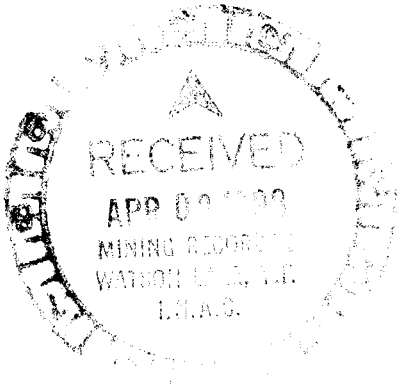
1997 SUMMARY REPORT ON THE FOOT 1 - 20, 37 - 80, 83 - 94, 180 - 188, 215 - 231, 11A - 12A, KINK 3, LOW 13 - 14

Located in the Pelly Mountains
Watson Lake Mining District
NTS 105G/8 and 9
61° 26' North Latitude
130° 07' West Longitude

Volume 1



Prepared by

Andrew J. Turner, P.Geol.
And
David A. Terry. Ph.D.

WESTMIN RESOURCES LIMITED
P.O. Box 49066, Bentall Centre
Suite 904 - 1055 Dunsmuir Street
Vancouver, BC, Canada
V7X 1C4

February 1998

DATES OF WORK PERFORMED

13 MAY TO 21 SEPTEMBER 1997

TABLE OF CONTENTS

		Page	Volume
1.0	1997 WORK PROGRAM	4	1
2.0	LIST OF CLAIMS	7	1
3.0	DRILL HOLE SUMMARY	8	1
4.0	DATE OF WORK TABLE	9	1
5.0	H. A. SIMONS AND ASSOCIATES REPORT	10	1
6.0	DRILL CORE STORAGE	20	1
7.0	STATEMENT OF EXPENDITURE	26	1
8.0	STATEMENT OF QUALIFICATIONS	27	1
9.0	DRILL LOGS		2 - 3
10.0	CHEMEX ASSAY CERTIFICATES		4
11.0	APPENDED MAPS AND SECTIONS		5 - 7

LIST OF FIGURES

FIGURE 1. LOCATION MAP	5	1
FIGURE 2. CLAIM MAP	6	1
FIGURE 3. DRILL HOLE LOCATION MAP		5
FIGURE 4. DEPOSIT DRILL HOLE LOCATION MAP		5
FIGURE 5. DRILL CORE LOCATION SKETCH	21	1
WOLVERINE DEPOSIT SECTIONS		
FIGURE 6. SECTION 16150 E		5
FIGURE 7. SECTION 16250 E		5
FIGURE 8. SECTION 16300 E		5
FIGURE 9. SECTION 16350 E		5
FIGURE 10. SECTION 16400 E		5
FIGURE 11. SECTION 16450 E		5
FIGURE 12. SECTION 16500 E		5
FIGURE 13. SECTION 16550 E		5
FIGURE 14. SECTION 16600 E		5
FIGURE 15. SECTION 16650 E		6
FIGURE 16. SECTION 16700 E		6
FIGURE 17. SECTION 16750 E		6
FIGURE 18. SECTION 16800 E		6
FIGURE 19. SECTION 16850 E		6
FIGURE 20. SECTION 16900 E		6
FIGURE 21. SECTION 16950 E		6
FISHER STRATIGRAPHIC SECTIONS		
FIGURE 22. SECTION 9400 E		6
FIGURE 23. SECTION 9750 E		6
FIGURE 24. SECTION 10000 E		6
FIGURE 25. SECTION 10200 E		6
FIGURE 26. SECTION 10600 E		7

LIST OF FIGURES

	Page	Volume
LAKE GRID STRATIGRAPHIC SECTIONS		
FIGURE 27. SECTION 12000 E		7
FIGURE 28. SECTION 12600 E		7
FIGURE 29. SECTION 13600 E		7
FIGURE 30. SECTION 14000 E		7
SABLE STRATIGRAPHIC SECTIONS		
FIGURE 31. SECTION 17800 E		7
FIGURE 32. SECTION 18300 E		7
FIGURE 33. SECTION 18400 E		7
FIGURE 34. SECTION 18500 E		7
FIGURE 35. SECTION 18550 E		7

1.0 1997 WORK PROGRAM

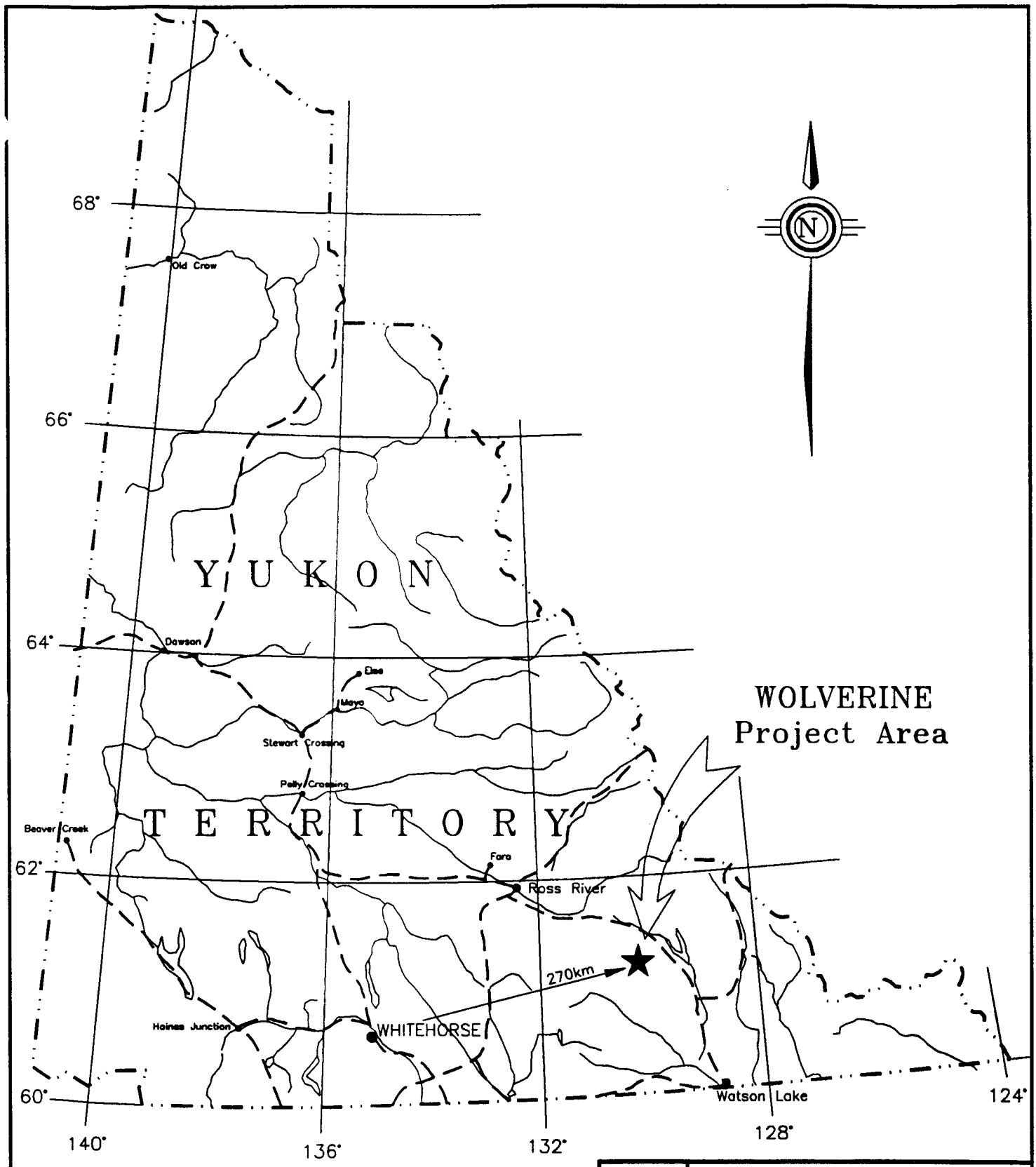
The FOOT property consists of 107 Yukon mineral claims located in the Watson Lake Mining District (figure 1). Figure 2 illustrates the detailed location of the claims.

Westmin Resources Limited carried out a diamond drill program on the Wolverine Project during the 1997 exploration season. The 1997 diamond drill program was conducted as two separate projects. The Wolverine Deposit Project was concerned with outlining the full extents of the Wolverine deposit, while the Wolverine Stratigraphic Project was designed to test other parts of the claim block in the hopes of identifying new massive sulfide lenses. The data and costs for both projects are presented herein. Also included in this report is a brief summary of a Geological Modeling and Resource Estimation exercise conducted by the consulting firm of H. A. Simons and Associates Ltd.

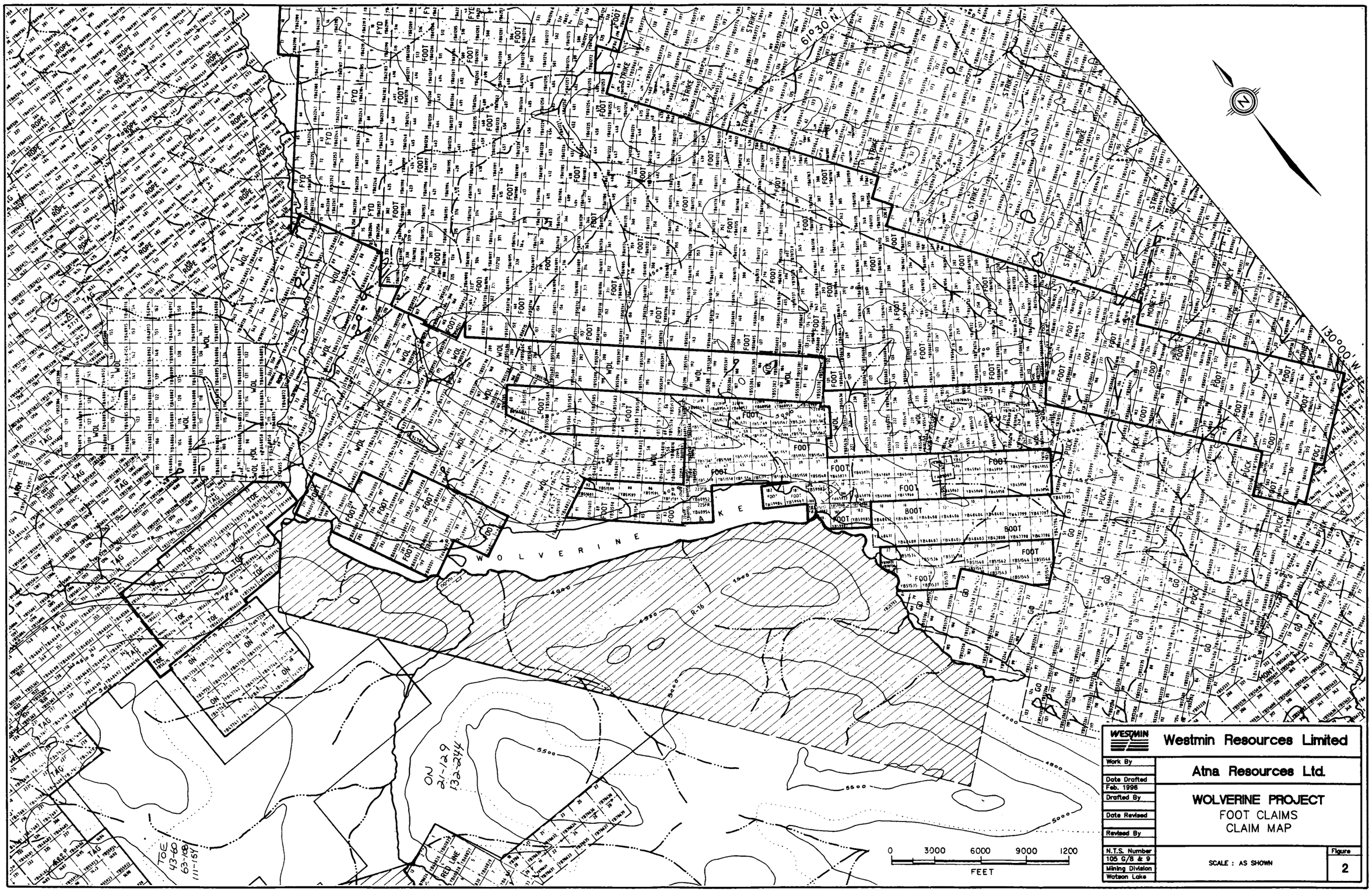
Mobilization commenced on April 26, 1997, while drilling commenced on May 13, 1997. Drilling continued throughout the summer months until September 21, 1997. In total, 23 drill holes and 5,512 meters of drilling were completed during this period on the Wolverine deposit (figures 3 and 4). An additional 17 drill holes and 6,341 meters of drilling were completed on the Stratigraphic drill program (figure 3).

The projects were supported from a base camp on Wolverine Lake that in turn was supported by an airstrip located approximately 5km to the southeast. The camp, the area of the deposit, and the airstrip are all connected by a dirt road (see figure 3). All Wolverine Deposit and Stratigraphic drill cores are stored at the Wolverine Lake campsite, which is located on the FOOT 39 and 181 claims. A table detailing the location of drill cores, along with a sketch of the Wolverine camp (figure 5), is provided in section 6.0.

The 1997 work program is summarized in sections 3.0 and 4.0. Drill sections and a Drill hole collar location maps are found in the attached pockets. Figures 6 to 21 are the drill sections for the Wolverine deposit drill program, while figures 22 to 30 are the drill sections for the Stratigraphic drill program. Figures 3 and 4 illustrate drill hole collar locations with respect to claims for both the stratigraphic and deposit drill programs respectively.



WESTMIN	WESTMIN RESOURCES LIMITED
Work By: Westmin	WOLVERINE PROJECT
Date Drafted: Nov. 24, 1996	Project Location Sketch
Drafted By: A. Turner	
N.T.S. Number	50 0 50 100 150km
File Name: Wolv_loc.dwg	Scale 1 : 2 500 000
	Figure 1.0



WESTMIN	Westmin Resources Limited
Work By	Atna Resources Ltd.
Date Drafted	Feb. 1996
Drafted By	
Date Revised	
Revised By	
N.T.S. Number	105 G/8 & 9
Mining Division	Watson Lake
WOLVERINE PROJECT	FOOT CLAIMS CLAIM MAP
SCALE : AS SHOWN	Figure 2

2.0 LIST OF CLAIMS

CLAIM No.	GRANT No.		CLAIM No.	GRANT No.		CLAIM No.	GRANT No.
FOOT 1	YB45954		FOOT 53	YB51564		FOOT 91	YB51600
FOOT 2	YB45955		FOOT 54	YB51565		FOOT 92	YB51601
FOOT 3	YB45956		FOOT 55	YB51566		FOOT 93	YB51602
FOOT 4	YB45957		FOOT 56	YB51567		FOOT 94	YB51603
FOOT 5	YB45958		FOOT 57	YB51568		FOOT 180	YB59982
FOOT 6	YB45959		FOOT 58	YB51569		FOOT 181	YB59983
FOOT 7	YB45960		FOOT 59	YB51570		FOOT 182	YB59984
FOOT 8	YB45961		FOOT 60	YB51571		FOOT 183	YB59985
FOOT 9	YB45962		FOOT 61	YB51572		FOOT 184	YB59986
FOOT 10	YB45963		FOOT 62	YB51573		FOOT 185	YB59987
FOOT 11	YB45964		FOOT 63	YB51574		FOOT 186	YB59988
FOOT 12	YB45965		FOOT 64	YB51575		FOOT 187	YB59989
FOOT 13	YB45966		FOOT 65	YB51576		FOOT 188	YB59990
FOOT 14	YB45967		FOOT 66	YB51577		FOOT 215	YB60944
FOOT 15	YB45968		FOOT 67	YB51578		FOOT 216	YB60945
FOOT 16	YB45969		FOOT 68	YB51579		FOOT 217	YB60946
FOOT 17	YB45970		FOOT 69	YB51580		FOOT 218	YB60947
FOOT 18	YB45971		FOOT 70	YB51581		FOOT 219	YB60948
FOOT 19	YB45972		FOOT 71	YB51582		FOOT 220	YB60949
FOOT 20	YB45973		FOOT 72	YB51583		FOOT 221	YB60950
FOOT 37	YB51548		FOOT 73	YB51584		FOOT 222	YB60951
FOOT 38	YB51549		FOOT 74	YB51585		FOOT 223	YB60952
FOOT 39	YB51550		FOOT 75	YB51586		FOOT 224	YB60953
FOOT 40	YB51551		FOOT 76	YB51587		FOOT 225	YB60954
FOOT 41	YB51552		FOOT 77	YB51588		FOOT 226	YB60955
FOOT 42	YB51553		FOOT 78	YB51589		FOOT 227	YB60956
FOOT 43	YB51554		FOOT 79	YB51590		FOOT 228	YB60957
FOOT 44	YB51555		FOOT 80	YB51591		FOOT 229	YB60958
FOOT 45	YB51556		FOOT 83	YB51592		FOOT 230	YB60959
FOOT 46	YB51557		FOOT 84	YB51593		FOOT 231	YB60960
FOOT 47	YB51558		FOOT 85	YB51594		FOOT 11A	YB71274
FOOT 48	YB51559		FOOT 86	YB51595		FOOT 12A	YB71275
FOOT 49	YB51560		FOOT 87	YB51596		KINK 3	YB69009
FOOT 50	YB51561		FOOT 88	YB51597		LOW 13	YB85394
FOOT 51	YB51562		FOOT 89	YB51598		LOW 14	YB85395
FOOT 52	YB51563		FOOT 90	YB51599			

3.0 DRILL HOLE SUMMARY

Hole	Location	Grid East	Grid North	UTM East	UTM North	Elev.	T.D. (m)	Azm	Dip	Claim	Cost
WV97-73	Lake Grid	14005.0	18132.4	438466.0	6813498.0	1415.0	385.30	180	-55	FOOT 52	$87,324
WV97-74	Wolverine	16450.0	16842.0	439797.0	6811077.0	1394.8	151.49	180	-55	FOOT 10	$38,597
WV97-75	Wolverine	16148.0	16974.0	439618.0	6811353.0	1397.0	194.50	180	-88	FOOT 12	$49,555
WV97-76	Wolverine	16500.0	16793.0	439809.0	6811003.0	1395.7	151.49	180	-90	FOOT 10	$38,597
WV97-77	Wolverine	16401.0	16770.0	439717.0	6811043.0	1375.7	113.40	180	-90	FOOT 12	$28,892
WV97-78	Lake Grid	13615.8	17844.6	437982.0	6813472.0	1330.0	193.20	179	-55	FOOT 53	$43,787
WV97-79	Wolverine	16148.0	16974.0	439618.0	6811353.0	1397.0	273.40	0	-70	FOOT 12	$69,657
WV97-80	Wolverine	16350.0	16767.0	439673.0	6811068.0	1375.4	85.34	180	-60	FOOT 12	$21,743
WV97-81	Wolverine	16254.0	16818.0	439621.0	6811164.0	1375.3	75.29	180	-80	FOOT 12	$19,182
WV97-82	Wolverine	16500.0	16785.0	439809.0	6811003.0	1395.7	160.63	180	-45	FOOT 10	$40,925
WV97-83	Lake Grid	12602.3	17354.5	436866.0	6813620.0	1240.0	192.42	180	-70	FOOT 44	$43,610
WV97-84	Wolverine	16207.0	16932.0	439645.0	6811285.0	1402.2	183.19	180	-88	FOOT 12	$46,673
WV97-85	Lake Grid	11986.6	17509.5	436437.0	6814088.0	1280.0	197.51	180	-70	FOOT 48	$44,764
WV97-86	Wolverine	16207.0	16932.0	439645.0	6811285.0	1402.2	261.22	0	-68	FOOT 12	$66,554
WV97-87	Fisher	10181.6	18801.9	435640.0	6816160.0	1626.0	617.80	180	-70	FOOT 70	$140,018
WV97-88	Wolverine	16209.0	17038.0	439704.0	6811372.0	1405.6	279.49	0	-78	FOOT 12	$71,208
WV97-89	Wolverine	16150.0	17041.0	439658.0	6811409.0	1396.1	145.40	0	-64	FOOT 12	$37,045
WV97-90	Wolverine	16400.0	17095.0	439895.0	6811314.0	1486.0	403.55	0	-84	FOOT 12	$102,816
WV97-91	Fisher	9774.6	18830.9	435316.0	6816408.0	1659.0	610.79	180	-70	FOOT 70	$138,429
WV97-92	Sable	18305.9	16608.9	441220.0	6809861.0	1364.0	276.40	180	-70	FOOT 1	$62,643
WV97-93	Sable	17798.8	16639.1	440813.0	6810165.0	1364.0	252.10	180	-70	FOOT 4	$57,136
WV97-94	Wolverine	16500.0	16790.0	439809.0	6811003.0	1395.7	197.20	0	-60	FOOT 10	$50,243
WV97-95	Wolverine	16550.0	16787.0	439851.3	6810975.4	1398.1	148.40	180	-60	FOOT 10	$37,809
WV97-96	Fisher	9391.5	18769.0	434962.0	6816567.0	1715.0	572.39	180	-70	FOOT 72	$129,726
WV97-97	Wolverine	16602.3	16770.8	439886.0	6810933.0	1395.0	163.70	180	-63	FOOT 10	$41,707
WV97-98	Sable	18407.6	16819.7	441421.0	6809981.0	1395.0	443.80	180	-70	FOOT 2	$100,583
WV97-99	Wolverine	16450.0	16842.0	439797.0	6811077.0	1394.8	148.40	180	-85	FOOT 10	$37,809
WV97-100A	Wolverine	16903.3	16700.8	440099.0	6810709.0	1370.7	242.91	0	-66	KINK 3	$61,888
WV97-101	Fisher	10582.2	18717.2	435928.0	6815869.0	1611.0	602.86	180	-70	FOOT 68	$136,632
WV97-102	Wolverine	16897.4	16959.1	440236.0	6810928.0	1487.0	419.69	180	-79.5	KINK 3	$106,928
WV97-103	Fisher	10000.0	19050.0	435624.7	6816467.1	1575.0	549.86	180	-70	FOOT 70	$124,620
WV97-103A	Fisher	10000.0	19050.0	435624.7	6816467.1	1575.0	371.86	180	-70	FOOT 70	$84,278
WV97-104	Wolverine	16500.0	17097.0	439979.5	6811261.0	1507.9	465.40	0	-83	FOOT 10	$118,574
WV97-105	Wolverine	16950.6	16952.7	440275.7	6810892.5	1484.2	423.35	180	-89	KINK 3	$107,861
WV97-106	Sable	18500.0	16595.0	441385.0	6809750.0	1400.0	222.19	180	-70	FOOT 1	$50,357
WV97-107	Sable	18400.0	16600.0	441303.0	6809805.0	1352.0	213.00	180	-70	FOOT 1	$48,274
WV97-108	Sable	18570.0	16615.0	441444.0	6809732.0	1355.0	173.40	180	-70	FOOT 2	$39,299
WV97-109	Sable	18500.0	16700.0	441435.0	6809835.0	1370.0	207.00	180	-70	FOOT 2	$46,914
WV97-110	Sable	18545.0	16700.0	441218.0	6809866.0	1360.0	258.80	180	-70	FOOT 2	$58,654
WV97-111	Wolverine	16947.5	16842.5	440213.8	6810803.0	1428.4	341.05	180	-87	KINK 3	$86,893
WV97-112	Wolverine	16950.6	16952.7	440275.7	6810892.5	1484.2	483.70	0	-80	KINK 3	$123,237
Totals	**23 deposit drill holes and 17 stratigraphic drill holes**						**11853**	**m**			**$2,841,442**

4.0 DATES OF WORK

Hole	Location	Claim	Start Date	End Date
WV97-73	Lake Grid	FOOT 52	13-May	23-May
WV97-74	Wolverine	FOOT 10	16-May	20-May
WV97-75	Wolverine	FOOT 12	19-May	24-May
WV97-76	Wolverine	FOOT 10	20-May	22-May
WV97-77	Wolverine	FOOT 12	23-May	24-May
WV97-78	Lake Grid	FOOT 53	23-May	27-May
WV97-79	Wolverine	FOOT 12	24-May	29-May
WV97-80	Wolverine	FOOT 12	24-May	26-May
WV97-81	Wolverine	FOOT 12	26-May	27-May
WV97-82	Wolverine	FOOT 10	27-May	29-May
WV97-83	Lake Grid	FOOT 44	29-May	1-Jun
WV97-84	Wolverine	FOOT 12	29-May	1-Jun
WV97-85	Lake Grid	FOOT 48	1-Jun	5-Jun
WV97-86	Wolverine	FOOT 12	2-Jun	6-Jun
WV97-87	Fisher	FOOT 70	5-Jun	18-Jun
WV97-88	Wolverine	FOOT 12	6-Jun	11-Jun
WV97-89	Wolverine	FOOT 12	11-Jun	15-Jun
WV97-90	Wolverine	FOOT 12	15-Jun	22-Jul
WV97-91	Fisher	FOOT 70	18-Jun	27-Jun
WV97-92	Sable	FOOT 1	20-Jun	23-Jun
WV97-93	Sable	FOOT 4	23-Jun	26-Jun
WV97-94	Wolverine	FOOT 10	24-Jun	26-Jun
WV97-95	Wolverine	FOOT 10	27-Jun	28-Jun
WV97-96	Fisher	FOOT 72	28-Jun	10-Jul
WV97-97	Wolverine	FOOT 10	28-Jun	29-Jun
WV97-98	Sable	FOOT 2	28-Jun	11-Jul
WV97-99	Wolverine	FOOT 10	30-Jun	1-Jul
WV97-100A	Wolverine	KINK 3	1-Jul	6-Jul
WV97-101	Fisher	FOOT 68	10-Jul	22-Jul
WV97-102	Wolverine	KINK 3	12-Jul	18-Jul
WV97-103	Fisher	FOOT 70	20-Jul	21-Aug
WV97-103A	Fisher	FOOT 70	24-Aug	6-Sep
WV97-104	Wolverine	FOOT 10	30-Jul	6-Aug
WV97-105	Wolverine	KINK 3	8-Aug	14-Aug
WV97-106	Sable	FOOT 1	15-Aug	17-Aug
WV97-107	Sable	FOOT 1	19-Aug	23-Aug
WV97-108	Sable	FOOT 2	23-Aug	25-Aug
WV97-109	Sable	FOOT 2	25-Aug	31-Aug
WV97-110	Sable	FOOT 2	1-Sep	4-Sep
WV97-111	Wolverine	KINK 3	6-Sep	12-Sep
WV97-112	Wolverine	KINK 3	13-Sep	21-Sep

5.0 H. A. SIMONS AND ASSOCIATES REPORT

MRDI Canada

A division of H.A. Simons Ltd.

MRDI Canada
111 Dunsmuir Street, Suite 400
Vancouver, British Columbia
Canada, V6B 5W3
Tel: (604) 664 3471
Fax: (604) 664 3041

February 16, 1998
Mr. David Terry
Westmin Resources Ltd.
Vancouver, BC

Dear David:

RE: Wolverine deposit modeling documentation

Enclosed you will find a memorandum documenting the modeling process for the 1997/98 Wolverine deposit. Results, repeated in this document, were forwarded to your office about a month ago. The procedures and resource estimates stated in the memorandum are subject to the following disclaimer:

DISCLAIMER

This memorandum was prepared for Westmin Resources Ltd. by MRDI Canada (A Division of H.A. Simons Ltd.) and is based on information available at the time of preparation. It is believed that the information and estimates contained herein are reliable under the conditions and subject to the qualifications set forth. This memorandum is intended to be used exclusively by Westmin Resources Ltd. for Wolverine deposit resource calculation. Any other use of or reliance on this memorandum is at the sole risk of the party that so relies.

If anything needs clarification, please do not hesitate to call me at (664 - 4349).

Yours truly,

MRDI Canada

Stephen Juras

MRDI Canada
A division of H.A. Simons Ltd.

TO: David Terry, Westmin Resources Ltd. **DATE:** 14 February 1998

FROM: Stephen Juras **FILE NO.:** U232A

Copy to:

SUBJECT: GEOLOGY MODELLING DOCUMENTATION - Wolverine Deposit

1. INTRODUCTION

This note is the documentation for the 1997/98 Wolverine deposit block model.

1.1 Project Description

The Wolverine deposit is a volcanogenic massive sulphide deposit located in southeast Yukon. It is interpreted as tabular lenses of massive sulphide, striking 032 degrees azimuth (100 degrees grid azimuth) with an average dip of 25 to 32 degrees North. A polygonal reserve of the deposit's Main Lens was completed in-house at Westmin Resources Ltd. MRDI was commissioned to do a Medsystem® reserve as a verification of the polygonal reserves (to update and rerun with similar parameters to an earlier Medsystem® project last run in the spring of 1997).

1.2 Data Source and Acquisition

The survey, assay and geology databases are maintained by Westmin Resources Ltd. - Vancouver office personnel. The data and previous Medsystem® project files were loaded from these databases. 1997 diamond drill assays and geologic interval coding was supplied to MRDI to incorporate into the previous Medsystem® project.

1.3 Data Verification

No data verification has been done to date by MRDI.

2.0 GEOLOGICAL MODELLING PREPARATION

The Medsystem® files for the Wolverine deposit contains the prefix WVGS.

MRDI Canada
A division of H.A. Simons Ltd.

2.1 Medsystem® Program Files

Modeling Parameters and Medsystem® data files are listed below (metric project).

PCF TABLE

Project Control Files Parameters				
	Min	Max	Dimension [Dx]	Number [Nx]
X	15000	16975	25	79
Y	16575	17225	25	26
Z	900	1600	1	7

MEDSYSTEM® data files table

MEDSYSTEM data files	
MEDS File	Description
wvgs08.dat	Sorted Composites
wvgs09.dat	Unsorted Composites
wvgs11.dat	Drill hole (Assays) File
wvgs12.dat	Survey (Assays) File
wvgs13.dat	Surface File
wvgs15.new	Block Model File (GSM)
wvgs25.top	Topography VBM
wvgs25.geo	Plan View VBM - GSM Ztop, Zbot,

Note: All of the items listed in the MEDSYSTEM® data files may not have been used in the project evaluation.

2.2 Item Descriptors for WVGS MEDSYSTEM® Files

Table for File wvgs11.dat.

Item	Minimum	Maximum	Precision	Description
REF#	0	10000	1	Reference #
FROM	0	1000	0.01	From
-TO-	0	1000	0.01	To
-AI-	0	500	0.01	Assay Interval
GEOL	0	99	1	Geology Code
AU	0	17	0.01	Gold g/t
AG	0	3500	0.1	Silver g/t
AS	0	17000	1	Arsenic ppm
SB	0	27000	1	Antimony ppm
HG	0	105000	1	Mercury ppm
BAXRF	0	51000	1	Barium - XRF analysis ppm
FE	0	50	0.01	Iron wt. %
DEN	0	5.5	0.01	Density
CU	0	25	0.01	Copper wt. %
PB	0	10	0.01	Lead wt. %

MRDI Canada
A division of H.A. Simons Ltd.

Item	Minimum	Maximum	Precision	Description
ZN	0	55	0.01	Zinc wt. %
NSR	0	4000	0.1	Net Smelter Return
XTRA1	0	99	1	Extra Item 1
XTRA2	0	99	1	Extra Item 2
XTRA3	0	1	0.01	Extra Item 3

Table for File wvgs09.dat

Item	Minimum	Maximum	Precision	Description
REF#	0	10000	1	Reference #
EAST	16000	17100	.1	Easting
NORTH	16500	17200	.1	Northing
ELEV.	800	1600	.1	Elevation
-TO-	0	1000	.1	To
LNGTH	0	500	.1	Length
ZTOP	800	1600	.1	Top Elevation of MS Lens
ZBOT	800	1600	.1	Bottom Elevation of MS Lens
From	0	1000	.1	From
GEOL	0	99	1	Geology Code
AU	0	17	.01	Gold g/t
AG	0	3500	.1	Silver g/t
AS	0	17000	1	Arsenic ppm
SB	0	27000	1	Antimony ppm
HG	0	105000	1	Mercury ppm
BAXRF	0	51000	1	Barium - XRF Analysis ppm
FE	0	50	.01	Zone Code
DEN	0	5.5	.01	Density
CU	0	25	.01	Copper wt %
PB	0	10	.01	Lead wt %
ZN	0	55	.01	Zinc wt %
NSR	0	4000	1	Net Smelter Return
VTHK	0	500	.1	Vertical Thickness
MTHK	0	500	.1	Measured Thickness

Table for File wvgs13.dat

Item	Minimum	Maximum	Precision	Description
TOPOG	900	1600	1	Topography
SURF1	900	1600	1	/Optional item
SURF2	900	1600	1	/Optional item
SURF3	900	1600	1	/Optional item

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Item	Minimum	Maximum	Precision	Description
TPFLG	0	1	1	/Optional item

Table for File wvgs15.new.

Item	Minimum	Maximum	Precision	Description
THICK	0	500	.1	Vertical Thickness (Ztop - Zbot)
GEOL	0	99	1	Geology Code
CU	0	25	.01	Copper wt. %
ZN	0	40	.01	Zinc wt. %
PB	0	10	.01	Lead wt. %
FE	0	30	.01	Iron wt. %
AU	0	10	.01	Gold g/t
AG	0	2000	.1	Silver g/t
BAXRF	0	30000	1	Barium - XRF Analysis ppm
HG	0	450	1	Mercury ppm
TOPO	0	100	1	Topography
ZTOP	900	1600	.1	Elevation of Top of Seam
ZBOT	900	1600	.1	Elevation of Bottom of Seam
AS	0	10000	1	Arsenic ppm
SB	0	3000	1	Antimony ppm
DEN	0	5.0	.01	Density
NSR	0	3000	1	Net Smelter Return
XTRA1	0	100	1	Extra Item 1
XTRA2	0	1.0	.01	Extra Item 2
DIST	0	200	1	Distance to nearest composite
NCMP	0	10	1	Number of composites per block
RTYPE	0	5.0	1	Code based on distance to nearest composite

Table for File wvgs25.top

Item	Minimum	Maximum	Precision
Y-PLN	12400	22000	.1
X-PLN	6500	22000	.1

Table for File wvgs25.geo

Item	Minimum	Maximum	Precision
Y-PLN	16000	18000	.1
X-PLN	16000	18000	.1

2.3 Explanation of File Codes

VBM Feature Wvgs25.GEO

Feature	Meds Code	Description
101		contours of main deposit (level 5)
102		contours of upper west deposit (level 4)
108		contours of stringer zone (level 6)f
201		ZTOP contours of Main (Level 5) ore
202		ZBOT contours of Main (Level 5) ore
298		1996/97 resource boundary (on plane 880)
299		1997/98 resource boundary (on plane 890)
662		outer boundary of upper west (level 4)
665		outer boundary of Wolverine deposit
666		Wolverine deposit boundary (level 5)
667		claim boundary
668		stringer zone boundary (level 6)

VBM Feature Wvgs25.top

Feature	Meds Code	Description
901	TOPO	Topography

Level Information

Level	Seam	Meds Code
1	4 (high)	HIGH
2	3 (upper)	UPPER
3	50 (argillite)	ARGST
4	2 (west)	WEST
5	1 (main)	MAIN
6	8 (stringer zone)	STRNG
7	6 (other)	SIX

Resource Classification Codes - RTYPE [File 15]

RTYPE	Description
1	0 to 25 meters to nearest composite
2	26 to 50 meters to nearest composite
3	greater than 50 meters to nearest composite (default model setting)

2.4 Data Loading Procedures

1. Received and corrected 1997 assay data format for entry into existing Wolverine project.
2. Loaded 1997 data (m201v1) into Wolverine project.
3. Tagged assay intervals in Meds file 11 with geologic code (in separate file) using m205v1.

2.5 Compositing

The compositing was done using seam (geology) codes. All drillhole data with the same code was averaged into a single composite, using sample lengths as the weighting factor. The top and bottom of each composite (i.e. defining the top and bottom of the respective seam) were stored as X Y Z coordinates in ZTOP and ZBOT. Up to 7 seams (composites) could be calculated per drillhole. The composites were calculated using m501SM. The generated composite file (09) was sorted by northing using m506V1. This generated an 08 file and was used to speed up model interpolation.

3.0 3-D BLOCK MODEL CONSTRUCTION

The philosophy used for the Wolverine modeling process by MRDI was to approximate the shallow dipping, apparently tabular Wolverine massive sulphide interval with a Gridded Seam Model (GSM). This process calculated the shape of the seam of interest by creating two DTM's using ZTOP and ZBOT values, respectively, from the composite database. The surfaces were then gridded, creating ZTOP and ZBOT values for each block. These were input into the GSM. Inverse Distance interpolation, controlled by geology code (seam), calculated the GSM block items and were stored in the GSM by Level (see Level Information table above). Vertical thickness of the GSM seam (THICK) was calculated as ZTOP - ZBOT for each block. Only zone 1 (MAIN) /Level 5 was used for model construction and resource calculation.

3.1 Model Construction Steps:

1. Initialized GSM (M601V1).
2. Reset default RTYPE to 3 (M601V1).
3. Ran Medsystem Procedure PDHGRD twice - once for ZTOP and once for ZBOT
   PDHGRD runs M503V1 to extract composite ZTOP/ZBOT values and their X-Y coordinates,
   M653V0 to extract a VBM boundary (in this case 299 - the 1997/98 resource boundary),
   M635V1 to create the respective DTM surface,
   M636V1 to grid the respective DTM surface,
   M610V1 to input ZTOP/ZBOT into the GSM.
4. Interpolation using inverse distance squared weighting, X-Y search distance of 100 x 100 meters.
   Maximum composites used per drillhole = 1, maximum composites used for a block = 3 (minimum = 1).
   Interpolation was controlled by geology code. Also calculated and stored was the distance to the nearest composite used (DIST). (M620V1)
5. Calculation of vertical thickness (THICK =ZTOP-ZBOT) (M612RP).

3.2 Model Verification

The GSM was checked by plotting plans and sections with drillhole assay and composite values, overlain by the relevant GSM blocks. Also the GSM DIST values were checked by being plotted with drillhole composite

overlays. Finally, statistical checks were run . The latter showed a clipping of GSM silver values at 850 g/t (old model limits). Upon consultation with Westmin, it was decided to reset the GSM silver to 2000 g/t. The reset GSM did not show any clipping with this new upper limit and this reset version was used for the resource calculation.

4.0 RESOURCE CLASSIFICATION/CALCULATION

The geological resource was classified by distance (DIST) to nearest composite. This was done by using RTYPE codes (see table above). The RTYPE values were calculated using two runs of M612RP: one to set RTYPE = 2 for DIST = 26 to 50 meters, the other to set RTYPE = 1 for DIST = 0 to 25 meters. IGP file extraction (M826v1) followed for each level that contained GSM items. Items extracted were Au, Ag, Cu, Pb, Zn, Fe, DEN (density), THICK, and RTYPE. Using Medsystem's M650IP (IGP), reserves for Level 5 (MAIN 1), inside the provided 1997/98 resource boundary (VBM code 299), were determined.

Level 5 (Main) Resource Calculation

RTYPE = 1 (0 to 25 m to Composite)	TONNES	2600727
	B.C.M. m^3	655813
	ZN wt.%	12.56
	CU wt.%	1.33
	PB wt.%	1.54
	FE wt.%	24.54
	AU g/t	1.79
	AG g/t	370.7
	DEN (density)	3.97
	THICK m	4.9
	HG ppm	30
	AS ppm	2533

RTYPE = 2 (26 to 50 m to Composite)	TONNES	2849031
	B.C.M. m^3	717474
	ZN wt.%	12.64
	CU wt.%	1.34
	PB wt.%	1.54
	FE wt.%	24.68
	AU g/t	1.81
	AG g/t	378.4
	DEN (density)	3.97
	THICK m	4.9
	HG ppm	35
	AS ppm	2530

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RTYPE = 3 (>50 m to Composite)	TONNES	444691
	B.C.M. m^3	110188
	ZN wt.%	12.98
	CU wt.%	1.61
	PB wt.%	1.4
	FE wt.%	25.57
	AU g/t	1.53
	AG g/t	337.5
	DEN (density)	4.04
	THICK m	7.3
	HG ppm	42
	AS ppm	2294

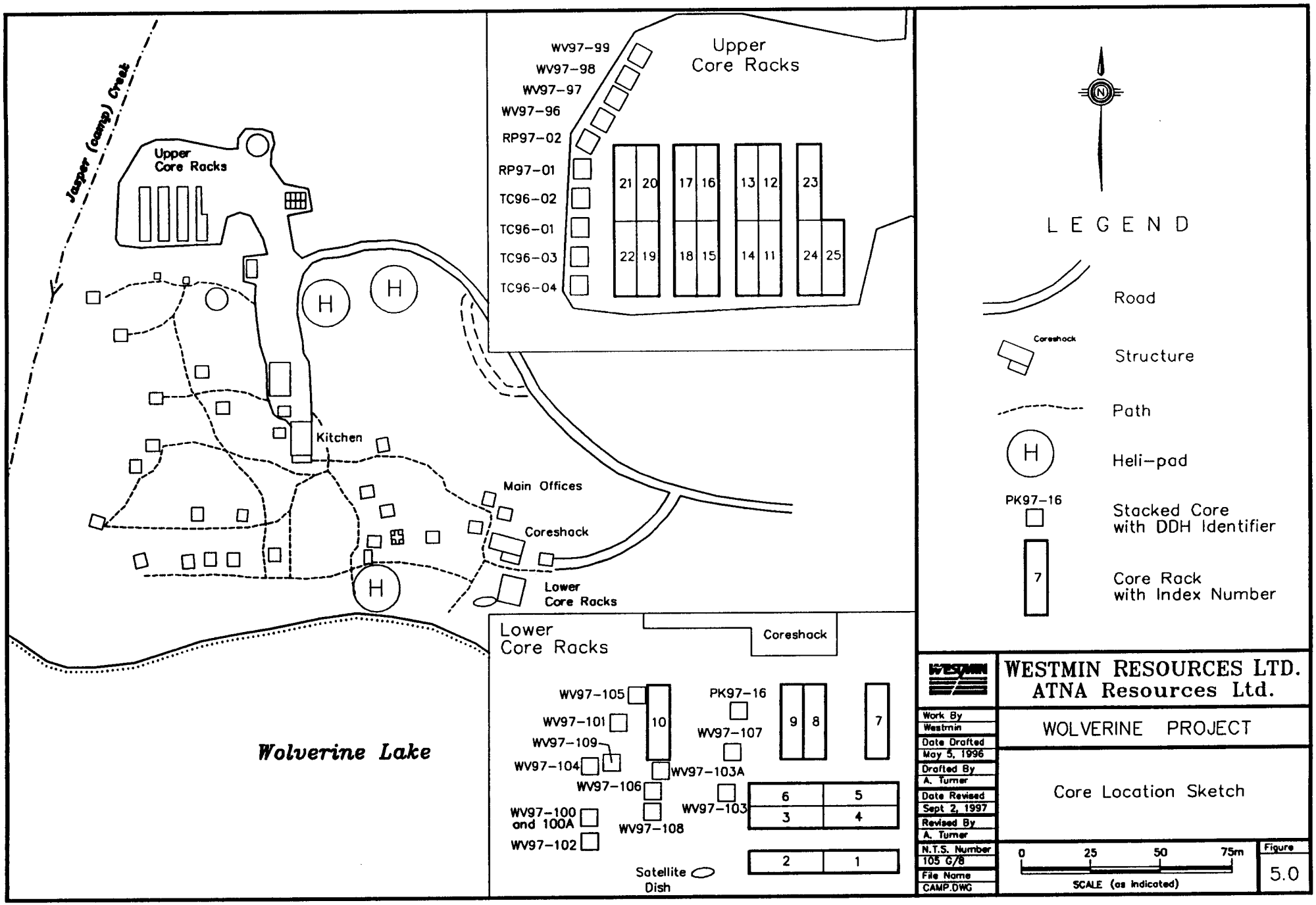
5.0 MISCELLANEOUS

5.1 Plot File Index

1. N-S sections (1:1000), every 50 meters, from 16200E to 16950E (16 total), named xxxxxE.plt. These contain drillhole assays and composites with GSM overlay.
2. E-W sections (1:1000), every 100 meters, from 16800N to 17100N (4 total), named xxxxxN.plt. These contain drillhole assays and composites with GSM overlay.
3. Three Plans (1:1000) of Main (1) seam / GSM Level 5 for various GSM items, named wplan1,2,3.plt.

6.0 DRILL CORE STORAGE

All Wolverine Deposit and Stratigraphic drill cores are stored at the Wolverine Lake campsite, which is located on the FOOT 39 and 181 claims. This section includes a sketch of the Wolverine camp (figure 5), and a table detailing the location of drill cores.


Jasper (camp) Creek
Upper
Core Racks
Kitchen
Main Offices
Coreshack
Lower
Core Racks
Wolverine Lake
WV97-99
WV97-98
WV97-97
WV97-96
RP97-02
RP97-01
TC96-02
TC96-01
TC96-03
TC96-04
21 20
17 16
13 12
23
22 19
18 15
14 11
24 25
Upper
Core Racks
Lower
Core Racks
Coreshack
WV97-105
WV97-101
WV97-109
WV97-104
WV97-106
WV97-100
and 100A
WV97-102
WV97-108
WV97-103A
WV97-103
PK97-16
WV97-107
10
9 8
7
6 5
3 4
2 1
Satellite
Dish
LEGEND
Road
Coreshack
Structure
Path
Heli-pad
PK97-16
Stacked Core
with DDH Identifier
7
Core Rack
with Index Number
WESTMIN RESOURCES LTD.
ATNA Resources Ltd.
WOLVERINE PROJECT
Core Location Sketch
Work By
Westmin
Date Drafted
May 5, 1996
Drafted By
A. Turner
Date Revised
Sept 2, 1997
Revised By
A. Turner
N.T.S. Number
105 G/8
File Name
CAMP.DWG
0 25 50 75m
SCALE (as indicated)
Figure
5.0

Location Of Wolverine Project Drill Cores		Location of Box #1		
Drill Hole	Core Rack	Section	Collumn	Boxes from top
WV95-01	Wolverine Lower Core Racks - #1	-	1	1
WV95-02	Wolverine Lower Core Racks - #1	-	3	8
WV95-03	Wolverine Lower Core Racks - #1	-	5	10
WV95-04	Wolverine Lower Core Racks - #1	-	9	4
WV95-05	Wolverine Lower Core Racks - #1-2	-	12	7
WV95-06	Wolverine Lower Core Racks - #2	-	4	1
WV95-07	Wolverine Lower Core Racks - #2-3	-	8	1
WV95-08	Wolverine Lower Core Racks - #3	-	4	4
WV95-09	Wolverine Lower Core Racks - #3	-	6	9
WV95-10	Wolverine Lower Core Racks - #5	-	1	1
WV95-11	Wolverine Lower Core Racks - #3-4	-	9	7
WV95-12	Wolverine Lower Core Racks - #5	-	3	9
WV95-13	Wolverine Lower Core Racks - #5-6	-	8	1
WV95-14	Wolverine Lower Core Racks - #3	-	6	7
WV95-15	Wolverine Lower Core Racks - #10	-	1	1
WV95-16	Wolverine Lower Core Racks - #6	-	6	1
WV95-17	Wolverine Lower Core Racks - #6	-	10	2
WV95-18	Wolverine Lower Core Racks - #7	-	1	1
WV95-19	Wolverine Lower Core Racks - #9	-	1	1
WV95-20	Wolverine Lower Core Racks - #8	-	1	1
WV95-21	Wolverine Lower Core Racks - #8	-	6	1
WV95-22	Wolverine Lower Core Racks - #7	-	4	4
WV95-23	Wolverine Lower Core Racks - #7	-	8	6
WV95-24	Wolverine Lower Core Racks - #10	-	4	6
WV96-25	Wolverine Lower Core Racks - #10-9	-	6	2
WV96-26	Wolverine Upper Core Racks - #11	1	1	1
WV96-27	Wolverine Upper Core Racks - #11	2	1	11
WV96-28	Wolverine Upper Core Racks - #11	3	2	10
WV96-29	Wolverine Upper Core Racks - #11 (12)	end	last	1
WV96-30	Wolverine Upper Core Racks - #12	2	1	5
WV96-31	Wolverine Upper Core Racks - #12	2	6	3
WV96-32	Wolverine Upper Core Racks - #13	1	1	1
WV96-33	Wolverine Upper Core Racks - #13	1	6	3
WV96-34	Wolverine Upper Core Racks - #13	2	3	6
WV96-35	Wolverine Upper Core Racks - #13	2	6	9
WV96-36	Wolverine Upper Core Racks - #13 (14)	3	6	13
WV96-37	Wolverine Upper Core Racks - #14	1	3	8
WV96-38	Wolverine Upper Core Racks - #14	2	2	3
WV96-39	Wolverine Upper Core Racks - #14	3	2	5
WV96-40	Wolverine Upper Core Racks - #14 (15)	end	last	9

Location Of Wolverine Project Drill Cores		Location of Box #1		
Drill Hole	Core Rack	Section	Collumn	Boxes from top
WV96-41	Wolverine Upper Core Racks - #15	1	4	11
WV96-42	Wolverine Upper Core Racks - #15	2	5	2
WV96-43	Wolverine Upper Core Racks - #15	3	3	9
WV96-44	Wolverine Upper Core Racks - #15 (16)	end	2	7
WV96-45	Wolverine Upper Core Racks - #16	1	3	13
WV96-46	Wolverine Upper Core Racks - #16	2	2	10
WV96-47	Wolverine Upper Core Racks - #16	2	6	1
WV96-48	Wolverine Upper Core Racks - #16	3	2	12
WV96-49	Wolverine Upper Core Racks - #16 (17)	end	last	13
WV96-50	Wolverine Upper Core Racks - #17	1	6	11
WV96-51	Wolverine Upper Core Racks - #17	2	5	10
WV96-52	Wolverine Upper Core Racks - #17	3	5	5
WV96-53	Wolverine Upper Core Racks - #17 (18)	end	last	8
WV96-54	Wolverine Upper Core Racks - #18	1	4	2
WV96-55	Wolverine Upper Core Racks - #18	2	1	12
WV96-56	Wolverine Upper Core Racks - #18	3	2	6
WV96-57	Wolverine Upper Core Racks - #18 (19)	3	6	8
WV96-58	Wolverine Upper Core Racks - #19	start	1	9
WV96-59	Wolverine Upper Core Racks - #19	1	3	6
WV96-60	Wolverine Upper Core Racks - #19	1	4	11
WV96-61	Wolverine Upper Core Racks - #19	2	2	13
WV96-62	Wolverine Upper Core Racks - #19	1	2	13
WV96-63	Wolverine Upper Core Racks - #19	3	2	6
WV96-64	Wolverine Upper Core Racks - #19	3	4	2
WV96-65	Wolverine Upper Core Racks - #19 (20)	end	2	3
WV96-66	Wolverine Upper Core Racks - #20	1	1	9
WV96-67	Wolverine Upper Core Racks - #20	1	3	13
WV96-68	Wolverine Upper Core Racks - #20	1	5	10
WV96-69	Wolverine Upper Core Racks - #20	2	1	9
WV96-70	Wolverine Upper Core Racks - #20	2	6	5
WV96-71	Wolverine Upper Core Racks - #20	3	2	2
WV96-72	Wolverine Upper Core Racks - #20	3	4	10
WV97-73	Wolverine Upper Core Racks - #20 (21)	3	6	6
WV97-74	Wolverine Upper Core Racks - #21	1	1	1
WV97-75	Wolverine Upper Core Racks - #21	1	2	8
WV97-76	Wolverine Upper Core Racks - #21	1	6	2
WV97-77	Wolverine Upper Core Racks - #21	2	2	2
WV97-78	Wolverine Upper Core Racks - #21	2	3	8
WV97-79	Wolverine Upper Core Racks - #21	2	4	8
WV97-80	Wolverine Upper Core Racks - #21	3	3	11

Location Of Wolverine Project Drill Cores		Location of Box #1		
Drill Hole	Core Rack	Section	Collumn	Boxes from top
WV97-81	Wolverine Upper Core Racks - #21	3	4	13
WV97-82	Wolverine Upper Core Racks - #21	3	6	4
WV97-83	Wolverine Upper Core Racks - #21 (22)	last	2	11
WV97-84	Wolverine Upper Core Racks - #22	1	2	2
WV97-85	Wolverine Upper Core Racks - #22	1	5	6
WV97-86	Wolverine Upper Core Racks - #22	2	1	7
WV97-87	Wolverine Upper Core Racks - #22	3	1	3
WV97-88	Wolverine Upper Core Racks - #23	-	-	-
WV97-89	Wolverine Upper Core Racks - #23	-	-	-
WV97-90	Wolverine Upper Core Racks - #24	-	-	-
WV97-91	Wolverine Upper Core Racks - #24	-	-	-
WV97-92	Wolverine Upper Core Racks - #25	-	-	-
WV97-93	Wolverine Upper Core Racks - #25	-	-	-
WV97-94	Wolverine Upper Core Racks - #25	-	-	-
WV97-95	Wolverine Upper Core Racks - #25	-	-	-
WV97-96	Wolverine Upper Core Racks - palletized	n/a	n/a	n/a
WV97-97	Wolverine Upper Core Racks - palletized	n/a	n/a	n/a
WV97-98	Wolverine Upper Core Racks - palletized	n/a	n/a	n/a
WV97-99	Wolverine Upper Core Racks - palletized	n/a	n/a	n/a
WV97-100	Wolverine Lower Core Racks - palletized	n/a	n/a	n/a
WV97-100A	Wolverine Lower Core Racks - palletized	n/a	n/a	n/a
WV97-101	Wolverine Lower Core Racks - palletized	n/a	n/a	n/a
WV97-102	Wolverine Lower Core Racks - palletized	n/a	n/a	n/a
WV97-103	Wolverine Lower Core Racks - palletized	n/a	n/a	n/a
WV97-103A	Wolverine Lower Core Racks - palletized	n/a	n/a	n/a
WV97-104	Wolverine Lower Core Racks - palletized	n/a	n/a	n/a
WV97-105	Wolverine Lower Core Racks - palletized	n/a	n/a	n/a
WV97-106	Wolverine Lower Core Racks - palletized	n/a	n/a	n/a
WV97-107	Wolverine Lower Core Racks - palletized	n/a	n/a	n/a
WV97-108	Wolverine Lower Core Racks - palletized	n/a	n/a	n/a
WV97-109	Wolverine Lower Core Racks - palletized	n/a	n/a	n/a
WV97-110	in progress - Lower Core Racks	n/a	n/a	n/a
PK96-01	Puck Core Racks - #1	-	-	-
PK96-02	Puck Core Racks - #1	-	-	-
PK96-03	Puck Core Racks - #1	-	-	-
PK96-04	Puck Core Racks - #2	-	-	-
PK96-05	Puck Core Racks - #3	-	-	-
PK96-06	Puck Core Racks - Palletized	n/a	n/a	n/a
PK97-07	Puck Core Racks - Palletized	n/a	n/a	n/a
PK97-08	Puck Core Racks - Palletized	n/a	n/a	n/a

Location Of Wolverine Project Drill Cores		Location of Box #1		
Drill Hole	**Core Rack**	**Section**	**Collumn**	**Boxes from top**
PK97-09	Puck Core Racks - Palletized	n/a	n/a	n/a
PK97-10	Puck Core Racks - Palletized	n/a	n/a	n/a
PK97-11	Puck Core Racks - Palletized	n/a	n/a	n/a
PK97-12	Puck Core Racks - Palletized	n/a	n/a	n/a
PK97-13	Puck Core Racks - Palletized	n/a	n/a	n/a
PK97-14	Puck Core Racks - Palletized	n/a	n/a	n/a
PK97-15	Puck Core Racks - Palletized	n/a	n/a	n/a
PK97-16	Wolverine Coreshack - Palletized	n/a	n/a	n/a
TW96-01	Ty Property	n/a	n/a	n/a
TW96-02	Ty Property	n/a	n/a	n/a
TW96-03	Ty Property	n/a	n/a	n/a
TW96-04	Ty Property	n/a	n/a	n/a
TW96-05	Ty Property	n/a	n/a	n/a
TW96-06	Ty Property	n/a	n/a	n/a
TC96-01	Wolverine Upper Core Racks - Palletized	n/a	n/a	n/a
TC96-02	Wolverine Upper Core Racks - Palletized	n/a	n/a	n/a
TC96-03	Wolverine Upper Core Racks - Palletized	n/a	n/a	n/a
TC96-04	Wolverine Upper Core Racks - Palletized	n/a	n/a	n/a
PR97-01	Wolverine Upper Core Racks - Palletized	n/a	n/a	n/a
PR97-02	Wolverine Upper Core Racks - Palletized	n/a	n/a	n/a

7.0 STATEMENT OF EXPENDITURES

I, Andrew J. Turner as agent for Westmin Resources Limited, #904-1055 Dunsmuir Street, Vancouver, B.C. do solemnly declare that a program consisting of diamond drilling was carried out on the FOOT 1 - 20, 37 - 80, 83 - 94, 180 - 188, 215 - 231, 11A - 12A, KINK 3, LOW 13 - 14 claims between 13 May, 1997 and 21 September, 1997.

The following expenses were incurred during the course of the diamond drilling project which occurred between May 1, 1996 and September 21, 1996.

WOLVERINE	
Item	**Cost**
Linecutting	$2,527.00
Diamond Drilling	$596,133.00
Bulldozing	$28,938.00
Labour	$381,532.00
Helicopter	$113,306.00
Camp Expenses	$168,005.00
Geochem-Assays	$113,952.00
	$1,404,393.00
Number of metres Drilled	5,512
Cost Per Meter	**$254.78**

STRATIGRAPHIC	
Item	**Cost**
Linecutting	n/a
Diamond Drilling	$865,538.00
Bulldozing	$10,479.00
Labour	$85,788.00
Helicopter	$154,081.00
Camp Expenses	$253,274.00
Geochem-Assays	$67,889.00
	$1,437,049.00
Number of metres Drilled	6,341
Cost Per Meter	**$226.64**

Note: Figures taken from the Westmin Resources Dec. 31, 1997 Statements of Expenditures. Average costs per meter used to calculate cost of each drill hole.

And I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

Declared before me at Vancouver in the Province of British Columbia this 17 day of ~~February~~ March, 1998.

Andrew J. Turner, P.Geol., Project Geologist

8.0 STATEMENT OF QUALIFICATIONS

I, Andrew J. Turner of #302, 1144 St. George's Avenue, North Vancouver, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Geologist in the employ of Westmin Resources Limited with offices at #904-1055 Dunsmuir Street, Vancouver, British Columbia.

2. THAT I have practiced my profession with various mining companies in Alberta, Ontario, the Northwest Territories, and the Yukon Territory for eight years.

3. THAT I am a graduate of the University of Alberta (1989) and hold a Honors Bachelor of Science Degree in Geology.

4. THAT I have been registered as a Professional Geologist with the Association of Professional Engineers, Geologists, and Geophysicists of Alberta (APEGGA) since 1994.

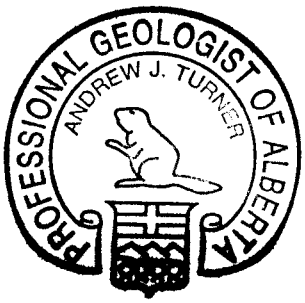
5. THAT I am a member of the Prospectors and Developers Association of Canada, and the British Columbia and Yukon Chamber of Mines.

6. THAT this report is based upon work on the property that I have either personally conducted or supervised between May 1 and October 1, 1997.

DATED at Vancouver, British Columbia this 17 day of March, 1998.

Andrew J. Turner, P. Geol.
Project Geologist

Professional Seal



I, David A. Terry of 1568 Maplehurst Circle, Burnaby, in the Province of British Columbia, DO HEREBY CERTIFY:

1. THAT I am a Project Geologist with Westmin Resources Limited with offices at #904-1055 Dunsmuir Street, Vancouver, British Columbia.

2. THAT I have practiced my profession with various mining companies in Ontario, Quebec, British Columbia, Yukon, the United States, and Argentina for nine years.

3. THAT I am a graduate of the University of Western Ontario and hold a Bachelor of Science in Geology (1988) and a Doctor of Philosophy in Geology (1997).

4. THAT I am a member of the Prospectors and Developers Association of Canada, the Geological Society of America, and the Society of Economic Geologists.

5. THAT this report is based on property work I personally supervised between May 1 and October 1, 1997.

6. THAT I have no direct interest in the property described herein, nor do I expect to receive any interest.

DATED at Vancouver, British Columbia this 17 day of March, 1998.

David A. Terry, Ph.D.,
Project Geologist

1997 SUMMARY REPORT ON THE FOOT 1 - 20, 37 - 80, 83 - 94, 180 - 188, 215 - 231, 11A - 12A, KINK 3, LOW 13 – 14

9.0 DRILL LOGS

VOLUME 2



RAPIDEX

Drill Logs

Deposit Holes:

74	79	84	90	99
75	80	86	94	100
76	81	88	95	
77	82	89	97	

Strat Holes

73	87	96
78	91	98
83	92	
85	93	

WV97-73

WV97-74

WV97-75

WV97-76

WV97-77

WV97-78

WV97-79

WV97-80

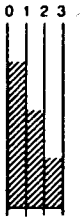
PostFax
MONTREAL, H1J 2K9
CR213-8RD

EQUITY ENGINEERING LTD.

DRILL LOG

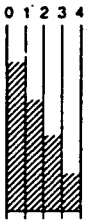
PROJECT: WOLVERINE STRATIGRAPHIC	GROUND ELEV.: 1440 m ASL
HOLE NO.: WV-97-73	BEARING: 212° Az (GRID SOUTH)
LOCATION: L1400E / 15145N	DIP: -55°
	TOTAL LENGTH:
LOGGED BY: DAVID GALE	HORIZONTAL PROJECT:
DATE: MAY 15 1997	VERTICAL PROJECT:
CONTRACTOR: BOISVENU	
CORE SIZE: NQ	
DATE STARTED: MAY 13, 1997	
DATE COMPLETED: MAY 24, 1997	
DIP TESTS:	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS % core recovery is calculated for each unit and is shown at the beginning of the specific interval.

Geological Summary

→ Initial 150m consists of an extensive zone of fault gouge, interspersed with units of andesite and rhyolite fragmentals.

→ 150m-190m is comprised of massive aphyric rhyolites with interbedded fragmental units.

→ 190-260 - A number of exhalitive horizons are observed. Four separate magnetite iron formations occur above a carbonate-pyrite exhalite. Massive rhyolite + argillite are interbedded between these exhalite units.

→ 260-360 - Bottom section of hole consists of argillaceous rocks that vary in the amount and size of fragments. Argillites are dominantly tuffaceous with some units having lapilli size fragments. Qtz eyes sporadically observed with argillite package.

Mineralization

→ 0-170 - no significant mineralization

→ 170-385 - Trace to 1-2% pyrite with the exception of the carbonate-pyrite unit that has 4% pyr

Alteration

→ No obvious alteration patterns. Weak association of sericite (weak-moderate) alteration with the exhalite units, both below and within the respective units.

LEGEND

- Structure - fault gouge
- Felsic volcanic
- Intermediate volcanic
- Intermediate tuff
- Interbedded rhyolite + argillite
- Felsic fragmental
- Argillaceous fragmental
- Massive Argillite
- Qtz vein
- Magnetite iron formation
- Carbonate-pyrite exhalite

PAGE 1 OF 34 | PROJECT: | HOLE NO. WW-93

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A chl	B ser	C ep	D carb	E	FRACTURE INTENSITY	% VEIN QTZ.
5				0 - 5.4 m DHCS Casing							
6											
7	20%			5.4 - 30.2 m STGG Fault gouge for almost entire section. Preserved sections of core shows a light to dark green colour and a weak to moderate banding. Minor calcite veins are present in rock chips and preserved rock.							
8											
9											
10				11.3 - 11.9 m : Solid piece showing a very weak banding with 0.5 - 1.5 cm size chlorite blebs in a light green (chlorite-epidote) matrix							
11											
12				24.1 - 24.3 : Moderately banded, brownish-green rock with minor calcite veins 0.3 - 1.5 cm thick. Banding makes a 90° angle with the core axis.							
13											
14				20% core recovery over 5.4 - 30.2 m interval.							
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											

PAGE 2 OF 34	PROJECT:	HOLE NO. WU-93

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 3 OF 34 | PROJECT: | HOLE NO. WV-13

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
28												
29												
30			45°									
31												
32												
33	90%			30.2 33.5m ADMS	Light green, weakly to moderately banded, weakly amygdaloidal andesite. Rock dominantly consists of chlorite (+/- epidote). When present, amygdules are filled with calcite.							
34			45°		Some intervals show a weakly developed fragmental texture. Fragments consist of andesite with minor argillite (3-5%) separating the fragments.							
35					0.2-1.3 cm wide calcite veins dissecting the rock							
36												
37					Banding makes a 45° to core axis							
38			45°		~90% core recovery							
39	39%			33.5-38.1 STGG	Chloritic fault gouge with pods of qtz + calcite. Rock chips in this shattered zone are argillaceous in composition							
40												
41												
42												
43	90%			38.1-46.3 ADMS	Light green, weakly to moderately banded andesite with 1-3% amygdules that are filled with calcite. Rock is rich in chlorite and veins of calcite. Veins vary 0.4-1.5cm in width.							
44												
45			40°		Top 20cm of this intermediate volcanic flow consists of 1-4cm sized andesitic fragments in a black, argillaceous matrix. This rock grades into a massive andesite.							
46												
47												
48					Fault gouge and rubble are present over a number of intervals: 42.17-42.37; 44.5-44.8							
49												
50					Minor fragmental texture (andesitic frags in a minor argillaceous matrix) developed at base of flow.							

PAGE 4 OF 34 | PROJECT: | HOLE NO. WH-73

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
27										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42		42.37	44.37	2m	172501					
43										
44										
45										
46										
47										
48										
49										
50										

PAGE 5 OF 34 | PROJECT: | HOLE NO. WW-13

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
51					Core angle with andesite varies from 45° at top to 40° at base							
52					90% core recovery over the interval (38.1-46.3)							
53	19%			46.3-55.6 STGG	An extensive fault zone with very poor core recovery. 1.5 m below the andesitic flow, core consists of rock chips of argillite + andesite. Below this, green/black gouge zone ("chloritic paste").							
54												
55												
56		LOST CORE		55.6-57.6 DHLC	Lost core							
57												
58				57.6-66.5 STGG	Same as 46.3-55.6 (see above)							
59												
60												
61												
62												
63												
64												
65												
66	65%		40	66.5-72.95 RHAT	Argillaceous rhyolite fragmental. Rock consists of ~60-75% aphyric siliceous fragments in a carbonaceous black argillite matrix. Siliceous fragments are 0.5-3.5 cm in size and are assymetrically folded. The moderately developed foliation is axial planar to these folds.							
67												
68												
69					Foliation is 40° to CA							
70					Moderately calcareous throughout unit							
71					Core gets extensively broken up in lower 1m of interval but the Rhyolite fragmental is still observed in the rock chips. Core recovery is 65%							
72			40									
73												

PAGE 6 OF 34	PROJECT:	HOLE NO. WU-13

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
51										
52										
53										
54										
55										
56										
57										
58										
59										
60										
61										
62										
63										
64										
65										
66 Trace pyrite (<1%) is present on isolated foliation surfaces and in clots in between the 67 foliation. Minor 0.1-0.3cm wide pyrite veins transverse to foliation. Veins are not continuous; app 1-3cm 68 in length.		66.5	68.5	2m	172502					
69										
70										
71										
72										
73										

PAGE 7 OF 34 | PROJECT: | HOLE NO. WV-13

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Fp)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
74	50%			72.95–82.1 RHAT: Entire box of rock chips and lesser amounts of fault gouge. Upper 1 m of this interval consists of brecciated RHAT (see above description). Rock chips within this interval that are 4–6 cm in size show the Rhyolite fragmental texture. Bull quartz fragments also present.							
75											
76											
77											
78				82.1–92.0 STGG: From 82.1–92.0 it is all fault gouge. Just a thick to tanned-coloured mud or paste.							
79											
80											
81											
82											
83											
84											
85											
86											
87											
88											
89											
90											
91											
92	90%		50	92.0–93.9 ARRT: Aphyric, light grey siliceous fragments in a black carbonaceous matrix. Core is fragmented + broken over this interval, but still can recognize original rock. Siliceous fragments are 0.3–3 cm in size, are angular, and comprise 40–60% of the rock. This rock is the same as the RHAT above, only fewer rhyolite fragments.							
93											
94	90%										
95											
96											

PAGE 8 OF 34	PROJECT:	HOLE NO. WV-73

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
~~74~~										
~~75~~										
~~76~~										
~~77~~										
~~78~~										
79 2 Coarse grained veins of pyrite observed in										
80 2 separate siliceous (rhyolite?) rock chips. Veins are 0.5 cm in width										
~~81~~										
~~82~~										
~~83~~										
~~84~~										
~~85~~										
~~86~~										
~~87~~										
~~88~~										
~~89~~										
~~90~~										
~~91~~										
~~92~~										
~~93~~										
~~94~~										
~~95~~										
~~96~~										

PAGE 9 OF 34 | PROJECT: | HOLE NO. WV-13

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Ch)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
97					Core angle is 50°. The weak to moderate banding is define by the argillaceous partings between the rhyolite fragments							
98												
99					Core consists of rock chips + fragments. Very poor core recovery							
100												
101												
102				93.7-94.2 RHAT	Siliceous (rhyolite) fragments (angular + flattened in the foliation; 0.3-3 cm in size) in a carbonaceous argillite matrix.							
103												
104					Siliceous fragments are aphyric							
105					Weak carbonate alteration over the interval.							
106					Very weak banding shown by the argillaceous partings. 75° to core axis							
107												
108												
109	30%			94.2-114.0 STGG	Almost two complete boxes of fault gouge. Gouge shows a light brown colour and where rock fragments are preserved, they are siliceous (rhyolite)							
110												
111												
112												
113												
114												
115				114.0-118.57 DHCL	Lost core							
116												
117												
118	28%			118.57-130.8 STGG	Fault Gouge - Recognizable fragments are siliceous (rhyolite)							
119												

LOST CORE

PAGE 10 OF 34	PROJECT:	HOLE NO. WV-13

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 11 OF 34 | PROJECT: | HOLE NO. WV-23

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
120											
121											
122											
123											
124											
125											
126											
127											
128											
129											
130	12%			130.8-140.5 RHAT — Very poor core recovery. Large enough fragments seem to show the siliceous fragments in a dark argillaceous matrix							
131											
132											
133											
134											
135											
136											
137											
138											
139											
140	75%			140.5-140.75 ARRT — Aphyric siliceous fragments (angular, 0.2-2cm, flattened in foliation) in a carbonaceous argillite matrix. Foliation is weakly developed. Fragments app. 40-50% of rock. Core angle cannot be measured due to fragmented core.							
141											
142											

PROJECT:

HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 13 OF 34 | PROJECT: | HOLE NO. W-73

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
143	20%			140.75-149.1 RHAT: Very poor core recovery. The large fragments show the siliceous fragments in an argillaceous matrix. Average fragments are ~3-4 cm in size							
144											
145											
146											
147											
148				149.1-152.1 DHLC: Lost core							
149											
150											
151											
152											
153	55%			152.1-155.14 RHFS: Core extremely broken. Massive aphyric rhyolite							
154											
155											
156	80%			155.14-158.2 STGG: Fault gouge. This interval of gouge is a rusty red colour (Fe content).							
157											
158	20%			158.2-165 RHFS: Very poor core recovery. All rock chips are aphyric and siliceous (rhyolite).							
159				At 164.5: diseminated magnetite forms 3 weakly defined 0.5 cm wide bands in the rhyolite							
160											
161											
162											
163											
164											
165											

LOST CORE

PAGE 14 OF 34	PROJECT:	HOLE NO. WV-73

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 15 OF 34 | PROJECT: | HOLE NO. WU-13

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
166	15%			165.5-170.4 STGG: Fault gouge	Chl	Ser	Ep	Carb			
167											
168											
169											
170											
171	LOST CORE			170.4-173.4 DHLC: Lost core							
172											
173	77%			173.4-174.3 RHFS: Fault Rock fragments are all aphyric rhyolite. Both massive and fragmental textures are preserved in these rock chips. The fragmental rhyolite has a matrix of argillite.							
174											
175											
176				174.3-176.5 STGG: Fault gouge. The rare fragments that are preserved are aphyric rhyolite.							
177	65%										
178			80	176.5-178.17 RHAT: Rock chips are all siliceous argillite with aphyric rhyolite fragments in an argillaceous matrix near base of interval.							
179				Entire interval consists of rock chips; fault!							
180											
181											
182				178.17-179.0 RHFS: Light grey, weakly to moderately banded aphyric rhyolite.							
183											
184				5-10% of the rock consists of 0.3-1 cm bands of dark green-black chloritic/argillaceous material. Much softer than the aphyric rhyolite. Sericite is present within these bands as well. Minor 0.5 cm wide calcite veins.							
185	50%										
186											
187				Core angle is 80%							
188											

PAGE 16 OF 34	PROJECT:	HOLE NO. WV-73

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
166						
167						
168						
169						
170						
171						
172						
173						
174 176.5-178.19 Within the massive aphyric rhyolite, there is 1% pyrite. Pyr is forming 0.1 cm						
175 euhedral to subhedral crystals + small (0.2-0.4cm) stringers within the						
176 foliation planes						
177						
178		178.2	178.85	0.65m	172503	
179 At 178.90-178.91 there is a band of rhyolite		178.85	179.00	0.25m	172504	
that has 2-4% euhedral-subhedral pyrite crystals		179.26	182.6	3.34m	172505	
180 Trace pyrite (1%) forms euhedral to						
subhedral crystals. Also observed in 0.2-0.5						
181 cm. stringers within the foliation plane.						
182 179.26: Pyrite (3%) occurs at the						
183 lower contact of the qtz vein.						
184						
185						
186						
187						
188						

PAGE 17 OF 34 | PROJECT: | HOLE NO. WV-73

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
189			90	179.0 - 179.26 QTVN: Quartz, carbonate, chlorite vein. Contains no foliation							
190											
191				179.26 - 184.8 RHFS: Same as above. Massive rhyolite with no phenocrysts. Weak banding defined by chloritic partings. From 179.5-184.8 core consists of rock chips 3-5 cm in size. All rock chips are composed of the same aphyric rhyolite							
192											
193											
194											
195	90%										
196			65	184.8 - 195.0 ARSI: Dark black, siliceous Argillite. Moderate banding defined by foliation and white siliceous layers 0.1 cm wide.							
197											
198	60%		80	Core angle is 70°							
199				Rock within this interval is broken and fragmented. 189.5 - 189.75: good core is preserved.							
200											
201	75%		75	Upper contact is gradational into the overlying Aphyric rhyolite. Black rock becomes lighter in colour and more siliceous							
202											
203				195.0 - 199.80 EXMT: Greenish-black, moderately banded magnetite iron formation. Banding is defined by alternating green + black layers, with minor veins of quartz. The black layers are composed of magnetite, are 0.2-0.5 cm wide, and make up 15-20% of rock.							
204	35°										
205											
206				The light and dark green bands are composed of silica + chlorite, with disseminated magnetite							
207											
208				>1% hematite in some of the magnetite bands - Core angle is 65° - Near base of interval core is extremely fragmented - 90% core recovery							
209											
210											
211											

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
189 1% pyrite shown as 0.5-2cm long						
190 stringers aligned in the foliation. This		190.0	191.0	1m	172506	
is present throughout the argillite.						
191						
192						
193						
194						
195		195.0	196.5	1.5m	172507	
196		196.5	197.8	1.3m	172508	
197		197.8	201.0	3.2m	172509	
198 1% Pyrite is disseminated throughout thin						
199 unit. It forms euhedral to subhedral 0.1cm		*Note	Sample number 172510 was temporarily misplaced			
200 crystals			and used following 172515.			
201		201.4	203.5	2.1m	172511	
202						
203						
204						
205						
206						
207						
208						
209 Over a 20-30cm interval, core fragments						
210 show 3-8% pyrite on fracture surfaces and						
within the foliation planes. Pyrite only observed						
211 within this zone						

PROJECT:

HOLE NO. WV-73

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
212				199.80-201.3 RHFS	Massive aphyric rhyolite with isolated green and black bands. Band comprise app 10-15% of rock							
213					- The black bands are argillaceous material							
214	95%		80		- Magnetite hematite and pyrite is disseminated throughout unit							
215					- A weak sericitic alteration is present on the foliation plane							
216					- Core angle is 80%							
219					- The contact with the overlying iron formation is conformable and grades into the Aphyric rhyolite							
218				201.3-201.4 STGG	Fault gouge							
219	30%		70	201.4-203.9 EXMT	Silica rich magnetite iron formation. Alternating light grey (felsite) green (chlorite) and black (magnetite) bands.							
220					- The black magnetite bands also contain hematite							
221					- Unit composed of mainly silica at top of interval with 10-20% black magnetite bands and becomes more magnetite rich (50-60%) near base of interval.							
222					- Core angle is 75°							
223					- < 0.1 cm size blebs of magnetite are disseminated over interval. ~1% of rock.							
224				203.9-213.8 RHFS	Massive aphyric rhyolite light grey in colour. Moderate sericite alteration observed on the foliation planes.							
225					- Core is very broken over interval. Fragments are average 2-4 cm size							
226					- Rare fragments show alternating black + white banding, the same as above EXMT unit.							
227				213.8-219.16 EXMT	Same as above but more silica and less chlorite/ magnetite banding. Hematite still present in some of the 0.1-1 cm magnetite bands							
228					- This interval is much more silica rich, with the magnetite and chlorite bands comprising 10-75% of rock.							
229					- Weak sericite + chlorite alteration over interval.							
230					- Moderate banding developed. Core angle is 85°							
231	95%											
232			80	219.16-231.3 ARSI	Siliceous black argillite. Weakly to moderately banded							
233	60%				227.2-227.7: rock fragments composed of 40-50% qtz veins							
234					This interval consists of mainly broken core. Some recovered pieces show a core angle of 70°							

 | PROJECT: | HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
217						
218						
219		213.8	215.8	2m	172512	
220 Trace pyrite (1-2%) observed in fractures						
221 and aligned in the foliation planes						
222						
223		217.1	219.1	2m	172513	
224						
225						
226		219.26	225.2	5.94m	172514	
227						
228						
229						
230						
231						
232 1% pyrite within FXMT, mainly in		231.3	232.27	0.97m	172515	
233 fractures and along foliation planes.		232.27	234.5	2.23	172510	
234 -1-2% pyrite in the RHAR unit. Finely disseminated across interval. 2or3 of the 10cm wide		* Note: Sample 172510 is out of sequence. Used between 172515-172516				
Argillite bands show 3-4% pyrite locally.						

PAGE 21 OF 34 | PROJECT: | HOLE NO. WV-73

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E*	FRACTURE INTENSITY	% VEIN QTZ.
235		QTVN		231.3-235.27 EXMT: Magnetite-Hematite iron formation. Moderately banding defined by black-red (mag-hem) layers and light grey siliceous layers. - The black magnetite rich layers make up 50% of interval and are 0.2-1.5cm thick - Very minor chlorite compared to the other EXMT units above. - Core angle is 80° - The upper contact with the argillite is not observed due to fragmented core							
236											
237											
238											
239	90%										
240	90%		90	231.5-231.53 - Qtz vein - 20% magnetite over the interval							
241				232.27-234.57 RHAR: Siliceous interbanded light grey aphyric rhyolite and black argillite. Composed mostly of rhyolite with minor (10-30%) bands of the argillite - <1% magnetite disseminated across the interval - Core angle is 85°							
242											
243											
244				234.57-234.82 QTVN: - Quartz vein with minor chlorite - Core is extremely broken.							
245											
246		QTVN	90	234.82-235.12 ARST: Black siliceous argillite. - Core is extremely broken							
247											
248	50%			235.12-237.4 RHAR: The same rhyolite/argillite banded rock as above. Rock has an overall light grey colour with 10-15% black argillite layers. - The lower 20cm of interval becomes more argillaceous but is still silica-rich. - Core angle is 75° - Contact with ARST above is marked by broken core.							
249											
250											
251											
252				237.4-239.8 RHFS: Massive aphyric rhyolite with a weakly to moderately developed banding - Core is fragmented and shows very bad recovery.							
253											
254				239.8-240.75 EXMT: Magnetite poor siliceous iron formation. Rock shows a moderately developed banding defined by green and black bands (chl + mag) and light-grey siliceous bands (rhyolite/felsite). ~1% hematite is present across interval, always localized in the mag. bands. - >0.1cm magnetite is also disseminated across interval. - 5-10% magnetite over interval.							
255											
256											
257	75%		70								

PAGE 22 OF 34 | PROJECT: | HOLE NO. WU-73

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
235 <1% pyrite observed along fractures within the FHAR						
236						
237						
238						
239		239.8	240.75	0.95m	172516	
240 <1% Pyrite is present in the EVMT unit and occurs as 0.1-0.8cm euhedral to		240.8	242.8	2m	172517	
241 subhedral crystals						
242 - 1-2% pyrite is disseminated across interval and forms 0.1-1cm euhedral (minor						
243 subhedral) crystals		243.4	245.4	2.1m	172518	
244 - Minor pyrite is aligned along the foliation planes.						
245						
246						
247		246.73	247.25	0.52m	172519	
248 ~ 1% pyr occurs as euhedral crystals (0.2-0.6 cm) across interval						
249		248.26	250.1	1.84m	172520	
250 Pyrite forms massive to disseminated 0.3-0.8cm wide bands within the carbonate exhalite unit.						
251 The bands of pyr. comprise ~3-5% of the unit						
252						
253						
254		254.9	256.7	1.8m	172521	
255						
256		256.41	259.4	2.99m	172522	
257						

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
258			80°	cont'd - weak to moderate chlorite alteration across interval. - core angle is 90° - Once again, the upper contact with the RHFS is fragmented so angle cannot be measured. Appears to be conformable.							
259											
260											
261				240.75-246.3 RHFS Moderately banded, light grey to greenish-green siliceous felsite/rhyolite. - Magnetite is disseminated across interval (1-3%) and reaches 3-5% in rare 0.5-1cm bands. There are no massive magnetite bands. - moderate chlorite alteration present within this interval - core angle is 90° - Hematite also forms blebs, disseminated the same as the magnetite. - Rock becomes dusty in the lower 20cm of interval							
262	25%										
263											
264			60°								
265											
266	90%			246.3-246.73 QTVN Quartz vein with minor chlorite alteration.							
267	50%		65°								
268				246.73-247.25 EXMT Hematite rich - magnetite iron formation 4-7% hematite is disseminated across interval. - Rock is dark-green to grey-green in colour (chlorite + magnetite) with interbedded light grey siliceous layers - moderate chloritic alteration across interval - Magnetite bands forms ~ 10% of rock							
269											
270											
271				247.25-248.26 RHFS - Light grey, weakly to moderately banded aphyric rhyolite/felsite. - Core angle is 90° - Core is broken							
272	80%		55°								
273	40%			248.26-256.41 EXCP - Carbonate - pyrite exhalite - Alternating white (carbonate), light-grey (silica-rich) and pyrite bands. 248.26-250.1: This interval of the exhalite unit consists of ~80% carbonate with minor siliceous bands (10-15%) and pyrite bands with argillite (5%) - 250.1-256.41: This interval of the exhalite unit contains more argillite (40-50%) with carbonate (40%) and pyrite (3-5%) bands - Upper contact with RHFS is gradational - Core angle is 90° at top of interval and changes to 70° at base. - Quartz veins: 255.55-255.570; 256.19-256.25 - Cream coloured iron carbonate also present in lower sections of interval							
274											
275											
276											
277											
278											
279	65%		75°								
280											

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
The EXSP unit contains 0.3-0.8cm wide bands of pyrite that comprise 2-4% of unit. Trace pyrite occurs along fractures.		259.4	262.5	3.1m	172523	
starts at 265.10-265.7 *1-2% pyr; observed as wisps + stringers, and continuous 0.2-0.3cm wide bands aligned in the weakly-developed banding. Bands consist of massive pyrite.						
1% pyr at base of qtz vein. Occurs along fractures and in clots.		265.1	265.7	0.6m	172524	
Trace pyr occurs along fractures and as stringers aligned in the foliation plane						
		268.5	271.95	3.45	172525	
1% pyr. observed along fractures throughout interval						
In association with a qtz vein, bands of massive pyrite are observed over a 5-10cm interval. Bands are 0.3-1cm wide and are within the qtz vein and the argillite. Over the QTVN interval, pyr is about 20-30% of rock. Concentration of veins occurs at 276.90-276.95		279.5	282.2	2.7m	172526	

PROJECT:

HOLE NO. WU-13

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
281				256.41-262.5 EXSP Greenish-grey, moderately banded silica-rich exhalite with minor bands of pyrite. - Generally a silica-rich rock with interbanded green chlorite rich layers. Some sections show a "fragmental-like texture shown by the chloritic layers wrapping around the siliceous sections - Minor carbonate throughout the unit - The silica rich sections show a pinkish colouration - Core angle is 80°							
282	75%										
283			80								
284											
285											
286	65%			262.5-262.90 ARST Black siliceous argillite with 10-15% calcite veining 262.60-262.90 - Quartz vein							
287											
288				262.90-265.10 STGG Black fault gouge over interval							
289	95%										
290			30	265.10-265.7 ARSI Black siliceous argillite with a network (30-40%) qtz veins. Also minor calcite veins - Very weak banding defining 60° core angle - 266.1-266.9 - qtz vein							
291	85%										
292				265.7-266.0 QTVN Quartz vein with minor chlorite							
293											
294				266.0-272.54 ARTF Light grey lapilli size fragments in a black siliceous/carbonaceous matrix. Fragments make up ~5-20% of rock Moderate banding developed over interval, defined by the fragments which are flattened in the dominant foliation. * Core angle is 65° - The argillaceous matrix becomes more carbonaceous (softer) lower in the unit. - Some sections show a weakly to moderately developed chloritic alteration: 268.3-268.8; 270.15-270.45 QTVN: 266.3-266.4; 266.45-266.5; 268.2-268.3; 268.35-268.40; 270.15-270.20; 271.2-271.3							
295											
296											
297											
298											
299											
300				272.54-273.4 RHAT Light grey siliceous lapilli size fragments in an argillaceous matrix. Fragments make up 50-70% of the rock. Average size is 0.5-2cm dia. - Moderate chloritic/sericitic alteration through the rock (very soft) - Core angle is 55°							
301	90%		70								
302											
303											

PAGE 26 OF 34	PROJECT:	HOLE NO. LV-73

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
281						
282		282.2	285.5	3.3m	172527	
283						
284						
285						
286		286.3	289.25	2.95m	172528	
287						
288						
289		289.4	291.3	1.9m	172529	
290						
291 Trace pyrite is observed within the ARRT. It		291.3	295.5	4.2	172530	
292 is mainly aligned in the foliation plane within						
293 thin laminations. Also occurs along the fractures						
- Each of the qtz veins has a trace amount						
294 of pyrite						
295						
296						
297						
298						
299						
300		300.6	301.9	0.9m	172531	
301		301.8	304	2.2m	172532	
302 Within ADTF there is trace pyrite observable						
303						

PROJECT:

HOLE NO. WU-13

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
304	90%	A		273.4-279.5 Siliceous Argillite with 10-20% lapilli-size		B		D			
305		A	70	ARTF siliceous fragments. Frag's are 0.2-1.5 cm dia.							
				- Moderately banding developed							
				QTVN- 276.9-277.1 - qtz vein network through rock within this interval							
306				- Intrusive consists of rock fragments, an accurate core angle							
307				cannot be obtained							
				279.5-282.2 Light grey aphyric rhyolite with sericitic partings							
308				RHFS spaced 0.5-1cm apart							
309				- Between 280.1-282.2 core is extremely fragmented							
				and broken.							
310				- Weak sericitic alteration							
				- Core angle is 75°							
311				282.2-286.3 - Light grey lapilli size (~1cm dia.) fragments in an							
312	50%		90	ARTF argillaceous matrix. Same as above unit.							
				- Matrix is carbonaceous.							
313				- QTVN: 285.5-285.75; 286.0-286.25.							
				- Core angle is 70°							
314				286.3-289.25 Moderately banded, light grey aphyric rhyolite.							
315				RHFS - Very weak sericitic alteration giving a weak green							
				coloration.							
316	65%		80	- Core angle is 70°							
				- Unit develops a fragmented texture in lower 10-20							
317				cm of interval.							
				289.25-289.4 Quartz vein							
318				QTVN							
319			65	289.4-291.3 Black siliceous argillite with little to no fragments.							
				ARSI - Weak to moderate banding is developed.							
320				- Core angle is 80°							
				- 1-2% calcite veins are throughout this interval							
321											
322	95%		90	291.3-301.9 Light grey, lapilli size (1-35cm length) fragments							
				ARTF in a dominantly siliceous black argillite matrix. Most							
323				fragments are flattened in the foliation.							
				Core angle changes from 85° at top of interval							
324				to 70° at the base.							
				QTVN: 291.75-291.85; 292.45-292.5; 292.70-292.75							
325	65%		80	; 295.1-295.15; 296.2-296.45; 297.0-297.05;							
				297.6-297.95; 298.8-298.85; 299.4-299.6							
326				300-300.0							

 | PROJECT: | HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
304 - Trace pyrite occurs along fractures		304.0	304.6	0.6m	172533	
305 - 1-2% pyrite is disseminated throughout unit and appears as "fragment-like" blebs, flattened		304.63	306.63	2m	172534	
306 parallel to all the siliceous fragments. - Trace euhedral pyrite xtls are also present.						
307						
308		308.1	312.6	4.5m	172535	
309						
310						
311						
312						
313						
314						
315						
316						
317						
318 2% pyrite is disseminated throughout unit and is usually (95%) associated with the siliceous fragments. Also seen disseminated		317.3	321.4	4.1m	172536	
319 throughout argillaceous matrix.						
320						
321						
322						
323		322.8	325m	2.2m	172537	
324						
325 324.9 5cm wide band with 2% pyrrhotite occurs as		325.2	327.0	1.8m	172538	
326 1-2mm euhedral to subhedral xtls. These xtls are not flattened in the foliation.						

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION Chl A	Ser B	Ep C	Carb D	E	FRACTURE INTENSITY	% VEIN QTZ.
327				Cont'd	Fault gouge: 295.8-296.15; 297.2-297.3; 297.75-297.85; 300.4-300.5							
328					Note: Each section of fault gouge is associated with one of the numerous qtz veins.							
329					- A weak to moderate carbonate alteration is present within this unit. Some (10-20%) of the lapilli-sized							
330			75		fragments are calcareous and there is 10-15% carbonate veining.							
331												
332				301.7-304.63	Grey-green to greenish-brown, moderately banded							
				ADTF	intermediate tuff. Tuffaceous to lapilli size fragments							
333					40-60% of rock, increasing to 70-80% in some areas.							
					- Rock unit is moderately altered by sericite + carbonate.							
334					The fragments are mostly calcareous and the matrix							
					consists of carbonate + sericite.							
335	65%				- 60-70% of tuffaceous fragments are 0.1-0.3cm in size,							
					with 30-40% increasing to 0.5-3cm. All lengths							
336					are measured in the foliation plane that has flattened all							
					fragments.							
337					- Upper contact with the ARTF is a fault gouge:							
					301.7-301.77 m							
338					- Core angle is 70°							
339				304.63-312.90	Black, moderately banded siliceous argillite with							
				ARTF	2-15% white, siliceous fragments. Some sections are							
340					comprised of up to 40-50% siliceous fragments.							
					- All fragments are intensely flattened in the foliation.							
341					They range 0.3-3.5 cm in length.							
					- Argillite is siliceous with some carbonaceous (softer)							
342			70		sections.							
					- Unit also contains 3-5% carbonate veins.							
343					- Core angle is 70° at top of unit and changes to							
					90° at base.							
344												
				312.90-316.7	Interval consists of a "black paste" that is							
345				STGG	indicative of the argillaceous precursor. Isolated							
					centimetre scale sections show the original ARTF rock.							
346					QTVN: 313.00-313.1 m							
347	50%		80	316.7-322.7 m	Same unit as above (304.63-312.90). The difference							
				ARTF	lies in the argillaceous matrix which is carbonaceous							
348					(softer) instead of siliceous.							
					- No carbonate in this unit.							
349					- Core angle changes from 90° at top of unit, to							
					65 in middle, and then to 90 at base							

 PROJECT: HOLE NO. WN-13

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
327 2% pyr disseminated throughout unit (ARTF); <1mm-2mm in size, always flattened in foliation. 2-4% of the white siliceous fragments contain up to 30-40% pyrite.		327.0	333	6m	172539	
328						
329						
330						
331						
332						
333						
334						
335		335	336.4	1.4	172540	
336						
337						
338						
339						
340		340.2	343.6	3.4	172541	
341						
342						
343						
344						
345						
346						
347		347.4	353.3	5.9	172542	
348 1% pyr disseminated throughout ARGE. 02-1cm pods + stringers flattened in foliation						
349						

PROJECT:

HOLE NO. WV-73

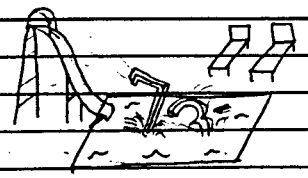
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Cl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
350				Cont'd QTUN : 321.5 - 321.7m							
				STGG : 320.1 - 320.2m ; 321.7 - 321.8m							
351				-At 321.8m - 320.0 - there is a crystal-rich interval. Some blue qtz eyes. Fragments - 50-60% felsic							
				322.7 - 325.0 Black, moderately (and) carbonaceous argillite with							
352				ARCB 5-30% white siliceous bands. This unit is different							
				from above ARTF because the siliceous parts form							
353	15%		80	continuous bands instead of identifiable fragments.							
				- Matrix is very soft, reflecting carbon/graphite content.							
354				- Core angle is 90°							
355				325.0 - 333.00 Black, moderately banded carbonaceous/siliceous							
				ARTF argillite with 5-40% white siliceous fragments that are							
356			75	all flattened in foliation. Frag's are 0.2-3cm in size.							
				- Same as above unit (316.7 - 322.2m). Matrix varies in							
357				carbon vs. silica content.							
				- 35% is preserved core, the rest consists of rock fragments							
358				~2-4 cm in size.							
				- Argillaceous matrix is mostly carbonaceous but becomes							
359				more siliceous over 20-30 cm intervals.							
				- Core angle is 75°							
360											
				333.0 - 335.0 Black fault gouge.							
361				STGG							
362				335.0 - 347.2 Greyish black, strongly banded carbonaceous argillite with							
				ARTF 30-50% tuffaceous (<2mm) size fragments. This unit							
363				is distinctive from previous ARTF's because of the							
				size and percentage of fragments.							
364				- Strong foliation developed throughout internal flattening							
				all fragments and defining a 80° core angle some variation							
365				is shown by the foliation due to folding but core is so							
				friable it cannot be picked up to examine the changing							
366				character of the foliation. In centre of unit, core angle is							
				75°							
367			75	- From 343.9 - 347.2 there is the same tuffaceous argillite							
				but consists of semi-continuous gouge intermixed with							
368				very soft ARTF. 25% of this interval the original friable							
				rock is preserved; the rest is poorly preserved gouge-like material.							
369											
				347.2 - 353.3 Quartz eye bearing argillite with tuffaceous to lapilli							
370				ARQE size siliceous and carbonaceous fragments. Frags - 55-65% of rock							
				- Rock is strongly foliated and has a greyish green colouration							
371				- Weak sericitic alteration + a moderate carbonate alteration							
				- Quartz eyes are 0.1 - 0.8cm in diameter and are							
372			90	weakly flattened in the foliation. Qtz eyes make up 10-15%							
				of fragment population							

 PROJECT: HOLE NO. WV-73

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS			
350 At 350.3 there is a 0.5cm wide band rich in pyr and a reddish brown mineral that									
351 appears to be sphalerite. It was only observed at this location.									
352									
353									
354									
355 - Over the 30m interval of ARTF, there is									
356 1% pyrite disseminated through the rock. The pyr is typically <2mm but rare 1-1.5cm									
357 blebs are observed.									
- <1% of fractures are filled with massive									
358 pyrite.		358.2	360.5	2.3m	172543				
359									
360									
361									
362									
363									
364									
365		365.3	367.3	1.9m	172544				
366									
367									
368									
369									
370									
371									
372									

PROJECT:

HOLE NO. WV-73

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
373				Cont'd - Siliceous and carbonate fragments (~40% of fragments) are 01-1.5cm and are all flattened in foliation.							
374				- Rock is very friable and separates readily along the foliation planes.							
375				- Core angle is 80°							
376				353.3-356.4 Fault gouge of a tuffaceous argillite(?)							
				STGG QTUN 356.0-356.05							
377											
378				356.4-385.3 Entel same unit as ARTF above at 335.0-347.2.							
				ARTF Greyish black strongly banded carbonaceous Argillite with							
379				30-50% tuffaceous (<2mm) size fragments							
				- 5-10% calcite veins							
380				QTUN at 356.56-356.60							
				STGG: 362.4-362.9 - fault gouge intermixed with ARTF							
381				Core angle is 75% at 356.4; 90° at 372.6;							
				90° at 385.3							
382				- Slight variations in rock type are observed across							
				this interval:							
383				356.4-367.7: This is the greyish-black 50%							
				tuffaceous size fragments that has a gritty appearence.							
384				Fragments are rarely greater than 0.2-0.3 cm.							
				367.7-374.3 broken core + fault gouge							
385			90	374.3-376.5: A more massive carbonaceous (black)							
				Argillite with larger lapilli size frags. 0.2-2cm in							
386				size but only making up 5-20% of unit.							
				376.5-385.3 - Back into the "gritty-like" agillite							
387				with 30-50% <0.2mm size fragments in a greyish-black							
				carbonaceous matrix. Minor sections <1cm within this							
388				interval are ARCB (massive carbonaceous argillite).							
				- QTUN: 365.4-365.45; 369.1-369.15.							
389				- STGG: 369.7-369.9							
				EOH							
390											
391											
392											
393											
394											
395											

PAGE 34 OF 34	PROJECT:	HOLE NO. WN-73

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
373										
374		374.5	376.5	2m	172545					
375										
376										
377		377.2	379	1.8m	172546					
378										
379										
380										
381										
382		382.4	385.3	2.9	172547					
383										
384										
385										
386										
387										
388										
389										
390										
391										
392										
393										
394										
395										

PAGE	OF	PROJECT:	HOLE NO. 97-73

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: ~1405m
HOLE NO.: WV 97-74	BEARING: Grid South
LOCATION: L 16450E / 16840 N	DIP: -55°
	TOTAL LENGTH: 151.5m
LOGGED BY: mark Padberg	HORIZONTAL PROJECT
DATE: May 18/97	VERTICAL PROJECT
CONTRACTOR: Boisvenu Diamond Drilling	**ALTERATION SCALE**
CORE SIZE HQ: 0.00 -	0 1 2 3 — absent; slight; moderate; intense
DATE STARTED: May 16/97	**TOTAL SULPHIDE SCALE**
DATE COMPLETED: May 20/97	0 1 2 3 4 — traces only; < 1%; 1% – 3%; 3% – 10%; > 10%
DIP TESTS Sperry-Sun corrected 297' - 283 -58 497' - 236 -60	

COMMENTS

~5m of typical Zn-rich SSMS } 95.64 -
~1m of very Cu-rich SSMS } 101.75m

4/-1m of gerad SSSG-min'n

over 30-40m of strong chl + ser. alt'n

(6.11m @ ~75-80 = 6.0m TT)

LEGEND

- argillite
- quartz vein
- rhyolite
- [illegible]
- fault gouge
- [illegible]
- [illegible]
- [illegible]

PAGE 1 OF 18 | PROJECT: Wolverine | HOLE NO. WV9774

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.	Box #
0				0.00-6.10 CASING								
				DHCS								
6.10				6.10-20.42 OVERBURDEN								6.10
				DHOB								
20.42				20.42-35.66 SILICEOUS ARGILLITE: (Rekn Core)								
				ARSI Si. blk arg. w/ wk pale gr. chlorite band'g. Localized mass py blebs up to 1%.							30	
	13										80	
											80	

PAGE 2. OF 18 | PROJECT: Wolverine | HOLE NO. WV-97-74

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21 Localised mass py blebs up to 1%.										
22										
23										

PAGE 3 OF 18 | PROJECT: Wolverine | HOLE NO. WV9774

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.	ROX #
				(20.42 - 35.66: ARSI cont)								
	17		72	21.50 - 23.47: QTZ. CLASTS:							10	
24				Bull white qtz clst's								
				up to 2cm in diam.								
25				Wk. chl. visible on								
				broken surfaces.								
26				50% qtz / 20% arg. clsts								
	13											
27												
28												
29												
	13											
30												
31												
32	13		71									
33												
34												
35												
35.66	13											
				35.66 - 44.36 APHANITIC RHYOLITE (Brkn Core)								
36	50			RHFS wk -> mod ser alt'd light								36.90
			80	grey/green mass. aphanitic								
37				rhyolite. Thin bands of								
				chl + ser are visible								
38				Fol'n @ 80° to core axis								
	50			Tr. disc. py throughout, localized								
39				impos. blebs (↑ 5%) on frac'd								
				surfaces. Chl'ic alt'n ↑'g downhole								
40												
	50											
41				41.54 - 41.64: STGG - FAULT GAUGE								
STGG			73	~10cm flt. gouge w/								
42				indiscernable U.C., L.C								
	50			@ 70° to c.a.v.								
43			75									
44	50			44.36 - 48.50 BANDED MAGNETIC IRON FORM'N								
44.36			70	EXMT Mod'ly magnetic banded iron form'n.								
45				Thunderhead blue / lt. purple								
	90			colour. Magnetite band'g varies								
46				in thkness from 1 -> 5mm.								

PAGE 4 OF 18 | PROJECT: Wolverine | HOLE NO. WV97-74

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
24										
25										
26										
27										
28										
29										
30										
31										
32										
34										
35										
Tr disseminated py; 36 localised blebs up to 5%										
37										
38										
39										
40										
41										
42										
44		441.36	441.83	47cm	174501					
note: actually only ~50cm of recovered core. (174502)		441.83	418.80	3.97m	174502					
45										
46										

PAGE 5 OF 19 | PROJECT: Wolverine | HOLE NO. WV 9774

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				(44.36-48.80 · EXMT cont)							
				Siliceously (RH?) hosted w/							
	45			tr. finely disseminated py.							
47				F/t'd lower contact. Regional							
				Brkn core							
48	30										
48.80			75	48.80-53.95 FAULT GAUGE							
49				STGG Primarily Arg'eous material,							
	2			grain sizes vary from fine → pebble							
50				clasts. Non-magnetic, non-calcareous							
	2			No vis alt'n.							
51				U C @ 75° to c.a.x.							
	2			L.C. @ 85° to c.a.x.							
52											
	2										
53											
	2										
53.95			85	53.95-55.45 CALCITE-PYRITE EXHALITE							
54				EXCP F.g. pyritic calcite exhalite w/							
	45			up to 80% py. (ex.) content.							
55				Snow wh. aphyric cal. gangue							
55.45			90	Mod fract. intensity / Brkn core							
56	25										
				55.45-60.05 CARBONACEOUS ARGILLITE							
57			72	ARCB Black carb. arg. w/ amygdaloidal (?)							
				calcic stringers (2mm x 5mm in size)							
58	25			Localised "banded" f.g. py (3%)							
				Fol'n is @ 73° to c.a.x.							
59				57.03-57.07: CALCITE VEIN							
	25			c.l vn w/ 1% fine							
60			85	disseminated py. 30%							
60.05											
60.10		DHLC	85	argillite							
61											
61.20			85								
	80			60.05-60.10 QUARTZ-CARBONATE VEIN							
62			74	QCVN 95/5 qtz/carb w/ 1% pyrite							
			85	and argillite in fracturing							
STFL 62.50											
63											
		PHLC(?)									
64				60.10-61.20 LOST CORE							
64.30				DHLC							
	50		50								
65				61.20-62.50 BANDED RHYOLITE LAPILLI-ASH TUFF							
				RHAL Str. cor. / wk'ly chl. alt'd banded							
66				rhyolite lapilli-ash tuff. Cdn. Armed							
				Forces: military green/grey. Fol'n @							
67				74°. F/t'd L.C. @ 55° to c.a.x.							
	50										
68											
69											

PAGE 6 OF 18	PROJECT: Wolverine	HOLE NO. W97-74

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
47 Tr disseminated py.										
48										
49										
50										
51										
52										
53										
54 Fine grained pyritic exhalite (up to 80% py).		53.95	55.45	1.40m	174503					
56										
Localized fg py (3%),										
57 appears banded.										
58										
59										
60 1% py										
61										
62										
63										
64										
65										
67										
68										
69										

PAGE 7 OF 19 | PROJECT: Wolverine | HOLE NO. 96WY74

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
	50			62.50-64.30 LOST CORE / FAULT GAUGE.							
70				DHLC/STGG Very poor core recovery.							
70.35											
71	60			64.30-70.35 SILICEOUS ARGILLITE							
				ARSI Black sil arg w/ localized x-cutting							
72				carb (calcite?) veins 1-2 mm							
				in thickness carb veins x-cut @ 50°							
	60			to c.a.x / localized tr disem. py.							
73											
74 74.00				70.35-74.00 APHANITIC FELSITE/RHYOLITE							
	90			RHFS mod'ly banded w/ ser+chl'ic							
74.80				partings aphanitic rhyolite.							
75				Ash grey colour. Fine disseminated							
	30			tr. py throughout							
76											
				74.00-74.80 QUARTZ VEIN							
77	30			QVN 97/3 % qtz/ankerite vein bull							
				white in colour. Some ank. vis							
78				along frac. planes; creamy beige							
				in colour. Pale blue/green stain's vis along							
79	30			frac. planes as well.							
				74.50: 1% MASSIVE PYRITE BLEB.							
80											
				74.80-95.64 SILICEOUS ARGILLITE							
81	30			ARSI strly calcareous (for first 80cm)							
				siliceous arg, grading from							
82				ash grey to dk blk. in colour.							
				Fol'n @ 65° to c.a.x, mod→wk							
83				ser alt'n.							
84											
	30										
85				85.65-87.94. STGG: FAULT GAUGE							
				Graphitic dk blk flt gouge							
85.65 STGG				w/ indiscernible U.C. (brkn							
86				core). V poor core recovery							
	5										
87											
				87.94-88.10: SILICEOUS/GRAPHITIC ARG							
87.94 88 88.10	90			Dk blk sil/graph arg; v.							
				brittle (poss. extn of STGG?)							
89	5										
				88.10-91.14: STGG: FAULT GAUGE							
90				Very similar to fault inf							
				section above (85.65-87.94)							
	5										
91 91.14											
				91.14-92.00: SILICEOUS/GRAPHITIC ARG.							
92 92.00 STGG	70			Brkn core; sil/graph arg.							

PAGE 8 OF 15	PROJECT: Wolverine	HOLE NO. WV 97 74

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
70 Tr. py. (disseminated)										
71										
72										
73										
74 1% mass py. bleb.										
75										
76										
77										
79										
80										
81										
82										
83										
84										
85										
86										
87										
88										
90										
91										

PAGE 9 OF 18 | PROJECT: Wolverine | HOLE NO. 96WV-74

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				174.80-95.64: ARGILLITE (cont'd)							
				Dk belk; similar to above							
				(87.94-88.10)							
93	2			92.20-92.87: STGG; FAULT GAUGE							
92.37				Lt. blk (recrystln) fine							
94 94.00	100			grained "pinstripe"							
				Broken core U.C., L.C.B.							
95	75			@ V (90° to c.a.x)"							
95.64				93.57-94.22: DCVN: QTZ/CARB VEIN							
1:100 1:50				Blk wsh 90/10 QTZ/carb							
				vn w/ stringer carbs							
				of argillite w/ localized							
				talc blebs. Tr diss py							
97				96.60-97.20: SILICEOUS/GRAPH							
97.25				ARG - Dk blk							
97.82				[illegible]							
				fol'n @ 85° to c.a.x							
98				Qtz vn LC @ 85° to c.a.x.							
				Predominantly sil arg w/ fol'n							
				@ 72° to c.a.x. Disseminitated-							
				pyritic bands occur from 94.22→							
99				95.64. Band's in irregular + width;							
				vary: from 3→10mm. Band's itself							
				are 60% py / 40% wallrock							
100											
				95.64-101.75 MASSIVE SULFIDE							
				SSMS Banded mass sx (py/sph/cpy)							
				w/ fg. "buckshot" py disseminated							
				throughout. 3% chl. blebs. Dominantly							
101				py w/ intermittent sph. banding (10%)							
				cpy footwall, argillaceous arg. interbeds,							
101.75				some coarse re-xtallized py. Localized							
1:50 1:100				x-cutting carb veins + carb bleb							
102				gangue in sx's.							
102.93				→ 95.64-95.90: 60% py / 30% sph / 10% chl.							
103 103.33				Str. py/sp band's, py bands are							
				0.5cm, sph bands are 0.2cm. F.g.							
104 104.00 STFL				euhedral py + sph. 3% chl. blebs							
				sizing 1mm x 2mm. Fine ser + chl							
105				band's w/ gangue. Overall fine banded							
				texture. Band's orient'd @ 85° to c.a.x.							
105.77 STFL 106 106.03 STFL				→ 95.90-96.70: 85% py / 10% gangue / 5% chl.							
				Py-diffuse mass sx, fg euh py x-tals,							
107				1x2mm chl blebs (5%). Calcareous							
				gangue effervescing rapidly w/ 20% HCl.							
107.92				1mm carb vn's @ 30° to c.a.x (96.00m)							
108				3% cpy stringers @ 96.65							
109											

PAGE 10 OF 18 | PROJECT: Wolverine | HOLE NO. WV 97 74

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		85.7	93.6	7.9m	174504	
93		93.6	95.6	2m	174505	
94						
60/40 % py/wallrk bands.						
95 (1cm bands)		95.6	96.2	60cm	174506	
1:100 96		96.2	96.7	50cm	174507	
1:50						
97		96.7	97.3	60cm	174508	
		97.3	97.7	40cm	174509	
98		97.7	98.3	60cm	174510	
		98.3	98.7	40cm	174511	
99		98.7	99.3	60cm	174512	
100		99.3	99.9	60cm	174513	
		99.9	100.5	60cm	174514	
101		100.5	101.0	50cm	174515	
		101.0	101.6	60cm	174516	
		101.6	101.8	20cm	174517	
1:50 102		101.7	102.8	1.1m	174518	
1:100 15 %cpy, 5% py, 3% sph						
103		102.8	103.3	50cm	174519	
104		103.3	104.0	70cm	174520	
		104.0	105.2	1.2m	174521	
105		105.2	106.2	1m	174522	
~1% py		106.2	107.2	1m	174523	
107		107.2	107.7	50cm	174524	
108		107.7	108.8	1.1m	174525	
109						

Descriptive Geology Only *

GEOLOGICAL DESCRIPTION

(95.64-101.75: SSMS cont'd).

ALTERATION: A | B | C | D | E

FRACTURE INTENSITY | % VEIN QTZ.

→ 96.70-97.00: 55% py / 40% sph / 5% gangue. Slightly crsr gr'd 10% py evenly dist. throughout 0.5→2 cm wide sph bands. Fg puritiferous bands are sub-cont. up to 5 cm in width. Gangue remains subly calcareous.

→ 97.00-97.25: 75% py / 15% gangue / 7% sph / 3% cpy. Py has a mass fragmental text. with fg puritic stringers "stockworked" around 1x1 cm fragments. Faint sph. stringer/banding (up to mm in width). Minor cpy blebs occur @ 97.25. Gangue consists of 0.5cm wide arg band @ 97.01 + thin chl'ic bands X-cutting 1mm thk carb. vein @ 97.04 (@ 10° to c.a.)

→ 97.25-97.50: 7cm graphitic arg (97.25-97.32) w/ few siliceous bands. Sil band. consist of 15% mass py. Mass Py+sph bands intermixed w/ 0.5cm sil + <1mm thk chl bands (97.32-97.50). Bands @ 85° to c.a.x.. U.C. of arg band @ 75° to c.a.x.

→ 97.50-99.20: 60% py / 35% sph / 5% gangue / tr cpy. Alternating massive py + sph bands, sph bands range from <1cm → 3cm wide + appear to "fade" in & out with the mass. py acting as host. Tr → 1% cpy blebs occur rarely in sec'n. Gangue mineralogy consists of chl. blebs (3%) + a carb. pod (@ 98.83) w/ in situ 10% chl, 2% py, 1% cpy + tr sph. Coarser recrined (re-crystallized?) py @ 99.00 in a mass sph band. Grains ~1x1mm.

→ 99.20-100.50: 60% sph / 20% cpy / 20% py. Crazy red-sph. / py bands w/ <ph dominating; localized cpy blebs throughout + mass cpy band btwn 99.49-99.51. All Sx's are euhedral w/ py grain sizes being slightly coarser than sph or cpy. Gangue consists of scattered chl blebs + carb blebs. Overall matrix effervesces moderately.

→ 100.50-101.60: 60% cpy / 20% gangue / 10% sph / 10% py/pyrr. Appears as a cpy/py banded text grading to a more mainly cpy

PAGE 12 OF 18 | PROJECT: Wolverine | HOLE NO. W 9774

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				

Descriptive Geology Only *

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (95.64-101.75: SSMS cont'd)	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				mottled text. w/a carb gangue + 10% pyrro. Cpy is fg massive w/ some euh x-tals visible. minor sph/cpy/py bands occur @ top of section (100.50-100.60). Gangue matrix effervesces moderately w/ 20% HCl							
				→ 101.60-101.75: 70% gangue / 25% cpy / 5% pyrr/py, Sil. matrix w/ str. ser alt'n mass cpy appears globular (as if it were melted metal) in veins of the wallrock. Chl. persists as 1x1 mm blebs. Gangue is banded str'ly alt'd ser + chl. Fine grained mass py is also interbanded w/ coarser grained euhedral py + cpy. Tr sph is visible.							
101.75-103.30				SERICITIC RHYOLITE TUFF							
RHST				Str.ly ser. alt'd banded lapilli tuff ser. banding are <1mm thk w/ mas. blebs of cpy, sph, py + pyrro. occuring along ser'it partings. 15% py, 5% cpy, 5% pyrr, 3% sph. Gangue in feldspar phenos. (20%) + chl. blebs (4%).							
				102.90-102.93: MASSIVE CPY TAMS							
				70% cpy / 20% gangue / 10% pyrro							
				F.g'd massive cpy, buttery yellow in colour w/ a sil gangue.							
103.30-104.00				RHYOLITE TUFF							
RHTT				DK. blue rhy tuff w/ carb, chl + sil (qtz) phenocrysts. WK banded to fragmented texture. no vn ex. wkly calcareous. Fit @ L.C. is 80° to c.a.							
104.00-104.20				FAULT - orient'd @ 80° to c.a.							
STFL											
104.20-107.92				SERICITIC RHYOLITE TUFF							
RHST				v thin ser'ic bands (1mm thk) w/ sil. interbands (1->2mm thk). DK forest green grading to a brn/br. 1% py @ 106.00 assoc. w/ x-cutting fractures + ser. bands. Tuff'aceous							

PAGE 14 OF 15	PROJECT: Wolverine	HOLE NO. WV9774

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 15 OF 18 | PROJECT: Wolverine | HOLE NO. WV 9774

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EPI C	CARB D	E	FRACTURE INTENSITY	% VEIN QTZ.
				107.00 - 107.92 : RHST cont'd							
				fracturing are small							
110				109.30 : STFL							
				109.72 : STFL							
111				110.05 STFL							
				WK chl alt'n becoming ~107.00.							
112											
112.40				107.92-112.40 CHLORITIC RHYOLITE LAPILLI TUFF							
113 STGS 113.40				RHCL Str'y chl alt'd rhy lapilli tuff							
				Dk green colour w/ fol'n @ 85° to c.a.							
				Rhy lapilli (0.5 x 1cm in ave size)							
114				well-rounded to lt. blue colour							
				109.22-109.52: 2% q. stringers							
115				" " same fol'n w/ chl							
				bands.							
116				Rare v thin carb bands (@ 25° to c.a.)							
				Amt. of chl. alt'n varies from							
117				intense to strong to intense.							
118				112.40-112.40 SILICATE ARGILLITE							
				ARS.1 Blk sil zone w/ fol'n @ 75° to c.a.							
119				w/ rare wispy <1mm thk sil bands/							
				stringers. Pyrite (5%) band (0.5cm thk)							
120				@ 113.00.							
				112.07-112.12 : STGS - FAULT GOUGE (75° to c.a.)							
121											
				112.40-124.05 CHLORITIC RHYOLITE TUFF							
122				RHCT Fgrnd gr. rhyolitic tuff w/ str. chl							
STSH				alt'n. Both lapilli + ash sized frags							
123				are v.f.g. Frags are primarily qtz (sil)							
				w/ rare carb + fsp (?)							
124 124.05				ser alt'n and chl intensity							
				-gradational downhole (w/ 113.00 → 124++)							
125				V. f.g. py zones w/ ser bands							
KB				@ 118.10. fol'n remains near							
126				70° to c.a. throughout section							
127				122.65 : STSH : SHEARING : Intense							
				chl alt'n + gr. planes							
128				(fol'n) for next ~1m.							
				122.07-122.05. CHEVRON FOLDS. (KB)							
129				Fold axis are @ 55° (r-cut)							
				scale 1:3 CHL to the c.a.r. 2cm down							
130				hole thickness 14cm							
				CHL fld nose + Orig fol'n @							
131				55° CHL 55° to c.a.							
132											

PAGE 16 OF 15 | PROJECT: Wolverine | HOLE NO. WN9714

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
2% py stringers		108.8	109.9	1.1m	174526					
110		109.9	110.8	90cm	174527					
111		110.8	111.6	80cm	174528					
112		111.6	112.4	80cm	174529					
113		112.4	113.4	1m	174530					
114		113.4	114.0	60cm	174531					
115		114.0	115.0	1m	174532					
116		115.0	116.0	1m	174533					
117		116.0	117.0	1m	174534					
		117.0	118.0	1m	174535					
119		118.0	119.0	1m	174536					
120		119.0	120.00	1m	174701					
121		120.0	121.0	1m	174537					
122		121.0	122.05	1.05m	174538					
123		122.05	123.05	1m	174539					
124		123.05	124.05	1m	174540					
125		124.05	125.05	1m	174541					
126		125.05	126.00	95cm	174542					
		126.00	126.90	90cm	174543					
127		126.90	129.5	2.6m	174544					
128										
		129.5	130.9	1.4m	174545					
130										
		130.9	131.85	95cm	174546					
131										
		131.55	132.50	65cm	174547					
132										

PAGE 17 OF 18 | PROJECT: Wolverine | HOLE NO. WV9774

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				124.05-136.00 STRONGLY SHEARED AND ALTERED QFP							
133		QFPH		Canadian Armed Forces eg. strongly chl + ser alt'd + str'ly shr'd							
134				QFP (?). 1x1 mm qtz + fsp pheno's							
				c/o 25% of a chl/ser str'ly fol'd							
135				h.g. Thrust shows most pressure							
136	136.00			fracture due to intense shr'g							
				Intense shr'g has caused							
137				the fabric to vary substantially							
				through core							
				125.70-125.80: KINK BAND FOLD							
138				Axial plane @ 65°, int fol'd							
				fol'n xcuts @ 20° to cax.							
139				(125.75)							
				Fol'n appears locally discontinuous							
140				due to shearing.							
				134.20-134.45: FLT @ 134.20 and 134.45							
141				w/ fol'n btwn the two							
				@ 50° to c.a.x. Core is							
142				v brittle							
				QFPH lower cte is fol'd @ 75° c.a.x							
143											
				136.00-149.22 ARGILLICEOUS RHYOLITE LAPILLI TUFF							
144		RHAT		Very str'ly chl + ser alt'd, v. str'ly							
				shr'd, v str'ly fol'd, brittle							
145				argillaceous rhy lapilli tuff lt. grey							
				to bile/puke green colour, tr.							
146				dis. py vis along ser partings.							
				149.07: X-cutting micro-sheer w/							
147				carb vein displacement							
				(drag) of 1cm vis. X-cut @ 15° cax							
148											
				149.22-151.49 GRAPHITIC ARGILLITE							
149	149.22	ARGR		Above RHAT grades into a dk							
				grey and ultimately jet black							
150				graphitic arg. Rock contains str'ly							
				sheared and brittle. No vis Sx.							
151											
	151.49										
				E O H							
Lay it flat to rest.											

PAGE 15 OF 18 | PROJECT: Wolverine | HOLE NO. WN 9774

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
133		132.50	133.50	1m	174548					
134		133.50	134.50	1m	174549					
135		134.50	136.00	1.5m	174550					
136										
137										
138										
139										
140										
142										
143										
144										
145										
146										
149										
148										
149										
150										
151										

PAGE OF | PROJECT: | HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.

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DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: 1405 m
HOLE NO.: WW97-75	BEARING: GS. (212)
LOCATION: 16130E 16970N	DIP: -88
	TOTAL LENGTH: 174.5
LOGGED BY: G. Bradshaw	HORIZONTAL PROJECT
DATE: May 21 1997	VERTICAL PROJECT
CONTRACTOR: F. Boisvenu	**ALTERATION SCALE**
CORE SIZE: HQ	
DATE STARTED: May 20	**TOTAL SULPHIDE SCALE**
DATE COMPLETED: May 24	
DIP TESTS	



absent
slight
moderate
intense



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS	LEGEND

PAGE | OF | PROJECT: WOLVERINE | HOLE NO. 97-75

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
8	8.2			0-8.2 CASING DHCS							
9		RHFS		8.2-38.4 LIGHT-DARK GREY APHANITIC FELSITE RHFS - aphyric, very siliceous rock - aphanitic but for tiny (<0.1mm) microlites - 8.2-13.5 - darker grey, mostly oxidized broken core - small argillaceous component. - green mm scale sericitic bands along partings - increases downhole. (2-3%) - badly broken core tht. unit.							
15			60°								
18				18.1-19.8 - 1-2% diss. magnetite crystals within felsite, euhedral - very fine elongate masses. Tr red mineral (poss. hematite) (small mt-poor iron fm ??)							
19			60°								
25				25.3-31.0 broken sericitic massive rhyolite mainly pebbles. 32.6-33.7 - mainly pebbles.							
27			bc								
30											

PAGE 2 OF	PROJECT: WOLVERINE	HOLE NO. 97-75

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
- Tr - <1% diss py, py clotted on foln and fracture surfaces.										

PAGE 3 OF | PROJECT: | HOLE NO. 97-75

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION
					RHFS (cont.)
31			65°		sharp lower contact.
32					
33					
34					
35		RHFS			
36					
37			65		
38				38.4 - 40.5	GREY-BLACK INTERBEDDED ARGILLITE AND
38.4				RHAR	APHANITIC FELSITE - about 75%
39			bc		aphanitic felsite, arg 1-3 cm bands
		RHAR			25% carb. arg, arg 5mm.
40					Bkn. core to 39.3. clear, sharp contacts
40.5					between rhy + arg within unit
41				40.5 - 47.1	GREY MASSIVE APHANITIC FELSITE -
42				RHFS	same as 8.2-38.4 above - weak-
43					moderate sericite along foln,
					broken core at upper contact - but
44			55°		sharp. Lower contact sharp at 60°
45		RHFS			
				47.1 - 49.5	GREY-BLACK ARGILLACEOUS RHYOLITE
46				RHAT	LAPILLI TUFF -
47					1st 20 cm - texture similar to RHFR w/
47.1					wispy sub mm arg bands in a rhyolite
		CG			then amount of arg increases to ~
48		RHAT			30%. - carbonaceous, forms a mtx to
					indistinct bands and ovoid fragments
49					(lapilli) - avg 2-3 mm. Minor sericite.
49.5		EXMT CG.			increasing downhole. Last 40 cm of
50			60°		unit contains distinct siliceous frags
					in a fine sericitic tuffaceous mtx. Sharp lower ct
50.9					
51				49.5 - 50.9	GREY-BLACK BANDED MAGNETITE IRON FORMATION
52		ARTF	bc	EXMT	10 cm band of msv. mt at upper ct.
					Unit well banded on a mm scale
53					

ALTERATION: A CHL | B SER | C EP | D CO_3 | E

FRACTURE INTENSITY | % VEIN QTZ. | % magnetite

PAGE 4 OF	PROJECT:	HOLE NO. 97-75

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
Tr - 1% pyrite disseminated + clotted on foln and fracture surfaces						
- Tr - 1% pyrite diss - clots on foln and fractures.						
- 1% py mobilized into fractures						
		47.9	49.5	1.6	174001	
		49.5	50.2	0.7	174002	
		50.2	50.9	0.7	174003	
about 20% magnetite overall banded to diss, 2-3% diss fine-med grained pyrite throughout		50.9	52.3	1.4	174004	
		52.3	54.0	1.7	174005	

PAGE 5 OF | PROJECT: | HOLE NO. 97-75

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
54	ARTF		DC	EXMT (cont.) - core broken up - irregular fracture surfaces w/ green coating. Mt. occurs as bands - ava 2 cm - as well as disseminations thr. unit. Rock otherwise is a grey aphanitic silica							
54.0											
54.4			70°								
55											
56				local green patchy epidote (50.6 m) lower ct. sharp - broken ore							
57											
58	RHFS			50.9-57.1 ARTF GREY MASSIVE SERICITIC RHYOLITE TO TUFFACEOUS BLACK ARGILLITE broken core through entire unit blocky, siliceous and sericitic (RHFS) from 50.9-51.3 - then broken up argillite w/ sig. tuffaceous comp.							
59											
59.2											
60	ARSI										
60.7				54.0-54.4 - white qv with chlorite w.r. inclusions sharp contacts							
61											
62			DC	54.4-55.5 - broken up core - RHFS + quartz veins minor calcite dark green micaceous inclusions in quartz veins							
63			60°								
64	RHFS			after 55.5, carb. arg but ~15-20% tuffaceous comp. - local RHYT type texture (55.8)							
65				56.8-57.1 - argillaceous quartz zone							
66											
66.5				57.1-59.2 RHFS WHITE-GREY MASSIVE APHANITIC FELSITE "cracked" almost fragmental texture, fairly							
67											
68											
69				59.2-60.7 ARSI GREY-BLACK SILICEOUS ARGILLITE - gradual contact with rhy. ab silica							
70											
71	ARSI		60°	60.0-60.7 irregular silica patches stringers chaotic texture. argillaceous mtx.							
72				60.7-66.5 RHFS WHITE-GREY APHANITIC FELSITE massive, very weak sericite on foln. banded siliceous broken ore to 63.1							
73											
74				63.7-63.0 - broken up white qv w/ a light green-white clay like, soft greasy mineral gradually grades into a more argillaceous unit.							
75											
76											

PAGE 6 OF | PROJECT: | HOLE NO. 97-75

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS			
EXMT (cont.) - trace - 1% specular - crudely oriented hematite - red - red-brown.		54.0	55.0	1.0	174006				
- 1% diss - clotted pyrite local bands up to 2 cm, tr sph (3% total sulphides)									
coarse diss euhedral py. (2%) in quartz vein after vein banded v. fine py up to 2 cm with trace sph - calcareous mtx (exhalative?)									
- 1% diss - clotted fine py									
- <1% f.g. diss py on foln.									
- <1% diss f.g py on foln.									

PAGE 7 OF | PROJECT: | HOLE NO. 97-75

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
77	ARS1		65°	166.5-86.2	BLACK SILICEOUS TO GRAPHITIC ARGILLITE							
				ARS1	black arg w/ up to ~5% tuffaceous bands and indistinct frags - mainly sil, but lx. graphitic							
78					72.4-73.2 - graphitic fault. gouge							
					76.4-78.4 - graphitic fault gouge							
79					81.0-81.4 - graphitic gouge - intact. pale green coating on fracture surfaces minor qv. fragments locally							
80					locally calcareous - discontinuous bands, patches and cross-cutting stringers							
81					Lower contact gradational. last 50 cm are interbedded ARS1 and RHFS. (bands: 2 mm - 1 cm)							
82												
83												
84												
85												
86	86.2			86.2-90.1	GREY-GREEN MASSIVE-BANDED APHANITIC							
				RHFS	RHYOLITE / FELSITE							
87		RHFS	65°		similar to previous RHFS units - very weak sericite on partings, banded appearance silica dominates. Brown bands (~3%) are prob. Fe-carbonate. microlites present							
88					sharp lower ct although minor arg bands are present above.							
89												
90	90.1			90.1-93.2	BLACK SILICEOUS ARGILLITE							
		ARS1		ARS1	very siliceous. ~30% faint grey siliceous bands, patches. Very hard.							
91												
92												
93	93.2			93.2-95.2	GREY MASSIVE RHYOLITE							
		RHFS		RHFS	very siliceous massive non-descript rhyolite. very little sericite. occasional microlites - see next unit (98.6) for more							
94												
95	95.2			95.2-98.6	BLACK SILICEOUS ARGILLITE							
		ARS1	60°	ARS1	gradual contact - argillite but remains very siliceous. Same as 90.1-93.2 above slightly gradual transition into another RHES.							
96												
97												
98	98.6											
99												

PAGE 8 OF	PROJECT:	HOLE NO. 07-75

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
· 2-3% diss py thit. unit often finely diss py within ovoid siliceous fragments.										
· 1% py · diss along fols + fractures										
· 2% fol'n para. streaks of py.										
· 1% py - diss on foln.										
· 3% py - clotted on fractures										

PAGE 9 OF | PROJECT: | HOLE NO. 97-75

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EP C	CO_3 D	E	FRACTURE INTENSITY	% VEIN QTZ.
100	RHFS			98.6 - 117.5 RHFS: GREY MASSIVE-FRAGMENTAL RHYOLITE. Massive silica rock with pervasive green-brownish 1 mm sericite patches + overall sericite in matrix. Microlites occasionally present. Local fragmental texture, sericite increases downhole. Bands become wavy downhole, locally develop fragmental appearance.							
101											
102											
103											
104			65°								
105				Fragmental texture: 111.5 - 113.7							
106				bands not angular normally separate with minor iron carbonate (brown).							
107											
108				somewhat arbitrary lower ct.							
109											
110			50°								
111											
112											
113											
114											
115				115 - 120.2 RHFR: GREY FRAGMENTAL RHYOLITE gradation from RHFS above as texture becomes more fragmental. Fragments defined by green-brown micaceous bands ± pyrite. Rock is still 95% massive silica with occasional microlites. Brown mineral along foln prob. $FeCO_3$. Gradational lower ct.							
116											
117											
117.5											
118			35°								
119											
120				120.2 - 137.2 RHTT: GREY-BROWN FINE GRAINED LOCALLY ARGILLACEOUS RHYOLITE TUFF. variable unit dominantly tuffaceous sized siliceous grains							
120.2											
121											
122											

PAGE 10 OF	PROJECT:	HOLE NO. 97-75

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1% pyrite, disseminated along fdn. recrystalized on fracture surfaces.										
~1% pyrite, f.g. diss. along fdn + fractures.										
<1% diss py on fractures.										

PAGE 11 OF | PROJECT: | HOLE NO. 97-75

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
123	RHTT			RHTT (cont)							
				- actual "grainy" texture as opposed to RHFS. lots of colour variation							
124				- lesser ovoid lapilli sized fragments (3%)							
125				- intermittent argillaceous zones up to 1m - very siliceous. Similar units but just black due to the addition of very fine carbonaceous sediment. (still contain tuffaceous and lapilli frags. gradual contact							
126			55°								
127				- weak sericite altn that as greenish brown mm scale bands para to foln.							
128				- local dark brown bands - patches likely dolomite / ankerite ($FeCO_3$)							
129				- local dark green chloritic patches.							
130				- gradual lower contact							
131				120.2 - 121.1 - ab bands patches of brown $FeCO_3$							
132				121.4 - 132.4 - argillaceous zone							
133				127.7 - 128.5 - $FeCO_3$ + arg + lapilli frags.							
134			60°								
135											
136											
137	137.2			137.2 - 139.3 ARSI: BLACK SILICEOUS ARGILLITE - black with grey siliceous bands - lens shape thk. unit 0.5-5 mms wide many contain diss pyrite. Becomes more graphitic and less siliceous downhole. Gradual l. ct.							
138	ARSI										
139	139.3		5°	139.3 - 162.5 ARGR: BLACK GRAPHITIC ARGILLITE / FAULT GOUGE - very graphitic broken cat and gouge thk unit. Local interbds of siliceous argillite as above.							
140				139.4 - 139.5 - minor graphitic gouge							
141				142.7 - 143.3 - graphitic gouge							
142	ARGR		bc	144.5 - 145.7 - "							
143				locally quite calcareous bands + stringers discontinuous, stretched bands (altered frags?) 1-2 mm thick							
144											
145											

PAGE 12 OF	PROJECT:	HOLE NO. 97-75

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
~3% pynte, banded with silica.										
2% bndd-diss py, fg., on foln + fracture surfaces		139.3	140.5	1.2	174007					
		140.5	143.3	2.8	174008					
		143.3	145.4	2.1	174009					
		145.4	148.1	2.7	174010					

PAGE 13 OF | PROJECT: | HOLE NO.

DEPTH (m) | % CORE REC | LITHOLOGY | STRUCTURE | GEOLOGICAL DESCRIPTION | ALTERATION A CHL, B SER, C EP, D CO_3, E | FRACTURE INTENSITY | % VEIN QTZ.

ARGR (cont.)

146
147
148
149 bc
150
151
152
153
154 ARGR
155
156
157
158
159 bc
160
161
162
162.5 fg
163
164
165
166 FDPH
167
168

60

55

155.1 - 155.3 · graphitic gouge.

158.0 - 162.5 - ab gouge + lost core
HANGING WALL to WOLVERINE ORE ZONE - no sulphides! - sharp contact here with sericitic FDPH.

162.5-178.0 FDPH

GREY MASSIVE FELDSPAR PORPHYRY
very sharp upper contact
162.5 - 163.5 - intense sericite alteration, very deformed - looks similar to a sericitized rhy. lapilli tuff in the immediate FTWL of wolverine. Contains stretched ovoid white feldspars within a fine siliceous groundmass avg size 2x5 mm. pervasive sericite as 1-3 mm pale green-grey bands.

ORE HORIZON

163.5 - 178.0 - deformation and intense alt'n subsides gradually and at 163.5 unit is clearly a massive porphyry. (first meter may be the deformed margin of an intrusion)
- 10-15% angular-subrounded (some rectangular) feldspar phenocrysts avg size 5x5 mm. up to 1x2 cm.

PAGE 14 OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		148.1	151.5	3.4	174011					
		151.5	154.5	3.0	174012					
		154.5	157.0	2.5	174013					
		157.0	160.6	3.6	174014					
		160.6	161.5	0.9	174015					
		161.5	162.5	1.0	174016					
		162.5	163.5	1.0	174017					
2-3% diss-bndd py, ass wl silica bands or diss along foln.		163.5	164.5	1.0	174018					
		164.5	166.7	2.2	174019					
		166.7	168.6	1.9	174020					

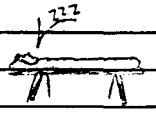
PAGE 15 OF | PROJECT: | HOLE NO. 1225

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
169		FDPH		FDPH (cont.)	crystals commonly twinned. Black crystals the same size and shape as the feldspars are probably altered feldspars - Ti-oxide ??							
170			55°		- Groundmass varies in colour from light - dark grey, but is invariably siliceous and fine grained. Sericite occurs thi as pale green miraceous bands on foln but is weak. (muscovite?)							
171												
172												
173												
174					very sharp lower contact with argillite							
175												
176					Unit likely a hypabyssal intrusive - with a deformed margin.							
177												
178	170	AR	60°									
179					178.0 - 178.6 ARMS BLACK MASSIVE ARGILLITE broken up msv. arg, moderately carbonaceous. sharp contacts.							
180												
181		FDPH			178.6 - 182.7 FDPH GREY MASSIVE FELDSPAR PORPHYRY same as above (162.5 - 178.0)							
182					178.6 - 178.9 · wht. quartz vein. 180.7 · end of large feldspar phenos 180.7 - 182.7 · fine grained siliceous sericitic matrix only wl ab quartz veining - usually irregular ~ 30% of rock qtz vein at shrp. lower ct.							
183												
184												
185					182.7 - 189.9 RPTF GREY-DARK GREY QUARTZ FELDSPAR BEARING RHYOLITE CRYSTAL TUFF							
186			50°		- mainly a darker grey, fine grained clastic texture, slightly different from the porphyry above.							
187					- 185.8 - 188.1 - lighter grey more crystal rich interval - may be FDPH again - but prob. part of RPTF due to presence of quartz eyes and lack of large feldspar phenocrysts.							
188												
189												
190					- unit consists of ~ 3% quartz eyes (blue 1-2 mm) and ~ 2% feldspar							
191												

PAGE 16 OF	PROJECT:	HOLE NO. 97-75

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
<1% fine diss. pyrite										
- 2-3% diss-bndd py										
- 2-3% fine banded py py banding - 184.3-184.5										

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
192	ARCB/STGG			crystals (white rectangular, 1-2mm) in a fine grained light-dark grey moderately-weakly sericitic siliceous matrix. Possibly a small arg. comp shrap l.rt. w/ gauged up argillite							
193											
194											
				189.9-194.5 ARCB/STGG GREY-BLACK CARBONACEOUS ARGILLITE/ FAULT GOUGE. - grey-black argillaceous gouge foln para to strs in intact pieces, min. hfn. qtz vns. 2% fine grained banded py (up to 5mm)							
195											
196											
197				193.2-194.5, more graphitic than above.							
198											
199				194.5 - EOH  PITB							
200											

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: ~1420m
HOLE NO.: WV 97 76	BEARING: Grid South
LOCATION: L 16500E / 16790N	DIP: -90°
	TOTAL LENGTH: 151.49 m
LOGGED BY: [illegible]	HORIZONTAL PROJECT:
DATE: May 21/97	VERTICAL PROJECT:
CONTRACTOR: Boyd's Diamond Drilling	**ALTERATION SCALE**
CORE SIZE: HQ	0 1 2 3 — absent; slight; moderate; intense
DATE STARTED: May 20/97	**TOTAL SULPHIDE SCALE**
DATE COMPLETED: May 22/97	0 1 2 3 4 — traces only; < 1%; 1% – 3%; 3% – 10%; > 10%
DIP TESTS:	
COMMENTS:	LEGEND: rhyolite; RHAR; quartz vein; fault gouge; calcite exhalite; argillite; massive sulfide intersection

PAGE 1 OF 16 | PROJECT: Wolverine | HOLE NO. W99776

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				0.0-1.2 CASING							
				DHCS							
				1.20-12.80 RHYOLITE FLOW.							
				RHFL Wkly chl banded aphanitic rhy flow. Atlantic fog grey w/ x-cutg natural fractures causing moderate oxidation on brkn surfaces. Regular (~ea. 3cm) ser partings (<1mm thk) w/ assoc tr. fg py blebs.							
				→ 8.23-9.65: fol'n begin to run // to core axis. Core is brkn w/ poor recovery btwn 9.65-12.60. → Poss. flt. gauge							
				→ 12.80 L.C of rhy is in brkn core							
				12.80-32.00 INTERBEDDED RHYOLITE/ARGILLITE							
				RHAR Interbedded rhy/arg w/ <1% mafic py blebs along chl/ser partings. Partings are <1mm thk + occur intermittently.							
				→ 12.80-21.30: Primarily rhy bands are larger (~2cm thk).							
				→ 14.20-14.30: QTVN: Quartz vein w/ 99% SiO_2 + 1% carb/chl. Fractures show mod ox stain'g							
				→ 15.85-16.10: QTVN: Same as above							
				→ 16.25-16.85: QTVN: same as above							

PAGE 2 OF 16	PROJECT: Wolverine	HOLE NO. WV9776

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1											
2											
3											
4											
5											
6											
7											
8											
10											
11											
12	<1% mass py. blebs.										
13											
14											
15											
16											
17											
18											
19											
21											
22											
23											

PAGE 3 OF 16 | PROJECT: Wolverine | HOLE NO. WV9776

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				(12.80 - 32.00: RHAR cont'd)							
				→ 21.30 - 23.50: Arg. rock w/ fewer sil. bands. Arg. bands dominates. Dk black light grey alternate.							
25				→ 23.50 - 32.00: similar to zone 12.80 - 21.30. ↑'d mass py blebs along fractures + partings (2-3%, py) (Rhythmic cm-scale foliation)							
27			60								
28											
29											
30											
31			70								
32	32.00		50	32.00 - 50.80 RHFS: APHANITIC FELSITE / RHYOLITE. Grey aphanitic rhy w/ regular (cm thick) felsic bandings 1mm thk. mod. ser. alt'n. Rare mass pyritic blebs, <1% of surface of fractured planes. Localized tr dolomite in fractures (creamy carb powder effervesces w/ 20% HCl) wkly chl. alt'd → core shows wk regions of dark chloritic green. Fault gauge @ lower contact.							
33											
34											
35											
36											
37			65								
38											
39				→ 39.95 - 40.15: STGG - FAULT GAUGE. Coarse grained rhy. w/ vfine ser/chl. pasty mush							
40	39.95 → 40.15 STGG		80								
41	41.00 STGG		70	→ 41.00 - 41.20: STGG - FAULT GAUGE. Same as STGG above.							
42											
43											
44	44.20		70	→ 44.20 - 50.50: V rare to trace fine sgd sulph dissem. not. Py							
45											
46											

PAGE 4 OF 16	PROJECT: Wolverine	HOLE NO. WV9776

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
24 2% mass py blebs along partings + fractures.										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37 Rare → <1% mass py blebs.										
38										
39										
40										
41										
42										
43										
44 Tr diss fine gr'd euh py										
45										
46										

PAGE 5 OF 16 | PROJECT: Wolverine | HOLE NO. WV9776

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (120.00 - 50.90: RHES cont'd)	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
47											
48											
49											
50				→ 50.50 - 50.90: Brkn core w/ ↑'s argillaceous - graphitic content. Dk black w/ wispy siliceous bands. Becoming even more graphitic downhole.							
50.90											
51 STGG											
52											
53											
54				50.90 - 59.43 FAULT GAUGE STGG Dk blk graphitic rich flt gauge grading downhole to greyish-green chloritic rich siliceous gauge. Brkn core @ lower contact							
55											
56											
57											
58											
59											
59.43			BK								
60			70	59.43 - 68.90 CALCITE EXHALITE. EXCP Light purplish blue w/ cream, carbonic rhythmic mm-scale banding. Strong carb alt'n, effervesces rapidly w/ 20% HCl. Non-magnetic, tr → 1% fine grd. disseminated euhedral py. Localized x-cutting carb veins. WK chl banding + alt'n							
60.55			PB C								
61											
62											
62.75			55								
63	63.15		85								
64				→ 59.65: STFL: FAULT Flt @ 70° to c.a. x-cutting micro fault showing lem displacement of fragment.							
65			70								
66	66.35		75	→ 59.90 - 60.55: STGG: FAULT GAUGE → 62.75 - 63.29 STGG: FAULT GAUGE → 66.35 - STFL - FAULT Flt @ 75° to c.a.							
67											
68											
68.90											
69			UNC								

PAGE 6 OF 16	PROJECT: Wolverine	HOLE NO. WW 9776

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
47										
48										
49										
50										
51										
52										
53										
54										
56										
57										
58										
59										
		59.43	59.83	40cm	174702					
60 tr -> 1% fine grained euhedral disseminated py.		60.55	60.96	41cm	174703					
61		60.96	62.75	1.79m	174704					
62										
63		63.10	65.25	2.15m	174705					
64										
65		65.25	68.15	29m	174706					
66										
67										
68		68.15	68.90	75cm	174707					
69										

PAGE 7 OF 16 | PROJECT: Wolverine | HOLE NO. WV9776

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
69.97											
				69.20-69.97 QUARTZ-CARBONATE VEIN							
				QRVN 3 cm. 50/50 qtz/carb vein w/ stringers of host fracturing. Chl blebs (1x2 mm) are found locally. Also tr talc (v soft green mineral) found in fractures. Fg py blebs (1x1 cm) are also found locally (total vn <1% py). UC is undulatory, LC @ 80° to c.a.x.							
72.20			BC								
74.10			EC								
				69.20-69.97 TUFFACEOUS ARGILLITE							
				ARTF Str'ly sericitized tuffaceous arg w/ chy. lapilli 0.5x3 cm in size. Str. chl alt'n as well. Strong fol'n @ 60° to c.a.x.							
75.30			BC								
				→ 69.37-69.50: STGG: FAULT GAUGE Dk black graphitic arg gauge							
78.30			75								
78.45			75								
				69.97-72.20 GRAPHITIC ARGILLITE							
				ARGR Graphitic jet black argillite w/ wk carb alt'n. Fol'n @ 80° c.a.x. Flat lower contact. Wispy cal. bands (<1mm thk).							
81.00			70								
				72.20-75.30 MODERATELY SERICITIC RHYOLITE							
82.40			70	RHFS Ser. pervasive in a grey chy. cause the core to be uncohesive. Tr fine grained diss py. wk chl alt'n							
83.48			70	→ 72.20-74.10: STGG: FAULT GAUGE Qtz/ser content (rubbly)							
84.90			70								
85.00			70								
85.30			70	75.30-94.15 GRAPHITIC ARGILLITE							
				ARGR Black graphitic arg w/ wk to regionally mod → str carb alt'n. Thin wispy cal stringers throughout							
87.46			70	→ 78.30-78.45: STGG: FAULT GOUGE Pebbly graphitic							
				→ 75.45-75.55: QRVN: QTZ/CARB VEIN 70/30% qtz/carb tr blebby py							
			70	→ 78.55-91.00: STGG: FAULT GOUGE Very graphitic (pebbly)							
90.83			70	→ 82.40-82.48: STGG: FAULT GAUGE same as above							
91.70			70	→ 74.90-95.00: STGG: FAULT GOUGE:							
92											

PAGE 8 OF 16 | PROJECT: Wolverine | HOLE NO. WV9776

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
70										
71 <1% py in QV										
72										
73 Tr fine grained disseminated py										
74										
75		75.30	78.30	3m	174708					
76										
77										
		78.30	81.40	3.10m	174709					
79										
80										
81										
		81.40	85.10	3.70m	174710					
82										
83										
84										
85		85.10	87.48	2.38m	174711					
86										
87										
		87.48	90.53	3.05	174712					
88										
90		90.53	91.50	97cm	174713					
91										
		91.50	94.15	265	174714					
92										

PAGE 7 OF 16 | PROJECT: Wolverine | HOLE NO. WV 9776

(75.30-94.15: ARGR cont'd)

93.45 — 95.10 — 95.75 — 96.88 — 98.18 — 99.37

94.15-95.10 MASSIVE SULFIDE (95cm)

CSMS Sph/py rich irregular bounded mass sx w/ carb. gangue. Overall fg mass py w/ fragmental coarser (recrystallized?) sulphide mass sph bands 1x1mm rich bands thru-out, wk carb. alt'n

→ 94.15-94.34: Fault'd n.c. (Gauge @ ~30° c.a.) 75% py / 15% sph / 10% gangue. Faint v wisp sph in massive py. A few sph rich barely undulatory bands

→ 94.17-94.15 Calcareous gangue w/ chl superimposed veinlets 1x2mm

phenos. Py is massive/dis fine grained euhedral sparkling x-tals

→ 94.24-94.42: 85% sph 10% py, 5% gangue / mass sph band c/w "frayed" wispy upper + lower cts. Band is orient'd @ 70° c.a.x. Fine grained euhedral py is diss throughout.

→ 94.42-94.60: 50% py / 40% sph / 10% gangue Rhythmically banded 0.5->1.5 mm py/sph band w/ wkly diss chl blebs + relic blebs/stringers. F.g. euh diss py again sparkles over mass x's

→ 94.60-94.62: CAVN: CALCITE VEIN

Snow wh. cal vn x-cutting banding @ 35° to c.a.x.

→ 94.62-94.74: 85% sph / 10% py / 5% gangue mass sph w/ 1mm thin wispy py'ic bands @ 70° to c.a.x. Cal/chl rich gangue diss throughout. Py bands are mass w/ diss f.g.'d euh x-tals

→ 94.74-95.10: 20% py / 15% sph / 5% gangue / tr. cpy. Irregular wispy sph banding on mass. py'ic matrix w/ faint dk. chl 1-2mm bands assoc. (?) w/ sph. banding. Again f.g. euh. py x-tals are diss + sparkling throughout.

ALTERATION: A CHL | B SER | C EPI | D CARB | E

FRACTURE INTENSITY | % VEIN QTZ.

PAGE 10 OF 16 | PROJECT: Wolverine | HOLE NO. XV 9776

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
93						
94		94.15	94.61	46cm	174715	
massive sulfide		94.61	95.10	49cm	174716	
95		95.10	95.88	78cm	174717	
		95.88	96.88	1m	174718	✓
96						
		96.88	97.29	36cm	174719	
97						
		97.29	97.80	51cm	174720	
		97.80	98.18	38cm	174721	
99 3% cpy/py stringers		98.18	99.67	1.49m	174722	
		99.67	100.57	90cm	174723	
100		100.57	101.57	1m	174724	
101 1% py		101.57	102.60	1.03m	174725	
102		102.60	103.65	1.05	174726	
103		103.65	104.65	1m	174727	
104		104.65	105.65	1m	174728	
105		105.65	106.65	1m	174729	
106		106.65	107.65	1m	174730	
107		107.65	108.48	83cm	174731	
108		108.48	109.48	1m	174732	
		109.48	110.48	1m	174733	
110		110.48	111.60	1.12m	174734	
111		111.60	112.62	1.02m	174735	
112						

1:100 1:50 1:50 1:100

PROJECT: Wolverine

HOLE NO. WV9776

* Descriptive Geology Only *

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				(94.15 - 95.10 · SSMS cont)							
				Strange lower contact of mass. sx. Very abrupt w/ 312' drill block marking the contact btwn mass sx + carb unit.							
				95.10-96.88 RHYOLITE LAPILLI.							
				RHLT Str'ly ser. alt'd rhy (siliceous) lapilli w/ a carb. matrix. Bile (light gr) colour. Lapilli text w/ localized fragmented rhy. Abrupt upper contact (??) → see above @ 95.10. Light gr. col. grades to a light grey downsect'n. Lapilli size is commonly 1x3cm w/ sericitic partings up to 2mm thk surrounds lapilli. Tr diss. py (f.g.) to 96.20.							
				→ 96.20-96.88: Py+cpy band'g along seric partgs. Accum.ns of 3% cpy + 2% py. Both are f.g. + blebby along partings. RHLT has a light grey colour.							
				→ 95.75: STFL: FAULT: Fit @ 40° to c.a.x							
				96.88-98.18 MASSIVE SULFIDE (1.3m)							
				SSMS Mass sx w/ py/sph band'g grad'g to a Cu rich (cpy) zone @ the bottom of the sect'n. much more calcareous than first mass. sx showing mod. carb. alt'n in the matrix.							
				→ 96.88-96.98: 60% py/30% sph/10% gangue str'ly fol'd/band'd py/sph. Very similar to rhy fol'n of prev. sect'n. Sx's appear lapilli like → very drawn out mass. blebs. Fine grained euh. py diss throughout. Gangue carb matrix. Sharp U.C. w/ RHLT @ 55° to c.a.x							
				→ 96.98-97.80: 90% py/5% sph/5% cpy mass. py w/ faint hints of sph (zinc/red) colour. F.g'd diss. euh. py persists (re-xtallized). Carb gangue blebs 5mm x 5mm are rare. ↑'d cpy content downhole starting @ 98.50 where regular/rhythmic sph/cpy bands w/							

PAGE 12 OF 16 | PROJECT: Wolverine | HOLE NO. WV9776

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 13 OF 16 | PROJECT: Wolverine | HOLE NO. WV9776

(96.88 - 98.18 SSMS cont')

diss mass. py accum. Bands are wispy + 1-2 mm in width

97.80 - 98.18: 80% cpy / 15% py / 5% gangue mass cpy buttery yellow in colour w/ thin (2mm) x-cutting carb vn's (4) @ bottom of sec'n Disseminated fg'd cpy + py (2%) euhedral x-tals sparkling in the mass. sx. Cpy. becomes gradually coarser + more blebby downhole Sharp L.C. @ 98.18 w/ sericitic parting btwn SSMS + RHLT.

★ TOTAL SULFIDE GRADE ★

UPPER ZONE: PYRITE: ~65%
SPHALERITE: ~35%
CHALCOPYRITE: ~0%

LOWER ZONE: PYRITE: ~25%
SPHALERITE: ~30%
CHALCOPYRITE: ~45%

98.18 - 150.00 RHYOLITE LAPILLI TUFF

RHLT

Light green to light grey rhy lapilli tuff w/ str ser + chl alt'n. mod → str shearing throughout section, variable fol'n. Siliceous lapilli (avg size 1x0.5cm) tr carb content.

→ 98.18 - 100.20: Sx stringers w/ 3% cpy + py along ser/chl partings. (2% cpy, 1% opy)

→ 99.07 - 99.14: STGG: FLT GOUGE @ 70° to c.a.x.

→ 103.45 - 103.85: massive aphanic rhy. w/ fewer + smaller lapilli frags (<0.5cm x 1cm), py stringers along ser partings (1%)

→ 107.92: STFL: FAULT X-cutting @ 70° c.a.x, healed.

→ 113.62 - 114.00 - STGG: FAULT GOUGE Chl'ic / Seric flaky green fault gouge. Both cont's @ 50° to c.a.x.

→ 116.75 - 116.90: QCVN: QUARTZ / CARB VN 90/10% qtz/carb vein

ALTERATION: A CHL | B SER | C EPI | D CARB | E

FRACTURE INTENSITY | % VEIN QTZ.

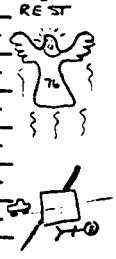
PAGE 14 OF 16 | PROJECT: Wolverine | HOLE NO. WV 9776

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
111										
112		112.62	113.62	1m	174569					
113										
114		113.62	115.18	1m	174736					
115		115.18	116.75	1.57m	174737					
116		116.90	117.96	1.06m	174738					
117		117.96	119.96	1m	174739					
118		119.96	119.96	1m	174740					
		119.96	120.96	1m	174741					
120		120.96	122.10	1.14m	174742					
121										
122		122.10	123.10	1m	174743					
123		123.10	124.05	95cm	174744					
124		124.05	125.05	1m	174745					
125		125.05	126.05	1m	174746					
126		126.05	127.05	1m	174747					
127		127.05	128.05	1m	174748					
128		128.05	129.05	1m	174749					
129		129.05	130.05	1m	174750					
		130.05	131.05	1m	174551					
131		131.75	132.75	1m	174552					
132		132.75	133.75	1m	174553					
133		133.75	135.75	2m	174554					

PAGE 15 OF 16 | PROJECT: Wolverine | HOLE NO. WW9776

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (198.18 - 150.00 RHLT cont'd)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				bull white, tr py.							
134			75	→ 117.60: STFL: FAULT @ 90° to c.ax.							
				→ 117.70: Fol'n @ 0° cax							
135				→ 117.75: STFL: FAULT @ 75° to cax.							
				→ 118.00: Fol'n @ 50° cax							
136			65	→ 118.25: Fol'n @ 0° cax							
				→ 118.75: Fol'n @ 70° cax							
137				→ 119.00: STFL: FAULT @ 90° cax.							
				→ 119.50: Fol'n @ 30° cax.							
138				→ 120.00: Fol'n @ 0° cax							
				→ 120.64: KINK BAND @ 30° c.a.x.							
139			70	→ 120.95: STFL: FAULT							
				x-cut @ 40° cax.							
140				→ 122.00: Fol'n @ 50°							
				→ 122.65: Fol'n @ 0°							
141				→ 123.95: KINK BAND: @ 30° cax							
				→ 125.50: KINK BAND: x-cut @ 40° cax							
142											
143			75								
144											
145				→ 145.82: STFL: FAULT @ 80° c.a.x.							
			60	→ 146.30-146.38: QTVN: QUARTZ VEIN							
146	M6639		80	Bull white pure qtz vn.							
	146.40		70								
	146.68			→ 146.69-146.91: QTVN QUARTZ VEIN							
147	146.91		70	QTZVN, wl tr. ser							
				in fractures							
148											
149											
150	150.00		90	150.00-150.15 QUARTZ VEIN							
				QTVN White qtz vein wl serie filled frac's							
151											
	151.48		90	150.15-151.48 GRAPHITIC ARGILLITE							
				ARGR Fine black graphitic arg. Tr. dis.							
				py. Carb stringers v.i.s.							
				151.38-151.48: STGG: FAULT GOUGE							
				EOH							

LAY IT TO REST



PAGE 16 OF 16	PROJECT: Wolverine	HOLE NO. WV9776

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
134										
135		135.75	136.75	1m	174556					
136		136.75	137.75	1m	174557					
137		137.75	139.35	1.60m	174558					
138										
139		139.35	140.35	1m	174559					
140		140.35	141.35	1m	174560					
141		141.35	142.35	1m	174561					
142		142.35	143.35	1m	174562					
143		143.35	144.35	1m	174563					
144		144.35	145.35	1m	174564					
145		145.35	146.25	90cm	174565					
146		146.33	146.61	28m	174566					
		146.82	147.82	1m	174567					
147		147.82	148.82	1m	174568					
148										
149										
150										
151										

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: ~1370m
HOLE NO.: WV 97 77	BEARING: GS 213°
LOCATION: L16400E / 16760N	DIP: -90°
	TOTAL LENGTH: 113.4m
LOGGED BY: Mark Padberg	HORIZONTAL PROJECT:
DATE: May 24/97	VERTICAL PROJECT:
CONTRACTOR: Boisvenu Diamond Drilling	**ALTERATION SCALE**
CORE SIZE: HQ	
DATE STARTED: May 23	**TOTAL SULPHIDE SCALE**
DATE COMPLETED: May 24/97	
DIP TESTS: Sperry Sun @ 62.5m - -88° @ 108.2m -87.5°	



absent
slight
moderate
intense



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- casing 1.22m.
- mass sulfide intersection. 53.39 - 54.64.

LEGEND

- argillite
- rhyolite
- fault gouge
- porphyry
- quartz vein
- massive sulfide intersection

PAGE 1 OF 15 | PROJECT: Wolverine | HOLE NO. WV9777

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
1.22				0.00-1.22 CASING DHCS							
5.98			bc 60	1.22-5.98 OVERBURDEN DHOB							
8.23			bc	5.98-8.23 SILICEOUS ARGILLITE Blk sil. arg w/ strly oxidized surfaces, primarily brkn or shattered core.							
17.37			55 bc	8.23-17.37 APHERIC RHYOLITE RHFS Fog grey apheric siliceous rhyolite (felsite). Rare thin (<1mm) sericitic partings.; tr. fine diss euhedral py. Rare 1x20mm carb stringers.							
23.47				17.37-23.47 FAULT GOUGE STGG V. coarse sand → pebble clast size dk grey gauge. Graphitic arg, qtz, + rhyolitic clasts are present.							

PAGE 2 OF 15 | PROJECT: Wolverine | HOLE NO. WV9777

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1										
2										
3										
4										
5										
6										
7										
8 tc fine diss. py.										
9 (823-1737)										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

PAGE 3 OF 15 | PROJECT: Wolverine | HOLE NO. WV9777

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (17.37-2347: STGG cont'd)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
23.47											
24				2347-3842 ARGR GRAPHITIC ARGILLITE Dk grey → black fine graphitic argillite w/ foln varying from 70° → 55° to c.a.x. Poor core recovery, moderately faulted + broken. (Wolverine horizon HW arg ???)							
25											
26											
27			70								
28											
29				→ 29.57-35.66: STGG: FAULT GOUGE Fine grained graphitic arg. black paste. Pebble + brkn core clasts are also visible							
29.53			70								
30											
31											
32											
33											
34											
35			55								
35.66			60	→ 35.66-37.84 - Closely spaced strongly sericitic partings change colour to a streaky bile green/black argillite							
36											
37											
37.84				→ 38.42: STFL: FAULT - flt'd contact btwn arg. + porph. @ 65° to c.a.x							
38 38.42			65								
39 39.05			60								
39.65			55	38.42-49.04 FDPH ALTERED FELSPATHIC PORPHORY. mass dk. grey/black very hard (moh's scale ~7.5) feldspar porphory. Carbonate stockworked stringers (microthin), w/ 3x1mm rare fsp pheno's. Feldspars show black fsp outlining. Possibly indicative of TiO_2 (rutile). Tr pyritic stringers. High sil. content, appearance of being altered (re-xtallized) faint shadows of siliceous phenocrysts are still visible. (2x2mm). FM'd U.C @ 65° to c.a.x., sharp L.C. @ 80° to c.a.x							
40			0								
40.60			60								
41 41.09			55								
41.32			50								
42											
43											
44											
45											
46											

PAGE 4 OF 15	PROJECT: Wolverine	HOLE NO. WV 9777

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
24										
25										
26										
27										
28										
29										
30										
31										
33										
34										
35										
36										
37										
38 Tr pyritic stringers (38.42 - 49.04).										
39		38.42	39.40	98cm	174570					
40		39.40	40.39	99cm	174571					
41		40.39	41.45	1.06m	174572					
42		41.45	42.48	1.03m	174573					
		42.48	43.30	82cm	174574					
44		43.30	44.45	1.15	174575					
45		44.45	45.50	1.05m	174576					
46		45.50	46.42	92cm	174577					

PROJECT: Wolverine

HOLE NO. WV9777

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(38.42-49.04: FDPH cont'd).							
				→ 39.05-39.06: Sigmoidally folded qtz/carb. vn, x-cutting foln @ ~60° to c.a.x							
47.72				→ 39.65 - Qtz/carb vein x-cutting @ 0° to c.a.x.							
48 47.85			60	→ 40.60 - Qtz/carb vn x-cutting @ 60° to c.a.x							
49 49.04			80	→ 41.09: STFL: FAULT @ 55° to c.a.x							
50				→ 41.32: STFL: FAULT @ 50° to c.a.x.							
51				→ 47.72-47.85 QCVN: QUARTZ/CARB. VEIN 80/20 qtz/carb w/ 1% pyritic stringers + 2x4cm wallrock frag's.							
51.69			70								
51.85 52			70								
53 53.10				49.04-51.85 RHLT: RHYOLITIC LAPILLI TUFF. Dk grey/blue rhyolitic lapilli tuff w/ 2% pyritic str'ies bands str'ly fol'd @ 65° to c.a.x w/ dark chl.'ic partings							
53.39 53.50			80								
54			90	→ 49.13: Tr sph. stringers // to foln along chl parting. Tr sph also visible rarely/locally in sec'n.							
54.64			65								
55			55	→ 51.47-51.60: STGG - FAULT GOUGE. Fit gouge of cohesive fine → very coarse grained wallrock w/ wk ser. alt'n							
56											
57 57.05											
57.25			60	→ 51.60-51.64: X-cutting cpy rich mass sx vein. 70% cpy, 20% py, 10% gangue. Mass blebby "buckshot" cpy w/ fine grained 50/50 cpy/py matrix; silicate gangue							
58											
59											
60 60.25 60.43			65								
61											
62				51.85-53.39 RHFC: FRAGMENTAL CARBONATE. Fragmental (hump zone?) carb w/ locally rich areas of sph, py, chl, + carb. Fragmental carb + sil (avg: 5x5mm) w/ carb. dominating. Ser.ic partings, btwn frags. Blebby sph + py w/ sx accumulat'ns @ 3% (sph:py are in equal amt's)							
63											
64			55								
65											
66				→ 53.10-53.39: SULFIDE RICH. 10% py blebs w/ wispy interclated sph/carb							
67											

PAGE 6 OF 15	PROJECT: Wolverine	HOLE NO. WV 9777

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
47 1% pyritic stringers.		46.42	47.40	98cm	174578					
48		47.40	48.56	1.16m	174579					
49		48.56	49.56	1m	174580					
50		49.56	50.55	99cm	174581					
51		50.55	52.13	1.58m	174582					
cpy vein → 70% cpy / 20% py /										
52 10% gangue (51.60 - 51.61)		52.13	53.20	1.07m	174583					
53 3% sph / py		53.20	53.39	19cm	174584					
53.10 → 53.39 : 10% py blebs										
		53.39	53.95	56cm	174585					
54		53.95	54.64	69cm	174586					
54.64-54.83: 35% cpy (RHLT)										
		54.64	54.98	34cm	174587					
55		54.98	55.20	22cm	174588					
56		55.20	56.14	96cm	174589					
57 1% fine grained localized		56.14	57.70	1.56m	174590					
58		57.70	58.69	99cm	174591					
59		58.69	61.50	2.89m	174592					
60										
61		61.50	62.50	1m	174593					
62		62.50	63.60	1.1m	174594					
63		63.60	64.55	95cm	174595					
64		64.55	65.80	1.25m	174596					
65		65.80	67.70	1.90m	174597					
66										
67										

1:100 1:50 1:100 1:50

PROJECT: Wolverine

HOLE NO. WV 97-77

* Descriptive Geology Only *

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				chl bands. Bands are <1mm thk + are poorly defined.							
				→ 53.11: STFL FAULT: Flt @ 80° c.a.x							
				→ 53.23: STFL FAULT: Flt @ 60° c.a.x							
				53.39-54.64 MASSIVE SULFIDE (1.2m)							
				SSMS mass py/sph rich sulfide. Re-xtlized f.g. py diss. through sph banding. Sil + Calcareous gangue is 2% of sec'n. Irregular faint sph bands primarily @ 80° to c.a.x.							
				→ 53.39-53.72: V. fine grained → mass dull metallic py w/ v. faint hints of trace sphaleritic bands (5mm thk) 95% py / 3% sph / 2% gangue. 3mm graphite vn w/ tr. mass. cpy blebs @ 53.50 x-cutting @ 40° to c.a.x							
				→ 53.72-54.64: 80% py / 15% sph / 5% gangue / tr cpy. Mass py w/ wispy, irregular sph banding. Fine grained euh. py disseminated up to 50% in sph bands (re-xtallization). Gangue mineralogy remains sil/carb blebs (5x5mm) throughout. Sph bands avg. 1-2cm							
				★ TOTAL SULFIDE GRADE ★							
				PYRITE: 85%							
				SPHALERITE: 15%							
				CHALCOPYRITE: Tr							
				54.64-57.05 RHYOLITE <APILLI TUFF							
				RHLT Gradationally contacted w/ SSMS. Sx rich, str chl alt'd rhy lapilli tuff. DK green w/ cpy metallic sheen up sec'n.							
				→ 54.64-54.83: 35% cpy / 35% gangue / 25% py / 5% sph. Fine grained blebby cpy in a fragmental appearing texture, strly fol'd @ 45° to c.a.x w/ str. ser + chl intermixing w/ f.g. euhedral pyritic stringers							

PAGE 8 OF 15 | PROJECT: Wolverine | HOLE NO. WV9777

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				

PROJECT: Wolverine

HOLE NO. WV 9777

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	*Descriptive Geology Only* GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				(54.64-55.18 RHLT cont)							
				→ 54.75-54.79: 1cm mass → f.g. sph. band w/ 3% f.g. sparkling (euh.) py.							
				→ 54.83-55.18: Lessening sx content, t'g chl+ser alt'n. remains str'ly fol'd @ 75° to c.a.x							
				→ 55.18-55.19: Dolomite vn (~75° to c.a.x) Powder effervesces w/ 10% HCl							
				→ 55.19-57.05: Primarily unalt'd lapilli tuff w/ no visible sx's dk. bluish grey in colour.							
				57.05-58.75 RHFC RHYOLITIC FRAGMENTAL CARBONATE Rhy frag. carb very sim. to that of sec'n 51.85-53.39. 1% f.g. localized py. stringers on ser part'gs.							
				→ 57.25-57.50: STGG: FAULT GOUGE 25cm of str'ly ser'c alt'd flt gouge w/ U+L contacts @ 70° to c.a.x. Faulted lower contact of unit @ 65° to c.a.x on a str'ly graphitic parting							
				58.75-60.00 STGG. FAULT GOUGE Very odd flt gouge w/ 5cm of graphitic arg. frags'+ paste (dk black), then 4 pebbles of primarily dull metallic py (difficult to ascertain mode). No bit change according to drill log.							
				60.00-99.70 RHLT RHYOLITE LAPILLI TUFF Cdn Armed Forces green rhy. lapilli tuff. Str. ser+chl alt'n, str. fol'n, str. shear. Colour varies slightly downhole from green → light greyish/green → light bluish/ green → green →... Intensity of alt'n varies slightly, yet remains str.							

PAGE 10 OF 15	PROJECT: Wolverine	HOLE NO. WV9777

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 11 OF 15 | PROJECT: Wolverine | HOLE NO. WV9777

(60.00 - 99.70 RHLT cont)

67.50 - 67.70 : ST66 - FAULT GOUGE
Contacts @ 50° to c.c.x

69.10 - 69.20 : ST66 - FAULT GOUGE.
@ 60° to c.a.x

71.60 : STFL - FAULT
@ 60° to c.a.x

72.20 - 72.40 : ST66 - FAULT GOUGE
Contacts @ 55° to c.a.x

80.75 - 81.00 : ST66 - FAULT GOUGE
contacts @ 65° to c.a.x.

86.37 - 87.20 : ST66 - FAULT GOUGE
contacts @ 70° to c.c.x.

90.00 - 1cm kink band

PAGE 12 OF 15 | PROJECT: Wolverine | HOLE NO. WV9777

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
68		67.70	69.40	1.70m	174598					
69		69.40	70.85	1.45m	174599					
70		70.85	72.45	1.60m	174605					
71										
72		72.45	75.45	3m	174 601					
73										
74										
75										
		75.45	76.55	1.10m	174602					
		76.55	77.80	1.25m	174603					
77										
		77.80	78.85	1.05m	174604					
78										
		78.85	79.75	90cm	174605					
79										
		79.75	80.70	95cm	174606					
80										
		80.70	82.15	1.45m	174607					
81										
82		82.15	83.15	1m	174608					
83		83.15	84.05	90cm	174609					
84		84.05	85.05	1m	174610					
85		85.05	86.06	1.01m	174611					
86		86.06	88.00	1.94m	174612					
88		88.00	89.00	1m	174613					
89		89.00	90.14	1.14	174614					
90										

PROJECT: Wolverine

HOLE NO. WV9777

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				(60.00-99.70: RHLT cont'd)							
				→ 91.85-92.45: STGG: FAULT GOUGE							
91			25	V coarse qtz/sericitic							
91.95			70	granular U.C. 70° to C.A. @ 60°							
92											
92.45			65								
93											
94											
94.91			60	→ 94.91-94.97-QCVN-QUARTZ-CARB. VN.							
94.97				60/40 qtz/carb vn, bull							
95			65	white in colour. U.C. +							
96				LC @ 60° to C.A.							
				→ 94.95-95.02-STGG: FAULT GOUGE							
97				@ 60° to C.A.							
98											
				→ 99.40-99.46-STGG: FAULT GOUGE							
99				contacts @ 60° C.A.							
99.43											
100			60								
				99.70-105.80 QUARTZ-FELDSPAR PORPHORY							
101				QFPH Light green QFP with 1x1 cm							
102			75	feldspar crystals + 3x3 mm							
103				blue quartz eyes. Mod. ser							
104				alt'n + sericitic partings around							
105				lapilli fragments. Tr fine grained py							
				diss. in ser. partings. Fsp's make							
				up 2% of whole rock.							
				105.80-111.85 CRYSTAL TUFF							
105.80			80	RPTF Strongly fol'd (@ 80° to C.A.)							
106				black feldspar bearing x-tal tuff.							
107				Some fsp's show white centers							
108			80	w/ black (Ti) alteration surrounding							
109				them. X-tals are euhedral rhombic							
110				avging 1x1 mm in size. Fsp's							
				are common comprising 3% of							
				rock							
				111.85-113.39 GRAPHITIC ARGILLITE							
111				ARGR Jet black graphitic arg. w/ very							
111.85				little sil. content 1% py bandings							
112			60	along fol'n. (70° C.A.)							
113											

 PROJECT: Wolverine HOLE NO. WV 97 77

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		90.14	91.10	96cm	174615					
91										
		91.10	92.45	1.35m	174616					
92										
		92.45	93.45	1m	174617					
93										
		93.45	94.45	1m	174618					
94										
		94.45	95.45	1m	174619					
95										
		95.45	96.35	90cm	174620					
96										
		96.35	97.35	1m	174621					
97										
		97.35	98.65	1.3m	174622					
98										
		98.65	99.60	95cm	174623					
99 Trace fine grained										
		99.60	100.70	1.1m	174624					
100										
		100.70	101.45	75cm	174625					
101										
		101.45	102.45	1m	174626					
102										
		102.45	104.47	2m	174627					
103										
		104.47	105.47	1m	174628					
104										
		105.47	106.50	1.03m	174629					
105										
		106.50	107.50	1m	174630					
106										
		107.50	108.70	1.2m	174631					
107										
		108.70	109.80	1.1m	174632					
108										
		109.80	110.85	1.05m	174633					
109										
		110.85	111.86	1.01m	174634					
110										
111										
112 1% py bands along foln.										
113										

PAGE 15 OF 15 | PROJECT: Wolverine | HOLE NO. WV 9777

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
113.39				(111.85-113.39: ARGR cont.							
				EOH 113.39.							



EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine Stratigraphic	GROUND ELEV.: 1330m
HOLE NO.: WV-97-78	BEARING: 212°
LOCATION: Northing: 17888.8 N; Easting: 13600 E	DIP: -55
	TOTAL LENGTH: 193.2 m
LOGGED BY: Dave Gale	HORIZONTAL PROJECT
DATE: May 23rd, 1997	VERTICAL PROJECT
CONTRACTOR: Boisvenu	**ALTERATION SCALE**
CORE SIZE: NQ	
DATE STARTED: May 25	**TOTAL SULPHIDE SCALE**
DATE COMPLETED: May 28	
DIP TESTS	





COMMENTS

Geological Summary

→ The first 60m of this hole contains massive, Aphyric rhyolite with associated fragmental units and beds of carbonaceous argillite. 12m consists of a coherent fault breccia with angular clasts of foliated argillite in an unfoliated iron oxidized matrix.

→ Three magnetite iron formations are observed beginning at 57m and continue to 80.5m They are separated by fault gouge and massive rhyolite. A carbonate-pyrite exhalite unit occurs below the iron formation, followed by exhalitive silica units at further depth.

→ Beyond the 112m point, the quality of hole + core recovery begins to decrease. "Sand seams" are encountered together with a number of lost core intervals. 112m-193m consists of tuffaceous argillite with extensive fault gouge.

Mineralization

→ Two silica exhalite units contain 20-35% pyrite. Pyr. occurs in ~1cm bands within the two 2-3m long intervals. The carbonate-pyrite exhalite contains ~5% pyrite

Alteration

→ No significant alteration.

LEGEND



PAGE 1 OF 17 | PROJECT: | HOLE NO. W-78

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
4				0-4.0 Casing DHCS							
5				4.0-8.8 DHOB Overburden. Interval consists of boulders & rock fragments. Some andesite, siliceous and argillaceous fragments							
6											
7				8.8-18.0 RHFS Brownish-orange rock chips that are siliceous. Could be a massive felsic unit (?) - Rock chips are 1-3cm in diameter. - Extremely broken core with poor core recovery.							
8											
9											
10		V		18.0-18.9 STGG Fault gauge. Top half has a brownish-orange colour and grades into a black colour at the bottom of the interval.							
11		V									
12		V		18.9-21.0 RHAT Greyish-white siliceous fragments (2-4cm in dia; comprising 70-80% of rock) in a black siliceous argillite matrix. Unit becomes a massive siliceous rock that grades into argillite at the base.							
13		V									
14		V		- Siliceous fragments are aphyric. - Core angle is 65° - A weak foliation is developed							
15		V									
16		V									
17		V		21.0-33.2 DHLC Lost core. "Sand seam" is written on one of the blocks over this interval.							
18		V									
19											
20											
21			65								
22		LOST CORE									
23											
24											
25		LOST CORE									
26											

PAGE 2 OF 17	PROJECT:	HOLE NO. LW-78

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19			18.9	21.0	1.1m	172543					
20											
21											
22											
23											
24											
25											
26											

PAGE 3 OF 17 | PROJECT: | HOLE NO. W-78

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
27	LOST CORE											
28												
29												
30												
31	LOST CORE											
32												
33				33.2-35.9 ARSI	Black siliceous argillite with white siliceous bands. The top half of unit is massive argillite with ghost-like wisps showing a fragmental texture. - This more massive section grades down into rock that has 5-15% siliceous fragments in a black siliceous argillite matrix. - Moderate foliation developed which defines a 50° core angle - The silica bands are assymetrically folded indicating that hanging wall moved up dip (reverse movement relative to the foliation)							
34												
35			50									
36												
37												
38												
39			45									
40				35.9-38.6 STFL	Coherent fault breccia composed of mainly siliceous argillite fragments in a oxidized reddish-brown matrix. → Fragments are 0.5-2cm in size with 5-10% frags that are up to 6 cm in diameter All argillaceous fragments are foliated. The matrix of the fault breccia does not contain a fabric. → All fragments are angular							
41												
42												
43												
44												
45				38.6-42.7 ARSI	- Black siliceous argillite with 3-5% siliceous fragments flattened in a moderately developed foliation - All fracture surfaces are oxides and show a reddish-brown colour. - Core is broken and consists of rock chips. - Preserved core shows a 45° core angle							
46												
47												
48												
49				42.7 49.8 STFL	The same fault breccia as described above.							

PAGE 4 OF 17 | PROJECT: | HOLE NO. WV-78

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
~~27~~										
~~28~~										
~~29~~										
~~30~~										
~~31~~										
~~32~~										
~~33~~		33.4	35.9	2.5m	172549					
~~34~~										
~~35~~ Trace pyrite disseminated over some sections										
~~36~~ within the fault zone. Also filling some fractures										
~~37~~										
~~38~~										
~~39~~		38.6	42.7	4.1m	172550					
~~40~~										
~~41~~										
~~42~~										
~~43~~										
~~44~~										
~~45~~										
~~46~~										
~~47~~										
~~48~~										
~~49~~										

PAGE 5 OF 17 | PROJECT: | HOLE NO. W-78

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
50				49.8-53.5 ARCB: Black carbonaceous Argillite with 5-15% siliciceous bands. Moderate foliation developed. The argillaceous matrix becomes siliceous towards base of interval. - Core angle is 50° - Upper contact of this unit is a fault							
51											
52											
53											
54			50	53.5-57.6 RHFS: A massive, aphyric siliceous unit (rhyolite?) that consists almost entirely of broken core. Whitish-grey in colour - Weak to moderately developed foliation defines a 75° core angle.							
55											
56			75	- Unit grades into a siliceous argillite in lower 20cm of interval.							
57				- The contact with the overlying carbonaceous-siliceous Argillite seems to be conformable and gradational (hard to determine due to fragmented core.							
58											
59				57.6-63.7 EXMT: Magnetite iron formation in a silica rich matrix. Unit is generally white and becomes black depending on concentration of massive magnetite veins (carbonate)							
60											
61				- The magnetite forms black bands that are typically 0.3-1cm in width. Upper portion (57.6-60.5) contains 15-20% magnetite in a white carbonate matrix with minor silica. Lower portion (60.5-63.7) is much richer in the carbonate-silica matrix with only about 5% magnetite. The black bands in lower interval are generally wider, averaging 1-2.5 cm.							
62			60								
63											
64				- 3-4% of the magnetite shows a reddish-brown colour, indicating hematite content.							
65				- Interval is composed of mainly fragmental core.							
66				- Banding in the larger core samples shows a 60° core angle - STGG at 60.6-60.7							
67											
68				63.7-70.6 RHFS: Greenish-grey aphyric siliceous rock that is weakly to moderately banded.							
69				- 2-4% of unit contains weakly defined bands of magnetite and hematite. Magnetite only 2-3% of rock.							
70				- There is a weak chloritic alteration present throughout this interval							
71			60	- Core angle is 60°							
72				- Very poor core recovery, rock consists of broken core, 1-3cm size frags.							

PAGE 6 OF 17 | PROJECT: | HOLE NO. WV-78

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
50		49.8	52.3	2.5	172551	
51 Trace pyr observed within the ARCB						
52						
53						
54		53.5	57.6	4.1	172552	
55						
56						
57						
58 Trace pyr observed as euhedral to subhedral xtls.		57.6	60.6	3m	172553	
59						
60						
61		60.7	63.7	3m	172554	
62						
63						
64 1% subhedral to euhedral pyrite xtls that are 0.5-1cm.						
65						
66		66.2	70.6	4.4m	172555	
67						
68						
69						
70						
71 Subhedral to euhedral 0.2-1cm pyr xtls		70.6	72.7	2.1m	172556	
72 Are disseminated throughout EXMT - 2%						

PAGE 7 OF 17 | PROJECT: | HOLE NO. WV-78

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
73				70.6-74.9 EXMT Greenish-grey to black rock composed of alternating bands of magnetite and carbonate/silica. Magnetite-rich iron formation.							
74			70	- Magnetite is disseminated through the rock as blebs and also forms disseminated to massive bands which are 0.3-0.8 cm in width. Slight reddish-brown colour is also observed in 5-10% of the magnetite bands; reflects hematite content. Overall, 10% of rock is magnetite							
75				- Chlorite is concentrated along the foliation planes which are parallel to the magnetite banding. Chlorite content increases towards base of unit.							
76				- Core angle is 70°							
77				- Green, cherty bands develop at the base of unit.							
78				- Fold closure 72.6. Foliation changes over a 30 cm interval - see diagramatic log. → If foliation is 060/40 then fold axis could plunge shallowly towards 060-50°							
79											
80			70	74.9-75.9 EXSP Siliceous, weakly to moderately banded, greyish-green rock (silica-exhalite? chert? rhyolite?)							
81				- Weak chlorite alteration; chlorite aligned along the foliation planes.							
82				- 1-2cm wide barite band is present within this siliceous unit.							
83				- Core angle is 70°							
84											
85			65	75.9-77.9 STGG Fault developed in the same green siliceous rock							
86				77.9-78.2 EXSP Same rock as above. Extremely broken core.							
87		LOST CORE									
88				78.2-80.4 EXMT Magnetite-rich iron formation. Rock is greenish-black and consists of alternating black and greenish-white bands.							
89				- The black bands consist of magnetite ± hematite. Magnetite bands are 0.3-1.5 cm wide. Magnetite is also disseminated throughout interval and forms 0.1cm blebs. Magnetite makes up ~30% of rock							
90			70	- The matrix that the magnetite occurs in is calcareous + siliceous and is variable across the interval. Calcite veins are also present (3-5%).							
91			65	- Greenish colouration due to a weak chloritic alteration.							
92				- Core angle is 70°							
93											
94											

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
73		72.7	74.9	2.2m	172557	
74						
75		74.9	75.9	1m	172558	
1% pyr found along the foliation planes. Forms subhedral (0.2cm) xtls and disseminations.						
77						
78 Subhedral to euhedral pyrite xtls are		78.2	79.8	1.6m	172559	
79 disseminated throughout EXMT (2% pyr)						
80		79.8	80.4	1.6m	172560	
		80.4	82.3	1.9m	172561	
81 Within the EXCP, pyrite occurs in pods and clots, as subhedral to euhedral xtls. Unit has ~5%						
82 pyrite.						
83		83.3	85.0	1.7m	172562	
84						
85						
86						
87						
88 Within the pyrite stringers there are bands		88.1	89.75	1.65m	172563	
89 0.3-1cm wide of massive, fine grained pyrite. 30-35% pyrite within this unit.		89.85	92.7	2.85	172564	
90 - In lower EXSP, there is ~1-2% pyrite.						
91						
92						
93		92.7	97.4	4.7	172565	
94						
95						

PAGE 9 OF 17 | PROJECT: | HOLE NO. WU-78

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
96				80.4 - 85.0 EXCP Carbonate-pyrite exhalite, weakly banded white rock with a network of green chlorite veins. - This unit is 75% carbonate, 20% chlorite and 5% pyrite - Core angle is 65° - The chlorite veins give a stockwork vein texture to the unit.							
97											
98											
99											
100			55	85.0 - 86.6 STGG Fault gouge of the carbonate exhalite unit.							
101											
102				86.6 - 88.1 OHLC Lost core							
103				88.1 - 89.75 EXSP Black siliceous rock that contains bands of pyrite. Rock is very hard and most likely is a silica-pyrite exhalitive unit. - Interval consists of broken core; fragments are average 23cm in size. - Rare complete core shows core angle of 70°							
104			70°								
105											
106											
107				89.75 - 92.7 EXSP - Same unit as above but does not show the massive sulphide bands. It has a blackish - grey colour; entirely silica. - The top 30cm of interval, has a network of carbonate veins that has brecciated the rock. - Weak to moderate banding developed over the interval - Core Angle is 65°							
108			45								
109											
110											
111				92.7 - 100.9 ARCB Greyish-black, moderately foliated carbonaceous Argillite - The transition from the above exhalitive unit is gradational, changing from a blackish-grey to greyish black colour (hard to soft) - There is a weak chlorite alteration across interval. QTVN: 100.0 - 100.3; 94.4 - 94.5 STGG: 98.3 - 98.8; 100.3 - 100.45 - Core Angle: 55							
112			90								
113		Sand									
114											
115		Sand									
116		LOST CORE		100.9 - 103.3 STGG Light green fault gouge. Chloritic paste.							
117											
118											

 PROJECT: HOLE NO. WW-78

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
96						
97						
98						
99						
100						
101						
102						
103 Trace pyr observed within the RHLT		103.5	106.7	2.7	172566	
104						
105						
106		106.6	109.1	2.5	172567	
107						
108						
109 Massive bands of fine grained pyrite making		109.1	112.5	3.4m	172568	
110 up 20% of this silica exhalite are concentrated						
111 in lower portion of rock. It occurs within 0.3-1cm wide bands that are parallel to the foliation						
112						
113		112.5	115.5	3m	172569	
114						
115						
116						
117						
118						

PAGE 11 OF 17 | PROJECT: | HOLE NO. WV-78

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
120				103.3-109.1	Light green lapilli tuff with a moderate to strong sericitic alteration. Rock is extremely friable, to the point that it cannot be picked up.							
121				RHLT	- Preserved core sections show white 1-2cm size fragments (5-10% of rock) in the light green matrix (rhyolitic lapilli tuff?)							
122	CORE				- Core angle is generally 45° but changes; at 103.7 it is parallel to core axis.							
123	LOST				QTUN: 103.3-103.45							
124					STGG 105.8-106.4							
125					ARCB : 106.2-106.6							
126					Note: Original rock type is difficult to determine due to alteration + poor condition of core.							
127				109.1-112.5	This is the same unit that was observed at 88.1-89.75							
128				EXSP	There is only about 20% pyr in this unit. It has the same blackish-grey colour with 3-5% argillaceous partings defining the foliation. Very siliceous rock.							
129					- Core consist of mostly broken fragments. A single preserved piece gives a core angle of 90°							
130												
131				112.5-115.5	Sand. Pyrit flecks are disseminated across this sandy							
132				"Sand!!"	interval							
133				115.5-124.7	Lost core. Three runs.							
134				DHLC								
135				124.7-127.5	Interval consists of well rounded rock fragments (large variety of rock types) that must have fallen into the hole(?)							
136				DHOB	These rock are not indicative of the rock that drill is passing through.							
137				127.5-133.8	Fault gouge in a black rock. Most likely the carbonaceous argillite that is found below fault zone							
138				STFGs								
139				133.8-146.2	Black, moderately band carbonaceous argillite.							
140				ARCB	- Entire interval consists of broken core - 1-2cm size fragments							
141					- Some white siliceous bands are interbedded within the argillite							
142					- Cannot get a core angle because of broken core.							
					- STGG: 142.9-143; 143.1-143.2; 145.8-145.8							

PAGE 12 OF 17	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
120										
121										
122										
123										
124										
125										
126										
127										
128										
129										
130										
131										
132										
133										
134		133.8	142.7	8.9m	172570					
135										
136										
137										
138										
139										
140										
141										
142										

PROJECT:

HOLE NO. WV-78

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
143				146.2 - 155.1 STGG	- Black argillaceous fault gouge. - From 151.8-152.1 the "black paste" becomes a light grey colour. This colour change possibly reflects siliceous / fragment content. Rock is very deformed. Contacts between the bi-coloured gouge are gradational.							
144												
145												
146				155.1-157.8 ARCB	Massive, moderately foliated carbonaceous argillite. - Interval consists of broken core; rock fragments 1-3cm in size. - A qtz vein must be within this interval because qtz fragments are intermixed with the argillite. - Core is too broken to obtain a core angle.							
147												
148												
149												
150				157.8-158.7 ARTF	Light-grey rock that contains white tuffaceous to lapilli size fragments in an argillaceous matrix. Frags ~20-40% of rock - Rock is strongly deformed and very friable (cannot be picked up by hand). - A core angle is 50° - Upper contact with ARCB is obscured due to deformation and fragmented core.							
151												
152												
153												
154												
155				158.7-161.2 STGG	Fault gouge within black argillite							
156												
157				161.2-164.3 ARCB	Massive, moderately foliated carbonaceous argillite - Interval consists of broken core; rock fragments are 1-3cm in size.							
158			50°	164.3-167.3 ARTF	- Same as ARTF at 157.8-158.7. Rock is very deformed and almost fault gouge.							
159												
160				167.3-170 DHLC	Lost core							
161												
162				170-179.5 ARTF	Strongly foliated, carbonaceous argillite that has varying percentages of tuffaceous to rare lapilli size fragments - From 172.5-172.9 the argillite is black and contains ~10-15% tuffaceous-sized fragments (white, siliceous?) - Over a 50 cm interval rock changes from black to light grey. This reflects an increase in							
163												
164												
165												

PAGE 14 OF 17 | PROJECT: | HOLE NO. JV-78

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
143										
144										
145										
146										
147										
148										
149										
150										
151										
152										
153										
154										
155 1% pyr in the argillaceous rock chips. Associated with qtz vein as well.		155.1	157.8	2.7m	172571					
156										
157		157.8	158.7	0.9m	172572					
158 Trace pyrite observed; 0.2cm subhedral xtls and flecs.										
159										
160										
161 2% pyr within ARCB. Some argillite rock fragments		161.2	161.3	3.1m	172573					
162 show millimetre-scale fine pyr-bands; also 0.2cm subhedral xtls										
163										
164										
165										

PAGE 15 OF 17 | PROJECT: | HOLE NO. WV-78

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
166				Cont'd	fragments (40-50%). Mostly tuffaceous with rare							
					0.2-0.4 cm frags.							
167					- The more blackish portion consists of slightly more							
					cohesive rock but over all rock is strongly foliated							
168					(cannot be examined by hand).							
					QTVN: 176.4-176.55							
169		LOST CORE			- Core angle is 75							
				179.5-188.7	Fault gouge within the same tuffaceous argillite.							
170				STGG								
171				188.7-193.2	Light gray, strongly foliated carbonaceous argillite							
				ARRT	with lapilli size fragments. Tuffaceous (sized) fragments within							
172					the matrix are present and the lapilli size frags ~ 10-30% of							
					rock.							
173			75		- Rare qtz eyes are also observed within unit							
					- All white fragments are calcareous. Matrix contains							
174					a moderate carbonate alteration as well							
					- Core angle is 45°							
175												
176												
177												
178												
179												
180												
181												
182												
183												
184												
185												
186												
187												
188												

PAGE 16 OF 17 | PROJECT: | HOLE NO. WV-78

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
~~166~~										
~~167~~										
~~168~~										
~~169~~										
~~170~~ Trace pyrite is observed through interval.		170.2	176.4	6.2m	172574					
~~171~~ <0.2cm flecs. Also observed coating some fragments										
~~172~~										
~~173~~										
~~174~~										
~~175~~										
~~176~~										
~~177~~										
~~178~~										
~~179~~										
~~180~~										
~~181~~										
~~182~~										
~~183~~										
~~184~~										
~~185~~										
~~186~~										
~~187~~										
~~188~~ Trace pyrite observed in ARRT		188.7	193.2	4.5m	172575					

PAGE 17 OF | PROJECT: | HOLE NO. WV-78

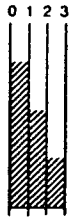
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
189											
190											
191			45								
192											
193											
EOH											

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: WOLVERINE	GROUND ELEV.: 405 m
HOLE NO.: WW97-79	BEARING: GN
LOCATION: 16150E 16970N	DIP: -70
	TOTAL LENGTH: 273.4
LOGGED BY: G. BRADSHAW	HORIZONTAL PROJECT:
DATE: MAY 25 / 97	VERTICAL PROJECT:
CONTRACTOR: F BOISVENU	
CORE SIZE: HQ	
DATE STARTED: MAY 24th	
DATE COMPLETED: MAY 30th	
DIP TESTS:	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- Target depth - 320 m (approx)
- Hole will approach Lens depth at ~100 m separation from section 25. (Looking to infill further N)
- Again no massive sulphides intersected. Appearance of porphyry at apparent location of Wolverine.

LEGEND

- fault
- quartz vein
- sheared fault zone
- base metal sulphides
- iron formation
- rhyolites
- feldspar porphyry
- massive rhyolite
- argillite
- tuffaceous rhyolites

PAGE 1 OF 24 | PROJECT: | HOLE NO. 97-79

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
	DHCS			0 - 3.0 DHCS — CASING							
	RHFS			3.0 - 5.6 RHFS — GREY MASSIVE APHANITIC FELSITE broken and oxidized massive textureless felsite. minor sulf with sericitic partings sharp lower contact							
	EXMT 85°			5.6 - 7.7 EXMT — GREY-BLACK BANDED MAGNETITE IRON FORMATION Massive mt. bands to 3 cm - but oxidized to a dirty brown. Interspersing massive silica bands to 10 cm. ≈ 60% mt overall. Minor diss. mt w/ siliceous bands. Shp. l. ct.							
	75°		40°	7.7 - 8.8 RHFS — GREY MASSIVE APHANITIC FELSITE - aphyric similar to above. quite massive. sericitic partings, oxidation on fol'n + fract. microlites present. Shp l. ct - appearance of arg.							
	RHAR		35°	8.8 - 17.8 RHAR — GREY-BLACK INTERBEDDED APHANITIC FELSITE AND SILICEOUS ARGILLITE ≈ 75% argillite, very siliceous - locally a fragmental texture (like RHFR), but never continues for more than 10-15 cm. Massive RHFS also present (25%) as bands from 1 mm - 3 cm usually w/ sharp contacts. Brown oxidation on cut fol'n and fract. surfaces sharp lower contact at 40° (depositional)							
	85°			17.8 - 50.3 RHFS — GREY MASSIVE - BANDED CHERTY APHANITIC FELSITE / RHYOLITE hard, fractured up, highly siliceous rock (weak sericite on foliation locally. mm scale sericitic partings. Very massive "cherty" texture. Microlites common otherwise aphyric.							
	RHFS		40°	27.0 - 27.4 - highly broken pebbly core 29.6 - 31.7 - broken core, pebbles some lost core 31.7 - 37.2 - very broken core, sand-pebble size rhy fragments, minor sericite							

PAGE 2 OF 24	PROJECT:	HOLE NO. 97-79

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
- ~60% magnetite overall.		5.6	6.4	0.8	174021					
		6.4	7.7	1.3	174022					
- 1% diss py f.g. on foln.										

PAGE 3 OF 24 | PROJECT: | HOLE NO. 97-79

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
36	RHFS			RHFS (cont'd)							
				394 - 397 - [illegible]							
			1	396 - 402 - [illegible]							
37			45°								
				410 - 411.2 - [illegible]							
38											
				weak to moderate [illegible]							
39				very broken core from 395 to end							
				of unit w/ only a few intact pieces							
40				Intact lower ct - colour change							
				from [illegible] into a more							
41				[illegible] unit							
42											
			b/c								
43											
44											
45											
46											
47			1								
			35°								
48											
			b/c								
49											
50											
51											
52											
53											
54											
55											
56											
57											
58											

PAGE 4 OF 24	PROJECT:	HOLE NO. 97-79

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 5 OF 24 | PROJECT: | HOLE NO. 97-79

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
49	RHFS			50.3-51.2 GREY/BLACK MASSIVE APHANITIC ARGILLITE							
				ARMS Mostly broken core [illegible]							
50	ARMS			[illegible] bedding to RHFS.							
				broken core at a slight [illegible]							
51				[illegible] contact							
				51.2-56.3 GREY MASSIVE APHANITIC RHYOLITE/FELSITE							
52				RHFS broken core bit. unit. [illegible]							
				on foln. Same as RHFS above.							
53			OT C								
54	RHFS										
55				56.3-61.3 GREY-BLACK SILICEOUS ARGILLITE							
				ARSI Mainly massive [illegible] siliceous [illegible]							
56				[illegible] with local bands of RHFS from							
				1-2 cm [illegible] (similar to RHBR)							
57				moderately carbonaceous.							
				56.6-59.0 broken core							
58				59.0-60.4 broken core							
59			35°								
60	ARSI			61.3-66.5 GREY MASSIVE APHANITIC FELSITE							
			35°	RHFS similar to RHFS above [illegible] foln.							
61				broken core from 61.3-65.6 - unit has							
				undergone extensive brittle deformation + [illegible]							
62				areas show a crackled texture							
				irregular mineralization (veining?) in last							
63				10 cm. Foln at 20° (CA)							
				Sharp lower contact							
64	RHFS		b/c								
65											
66				66.5-68.3 BLACK-GREY SILICEOUS ARGILLITE							
				ARSI broken core to 67.5 moderately							
67	ARSI			carbonaceous unit w/ ~10% siliceous							
				[illegible] as centimetre scale shale beds							
68				approx. parallel to core axis							
				68.3-69.6 GREY-GREEN CHLORITIC SILICA-PYRITE							
69	EXSP		45°	EXSP EXHALITE - well banded grey							
				siliceous unit [illegible] - [illegible] alt'n							
70	CHT			(Fe bearing exhalite?) Alternating [illegible] sil.							
				bands from 1-15 mm wide. Sharp lower ct							
71				[illegible] 10 cm is fault gouge.							

 PROJECT: HOLE NO. 97-79

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
<1% fg diss. pyrite										
~1% diss py on fract + fdn										
~1% diss py also on fdn.										
<1% diss py on fractures.										
4-5% banded (exhalative) to disseminated fine-med gr. pyrite		68.3	69.6	1.3	174023					
Bands from 2mm-1cm.		69.6	70.3	0.6	174024					

PAGE 7 OF 24 | PROJECT: | HOLE NO. 22-73

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
72	EXSP			69.6-70.3 BLACK-GREY BANDED CHERTY ARGILLITE							
				EXSP very siliceous ...							
73				... bands (1-2mm) ...							
				core at ct and for last 30cm.							
74				70.3-72.7 GREY-GREEN SILICA-CALCITE EXHALITE							
	ARTF			EXSP 72.2-72.6 bx zone 40cm qv at 72.6							
75			20°	Mottled ...							
				... local chl alter + fg calcite							
76				71.2-71.5 - calcite - chl alter. 72.0-72.3 - qv.							
				sharp ct. with grey below.							
77				72.7-76.2 BLACK FOLIATED TUFFACEOUS ARGILLITE							
				ARTF - several % discontinuous grey							
78				siliceous tuffaceous blebs and bands							
				... graphitic, carbonaceous							
79				argillite. (sheared?) Unit							
				folded and contorted - esp 74.9-76.2 which							
80	RHAR			contains stringers (x-cutting) of soft green							
				mineral - fizzes when powdered. (Ba?)							
81				76.2-82.9 BLACK-GREY INTERBEDDED APHANITIC							
				RHAR FELSITE AND SILICEOUS ARGILLITE.							
82			40°	grey aphanitic RHES (80%) massive							
				typically ~1cm thick with much							
83				thinner wavy argillaceous bands that							
				0.5-7mm thick. Grad. lct - disappear.							
84				... of argillite.							
				82.9-89.6 GREY BANDED APHANITIC FELSITE.							
85				RHES strongly banded very weak schistosity							
				... 0.5mm bands separate 5mm-1cm							
86				bands of aphanitic siliceous rock - possibly							
				tuffaceous - slightly more argillaceous texture							
87				than RHES above. thin bands are							
				schistosity along foln. some bands + laminations							
88				look more like a banded chert.							
			45°	88.5-89.3 - Mixed lithology and RHES							
89				occasional microlites. sharp ct bottom.							
				89.6-93.6 INTERMIXED RHYOLITE AND SILICEOUS							
90				RHAR ARGILLITE ~60% grey RHES -							
				aphanitic siliceous locally calcareous.							
91				40% calc-siliceous argillite occurs as							
				thin sub-mm patchy unit but							
92				also as bands up to 2cm wide w/							
				sharp contacts. Gradational							
93				lower contact.							
				93.4-93.6 - interval full of mafic fg							
94				blebs and stringers							

PAGE 8 OF 24	PROJECT:	HOLE NO. 97-79

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
<1% v. fine diss py tht. unit discontinuous red-brown bands (1mm) may be hematite.		70.3	71.5	1.2	174025					
		71.5	72.7	1.2	174026					
- 1-2% stronger pyrite (~1mm thick) minor diss. py. 1 mm bands of "straw coloured" sericite tht. unit.		74.9	76.2	1.3	174027					
- 1% pyrite diss + clotted on foln.										
- ~1% py clotted on foln.										
- 1-2% py banded along foln.										
- 1% py clotted on foln.										

PAGE 9 OF 24 | PROJECT: | HOLE NO. 17-79

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
				93.6 - 138.8 BLACK - GREY MASSIVE SILICEOUS - CARBONATE -							
95			45	ARSI ARGILLITE							
				lengthy unit of argillite -							
96				silica flooded in places with several %							
				fine grained disseminated pyrite along							
97				beds and fracture planes							
				Argillaceous beds are fine							
98				Green staining on fracture surfaces.							
				Locally quite calcareous unsilicified							
99				calcite bands parallel to foln.							
100											
101											
102											
103			51								
104											
105											
106											
107											
108				108.5 - 108.8 - graphitic fault zone							
109											
				109.8 - 111.3 - grey and blk graphitic							
110				argillite.							
111				111.6 - 112.0 - blk. calcite w/ stringer py							
112											
113			36								
114											
115											
				115.4 - cross-cutting qtz vein w/ stringer py							
116				116.5 - 117.0 - crumbly gouge zone -							
				possible fault							

ARSI / ARCB

PAGE 10 OF 24	PROJECT:	HOLE NO. 97-79

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
3% total sulphides fine grained diss-seeded (usu. 1% to 5%) thin units, comm ass'd w/ calcite. Locally diss sph stringers - also parallel to foln. Only 4m amounts overall.										
102.9 - 103.8 - 4% py + 1% sph over interval, bands and stks para. to foln. Ass'd w/ silica + tr. calcite										

PAGE 11 OF 24 | PROJECT: | HOLE NO. 97-79

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
118	ARSI/ARCB			ARSI/ARCB (cont'd)							
119				117.2 - 117.8 - zone of ab. calcite with sulp contents 3½ d-s and minor pyrite. calcite veinlets & fg qtz vnlts and of same orientation							
120											
121			35	121.0 - 123.4 - broken ground core							
122				124.2 - 124.9 - black graphitic gouge							
123											
124											
125											
126											
127											
128											
129											
130				130.0 - 130.8 - black graphitic fault gouge?							
131											
132				132.2 - 133.0 - grey silicified sericite with patchy carbonate veinlets weak green sericite banding to 2mm 2-3% banded py. Streaky - banded 1-2mm org bands near upper ct looks like RHES but may be tuffaceous							
133			40								
134											
135				135.3 - 4 cm irregular wht qv							
136				More silica after 133.0 - locally pitted almost fragmental texture ab Microfolding of siliceous bands 3-4 % py							
137											
138			35	Sharp lower ct btn competent/ductile dolomitic sed.							
139											
140											

PAGE 12 OF 24	PROJECT:	HOLE NO. 97-79

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
133.0 - 138.8 · very siliceous w/ 3-4% diss. py, clots and fills fractures.										

PAGE 13 OF 24 | PROJECT: | HOLE NO. 97-79

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EP C	CO_3 D	E	FRACTURE INTENSITY	% VEIN QTZ.
141	RHFS			138.8 - 142.9	GREY/BROWN MASSIVE APHANITIC FELSITE							
				RHFS	grey very siliceous [illegible]							
142			40°		[illegible]							
					with sericitic partings throughout.							
143					Undulating weakly developed bands towards							
					bottom of unit. Slight breccia							
144					fragments to sericite. Gradational							
					lower contact w/ argillite.							
145				142.9 - 154.2	BLACK-GREY SILICEOUS ARGILLITE							
				ARSI	strong (15-20%) tuffaceous component							
146					to this argillite. Some beds with							
					jagged boundaries may be syn-sed.							
147					fragments. Filled with irregular							
					silica stringers + impregnations							
148					of which show tight wispy folding.							
					Also undulating wispy patchy silica.							
149					Otherwise black very siliceous argillite							
					1-2 mm argillaceous bands often							
150					visible. Fairly gradational lower							
					contact.							
151												
152			40°									
153				154.2 - 158.2	GREY-BROWN MASSIVE APHANITIC							
				RHFS	RHYOLITE/FELSITE							
154					same as 138.8 - 142.9 above.							
	RHFS				Again black argillaceous undulating							
155					bands towards lower contact							
					also from 155.2 - 156.4.							
156					Very weak density.							
157												
158				158.2 - 165.4	BLACK-GREY SILICEOUS ARGILLITE							
				ARSI	same as above 142.9 - 154.2							
159					gradational lower contact							
160	ARSI											
161												
162			35°									
163												

PAGE 14 OF 24	PROJECT:	HOLE NO. 97-79

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
1-2% disseminated py. often coarse euhedral crystals.		138.8	140.3	1.5	174028	
		140.3	141.6	1.3	174029	
		141.6	142.9	1.3	174030	
		144.4	145.9	1.5	174031	
1% diss - crudely banded fine gr. pyrite.						
		147.4	148.9	1.5	174032	
		150.4	151.9	1.5	174033	
		154.2	155.5	1.3	174034	
		155.5	156.8	1.3	174035	
		156.8	158.2	1.4	174036	
		158.2	159.7	1.5	174037	
		161.2	162.7	1.5	174038	
		164.2	165.4	1.2	174039	

PAGE 15 OF 24 | PROJECT: | HOLE NO. 17-79

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
164												
165				165.4 - 178.9	GREY-BROWN RHYOLITE FRAGMENTAL							
166	98%	RHFR	40°	RHFR	inspiently fragmental texture anastamosing green-brown sericitic bands. very siliceous may have a small argillaceous component. Some well defined silica dominated fragments with jagged edges More commonly buff-grey siliceous bands to 1 cm wide often discontinuous w/ rounded terminations							
167												
168												
169												
170												
171												
172												
173												
174												
175												
176												
177												
178												
179				178.9 - 190.6	GREY MASSIVE APHANITIC RHYOLITE							
180				RHFS	- similar to RHFS above but less massive silica massive silica as bands - patches (1-5 cm) between green-brown sericitic bands							
181					microlites common. oval shaped up to 1mm							
182					- very fine (ash) tuffaceous layers (0.5 - 1 cm wide) darker grey-brown become more common towards layer contact.							
183		RHFS	40°		183.8 - 184.0 - qtz vn w/ sharp irregular contact							
184												
185					- slightly gradational layer of							
186												

PAGE 16 OF 24 | PROJECT: | HOLE NO. 97-79

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
- <1% disseminated py.		165.4	166.9	1.5	174040					
		166.9	168.4	1.5	174041					
		168.4	169.9	1.5	174042					
		169.9	171.4	1.5	174043					
		171.4	172.9	1.5	174044					
		172.9	174.4	1.5	174045					
		174.4	175.9	1.5	174046					
		175.9	177.4	1.5	174047					
		177.4	178.9	1.5	174048					
- ~1% pyrite disseminations + clotted on foln. 188.0 - coarse py clots on foln.		178.9	180.4	1.5	174049					
		181.9	183.4	1.5	174050					
		184.9	186.4	1.5	174051					

 PROJECT: HOLE NO. 97-79

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EP C	CO_3 D	E	FRACTURE INTENSITY	% VEIN QTZ.
187	RHFS											
188				190.6-191.7 RHTT	GREY-BROWN BANDED FINE GRAINED RHYOLITE TUFF. Felsic volcanic "LAKE" banded - alternating white-grey siliceous fine grained bands (2-10mm) apple green - light brown sericitic bands (1mm) and variable amounts of dark brown 1-2 mm bands (iron carbonate?) - (scratches white and effervesses slightly) banding often irregular - slightly grad. lct.							
189												
190												
191	RHTT		40°									
192	RHAT		40°	191.7-193.6 RHAT	BLACK-GREY ARGILLACEOUS RHYOLITE LAPILLI TUFF - reverse sense of shear determined by tight assymmetric microfolded siliceous bands (lapilli) w/ arg. mtx (cont-195.5)							
193												
194	RHTT		45°	193.6-195.5 RHTT	GREY/GREEN FINE GRAINED RHYOLITE TUFF grey fine gr. siliceous tuff w/ frequent green sericitic bands (1-2mm). Grad cts w/ argillaceous units							
195			40°									
196	RHAT		30°	195.5-196.3 RHAT	BLACK-GREY ARGILLACEOUS RHYOLITE LAPILLI TUFF (cont. from 191.7-193.6) - black argillaceous mtx very stretched siliceous lapilli (4×40mm) about 20% of unit. Shp. l.ct (depositional)							
197	RHTT			196.3-200.2 RHTT	GREY-BROWN FINE GRAINED RHYOLITE TUFF see 201.0-216.4 below for description of this unit							
198												
199												
200			40°									
201	RHTF		45°	200.2-201.0 RHTF	BLACK-GREY TUFFACEOUS ARGILLITE Mainly arg but well banded on a mm scale w/ ≈ 10% tuffaceous bands (~3mm) parallel to foln. Fairly sharp upper and lower contacts.							
202												
203												
204	RHTT			201.0-216.4 RHTT	GREY BROWN RHYOLITE FINE (ASH) TUFF same as 196.3-200.2 above - Ranges from light grey to a dark brown. Banded thr unit on a mm scale. Aphanitic silica bands Frequent avg 5mm wide. - Rock dominated by fine ash sized grains (80%) but also contains darker brown intervals with slightly coarser grain sizes (non-volcanic origin??)							
205			40°									
206												
207												
208												
209												

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
- trace - none.		187.9	189.4	1.5	174052	
		190.6	191.7	1.1	174053	
- only trace amounts of sx.		191.7	193.6	1.9	174054	
- 1% py, clotted on foln.		193.6	195.5	1.9	174055	
		195.5	196.3	0.8	174056	
- Only trace amounts of sx.		196.3	197.6	1.3	174057	
		197.6	198.9	1.3	174058	
- <1% diss py - usually on fractures and foln.		198.9	200.2	1.3	174059	
- 2-3% pyrite - clotted on fractures and foln.		200.2	201.0	0.8	174060	
- <1% diss py - usually on fractures and foln.		201.0	202.5	1.5	174061	
		204.6	205.5	1.5	174062	
		207.0	208.5	1.5	174063	

PAGE 19 OF 24 | PROJECT: | HOLE NO. 97-79

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EP C	CO_3 D	E	FRACTURE INTENSITY	% VEIN QTZ.
		RHTT		RHTT (cont.) - (206.5 - 206.7 wht qv w/ light green staining, minor py stringers) unit contains minor sericite (light green - yellow) along partings. Brown mineral possibly biotite. (207.7 - 208.3 - quartz vein)							
				Contact with RHFS below not obvious. based on a more massive rather than grainy texture and decrease in green and brown micaceous bands. (increase in silica content)							
		RHFS		216.4 - 219.7 RHFS: GREY MASSIVE APHANITIC RHYOLITE - becomes more tuffaceous towards lower contact, but otherwise massive and aphanitic. 218.9 - 219.7 - very fine grained ash? sharp lower contact w/ arg.							
		ARCB		219.7 - 241.7 ARCB: BLACK CARBONACEOUS ARGILLITE moderately carbonaceous to strongly graphitic argillite ab bkn + gouged core tht unit. <<1mm - 3mm siliceous bands and calcite blebs tht. (221.0 - 221.4 - more felsic tuffaceous interval) (223.0 - 224.9 - possible fault zone - bkn core contorted fols, minor fault gouge. intact core is soft and gouge-like ab py (5%) ass w/ bands and patches of silica. Massive bands to 2cm wide.)							
				Calcite bands and patches common often w/ pyrite.							
				229.0 - 229.5 - gouged up carbonaceous argillite.							

 | PROJECT: | HOLE NO. 97-79

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		210.0	211.5	1.5	174064					
		213.0	214.5	1.5	174065					
<1% diss py on foln + fractures		216.4	217.9	1.5	174066					
		219.7	221.0	1.3	174067					
5-7% pyrite, disseminated tht unit, massive eg. pyrite bands + patches common, esp. in fault zones ass/ w/ quartz (2mm-2cm) abundant fine mm scale pyrite bands tht. unit.		221.0	222.9	1.9	174068					
		222.9	223.5	0.6	174069					
		223.5	224.1	0.9	174070					
		224.1	225.0	0.9	174071					
		225.0	226.5	1.5	174072					
		226.5	228.0	1.5	174073					
		228.0	229.5	1.5	174074					
		229.5	231.0	1.5	174075					
		231.0	232.5	1.5	174076					

PAGE 21 OF 24 | PROJECT: | HOLE NO. 97-79

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EP C	CO_3 D	E	FRACTURE INTENSITY	% VEIN QTZ.
233	ARGB			232.6 - 232.9 - broken core Fault gouge.							
234											
235											
236											
237											
238											
239				(lost core!)							
240				241.0 - 241.1 - black argillaceous sand, some graphite. Sharp but sheared up l.ct.							
241				241.4 - 241.7 - sheared contact zone, fault gouge quartz veining minor pyrite.							
242	FDPH	+		241.7 - 264.9 FDPH GREY MASSIVE FELDSPAR PORPHYRY - same as at the bottom of hole WU97-75.							
243		+		WOLVERINE HORIZON - contact zone 241.7 - 242.3 is strongly sheared, alternating argillaceous and felsic bands (<1mm) Moderate pale green sericite - but may be a result of shearing rather than hydrothermal alteration (242.2 - 8 cm argillaceous gouge)							
244		+		(sheared porphyry continues to ~ 243.2) - this contact is probably the Wolverine ore horizon. Ore missing prob because of this large porphyry intrusive							
245		+									
246		+		- Bulk of unit is quite massive although a banded appearance and weak sericite are a result of tectonic strain. (green ser - wavy 1-2mm bands)							
247		+									
248		+		- Otherwise groundmass is very siliceous and fine grained. (grey)							
249		+									
250		+		- Phenocrysts are subrounded - rectangular feldspar from 2mm - 1.5 cm in diameter ~ 10-15% of rock							
251		+									
252		+		- quartz veining common 1-10 cm wide sub-parallel to foln.							
253		+									
254		+		- locally feldspars are partially - totally altered to a black colour - possibly Ti oxides? (<1% of rk.)							
255											

PAGE 22 OF 24 | PROJECT: | HOLE NO. 97-79

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		232.5	234.0	1.5	174077					
		234.0	235.5	1.5	174078					
		235.5	237.0	1.5	174079					
		237.0	238 5	1.5	174080					
		238.5	240.0	1.5	174081					
		240.0	241.7	1.7	174082					
		241.7	243.2	1.5	174083					
- pyrite bands common (~3%) fine grained, foln. parallel, 1-5 mm										
		243.2	244.7	1.5	174084					
		244.7	246.2	1.5	174085					
		246.2	247.7	1.5	174086					
		247.7	249.2	1.5	174087					
		250.7	252.2	1.5	174088					
		253.7	255.2	1.5	174089					

PAGE 23 OF 24 | PROJECT: | HOLE NO. 97-79

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EP C	CO_3 D	E	FRACTURE INTENSITY	% VEIN QTZ.
	FDPH			FDPH (cont.)							
256				254.1 - 256.4 ab black feldspars + th. wavy pale bands							
257											
258				sharp lower ct disappearance of feldspars more clastic texture w/ qe's.							
259											
260											
261											
262											
263			50°								
264											
265		55°		264.9-272.4 GREY QUARTZ FELDSPAR CRYSTAL TUFF							
266	RPTF			RPTF similar to same unit in WV97-75. Grey fine grained tuffaceous unit w/ 2% blue quartz eyes (~2mm) and ~3% rectangular white feldspar crystals (1-2mm) Minor amounts of siliceous lapilli sized fragments. Seriate on partings thr. unit (partings frequent <1mm wide, ~7% of rock) discontinuous stretched argillite fragments appear towards lower contact (271.7-272.4) sharp contact w/ argillite.							
267											
268											
269											
270											
271											
272		50°		272.4-273.4 GREY-BLACK CARBONACEOUS ARGILLITE							
273	ARCB			ARCB (FOOTWALL ARGILLITE?) black arg moderate-strongly carbonaceous. ~5% siliceous (tuffaceous) bands minor calcite bands.							
274											
275				273.4 - EOH							
276											
277				PITB							
278											

 PROJECT: HOLE NO. 97-79

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
ab py as swirly bands and stringers sub parallel to foln.		256.7	258.2	1.5	174090					
		259.7	261.2	1.5	174091					
		263.4	264.9	1.5	174092					
		264.9	266.4	1.5	174093					
1% diss-banded py usu. para. to foln. or ass w quartz veining										
		266.4	267.9	1.5	174094					
		267.9	269.4	1.5	174095					
		269.4	270.9	1.5	174096					
		270.9	272.4	1.5	174097					
- 2% diss-banded fine gr. py.		272.4	273.4	1.0	174098					

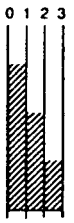
PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: ~1370 m
HOLE NO.: WV 9750	BEARING: 215
LOCATION: L 16350 E 16750 N	DIP: -60°
	TOTAL LENGTH: 85.34 m
LOGGED BY: M. Padberg	HORIZONTAL PROJECT
DATE: May 26/97	VERTICAL PROJECT
CONTRACTOR: Boisvenu Diamond Drilling	**ALTERATION SCALE**
CORE SIZE: HQ	
DATE STARTED: May 25/97	**TOTAL SULPHIDE SCALE**
DATE COMPLETED: May 26	
DIP TESTS: @ 100' (30.5m) -60 @ 270' (82.3m) -61	



absent
slight
moderate
intense



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- 1.94 m massive sulfide intersection. (27.86-29.80)
- pervasive sericite + chlorite alteration in hangwall

LEGEND

- argillite
- rhyolite
- quartz vein
- mass sulfide intersection
- fault gouge
- shear zone
- porphory

PAGE 1 OF 8 | PROJECT: Wolverine | HOLE NO. WV9750

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.00-1.83 CASING							
				DHCS							
1.83				1.83-18.95 OVERBURDEN							
				DHOR							
15.95			70	18.95-27.33 GRAPHITIC ARGILLITE							
19.82			65	ARGR Black graphitic arg w/ wispy silt							
20.32			55	lenses along fol'n. Intensely							
			55	fract'd. Fract'd surfaces are mostly							
				oxidized. Tr fg'd euhedral diss. Py.							
				→ 19.82-20.32. FH bound'd rhy. lapilli							
				tuff. Thin (2mm) lapilli							
22.55				w/ wk. ser'c partings.							
22.72			70								
			70								

PAGE 2 OF 8	PROJECT: Wolverine	HOLE NO. WV9780

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18	Tr. f.g. eub. py.										
19											
20											
21											
22	9% f.g. diss. py		2255	2272	17cm	174635					
23											

PAGE 3 OF 8 | PROJECT: Wolverine | HOLE NO. WV9780

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(1895-2733: ARGR cont.)							
				→ 19.82: STFL: FAULT: flt @ 55° to c.a.x.							
24				→ 19.97-20.03: QCVN: QTZ/CARB VN - 50/50 qtz/carb vn.							
25			70	→ 20.32: STFL: FAULT: flt @ 55° to c.a.x							
26				→ 22.55-22.72: Beige colour'd, str'ly pyic (f.g diss py 9%) rhyl. lapilli tuff. Flt'd U.C. @ 70° to c.a.x. Small lapilli (5x10mm) w/ str. fol'n @ 70° c.a.x.							
27											
27.33											
27.56			35								
			45								
28											
				27.33-27.56 QUARTZ VEIN							
				Qtz VN: Qtz vn cuts + fragments agph arg @ 35° c.a.x (btwn 27.33 - 27.50) then becomes 80/20 % qtz/graphite from 27.50 to SSMS contact @ 27.56. 3% mass cpy strong through sealed fractures. Some cpy tarnished w/ silvery/purplish colourization. Natured fractures show oxidized surfaces, wk chloritic content, str graphitic, tr. carb. fragments (1x1cm).							
29			60								
29.80			65								
			65								
30											
31											
31.65											
32			55								
32.46			70								
32.86											
				27.56-29.80 MASSIVE SULFIDE (1.94m)							
33			75	SSMS: Mass f.g. py w/ tr. sph band: Bxd py w/ v.fg dull metallic py'ic matrix Sil gangue "Jigsaw f.t" texture Localized mass blebby cpy + regions of 1x1mm recrystallized pyrite + <1mm graphite band. Perk core w/ FeO staining							
34											
35											
36											
				→ 27.86-29.56: 90% py / 5% sph / 5% gangue Bxd mass py (frags 1x1cm or less) in a v. f.g'd py'ic matrix. Very faint red very f.g. mass sph is visible in matrix. Rare 1x1mm cpy blebs:							
37											
38			70								
39				→ 29.56-29.61: 60% gangue / 30% cpy / 10% py F.g'd to massive cpy - strong through equal parts sil/agph/+ sericitic gangue. V.f.g dull py disc through cpy stringers							
40											
41	41.10			→ 29.61-29.80: 60% cpy / 30% sph / 10% gangue F.g. recrystallized euh. py xtals - sparkling over dull massive py matrix. Anastomizing							
42											

PAGE 4 OF 8 | PROJECT: Wolverine | HOLE NO. WV9780

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
24						
25						
26		22.72	26.52	3.80	174636	
27 3% mass cpy.		26.52	27.56	1.04	174637	
		27.56	28.56	1m	174638	
SSMS						
28 ↓						
29 1% f.g. diss. py		28.56	29.56	1m	174639	
		29.56	29.80	24cm	174640	
30		29.80	31.86	2.06	174641	
31		31.86	32.46	60cm	174642	
32 1% f.g. diss py		32.46	32.86	40cm	174643	
33 3% f.g. diss		32.86	34.15	1.29	174644	
34		34.15	35.15	1m	174645	
35		35.15	36.23	1.08	174646	
36		36.23	37.25	1.02	174647	
37		37.25	38.44	1.19	174648	
38		38.44	39.41	97cm	174649	
		39.41	40.52	1.11m	174650	
40		40.52	41.55	1.03m	174651	
41		41.55	42.55	1m	174652	
42		42.55	43.55	1m	174653	

PAGE 5 OF 8 | PROJECT: Wolverine | HOLE NO. WV97 80

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (27.86-29.80 SSMS cont'd)	ALTERATION CHL A	SER B	CERI C	CARB D	E	FRACTURE INTENSITY	% VEIN QTZ.
				very faint sph / gangue (graphite + silica) banding intermixes w/ re-xtallized py / pyritic matrix							
43				★ TOTAL SULFIDE GRADE ★							
43.35				PYRITE: 85%							
44.20				SPHALERITE: 10%							
44.50				CHALCOPYRITE: 5%							
45											
46											
				29.80-29.84 GRAPHITIC ARGILLITE							
47				ARGR Sharp U.C w/ SSMS along graphitic parting of sph + siliceous band @ 29.80 1% fine grained							
48				diss py. Jet black graph. arg for 1cm. L.C. is fault gouge							
49											
49.86											
50				29.84-31.65 FAULT GOUGE							
50.60				STGG Dark blk. graphitic pasty fit gouge grading to a more siliceous gouge @ 31.45. Clast							
51				size varies from silt to pebble.							
52											
				31.65-63.50 RHYOLITIC LAPILLI TUFF							
53				RHLT Str'ly alt'd (chl + ser) rhy lapilli tuff							
54				w/ f.g py along ser partings. (1%) Cdn. Armed Forces green w/ white							
55				rhy. lapilli varying in size from 1mm² to 1cm². Strong fabric							
56				(fol'n and shearing) have made lapilli very elongate.							
57				→ 31.66-31.86: QCVN: QUARTZ / CARB VN							
58				90/10 qtz/carb vn bull white in colour w/							
59				rare py + chl. septa							
				→ 31.86-32.46: Tr. pyrrhotite disseminated							
60				w/ 3% f.g diss py. Wkly magnetic							
				→ 32.46-32.86: QCVN: QUARTZ/CARB VN							
61				same as above (31.66-31.86)							
				→ 41.10-43.35: STSH: SHEAR ZONE							
62				variably foliated pasty							
63				ductile core. Fol'n varies							
63.50				from: 90° → 0° → 80° cw							
				→ 44.20-44.50: STGG: FAULT GOUGE							
64	64.00			gray paste. (v. sericitic)							
				→ 49.86-50.60: STGG: FAULT GOUGE							
65				same as above							

PAGE 6 OF 8	PROJECT: Wolverine	HOLE NO. WV 9780

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
43		43.55	44.65	1.1m	174654					
44		44.65	45.67	1.02m	174655					
45		45.67	46.80	1.13	174656					
46		46.80	47.84	1.04	174657					
47		47.84	49.07	1.23	174658					
48										
49		49.07	49.80	73cm	174659					
50		49.80	51.30	1.5m	174660					
		51.30	52.40	1.1m	174661					
52		52.40	53.40	1m	174662					
53		53.40	54.45	1.05	174663					
54		54.45	55.50	1.05	174664					
55		55.50	56.70	1.2	174665					
56		56.70	57.70	1m	174666					
57		57.70	58.70	1m	174667					
58		58.70	59.70	1m	174668					
59		59.70	60.72	1.02	174669					
60		60.72	62.50	1.78	174670					
61		62.50	63.95	1.45	174671					
63		63.95	65.00	1.05	174672					
64										
65										

PAGE 7 OF 8 | PROJECT: Wolverine | HOLE NO. WW9780

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
				63.50-64.00 GRAPHITIC ARGILLITE							
			70	ARGR Jet black, brkn core, graph.							
66				arg w/ rare stringers qtz veins.							
				No vis. sx's							
67	67.02		70								
67.37			70								
				64.00-67.37 RHYOLITIC LAPILLI TUFF							
68				RHLT Same as above w/ ser. partings,							
				tr f.g. dissem py in ser partings.							
69				Gradational contact w/ lower QFPH							
			75	67.02-67.07: QTVN: QUARTZ VEIN							
70				Bull white qtz vn w/							
				sericite filled fractures							
71											
				67.37-81.00 QUARTZ FELDSPAR PORPHORY							
72			75	QFPH Fsp gray QFP w/ both black							
				(TiO_2) + white fsp's vis. Pheno's							
73				are on avg. 1x1 cm but smaller							
				(up to 1mm²) phenos are present							
74	73.93		65	Variably wk→mod pervasive seritic							
				alth'n w/ localized fine grained							
75				stringer py. (3%). Stringer qtz vns							
				(commonly @ 70° to c.a.x.) Localized							
76			60	qtz stockworkings of very thin							
				veinlets.							
77				→ 73.93: STFL: FAULT							
	77.88			Fit @ 65° to c.a.x.							
78	78.15		70	→ 77.88-78.15: QTVN: QUARTZ VEIN							
				Absolutely bull white							
79				w/ no other vis. min.							
				U+L contacts @ 70° c.a.x.							
80											
81	81.00			81.00-83.21 BLACK FELDSPAR PORPHORY							
				FDPH Str'ly fol'd dk gray blk FP							
82			75	w/ phenos averaging 1mm² wk ser							
				part'g's. V. small wh. fsp's are vis.							
83	83.21			Very fine grain'd py'ic stringers (1%)							
		≈									
84		≈		83.21-85.34 FAULT GOUGE.							
		≈		STGG Dk gray v.f.g. paste.							
85	85.34	≈									

Lay it to Rest

PAGE 8 OF 8 | PROJECT: Wolverine | HOLE NO. WV9780

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
66		65.00	66.30	1.3	174673					
67 fg stringer py. (3%)		66.30	67.30	1m	174674					
68		67.30	68.30	1m	174675					
69		68.30	69.40	1.1m	174676					
70		69.40	70.40	1m	174677					
71		70.40	71.40	1m	174678					
72		71.40	72.40	1m	174679					
73		72.40	73.40	1m	174680					
		7340	74.40	1m	174681					
75		74.40	75.48	1.08	174682					
76		75.48	76.52	1.04	174683					
77		76.52	77.52	1m	174684					
78		77.52	78.72	1.2	174685					
79		78.72	79.72	1	174686					
80		79.72	81.10	1.38	174687					
81 v. f.g. stringer py (1%)		81.10	82.10	1m	174688					
82		82.10	83.21	1.11	174689					
83										

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.

RAPIDEX

WV-97-81 1

WV-97-82 2

WV-97-83 3

WV-97-84 4

WV-97-85 5

WV-97-86 6

WV-97-87 7

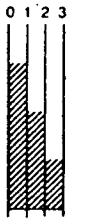
WV-97-88 8

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EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: ~1370m
HOLE NO.: WV 97 81	BEARING: 213°
LOCATION: L/16250E 16520N	DIP: -80°
	TOTAL LENGTH: 75.29m
LOGGED BY: M. Padberg	HORIZONTAL PROJECT
DATE: May 27/97	VERTICAL PROJECT
CONTRACTOR: Boisvenu Diamond Drilling	**ALTERATION SCALE**
CORE SIZE: HQ	
DATE STARTED: May 26	**TOTAL SULPHIDE SCALE**
DATE COMPLETED: May 27	
DIP TESTS: @ 102' (31.1m) -80° @ 232' (70.7m) -79.5°	



absent
slight
moderate
intense



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- 95cm SSMS
- stringer sulfides in footwall
  → pyrite
  → sphalerite
  → galena

LEGEND

- argillite
- quartz vein
- fault gouge
- massive sulfide
- rhyolite

PAGE 1 OF 10 | PROJECT: Wolverine | HOLE NO. WV9781

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EPI C	CARB D	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.00-4.30 CASING							
				DHCS							
4.30				4.30-7.65 GRAPHITIC ARGILLITE							
				ARGR Jet black graph. arg. w/ wispy silic.'s banding bands are wk + faint Tr. py blebs along foln (band'g). Primarily brkn core w/ oxidized staining on fracture surfaces							
7.65			65								
			65								
				7.65-11.00 TUFFACEOUS BANDED ARGILLITE							
9.00				ARTF Dk gray arg. w/ a wkly tuffaceous fabric. Sil lapilli have wk carb. component + very fine ser. partgs.							
9.15			70								
				Trace lapilli are pyritic w/ v f.g. to mass. py. Localized x-cutting qtz veinlets @ 40° to c.a.x.							
11.00			70	9.00-9.15: QTVN: QUARTZ VEIN Bull white qtz vn w/ calcareous contacts. Both U+L contacts are sharp @ 70° to c.a.x.							
				11.00-21.40 GRAPHITIC ARGILLITE							
			60	ARGR Jet blk graph. arg. very similar to unit above (4.30-7.65) Foln @ 60° c.a.x. Natural fract. have wkly oxidized surfaces							
				→ 14.32-21.40: x-cutting + stockworked carb veinlets effervescing freely w/ 10% HCl. Veinlets avg 1mm thk and x-cut at all angles.							
17.91				→ 17.91-18.50 STGG FAULT GOUGE							
18.50			65								
			65								
			45	f.g'd blk graphitic paste mixed w/ coarse sand + pebble sized clasts.							
21.40			60								
				21.40-23.75 SILICEOUS ARGILLITE							
23.75				ARSI f'd sil makes a dk gray colour							

PAGE 2 OF 10	PROJECT: Wolverine	HOLE NO. WV9781

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1											
2											
3											
4	Tr py blebs along foln										
5											
6											
7											
8											
9											
10											
11	V.f.g → mass py										
12											
13											
14											
15											
16											
17			17.75	20.50	2.75	174690					
18											
19											
			20.50	23.50	3m	174691					
21											
22	1% f.g py										
23											

PROJECT: Wolverine

HOLE NO. WV9781

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				(21.40 - 23.75 : ARS1 cont)							
				+ a much harder lith than ARGR 1% f.g. diss py along v. fine graphitic widely spaced (>1cm) laminae							
24			70 / 55								
25				→ 22.90-23.00: QCVN: QTZ CARB VN 50/50 qtz/carb vn w/ tr. py + graphitic septa							
26											
27											
				23.75-31.20 GRAPHITIC ARGILLITE							
28				ARGR Jet blk graph arg (again v sim. to that of sec'n 4.30-7.65) w/ wispy 1mm thk irregular sil'ceous bands + rare x-cutting carb veinlets Tr py blebs in siliceous bands.							
29			60								
30		1.00									
31	31.10			→ 31.10-31.19: ST66: FAULT GOUGE							
	31.20	1.50	50 / 50 / 50								
				31.20-32.15 MASSIVE SULFIDE (95cm)							
			70	SSMS Primarily pyritiferous mass sx w/ rare (0.5cm) graphitic argilliceous bands locally sph + Pbs. Regional py recrystallized into a stockworked "spiderweb" over a dull metallic py ic matrix Qtz/carb + graphitic gangue.							
32	32.15										
	32.20		65								
	32.49										
	32.51		65								
	32.74										
	32.79		65								
33	33.03		70 / 65	→ 31.20-31.39: 85% py / 15% gangue mass: dull metallic py w/ a sharp U.C. @ 31.20 on a graphitic part'g @ 50° cax. Re-xtallized v.f.g. py in a wk. stockwork. Stockwork'g grades stronger downhole. 50/50 qtz/carb interstitial patches 1x3cm.							
	33.49		70 / 70 / 70								
34	34.32		70								
	34.69		70								
35				→ 31.39-31.48: 60% gangue / 20% sph / 20% py F.g. py + sph disseminated 50/50 through each other over a dk black graphitic matrix.							
	35.50										
	35.65		60								
36				→ 31.48-31.89 70% py / 30% gangue Re-xtallized f.g. euh. py in a spiderweb stockworking over a dull metallic mass py containing graphitic blebs + a x-cutting qtz/carb pod 9cm across. Pod contains 4% pyritic "ripups"							
	36.30		80								
	36.50		80								
37											
	37.20		75								
	37.49	1.50	75	→ 31.89-32.15: 70% py / 20% gangue / 10% sph Stockworked py grades into a wispy banded mas. + f.g. py w/ graphitic blebs. Rare 5mm thk faint rhythmic sph band'g. Tr fine galena. Qtz/carb							
38											
		1.81									
39											

PAGE 4 OF	PROJECT: Wolverine	HOLE NO. WV 97 81

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		23.50	25.50	2m	174692	
24 Tr. py blebs						
25		25.50	29.00	3.5m	174693	
26						
27						
28						
29		29.00	31.20	2.20	174694	
30						
31 SSMS (95cm)		31.20	31.37	17cm	174695	
		31.37	31.47	10cm	174696	
32 35% py, 5% tr PbS		31.47	32.15	68cm	174697	
		32.15	33.12	97cm	174698	
40% sph, 10%, 5% PbS						
33 60% py, 15% sph, 3% PbS		33.12	34.07	95cm	174699	
34 wispy py + sph disseminated bands		34.07	35.05	98cm	174700	
30% py, 10% sph						
35		35.05	36.07	1.02m	174751	
80% py, 3% sph						
36 60% mass py		36.07	37.06	99cm	174752	
37 90% mass py, 20% sph		37.06	38.07	1.0m	174753	
38		38.07	39.14	1.07	174754	
39		39.14	410.20	1.06	174755	

PROJECT: Wolverine

HOLE NO. W97-81

* Descriptive Geology Only *

GEOLOGICAL DESCRIPTION

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				(31.20-32.15: SSMS cont)							
				gangue appears as a fragmented vn from 32.03-32.07 w/ 30% pyritic + sphaleritic stringers. Sharp L.C. @ 32.15 along siliceous band (2mm) @ 60° to c.a.x. Sv stringers persist through RHFS.							
				✱ TOTAL SULFIDE GRADE ✱							
				PYRITE 95%							
				SPHALERITE: 5%							
				GALENA: Trace (<<1%)							
				32.15-47.35 MASSIVE RHYOLITE							
				RHFS mass aphyric gray rhy w/ str. py + sph stringers near top of the sec'n. V. wk rhythmic sericitic/pyritic (<1mm thk) banding. (exhalative?)							
				→ 32.19-32.24: 30% py, 5% sph, tr PbS banded @ 65° c.a.x. F.g. euh x-tals in a sil. matrix.							
				→ 32.49-32.51: 40% sph, 10% py, 5% PbS. Fine grained diss. sulfides @ 65° c.a.x in a siliceous matrix.							
				→ 32.51-33.40: wispy, very irregular anastomizing py/sph band'g. F.g'd sx's locally inter-disseminated through bands							
				→ 32.74-32.79: QTVN: QTZ VN Bull wh. w/ U+L C's @ 65° c.a.x.							
				→ 33.00-33.02: QTVN: QTZ VN @ 70° c.a.x.							
				→ 33.40-33.48: 60% py, 15% sph, 3% PbS Sx band anastomizing on itself w/ 3% v.f.g. diss PbS, mod sph band btwn 33.40-33.41							
				→ 33.48-33.60: QTVN: QTZ VN Bull white w/ tr. mass blebs of PbS + py. contacts @ 70° c.a.x							
				→ 33.60-34.05: w.spy py + sph anastomizing bands comprising 15% of rock, + d quantity of py							

PAGE 6 OF 10 | PROJECT: Wolverine | HOLE NO. WV9781

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				

PAGE 7 OF 10 | PROJECT: Wolverine | HOLE NO. WV9781

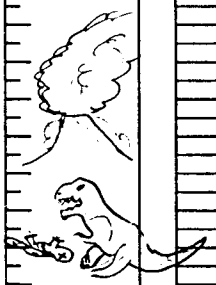
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				blebs from 33.92-34.02 (~40%)							
410			65	→ 34.05-34.11: QTVN: QUARTZ VEIN							
				Bull white, no vis sx's							
				→ 34.27-34.60: tr'd sx content. Py + sph							
411				up to 30% py, 10% sph							
411.35				anastomizing, same as							
411.72			0	above. Fine grained euh x-tals							
412											
				→ 34.60-34.70 QTVN: QUARTZ VEIN							
413				Bull white, no sx's							
				contacts @ 70° cax.							
414											
				→ 35.50-35.65: 80% py, 3% sph							
415				f.g.'d, blebby euh py							
				banded @ 60° cax w/ chy.							
416				3% f.g. diss. sph							
				→ 36.30-36.50: 60% dull metallic mass							
417				py w/ f.g. euh. re-x-tal'd							
417.35			65	diss. py sparkling							
418				throughout. 4% wispy							
			70	faint sph braided							
419				through.							
				→ 37.20-37.40: 5cm of mass 90% py, followed							
50				by 15cm of wispy banded							
				f.g. sph'ic bands 20%							
51				sph., 3% py, 77% gangue.							
				→ 37.40-47.35: Sx content decreases							
52				to ~1% f.g. diss							
				py throughout + blebby							
53			75	along sericitic partings							
				41.35-41.72: QTVN: QTZ VN							
54				x-cutting							
				bull white							
55	55.07		75	qtz vn @							
				~0° cax.							
56											
				47.35-56.69 SILICEOUS ARGILLITE							
56.69				ARGI light black f.g.'d siliceous arg.							
57				w/ rare x-cutting carb veinlets							
				(@ 40° cax), thin (<1mm) wispy							
58				wh. sil bands occurs regularly.							
58.75			65	1% f.g. diss py along sil							
59				margins. Gradational UC w/ RHFS							
				~20cm, FIt gouge @ LC							
60				→ 55.07-56.69: STGG FAULT GOUGE							
60.69				Fine grained, dk blk							
61			60	moderately graphitic							
61.50				variable grain size							
			70								
62											

PAGE 8 OF 10 | PROJECT: Wolverine | HOLE NO. KN9781

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
40		40.20	41.19	99cm	174756					
41		41.19	42.20	1.01	174757					
42		42.20	43.20	1m	174758					
43		43.20	44.20	1m	174759					
44		44.20	44.75	55cm	174760					
45		44.75	45.75	1m	174761					
46		45.75	46.75	1m	174762					
47 1% f.g diss. py										
49										
50										
51										
52										
53										
54										
55										
56										
57										
58										
60 Tr py blebs										
61		61.50	63.50	2m	174763					
62										

PAGE 9 OF 10 | PROJECT: Wolverine | HOLE NO. WW9781

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				56.69-61.75 TUFFACEOUS ARGILLITE							
63				ARTF Black tuffaceous arg, wl foln @ 62° + graphitic partings. Trpyic blebs along sil tuff fragments. Fragments avg. 1x3 cm. Core is modly foln'd.							
64			70								
65 65.40				→ 58.75 : STFL : FAULT @ 65° cax							
65.85 → 66			50 80	→ 60.66 : STFL : FAULT @ 60° cax							
66.90 67			80	→ 61.75 : STFL : FAULT @ 70° cax							
68											
69				61.75-65.40 RHYOLITE LAPILLI TUFF							
70				RHLT lt greenish/gray rhy lapilli tuff w/ mod. chl + ser altn Elongate lapilli 1x4 cm in size. w/ chl + sericitic part'gs. No vis sx's							
70.71 71			70								
72			70	→ 65.40 : STFL : FAULT @ 50° cax							
73											
73.66 → 73.80 74			60	65.40-66.90 RHYOLITIC FRAGMENTAL CARBONATE							
				RHFC Fault bound'd rhy frag carb dk greenish/blue colour. Pervasive carb. altn, effervesces moderately w/ 10% HCl. Fragments are small (1mm²) + disseminated throughout.							
75 75.29				→ 65.85 : STFL : FAULT @ 80° cax							
				→ 66.90 : STFL : FAULT @ 80° cax							
				66.90 - 70.71 TUFFACEOUS RHYOLITE							
				RHTT Fine grained mottled tuff : rhy w/ mod perv chl. altn w/k sericite + strong chloritic rhythmic bands (5cm thk)							
				70.71-75.29 SILICEOUS ARGILLITE.							
				ARSI Blk sil arg w/ wispy, variable sil bands. moderately graphitic							
				73.66-73.80 : STFL : FAULT GOUGE Fg graphitic paste							
				E O H							



PAGE 10 OF 10	PROJECT: Wolverine	HOLE NO. WV9781

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
63		63.50	65.40	1.9	174764					
64										
65										
66										
67										
68										
69										
70										
71										
72										
73										
74										
75										

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: 1405m
HOLE NO.: WV 97 82	BEARING: 213°
LOCATION: L. 16500 E 16780 N	DIP: -45°
	TOTAL LENGTH: 160.62 m
LOGGED BY: M. Padberg	HORIZONTAL PROJECT
DATE: May 29	VERTICAL PROJECT
CONTRACTOR: Boisvenu Diamond Drilling	
CORE SIZE: HQ	
DATE STARTED: May 27	
DATE COMPLETED: May 29	
DIP TESTS: @ 95.1m → -47.5°; @ 156.1m → -49°	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- 95.58 → 97.92 SSMS
- 7m of iron form.
- 5m of EXCP

LEGEND

- RHAR
- quartz vein
- rhyolite
- magnetic iron formation
- fault gouge
- calcite pyrite exhalite
- argillite
- massive sulfide

PAGE 1 OF 17 | PROJECT: Wolverine | HOLE NO. WV9782

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				0.00-5.18 CASING							
				DHCS							
5.18				5.18-24.80 INTERBEDDED RHYOLITE / ARGILLITE							
				RHAR Fog gray aphyric rhy interbedded w/ fg. arg. Rhythmic bed'g w/ variable thk'ness from 2mm → 2cm. Thin (1mm) chl/ser. part'gs. mod. fract. intensity w/ strongly oxidized natural fractures. Rare v.f.g py vis. in some chl/ser part'gs							
7.72 / 7.80			70	→ 7.72-7.80: QTVN: QUARTZ VEIN							
8.23 / 8.43			60	Bull wh. w/ oxid'd surfaces, no vis sx's.							
9.01 / 9.40			90	→ 8.23-8.43: QTVN: QUARTZ VEIN							
			80	Same as above							
			60	← 9.01-9.40: QTVN: QUARTZ VEIN							
				Same as above							
				→ 9.40: STFL: FAULT							
				@ 80° cax.							

PAGE 2 OF 17	PROJECT: Wolverine	HOLE NO. WW97-82

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1										
2										
3										
4										
5 Rare v. fg py in sedic partings.										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

PROJECT: Wolverine

HOLE NO. WV 9782

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(5.18 - 24.80 RHAR cont)							
24											
24.80			75	24.80 - 36.44 MASSIVE APHYRIC RHYOLITE							
25				RHFS Fgr, gray, mass aphyric rhy w/ regular rhythmic ser ic							
26				band's 1-2 mm thk. Wk perv.							
27			75	chl alt'n Oxidation on							
				natural fractures continues							
28				Rare - tr f.g. py finely							
				diss'd along sericitic part'gs							
29											
30											
31											
32											
33											
34											
35			80								
36											
36.44			80								
37				36.44 - 43.58 MAGNETIC IRON FORMATION							
				EXMT Seagreen / bluish banded marg.							
38				iron form'n, mod pervasive							
				chl. alt'n w/ 1% diss stringer							
39				py. Modly magnetic band's (1-2 mm							
				thk) w/ up to 10% magnetite							
40			80	Gradational lower contact w/							
				magnetic properties decreasing							
41				to 0 @ 43.58							
42											
43											
43.58			75								
44				43.58 - 45.35 Interbedded RHYOLITE / ARGILLITE							
				RHAR V. similar to sec'n 5.18 - 24.80 w/							
45				rhythmic rhy/arg. sericitic							
45.35				partings + very rare fine grained							
45.45			80	chl'c py							
46											

PAGE 4 OF 17	PROJECT: Wolverine	HOLE NO. WV 97 82

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
24										
25 Rare → tr f.g diss. py in semi massive parts.										
26										
27										
28										
29										
30										
31										
33										
34										
35										
36 1% stringer py		36.44	37.44	1m	174765					
37		37.44	38.24	80	174766					
38		38.24	39.24	1m	174767					
39		39.24	40.24	1m	174768					
40		40.24	41.37	1.13	174769					
41		41.37	42.32	95	174770					
42		42.32	42.98	66	174771					
43 Rare f.g. diss py		42.98	43.58	60	174772					
44		43.58	44.60	1.02	174773					
45		44.60	46.30	1.70	174774					
46		46.30	47.85	1.55	174775					

PAGE 5 OF 17 | PROJECT: Wolverine | HOLE NO. KN9682

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
47 47.10				45.35-48.06 SILICEOUS ARGILLITE							
				ARSI f.g. blk siliceous arg w/ tr diss f.g. py. Faint wispy sil. bands (2mm thk.							
48 48.06				→ 45.65-47.10 STGG: FAULT GOUGE blk+white (sil+graph) filt sample w/ varying grain sizes + varying degrees of filted/brkn core							
49											
50											
51											
52				48.06-53.77 GREEN RHYOLITIC TUFF							
				RHTT lt green lapilli/ash tuff w/ wk perv. chl. altn + tr f.g. euh. py. 2mm thk irregular elongate siliceous lapilli are common							
53 53.77											
54											
55											
56				53.77-61.55 CALCITE PYRITE EXHALITE							
				EXCP mostly fol'd calcite py exhalite w/ str. perv. carb altn. 5% mass/blebby to banded f.g. py. No magnetic content. Graphitic part'gs + qtz/carb veins predominate throughout.							
57				→ 57.40-59.00: Brkn Core							
58				→ 60.40: STFL: FAULT @ 70° CAX.							
59											
60 60.40											
61 61.55				61.55-84.50 SILICEOUS ARGILLITE							
				ARSI Blk siliceous arg. (primarily shattered + broken core) w/ 2% blebby diss. py. Wispy faint sil. bands (1-2mm thk). Mostly graphitic. U.C (w/ EXCP): is v. sil (rhyolitic) grading to arg. (ARSI) over 50 cm.							
62											
63											
64 63.93 64.06 64.31				61.55-62.05: lt green v. rhyolitic w/ wk perv. ser. altn. Grades into ARSI							
65				63.90-64.06: STGG: FAULT GOUGE fine graphitic paste.							
66 66.14				64.06-64.31: QTVN: QUARTZ VEIN Qtz vn w/ 10% f.g. euh py + graphitic septa							
66.84 67 67.29 67.44											
68											
69											

PAGE 6 OF 17	PROJECT: Wolverine	HOLE NO. WV9782

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
47 tr. diss f.g. py		47.85	49.22	1.37	174776					
48										
49		49.22	50.22	1m	174777					
50 tr. f.g. enh py.		50.22	51.22	1m	174778					
51		51.22	53.77	2.55	174779					
52		53.77	54.77	1m	174780					
53 5% mass/blebby to banded f.g. py.										
54		54.77	56.01	1.24	174781					
55										
56		56.01	57.05	1.04	174782					
57		57.05	60.15	3.10	174783					
58										
59										
60		60.15	61.55	1.40	174784					
61 Blebby diss. py (2%)		61.55	63.75	2.20	174785					
62										
63		63.75	65.9	2.15	174786					
64 QV: 10% f.g. enh py.										
65		65.9	68.4	2.5	174787					
66										
67										
68		68.4	74.3	5.9	174788					
69										

PAGE 7 OF 17 | PROJECT: Wolverine | HOLE NO. WV 96 82

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				(61.55-84.50: ARSI con't)							
				→ 66.14-66.84: STGG FAULT GOUGE							
70			75	→ 66.54-67.54: v. Sil. lt green. Same as 61.55-62.05							
71				→ 67.29-67.48 STGG: FAULT GOUGE							
72				→ 67.65: KINK BANDING							
73											
74				→ 74.90-74.99: QTVN: QUARTZ VEIN							
75	74.93 74.99 75.30		80 80 60	Qtz vn w/ contacts @ 30° c.a. w/ graphitic + chloritic septa							
76				→ 75.30-81.30: STGG: FAULT GOUGE							
77				Sil grey w/ fg diss py @ U c.a. 60° c.a, L.C @ 70° c.a.							
78											
79											
80											
81	81.30		75								
82											
83			75								
84											
84.50			75	84.50-93.50 TUFFACEOUS RYHOLITE							
85			80	RHTT Dk forest green ash + lapilli rhy tuff w/ rare pyritic stringers + wk seric partings. Frags range from ash to 2 cm² elongate lapilli.							
86											
87											
88											
89				→ 89.69-89.75: QTVN: QUARTZ VEIN Bull white w/ rare carb filled fractures							
90	89.69 89.75		85								
91											
92											

PAGE 8 OF 17 | PROJECT: Wolverine | HOLE NO. WV9782

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
70										
71										
72										
73										
74		74.3	75.8	1.5	174789					
75 fg diss. py (1%)		75.8	78.5	2.7	174790					
76										
77										
78		78.5	84.43	5.93	174791					
79										
80										
81										
82										
83										
84 Bars pyritic stringers		84.43	86.77	2.34	174792					
85										
86		86.77	87.77	1m	174793					
87		87.77	88.77	1m	174794					
88		88.77	89.80	1.03	174795					
89		89.80	90.80	1m	174796					
90		90.80	92.97	2.17	174797					
91										
92		92.97	94.25	1.25	174798					

PAGE 9 OF 17 | PROJECT: Wolverine | HOLE NO. WV 96-82

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				(89.69 - 95.58 RHYT cont.)							
93											
				93.50 - 95.58: wk pervasive ser alt'n 2% fine diss py, wkly fragmental texture							
94											
95											
95.58				95.58-97.92 MASSIVE SULFIDE (2.34m)							
				SSMS Zinc rich banded mass. sx w/ blebby carb + chl gangue. Sharp upper + lower contacts. Avg. core angle is @ 60° cax. Tr blebby cpy, re-xtallized f.g. euh py blebs sparkle over sph/gangue matrix.							
96				→ 95.58 - 96.18: 55% py, 35% sph, 10% gangue wispy, irregular sph band's (2mm thk) over a fine grained to mass py/sph matrix. Re-xtallized py blebs are diss throughout. Qtz/carb. stringers + chl blebs make up the gangue min. Sph bands @ 75° cax.							
97											
97.92											
98											
98.63											
98.93											
99				→ 96.18 - 96.94: 50% sph, 35% gangue, 15% py Anastomizing sph + py over a gangue matrix of 2mm² qtz/carb blebs + stringer/blebs (1mm²) chl. Sph. red dominates							
99.10											
100											
101											
102				→ 96.61 - 96.75 - Quartzose pods w/ tr. cpy blebs, undulatory contacts.							
102.13											
103											
103.53				→ 96.94 - 97.12: 40% py, 30% sph, 30% gangue Intercalating py/sph + qtz/carb gangue w/ re-xtallized py cubic blebs diss. Bands ass wispy + ~1mm thk each @ 70° cax							
104											
105											
106				→ 97.12 - 97.92: 70% sph, 20% py, 10% gangue + tr cpy, mass red sph acts as matrix for f.g. diss euh. py + tals and blebby chl. gangue. Faint irregular py band's in vic. + increases slightly in intensity downsection.							
106.49											
107											
108											
109											
110				Tr cpy blebs @ 97.90 w/ f'd gangue (qtz/carb). Sharp L.C. @ 97.92 w/ frag. rhy @ 75° cax.							
110.38											
110.48											
111											

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
93 2% fine diss. py.		92.97	94.25	1.28	174798	
94		94.25	95.58	1.33	174799	
95 SSMS		95.58	96.16	58cm	174800	
96		96.18	96.94	76cm	174801	
		96.94	97.12	18cm	174802	
97		97.12	97.92	80cm	174803	
2% stringer cpy + blebby sph. 98		97.92	98.39	47cm	174804	
- 15% f.g. diss sph, 8% local f.g. diss py		98.39	98.70	31cm	174805	
- 60% py, 30% sph; Fit Bx		98.70	98.90	20cm	174806	
99		98.90	100.08	1.18	174807	
100 Tr. stringer py		100.08	101.10	1.02	174808	
101 15% diss py/po stringers.		101.10	102.00	90	174809	
102 Tr stringer py		102.00	103.10	1.10	174810	
103		103.10	104.10	1m	174811	
104		104.10	105.36	1.26	174812	
105		105.36	106.56	1.2m	174813	
106		106.56	107.25	69	174814	
107		107.25	108.41	1.16	174815	
108		108.41	109.41	1m	174816	
109		109.41	110.41	1m	174817	
110		110.41	111.45	1.04	174818	
111		111.45	112.35	90	174819	

PAGE 11 OF 17 | PROJECT: Wolverine | HOLE NO. WV 9782

* Descriptive Geology Only *

(95.58 - 97.92 SSMS cont)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				★ TOTAL SULFIDE GRADE ★							
				PYRITE: 30%							
				SPHALERITE: 70%							
				CHALCOPYRITE: Trace.							
			97.92 - 98.15	FRAGMENTAL RHYOLITE							
			RHFR	Frag'l rhy w/ ser partings + 2% stringer cpy + blebby sph. near sharp U.C w/ SSMS. Frags are common + elongate (5x20mm) in avg. size.							
			98.15 - 98.90	FAULT BRECCIA							
			STFB	Cdn Armed Forces green rhyolitic hosted flt Bx. Modly cohesive w/ 15% f.g. tiny sph + up to 8% local f.g. tiny py							
			→	98.60 - 98.62: QTVN: QUARTZ VEIN. Bx'd qtz vn w/ avg frags being 5x10mm; orient'd @ 70° ca							
			→	98.70 - 98.90: BRECCIATED MASSIVE SX 60% py 30% sph 10% gangue Sub-angular fragments of py + sph (~1x1 cm) w/ a f.g. pyritic matrix + wispy calcareous gangue parting. Some frags has the appearance of a milled texture w/ all grain sizes present. Tr cpy stringers.							
			98.90 - 99.10	FAULT GOUGE							
			STGG	Flt gouge w/ a 50/50 patty mixture of pyritic + sphaleritic fragments w/ those of a pervasively sericitized rhy. L.C @ 50° ca							
			99.10 - 131.70	RHYOLITE LAPILLI TUFF							
			RHLT	Armed Forces green rhy lapilli tuff w/ mod pervasive ser + chl alt'n. Tuffaceous lapilli sized fragments are present w/ fol'n varying down hole. Tr. stringer py.							

PAGE 12 OF 17	PROJECT: Wolverine	HOLE NO. WW9782

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 12 OF 17 | PROJECT: Wolverine | HOLE NO. WY97-52

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				109.10-126.0 RHLT cont'd							
				101.22-101.32: 10% thin pink stringers along foln @ 70° c.a.							
				103.10: STFL FAULT @ 70° c.a.							
				103.50-103.70: ST66: FAULT GOUGE							
114.93				104.08-104.35 Ductily deformed sigmoidal fold. Foln goes from 75°→0°→70° to c.a.							
115.20			90								
			90								
			85	106.40: STFL FAULT @ 80° to c.a.							
				110.30-110.40: ST66: FAULT GOUGE							
				114.90-115.20: ST66: FAULT GOUGE							
118.80			85	118.50: STFL FAULT @ 85° c.a.							
119.32			60								
				119.72 STFL: FAULT							
120.38			80	xcut @ 60° c.a.							
				120.75: STFL: FAULT							
			80								
				128.55-129.50: fld agg component, dk gray/black colour							
129.95				129.95-130.02: ST66 FAULT GOUGE							
130.02			70								
			85								

PAGE 14 OF 17 | PROJECT: Wolverine | HOLE NO. WV 97 82

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
112		112.35	113.35	1m	174820					
113		113.35	114.45	1.1m	174821					
114		114.45	115.45	1m	174822					
115		115.45	116.35	90cm	174823					
116		116.35	117.38	1.03	174824					
117		117.38	118.34	96cm	174825					
118		118.34	119.46	1.12	174826					
119		119.46	120.47	1.01	174827					
120		120.47	121.31	90cm	174828					
121		121.37	122.37	1m	174829					
122		122.37	123.60	1.23	174830					
123		123.60	124.50	90	174831					
124		124.50	125.49	99	174832					
125		125.49	126.64	1.15	174833					
126		126.64	127.50	86cm	174834					
127		127.50	128.82	1.32	174835					
128		128.2	129.84	1.64	174836					
129		129.84	130.75	.91	174837					
130		130.75	131.75	1.0	174838					
131		131.75	132.70	.95	174839					
132		132.70	133.58	.88	174840					
133		133.58	134.58	1.0	174841					
134		134.58	135.62	1.04	174842					

PAGE 15 OF 17 | PROJECT: Wolverine | HOLE NO. WV9752

(99.10 - 137.60 RHLT cont'd)

137.60 - 138.56 GRAPHITIC ARGILLITE
ARGR
Jet black unaltered grapth. arg., mostly flt gouge.
137.60 - 138.35 : STGG : FAULT GOUGE
Graphitic paste

138.56 - 142.91 RHYOLITIC CRYSTAL TUFF
RHXT
Calcareous x.tals w/ predominantly chl. (some ser'ic) part'gs in a rhy'ic tuff. Tr f.g. diss py along part'gs. Fol'n @ 90° ca x.

142.91 - 147.66 RHYOLITE LAPILLI/ASH TUFF
RHAL
Fine ash to lapilli sized tuffaceous (wh carb. + black fsp) fragm.'ts Strong fol'n @ 55° ca x. No vis sxs
144.80 : STFL : FAULT @ 85° ca x.

147.66 - 160.68 SILICEOUS ARGILLITE
ARSI
Black sil. arg w/ wispy sil. bend's grading v. faint down hole. Rare f.g. diss py.
148.43 - 152.85 : STGG : FAULT GOUGE

153.40 - 156.00 : STGG : FAULT GOUGE

PAGE 16 OF 17	PROJECT: Wolverine	HOLE NO. WV 9782

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH (m)	SAMPLE NUMBER	ASSAYS				
136		135.62	137.60	1.98m	174843					
137		137.60	138.57	.97	174844					
138		138.57	139.45	.88	174845					
Tr. fg diss. py										
139		139.45	140.45	1.00	174846					
140		140.45	141.45	1.00	174847					
141		141.45	142.20	.75	174848					
142		142.20	143.12	.92	174849					
143		143.12	144.12	1.00	174850					
144		144.12	145.66	1.54	174851					
145		145.66	147.66	2.00	174852					
146										
147										
f.g. diss py.										
148										
149										
150										
151										
152										
153										
154										
155										
156										
157										
158										

PAGE 17 OF 17 | PROJECT: Wolverine | HOLE NO. WV9782

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (147.66-160.62 · ARSI cont'd)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
159			55								
160											
160.62				EOH							

JAY HISTORICAL

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine Stratigraphic	GROUND ELEV.: 1240m
HOLE NO.: WV-97-83	BEARING: 213
LOCATION: 17350N, 12600 E	DIP: -70
	TOTAL LENGTH: 192.42
LOGGED BY: Dave Gale	HORIZONTAL PROJECT
DATE: May 29, 1997	VERTICAL PROJECT
CONTRACTOR: Boisvenu	
CORE SIZE: NQ	
DATE STARTED: May 30, 1997	
DATE COMPLETED: June 2, 1997	
DIP TESTS	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

Geological summary

→ The tantalizing geology within hole 83 occurs within the two magnetite iron formation exhalitive horizons. These exhalitive units are encounted at only 10m depth and are separated by a 20m thick package of massive and fragmental aphyric rhyolite.

→ The first exhalitive horizon is 20m thick and consists of three iron formations, separated by silica-rich horizons (silica-exhalites? massive rhyolites?).

→ The second exhalitive horizon is 25m thick and is also composed of three different magnetite iron formations, separated by silica exhalites and massive aphyric rhyolites.

→ Below the exhalit horizons, rocks consist mainly of argillites with a minor component of massive to fragmental rhyolite. The Wolverine horizon, if it had been present, is interpreted to occur between 120m and 128m; above 120m the aphyric rhyolite + siliceous argillite and below 128 first appearance of qtz-eye bearing argillite.

Mineralization

→ Generally 1% pyr. in iron formation. Once again (see holes 73+78) bands of fine grained pyr are interbedded within the siliceous + carbonaceous argillite. Up to 25% pyr over 10-15cm intervals in argillite. Trace sphalerite also observed in association with the pyr bands in argillite. Trace Pyrrhotite observed in iron formations. Alteration: No significant alteration.

LEGEND

- Magnetite iron formation EXMT
- Carbonate or silica exhalite horizon EXCPorSP
- Qtz vein QTVN
- Massive aphyric rhyolite RHFS
- Fragmental aphyric rhyolite RHFR
- Tuffaceous rhyolite RHTT
- Rhyolite fragments in argillaceous matrix (RHAT)
- Qtz-eye argillite (ARQE)
- Argillite - carbonaceous / siliceous
- Fault gouge

PAGE 1 OF 18 | PROJECT: | HOLE NO. WV-83

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Gyp)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
4				0 - 4.97 Casing							
5				4.97 - 9.35 RHFR Greyish black, moderately banded fragmental rock. Fragments are siliceous angular, are 0.5-3cm in size and make up 60-80% of rock.							
6			75°	- A brown staining is pervasive throughout this unit reflecting the iron content. It has all been oxidized.							
7				- There is a weak to moderate chlorite alteration, imparting a dark green colour to some of the bands							
8				- STGG: 7.95 - 8.10							
9				- Core angle is 75°							
10				9.35 - 11.75 EXMT Variable black to grey, moderately banded magnetite iron formation.							
11			60°	- Magnetite appears in massive 0.2-1cm wide bands within this unit. Also occurs as blebs (color) disseminated throughout the rock. Magnetite content is app 7-9%.							
12	SP		75°	- The magnetite occurs within a variably calcareous + siliceous matrix.							
13				- Massive cream-coloured carbonate occurs in bands between the magnetite + grey silica layers. Carbonate ~ 50% of the rock.							
14				- Black argillite bands are also present (~5%).							
15			65°	- Core angle is 60°							
16				- Upper contact with the fragmental rhyolite is gradational and conformable.							
17											
18				11.75 - 12.65 EXSP - Grey, moderately banded siliceous rock labelled a silica exhalite (with out pyrite)							
19	SP			- Cream coloured carbonate band (3cm width) at 12.97-13.00.							
20				- A pastel orange colour is observed with the grey siliceous bands, possible reflecting Fe that has oxidized. These pastel orange areas only comprise 3-5% of rock.							
21			70°	- Core angle is 75°.							
22				- Dendritic psilomelane (Mn-oxide) is present in this unit							
23				12.65 - 16.30 EXMT Variably black and white (banded) magnetite iron formation. - Magnetite occurs mainly in bands 0.3-2cm wide. Also observed as <0.2mm size blebs disseminated over the interval							
24				Magnetite content is ~ 13-15% of rock							
25			70°	- Mag. is sitting in a carbonate (60%) and silica (25%) matrix. Mag. banding is not homogeneous throughout, there are more massive silica sections: 13.41 - 13.91; 12.80 - 13.00							
26	SP			- Core angle is 65°							

PAGE 2 OF 18	PROJECT:	HOLE NO. WV-83

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		5.4	7.9	2.5	172576					
		9.4	11.75	2.4	172577					
Trace subhedral to euhedral 0.1-0.4 cm pyr xtls within the iron formation.										
		11.75	12.65	0.9	172578					
1-2% pyrite occurs as subhedral to euhedral xtls, avg. 0.2 cm in size. Some xtls are up to 0.8 cm.		12.65	14.30	1.7	172579					
		14.3	16.3	2.0	172580					
Trace pyr observed within EXSP		16.3	18.7	2.4	172581					
		21.45	23.20	1.8	172582					
trace pyrrhotite observed with EXMT. Anhedral flecks overprinting the foliation.										
		24.5	25.6	1.1	172583					
		25.6	27.25	1.7	172584					

PAGE 3 OF 18 | PROJECT: | HOLE NO. WV-83

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
27	SP			16.30 - 21.45 EXSP: Moderately banded, greenish-grey to cream silica rich rock. Rock is simply massive silica, could be aphyric rhyolite (?). - Very distinctive rock, alternating bands of cream + grey. Cream reflects Fe content which must now be oxidized. QTVN: 18.7 - 19.0 = Qtz + chlorite vein - Core angle is 70°							
28	CP										
29	SP		70								
30	CP										
31				21.45-25.6 EXMT: Blackish-green, moderately banded magnetite iron formation. Contains chlorite (40%), magnetite (15%), carbonate (30%) and silica (15%) and ± epidote. - Magnetite forms diffuse bands within the chlorite + carbonate matrix, Avg 0.3 - 1cm in width. - A distinctive fragmental texture is developed within this unit; composed of siliceous rounded frags in a chlorite/carbonate matrix: 22.2 - 22.5 ; 24.6 - 25.0 - The matrix of this rock is chlorite, carbonate + silica. - Core angle is 70 - Qtz vein : 22.77 ; 23.4 - 24.4m - Pistachio green colour mineral mixed in with chlorite (~1% of unit).							
32											
33											
34											
35											
36											
37			70								
38				25.6 - 27.25 EXSP: Grey calcite-rich rock. Weakly banded. - Magnetite blebs are disseminated throughout unit. Avg. ~2% of rock - At 26.15 - 26.45 angular silica fragments are within a siliceous matrix - Core angle 70°							
39											
40											
41											
42				27.25 - 27.95 EXCP: Carbonate exhalite. Consists of alternating white + dark grey bands of carbonate. Moderately banded with a core angle of 70° - A ghost-like fragmental texture is also preserved							
43											
44											
45				27.95 28.55 EXSP: Greenish-grey silica exhalite. Bands defined by alternating layers of silica with variable chlorite content - Core angle is 90°							
46											
47			65	28.55 - 28.80 EXCP: Carbonate exhalite. Same as 27.25 - 27.95. Core angle is 75°							
48				28.8 - 30.0 EXSP: Massive silica rich rock. Same as EXSP above (27.95 - 28.55)							
49											

PAGE 4 OF 18	PROJECT:	HOLE NO. WV-83

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
27		27.25	27.95	0.7	172585					
28		27.95	28.55	0.6	172586					
29		28.8	30.0	1.2	172587					
30										
31		31	32.4	1.4	172588					
32										
33										
34		34	37.4	3.4	172589					
35										
36										
37										
38		37.9	39.75	1.9	172590					
39										
40		40.1	42.3	2.2	172591					
41										
42										
43		43.6	45.11	1.5	172592					
44										
45										
46		45.62	48.3	2.7	172593					
47										
48										
49 Trace pyr along fractures (RHFS)		49.65	51.3	1.7	172594					

PROJECT:

HOLE NO. WV-83

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
50				30.0 - 37.9 RHFS Greyish white, moderately banded massive aphyric rhyolite. - A fragmental texture exists over a 40cm interval starting at 29.4m. Siliceous fragments (~1-3cm, angular, 90% of rock) surrounded by argillite							
51											
52	SP			- Core angle is 70°							
53			70								
54				37.9 - 43.60 RHFR 85-90% aphyric rhyolite fragments in a argillaceous matrix. Rock is greyish-white in colour and is [illegible] weakly-moderately banded. - Core Angle is 70° - Fragments are 1-4cm in size and appear angular. All are flattened in foliation.							
55											
56											
57											
58				43.6 - 45.11 RHFS Greyish-white, weakly to moderately banded aphyric rhyolite - Core Axis is 75°							
59											
60				45.11 - 49.70 RHTT - Greenish grey rhyolite tuff. Rock is composed of tuffaceous fragments that show a weak banding defined by variability of fragment size. Some more massive layers (RHFS) interbedded by dominantly tuffaceous beds - A weak to moderate sericitic alteration is present throughout unit - 1% of unit consists of 0.5-1cm long fractures that are Almost ⊥ to the layering and show green chlorite on the edges. These fractures are 0.1-0.2cm wide. - Core angle is 65°							
61			70								
62											
63	SP										
64											
65											
66				49.70 - 51.30 RHFS Moderately banded light grey massive aphyric rhyolite. - Core Angle is 70°							
67											
68			70	51.3 - 53.4 EXSP White, weakly banded silica exhalite. No pyrite. This unit is very similar to the above unit (and could be! the same!) but shows more of a chalky, massive silica texture. - An exhalative nature is assumed because of the iron formation found below the unit. - This unit is simply aphyric silica. - Core angle is 70°							
69											
70			70								
71											
72											

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		49.65	51.80	1.7	172594	
		51.3	53.4	2.1	172595	
		53.4	54.37	1.0	172596	
1% pyr xtls in the iron formation.		54.7	55.5	0.8	172597	
Subhedral to euhedral xtls overgrowing the foliation (0.2-1cm).						
trace pyrr also present.						
RHFS: 1% pyr occurring mainly along the foliation planes. Some euhedral pyr xtls overgrowing the fabric						
trace pyrrhotite observed as subhedral xtls.		58.4	60.4	2.0	172598	
		61.5	6300	1.5	172599	
1% euhedral pyr. xtls ~0.4cm in size. These xtls are scattered randomly throughout the unit.		63	64.9	1.9	172600	
		65.16	67.24	2.1	172601	
		67.24	70.05	2.8	172602	
1% euhedral pyr xtls throughout EXMT		70.05	71.44	1.4	172603	
		71.44	73.9	2.5	172604	

PAGE 7 OF 18 | PROJECT: | HOLE NO. WV-83

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Ch)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
73				53.4-55.5 EXMT	Black and grey (alternating layers), moderately banded magnetite iron formation.							
74					- Magnetite occurs in black bands (0.4-1.5cm width) and as blebs disseminated throughout unit. Mag makes up ~20% of rock							
75					- The matrix is almost entirely silica with only ~5-10% carbonate. This is very different from the two EXMT's observed above which had extensive carbonate in matrix. There is also very little chlorite in this unit							
76			70									
77	CP				- Qtz vein: 54.45-54.65							
78					- Core angle is 65°							
79				55.5-61.5 RHFS	Grey to white, moderately banded massive aphyric rhyolite that develops more sericitic partings in the lower portion of unit.							
80					Weak sericite alteration in lower half of unit							
81					- Core angle is 70°							
82					- Upper contact with iron formation is conformable + gradational.							
83				61.5-63.0 EXSP	Milky white silica exhalite. This unit is all white with the exception of greyish-black bands ~0.5cm wide. These bands are also massive silica.							
84												
85					- This unit is massive and aphyric is very similar in appearence to the massive rhyolite above. The difference is in the milky (almost chalky) appearence.							
86					- The contact with the RHFS is gradational.							
87					- Core angle is 65°							
88			70	63.0-67.24 EXMT	Moderately banded, alternating grey + black magnetite iron formation. Banding defined by black magnetite, grey silica and rare green chlorite-rich layers.							
89					- Magnetite occurs in 0.2-1.5cm massive bands and as disseminated blebs throughout interval. Mag makes up 13-15% of rock. Blood red hematite also present as blebs disseminated within the magnetite layers. Only about 2-4% of rock interval.							
90	CP											
91												
92					- Most of matrix is silica (60-70%) with minor carbonate (10-15%). This is different from the iron formations in upper portion of hole, they were calcareous.							
93			65		- Upper contact with silica exhalite is gradational.							
94					- Core angle is: 70°							
95					- 5-10% of rock is greyish-green to dark green reflecting sericite + chlorite respectively. Imparts a slight green colour to the rock							

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
73						
74		74.4	76.8	2.4	172605	
75						
76		76.8	77.35	0.5	172606	
77		77.35	78.45	1.1	172607	
78 Throughout the ARSI there are rare 0.5 cm wide massive pyrite spaced sporadically		78.45	80.24	1.8	172608	
79 over the unit. ~1% of the rock.						
80 Also observe pyr rich sections that contain						
A concentration of these bands: 88.80-						
81 88.95 avg ~ 4% pyr; 88.10-88.3 - massive						
fine grained bands and medium grain buckshot						
82 textured pyr, ~20% pyr over the interval.						
- At 85.95. 05 cm wide pyrite band		82.1	84.53	2.4	172609	
with sphalerite. Both pyr + sph are fine grained						
83 - Overall ~ 3% pyr						
84						
85		85.8	86.50	0.7	172610	
86						
87		86.8	88.3	1.5	172611	
88						
Zone of pyrite veining observed at base		89.3	91.4	3.1	172612	
89 of ARSI continues into EXCP; fine grained						
veins of pyrite ~ 0.3-0.5 cm wide ~ 10% of						
90 rock over by 10 cm						
- Overall ~ 3% pyr throughout EXCP						
91 - 90.2-90.3 - 10+2% veins of pyr.		91.6	92.9	1.3	172613	
92						
93 Within the ARSI 1% pyr. is found in						
94 fine grained 0.3-0.5 cm wide bands.						
95		95.35	97.7	2.4	172614	

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Fp)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
96				Cont'd QTUN: 64.9-65.1; 65.3-65.4; 65.6-65.9;							
97				67.24-70.05 RHFS: Whitish-grey aphyric massive rhyolite with coticitic partings defining the moderately developed banding.							
98			65	- Top 15 cm shows a fragmental texture with 1-2cm siliceous frags in a silica matrix.							
99				- At 68.70-69.85 Sets of magnetite stippling 3-4% of rock over the interval occurs. It does not form bands, simply disseminated within the rhyolite.							
100				- Core angle is 70°							
101				70.05-76.8 EXMT: Same description as transitional iron formation above (63.0-67.24): Black and grey banded rock.							
102				- Weak chlorite alteration: green bands; weak sericite bands							
103				- 73.90-74.40: Massive siliceous section with little magnetite (1-2%). RHFS							
104				Upper mag content: 13-15% \ over all would be ~23%							
105				Lower mag content: 30% /							
				- Core angle is 70°							
106			75								
107				76.8-77.35 EXCP: Carbonate rich exhalite. No pyrite							
				- Moderate banding defined by alternating layers of carbonate grey to white in colour.							
108				- Upper contact with iron formation is conformable. Sharp contact (little to no carbonate at base of EXMT.							
109				- Core angle: 70							
110				77.35-78.45 RHFS: Massive, aphyric, grey, moderately banded rhyolite							
				- Core angle is 70°							
111				78.45-88.3 ARSI: Greyish-black to black, moderately banded siliceous argillite							
112				- Unit is a more greyish black on top reflecting more massive siliceous and grades to a black rock at base of unit.							
113				- A poorly developed fragmented texture developed over short intervals - for the most part all massive siliceous argillite							
114				- Core angle 70°							
115			65								
116				88.3-91.4 EXCP: Whitish grey, poorly banded and fragmented carbonate pyrite exhalite.							
117				- Entire zone is rich in carbonate and effervesces vigorously							
118				- The rock has a fragmental texture and also a tuffaceous appearance over 10cm intervals							

 PROJECT: HOLE NO. WV-23

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
96						
97						
98						
99		98.46	100.80	2.3	172615	
100						
101		101.4	103.8	2.4	172616	
102						
103						
104						
105						
106 Within the RHAT 2% pyr occurs in fine		105.9	106.50	0.6	172617	
107 grained bands ~ 0.5 cm width. Also see						
pyr disseminated along the foliation planes.						
108 - <<< 1% sphalerite associated with the						
pyr within the foliation plane. Occurs at 106.4						
109 and at 116.1						
110						
111						
112						
113						
114						
115		115.8	116.40	0.6	172618	
116						
117						
118						

PROJECT:

HOLE NO. WV-83

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION Chl A	Ser B	Ep C	Calc D	E	FRACTURE INTENSITY	% VEIN QTZ.
119				Cont'd - core angle: 70°							
				- Poor core recovery in bottom portion of interval.							
120				91.4-95.3 RHFS Dark grey aphyric rhyolite that is mostly massive,							
121				with minor fragmental portions.							
				- A black siliceous argillite makes up the matrix when							
122				a fragmental texture is observed. Frags 85-95% of rock							
				- A weak sericite alteration occurs along the foliation							
123				planes							
				QTUN: 92.9-93.75 Massive qtz vein							
124				- Core angle: 70°							
125				95.3-98.46 RHTT - Tuffaceous to massive rhyolite with a layered texture							
				caused by carbonate veins.							
126			55	- Most of original rock is obscured by carbonate veins.							
				Veins are ~40% of rock							
127				- The silica rich portions vary from massive rhyolite (~20%)							
				to tuffaceous (40%).							
128				STGG: 97.0-97.5							
				- Core angle: 65°							
129											
130				98.46-106.3 ARSI Weakly banded black siliceous argillite with 10%							
				white siliceous bands.							
131				- It becomes more carbonaceous in sections but for							
				the most part it is siliceous (very hard).							
132				- QTUN: 101-101.3 ; 105.8-105.95 ; 104.1-104.3							
				- Core angle 75°							
133				106.3-106.8 RHAT Greyish-white siliceous fragments (0.5-4cm size)							
134				in a black carbonaceous argillite matrix. Fragments							
				are all aphyric rhyolite.							
135											
				106.8-109.31 STGG Fault gouge within the fragmental.							
136			60								
137				109.31-117.1 RHAT Same unit as above (106.3-106.8)							
				- Core angle is 65°							
138				- QTUN: 109.9-110.3 ; 113.20-117.1 = 30% qtz veins dissecting rock							
				- Percentage of siliceous fragments varies from ~80% to 40%.							
139											
				117.1-120.6 ARCB Black moderately banded argillite; carbonaceous.							
140				- Core is in place but rock is very friable and falls							
				apart at the touch.							
141				STGG: 119.1-119.5.							
				- Core axis is 80°							

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		121.9	123.55	1.6	172619	
1% pyr. within RHFR. Occurs as subhedral xtls concentrated in bands that are // to the foliation. Some xtls are up to 0.6cm in size						
→ Fine grained pyr. forms 0.2-0.9 cm wide bands parallel to the banding in the argillite. Pyr is also replacing the silica in the white siliceous bands.		124.5	126.3	1.8	172620	
2% pyr; Pyr is finely disseminated throughout ARQF.		128.6	130.55	2.0	172621	
		131.4	133.3	1.9	172622	
Over the final 30m of core (ARCB) fine grained pyrite forms 0.2-1cm wide bands. Varying trace to 1% of the rock. Rare subhedral pyrite xtls overgrowing the foliation.		136.54	138.64	2.1	172623	
		140.2	142.9	2.7	172624	

PROJECT:

HOLE NO. WV-83

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
142				120.6 - 121.70 STGG	Fault gouge within the black argillite							
143				121.9 - 123.6 RHFR	A dark grey fragmental rock consisting of siliceous aphyric rhyolite fragments in a minor argillaceous matrix. Grades to massive rhyolite over some sections							
144					- Sericite occurs along the foliation planes.							
145					- Upper contact with argillite is masked by fault gouge.							
146			70		- Core angle is 75°							
147												
148				123.6 - 128.4 ARCB	- Alternating grey and black bands of carbonaceous argillite							
149					- 5-10% white siliceous bands parallel to banding							
150					- Upper contact with RHFR is gradational.							
151					- Core angle is 55°							
152					- QTVN: 125.35-125.40; 125.45-125.50; 127.1-127.15.							
153				128.4 - 134.75 ARQF	Argillaceous qtz and feldspar crystal rich tuff. Thin (0.1-0.3 cm wide) argillite partings define the foliation. Qtz xtls ~ 10-15%; Feldspar xtls ~ 15%; all the rest are whitish grey siliceous fragments. Frags + xtls make up ~ 60-65% of rock. Xtls + frags are all 0.1-0.3 cm in diameter							
154					- Unit is uniform throughout (ie - same xtl content).							
155					- Upper contact with carbonaceous argillite is gradational with the tuff: massive argillite showing interbedded bands							
156			55		over a 15 cm interval							
157					- Core angle is 60° QTV: 133.35-133.45							
158				134.75 - 192.42 ARCB	Very fine alternating black and grey banded carbonaceous argillite							
159					- 2-15% white siliceous bands, typically ~ 4%							
160					- 5% 0.2-1 cm wide tuffaceous rhyolite bands interbedded within the argillite							
161					QTVN: 153.3-153.6; 153.3-153.4; 175.7-175.8							
162					STGG: 156.6-157.0; 169.3-169.5							
163					- With this carbonaceous argillite unit there are portions that are richer in siliceous fragments. Frags vary from 40-60% of rock. These sections are also harder reflecting silica content.							
164					These intervals occur at: 156.2-157.88; 160.98-164.7; 177.6-179.21. The siliceous frags still lie within an argillaceous matrix. Also 188-188.4							
					- Core angle: 136: 60° 156: 55° 176: 60° 146: 70° 166: 65° 186: 45°							

 | PROJECT: | HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
~~142~~		142.9	145.15	2.3	172625					
~~143~~										
~~144~~										
~~145~~		145.69	147.9	2.2	172626					
~~146~~										
~~147~~		147.9	149.65	1.8	172627					
~~148~~										
~~149~~		149.65	157.68	8.0	172628					
~~150~~										
~~151~~										
~~152~~										
~~153~~										
~~154~~		154.5	157.3	2.8	172629					
~~155~~										
~~156~~										
~~157~~										
~~158~~										
~~159~~										
~~160~~		160.3	164.7	4.4	172630					
~~161~~										
~~162~~										
~~163~~										
~~164~~										

PAGE 15 OF 18 | PROJECT: | HOLE NO. W1-83

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
165											
166			65°								
167											
168											
169											
170											
171											
172											
173											
174											
175											
176			65°								
177											
178											
179											
180											
181											
182											
183											
184											
185											
186			45°								
187											

PAGE 16 OF 18	PROJECT:	HOLE NO. WV-83

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
165		165.4	168.6	3.2	172631					
166										
167										
168										
169		169.3	172.0	2.7	172632					
170										
171										
172										
173										
174										
175										
176										
177										
178		177.8	179.8	2.0	172633					
179										
180										
181		180.7	183.0	2.3	172634					
182										
183		183.8	185.58	1.8	172635					
184										
185										
186		186.3	188.00	1.7	172636					
187										

PAGE 17 OF 18 | PROJECT: | HOLE NO. WV-83

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Cb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
188											
189											
190											
191											
192											
193				- E.O.H.							

PAGE 18 OF 18	PROJECT:	HOLE NO. WU-83

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
~~188~~		188.9	190.5	1.6	172637					
~~189~~										
~~190~~		190.5	192.42	1.9	172638					
~~191~~										
~~192~~										
~~193~~										

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: 1410 m
HOLE NO.: WV 97 84	BEARING: 213°
LOCATION: L 16200E, 16930N	DIP: -89°
	TOTAL LENGTH: 183.18 m
LOGGED BY: M. Padberg	HORIZONTAL PROJECT
DATE: May 31/97	VERTICAL PROJECT
CONTRACTOR: Boisvenu Diamond Drilling	**ALTERATION SCALE**
CORE SIZE: HQ	0 1 2 3 — absent, slight, moderate, intense
DATE STARTED: May 30/97	**TOTAL SULPHIDE SCALE**
DATE COMPLETED: June 2/97	0 1 2 3 4 — traces only, < 1%, 1% – 3%, 3% – 10%, > 10%
DIP TESTS	

COMMENTS

- 62 cm massive sulfide interval (127.01-127.63)
  - ↳ low $CuFeS_2$
  - ↳ mod PbS
- QFP in footwall
- Missing Wolverine horizon @ ~153 m.

LEGEND

- RHAR
- fault gouge
- iron formation
- quartz vein
- rhyolite
- calcite/pyrite exhalite
- argillite
- massive sulfide
- porphory

PAGE 1 OF 19 | PROJECT: Wolverine | HOLE NO. WW9784

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
0				000 - 4.28 CASING							
				DHCS							
4.28			65	4.28 - 48.05 INTERBEDDED RHYOLITE/ARGILLITE							
			65	RHAR Rhythmically banded Atlantic fog coloured aphyric rhyolite + dark gray/light black massive siliceous argillite. Upper 20 m of section has mod. to strong Fe oxidation. Rare f.g. diss. py throughout. Very fine rhythmic ser interbands (<1mm thk) are also vis. Mass py (up to 1%) blebs fill fractures.							
			75								
			70								
			65								
21.85				→ 21.85 - 22.20 : ST GG : FAULT GOUGE Near 50/50 mix of dk arg + lt. rhy w/ all grain sizes (silt → pebble) visible. Contacts @ 60° cax.							
22.20			60								
			60								
23											

PAGE 2 OF 19	PROJECT: Wolverine	HOLE NO. WV97 84

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1										
2										
3										
4 1% py blebs fill fractures										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

PAGE 3 OF 19 | PROJECT: Wolverine | HOLE NO. WV 9784

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (428-480.5 : RHAR cont'd)	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
24											
25			60								
26											
27											
28											
29											
30											
31			70								
32											
33											
34											
35											
36											
37											
38											
39			65								
40											
41											
42			65								
43											
44											
45											
46											

PAGE 4 OF 19	PROJECT: Wolverine	HOLE NO. WV9784

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										

PAGE 5 OF 19 | PROJECT: Wolverine | HOLE NO. WV9784

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
				(4.28 - 418.05: RHAR cont'd)							
47			70								
48.05				418.05 - 419.05 MAGNETIC IRON FORMATION							
48.60				EXMT Forest green rhythmically banded Fe							
48.75			60	formation w/ 15% magnetite. Tk alt.							
49 419.05			60	chl'ic/sil matrix w/ dk black							
			60	fine (<1mm thk) magnetite bands.							
50				Tr. mass pyrrhotite blebs along							
				magnetite partings.							
51			60	→ 418.60 - 418.75: QTVN: QUARTZ VEIN							
				Bull wh. qtz vein w/							
52				1% wallrock clasts.							
52.78				Contacts @ 60° cax.							
53			60								
54				419.05 - 527.8 MASSIVE RHYOLITE							
			55	RHFS Mass gray aphyric rhy w/ macro-thin							
55				rhythmic sericitic partings. 1%							
55.22				mass blebby py along fracture							
55.36			60	planes (ser. partgs.)							
55.94											
56			75								
56.23											
57 57.02			45	527.8 - 570.2 CALCITE PYRITE EXHALITE							
			75	EXCP Lt. sky blue exhalite w/ stg. perv							
57.60				carb. alt'n. 10% med gr'd euh							
57.72			55								
58 58.17				diss py. Localized irregular carb bands.							
58.33			40								
58.95			75	→ 527.8 - 539.5: Fragmental EXCP w/ dolomite							
59			45	+ chl. stringers. Calcareous							
				pods (2x5cm in size)							
60			30								
60.31				→ 552.2 - 553.6: QTVN: QUARTZ VEIN							
60.44				White w/ 1% wallrock							
60.95			20	frags. Contacts @ 65° cax.							
			60								
61.90			55	→ 559.4 - 562.0: QTVN: QUARTZ VEIN							
62			45	Bull wh. qtz vn w/ 2cm.							
62.40				thk mass py band @ U.C.,							
			60	band is 90% py, 10% qtz.							
63				5% chl. septa. U.C @ 75°							
63.60				cax. LC @ 45° cax.							
64			55								
65			60								
				570.2 - 589.5 RHYOLITE TUFF							
66				RHTT Fine grained dk green grading to							
66.50				dk gray rhy tuff. Rare v.f.g. diss.							
67			60	py.							
				→ 571.62 - 571.72: QCVN: QUARTZ/CARB. VN							
68				60/40 qtz/carb. w/ mass							
				chl. blebs + tr. pyrrh. blebs.							
68.90				U.C @ 50° cax. undulatory L.C.							
69			75								

PAGE 6 OF 19	PROJECT: Wolverine	HOLE NO. WV 97 84

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
47		47.05	48.05	1m	174853					
48 15% magnetite		48.05	49.05	1m	174854					
49		49.05	50.05	1m	174855					
1% massive blebby py.										
50		50.05	51.05	1m	174856					
51		51.05	52.05	1m	174857					
52 10% med grd. euh.		52.05	52.78	72cm	174858					
diss. py										
53		52.78	53.78	1m	174859					
54		53.78	54.78	1m	174860					
55		54.78	55.94	1.16m	174861					
56 (55.94-55.96) 2cm thk		55.94	57.02	1.08m	174862					
massive py band. (90/10										
57 py/qtz).		57.02	58.02	1m	174863					
58										
59										
60 tr sph stringers										
61										
62										
63										
64										
65										
66										
67										
68										
69										

PROJECT: Wolverine

HOLE NO. WV9784

* Descriptive Geology Only *

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				(57.02 - 58.95 RHYT cont'd)							
				→ 58.17 - 58.57: QTVN: QUARTZ VEIN							
				Bull white, m-l frctd							
				w/ blk seams + tr py							
				blebs + tr py, Lithics.							
				UC @ 50° cax LC @ 75° cax							
				58.95 - 60.95: SILICEOUS ARGILLITE							
				ARS1 Blk sil arg w/ wispy, 1cm-2							
				sil/carb stringers. (bnds)							
				→ 60.06: Tr sph. stringers along sil							
				band.							
				→ 60.21 - 60.44: QTVN: QUARTZ VEIN							
				Bull white w/ rare py blebs.							
				UC @ 30°, LC x-cut, @ 30°.							
				60.95 - 61.90: FAULT GOUGE							
				STGG Fine grained pasty sil. arg grading							
				to a fine grained pasty rhyolitic							
				fragments.							
				61.90 - 62.40: FRAGMENTAL RHYOLITE							
				RHFR Gray aphyric fragmental rhy. w/							
				graph'ic partings. Frags avg 1x5cm							
				62.40 - 63.60: MASSIVE RHYOLITE							
				RHFS Mass. aphyric fgr gray rhy w/							
				wk chl banding (<1mm thk)							
				63.60 - 66.50: SILICEOUS ARGILLITE							
				ARS1 Blk sil arg. w/ wispy, faint							
				sil banding.							
				→ 66.40 - 66.50: STGG: FAULT GOUGE							
				Contacts @ 60° cax							
				66.50 - 68.80: MASSIVE RHYOLITE							
				RHFS Gray aphyric mass rhy w/ macro-							
				thin sericitic partings							
				→ 68.80: STFL: FAULT							
				@ 75° cax							
				68.80 - 72.00: SILICEOUS ARGILLITE							
				ARS1 Blk arg. w/ a wk siliceous							
				stockworking, mod graphitic							
				component, w/ rare bxtn core							
				→ 72.00: STFL: FAULT							
				@ 70° cax							

PAGE 8 OF 19	PROJECT: Wolverine	HOLE NO. WV 97-54

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 9 OF 19 | PROJECT: Wolverine | HOLE NO. WV 9784

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EPI C	CARB D	E	FRACTURE INTENSITY	% VEIN QTZ.
				(68.80-72.00: ARSI con't)							
70			75								
71											
72 72.00				72.00-72.24 MASSIVE RHYOLITE							
72.24			70 60	RHFS Grey, mass rhy. same as above.							
73.06			75								
73.40 73.65			70 40	72.24-73.06 QUARTZ VEIN. QTVN Snow white pale quartz vn w rare fg py near contacts. 1% chloritic + graphitic septa U.C. @ 60°, L.C. @ 75° to c.a.							
74											
75 75.28			60								
76				73.06-75.28 FRAGMENTAL RHYOLITE.							
77				RHFR Fragmental aphyric rhy w/ graphitic part'gs faulted L.C. w/ associated brx'n.							
78 78.33				→ 73.40-73.60: QTVN: QUARTZ VN. Fragmental qtz vn w/ stringer py along L.C. U.C. @ 40° cax, L.C. @ 70° cax.							
79											
80											
81			60	→ 74.35-75.28: STFP: FAULT BRECCIA Brx'd RHFR. Frags are 5mm² + less.							
82											
83				75.28-85.65 SILICEOUS ARGILLITE							
84			30	ARSI Blk arg. w/ mod. sil banding. Bands are wispy, irregular + some show tr. py blebs							
84.75 85			50	→ 75.28-78.33: STGG: FAULT GOUGE → 84.75-85.65: STGG: FAULT GOUGE L.C. in brkn core.							
85.65 86			60 60								
87				85.65-91.80 MASSIVE RHYOLITE.							
87.30 87.50				RHFS massive aphyric rhy w/ fine → med grained diss. euh py x-tals (1%). Rhythmically banded w/ fine sericite.							
88			40 50								
88.45 88.80											
89			55	→ 87.30-87.50: QTVN: QUARTZ VEIN Pale white w/ 1% carb fragments. Contacts @ 40° cax.							
90											
91			75	→ 88.45-88.80: QTVN: QUARTZ VN. Same as above. U.C. not @ 50°							
91.80 92			70								

PAGE 10 OF 19	PROJECT: Wolverine	HOLE NO. WV 97 84

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
70										
71										
72										
73 1% stringer py										
74										
75										
76										
77										
78										
79										
80										
81										
82										
83										
84										
85 1% mass enh. py										
86										
87										
88										
89										
90										
91 3% diss fg py										
92										

PAGE 11 OF 19 | PROJECT: Wolverine | HOLE NO. WV 97-84

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C CARB	D HEM	E	FRACTURE INTENSITY	% VEIN QTZ.
92.55				91.80-92.55	RHYOLITE TUFF							
93				RHTT	Gray rhy tuff w/ 5×20 mm fragments + 3% diss. f.g. py. fine chloritic + sericitic parting							
94												
95				92.55-104.55	MASSIVE RHYOLITE							
				RHFS	Same as above (85.65-91.80)							
96					Aphyric, gray, w/ 1% diss py.							
97												
98												
99												
100												
101												
102												
103												
104												
104.55				104.55-127.01	FRAGMENTAL RHYOLITE							
				RHFR	Dk gray, "type section" fragmental rhy. w/ wispy ccc'is parting 1% fg diss py mostly associated w/ ccc'is partings. Fragments are faint to semi-faint w/ very irregular chevron undulatory boundaries. Variable carb. alt'n downhole							
105												
106												
107												
108												
109												
110					→ 110.00-112.00 mod carb alt'n milky white w/ hints of unalt'd gray RHFR patches throughout							
111												
112					→ 112.00-124.59: Variable wk carb alt'n intermixing w/ gray unalt'd RHFR							
113												
114												
115												

PAGE 12 OF 19	PROJECT: Wolverine	HOLE NO. WV 9784

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
93 1% diss py										
94										
95										
96										
97										
98										
99										
100										
1										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										
113										
114										
115										

PAGE 13 OF 19 | PROJECT: Wolverine | HOLE NO. WV 97 84

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(124.55 - 127.01 RHFR cont)							
116											
117											
118											
119											
120											
121											
122											
123											
124				→ 124.67 - 125.00 : Wk argill assoc. component (CARB) thickens the rock to a beigish black							
125											
126				→ 126.50 - 127.01 : fg to mass py has x-tallized up to 75% of fragmented lapilli. Sericitic partings continue.							
127	127.01										
	127.63			127.01-127.63 MASSIVE SULFIDE (62cm)							
128	127.95			SEMI S mixed ox w/ fg diss euh py, sph bands, tr cpy stringers + localized fg'd Pb. Gangue min'ls consists of 1mm² qtz + chl blebs disseminated throughout + fine wisps of Dijon mustard yellow sericite. 3 sph rich bands: 1cm thk ea w/ tr. amounts of fg Pb. Sph bands @ 127.20, 127.45 + 127.55; + oriented @ 60° cax. Avg core angle 60° cax							
129											
130											
131											
132	132.00										
133	133.61			★ TOTAL SULFIDE GRADE ★							
134				PYRITE : 55%							
135	135.27			SPHALERITE : 30%.							
				GALENA : 3%							
				CHALCOPYRITE : 2%							
136				GANGUE : 10%							

PAGE 14 OF 19	PROJECT: Wolverine	HOLE NO. WW97 84

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
116										
117										
118										
119										
120										
121										
122										
123										
124		124.44	126.16	1.72m	174864					
125										
126 py fills carb/sil. lapilli (up to 75% of lapilli)		126.16	127.01	85cm	174865					
		127.01	127.63	62	174866					
127 SSMS ↓		127.63	128.68	1.05m	174867					
128		128.68	129.5	82	174868					
129		129.5	130.67	1.17	174869					
130		130.67	131.45	78cm	174870					
131		131.45	132.8	1.35	174871					
132		132.8	133.45	65	174872					
133		133.45	134.37	92	174873					
134		134.37	135.47	1.10	174874					
135		135.47	136.50	1.03	174875					
136										

PAGE 15 OF 19 | PROJECT: Wolverine | HOLE NO. WV9784

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
				127.63-139.29 RHYOLITE TUFF							
				RHTT Brownish / Beige fg. rhyolite tuff w/ wk perv. ser alt'n. Strly fol'd @ 65° cax. Rare f.g. diss py.							
139.29			65	→ 127.65-127.95: QCVN: QUARTZ/CARB VN wk. qtz vn w/ tr py blebs, 10% mafic chl + 3% 1cm² carb. blebs UC @ 45° cax, LC @ 50°.							
140.00			65								
141.82			65	→ 129.10-129.15: QCVN: QUARTZ/CARB VN 10/90 qtz/carb w/ contacts @ 75° cax.							
				→ 132.00-132.10: mod. perv. chl alt'n.							
			60	135.27-159.29 LAPILLI TUFF							
				RHLT Atlantic fgr gray lapilli tuff w/ thin wispy fragments, irregular localized dolomitic bands.							
				→ 136.00: 10% py blebs making a 5mm thk. fragmental stringer band.							
146.80			70								
				139.29-140.00 SILICEOUS ARGILLITE							
				ARSI Lt. blk w/ wispy alt. gray sil. bands comprising 40% of core. ↑g graphitic content downhole. Fit @ LC.							
				140.00-155.40 GRAPHITIC ARGILLITE							
				ARGR JET Black graphitic arg. V.f.g. substantial amt. of broken + filled core. Rare thin carb. bands.							
153.00			bx	→ 140.00-141.80: STGG: FAULT GOUGE Graphitic, black, f.g.							
				→ 146.80-153.00: STGG: FAULT GOUGE Graphitic pasty black w/ 1-2% f.g. diss. py							
154.35			bx								
154.60			bx								
155.40			60	→ 153.00-154.35: QCVN: QUARTZ/CARB VN: Broken core/qtz rubble w/ pyritiferous (5%) graphitic fracture surfaces.							
			65	→ 154.45-154.60: STGG: FAULT GOUGE V. str. ser. alt'n w/ 10% f.g. diss. py. Contacts in broken core.							

PAGE 16 OF 19	PROJECT: Wolverine	HOLE NO. WV9784

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
10% py blebs		136.50	137.55	1.05	174876					
137										
		137.55	139.11	56	174877					
138										
		138.11	139.49	1.38	174878					
139										
		139.49	141.34	1.85	174879					
140										
141										
		141.34	142.97	1.63	174880					
142										
143		142.97	144.58	1.61	174881					
144		144.58	147.11	2.53	174882					
145										
146 1-2% f.g. diss py										
147		147.11	151.48	4.37	174883					
148										
149										
150										
151		151.48	154.45	2.97	174884					
152										
153										
154 (154.45-154.60) - 10% fg. diss py		154.45	154.75	30	174885					
155		154.75	155.45	70	174886					
156		155.45	156.80	1.35	174887					
157		156.80	157.87	1.07	174888					
158		157.87	158.7	.83	174889					
159		158.7	159.77	1.07	174890					

PAGE 17 OF 19 | PROJECT: Wolverine | HOLE NO. WV9784

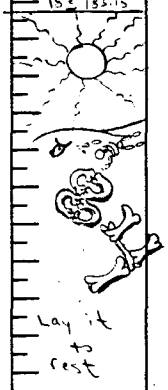
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SSER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
				140.00 - 155.40: ARGR cont'd							
				→ 154.60 - 154.75: Continued v. str. sec alt'n; brkn core							
160				→ 155.40: STFL: FAULT Fit'd LC of ARGR @ 60° c.a.							
161	100%		30								
162			55	155.40-165.17 QFDP: QUARTZ / FELDSPAR PORPHORY Dk gray QFP w/ qtz + fsp phenos 1 cm² in size. 1% py stringers, occuring locally. High sil. content (very hard) wispy green sericitic partings "flow" around x-tals							
163	162.50		25								
164	163.30		55								
165	165.17		55	160.95 STFL FAULT @ 30° c.a.							
166			55	→ 162.50: STFL: FAULT x-cutting @ 35° c.a.							
167	167.31		55	→ 163.30 STFL FAULT x-cutting @ 25° c.a.							
168											
169				165.17-178.83: CRYSTAL TUFF RPTF: Dk gray qtz + fsp bearing x-tal lapilli tuff. 1mm² blue qtz eye + black fsp x-tals. mod. seric partgs + resjoint wispy anastomizing py. bands							
170											
171											
172			55	→ 167.31: STFL: FAULT @ 55° c.a.							
173											
174											
175											
176											
177											
178			55								
179	177.23		60	178.83-183.18: SILICEOUS ARGILLITE ARSI: Black sil arg. w/ rpod graphitic component mod'ly fol'd @ 55° c.a.							
180											
181			55	→ 181.80-183.18: STGG: FAULT GOUGE Fine grained black graphitic							
182	181.83		55								

PAGE 18 OF 19	PROJECT: Wolverine	HOLE NO. WW97 84

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		159.77	160.86	1.09	174891					
160 1% py stringers										
		160.86	161.82	96cm	174892					
161										
		161.82	162.81	99	174893					
162										
		162.81	163.52	1.01	174894					
163										
		163.82	164.85	1.03	174895					
164										
		164.85	165.55	70	174896					
165										
		165.55	166.9	1.35	174897					
166										
		166.9	167.95	1.05	174898					
167										
		167.95	169.00	1.05	174899					
168										
169		169.00	170.32	1.32	174900					
170		170.32	171.16	84cm	174901					
171		171.16	172.26	1.10	174902					
172		172.26	173.26	1m	174903					
173		173.26	174.34	1.08	174904					
174		174.34	175.26	92	174905					
175		175.26	176.32	1.06	174906					
176		176.32	177.34	1.02	174907					
177		177.34	178.10	76	174908					
178		178.10	179.30	1.20	174909					
179										
180										
181										
182										

PAGE 19 OF 19 | PROJECT: Wolverine | HOLE NO. WN9784

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (17888-183.8: ARSI cont)	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
183 183.15		~		End of Sole.							

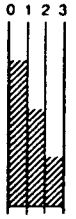


EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine Stratigraphic Drilling	GROUND ELEV.: 550m
HOLE NO.: WV-95-85	BEARING: Grid south, 213 azimuth
LOCATION: [illegible]	DIP: 70°
	TOTAL LENGTH: 197.50 m
LOGGED BY: Dave Gale	HORIZONTAL PROJECT:
DATE: June 2	VERTICAL PROJECT:
CONTRACTOR: F. Boisvenu	
CORE SIZE: NQ	
DATE STARTED: June 4, 1997	
DATE COMPLETED: June 7, 1997	
DIP TESTS: 197.5m: 61° dip	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

Geological Summary

→ Rhyolite fragmentals and a massive rhyolite flow extend to a depth of 67m.

→ A rather broad zone of exhalitive activity continues to a depth of 107m and contains 4 separate magnetite iron formations, separated by exhalitive carbonate-pyrite units and massive to fragmented rhyolites.

→ Massive rhyolite extend to a depth of 127m and are underlain by a thin (2m) carbonate-pyrite exhalite unit.

→ The remainder of the hole, extending to a depth of 197.5m consists of black argillite which is variably carbonaceous to siliceous. A 10m thick qtz-eye bearing argillite occurs at 158-168m. Wolverine horizon must be above this unit, but below the final exhalite (131m). Therefore 131-158m interval.

Mineralization

→ Only mineralization found within the exhalitive horizons are pockets of pyrite. Pyr. either occurs as massive fine grained bands or within pods filling the matrix within the fragmental/breccia/tuff carbonate exhalite. Pyr comprises [illegible] of rock in some of the carbonate-pyr exhalite units. Small pod of sphalerite occurs at 83m within RHFS.

Alteration

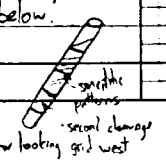
→ No significant alteration.

LEGEND

- Rhyolite (RHFS)
- Rhyolite fragmental (RHFR)
- Rhyolite tuff (RHLT)
- Argillite rhyolite lapilli tuff (ARTF)
- Argillite (ARSI)
- Tuffaceous Argillite (ARTF)
- Qtz-eye bearing Argillite tuff (ARQE)
- Qtz vein (QTVN)
- Magnetite iron formation (EXMT)
- CP SP Exhalite carbonate-pyrite (EXCP) / carbonate-pyrite (EXSP)
- Fault gouge (STGG)

PAGE 1 OF 17 | PROJECT: | HOLE NO. WU-85

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
1–23				0 - 0.30m Overburden DHOB							
				0.3cm-10.47 Greyish-white siliceous fragments in a straw green RHFR to black matrix - Fragments are well defined, are sub angular, vary 0.4 - 4cm in diameter (avg. is 1-2cm) and are mostly flattened in the pervasive foliation. - The fragments make up ~55-70% of rock and are within a sericitic (straw green) or argillaceous (black) matrix. The upper portion of unit (0.3-5.50) shows the sericitic matrix and the lower portion consists entirely of argillite (matrix). The rock parts readily along the sericitic partings. - The siliceous fragments are variably oxidized and have a light brown colour. - Core Angle is 50°. Foliation within this unit is weakly developed							
				10.47-10.55 Thin slice of fault breccia that has been cemented in STFB a brown iron oxide matrix. This zone separates the two rhyolite fragmental units.							
				10.55 - 37.09 Weakly banded greyish-green to blueish green RHFR rock composed of siliceous fragments in a sericitic matrix. This rhyolite fragmental unit differs from the unit above in the distinctive colour that is exhibited by entire rock (siliceous fragmentals as well as matrix). - Rock is hard because it is ~60-80% siliceous fragments and the rest soft sericitic matrix. Unit grades into massive rhyolite in a number of places and keeps the same blueish green colour. - A pervasive sericitic alteration could explain the green colour of rock. - Textbook example of cleavage refraction. The cleavage refracts going from the siliceous fragments into the sericitic matrix and then back into the siliceous frag. - This sericitically altered rhyolite is separated from the overlying rhyolite by a cemented fault breccia. - Core angle: 65° - There are two foliations observed in this rock. The first is defined by the sericite layers and the flattened rhyolite fragments and the second shows the relationship below. Not pervasive throughout unit, just isolated examples							



PAGE 2 OF 17	PROJECT:	HOLE NO. WV-85

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1		0.4	2.44	2.04	172639					
2										
3										
4										
		4.07	5.49	1.4	172640					
5										
6										
7										
8										
		8.23	10.33	2.1	172641					
9										
10										
11										
		10.57	12.68	2.1	172642					
12										
13										
		13.33	17.50	4.2	172643					
14										
15										
16										
17										
18										
		18.58	21.50	2.9	172644					
19										
20										
21										
22										
23										
		22.87	24.87	2.0	172645					

PROJECT:

HOLE NO. WU-85

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
24				37.09-45.73 ARTF Black, moderately banded siliceous argillite with lapilli size (2-4 cm dia) fragments - Fragments are all aphyric, greyish-white, siliceous and are all flattened in the foliation - Percent of siliceous fragments varies from 70-80% at lower contact with the underlying massive rhyolite to 30-50% at the top of the interval - QTVN: 37.19-37.39 ; 43.68-44.00 - STFB: 42.60-43.00 - A silica cemented fault breccia. Fragments are all angular and are argillaceous - Core angle ≈ 60°							
25											
26											
27											
28											
29											
30				45.73-66.94 RHFS Greyish-white, poorly banded aphyric rhyolite. Massive rock develops a autoclastic/fragmented texture over 10-20cm intervals.							
31			60	-Orange brown iron oxidation colour is present within this unit. -Very weak sericite alteration. The limited sericite is concentrated within the foliation planes Core angle ≈ 70°							
32											
33											
34				- Condition of core : mainly broken over the interval.							
35				66.94-67.5 RHFS -Grey mottled, banded massive aphyric rhyolite with 50-60% cream to white veins dissecting the rock.							
36				- Some of the veins are calcareous and some are silica-rich. -The original rock is hard to determine due to veining but it appears the same as the RHFS above.							
37				- The massive rhyolite also grades into a fragmental over 10-20 cm intervals, and then back into massive rhyolite.							
38				- Core angle is: 50							
39											
40				67.5 - 68.80m EXMT Alternating grey and black banded magnetite iron formation.							
41				Magnetite is concentrated in 0.2-0.7cm wide bands and makes up 10% of rock - Banded texture also defined by alternating silica, carbonate + pyrite each no more than 1.5cm wide - The matrix of rock is weakly calcareous and mainly composed of silica.							
42											
43											
44				- Core angle is 55°							
45											
46			60								

PAGE 4 OF 17	PROJECT:	HOLE NO. WV-85

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
~~24~~										
~~25~~										
~~26~~		26.0	28.0	2.0	172646					
~~27~~										
~~28~~										
~~29~~										
~~30~~		29.72	30.70	0.98	172647					
~~31~~										
~~32~~										
~~33~~		33.12	34.64	1.52	172648					
~~34~~										
~~35~~		35.11	37.06	1.95	172649					
~~36~~										
~~37~~		37.49	39.51	2.02	172650					
~~38~~										
~~39~~										
~~40~~		39.51	42.61	3.10	172651					
~~41~~										
~~42~~		42.61	43.66	1.05	172652					
~~43~~										
~~44~~										
~~45~~										
~~46~~		45.76	48.96	3.20	172653					

PAGE 5 OF 17 | PROJECT: | HOLE NO. WN-85

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
47				68.80-71.1 EXCP Carbonate-pyrite exhalite. The carbonate content within this rock varys from weak in upper portion to strong in the lower portion. - Bands of grey-white silica (15%) are also present. - Lower 40 cm of this unit consists rock chips + broken core. From these samples and a brecciated texture in preserved portions of core, a cemented fault breccia is observed. - QTVN: 68.9-69.0 ; 70.6-70.85. - Upper contact with EXMT is gradational, with conc of magnetite increasing over 10-15 cm. - Core angle: 70°							
48											
49											
50											
51											
52											
53				71.1-72.32 EXMT Magnetite iron formation with thin alternating bands of massive magnetite + grey-white carbonate/silica layers.							
54											
55			70	- Magnetite is concentrated in the black bands which are 0.2-2 cm thick. Mag. makes up 35% of rock unit. - matrix is composed of carbonate and minor silica, ~55-60% of rock - QTVN: 72.00-72.2 - Core angle: 65°							
56											
57											
58											
59				72.32-75.29 EXCP Brown/straw coloured, poorly banded carbonate-pyrite exhalite. Carbonate is cream to white and interspersed with pods of pyrite. - Portions of unit has a brecciated/fragmental texture, cemented by carbonate-pyrite. The brecciated fragments are mostly composed of massive pyrite, as well as carbonate and silica fragments - Core is in poor shape, varing from rock chips + fragments to thin fault gouge zones. - Core angle is unmeasurable/note, banding is only weakly developed.							
60											
61											
62											
63											
64											
65				75.29-78.64 RHFS Greyish white moderately foliated aphyric rhyolite. Rock is banded in places, showing thin layers of sericite and crinillite between the massive rhyolite (weak or nil.) - Upper contact with EXCP is gradational - Core angle is : 50°							
66											
67											
68			50								
69											
	CP										

PAGE 6 OF 17	PROJECT:	HOLE NO. WV-85

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
47										
48										
49										
50		49.77	51.70	1.93	172654					
51										
52										
53		53.20	58.00	4.80	172655					
54										
55										
56										
57										
58										
59		58.9	66.4	7.50	172656					
60										
61										
62										
63										
64										
65										
66		66.5	67.54	1.04	172657					
67		67.54	68.8	1.26	172658					
68	Pyr occurs as massive and silt rich layers within the magnetite iron formation. Massive pyr is fine grained and silts are subhedral. ~ 4% of interval.									
69		68.8	71.1	2.3	172659					

PAGE 7 OF 17 | PROJECT: | HOLE NO. WV-85

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Carb	E	FRACTURE INTENSITY	% VEIN QTZ.
70	CP		70	78.64-87.00 EXSP: The lithology of this core is highly variable over this interval. The rock varies from a carbonate rich rock (EXCP) to a siliceous rich rock (RHFS? EXSP?) to a Lapilli tuffaceous rock to an Argillite with siliceous fragments. There is no specific order to the lithologies. - One common theme is the presence of bands of pyr. - On the whole this exhalitive horizon looks like it is fragmented and has been recemented by fluids rich in pyr + $CaCO_3$. - Lower 1 m of this unit is a massive silica unit that could be exhalitive or could be massive rhyolite. Some portions have the milky white, clay-like texture within lower 1 metre							
71											
72											
73											
74	CP										
75											
76											
77			55	EXCP: 84.08 - 84.48 Core angle: 55°							
78				87.00-90.1 EXMT: Pink, banded brownish-black magnetite iron formation. Magnetite is within a matrix of mainly silica with minor carbonate - Rock is dissected by veins containing silica, pyr, and carbonate - Not the typical iron formation in that the magnetite is massive throughout the rock and not concentrated in bands. Mag. is ~30% of rock interval - Rock is not fractured and no banding observed, ∴ no core angle defined.							
79											
80											
81											
82											
83	SP			90.1-90.83 EXCP: This interval contains massive carbonate that shows mottled textures and veining. - No banding observed in this interval - Upper contact with EXMT is gradational - The veining is defined by white carbonate within a more grey/pink white carbonate - No pyr within this unit.							
84											
85											
86											
87			55	90.83-96.50 RHFR: This is a highly siliceous fragmental rock that shows variation in alteration intensity and fragment size over the interval. - Mostly the rock 0.5-2cm clr siliceous frags in a greenish dark matrix. The fragmental rock grades into a massive aphyric siliceous rock and back into fragmental. - 93-93.9: rock is mostly matrix giving the rock a greenish brown colour. 0.4-1cm siliceous frags still observable. Green colour ∴ due to a moderate chlorite alteration. - Core angle: 65 - overall very weak banding developed.							
88											
89											
90											
91	CP										
92											

Note: Thin section sample taken from exhalite unit + 83.1m. Strong hematite alteration.

PAGE 8 OF 17	PROJECT:	HOLE NO. WV-85

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
70 - At the contact with the EXMT, there's a 10cm interval that has a mottled texture (pods and veins)						
71 defined by pods of pyr + silica gangue. Pyrite is all fine grained. Over 10cm ~35% pyr		71.1	72.32	1.22	172660	
72 Fine bands are present throughout interval. 4%						
- Lower 30-40cm, pyr forming massive pods and		72.32	73.84	1.52	172661	
73 acting as the cement within brecciated rock. ~30% pyr over this lower interval.						
74 Note: in both cases, concentration of pyr. is localized at upper + lower contact of exhalt		73.84	75.29	1.45	172662	
75 horizon and is also associated with qtz veining		75.29	77.10	1.81	172663	
76 Within EXMT (71.1-72.32), bands of subhedral pyr						
xtls are observed ~3% of unit						
77 - At base of unit, there is a qtz vein that contains						
pods of pyr - making up ~20-25% of rock over		77.1	78.69	1.59	172664	
78 a 10cm interval. Qtz vein occurs within the EXMT						
79 Within EXCP (72.32-75.29): Pyr occurs as						
massive 1-3cm size fragments in a pyr-carb		79.36	80.90	1.54	172665	
80 matrix. Also see subhedral to euhedral pyrite						
in the matrix of EXCP. Pyr ~35% of rock						
81						
Within the RHPS (75.29-78.64) there are bands						
82 (0.1-0.3cm wide) of fine grained pyrite,						
2% of rock		82.10	85.6	3.5	172666	
83						
Within the EXSP (78.64-87.1) bands of massive						
84 fine to medium grained pyr (0.2-0.4cm wide)						
occur. Pyrite also occurs in massive pods associated						
85 with fragmented portions of rock. ~10-12% over						
unit		85.6	87.0	1.4	172667	
86						
87						
EXMT: Pyr in a network of veins that are		87.0	88.5	1.5	172668	
88 dissecting + brecciating the EXMT. Fine grained						
pyr also observed interspersed with the		88.5	90.1	1.6	172669	
89 magnetite. Minor euhedral pyr also sporadically						
throughout unit. Veined + interspersed pyr is ~						
90 25%		90.1	90.83	0.73	172670	
91 1% pyr forms blebs localized in certain sections		90.83	93.05	2.22	172671	
instead of as disseminations throughout interval						
92						

PROJECT:

HOLE NO. WV-85

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
				96.5-96.83 STGG — Fault gouge developed in siliceous fragmental							
				96.83-98.97 EXMT — Interbedded banded black-grey magnetite iron formation							
			65	- Magnetite occurs as 0.3-1cm wide bands as well as disseminated blebs (<0.1mm) throughout interval. Mag. is ~15% of rock. Disseminated blebs also are dark red; hematite.							
				- The remainder of the rock is silica - whitish grey in colour.							
				- Core axis is 50°							
				- QTVN: 97.12-97.32							
				98.97-100.22 RHFS — Grayish-white moderately foliated aphyric rhyolite							
				- Upper 20 cm of this interval consists of 1-2cm size fragments in a siliceous matrix							
				- Core angle 70°							
	CP			100.22-108.22 EXCP — Same as 90.1-90.83 interval							
				- Core is very broken and consists of rounded rock fragments							
				- All frags. effervesse vigorously.							
				103.22-105.77 EXMT — Same as EXMT above (96.83-98.97).							
				- The matrix within this unit is more calcareous compared to above EXMT unit.							
			55	- EXCP units interbedded within the iron formation: 103.82-104.02; 105-105.30							
	SP			- Mag. content is ~15%							
				- At the base of this unit, there is a 3.5 cm thick red fault gouge. Red colour is interpreted to be caused by hematitic staining							
				- This unit also has a slight green colour due to a weak chlorite alteration.							
				- Core angle: 55°							
				105.77-106.77 EXSP — Weakly banded white to grey massive silica unit.							
				- Portions of rock show a milky white colour.							
				- Banding is defined by grey silica interbedded with massive white silica.							
				- Core angle is 70°							
				106.77-108.21 RHLT — Grey, moderately banded lapilli tuff. Rock is very siliceous with light green sericitic partings defining the foliation							
				- At 107.6-107.8 chlorite content increases to give a							

PAGE 10 OF 17	PROJECT:	HOLE NO. WV-85

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
93			93.05	93.42	0.37	172672					
94			93.42	96.5	3.08	172673					
95											
96											
97			96.83	98.97	2.14	172674					
98											
99	Trace pyr as subhedral to euhedral xlts.		98.97	100.22	1.25	172675					
100											
101											
102											
103	2% subhedral to euhedral pyr occurs within		103.22	105.77	2.55	172676					
104	this unit.										
105											
106			105.77	106.77	1.00	172677					
107			106.77	108.21	1.44	172678					
108			108.21	110.21	2.00	172679					
109											
110											
111											
112											
113			112.66	115.75	3.09	172680					
114											
115											

PROJECT:

HOLE NO. WW-85

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
116			70	Cont'd green colour to rock. Also see 3% hematite disseminated over this interval. Occurs as 0.1-0.2 cm sized blebs. - Fragments are mainly 1-2 cm in size and are surrounded by a fine, tuffaceous matrix. - Core angle: 70°							
117											
118											
119				108.21-118.95 RHFS Greyish-white, poorly to moderately banded aphyric rhyolite - Upper contact with lapilli tuff unit is gradational - 30-40 cm of brecciated rhyolite is observed within this unit and is cemented by carbonate and silica STGG: 116.55-116.75. - The final 1.5 m of this unit is broken core. Core angle 70°							
120											
121											
122											
123				118.95-123.23 RHFR - Same rock as above (RHFS) but fragments are observable and there are more sericitic partings defining the foliation. Upper 3 m of core is broken. Portions of this unit could be a fault that has been reheated by siliceous fluids. Difficult to determine because of broken core. - core angle is 75°							
124											
125											
126			60								
127				123.23-127.4 RHFS Same unit as RHFS above. - This unit shows a weak sericitic alteration mainly concentrated in the foliation planes. - Fragmented or brecciated texture observed between 126.9 - 127.2 m. - Core angle is 60 - Disseminated magnetite occurs at 125.35-125.55 Only about 2-3% magnetite over this interval							
128											
129											
130	CP										
131											
132				127.4 - 128.65 RHFR This is a poorly banded, whitish grey siliceous fragmented rock. The siliceous fragments are cream-coloured and could be fragments from a massive rhyolite or from an exhalitive silica unit. 127.9-128' fault gouge/breccia zone - core angle is 65° - The siliceous fragments are found within a cream coloured dolomitic matrix.							
133											
134											
135											
136											
137											
138											

PAGE 12 OF 17	PROJECT:	HOLE NO. WV-85

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
116			116.85	117.84	1.00	172681	
117							
118							
119			119.79	121.70	1.91	172682	
120							
121							
122			122.23	123.85	1.62	172683	
123	Trace pyr; conc. in veins that are both //						
124	and cross-cutting the foliation.						
125	At 125.85 there is a pod of sphalerite - reddish brown in colour ms is 0.4 wide, 2cm long		124.05	124.55	0.50	172684	
126			125.9	127.4	1.50	172685	
127			127.4	128.65	1.25	172686	
128							
129	20% pyr occuring in thin EXCP-forms massive		128.65	129.45	0.8	172687	
130	bands of subhedral to euhedral xtls. Also fills voids in the fragmental/breccia portion of rock.		129.45	135.15	5.70	172688	
131							
132			132.00	133.75	1.75	172689	
133							
134							
135							
136							
137			136.54	138.05	1.51	172690	
138							
			138.55	140.65	2.10	172691	

PAGE 13 OF 17 | PROJECT: | HOLE NO. NV-85

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
140			165	128.65-130.45 EXCP							
				Pinky banded cream to grey coloured carbonate-pyrite exhalite.							
141				-Rock has a clastic appearance with pyrite forming some bands but mainly occupying voids between silica + dolomite fragments.							
142				- Matrix is composed of silica + cream-coloured dolomite.							
				- 10-20cm intervals consisting of fragmental / recrystal. texture with the matrix composed of more dolomite.							
143				129.45-130.25: pyrite disappears and rock has an argillaceous matrix with silica + dolomite fragments.							
144				130.25-130.45: Massive dolomite.							
				- Core angle is not measurable							
145											
146											
				130.45-136.54 STGG	Fault gouge developed within black argillite. Flecks of pyr. are observed within matrix						
147											
148				136.54-140.65 ARTF	Greenish-black moderately banded tuffaceous argillite						
				-15% of rock consists of 0.1-0.5 cm wide bands of silica. Could be massive silica or concentrated tuff fragments							
149				- Green colour due to a pervasive moderate chlorite alteration.							
150				- 2-4% of rock consists of cross-cutting calcite veins 0.1-0.4 cm wide							
151				- Core angle is 65°							
			70°	- The foliation within this rock demonstrates variation due to folding but an orientation on the foliation cannot be determined because rock is friable and cannot be picked up.							
152											
153											
154											
				140.65-147.94 STGG	Fault gouge developed in black argillite						
155				- 10% qtz vein fragments with gouge material. Fine grains occupied within fault gouge zone.							
156				147.94-154.43 ARSI	Black moderately foliated fine-grained argillite with 10-15% white siliceous layers.						
				Rock is variable carbonaceous (graphitic) but mainly is silica rich (hard). Upper 2 m is graphitic.							
157				- Core angle is variable due to folding but is 70°.							
158				Upper 1.5 m the foliation is folded and highly variable showing a 0° core angle and multiple fold closures. Core is broken and friable so a rough orientation on folds cannot be made.							
159				- 5% consists of qtz veins + pods networked through the rock							
160											
161											
162											

 | PROJECT: | HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
140										
141										
142										
143										
144										
145		144.69	147.13	2.44	172692					
146										
147										
148		148.04	150.0	1.96	172693					
149										
150										
151		151.0	153.1	2.10	172694					
152										
153										
154		153.1	154.43	1.33	172695					
155		154.53	156.14	1.61	172696					
156										
157		157.3	158.68	1.38	172697					
158										
159		158.68	161.44	2.76	172698					
160										
161										
162										

Within the ARGR, there is trace pyrite forming fine grained bands + individual xtls ~0.2 cm that are concentrated over a 2-3m interval, totalling no more than 5% xtls over specific interval

PAGE 15 OF 17 | PROJECT: | HOLE NO. WV-85

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Hem)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
163				154.43-158.68 Same rock as above. Only difference is [illegible]							
			66	ARSI layers are [illegible]° to [illegible]							
164				- The foliation / silica banding is filled but not as contorted as layer above. Remains present still axis but cannot get a reliable trend to get a sense on the orientation. Folds are non-cylindrical and fold axis is curved							
165											
166				- [illegible] veins appear to be part of [illegible] appear to truncate (chaotic?)							
167				- Core angle is unreliable: [illegible] = 45°							
168				154.75 = 90							
				155.5 = 70°							
				approximate dip ~ 70°							
169				QTVN: 157.05-157.30							
170				158.68-168.5 Tuffaceous to fine grained black siliceous argillite with							
				ARQF silica fragments, veins and thick veins.							
171				Silica frag ~ 10% of rock + thin veins ~ 10% qtz eyes							
				2%.							
172				STGG: 159.28-159.52; [illegible]; 166.75-167.0							
				- Core angle: 65°							
173				- There are pods 0.5-1cm long x 0.2cm wide (aligned in foliation) that are reddish brown. Doesn't appear to							
174				be sphalerite and in reality likely due to hematite staining							
175											
176				168.5-172.72 Fault zone within black argillite. Also qtz veins							
				STGG and fragments.							
177											
				172.72-174.00 Core rock is ARSI above (147.94-154.53) except							
178				ARSI one is all broken up 1-2cm size fragments							
179				174.00-184.20 Fault gouge within black siliceous argillite							
				STGG							
180											
				184.20-197.50 Very poor core recovery and poor condition of							
181				ARSI core. Mostly rock chips + broken rock with fault gouge.							
				- Sections of intact core show ARSI and some							
182				ARCB. Black fine grained argillite							
				- Qtz fragments are widespread with some core runs							
183				10-30cm intervals: QTVN: 193.85-194.05							
				Note: Very few (to none) qtz veins within the argillite							
184				compared to the previous [illegible] core (73-78-83).							
				- Core angle 65° at 187.5m. Most of section a core angle							
185				is not measurable - i.e. broken core < 2cm gouge).							

PAGE 16 OF 17	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
~~163~~										
~~164~~		164.27	166.53	2.26	172699					
~~165~~										
~~166~~										
~~167~~		166.53	168.5	1.97	172700					
~~168~~										
~~169~~		169.37	172.72	3.35	172701					
~~170~~										
~~171~~										
~~172~~										
~~173~~										
~~174~~										
~~175~~										
		175.93	182.24	6.31	172702					
~~176~~										
~~177~~										
~~178~~										
~~179~~										
~~180~~										
~~181~~										
~~182~~										
~~183~~										
~~184~~										
~~185~~		185.31	188.31	3.00	172703					
		191.41	197.5	6.09	172704					

PAGE 17 OF 17 | PROJECT: | HOLE NO. WV-85

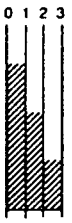
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
187					Chl	Cc	Ep	(Hm)			
198				E.O.H.							

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: 1410 m
HOLE NO.: WV 97-86	BEARING: Grid North
LOCATION: L 16200E . 16930 N	DIP: -68
	TOTAL LENGTH: 261.21 m
LOGGED BY: M. Pratkora	HORIZONTAL PROJECT:
DATE: June 4/97	VERTICAL PROJECT:
CONTRACTOR: Boisvenu Diamond Drilling	
CORE SIZE: HQ	
DATE STARTED: June 2/97	
DATE COMPLETED: June 7/97	
DIP TESTS @ 332 (101.2m) -69° @ 632 (192.6m) -74° @ 832 (253.6m) -76.5°	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- Exhalitive units btwn 66.20 - 81.30, + 173.26 - 198.22.
- 56 cm massive sulfide unit @ 198.22 - 198.78 w/ ~17 or 18% Zn, 1-2% Pb, + trace Cu.
- 21 m thick QFP in footwall (236.57 - 257.40

LEGEND

- rhyolite
- RHYAR
- quartz vein
- magnetic iron formation
- argillite
- calcite/pyrite exhalite
- silica exhalite
- fault gouge
- massive sulfide interval
- porphory

PAGE 1 OF 26 | PROJECT: Wolverine | HOLE NO. WW9756

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
0	CASING	CASING		0.00-5.18 CASING DHCS							
1											
2											
3											
4											
5 5.18											
6		RHFS		5.18-8.45 MASSIVE RHYOLITE RHFS mass aphyric rhy w/ strong fe-ox staining. Heavily fractured / brkn core.							
7			45								
8 8.45											
9		RHAR	45	8.45-57.00 INTERBEDDED RHYOLITE / ARGILLITE RHAR Aphyric rhy variably (locally rhythmic) interbedded w/ fine grained silica rich argillite. millimeter scale rhythmite sed. bands are present in regions where rhy is more prevalent than arg. 1% blebby diss py commonly along sed. bands w/ 1% mass py'ic blebs visible on fractured surfaces.							
10											
11											
12			40								
13											
14				→ 11.28-11.70: 2% magnetite, wk→mod'ly mag. (EXMT?). Appears to be interbedded rhy/arg.							
15			45	→ 11.70-30.00: Fog gray colour w/ less intense arg component.							
16											
17											
18											
19			55								
20		RHAR									
21											
22			40								
23											

PAGE 2 OF 26	PROJECT: Wolverine	HOLE NO. WV9756

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											

PAGE 13 OF 26 | PROJECT: Wolverine | HOLE NO. WV 97 86

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
24	RHAR		40	(8.45 - 57.00 RHAR cont)							
25											
26											
27											
28											
29											
30			35	→ 30.00 - 35.20: ↑d arg. Arg. component is greater than rhy.							
31											
32				→ 32.65 - 33.00: STGG: FLT GOUGE dk. gray flt gouge w/ all grain sizes (silt → pebble)							
33	32.65 33.00		60								
34			35								
35	RHAR			→ 35.20 - 46.58: ↓d arg. component, arg. bands are thinner + less frequent (mm-cm thk)							
36											
37											
38			40								
39											
40											
41											
42											
43	RHAK										
44											
45			35								
46											

PAGE 4 OF 26	PROJECT: Wolverine	HOLE NO. WV 9786

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										

PAGE 5 OF 26 | PROJECT: Wolverine | HOLE NO. WV9786

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
	RHAR			(8.45-57.00: RHAR cont'd)							
				→ 46.55-49.70: ↑'d arg. component same as above (33.00-35.20)							
			45								
				→ 49.70-57.00: ↓'d arg. ↑'d phy. same as before (35.20-46.58). Grading towards a more massive (aphyric) rhyolite @ 57.00.							
			45								
			35								
			45								
57.00				57.00-66.20 MASSIVE RHYOLITE							
			30	RHFS mass. fsp. grey aphyric rhy w/ 2mm thk rhythmic sericite bands. 1% f.g. → mass. py blebs along sericitized planes (fractured surfaces) Primarily broken core							
			40	→ 60.70-60.90: QTVN: QUARTZ VEIN Fe stained qtz rubble, broken core							
60.70 60.90			bc								
	RHFS										
			60								
66.20				66.20-67.17 MAGNETIC IRON FORMATION							
	EXMT		45	EXMT Dk fol'd green w/ wispy carb + sil' cooks banding. Tr f.g. disc. py. Mostly magnetic (10% magnetite) Banding is regular + rhythmic.							
67.17			55								
	RHFS		55								
69.00											

PAGE 6 OF 26	PROJECT: Wolverine	HOLE NO. WV9786

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
47										
48										
49										
50										
51										
52										
53										
54										
55										
56										
57										
58										
59										
60										
61										
62										
63										
64										
65		65.20	66.20	1m	174910					
66		66.20	67.17	97	174911					
67		67.17	69.00	1.83	174912					
68										
69		69.00	69.90	90	174913					

PAGE 7 OF 26 | PROJECT: Wolverine | HOLE NO. WV 97 86

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				67.17-69.00 MASSIVE RHYOLITE							
70	EXMT			RHFS massive aphyric gray rhy w/ ser rhythmic banding (2mm thk)							
70.85				1% mass py blebs along frac surfaces (ser ic bands)							
71	RHF		55								
72	DHOB			69.00-70.85 MAGNETIC IRON FORMATION							
			50	EXMT Similar to EXMT above w/ 1% f.g. cubic py blebs (1mm²) along chl'ic + ser'ic rich bands. Rare light purple elongate sil fragments (5×20mm)							
73	ARGI										
74											
74.78											
75			45								
				71.25-71.30 RHYOLITE							
76			40	RHFS Rhythmic (cm, 5mm) chl banding across aphyric gray rhyolite 1% f.g. disc py along bands. Bands @ 45° cax. Primarily brkn core							
77	EXCP										
78				→ 71.10-71.25: STGG: FAULT GOUGE							
78.25				Fit gouge bounded by brkn core w/ silt→pebble clasts.							
79	EXMT		45								
79.50			45								
80			45								
				71.30-72.23 OVERBURDEN							
81	EXCP		35	DHOB Drill bit crown was drilled out							
81.30											
81.95	RHFS		50								
				72.23-74.78 SILICEOUS ARGILLITE							
83				ARGI Dk gray / blackish sil. arg w/ 2% f.g. disc py stringers along fol'n. Strong sil. compaction fol'n @ 40° cax							
84											
85				→ 74.68-74.78: QCVN: QUARTZ/CARB. VN. 50/50 qtz/carb vn w/ tr. f.g. py + 3% 1mm² chl blebs. Sharp contacts @ 40° cax.							
86	ARGI		60								
86.36											
87			60								
87.35											
88	RHFE		20	74.78-79.25 CALCITE PYRITE EXHALITE							
88.50			60	EXCP Lt. sky blue calcite banded + banded cal py exhalite. Str silicification w/ 10% HCl. 5% f.g. py in wispy bands along fol'n @ 40° cax							
89	QTVN										
90				→ 74.78-75.90 EXCP w/ silicic interbands + 5→7% mass f.g. disseminated							
90.22				Laminated texture							
91	ARGI		45								
91.26											
91.97	RHFE		10								
92											

PAGE 8 OF 26	PROJECT: Wolverine	HOLE NO. WW9786

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
70		69.90	70.85	95	174914					
71		70.85	74.78	3.93	174915					
72										
73										
74		74.78	75.76	98	174916					
75		75.76	76.70	94	174917					
76		76.70	77.56	86	174918					
77		77.56	78.28	72	174919					
78		78.28	78.65	37	174920					
		78.65	79.50	85	174921					
79		79.50	80.60	1.1	174922					
80		80.60	81.30	90	174923					
81		81.30	81.95	65	174924					
82		81.95	87.35	5.30	174925					
83										
84										
85										
86										
87		87.35	88.30	95	174935					
88		88.30	89.45	1.15	174926					
89		89.45	90.22	77	174927					
90		90.22	91.36	1.14	174928					
91		91.36	91.87	51	174929					
92		91.87	92.85	98	174930					

PAGE 9 OF 26 | PROJECT: Wolverine | HOLE NO. WV 97 86

* Descriptive Geology Only *

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				74.28-74.65 SILICA PYRITE EXHALITE							
				EXSP Pure aphanitic white banded sil py exhalite. Primarily py bands @ 55° c.a. Very thin (<1mm) faint sph @ 78.62 Py bands avg 5mm thk							
				78.65-79.50 MAGNETITE IRON FORMATION							
				EXMT Banded mag Fe formn w/ 7% py + tr sph laminae. Med grained magnetite x-tals diss. throughout Rare purplish siliceous interbands. Laminae are avg. ~2-3mm thk @ 45° c.a.							
				79.50-81.30 CALCITE PYRITE EXHALITE							
				EXCP Laminated cal/py exhalite same as 74.48-75.90. Rare sph laminae + localized f.g. magnetite diss (up to 5%) in 1cm thk bandings.							
				81.30-81.95 MASSIVE RHYOLITE							
				RHFS Fog gray mass rhy w/ serific band'g + tr f.g. diss py Brkn core.							
				81.95-87.35 SILICEOUS ARGILLITE							
				ARSI Blk aph w/ faint rhythmic wispy sil. banding. Primarily brkn core w/ foln @ 45° c.a. Brkn core @ L.C.							
				→ 86.00-86.86: STGG: FAULT GOUGE Blk filt gouge w/ f.g. diss py							
				→ 86.86-87.35: Regional str. deformation (shear?) Rock is v. friable							
				87.35-88.30 RHYOLITE ASH TUFF							
				RHFF Gray v. fgd rhy. ash tuff. Rare f.g. diss py. Foln @ 30° c.a.							
				88.30-90.22 QUARTZ VEIN							
				QTVN Bull white qtz vn w/ tr. py blebs, chloritic septa + localized v. f.g. light green clay mineral (kaolinite?) x-cutting LC @ 65° to c.a. Filled L.C @ 45° c.a.							

PAGE 10 OF 26	PROJECT: Wolverine	HOLE NO. WV97 80

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PROJECT: Wolverine

HOLE NO. WV97S6

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				90.22-91.36 SILICEOUS ARGILLITE							
93				ARGI Black sil arg w/ mod argillic							
				carb cons to brkn core. Rare f.g							
94	QTVN			disc py.							
				91.36-91.87 MASSIVE FRAGMENTED RHYOLITE							
95				RHFR Dk grey-green frag rhy w/ up							
96	96.00			to 3% f.g disc py. Sericitic							
				partings btwn rhy. frags. Angle							
97	RHFR			of ser partings begins @ 45° to cax							
				and gradationally becomes // to							
	97.99			cax @ 91.87. Very siliceous							
98	STGG										
99				91.87-96.00 QUARTZ VEIN							
	99.00			QTVN Bull white qtz vn w/ tr. py							
100				blebs. Variable regional/local							
				mineralogy from single Pbs + sph							
101				blebs to f.g clay (kaolinite?)							
				being locally massive, to 3%							
102				localized epidote. Regional wallrock							
				frags. (RHFR). Undulatory UC @							
103	DMOB			55° cax. Sharp LC @ 45° cax							
				96.00-98.14 MASSIVE FRAGMENTED RHYOLITE							
104				RHFR Very similar to RHFR above the							
				qtz vein (91.36-91.87). Dk grey							
105				w/ 2% f.g disc py along ser partings							
	105.76			→ 97.40-98.14: RHFR w/ mod. pervasive							
106				carb alt'n. Dk blueish/							
				light green colour							
107											
				98.14-99.60 FAULT GOUGE							
108				STGG Dark grey, pasty silt → pebble							
	108.31 →			grain sizes. Primarily arg material.							
109				Broken core @ U+L contacts.							
110											
				99.60-105.76 OVERBURDEN							
111				DMOB Ground left out of hole							
112	112.80 →			105.76-127.55 TUFFACEOUS ARGILLITE							
				ARTF Dk blk tuffaceous arg. Sil frags							
113				w/ up to 2% disc py. Lithic							
				to 10% lapilli-sized frags; foln @ 35° cax							
114				→ 108.31-111.80: STGG-FAULT GOUGE							
				vein broken core LC							
115	ARTF			@ 45° cax. Pbel paste							

PAGE 12 OF 26 | PROJECT: Wolverine | HOLE NO. WV9786

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
93		92.85	93.66	.81	174931					
94		93.66	94.70	1.04	174932					
95		94.70	96.00	1.3	174933					
96		96.00	98.14	2.14	174933					
97										
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										
112										
113										
114										
115										

PAGE 13 OF 26 | PROJECT: Wolverine | HOLE NO. WW 97-80

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (105.76-127.55 ARTF cont'd)	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
116	ARTF										
117											
118											
119											
120											
121											
122			35								
123											
124											
125											
126											
127											
127.55				127.55-132.75 RHYOLITE LAPILLI TUFF							
128	RHLT			RHLT Light grey fine grained rhyolite lapilli tuff w/ 5-20mm fragments + localized orange (dolomitic?) carbs, fine->med grained size ticc'd 1% stringer parts along foln.							
129											
130											
131											
132											
132.75				132.75-136.55 TUFFACEOUS ARGILLITE							
133	ARTF			ARTF Same as above (105.76-127.55)							
134											
135			40								
136											
136.55				136.55-141.00 FRAGMENTAL RHYOLITE							
137				RHFR DK fgn grey frag. rhy w/ tr fg disc pyrite stringers. Dominant foln @ 55° can pass onto volcanic xenolith							
138											

PAGE 14 OF 26	PROJECT: Wolverine	HOLE NO. WV9756

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
116										
117										
118										
119										
120										
121										
122										
123										
124										
125										
126										
127										
128										
129										
130										
131										
132										
133										
134										
135										
136										
137										
138										

PAGE 15 OF 26 | PROJECT: Wolverine | HOLE NO. WV 9756

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				(136.55 - 141.00: RHFR cont'd)							
				foliation @ 70° c.a.							
139		RHFR									
140			55°								
141.00				141.00 - 143.00 SILICEOUS ARGILLITE							
141		ARGI	55	ARGI Black sil. arg, broken core; tr py in wispy sil. bands							
142											
143 143.00											
143.23			55	143.00 - 146.90 RHYOLITE LAPILLI TUFF							
143.55			35	RHLT DK gray, lt black lapilli tuff w/ 1×5mm frags. Avg foln is @ 45° core axis. Tr f.g. diss py.							
144				143.20 - 143.53 QTVN QUARTZ VEIN							
145		RHLT		Rolly white qtz vn w/ tr oxid py xtals + blebs. V irregular contacts.							
146											
146.90											
147			35	146.90 - 150.69 TUFFACEOUS ARGILLITE							
148.26				ARTF Dk grnish/black tuffaceous arg w/ lapilli sized frags (5×30mm) Frags are sil + contain v. rare f.g. py.							
149.33		ARTF	30	→ 148.66 - 149.00 QTVN QUARTZ VEIN							
149			40	Qtz vn w/ sharp U (@30° c.a.) + L (@20° c.a.) contacts. Tr chl/ser py + chloritic septa							
150											
150.69			20								
151			40	150.69 - 153.83 FRAGMENTAL RHYOLITE							
152		RHFR		RHFR Fog gray frag rhy w/ faint remnant lapilli frags visible. Rare f.g. diss py. Thin ser fills healed fract's							
153											
153.83			35								
154			20								
155											
156		RHFS		153.83 - 157.57 MASSIVE RHYOLITE							
157				RHFS mass fog gray aphyric rhy w/ rare very f.g. diss. euh py xtals							
157.57			45								
158			45	157.57 - 164.10 FRAGMENTAL RHYOLITE							
159				RHFR Same as above (153.69 - 153.83)							
160		RHFR									
			45								
161											

PAGE 16 OF 26	PROJECT: Wolverine	HOLE NO. WV 97 86

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
139										
140										
141										
142										
143										
144										
145										
146										
147										
148										
149										
150										
151										
152										
153										
154										
155										
156										
157										
158										
159										
160										
161										

PAGE 17 OF 26 | PROJECT: [illegible] | HOLE NO. [illegible]

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (SER)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				(157.57 - 164.40 : RHFR cont'd)							
162											
163	RHFR										
164 / 164.40				164.40 - 165.00 ASH TUFF							
165.00	RHT			RHT Beige/pink/gray fg. ash tuff w/ tr localized py stringers (v. small + wispy) + dominant fol'n @ 30° c.a.							
166			30								
167				165.00 - 173.26 FRAGMENTAL RHYOLITE							
168				RHFR Same as above (150.69 - 153.52) + (157.57 - 164.40) Faulted L.C. @ 173.15°							
169			75								
170	RHFR										
171											
172											
173 / 173.15 / 173.26				→ 173.15 - 173.26 : STFR : FAULT BRECCIA In situ rhy fragments w/ fine clayey gray carbonate matrix							
174			50								
175			80	173.26 - 177.21 CARBONATE EXHALITE							
176	EXCP			EXCP Interbedded carb + rhy exhalite w/ 1-2% py ic stringer bands Banding is very irregular is locally wispy + / or fragmented. Carb bands effervesce moderately.							
177 / 177.21			40								
178											
179	RHFS		75	177.21 - 179.80 MASSIVE RHYOLITE							
179.80				RHFS massive aphyric rhy w/ tr fg. disp'y (+ rare lapilli fragments?) Fg. gray in colour							
181			85								
182				179.80 - 185.80 CARBONATE EXHALITE							
183				EXCP Same as above (173.26 - 177.21)							
184			45								

PAGE 18 OF 26	PROJECT: Wolverine	HOLE NO. WV 9786

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
162										
163										
164										
165										
166										
167										
168										
169										
170										
171										
172										
173		173.26	174.58	1.32	174936					
174		174.58	175.45	88	174937					
175		175.45	176.24	79	174938					
176		176.24	177.21	97	174939					
177		177.21	178.92	1.71	174940					
178		178.92	179.80	88	174941					
179		179.80	180.80	1	174942					
180		180.80	181.78	98	174943					
181		181.78	182.76	98	174944					
182		182.76	183.86	1.10	174945					
183		183.86	184.72	86	174946					
184		184.72	185.80	1.08	174947					

PAGE 19 OF 26 | PROJECT: Wolverine | HOLE NO. WV 97 86

(179.50 - 185.50 EXCP cont)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EPI C	CARB D	E	FRACTURE INTENSITY	% VEIN QTZ.
185	EXCP										
185.80				185.80-188.71 MASSIVE RHYOLITE							
186	RHFS		35	RHFS Similar appearance to aphyric rhyolite as above (177.21-179.80).							
187			40								
188											
188.71				188.71-198.22 CARBONATE EXHALITE							
189	EXCP		40	EXCP Interbedded carb exhalite w/ rhy. lapilli tuff. V. similar to EXCP units above (173.26-177.21 + 179.80-185.80). Tr sericite partings + rare fg. diss euhedral py are v/s							
190											
191											
192			40								
193											
194				→ 194.99-195.09 QCVN QUARTZ/CARB VN 35/65 qtz/carb vn w/ sharp contacts @ 40° ca 1cm thk fg py band (85% py) @ L.C							
195	194.99 195.09										
196	195.72 195.90			→ 195.72-195.90 QCVN QUARTZ/CARB VN 30/70 qtz/carb vn w/ 13% py + sharp contacts @ 45° ca.							
197	197.10										
198	197.99 198.09		45	→ 196.[illegible] Aphanitic banding [illegible] fractures by 10% [illegible]							
198.22			45	→ 197.[illegible]-197.14: 60% py fg band. Py appears recrystallized into cubic [illegible] 5x[illegible] in size over a carbonate matrix							
198.78			50								
199	QCVN		60	→ 197.52 Possible As mineral. Arsenite + pyrargyrite. Pyrargyrite appears red wire in color + translucent. Trace [illegible] on fracture plane							
199.45	1.52										
200				→ 197.99-198.09 90% fine grained recrystallized cubic pyrite 1.0cm x 1.0cm x 1.0cm over a carbonate matrix							
201											
202											
202	RHLT			198.22-198.78 MASSIVE SULFIDE (56 cm)							
203			45	SCMS Dull metallic pyrite band with [illegible] infill w/ localized recrystallized [illegible] w/ a							
204											

 PROJECT: Wolverine HOLE NO. WV 97 86

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
185		185.80	186.80	1m	174948					
186		186.80	187.80	1m	174949					
187		187.80	188.71	91	174950					
188		188.71	190.00	1.29	174951					
189										
190		190.00	191.05	1.05	174952					
191		191.05	192.10	1.05	174953					
192		192.10	193.23	1.13	174954					
193		193.23	194.24	1.01	174955					
194		194.24	195.30	1.06	174956					
195		195.30	196.33	1.03	174957					
196		196.33	197.69	1.36	174958					
197		197.69	198.22	53	174959					
198		198.22	198.48	26	174960					
		198.48	198.78	30	174961					
199		198.78	199.95	1.17	174962					
200		199.95	201.00	1.05	174963					
201		201.00	202.00	1m	174964					
202		202.00	202.97	97	174965					
203		202.97	203.90	93	174966					
204		203.90	204.90	1 m	174967					

PAGE 21 OF 26 | PROJECT: Wolverine | HOLE NO. WV97-8

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (198.22-199.75 : SEMS cont'd)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				Fragmental fmt strongly massive							
205				aphanitic hue. Wk 2° fracturing							
				w/ 10% HCl supporting an overall							
206				earthy matrix. Barren veining,							
				incl. dom. localized earthy pods (1x1cm							
207				@ 199.43 + elongate qtz/carb							
				stringers btwn 198.23 + 199.43.							
208				Fine disc chl. blebs (<1mm²)							
				Contacts are sharp w/ U @ 55° +							
209				L @ 60° cax.							
				★ TOTAL SULFIDE GRADE ★							
210				PYRITE: 55 %,							
				SPHALERITE: 35 %,							
211			55	GALENA Rare							
				CHALCOPYRITE: Rare							
212				GANGUE: 10 %,							
213 213.37 213.55				198.78-199.95 (QUARTZ VEIN							
			50	QTVN Snow white qtz vn w/ localized							
214 214.52		RHLT	60	mass forest green chloritic pods							
			65	Trace mass spy blebs splattered							
215				throughout w/ assoc'd tr PbS,							
			65	sph + pyrrohtite. Localized sericite							
216 216.00				filled fractures. Sharp contacts w/							
			45	U @ 60° (w/ SEMS) + L @ 40°.							
217											
217.40 217.85				199.95-216.00 RHYOLITE LAPILLI TUFF							
218			42	RHLT Dk gray, rhy lapilli tuff w/							
			40	fine ser partgs. Tr fg diss py							
219				w/ rare pyrrh downsection mod							
				foln w/ localized millimetric							
220				quartzose bands. Gradational L C.							
			10	→ 213.07-213.25 : QTVN · QUARTZ VEIN							
221				Qtz vn w/ sharp							
221.63 221.91				calcareous bands (1cm							
222				ea) @ contacts.							
				Tr py + 2% chl.							
223				blebs.							
				→ 213.50-213.63 : QTVN · QUARTZ VEIN							
224				Bull wh. qtz vn w/							
				chl + py filled fractures							
225 225.93			50	(tr amts) Sharp							
				contacts @ 45° cax.							
226		ARGR		→ 214.32-214.39 : QTVN : QUARTZ VEIN							
				Same as above (213.07-213.63)							
227											

PAGE 22 OF 26	PROJECT: Wolverine	HOLE NO. WV 9786

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
205		204.90	205.85	.95	174968					
206		205.85	206.83	.98	174969					
207		206.83	207.83	1	174970					
208		207.83	208.80	.97	174971					
209		208.80	209.78	.98	174972					
210		209.78	210.80	1.02	174973					
211		210.80	211.84	1.04	174974					
212		211.84	212.82	.98	174975					
213		212.82	213.82	1	174976					
214		213.82	214.55	.73	174977					
215		214.55	215.56	1.01	174978					
216										
217										
218										
219										
220										
221										
222										
223										
224										
225										
226										
227										

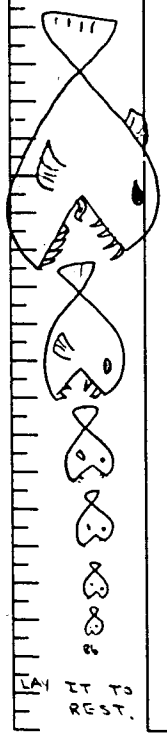
PAGE 23 OF 26 | PROJECT: Wolverine | HOLE NO. WW 9786

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				217.00-235.80 GRAPHITIC ARGILLITE							
				ARGR Jet black graph arg w/ <1% wispy qtz, qtz/carb, or carb stringer bands. Tr py fills some calc stringers.							
				→ 217.40-217.85: STGG - FAULT GOUGE Graphitic pelite, variable grain size.							
				→ 221.60-221.91: STFB - FAULT BRECCIA. Fit bx w/ clasts fr. silt → pebble. Contacts @ 25° cax							
				→ 224.93-235.29: STGG - FAULT GOUGE Graphitic gouge w/ rare consolidated core.							
				→ 235.29-235.80: QTVN: QUARTZ VEIN Primarily brkn core w/ graphitic frac. planes.							
235.80											
236											
236.57		RHLT		235.80-236.57 RHYOLITE LAPILLI TUFF							
				RHLT Light green rh. y lapilli tuff w/ mod perv. ser alt'n mod'ly sheared, ste. foln.							
				→ 235.90-236.40: STGG: FAULT GOUGE Light greenish grey microseous gouge. Contacts @ 50° cax.							
				236.57-257.40 QUARTZ FELDSPAR PORPHYRY.							
				QFPH Light grey QFP w/ both white feldspars + black (TiO_2 -> rutile) feld. phens. Localized py'ic stringers + qtz veins (avg ~ 5cm in thickness). White fsp's are generally sub-hedral + 5mm² in size. Blk fsp's generally sub-angular + 2mm². Qtz veinlets upper in hole have sharp contacts, while those down hole have fainter, more ghostly contacts. Fit'd L.C. @ 257.40 @ 55° cax.							
		QFPH									
250											

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
228										
229										
230										
231										
232										
233										
234										
235		235.80	237.57	1.77	174979					
236										
237		237.57	238.45	88	174980					
238		238.45	239.61	1.16	174981					
239		239.61	240.62	1.01	174982					
240		240.62	241.63	1.01	174983					
241		241.63	242.65	1.02	174984					
242		242.65	243.65	1m	174985					
243		243.65	244.63	98	174986					
244		244.63	245.63	1m	174987					
245		245.63	246.63	1m	174988					
246		246.63	247.63	1m	174989					
247		247.63	248.71	1.08	174990					
248		248.71	249.71	1m	174991					
249		249.71	250.71	1m	174992					
250		250.71	251.71	1m	174993					

PAGE 25 OF 26 | PROJECT: Wolverine | HOLE NO. WV9786

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (236.57-257.40 QFPH cont)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
251											
252			55								
253											
254		QFPH									
255											
256											
257											
257.40			55	257.40-261.21 CRYSTAL TUFF							
258		RPQL		RPQL Blue qtz eye rich dk gray x-tal tuff. Fine sericitic partgs btwn lapilli fragments. Rhy host Tr fg euh py.							
259											
260				→ 260.33-261.21: STGG FAULT GOUGE. light grey v coarse grit + sand sized x-tals in a silty matrix							
260.33			55								
261.21				261.21 - EOH							



PAGE 26 OF 26	PROJECT: Wolverine	HOLE NO. WV 97 86

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
251		250.71	251.71	1m	174993					
252		251.71	252.71	1m	174994					
253		252.71	253.71	1m	174995					
254		253.71	254.67	96	174996					
255		254.67	255.67	1m	174997					
256		255.67	256.67	1m	174998					
257		256.67	257.40	73	174999					
258		257.40	258.40	1m	175000					
259										
260										
261										

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine Stratigraphic Drilling	GROUND ELEV.: 1620m.
HOLE NO.: WV-97-87	BEARING: Grid south, 213° Azimuth (UTM)
LOCATION: 18786 N 10200 E	DIP: 70° TOTAL LENGTH: 617.8
LOGGED BY: Dave Gale	HORIZONTAL PROJECT
DATE: June 5, 1997	VERTICAL PROJECT
CONTRACTOR: Boisvenu Drilling	**ALTERATION SCALE** 0 1 2 3 absent slight moderate intense
CORE SIZE: NQ-II - AH 296.56, changed to BQ	
DATE STARTED: June 7, 1997	**TOTAL SULPHIDE SCALE** 0 1 2 3 4 traces only < 1% 1% – 3% 3% – 10% > 10%
DATE COMPLETED: June 18, 1997	
DIP TESTS: 36.6 m – 66° 301.8 m – 57° 617.8 m – 48.5°	
COMMENTS	LEGEND

PAGE 1 OF | PROJECT: | HOLE NO. WW-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Carb	E	FRACTURE INTENSITY	% VEIN QTZ.
				0 - 3.72 Overburden DHDB							
				3.72 - 15.27 Greyish-white moderately foliated monolithic, fragmental to autoclastic rhyolite. RHFR - 3.72 - 9.00 - Rocks show a brownish orange colour, indicative of FeO weathering. - Rocks are mainly fragmentals, consisting of 60-80% greyish-white aphyric siliceous fragments (rhyolite) within a sericite to argillite matrix. The type of matrix imparts a green or black (respectively) to the rock. Fragments seem to be angular to sub angular but are flattened in the foliation; average size is 1-2cm but as big as 4cm. - Portions of this interval (9.53 - 10.70m) have a more coherent flow-like texture but a weakly developed fragmented texture is observed. - Sericite is concentrated along the foliation planes, causing the rock to break readily along these surfaces. - Core angle : 70°							
				15.27 - 15.75 Blackish grey, moderately foliated tuffaceous rhyolite RHTT - The upper and lower contacts are gradational; fragmental rhyolite in an argillaceous matrix grading into a grey to black fine grained tuffaceous rock and back into frag. rhy. - 3-4% of rock are intruded by calcite veins that are networked through the tuff - 0.1-0.2 cm wide bands of black argillite dissect rock and define foliation. - Core angle : 70°							
				15.75 - 17.65 - Whitish-grey aphyric rhyolite fragments and tuffaceous RHFR rhyolite fragments (0.5-1.5 cm avg. size; 60-70% of unit) in a black siliceous to carbonaceous matrix. - weak carbonate alteration observed over specific intervals (20-30cm.) and not entire unit. - Tuffaceous fragments appear the same as RHTT above.							

PAGE 2 OF	PROJECT:	HOLE NO. WV-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1										
2										
3										
4 3		3.72	5.22	1.50	172705					
5										
6										
7										
8										
9										
10		9.53	11.03	1.5	172706					
11										
12										
13										
14										
15										
16		15.27	15.75	0.48	172707					
		15.90	17.40	1.5	172708					
17										
18		17.65	21.23	2.13	172709					
19										
20										
21										
22										
23		22.67	24.17	1.5	172710					

PAGE 3 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Fsp)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
24				RHFR Cont'd	Weak oxidation above within this unit							
					- Core angle : 75°							
25			75		- The Argillaceous matrix imparts a darker colour to the fragmental compared to upper RHFR.							
26												
				17.65 - 18.10	Greyish-black moderately foliated tuffaceous argillite.							
27				ARTF	5-10% lapilli size (0.5-1cm) siliceous fragments in the tuffaceous matrix							
28					- Argillaceous matrix is variably carbonaceous to siliceous.							
29					- Core angle is 75°							
30												
				18.10 - 19.10	Same RHFR as 15.75 - 17.65							
31				RHFR	- Fragments are almost completely tuffaceous rhyolite.							
32					- Core axis is 75°							
33												
				19.10 - 26.38	Weakly to moderately foliated, light grey tuffaceous							
34				RHTT	rhyolite.							
35			80		- 20-30 cm. intervals show a subtle fragmental texture with tuffaceous fragments in an argillite matrix.							
36					- A moderate carbonate alteration is pervasive throughout this unit (matrix of tuff). Also see 4% calcite veins dissecting the rock.							
37					- Core Angle is : 75°							
38												
39				26.38 - 37.5	Same fragmental rhyolite as 3.72 - 15.27 but no							
				RHFR	massive "flow-like" sections.							
40					- 65-35% aphyric rhyolite to tuffaceous rhyolite fragments							
41					- Argillaceous matrix varies from 15-30% of rock. Average : 20% matrix.							
42					- Core Angle ~ 80°							
43				37.5 - 47.6	Greenish grey moderately foliated rhyolite fragmental.							
				RHFR	Dominated by cloudy, aphyric rhyolite fragments in							
44					a sericitic matrix.							
45			80		- Frags ~ 80-85% of rock and avg 1.5-3cm in size							
					- Sericite matrix is straw-green colour. Moderate alteration							
46					- Rock is very siliceous but parts readily along the sericitic foliation planes							

PAGE 4 OF	PROJECT:	HOLE NO. WV-87

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
24											
25											
26											
27			26.82	28.35	1.53	172711					
28											
29											
30											
31											
32											
33			32.52	34.05	1.53	172712					
34											
35											
36											
37	Trace pyrite is observed as wisps aligned in the foliation.		37.50	39.10	1.6	172713					
38											
39											
40											
41											
42											
43											
44			44.00	45.53	1.53	172714					
45											
46											

PAGE 5 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION Chl A	Ser B	Ep C	Carb D	E	FRACTURE INTENSITY	% VEIN QTZ.
47				RHFR Cont'd - 40.63 - 41.3: Oxidized rhyolite fragmental, gives a brownish-orange colour over interval							
48				Core Angle: 80°							
49											
50											
51											
52				47.6 - 63.40 RHFR Fragmental Rhyolite in Dark Argillaceous matrix. Same as RHFR (26.38-37.5) - Core Angle 75° (defined by foliation). - QTVN: 54.55-54.85							
53											
54											
55			75	63.4 - 65.44 RHTT Dark grey, moderately foliated rhyolite tuff with a moderate carbonate alteration throughout the unit - Rock is also extensively veined with calcite (5-10% of rock)							
56											
57				- Most of rock is tuffaceous rhyolite but some 10-15cm wide intervals have the same tuffaceous fragments within a siliceous/carbonaceous argillite matrix.							
58				- Core Angle: 75							
59				- It is difficult to accurately understand the protolith of this rock. Is it a rhyolite tuff that has a moderate carbonate alteration or is it a carbonate fragmental in an argillaceous matrix. The reason for the latter							
60											
61				suggestion is because the rare argillaceous matrix that is present does not effervesce and if it is a pervasive carbonate							
62				alteration then one would expect the argillite to effervesce. Possibly it just wasn't altered like the tuff!?							
63				Interpretation: Rhyolite tuff with pervasive alteration.							
64				65.44 - 66.84 RHFR Same Fragmental rhyolite in argillaceous matrix Core Angle: 75							
65			75								
66				66.84 - 68.40 RHTT Same rock as above (63.4 - 65.44) - This time there is more argillite and an obvious fragmental texture. All fragments are rich in carbonate but matrix is void of $CaCO_3$. - Core Angle: 75							
67											
68											
69				68.40 - 68.75 RHFR Same Rhyolite fragmental.							

PAGE 6 OF	PROJECT:	HOLE NO.

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
47											
48	Trace pyrite observed as wisps aligned in the foliation plane										
49											
50			49.76	51.30	1.54	172715					
51											
52											
53											
54											
55	54.8: 1cm wide by 3cm long pod of pyr. associated with the qtz vein.		55.4	56.93	1.53	172716					
56											
57											
58											
59											
60											
61			61.0	62.53	1.53	172717					
62											
63											
64			63.4	65.30	1.9	172718					
65											
66											
67			66.84	68.4	1.56	172719					
68											
69			68.79	69.79	1.04	172720					

PAGE 7 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
70				68.75-69.79 RHTT: The same carbonate altered rhyolite tuff. - Mainly tuff with minor argillite partings (arg: 8-10%). - Core angle: 75°							
71											
72				69.79-73.1 RHFR: Rhyolite fragmental in an argillaceous matrix. Same rock as above							
73											
74				73.1-74.75 RHTT: Massive to fragmental rhyolite tuff (frags in argillaceous matrix). All tuff has moderate carbonate alteration. Same unit as above							
75			75								
76				74.75-76.5 RHFR: The same rhyolite fragmental. - Aphyric white-grey frags; ~75-85% frags; frags in argillite							
77											
78				76.5-78 RHTT: Same rhyolite tuff with moderate carbonate alteration. Seems odd that there are so many of these units and the interbedded rhyolite fragmentals have no carbonate at all! Carbonate primary ??? Core angle: 75							
79											
80											
81				78-85.35 RHFR: Rhyolite fragmental. Same as above. Core angle: 75°							
82											
83											
84											
85			75°	85.35-86.35 RHTT: Calcareous rhyolite tuff. Fragmental texture observed; matrix argillaceous. Same rock as above!! - Note: All fragments within these massive to fragmental tuffs are still very hard. This probably reflects their original silica content instead of being carbonate fragments.							
86											
87											
88				86.35-115.25 RHFR: Same rock as above. Moderately foliated. Aphyric white-grey rhyolite fragments in a black argillaceous matrix. - Rock is clast supported: containing 70-90% rhyolite fragments. Frags are angular and vary from a cloudy, milky white colour to a dark grey colour. Average size is ~1.5-2.5 cm but are as small as 0.3-0.5 cm and as big as 3-4 cm. Angularity of fragments hard to determine because of flattening in 'foliation' plane. - Matrix is a dark black colour and very siliceous (hard!) - Sections within this rock are sericitically altered and							
89											
90											
91											
92											

PAGE 8 OF	PROJECT:	HOLE NO. WV-97

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
70			69.79	71.30	1.51	172721					
71											
72											
73			73.1	74.75	1.65	172722					
74											
75	Trace pyr. as wisps. aligned in foliation. No more than 1cm length, 0.1cm wide.										
76			76.5	78.0	1.5	172723					
77											
78			78	79.53	1.53	172724					
79											
80											
81											
82											
83											
84											
85			85.35	86.35	1.0	172725					
86	Trace pyr. in fragmental rhyolite										
87	Trace pyrrohtite observed as flecks + wisps aligned in foliation.		86.7	88.23	1.53	172726					
88											
89											
90			89.63	91.15	1.52	172727					
91											
92											

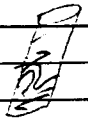
PAGE 9 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (ser)	ALTERATION C (Ep)	ALTERATION D (Cb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
93				Cont'd have a green to brown colour : 112.8 - 113.2							
				- Other than this section, alteration is not present.							
94				- Core angle : 105m : 70°							
				115 m : 65°							
95			75								
96											
97											
98											
99											
100											
101											
102											
103											
104											
105			70								
106											
107											
108											
109											
110											
111											
112											
113											
114											
115			65								

PAGE 10 OF	PROJECT:	HOLE NO. W1-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
93										
94										
95		95.4	96.93	1.53	172728					
96										
97										
98										
99										
100										
101										
102		101.5	103.03	1.53	172729					
103										
104										
105										
106										
107		107.4	108.5	1.10	172730					
108										
109										
110										
111										
112										
113		112.9	114.43	1.53	172731					
114										
115										

PAGE 11 OF | PROJECT: | HOLE NO. WJ-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
116				115.25-124.10 RHFR Same rock unit as above. The difference lies in the alteration. This interval of fragmental rhyolite shows a weak to moderate sericitic alteration. - The sericitic alteration gives a green to brown colour to the rock (mainly shown by matrix). The siliceous fragments are mainly white with a slight green colour. · Core angle is : 75° - A folded qtz vein is present at 120.3 and remobilized an observable fold hinge.							
117											
118											
119											
120											
121				view looking grid West  - The fold hinge lies within the foliation plane. Therefore same azimuth as strike of foliation and almost a horizontal plunge.							
122											
123			75	The sense of vergence is down dip on a normal sense of movement relative to the foliation plane.							
124											
125				124.10-135.14 RHFR Fragmental Rhyolite in a black argillaceous matrix. - This rock is essentially the same unit as 86.35-115.25 except for Argillite component that increases to 40-50% of rock over 20-30cm intervals. This is only minor and rock is mainly the same clast-supported fragmental.							
126											
127											
128				- Fragments are also darker in colour (dark grey) and blend in with the black matrix. - Core Angle : 75							
129											
130				135.14-139.76 RHLT Greenish-brown to black, moderately foliated rhyolitic lapilli tuff							
131				· 10-15% white to grey lapilli-size siliceous fragments (Avg. 0.5-1.5cm) in a tuffaceous matrix.							
132				- The tuffaceous matrix is mainly brown to green in colour because of moderate sericite alteration. Matrix soft compared to hard siliceous fragments.							
133				· 1-2% of fragments are feldspar xtls, euhedral to subhedral in shape (0.5-1cm in size). Within these xtls, some show the "black alteration" that has been observed in the feldspar phenos from Fisher porphyry.							
134											
135			90° 75°	- Two foliations are observed over short intervals within this tuff							
136				appears to be compositional banding defined by green, dark layers. Original bedding (So) or product of alteration - core angle 90°  dominant foliation - core angle : 75°							
137											
138				135.64m Dominant foliation is crenulating the So. There also could be a cleavage // to the banding.							

PAGE 12 OF	PROJECT:	HOLE NO. WV-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
116		115.97	117.50	1.53	172732	
117						
118						
119						
120						
121		121.5	123.03	1.53	172733	
122						
123						
124 - Trace pyr + pyrrohite. Pyrr reaches 1-2%		124.55	126.8	2.25	172734	
125 in the argillite rich interval: 128.3-128.6.0						
- Both minerals appear as wisps ~0.3-0.6cm						
126 long aligned in foliation plane						
- Pyrite is also forming 0.2-0.6 cm wide						
127 bands + pods (B)s 1x1 cm).						
128						
129						
130						
131		130.7	132.23	1.53	172735	
132						
133						
134						
135 1% pyrrohite with RHLT; thin wisps aligned in		135.14	136.64	1.50	172736	
136 foliation.						
Trace pyr as well						
137						
138		137.74	139.27	1.53	172737	

PAGE 13 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
139											
140											
141											
142				139.76 - 158.38 RHFR: Rhyolite fragmental in black argillaceous matrix. Same as above (124.10-135.14). - Two ten cm. intervals of fine grained (tuffaceous?) green sericite with no fragments, interbedded within the fragmental: 148.3-148.4 ; 148.81-148.91 (RHFT). - Core Angle : 75							
143											
144											
145			75°								
146											
147											
148											
149				158.38-165.77 RHFR: Rhyolite fragmental with a weak to moderate carbonate alteration. Same rock as above apart from alteration. - Siliceous fragments are in an argillaceous matrix. Matrix is not altered. Overall, it is a weak carbonate alteration. - The carbonate alteration causes the siliceous fragments to take on a "dusty" almost tuffaceous appearance. - If there was any doubt before, the carbonate is a result of alteration (as opposed to original carbonate fragments) because the intensity of alteration varies over this interval, changing from very weak to moderate over a 10-20 cm interval. The fragments with very weak alteration are the same siliceous frag's observed within the unaltered rhyolite frag. - Core Angle : 80°							
150											
151											
152											
153											
154											
155			75								
156											
157											
158											
159											
160											
161											

PAGE 14 OF	PROJECT:	HOLE NO. WV-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
139 Trace pyr + pyrr in interval. Pyr filling fractures and pyr+pyrr as flecks +										
140 wisps in foliation plane										
141										
142		142.5	144.03	1.53	172738					
143										
144										
145										
146										
147										
148		148.24	149.77	1.53	172739					
149										
150										
151										
152										
153										
154		154	155.53	1.53	172740					
155										
156										
157										
158		158.47	160	1.53	172741					
159										
160										
161										

PAGE 15 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
162				165.77-167.02 RHFR: Rhyolite fragmental with black argillaceous matrix. Same as RHFP at 115.25-158.38.							
163											
164											
165			80°	167.02-177.52 RHFR: Same rock but has been altered - Moderate sericite alteration changes the typically black and grey rock to a greenish white. Matrix is altered to green sericite and siliceous fragments take on a milky white, sometimes light green, colour. - Percentage of clasts is ~80-85% but decreases to 65-70 over 10-20 cm intervals - Core angle: 75°							
166											
167											
168											
169											
170											
171											
172				177.52-178.60 RHLT: Brownish-green, moderately foliated rhyolite lapilli tuff - 25-35% grey, white siliceous fragments (avg 1 cm in size) in a tuffaceous to lapilli-size matrix - Green colour of matrix due to a moderate sericite alteration - The percentage of fragments increases to 50% near base of interval - Upper contact is gradational from the fragmental rhyolite. - Core angle: 80°							
173											
174											
175			75°								
176											
177											
178											
179											
180											
181											
182											
183											
184											

PAGE 16 OF	PROJECT:	HOLE NO. WV-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
162		162.95	165.5	2.55	172742	
163						
164						
165						
166		165.77	167.30	1.53	172743	
167						
168						
169						
170						
171						
172		171.72	173.25	1.53	172744	
173						
174						
175						
176						
177						
178		177.52	178.60	1.08	172745	
179 → Within this RHFR there is trace pyrite mainly as euhedral to subhedral 0.1-0.3 cm xlts in the sericite foliation planes. See		178.60	180.13	1.53	172746	
180						
181 below for occurrences of sphalerite + cpy.						
182 Pyr is also associated with the qtz veins, xltizing on edges + forming fine pyr aligned in the foliation						
183						
184		183.67	185.20	1.53	172747	

PAGE 17 OF | PROJECT: | HOLE NO. WU-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Grb)	E	FRACTURE INTENSITY	% VEIN QTZ.
185		RHFR	85	178.6-249.72 Same rock as above (167.02-177.52).							
186				- A pervasive greenish white colour exists throughout this interval, both in the matrix (dark green to brown) and within siliceous frags.							
187				- Variation across this interval is seen in percent fragments; avg. is 85% but increases to almost a massive flow over 20-30 cm intervals. The massive portions only make up 4-5% of rock							
188				- 1% magnetite disseminated as 0.1-0.2cm blebs within the fragmental rhyolite: 189.14-189.45.							
189				210.25 - 210.35 · 2-3 cm wide calcite vein that has brecciated the rhyolite. Small siliceous fragments (0.5-1.5cm) within a calcite matrix.							
190				- Moderate sericite alteration throughout entire interval.							
191				Core angle: 185: 85° 225: 70°							
192				195: 85° 235: 70							
193				205: 85 245: 80°							
194				215: 90°							
195			85	QTUN: 222.35 - 223.05; 224.13 - 224.38;							
196				226.45 - 226.55; 227.05 - 227.20;							
197				227.14 - 227.68; 228.08 - 228.18;							
198				228.38 - 228.60; 228.88 - 229.28;							
199				227.88 - 233.86; 234.60 - 234.80;							
200				Structure:							
201				→ Two foliations are present in this rock							
202				- The first is a rare spaced fracture cleavage that is preserved within the rhyolite fragments. The foliation planes are spaced ~ 0.2-0.5 cm apart and are filled with fine silica. Sometimes gives the appearance that it could be refracting from cleavage in matrix (S_2), but in a number of areas, this cleavage (S_1) is folded and the S_2 is axial planar to folds.							
203				- Original orientation of this cleavage is hard to determine but generally has a vertical orientation with a similar strike to S_2							
204				- S_2 cleavage is the pervasive cleavage present throughout the core. It is defined by sericite which forms the matrix around the siliceous fragments. Fragments are flattened in this foliation. Fragments that have their long axis ⊥ to the foliation are folded and the axial planes are // to the main foliation.							
205			85								
206											
207											

PAGE 18 OF	PROJECT:	HOLE NO. WV-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
185										
186										
187										
188										
189		188.84	190.37	1.53	172748					
190 - Cpy framing a 0.1-0.2 cm pod within the foliation plane.										
191		190.77	191.27	0.50	172749					
192										
193										
194		194.73	196.26	1.53	172750					
195										
196										
197										
198										
199										
200		200.29	201.82	1.53	172751					
201										
202										
203										
204										
205		205.88	207.41	1.53	172752					
206										
207										

PAGE 19 OF | PROJECT: | HOLE NO. WV-97

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
208				siliceous fragments; grinite partings defining S_2 foliation							
209				siliceous frag; S_1 foliation within siliceous frags. Axial planes of fold are // to foliation							
210				→ Examples of S_1 not folded are parallel to S_2 strike + near vertical.							
211				Core oriented such that viewing is to the grid west (i.e along the strike).							
212											
213				→ S_0 is rarely seen and when present is parallel to S_2.							
214											
215			90								
216											
217											
218											
219											
220											
221											
222											
223											
224											
225			70								
226											
227											
228											
229											
230											

PAGE 20 OF	PROJECT:	HOLE NO. WV-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
~~208~~										
~~209~~										
~~210~~										
~~211~~										
~~212~~		211.81	213.34	1.53	172753					
~~213~~										
~~214~~										
~~215~~										
~~216~~										
~~217~~		217.32	218.85	1.53	172754					
~~218~~										
~~219~~										
~~220~~										
~~221~~										
~~222~~										
~~223~~		222.7	224.23	1.53	172755					
~~224~~										
~~225~~										
~~226~~										
~~227~~										
~~228~~										
~~229~~		228.88	229.39	0.50	172756					
230 Within a qtz vein, a fragment of host rock is preserved and py + sph mineralization is present. The sph is altering around a silica		229.51	231.02	1.51	172757					

PAGE 21 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
231											
232											
233											
234											
235			70								
236											
237											
238											
239											
240											
241											
242											
243											
244											
245			80°								
246											
247											
248											
249				249.72-251.61 EXCP Light grey, poorly foliated carbonate with trace pyr. exhalite							
250				- Fragmental texture is not present and only minor ser. bands are observed.							
251	CP			- T7 has a dusty appearance and effervesses vigourously with HCl.							
252				- A poorly defined banding is defined by grey to white carbonate bands							
253				- Upper contact is sharp, changing from rhyolite frag to carbonate over 5cm. Load control the same.							
				- Core angle = 80° - defined by sericite bands.							

PAGE 22 OF	PROJECT:	HOLE NO. WV-87

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
231	vug or fragment. The fragment preserved within the qtz vein is 4cm x 3cm and sph						
232	is ~ 4-5% of this fragment.						
233	Both sph + pyr are finely disseminated around the siliceous fragment.						
234							
235							
236			236.22	237.75	1.53	172758	
237							
238							
239							
240							
241			240.57	242.10	1.53	172759	
242							
243							
244							
245			244.95	246.48	1.53	172760	
246							
247							
248							
249	Concentration of pyrite within a foliation		249.18	249.65	0.47	172761	
250	plane. Sph also associated with pyr.		249.72	250.22	0.50	172762	
	Reddish brown sph; fine grained and		250.22	251.61	1.39	172763	
251	mixed with the pods of pyr.						
252	-Within the EXCP, fine grain sph intimately		251.76	253.30	1.54	172764	
253	associated with pyrite in a 0.2-0.3 cm foliation plane						

PAGE 23 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
254											
255			80°								
256											
257											
258				251.61 | 289.44 RHFR The same sericite altered, green, moderately foliated, fragmental rhyolite/lapilli tuff rock as 178.6-249.72).							
259				- Rhyolite frags are variable in size; 1-4.5 cm diameter.							
260				- Sericite in matrix is green and the rhyolite fragments are greenish white.							
261				- The same two deformations are observed over this interval (see above).							
262				- 2% magnetite is disseminated as 0.1-0.2 cm dia. blebs over 287.25-287.95 m. Magnetite blebs occur mainly in the sericite matrix.							
263				- Core angle: 255: 20° 275: 80° 265: 20° 285: 70°							
264											
265			80°								
266											
267											
268											
269											
270											
271											
272											
273											
274											
275			80°								
276											

check 172770

PAGE 24 OF	PROJECT:	HOLE NO. WV87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
254						
255						
256		255.96	257.50	1.54	172765	
257						
258						
259						
260						
261						
262		261.9	263.43	1.53	172766	
263						
264						
265		264.9	265.4	0.5	172767	
At 265, A single foliation plane consists of sericite but also ~ 5-10% cpy forming Anhedral 0.5-1cm pods. Minor pyr also present, aligned in same foliation plane						
266						
267		267.4	268.93	1.53	172768	
268						
269						
270						
271						
272						
273		273.36	274.89	1.53	172769	
274						
275						
276						

PAGE 25 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Gb)	E	FRACTURE INTENSITY	% VEIN QTZ.
277											
278											
279											
280											
281											
282											
283											
284											
285			75°								
286											
287											
288											
289											
290				289.44 – 296.25 RHFS Weakly to moderately foliated, whitish-grey to green aphyric rhyolite → Upper 15cm (289.44-289.59) is a RHTT; A grey tuffaceous rhyolite separates the fragmental rhyolite and the massive rhyolite.							
291											
292				→ Brownish green sericite bands (0.1-0.3 cm wide) are spaced ~1-3cm apart within the massive rhyolite.							
293				- 291.6 – 292.1 : Sericite bands disappear and rock consists of massive silica. It also has a milky white colour with interbanded grey silica layers. It could be a silica exhalite or a more massive rhyolite flow within the massive rhyolite. Unknown for certain.							
294											
295			80°								
296				→ The rhyolite shows a fragmental texture in a number of places but the same well defined fragments in a sericitic matrix are not observable.							
297				→ Thin stilpnomelane bands (1-2% of interval) are observed interbedded the rhyolite. If this is primary bedding (S_0) it is parallel to S_2 - the dominant foliation.							
298											
299											

PAGE 26 OF	PROJECT:	HOLE NO. WV-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
277						
278		278.76	280.29		172770	
279						
280						
281						
282						
283						
284						
285						
286						
287		287.22	288.75	1.53	172771	
288						
289		289.52	290.54	1.02	172772	
290		290.54	291.03	.49	172773	
291 290.80 : At this locality sph is observed over a 2-3cm length (2mm wide) within a sericite foliation plane. It is fine grained and associated with pyrite xlts. Only ~25% of "pod" is sphalerite, the rest is pyr.						
292						
293						
294		294.88	296.38	1.50	172774	
295						
296		296.26	298.41	2.15	172775	
297 EXMT: Trace py. observed as subhedral to euhedral xlts overgrowing the magnetite + silica bands.						
298		298.41	300.08	1.67	172776	
299						

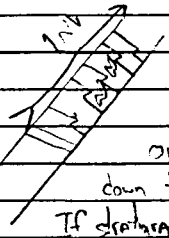
PAGE 27 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
300				RHFS Cont'd - 293.51-293.73: This interval consists of fragment aphyric rhyolite in a matrix of sericite. Fragments are all angular and were formed due to deformation. This is a cemented fault breccia. - Core Angle: 80°							
301	CP										
302											
303											
304											
305			75	296.25-301.15 EXMT: Greyish-black, moderately banded magnetite-rich exhalite. - Mag. forms massive to semi massive bands that range 0.2-15 cm in width. Mag. is also disseminated throughout entire interval as 0.1-0.2 cm dia. blebs. Mag. layers are chaotically folded but generally all have fold axes that lie within the plane of the foliation/banding. Difficult to determine because core angle is close to 90°. Interval consists of 35-40% magnetite - A slight red colour is present throughout most of the magnetite and reflects hematite content: 3-4% of rock.							
306											
307											
308											
309											
310	CP										
311											
312	SP		80	- Magnetite is within a matrix of silica. Grey silica-rich bands are still disseminated by magnetite - Small pods of calcite (0.5-15 cm dia); calcite + dolomite (cream coloured) also in 0.5-3.5cm veins. - Upper contact with rhyolite is gradational, with magnetite veins increasing from 0% to 85% over 5-10cm - Core angle: 80°							
313											
314											
315	CP		75	301.15-301.75 EXCP: Whitish grey, chaotically banded carbonate exhalite (no quartz). Alternating bands of white + grey carbonate, interbedded with 3-4, 0.5-1cm thick magnetite bands - Sharp upper contact with EXMT; mag stops + it is carbonate. Contact is conformable. - Core angle is 70 → 3% magnetite							
316											
317											
318	CP			301.75-301.8 EXMT: Greyish black, modestly banded magnetite-rich iron formation. → Exact same rock as was described above. QTVN: 305.70-306.0; 306.25-306.35 → Mag content: ~ 30%-35% → Core angle: 75°							
319	CP										
320											
321	SP										
322											

PAGE 28 OF	PROJECT:	HOLE NO. WV-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
300		300.08	301.15	1.07	172777	
301		301.15	301.75	.60	172778	
At 301.45: Trace fine grained sph aligned in a		301.75	303.84	2.09	172779	
302 single (0.1cm wide) foliation plane.						
Sph in two thin (<0.1cm) bands						
303 that are ~3-4cm long on						
core surface. Minor py associated		303.84	305.71	1.87	172780	
304 with sph						
305 → Py content increases towards base of EXMT,						
forming bolt enh. b subh. xtls overgrowing						
306 banding + fine py forming bands // to		306.12	307.98	1.86	172781	
mag. banding. Py + mag bands						
307 chaotically folded towards base of unit						
Pyr ~ 4% overall but is ~ 5-6 in		307.98	309.80	1.82	172782	
308 lower 1 metre.						
309						
		309.80	310.08	.28	172783	
310		310.08	311.65	1.57	172784	
EXCP: 3% fn. grained py // to carbonate						
311 layers. Occurring in 0.1-0.3cm wide						
massive b diss. bands that are also		311.65	313.42	1.77	172785	
312 folded, similar to carbonate host.						
313		313.42	314.85	1.43	172786	
EXCP: 35% pyrite; fine grained and forming						
314 0.2-3cm wide massive b diss. bands						
within carbonate		314.85	316.26	1.41	172787	
315						
316		316.37	317.04	.67	172788	
317		317.04	317.90	.86	172789	
317.42-317.49: A series of 6-7 qtz veins		317.90	318.52	.62	172790	
318 which are 0.5-1cm wide have fine						
grained sph. + pyr. at the edges of the		318.52	319.22	.70	172791	
319 veins. Over the 6 cm, sphalerite is ~		319.22	319.70	.48	172792	
4% of rock. Dark red-brown in colour.		319.70	321.96	2.26	172793	
320 - Fine grained sph also observed in 3-4						
bands ~(0.1cm thick) at base of RHTT.						
321 Sph aligned within the foliation plane						
317.90: EXSP: Fn grained pyr in bands forming		321.96	323.24	1.28	172794	
322 4% of rock unit						
318.52: 10 pyr in carbonate exhalite						

PAGE 29 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
323				309.8-310.08 EXCP: White grey moderately banded carbonate-pyrite exhalite. Same unit as above but pyrite is present.							
324				- Core angle: 75°							
325	CP		80°	- Carbonate is interbedded with 0.5-1cm thick silica layers, totalling ~5% of rock							
326	SP			- Upper contact with EXMT is conformable + gradational							
327				310.08-313.42 EXSP: Grey, moderately banded massive siliceous rock with pods of cream coloured dolomite.							
328				- Weak sericite alteration present.							
329				- Numerous centimetre scale folds are present within the pods of dolomite and silica layers.							
330				 - When looking to the grid west + with a 75° core angle, core can be oriented. Z folds or movement down the dip of foliation plane. If stratigraphic facing is towards top of hole then there is an anticline towards top of hole							
331											
332	CP										
333											
334				Note: core angle is 90° in some places, making this kind of interpretation dubious.							
335			85°	CAUN: 312.62-312.72: calcite vein.							
336				312.92-313.42: Silica exhalite grades into a fragmented silica unit with argillite preserved between the fragments							
337				- Core angle: 80°							
338				313.42-316.27 EXCP: Pyrite rich carbonate-pyrite exhalite. Well banded rock defined by pyrite; black + white mottled carbonate preserved between pyr. bands							
339				- Massive to semi-massive pyr. bands in a carbonate matrix. Pyr. bands ~35% of rock.							
340				- Core angle: 75°							
341				316.27-317.90 RHTT: Greenish-grey, moderately foliated tuffaceous rhyolite.							
342	CP			- This tuffaceous rock has a moderate sericite alteration. The sericite varies from a greenish-grey colour to a straw green.							
343				- Upper contact with EXCP marked by QTUN: 316.27-316.37. Other qtz veins: 316.87-316.92							
344				- Core angle is 70°							
345			75°								

PAGE 30 OF	PROJECT:	HOLE NO. WV-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
323 319.6 (within FYMT): 4 (0.1 cm thick) sph/pyr bands within the carbonate rich portion of FYMT. Fine grained sph aligned in the foliation plane. Sph is orange-red in colour (Zn rich?).		323.24	324.50	1.26	172795	
324		324.50	325.14	.64	172796	
325		325.14	326.97	1.83	172797	
326 At 323.7 within FYMT. Trace sph observed with pyr and is disseminated, along with the pyr, are a 5 cm interval. Does not form complete bands around		326.97	328.36	1.39	172798	
327						
328 core. The sph is in a portion of unit that has equal amounts of meg calc-silica.		328.36	330.09	1.73	172799	
329 -At 329.95, 0.1 cm thick sphalerite band; reddish brown in colour & fine grained		330.09	331.61	1.52	172800	
330 -In FYMT 2% pyr diss throughout						
331 →At 326.47 - Two foliation planes show fine grained orangey-red sph., mixed with pyr.		331.61	333.14	1.53	172801	
332						
333 1% pyr diss through FYSP		333.14	334.25	1.11	172802	
334 326.97 - Pyr bands make up 18% of unit. Also see 4-5% pyrrhotite associated						
335 with pyr.		335.65	338.23	2.58	172803	
336 326.97: EXCP - 12% pyr in fin gr. bands 0.2-0.3 cm thick. Also see 6-7						
337 0.2-0.5 cm wide sph. bands // to py + carb. banding. Fine grained and reddish						
338 brown to dark red in colour. sph: 333.5, 333.7, 333.8 (thin bands);		338.23	338.97	.74	172804	
		338.97	340.37	1.40	172805	
339 335.65 (RHFR) Fine gr. py bands // to AF						
340 layers. 6% of unit		340.37	341.77	1.40	172806	
341 338.97 - EXCP - 12-15% pyrite bands. Py is fine to coarse grained + forms 0.4-1.5 cm						
342 wide bands		341.77	343.25	1.48	172807	
343		343.25	343.95	.70	172808	
		343.95	345.48	1.53	172809	
344						
345		345.48	346.85	1.37	172810	

PAGE 31 OF | PROJECT: | HOLE NO. WJV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Carb	E	FRACTURE INTENSITY	% VEIN QTZ.
346				317.00-318.52 EXSP: Same as EXSP above except there are no rocks of dolomite and there are bands of ripple ~0.2 - 1cm wide comprising 4% of mafic - This could be RIIFS !! Similar massive siliceous * Pale irregular [illegible] lower contact with FXCP. - Core angle: 75°							
347											
348											
349											
350	CP										
351				318.52-319.22 EXCP: Pale-pale exhalite. Same rock as above at 313.42. Py ~ 10% of unit - Carbonate + pyr [illegible] moderately filled.							
352											
353				319.22-319.70 EXMT: Alternating black + grey + white - magnetite exhalite. - Rock composed ~ 2-3 cm thick intercalated with the calcite + silica bands - lower 20 cm of unit is massive magnetite [illegible] only 2-3% magnetite bands - Core angle is 30°							
354			75								
355											
356											
357				319.70-321.96 EXSP: Fine grained massive medium grey silica interbedded with green-coloured and white layers. - Dolomite layers comprise ~2% of rock - Calcite (veins, bands?) also present. - This could be RIIFS. Difficult to determine because simply massive silica - Upper contact with EXMT is gradational + conformable. - Core Angle: 80°							
358											
359											
360											
361											
362	CP			321.96-324.5 EXMT: Alternating black + grey + white calcite magnetite exhalite. Rock composed of alternating layers rich in magnetite, carbonate, calcite + dolomite and silica. Mag. plates disc. as 0.1cm thick throughout interval. Mag content ~ 15%. - Matrix is variable calcareous and mainly siliceous - Most of interval is moderately hard but core sections are intensely folded + distorted. - Core angle: 80°							
363											
364											
365	CP		70								
366											
367				324.5-325.14 EXCP: Calcite-pyrite exhalite. Same rock as above. Bands of fine grained pyr make up ~ 10% of rock - Core Angle: 85°							
368											

PAGE 32 OF	PROJECT:	HOLE NO. WV-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
346										
		346.55	348.38	1.53	172811					
347										
348		348.38	349.77	1.39	172812					
349										
		349.77	351.30	1.53	172813					
350										
351		351.30	352.73	1.43	172814					
352										
		352.73	354.03	1.30	172815					
353										
354		354.03	355.51	1.48	172816					
355										
		355.51	357.04	1.53	172817					
356										
357		357.04	358.57	1.53	172818					
358										
		358.57	359.44	.87	172819					
359		359.44	361.04	1.6	172820					
RHFR: Fine grained py within bands surrounding matrix. ~ 8% py										
360										
361		361.04	361.50	.46	172821					
362		362.49	363.38	.89	172822					
363		363.38	364.94	1.56	172823					
EXCP: 6-8% fn. grnd py within bands // to foliation.										
364										
Trace sph within thin <0.1cm bands										
365 fine grained and dark red in colour.		365.13	366.42	1.29	172824					
366										
		366.42	367.85	1.43	172825					
367										
		367.85	369.13	1.28	172826					
368										

PAGE 33 OF | PROJECT: | HOLE NO. NV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Sp)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
369				325.14-326.97 Medium to dark grey, weakly foliated aphyric							
				EXSP silica exhalite.							
370				- Weak epidote alteration defining the foliation planes							
				- Lower portion of unit has the characteristic rusty							
371				silica exhalite texture.							
				- 1-2% magnetite is disseminated through unit							
372				- Core angle: 30°							
373				326.97-330.09 Alternating bands of EXCP + EXMT							
				EXMT - Unit consists mostly of magnetite iron formation							
374				(same as above - 321.96) with 20-30 cm wide							
			75°	carbonate rich layers. Magnetite is present throughout							
375				entire unit.							
				- Also pyr bands ~ 15% of unit							
376				- EXCP where present, is same as above.							
	CP			- Core angle is 75°							
377											
378				330.09-335.65 Calcite-pyrite exhalite.							
				EXCP → Dominantly white rock w/ grey sil bands +							
379				dull yellow py with minor sphalerite bands.							
				70% carbonate; 12% py; 18% silica							
380				- core Angle: 85°							
381				Qtz-chl vein: 334.25-334.53							
382				335.65-338.23 Greyish-black aphyric and tuffaceous siliceous							
	SP			RHFR fragments in a black argillaceous matrix.							
383				- Sil. frags 0.5-3cm in size; 75-85% sil frag							
				- Arg. mtx very siliceous.							
384											
385			75°	338.23-338.97 Aphyric, light grey, weakly to moderately foliated							
				RHFS rhyolite.							
386				- 338.50-338.60 Calcite vein							
387				338.97-359.44 Calcite-pyrite exhalite							
				EXCP - Medium grey to white carbonate. Mostly consists of							
388	SP			the dark grey but 25-45 cm intervals show the white							
				carbonate							
389				- Entire unit is interbanded with pyrite: 0.3-1cm wide							
				and with fine grained py.							
390				- Minor component of interbedded argillite (5-10%)							
				- Extensive qtz veining over 352.14-358.74; 45% of							
391				core is qtz veins.							
				- 10-20 cm intervals show a fragmental carbonate in Arg.							

PAGE 34 OF | PROJECT: | HOLE NO. WV-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
369 RHFR: 6-7% py forming bands // to foliation within the matrix around the frag. Py also within the sil. frag - replacement of original mineralization in fragment 3-4% sph within the matrix as bands + as disseminations. Small % of siliceous fragments also show diss sph within. All sph a dark red-brown colour		369.13	370.70	1.57	172827	
370		370.70	372.05	1.35	172828	
371						
372		372.05	373.58	1.53	172829	
373		373.58	374.94	1.36	172830	
374 EXCP: 3-4% sph filling spaces between carbonate fragments 7-8% pyr as fine grained bands		374.94	376.38	1.44	172831	
375						
376		376.38	377.78	1.40	172832	
377		377.78	379.33	1.55	172833	
378						
379		379.33	380.57	1.24	172834	
380		380.57	382.34	1.77	172835	
381						
382		382.34	384.42	2.08	172836	
383						
384 EXMT: 8% pyrite in fine grained bands.		384.42	385.87	1.45	172837	
385		385.87	387.13	1.26	172838	
386						
387		387.13	388.66	1.53	172839	
388		388.66	390.32	1.66	172840	
389						
390		390.32	391.85	1.53	172841	
391		391.85	392.97	1.12	172842	

PAGE 35 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
392	SP			EXCP cont'd 342.4 - 342.8 - Mag. + pyrrh. rich layer. Interbedded with py + carbonate.							
393				Core angle : 75°							
394				359.44 - 361.04 Aphyric blackish-grey siliceous (+/- tuffaceous frag)							
395	SP		FO	RHFR in a black argillaceous matrix							
396				- Frag ~ 15 cm dia. + rpp. 70% of rock							
397				- Mx. is siliceous - arg.							
398				CFUN : 360.26 - 360.40							
399				361.04 - 361.93 Calcite pyr exhalite							
400				EXCP Same as above.							
401				CFUN : 361.50 - 361.90							
402				361.93 - 363.38 See above for description. Same rock !							
403				RHFR							
404				363.38 - 366.42 Calcite - pyrite exhalite with thin interbedded rhyolite							
405			80°	EXCP fragmental units.							
406				- The cal-py exhalite becomes fragmental near base of unit							
407				- Same description as above							
408	SP			- Core Angle : 70°							
409				366.42 - 372.92 Variably black and dark grey, aphyric and tuffaceous							
410				RHFR fragments in a black argillaceous matrix							
411				- fragments are variable, showing both aphyric rhyolite							
412	SP			compositions and grainy, tuffaceous rhyolites. Size:							
413				0.3 - 4 cm diam, flattened + filled by pervasive foliation.							
414	CP			~20-25% of frag. are calcareous ; alteration ? or							
				carbonate fragments ? . Frag percentage varies ; 50-90%							
				throughout unit. <1% of frag. have sphalerite diss. within ;							
				see min. description.							
				- Matrix is black carbonaceous arg. material							
				- 366.93 - 367.33 : fine grained calcite / dolomite (cream coloured)							
				forming a layer within fragmental.							
				- Core Angle : 80°							
				372.92 - 380.57 Calcite - pyrite exhalite (same as above)							
				EXCP - Argillite is interbedded with this exhalite unit (10-15% arg.)							
				- Upper 1 m of this unit has a fragmental texture							
				6-10 cm dia. carbonate fragments separated by thin argillite.							
				Sphalerite (~3-4%) is filling the spaces between these							
				carbonate frag.							

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PAGE 36 OF	PROJECT:	HOLE NO. W-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
392						
393		393.36	394.18	.82	172843	
394		394.18	395.46	1.28	172844	
395 - ARTF: Trace py in foliation plane		395.75	397.39	1.64	172845	
396 Sph: one single band, 0.7cm wide. fine grained.						
397		397.39	398.67	1.28	172846	
398		398.67	400.19	1.52	172847	
399						
400		400.19	401.48	1.29	172848	
401		401.48	402.98	1.50	172849	
402		402.98	404.58	1.60	172850	
403						
404		404.58	406.58	2.00	172851	
405						
406		406.58	407.45	.87	172852	
407		407.45	408.66	1.21	172853	
408		408.66	410.10	1.44	172854	
409						
410 EXSP: Trace pyr		410.40	411.80	1.40	172855	
411 Trace sph. concentrated in pods + in fine grained bands. Colour is		411.80	414.03	2.23	172856	
412 dark reddish brown.						
413						
414		414.03	415.73	1.70	172857	

PAGE 37 OF | PROJECT: | HOLE NO. WJ - 87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
415			80°	EXCP cont'd	Core Angle: 75°						
416				380.57-384.42 EXSP	Whitish-grey massive silica exhalite with trace pyrite. - Upper 40 cm of unit shows 10→20% argillite (20% at top) with a weakly developed fragmented texture - Foliation is weakly developed and is defined by sericite - py. - Green bands are due to chlorite silica. - Core angle = 80°						
417											
418	CP										
419											
420				384.42-385.87 EXMT	Chlorite magnetite iron formation, - Banded mag. at top - forming 1-4cm massive bands. - Lower 1m consists of 10% mag. bands and chl. + silica. Lower portion is poorly banded where mag. not present.						
421											
422											
423				385.87-393.0 EXSP	Silica exhalite (Same as above) - 3-4% sericite defining the foliation planes - Core angle: 75°						
424	CP SP										
425			75°	393.0-393.2 STFB	Cemented fault breccia. Siliceous fragments in a carbonate matrix						
426											
427	CP			393.2-393.35 QTVN	Qtz vein						
428				393.35-394.15 ARTF	Fine grained tuffaceous argillite - siliceous argillite - 10-15% white siliceous bands + 3-4% dolomite bands.						
429											
430	SP										
431				394.15-395.75 EXSP	Tuffaceous to massive silica exhalite with bands of dolomite - See above for description - Core angle: 90° - QTVN: 395.45-395.73						
432											
433											
434				395.75-407.45 ARTF	Tuffaceous argillite; moderately foliated + greyish black in colour. - Very siliceous - Tuffaceous Arg interbedded with 5-10% black fine grained argillite - 15-25cm intervals show a fragmented texture; aphyric to tuffaceous fragments in a black arg. matrix - Core angle: 80°						
435			90° 80°								
436											
437											

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PAGE 38 OF	PROJECT:	HOLE NO. WV-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
415 EXCP: 7% py. Fine grained bands and larger 0.2 cm vtks aligned in. bands						
416						
417						
418						
419						
420						
421						
422						
423 EXMT: 0.1-0.2 dia. pods of sph. (trace) completely						
424 within the siliceous domains.						
425 EXCP: At lower contact of EXCP + above						
426 the underlying EXSP a "pool" of						
427 sulphide. 0.8 cm wide band of fine grained py + diss sph in bands + veinlets. Accumulation right at the contact.						
428 EXCP (424.49): Trace sph occurs in fine grained						
429 bands + discontinuous wisps. vtx in						
EXSP: 7-8% pyrite as med. grained bands						
430 // to the silica banding.						
431						
EXMT: 1% py; mainly occurs as aub. to subh.						
432 vtx overgrowing banding. Also as bands						
of fine grained pyr // to mag/arb banding.						
433						
434						
435						
436						
437						

PAGE 39 OF | PROJECT: | HOLE NO. WV-87

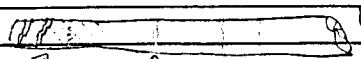
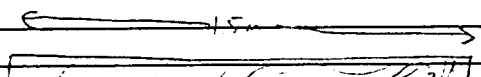
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Carb.	E	FRACTURE INTENSITY	% VEIN QTZ.
				397.46-397.76 = Fault breccia cemented by carbonate. fragments are all argillite							
439				407.45-408.66 EXSP Grey, weakly banded, buff areas to massive silica exhalite. - Only trace pyr present. - See above for description (same).							
442				408.66-410.40 EXMT Greenish black chlorite rich, magnetite iron formation - Weak banding defined by 0.5-1cm bands of magnetite in a chlorite-silica matrix - Mag. also diss. as fine blebs throughout unit. Mag content ~ 13% - Upper 25 cm is broken core + qtz veins EXMT QTVN ~ 410.10-410.25.							
446		CT		410.40-414.03 EXSP White silica exhalite with trace pyrite. - Massive silica with little variation across unit. - Lower 60 cm shows a fragmented texture. Bands of chlorite + argillite separate fragments. Only ~3-4% chl + arg. - Core angle: 80°							
450		SP		414.03-423.0 EXCP Calcite-pyrite exhalite with 5-10% thin argillite layers. - Same as EXCP above - Core angle: 80°							
453		SP		423.0-423.44 EXMT- Fragmented silica-magnetite exhalite - Very distinctive zebra-like texture. Defined by massive milky silica fragments in a black (mag) matrix and overprinted by thin calcite veinlets with small (0.2cm) pods of dolomite + calcite. - Mag % ~ 10% - 3cm thick diss. mag. in a carb. matrix at base of mottled-textured unit.							
457		QTVN		423.44-423.66 EXCP · Calcite exhalite (no py) - Same as above - lower 2.5 cm diss. py + sph.							
459				423.66-424.49 EXSP Massive silica exhalite (see above) - weak sericite alteration - Within EXSP, a pod of EXCP with trace sph is present Pod contains ~ 30% pyr : Pod only 3.5 cm in dia.							

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PAGE 40 OF	PROJECT:	HOLE NO. WV-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
438										
439										
440										
441										
442										
443										
444 2% pyr aligned in bands										
445										
446 1% pyr as veinlets ~ 0.1 cm.										
447										
448										
449 1% pyr in fine grained bands.										
450										
451										
452 2% pyr - Occurs mainly within the basalt										
453 pervasive in fragmental beds										
454 Rarely occurs within the siliceous veins.										
455										
456										
457										
458										
459										
460										

PAGE 41 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
461				424.49-429.0 Exhalitive calcite-pyrite with interbedded							
				EXCP exhalitive magnetite iron formation							
462				- 5-40cm bands of mag in a carb matrix within this calcite exhalite							
				- Calcite-pyrite exhalite same as above							
463				- Overall mag content is 5%							
				- Core angle 75°							
464				- There are 8 separate EXMT layers totalling 25% of carbonate exhalite.							
465			75								
466				429.0-431.81 Alternating dark grey and white bands of silica-pyrite							
				EXSP exhalite.							
467				- Well developed banding defined by alternating bands of							
				grey + white silica. The py. is associated with							
468				the darker silica bands							
				- Structure: In rare places, there is a foliation developed							
469				that crenulates and offsets the silica banding							
	SP			(microfaults) The banding is 90° to core axis							
470				and the foliation is 70°. Py. is remobilized							
				from being // to banding to being aligned							
471				in this foliation plane							
472				top  bottom							
				S Dark grey silica bands							
473				- Angular relationships point to an anticline up hole,							
				if younging is towards top of hole. Unknown if these							
474				bedding / cleavage relations can be used to determine							
				location of macroscopic folds?!							
475			75								
476				431.81-444.74 Carbonate-rich magnetite exhalite							
				EXMT - Mag. is diss. throughout as 0.1-0.2 cm deg. blebs.							
477				Mag is also concentrated in bands that are in a							
				calcite-rich matrix and interbedded with carbonate (white)							
478				rich layers. Mag ~ 20% content							
				- Banding is regular over most of interval but shows							
479				chaotic distortions over 20-30 cm intervals:							
				syn sedimentary? tectonic? The irregularity of folds							
480				suggests syn sedimentary slumping.							
				- Also see broad open folds of the foliation that							
481				undulate over a 1.5m length.							
											
482											
	SP			folding is defined by the carbonate-mag layering. Unknown							
483				if this is also folding S1 (bedding //) or if the fold is							

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PAGE 42 OF	PROJECT:	HOLE NO. WV-87

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
461 EXSP 3% pyr is found in fine grained bands within the matrix surrounding the EXSP. Small percentage is forming euh-subh xtls throughout interval.						
462						
463 The pyr. is rarely within the EXSP Trace sph. is observed at the same locations and not within the siliceous						
464						
465 argillite. Like pyr., sph forms bands where the EXSP becomes fragmented. App 6-7 0.5-1cm wide bands through						
466 interval.						
467 ARSI (47723) trace sph found in fine grained 0.5cm wide bands						
468						
469						
470						
471						
472						
473						
474						
475						
476						
477						
478						
479						
480						
481						
482 EXSP: 1% py in fine grained bands. Fine grained						
483 sph forming 2, 0.1-0.3 cm thick bands. dark red brown in colour.						

PAGE 43 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (fp)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
				EXMT cont'd only folding S_0 and the axial planar foliation (S_1?) is not developed. This broad open fold seems to be tectonic but cannot be certain due to lack of axial planar foliation.							
			80	- Carbonate is predominantly calcite but over some intervals, iron carbonate is present: 434.33-435.10, 436.3-436.80.							
				Core angle is variable due to folding: 435: 70°							
				- The measured thickness is much greater than the true thickness if these are tectonic-related folds (i.e 9-10m instead of the measured 13m).							
490											
				444.74-446.47 EXCP Calcite-pyrite exhalite. - Alternating white grey massive calcite with 2% pyrite - Same as above - Core angle: 80°							
492											
				446.47-449.58 EXSP Silica-pyrite exhalite - Alternating light and dark grey massive silica with ~1% pyr - Same as above							
495			75°								
				449.58-451.12 EXSP Silica exhalite with an argillaceous component - Black argillaceous bands ~0.5cm wide, separate the more siliceous exhalite and in places define a subtle fragment texture. The fragments are defined by the dark grey to black siliceous portions - Could be a silica exhalite with a greater argillaceous component - Pyrite occurs in bands around the siliceous exhalite and in association with the fine black argillite bands. Where there are traces accessible, pyr is within the matrix.							
499	CP										
500											
501											
				451.12-452.12 EXSP Silica-pyrite exhalite - Same as above							
503											
				452.12-457.0 EXSP Silica exhalite with an argillaceous component. - Same as above - A fragmental texture is present within this rock. Siliceous dark grey to black exhalite fragments in a matrix of black argillite. The matrix also shows py. trace sd. from 10% fine black py matrix.							
504	SP										
505			75°								
506	CP										
	SP			- 0.1-0.2cm lens/pockets of massive pyrite within some							

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PAGE 44 OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
484 RHFR (482.76): 1% py forming bands + wisps within the fine black argillite surrounding the siliceous domains						
485 → Trace sphalerite; fine grained + red-brown observed in the fine black argillite surrounding siliceous domains. Also see it diss. over a 2cm interval, totalling 2-3% of interval. sph: 481.7, 486.5, 493.2						
486						
487						
488						
489						
490						
491						
492						
493						
494						
495						
496						
497						
498						
499 RHFR: Trace py. forming wisps + bands						
500 Trace pyrrh. forming wisps // to foliation						
501 Trace sph. forming bands 0.2-0.4 cm wide surrounding the more siliceous domains.						
502 Sph. also diss. over 1-2cm intervals, totalling 1-2% of specific interval						
503 EXSP: Trace py forming 0.1-0.2 cm euh-subh. xlls						
504 Trace sph. with 3-5 0.1-0.3 wide bands // to silica banding.						
505 Trace to 1% pyrrhotite forming wisps + continuous bands						
506						

PAGE 15 OF | PROJECT: | HOLE NO. WU-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
					Fine siliceous argillite fragments - bands							
					Core angle: 80°							
				457.0-457.5	Calcite vein with siliceous argillite fragments							
				CAVN								
				457.5-459.12	Fault gouge with siliceous argillite							
				STGG	- 10-20 cm intervals show semi-consolidated fault							
		SP			breccia in a calcite matrix. Also see cemented							
					fault breccia; ARSI within calcite.							
				459.12-477.23	Silica exhalite within an argillaceous component.							
				EXSP	- Calcite vein: 459.12-461.02 - brecciated ARSI frag.							
					in top 20cm of vein							
					- Upper 6 m (until 466.5m) is ~ 5-8% networked							
					by calcite veins that have brecciated the rock.							
					- STGG - 466.48 - 466.68 - fault gouge							
			70		- 0.1-0.2 cm calcite rhombs are present between							
					471-477, and continue into lower unit							
					473-475 - Spheroidal "concretion-like" structures 0.5-1cm							
					in diameter. All are rimmed by a thin band of pyrite							
					and have a black material that has diss. py with							
					0.1-0.2 cm py xtls. ~20 of these features over the							
					specified interval.							
					- Fragmented texture with the exhalite in a fine black							
					argillite matrix is observed over 5-10% of this interval.							
					Pyr: trace sphalerite occur within the black argillite around							
					the greyish-black silica exhalite							
					- The texture produced within the fragmented portions							
					is similar to the RHFR identified within the top of							
					this hole							
					- Core Angle: 465: 75° 475: 75°							
				477.23-482	Siliceous argillite							
				ARSI	- Black, very hard, fine grained argillite.							
					- Throughout this interval (extending for no more than							
					10-30 cm + totalling 25% of interval) a subtle							
			90°		fragmental texture is present. Defined by greyish-black							
					siliceous domains surrounded by thin bands of							
					argillite. Silica exhalite (?) or rhyolite (?) that has							
					been fragment during deposition(?) or during subsequent							
					deformation.							
				482-482.76	Silica-pyrite Exhalite. Typical, cream to white banded							
				EXSP	exhalite. No argillaceous component.							

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PAGE 46 OF	PROJECT:	HOLE NO. WV-87

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
507	SDS-FXCP: Trace py. 4% pyrrho. forming fine grained bands + wisps near base of interval										
508											
509											
510											
511											
512											
513											
514											
515											
516											
517											
518	Trace pyr > pyrrho + sph throughout interval; occurring as wisps + thin bands										
519											
520											
521											
522	ARSI: 1% pyr: fine grained bands // to foliation										
523	trace sph forming fine grained 0.2-0.4cm wide bands										
524											
525											
526											
527											
528											
529											

PAGE 47 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
530				482.76-498.62 RHFR	Greyish-black, moderately foliated siliceous "fragmental-like" rock.							
531					- Dark grey siliceous "fragments" in a matrix of argillite. Fragmental texture could be due to original rock type or due to tectonic fragmentation (note labelled RHFR because this rock exhibits very similar textures to the extensive RHFR in upper 300m+ of this hole).							
532												
533					- The percentage of matrix around siliceous frags ~ 5-10% of unit.							
534					- The greyish-black siliceous portion of rock is very similar to the dark silica exhalite above.							
535					- 60-50% of siliceous "fragments" have calcite/dolomite veinlets + small calcite vlts. The veinlets are no longer than 0.1-0.2 cm long. This represents a weak carbonate alteration over isolated intervals but not extensive through unit (2, 10-15 cm EXCP horizons are interbedded with this siliceous fragmental.							
536												
537												
538					- Core angle: 485: 80°							
539					495: 75°							
540				498.62-499 EXCP	Dusty grey carbonate exhalite (no pyrite).							
541												
542				499-502.94 RHFR	Greyish-black moderately foliated, siliceous "fragmental-like" rock. (same as above).							
543					- There is more of a banding preserved in this rock, but majority shows same texture as described above (482.76).							
544					- The banding is defined by grey siliceous layers grading into ARSI and back into siliceous rich layers. This gives a tuffaceous character to the rock.							
545					- Evidence preserved showing S_0 + S_1 cleavages at a ~30° angle. The S_1 is "fragmenting" the alternating black + grey bands! Therefore deformation causing fragmentation. Banding ~ 90° + cleavage 70° to core axis.							
546												
547												
548					- If deformation accounts for fragmental texture than the rock is most likely a ARTF with alternating siliceous + argillaceous layers.							
549					-							
550				502.94-505.33 EXSP	Silica-pyrite exhalite.							
551					- Alternating bands of white + dark grey silica with 10-15% 1-2 cm wide dolomite bands.							
552					- Core Angle: 75°							

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PAGE 418 OF	PROJECT:	HOLE NO. WV-87

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
530	RHLT: Trace pyrrho.						
	- Trace sph; over a 3cm interval, 5-6						
531	0.1-0.2 cm wide sphalerite bands are seen.						
	Dark red-brown. Associated with sph over						
532	same interval is a grey-silver sulphide, some						
	or all of which is galena. This grey						
533	mineral is aligned in discontinuous						
	bands + wisps.						
534							
535							
536							
537							
538							
539							
540							
541							
542							
543							
544							
	544.36 (RHFP): Trace py in fine grain bands						
545	within matrix: black argillite						
546							
547							
548							
549							
550	10 cm zone of py + pyrr banding along						
	with bands of sphalerite						
551	Over 10cm; 2% pyr; 1% pyrr; 2% sph.						
552							

PAGE 49 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
553				505.33 - 506.36 Calcite-pyrite exhalite							
				EXCP - Banding defined by white calcite + cream coloured dolomite with argillite							
554				- Upper contact with EXSP is gradational, with carbonate + silica bands interbedded over 20 cm.							
555			80								
				506.36 - 514.32 Light to medium grey silica exhalite (no pyrite)							
556				EXSP - Banding defined by light - dark silica bands.							
557				- This unit is gradational from a massive silica unit at top to a slightly argillaceous silica exhalite (black colour) and then back into the typical silica exhalite. In the argillaceous portions the same "fragmental-like" texture is observed (see RHFR above).							
558				- There is a weak sericite alteration present within this rock.							
559				- CTUN : 508.66 - 509.							
560				- Core angle : 75°							
561											
562											
				514.32 - 518.33 Fine grained black siliceous argillite							
563				ARSI - Numerous qtz veins totalling ~ 40% of rock interval.							
564				- Core angle 70°							
565			75°	518.33 - 524 Greyish-black moderately foliated, siliceous "fragmental-like" rock (same as above).							
				RHFR - Unknown if the fragmental texture is due to original fragments or due to deformation.							
566				CTUN : 519 - 519.70; 522.82 - 523; 523.60 - 523.90							
567											
				524.00 - 530.86 Siliceous argillite							
568				APSI - Black fine grained argillite with 3-4, 15-25 cm intervals showing same textures as observed in above "fragmental" unit							
569				- Core angle : 90°							
570											
				530.86 - 534.33 Strongly sericitically altered rhyolite lapilli tuff.							
571				RHLT - 15-20% 1-3cm siliceous (white) and argillaceous fragments (black) in apple green (sericite) tuffaceous matrix							
572				- Weak grading developed identifying bands that are parallel to the strong foliation developed							
573				- Sericite is the apple-green typical of footwall (?) sericite.							
574				- Core angle : 75°							
575			90								

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PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 51 OF | PROJECT: | HOLE NO. WV-87

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
576				534.33-540.31 Strongly sericitically altered, tuffaceous rhyolite							
				RHTT - Same rock as above except for fragment size.							
577				- 20% whit siliceous bands present throughout.							
				- Banding shown by slight grain size variation of tuff.							
578				ST66: 539-539.10							
				- In lowermost 40cm of unit, sericite becomes pale							
579				brown and 10-20% argillaceous component is interbanded							
				with fine tuffaceous bands.							
580				- Core angle: 80°							
581				540.31-544.36 Greyish-black, moderately foliated, siliceous fragmental-							
				RHFR like rock. (same as above)							
582				- Rock is variable over interval. It is all very							
				siliceous and has a greyish black colour. Well							
583				defined to ghosted fragmented texture shown by grey							
				siliceous domains surrounded by black argillaceous material.							
584				This grades into a tuffaceous argillite + back into the							
				fragmental rock (black rhyolite?). Also see well							
585			75°	defined FRSI over 10-20cm intervals.							
				- Core angle: 80°							
586											
				544.36-562.14 Grey to black rhyolite fragmental.							
587				RHFR - Characteristic rhyolite fragmental with minor siliceous							
				argillite bands between rhyolite							
588				- Rhyolite is white to grey, aphyric and is fragmented							
				within a black argillite matrix. Matrix ~3-15% of							
589				rock							
				- Weak sericite alteration present, straw-green to brown							
590				coloured sericite observable in the more rhyolitic							
				intervals.							
591				- In between the RHFR with little Argillite matrix, the same							
				RHFR occurs that was identified above; the rock							
592				with the "fragmental-like" texture.							
				- Core angle: 80°							
593											
				562.14-575.7 Banded tuffaceous argillite							
594				ARTF - dominant rock type is a carbonaceous argillite (black)							
				with 10-40% siliceous bands + fragments.							
595			75°	- All siliceous b. and f. are flattened in the dominant							
				foliation							
596				- 10% of rock consists of more siliceous bands that							
				are altered by weak-moderate apple-green - straw-coloured							
597				sericite							
				- This rock is different from the black RHFR described							
598				above because of the relatively low % of frag. wit carb.							
				Argillite.							

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PAGE 52 OF	PROJECT:	HOLE NO. WV-87

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
576	RHFR Trace pyrr in thin wisps + discontinuous bands										
577											
578											
579											
580											
581											
582											
583											
584											
585											
586	RHTT: 0.1-0.3 cm long wisps of pyrr // to foliation. (Trace pyrr).										
587											
588											
589											
590	RHTT: Trace pyrr forming wisps + discontinous bands.										
591											
592											
593											
594											
595											
596											
597	ARSI: 1% py; fine grained wisps + bands // to foliation. Trace pyrr in same occurance										
598											

PAGE 53 OF | PROJECT: | HOLE NO. WV-87

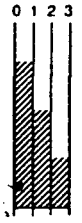
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Carb	E	FRACTURE INTENSITY	% VEIN QTZ.
				ARTF Cont'd	STGG: 573.1 - 573.4 - fault gouge within sericitically altered argillite						
					QTUN: 570.6 - 570.9; 572 - 572.10; 572.4 - 572.9; 575.2 - 575.3						
					- Overall - weak sericite alteration						
					- Core angle: 565: 75° 575: 80°						
				575.7 - 586.1 RHFR	White to greyish-black fragmental rhyolite.						
					- Rock is predominantly greyish white but some intervals show a siliceous argillite matrix around the aphyric rhyolite fragments.						
					- 80% of interval is clast supported and grades to massive rhyolite over 30-40 cm intervals						
			65		- Weak sericite alteration - a very light yellow green colored sericite						
					- Core angle: 585: 75°						
				586.1 - 586.6 RHTT	Fine grained tuffaceous rhyolite						
					- Poorly developed band defined by slight grain size variation.						
				586.6 - 590 RHFR	Fragmental rhyolite with a weak sericite alteration						
					- Same as above (575.7) except without argillaceous component.						
					- Note: The RHFR is describing the rock composition and texture. The fragmental texture could be due to tectonic fragmentation which would make this rock a massive rhyolite.						
				590 - 591.9 RHTT	Tuffaceous rhyolite (same as above - 586.1).						
					- Upper contact with RHFR is gradational over 15 cm.						
					- Core angle: 70°						
			65°	591.9 - 597.8 RHFR	Fragmental rhyolite with weak sericite alteration (same as above).						
					- 10-20% argillaceous matrix						
					- QTUN: 592.8 - 593.1; 597.0 - 597.3.						
					- Core angle: 75°						
				597.8 - 617.8 ARSI	Siliceous Argillite with 10-20% white siliceous bands						
					- 15% of interval consists of qtz veins: 598.1 - 598.2; 599.4 - 599.5; 601.7 - 601.9; 602 - 602.3; 609.60 - 609.80; 612.4 - 612.6						
					- Core angle: 605: 65° 615: 65°						

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DRILL LOG

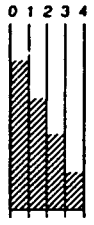
PROJECT: Wolverine	GROUND ELEV.: 1414
HOLE NO.: WV 97 88	BEARING: GN - 033°
LOCATION: 16209E, 17038N	DIP: -78°
	TOTAL LENGTH: 279.49
LOGGED BY: M. Padberg, Dave Gale	HORIZONTAL PROJECT
DATE: June 9/97	VERTICAL PROJECT
CONTRACTOR: Boisvenu Diamond Drilling	
CORE SIZE: NQ	
DATE STARTED: June 7/97	
DATE COMPLETED: June 16/97	
DIP TESTS: 119.5 m - 326° (GRID), 359 -82 180.4 m - 266° (GRID), 299 -88 271.9 m - 191° (GRID), 224 -83.5	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

LEGEND

PAGE 1 OF | PROJECT: Wolverine | HOLE NO. WV9758

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
	DHCS			0.00-6.10 CASING DHCS							
1											
2				6.10-32.61 OVERBURDEN							
	DHOB			DHOB							
28											
29											
30											
31											
32											
32.61				32.61-57.00 RHYOLITE LAPILLI TUFF							
32.70		bc		RHLT Brkn + fit'd rhy lapilli tuff w/ v. poor core recovery. Primarily coarse grained rubble. Light greenish/grey colour w/ wk pervasive chl. alt'n. Tr. f.g. diss. py.							
33											
34											
35											
	RHLT			→ 32.70-44.81: STGG: FAULT GOUGE Clasts range from clay → pebble sized. U.C. in brkn core. L.C @ 55° cax.							
36											
37											
38											
39											
40											
41											
42											
43											
44											
44.81				→ 45.16-47.99: STGG: FAULT GOUGE Same as above (32.70-44.81)							
45			35° 55°								
46											
	RHLT										
47											
48											

PAGE 2 OF	PROJECT: Wolverine	HOLE NO. WV 97 88

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
1										
2										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										

PAGE 3 OF | PROJECT: Wolverine | HOLE NO. WN 97 88

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(32.61 - 57.00 : RHLT - con't)							
48.20	RHLT		55	→ 48.20 - 57.00 : STGG. FAULT GOUGE							
49			55	Same as above. LC in broken core							
50											
51											
52											
53											
54											
55											
56											
57 57.00			60	57.00 - 60.05 OVERBURDEN.							
	DHOB			DHOB Andesite pebbles. Only 10cm of core recovered.							
58											
59											
60 60.05			60 55	60.05 - 65.25 TUFFACEOUS ARGILLITE							
	ARTF		55	ARTF Black tuffaceous arg w/ thin wispy sil'ic 2x5mm lapilli fragments. Localized x-cutting pyrite rich 5mm carb veins @ 60° cax. Fol'n remains @ 55° cax.							
61											
62											
63				→ 60.44 - 65.25 : STGG - FAULT GOUGE Black argillaceous gouge w/ all grain sizes UC @ 55° cax, LC @ 60° cax							
64											
65 65.25			70 60	65.25 - 68.73 BRECCIATED MASSIVE RHYOLITE							
	RHFS			RHFS Mypss aphyric greenish/grey sil'y bx'd into ~5mm² frags (on avg.) Wk perv chl alt'n + a chloritic matrix. Rare ARTF frags vis. 5% py stringers localized upper 1/3 (fra. 65.25 - 65.75)							
66											
67											
68				→ 68.40 : Vis. sph stringer, 1x30mm							
68.73			70 50								
69				68.73 - 70.46 SILICEOUS ARGILLITE							
	ARSI			ARSI Blk sil arg w/ mod graphitic component, mstly f/l'd, sharp UC w/ RHFS f/l'd LC							
70 70.46			55								
71											

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
49										
50										
51										
52										
53										
54										
55										
56										
57										
58										
59										
60										
61										
62										
63										
64										
65										
66										
67										
68										
69										
70										
71										

PAGE 5 OF | PROJECT: Wolverine | HOLE NO. WV 9788

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
				(68.73-70.46 ARSI cont'd)							
	RHLT			68.79-70.45 STGG: FAULT GOUGE							
72 72.18				Argillaceous clasts							
72.60	RHTT			ranging from silt→pebble							
72.69			50	U.C @ 70°, L.C @ 55° cax.							
73	RHFS										
74 74.53				70.46-72.18 RHYOLITE LAPILLI TUFF							
				RHLT Dk gray, rhy lapilli tuff w/ frags							
75 75.75	RHFS		bc	up to 1x4 cm. wk chl'ic alt'n							
				Dk chl partgs w/ 1% py							
76				stringers. Rare localized sph stringer							
				@ 71.90							
77											
	ARSI			72.18-72.60 RHYOLITE ASH TUFF							
78 78.65				RHTT Dk brownish/beige ash tuff							
			bc	w/ faint, wispy fine siliceous							
79				bands + tr f.g. diss. py. wk→							
				mod chl. alt'n							
80											
				72.60-72.69 QUARTZ VEIN							
81				QTVN Bull white qtz vn w/ stringer							
				chl + 2% py blebs. Sharp							
82				contacts w/ U @ 55° + L @ 80° cax.							
83				72.69-74.53 MASSIVE RHYOLITE							
83.50				RHFS mass. aphyric rhy. mostly brkn							
			50	and fit'd core wk perv. chl							
84				alt'n							
				→ 74.43-74.53: STGG: FAULT GOUGE							
85				Rhyolitic gouge w/							
				contacts @ 45° cax.							
86											
87	RHTT			74.53-75.75 BRECCIATED MASSIVE RHYOLITE							
87.63				RHFS Bx'd mass. aphyric rhy w/ 65%							
			50	matrix vs frags. Dolomitic							
88				creamy white (w/ localized wk Fe-ox							
				staining) v.f.g. matrix. Tr blebby							
89 89.00			bc	py. Brkn core for the entire							
89.31				interval							
89.70			55								
90			60								
				75.75-78.65 SILICEOUS ARGILLITE.							
91				ARSI Black sil. sed.							
				75.75-78.65: STGG: FAULT GOUGE							
92	ARSI			Contacts in brkn core							
93				78.65-89.00 ASH TUFF							
93.50				RHTT Ver. sim. to unit above (72.18-72.60)							
			50								
94											

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
72										
73										
74										
75										
76										
77										
78										
79										
80										
81										
82										
83										
84										
85										
86										
87										
88										
89										
90										
91										
92										
93										
94										

PAGE 7 OF | PROJECT: Wolverine | HOLE NO. WW9788

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(78.65-89.00 RHTT cont)							
				→ 78.65-82.50 STGG-FAULT GOUGE							
				Dk agay pasty rubble							
				L.C. @ 50° cax							
				→ 87.60-89.00: STGG-FAULT GOUGE							
				Same as above							
95	ARSI										
96											
96.80 97 97.05			50								
				89.00-97.05 SILICEOUS ARGILLITE							
98				ARSI Black v.f.g arg w/ faint wispy							
				siliceous bands. Tr f.g py.							
99			65	→ 89.00-89.31 STGG-FAULT GOUGE							
				Continuation of above. L.C. @ 55° cax							
100				→ 89.70-89.96: STFB: FAULT BRECCIA							
101	RHAR			Fit bx for 6cm of ARSI							
				w/ occ. frag size @ 5mm²							
102				Assoc'd fit @ 89.70 @							
				60° cax							
103				→ 93.57-96.80: STGG FAULT GOUGE							
				Blk sil argilliceous pasty							
104			65	rubble. Contacts @ 55°							
				cax.							
105											
				97.05-106.07 INTERBEDDED RHYOLITE/ARGILLITE							
106 106.07			60	RHAR Rhythmic 1cm thk interbedded rhy							
				+ arg w/ f.g → mass py blebs (<1%)							
107	RHFS			on fractures. Primarily brkn core.							
108 108.20											
				106.07-108.20 MASSIVE RHYOLITE							
109			60	RHFS Mass fg agay aphanic rhy w/							
				sericitic partgs. Tr mass blebby							
110				py along ser. partgs. Primarily							
				brkn core							
111	ARSI										
				108.20-112.25 SILICEOUS ARGILLITE							
112 112.25				ARSI Black sil arg w/ mod→str. silicic							
			60	content. Common wispy sil. bandg							
113				w/ fine straw ser. bandings (<0.1mm							
				thk) wk perv. chl. alt'n as seen							
114	EXMT		65	by dk green staining on natural							
				fracture surfaces. Primarily brkn core							
115 115.22											
				112.25-115.22 MAGNETIC IRON FORMATION							
115.75	EXMT		70	EXMT Dk blueish purple magnetic iron formn							
116	RHFS		65	w/ 2% hematite disseminated							
116.75			70	magnetite bands. Strongly magnetic							
117				(25% magnetite), 3% py re-xtallized							

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110		110.35	112.25	1.9	N203001					
111										
112		112.25	113.25	1.0	N203002					
113		113.25	114.25	1.0	N203003					
114		114.25	115.22	.97	N203004					
115		115.22	115.75	.53	N203005					
		115.75	116.35	1.0	N203006					
116		116.75	118.54	1.79	N203007					
117										

PAGE 9 OF | PROJECT: Wolverine | HOLE NO. WV 97 88

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(112.25 - 115.22 EXMT cont)							
				into f.g'd cubic blebs. Blebs are diss'd throughout							
118				→ 115.02-115.17 QTVN · QUARTZ VEIN							
	EXCP		65	Qtz vn w/ sharp contacts (@ 50° L @ 70° ca-x) w/ tr. 1mm² chl blebs							
119											
120											
120.90											
121 / 121.20	RHFS		65								
			70	115.22-115.75 SILICA PYRITE EXHALITE							
122			70	EXSP Banded silica-pyrite exh w/ lt. pink sil + dk green ash tuff rhythmically layered. Fine stringer py as well as rare f.g. diss. py							
122.80											
123			80								
124											
				115.75-116.75 MASSIVE RHYOLITE							
125				RHFS Same as above: (106.07-108.20)							
125.85			60								
126 / 126.35			45								
	ARSI			116.75-118.54 RHYOLITE LAPILLI TUFF							
127				RHLT Dk gray rhy. lapilli tuff w/ fine arg. bands. Avg. lapilli: 3x15mm, w/ fine 1% pyritiferous partings + rare sph stringers.							
128											
129											
129.65			65	118.54-120.90 CALCITE / PYRITE EXHALITE							
				EXCP mottled yellowish beige calcite/ py exh w/ magnetite + pyriteferous rich interbands. 8% total f.g. diss. py w/ aug foln (layering) @ 65° ca-x.							
130	RHFR		70								
131 / 131.15			60								
132											
				120.90-121.20 MASSIVE RHYOLITE							
132				RHFS massive aphyric gray rhy, same as above (106.07-108.20)							
134											
				121.20-129.65 SILICEOUS ARGILLITE							
135	ARSI		55	ARSI Black sil arg w/ faint wispy sil banding + variable fabric. Flt'd +/or broken core is common. Tr (<1%) f.g. diss. py, mod graphitic component.							
136				→ 122.80: STFL: FAULT @ 80° ca-x.							
137											
138			60	→ 125.85-126.35: STGG: FAULT GOUGE Graphitic pasty gouge, v.c in broken core L.C @ 45° ca-x.							
138.65											
139											
140											

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
118										
		118.54	119.90	1.360	N203008					
119										
		119.90	120.90	1.0	N203009					
120										
		120.90	121.20	.30	N203010					
121										
122										
123										
124										
125										
126										
127										
128										
129										
130										
131										
132										
133										
134										
135										
136										
137										
138										
139										
140										

PAGE 11 OF | PROJECT: Wolverine | HOLE NO. WV9788

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
	RHFF			129.65 - 131.15	FRAGMENTAL RHYOLITE							
141				RHFR	Gray aphanic frag rhy. w/							
					frags up to 1x3 cm. Fine ser							
142					+ chl partgs w/ tr. mass. py							
					blebs along partgs LC of							
143					unit in brkn core							
144.00				131.15 - 138.65	SILICEOUS ARGILLITE							
			65	ARS1	Blck sil arg w/ wispy silica							
145			55		bands. Rubble / brkn core. Wk							
					perv chl alt'n as seen by dk							
146					green weathering from natural fractures							
					Rare mass py blebs. U+L contacts							
147					in brkn core							
147.70												
148	ARTF		55	138.65 - 144.00	ASH TUFF							
148.70				RHTT	Fg gray ash tuff w/ fine → med.							
149			50		grained particles. Var bds silicous							
					interbands + fine ser'ic interbands.							
150					Rare fg diss py							
					139.39 - 142.33: DHLC LOST CORE							
151			60		Two drill blocks side							
	RHFS				by side (457' + 467')							
152												
				144.00 - 147.70	MASSIVE RHYOLITE							
153				RHFS	Typ. aphyric fg gray rhy w/							
153.30			60		localized rhythmic pyritic stringers							
154					<1mm thk; Fol'n @ 55° cax. Py (1%)							
154.9					stringers assoc't w/ fine ser.							
			65									
155												
				147.70 - 148.70	TUFFACEOUS ARGILLITE							
156				ARTF	Blk fg arg w/ siliceous lapilli							
156.0			70		fragments; 5x25mm in size. Chl'ic							
157					partings w/ associated f.g. → mass							
			70		wispy py. (1%)							
158												
				148.70 - 153.30	CHERTY RHYOLITE.							
159				RHFS	mass aphyric lt gray cherty							
					rhy. Rare → tr v.f.g. fine py'c							
160					stringers (0.1mm thk). Rare localized							
					snow white carb veinlets (up to							
161					5mm thk downsec'n. Primarily brkn							
161.19					core							
161.59			55									
162												
				153.30 - 172.25	SILICEOUS ARGILLITE							
163				ARS1	Blk f.g. sil arg w/ faint, wispy							

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
141										
142										
143										
144										
145										
146										
147										
148										
149										
150										
151										
152										
153										
154										
155										
156										
157										
158										
159										
160										
161										
162										
163										

PAGE 13 OF | PROJECT: Wolverine | HOLE NO. WV97-83

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
				(153.30 - 172.35 ARSI - cont'd)							
				siliceous bands wk pervasive chl alt'n as noted by dk green stains weathering out from natural fractures							
164		ARSI	60	Tr fg diss py							
165				→ 154.40: STFL - FAULT							
166	166.09		55	@ 65° ca							
	166.48			→ 156.00: STFL - FAULT							
	166.55		70	@ 70° ca							
167				→ 161.10 - 161.50: QCVN: QUARTZ/CARB VN.							
168				95/5 % qtz/carb vn w/ 1% chl'ic stringers + blebs							
169			70	→ 161.15 - 161.30: CARB. EXHALITE							
				strly effervescing carb exh. Rip-Up clast from EXCP downhole?							
170				Fragmented specimen							
171											
	171.80			→ 166.00 - 166.43 QCVN. QUARTZ/CARB. VN							
172			70	95/5 % qtz/carb vn w/ 20%							
	172.35			mass chl + 1x4 cm EXCP							
			72	fragments Rare fg diss. py							
173			75	→ 166.55 - 166.72: EXCP. DK green/wht/blue							
				carbonate exhalite. Strong							
				effervescence w/ 10% HCl							
	173.77			→ 171.80 - 172.35 ST66: FAULT GOUGE							
	173.84		73	Contacts @ 70° ca,							
174			72	graphitic black w/							
		ARSI		wispy silica + carb, 1%							
			70	fg py.							
175											
				172.35 - 177.36 EAGLE HORIZON: 5.01 m							
	175.40		70								
				172.35 - 175.10 SILICEOUS ARGILLITE							
176		RHFR		ARSI DK black arg w/ fine wispy faint							
				siliceous bands. Fine-grained →							
	176.60			mass pyric stringers (5%) w/							
			80	recrystallized 1-2 mm² cubic py							
177		EXCP		blebs and trace associated fg							
	177.33		50	sphalerite							
				173.77 - 173.84: QTVN: QUARTZ VEIN.							
		ARGR	73	Bull white qtz vn w/							
178				2mm fg py+sph bands							
				@ both U+L contacts							
179				1% fg cpy blebs in							
				vein. Contacts are sharp							
180				@ 73° ca.							

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
164										
165										
166		166.48	169.16	2.68	N203011					
167										
168										
169		169.16	172.35	3.19	N203012					
170										
171										
172		172.35	174.25	1.90	N203013					
173										
174		174.25	175.40	1.15	N203014					
175		175.40	176.60	1.20	N203015					
176		176.60	177.33	.73	N203016					
177		177.33	180.23	2.90	N203017					
178										
179										
180		180.23	182.20	1.97	N203018					

PAGE 15 OF | PROJECT: Wolverine | HOLE NO. WV97-88

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
180.23				17540-17660	FRAGMENTAL RHYOLITE							
181	ARSI		30	RHFR	Py'ic + sph'ic bnded (up to 5%) fragmented aphyric rhy w/ carb matrix (effervesces mostly w/ 10% HCl) Sulfidic bands are fairly regular (rhythmic) yet vary from 1mm → 3 cm thick + are @ 65° cax.							
182			60									
183			60									
184			60	17660-17733	FRAGMENTED CARBONATE EXHALITE							
185	RHLT			EXCP	Fragmented dolomitic exhalite w/ 3% stringer sph + py Frags. avg 5×20 mm in a carbonate matrix Irregular creamy/white colour							
186			65									
187												
188				17733-18023	GRAPHITIC ARGILLITE							
189				ARGR	Jet black graphitic arg mostly all fit a.a. 3cm of cont'd sx bonding from 177.33-177.36 5% py + 5% sph in these fine bands.							
190			60									
191	ARSI				→ 177.36-180.23: STGG: FAULT GOUGE Black graphitic rubbly paste, 2% diss f.g. py. UC @ 50° cax LC @ 30° cax.							
192												
193												
194				18023-18220	SILICEOUS ARGILLITE							
195				ARSI	Black f.g. sil. arg w/ faint fine wispy silic bnds + 1% f.g. diss. py Rare localized carb stringers.							
195.65			60									
196			60	18220-18595	RHYOLITE LAPILLI TUFF							
197	RHLT			RHLT	Greenish/gray rhy. lapilli tuff frags avg 1×1 cm. 2% f.ins → med grained euhedral py. diss throughout. Rare localized v.f.g.v. faint sph stringer							
197.85			70									
198			60	18595-19565	SILICEOUS ARGILLITE							
199	ARSI			ARSI	Same as above (180.23-182.20)							
200.200			65									
201	RHFS			19565-19785	RHYOLITE LAPILLI TUFF							
202				RHLT	mass aphyric rhy lapilli tuff w/ 1% f.g. diss py + localized wkly dol'ic lcm thk bands.							
203	HRST											

PAGE 16 OF	PROJECT:	HOLE NO. WV-88

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
181										
		182.23	183.46	1.23	N203019					
182										
183		183.46	184.63	1.17	N203020					
184										
		184.63	185.95	1.32	N203021					
185										
186										
187										
188										
189										
190										
191										
192										
193										
194										
195										
196										
197										
198										
199										
200										
201										
202										
203										

PAGE 17 OF | PROJECT: Wolverine | HOLE NO. WV 97 83

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
204	ARSI			197.85-200.21	SILICEOUS ARGILLITE							
				ARSI	Black arg. w/ faint wispy sil. bands, Tr f.g. diss py. Dominant foln @ 60° cax.							
205					- Cm scale asymm. folds of sil bands have vergence down the plane of the foliation; - normal movement w.r.t. foliation plane.							
206					- Upper contact with RHLT is gradational.							
207	RHFS											
208				200.21-201.36	Grey, mass. aphy. rhyolite with faint, wispy sil.							
209				RHFS	bands.							
					- Trace py.							
210	RHLT		60		- Upper contact with ARSI gradational							
					- Core angle: 65°; defined by mostly to moderately developed foln.							
211												
212	ARSI			201.36-205.93	Siliceous argillite. See above (197.85-200.21)							
213				ARSI	for description							
					Core angle: 55°							
214					- Contact with RHFS is gradational, becoming more sediment rich (ARSI) over a 30 cm interval.							
215	ARTF											
				205.93-207.58	Light grey, aphyric rhy with thin sil. bands							
216				RHFS	aligned parallel to foliation. Minor arg. bands near							
					top of felsic flow.							
217					- Core angle: 50°							
218	RHFS											
				207.58-210.96	Med. grey, moderately fol. siliceous lapilli size fragments							
219				RHLT	separated by argillite.							
					Fragments are avg 1-2 cm in size, 85-90% of rock and are separated by thin laminations (<0.1cm) of black							
220	EXSP		50		argillite.							
221	EXSP				- Unit becomes massive over 10-20 cm intervals, losing the argillaceous/fragmented texture.							
222	EXSP				- Lapilli fragments increase in size towards base of unit, reaching max 3-4 cm size.							
223					- Core angle: 60°							
224				210.96-213.08	Siliceous argillite							
				ARSI	(same as above - 197.85)							
225	RHFF											
226												

PAGE 18 OF	PROJECT:	HOLE NO. WV-88

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
204										
205										
206										
207										
208										
209										
210										
211										
212										
213										
214										
215										
216										
217										
218										
		218.3	219.84	1.5	N203022					
219 2% py with EXCP; 0.1-0.2cm subhed. to		219.84	220.88	1.0	N203023					
220 euh. veins aligned in foliation plane										
		220.88	221.34	.5	N2032024					
221 - RHLT: 2% py defining foliation planes		221.34	221.92	.6	N2032025					
222		221.92	223.4	1.5	N2032026					
223										
224		223.4	225.6	2.2	2032027					
225		225.0	226.8	1.8	203028					
226										

PAGE 19 OF | PROJECT: | HOLE NO. WV-88

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Carb	E	FRACTURE INTENSITY	% VEIN QTZ.
227	RHFF			213.08-215.58 Tuffaceous argillite ARTF - Sil. rock with alternating bands of black argillite with more siliceous med grey bands - showing tuffaceous character. - Towards end of unit argillite forms bands around siliceous patches to tuffaceous fragments that are 2-4cm in diameter. - Core angle : 60 - Some assym. of folds bands indicating younging down dip of foliation							
228											
229											
230											
231			55								
232				vein looking west (unit)							
233											
234	PHAT			215.58-219.84 Light to dark grey moderately foliated aphyric rhy. RHFS foliation with rhy. defined by black argillite layers + minor sericite. - Over 20-30 cm intervals, RHFS becomes fragmental with both tuffaceous unit (PHTT) and lapilli size (RHLT) fragments surrounded by thin argillite bands. - Trace py aligned along foliation planes. - Core angle : 55°							
235											
236	PHTT										
237											
238				219.84-220.88 Calcite-pyrite exhalite with grey aphyric siliceous (interbedded) EXCP bands - The cream to white coloured carbonate bands are ~40% of rock, the remainder consist of sil. bands.							
239											
240			55								
241	RHFS			220.88-221.36 Rhyolite lapilli. tuff. RHLT - Aphy. siliceous frags = 1-7 cm & a surrounded by thin laminations of arg., ser., py. - Core angle : 50°							
242											
243	SCMS			221.36-221.92 Calcite-pyrite exhalite. (Same as above - 219.84) EXCP More carbonate in this unit - up to 70-80%.							
244											
245	QFWK			221.92-223.40 Silica-pyrite exhalite (py-poor). EXSP - Banded rock defined by massive white to grey silica layers with 10% carbonate layers and 10% argillite bands. - Portions of unit have a milky white colour (ie Exhalite altered). - Core angle : 50°							
246											
247											
248	ARST										
249											

PAGE 19 OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		226.8	228.4	1.6	203029					
227										
228										
229		228.4	230.0	1.6	203030					
230										
231										
		231.5	233.0	1.5	203031					
232										
233										
234										
		234.5	235.7	1.2	203032					
235										
236		235.7	237.2	1.5	203033					
237										
		237.2	238.2	1.0	203034					
238		238.2	239.35	1.2	203035					
239										
240		239.35	241.7	2.3	203036					
241										
		241.7	242.5	.8	203037					
242										
		242.5	242.77	.3	203038					
243		242.77	243.35	.6	203039					
		243.35	243.7	.3	203040					
244		243.7	244.45	.8	203041					
		244.45	244.5	.05	203042					
245										
		244.5	246.5	2.0	203043					
246										
247		246.5	248.33	1.8	203044					
248										
249										

PAGE 21 OF | PROJECT: | HOLE NO. WV-88

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				223.40-231.5 RHFF: Very fine grained rhyolite tuff - 30-40 cm intervals are massive aphyric rhyolite but most of unit consists of a fine (varve) tuffaceous rhyolite - 226.8-227.30 RHFF develops calcite/dolomite layers (~15% of interval) interbanded with the RHFF. Py content increases to ~3-4% over this interval. - Some calcite/dolomite bands at 228.4-228.80. - weak to moderate sericite alteration defining foliation planes - Argillite bands begin to appear towards base of unit							
				231.5-235.7 RHAT: Aphyric siliceous lapilli size fragments interbedded with black siliceous argillite - Lapilli fragments are ~1-2cm in size and are flattened in moderately developed foliation. - Core angle: 55°							
				235.7-237.2 RHTT: Fine grained tuffaceous rhyolite - very siliceous - med grey. - interbedded argillite layers near top of unit							
				237.2-242.5 RHFS: Massive, aphy. light grey rhyolite 2 massive carbonate bands within the rhyolite: 239.26-239.36; 241.06-241.16 - weak sericite alteration. - Lower contact with sulphide consists of slightly broken core but contact seems to be conformable							
				242.5-243.7 SSMS: Zn-rich massive sulphide, see accompanying sheet for details on the zone. - Sulphides in a carbonate matrix.							
				243.7-243.78 RHFS: See above description above SSMS.							
				243.78-244.45 QTVN: Qtz vein with pods of chlorite Cpy + Py with qtz vein							
			65°	244.45-244.5 CPMS: Cpy-rich massive sulphide.							

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS	243.77m 58 4.35
NV97-88							
v. thinly bedded. s.l.s aFeox RMTT + Py/Po (1-2%)							
(1) 233.4m - 243.4m -		60°					
(2) 243.4m - 249.6m @ ~~55~~60°			50°				
SSMS → as follows.							
(3) 243.6 - 246.55m - QV + pale green alt + ? CO_3 (10-15%), blebby Py/Po - 5%, cpy (5%)							
semipassive band Py/cpy		@ 245.45 - 245.50.					
(4) 246.55m - 250.3m - ARTF +/- Py.		65°					
SSMS							
(PYMS)							
(1) 242.50m - 242.77m - SSPY - (1-2% gal, cpy)		Fn.grd., vaguely banded, py rich MS.					- 80% py, 10% sph 5% chl, 5% carb.
N203038		minor brecciation of upper 10-15cm at upper contact. also majority of sph concentrated in single band @ 242.45 - 242.50m. (typical Fe-rich - red-purple colr)					
(SPMS)							
(2) 242.77m - 243.35m - SSSP -		Fn.grd., vaguely banded, sphalerite rich MS.					
N203039 (1-2% Gal, 2-3% cpy) →		- 50% py, 40% sph, 2% chl blebs, 5% blebby carb. minor X-cutting (.5-1cm) qvts.					
		- sph. uniform throughout entire and with a distinctive orange-red color (>Zn conc.)					
(SPMS/SPMS)							
(3) 243.35m - 243.7m - SSSP/SSPY		variable bands (2-5cm thick) of alternating py-rich (+ cpy) MS and sph-rich MS.					
+/- 203040		overall (40% py, 50% sph (orange bands + purple bands), 3-5% cpy, 23% chl/carb gang, gal-Tet?)					
		- 15cm orange, Zn-rich					
		- 2.5cm cpy/py-rich					
		- 2.5cm purple - Zn-rich					
		- 10cm pyritic + Carb. gangue.					
		sphal always coarser grained than py per occurs as discontinuous sph-rich matrix					
(CPMS)							
(4) 244.45 - 244.50 SSCP		Thin, cpy rich massive sulphide. Massive, fn grained cpy in silica matrix					
N203042		- within qtz vein.					

PAGE 23 OF | PROJECT: | HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
250										
251		250.91	252.37	1.5	203045					
252										
253										
254										
255										
256										
257										
258										
259										
		259.7	260.98	1.3	203046					
260										
261		260.98	262.28	1.3	203047					
262										
		262.28	262.87	.6	203048					
263										
		262.87	263.99	1.1	203049					
264										
265										
266										
267										
268										
		268.02	269.55	1.5	203050					
269										
270										
271										
272										

PAGE 25 OF | PROJECT: | HOLE NO. WV-88

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Gl)	B (Ser)	C (Ep)	D (Grb)	E	FRACTURE INTENSITY	% VEIN QTZ.
273		V		244.5-244.8 Same qtz vein as above							
				QTVN							
274		V		244.8-245.1 Sericitically altered rhyolite tuff.							
				RHLT - Core is broken fragments							
275				- 0.5-1cm siliceous frags in sericitic matrix							
				- Strong sericitic alteration							
276				- 5-7% cpy in this unit.							
277		V		245.1-246.5 Same qtz vein as above							
				QTVN							
278		V		246.5-250.85 Siliceous argillite							
				ARSI - 5-8% white sil bands ~0.2-1cm wide, parallel to foliation							
279				- 1% py within bands parallel to foliation							
				- Core Angle: 60							
		EOH									
				250.85-259.03 - Graphitic argillite							
				ARGR - 5-10% white siliceous bands							
				- STGs: 253.18-253.28; 258.05-258.15; 259.30-259.37.							
				- Core angle 60°							
				259.03-262.44 Light grey, strongly foliated feldspar xlt rhyolite tuff							
				RPTF - Feldspars + siliceous frags, tuffaceous to lapilli in size.							
				- Foliation is intensily folded.							
				- Strong sericite alteration throughout unit							
				262.44-263.14 Siliceous argillite with interbedded fine grained py.							
				ARSI - Py is ~6% of unit							
				- Same as ARSI above							
				263.14-264.10 - Feld. xlt rhyolite tuff. (same as above).							
				RPTF - Foliation moderately to strongly developed							
				- 2% py discs throughout							
				264.10-269.69 Feldspar porphyry.							
				FDPH - Typical porph. characteristic to footwall of deposit							
				- Feld: euhedral 0.3-1.5cm size xlts							
				- 9-13% of rock are feld xlts							
				- Feld in upper 1.5m of unit are variably altered to a dark mineral							
				- 266.26-276.76 feld xlts decrease to about 1-2% of rock.							

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
273										
274		273.51	275.04	1.5	203051					
275										
276										
277										
278		277.56	279.09	1.5	203052					
279										
280										

PAGE 27 OF | PROJECT: | HOLE NO. WV-88

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				FDPH cont'd - long axis of most fdl xtls aligned in foliation plane							
				- Moderate sericite alteration							
				- Core angle 60							
				269.69-276.66 Felspar rich (+/- qtz xtls) rhyolite xlt tuff.							
				RPTF - 0.3-0.8cm fdl xtls ~ 60% of rock							
				- xtls are within a sericitic matrix (moderate alteration)							
				that decreases down hole.							
				- More argillite + less fdl also down hole. Base							
				of unit ~ 25-35% fdl xtls.							
				- Core angle: 65°							
				276.66-279.49 Fine grained tuffaceous rhyolite with 10-20							
				RHTT interbedded bands of massive graphitic argillite							
				- Arg. comp. increases towards base of hole							
				- Fdl xtls are rare							
				- moderately to strongly foliated.							
				EOH.							

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: 1405 m
HOLE NO.: WU-97-89	BEARING: GN (033°)
LOCATION: 16150 E, 17035 N	DIP: -64
	TOTAL LENGTH: 145.38
LOGGED BY: Dave Gale	HORIZONTAL PROJECT
DATE: June 12, 1997	VERTICAL PROJECT
CONTRACTOR: Boisvenu Drilling	
CORE SIZE: NQ	
DATE STARTED: June 13	
DATE COMPLETED: June 15	
DIP TESTS: 108.8 m 13° (GRID) 46° (TRUE) -69°	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

Rods broke, terminating hole 89 at 145.38

Casing was sunk to ~ 60 metres and hole 89-A was started along side of hole 89. This hole was terminated when it cored hole 89's drill rods! Four boxes of core were obtained from 89-A but were not logged because of redundancy.

LEGEND

PAGE 1 OF | PROJECT: | HOLE NO. WV-89

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Fp	D Carb	E	FRACTURE INTENSITY	% VEIN QTZ.
				0-20.42 Overburden + casing DHOB							
20.42-27.13 RHLT				Oxidized, rhyolite lapilli tuff - Lapilli sized fragments (0.5-1.5cm) are siliceous and are within a argillite matrix. Frags ~70-80% of rock - Core is mainly broken. Preserved core has core angle of 50°							
27.13-63.09 STGG				Rock chips + fault gouge. 27.13 - 32.61 - core is green - rhyolitic 32.61 - 63.09 - black argillite.							
63.09-83.63 RHFS				Green, aphyric rhyolite with green sericitic partings defining moderately developed foliation - Weak sericite alteration - Entire interval consists of broken core. - Core angle 45°							
83.63-101.98 RHAR				Interbedded massive aphy. rhy. and black carbonaceous argillite. Argillite is ~25-30% of rock, increases to 45% near base - rhy is greyish white + aphyric. - Core angle is 45°							
101.98-108.30 RHFS				Greyish-white aphyric rhyolite with 0.3-1cm wide brownish green sericitic partings. - Weak sericite alteration - Trace py preserved along foliation planes - Core Angle: 45 - QTVN: 102.93-103.53							
108.30-111.86 RHAR				- Interbedded Argillite + aphyric rhyolite - Same as above - 40% argillite							
111.86-119.15 ARSI				- Siliceous argillite - Minor bands (5-10%) of aphyric rhyolite - Core Angle: 40°							

PAGE 2 OF	PROJECT:	HOLE NO. VW-89

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 3 OF | PROJECT: | HOLE NO. WV-89

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
42											
43											
44											
45											
46											
47											
48											
49											
50											
51											
52											
53											
54											
55											
56											
57											
58											
59											
60											
61											
62											
63											
64											

PAGE 4 OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 2 OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
65			45°		Chl	Ser	Ep	Cnk			
66											
67											
68											
69											
70											
71											
72											
73											
74											
75			45°								
76											
77											
78											
79											
80											
81											
82											
83											
84											
85			45°								
86											
87											

PAGE 6 OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 7 OF | PROJECT: | HOLE NO. NV-89

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Cb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
88											
89											
90											
91											
92											
93											
94											
95			45°								
96											
97											
98											
99											
100											
101											
102											
103											
104											
105			45°								
106											
107											
108											
109											
110											

PAGE 8 OF	PROJECT:	HOLE NO. WV-89

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 9 OF | PROJECT: | HOLE NO. WW-89

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
111											
112											
113											
114											
115			45°								
116											
117											
118				119.15-119.75 RHFS - Aphyric rhyolite with sericitic partings - Same as above (101.98) - Core Angle: 45							
119											
120				119.75-122.26 RHTT Fine grained tuffaceous rhyolite with 5-10% lapilli size fragments - Lapilli. size frags ~ 0.5-1cm dia ass^ white and very siliceous. - 1% magnetite is disseminated throughout unit. - Trace py.							
121											
122											
123											
124				122.26-122.54 EXMT Exhalitive magnetite iron formation - Rock consists of alternating bands of greenish black magnetite + grey silica. - Magnetite is med dia. as <0.1cm blebs. Mag ~ 8% of rock							
125											
126											
127				122.54-123.45 RHFS Aphyric grey rhyolite with thin sericitic to argillaceous partings - Mag. is diss throughout ~ 2% of unit. - Core angle: 40°							
128											
129				123.45-126.96 EXMT Exhalitive magnetite iron formation. - Same as above. - Mag ~ 13%. Matrix is silica. - Qtz: 124.25-124.82 - Trace py. - Core angle 40							
130	CP										
131											
132											
133											

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PAGE 10 OF	PROJECT:	HOLE NO. WV-89

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
111										
112										
113										
114										
115										
116										
117										
118										
119										
120										
121										
122										
123 2% py as euhedral b sush. xlts.										
124										
125										
126										
127 EXCP: Fine grained py Gyms bands interbedded										
128 with the carbonate. Py ~ 10% of unit.										
129										
130										
131										
132										
133										

PAGE 11 OF | PROJECT: | HOLE NO. WV-89

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				126.96-127.61 RHFS - Grey, moderately foliated aphyric rhyolite - Massive rhyolite with sericite bands and darker bands of dark grey silica - weak sericite alteration.								
				127.61-133.0 EXCP - Calcite pyrite exhalite - Alternating bands of green-(sericite + pyrite) and white-(calcite) material. - Core angle is 45°								
				133.0-141.23 ARSI - Siliceous Argillite - 10-15% siliceous bands - bands + foliation is chaotically folded over 40-50 cm intervals - Core angle is 45 but is folded into a 0° (// to core axis) at some intervals								
				141.23-142.98 RHTT - Dacitic to rhyolitic fine grained tuff - Moderate sericitic alteration throughout rock - Tuff-frag are 0.1-0.2 in size. And consist of white siliceous fragments.								
				142.98-144.28 ARSI - Siliceous Argillite (same as above) - Two rhyolite tuff. at 143.53-143.63; 144.0-144.1 These tuff beds are the same as above.								
				144.28-145.38 RHFS - Aphyric light grey rhyolite with thin argillaceous laminations - Core angle is 45								
				EOH - 89 - Cont'd in hole 89-A								

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine Deposit	GROUND ELEV.: 1492m
HOLE NO.: WV-97-90	BEARING: 033° (GN)
LOCATION: 16400E 17095N	DIP: -84
	TOTAL LENGTH: 403.55 m.
LOGGED BY: Dave Gale, Mark Pedersen	HORIZONTAL PROJECT
DATE: June 16, 1997	VERTICAL PROJECT
CONTRACTOR: Bois Venu Drilling	
CORE SIZE: HQ	
DATE STARTED: June 17	
DATE COMPLETED: July 22	

DIP TESTS

17.4 - 039 (T) - 84°	172.8 - 029 (T) - 87°
103.9 - 339 (T) - 88°	274.9 - 239 (T) - 82°
145.4 - 249 (T) - 87.5°	369.9 - 229 (T) - 79°

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- Hole Suspended at 367.9 m on June 22/97
- Hole Re-started July 21/97
- 5.53m high grade massive sulfide intersection 370.52 - 376.05

LEGEND

- ADMS
- ADTT
- ARGILLITE
- RHFR
- QTVN
- FAULT GOUGE
- EXCP
- EXMT
- RHFF / RHFS / RHTT / RHAT
- SSMS
- QFPH

PAGE 1 OF 44 | PROJECT: Wolverine | HOLE NO. W-90

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Gyb)	E	FRACTURE INTENSITY	% VEIN QTZ.
				0-3.05 Casing DHCS							
				3.05-4.78 Overburden DHOB							
			45	4.78-27.36 Massive, fine grained andesite, ADMS - Light green and moderately foliated. - Rare, thin argillite bands (totalling no more than 1-2% of interval) within the andesite. Presumed to representing fine grained interflow sediment. - At 7.00m, A possible contact between flows is defined by round 0.1-0.2 cm. structures that are filled with dolomite. Could represent an amygdule rich portion of a flow. - QTVN: 26.5-27.0 - Core Angle 5: 45° 15: 45° 25: 45							
				27.36-54.9 Tuffaceous andesite with interbedded massive andesite ADTT flow - Light green + moderately foliated - Fine ash to tuffaceous size fragments defining 1-5cm thick beds with more massive andesite flow. - Increase in % of interbedded argillite; increasing from 1-2% at top of tuff to 10-15% near base of interval (adjacent to contact with ARTF). - % of fine grained andesite tuff layers increases to 25-35% of rock near base of interval. - QTVN - 29.0-29.1; 31.0-31.1 - Core Angle: 35m: 40° 45m: 40°							
		ADMS	45								

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PAGE 2 OF 44	PROJECT: Wolverine	HOLE NO. WV97-90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23		23.70	24.20		203055					
24										
25										

PAGE 3 OF 44 | PROJECT: Wolverine | HOLE NO. WL-90

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
26	AOMS										
27											
28											
29											
30											
31											
32											
33											
34											
35			40								
36											
37											
38											
39											
40	AOTT										
41											
42											
43											
44											
45			50								
46											
47											
48											

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PAGE 4 OF 44	PROJECT: Wolverine	HOLE NO. WV 97 90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										

PAGE 5 OF 44 | PROJECT: Wolverine | HOLE NO. WV-90

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
				54.9 - 67.2 ARTF: Black, moderately banded, moderately tuffaceous argillite. - Banding defined by fine argillite varing to tuffaceous argillite with 3-4% lapilli size fragments. Some bands are a greenish-black colour reflecting a tuffaceous andesite component. - The upper contact with andesite tuffs is gradational + conformable. The lower ADTT is interbedded with ARTF and ARTF is interbedded with ADTT!! - 3-4% of rock as 0.2-0.4 cm white siliceous bands. - Banding is // to dominant foliation. - Core angle 55m: 45° 65m: 50° - QTUN: 66.6-66.8 ; 66.0-66.1							
			95								
				67.2 - 70.7 ADTT: Tuffaceous andesite - Same as above but mainly all tuffaceous material: fine andesitic ash, grading to tuffaceous ± lapilli frags. Max. frag size is 1 cm. - Contacts above + below are conformable + gradational over 10-15 cm.							
				70.7 - 73.5 ARTF: Black tuffaceous argillite. (Same as above). - Thin (20-30cm thick) fragmental unit (consisting of aphyric siliceous frag. in a black argillite) within the ARTF.							
				73.5 - 78.7 RHFR: Aphyric siliceous rhyolite within an argillaceous matrix - Frags are siliceous and 50-60% of rock, and are flattened in moderately developed foliation. Frags are ~0.5-3cm in length. - Argillite matrix is carbonaceous. - Thin bands of green ADTT within the fragmental unit. Banding // to foliation. - Core angle: 75m: 45°							
			50								
				78.7 - 79.9 ARTF: Interbedded tuffaceous argillite + tuffous andesite forming alternating bands - Fine grained carbonaceous argillite - Green tuffaceous andesite 0.5-20cm beds within the argillite							
				79.9 - 80.5 RHFR: Aphyric siliceous rhyolite within an argillaceous matrix (same as above) - Green tuffaceous andesite bands still present. - Core angle 50°							

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PAGE 6 OF 44	PROJECT: Wolverine	HOLE NO. WV 9790

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
49										
50										
51										
52										
53										
54										
55										
56										
57										
58										
59										
60										
61										
62										
63										
64										
65										
66										
67										
68										
69										
70										
71										

PAGE 7 OF 44 | PROJECT: Wolverine | HOLE NO. W-90

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Carb	E	FRACTURE INTENSITY	% VEIN QTZ.
72				80.5 - 80.8	Tuffaceous andesite with thin argillite layers +							
				ADTT	partings - Same as above							
73												
				80.8 - 91.2	Aphyric siliceous rhyolite fragments in a carbonaceous							
74				RHFR	Argillite matrix							
					- Same as above							
75			45		- 5-7% of rock as 1-3cm wide ADTT bands							
					- Core angle : 85m : 65°							
76												
				91.2 - 92.2	Tuffaceous argillite with interbedded tuffaceous							
77				ARTF	andesite. (Same as above)							
					- T andesite comprises ~ 10% of interval but gives							
78					the rock a greenish black coloration.							
					- 10-15% white siliceous bands // to foliation							
79												
				92.2 - 95.3	Rhyolite fragmental							
80				RHFR	- Same as above							
					- 40-60% aphyric rhy frag in carb. arg matrix.							
81					- 5-10% tuff.'s andesite.							
					- Core angle : 95m : 60°							
82												
				95.3 - 101.7	Tuffaceous andesite							
83				ADTT	- Same as above							
					- white siliceous bands + pseudo-fragments							
84					present ~ 15% of rock							
					- Moderately foliated + light green colour.							
85			60		- Minor andesitic flows within the tuff.							
86				101.7 - 103	Rhyolite fragmental							
				RHFR	- White siliceous fragments (aphyric rhy) in a							
87					tuffaceous andesite matrix (light green and fine							
					grained							
88					- Fragments ~ 40% of rock.							
89				103 - 105.6	Tuffaceous andesite							
				ADTT	- Tuffaceous matrix with minor white, siliceous lapilli-size							
90					frags.							
					- Same as above							
91					- Core angle :							
92												
93												
94												

Westmin Resources

PAGE 8 OF 44	PROJECT: Wolverine	HOLE NO. WV 97-90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
72										
73										
74										
75										
76										
77										
78										
79										
80										
81										
82										
83										
84										
85										
86										
87										
88										
89										
90										
91										
92										
93										
94										

PAGE 9 OF 44 | PROJECT: Wolverine | HOLE NO. WV-90

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
95	AOTT										
96											
97											
98											
99											
100											
101											
102											
103	FHFP										
104											
105											
106											
107											
108											
109											
110											
111	RHFR										
112											
113											
114											
115											
116											
117											

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PAGE 10 OF 44	PROJECT: Wolverine	HOLE NO. WV 9750

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										
112										
113										
114										
115										
116										
117										

PAGE 11 OF 44 | PROJECT: Wolverine | HOLE NO. WV-90

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
118	PHFP										
119											
120											
121											
122											
123											
124											
125			65								
126											
127											
128											
129											
130											
131											
132											
133											
134											
135			70								
136											
137											
138											
139											
140											

Westmin Resources

PAGE 12 OF 44	PROJECT: Wolverine	HOLE NO. WV97-90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
118										
119										
120										
121										
122										
123										
124										
125										
126										
127										
128										
129										
130										
131										
132										
133										
134										
135										
136										
137										
138										
139										
140										

PAGE 13 OF 44 | PROJECT: Wolverine | HOLE NO. WV-90

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Ch)	ALTERATION B (Se)	ALTERATION C (Fp)	ALTERATION D (Crb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
141–163	RHFR	RHFR	65 / 55	105.6-203.30 RHFR Fragmental Rhyolite - Extensive package of siliceous aphyric rhyolite in an argillaceous matrix. - Variation over interval is observed in clast percentages: Avg 70-80% with 1-2m intervals showing 50-60%, 1-2m intervals showing semi-massive rhyolite. Variation also shown by clast size: avg ~ 2-3cm, up to 4-6cm over 0.5-1m intervals - Core Angles 115m: 65° 145m: 65° 125m: 65° 155m: 55° 135m: 70° 165m: 65° - No evidence for grading (reverse or normal) in clast-size variation							

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PAGE 14 OF 44	PROJECT: Wolverine	HOLE NO. WV 97 90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
141										
142										
143										
144										
145										
146										
147										
148										
149										
150										
151										
152										
153										
154										
155										
156										
157										
158										
159										
160										
161										
162										
163										

PAGE 15 OF 414 | PROJECT: Wolverine | HOLE NO. WV-90

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (105.6 - 229.30: RHFR cont'd)	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
164											
165			65°								
166											
167											
168											
169											
170											
171											
172											
173											
174											
175											
176			65°								
177				→ 176.93-177.10: STGG: FAULT GOUGE DK grey, chl'ic, clay→ some crushed fragments contacts @ 25° c.a.							
178			25°								
179											
180											
181											
182			60°								
183											
184											
185			65°	→ 185.09: STFL: FAULT @ 65° c.a.							
186											

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PAGE 16 OF 44	PROJECT: Wolverine	HOLE NO. WV 97 90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
164										
165										
166										
167										
168										
169										
170										
171										
172										
173										
174										
175										
176										
177										
178										
179										
180										
181										
182										
183										
184										
185										
186										

PAGE 17 OF 44 | PROJECT: Wolverine | HOLE NO. WV97-30

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (chl)	B (ser)	C (ep)	D (carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
				(105.6-203.30: RHFR cont'd)							
187	RHFR		65								
188											
189											
190											
191											
192											
193	193.23 193.50		65	→ 193.23-193.50: QTVN: QUARTZ VEIN Bull wh. qtz vn w/ rare f.g. blebby py + 2% blebby chl. Primarily brkn (shattered) core, contacts @ 65° cax							
194			65								
195											
196	196.43			→ 196.43-196.85: STGG: FAULT GOUGE Pasty rhyolitic ash-g w/ contacts @ 65° cax							
197	196.85 197.25 197.45		65 65	→ 197.25-197.45: STGG: FAULT GOUGE Same as above.							
198											
199											
200	RHFR										
201											
202											
203	203.30		70	→ 203.25-203.30: STBX: FAULT BRECCIA Brk'd core w/ chl-ats from f.g. sand to 1x1cm pebble sized orient'd @ 70° cax							
204	203.67 205.77		65								
205											
206				203.30-212.00 SILICEOUS ARGILLITE.							
207	ARSI			ARSI Black sil arg w/ wk porv. chl alt'n + 3% f.g. diss py. Primarily brkn, fit'd or brk'd core.							
208				→ 203.67-203.77: QTVN: QUARTZ VEIN Bull wk qtz vn w/ tr chl + graphite, contacts @ 55+80° (LITL)							
209											

Westmin Resources

PAGE 18 OF 44	PROJECT: Wolverine	HOLE NO. WV9790

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
187										
188										
189										
190										
191										
192										
193										
194										
195										
196										
197										
198										
199										
200										
201										
202										
203		203.30	212.0		203056					
204										
205										
206										
207										
208										
209										

PAGE 19 OF 44 | PROJECT: Wolverine | HOLE NO. W9790

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (CBT)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				(203.30 - 212.00: ARSI cont'd)							
				→ 209.40 - 212.00: ST66/STBX							
				Patchy blk graphitic / siliceous gouge w/ local consolidated bx'd core. All grain sizes present. Poor core recovery.							
210											
211											
212 212.00											
213 213.30											
213.65				21200-213.30 CARBONATE EXHALITE (?)							
214				EXCP Flt bx w/ dolomitic matrix + up to 10% bgass py. Silic clasts 3→4 mm² w/ localized chl stringers + wk perv chl. alt'n. Py occurs primarily in 2-3 cm thk irregular bands.							
215											
215.85											
216											
217											
218				213.30-213.65 MAGNETIC IRON FORMATION							
218.50				EXMT V.dk gray fragmented (bxd) magnetic fe formn w/ 15% magnetite + 12% f.g. stringer py. Sharp lower contact @ 60° cax							
219											
220											
221				213.65-226.25 ASH TUFF							
222				RHFF Mod perv chl alt'd rhy ash tuff w/ localized mod→ strong perv. chl. alt'n. Dk greenish gray colour w/ recrystal bx'd zones w/ dolomitic matrix. Primarily brkn core + flt gouge							
223											
224				→ 215.85-218.50: ST66 FAULT GOUGE Dk gray pasty rubble							
225											
226 226.25											
226.63 226.80				226.25-241.10 SILICEOUS ARGILLITE							
227				ARSI Blk sil arg w/ fine wispy sil laminae + 1% bgass blebby py. Wk→mod perv chl alt'n as noted by dk green weathering product on natural fracture faces. Poor core recovery w/ brkn core (rubble) common							
228											
229											
230				→ 226.68-226.80: QTVN - QUARTZ VEIN Snow white, tr chl blebs v. coarse f.g. py. Contacts @ 85° cax.							
231											
232											

Westmin Resources

PAGE 20 OF 44	PROJECT: Wolverine	HOLE NO. WV 97 90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
210										
211										
212		212.00	213.30		203057					
213		213.30	213.65		203058					
		213.65	226.25		203059					
214										
215										
216										
217										
218										
219										
220										
221										
222										
223										
224										
225										
226										
227										
228										
229										
230										
231										
232										

PROJECT: Wolverine

HOLE NO. WV 97 90

(226.25-241.10: ARSI - cont)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION		ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
233	ARSI											
234												
235												
236												
237												
238												
239												
240												
241.10				241.10-246.40	MASSIVE RHYOLITE							
			70	RHFS	wk pssv. ser. alt'd mass aphyric							
242			70		pale green rhyolite. Rare f.g.							
242.49					diss. py. Primarily broken core							
242.60			55		→ 242.40-242.65: QTVN: QUARTZ VEIN							
243			80		Bull white qtz vein							
					w/ tr chl blebs +							
244					no vis sx's							
245												
246												
246.40			70	246.40-248.08	FRAGMENTAL RHYOLITE							
247				RHFR	Fragmental aphyric rhy w/							
					v fine wkly sericitic partings.							
248					Frags avg 1×3 cm in size							
248.08			65									
249				248.08-252.15	CALCITE / PYRITE EXHALITE							
249.00			70	EXCP	Laminated cal/py exh in two							
250					sections w/ a fit in btwn. Upper							
			70		sect'n is laminated light blue mottled							
251					texture w/ 5% py + a localized							
252					fine calcite stockwork. Lower							
252.15					section is a laminated beige/pale							
			75		green w/ 10% py + ↑'d							
253					sil content; sericitic partings							
					→ 249.00: STFL: FAULT							
254					@ 70° CAX.							
254.70												
255.23				252.12-255.10	SILICEOUS ARGILLITE							
				ARSI	DK gray aphanitic to black sil arg							

L 15°

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PAGE 22 OF 44	PROJECT: Wolverine	HOLE NO. WV97 90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
233										
234										
235										
236										
237										
238										
239										
240										
241										
242										
243										
244										
245										
		245.96	248.08		203060					
246										
247										
248		248.08	249.01		203061					
249		249.01	251.36		203062					
250										
251		251.36	252.15		203063					
252		252.15	253.15		203064					
253										
254										
255										

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				(252.12-255.10: ARSI-cont'd)							
256	RHFF			w/ tr. mass py stringers. Grading vertically more graphitic downhole. Fit's very bottom of sec'n							
257			60								
258				→ 254.95 STFL: FAULT Fit on a graphitic surface @ 15° cax w/ vis. slickenside striae							
259											
259.75			70	→ 255.10 STFL: FAULT Fit'd lower contact @ 60° cax							
260	ARCB										
261 261.10			65								
262	RHLT		60	255.10-259.75 RHFF	ASH TUFF Mod'ly chl.ic alt'd purplish/gray ash tuff. Laminated w/ regular rhythmic fine (1mm) chl. banding, V. rare py.						
263											
264.00 264.2			60 70								
265	ARSI			259.75-261.10 ARCB	CARBONACEOUS ARGILLITE Dk. blk carb'ceous arg w/ sil. stringers + fragments. 1% mass py blebs vis. on fract planes. Moh's hardness = ~4.5 Primarily broken core.						
266											
267 267.30											
268				261.10-264.00 RHLT	RHYOLITE LAPILLI TUFF Blk greenish/gray rhy lapilli tuff w/ sericitic part'gs + rare to trace f.g. py blebs along part'gs.						
269											
270	RHFF		70								
271				264.00-267.30 ARSI	SILICEOUS ARGILLITE Blk sil arg w/ wispy siliceous bands up to 3mm thk Tr. mass py stringers. Lower contact in broken core.						
271.93 272			60								
273				→ 264.01-264.09: GTVN: QUARTZ VEIN Qtz vn w/ tr. chl septa, rare (i.e. 3) mass py blebs (2mm²) + sharp contacts @ 50° cax							
273.89 274.09		BX	70								
275											
276											
277				267.30-271.93 RHFF	ASH TUFF Pale greenish/gray f.g. rhyolitic ash tuff w/ fine sericitic rhythmic bands + rare py, mostly broken core						
278											

Westmin Resources

PAGE 24 OF 44	PROJECT: Wolverine	HOLE NO. WV 97 90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
256										
257										
258										
259										
260										
261										
262										
263										
264										
265										
266										
267										
268										
269										
270										
271										
272										
273										
274										
275										
276										
277										
278										

PROJECT: Wolverine

HOLE NO. WV9790

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
279	RHFS			271.93-280.40 MASSIVE RHYOLITE							
				RHFS Fg gray mass aphyric rhy w/ regular rhythmic apple green sericitic bands 1-2mm thk. V. rare f.g. py, commonly brkn core. Gradational U+L contact.							
280.40			70	→ 273.89-274.09 BRECCIA							
281			70	Brkd core, no sign of flt'g, frags are angular to sub-ang. + vary from fine sand to pebble. Sericitic matrix							
282											
283											
284	ARS1										
285											
286				280.40-286.32 SILICEOUS ARGILLITE							
286.32				ARS1 Black f.g. arg. w/ wispy siliceous bands. Rare very fine grained py stringers ~0.1mm thk // to foln. Primarily brkn core +/or rubble.							
287			70								
287.04			70								
288											
289				286.32-291.90 MASSIVE RHYOLITE							
289.95	RHFS		65	RHFS Fg gray mass, somewhat cherty, aphyric rhyolite. Tr fine f.g. pyritic rhythmic laminae + x-cutting fine carb veinlets @ 40° cax.							
290			65								
290.11											
291											
291.43			65								
291.50				→ 286.50-287.04 QCVN QUARTZ/CARB VN. Bull white qtz vn w/ x-cutting carb veinlets (@ 40° cax) + 20% fine clayey white (kaolinite?) mineral. Very rare f.g. py, undulatory contacts (@ ~70° cax)							
292			70								
292.93	ARS1										
293.02	EXCP		65								
293.61			70								
294											
295											
296				→ 289.98-290.11 EXCP CARBONATE EXHALITE Light bluish/gray mottled carbonate exh. Foln @ 65° cax, sharp contacts @ 65° cax + continued tr. fg pyritic bands.							
296.52	ARTF										
296.75											
297											
298											
298.50			70								
299				→ 291.43-291.50 EXCP CARBONATE EXH. Same as above							
300	RHFS		70								
300.43			70								
300.55											
301				291.90-293.08 SILICEOUS ARGILLITE							
301.45			75	ARS1 Same as above (280.40-286.32)							

Westmin Resources

PAGE 26 OF 44	PROJECT: Wolverine	HOLE NO. W97 90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
279										
280										
281										
282										
283										
284										
285										
286										
287										
288										
289		289.00	289.98		203065					
		289.98	290.11		203066					
290		290.11	291.43		203067					
291		291.43	291.50		203068					
		291.50	291.90		203069					
292		291.90	293.08		203070					
293		293.08	293.61		203071					
		293.61	294.28		203072					
294										
295										
296										
297										
298										
299										
300										
301										

PROJECT: Wolverine

HOLE NO. WV 9790

* Descriptive Geology Only *

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				293.08 - 293.61 CARBONATE EXHALITE							
				EXCP mottled light blue colored							
				carbonate exh w/ mod effervescence							
				w/ 10% HCl. V. rare f.g. diss py.							
				Fine carb veinlets produce a							
				faint spiderweb stockworking							
				through core.							
				→ 293.20 - 293.26: QTVN: QUARTZ VEIN							
				Bull white qtz vn w/							
				fine carb bands @							
				contacts. Contacts are							
				sharp @ 60° (U) + 65° (L)							
				to cax							
				→ 293.44 - 293.50: QCVN: QUARTZ/CARB. VN							
				90/10 % qtz/carb w/							
				tr. 1mm² chl. blebs.							
				No cx's. U + L contacts							
				@ 90° cax.							
				293.61 - 298.50 TUFFACEOUS ARGILLITE							
				ARTF Fine grained black arg. w/ 5×25mm							
				siliceous, tuffaceous sized, bands.							
				Rare 1mm thk f.g. pyritic bands							
				running // to fol'n are vis. Primeval							
				brkn or fit'd core.							
				→ 296.50 - 296.70: ST66: FAULT GOUGE							
				Pasty dk grayish/black							
				gouge bounded by							
				brkn core/rubble							
				298.50 - 301.45 MASSIVE RHYOLITE							
				RHFS mass. fg gray aphyric rhy w/							
				rare f.g. pyritic stringers <1mm							
				thk Tr. localized x-cutting							
				fine dolomitic veinlets							
				→ 300.47 - 300.53: EXCP: CARB. EXHALITE							
				mottled light gray							
				carb. exh w/ mod							
				effervescence w/ 10%							
				HCl. Very fine f.g.							
				pyritic bands @							
				contacts (@ 70° cax)							
				301.45 - 312.00 SILICEOUS ARGILLITE							
				ARSI Black fine grained sil. arg. w/							
				rare fg pyrite blebs <1mm².							

PAGE 28 OF 44	PROJECT: Wolverine	HOLE NO. WV 97 90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 29 OF 44 | PROJECT: Wolverine | HOLE NO. WV 9790

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(301.45-312.00: ARSI cont)							
302				Wispy siliceous bands appear near tuffaceous in texture.							
303				→ 301.10-301.50: Mass aphyric rhyolite rubble. Pebble sized clasts.							
304			75	→ 303.97-303.95: Carbonate band w/ 1% stringer fg py, possibly exhalative.							
305											
306											
307		ARSI									
308	308.03		75	→ 308.07-308.17: QCVN: QUARTZ/CARB VN. 93/7% qtz/carb vn bull white w/ 1 wallrock fragment 2cm². Contacts @ 75° (U) + 80° (L) to cax.							
309	308.17		80								
310											
311	312.93			→ 310.90-311.90: ST66: FAULT GOUGE Black pasty gouge w/ c in brkn core.							
312	312.00		25								
	312.39		75								
			65	312.00-317.02 CARBONACEOUS ARGILLITE							
313				ARCB Black arc w/ 1% carbonaceous component. Tr. stringer py. Continued wispy siliceous bands.							
314											
315		ARCB	75 1	→ 312.00-312.30: ST66: FAULT GOUGE Black graphitic gouge; from clay → pebble clast size.							
316			1								
317	317.02		75								
		ARTF		317.02-317.82 TUFFACEOUS ARGILLITE							
	317.82		50	ARTF V. dk. gray tuffaceous arg. Frags avg. 2mm² in size and give an overall mottled							
318	318.36		20	appearence. 1% f.g. diss. py.							
	318.50		20								
	318.93		40								
319			40								
	319.69		90								
320				317.82-323.92 CARBONACEOUS ARGILLITE							
				ARCB Same as above (312.00-317.02)							
321				→ 318.36-319.65: Very fine faint carb stockworked veinlets effervescing wkly w/ 10% HCl							
322											
323			90 1	→ 318.50-318.60: QTVN: QTZ VN Bull white 3% chl blebs, no sxs							
	323.92		70								
324		V									

PAGE 30 OF 44 | PROJECT: Wolverine | HOLE NO. WV97 90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
302										
303										
304										
305										
306										
307										
308										
309										
310										
311										
312										
313										
314										
315										
316										
317										
318										
319										
320										
321										
322										
323										
324										

PAGE 31 OF 44 | PROJECT: Wolverine | HOLE NO. WV9790

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				(317.82-323.92: ARCB cont'd)							
				→ 318.90-319.60: QTVN:QTZ VN							
325				Same as above							
326	RHAT										
				323.92-327.38 ARGILLICEOUS RHYOLITIC TUFF							
327				RHAT Rhyolitic lapilli tuff w/ arg.							
327.38				partgs. Dk greyish/black							
328	RHFR		60	colour. Frags are lapilli sized							
			60	w/ jagged edges. Tr localized							
329				mass py blebs assoc'd w/							
329.42			65	arg partgs.							
330											
				327.38-329.42 FRAGMENTAL RHYOLITE							
331				RHFR Lapilli sized rhy. frags, v. similar							
				to above unit yet arg. partgs							
332				have been "replaced" by beige							
				sericite.							
333											
			70	329.42-337.00 ASH TUFF							
334	RHFF			RHFF Fog gray fine→med grained							
				(ash sized) rhy tuff. 1%							
335				diss. f-g py blebs. Rhythmic							
				fine (1mm thk) sericitic bndg.							
336				→ 329.42 STFL - FAULT							
				@ 65° ca							
337			35	337.00 → 329.55 STFL - FAULT							
				@ 65° ca							
338				→ 329.87-329.95: BRECCIA							
				Bxd RHFF; frags avg							
339				2cm²							
340				337.00-344.67 ARGILLICEOUS RHYOLITE TUFF							
				RHAT Same as sec'n 323.92-327.38							
341				above							
				- Fe oxid spots							
342	RHAT										
343											
344											
344.67				344.67-358.92 FRAGMENTAL RHYOLITE							
345			60	RHFR Fog gray fragmental rhy w/							
				fine grayish/green sericitic							
346				partings + tr. f-g diss blebby							
	RHFR			py Frags avg. lapilli size (1-2mm)							
347			65								

PAGE 32 OF 44	PROJECT: Wolverine	HOLE NO. WV 97 90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
325										
326										
327										
328										
329										
330										
331										
332										
333										
334										
335										
336										
337										
338										
339										
340										
341										
342										
343										
344										
345										
346										
347										

PROJECT: Wolverine

HOLE NO. WV9790

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (341.67 - 358.92 : RHFR cont'd)	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (LFP)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
345	RHFR		30								
349											
350											
351											
352											
353											
354											
355			65	→ 355.03-355.17 mod perv. dol alt'n, light brownish/ gray colour w/ 3% f.g. diss. py							
356											
356.93 357 357.07			60	→ 355.17-356.90 tr d py content, up to 2% f.g. diss. euh py.							
358											
358.92 359			70	→ 356.90-357.07 EXCP CARBONATE EXHALITE wkly effervescent (w/ 10% HCl) carb. exh w/ 2% f.g. diss py. mottled fog gray colour.							
360 360.25	ARSI		70								
361	EXCP		65	→ 357.07-358.92 Random carb exh bands, 2-3 cm thk w/ tr f.g. py. Bands comprise <1% total core.							
361.46	RHFR		40								
362 360.92			65								
363											
364	ARSI			358.92-360.25 ARSI SILICEOUS ARGILLITE Rhythmically banded black (cherty) siliceous arg w/ 10% fine → vf.g. py assoc'd w/ siliceous bands. Some (40%) of siliceous bands show finely mottled carbonate re-xtallization + effervesce modly.							
365			65								
366											
367											
368				360.25-361.46 EXCP CALCITE PYRITE EXHALITE Dk gray, mottled ca/py exh w/ wispy py'ic + calcic stringers 3% f.g. stringer py. stringers are irregularly shaped "S-Z" patterns. Sharp lower contact @ 361.46 (40° ca							
369 369.95			70								
	ARGR										

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
348						
349						
350						
351						
352						
353		353.14	354.14		203073	
354		354.14	355.13		203074	
355		355.13	356.07		203075	
356		356.07	357.07		203076	
357		357.07	358.0		203077	
358		358.0	358.92		203078	
		358.92	360.25		203079	
359						
360		360.25	361.46		203080	
361		361.46	362.02		203081	
362		362.02	362.98		203082	
		362.98	363.93		203083	
363		363.93	365.04		203084	
364						
365		365.04	366.07		203085	
366		366.07	366.96		203086	
		366.96	367.95		203087	
367		367.95	368.95		203088	
368		368.95	369.70		203089	
369						
370						

PROJECT: Wolverine

HOLE NO. WV9790

* Descriptive Geology Only *

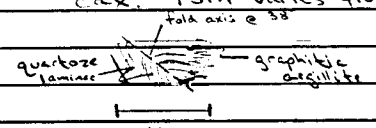
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				361.46-362.02 ASH TUFF							
				RHFF Fine grained, mottled, light grey rhyolitic ash tuff w/ v f g, wispy common pyrite stringers. Grading massive siliceous downhole to a siliceous (cherty) arg. @ 362.02.							
				362.02-368.95 SILICEOUS ARGILLITE							
				ARSI Black siliceous/cherty arg. w/ rhythmic fine siliceous bands, 3% f g pyrite stringers assoc'd w/ siliceous bands. Very similar to previous ARSI unit (358.92-360.35) minus carbonate re-mobilization of siliceous bands.							
				* → Lost hole; will continue with NQ at a later date							
				Restarted with NQ on July 21/97 Switched HQ → NQ at 1217'.							

Westmin Resources

PAGE 36 OF 44	PROJECT: Wolverine	HOLE NO. WV 9790

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 37 OF 44 | PROJECT: Wolverine | HOLE NO. WV 97 90

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
370.52	ARGR	SSMS	60	368.95-370.52 GRAPHITIC ARGILLITE ARGR Jet black hanging wall graphitic arg. w/ variable structure; strongly fol'd, gouged lower part of sec'n. Diss f.g. → mass py w/ regional pyitic blebs + stringers vis							
371				→ 369.75 · ST - CHEVRON FOLD NOSE Graphitic arg. w/ quartzose laminae fine → 3mm thk. in a chev. fld. Fold axis @ 38° cax. Foln varies from 60° → ~0°							
372			68								
373				→ 370.16-370.52 · STGG - FAULT GOUGE Black graphitic fine grained mod'ly consolidated, friable gouge.							
374											
375				370.52-376.05 MASSIVE SULFIDE (5.53m) SSMS High Pb/Zn grade mass. sx w/ a Cu rich region near bottom of unit. Localized qtz, carb, graphite, + chl'ic gangue							
376.05			41								
376.51		RHFS	70	→ 370.52-371.20 · 95% PY 5% GANGUE Avg core angle: 60° Granular fine → med. grd subhedral py x-tals over a dull metallic mass pyitic matrix. No other apparent sx mineralization. Gangue min'y consists of fine dk graphite bands from 370.59-370.69m.							
377			50								
378			60								
379				→ 371.05-371.11 · Fractured bullish qtz pod.							
380											
381				→ 371.20-371.73 · 95% PY, 5% GANGUE mass dull metallic py mod'ly cut randomly by healed fract planes. Random f.g. up to 1cm thk (5%) regular pyrite bands. Localized fine carb blebs + also trace 2x20mm green talc stringer @ 371.55. Overall v. wk effervescence w/ 10% HCl.							
382			75								
383		ARTF									
384.39	114		70								
385				→ 371.73-372.15 · 60% PY 25% SPH 5% CPY 5% GALENA 5% GANGUE							
386		ARGR	33	mass dull metallic py w/ faint							

Westmin Resources

PAGE 38 OF 414	PROJECT: Wolverine	HOLE NO. WW 97 90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		369.70	370.52		204001					
		370.52	370.92		204002					
371		370.92	371.20		204003					
		371.20	371.73		204004					
		371.73	372.15		204005					
372		372.15	372.82		204006					
		372.82	373.63		204007					
373		373.63	373.97		204008					
		373.97	374.29		204009					
374		374.29	374.74		204010					
		374.74	375.41		204011					
375		375.41	375.69		204012					
		375.69	376.05		204013					
376		376.05	376.40		204014					
		376.40	376.81		204015					
377		376.81	378.19		204016					
378		378.19	379.67		204017					
379		379.67	381.02		204018					
380										
381		381.02	382.45		204019					
382		382.45	384.14		204020					
383										
384		384.14	385.88		204021					
385		385.88	387.19		204022					
386										

PROJECT: Wolverine

HOLE NO. WV9790

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	* Descriptive Geology Only * GEOLOGICAL DESCRIPTION (370.52-376.05 - SSMS cont'd)	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				feathery, anastomozing mass red sph bands. Diss. v.f.g. gray euh. PbS "glittering" throughout. Localized (near 372.12) mass. cpy. stringer 5mm x 30mm. Gangue incl. Localized 5mm² creamy carb. (modly efferv.) + tr fine chl'ic stringers							
				→ 372.15 - 372.82: 65% PY, 15% SPH, 10% PbS, 5% CPY, 5% GANGUE							
				Dull metallic mass py w/ fract. texture similar to secn 371.20 - 371.73. Very faint feathery red mass. sph stringers w/ assoc. d.v.f.g. → mass wispy silvery PbS (possibly tetra. or both). Localized creamy 5mm² qtz/carb gangue							
				→ 372.82 - 373.97: 40% PY, 30% SPH, 15% CPY 10% PbS, 5% GANGUE							
				Dull metallic mass py w/ rhythmic faint reddish 3mm thk sph'ic banding. Localized large (~7mm → 1cm) thk mass cpy stringers + blebs. Faint v.f.g PbS (tetra?) diss'd through sph'ic bands. Fine gr'd py in coarse angular fracs @ 373.78. These fracs are in 2x4 cm lenses surrounded by fine sph. bands (pacting)							
				→ 373.97 - 374.29: 80% PY, 10% SPH, 5% PbS 5% GANGUE							
				mass dull metallic py w/ diss f.g py "buckshot" (← re-xtallized py) + v faint wispy v.f.g → mass 70/30% sph/PbS banding. 2mm² creamy carb. blebby gangue.							
				→ 374.29 - 375.41: 50% PY, 25% SPH, 10% CPY 10% PbS 5% GANGUE							
				F.g → mass glittery metallic py w/ rhythmic irregular sized (1mm → 1cm thkness) sph banding common V.f.g diss. PbS giving the secn a faint steely/silverish hue. Variably diss. mass irregular cpy stringers. Continued randomly disseminated 5mm² blebby/pod-like carb. gangue							
				→ 375.41 - 375.69: 30% SPH, 30% CPY, 15% PY 15% PbS, 10% GANGUE							
				Cu/Zn rich secn w/ mass red sph							

Westmin Resources

PAGE 40 OF 44	PROJECT: Wolverine	HOLE NO. WV 9790

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 41 OF 44 | PROJECT: Wolverine | HOLE NO. XN 97 90

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (370.52-376.05-SSMS cont)	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				as a matrix for f.g. disc. w/ py xtals. Zn rich to 375.53, Cu rich to 375.69. mass blebby cpy, very globular in texture from 375.53-375.69. Zn rich secn has primarily a 1mm² cubic black chlorite gangue sparsely disseminated. V f.g → mass PbS vis disc throughout secn. Blebby stringer like qtz/carb gangue in Cu rich secn.						
				→ 375.69-376.05: 30% PY, 30% SPH, 30% GANGUE, 10% PbS Evenly disseminated f.g → mass euh py, mass sph + light qtz ose/carb, dk chl'ic gangue w/ random 5cm thk regions of v f.g. PbS disseminated bands. Very sharp lower contact w/ ser. ically alt'd RHFS @ 376.05. Secn contains m.g. re-xtallized py'ic "buckshot" sparsely disseminated throughout						
				★ TOTAL SULFIDE GRADE ★							
				PYRITE: 45%							
				SPHALERITE: 30% Zn: 16%							
				CHALCOPIRITE: 15% Cu: 2%							
				GALENA: 10% Pb: 8%							
				376.05-376.81 MASSIVE RHYOLITE.							
				RHFS lwk → mod perv. ser. alt'd mass. aphyric rhy. w/ 1% f.g → mass fine pyic stringers. Light greenish/gray colour							
				376.81-384.14 TUFFACEOUS ARGILLITE							
				ARTF Black w/ fine carbonate (white) laminae. V wispy, drawn out tuffaceous frags. 1% f.g. fine pyritic bands randomly intercalated throughout.							

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PAGE 42 OF 44	PROJECT: Wolverine	HOLE NO. WW 9790

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 43 OF 44 | PROJECT: Wolverine | HOLE NO. WW9190

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
387											
				384.14 391.75 CARBONACEOUS ARGILLITE							
388				ARCB DK black aphyric carbonaceous arg. w/							
				tr. pyritic + tr. spheleritic stringers							
389				mottly effervescent fine wk. wispy							
				laminae.							
390	ARCB		70								
391											
391.75											
392			74	391.75 - 393.55 LAPILLI TUFF							
				RHLT Str'y fol'd lapilli tuff, dk							
393	RHLT			grey in colour. Rare chyic lapilli							
393.55			70	vis. Rare f.g. diss. py.							
394											
				393.55 - 394.81 GRAPHITIC ARGILLITE							
394.81	ARGR		65	ARGR Jet black graphitic, pasty							
395				fault gouge							
				393.55 - 394.81 - T66 - FAULT GOUGE							
396				UC @ 70° LC @ 65° cax							
397			73	394.81 - 398.15 QUARTZ - FELDSPAR PORPHORY							
	QFPH			QFPH Fsp grey chyic matrix w/							
398.15			64	5 x 5 mm fsp x-tals common.							
399				Fine bile green sericitic partings							
				surround porphoritic x-tals.							
400				White/translucent qtz x-tals.							
				1% f.g. banded py.							
401	RHTT										
401.42				398.15 - 401.42 FINE GRAINED TUFF							
402				RHTT Gun metal grey f.g. chyic							
				tuff w/ wk perv. str. alln							
403	ARCB		75	To -> 1% f.g. diss py							
403.55											
				401.42 - 418.55 CARBONACEOUS ARGILLITE							
				ARCB Same as above (357.20 - 391.75)							
				Fld UC @ 70° cax							
LAY FLAT TO RECT											
CARR											

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PAGE 44 OF 44	PROJECT: Wolverine	HOLE NO. WV 97 90

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
387										
		387.19	388.62		204023					
388										
		388.62	390.06		204024					
389										
390		390.06	391.75		204025					
391										
		391.75	393.55		204026					
392										
393		393.55	394.81		204027					
394										
		394.81	396.24		204028					
395										
396		396.24	398.15		204029					
397										
398		398.15	400.00		204030					
399										
400		400.00	401.42		204031					
401		401.42	402.55		204032					
402		402.55	403.55		204033					
403										

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.

EQUITY ENGINEERING LTD.

DRILL LOG

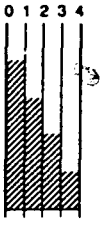
PROJECT: Wolverine Stratigraphic	GROUND ELEV.: 1659 m a.s.l. (GPS) 1625 m a.s.l (baro)
HOLE NO.: WV-97-91	BEARING: 213° - Grid. South.
LOCATION: N 18750 m, E 9800 m	DIP: -70°
	TOTAL LENGTH: 610.79 m (2004')
LOGGED BY: M. Padberg, D. Terry.	HORIZONTAL PROJECT
DATE: June 20/97	VERTICAL PROJECT
CONTRACTOR: Boisvenu Diamond Drilling.	
CORE SIZE: NQ II -> 297.17 m BQ -> 610.79 m	
DATE STARTED: June 18/97	
DATE COMPLETED: June 27/97	
DIP TESTS - ACID TESTS. @ 297.2m - -55° @ 462.7m - -63° @ 610.8m - -52.5	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- Exhalite rich hole w/ varying degrees of calcareous + pyritiferous crystallization.
- Intersected 55cm thick pyrite rich massive sulfide at 500.18 - 500.73 (99% pyrite, 1% sphalerite.)

LEGEND

- RHYOLITE
- QUARTZ VEIN
- CALCITE PYRITE EXHALITE
- MAGNETITE IRON FORMATION
- SILICA EXHALITE
- ARGILLITE
- FAULT GOUGE
- MASSIVE SULFIDE
- SAND

PAGE 1 OF 61 | PROJECT: Wolverine Street. | HOLE NO. WW9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	ALTERATION B SER	ALTERATION C EPI	ALTERATION D CARB	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
	DHCS			0.00-3.05 CASING							
				DHCS							
3.05				3.05-128.05 FRAGMENTAL RHYOLITE							
				RHFR Dk gray, fragmental rhy w/ Dk greenish/blue chl'ic partings. Variable clast sizes from coarse sand to 3x4 cm. Randomly fragmented, + localized fe oxidation for the first 20m of section. Very rare, f.g. pyrrhotite x-tals diss'd through chl'ic partings.							
			65								
			60								

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PAGE 2 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97-91

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1	V. rare fg. pyrrhotite (po)										
2											
3											
4											
5											
6											
7											
8											
9											
10	RHFR		11.58	13.08	1.5	173002					
11											
12											
13											
14											
15											
16	RHFR - mod thin argillaceous		17.68	19.18	1.5	173003					
17	foliae enveloping clasts										
18											
19											
20											
21											
22											
23											

PAGE 3 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (3.05-139.47 RMFR cont.)	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
24											
25											
26											
27			65								
28											
29											
30											
31											
32											
33											
34			70								
35											
36											
37											
38			65								
39											
40											
41											
42											
43			75								
44											
45											
46											

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PAGE 4 OF 61	PROJECT: Wolverine Strat.	HOLE NO. WV 9791

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS			
24	RHFR - mod dlk grn foliae		23.77	25.27	1.5	173004				
	env. clasts.									
25										
26										
27										
28										
29										
30										
31										
32	RHFR - 20% mass green colored		31.40	32.92	1.5	173005				
	fg serid bands to centrol									
33	cm in width ū tr fg po									
34										
35										
36										
37										
38	RHFR - - clastic 2-4cm		38.90	39.90	1.5	173006				
	clasts,									
39										
40										
41										
42										
43										
44										
45										
46										

PAGE 5 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97 91

(3.05 - 128.05 RHFR cont)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
47											
48											
49				→ 49.80: STFL: FAULT							
49.80 → 50			55	<1 cm flt w/ fine silty fill. Orient'd @ 55° c.a. Fill shows wk → mod Fe Ox.							
51											
52			65								
53											
54											
55											
56											
57											
58			70								
59											
60											
61											
62			65								
63				→ 63.65 - 63.75: QTVN - QUARTZ VEIN wh. qtz vn w/ 1% f.g. stringer py + 3% blebby chlorite							
63.65 → 63.75 → 64			60 65								
65				Mod chloritically alt'd sharply contacted bands avg ~10 cm (or less) occur irregularly over 50 m of section (from ~60 → 110 m). Bands are characteristically pale green (w/ bright, sericitic wisps) + appear to be granular (f.g. sized particles)							
66											
67											
68											
69			70								

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PAGE 6 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97 91

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
47						
48						
49						
50						
RHFR – blotchy textured – "pure shear"		51.21	52.71	1.5	173007	
52						
53						
54						
55						
56						
57						
58						
59						
60						
RHFR · 10% fg light-moss green colour. Ser faint domains		63.90	64.90	1.5	173008	
likely originally beds which have been contorted as a result of						
diff'l contains 2 gv's (5%) in local fracture ea sch py?						
RHFR component ↓ dic in						
mod-abundant ary enveloping						
matl.						
66						
67						
68						
69						

PAGE 7 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97 91

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (3.05 - 128.05 RHFR - cont.)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
70											
71											
72											
73											
74											
75											
76			70								
77											
78											
79											
80											
81											
82			55								
83											
84											
85											
86											
87											
88			50								
89											
90											
91											
92											

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PAGE 8 OF 61 | PROJECT: Wolverine Strat. | HOLE NO. WV 9791

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
70										
71										
RHFR - "classic"		72.54	74.04	1.5	173009					
72										
73										
74										
75										
76										
77										
RHFR - mod amt of dk grey mx		79.63	81.13	1.5	173010					
- Several bnds of cg sts										
79 py in cz vn mx - oxidized										
common as vuggy										
80 overgrowth on tex. (X-cutting!)										
- coarse med green ser (chl?)										
dm fg dom - primary comp										
cliff; ∞ fg to disstd py										
82										
83										
84										
85										
86										
87										
88										
89										
RHFR		90.83	92.33		173011					
91										
92										

PAGE 9 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97 91

(3.05-128.05 RHFR - cont'd)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E BIO	FRACTURE INTENSITY	% VEIN QTZ.
93											
94											
95											
96											
97			65								
98											
99											
100											
101				101.55-101.65 QCVN-QUARTZ/CARB VN 95/5% qtz/carb w/ 1% f.g. euhedral py xtals diss. through 2cm³ vug.							
102			55 35 40	101.79-102.43 QCVN-QUARTZ/CARB VN similar to above; 95/5% qtz/carb w/ Tr v.f.g. euhedral py xtals diss. throughout.							
103			50								
104			65								
105											
106				106.28-106.94 - x cutting qtz vn w/ irregular chloritic boundaries - vn-bound blk-grn chl seams & minor fg py							
107				107.47-107.54 - qv // to fol'n							
108											
109											
110											
111											
112			95°								
113				114.91-115.71 - interval of cm-size rounded - to milled light grey calcareous aphanitic clasts, in minor brown bio-qtz-fsp matrix.							
114											
115											

Westmin Resources

PAGE 10 OF 61	PROJECT: Wolverine Strat.	HOLE NO. WV 97 91

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
93										
94										
95										
96										
97										
98										
99										
100										
101										
RHFR - local fg ser-chl blocks		103.02	104.52	1.5	193012					
102 (5%)										
103										
104										
105										
106										
107										
108										
109		109.11	110.61	1.5	173013					
110										
111										
112										
113										
114		114.8	115.21	0.4	173014					
115										

PROJECT: Wolverine Stratigraphic

HOLE NO. WV9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (3.05 - 128.05: RHFR cont)	ALTERATION A CHL	B SER	C EPI	D CARB	E BID	FRACTURE INTENSITY	% VEIN QTZ.
116			70								
117											
118											
119											
120											
121				121.0 - 123.8 - fragmental rhyolite has a burnt coloured - fine-grained groundmass due to the presence of mic-med brown hematite alt'n on fol'n planes.							
122			70°								
123											
124											
125											
126											
127											
128				128.05-131.42 RHFS BANDED LIGHT GREY-GREEN APHYRIC RHYOLITE. - striped light grey/green coloured - ~1cm wide recrystallized quartz siliceous rhyolite domains separated by 3-4mm wide fold domains consisting dominantly of cc->chl. - NVS; med mic; arcc							
129											
130			65°								
131											
132											
133				131.42-134.69 RHFR FRAGMENTAL RHYOLITE - light green coloured siliceous clasts in recrystallized groundmass; boundaries defined by recrystallized quartz; NVS; arcc; min mic.							
134			70								
135											
136				134.69-136.54 RHAT RHYOLITE LAPILLI TUFF to ARGILLACEOUS MATRIX. ≤1cm wide light grey coloured aphyric rhyolitic clasts in dark (blk) arg-bio mx (35%). - arcc; min mic; tr fg py. - containing several qz-recrystallized clasts to 3mm.							
137											
138											

PAGE 12 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WV9791

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
116											
117											
118											
119											
120											
121			121.0	122.5	1.5	173015					
122											
123											
124											
125											
126											
127											
128			128.95	130.45	1.5	173016					
129											
130											
131											
132			132.0	133.5	1.5	173017					
133											
134	tr. f.g. py										
135			135.9	136.5	0.6	173018					
136											
137											
138											

PAGE 12 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
140	70			126.52-140.87 FRAGMENTAL RHYOLITE RHFR - medium to dark grey coloured [illegible] fragmental rhyolite unit dominated by dark grey to blk fragmental clasts in fine grained blk siliceous groundmass, felsic phenocrysts						
142				72°							
144											
146											
148	40			140.87-148.40 CRYSTAL FELSIC TUFF BTFF - light grey to dk grey, homogeneous, well sorted unit - dominated by felsic crystals & crystal fragments - fine grained - [illegible]							
150											
152											
154				- [illegible]							
156				148.40-266.69 FRAGMENTAL RHYOLITE RHFR - light grey to dk grey - clasts up to 8cm in size comprised of blk siliceous clasts, rare sericitized clasts							
158											
160				- 1-2% [illegible] clasts of fine-med sericitized [illegible] siliceous clasts, moderately to strongly foliated							
162				- Good flow appearance							
164				- Locally clasts have flow [illegible]							
166				80°							
168				148.40-172.47 - RHFR characterized by grey-ser foliated bands bounding clasts -- dk grey to blk colour							
170											
172				75° 172.42-221.02 RHFR characterized by foliated domains bounding clasts comprised of straw yellow to medium green coloured ser>>chl -- giving the rock an irregular green/grey appearance.							
174											
176											
178											
180											
182				73°							
184											

PAGE 13 . OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WW9791

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
140 RHYT - 1-2% f.g. diss. py										
142		142.01	143.51	1.5	173019					
		143.51	145.49	2.2	173020					
144										
146										
148										
150										
		151.78	153.28	1.5	173021					
152										
154										
156										
158										
160										
162										
		163.97	165.47	1.5	173022					
164										
166										
168										
170										
172										
174										
176		176.17	177.67	1.5	173023					
178										
180										
182										
184										

PAGE 15 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97 91

DEPTH (m) | % CORE REC | LITHOLOGY | STRUCTURE | GEOLOGICAL DESCRIPTION | ALTERATION (CHL A, SER B, EPI C, CARB D, E) | FRACTURE INTENSITY | % VEIN QTZ.

* - scale change @ 212m from 1:200 → 1:100.

186
188
190
192
194
196
198
200
202
204
206
208
210
212
213
214
215
216
217
218
219
220
221

187.96 - 188.56
FeOx Stained interval ☐ local bnds to several cm ☐ 20% dissem py FeOx filled vugs after ∇ py.

90°

200.0 -
tr - 1% my sub py associated ☐ sil'c foliated domains btwn felsic frags -
- locally coarse py aggregates up to 1cm in diameter -- open space filling

72
65

→ 210.72 - 210.80: QTVN - QUARTZ VEIN
Bxd wh. qtz. vn w/ fine sericic bands @ contacts. U.C @ 90°, L.C. @ 70° cax. Rare v fg. sub. py

210.72 / 210.80

90
70

SCALE 1:200 / 1:100

→ 216.32 - 216.50: QCVN - QUARTZ CARB. VN
Bxd 40/60% qtz/carb vn comprised of qtz frags in a carb matrix. Angular → sub-ang frags, 2 → 3 cm² down to coarse grained sand size. U.C @ 60° cax, L.C @ 50° cax.

216.32 / 216.50

60
50

→ 221.02 - 224.30: Black RHFR, sim to that of sec'n 148.40-172.42

PAGE 16 OF 61	PROJECT: Wolverine Strat.	HOLE NO. WV9791

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
186										
188										
190		190.61	191.11		173024					
192										
194										
196										
198										
200		200.55	202.05		173025					
202										
204										
		205.14	206.64		173026					
206										
208										
210		210.10	211.51		173027					
212										
213										
214		214.50	215.84		173028					
215										
216										
217										
219		218.76	220.2		173029					
219										
220										
221										

PAGE 17 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(148.40-266.69 RHFR cont)							
				→ 224.20-266.69: Green RHFR same as that of sec'n 172.42-221.02 Chl'ic component ↑ gradually downhole over entire unit.							
228				→ 228.07-228.90: Fragments have a much more linear arrangement. Fol'n @ ~25° cax. Frags. return to a much "vertical" arrangement downhole.							
240				→ 240.42-240.68: QCVN: QUARTZ/CARB VN 70/30 % qtz/carb w/ 5% chl'ic wallrock frags							

PAGE 18 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97 91

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
222										
223		223.5	224.51		173030					
224										
225										
226										
227		227.10	228.50		173031					
228										
229										
230										
231		231.50	233.00		173032					
232										
233										
234										
235										
		235.55	237.08		173033					
236										
237										
238										
239										
		239.85	241.29		173034					
240										
241										
242										
243										
244		244.18	245.58		173035					

PROJECT: Wolverine Stratigraphic

HOLE NO. WV 9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(148.40-266.69: RHFR cont)							
245				Continued chloritic aggm. fragmental rhyolite.							
246											
247			45								
248											
249											
250											
251											
252											
253											
254											
255											
256			60								
257											
258											
259											
260											
261											
262											
263			70								
264											
265				→ 266.11 - 266.38 : QTVN : QUARTZ VN V. irregular qtz vn w/ an undulatory lower contact. VC @ 50° TC ~ 50° c.a.; no mineral.							
266	266.11 266.38		60 50 40								
267	266.38 266.98										

PAGE 20 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WV9791

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
245										
246										
247										
248		248.42	249.77		173036					
249										
250										
251										
252		252.56	254.02		173037					
253										
254										
255										
256		256.70	258.03		173038					
257										
258										
259										
260		260.91	262.27		173039					
261										
262										
263										
264		264.80	266.28		173040					
265										
266										
267										

PAGE 21 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
268	RHFS			266.69-277.81 MASSIVE RHYOLITE							
				RHFS Fcg gray rhythmically banded massive aphyric rhy. Fine sericitic bands w/ fine grained diss + f.g. cubic blebs of py. (tr)							
269											
270			65	→ 266.87-266.95: QTVN: QUARTZ VEIN Bull white qtz vn w/ fine sericitic bands @ contacts. Undulatory contacts @ ~65° ca							
271											
272			35								
273											
274											
275				→ 275.62-275.67: Reddish / straw colored sericitic band w/ f.g. py stringer (1%). Faint wispy 1mm thk silicous host							
276	RHFS										
277			85								
277.81			60								
278				→ 277.56-277.81: Reddish med perv. carb alt'n (ankerite?) w/ fine calcic stringers x-cutting							
279	RHFR										
279.59			79								
279.73 280.06	EX CP		75								
280											
281			75	277.81-279.59 FRAGMENTAL RHYOLITE RHFR DK gray fragmental massive aphyric rhy w/ med grained sparsely disseminated calcite x-tals. Laminated appearance w/ arg, silicous, + sericitic laminae. Arg laminae show v. wk perv. carb alt'n. Wk perv ser alt'n							
282											
283											
284 284.23			80								
285			60	279.59-290.05 CARBONATE EXHALITE EXCP Strongly effervescent, wkly fragmentd carb exh w/ v.f.g. tr py, show fragmtl textures. Locally fine sericitic + chloritic laminae							
286											
287 287.73											
287.44			50	→ 279.73-279.79: QTVN-QUARTZ VEIN Bull wh. qtz vn w/ no mineral + carbonate lined contacts @ 90° ca							
287.60	EX CP		70								
288 298.13			60								
289			80								
290											

PAGE 22 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97 91

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
268 RHFS - tr f.g diss py										
269		269.17	270.65		173041					
270										
271										
272										
273		273.57	274.97		173042					
274										
275										
276										
277		277.59	278.54		173043					
278		278.54	279.59		173044					
279 EXCP - tr. f.g. py		279.59	280.05		173045					
280		280.05	281.05		173046					
281		281.05	282.05		173047					
282		282.05	283.04		173048					
283		283.04	283.08		173049					
284		284.08	284.96		173050					
		284.96	285.95		173051					
285		225.95	287.59		173052					
256										
287		287.59	288.15		173053					
288		288.15	289.18		173054					
289		289.18	290.16		173055					
290		290.16	291.00		173056					

PAGE 23 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97 91

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
	RHFR			280.05-287.44 FRAGMENTAL RHYOLITE							
291				RHFR Same as RHFR above (277.51-279.59) w/ wk perv. carb alt'n + laminae. + calcic mottled fragments							
291.55			75								
292	EXMT			→ 294.22: STEL FAULT Fit @ 80° cax Same sort of an alternating fragmental to fine laminated textures on a decimeter scale.							
293			50								
295.15				→ 297.22-297.44: QCVN: QUARTZ/CARB VN white qtz vn w/ 2cm² carb frags common 85/15% qtz/carb, sharp contacts: VN @ 50° to C, 70° to c.a.							
295.77	RHFR		75								
296.09	EXMT		85								
296.50	QCVN		20								
296.93			90								
297	EXCP		90								
297.42			80								
298			65	297.44-297.60 ALTERED RHYOLITE							
298.65				RHFR Mod perv sericitically alt'd micro aphyric rhy. Alternating btwn dk + lighter greens, wispy appearance.							
299	EXCP		75								
300											
301				297.60-298.18 CARBONATE EXHALITE							
302				EXCP light gray, modly banded carbonate exhalite. Faint f.g. mottled texture. Tr v.f.g. fine pyr stringers.							
303			75								
303.65			90								
304	RHYT (?)			298.18-291.85 FRAGMENTAL RHYOLITE							
305				RHFR wk perv. carb alt'n w/ recessed beige mod-str. ankerite alt'n. Rhy frags avg. 5×20 mm w/ fine ser + arg. partings. Regionally variable. 2mm² cubic fg py blebs (Tr)							
306											
307.16			85	→ 288.18-288.67: Dk gray + very siliceous similar to fragmental unit above (280.05-287.44)							
308											
309	EXCP		80	→ 291.55-291.67: QCVN: QUARTZ/CARB VN 90/10% qtz/carb w/ 2% pyritic stringers							
309.25			75								
309.85	EXCP		70								
310			75								
310.70	EXCP		70								
311				291.85-295.15 MAGNETIC IRON FORMATION							
311.92				EXMT Sea green + blue laminae w/ white siliceous f. ment. + a dispersed beige ankeric mottled Texture. Fine grained banded magnetite + mod							
312.30			70								
312.50			60								
312.77			75								
313											

 PROJECT: Wolverine Stratigraphic HOLE NO. WV9791

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
291 EXMT - 15% magnetite, 2% f.g. blebby py		291.0	291.85		173057	
		291.85	292.83		173058	
292						
		292.83	293.78		173059	
293						
		293.78	295.15		173060	
294						
295 RHFR - 1% f.g. py.		295.15	295.77		173061	
		295.77	296.08		173062	
296 EXMT - 15% magnetite, 2% f.g. blebby py		296.08	296.50		173063	
		296.50	298.83		173064	
297						
298						
		298.83	299.64		173065	
299						
		299.64	300.60		173066	
300						
		300.60	302.60		173067	
301						
302						
		302.60	303.63		173068	
303						
		303.63	304.66		173069	
304						
		304.66	305.69		173070	
305						
		305.69	307.16		173071	
306						
307		307.16	308.15		173072	
308		308.15	309.28		173073	
309		309.28	309.37		173074	
		309.37	309.85		173075	
310		309.85	310.70		173076	
		310.70	311.92		173077	
311						
		311.92	312.30		173078	
312		312.30	312.77		173079	
		312.77	313.76		173080	
313						

PROJECT: Wolverine Stratigraphic

HOLE NO. WV97 91

* Descriptive Geology Only *

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (291.85-295.15: EXMT cont)	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				gr'd diss magnetite throughout. 15% total mag. 2% f.g. blebby dispersed py. Localized mod. perv. chl alt'n							
				295.15-295.77 RHFR — FRAGMENTAL RHYOLITE: Fog gray mass. aphyric rhy w/ localized irregularly shaped 1cm² sized rhy. fragments. Layering @ UC is 30° cax + gradually becomes // cax (0°). 1% v.f.g. euhedral sphaleritic stringers w/ 1% f.g. py. Fol'n has a "z-fold" appearance when grading to 0° cax. → 295.70: Fol'n bends from 0° cax to 85° cax in a very fluid ductile manner; no apparent flt'g or breaking.							
				295.77-296.08 EXMT — MAGNETIC IRON FORMATION: mag. fe form., same as above but w/ tr. sph. stringers							
				296.08-296.50 QTVN — QUARTZ VEIN: 75% qtz vn fragmented by bands + stringers of magnetite rich wallrock (EXMT). 2% stringer sxs (py+sph). Tr carb + chl. blebs UC @ 85° cax, LC @ 90° cax							
				296.50-298.65 EXCP — CALCITE PYRITE EXHALITE: Banded "mixed-bag" calcite pyrite exhalite w/ coarse gr'd size diss carb throughout. Localized f.g. magnetite bands (10% mag in a 5mm band) wk localized fe staining. 1% f.g. diss py							
				→ 296.83-296.99 - QTVN - QUARTZ VEIN: Bull white w/ tr. fe staining on healed fractures Contacts @ 90° cax.							
				→ 297.40-297.62 - QTVN - QUARTZ VEIN: Bull wh. qtz vn w/ 5cm EXMT stringer. 3% py							

PAGE 26 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WV9791

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 27 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97 91

* Descriptive Geology Only *

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
298.65-303.65				SILICA EXHALITE							
EXSP				Intercalated carbonate beige (ankerite) laminae w/ dk gray silica laminae; fine → med. grd disc py as well as localized v.f.g. 5mm pyric bands. Regional fragmentation +/or brecciation. Also, regional harmonic folding + assoc'd micro-faulting.							
303.65-307.16				RHYOLITIC TUFF (?)							
RHTT (?)				wk perv. carb. altd grayish/black mottled rhyl? w/ tuffaceous sized frags. wkly → modly finely laminated arg + host.							
307.16-309.28				CALCITE PYRITE EXHALITE							
EXCP				Banded calcite/py exh w/ 25% fig banded py + 5mm thk rhythmic arg laminae + fine yellowish carb laminae. Regional pyritic "mottling" over core w/ fig. py disc. tightly over small areas.							
309.28-309.37				SILICA EXHALITE							
EXSP				Same as above (298.65-303.65)							
309.37-309.55				CALCITE PYRITE EXHALITE							
EXCP				Same as above (307.16-309.28)							
309.55-310.70				SILICA EXHALITE							
EXSP				Same as above (298.65-303.65)							
310.70-311.92				CALCITE PYRITE EXHALITE							
EXCP				Same as above (307.16-309.28)							
311.92-312.13				QUARTZ VEIN							
QTVN				Rull wh qtz vn w/ sharp contacts + tr carb blebs as well as fine faint chl. stringers							
312.13-312.30				SILICA EXHALITE							
EXSP				Same as above (298.65-303.65)							
312.30-312.77				CALCITE PYRITE EXHALITE							
EXCP				Same as above (307.16-309.28)							

PAGE 28 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV9791

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				

PROJECT: Wolverine Stratigraphic

HOLE NO. WV9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				312.77-315.55 LAPILLI TUFF							
314	RHLT			RHLT Reworked grey rhy lapilli t.ff w/ wk perv. ser alt'n + localized (cm scale) more perv ser alt'n. Variably fg pyritic stringers (3%)							
315			65								
315.55											
316	ARTF		90	Lapilli sized fragments w/ fine sericitic partings							
316.32			90								
317			70	→ 314.95-314.29 · QTVN · QUARTZ VEIN Pale wh. qtz vn w/ ser. bnd. @ contacts, no mineral							
			90								
318	ARSI										
319				315.55-316.32 TUFFACEOUS ARGILLITE							
			60	ARTF Dk black arg w/ wispy dk greyish lapilli sized tuffaceous fragments v. fg tropy blebs + stringers fill (partially fill) some lapilli frags							
320											
320.71											
321			90								
322	RHFF										
323				316.32-320.71 SILICEOUS ARGILLITE							
				ARSI Dk black hard wkly laminated siliceous arg w/ fine wispy sil. laminae sometimes replaced by 1% v.f.g py. Py appears always assoc'd w/ silica							
324											
325.28											
325.71	EXCP		25	→ 316.54-316.97 · QTVN · QUARTZ VN Bull white, pure qtz w/ rare localized wallrk bands							
326			80								
326.34			70								
327			70								
328	ARSI			→ 316.74-316.77 · STFL · FAULT Fit in wlrk band @ 70° on a graphitic parting							
328.92											
329			70								
330	RHFF		75	→ 319.87-320.71 · Disharmonic "S-folding" along siliceous bands w/ 3% v.f.g. sph + 5% v.f.g py diss. lightly through sil. band-							
330.94											
331			60								
332	ARSI										
332.60											
332.95	EXCP		80								
333.14			80								
333.84			90								
333.96				320.71-325.28 ASH TUFF							
334			70								
	RHFF			RHFF F.g.d. mod perv. ser alt'd, beige/pinkish med grey rhy ash tuff. 3% 1mm² diss chl blebs spot the core. Rare sil. lapilli							
334.80			90								
335.25											
335.47			75								
335.73		Bx									
336											

PAGE 30 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97 91

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		313.76	314.65		173081					
314										
		314.65	315.55		173082					
315										
		315.55	316.32		173083					
316		316.32	317.33		173084					
317		317.33	318.40		173085					
318		318.40	319.46		173086					
319		319.46	320.71		173087					
320										
		320.71	322.97		173088					
321										
322										
		322.97	325.28		173089					
323										
324										
325		325.28	326.34		173090					
326		326.34	328.92		173091					
327										
328		328.92	330.94		173092					
329										
330		330.94	332.60		173093					
331										
332		332.60	332.95		173094					
333		332.95	333.34		173095					
334		333.34	333.96		173096					
		333.96	334.80		173097					
335		334.80	336.70		173098					
336										

* Descriptive Geology Only *

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				(320.71-325.28: RUFF-cont) fragments. Re-sedimented volcan clastics Diss'd coarse grit sub-angular → sub-rounded carb. fragments (1%)							
				325.28-326.34 EXCP CALCITE PYRITE EXHALITE Banded + modly fragmented calcite pyrite exh w/ fine localized arg. laminae, localized wkly vuggy mass pyrrhotite (5%) + localized sub-angular 2mm² irregularly shaped carb frags. 20% py → f.g to mass diss throughout + locally banded							
				→ 325.77-325.90: QCVN-QUARTZ/CARBVN 95/5 % qtz/carb w/ 2% mass pyrrh blebs/stringers, 9% chl blebs + tr f.g. py. Qtz has a fragmented x-talline texture. Sharp contacts: U @ 80° c.a. L @ 60°							
				326.34-328.92 ARSI SILICEOUS ARGILLITE DK black v.f.g. arg w/ wispy hard milky white siliceous irregular bands / stringers. wkly fraq'd text. w/ tr. v.f.g. py stringers + blebs assoc'd w/ siliceous bands.							
				328.92-330.94 RHFS MASSIVE RHYOLITE mass aphyric fsg gray rhy. w/ fine rhythmic sericitic bndg. Rare f.g. py diss. in sericitic bands.							
				330.94-332.60 ARSI SILICEOUS ARGILLITE Same as above (326.34-328.92).							
				332.60-332.95 EXCP CARBONATE EXHALITE. mod→strly effervescent navy blue faintly mottled (by calcite) w/ variable carb. veinlets; faintly fragmented w/ tr. f.g. stringer py.							

PROJECT: Wolverine Stratigraphic

HOLE NO. WV 9791

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 23 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97 91

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				332.95-333.34	SILICEOUS ARGILLITE							
337	RHFR			ARSI	Same as above (326.34-328.92)							
				333.34-333.96	CARBONATE EXHALITE							
338				EXCP	Same as above (332.62-332.95)							
339				333.96-334.80	SILICEOUS ARGILLITE							
340				ARSI	Same as above (326.34-328.92)							
340.70			80									
341	EXSP		70	334.80-340.70	FRAGMENTAL RHYOLITE							
342			80	RHFR (?)	V. dk (blackish) aphy. frag. rhy w/ sec. carbonate. Frag's have irregular edges + are somewhat faint + "faded". Possibility of this unit being an EXSP Tr v.f.g → massive pyritic stringers // to foln.							
343	EXCP				→ 335.87-335.90: Zone of brecciation w/ angular 3mm² irregular frags + a fine creamy carb matrix.							
344					→ 339.25-340.35 Mod → str. pervasive dol. alt'n. Beigish colour. Powder effervescence							
344.89			70									
345					→ 340.32: 5mm thk f.g → massive reddish sphalerite band. @ 80° CA							
346	EXSP		80									
347			85									
348												
349			85									
350				340.70-342.00	SILICA EXHALITE							
350.79			80	EXSP	Intercalated rusty beigish carb frags w/ faint mauvish gray silica + beigish/brown coloured massive aphyric silica. Disseminated fine → med grained py, regional pyritic stringers (1% py)							
351												
352			70									
352.27												
353	EXSP		70									
353.75												
354			65									
354.23				342.00-344.89	CALCITE PYRITE EXHALITE							
354.87	RHFR		65	EXCP	Rusty fragmented angular → sub ang carb aggr + calcite/siliceous matrix 5% f.g. pyritic stringers. Tr. localized med grained massive bands. Localized minor qtz (silica) flooding.							
355	EXCP		80									
355.91												
356			70									
356.57												
356.91	EXCP											
357			45									
357.57	EXSP		60									
358			80	344.89-354.23	SILICA EXHALITE							
	RHFS			EXSP	Aphyric laminated silica/py exhalite Intercalated w/ f.g. arg laminae +							
359			80									

PAGE 34 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WW9791

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
337		336.70	338.75		173099					
338		338.75	340.70		173100					
339										
340		340.70	342.00		173101					
341										
342		342.0	343.43		173102					
343		343.43	344.89		173103					
344		344.89	346.80		173104					
345										
346		346.80	348.70		173105					
347										
348		348.70	350.70		173106					
349										
350		350.70	352.75		173107					
351										
352		352.75	354.23		173108					
353										
354		354.23	354.87		173109					
		354.87	355.86		173110					
355		355.86	356.59		173111					
356		356.59	356.81		173112					
357		356.81	357.14		173113					
		357.14	357.57		173114					
358		357.57	358.95		173115					
		358.95	360.24							
359		360.24	361.54		173116					

PROJECT: Wolverine Stratigraphic

HOLE NO. W9791

* Descriptive Geology Only *

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				(344.89-354.23: EXSP cont)							
				aphyric milky silica + fg. py'ic bands variably alternating blacks + grays (colour) w/ both regional and local (varying degrees) carb. frag's. V. well min'zed w/ stringers (local) of PbS, 1% stringer sph, 5% diss. + stringer py + stringer pØ, + rare cpy. Regional EXCP banding.							
				→ 345.66 + 345.83: fine → med grd PbS stringers in siliceous bands. Locally 5% PbS. @ 80° cax. Assoc'd w/ mass pØ (10% locally)							
				→ 349.22-349.34: EXCP: CAL/PY EXHALITE mottled light blue + beige EXCP w/ 5% mass py stringers wkly stockwork'd being carb veinlets + tr. silica stringer/blebs.							
				→ 350.25-350.32: EXCP: CAL/PY EXHALITE Rhythmically banded carb/arg/py @ 85° cax. 15% fg → mass py.							
				→ 350.70-350.79: EXCP CAL/PY EXHALITE Fragmented EXCP w/ 3% stringer py. 5mm² navy blue rounded carb frags over a creamy carb matrix. contacts @ 80° cax.							
				→ 352.27-352.75: EXCP: CAL/PY EXHALITE Lenticular creamy/beige carbonate fragments w/ stringy 10% py'ic partings wkly (3%) qtz flooded w/ 2mm² Si blebs visible							
				354.23-354.87 FRAGMENTAL RHYOLITE							
				RHFR Light gray mottled w/ wh f.g. dolomitic specks, 1x1 cm sized rusty/yellowish mod incipient carb alt'd rhy frags. Irregular fine sericitic partings.							
				354.87-355.91 CALCITE PYRITE EXHALITE							
				EXCP wkly effervescent cal/py exh w/ regional							

PAGE 36 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97 91

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PROJECT: Wolverine Stratigraphic

HOLE NO. WV9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(354.87-355.91 EXCP cont)							
360	RHFS			rusty, buff patchy carbonate, Armed Forces green feathery ser 3% f.g. py'ic stringers + 1% f.g. red disc + stringer sphalerite wk→mod qtz flooded downsec'n near lower contact w/ qtz vn							
360.26			75								
361	RHFR										
361.32			60								
361.39			80								
362			80								
363	RMFS			355.91-356.57 QUARTZ VEIN QTVN milky wh qtz vn w/ wallrk (EXCP) frags (30%). Wallrk, same as above.							
364											
365				356.57-356.81 CARBONATE EXHALITE EXCP Light beige w/ Tr. rusty mottling, tr. py, mod'ly effervescent 5% qtz flooding							
366											
367											
368				356.81-357.57 SILICA PYRITE EXHALITE EXSP Fog gray silica exh strly banded w/ ghostly jagged fine dker gray sil bands (1mm thk)							
369	RMFS			→ 356.81-357.14: 30% med→coarse gr'd exh py x-tals.							
370				→ 357.14-357.57: 3% f.g. reddish sph stringers along dker gray bands.							
370.46			75								
371	RHFR		70								
372											
372.42			60	357.57-360.26 MASSIVE RHYOLITE RHFS Fog gray mass aphyric rhy w/ mod rhythmic fine sericitic banding + 1% f.g. blebby py. 1% f.g. orangy sph stringers. Coarsely mottled med. gr'd dol'ic blebs (Tr.)							
373	ARSI										
374											
375											
376				360.26-361.54 FRAGMENTAL RHYOLITE RHFR wkly fragmented mass aphyric rhy w/ fine feathery sericitic partings. Tr mass blebby py + 1% fine grained orange sph. stringers along seric partings							
377											
378			60	→ 361.32-361.39: QTVN-QUARTZ VEIN Bull wh. qtz vn w/ tr carb blebs w/ tr. f.g. py blebs + tr. v.f.g. orange + red sph stringers. Sharp contacts @ 50° ca.							
379											
380											
381	ARSI										
382											

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		360.26	361.54		173117					
360										
		361.54	363.04		173118					
361										
362										
363		363.04	364.45		173119					
364		364.45	365.99		173120					
365		365.99	367.53		173121					
366										
367		367.53	368.93		173122					
368										
		368.93	370.46		173123					
369										
370		370.46	372.01		173124					
371										
372		372.01	372.42		173125					
373		372.42	373.95		173126					
374		373.95	375.25		173127					
375		375.25	376.62		173128					
376		376.62	378.03		173129					
377										
		378.03	379.43		173130					
378										
379		379.43	380.87		173131					
380		380.87	382.32		173132					
381										
382		382.32	383.57		173133					

PAGE 39 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. W9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				364.54-370.46	MASSIVE RHYOLITE							
383	ARS1			RHFS	mass. aphyric fsp gray rhy w/							
			65		regional fine feathery sericitic bands							
384					1% f.g. pyitic stringers + discrete							
					blebs as well as 1% red +							
385					orange f.g. sph stringers. Coarsely							
					mottled med grained carbonate							
386					in tr → 1% amts.							
				370.46-372.42	FRAGMENTAL RHYOLITE							
387				RHFR	DK gray frag'l rhy w/ chl'ic +							
					ser'ic partgs. Frags are 5-25mm							
388					Rare f.g. diss py + rare localized							
					v.f.g. sph. Overall wkly → mod'ly frag'd							
389					→ 372.01-372.42 Arg. partgs in mod'ly							
					fragmented RHFR.							
390												
391.14				372.42-391.14	SILICEOUS ARGILLITE							
				ARS1	v.f.g. dk black siliceous (cherty)							
391.78	RHFS		75		arg. w/ v common wispy							
392			80		disharmonic cherty bands. Band							
					contacts are faint + ghostly. Rare							
393					localized f.g → mass disseminated pyitic							
					blebs. Rare → tr v.f.g → mass 5mm							
394					thk sph'ic stringers + bands							
	ARS1											
395			75									
				391.14-391.78	MASSIVE RHYOLITE							
396				RHFS	F.g. gray mass aphyric cherty							
396.14			15		rhy w/ tr f.g. diss. py x.tals							
			50									
396.85												
397			45	391.78-396.14	SILICEOUS ARGILLITE							
	RHTT			ARS1	Same as above (372.42-391.14)							
398												
398.30			55									
				396.14-398.30	FINE GRAINED TUFF							
399				RHTT	Beige wkly perv. dd'ic altered							
					coarse grained ashi (f.g. "sand") tuff							
400					Finely mottled w/ v.f.g. lt beige							
					mineral (carbonate? → v.wk effervescence)							
401					→ 396.15-396.85: QCVN. QTZ/CARB VEIN							
					95/5% qtz/carb w/ v.rare							
402					f.g. py + 3% wallrock clasts							
	ARS1											
403			75									
				398.30-403.90	SILICEOUS ARGILLITE							
403.90			40	ARS1	Same as above (372.42-391.14)							
404	RHFS											
404.72			75									
405												

 PROJECT: Wolverine Stratigraphic HOLE NO. WV9791

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
383		383.57	385.06		173134					
384										
385		385.06	386.25		173135					
386		386.25	387.67		173136					
387		387.67	389.12		173137					
388										
389		389.12	391.14		173138					
390										
391		391.14	391.78		173139					
392		391.78	393.70		173140					
393		393.70	396.14		173141					
394										
395										
396		396.14	396.85		173142					
397		396.85	398.30		173143					
398		398.30	401.60		173144					
399										
400										
401		401.60	403.80		173145					
402										
403		403.80	404.72		173146					
404		404.72	406.30		173147					
405										

PROJECT: Wolverine Stratigraphic

HOLE NO. WV 9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
	RHFR			403.80-404.72 MASSIVE RHYOLITE							
406 406.30				RHFS Variably dk + beigish gray mass p.phyric rhy finely mottled w/ v f.g. beigish biotite (?) (or wk dolomite?) + also incipiently intermixed locally w/a fine faint, v. cherty argilliceous component							
407											
407.61 407.77 408 408.09 408 408.18			85 70 70								
409 409.43	ARSI		75	404.72-406.30 FRAGMENTAL RHYOLITE							
409.68 410 409.90 410.33			75 75 75	RHFR Dk gray/beigish fragmental rhy w/ fine argilliceous + seric partings. Variable sized frags from coarse sand → 2×4 cm Continued motl'd v f.g beigish biotite → same as above							
411 411.06	RHFR		75								
411.2 412.20	ARSI		75								
413				406.30-410.54 SILICEOUS ARGILLITE							
414	RHFR			ARSI Black v.f.g. sil. arg. w/ tr→1% f.g→mass py stringers. mod'ly laminated w/ v.fine arg bands, faint ghost-like sil. bands + localized dis-harm fld'g. Tr faint dkred v f.g→mass sph. band'g + stringers							
415											
415.90 416			80	→ 407.61-407.70: QTVN: QUARTZ VN							
417	RHFS			Bull wh. w/ fine arg. septa + tr mass py blebs							
418 418.53			80	→ 407.82-407.90: QTVN: QUARTZ VEIN							
				Same as above (407.61-407.70)							
419				→ 407.97-408.02: QTVN: QUARTZ VEIN							
				→ 408.05-408.09: QTVN: QUARTZ VEIN							
420	RHFR		80	→ 408.15-408.18: QTVN QUARTZ VEIN							
				Same as above (407.61-407.70)							
421				→ 409.06-409.43: QTVN: QUARTZ VN.							
				Same as above (407.61-407.70)							
422 422.37			80	→ 409.50-409.68: QTVN: QUARTZ VEIN							
				→ 409.90-410.33: QTVN: QUARTZ VEIN							
423	RHFS			Same as above (407.61-407.70)							
424 424.23				410.54-411.06 FRAGMENTAL RHYOLITE							
			75	RHFR Same as above (404.72-406.30)							
425				411.06-412.20 SILICEOUS ARGILLITE							
426	EXMT			ARSI Same as above (406.30-410.54)							
427 427.30				412.20-415.90 FRAGMENTAL RHYOLITE							
				RHFR Same as above (404.72-406.30)							
428	OVB		25								

PAGE 42 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 9791

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
406		406.30	408.40		173148	
407						
408		408.40	410.54		173149	
409						
410		410.54	411.06		173150	
411		411.06	412.20		173151	
412		412.20	413.90		173152	
413		413.90	415.90		173153	
414						
415		415.90	418.53		173154	
416						
417						
418		418.53	420.30		173155	
419						
420		420.30	422.37		173156	
421						
422		422.37	424.23		173157	
423						
424		424.23	425.79		173158	
425		425.79	427.30		173159	
426						
427		427.30	427.91		173160	
428		427.91	429.14		173161	

PROJECT: Wolverine Stratigraphic

HOLE NO. W9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
428.06	EXCP		70	415.90-415.53	MASSIVE RHYOLITE							
429 429.34				RHFS	mass. fg gray aphyric rhy w/ fine sericitic random bands, tr fine-> med g/d pyic blebs + rare fg orange sphic bands. 1 PbS (v.f.g) stringer							
429.59			55									
430	EXCP		30									
430.51			80									
430.80	ARSI		60									
431 431.17			60									
			75	418.53-422.37	FRAGMENTAL RHYOLITE							
432	EXCP		75	RHFR	Fg to gray w/ a lt. greenish hue frag'l rhy w/ feathery fine sericitic partings. 1% f.g. diss pyic blebs (2mm² in size) + random f.g. magnetite bands. 1% total mag.							
432.87			80									
433												
434												
435 435.38												
435.55	EXSP		85	422.37-424.23	MASSIVE RHYOLITE							
436				RHFS	mass armed forces green aphyric rhy w/ wk perv. chl. altn 1% random f.g magnetite banding. Tr med -> coarse grained disseminatn euh. py x.tals.							
437												
437.53			70									
438		RHFS	75									
438.47			80									
438.72			60									
439		RHFS		424.23-427.30	MAGNETITE IRON FORMATION							
439.33			75	EXMT	Laminated armed forces green, silicic mauvish/purple, + carbonate gray w/ f -> med g/d finely diss (20%) magnetite x.tals 1% med -> crs. g/d disseminated cubic py. A.F green bands exhibit wk -> mod chl altn.							
440												
440.50												
441												
442												
443				427.30-427.91	QUARTZ CARBONATE VEIN							
444	EXMT		75	QCVN	90/10% qtz/carb w/ f.g diss mag x.tals, chl'ic blebs + septa (4%) + tr. f.g. diss beigish dolomite.							
445					→ 427.50-427.78: 40% mass py intermixed w/ 20% f.g. magnetite + localized blebs of carbonate. Appears as one large (joint) sx wh w/ qtz on other half of core							
446												
447 447.22			70									
448												
449	EXSP			427.91-428.06	ALTERED ASH TUFF							
450				RHFF	Fg-f.g green strongly perv chl altn'd ash tuff. Fine grained rhyolite. No mineralization.							
			70									
451												

PAGE 44 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WW 97 91

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
429		429.14	430.51		173162					
430		430.51	431.17		173163					
431		431.17	432.87		173164					
432		432.87	434.36		173165					
433										
434		434.36	435.82		173166					
435		435.82	437.50		173167					
436										
437		437.50	438.47		173168					
438		438.47	438.72		173169					
439		438.72	439.38		173170					
440		439.38	440.83		173171					
		440.83	442.38		173.172					
441										
442		442.38	443.84		173173					
443		443.84	445.60		173174					
444										
445		445.60	447.27		173175					
446		447.27	448.95		173176					
447										
448		448.95	451.29		173177					
449										
450										
451		451.29	452.17		173178					

PROJECT: Wolverine Stratigraphic

HOLE NO. WV 9791

* Descriptive Geology Only *

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				428.06-429.04 CARBONATE EXHALITE							
				EXCP Mod'ly banded light grey + beige/pink areas carb. exh. w/ tr (<1%) f.g. stringer py // to fol'n. @ 70° cax. Random (up to 2cm thk) beige cherty bands + finely mottled dolomitic speckles.							
				429.04-429.14 QUARTZ CARBONATE VEIN							
				QCVN 5/95% qtz/calcite, snow white, no mineral. U.C. @ 30° cax, L.C @ 50° cax.							
				429.14-430.51 CALCITE PYRITE EXHALITE							
				EXCP Sky blue cal/py exh w/ finely mottled f.g. calcite x-tals + up to 5% f.g. pyritic stringers. Strongly effervescent w/ 10% HCl.							
				429.90-430.00: STFB: FAULT BRECCIA							
				FIt @ 429.90 (@ 50° cax) w/ assoc'd zone of 5x10mm clasts size bxn							
				430.51-431.17 SILICEOUS ARGILLITE							
				ARSI Dk. black v.f.g. sil. arg. w/ faint wispy siliceous bands. Quite cherty. 6% v.f.g. banded pyrite // to fol'n. Regional bxn assoc'd w/ flt gouge.							
				→ 430.55-430.80: ST66: FAULT GOUGE							
				Variable clast sized graphitic gouge @ 60° cax							
				431.17-432.87 CALCITE PYRITE EXHALITE							
				EXCP Same as above (430.51-431.17), mottled sky blue w/ wispy pyritic bands.							
				432.87-437.50 SILICA PYRITE EXHALITE							
				EXSP Dk grey/light black silica exh. w/ 3-4% f.g. py + tr med. grid py as well as v.f.g. reddish sph. (1%) banding. Very faint wispy, discharmonic, undulatory grey silica feathering throughout dker argillaceous (?) component. V rare f.g. cpy vis.							
				→ 435.28-435.33: EXCP: CAL/PY EXHALITE							
				Same as above (430.51-431.17)							

PAGE 46 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97-91

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				

PAGE 47 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 91

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
451.23				437.50-438.47 MASSIVE RHYOLITE							
452 452.17	EXMT		85	RHFS Fg grey aphyric pure massive rhy w/ v fine anastomizing carb veinlets. 4% randomly located f.g. py intermixed w/ tr. f.g. sph.							
453 453.88	EXSP		85	→ 438.08-438.39: Exhibits a wkly fragmental texture							
454			80	438.47-438.72 CARBONATE EXHALITE							
455				EXCP Same as above (429.01-429.01)							
456				438.72-439.38 MASSIVE RHYOLITE							
457				RHFS Same as above (437.50-438.47)							
458				439.38-440.22 MAGNETITE IRON FORMATION							
459				EXMT Dk. purple fe rich iron form w/ up to 15% f.g. diss. mag in fe rich regions. Grades downhole (from 440.30m → 440.70) to a mod. perv. chl'ic alt'd semi-sec.							
460			70	fe form. 1% fine → med grd diss py throughout. Chloritically alt'd region has ↑ Si content. Returns to a dk purple w/ hematic mauvish hue from 440.70 → 441.23							
461											
462											
463											
464				441.23-451.29 SILICA EXHALITE.							
465				EXSP Silica exh w/ mod perv. chl. alt'n forest green in colour + ~3% f.g. magnetite bands randomly scattered through sec'n. V. siliceous							
466											
467				451.29-452.17 MAGNETITE IRON FORMATION							
468				EXMT Intercalated mauvish purple + sil bands avging 5mm thkness. 17% f.g. diss. magnetite + 1% f.g. → mass py blebs. Modly sharp U+L contacts							
469			80								
470 470.02			70	452.17-453.88 SILICA PYRITE EXHALITE							
471				EXSP Light fog grey pure aphyric silica exh w/ localized v. fine carb. stockwork veinlets. 1% f.g. py + 1% f.g. orange sph. banding. Fine (<1mm thk) seric bands rhythmically cut the core // to foln. (85° cax)							
472											
473											
474											

 PROJECT: Wolverine Stratigraphic HOLE NO. WW 97 91

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
452		452.17	453.88		173179					
453		453.88	455.65		173180					
454										
455		455.65	457.10		173181					
456										
457		457.10	458.62		173182					
458		458.62	460.11		173183					
459										
460		460.11	461.62		173184					
461		461.62	463.17		173185					
462										
463		463.17	464.77		173186					
464										
		464.77	466.13		173187					
465										
466		466.13	467.60		173188					
467		467.60	468.99		173189					
468		468.99	470.02		173190					
469										
470		470.52	472.15		173191					
471										
472		472.15	474.04		173192					
473										
474		474.04	475.90		173193					

PAGE 49 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97 91

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
474.04	RHLT		75	453.89-470.02 MAGNETITE IRON FORMATION.							
475 474.89 475.02			90	EXMT Same as above (451.29-452 m)							
			90	→ 465.10-465.25: 20% mass py blebs in a localized bx'n w/ 1cm² carb. clasts. Calcite matrix w/ v. str. effervescence.							
476											
477											
478											
479 478.13 478.55			30	470.02-474.04 SILICA PYRITE EXHALITE EXSP Variable sil./py exh w/ overall 3% f.g. banded pylic stringers, 1% f.g. → mass stringer sph.							
480 480.01			55	→ 470.02-470.60: V. fine, feathery dol'ic stockworking. Lt gray/green laminae							
481			70	→ 470.60-471.90: milky/creamy silica w/ apple green fine ser. partings around wkly fragmented host. Overall bole appearance							
482				→ 471.90-474.04: DK gray, grading to a light black ghostly silica w/ localized orbicular concretions which have pylic halos. (1→2mm in size)							
483											
484											
485			70								
486											
487 487.13 487.55			90								
488				474.04-490.01 RHYOLITE LAPILLI TUFF RHLT V. dk gray fine wispy clay lapilli fragments w/ arg. partings 1% localized f.g. → mass py'ic stringers/bands.							
489				→ 474.89-475.02: QTVN-QUARTZ VN. Bull white qtz vn w/ fine arg. filled fractures. Contacts @: U→90° L→40° ca							
490				→ 479.48-479.55: QTVN-QUARTZ VEIN Bull wh qtz vn w/ 3% chl blebs + fine ser. filled fractures.							
491				→ 479.48-479.55: QTVN-QUARTZ VEIN Same as above (479.15-479.2)							
491.70			90								
492			30								
493											
494											
495											
496											
497				490.01-491.70 SILICEOUS ARGILLITE ARSI Black sil arg w/ faint "cloud"							

RHLT

ARSI

ARSI

RHFR

PAGE 50 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WN-91

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
475										
476										
477										
478										
479										
480										
481										
482										
483		483.00	484.45		173194					
484										
485										
486										
487										
488		488.71	490.21		173195					
489										
490										
491		491.70	492.98		173196					
492		492.98	494.57		173197					
493										
494		494.57	495.94		173198					
495		495.94	497.20		173199					
496										
497		497.20	499.08		173200					

PAGE 51 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WW9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(480.01-491.70: ARSI cont'd) lam fg py - tr sph, cpy in siliceous + argill. bands							
				wispy perv. silica, 1% localized f.g blebs + v.f.g. stringer py							
498				497.20-497.35: QTVN: QUARTZ VEIN							
499 499.08	RHFR			Bull wh. w/ tr. carb blebs, no mineral.							
				491.70 499.08 FRAGMENTAL RHYOLITE							
500 500.18	EXCP			RHFR Dk gray fragmental rhy, perv. sil'd, lt-dk gray, subangular, 1x3 cm fragment size. Rare massive py blebs in areg. partings							
500.73	SSMS			499.08-500.18 CALCITE PYRITE EXHALITE							
501				EXCP / minor mt General "mixed bag" cal/py exh w/ rusty-beige, black white, gray laminae + fragments mod effervescence							
502 502.12 502.34 502.72	RHFR			w/ 10% HCl 9% f.g. banded + stringer py - coarse dk black-reddish br sphal @ 499.3m							
503 503.97	QTVN			500.18-500.73 MASSIVE SULFIDE (55cm)							
504 504.68 504.73				SSMS Primarily py, dull metallic massive (99% py, 1% sph) Very little							
505 505.48				variation over unit; f'd aggregate							
506				upsection from down.							
507 506.73				→ 500.18-500.41: Up to 65% gangue w/ remaining 35% v.f.g → mass py. Gangue							
508	EXMT			- fragmental texture - recrystln textures - ?fg marcasite irreg. patches/fronds - biogenic looking textures							
509				min'ogy consists primarily of perv. (mod) sericite + v. wk carb Dominant fol'n (layering) @ 60° cax.							
510 511.24				→ 500.41-500.73 - Appears 99.9% mass sx (99% py, 1% sph). 5mm thk sph bands @ 502.41 + @ 500.73							
511 511.95				★ TOTAL SULFIDE GRADE ★							
				PYRITE: 99% (sect'n: 500.41 → 500.73)							
512				SPHALERITE: <1% (Zn grade: 1.5%)							
513				GANGUE: 20%							
514				500.73-502.72 FRAGMENTAL RHYOLITE (aphyric)							
515	RHTT			RHFR wk perv. ser. alt'd fragmental rhy w/ tr → 1% f.g. py ø blebs/stringers 5x20 mm frag size w/ sericitic partings							
516				→ 502.12-502.34: QCVN: QUARTZ/CARB VN. 90/10% qtz/carb (ankerite) w/ tr fg py ø blebs. 2% 2mm² chl. blebs							
517											
518											

PAGE 52 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WV9791

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
498										
499		499.08	500.18		173201					
500		500.18	500.41		173202					
		500.41	500.73		173203					
501		500.73	502.12		173204					
502		502.12	503.97		173205					
503										
		503.97	505.56		173206					
504										
505		505.56	507.22		173207					
506										
507		507.22	508.38		173208					
508		508.38	509.74		173209					
509		509.74	511.05		173210					
510										
511		511.05	512.60		173211					
512		512.60	514.00		173212					
513										
514		514.00	515.34		173213					
515		515.34	516.87		173214					
516		516.87	518.29		173215					
517										
518		518.29	520.26		173216					

PROJECT: Wolverine Stratigraphic

HOLE NO. WV 9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (500.73-502.72 RHFR cont'd)	ALTERATION CHL A	SER B	EPI C	CARB D	E	FRACTURE INTENSITY	% VEIN QTZ.
519	RHTT		30	→ 502.49-502.52: QCVN QUARTZ/CARB VN							
				Same as above (502.12-502.34)							
520.02			35	502.72-503.97 QUARTZ VEIN + Carb + chl							
520.55	AP TP			QTVN Bull wh qtz vn w/ 5% chl'ic							
521	RHFR		80	+ sericitic bands. Chl. bands are							
521.54				fine, jagged clear healed fractures							
522	RHLT		60	Ser. bands avg. 4cm thk + are							
523			70	massive straw beige/yellow Tr							
523.43				f.g. py blebs. No Po							
524	RHFR		75	503.97-511.05 MAGNETITE IRON FORMATION							
524.53				EXMT Variable perv. ser + chl. alt'd							
525			70	magnetite fc form. wk → mod							
				AND 504m to 521 magnetic w/ tr pø + py stringers							
526				Rare localized v.f.g. sph. stringers							
				→ 503.97-505.48: mod perv. ser + chl alt'n							
527			80	Sea blue/green colour							
				→ 504.48-504.77: QCVN: QTZ/CARB VN							
528				~5115% qtz/carb							
				w/ tr py + 2%							
529				blebby chl.							
				→ 505.48-506.83: Str perv. chl, wk perv. ser							
530				alt'n. Dk forest green colour							
				→ 506.83-510.26: mod perv. chl + ser w/							
531			69	10% carb vn flooding. 1cm sph-py-po @ 507m							
				Similar Bahamas sea blue/							
532				green colour as above (503.97-505.48)							
				→ 510.26-511.05: Str perv. ser, wk chl w/							
533				a beige/pink Dijon mustard							
				colour.							
534				511.05-520.26 FINE GRAINED TUFF ~ AND (MGV) carb alt.							
535.55			80	RHTT? mod perv chl + wk → mod perv							
				carb alt'd f.g. clastic tuff. Forest							
536				green colour w/ rare f.g. py + abundant leucoxene							
	RHFS			→ 513.63-513.82: QCVN: QUARTZ/CARB VN							
537				5/95% qtz/carb w/ tr							
				Po veins & seams f.g. py blebs + 1% mass							
538				blebby sph *							
			70	→ 516.11-516.43: Regional qtz/carb flooding							
539			80	po- w/ 3% f.g. py + 4% f.g.							
				* rich sph stringers parlg dzone							
540	RHFR			parg looks like hole b							
541											

PAGE 54 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97 91

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
519										
520										
521										
522										
523										
524										
525										
526										
527										
528		528.00	529.25		173217					
529										
530										
531										
532		532.01	533.35		173218					
533										
534										
535		535.94	538.19		173219					
536										
537										
538										
539										
540										
541										

* Should split above STR. --> >>9.1

PAGE 55 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				AND							
	RHFS			520.24-520.55 TUFFACEOUS ARGILLITE							
540.30				ARTF Black arg w/ lapilli sized rhy/ carb fragments, tr v fine pyric stringers.							
541	RHFR		90								
542											
543			85	520.55-521.54 FRAGMENTAL RHYOLITE							
				RHFR Fragmental rhy same as above @ 499.90-499.08							
544				520.1 → 520.2+ AND Flow (amyd top) ± fine stroaks Po							
545				521.54-523.43 LAPILLI TUFF							
				RHLT mod perv. serically alt'd rhy lapilli tuff Tr. fine pyric stringers.							
546											
547				523.43-524.50 FRAGMENTAL RHYOLITE							
				RHFR Same as above (499.90-499.08)							
548											
548.14			80	524.50-535.10 SILICEOUS ARGILLITE							
548.27				ARSI Black v. fine grained sil. arg w/ ghostly wispy, silica content. Variable x-cutting carb. veinlets							
549.15			80								
550											
			80								
551				535.10-535.40 MASSIVE RHYOLITE							
				RHFS Fog gray mass aphyric rhy w/ tr. fine sericitic bands. Rare f.g stringer py.							
552			75								
			45								
553			70								
553.6				535.40-540.80 FRAGMENTAL RHYOLITE							
			60	RHFR DK gray fragmental aph. rhy bounded by v.f.g arg. domains. Rare f.g diss. py.							
554											
555											
556				540.80-543.61 MASSIVE RHYOLITE							
				RHFS Same as above (535.10-535.40) -chl-sph stringers over several meters (red brown ± fe)							
557											
				543.61-548.15 FRAGMENTAL RHYOLITE							
558				RHFR Same as above (535.40-540.80) ~1-2% f.g py veinlets x-cutting @ ~0° ax.							
559				→ 548.14-548.27 EXCP: CARBONATE EXHALITE							
559.50				Light blue mottling of white ghostly frags (avg 5mm²) + dk blue carb. matrix. Tr f.g py blebs.							
560			50								
			60	→ 548.70-548.85 EXCP CARBONATE EXHALITE							
561				Same as above (548.14-548.27)							
562											

ARGILLIC

FELDSPATHIC

ARCB

SAND

minor sphalerite 30cm?

HW 557.15

PAGE 56 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WV9791

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
541 split ½										
542		542.23	543.61		173220					
543		543.61	544.96		173221					
544										
545		544.96	546.27		173222					
546		546.27	547.82		173223					
547		547.82	549.15		173224					
548										
549		549.15	550.78		173225					
550		550.78	553.68		173226					
551										
552										
553		553.68	559.50		173227					
554										
555										
556										
557										
558										
559		559.50	560.75		173228					
560		560.75	563.05		173229					
561										
562										
563		563.05	566.50		173230					

PAGE 57 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION
563.05				
	ARTF			549.15-553.68 SILICEOUS ARGILLITE
564				ARTF Black f.g. hard sil acc. w/ faint ghostly siliceous wisps "lapilli sized fragments"
565				→ 550.33-550.53 QTVN: QUARTZ VEIN Bull white qtz vn w/ sharp contacts (@80° c.a.) + tr→1% f.g. blebby py
566				
566.25				
566.50				
566.94	RHLT		70/90	
567	RHFR			→ 550.78-550.88: QTVN: QUARTZ VEIN Same as above (550.33-550.53)
568			80	
568.10				→ 551.46-551.71: QTVN: QUARTZ VEIN Same as above (550.33-550.53)
	ARTF			
569			75	→ 553.58-553.68: QTVN: QUARTZ VEIN Same as above (550.33-550.53)
569.55			85	
570				
	ARSI			553.68-559.50 SAND
571				SAND Dk. gray fine + med grained sand. Re-drilled / pulverized / crushed core?
572				
572.25			80	
	RHLT			559.50-560.75 CARBONACEOUS ARGILLITE
573				ARCB Black f.g. carbonaceous arg. w/ 3% f.g. pyr. laminae. Tr disc soft (1->2) white re-crystallized mineral (alteration product of feldspar = montmorillonite?)
573.80				
574	ARTF		80	
574.61			80	
575				
	RPTF			560.75-563.05 CRYSTAL TUFF
576				RPTF Fg gray rhy. lapilli t.ff w/ disc. montmorillonite "x-tals". Wk perv ser. alt'n w/ ser. partings around rhy. lapilli frags. 1% f.g. finely banded py
576.62			75	
577				
578				
	RHLT			563.05-566.50 TUFFACEOUS ARGILLITE
579				ARTF Black v.f.g. arg. w/ mod. graphitic component. Siliceous lapilli 0.5-2mm in size. Strly foli'd => mod'ly sheared 1% f.g. localized banded py. Fossil Fe-Mn → 566.25-566.50: Str. perv. ser. alt'n. Dijon mustard coloured ser.
580				-10cm Si-Py fin lam Py
581				
582				
				566.50-566.94 LAPILLI TUFF - QFP
583				RHLT mod perv. sericitic alt'd lapilli tuff w/ ser. partings. Gradationally f.g. arg. component downhole
584				
585				
	RHLT			566.94-568.10 FRAGMENTAL RHYOLITE - QFP
586				RHFR Dk gray aphyric rhyolite flows bounded by arg. partings. Tr mass blebby Py

ALTERATION						FRACTURE INTENSITY	% VEIN QTZ.
CHL A	SER B	EPI C	CARB D	E			

PAGE 55 OF 61	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97 91

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
564										
565										
566		566.50	568.10		173231					
567										
568		568.10	569.55		173232					
569		569.55	572.25		173233					
570										
571										
572		572.25	573.80		173234					
573		573.80	574.61		173235					
574		574.61	576.62		173236					
575										
576		576.62	578.15		173237					
577		578.15	579.68		173238					
578										
579		579.68	581.30		173239					
580										
581		581.30	582.50		173240					
582		582.50	583.90		173241					
583		583.90	585.37		173242					
584										
585		585.37	586.66		173243					
586										

PAGE 59 OF 61 | PROJECT: Wolverine stratigraphic | HOLE NO. WV9791

Silica andalusite ± cpy+sph.

GEOLOGICAL DESCRIPTION

568.4 - 576.3 — lam silica-arg rx ± coarse py + fine py-sph-cpy laminae

ALTERATION: A CHL | B SER | C EPI | D CARB | E

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	FRACTURE INTENSITY	% VEIN QTZ.
	RHLT			568.10 - 569.55	TUFFACEOUS ARGILLITE		
587				ARTF	Same as above (563.05 - 566.50)		
588				569.55 - 572.25	SILICEOUS ARGILLITE		
	RHAT			ARSI	Dk black hard sil. arg. w/ f.g-> mass py ic bands (up to 5%) assoc'd w/ silica rich regions. sph @ 570.5, cpy @ 574.55		
589							
590				572.25 - 573.80	LAPILLI TUFF		
590.98				RHLT	Same as above (566.50 - 566.94)		
	ARSI		75				
592			70	573.80 - 574.61	TUFFACEOUS ARGILLITE		
				ARTF	Same as above (563.05 - 566.50)		
593							
593.20			50	574.61 - 576.62	CRYSTAL TUFF		
593.65	RPHT		75	RPTF	Felspar x-tal rich tuff w/ rhy lapilli frags + wk arg. partings Tr -> 1% f.g diss py.		
594			55				
595							
	ARCB			576.62 - 588.10	LAPILLI TUFF (coarse qtz eyes, fspar)		
596				RHLT	Same as above (566.50 - 566.94) - Qtz phenos to 6mm		
597							
				588.10 - 590.98	BLACK LAPILLI TUFF		
598				RHAT	DK grey lapilli sized (1x5mm) rhyolitic frags bounded by f.g black arg. laminae		
599							
				590.98 - 592.20	SILICEOUS ARGILLITE		
600				ARSI	Black v.f.g. arg. w/ faint ghostly wispy silica Tr -> 1% f.g pyritic stringers		
601							
				→	592.35 - 593.00 STGG - FAULT GOUGE Black graphitic pyritic gouge w/ 1% f.g diss py		
602							
603							
604				593.20 - 593.65	BLACK LAPILLI TUFF		
				RHAT	Same as above (588.10 - 590.98)		
605							
	ARCB			593.65 - 606.83	CARBONACEOUS ARGILLITE		
606				ARCB	Black f.g carbonaceous argillite, mostly foliated w/ graphitic + fine siliceous laminae. 1% localized f.g -> mass py blebs. Qtz vns of variable width (~1mm -> 1cm) are common.		
606.83			75				
607							
608	ARSI						
609							

PAGE 60 OF 61	PROJECT: Wolverine Strati	HOLE NO. WV 97 91

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		586.60	588.10		173244					
587										
588		588.10	589.45		173245					
589		589.45	590.98		173246					
590		590.98	593.20		173247					
591										
592										
593		593.20	593.65		173248					
594		593.65	595.15		173249					
595		595.15	597.00		173250					
596										
		597.00	598.89		173251					
597										
598		598.89	600.35		173252					
599										
600		600.35	601.70		173253					
601		601.70	602.96		173254					
602										
603										
604										
605										
606										
607										
608										
609										

PAGE 61 OF 61 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV9791

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
610	ARSI			606.88-610.79 SILICEOUS ARGILLITE							
610.79				ARSI Same as above (590.98-593.20)							
				5 Qtz/Epy grit bands							
				610.79 - End of hole							
				2004'							
				Pumpy @ 596.4m in blarg (silicic)							

LAY IT TO REST

91

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: WOLVERINE REGIONAL	GROUND ELEV.: 1348 m
HOLE NO.: WV97-92	BEARING: GS (213°)
LOCATION: 18300E, 16600N	DIP: -70
	TOTAL LENGTH: 276.4 m
LOGGED BY: G. BRADSHAW	HORIZONTAL PROJECT:
DATE: JUNE 22	VERTICAL PROJECT:
CONTRACTOR: F. BOISVENU	
CORE SIZE: NQ	
DATE STARTED: JUNE 20	
DATE COMPLETED: JUNE 23	
DIP TESTS: 137.2 - 64°; 267.3 - 60.5°	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- Upper section of mixed argillites and andesitic tuffs
- Rhyolites begin at 35.6 m and consist of a variety of fragmental, tuffaceous and massive coherent facies.
- Two distinct zones of "exhalative activity" -
  - An upper iron formation from 96.8 – 111.9 m. - very massive and chloritic
  - A lower zone of iron formations and silica-calcite exhalites from 170.9 - 202.1 m.
- Transition zone to lapilli and crystal bearing tuffs occurs at 228.1 (possible fault contact) This is probably the "Wolverine Horizon"
- Best mineralization occurs within a chloritic quartz-feldspar crystal bearing lapilli tuff - 242.3 - 252.1
- Mineralization is localized - a 20cm "footwall stringer zone" with ~25% cpy and minor py + pO within a mainly CO_3 mtx. occurs at 243.8 (~8% copper over 30cm)
- Another 60cm stringer cpy + sph mineralized zone occurs at 251.5 m

LEGEND

PAGE 1 OF | PROJECT: | HOLE NO. WV97-92

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
				0 - 8.5 CASING OHCS							
	DHOB			8.5 - 14.4 OVERBURDEN DHOB							
				14.4 - 26.5 GREY-BLACK TUFFACEOUS ARGILLITE ARTF - mainly a finely laminated black argillite, moderately carbonaceous. Contains a variety of fine grained tuffaceous bands and fragments - near upper contact, up to 10% green fine grained andesitic bands and fragments to 17cm, avg ~1cm. - ~20% indistinct tuffaceous siliceous bands and fragments tht. unit. sub-mm - 2cm. - minor calcite as blebs within siliceous bands and fragments. - rare cross cutting cc. stringers - sharp lower contact at 70°							
				andesite interbeds continue to 17.2							
			65°								
	ARTF			1-2cm andesitic interbeds near l. ct.							
			30°	26.5 - 28.9 GREEN FINE GRAINED BANDED ANDESITE TUFF ADTT - 2-3% biotite, sub mm foln // bands + speckles. - 1-2%, cc. sub mm foln // bands + ob late vns + stringers. Tiny sub-mm wht wisps tht unit are prob felsic tephra.							
	ADTT		70°								
			35°	28.9 - 29.6 GREY-BLACK TUFFACEOUS ARGILLITE ARTF same as above, 14.4 - 26.5. sharp contacts							
	RHYR										

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PAGE 2 OF	PROJECT:	HOLE NO. 97-92

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 3 OF | PROJECT: | HOLE NO. 97-92

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EP C	CO_3 D	E	FRACTURE INTENSITY	% VEIN QTZ.
32	QTVN		70°	29.6 - 33.2	GREEN APHANITIC BANDED - FRAGMENTAL RHYOLITE							
				RHFR	distinct green "puck rock" - not the same as usual RHFR at Wolverine. Possibly weak chl altn.							
33					Same as RHFR below starting at 57.1 - see for full description.							
34												
				33.2 - 35.6	WHITE MASSIVE QUARTZ VEIN							
35				QTVN	massive featureless milky white.							
36			75°	35.6 - 57.1	GREY VARIABLE RHYOLITE LAPILLI TUFF							
				RHLT	- A bit of a "mixed bag"							
37					- Bulk of unit is composed of subrounded 2-5 mm flattened ovoid siliceous felsic volcanic fragments within a dark brown - black micaceous matrix. (Biotite - sericite)							
38					- Typically quite crowded - 50% frags.							
39					- locally fragment content decreases and mtx has an argillaceous component							
40					- Green fine grained soft andesitic bands (see ADTF abv 26.5-28.9) locally ab. Avg 1-2 cm.							
41					- 41.8 - 42.2 - dirty mtx qv w/ patches of CO_3							
42					- Often diss. calcite within siliceous bands and fragments							
43												
44												
45			65°									
46	RHLT											
47												
48												
49												
50												
51												
52												
53												
54												

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PAGE 4 OF	PROJECT:	HOLE NO. 97-92

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
Rare traces of pyrite.										

PAGE 5 OF | PROJECT: | HOLE NO. 97-92

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_2)	E	FRACTURE INTENSITY	% VEIN QTZ.
55	RHLT				RHLT (cont.)							
56				57.1 - 66.8	GREEN MASSIVE APHANITIC RHYOLITE (FRAGMENTAL)							
57				RHFS/ RHFR	- same as 29.6-33.2 above "PUCK Fragmental."							
58					- green-white siliceous aph rhy bands avg 1-2cm							
59					- occasionally show ragged fragment terminations							
60					- About 90% w/ 10% grey-brn micaceous (biotite + chlorite) partings							
61					- distinctive dark forest green colour may be due to weak chl. altn.							
62	RHFR				- minor amounts of calcite - usu. diss. w/i felsic bands/fragments							
63					- Approximate lower contact - gradual change in size and density of frags							
64												
65												
66												
67				66.8-74.7	GREY RHYOLITE LAPILLI TUFF							
68				RHLT	- similar to rhyolite lapilli tuff from 35.6-57.1 above.							
69					- ~40% grey aph siliceous fragments							
70					- usu subrounded - rounded (not spherical!) ovoid shaped avg 2×7mm, up to ~2cm							
71	RHLT				(70.4 - 72.7 - quartz vein zone - 80% white well fractured quartz veins 20% wall rock.)							
72					- brown-grey micaceous matrix							
73												
74												
75				74.7-96.8	GREEN MASSIVE APHANITIC RHYOLITE (FRAGMENTAL)							
76				RHFS/RHFR	"Pucic Fragmental" - fragment terminations only rarely visible - dominated by green and less often white aph siliceous bands - avg. 1 cm wide.							
77												

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PAGE 6 OF	PROJECT:	HOLE NO. 97-92

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
Tr-1% pyrite, cross-cutting and foln para. pyrite stringers.										

PAGE 7 OF | PROJECT: | HOLE NO. 97-92

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
78	RHFS/RHFR			RHFS/RHFR (cont.) - partings are mainly oil w/ minor sericite. ~ 3-5% of rock.							
79			70°	- Occ anastomosing - create < pseudo-fragmental texture - large 2 x 5 cm siliceous domains. - Very sparse (<1%) magnetite crystals (avg 0.5 mm) - possibly after pyrite.							
80											
81											
82											
83											
84											
85											
86											
87			70°								
88											
89											
90											
91											
92											
93											
94											
95				96.5-96.8 - wht qtz vein sericite + chl. inclusions (right at lithological contact.)							
96											
97				96.8-111.9 EXMT BLACK - DARK GREEN MAGNETITE IRON FORMATION thick 15 m iron fm, but with some intervening argillite clay gouge and some lost core.							
98	EXMT		70°								
99			BC	Overall 60% mt iron formation 9m out of 15m interval.							
100											

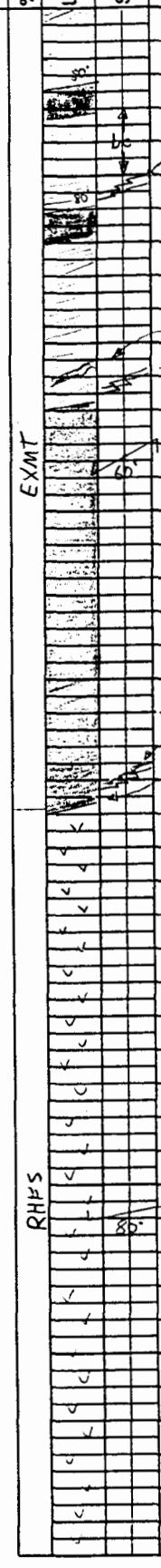
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PAGE 8 OF	PROJECT:	HOLE NO. 97-92

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		95.3	96.8	1.5	174349	
~3% sulphides mainly pyrite stringers tht and clots on foln. Also traces of po.		96.8	98.4	1.6	174350	
		98.4	99.4	1.0	174351	
		99.4	99.9	0.5	174352	

PAGE 9 OF | PROJECT: | HOLE NO. 97-92

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C CLP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
101		EXMT	90°	EXMT (cont.)							
				- intervening rocks are typically broken-rubbed carbonaceous argillites (with some gouge (Faultr) - as indicated on the left.							
102			bc	- mt. rich zones are typ. wavy mm-cm bands 1-2 cm with minor silica or simply massive very fine grained finely laminated mt + chl.							
103			80°	103.3 - 105.8 - siliceous argillite grading into grey sericitic rhyolite - ends w/ a grey gouge zone - some lost core.							
104											
105				- Iron formation averages ~ 80% mt							
106				- Not a typical "salt and pepper" iron fm.							
107			60°	- 50% mt overall.							
				- very sharp lower contact - 10 cm of fault gouge (mt)							
108											
109											
110											
111											
112		RHFS		111.9 - 136.8 GREY MASSIVE APHANITIC RHYOLITE							
				RHFS							
113				- grey aph rhyolite w/ numerous 1 mm green sericitic partings (~10%)							
114				- ab silvery green musc/ser on fdn.							
				- brkn core tht unit.							
115				- ab lost core.							
116											
117											
118			80°								
119											
120											
121											
122											
123											



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PAGE 18 OF	PROJECT:	HOLE NO. PK97-10

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		99.9	101.2	1.3	174353	
		101.2	101.6	0.4	174354	
		101.6	103.0	1.4	174355	
		103.0	103.3	0.3	174356	
		103.3	105.8	2.5	174357	
		105.8	107.3	1.5	174358	
		107.3	108.8	1.5	174359	
		108.8	111.9	3.1	174360	
		111.9	114.9	3.0	174361	
tr - 1% diss f.g. pyrite.						
		114.9	117.3	2.4	174362	
		119.0	121.0	2.0	174363	

PAGE 11 OF | PROJECT: | HOLE NO. 97-92

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
124	RHFS			RHFS (cont.)							
				slightly gradational lower ct into blk argillite							
125											
126											
127			84°								
128											
129											
130											
131											
132			BC								
133											
134											
135											
136											
137	ARCB			136.8-142.4 ARCB — BLACK CARBONACEOUS ARGILLITE: black finely laminated strongly carbonaceous argillite 2-3% 1-2mm white-grey siliceous banding							
138											
139			80°								
140				- minor blk fault gouge							
141			35°	141.0-141.2 - broken wht qv.							
142				142.4-158.9 RHFS — GREY MASSIVE APHANITIC FELSITE (RHYOLITE)							
143			4	same as abv 111.9-136.8 very broken up ab lost core							
144			BC	- ab lost core							
145	RHFS										
146											

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PAGE 12 OF	PROJECT:	HOLE NO. 97-92

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		132.6	133.9	1.3	174364					
- 2-3% py. clots + stringers of f.g. dusty py along fol'n		136.8	138.8	2.0	174365					
		138.8	140.4	1.6	174366					
		140.4	142.4	2.0	174367					
		142.4	145.4	3.0	174368					

PAGE 13 OF | PROJECT: | HOLE NO. 97-92

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
					RHFS (cont.)							
147					fairly sharp lower ct. at 65°							
148												
149												
150												
151												
152			BC									
153												
154												
155												
156												
157												
158	RHFS			158.9 – 170.1	GREY-BLK MASSIVE SILICEOUS ARGILLITE							
				ARS1	- black-grey very siliceous, locally carbonaceous finely laminated - massive argillaceous sediment.							
159		65°	65		- "cherty" - local 1-3 mm alternating dark and light grey bands							
160					- ab bkn. core-fit unit							
161					- greyish indistinct irregular siliceous banding + massive patches fit unit.							
162					- occ. bkn. qtz veins.							
163												
164												
165	ARS1											
166												
167					167.6 - 169.0 - strongly graphitic interval, ab crushed core							
168				ab graphite	169.3 - 169.8 - zone of ab sub-mm (web-like) cross-cutting cc stringers + a 4cm calcite vein.							
169			75°									

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PAGE 14 OF	PROJECT:	HOLE NO. 97-92

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
~2% pyrite ab f.g. disseminations on foln. and fractures. sub mm foln. para. and cross cutting stringers common.		158.9	161.1	2.2	174369					
		167.6	168.9	1.3	174370					

PAGE 15 OF | PROJECT: | HOLE NO. 97-92

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
	ARSI			170.1-170.9 GREY MASSIVE APHANITIC FELSITE (RHYOLITE)							
170				RHFS same as 142.4-158.9 abv							
	RHFS			170.9-173.1 GREY SILICA-MAGNETITE-CALCITE EXHALITE							
171				EXMT (MAGNETITE POOR IRON FORMATION)							
172				well banded. ~70% grey aphanitic silica, regular bands (1-2mm) of mt + minor chl							
173	EXMT			tht unit (~20% mt.) Peppery diss mt- tht unit 5-10% calcite - 2-3 mm bands + irr stgrs. sharp lower contact ~70°.							
174											
175				173.1-180.4 GREY BANDED-MASSIVE APHANITIC SILICA EXHALITE							
				EXSP > - white-grey some textural variation.							
176			70°	- Indistinct mm-cm scale banding w/i silica.							
				- minor greenish grey sericite on foln. planes							
177				(1-2 mm bands) - fairly localized.							
	EXSP			- locally rich in tiny sub mm miriolites							
178				- local Chloritic zones (up to ~20cm)							
				- may be a mixture of silica exhalite and							
179				very fine grained ash tuff.							
180				180.4-184.2 DARK GREY-GREY APHANITIC RHYOLITE							
			30°	RHFS - grey siliceous aphanitic rock mainly -							
181				- occasional 1mm interbeds of black							
				carbonaceous argillite							
182				- very faint mm dark wisps give rock a							
	RHFS			pseudo-fragmental appearance							
183				- exhalative calcite bands 2-4 cm. white-							
				creamy w/ a grainy texture. sharp l ct.							
184			25°								
				184.2-186.4 WHITE-GREY BANDED CALCITE EXHALITE							
185			65°	EXCA - crude mm scale bands tht							
	EXCA			- grainy white calcite dominates ~90% of unit							
186				- minor siliceous blebs.							
			65°	- sharp contact - 1st appearance of mt.							
187											
				186.4-191.4 BLACK-GREY MAGNETITE-CALCITE EXHALITE							
188				EXMT (MAGNETITE IRON FORMATION)							
				- ~50% magnetite overall, present tht							
189				unit, as 1-2 mm bands. MSV intervals 5-10cm							
				coarse diss. bands and pepper-like disseminations							
190				- Remainder of unit mostly calcite - exhalative bands							
				(188.0-188.3 - white broken up quartz vein.)							
191	EXMT			up to 10 cm as well as ab late veins and stringers							
				- local green chloritic zones - indistinct.							
192			70°								

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PAGE 16 OF	PROJECT:	HOLE NO. 97-92

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
2% diss py, some euhedral cubes.		168.9	170.1	1.3	174371	
1% diss py. fine-med grained.		170.1	170.9	0.8	174372	
		170.9	172.0	1.1	174373	
		172.0	173.1	1.1	174374	
		173.1	175.1	2.0	174375	
- 3-4% sulphides, py bands common (1-5mm) diss py fht unit. Tr. sph oss/w/ some py bands. (176.3)		175.1	177.1	2.0	174376	
		177.1	178.7	1.6	174377	
179.0 - 2mm red-brown sph. band.						
		178.7	180.4	1.7	174378	
- ~5% sulphides, py bands 1-5 mm are common fht. unit, usu very dark and fine grained. Minor coarser diss + str. py.		180.4	182.1	1.7	174379	
		182.1	184.2	2.1	174380	
- ~4% pyrite, 1-4mm wavy bands fht unit.		184.2	185.3	1.1	174381	
		185.3	186.4	1.1	174382	
		186.4	187.6	1.2	174383	
- 2% pyrite, wavy bands up to 5mm rare - mainly f.g. diss.		187.6	188.8	1.2	174384	
		188.8	190.1	1.3	174385	
		190.1	191.4	1.3	174386	

PAGE 17 OF | PROJECT: | HOLE NO. 97-92

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EP C	CO_3 D	E	FRACTURE INTENSITY	% VEIN QTZ.
				191.4 - 194.3 WHITE - GREY CALCITE PYRITE EXHALITE							
193	EXCP			EXCP - ab bkn core thr. unit. mainly white grey grnly calcite w/ only rel scale bands to massive intervals (up to 10 cm). Locally 3-5 mm siliceous bands - tr. diss mt. sharp l.ct.							
194			30°								
195											
				194.3 - 197.3 GREY BANDED SILICA-CALCITE-MAGNETITE EXHALITE							
196	EXSP			EXSP - mainly grey aphanitic silica w/ local minor bds. - 1-2 mm calcite bands thr. mtx cc - 1950-1955 ~20% overall. ~3% mt - diss-bndd for 100 cm w/ minor chl at 195.6. shp. lower ct.							
197			75°								
198			75°								
				197.3 - 202.1 WHITE/GREEN/BLACK BANDED CHLORITIC MAGNETITE IRON FORMATION							
199	EXMT			EXMT - well banded exhalative unit w/ ~10% mt. - occ sl. sl. poppery disseminations and 1-2 mm stringer like veinlets. Dark green - 1-5 mm chlorite bands common thr. with lesser light green patchy epidote - calcite ab. thr, 1-2 cm bands (veinlets) w/ mt+chl as well as irr. patches and stringers.							
200											
201			75°								
202											
203				bkn quartz veins - gradational ct - disappearance of mt + chl and appearance of argillite partings.							
204											
				202.1 - 210.2 BLACK GRAPHITIC ARGILLITE / FAULT GOUGE ZONE							
205	ARGR			ARGR - near upper ct. interbedded arg + silica (rhyolite) - mm scale.							
206				graphitic gouge zones (intense) - Most of unit - sheared - brecciated graphitic argillite + minor qtz veins.							
207				- 205.1 - 205.5 green strongly sericitic rhy.							
208				- sharp lower contact interbeds up to several cm of next unit near l.ct.							
209											
				210.2 - 220.4 GREY-BROWN VARIABLE TUFFACEOUS RHYOLITE							
210	RHTF		35°	RHTF 210.2-212.4 - grey - straw coloured very sericitized fine grained rhyolite.							
211				211.2-212.4 - foln dips to 35-40° to c.a. - strong straw coloured sericite alt'n. blebby cc bands to 1 cm							
212			40°	211.2-212.4 shear zone							
213				minor fault gouge 212.4 - 219.1 - fine grained grey-brown banded siliceous tuff 10-15% sericite + mm biotite as mm scale bands separating grey grnly - aph silica. occ. lapilli sized fragments visible.							
214				219.1 - 220.4 - grey to slightly greenish aph rhy (more like RHFS), 5% 1mm sericite bands.							
215											

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PAGE 18 OF	PROJECT:	HOLE NO. 97-92

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
- 10% pyrite as well defined bands 1-5mm, fine grained, prob. exhalative. Occur thr. unit. Also wavy stringers + dissemination		191.4	192.8	1.4	174387	
		192.8	194.3	1.5	174388	
		194.3	195.8	1.5	174389	
- 1-5mm fine-med grained py bands ~ 3-5%.		195.8	197.3	1.5	174390	
		197.3	198.8	1.5	174391	
		198.8	200.3	1.5	174392	
~ 3% pyrite, rare exhalative bands, mainly clots and cross cutting stars		200.3	202.1	1.8	174393	
		202.1	204.1	2.0	174394	
		204.1	205.1	1.0	174395	
- 2% fine diss py		205.1	206.3	1.2	174396	
		206.3	209.4	3.1	174397	
		209.4	210.2	0.8	174398	
- Tr-1% diss f.g. py.		210.2	212.4	2.2	174399	
		212.4	214.5	2.1	174400	
		214.5	216.5	2.0	174401	

PAGE 19 OF | PROJECT: | HOLE NO. 97-92

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
216	RHTT		70°		RHTT (cont.) sharp contact - appearance of argillite bands							
217												
218												
219				220.4-224.2	INTERBEDDED BLACK ARGILLITE AND GREY APHANITIC							
220				RHAR	- TUFFACEOUS RHYOLITE.							
221			70°		- 60-70% carbonaceous argillite, interbedded on a mm to cm scale w/ a darkish grey aph. siliceous rhyolite. sharp lower ct							
222	RHAR											
223				224.2-226.3	GREY MASSIVE APHANITIC RHYOLITE							
224				RHFS	massive aph wkt siliceous mtl w/ no banding and only weak sericite on foln. Trace blk graphitic partings near sharp l. ct.							
225	RHFS		80°									
226				226.3-228.1	DARK GREY-BLACK ARGILLACEOUS RHYOLITE							
227	ARTF?		60°	ARTF?	- very siliceous rock - but dark and with 1-2 mm graphitic partings. Aphanitic.							
				WOLVERINE HORIZON.?	- 227.4-227.7 - brecciated zone w/ calcite vns and stringers. 5 cm of crushed/gouged							
228				possible fault contact	core at very sharp l. ct - possible fault.							
229	RHLT			228.1-233.8	LIGHT-DARK GREY WELL FOLIATED RHYOLITE							
				RHLT	LAPILLI TUFF (FOOTWALL LAPILLI TUFF)							
230					- first of the "footwall type" units. Possible fault ct above may represent Wolv. horizon.							
					- weak sericite alt'n - 1-3 mm pale grn bndr tht.							
231			70°		- Dirty grey rock w/ ~10-20% clear round felsic "lapilli" - avg 0.4 mm. Otherwise fine grained.							
232					- many siliceous lapilli altered partially to cc.							
					- occ argillaceous intervals - felsic lapilli w/ a fine black argillite mtx. Up to ~30 cm.							
233					- Rare alt'n eyes <<1%, sharp ct w/ fault zone							
234				233.8-242.3	BLACK-GREY MIXED RHYOLITE + GRAPHITIC GOUGE							
	ARGR/STGG			ARGR/STGG	ZONE.							
235					- big fault zone. mix of ground up + clay like grey gouge (prob RHLT above) and							
236					black graphitic gouge - (~70% blk argillite) minor quits of broken qvs							
237					and carbonate. (240.2 - 6 cm qv)							
238												

PAGE 20 OF	PROJECT:	HOLE NO. 97-92

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		216.5	218.5	2.0	174402	
		218.5	220.4	1.9	174403	
- Tr. f.g. diss py + fg cross-cutting stringers.						
		220.4	222.3	1.9	174404	
- Tr. f.g. pyrite clotted on fractures and foln.		222.3	224.2	1.9	174405	
		224.2	226.3	2.1	174406	
- 1% py clotted on foln and fractures.						
		226.3	228.1	1.8	174407	
- 2-3% fine diss-braid py. Locally more abundant (228.6-230.0) Traces of associated sph (229.7)		228.1	229.6	1.5	174408	
		229.6	231.3	1.7	174409	
		231.3	233.8	2.5	174410	
		233.8	236.8	3.0	174411	
- 1-2% diss-clots of pyrite. · large 2×4 cm round massive py "knocker" at 231.2. · 240.2 · f.g. po+py in a 6 cm qv.						
		236.8	239.9	3.1	174412	

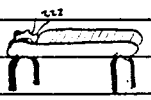
PAGE 21 OF | PROJECT: | HOLE NO. 97-92

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
239	ARGR/STGG			ARGR/STGG (cont.) - 240.3-240.7 - intact argh. Sg. w 3-5% mm scale cc bands/blebs 240.9-241.3 qtz-CO_3 vn.							
240				- 241.3-241.7 - intact tuffaceous sericitic rhyolite - 241.7-242.3 - only 10 cm of recovery - mixed gouge.							
241				242.3-252.1 RPTF - GREY/GREEN CHLORITE ALTERED QUARTZ-FELDSPAR CRYSTAL BEARING RHYOLITE LAPILLI TUFF							
242				- gouge + lost core - Tr diss cpy in qv - fine grained tuffaceous rhyolite w/ 1-2% white 1 mm feldspar crystals and rare 1 mm grey glassy quartz eyes							
243				- locally concentrated (overall ~10%)							
244				30 cm zone of stringer cpy + py w/ CO_3 + Si mtx. white very flattened 2-4 mm felsic lapilli							
245			80°	- moderate to intense dark green chlorite alteration thr. unit w/ lesser pale green white sericitic alt'n.							
246				- 242.3 - 10 cm qv w/ traces of disc cpy							
247				- 242.4 - 243.8 - intense alt'n. zone of many cc. blebs. Angular 'augen' texture. Sp. 5 mm scale patchy int. feldspar xtls.							
248				90 cm zone of fault gouge ob lost core.							
249			35°	- 243.3-244.1 - 30 cm interval - grey fine grained siliceous + calcite matrix w/ ab sulphides - see →							
250				- 248.1-249.0 - grey gouge bkn qv 3% recovery 60 cm zone of ab cpy + sph stgrs							
251				possible fault ct							
252				- 251.5-252.1 - intensely chl altered zone w/ fault calcite bands (1 mm) and ab sulphides - see across →							
253	RHLT		37°	fault ct w/ RHLT at 37° - sharp probably faulted contact							
254				252.1-265.7 RHLT - GREY RHYOLITE LAPILLI TUFF							
255				252.1-253.4 - unit begins w/ 1.3 m of grey clay gouge with a sharp lower contact at 37°							
256				very similar to 228.1-233.8 above varies from green and moderately sericitic to grey without much sericite.							
257				- local gouge zones and minor brecciation - 20% very flattened felsic lapilli avg 2-20 mm							
258			75°	- rare qtz eyes <1%							
259				- gradational / depositional contact with next unit.							
260											
261											

PAGE 22 OF	PROJECT:	HOLE NO. 97-92

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		239.9	240.9	1.0	174413	
2-3% fine dark py stringers within qtz-CO3 vein - 240.9 - 241.3.						
- Overall about 5-7% sulphides		240.9	242.3	1.4	174414	
Fine grained diss-clotted pyrite (~3%) diss-stringer cpy locally abundant						
traces of sph locally. Po also present		242.3	243.8	1.5	174415	
242.3 - tr. cpy in qtz vein						
242.5 - diss str cpy						
243.8 - 244.1 - 30cm of stringer type mineh		243.8	244.1	0.3	174416	
w/ a qtz+CO3 matrix - 20% dark brown						
py in 1-2mm X-cutting veins/stringers		244.1	245.4	1.3	174417	
and patches. 25-30% cpy clotted +						
disseminated thr interval. minor py.		245.4	247.9	2.5	174418	
245.5 - traces of diss cpy.						
251.5 - 252.1 - zone of ab very fine						
foln parallel stringer cpy + sph						
~ 5% cpy, 3% sph and 2-3% py.		247.9	251.5	3.6	174419	
		251.5	252.1	0.6	174420	
		252.1	253.9	1.8	174421	
- 3% py. fine grained, dark brown		253.9	255.7	1.8	174422	
thr. stringers and disseminations thr.						
		255.7	258.2	2.5	174423	
		258.2	259.7	1.5	174424	
		259.7	261.2	1.5	174425	

PAGE 23 OF | PROJECT: | HOLE NO. 97-92

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
262	RHLT			RHLT (cont.)							
263											
264											
265											
266				265.7-276.4 RPTF: WHITE/BROWN QUARTZ-FELDSPAR RHYOLITE CRYSTAL/LAPILLI TUFF (QFP)							
267				- distinct unit with very aburdant (~5%) clear, large (1-4 mm), blue, glassy quartz eyes and rounded-rectangular grey-white 1-5 mm feldspar crystals.							
268											
269				- ab (~20%) very stretched and flattened (avg 2x20 mm) grey/wht felsic lapilli. give the rock a banded appearance.							
270											
271				- fine grained grey siliceous matrix with distinct mm-scale brown micaceous bands thr unit up to ~30% of rock mainly but + minor sericite. fairly uniform throughout							
272	RPTF										
273											
274											
275											
276				276.4 - EOH							
277				PITB 							
278											
279				Base of last ign fm to transition zone: 202.1 - 228.1 m. (26m)							
280											
281											
282											
283											
284											

PAGE	OF	PROJECT:	HOLE NO. 97-92

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS			
		261.2	264.3	3.1	174426				
		264.3	265.7	1.4	174427				
- 2-3% py - mainly diss and clotted on fractures.		265.7	267.3	1.6	174428				
		267.3	268.8	1.5	174429				
		268.8	270.3	1.5	174430				

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.

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DRILL LOG

PROJECT: WOLVERINE STRATIGRAPHIC	GROUND ELEV.: 1370 m
HOLE NO.: WV97-93	BEARING: GS. (213°)
LOCATION: 17800E, 16625N	DIP: -70
	TOTAL LENGTH: 252.1
LOGGED BY: G. BRADSHAW	HORIZONTAL PROJECT
DATE: JUNE 26	VERTICAL PROJECT
CONTRACTOR: F. BOISVENU	ALTERATION SCALE
CORE SIZE: NQ	
DATE STARTED: JUNE 24	
DATE COMPLETED: JUNE 28	TOTAL SULPHIDE SCALE
DIP TESTS: 125.0 ⇒ -63°; 252.1 ⇒ -55°	



absent
slight
moderate
intense



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- Upper section of hole to 72.9 m. consists of massive to fragmental rhyolite.
- Two distinct + separate iron formations, with massive rhyolite, lesser tuffaceous argillite and considerable lost core in between.
- 72.9 - 80.7 - 1st iron formation,
  125.0 - 141.5 - 2nd iron formation. Includes msv rhyolite and a small EXCP unit from 137.9 - 139.1.
- Sharp transition between tuffaceous rhy and carbonaceous argillite of the "hanging wall" and lapilli and crystal rich units of the "footwall" occurs at 151.1 m - no visible mineralization.
- Most interesting mineralization occurs deep:
  194.0 - 5cm mineralized band with sph, py and tr cpy CO_3 mtx - similar to cpy rich zone in WV97-92
  207.9 - 212.3 - chl altered quartz-eye unit with minor cpy stringers. May correlate w/ chl altered zone in bottom of WV97-92.

LEGEND

PAGE 1 OF | PROJECT: | HOLE NO. 97-93

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
25				0.0 - 25.0 CASING OHCS							
26				250 - 502 GREY VARIABLY TEXTURED FRAGMENTAL RHYOLITE RHFR generally grey aphanitic aphyric siliceous							
27			75	rhyolite fragments within a dark grey to brown micaceous matrix.							
28				- variation in size and density of fragments and amount of matrix.							
29				- 25.0 - 37.2 → grainy texture to cm scale							
30				siliceous bands w/ fragment terminations occasionally visible.							
31				sub mm sericitic partings							
32				- many oxidized zones fragments contain orange FeO_x.							
33				- 37.2 - type-section for "Wolverine Fragmental"							
34				60 - 80 % white aph siliceous angular frags with jagged terminations within a							
35				sub mm dark brown - black often anastamosing sericite matrix.							
36			75°	Size ranges from 2-5 mm to 2-5 cm.							
37				continues to 502 m.							
38											
39											
40											
41											
42											
43											
44											
45											
46			20°								
47											

RHFR

PAGE 2 OF	PROJECT:	HOLE NO. 97-93

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
Trace diss. pyrite.										

PAGE 3 OF | PROJECT: | HOLE NO. 97-93

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (IO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
48				RHFR (cont.)							
49											
50				50.2-63.7 RHFR: GREEN APHANITIC FRAGMENTAL RHYOLITE							
51	RHFR		80	- dark forest green tinged (chl present) "Puck Fragmental" - same as in all Puck holes and 74.7-96.8 in DDH 97-92.							
52				- Fragment boundaries only rarely visible							
53				- dominated by green and less often white aphanitic siliceous bands typically ~1cm wide.							
54				- sub mm pyrites are chl ± mm sericite - 3-5 % of rock.							
55				- local sparse disseminated mt. Xtals: (<<1% overall)							
56				sharp lower contact at 70°							
57											
58											
59											
60			70°								
61											
62											
63				63.7-70.1 RHAR: INTERBEDDED MASSIVE - TUFFACEOUS BLACK ARGILLITE AND GREY APHANITIC TUFFACEOUS RHYOLITE							
64	RHAR			- 63.7-65.8 → mainly argillite w 3-5% grey tuffaceous - calcareous bands and wisps.							
65				(65.3-65.8 · calcareous zone · bands, blebs and fine disseminations)							
66				- 65.8-70.1 → typical RHAR - blk argillite 2mm-2cm bands interbanded w/ aphanitic siliceous bands - typically 1-2 cm wide.							
67				Occasional siliceous ovoid frags (68.5)							
68				· sharp lower contact.							
69											
70											

PAGE 4 OF	PROJECT:	HOLE NO. 97-93

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
- trace - 1% diss. stringer pyrite.										
- 2-3% pyrite - ab as Hwy sub-mm stringers parallel to foln. w/i argillite. clots along fractures and cross cutting stringers also present.										
		68.5	70.1	1.6	174431					

PAGE 5 OF | PROJECT: | HOLE NO. 97-93

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
70												
71	RHFS			70.1-72.9 RHFS	GREY-WHITE BANDED APHANITIC FELSITE (RHYOLITE) - typical RHFS - dominated by grey smooth aphanitic siliceous material - given a banded appearance by frequent sub.mm sericitic partings (1-10% overall). Local zones of fiss-stringer calcite. Sharp lower contact.							
72												
73												
74	EXMT			72.9-75.5 EXMT	BLACK/GREEN BANDED-MASSIVE MAGNETITE-CHLORITE-EPIDOTE IRON FORMATION. Frequent massive mt. bands - 1mm-2cm (~70-80%) black finely crystalline. Minor disseminations. Lesser 1-2 mm halo green epidote and dark green chl stirs. Minor calcite wisps and stringers.							
75												
76												
77												
78	RHFS			75.5-79.5 RHFS	GREY-WHITE BANDED APHANITIC FELSITE (RHYOLITE) well banded as above 5mm-1cm. ~5% sub.mm sericitic bands. Local microlites. shp. ct							
79												
80	EXMT			79.5-80.7 EXMT	GREY/WHITE MAGNETITE POOR IRON FORMATION ~10% magnetite in a mainly siliceous unit. Very fine diss cc + w/ local patches + bands (up to 2cm). Generally banded silica w/ mm. calcite on a mm scale. Magnetite mainly in disseminated bands 'salt+pepper' texture.							
81												
82												
83												
84	RHFS			80.7-86.1 RHFS	GREY-WHITE BANDED-MASSIVE APHANITIC FELSITE very similar to RHFS above - but more massive. Only 1-2% sericitic partings locally creating pseudo-fragmental texture.							
85												
86					86.1-87.4 - Fault gouge zone: some graphite but still looks to be mainly siliceous rock as above.							
87												
88			bc									
89					88.3-90.5 - grey crushed ore and minor gouge.							
90												
91	DHLC			90.5-104.2 DHLC	LOST CORE (FAULT ZONE? CAVE?) a few siliceous pebbles recovered w/ minor sericite.							
92												
93												

PAGE 6 OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
Tr. diss pyrite, crude bands.		70.1	71.6	1.5	174432					
		71.6	72.9	1.3	174433					
		72.9	74.2	1.3	174434					
- Tr diss - crudely bndd py		74.2	75.5	1.3	174435					
		75.5	77.7	2.2	174436					
- negligible mineralization		77.7	79.5	1.8	174437					
		79.5	80.7	1.2	174438					
- Trace f.g. diss. py		80.7	82.2	1.5	174439					
- negligible mineralization (Trace diss - clotted pyrite)		84.4	86.1	1.7	174440					
		86.1	87.4	1.3	174441					
		87.4	90.5	3.1	174442					

PAGE 7 OF | PROJECT: | HOLE NO. 97-93

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
	DHLC				DHLC (cont.)							
94												
95												
96												
97												
98												
99												
106				104.2-105.1	WHITE SUGARY TEXTURED QUARTZ VEIN.							
				QTVN	- broken up, minor carbonate							
101												
				105.1-112.3	BLACK-GREY TUFFACEOUS ARGILLITE							
102				ARTF	blk finely laminated org. w/ several %							
					sub mm siliceous (tuffaceous) wisps							
103					and bands ± calcite bands.							
					weakly carbonaceous.							
104												
	QTVN											
105												
166												
					112.0-112.3 : mineralized brecciated zone							
107					at lower contact							
108												
	ARTF											
109				112.3-121.2	GREY MASSIVE SILICEOUS RHYOLITE							
				RHFS	- mainly lost core in this unit (~15%							
110					recovery)							
					- recovered core - very siliceous dark							
111					grey to white pebbles							
112												
113												
114												
	RHFS											
115												
116												

PAGE 8 OF	PROJECT:	HOLE NO. 97-93

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
- Traces of pyrite stockwork type sub mm pyrite veinlets at lower contact.										
		105.1	106.7	1.6	174443					
		109.5	111.7	1.5	174444					

PAGE 9 OF | PROJECT: | HOLE NO. 97-93

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
117	RHFS			121.2-125.0 ARTF BLACK-GREY TUFFACEOUS ARGILLITE same as 105.1-112.3 above broken core fmt unit							
118											
119				125.0-132.6 EXMT GREY BANDED-MASSIVE MAGNETITE-SILICA IRON FORMATION.							
120				- approx 60% mt overall.							
121				- msv. black mt + minor greenish chl rock up to ~ 129.1							
122	ARTF			- massive looking but actually finely laminated mt (~ 80%) with lesser chl + silica.							
123				- mt bands up to ~ 5mm.							
124			30°	- After 129.1 unit becomes a well banded silica-mt exhalite with msv blk mt bands up to 1cm. grey aph siliceous intervals to 2 cm and zones of coarsely diss mt + chl (~10 cm)							
125				- local distinct calcite exhalative bands usu w/ banded-diss mt.							
126											
127	EXMT			132.6-137.9 RHFS GREY BANDED APHANITIC RHYOLITE.							
128				- well banded aph. rhy w/ pale green sericitic partings defining cm scale bands.							
129				- tiny sub-mm wht microliths present throughout.							
130			10°	- grades into a slightly more argillaceous unit after 136.1							
131											
132											
133				137.9-139.1 EXCP GREY-WHITE BANDED CALCITE-PYRITE EXHALITE.							
134			45°	- grey grainy texture - locally msv but generally mm scale laminations (wavy.)							
135	RHFS			- Mainly calcite (~ 85% of unit.)							
136				- minor dark sub mm argillaceous bands towards lower contact.							
137				139.1-140.1 ARTF BLACK-GREY TUFFACEOUS ARGILLITE							
138			20°	broken core at bt - badly broken core bit - basically same as msv - 121.2-125.0							
139	EXCP										

PAGE 10 OF	PROJECT:	HOLE NO. 97-93

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
- Tr - 1% pyrite - clotted on fnlt fractures.						
- 2-3% sulphides - mainly in lower part of unit. coarse crudely banded - diss. pyrite. Traces of cpy. (129.7)						
		121.2	125.0	3.8	174445	
		125.0	127.1	2.1	174446	
- Tr - 1% diss pyrite.		127.1	128.7	1.6	174447	
		128.7	130.2	1.5	174448	
		130.2	131.5	1.3	174449	
		131.5	132.6	1.1	174450	
- ~10% pyrite, mainly zones (crude bands) of coarse grained disseminations - 2-4 cm wide.		132.6	133.6	1.0	174451	
Also diss + clotted on fractures.		133.6	136.1	2.5	174452	
		136.1	137.9	1.8	174453	
		137.9	139.1	1.2	174454	

PAGE 11 OF | PROJECT: | HOLE NO. 97-93

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
140	ARTF			140.1-141.5	GREY/GREEN/BLACK BANDED SILICA-MAGNETITE							
				EXMT	- CHLORITE IRON FORMATION - mainly mm scale							
					~20% mt bands - occurs in well defined							
141	EXMT		80°		zones - 1-5 mm bands + disseminations							
					minor chl bands and calcite bands 1-5 mm.							
142												
				141.5-146.8	GREY FINE GRAINED SILICEOUS RHYOLITE							
143				RHTT	TUFF. - upper ct approx - as item core,							
					but 141.5 is end of pit.							
144	RHTT				- grey fine siliceous tuff occ. calcite							
					bands (1-2mm) weak pale green sericite							
145					on partings slow gradation to a more							
					argillaceous tuff up to 145.0							
146				approximate ct (core zone)	145.0 - 146.8 - qtz vein then gange to end of unit							
147				146.8-151.1	GREY-BLACK CARBONACEOUS-TUFFACEOUS							
				ARCB	ARGILLITE/ CALCAREOUS FAULT GOUGE.							
148					- upper ct approx - within a 1.9 M aquire zone.							
					- this unit mainly aquire + crushed core.							
149	ARCB				- fairly carbonaceous - aphanitic partings that							
					- 149.9 ± 151.1 - fault breccia w/ ab calcite							
150				minor fault breccia w/ qtz-calc vns.	veins and stringers.							
					- sharp lower contact within broken core.							
151												
				151.1-156.8	GREY-GREEN CHLORITE-SERICITE ALTERED							
152				RHLT	BANDED FINE GRAINED LAPILLI POOR							
				transition zone ! (Wolverine Horizon?)	RHYOLITE TUFF. (FOOTWALL LAPILLI TUFF)							
153					- fine grained "footwall type" tuff.							
					well foliated w/ mm scale distinct							
154					laminae.							
					- only ~ 5% lapilli sized flattened							
155	RHLT		85°		quartz eyes ~1% 1x3 mm							
					- 10-20% dark green soft chl bands							
156					and pale green sericite occur thr unit							
					intimately interbanded with more							
157					siliceous mtl - weak pervasive alteration							
158				156.8-176.8	BLACK-GREY/ MASSIVE-TUFFACEOUS ARGILLITE							
				ARTF	- slightly gradational upper contact							
159					then massive black weakly carbonaceous							
					argillite to 157.5:							
160	ARTF				- Most of unit is finely laminated blk							
					arg w/ scarce ~1% grey <1-2mm							
161					tuffaceous bands and fragments							
					(usually indistinct)							
162												

PAGE 12 OF | PROJECT: | HOLE NO. 97-93

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
- 2-3% 1-2 mm py bands + clots on fractures		139.1	140.1	1.0	174455	
		140.1	141.5	1.4	174456	
		141.5	142.4	2.9	174457	
- ~1% py, E.g. cross-cutting units						
		144.4	145.7	1.3	174458	
		145.7	146.8	1.1	174459	
- 1-2% diss E.g. py common in gouge zones and fnt unit		146.8	148.5	1.7	174460	
		148.5	151.1	2.6	174461	
		151.1	152.3	1.2	174462	
- Tr-1% py - foln parallel sub mm-stringers. Rare E-cutting veins.		152.3	153.9	1.6	174463	
		153.9	155.3	1.4	174464	
		155.3	156.8	1.5	174465	
		156.8	158.8	2.0	174466	
- 3-4% pyrite. ab coarse clots and foln parallel stringers fnt unit.		158.8	160.8	2.0	174467	
		160.8	163.7	2.9	174468	

PAGE 13 OF | PROJECT: | HOLE NO. 97-93

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (IO_2)	E	FRACTURE INTENSITY	% VEIN QTZ.
153	ARTF			ARTF (cont.) - local interbeds of sericitic lapilli tuff as above. (20-30 cm)							
154											
155											
156			25°								
157											
158											
159				169.6 - 170.8 - qtz veins + associated fault breccia.							
170											
171											
172											
173											
174											
175											
176			25°	176.8-185.9 RPTF GREY FINE GRAINED RHYOLITE CRYSTAL TUFF - well foliated grey rhyolite siliceous with frequent indistinct sericitic patches. - crowded with quartz and feldspar crystals - ~20-25% rounded, 1-2mm, bluish quartz crystals and more irregularly shaped feldspar crystals of similar size. - ~10-20% pale green-yellow sericite overall - locally has a pitted appearance - origin unknown.							
177	RPTF										
178											
179											
180											
181											
182											
183											
184											
185											

PAGE 14 OF	PROJECT:	HOLE NO. 97-93

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		169.8	171.1	1.3	174469	
		175.4	176.8	1.4	174470	
- 3-4% pyrite, frequent very fine 2-3 mm bands + stringers (exhalative?) disseminations also common		176.8	178.4	1.6	174471	
		184.6	185.9	1.3	174472	

PAGE 15 OF | PROJECT: | HOLE NO. 97-93

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
185.9-201.3 RPAT				GREY-BLACK ARGILLACEOUS RHYOLITE QUARTZ FELDSPAR CRYSTAL LAPILLI TUFF							
				- crowded lapilli tuff with 20-30% white flattened, ovoid, avg 1.7mm felsic lapilli fragments (main difference from appearance of previous unit)							
			25°	- significant argillaceous component (~5-10% overall) - increases down hole toward lower ct. Usu clusters of finely laminated blk carbonaceous bands (sub-mm) up to 2-3 cm.							
				- 2-3% qtz + feldspar crystals - sparse but distinct and present thr. unit.							
				- qtz xtals blue, rounded, ovoid 1-2 mm - felds. xtals ~1mm irregularly shaped							
			folded + faulted argillaceous mtl	- ~3-5% pale green sericitic partings thr. unit.							
			pyrrhotite + trace sulphides	- minor calcite blebs + stringers thr.							
				- abundant argillaceous gouge towards lower ct.							
			25°	- fairly abrupt l.ct - decrease in ab of argillaceous mtl.							
			shear zone fdn 25° to ca-								
			folding (shear zone)								
201.3-207.9 RHLT				GREY FINE GRAINED RHYOLITE LAPILLI TUFF.							
				- grey siliceous rock crowded with very flattened felsic lapilli as in RPAT abv.							
				- sparse qtz crystals present as above (RPAT) and has same general appearance but for lack of arg.							
				- Calcite common thr (~5%) fine diss w/ felsic frags and fg. siliceous mtx.							
			35°	- several % green sericite + minor chl pale on partings thr unit.							

PAGE 16 OF	PROJECT:	HOLE NO. 97-93

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
- generally 1-2% 1-2mm py stringers occur thr. unit.		185.9	187.4	1.5	174473	
194.0 - 5cm stringer zone of sph > py >> cpy w/ a white F.g. carbonate matrix (looks similar to zone at the bottom of WV97-92)						
		193.5	194.5	1.0	174474	
		200.1	201.3	1.2	174475	
- v1% py, fine diss. thr unit, 204.0-204.1 ⇒ 10cm of coarse diss. py, 30-40% of interval.		201.3	203.3	2.0	174476	
		203.3	206.3	3.0	174477	
		206.3	207.9	1.6	174478	

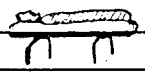
PAGE 17 OF | PROJECT: | HOLE NO. 97-93

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
209	RPQL			207.9 -212.3 RPQL DARK GREY - GREENISH FINE GRAINED CHLORITIC QUARTZ-EYE RHYOLITE - weak-moderate pervasive chl alteration tht, sub mm dark green chl bands on fdn. - sparse (2-3%) distinct round blue qtz eyes (1-3 mm) - generally aph - fine grained wispy chl, hints of indistinct frags. - may be a lapilli tuff as above, - slightly gradational lct - 80°							
210			diss-stgr-cpy								
211											
212											
213			80°								
214			80°	212.3 - 218.7 RHLT GREY FINE RHYOLITE LAPILLI TUFF - very crowded tuff similar to 201.3 -207.9							
215	RHLT										
216											
217											
218											
219				218.7-252.1 RPTF GREY FINE GRAINED WELL FOLIATED QUARTZ FELDSPAR CRYSTAL LAPILLI TUFF. - very similar to RPAT (185.9 -201.3), but only sporadic argillaceous zones (up to 40 cm)							
220											
221											
222				218.7-219.1 - argillaceous interbed 247.7-249.9 - blk msv ora interbed							
223											
224				220.0 -222.2 - interval of lapilli poor crystal rich tuff similar to 176.8 -185.9							
225											
226	RPTF										
227											
228			85°								
229											
230											
231											

PAGE 18 OF	PROJECT:	HOLE NO. 97-93

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
- occ diss cpy - 208.1, 208.7 diss - stringer mineralization		207.9	208.9	1.0	174479					
- 210.2 - cluster of 1-2 mm py bands overall ~ 2% sulphides.		208.9	210.6	1.7	174480					
		210.6	212.3	1.7	174481					
		212.3	214.0	1.7	174482					
Tr - 1% diss-bndd py										
1-2 % diss-bndd py.										
		220.0	221.5	1.5	174483					
		226.8	228.2	1.4	174484					

PAGE 19 OF | PROJECT: | HOLE NO. 97-93

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (CLAY)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
232	RPTF			RPTF (cont.)							
233											
234											
235											
236											
237											
238			85°								
239											
240											
241											
242											
243											
244											
245											
246											
247											
248											
249											
250			80°								
251											
252				252.1 - EOH  PIPE							
253											

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: 1405 m
HOLE NO.: WV 97 94	BEARING: 33° (GN)
LOCATION: 16790N 16500E	DIP: -60
	TOTAL LENGTH: 197.2 m
LOGGED BY: M. Padberg / G.D BRASHAW	HORIZONTAL PROJECT
DATE: June 25/97	VERTICAL PROJECT
CONTRACTOR: Boisvenu Diamond Drilling	**ALTERATION SCALE**
CORE SIZE: NQ	
DATE STARTED: June 24	**TOTAL SULPHIDE SCALE**
DATE COMPLETED: June 26	
DIP TESTS: 91.4 m - 0° (GRID), 33° (TN) → -64° 197.2 m - 358° (GRID), 31° (TN) → -75°	



absent
slight
moderate
intense



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

two massive sulphide lenses intersected:

- → A smaller upper zone 132.9 - 133.7 with py + sph (avg core angle - 40°) (80cm)
- → A larger lower zone 143.89 - 146.01 with py + sph + cpy. (avg core angle 39°) (2.12m)

Normal footwall lapilli tuff up to 153.6 - then a strange dolomitic unit with some type of orbicular fossils (153.6 - 162.1)

LEGEND

PAGE 1 OF | PROJECT: Wolverine | HOLE NO. WV 9794

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
0				0.00-3.05 CASING							
				DHCS							
3.05				3.05-28.05 MASSIVE RHYOLITE							
				RHFS mass fog gray aphyric rhy w/ fine rhythmic sericitic banding. Tr fg py diss. through ser. bands. Primarily brkn core w/ poor recovery. Mod. fe-ox staining for 18m							
4.75			50	→ 4.75-5.80: QTVN · QUARTZ VEIN							
5.80			50	wkly fe-ox stained pure qtz vn. No mineral.							
23											

PAGE 2 OF	PROJECT: Wolverine	HOLE NO. WW 97 94

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

PAGE 3 OF | PROJECT: Wolverine | HOLE NO. WV 9794

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(3.05-28.05 - RHFS cont)							
24											
25											
26											
27											
28 28.05				28.05 - 63.1 RHAR: INTERBANDED RHYOLITE / ARGILLITE. Interbedded mass. aphyric unalt'd fog gray rhy. + black f.g. carbonaceous argillite. Tr. f.g. → mass. stringer py. Primarily brkn core / rubble.							
29											
30											
31											
32											
33											
34											
35											
36 3633				36.33 - 38.20: QTVN: QUARTZ VEIN. Bull white qtz vn w/ 3% mass chl'ic blebs + stringers. Tr 1mm² sub-rounded carb x-tals. V rare f.g. py.							
37											
38 3823											
39											
40											
41											
42											
43											
44											
45											
46											

PAGE 4 OF	PROJECT:	HOLE NO. WV97-94

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 5 OF | PROJECT: | HOLE NO. 97-94

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
47	RHAR				RHAR (cont.)							
					- dominantly tuffaceous to carbonaceous argillite (~70%) with occ. interbedded grey aphanitic rhyolite (avg 1cm)							
48					- aphanitic partings common thr.							
49					- felsic intervals commonly contain feldspar microlites and minor carbonate. Ab. silvery sericite / muscovite on partings.							
50												
51					- ab. bkn core thr unit.							
52												
53			30°		53.7 - 54.2 - crushed aphanitic arg w/ minor fault gouge.							
54												
55												
56												
57												
58												
59					59.1 - 59.9 - 80cm interval of strongly sericitic massive rhyolite.							
60												
61					irregular lower contact - possible fault?							
62												
63				63.1 - 77.1 RHFS	GREY MASSIVE APHANITIC FELSITE (RHYOLITE)							
64	RHFS				- broken core thr unit							
					- generally msv, aph. siliceous rock with little textural variation.							
65					- Abundant silvery grey - green sericite on foliation planes (± clay?). 1-2 mm partings thr unit. (5-10% overall)							
66			35°		- well fractured							
67					- local traces of disseminated mt - tiny sub-mm black crystals (736)							
68					- microlites common thr.							
69												

PAGE 6 OF	PROJECT: WOLVERINE	HOLE NO. 97-94

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 7 OF | PROJECT: | HOLE NO. 97-94

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
70	RHFS			RHFS (cont)							
71											
72											
73											
74			40°	74.5 - 74.6 - 10 cm of yellow green CO_3 alteration - mottled texture.							
75				- slightly gradational contact into argillite.							
76											
77											
78	ARCB			77.1 - 81.4 ARCB BLACK CARBONACEOUS ARGILLITE - badly broken core tht. unit.							
79				- local wispy silica blebs and stringers. (SL) - generally finely laminated black arg. w/ strongly carbonaceous partings.							
80				- 20 cm of crushed core and gouge at lower contact - possible fault?							
81			5K	possible fault ct.							
82	RHFS?			81.4 - 85.2 RHFS? WHITE / BROWN QUARTZ VEIN ZONE WITH SEMI-MASSIVE - STRINGER PYRITE.							
83				crushed / gravel							
84				fault breccia w/ CO_3 qtz veins + Py - may have been once a rhyolite, but completely hammered by quartz veins. and "remobilized" coarsely crystalline pyrite. Ccl. bx. zones w/ arg. siliceous frags.							
85				- quartz veins through ~ 50% of unit							
86	ARGR			- local white - grey 1-2 mm siliceous banding is visible.							
87				- broken qtz vein + grey fault gauge at l. ct.							
88	EXCP?			85.2 - 86.9 ARGR BLACK-GREY GRAPHITIC ARGILLITE / FAULT GOUGE - broken core, fault gouge tht unit							
89			30°	88.7 - 10cm of gouge - minr wht / green siliceous / sericitic component.							
90	RHTT			86.9 - 88.4 EXCP? WHITE-GREEN BANDED CALCAREOUS EXHALITE?							
91				distinctive "ribbed" texture - ~60% flattened foliated rectangular 1-5 mm calcareous bands (altered tuffaceous fragments?) are slightly raised.							
92				Alternate w/ 1-2 mm dark green chl bands.							

 PROJECT: HOLE NO. 97-

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		74.5	77.1	2.6	203090	
- 1-2% py - diss - clotted on foln		77.1	81.4	4.3	203091	
		81.4	83.0	1.6	203092	
- ~20% pyrite overall - usually quite coarsely crystalline. Occurs as abundant irregular patches (finer grained) sub mm - 3 mm cross cutting stringers, disseminated on fractures and foln, irregularly disseminated w/i fault bx.		83.0	84.1	1.1	203093	
		84.1	85.2	1.1	203094	
		85.2	86.9	1.7	203095	
		86.9	88.4	1.5	203096	
- 1-2% diss py w/i gouge.		88.4	89.7	1.3	203097	
- ~5% 1-2mm well defined, wavy pyrite bands - possibly exhalative.		89.7	90.8	1.1	203098	
		90.8	93.3	2.5	203099	

PAGE 9 OF | PROJECT: | HOLE NO. 97-94

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
93	RHTT			88.4 - 93.3 RHTT: GREY/GREEN WELL FOLIATED ALTERED TUFFACEOUS RHYOLITE - similar texture to abv - but no cc. weak - moderate dark green pervasive chl altn. w/ minor sericite. Gen. f.g. siliceous unit w/ ~10% flattened ovoid 1mm - 1cm felsic fragments. Shp l.ct.							
94											
95	RHAR			93.3 - 96.6 RHAR: GREY-BLACK MIXED CARBONACEOUS ARGILLITE AND SILICEOUS RHYOLITE. - badly broken tht. very ab. cross-cutting micro veins of qtz and lesser cc. (multiple generations) Late brecciation common. Original textures when visible show intimately intercalated mm-scale siliceous layers and black f.g argillite. 20 cm of fault gouge at lower contact							
96			possible fault ct.								
97											
98											
99											
100	RHTT			96.6 - 105.7 RHTT: GREY-GREEN FINE GRAINED TUFFACEOUS RHYOLITE - similar to 88.4 - 93.3 above well foliated, focal pervasive chl altn (weak-moderate) - mm scale fine tuffaceous bands w/ local massive aph. intervals up to ~10 cm. - msv. intervals appear unaltered, w/ frequent microlites - gen. broken up tht. unit minor bkn up qtz veins							
101			35°								
102											
103											
104											
105											
106	ARTF			105.7 - 112.5 ARTF?: GREY/WHITE BROKEN/GOUGED QUARTZ - CARBONATE VEINS AND TUFFACEOUS ARGILLITE - bulk of unit is greyish crushed core and fault gouge. Graphitic and siliceous mtl are present - probably a tuffaceous argillite (same as below.) - ~20% broken up wht qtz veins and sugary white calcite veins. - ab. lost core.							
107			bcf lc								
108											
109											
110											
111											
112				112.5 - 120.6 ARTF: BLACK STRONGLY CARBONACEOUS TUFFACEOUS ARGILLITE - very carbonaceous. locally graphitic - patchy graphitic tht. unit. - contains ~10% siliceous "tuffaceous" bands + blebs (typically 2-3 mm).							
113											
114											
115											

PAGE 10 OF	PROJECT:	HOLE NO. 97-94

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
- Tr - 1% fg. diss - star py.						
		93.3	94.1	0.8	203100	
		94.1	96.6	2.5	203101	
- 1% f.g. stringer - clotted pyrite.						
		96.6	98.0	1.4	203102	
- Tr - 1% diss - stringer f.g. pyrite.						
- negligible mineralization						
- Tr - 1% f.g. diss - stringer py.						
		112.5	114.7	2.2	203103	
		114.7	116.4	1.7	203104	

PAGE 11 OF | PROJECT: | HOLE NO. 97-94

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
116	ARTF			ARTF (cont)							
117											
118			30°								
119											
120											
131				120.6-132.9 ARGR/ST6G	BLACK STRONGLY GRAPHITIC ARGILLITE / FAULT GOUGE ZONE						
132					black graphitic fault gouge and crushed core tht. unit						
123					130.2-130.7 → intact but broken up gr. gtg w/ min bkn qtz vns and pebbles of semi-massive → massive pyrite to 2 cm						
124											
125					132.6-132.9 → intact core! 10 cm of sericitic tuffaceous rhyolite						
126											
127					nature of lower contact with massive sulphide obscured by b.c.						
128											
129	ARGR										
130			BC. LC								
131				mrv pyrite pebbles w/i grg							
132				nature of l ct obscured by B.C.							
133			35°	132.9-133.7 SSMS	WELL BANDED PYRITE RICH MASSIVE SULPHIDES w/ CARBONATE GANGUE						
134	SSMS			Core ANGLES: 132.8 - 35°; 133.3 - 55°; 132.5 - 31°; Avg CA = 40°	- msv. ss pebbles for first 30 cm - possible lost core? - 70% py 20-25% carbonate gangue 5-10% sph. - very fine diss + crude CO_3 bands up to 5mm tht unit - faulted l ct? 5cm of gr. gauge 5cm of brd msv py.						
135											
136				133.7 - 138.4 ARGR/ST6G	BLACK STRONGLY GRAPHITIC ARGILLITE / FAULT GOUGE ZONE. - same as abv. 120.6 - 132.9. Minor pebbles to 136.1						
137											
138											

PAGE 12 OF	PROJECT:	HOLE NO. 97-94

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		116.4	118.6	2.2	203105	
		118.6	120.6	2.0	203106	
- 1-2% clotted pyrite - pyrite pebbles @ 130.2 m.		120.6	127.1		203107	
		127.1	130.3		203108	
		130.3	132.9		203109	
- finely crystalline massive to slightly coarser diss py. - red brown sph as mm scale bands (indistinct) as well as fine diss. wi py and cc. - only traces of diss cpy. (fine grained) GRADES - 0.5% Cu 1.1% Pb 6% Zn.		132.9	133.7		203110	
		133.7	137.0		203111	
- minor clotted pyrite (~1%) as above.						

PAGE 13 OF | PROJECT: | HOLE NO. 97-94

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EP C	CO_3 D	E	FRACTURE INTENSITY	% VEIN QTZ.
				138.4 - 143.89 BLACK CARBONACEOUS-TUFFACEOUS ARGILLITE							
139	ARTF		28°	ARTF - upper contact marked by end of gelue zone							
				- more competent though strongly carbonaceous tht							
140				- several 1-mm scale siliceous bands + blebs tht.							
			17	- 1-2 % calcite blebs + stringers.							
141											
				143.89 - 146.01 WEAKLY BANDED FINE GRAINED PYRITE DOMINATED							
142				SSMS MASSIVE SULPHIDE							
				core angles: - sharp depositional upper ct - 28° to core axis							
143			52°	139.6 - 27° - ~80% pyrite, 10% sph 4-5% cpy.							
				143.0 - 58° 143.4 - 36° - 5% gangue.							
144			38°	145.5 - 48° 146.8 - 36° - Grade estimates: 24 oz Cu 1.9% Pb, 8% Zn							
				147.2 - 35° - pyrite generally finely crystalline massive.							
145	SSMS			Avg. C.A - 39° present tht. interval.							
				- sphalerite is well banded - 3-10 mm							
146			48°	and red-brown coloured. Fine grained.							
				irregular l ct. - cpy locally patchy - crudely banded.							
147			36°	- gangue is dominated by calcite - irr. patches							
				and blebs - very fine disseminations w/ msv. sx.							
148				- sharp irr. l. ct. w/ min. (2cm) stringer like							
				- clotted cpy. (rare 1mm black chl clots)							
149											
				146.01 - 153.6 GREY-GREEN SERICITIC FINE GRAINED RHYOLITE							
150				RHLT LAPILLI TUFF							
				- well foliated fine grained sericitic tuff with							
151	RHLT			10-15% fairly localized felsic "lapilli"							
				avg size 2x10 mm. Usually ovoid.							
152				flattened, rounded - sub rounded.							
				- "groundmass" is f.g. and siliceous.							
153				- 15-20% pale yellow-green sericite as							
			35°	dusters of sub mm wispy bands tht unit.							
154				(sometimes darker green-brown)							
				- sericite alteration is present - but only							
155				weak to moderate.							
				- V. sharp lower contact - parallel to foln.							
156											
				153.6 - 162.1 GREY/WHITE VARIABLY TEXTURED FOSSIL BEARING							
157	LMST			LMST DOLOSTONE? - fine grain size tht.							
				- chaotic texture - but mainly grey-white							
158			28°	dolomite. (Fizzes when powdered)							
				mainly irregular blocky patches w/ irregularly							
159			clotted - stringy cpy Interbed of chloritic tuff	shaped variously oriented fragments of							
				chloritic - sericitic 'tuff' (as above).							
160				- contains round white "orbicules" -							
				(fossils?) - dolomitic, often with sulphides							
161				in the cores. (dolomite rosettes)							

PAGE 14 OF	PROJECT:	HOLE NO. 97-94

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
- 1-2% patchey very fine dark pyrite.		137.0	138.4	1.4	203112	
		138.4	139.6	1.2	203113	
		139.6	142.2	2.6	203114	
- 143.89 - 143.95 - upper ct zone - ob patchy CO_2 wispy sub-mm py stringers and minor clotted cpy		142.2	143.89		203115	
- 143.95 - 145.05 - mainly massive, very finely xtalline py (80-85%) w/ very fine indistinct irr patchy cpy (~3%) and local aggregates of red-brown sph (up to 1-2mm) (~2%)		143.89	145.05		203116	
ab cross-cutting CO_2 stringers (1-2mm) + v. fine diss. (entire zone has a brisk effervescence)		145.05	145.72		203117	
- 145.05 - 146.01 - (ZINC AND COPPER RICH ZONE)		145.72	146.01		203118	
~60% pyrite - finely crystalline as above		146.01	147.5	1.5	203119	
~20% sph. - fairly regular, evenly distributed 2-5 mm red brown bands tht. sometimes indistict - disseminated w/ py.		147.5	149.0	1.5	203120	
- 10% cpy - as above, diffuse, indistinct irr fine gr patches, tht interval		149.0	150.5	1.5	203121	
- ~13% pyrite - 1mm-2cm v. fine exhalative bands tht. Also msv patchs ass'd w/ carbonate. 1-2% pø, localized 1mm foln para. stringers		150.5	152.0	1.5	203122	
146.3-146.4 - 10cm patch of msv py with cross-cutting cc. stringers and blebs.		152.0	153.6	1.6	203123	
150.5 - pø stringers. 15cm of coarsely diss. py (70% of interval) at lower ct.		153.6	154.3	0.7	203124	
		154.3	155.6	1.3	203125	
To - 1% diss. sulphides, pyrite and minor sph in cores of dolomitic orbicules.		155.6	157.6	2.0	203148	
		157.6	159.5	1.9	203149	
		159.5	160.5	1.0	203150	
		160.5	162.1	1.6	203151	

PAGE 15 OF | PROJECT: | HOLE NO. 97-94

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
162	LMST		35°	LMST (cont.) - minor intervals of siliceous tuff with sericite + chl banding. 159.5-161.2 - fine grained interbed - chloritically tuff - similar to below - very sharp contact - 32°.							
163	ARMS		35°								
164				162.1-163.4 ARMS DARK GREY - BLACK ARGILLACEOUS DOLOSTONE. - mottled, chaotic textured rock with a fine black mainly argillaceous matrix + min. irregular, randomly oriented crg. frags. ab fine gr diss-patchy calcite and ab wht-cream coloured dolomite - irregularly shaped, often angular with a 'fossil-like' appearance typically 2-5 mm. Shp. l ct.							
165											
166											
167											
168											
169				163.4-197.2 RHLT GREY-GREEN WELL FOLIATED CHLORITIC RHYOLITE LAPILLI TUFF. - generally fine grained tuff w/ 20-30% rounded, flattened, ovoid felsic fragments (lapilli) with size ranging from 1x3 mm to 1x4 cm. (Average 4x10 mm.) - pervasive moderate - strong chl altn throughout unit with minor sericite. - Chl also occurs as clusters of fine soft dk grn mm scale bands up to 1-2 cm wide. - Some 2-4 mm fragments are possibly quartz (slightly bluish) and felspar (white) crystals. - May be a xtal tuff or even a sheared and altered porphyritic unit. - Locally fragments (lapilli) more clustered (up to 50-60%) - Occ calcite blebs and bands to 1 cm.							
170											
171			35°								
172											
173											
174											
175											
176											
177											
178											
179											
180											
181											
182											
183	RHLT		35°								
184											

PAGE 16 OF	PROJECT:	HOLE NO. 97-94

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		162.1	163.4	1.3	203152	
		163.4	165.4	2.0	203153	
- Tr diss. py						
		165.4	167.4	2.0	203154	
		167.4	169.4	2.0	203155	
- 1-2% diss - stringer pyrite.		169.4	171.1	1.7	203156	
		171.1	173.1	2.0	203157	
		173.1	175.1	2.0	203158	
		175.1	177.1	2.0	203159	
		177.1	179.1	2.0	203160	
		179.1	181.0	1.9	203161	
		181.0	183.0	2.0	203162	
		183.0	185.0	2.0	203163	

PAGE 17 OF | PROJECT: | HOLE NO. 97-94

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Cb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
185				RHLT (cont.)							
186											
187											
188			1 / 25°								
189											
190											
191	RHLT										
192											
193											
194											
195				PITB 							
196											
197				197.2 - EOH							
198											

PAGE 18 OF	PROJECT:	HOLE NO. 97-94

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		185.0	187.0	2.0	203164					
		187.0	189.0	2.0	203165					
		189.0	191.1	2.1	203166					
		191.1	193.1	2.0	203167					
		193.1	195.1	2.0	203168					
		195.1	197.2	2.1	203169					

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.

Westmin Resources

DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: 1405 mts
HOLE NO.: WV-97-95	BEARING: 213
LOCATION: 16780 N, 16550 E	DIP: -60°
	TOTAL LENGTH: 148.44
LOGGED BY: R. Chavarría	HORIZONTAL PROJECT
DATE: 28-06-97	VERTICAL PROJECT
CONTRACTOR: F. BOISVENU	
CORE SIZE: NQ	
DATE STARTED: June 27.	
DATE COMPLETED: June 28	
DIP TESTS: 75.3 – 212 (T) – 59.5°; 148.4 – 206 (T) – 57.5°	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- 3. a 52 metros; Intercalación de Rocas Riolíticas, fuertemente silíceas, afaníticas y fragmentadas, con rocas arcillosas principalmente silíceas
- Dos eventos de "Iron Formation" de 1 y 2 metros de espesor aparente; uno a los 52 y otro 58 con 10 a 20% de Magnetita. Ambos con Matriz silícea
- 70 metros; 2.5 m de "Calcite Pyrite Exhalite" con bandas de sPH (1%), MT <1% y 10% Py.
- 70-100 metros: Mayor presencia de rocas Arcillosas, con alto contenido en grafito (ARGR), que rocas riolíticas
- 100.4-101.67 Intersección de sulfuros Masivos "Pyrite-sphalerite Chalcopyrite Massive Sulphide". 85% Py, 5% sPH y 2% CPy
- "CPy stringer zone" en el "footwall", en tobas riolíticas Sericitizadas y erráticamente cloritizadas en fracturas
- Solo trazos de sulfuros (Py) después de los 148 metros.

LEGEND

- RHFS
- RHFR
- RHAR
- EXCT
- ARSI
- ARGR
- EXMT
- SSMS
- Q veins
- Fault

PAGE 1 OF 14 | PROJECT: Wolverine | HOLE NO. [illegible]

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (chl)	ALTERATION B (Ser)	ALTERATION C (FP)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
1–2		CASING									
3		C		3.05 – 9.6							
4		V V	90°	RHFS - Riolita gris-blanca, amarillenta							
5		V V		- Parcialmente afanítica y parcialmente bandeada							
6		V V		- 7.70 - Amarillenta presencia de Microlitos en la roca							
7		V V		- Bandas de oxidación típica en superficie.							
8		V V		- Trazas de Py							
9		V V									
10		V V		9.6 – 11.4 - Gris-verde con fragmentos de cuarzo							
11		V V		RHFR Separados por bandas de clorita							
12		V V	30°	- Fragmentos son subangulares y centimétricos (Size. cm), con orientación							
13				11.4 – 15.84							
14				ARSI. Argilita de textura afanitica, color gris-negro. Bandamiento muy fino							
15				Débil intercalación de tobas.							
16		V V	50°	12.9 Fuerte brechización + Arcilla, posible Falla							
17		V V		15.84 – 17.8 Siliceous Aphyric Felsite.							
18		V V		RHFS - Similar á la de 3.05							
19		V V		- Contacto por falla con ARSI.							
20		V V		- Verde-Gris con presencia de Microlitos.							
21		V V		17.8 – 23							
22		V V		RHAR Interbedded Rhyolite a Argillite							
23		V V		- Negro + gris, intercalación de riolita afanítica en secuencia de rocas argilíticas							
				20.0 - Pequeña veta de 10 cm ϕ							
			50°	- Estratos de Argilita > Riolita							
				21.3 veta de 60° de Roja Nuclear, Fuerte fracturamiento con relleno de oxidos							

PAGE 2 OF 14	PROJECT: Wolverine	HOLE NO. WV-97-95

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 3 OF | PROJECT: Wolverine | HOLE NO. WV 97-95

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				23 – 39.4 Intercalación de rhyolitas y andesitas,							
24				RHAR continúa el mismo tipo de roca con							
				mayor presencia de rocas sedimentarias							
25				(arenitas) que rigen las alteraciones							
				88°							
26				26.5 - Se da la presencia de delgadas láminas de							
				↓ arcilla intercalada entre las riolitas							
27				- Aparece pirita en fracturas ll a la							
28				28.6 Débil presencia de fracturas rellenas de							
				clorita en las rhyolitas							
29			10								
				29.9 Plano de falla con desplazamiento de los							
30			80	estratos.							
31											
				32 – 32.3 Deformación de los estratos, plega-							
32				miento 32							
				32.3							
33											
				9 - chl							
34				34.65 veta de q 75° en un contraste con							
				de clorita en forma de cúmulos.							
35											
				Débil ocurrencia de carbonatos							
36											
				Trazas Py - cPy oxidando (limonitas)							
37											
				85° Continúa presencia de trazas de Py en							
38				fracturas y siguiendo la foliación; débil							
				presencia de grafito.							
39											
				39.4 – 46							
40				RHFS Massive Rhyolites							
				Gris blanquesca fuertemente							
41				silicificada. Foral. bastante cuarzo fino							
				y fenocristales. Presencia de Moscovita							
42				en algunas de fracturas y de la brechamiento							
				+							
43				- Trazas de Py entre bandas y en							
				la matriz de la roca. Débil silicificación							
44											
45											
46											

PAGE 4 OF 14	PROJECT: Wolverine	HOLE NO. WW05-25

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
39.4 - 46. Trazas de Py en fracturas y bandas.										

PAGE 3 OF 14 | PROJECT: | HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
			80°								
50											
51											
52				51.8-52.7 - Iron Formation: Fuerte							
			70°	EXMT silíceo. Bandeado con							
				Fuerte bandeado y							
53				52.7-55							
				SULFS → Massive Pyrrh.							
54											
				55-57.1							
55				IRCR							
56											
57											
58											
59				59-60.4							
				EXMT → Iron Formation con							
60											
				60.4-61							
61											
				61.4-62							
62				CHAF							
63											
64			80°	63.3-64.3							
65				64.3-66.7							
				AFSI							
66											
67				66.7-69							
				CHFS							
68											
69											
70											

PAGE 3 OF 14 | PROJECT: [illegible] | HOLE NO. [illegible]

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		48.8	49.8	1	203126	
		49.8	50.9	1.1	203127	
		50.9	51.8	0.9	203128	
51.8 - 52.7: to [illegible] 1% Py in band.		51.8	52.7	0.9	203129	
		52.7	53.7	1	203130	
		53.7	54.7	1	203131	
		54.7	57.0	2.3	203132	
		57.0	58.0	1	203133	
		58.0	59.2	1.2	203134	
59 - 60 m: Mod. mic. to coarse magnetite pcs. dominate assemblage.		59.2	60.4	1.2	203135	
60.4 - 61.6: 1/2% Py < 1%		60.4	61.4	1	203136	
		61.4	62.4	1	203137	
		62.4	63.4	1	203138	
		63.4	64.4	1	203139	
63.2 - 64.2: 1% fine Py + v. fine pyrrhotite in [illegible]		64.4	66.14	1.74	203140	
		66.14	67.14	1	203141	
		67.14	68.7	1.56	203142	
		68.7	69.7	1	203143	

PAGE 7 OF 14 | PROJECT: | HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				73.3 - 74.25 Rhyolite Lapilli Tuff							
				RHLT - Gris - verdoso. Fragmentos de Rhyolite (Rhyolite) con chl + Py en Bandas							
				74.25 - 79.5							
				ARTF Argillite Tuff							
				Roca bandeada con zonas obscuras con talco y cuarzo con 10% de bandas tobáceas y zonas fragmentadas de argilla. Débil cloritización en fracturas y planos de fall. Moderada presencia de grafito en bandas finas.							
				Color Negro - gris oscuro							
				80° - Posible falla							
				79.5 - 81.5 Rhyolite Tuff.							
				RHTT Verde - gris Amarillento con poco diferenciables fragmentos tobáceos. Fuertemente silicificada. Débil cloritización.							
				81.5 - 87.5 Argillite Tuff.							
				ARTF similar a la de arriba pero con una mayor cantidad de bandas tobáceas - contiene una débil alteración clorítica							
				80°							
				87.5 - 93.6 Graphitic Argillite							
				ARGR Negra con débil y errática coloración gris (posible fragmentos de toba). Cerca a sobre el hanging wall. - Trazas de Pirita - Relativamente zonas de débil falla verdosa falla.							

PAGE 5 OF 14 | PROJECT: | HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		69.7	70.7	1	203144	
		70.7	71.9	1.2	203145	
		71.9	73.1	1.2	203146	
		73.1	74.1	1	203147	
		74.1	75.28		203170	
		75.28	76.58		203171	
		76.58	77.70		203172	
		77.70	78.90		203173	
		78.90	79.90	1	203174	
		79.90	81.38		203175	
		81.38	82.48	1	203176	
		82.48	83.48	1	203177	
		83.48	84.58	1.1	203178	
		84.58	85.58	1	203179	
		85.58	87.47		203180	
		87.47	90.52		203181	
		90.52	93.00		203182	

PAGE 9 OF 14 | PROJECT: Wolverine | HOLE NO. 97-95

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (ILT)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
93											
				98.1 – 99.1 Andesitic Tuff							
94				ACTE - Verde - gris oscuro, textura afanítica con cristales de plagioclasa y carbonatos que resaltan la roca en forma de bolillos. Fragmentos de roca volcánica, lapilli cristalino, 1-2 mm, 2% de fragmentos de roca sedimentaria							
95											
96											
				45°							
97				98 – 99.9 zona con bandas de Py 70° eje de la							
98											
99				99.1 – 100.4 Rhyolite tuff							
				RHTT Gris-Verdosa con cristales finos a medianos de plag							
100				Buen bandeamiento. Alteración sericítica. Veinlets							
			77	100.4 – 101.07 SSMS: Pyrite - Sphalerite - Cpy Massive sulphide							
101				100.25 – 80° Regular a Irregular contacto superior 80-85° Py fina							
				99.9 – 90° 99.2 – 80° en bandas 5% Cpy Py Pobremente bandeada a							
				103.1 – 75° 104.6 – 75° diseminada Esfalerita (SPH) 1.6% Cpy fina							
102				entre los cristales de Py, 5-10% de ganga, carbonatos color blanco "pearly rock" + Stringers							
				de 1-5 mm ϕ. Contacto inferior es Irregular							
103				101.07 – 102.0 RHLT: Grey and green Rhyolite tuff + Cpy							
				Stringer zone. Contacto inferior Irregular							
104				102 – 102.[illegible] Presencia de bandas de SPH. 1-3 mm							
105				102 – 146.92							
				60° RHLT = Rhyolite lapilli tuff: verde - gris con							
106				[illegible] Fragmentos de roca volcánica							
107											
				107.4 – [illegible] Green and grey rhyolite + ll + Cpy stringer							
108				zone. [illegible] Cpy [illegible] SPH bandeamiento							
				[illegible]							
109				70° 2° Fuerte alteración sericita, fracturamiento.							
				Bandas de sericita + clorita + [illegible]							
110											
111				Veta de a 75° de [illegible] con [illegible]							
			SPH	con SPH. Debajo [illegible] las bandas en la							
112				[illegible]							
				[illegible]							
113											
				75° - Presencia de fracturas rellenas de Cpy							
114											
115											

PAGE 10 OF 14 | PROJECT: | HOLE NO. 97-95

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		93.0	94.5		203183	
		94.5	95.5		203184	
		95.5	96.6		203185	
		96.6	97.6		203186	
		97.6	99.1		203187	
		99.1	100.4		203188	
100.4 - 100.64: Sph + Cpy Rich in fine Py Massive Sulphides: ~20 Sph - ~2 Cpy - ~75 Py		100.4	100.64		203189	
100.64 - 101.67: fine Py Massive Sulphides: 85% Py, <1% sph., 4% gangue		100.64	101.67		203190	
		101.67	102.0		203191	
		102.0	102.46		203192	
101.67 - 102: Cpy stringer zone: 20% Cpy, <1% sph.		102.46	103.46		203193	
102 - 102.46: Sph. Band zone 5% sph.		103.46	104.46		203194	
		104.46	105.46		203195	
		105.46	106.46		203196	
		106.46	107.4		203197	
107.4 - 108.4 Cpy stringer zone 10% Cpy <1% Py		107.4	108.4		203198	
		108.4	109.4		203199	
		109.4	110.4		203200	
		110.4	111.4		203201	
		111.4	112.76		203202	
		112.76	113.76		203203	
		113.76	114.9		203204	
		114.9	115.9		203205	

PAGE 11 OF 14 | PROJECT: Valvivias | HOLE NO. VV97-75

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
116				Continúa FHL							
117				- Se reduce en abundancia el fracturamiento de 1 a 4 mm a clay sellado en el fracturamiento.							
118				- Alteración a vetillas cuarzo-clorita-calcita con halo de alteración sericítica moderada a débil.							
119				- Moderada a fuerte alteración sericítica. Formándose halos anchos de 1-2 mm							
120				- Débil silicificación de clasts en contacto con la roca							
121			75°	- Este segmento está bastante afectado por vetillas de cuarzo							
122				- Presencia de bandas de Py de no más 3 mm y con amplia cantidad de vetillas (rara Py) << 1%. La Py es muy fina							
123											
124											
125											
126			Fault 70° en → 70°	Halladas Py rodeando la veta de cuarzo y presente en zona de falla con débil presencia de sericita							
127											
128											
129				Veta de forma irregular							
130											
131			80°								
132				Fuerte influencia de falla, mayor contenido de arcilla, roca se disgrega en la							
133											
134											
135											
136											
137											
138											

PAGE 12 OF 14	PROJECT: Wolverine	HOLE NO. 97-95

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
115		115.9	116.9		203206					
117		116.9	117.95		203207					
118		117.95	119		203208					
119		119	120		203209					
120		120	121		203210					
121		121	122		203211					
122		122	123		203212					
123		123	124.05		203213					
124		124.05	125.05		203214					
125		125.05	126.25		203215					
126		126.25	127.25		203216					
127		127.25	128.25		203217					
128		128.25	129.25		203218					
129		129.25	130.3		203219					
130		130.3	131.3		203220					
131		131.3	132.3		203221					
132		132.3	133.3		203222					
133		133.3	134.3		203223					
134		134.3	135.3		203224					
135		135.3	136.45		203225					
136		136.45	137.45		203226					
137		137.45	139.0		203227					
138										

PAGE 13 OF 14 | PROJECT: Wolverine | HOLE NO. 17-95

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				RHLT. continúa RHLT.							
				Disminución de vetas de cuarzo							
139											
140											
141											
142											
143											
144			70°								
				- Reducción de vetas de cuarzo							
145											
146				145.8 - Presencia de estratos de arcillas negras calcáreas entre las rocas de la Toba riolítica. Arg band 1-3 mm ∅							
147			70°	- Débil alteración clorita							
148				148.22 - 148.44							
EOH				ARTF Siliceous black argillite with several tuffs cave fragments.							
149				- Hilos de Py 40°-50° eje núcleo, deformado parcial a totalmente por producto de fallamiento "Trocas"							
				- Punto de formación de los estratos							
				- Bandas de Arcilla de 2-8 mm ∅ de matriz muy fina y silícea							
				- Débil clorita y débil sericita							
				- Moderada presencia de arcilla							

PAGE 141 OF 141	PROJECT: Wolverine	HOLE NO. 97-95

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
139		139.0	140.0		203225					
140		140.0	141.08		203229					
141		141.08	142.08		203230					
142		142.08	143.09		203231					
143		143.08	144.04		203232					
144		144.08	145.08		203233					
145		145.08	146.08		203234					
146		146.08	146.92		203235					
147		146.92	149.44		203236					
148										

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.

Westmin Resources

DRILL LOG

PROJECT: Wolverine Stratigraphic	GROUND ELEV.: 1715 m
HOLE NO.: WV 97-96	BEARING: 180
LOCATION: 9560 E, 18671 N	DIP: -70°
	TOTAL LENGTH: 572.39
LOGGED BY: M. Padberg / R. Charrois	HORIZONTAL PROJECT
DATE: July 1/97	VERTICAL PROJECT
CONTRACTOR: Boisvenu Diamond Drilling	ALTERATION SCALE: 0 1 2 3 — absent; slight; moderate; intense
CORE SIZE: NQ II	
DATE STARTED	TOTAL SULPHIDE SCALE: 0 1 2 3 4 — traces only; < 1%; 1% – 3%; 3% – 10%; > 10%
DATE COMPLETED: July 11/97	
DIP TESTS	
COMMENTS: – No se intersectó una zona de Sulfuros Masivos (SSMS) – Presencia errática de stringers de SPH a partir de 530 metros hasta 560 metros.	LEGEND

PAGE 1. OF 52 | PROJECT: Wolverine Stratigraphic | HOLE NO. WW 9796

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
0	DHCS			0.00-2.44 CASING DHCS							
2.44		RHFR		2.44-181.08 FRAGMENTAL RHYOLITE RHFR Sericitically parted fragmental rhyolite w/ 1x4 cm fragments. Variable degrees of fe-ox visible down hole pr-st 550' (~167m).							
5			55	Very rare f.g. py. vis. along sericitic partings.							
12			55								
17		RHFR	45								
22			6								
23											

PAGE 2 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97 96

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1											
2											
3											
4											
5											
6			6.62	8.00	1.4	173255					
7											
8											
9											
10			10.70	12.98	2.3	173256					
11											
12											
13											
14											
15											
16											
17			17.22	18.46	1.2	173257					
18											
19											
20											
21											
22			22.95	24.27	1.3	173258					
23											

PAGE 3 OF 32 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97-96

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
24				(244-181.58 RHFR con't)							
25											
26			55								
27											
28											
29											
30											
31											
32											
33			50								
34											
35											
36											
37											
38											
39											
40			70								
41											
42											
43											
44											
45											
46											

RHFR

RHFR

PAGE 4 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97-96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
24										
25										
26										
27										
28										
		28.50	29.87	1.4	173259					
29										
30										
31										
32										
33										
		33.87	35.36	1.5	173260					
34										
35										
36										
37										
38										
39		39.47	41.00	1.5	173261					
40										
41										
42										
43										
44										
45		45.11	46.44	1.3	173262					
46										

PAGE 5 OF 52 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97-96

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (244 - 181.08 : RHFR cont'd)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
47	RHFR										
48			60								
49											
50											
51											
52											
53											
54											
55											
56											
57											
58											
59											
60											
61				→ 61.55 - 62.00 : QTVN - QUARTZ VEIN 65/35 % qtz/wallrock. Wallrk is strly fe-ox'd + is irregularly banded + disseminated throughout.							
61.55 →			80								
62.00 →			50								
63											
64	RHFR										
65											
66											
67											
68											
69											

PAGE 6 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97-96

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
47											
48											
49											
50											
			50.75	52.12	1.4	173263					
51											
52											
53											
54											
55											
56			56.42	57.85	1.4	173264					
57											
58											
59											
60											
61											
62											
63											
64											
65											
66											
67											
68											
69											

PAGE 7 OF 52 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 9796

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (244-1810B : RHFR cont.)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
70	RHFR										
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											
81											
82											
83											
84											
85											
86											
87	RHFR										
88											
89											
90											
91											
92											

PAGE 8 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97-96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
70										
71										
72										
73										
74										
75										
76										
77										
78										
79										
80		80.62	81.90	1.3	173265					
81										
82										
83										
84										
85										
86										
87										
88										
89										
90										
91		91.67	92.97	1.3	173266					
92										

PAGE 9 OF 52 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 9796

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				144.18-108 - RHFR (cont'd).							
93	RHFR			Oxidized fragmentals continue							
94											
95											
96											
97											
98											
99											
100											
101											
102											
103											
104											
105											
106											
107											
108											
109											
110	RHFR										
111											
112											
113											
114											
115											

PAGE 10 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97 96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
93										
94										
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										
112		112.07	113.37	1.3	173267					
113										
114										
115										

PAGE 11 OF 52 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV9796

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (2.44-181.08: RHFR cont)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
116		RHFR									
117											
118											
119				→ 119.84-120.82: STGG: FAULT GOUGE Rusty (fe.oxid) fit gouge w/ all grain sizes present							
120 (119.84)			60								
121 (120.82)			70								
122											
123											
124											
125											
126											
127											
128 (128.33) (128.59)			80	→ 128.33-128.59: QTVN: QUARTZ VEIN Bull wh qtz vn w/ 1% oxidized dk purple formerly pylic blebs.							
129											
130											
131											
132											
133											
134		RHFR									
135											
136											
137											
138											

PAGE 12 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV9796

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
116										
117										
118										
119										
120										
121										
122										
123										
124										
125										
126										
127										
128										
129										
130										
131										
		131.81	133.30	1.5	773268					
132										
133										
134										
135										
136										
137										
138										

PAGE 13 OF 52 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV9796

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (244 - 181.08: RHFR cont'd)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
139	RHFR										
140											
141											
142											
143											
144											
145											
146											
147											
148											
149											
150											
151											
151.53 →				→ 151.53-152.15: STG6 - FAULT GOUGE							
152 152.15 →				Rusty (fe-ox'd) gouge							
153											
154											
155											
156											
157											
158	RHFR										
159											
160											
161											

PAGE 14 OF 32	PROJECT: Wolverine Stratigraphic	HOLE NO. WV9796

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
139										
140		140.36	141.82		173269					
141										
142										
143										
144										
145										
146										
147										
148										
149										
150										
151										
152										
153										
154										
155										
156		156.20	157.70	1.5	173270					
157										
158										
159										
160										
161										

PAGE 15 OF 52 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV9796

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(2.44 - 191.05: RHFR cont'd)							
161.56				→ 161.56 - 162.12: ST66: FAULT GOUGE							
162.12			70	Rusty (fe. oxid) gouge.							
163			70								
164		RHFR									
165											
166											
167											
168											
169											
170				Continued Fe-oxidation. "Rust Never Sleeps".							
171											
172											
173											
174											
175											
176											
177			70								
178											
179				→ 181.08: ST67: FAULT							
180				FLT'd contact w/ lower andesitic dyke							
181	181.08		70	181.08 - 198.43 ANDESITIC DYKE							
182		ADDK		ADDK Dk forest green, soft (3.5→4), finely mottled beige, andesitic dyke. Lwkly magnetic, localized wk carbonate alteration, likely mod→str chl alt'n. Med. gr. size mafic porphyritic texture (plag + hornbl. phenos over a matic groundmass)							
183	183										
184											

PAGE 16 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97 96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
162										
163										
164										
165										
166										
167										
168										
169										
170										
171										
172										
173										
174										
175										
176		175.98	177.22	1.2	173271					
177										
178										
179										
180										
181										
182										
183										
184										

PAGE 17 OF 52 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97 96

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EFI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(181.08 - 198.43: ADTT cont)							
				→ 181.08 - 183.06: V str fe-oxidation, bright orange colour							
185.32				→ 183.06 - 185.32: STGG: FAULT GOUGE Oxidized gouge, andesitic dyke. Broken core @ contacts.							
	ADDK										
191.64			20	→ 191.64 - 193.75: STBX - FAULT BRECCIA Fit bx'd andesitic dyke w/ v. fine clay brown matrix.							
				→ 192.03 - 192.30: Bx'd rhyolite, same clay matrix as above							
193.75			60								
196.31			55	→ 196.31 - 197.35: STBX - FAULT BRECCIA Same as above (191.64 - 193.75) except no rhy.							
197.35	ADDK			→ 197.90 - 198.43: Region of v str fe-oxidation. Same as above (191.08 - 193.06)							
198.43			60								
			40	→ 198.35 - 198.43: Chill margin @ lower cont. of dyke. Phenos grade to v.f.g.							
	RHFS		72								
				198.43 - 202.48 RHFS: MASSIVE RHYOLITE wk perv chl alt'd massive aphyric rhy. V fine anastomizing rhythmic ser'ic bands. No sxs.							
202.48			75								
				202.48 - 211.20 ADDK: ANDESITIC DYKE Same as above (181.08 - 198.43) 5cm chill margin @ UC w/ a fit @ 30° cax @ L.C.							
207											

PAGE 18 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV9796

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
185										
186		186.62	188.12	1.5	173272					
187										
188										
189										
190										
191										
192										
193										
194										
195										
196										
197										
198										
199										
200										
201										
202										
203										
204										
205										
206										
207										

PROJECT: Wolverine Stratigraphic

HOLE NO. WV9796

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(202.48 - 211.20: ADDK cont)							
208		ADDK									
209											
210											
211 211.20				211.20 - 216.33 MASSIVE RHYOLITE							
		RHFS		RHFS Same as above (198.43 - 202.48)							
212											
213											
214			75								
215											
216 216.33				216.33 - 228.00 FRAGMENTAL RHYOLITE							
217			70	RHFR Mod. strly ox'd frag'l rhy w/							
218		RHFR	78	faint/ghostly 3cm² sized sil'ic							
219				frags. fine seri'ic part'gs + variable							
220				localized perv. chl. alt'n. (generally wk'							
221											
222											
223											
224											
225			58								
226		RHFR									
227											
228 228.00				228.00 - 238.61 SILICA EXHALITE							
228			45	EXSP Laminated light gray sil exh							
229		EXSP		w/ 1% f.g. diss. mag, 2% fgr							
230				mag py stringers + blebs. Local							
				fe-ox staining. Tr fe-carb in							

PAGE 20 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 9796

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
208										
209										
210		210.80	213.10	2.3	173273					
211										
212										
213										
214										
215										
216										
217										
218										
219										
220		220.03	221.52	1.5	173274					
221										
222										
223										
224										
225										
226		226.70	228.00	1.3	173275					
227										
228		228.00	229.89	1.9	173276					
229		229.89	231.52	1.6	173277					
230										

PROJECT: Wolverine Stratigraphic

HOLE NO. WV9796

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
				(228.00-233.61 EXCP cont)							
				fine laminae							
231				→ 231.52-232.28: QTVN: QUARTZ VEIN							
231.52	EXSP			wkly fe-oxid stained							
232				qtz vein w/ 1%							
232.28				fg. pyritic stringers.							
233				3% wallrock frags.							
233.72				→ 232.20-233.72: EXCP: CARBONATE EXH							
233.92				Rust + bleach carbonate							
233.61				(effervesces rapidly w/ 10% HCl							
234				w/ 3% fg. diss. py							
234.19	RHFR			→ 233.52-233.61: EXCP: CARBONATE EXH							
234.80				wkly oxid fe-carbs w/							
235				a wk fragmental appearance,							
235.27				no sx's							
236											
236.95	RHTT										
237											
237.12											
				233.61-235.27 FRAGMENTAL RHYOLITE							
238				RHFR Variable light grey + wk ox'n							
238.27				rust + dk chl. green. Wkly fragmented							
238.79	ARSI			rhy w/ fe-carb veinlets + wk							
238.99				qtz flooding. Chl'ic banding; no							
239				alt'n No sulfides							
239.25				→ 234.39-234.56: QCVN: QUARTZ/CARB. VEIN							
240				Bull white 90/10% qtz/							
240.07				carb vein. 2mm thk							
240.27				fe-carb stringers + frags							
240.56											
241											
242											
243				235.27-237.12 FINE GRAINED TUFF							
				RHTT Steel gray f.g rhy tuff w/							
244				wk perv ser. alt'n. Tr. fine qtz							
245				veinlets cross // to fol'n.							
				→ 236.95: STFL: FAULT							
246				Sub-angular fine pebble clasts							
				in a str'ly ox'd f.g sand matrix							
247				@ 35° cax.							
248				237.12-240.07 SILICEOUS ARGILLITE							
				ARSI Finely laminated cherty sil'ceous							
249				arg. w/ 1% py'ic stringers (f.g)							
				+ variable amt of fl'g. DK							
250				black colour							
250.02				→ 238.12-238.21: STGG: FAULT GOUGE							
251				Fine grained black gouge							
				w/ 5% f.g diss. py.							
252				→ 238.99-238.59: STGG: FAULT GOUGE							
	RHLT			Same as above (238.12-238.21)							
252.93											
253				→ 239.05-239.20: QCVN: QUARTZ/CARB VN							

PAGE 22 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97 96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
231										
		231.52	232.28	0.8	173278					
232										
		232.28	233.61	1.3	173279					
233										
		233.61	235.27	1.7	173280					
234										
235		235.27	237.12	1.8	173281					
236										
237		237.12	238.49	1.4	173282					
238		238.49	240.07	1.6	173283					
239										
240		240.07	241.26	1.2	173284					
241		241.26	242.74	1.5	173285					
242		242.74	244.07	1.3	173286					
243										
244		244.07	245.56	1.5	173287					
245		245.56	246.99	1.4	173288					
246										
247		246.99	248.46	1.5	173289					
248		248.46	249.45	1.0	173290					
249		249.45	251.09	1.6	173291					
250										
251		251.09	252.40	1.3	173292					
252		252.40	253.65	1.3	173293					
253		253.65	254.97	1.3	173294					

PAGE 23 OF 52 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97-96

	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (237.12-240.07: ARSI con't)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
		RHLT	90	white 50/50% qtz/carb w/ 2cm² carb clasts. no vis sxs							
254				→ 239.45-240.07: Grades into a tuffaceous fragmental text. w/ fine beige carb mottled through siliceous lapilli. tr f.g. sph stringers							
256											
257											
258				240.07-254.97 LAPILLI TUFF							
258.45		EXSP		RHLT Bile greenish gray rhy lapilli tuff w/ wk→mod perv ser alt'n. Tr f.g. py'ic + sph'ic stringers + tr f.g. diss. py. 3% disseminated coarse gr. sized beige carbonate frags. Sharp L.C w/ EXSP @ 254.97.							
259											
260											
260.92											
261		EXCP	72	→ 240.27-240.80: Fragmental/tuffaceous argillite very similar to that of 239.45-240.07.							
262											
262.94			65	→ 250.02-250.07: 40% mass sph. band @ 68° cax.							
263				→ 252.82-253.65: QCVN QUARTZ/CARB. VEIN 30/70% qtz/dol vn. 3cm² angular dol. fragments over a qtzose matrix. Tr f.g. sph'ic stringers + 1% fine→med gr. diss. py. 253.10-253.20: 90% wallrock (RHLT) frags							
264											
265		EXSP	70								
266											
266.83			75								
267											
268				254.97-260.92 SILICA EXHALITE							
268.48		EXCP	55								
268.75			65	EXSP Dk grayish/black silica exh. w/ fine argillaceous anastomizing laminae. 5% f.g.→mass py'ic stringers/blebs. Very cherty in appearance.							
269											
269.88			75								
270											
271				→ 256.65-257.08: F.g. gray colour, decreased arg. content. Tr faint wispy, fe-ox, rusty, bands.							
272		EXSP		→ 258.45-260.92: Str'ly laminated beige/grey/black EXSP w/ wk perv. dol. alt'n. Tr f.g.→mass sph. stringers							
273											
273.11			65								
273.55			70								
274											
274.09		EXSP									
274.32			85								
275		RHLT		260.92-262.94 CALCITE/PYRITE EXHALITE							
			75	EXCP Variably coloured from rusty/beige mottled white over bl.ish/gray							
276			75								

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PAGE 24 OF 32	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97 96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
254										
		254.97	256.65	1.7	173295					
255										
256		256.65	258.45	1.8	173296					
257										
258		258.45	259.80	1.4	173297					
259										
		259.80	260.92	1.1	173298					
260										
		260.92	261.90	1.0	173299					
261										
		261.90	262.94	1.0	173300					
262										
		262.94	264.55	1.6	173301					
263										
264		264.55	265.75	1.2	173302					
265		265.75	266.23	1.1	173303					
266										
		266.83	268.13	1.3	173304					
267										
268		268.13	269.38	1.8	173305					
269		269.88	270.90	1.0	173306					
270										
		270.90	272.40	1.5	173307					
271										
272		272.40	274.04	1.6	173308					
273										
274		274.04	275.39	1.3	173309					
275		275.39	276.74	1.4	173310					
276										

PAGE 25 OF 52 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97-96

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(260.92-262.94: EXCP cont.)							
				to fine brassy metallic py. ic laminae							
				str'ly efferv. (w/ 10% HCl) EXCP w/							
				up to 7% fg + mass py'ic stringers,							
				laminae, bands, + disseminae.							
278.18		RHLT									
				262.94-266.83 SILICA EXHALITE							
				EXSP Same as region above 258.415-							
				260.92. wk perv. dol. alt'n, 5% f.g.							
279.57		EXSP		blebby + banded py. Fit'd lower contact.							
				266.83: STFL - FAULT							
				<1cm fg gouge w/ coarse							
				angular clasts. Fit @ 75° ca.							
				266.83-269.38 CALCITE PYRITE EXHALITE							
283.44				EXCP sky blue mottled cal/py exh							
				w/ 10% f.g. py. localized fe-carb							
				patches w/ assoc'd fe-ox stain's.							
				→ 268.48-268.75: QCVN - QUARTZ/CARB. VN							
285.75				70/30% qtz/fe-carb							
				(ankerite) w/ 3% chl							
				blebs + tr f.g. diss.							
		EXSP		py							
				269.88-278.11 SILICA EXHALITE							
288.20				EXSP Same as above (262.94-266.83)							
				273.11-273.55 CALCITE PYRITE EXHALITE							
				EXCP Same as above (266.83-269.38)							
				273.55-274.04 SILICA EXHALITE							
		EXCP		EXSP Same as above (262.94-266.83)							
				274.04-278.18 LAPILLI TUFF							
292.79				RHLT Same as above (240.07-254.97							
				→ 274.04-274.33: QCVN - QUARTZ/CARB VN							
				95/5% wkly fractured							
				bull wh. qtz/carb vn. no sx.							
				→ 275.83-276.05: QCVN - QUARTZ/CARB VN							
				Same as above (274.04-274.33)							
				→ 276.21 - STFL: FAULT							
				Fit @ 60°							
		EXSP									
				278.18-288.20 278.18-283.44: SILICA PYRITE EXHALITE							
				EXSP Light seagreen modly perv. serially							
				alt'd silica pyrite exh 8% diss							
				f.g → mass dull metallic py.							

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PAGE 26 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97-96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		276.74	278.18	1.4	173311					
277										
278		278.18	279.55	1.4	173312					
279										
		279.55	281.03	1.5	173313					
280										
281		281.03	282.53	1.5	173314					
282										
		282.53	284.00	1.5	173315					
283										
284		284.00	285.50	1.5	173316					
285										
		285.50	286.78	1.3	173317					
286										
287		286.78	288.30	1.5	173318					
288		288.30	289.77	1.5	173319					
289										
		289.77	291.30	1.5	173320					
290										
291		291.30	292.79	1.5	173321					
292										
		292.79	294.62	1.8	173322					
293										
294		294.62	295.82	1.2	173323					
295										
		295.82	297.60	1.8	173324					
296										
297										
		297.60	300.30	2.7	173325					
298										
299										

PROJECT: Wolverine Stratigraphic

HOLE NO. WV97-96

* Descriptive Geology Only *.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				(278.18-288.30 - EXSP cont'd)							
				→ 278.18-278.95: ST66-FLT GOUGE							
				Pasty matrix,							
				dk gray, all grain							
				sizes present.							
				→ 278.95-279.57: QCVN: QTZ/CARB.							
				50/50% qtz/fe							
				carb (ankerite)							
				→ 278.95-279.25: 95% carb							
				→ 279.25-279.57: 95% qtz							
				Continued regional qtz flood'g/vn'g.							
				283.44-285.75: Fog gray w/ mauvish							
				hue, 10% f.g pyic + 5% f.g sph							
				banding. Unalt'd.							
				285.75-286.47 Same as above							
				(278.18-283.44)							
				286.47-288.30 - Same as above							
				(283.44-285.75)							
				288.30-292.79 CALCITE PYRITE EXHALITE							
				EXSP sky blue wkly laminated cal/py							
				exh w/ 5% f.g sph/py stringers							
				Regional (7%) qtz flooding +							
				fe-carb. clasts/fragments.							
				→ 288.94-289.10 - EXSP - Silica Exhalite							
				Same as above							
				(283.44-285.75)							
				292.79-305.90 SILICA EXHALITE							
				EXSP Dk gray, fil exh w/ anastomizing							
				fine arg. laminae. 1% f.g. diss							
				py. Variable arg/carb. component							
				→ 295.00-300.50: mod→str (variable)							
				fe-oxidation.							
				305.90-326.40 OVERBURDEN							
				DHSE Rounded pebbles of various							
				lithologies.							
				326.40-326.72 SILICA EXHALITE							
				EXSP Cherty, laminated variably black/							
				dk gray colour. Localized v. wk							
				v. fine mottled carbonate							
				High carbonaceous (↑ arg)							
				component. Laminae are fine black,							
				anastomizing/feathery. Tr→1%							
				massive py blebs. Rare sph stringers							

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PAGE 28 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97-96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PROJECT: Wolverine Stratigraphic

HOLE NO. WV 9796

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
				(306.40 - 326.56: EXSP cont)							
				Very much the appearance of a siliceous argillite							
300											
301											
302											
303											
304	EXSP		80								
305											
305.90											
306											
306.40											
307											
308											
309	EXSP										
310											
311			85								
312											
313											
314											
315											
316				→ 316.00-316.79: QTVN - QUARTZ VEIN							
316.22			75	Rust wh. qtz vn w/							
316.79				3% chl. blebs + 10%							
317			75	wallrock frags. Sharp							
318			60	contacts; UP 75°, LO 75°							
319											
320											
321	EXSP										
322											

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PAGE 30 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV9796

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
300		300.30	301.64		173326					
301		301.64	303.20		173327					
302										
303		303.20	304.59		173328					
304		304.59	305.90		173329					
305										
306		306.40	307.45		173330					
307		307.45	309.40		173331					
308										
309		309.40	310.45		173332					
310		310.45	311.95		173333					
311										
312		311.95	313.40		173334					
313		313.40	314.75		173335					
314		314.75	316.22		173336					
315										
316		316.22	317.45		173337					
317		317.45	319.25		173338					
318										
319		319.25	320.65		173339					
320		320.65	322.05		173340					
321										
322		322.05	323.32		173341					

PAGE 31 OF 52 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV9796

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				(326.40 - 326.56 EXSP cont)	CHL	SER	EPI	CARB			
323											
324											
325	EXSP		60								
326 / 326.32			60	326.32-333.97 MASSIVE RHYOLITE							
327				RHFS Fog gray, massive, aphyric rhy							
328				w/ coarsely mottled carb micro-lites							
329				Fine sericitic banding (<1% total)							
330				Rare disseminated f.g. euh. py							
331	RHFS			x-tals.							
332											
333											
333.97				333.97-338.17 MAGNETIC IRON FORMATION							
334			45	EXMT wk->mod'ly magnetic fe form. w/							
335				5% diss mag. w/ wk perv. chl							
336	EXMT		65	alt'n. 1% f.g.-> mass blebby							
337				py., wk perv epi alt'n. Overall lt.							
338 / 338.17			70	pistachio green colour.							
339				338.17-341.45 SILICA EXHALITE							
340				EXSP Fog gray pure massive silica exh							
341				w/ tr. mass blebby py. Localized							
341.45			70	fine x-cutting calcite veinlets							
342				@ 25° cax.							
343				341.45-345.27 MAGNETIC IRON FORMATION							
344				EXMT strly magnetic dk purple fe form							
345			60	w/ 20% diss mag., 2% blebby f.g.->							
				mass py. Regional qtz flooding.							
				Laminated dk purple + pist green							
				colour wk perv epi alt'n.							

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PAGE 32 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97-96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
323						
		323.32	325.06		173342	
324						
325		325.06	326.32		173343	
326		326.32	328.56		173344	
327						
328		328.56	329.90		173345	
329						
		329.90	331.50		173346	
330						
331						
		331.50	332.95		173347	
332						
		332.95	333.97		173348	
333						
		333.97	335.56		173349	
334						
335		335.56	336.95		173350	
336		336.95	338.19		173351	
337						
338		338.19	339.90		173352	
339		339.90	341.45		173353	
340						
341		341.45	342.76		173354	
342		342.76	344.19		173355	
343						
344		344.19	345.27		173356	
345		345.27	347.05		173357	

PROJECT: Wolverine Stratigraphic

HOLE NO. WV97-96

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(341.45 - 345.27 - EXMT cont							
345.27				→ 345.27 STFL FAULT							
				x-cutting fit @ 27° c-x							
346				? contact btwn EXMT +							
				EXSP							
347											
				345.27-351.84 SILICA PYRITE EXHALITE							
348				EXSP Variably grading light gray → dk							
				gray → black → light gray ... etc							
349		EXSP		silica (mass. (aphanitic) pyrite exh.							
				10% f.g. stringer py. 1% mass							
350				blebby sph.							
351											
351.84				351.84-367.04 MAGNETIC IRON FORMATION							
352			75	EXMT maroon purple strly magn							
				fe-form w/ 10% fine → med.							
353				gr'd diss magnetite. 5%							
				localized banded hematite							
354				plus regional perv hem giving							
				a str. purple colour. 1% med							
355			70	gr'd py x-tals							
356											
357				→ 357.47 - 359.72 - EXMT w/ mod perv							
357.47				chl alt'n. Forest							
				green colour							
358											
359											
359.72											
				→ 360.20 - 360.90 - EXMT w/ wk perv chl							
360				alt'n + t'd SiO_2							
360.23				content							
360.90											
361			75								
362											
363											
364		EXMT									
365											
366											
367				367.04-368.70 MEDIUM GRAINED TUFF							
367.04			75	RHTT Light gray mod gr'd sh. tuff							
		RHTT	10	w/ tuff. comm. frags (x-tals?)							
368											

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PAGE 34 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97-96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
346										
347		347.05	348.55		173358					
348										
		348.55	349.89		173359					
349										
		349.89	351.36		173360					
350										
351		351.36	351.84		173361					
352		351.84	353.92		173362					
353										
		353.92	355.83		173363					
354										
355		355.83	357.47		173364					
356										
357		357.47	358.85		173365					
358										
		358.85	359.72		173366					
359										
		359.72	360.20		173367					
360										
		360.20	360.90		173368					
361		360.90	362.10		173369					
362		362.10	365.06		173370					
363										
364										
365		365.06	365.83		173371					
366		365.83	367.04		173372					
367		367.04	368.70		173373					
368		368.70	370.08		173374					

PROJECT: Wolverine Stratigraphic

HOLE NO. WV 97-96

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(367.04-368.70 RHTT cont)							
368.70	RHTT		80	being surrounded by ~ full fine stockworked siliceous (?) spiderweb. Hardness = ~5 Rare f.g. diss py.							
369											
370				368.70-406.00 SILICA EXHALITE.							
371	EXSP		80	EXSP Gray grading dk gray to blackish silica exh, wkly (faintly) laminated. Localized separate carb + qtz veinlets. (usually x-cutting) 2% mass + f.g. py/ic stringers feather throughout. Tr →							
372											
373											
374			65	1% mass sph stringers local rare f.g. PbS stringer/blebs. Tr py							
375				371.00: STFL FAULT @ 85° ca							
376											
377											
378											
379	EXSP										
380											
381											
382											
383			60								
384				→ 384.84-384.96: STVN - QUARTZ VEIN Bull wh.; no mineral(s)							
384.84 385 384.96			40 50								
386											
387											
388	EXSP										
389				→ 389.60-389.70: STBX - BRECCIA 10cm zone of bxn w/ angular fragments ~1cm² Carbonate matrix.							
390		Bx									
391			75								

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PAGE 36 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97-96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
369										
370		370.08	371.45		173375					
371		371.45	373.07		173376					
372										
373		373.07	374.50		173377					
374										
		374.50	376.00		173378					
375										
376		376.00	377.34		173379					
377		377.34	378.80		173380					
378										
		378.80	380.40		173381					
379										
380		380.40	381.85		173382					
381		381.85	383.20		173383					
382										
383		383.20	384.50		173384					
384										
		384.50	385.95		173385					
385										
386		385.95	387.35		173386					
387		387.35	388.88		173387					
388										
		388.88	390.22		173388					
389										
390		390.22	391.77		173389					
391		391.77	393.17		173390					

PROJECT: Wolverine Stratigraphic

HOLE NO. WV 97-96

(368.70 - 406.00: EXSP cont)

393.98 - 394.12: Spheroidal concretions (1%) w/ re-xtallized radially symmetric mass py.

scale: 2:1

pyrite

hard (6-7) massive black mineral (silicate?)

397.08 - 397.18: STBx - BRECCIA

1cm² angular frags over a carbonate matrix

402.09 - 402.38: STGG - FAULT GOUGE

Fairly consolidated fit gouge w/ 1x3cm clasts

402.54 - 402.74: QTVN - QUARTZ VEIN

Bull wh. qtz vn w/ tr. chl. ic septa. no mineral

403.50 - 404.10: Nose of a single unit fold. Foln visible betwn layering. Foln @ 30° cax while layering @ 68° cax

EXSP

24cm

scale 1:8

405.47 - 406.00: QTVN - QUARTZ VEIN

Qtz vein w/ 30% wall rock frags. V.C. @ 35° cax. L.C. @ 70° cax.

406.00 - 408.75 RHLT: LAPILLI TUFF

mod perv. ser. alt'd lapilli tuff. Lapilli frags. avg 2x5mm and are rare → ts.

406.03 - 406.17 - QCVN - QUARTZ CARB VN

95/5 % qtz/carb w/ rare py

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PAGE 38 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97-96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
392										
393		393.17	394.52		173391					
394		394.52	395.95		173392					
395										
		395.95	397.43		173393					
396										
397		397.43	398.82		173394					
398										
		398.82	400.33		173395					
399										
400		400.33	401.79		173396					
401										
		401.79	403.24		173397					
402										
403		403.24	404.62		173398					
404										
		404.62	406.00		173399					
405										
406		406.00	407.50		173400					
407										
		407.50	408.75		173401					
408										
		408.75	409.48		173402					
409										
		409.48	411.10		173403					
410										
411		411.10	412.58		173404					
412		412.58	414.55		173405					
413										
414		414.58	416.03		173406					

PROJECT: Wolverine Stratigraphic

HOLE NO. WV97-96

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (406.00 - 408.75 - RHLT cont)	ALTERATION A CHL	B SER	C EPI	D CARB	m	FRACTURE INTENSITY	% VEIN QTZ.
				→ 406.52 - 406.70 QCVN - QUARTZ CARB. VN							
415				Same as above (406.03 - 406.17)							
416	RHTT										
				408.75 - 409.48 TUFFACEOUS ARGILLITE							
417				ARTF Dk gray tuffaceous arg w/ rare → tr. py. Tuffaceous fracs							
= 417.30				avg. 5 x 25 mm in size							
417.94	ARCB										
418				409.48 - 417.30 RHYOLITE TUFF							
419				RHTT Grayish green rhy. f.g. tuff w/ mod pervasive ser alt'n. Tr. f.g. py is + f.g. sphalerite stringers. Localized (avg <1cm) qtz/carb veinlets.							
420				413.20 - 417.30 - mod pervasive carb. alt'n							
421											
422				417.30 - 417.94 CARBONACEOUS ARGILLITE							
423				ARCB Black/gray carbonaceous w/ wk pervasive carb alt'n 3% mass pø stringers + 1% fine carb. veinlets							
424				→ 417.30 - STFL - FAULT							
425				Fit'd UC @ 75° cax.							
426				417.94 - 420.40 RHYOLITE TUFF							
				RHTT Same as above (409.48 - 417.30).							
427				60°							
				420.44 - 420.64 Siliceous Exhalative							
428				ExSP Negro silica con vetillas de calcita							
				Presencia de stringers de SPH (Alt. cuarzo - carb)							
429											
430				420.6 - 421.2 RHYOLITE TUFF							
				RHTT Verde claro a oscuro, 5% fragmentos de lapilli. Alt: CO_2 mod. to débil sericita + (chl)							
431											
432				421.2 - 430.12 Intercalación de Rhyolite TuF y siliceous							
				PHTT/ExSP Exhalative. Similares a las descritas con. to superior. Stringers de Py (1%) y SPH (Tr)							
433				70°							
434				430.12 - 432.9 Fragmental Massive Rhyolite							
				RHFR Verde grisáceo con fragmentos centimétricos y mineralización de Fe-Mn-óxidos							
435											
436				432.9 - 441.7 Siliceous Exhalative							
				ExSP Negro, silíceo con mayor contenido de grafito y stringers de pirita							
437											

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PAGE 40 OF 52	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 9796

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
415						
416		416.03	417.30		173407	
417		417.30	417.94		173408	
418		417.94	419.17		173409	
419		419.17	420.46		173410	
420 420.46 – 420.64 stringer de sph café rojizo (5%)		420.46	420.64		173411	
421		420.64	422.3		173412	
422		422.3	423.25		173413	
423 423.25 – 423.45 : 2% SPH en [illegible]		423.25	423.45		173414	
424		423.45	425.85		173415	
425		425.85	426.64		173416	
426		426.64	427.86		173417	
427		427.86	428.6		173418	
428		428.6	430.12		173419	
429						
430		430.12	431.6		173420	
431		431.6	432.9		173421	
432		432.9	434.1		173422	
433						
434		434.1	435.23		173423	
435		435.23	437.3		173424	
436						
437		437.3	439.5		173425	

PAGE 41 OF 52 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97-96

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION		ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
				Contacto	443.2 Veta de cuarzo-calcita							
438					- Stringers de Py 2I%							
439												
440												
441												
442			30°									
				441.7 - 446.94	FRAMENTAL MASSIVE RHYOLITE							
443				RHFR	verde grisáceo con fragmentos [illegible]							
					[illegible] y moderado fallamiento.							
444												
445												
446												
447												
				446.94 - 447.76	MASSIVE RHYOLITE							
448			30°	RHFS	verde [illegible] silicificada y moderado							
					fallamiento							
449												
450				447.7 - 451.21	SILICEOUS EXHALITIVE							
				EXSP	gris negruzca, con presencia de stock-							
451					q-chl-calc. Stringers de Py 1-2 %							
452			70°									
				451.21 - 453.7	RHYOLITE TUFF							
453				RHTT	Verde claro a oscuro. Presencia de frag-							
					mentos tobaceos 5%. Trazas de stringers							
454					de Py Alt Sericita Moderada							
					-451 Pequeño nivel EXSP							
455				453.7 - 455.93								
				EXSP	SILICEOUS EXHALITIVE							
456					Negruzca silícea con fragmentos de							
					toba alterados a cuarzo							
457					Stringers de Py 2 %							
				455.93 - 456.44								
458				RPTF	CRISTAL RHYOLITE TUFF							
					Verde [illegible] con [illegible] y							
459					[illegible] de 1 - 2 %							
			50									
460												

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PAGE 42 OF 52	PROJECT: Wolverine	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
438										
439		439.5	441.7		173426					
440										
441		441.7	444.54		173427					
442										
443										
444		444.54	447.76		173428					
445										
446										
447		447.76	449.76		173429					
448										
449		449.76	451.09		173430					
450										
451		451.09	451.75		173431					
452		451.75	453.7		173432					
453		453.7	455.51		173433					
454										
455		455.51	456.48		173434					
456		456.48	457.7		173435					
457										
458		457.7	459.33		173436					
459		459.33	460.83		173437					
460										

PAGE 43 OF 52 | PROJECT: Wolverine | HOLE NO.

DEPTH (m)	% CORE REC.	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				Core Loss							
				468.30 – 468.90 SILICEOUS EXHALITE							
				EXSP Siliceous exhalite							
				468.90 – 469.15 CRYSTAL RHYOLITE TUFF							
				RHPTF Light grey, massive crystal rhyolite tuff with 2% fine to medium disseminated pyrite. Trace of Py. Py. Detail see							
	70°			469.15–469.47 ARGILLITE BRECCIA							
				ARBC Medium grey, siliceous VC matrix supported argillite breccia. Clasts consist of brown to grey argillite clasts							
				469.47 ST–> Fault vein with Hematite in the Matrix (Chlorite) 55°							
				469.47 – 469.15 CRYSTAL RHYOLITE TUFF							
				RPTF Similar to the above unit with presence of brown to dark grey argillite fragments (1cm-5cm) - Decrease in matrix content							
				469.15–474.06 FAULT GOUGE ZONE							
				STGF Medium grey clay rich gouge with minor angular fragments of the country rock 20							
				474.06 – 482.17 RHYOLITE / LAPILLI TUFF.							
				PLT Pervasive chlorite alteration. Locally with 5% disseminated pyrite blebs in the matrix. Traces of Py. Py. Remains of the fragments 1cm long x 2mm wide							
				SILICEOUS EXHALATIVE							
	95°			482.17 – 483.30 Massive siliceous exhalite with 1% disseminated pyrite							
				EXSP Fine grained to massive							

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PAGE 44 OF 52 | PROJECT: Wolverine | HOLE NO. W-97-96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
461		460.83	462.3		173436					
462		462.3	463.5		173439					
463		463.5	464.4		173440					
464		464.9	466.93		173441					
465		466.93	467.91		173442					
466										
467										
468										
469										
470										
471										
472		472.91	474.6		173443					
473										
474		474.6	476.6		173444					
475										
476										
477		476.6	477.8		173445					
478		477.8	479.25		173446					
479										
480										
481										
482		482.17	483.32		173447					
483										

PAGE 115 OF 52 | PROJECT: | HOLE NO. 22-95

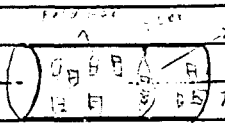
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
				492.30 – 502.95							
				RHLT	PHYOLITE CRYSTAL TUFF						
				- Grisáceo verdoso con matriz afanítica							
				- Algunos cristales de Fp, y cuarzo							
			75°								
				496.9 ; Alteración Sericita débil en							
			75°	la roca hasta el contacto con la							
				RPTE.							

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PAGE 16 OF 52	PROJECT: Wolverine	HOLE NO. WV-97-9

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		483.32	485.36		173448					
484										
485										
486										
487										
488										
489		489.05	494.05		173449					
490										
491										
492										
493										
		493.42	494.93		173450					
494										
495										
496										
		496.75	499.24		173451					
497										
498										
499										
500										
501		501.02	502.95		173452					
502										
		502.95	505.05		173453					
503										
504										
505		505.05	507.05		173454					
506										

PAGE 47 OF 52 | PROJECT: Lo'ivre | HOLE NO. [illegible]

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO3)	E	FRACTURE INTENSITY	% VEIN QTZ.
509				Continúa - Fuerte presencia de megaclastos							
				RPTF y fragmentos de diámetros variados							
				en una matriz de roca. Sin embargo							
				la mayoría de los fragmentos son							
				de composición andesítica con							
				textura porfirítica con fenocristales							
				de plagioclasa y algunos							
				cristales de cuarzo.							
			80°	Los megaclastos presentan							
				una matriz clástica de composición							
				similar a los fragmentos							
				clásticos.							
511											
											
512											
513				Elongated rock clasts (PHLT)							
				in andesitic matrix							
514											
			514.13 – 514.93								
515	35		PHLT	RHYOLITE LAPILLI TUFF							
				Similar a la anterior, con acumu-							
516				laciones de Py, concordantes a la fábrica de Qz							
				1% Py en toda la roca							
517											
518											
			70°								
519											
520											
			60° 520.45 – 521.70	FELDSPAR CRISTAL RHYOLITE TUFF							
521			RPTF	similar a la anterior. Con mayor							
				% de Py ≈ 1a2%							
522											
523			523.70 – 524.34	LAPILLI TUFF							
			PHLT	similar a la anterior (SAA)							
524											
525			75°								
			524.34 – 525.58	QFP CRISTAL TUFF / Minor Sph seams							
526			RPTF	Semi As above (SAA)							
527			525.58 – 527.15								
			RHLT	LAPILLI TUFF							
528				Similar a anterior. Sin embargo							
				el tamaño de clasto es menor. 527.15							
529				con presencia de SPH. Trazas de (Py,							

→

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PAGE 48 OF 52	PROJECT: Wolverine	HOLE NO. WV97-96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
507		507.05	509.26		173455					
508										
509		509.26	511.26		173456					
510										
511		511.26	513.70		173457					
512										
513		513.70	514.63		173458					
514										
515		514.63	515.1		173459					
516										
517		517.53	519.18		173460					
518										
519		519.18	521.25		173461					
520										
521		521.25	522.20		173462					
522		522.20	524.26		173463					
523										
524		524.26	525.58		173464					
525		525.58	527.29		173465					
526										
527		527.29	529.24		173466					
528										
529		529.24	531.43		173467					

PAGE 47 OF 52 | PROJECT: | HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
530				contacto [illegible]							
				- [illegible]							
				[illegible]							
			70°								
531				- [illegible]							
532											
533											
534											
535				435.1m (SPH)							
536				435.5							
537											
538											
539				459.5 SPH							
540											
541			85°								
542											
543											
544				Presencia de Py y SPH asociado al fracturamiento							
545											
546											
547											
548											
549											
550											
551				Stringers de Py y SPH. Leve oxidación de [illegible]							
			75°	[illegible]							
552											

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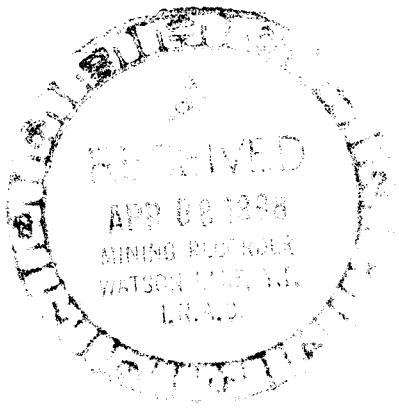
PAGE 50 OF 52	PROJECT: Wolverine	HOLE NO. WV-97-96

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
530						
531 531.43 – 532.46: 2–3% SPH on hairline parallel to clast boundary		531.43	532.46		173468	
532		532.46	534		173469	
533						
534		534	535.61		173470	
535 535.81 – 536.58: 1% SPH on hairline Trace of Py		535.81	536.41		173471	
536		536.41	537.76		173472	
537		537.76	538.86		173473	
538		538.86	540.79		173474	
539						
5410		540.74	541.81		173475	
541		541.81	543.11		173476	
542						
543						
544 544 – 544.57: 2% Py on parallel hairlines & SPH <1%		544	544.57	0.57	173477	
545		544.57	546.57		173478	
546		546.57	548		173479	
547						
548		548	549.84		173480	
549		549.84	551.33		173481	
550						
551 551.33 – 552.48: Stringers Py <1% 1% SPH		551.33	552.48		173482	
552						

1997 SUMMARY REPORT ON THE FOOT 1 - 20, 37 - 80, 83 - 94, 180 - 188, 215 - 231, 11A - 12A, KINK 3, LOW 13 – 14

9.0 DRILL LOGS

VOLUME 3



RAPIDEX

WV97-97 1

WV97-98 2

WV97-99 3

WV97-100/-100A 4

WV97-101 5

WV97-102 6

WV97-103 7

WV97-103A 8

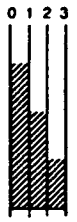
PostFax
MONTREAL, H1J 2K9
CR213-8RD

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DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: 1405
HOLE NO.: WV-97-97	BEARING: 213
LOCATION: 16770 N, 16600 E	DIP: -63
	TOTAL LENGTH: 163.68
LOGGED BY: R. Chavarría	HORIZONTAL PROJECT
DATE: July 1	VERTICAL PROJECT
CONTRACTOR	
CORE SIZE: NQ	
DATE STARTED: 28 June	
DATE COMPLETED: 29 June	
DIP TESTS: -62.5 → 82.3m; -58 → 163.7m	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

0-98 – Intercalación de rocas Riolíticas con rocas Arcillitas.

52-69 → Presencia de rocas Exalativas (EXMt, EXCP, EXSP)

102.71-102.99 – Pequeña intersección de sulfuros masivos ricos en CPy 75%, SPH 5% y pirrotina fina 2-3%

98-EOH – Típico "foot wall rock" con débil-fuerte alteración de clorita y/o sericita. Intercalación con rocas arcillosas en este tramo

LEGEND

RHFS.
RHAR
AR
AR GR
EXMt
EXCP
EXSP
Veins
SSMS.
RHTT.
RHTF

PAGE 1 OF 16 | PROJECT: Wolverine | HOLE NO. WV 97-97

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
1		CASING									
2											
3				Massive Rhyolite							
4				3.05 - 6.30 Gris-Pardo, fuertemente silicea, Textura Afanitica con presencia regular de Microlitos. Fuerte Oxidación principalmente en fracturas. Débil silicificación de los microlitos							
5				- Bandeamiento Irregular							
6			95								
7				6.30 - 9.60 Aphanitic Siliceous Argillite APSI Argillite silicea fina, Negra a débil gris, fuerte bandeamiento fino. Débil a Moderada presencia de fragmento de tuba.							
8											
9				Falla a 9.9, 90° con fuerte presencia de Arcilla.							
10			70°	9.60 - 15.81							
11				RHFS Massive Rhyolite - similar a la de arriba, con una débil componente de bandas <1 mm de Argillita en forma esporádica							
12				- El bandeamiento es más regular.							
13				- Mayor presencia de vetas.							
14											
15											
16			90°	15.81 - 33.51 Interbedded Rhyolite and Argillite RHAR							
17				} Fuerte presencia de vetas con fuerte oxidación.							
18											
19				- Gris - Negro; intercalación de Rhyolita afanitica con microlitos, con la argillita fina. Bandas de 3 - 50 mm de Riolita intercaladas con							
20				1 - 3 mm de bandas de arcilla							
21				- Muscovita en los planos							
22				- Trazas de Pirita y muy rara Pirrotina - Arcilla producto de fallamiento							
23			80°								

PAGE 2 OF 16	PROJECT:	HOLE NO. W1-93-12

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
0											
1											
2											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											

PAGE 3 OF 16 | PROJECT: Wolverine | HOLE NO. 77-97

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Fld)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
24				RHAR — Intrusivo Riolita a Andesita							
				Fuerte presencia de agua - Débil cantidad							
				Continúa la misma unidad							
25											
26				85°							
27											
28											
29			SEA	→ Fuerte deformación (Plegamiento)							
30											
31											
32											
33											
				33.51 - 48 — Massive Rhyolite							
34				RHRS — Riolita textura afanítica, color gris verdosa, con fuerte bandeamiento							
				- Igual a la presente arriba, contiene una regular cantidad de minerales							
35											
36				85° — Bandeamiento fino a moderado 1mm - 3cm ∅							
				- Muscovita en tres planos							
37				- Rara presencia de Py							
38											
39											
40											
41											
42											
43											
44											
45											
46											

PAGE 21 OF 16	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
		413.35	46.85	1.50	203237					
46										

PAGE 5 OF 16 | PROJECT: Wolverine | HOLE NO. 97_97

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
47				Continúa Massive Chloritite							
48				48.00 - 51.90 Siliceous Argillite							
49				ARST - Negra a Gris oscuro, fuertemente silícea. Débil presencia de fragmentos líticos. Bandeamiento milimétrico.							
50											
51				- Brecha de falla con fragmentos Angulosos, matriz de Sericita, muy débil dureza. Mala recuperación (50% Recovery)							
52				51.70 - 54.79 Ex Mt IRON Formation							
53				- Matriz silícea color gris Verdosa con presencia de bandas de magnetita - 20 a 30 % Mt dispuesta en finas bandas.							
54				q vein							
55				q-vein + Py con asociación de Py < 1% cerca del contacto con la unidad inferior EXCP							
56			60°	54.79 - 55.35 IRHFS → Pequeño cuerpo de Rhyolita masiva (lente?)							
57				55.35 - 68.65 Calcite - Pyrite Exhalites EXCP							
58				Gris Verdosa - blanquecinas bandas de carbonato con cierto % de Silice, con presencia de bandas Irregulares de Py con ∡ 60° eje núcleo							
59				- Presencia de vetas de q cerca del contacto con EXMt.							
60				- Fracturas con débil contenido de clorita y Py sin posiblemente recristalizada. - Fracturas presentan angulos entre 0° - 20°.							
61				- El contenido de Py es de ≈ 20%							
62											
63											
64											
65											
66											
67											
68			80°	68.65 - 69.0 Siliceous - Pyrite Exhalites EXSP							
69				Bandas mm - cm de Py (15%), fragmento carbonáticos							

PAGE 6 OF 16	PROJECT: Wolverine	HOLE NO. 97-97

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		46.85	47.85	1	203238					
47										
		47.85	49.35	1.5	203239					
48										
49										
		49.35	50.90	1.55	203240					
50										
51		50.9	52.70	1.80	203241					
52		52.70	53.75	1.05	203242					
53		53.75	54.79	1.04	203243					
54										
		54.79	55.35		203244					
55										
		55.35	56.99		203245					
56										
		56.99	58.44		203246					
57										
58										
		58.44	59.94		203247					
59										
60		59.94	63.25		203248					
61										
62										
		63.25	64.9		203249					
63										
64										
65		64.9	66.14		203250					
66										
		66.14	67.64	1.5	203251					
67										
		67.64	69.14	1.5	203252					
68										
69		69.14	71.64	1.5	203253					

PAGE 7 OF 16 | PROJECT: Wolverine | HOLE NO. 97-92

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHI A	SER B	EP C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
70				69 – 74.30 ARTF Sil. ceous Argill. te with tuffaceous fragments - Negra grisacea particularmente bandeada, con fragmentos de toba elongados en el sentido de las bandas - Débil presencia de clorita y cierto contenido de carbonato - Bandas de Py ± son presentes.							
71											
72											
73											
74				74.30 – 76.90 RHTT Rhyolite Tuff - Gris verdoso, fuertemente bandeada con fragmentos de lapilli 1 – 8 mm ø elongados en las bandas. Débil a escasa presencia de bandas mm de Argillita - Moderada alteración de Sericita - Fuerte (Dominante) presencia de Lapilli fragmentos							
75											
76											
77											
78				76.9 – 78.33 ARTF Similar a la anterior pero sin presencia de Py y/o Estibnita							
79											
80				78.33 – 80.50 RHFS. Riolita Masiva gris pobremente bandeada							
81				80.50 – 84.43 RHAR Interbedded Rhyolite and Argillite, gris oscura con pobre contenido de bandas de Arcilla Calcita en fracturas, Trazas de Py en fracturas.							
82											
83											
84											
85				84.43 – 96.0 ARFT Siliceous Argillite w/ tuffaceous fragments Negra – verdosa con fuerte presencia de fragmentos tufaceos y con presencia de niveles de toba intercalada - Bandas de Py a lo largo de toda la secuencia - Bandas de Arcilla tamaño mm - Fragmentos 5 mm ø elongados en las bandas de Arcilla							
86											
87											
88											
89											
90											
91											
92				45°.							

PAGE 8 OF 16	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
69 - 74.30										
70 3% Py grano gruess en bandes										
<1% SPH en bandes fines										
71		71.64	72.23		203254					
72										
		72.23	74.3		203255					
73										
74										
		74.3	76.50		203256					
75										
		76.50	78.33		203264					
76										
77										
78		78.33	80.5		203265					
79										
80		80.5	81.75		203266					
81										
82		81.75	84.43		203267					
83										
84 84.23 - 96		84.43	92.96		203268					
3% Py en bandes y stringers										
85										
86										
87										
88										
89										
90										
91										
92										

PAGE 9 OF 16 | PROJECT: Wolverine | HOLE NO. WV 9297

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (CLP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
				ARFT — Continúa de la página anterior							
93											
94											
95											
96				96 — 97.8: Rhyolite Tuff							
97				RHTT. Verde grisáceo, con bandeamiento muy fino (1-2 mm ϕ) Trazas de Py excepto a 96.4 — Presencia de bandas de SPH + Py. Alta Serecita débil							
98				75°							
99											
99				97.8 - 102.7 RHLT. Rhyolite Lapilli tuff Verde claro a oscuro, productos de moderada a leve alteración Serecítica y Débil a moderada Clorita. Fragmentos subangulares.							
100											
101											
102				y SPMS							
103				78° 98 - 102.1: Zona con bandas de Py + SPH de 1-3 mm ϕ							
104											
105				102.1 - 102.71: RHLT con stringers de CPy y Zonas de fuerte concentración de esfalerita							
106				96.66 - 90° 101.25 - 85° 102.0 - 87° 108.56 - 75° 104.90 - 60° 123.30 - 20° Ave = 78							
107				102.71 - 102.99 CPMS 70-75 % CPy fina - media con muy fina Pirrotina 2-3% diseminada + 5% de SPH de grano medio. 10 % de CO_3 ganga							
108				107.5 - RPHF							
109				102.99 - 106.36 CPy stringer con bandas finas de SPH y trozos de Py							
110											
111				107.5 - 108.3 SPH bands + 1% CPy + trozos de Py y Pirrotina fina							
112				109.6 - 111.8 CPy stringers and bands + finas trazas de SPH + Py							
113				117.76 - 103.06 CPy stringers, grano medio asociados a vetas de cuarzo							
114											
115											

PAGE 10 OF 16	PROJECT:	HOLE NO. KV 97-92

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		92.86	95.25		203269	
93						
94						
95		95.25	96.4		203270	
96 96.4 - 97.12						
3% Sph + 2% Py en bandas		96.4	97.12		203271	
97 finas y stringers.		97.12	97.86		203272	
98 4% Py en bandas de 1-3mm ϕ		97.86	99.66		203273	
3% Sph en bandas 1cm ϕ						
99		99.66	102.1		203274	
100						
101						
102 102.1 - 102.22 5% Py en stringers		102.1	102.22		203275	
+ <1% SPH		102.22	102.28		203276	
103 102.22 - 102.28 SPMS Alta concentración de SPH + Py. 55% SPH fino		102.28	102.71		203277	
		102.71	102.81		203278	
104 +10% Py de grano medio		102.81	102.99		203279	
102.28 - 102.71 15% Py + 5% SPH.						
105 → 102.71 - 102.81 fuerte presencia de esfalerita 90% + 10% CO_3		102.99	104.96		203280	
		104.96	106.36		203281	
106 102.81 - 102.95 85% Py						
fino a medio +5% Pirrotina muy		106.36	107.5		203282	
107 fina y 10% CO_3.						
102.95 - 102.99 3cm de fuerte		107.5	108.3		203283	
108 esfalerita 85% SPH + 10% CO_3						
+ 5% Py.		108.3	109.6		203284	
109						
102.99 - 106.36 3% Py + <2% SPH		109.6	111.8		203285	
110 107.5 - 108.3 0% SPH + 1% Py						
Pt + Py (+rozas)						
111						
109.6 - 111.8 4% Py		111.8	112.76		203286	
112						
112.76 - 113.06 4% Py						
113		112.76	113.06		203287	
114		113.06	115.75		203288	
115						

PAGE 11 OF 16 | PROJECT: | HOLE NO. 97-97

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D (CO3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
116			75°	107.5–143.9 Rhyolite crystal tuff							
117			RPTF	Regularmente bandeada, bandas de 2–3 mm ϕ. Presenta 5% de cristales de cuarzo 1% de feldespato (1–4 mm ϕ)							
118				– Moderada a fuerte cloritización.							
119				– Moderada Sericitización.							
120				– A partir de 113.06 se la presenta texturas de CPy + EPH + Py							
121											
122											
123											
124											
125											
126			75°								
127											
128											
129											
130											
131											
132											
133											
134											
135			80°								
136				Disminuye el contenido de cristales y el tamaño de los mismos							
137											
138											

PAGE 12 OF 16	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
116		115.12	116.75		203289					
117		116.75	118.75		203290					
118		118.75	120.68		203291					
119										
120										
		120.68	122.68		203292					
121										
122										
		122.68	124.3		203293					
123										
124		124.3	126.3		203294					
125										
126		126.3	128.3		203295					
127										
128		128.3	129.84		203296					
129										
130		129.84	131.9		203297					
131										
		131.9	133.87		203298					
132										
133										
		133.87	136.24		203299					
134										
135										
136		136.24	138.75		203300					
137										
138										

PAGE 13 OF 16 | PROJECT: Wolverine | HOLE NO. 97-97

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
				RPTF							
139				Continúa de arriba							
140				Moderada alteración Sericita							
141											
142											
143											
			80°								
144				143.88 - 146.7 Cristal Feldspar Lapilli tuff with							
				RPAT fine Argillite bands.							
145				Similar a la anterior solo que con bandas							
				de arcilla de 1-2 mm ϕ							
146											
147				146.7 - 150.37 - Carbonaceous Argillite with several							
				ARTF tuffaceous fragments.							
148				- También presenta cierto contenido de grafito							
				- Trazas de Py							
149											
150				85°							
				150.37 - 151.14 graphitic black Argillite, con presencia							
151				ARGR de carbonatos.							
				151.14 - 157.34							
152				RPTF.							
				- Verde con pequeños cristales de feldespato							
153				y fragmentos de lapill.							
				- Presencia de Carbonatos en fracturas							
154				- Alteración clorita débil.							
				- Moderada sericita							
155											
156											
157											
			80°								
158				157.34 - 163.67 Cristal tuff con bandas de Argillite							
				RPAt Presencia de brillitos de Py fina con cris-							
159				tales cristales de Py de 3mm ϕ							
				Moderada Sericita							
160											
			60								
161											

PAGE 14 OF 16	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		138.25	139.29		203301					
139										
		139.29	141.3		203302					
140										
141										
		141.3	143.3		203303					
142										
143										
		143.3	145.38		203304					
144										
145										
		145.38	146.7		203305					
146										
147		146.7	148.82		203306					
148										
149		148.82	149.4		203307					
150		149.4	151.25		203308					
151										
		151.25	153.0		203309					
152										
153		153.0	155.0		203310					
154										
155		155.0	157.1		203311					
156										
		157.1	159.35		203312					
157										
158										
159		159.35	160.50		203313					
160										
		160.5	160.62		203314					
161		160.62	161.82		203315					

PAGE 15 OF 16 | PROJECT: Wolverine | HOLE NO. 97-97

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (SER)	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				RPAT							
				Continue RPAT							
162											
163											
				60°							
164				EOH							

PAGE 16 OF 16	PROJECT: Wolverine	HOLE NO. W 97-97

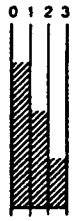
MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
162		161.82	163.7		203316					
163		"	"							
164										

Westmin Resources

DRILL LOG

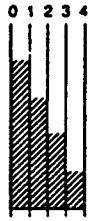
PROJECT: WOLVERINE STRATIGRAPHIC	GROUND ELEV.: 1395m.
HOLE NO.: WV97-98	BEARING: 213° (GS)
LOCATION: 18400E 16800N	DIP: -70
	TOTAL LENGTH: 443.8
LOGGED BY: G. BRADSHAW	HORIZONTAL PROJECT
DATE: JULY 1 / 1997	VERTICAL PROJECT
CONTRACTOR: F. BOISVENU	
CORE SIZE: NQ	
DATE STARTED: JUNE 29	
DATE COMPLETED: JULY 11	
DIP TESTS: 106.7 ⇒ -66 213.4 ⇒ -62.	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- Upper sedimentary package with minor andesitic tuffs persists until 192.8 m (similar to top of PK97-10)
- Mixture of green 'PUCK type' fragmentals and more traditional 'WOLVERINE type' fragmentals - both aphyric aphanitic rhyolite occurs from 192.8 - 257.9 m depth.
- Two distinct zones of exhalative activity within a lengthy package of mixed argillites and rhyolites Upper Fe-Fm from 282.4 - 290.5 and a lower from 345.7 to 373.0 (possibly equivalent to EXCP)
- transition to dominantly crystal rich rhyolite tuffaceous sediments occurs at 394.8 m (approx.)

LEGEND

PAGE 1 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_2)	E	FRACTURE INTENSITY	% VEIN QTZ.
4				0-4.3 CASING DHCS							
5	ADTT			4.3-41.3 LIGHT GREEN TUFFACEOUS - LOCALLY MASSIVE FINE GRAINED ANDESITE (DACITE?) ADTT							
6				- variable from massive finely crystalline rock to a well banded - fragmental unit.							
7				- bands are typically 1-2 mm dark brown biotite - occ. defining flattened cuoid fragments - typically 5 x 30 mm.							
8											
9			50°	- 1-2 mm calcite stringers / veinlets running thr. (~5%)							
10											
11				(NOTE - SIMILAR to andesite near top of PK-97-10)							
12											
13											
14											
15											
16											
17											
18											
19											
20			50°								
21											
22											
23											
24											
25											
26											

PAGE 2 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
- Negligible mineralization.										

PAGE 3 OF	PROJECT:	HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
27	ADTT		1	ADTT (cont.)							
28			55°								
29											
30											
31											
32											
33											
34											
35											
36											
37											
38			50°	Fairly sharp depositional contact w/ underlying sediments.							
39											
40											
41											
42	ARWK		80°	41.3 - 127.4 ARWK: INTERBEDDED BLACK ARGILLITE AND GREY FINE GRAINED GREYWACKE							
43				- Finely laminated sedimentary package - very similar to top of PK 97-10.							
44				- mainly grey arenite wacke. Finely laminated uniform texture. (~70%)							
45				- well defined contacts w/ interbedded blk arg. (avg. 1-5cm)							
46				- calcite bands and L-cutting veinlets common throughout. (usu 1-2 mm // bdg)							
47			65°	- local interbeds of ADTT (as above) up to ~30 cm (especially near wkt.)							
48											
49											

PAGE 4 OF	PROJECT:	HOLE NO. 97-99

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 5 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m) | % CORE REC | LITHOLOGY | STRUCTURE | GEOLOGICAL DESCRIPTION | ALTERATION A (CHL) B (SER) C (EP) D (CO_3) E | FRACTURE INTENSITY | % VEIN QTZ.

ARWK (cont.)

black org - grey coarser greywacke intimately interbedded thr unit typically 5mm - 5cm w/ sharp contacts.

77°

53.0 - 53.9 - broken + gouged argillite (possible fault

54.0 - 66.1 - pebbly broken core w/ frequent gouge zones (up to ~20cm) (same lithology)

major fault? (hole stalled for 2 days)

Huge Fault ???

(Drillers stuck for over two shifts!)

60°

71.1 - 72.0 gouge + poor recovery

ARWK

PAGE 6 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 7 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
73				ARWK (cont.)							
74											
75			60°	75.0 - 75.4 ⇒ minor argillaceous clay-like zone.							
76											
77											
78			30°	- 10 cm shear.							
79											
80											
81			60°								
82											
83											
84		ARWK									
85											
86											
87				88.1 - 10 cm clay shear / fault zone.							
88			30°								
89											
90											
91											
92											
93			70°								
94											
95											

PAGE 8 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 9 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
96	ARWK			ARWK (cont.)							
97			70°								
98											
99											
100											
101											
102				102.7 - 108.8 - poor recovery possible fault zone							
103											
104											
105											
106											
107											
108											
109											
110				110.2 - 111.8 - grey gouge zone. lost core							
111											
112											
113			60°								
114											
115											
116											
117											
118											

PAGE 10 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
→ Trace pyrite continues. diss - foliation // stringers.										

PAGE 11 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
					ARWK (cont.)							
119												
120												
121												
122												
123	ARWK				123.9 - 124.4 - argillaceous gouge							
124												
125					126.5 - 10 cm qv							
126					126.6 - start of grey aph. felsic interbeds up to 3 cm - gradational contact.							
127												
				127.4-131.6	GREY MASSIVE APHANITIC FELSITE (RHYOLITE)							
128				RHFS	massive aphanitic appearance, but grains are visible locally - may actually be a very fine ashy tuff. Pale green ser and darker grn. chl visible on partings 1-3 mm. (~10% overall) Grey-wht 1-2 cm msv. aph intervals may be frags.							
129												
130	RHFS											
131					129.3-129.5 · fault breccia w/ clay fragments up to 2 cm.							
132					very sharp lower contact.							
				131.6-140	GREY-BLACK INTERBEDDED ARGILLITE							
133				ARWK	+GREYWACKE.							
134					as above.							
135					133.5-133.9 - flooded w/ grainy white calcite - forms a matrix for broken angular frags of wall rock							
136												
137	ARWK		75°									
138			1									
139												
140												
141												

PAGE 12 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
Trace diss py, tiny stringers para. to foln.										
Trace tiny sub mm py stringers mainly ⊥ to foln, sometimes ⊥-cutting.										

PAGE 13 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
142	ARWK			ARWK (cont.)							
				Unit continues - mostly aphyric							
				ash wacke beds up to 50 cm							
143			30° 1	Frequent 1-5 mm cc bands							
144											
145											
146											
147											
148											
149											
150											
151											
152											
153											
154											
155											
156			70° 1								
157				Lower contact marked by first appearance of green tuffaceous bands.							
158											
159											
160				161.0 - 192.8 ARGT: INTERBEDDED GREEN TUFFACEOUS ANDESITE AND GREY-BLACK ARGILLACEOUS SEDIMENTS							
161				- Appearance of green fine grained soft chloritic tuffaceous andesite bands typically 1-2 cm wide but often occurs as much larger intervals (up to 100 cm).							
162	ARGT		85° 1 80°	- generally sharp contacts // to foln							
163											
164											

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PAGE 14 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 15 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
165				ARGT (cont.)							
166				- jagged fragment terminations sometimes visible on the andesite							
167			80°	- interbedded arenitic and grey coarser greywacke is similar to above - usu banded on a 5mm - 1cm scale.							
168				- More siliceous felsic bands - fragments also common in this unit (~10%). typically ~5mm wide and partially altered to carbonate. (effervess slightly)							
169			80°								
170											
171				- longer andesitic intervals generally crudely banded - contain several % brown biotite (disseminated - banded).							
172											
173				- also contain 1-2% medium grained (~2mm) white calcite grains.							
174											
175				- quartz veins common thr unit. typically 2-3 cm wide.							
176			75°								
177		ARGT	75°								
178											
179											
180											
181											
182			75°								
183											
184											
185			75 / 75								
186											
187											

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PAGE 16 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 17 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EP C	CO_3 D	E	FRACTURE INTENSITY	% VEIN QTZ.
188	ARGT		80°	ARGT (cont.)							
189											
190				192.8 - 201.3 RHFG: GREY-GREEN MASSIVE-BANDED SILICEOUS RHYOLITE FRAGMENTAL.							
191				- sub mm brown biotite bands separate green-grey aphanitic siliceous rhyolite bands (typically ~1 cm) which show rare fragment terminations.							
192			85°	- Unit looks very similar to green chlontic 'fragmental' at rock.							
193				- 10-15% biotite bands overall.							
194			85°	194.2-194.7 - argillaceous interval - ovoid flattened (2x20mm) felsic fragments (calcified) within mainly black argillaceous mtx.							
195											
196											
197	RHFG										
198											
199											
200				201.3 - 212.0 RHTT: GREY/GREEN BANDED ARGILLACEOUS MIXED ANDESITIC/RHYOLITIC TUFF							
201			65°	"mixed bag" - combination of ADTT (fine grained chlontic tuffaceous andesite as in ARGT above) - ~30% of unit, prominent to ~214.8. Typically 1-2 cm intervals, but up to 30-40 cm.							
202				- ~50% siliceous aph. aphyric rhyolite - typically 1-2 mm bands. 5mm-1cm aphanitic grey fragments also common (very flattened - similar to frags in RHFG above.							
203											
204											
205			80°	- 20% fine (~1mm) black argillaceous partings wavy, separating silty frags.							
206	RHTT			- grey-brown micaceous partings also present.							
207											
208											
209											
210											

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PAGE 18 OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
–										
– Tr v.f.g. pyrite stringers on foln.										

PROJECT:

HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
211	RHTT			RHTT (cont.)							
212											
213	RHFR		85°	212.0 - 319.5 RHFR GREY APHANITIC SILICEOUS RHYOLITE FRAGMENTAL - very siliceous unit comprised of very flattened aph. rhy frags (typically 5x30 mm), sometimes appear banded. - 10-45% sub mm banded - anastomosing dark grey - brown micaceous partings (biot + ser). - Rare argillaceous partings (up to 1cm) - Approximate lower ct - Similar appearance to typical "Wolverine type" fragmental							
214											
215											
216											
217											
218											
219											
220	RHFG			219.5 - 243.2 RHFG GREEN-GREY APHANITIC BANDED-FRAGMENTAL CHLORITIC RHYOLITE. - green fragmental as obv. (193.8-201.3) - similar to RHFR above - main differences are: • pervasive greenish tinge to aph. rhy frags → due to a weak chl alth. • fragments are large - 1-2 cm wide and terminations are only rarely visible resulting in a banded appearance. • Traces of black angular magnetite crystals (<< 1%) are disseminated thr unit. • 1-2 mm partings are mainly dk grn. chl ± minor ser. (~5% of unit)							
221											
222											
223			80°								
224											
225											
226											
227											
228											
229											
230											
231											
232											
233											

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PAGE 20 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
- Tr - 1% py. clotted on foln + fractures.										
- Tr - 1% py. clotted on fractures, rare crude 1-2mm bands										
well developed fragmental w chl →		227.7	229.1	1.4	174485					

PAGE 21 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
234	RHFG			RHFG (cont.) fairly gradational lower contact (approximate)							
235											
236											
237											
238			80°								
239											
240											
241											
242											
243				243.2-251.9 RHFR: GREY APHANITIC SILICEOUS FRAGMENTAL RHYOLITE same as 212.0-219.5 above. very well developed fragmental texture thit. unit (typical Wolverine type fragmental)							
244	RHFR			~80% grey aph. siliceous frags size ranging from 2x10 mm to 2x6 cm. (typically 5x15 mm) ovoid flattened w/ jagged terminations							
245				- wildly anastamosing dark brown to black micaceous matrix (~20%)							
246											
247											
248											
249			85°	- 10 cm shear - wide variations in both sizes and shapes of fragments. - broken core at a fairly sharp lower contact.							
250											
251											
252				251.9-257.9 RHFG: GREEN-GREY APHANITIC BANDED-FRAGMENTAL RHYOLITE							
253	RHFG			same as 243.2-243.2 above. 0.5-1% diss pit. sharp lower contact							
254											
255											
256											

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PAGE 22 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				

PAGE 23 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
257	RHFG			257.9-260.7 ARTF: BLACK TUFFACEOUS-CARBONACEOUS ARGILLITE mainly finely laminated blk carb argillite but with ~10-15% 5mm-1cm grey siliceous-calcareous bands. (CO_3 alteration?)							
258			80°	Graphitic w/ little tuffaceous mtl to 259.3							
259	ARTF			258.3 - minor graphitic gouge							
260				259.3-259.8 - qv w/ interbeds + inclusions of arg Gradational lower contact.							
261			80°	260.7-266.7 RHFS: GREY MASSIVE APHANITIC RHYOLITE grey aph. silica flt unit w/ frequent microlites (some free with difficulty - cc after ep?) ~5% pale green sericitic partings shp 1 ct.							
262											
263											
264	RHFS			266.7-267.3 EXMT: GREEN FINE GRAINED CHLORITE-EPIDOTE - MAGNETITE IRON FORMATION massive fine grained unit w/ distinct yellow green colour - alternating crude indistinct dk gm chl and yellow-gm ep bds. ~10% mt - diss - 1-2mm stringers // to fdn.							
265											
266											
267	EXMT		80°								
268	RHFS			267.3-271.2 RHFS: GREY MASSIVE APHANITIC RHYOLITE. same as above (260.7-266.7) Frequent 1-2mm darker brown partings (biot.) Grades into a dark siliceous arg starting at ~ 269.8 m. Shp 1. ct.							
269											
270											
271				271.2-275.6 EXMT: BLACK FINE GRAINED BANDED MAGNETITE IRON FORMATION. - Finely laminated fine grained magnetite rich rock. Contains ~60-70% very fine gr. mt - massive intervals to 8cm. More commonly clusters of 1-3 mm wavy bands. Greenish tinge due to minor chl. 30-40% of unit is a tuffaceous arg - graphitic partings frequent Grey indistinct siliceous bands/frags present. Slp. ct.							
272	EXMT										
273			80°								
274											
275			80°								
276	RHAR			275.6-282.4 RHAR: MIXED BLACK CARBONACEOUS ARGILLITE AND MASSIVE APHANITIC RHYOLITE mainly a broken up black-dark grey argillaceous rock with frequent indistinct wormy aphanitic siliceous domains - typically 2-3mm x 2-3 cm. Graphitic partings common.							
277											
278											
279											

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PAGE 24 OF	PROJECT: WOLVERINE STRATIGRAPHIC	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
- 1-2 ½ py. sub mm stringers on foln and fractures		257.9	259.1	1.2	174486	
- Tr - 1% diss - strg. f.g. py Tr. cpy in qv (265.2)						
- 3-5 % py ab clots on fractures, frequent 1-2 mm cross cutting veinlets.		264.7	265.8	1.1	174487	
		265.8	266.7	0.9	174488	
		266.7	267.3	0.6	174489	
- 1-2 % py. frequent clots on fracture and foln // stringers.		267.3	268.2	0.7	174490	
		268.2	269.6	1.4	174491	
		269.6	271.2	1.6	174492	
- 1-2 %, py, mainly clotted on fracture surfaces		271.2	272.2	1.0	174493	
		272.2	274.1	1.9	174494	
		274.1	275.6	1.5	174495	
- 2-3 % sub-mm foln para. py stringers, minor clots on fractures		275.6	277.7	2.1	174496	
		277.7	280.0	2.3	174497	

PAGE 25 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
280	RHAR			RHAR (cont.)							
				280.0-281.3 - grey msv. aph rhy - (lite RHFS obv) 1-2mm pale green-brn micaceous pltgs.							
281				crushed pebbly core at slip. 1 ct - possible fault?							
282				282.4-290.6 EXMT GREY/GREEN/BLACK MASSIVE-BANDED WELL DEVELOPED MAGNETITE IRON FORMATION							
283	EXMT			~75% finely crystalline massive black magnetite w/ ~5% coarse 'buckshot' dark purplish diss mt clustered in zones typically 10-20 cm wide - overprinting massive f.g. mt. (80% mt overall).							
284				- locally zones are slightly tinged green due to presence of chl. also lcl. bnds to 5mm							
285				- local wispy 0.5-2mm yellow green epidote bands (chl+ep ~10% of unit)							
286				- occasional quartz veins up to 15cm							
287				- local felsic fragments (grey, aph) occur in clusters - zones up to 30cm							
288			80°	- typically 5*20mm, jagged terminations							
289				-							
290				- local fine diss. star cc. (1-2%) shp l.ct.							
291	RHFS			290.6-303.9 RHFS GREY MASSIVE-BANDED APHANITIC RHYOLITE/FELSITE.							
292				- grey aphanitic felsite with fairly regular pale green-brown sub-mm micaceous partings (sericite + biotite) giving a banded appearance							
293				- local chloritic partings - greenish tinge is reminiscent of RHFG (Puck green fragmental) (Also, but more common than typical RHFS)							
294				- may be a fragmental but no terminations are visible.							
295				- tiny microlites common but most frzz slightly - poss cc. alter fld.							
296				- local sugary texture to felsic bands							
297				- fairly gradational contact w/ underlying argillite.							
298											
299											
300			80°								
301											
302											

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PAGE 26 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		280.0	281.3	1.3	174498	
		281.3	282.4	1.1	174499	
- 2-3% pyrite as f.g stringers parr. to foln. occ. on cross cutting fractures. Common tht unit.		282.4	283.6	1.2	174500	
		283.6	284.9	1.3	203439	
		284.9	286.3	1.4	203440	
		286.3	287.9	1.6	203441	
		287.9	289.2	1.3	203442	
		289.2	290.6	1.4	203443	
		290.6	292.1	1.5	203444	
- 2-3% pyrite - common tht. Mainly occurs disseminated and on cross cutting fractures.						
		294.7	296.2	1.5	203445	
		297.9	299.9	2.0	203446	
		301.2	303.9	2.7	203447	

PAGE 27 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	ALTERATION B SER	ALTERATION C EP	ALTERATION D CO_3	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
303	RHFS			RHFS (cont.)							
304				303.9 - 323.2 ARTF	DARK GREY - BLACK FINELY LAMINATED TUFFACEOUS ARGILLITE - gradational contact - more like RHAR until ~307.1 m. ~20% greyish interbedded aphanitic silica.						
305											
306			80°								
307			306.9 - 307.0 argillaceous gouge - shear?		- bulk of unit is black moderately carbonaceous finely laminated argillite w/ ~10% grey 1-2 mm siliceous - weakly calcareous bands + fragments.						
308			60 cm qv w/ ab org inclusions of wall rk								
309					- often elongate-lens shaped and less frequently irregularly shaped blebs.						
310			btn 20 cm qv w/ ab pyrite clots.		- occ. microfolding of siliceous bands						
311					- broken core & frequent gouge zones.						
312											
313											
314	ARTF		75°								
315			gouge zone		315.3 - 316.0 - possible fault zone gouged up but intact tuffaceous arg						
316											
317											
318			318.1 - 318.5 - fault gouge.								
319					- sharp lower contact w/ btn. core.						
320											
321											
322				323.2 - 334.6 RHFS / RHFR	GREY MASSIVE - FRAGMENTAL APHANITIC RHYOLITE. similar to RHFS above - sericitic (+/- chl) partings occur as regular foln. parallel 1-3 mm bands over most of unit - separating aphanitic aphyric msv siliceous domains - typically 2-3 cm wide.						
323											
324	RHFS		75°								
325											

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PAGE 28 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		303.9	306.1	2.2	203448					
- 3-4% py common tht as sub mm foln // bands. Frequent clots on fractures. Tr. stringers of po.		306.1	307.8	1.7	203449					
		307.8	309.7	1.9	203450					
		309.7	311.3	1.6	203451					
		311.3	313.3	2.0	203452					
		313.3	314.8	1.5	203453					
		314.8	316.4	1.6	203454					
		316.4	318.1	1.7	203455					
		318.1	320.2	2.1	203456					
		320.2	321.7	1.5	203456					
- Tr - 1% diss - stringer pyrite.		321.7	323.2	1.5	203457					
		323.2	325.2	2.0	203458					

PAGE 29 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
326	RHFS			RHFS (cont.)							
				- locally develops a fragmental texture w/ anastamosing micaceous bands creating irregularly shaped siliceous domains.							
327			75°	- After 333.2m graphitic partings (sub-mm) give rock a dark grey colour							
328											
329											
330											
331											
332											
333											
334				334.6 - 344.1 ARCB — BLACK FINELY LAMINATED CARBONACEOUS ARGILLITE / GRAPHITIC FAULT GOUGE							
			80°	- strongly carbonaceous - graphitic finely laminated blk arg							
335				- frequent gouge zones bkn core tht unit							
336			RC	- 2-3% 1-2 mm folded + deformed siliceous - weakly calcareous bands/ fragments.							
337											
338			5°	graphitic gauge zones							
339	ARCB										
340			80°								
341				344.1 - 345.7 RHFS — GREY MASSIVE FRACTURED APHANITIC FELSITE							
342				grey siliceous rock sim. to RHFS above, but very fractured up Fractures perp to foln common tht. minor							
343				← arg. fault gouge/ fault bx. Faulted l. ct. — fault brecciation. L ct. based on							
344			65°	first appearance of magnetite.							
345	RHFS		40°	345.7 - 350.0 EXMT — GREY MSV. APHANITIC SILICEOUS EXHALITE / MAGNETITE POOR IRON FORMATION							
346				grey - locally greenish rock, mainly MSV aphanitic fractured up silica as above.							
347	EXMT		70°	But also has ~ 5% mt typically as crude disseminated bands avg 1 cm.							
348											

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PAGE 30 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		327.2	329.2	2.0	203460	
		332.6	334.6	2.0	203461	
- 1-2% py, finely diss tht.		334.6	336.2	1.6	203462	
		336.2	338.0	1.8	203463	
		338.0	340.1	2.1	203464	
		340.1	342.1	2.0	203465	
- 1-2% diss - clotted pyrite.		342.1	344.1	2.0	203466	
		344.1	345.7	1.6	203467	
- 2-3% coarse diss - crudely banded py.		345.7	347.2	1.5	203468	
		347.2	348.8	1.6	203469	

PAGE 31 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EP C	CO_3 D	E	FRACTURE INTENSITY	% VEIN QTZ.
349	EXMT				EXMT (cont.) Also mt is diss tht - pepper-like texture small amounts of green chl staining in this zone.							
350			80°									
351	RHFS			350.0-355.4 RHFS	GREY MASSIVE APHANITIC FELSITE. very similar to previous RHFS units - frequent 1-2 mm pale green sericitic partings. local fractured zones with microfractures filled w/ calcite. Sharp lower contact							
352			75°	yellow-brn 1mm sph bands								
353												
354												
355				355.4-357.3 EXSP?	DARK GREY-WHITE BANDED SILICA PYRITE EXHALITE broken core tht unit - mainly grey indistinct aphanitic silica, worm like bands to lens shaped fragments. ~10% dark sub-mm argillaceous partings - wavy, separating siliceous domains							
356	EXSP?											
357				minor brecciation below ct - post fault?	357.0-357.3 (EXCP) - mainly cc w min diss mt.							
358	RHFS		35°	siliceous arg pebbles								
359				357.3-361.8 RHFS/EXSP?	GREY MASSIVE APHANITIC RHYOLITE/SILICA EXHALITE? - sharp upper ct at 35° w/ minor brecciation just below. - very massive looking aphanitic siliceous rock. - Only very trace amounts of micaceous mtl on foln. - well fractured, occ. tiny lit mindlets? calcareous but may be after feldspar. Sharp l. ct.							
360			80°									
361												
362	EXMT			361.8-363.7 EXMT	GREY BANDED MAGNETITE-CALCITE EXHALITE well banded, fine grained siliceous mtx, often stained dark green (chl.). ~20% mt, medium gr diss. tht as well as 1-5 mm regular bands. wht-cream blebby-bndd cc tht (~5%). Occ. lit qtz vns, shp l ct.							
363												
364	RHAR											
365				363.7-368.5 RHAR	MIXED GREY APHANITIC SILICA + BLACK CARBONACEOUS ARGILLITE. - ~70% grey aph silica, indistinct, diffuse 2-5 mm bands, less commonly lit. frags. - ob 0.5-1 mm carbonaceous partings - minor calcite, banded-msv up to 4 cm - minor sericite on foln. sharp l. ct.							
366												
367			80°	367.8 - 20cm of lt brown - red brown sph bands.								
368				sph bands (368.1)								
369	EXMT		80°	368.5-373.0 EXMT	GREY/GREEN CHLORITIC BANDED MAGNETITE - SILICA - CALCITE EXHALITE. sharp contact (upper) with 25 cm of bx below. real mixed exhalative unit w/ an irr. mottled texture.							
370				minor fault bx at ct.								
371												

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PAGE 32 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		348.8	350.0	1.2	203470	
		350.0	352.0	2.0	203471	
- ~1% crudely banded to diss py. Trace sph occurs as stringers (351.1, 352.2)						
		352.0	353.5	1.5	203472	
		353.5	355.4	1.9	203473	
- ~5% pyrite, common diss within siliceous bands/lenses and as diss. bands. 357.0-357.3 - looks like very small Exp with frequent 1-2 mm wavy py bands.		355.4	357.0	1.6	203474	
		357.0	357.3	0.3	203475	
- 1-2% py, frequent sub mm bands para. to foln. Minor disseminated py.		357.3	359.1	1.8	203476	
		359.1	361.8	2.7	203477	
		361.8	363.7	1.9	203478	
- 2<3%, coarse disseminated py tht.		363.7	364.9	1.2	203479	
- 1-2% stringer py, often x-cutting. minor clots on fractures.		364.9	366.7	1.8	203480	
~2% sphalerite - occurs as fine grained foln parallel bands 1mm-1cm. Concentrated 366.8-367.0 m Also, minor sph from 368.0-368.5 m.		366.7	367.2	0.5	203481	
- 4-5% pyrite, fine grained 1-2 mm bands + disseminations tht traces of sph, e.g. sub-mm stringers.		367.2	368.5	1.3	203482	
		368.5	370.0	1.5	203483	

PAGE 33 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
372	EXMT			EXMT (cont.) - gen. medium-wavy grainy looking calcite bnds from 2mm-15mm, lesser creamy ill patches (~30% overall). Mtx is fine gr siliceous mtl, locally chloritic, sometimes aphanitic mtx blebby.							
373			sharp contacts!	~20% magnetite, mainly periodic zones of medium sized disseminated crystals, less commonly wavy bands 0.5-5mm. Min sub-mm ser. on fqtn							
374	RHFS		76°								
375				373.0-373.9 GREY MASSIVE APHANITIC RHYOLITE - well fractured							
376				RHFS Frequent (~20%) pale grn. sericitic partings (~1mm)							
377				373.9-382.2 BLACK CARBONACEOUS ARGILLITE - mainly argillite but silica occurs between sub-mm argillaceous partings - exactly like 363.7-368.5 above - for first 1.8 m. then rest of unit is							
378	ARCB		Fault breccia	ARCB laminated arg with several % siliceous fragments							
379			378.8 - 15cm of graphitic gouge 379.9-381.3 Fault breccia	ab. zones of brecciation and gouge. 1-2% calcite							
380											
381				382.2-383.2 GREY-GREENISH FINE GRAINED RHYOLITE TUFF							
382			sharp contacts	RHTT sharp upper contact, very fine grained fairly soft unit w/ ab sub mm sericitic bands and crowded with ~20% drg. 1x1mm felsic tephra.							
383	RHTT		80°	Very calcareous (tiny grains in mtx) CO_2 altered?							
384				383.2-389.2 MIXED GREY APHANITIC SILICEOUS ROCK +							
385				RHAR BLACK CARBONACEOUS ARGILLITE similar to RHAR above mainly siliceous (~65%) - aph dark grey 1-5 mm bands.							
386				fragment shaped domains up to 2cm wide. Intercalated with black finely laminated (sub-mm) carbonaceous arg.							
387	RHAR										
388											
389				389.2-391.8 GREY MASSIVE APHANITIC RHYOLITE.							
390			pebbly core	RHFS same as previous RHFS units sericitic partings present but infrequent (2-3%) - broken core at shp l.cf.							
391	RHFS										
392			40°	391.8-394.8 MIXED GREY-WHITE APHANITIC SILICA + BLACK							
393	RHAR			RHAR CARBONACEOUS ARGILLITE. ab broken core tht. this unit - same as 363.7-368.5 abv. to 394.0 (~70% silica)							
394											

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PAGE 34 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		370.0	371.5	1.5	203484	
		371.5	373.0	1.5	203485	
		373.0	373.9	0.9	203486	
		373.9	375.6	1.7	203487	
- Tr diss py on Foln.		375.6	377.6	2.0	203488	
- 1-2% diss - less commonly banded f.g. py		377.6	379.7	2.1	203489	
		379.7	381.3	1.6	203490	
- Trace diss py		381.3	382.2	0.9	203491	
		382.2	383.2	1.0	203492	
- 1-2% v.f.g. banded pyrite. (1-2mm)		383.2	385.2	2.0	203493	
		385.2	387.2	2.0	203494	
		387.2	389.2	2.0	203495	
- Tr-1% fine diss. pyrite.		389.2	391.8	2.6	203496	
		391.8	394.0	2.2	203497	
- 1-2% py, diss f.g to rare bands. Eg. drss py int fault gouge zone						

PAGE 35 OF | PROJECT: | HOLE NO. 97-98

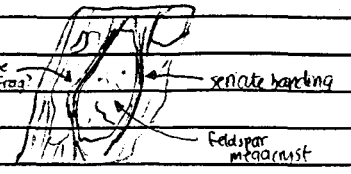
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
	RHAR			RHAR (cont.) 394.0 - 395.7 - fault gouge zone							
395				WOLVERINE HORIZON?							
396											
				394.8-404.7 RHLT							
397				GREY FINE GRAINED RHYOLITE LAPILLI TUFF							
			70°	- dirty grey unit - first "footwall looking" rock. soft, not competent							
398				- well foliated silvery-grey mica (sericite) well developed on foliation.							
399				- crowded with 40-50% flattened (avg 1x10 mm) felsic fragments (lapilli).							
400				- green-grey clay-like gouge up to 395.7							
				- appears unaltered.							
401				- frequent zones of clay like fault gouge and broken core.							
402				- fairly sharp lithological change at 404.7.							
403											
				403.8-405.5 - fault gouge, core mainly intact							
404			60°								
405				404.7-4106 ARTF							
				GREY DIRTY TUFFACEOUS ARGILLITE							
406				- similar well foliated deformed appearance as abv unit, but dominated by dark grey-black C-rich sediments. ~10% small very flattened light grey felsic fragments, normally look more like bands, typically 1-2 mm. Most bands/ fragments are moderately - strongly calcareous.							
407											
408											
409											
410											
				410.6-431.9 RPTF							
411				GREY SERICITIC QUARTZ EYE RHYOLITE TUFF							
				- very siliceous, more competent unit with distinct yellow green sericite (0.5-1mm bands) on foln tht.							
412											
413			60°	- 1-3 mm, round blue-grey quartz crystals are abundant tht. ~5%							
414				kink bands							
				sph bands, occ w/ py							
415				- large sub-rounded to sub-anavlar white feldspar crystals become common after ~ 417.5 m. Typically ~ 5x8 mm up to 1x2 cm. (megacrystic)							
416				- siliceous + sericitic matx							
417											

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PAGE 36 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		394.0	394.8	0.8	203498	
		394.8	395.8	1.0	203499	
– Tr - 1% diss. py.		395.8	398.9	3.1	203500	
		398.9	401.4	2.5	203501	
		401.4	404.7	3.3	203502	
– Tr. diss pyrite		404.7	406.2	1.5	203503	
		406.2	407.9	1.7	203504	
		407.9	410.6	2.7	203505	
		410.6	412.0	1.4	203506	
– GOOD MINERALIZATION - very fine gr dusty sulphide bands parallel to foln. Mainly pyrite (~5% overall) but also ~2% fine grained red-brown sph bands often finely diss - crudely banded with pyrite.		412.0	413.8	1.8	203507	
		413.8	415.3	1.5	203508	
		415.3	417.5	2.2	203509	

PAGE 37 OF | PROJECT: | HOLE NO. 97-98

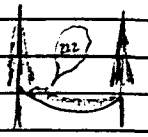
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO3)	E	FRACTURE INTENSITY	% VEIN QTZ.
418	RPTF			RPTF (cont)							
419				Foln - (sericitic bands) wrap around large feldspars - porphyroblasts?							
420											
421			76°	3 cm							
422				matrix sericitic but not dirty looking but rare siliceous volcanic fragments are noted. Probably a resedimented crystal rich volcanic but may be a well foliated intrusive porphyritic rock sharp lower contact (faulted?)							
423											
424											
425											
426											
427											
428											
429											
430											
431											
432			50°								
433	ARMS			431.9-443.8 ARMS DARK GREY - BLACK MASSIVE - TUFFACEOUS ARGILLITE.							
434				anitty looking banded argillaceous sediment (probably footwall argillite) not black and aphanitic but dark grey with fine laminae clearly visible. several 1- very fine (sub-mm) lighter grey bands/fragments along foln. prob. of volcanic origin. weakly calcareous locally.							
435			80°								
436											
437				- foln almost parallel to bedding for 20 cm.							
438				- folds + kink bands. Numerous gouge zones and folding of fine laminae.							
439											
440											

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PAGE 38 OF	PROJECT:	HOLE NO. 97-98

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		417.5	419.5	2.0	203510					
		419.5	421.5	2.0	203511					
		421.5	423.5	2.0	203512					
		423.5	425.5	2.0	203513					
		425.5	427.5	2.0	203514					
		427.5	429.5	2.0	203515					
		429.5	431.9	2.4	203516					
		431.9	434.0	2.1	203517					
- Trace diss py.										
		434.0	436.0	2.0	203518					
		436.0	438.0	2.0	203519					
		438.0	440.2	2.2	203520					

PAGE 39 OF | PROJECT: | HOLE NO. 97-98

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
441	ARNS										
442											
443				443.8 - EOH. 							
444											
445											

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DRILL LOG

PROJECT: WOLVERINE	GROUND ELEV.: 1405 m
HOLE NO.: WV97-99	BEARING: 213
LOCATION: 16450E, 16842N	DIP: -85
	TOTAL LENGTH: 148.4
LOGGED BY: G. BRADSHAW	HORIZONTAL PROJECT
DATE: JULY 2	VERTICAL PROJECT
CONTRACTOR: F. BOISVENU	
CORE SIZE: NQ	
DATE STARTED: JUNE 30	
DATE COMPLETED: JULY 1	
DIP TESTS: 75.3 m - -83° azimuth unreadable 148.4 m - -80° 237° (true), 204° (gria)	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- Intersected 8.1 m (7.5 m true thickness) of fairly high grade massive sulphide (approx: 4.5% Cu, 3% Pb, 16% Zn). From 99.8 - 107.9 m.
- Ab cpy within the massive sulphide but none concentrated at the base or in the footwall rhyolite crystal / lapilli tuff.
- Graphitic gouge in hanging wall 87.8-99.8.

LEGEND

PAGE 1 OF	PROJECT:	HOLE NO. 97-99

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
0				0 - 3.1 CASING DHCS							
4											
5				3.1 - 13.6 GREY MASSIVE APHANITIC RHYOLITE RHFS - aphanitic rhyolite with occ tiny microlites							
6				- frequent 1-2mm pale green sericite partings.							
7				- broken up, oxidation on fractures. - fairly well defined lower contact.							
8											
9											
10											
11			65°								
12				13.6 - 21.6 GREY-GREEN BANDED - FRAGMENTAL RHYOLITE RHFR - distinctive green colour - only occ.							
13				tinges - weak chl alteration.							
14				- sericite and chl partings are frequent (1-2mm)							
15				- local tiny (up to 1mm) disseminated mt crystals (<1% overall)							
16				- generally highly siliceous aph. rhy bands - cm scale							
17			65°	- rarely show fragment terminations - reminiscent of upper fragmental as in the top of many eastern regional holes and PUCK.							
18											
19				- minor light brown CO_2 altn along partings toward l. ct. (ankerite)							
20				21.6 - 29.4 INTERBEDDED BLACK ARGILLITE + APH. RHYOLITE RHAR							
21				clusters of finely laminated blk arg interbedded w/ grey - dark grey siliceous aphanitic rhyolite							
22			75°	- Rhy similar to RHFS above. - interbedding generally on a cm scale.							
23											
24			65°								
25				25.3 - 25.9 - barren wht fractured qtz vn.							
26											

RHFS

RHFR

RHAR

PAGE 2 OF	PROJECT:	HOLE NO. 97-99

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
- Negligible mineralization										
- Tr - 1% diss pyrite										
- 1-2% tiny folin para pyl stringers.										

PAGE 3 OF | PROJECT: | HOLE NO. 97-99

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	CD C	CO_3 D	E	FRACTURE INTENSITY	% VEIN QTZ.
27	RHAR			RHAR - fairly approximate l.ct. decrease in abundance of rhy beds.							
28			65°								
29											
30		25°		29.4 - 38.0 ARS1 BLACK-GREY MASSIVE SILICEOUS ARGILLITE dark grey - blk finely laminated (overall msv. appearance) argillite with local aph. siliceous interbeds (as above but only ~ 3-5% of unit) - broken core tht. unit.							
31											
32											
33											
34											
35	ARS1		75°								
36											
37											
38		25°		38.0-52.0 RHFS GREY MASSIVE APHANITIC RHYOLITE - typical unit in deposit holes, very broken and gravel-like tht. - mainly grey aph. siliceous pebbles - pale green sericite and lesser dark green chl on foln. (5-7%) - sericite locally very ab, silvery green partings up to ~ 5 mm.							
39		V									
40		V									
41		V									
42		V									
43		V	BC								
44	RHFS	V									
45		V									
46		V									
47		V									
48		V									
49		V									

PAGE 4 OF	PROJECT:	HOLE NO. 97-99

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
- ~1% pyrite, ab. clots on foln surfaces.										
- Trace pyrite, diss on fractures + foln.										

PAGE 5 OF | PROJECT: | HOLE NO. 97-99

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
50	RHFS				RHFS (cont.)							
					sharp l. ct. at 75°							
51												
52			75°	520-563	GREY-BLACK SILICEOUS ARGILLITE.							
	ARSJ			ARSJ	faint 1mm-1cm siliceous bands tht							
53					unit (~10%) - mainly finely							
			75°		laminated blk arg similar to 29.4-							
54					30.0 above. sharp contact with							
55					EXMT below.							
56												
57				56.3-59.8	GREY/BLACK/GREEN WELL BANDED CHLORITIC							
	EXMT			EXMT	MAGNETITE IRON FORMATION							
58					~10% splotchy to mm-scale banded							
				(minor lt. brn oxidized bands ass w/ mt.	green chl with slightly less light am ep.							
59			60°		- aph grey siliceous rock (exhalative?)							
					with 1-5 mm wavy black mt stgrs							
60					and peppery disseminations tht unit							
	RHFS				- 50% magnetite overall							
61					- 3-5% im. calcite veinlets occ qtz							
					veins (up to 6cm). shp. l. ct.							
62												
	EXCA			59.8-62.1	GREY BANDED APHANITIC RHYOLITE 10 cm							
63				RHFS	same as RHFS above - qtz vein at l.ct							
64				62.1-643	GREY IRREGULARLY BANDED CALCITE							
				EXCA	EXHALITE. 60% grey grainy							
65					wavy-irregularly banded (1-2mm) cc.							
					30% white-cream coloured splotchy							
66			65°		to cross cutting calcite. OCC irregular							
					qtz veins. sharp upper and lower cts.							
67	ARTF											
				64.3-69.2	GREY-BLACK TUFFACEOUS ARGILLITE							
68				ARTF	mainly carbonaceous arg. but regular							
					1-2 mm siliceous bands tht unit (5-10%)							
69					- minor green sericitic interbeds							
70				69.2-78.3	GREY-GREEN WELL FRACTURED BANDED							
	RHFS			RHFS	APHANITIC FELSITE (RHYOLITE)							
71					banded tht - 5-10 mm - formed by							
					sub mm green sericitic partings (3%)							
72												

PAGE 6 OF	PROJECT:	HOLE NO. 97-99

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
- 1-2 % py - fine sub-mm foln para. stringers + disseminated.						
		53.6	56.3	2.7	203257	
3-5 % pyrite, medium grained clots to crude bands (up to 1-2cm) tht. unit.		56.3	57.5	1.2	203258	
		57.5	58.9	1.4	203259	
		58.9	59.8	0.9	203260	
		59.8	62.1	2.3	203261	
Trace py		62.1	63.2	1.1	203262	
Minor py, 2-3 % fine gr 1-2mm bands.		63.2	64.3	1.1	203263	
		64.3	66.1	1.8	203317	
		66.1	69.2	3.1	203318	
1-2 % fin grained dusty py bands to 9mm. Also diss + clotted on fractures.		69.2	70.6	1.4	203319	
		70.6	72.2	1.6	203320	

PAGE 7 OF | PROJECT: | HOLE NO. 97-99

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
	RHFS				RHFS (cont.) - very crackly texture tht unit							
73					71.7 - 72.2 - slightly graphitic gouge zone / fault breccia							
74												
75					ab bkn core tht - sharp change in lithologies at l. ct but broken up							
76												
77				78.3 - 87.8 ARTF	BLACK SILICEOUS - TUFFACEOUS ARGILLITE - broken core and gouge zones tht. unit. - graphitic partings frequent. - intact portions show a finely laminated carbonaceous argillite with sub-mm wispy, faint siliceals bands tht (~10%)							
78												
79	ARTF			↖ minor gouge								
80					- cross cutting and foln parallel calcite stringers + veins (<1mm - 1cm) common tht.							
81												
82				← gouge zone - poor recovery	- lower ct based on beginning of large graphitic gouge zone.							
83												
84				← siliceous pebbles (20 cm)								
85				← graphitic gouge (50 cm)								
86												
87												
88	ARGR			87.8 - 99.8 ARGR	BLACK GRAPHITIC GOUGE ZONE - entire unit is graphitic gouge and minor broken up graphitic argillite. Poor recovery. - trace amounts of ground up more felsic material. - very sharp contact with very competent massive sulphide.							
89												
90												
91												
92												
93												
94												
95												

PAGE 8 OF	PROJECT:	HOLE NO. 97-99

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		72.2	73.9	1.7	203321					
		73.9	78.3	4.4	203322					
- 2-3% py. Fine wispy foln para stgrs common tht. Disseminated bands ass/w/ calcite, and fine disseminations tht.		78.3	86.1	7.8	203323					
		86.1	87.8	1.7	203324					
2-3½ fine-med grained diss py distributed tht unit.		87.8	90.5	2.7	203325					
		90.5	93.6	3.1	203326					
		93.6	96.6	3.0	203327					

PAGE 9 OF | PROJECT: | HOLE NO. 97-99

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	C EP	D CO_3	E	FRACTURE INTENSITY	% VEIN QTZ.
96	ARGR			99.8 - 107.9 BANDED POLYMETALLIC MASSIVE SULPHIDES							
				SSMS - High grade 8.1 m intersection (7.5 m true thickness).							
97				CORE ANGLES: 108.1 - 70°; 108.5 - 63°; 108.7 - 65°; 110.4 - 75°; Avg = 68°							
98				- Not well zoned - ab cpy + sph throughout entire interval - see mineralization description ⇒							
				- well banded tht most of unit - regular alternating py, sph and cpy from 1-5 mm (avg.) - up to 2 cm							
99				TRUE THICKNESS: sin68 × 8.1 m = 7.5 m							
				- bands of fine grained grey galena rarely visible.							
100				- calcite gangue locally abundant and present tht entire unit as tiny interstitial disseminations. Abundant zones have larger 2-3 mm disseminations and msv patches - most of zone effervesses boisly							
101											
102											
				- lower contact is sharp and depositional but sulphides become less massive toward lower contact w/ minor intercalated rhyolitic material.							
103											
104	SSMS			- Overall modal estimations: 40% py, 35% sph, 15% cpy, 10% cc							
105				- GRADE ESTIMATION - 4.5% Cu, 16% Zn 3% Pb.							
106											
107				sharp but irr. Lct at 70°							
108				70 70							
				107.9 - 148.4 RPTF GREEN CHLORITE / SERICITE ALTERED RHYOLITIC QUARTZ-FELDSPAR CRYSTAL BEARING LAPILLI TUFF.							
109				- intense pervasive chl alteration tht unit w/ lesser sericite alteration.							
110											
111				- green fine grained chloritic to siliceous 'matrix'.							
112				70							
				- locally abundant pale green sericitic banding (wispy, 1-2 mm)							
113				- dark green chl partings ab tht.							
114	RPTF			- ab 2-5 mm ovoid rounded felsic volcanic fragments. Flattened appearance. Ab tht unit (10-20%) Some very large 5 mm - 1 cm Feldspar augen??							
115											
116				- Minor (2-3%) smaller sub-angular → sub-rounded rarely rectangular (~1 mm) white feldspar crystals							
117											
118											

PAGE 10 OF	PROJECT:	HOLE NO. 97-99

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
DETAILED MINERALIZATION DESCRIPTION:		96.6	99.8	3.2	203328	
99.8 - 101.24 ⇒ 70% py, 20% sph, 7-4% cpy mainly fine crystalline py w/ both faint indistinct rbr sph wisps and well defined lt bm - dk bm 1-4 mm sph bnds occ dissem inations of cpy. All sulphides v. f.g.		99.80	101.24	1.44	203329	
101.24 - 102.44 ⇒ "Blebby calcite zone" ~ 75% v. fine py mtx, 5% v. f.g. diss - patchy interstitial sp. ~ 15% large (up to 4cm dia.) irr. calcite blebs/patches w/ ~ 5% coarse ass'l cpy clots w/ tr. coarse sph clots		101.24	102.44	1.20	203330	
Also tr. dark green irr chl clots (1-5mm dia.)		102.44	103.68	1.24	203331	
102.44 - 103.68 ⇒ "Pyrite rich zone" - mainly fine msv crystalline py but still ~ 15% irr fine diss - random fine sph stars interstitial to py.						
103.68 - 106.06 ⇒ HOT ZONE ~ 50% sph, 30% cpy, 15% py, 5% gangue (cc) rhythmic 1-5mm alternating cpy + sph bands		103.68	104.44	0.76	203332	
Cpy sometimes patchy - rare coarser clots.		104.44	105.49	1.05	203333	
Rare 1 mm gn bands noted. All sulphides very fg. Minor very fine interstitial cc. + rare larger patches (1-2cm)		105.49	106.06	0.57	203334	
106.06 - 107.11 ⇒ "Polymetallic - poorly banded zone" 60% f.g py mtx 20% crudely bndd - diss sph ~ 10% stringer-like cpy usu in 5cm intervals. ~10% cc gangue		106.06	107.11	1.05	203335	
107.11 - 107.90 ⇒ - 65% f.g pyrite w/ ~ 10% 3-5 mm sph bands. Minor intervals - up to ~ 10cm. of rhyolite. (35% py + cc gangue)		107.11	107.90	0.79	203336	
		107.9	108.9	1.0	203337	
- 2-3% sulphides over interval, usu fine - med. banded to stringer py para. to fdn. Rare oss-cutting stringers. (1-10mm)		108.9	110.2	1.3	203338	
		110.2	111.4	1.2	203339	
107.9 - 108.9 - pyrite bands (1-5mm) common with lesser 1-2 mm sph stringers. (3-4% sph over 1m)		111.4	113.0	1.6	203340	
		113.0	114.5	1.5	203341	
		114.5	116.0	1.5	203342	
		116.0	117.5	1.5	203343	
		117.5	119.0	1.5	203344	

PAGE 10 OF | PROJECT: | HOLE NO. 97-99

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
119	RPTF		65°	RPTF (cont.) - also 1-2% grey - slightly bluish 0.5-1mm pitted quartz crystals. -- unit probably an altered felsic volcaniclastic - but large augen-like clasts suggest a possible porphyritic affinity. (Or an actual sheared altered feldspar porphyry?)							
120											
121											
122											
123				121.9 - 123.8 - argillaceous gouge zone graphite + sericite + chl							
124											
125											
126											
127											
128											
129			80°								
130											
131				131.1 - 132.9 - massive blk finely laminated argillite interbed w/ gradual contacts							
132											
133				Argillaceous intervals - up to ~30cm common towards end of hole.							
134											
135											
136											
137											
138											
139			70°								
140											
141											

PAGE 11 OF	PROJECT:	HOLE NO. 97-99

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		119.0	120.5	1.5	203345					
		120.5	121.9	1.4	203346					
		121.9	123.8	1.9	203347					
		123.8	125.5	1.7	203348					
		125.5	127.0	1.5	203349					
		127.0	129.0	2.0	203350					
		129.0	131.0	2.0	203351					
		131.0	132.9	1.9	203352					
		132.9	135.1	2.2	203353					
		135.1	137.1	2.0	203354					
		137.1	139.1	2.0	203355					
		139.1	141.1	2.0	203356					
		141.1	143.1	2.0	203357					
		143.1	145.2	2.1	203358					
		145.2	147.7	2.5	203359					

PAGE 12 OF | PROJECT: | HOLE NO. 17-99

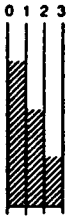
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
142	RPTF			RPTF (cont)							
143											
144											
145											
146											
147				(223) PITB							
148				148.4 - EOH							
149											
150											

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DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: 1375
HOLE NO.: WV 97-100	BEARING: GN
LOCATION: 16903.3E 16700.8N	DIP: -66
	TOTAL LENGTH:
LOGGED BY: R. Chavarría.	HORIZONTAL PROJECT:
DATE: July 3°	VERTICAL PROJECT:
CONTRACTOR:	ALTERATION SCALE
CORE SIZE: NQ	
DATE STARTED: July 2°	TOTAL SULPHIDE SCALE
DATE COMPLETED:	
DIP TESTS:	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- Derrumbe (caving) a los 44 mts, se para la perforacion.
- No hay intersección de sulfuros Masivos.

LEGEND

DHOB

DHFS.

PAGE 1 OF | PROJECT: Wolverine | HOLE NO. WV 87-10

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
1		CASIVO									
2											
3				3.05 – 29.3							
4				DH 08 Zona de cobertura. Presenta fragmentos de diferentes tipos de roca. Andesita – Exmt – Tobas							
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											

PAGE 2 OF	PROJECT: Wolverine	HOLE NO. 92-100

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											

PAGE 3 OF | PROJECT: Wolfe Tank | HOLE NO. 95-100

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
24				DH OB							
25											
26											
27											
28											
29											
30											
31				? Mud Flow — Flujo de lod. con fragmentos subredondeados de Rhyolita							
32											
33											
34				Massive Rhyolite							
35			20° 32.62- RHFS	Oris Verdosa porfiritica bandeada con microlitos de Feldespato.							
36											
37	70			Brecha de falla 70° eje mayor, fragmentos angulares y subangulares de RHFS y matriz arcillosa.							
38											
39			40°								
40				Brecha de falla 40° eje mínimo, similar a la anterior							
41											
42											
43											
44											
45				EOH: 44.73 Debido al mayor volumen de roca en el fondo.							
46											

Derrumbe (Caving)

Westmin Resources

DRILL LOG

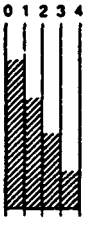
PROJECT: Wolverine	GROUND ELEV.
HOLE NO.: WV-97-100 A	BEARING: GN
LOCATION: 169033 / 16700.8	DIP: -66°
	TOTAL LENGTH: 242.93
LOGGED BY: R. Chavarría	HORIZONTAL PROJECT
DATE: 5 Julio 97	VERTICAL PROJECT
CONTRACTOR: Boisvence Diamond Drilling	
CORE SIZE: NQ	
DATE STARTED: 4 de Julio	
DATE COMPLETED	
DIP TESTS	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- Some pleu that WV-97-100.
- 33 a 97 metros: Intercalación de rocas riolíticas con rocas argilíticas
- 97 - 144: Eventos de rocas exclativos (EXMt, EXCP y EXSP) EXMt de 96.72 - 103.56
- 144 - 217.93: Intercalación de riolitas masivas, Argilitas y principalmente tobas riolíticas cristalinas y fragmentales.
- 217.93 - 219.51: Intersección de sulfuros Masivos; principalmente Py 92% I SPH 2% y trazas CPy y Fo. 1%
- 219.51 — EOH: Presencia de tobas riolíticas fragmentales
- 219.51 - 220.11: Stringer SPH, CPy zone 8% 2%

LEGEND

- DHUB
- RHM
- AR
- ARGR
- EXMt
- EXCP
- EXSP
- SSMS
- RHT
- RHX
- Qz Vein
- Fault Breccia

PAGE 1 OF | PROJECT: Wolverine | HOLE NO. WV-97-100A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.	
1				0 - 32.61 DHOB								
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												
23												

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PAGE 2 OF	PROJECT: Wolverine	HOLE NO. WV-97-105A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

PAGE 3 OF | PROJECT: Wolverine | HOLE NO. 97-102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				DHOE							
24											
25											
26											
27											
28											
29											
30											
31											
32				↓							
33				32.61 - 42.45 Massive Phyllite							
				RHFS							
34				- Gris - verdosa, masiva y debilmente bandeada. Fuertemente afectada por fallas en el sentido de la foliación							
35				- Presencia de Py en planos (trazas)							
36											
37											
38											
39											
40											
41											
42											
43											
44				→ Falla con alto contenido de Arcilla							
45											
46											

PAGE 4 OF	PROJECT:	HOLE NO. [illegible]

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
26										
25										
24										
23										
22										
21										
20										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41		211.76	47.85		203360					
42										
43										
44										
45										
46										

PAGE 5 OF | PROJECT: Wolverine | HOLE NO. 97-100A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				Contacto de caliza (Mala contacto)							
47											
48				47.55-57.0 Siliceous Argillite							
49	30°			ARSI - Negra afanítica a silicea con cierto contenido de arcillas en zonas de debilidad arcillas a falla							
50				- Muy difícil presencia de fracturas y fracturas							
51											
52											
53				Veta Py Veta 30° con con hilillos de Py entre fracturas							
54											
55											
56											
57				57.0-57.90 Graphitic Argillite							
58				ARGR - Negra con vetas de cuarzo asociado - Moderado a fuerte contenido de grafito							
59				57.9-58.57 ARSI Siliceous Argillite. Py en fracturas y en los planos de la veta disseminado 1% Py							
60			46°								
61				58.57-61.20 ARGR. Similar a la de arriba con alto contenido de vetas de q + Py y trazas de Sericita							
62											
63				61.20-64.30 ARSI - Siliceous Argillite Negra, bien bandeada con una componente tobacea caracterizado por bandas milimétricas y fragmentos alargados de toba							
64											
65				- Moderado a Fuerte contenido de grafito - Py en hilillos y fracturas, producto de transporte							
66	30										
67				64.3-84.43 RHFS. Massive Rhyolite Verde grisacea, masiva, pobremente bandeada							
68											
69											
70											

PAGE 6 OF	PROJECT: Wolverine	HOLE NO. 97-1003

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
47										
		47.85	51.17		203361					
48										
49										
50										
51		51.17	51.67		203362					
52		51.67	52.78		203363					
53		52.78	57.0		203364					
54										
55										
56										
57		57.0	59.9		203365					
57.9 – 58.57 1% P_y &										
58 strong mod.										
59		59.9	60.9		203366					
60		60.9	63.9		203367					
61										
61.2 – 64.41 prismatic & P_y in										
62 millimetric veinlets = fracture										
1% P_y										
63		63.9	64.49		203368					
64										
65										
66										
67										
68										
69										

PAGE 7 OF | PROJECT: Wolverine | HOLE NO. 97-100E

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D	E	FRACTURE INTENSITY	% VEIN QTZ.
70				continua la Pirita diseminada							
				Zona de falla reconocida - probable							
				zona de falla							
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											
81											
82											
83				Qz vein pl. chlorite							
84											
85				BH.43-95.64 Silicious Argillite							
		ARSI		similar a la de arriba, con menor							
86				contenido de Py < 1% y Clorita en							
				trazas							
87				Mala recuperación							
88											
89											
90				50°~							
91											
92											

PAGE 8 OF	PROJECT: Wolverine	HOLE NO. 97-100E

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		69.49	74.23		203369					
70										
71										
72										
73										
74										
		74.23	84.43		203370					
75										
76										
77										
78										
79										
80										
81										
82										
83										
84										
		84.43	96.72		203371					
85										
86										
87										
88										
89										
90										
91										
92										

PAGE 9 OF | PROJECT: | HOLE NO. [illegible]

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				ARST — Continúa de arriba.							
93											
94											
95											
96											
97				Massive Rhyolite							
				- Verde masiva, con bandas de sericita + clorita Moderada.							
98				93.67 – 96.72 — 50° RHFS — Perdida de consistencia por efecto de la alteración							
99											
100											
				96.72 – 103.56 EXMt. — Magnetite TRON Formation							
101				Gris - verde oscuro, con bandas negras de Mt. Matriz silícea representada por bandas centimétricas intercaladas con bandas milimétricas de clorita + Py + Mt y bandas de Magnetita centimétrica. Además Mt diseminada							
102											
103											
104				→ 9 C Vein.							
105				103.56 – 105.76 RHFS. 40° — Massive Rhyolite							
				Massive, gris verdosa con microlitos de feldespato, ocasional bandeado							
106											
107											
108				105.76 – 113.4 EXSP. — Silica Exhalite.							
				- Gris negruzca fuertemente bandeada, con micro bandas de Arcilla y/o grafito y Matriz principalmente silícea.							
109				- Bandas finas milimétricas de Py de grano medio con recristalización amígdalina.							
110				- Errática presencia de bandas finas de sph fina trazas calcopirita.							
111				- Clorita en fracturas.							
112											
113				113.4 – 117.25 EXCP. — Calcite Exhalite							
114				gris blanquecina verdosa con presencia de pirobis y/o calcita cuarzo Matriz cálcárea.							
115				45°							

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PAGE 10 OF	PROJECT: Wolverine	HOLE NO. W97-1002

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
93						
94						
95						
96						
97 96.72 - 103.56.		96.72	98.8		203372	
30% Mt en bandas y diseminada						
98 cristales de grano medio						
1% Py grano medio en bitillos y		98.8	101.0		203373	
99 fracturas.						
100						
101		101	102.1		203374	
102						
		102.1	103.56		203375	
103						
		103.56	105.76		203376	
104						
105						
105.76 - 113.4.		105.76	109.3		203377	
106 2% Py de Py fina en bandas						
107						
108						
109		109.3	113.9		203378	
110						
111						
112						
113		113.4	115.52		203379	
114						
115						

PAGE 11 OF | PROJECT: Wolverine | HOLE NO. WV-97-1013

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
116					Continúa de Arriba.							
					- Dique máfico alterado en contacto inferior de Pórfido							
117					grano fino a medio en bandas de 1-5mm							
	10°				con trazas de calcedonia en finas bandas							
118												
119												
120				117.4-137.65	Silice Exhalita							
				EXSP.	- gris purpura y verdosa, textura fina							
121					"chert", fuertemente silicea,							
					bandas finas, presencia de Calcita 5%							
122					en finas de vetas y cúmulos. También							
					presenta cristales rómbicos de Dolomita de							
123			→	SPH	tamaño milimétrico							
					- Esporádicas bandas de sPH (trazas)							
124					- Débil alteración clorita							
					- Trazas de Magnetita							
125					- < 1 % Py							
126												
127												
128												
					128.2: Fuerte componente silicificado con in-							
129					tensidad de grafito, se presenta en bandas							
					milimétricas que le dan una coloración							
130					negruzca a la roca							
				30°	grafito 20% en la roca							
131					- A partir de esta profundidad la pirita							
					aumenta a 1% Py							
132												
133												
134												
135												
136												
137												
	50°			137.65-144.45								
138				EXCP								

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PAGE 12 OF	PROJECT: Wolverine	HOLE NO. 97-139A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		115.52	117.4		203380					
116										
113.4 — 117.4										
117 10% Py & grano fine a me										
dis. Trace & SPH		117.4	120		203381					
118										
119										
120		120	122.5		203382					
121										
122		122.5	124.5		203383					
123										
124		124.5	126.2		203384					
125										
126		126.2	128.3		203385					
127										
128 128.2 — 137.65		128.3	130.2		203386					
1% Py grano medio in bands										
129										
130		130.2	132.0		203387					
131										
132		132.0	134.0		203388					
133										
134		134.0	136.8		203389					
135										
136										
		136.80	137.65		203390					
137										
		137.65	139.65		203391					
138										

PAGE 13 OF | PROJECT: Wolverine | HOLE NO. 97-1009

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				EXCP - gris verduzca con bandas milimétricas a centimétricas de Arcillita grafitosa.							
139				- Pervasivo bandeamiento de Py de grano medio con trazas de CPy.							
140				- Erráticas bandas finas de SPH (Trazas)							
141				- Débil clorita en fracturas							
				- 70% CO_2							
142				- 2% SiO_2							
				- 20% Sulfuros							
143				- 5% grafito							
144											
				144.4: Aumento % Mt. MH, disminuye							
145	50°										
146				144.95 - 147 EXPh.t Arcillita							
				AR GR - Negra blanquecina, fuertemente fracturada							
147				y cizallada por efecto de falla							
				- Fragmentos de vetas de qz con clorita							
148				147. - 149.50							
				F → Fault Breccia							
149				Gouge con fragmentos competentes							
150				149.5 - 152.75							
				ARTF Tuffaceous Arcillite							
				Negra grisacea con matriz fragmentos y							
151				fragmentos tobáceos alargados							
				60° - Py en fracturas trazas							
152											
	50°										
153				152.75 - 154.65 Lapilli tuff							
				RHAT Gris-verdosa con 60% de fragmentos de							
154				Lapilli y bandas milimétricas de Arcillita (1-2mm ø)							
155				Moderada a fuerte sericita							
				--- ---							
156				154.65 - 158.91							
				RHLT Lapilli tuff							
157				Similar a la de arriba - pero sin ban-							
				das de Arcillita							
158				Moderada a fuerte sericita							
				158.91 - 159.61							
159				ARTF Similar a la de arriba - Presencia de							
				Py en fracturas y en los planos 1% Py							
160											
				159.61-160.92 Verdosa de grano fino (Rhyolite Tuff)							
161				RHTT Vetas de qz calcita presente. 1% Py							

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PAGE 14 OF	PROJECT: Wolverine	HOLE NO. 97-100A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
139						
137.65 – 144.95		139.65	141.65		203390	
140 15-20% Py grano medio en bandas y fracturas						
141						
		141.65	143.4		203393	
142						
143						
		143.4	144.95		203394	
144						
145		144.95	147.03		203395	
146						
147		147.03	148.43		203396	
148						
		148.43	150.9		203397	
149						
150						
		150.9	153.0		203398	
151						
152						
153		153.0	155.0		203399	
154						
155		155	157.2		203400	
156						
157		157.2	159.44		203401	
158						
159 156.61 – 160.92 · 1% Py & grano fino a medio en bandas y fracturas		159.44	161.15		203402	
160						
161		161.15	163.67		203403	

PAGE 15 OF | PROJECT: Wolverine | HOLE NO. 97-109A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
162				160.92 - 164.13 Rhyolite Tuff RHFF - Color Verdoso con fragmentos subangulosos de toba ocasionalmente brechada muy fina, Fragmentos de 1cm ø							
163											
164											
165				164.13 - 167.65 Siliceous Argillite ARTF similar a la anterior pero con menor contenido de fragmentos							
166											
167											
168				167.65 - 169.12 Massive Rhyolite RHFS Verde afanítica, con escasos microlitos de silicoporto							
169	80			Presencia de vetas de cuarzo - calcita							
170											
171				169.12 - 175.94 Massive Fragmental Rhyolite RHFR gris blanquecina con fragmentos mm - cm ø. Débil presencia de bandas de Argillita de 1 mm ø.							
172											
173											
174											
175											
176	90										
177											
178				175.94 - 178.12 Siliceous Argillite ARTF Negra Silicea con débil carbonato y fragmentos milimétricos de toba							
179											
180											
181				178.12 - 181.96 Graphitic Argillite ARGR Negra con menos de un 5% de componentes tubulares, 95% de arcilita							
182											
183				181.96 - 184.91 ARTF similar a la anterior							
184											

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PAGE 16 OF	PROJECT: Wolverine	HOLE NO. 97-100A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
162										
163		163.67	164.2		203404					
164										
165										
166		164.2	169.0		203405					
167										
168										
169		169.0	173.9		203406					
170										
171										
172										
173		173.9	178.12		203407					
174										
175										
176										
177										
178		178.12	183.0		203408					
179										
180										
181										
182										
183		183	185		203409					
184										

PAGE 17 OF | PROJECT: | HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHI)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
185	50°										
186				184.91 – 191.15 RHTT Rhyolite Tuff Verde – grisáceo de textura muy fina con fragmentos milimétricos de toba - Débil cloritа y sericita							
187											
188											
189											
190											
191				191.15 – 194.33 RHFF Rhyolite Tuff similar a la de arriba pero con poca cantidad de ceniza							
192											
193											
194											
195	60°			194.33 – 199.2 ARTF Negro grisáceo con un 40 % de matriz arcillita y 6 % de fragmentos de toba de tamaño milimétrico a centimétrico alongados en las bandas. Trazas de Py							
196											
197											
198											
199											
200	80			199.2 – 206.34 RHTF Rhyolite cristal tuff Verde – blancuzca con cristales muy pequeños de cuarzo y feldespato < 1mm ∅ Fragmentos de toba – lapilli hasta de 1 centímetro ∅. - Débil cloritа en fracturas - Débil Sericita							
201											
202											
203											
204											
205											
206				206.34 –							
207	40										

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PAGE 18 OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
185		185	187		203410					
186										
187		187	189		203411					
188										
189		189	191		203412					
190										
191		191	193.5		203413					
192										
193		193.5	195.55		203414					
194										
195		195.55	198.0		203415					
196										
197										
198		198	199.2		203416					
199										
		199.2	200.74		203417					
200		200.74	204.3		203418					
201										
202										
203										
204		204.3	206.98		203419					
205										
206										
207		206.98	209.0		203420					

PAGE 19 OF | PROJECT: Wolverine | HOLE NO. 97-100A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				206.84 - 212.03 Qz Cristal Rhyolite Tuff							
208				RPQL - Gris - verde - blanquesca con cristales							
				de q fracturados de hasta 3mm ø							
209				Bien bandeado a los fragmentos de tuba							
				y cristales se alargan en el sentido del							
210				bandeamiento.							
				- 5 - 10% Ojos de cuarzo							
211				- 10% de fragmentos							
				- Débil a moderada Sericita							
212	35			- Trazas de Py y SPH entre bandas.							
213				212.03 - 216.55 Black Rhyolite Lapilli tuff.							
				RHAT - Negra a gris con un 15% de fragmentos							
214				de lapilli separados por bandas milimétricas							
				de Arcillita							
215				- Tr - 1% de Py de grano medio entre las							
				bandas							
216											
				216.55 - 217.93 Graphitic Argillite							
217				ARGR Negra con fragmentos de carbonatos.							
	50°			- Py ± SPH de grano fino diseminada							
218				Típica en el hanging wall							
219				PYMS.							
				217.93 - 219.51 Py and SPH Massive Sulphide							
220				SSMS. - Zona de Sulfuros Masivos con Py							
				principalmente, en asociación SPH y							
221				215.6 - 47° posible Pirrotita, trazas de CPy							
				215.85 - 45° - 72% Py de grano fino a medio							
222				216.55 - 45° - 2% SPH fina en bandas finas de							
				217.53 - 70° < 1 mm ø							
223				220.5 - 40° - 1% Pt ± CPy difíciles de distinguir.							
				220.8 - 50° - 25 a 30% de ganga compuesta por cuarzo							
224				222.7 - 50° carbonato y grafito.							
				PROM = 49.6 ≈ 50° 3 zonas de ganga representativas en el espe							
225				sor total							
				Espesor Real. 217.93 - 218.14 Qz + grafito + CO_2							
226				1.21 metros 218.90 - 219.06 Qz + grafito + CO_2 + Py - SPH							
				219.21 - 219.31 Qz + grafito + CO_2 + Py							
227				- Contacto superior con ARGR; es muy							
				regular y filoso. (Sharp contact)							
228				- Contacto Inferior con RPTF (stringers con)							
				de forma Irregular. (Irregular contact)							
229											
230				30°							

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PAGE 20 OF	PROJECT: Wolverine	HOLE NO. 97-100A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
208						
209		209	211.2		203421	
210						
211						
		211.2	213.2		203422	
212						
213						
		213.2	215.6		203423	
214						
215		215.6	216.55		203424	
216 216.55 - 217.93 : 2% Py & grano medio diseminada, 1% SPH fina y		216.55	217.93		203425	
217 trazas de CPy		217.93	218.14		203426	
		218.14	218.33		203427	
218 -217.93 - 218.14 : PyMS : 70% de		218.33	218.99		203428	
Py fina con 30% de Ganga en bda		218.99	219.31		203429	
219 dos. 2% SPH trazas. 30% Ganga.		219.31	219.51		203430	
-218.14-218.33 : SPH-PyMS : 50% SPH		219.51	220.11		203431	
220 color rojo a purpura + 40% Py fina		220.11	221.55		203432	
10% Ganga.		221.55	222.2		203433	
221 -218.33 - 218.99 : PyMS : 90% de Py de						
grano fino en cúmulos y grano medio en						
222 bandas, 5% SPH fina, 5% Ganga						
-218.99-219.06 : 90% Ganga, 6% Py, 4% SPH						
223 -219.06-219.21 : PyMS : 70% Py, 5% SPH, 25% Ganga						
224 - 219.21-219.31 : 95% ganga, 5% Py						
- 219.31 - 219.51 : 80% Py, 10% SPH, 10% ganga						
225						
226						
227		227.7	229.4		203434	
228						
229		229.4	233.55		203435	
230						

PAGE 21 OF | PROJECT: Wolverine | HOLE NO. 97-100A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				220.03-240.31 Rhyolite Lapilli tuff							
231				RHLT - Verde. grisáceo con segmentos de							
				cenizas oscuras a la altura.							
232				- Fuerte moderadamente foliada general-							
				mente en las bandas							
233											
				- 219.51 - 220.11 : Stronger zone							
234				- Presencia de bolillos irregulares de SPH con							
				textura orientada paralelamiento (QzSPH)							
235				- cristales de Py de grano medio (1% Py)							
				- bolillos de CPy fino (2% CPy)							
236											
237											
238											
239											
240											
241											
242											
243	55										
				EOH							

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PAGE 22 OF 22 | PROJECT: Wolverine | HOLE NO. WV97-100A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
231										
232										
233		233.3	234.7		203426					
234										
235										
236		236.7	240.9		203427					
237										
238										
239										
240		240.9	241.9		203428					
241										
242										
243										

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DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: 1611
HOLE NO.: WV-97-101	BEARING:
LOCATION: FISHER ZONE 10582.2 E 18717.2 N	DIP:
	TOTAL LENGTH: 602.86
LOGGED BY: R. Chavarría	HORIZONTAL PROJECT:
DATE: July 12th, 1997	VERTICAL PROJECT:
CONTRACTOR:	
CORE SIZE: NQ	
DATE STARTED: July 11th	
DATE COMPLETED: July 22th	
DIP TESTS:	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

0 - 268 : Fuerte presencia de riolitas masivas y fragmentales, RHFS/RHFR, con ocacionales intercalaciones de tobas riolíticas y andesíticas ; RHT/ADTT y una escaza presencia de rocas sedimentarias ; AR.

268 – 517 : Aparece la facies exalativa; con presencia de EXMT, EXCP y EXSP; ≈ 1:1:1. Intercalaciones de rocas Argilitas principalmente y de Riolitas masivas y fragmentales es común. Un mínimo de 1% Py y Trazas de SPH, Po y CPy están presentes.

286.67 - 287.15 } : Se intersectan dos zonas de semiacumulación de
292.43 - 292.66 } sulfuros Masivos. (SEMI PYMS) compuestas principalmente por Py ≈ 85% AVERAGE. Los espesores son 0.46 mts y 0.22 m respectivamente. Trazas de SPH fina se observan en la primera intersección.

550.17 - 557.93 : Aparece la RHLT con fuerte alteración sericitaly se interpreta como el Footwall del depósito.

LEGEND

- RHM
- RHF
- RHAR
- AR
- EXM
- EXSP
- EXCP
- SEMI-PYMS
- RHT
- ARGR
- Qz VEIN
- ST

PAGE 1 OF 54 | PROJECT: Wolverine | HOLE NO. W-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
1		Casing									
2											
3											
4				3.05 – 22.65 FRAGMENTAL RHYOLITE. RHFR - Gris - verdosa, fuertemente silicea, esporadicamente los fragmentos							
5				- Presenta interrumpido a irregular bandeamiento, en donde se observa una matriz de sericita, separando fragmentos angulares de Riolitas.							
6											
7				- La relación Fragmentos - matriz es 35% Fragmentos promedio							
8				- Hay presencia esporádica de fragmentos de Andesitas volcaniclásticas (ADTT)							
9				- Esta unidad presenta intercalación con las Andesitas volcaniclásticas							
10			80°	- Débil oxidación en los primeros 4 metros							
11											
12											
13											
14											
15			85°								
16											
17											
18											
19											
20											
21			75°								
22				22.65 – 24.33 RHYOLITE TUFF RHTT Fina, gris, silicea, poco con cierto contenido de carbonato, escasos a ausentes fragmentos							
23											

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PAGE 2 OF 54	PROJECT: Wolverine	HOLE NO. WR-02-101

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											

PAGE 3 OF 54 | PROJECT: Wolverine | HOLE NO. 97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION		ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				Continúa	Same as Above							
24												
25				24.33 - 27.0	FRAMENTAL RHYOLITE							
					same as Above (SAA)							
26												
27												
				27.0 - 30.10	ADESITE TUFF							
28				ADTT	-verde fina con fragmentos carbonatados							
					posible dolomita 10% de carbonato a la mo							
29			70°		tria, posiblemente producido por la altera-							
					de los feldespatos cálcicos							
30					-A veces contiene fragmentos de violita							
					masiva							
31												
				30.10 - 36.85								
32				RHFR	FRAMENTA RHYOLITE							
					Similar a la de arriba							
33												
34												
35												
36												
37												
			75°									
38				36.85 - 38.40	similar a la de arriba							
39				ADTT								
40				38.40 - 42.06								
				RHFR	presente intercalaciones pequeñas de andesita							
41												
42												
				42.06 - 47.55								
43				ADTT	Similar a la de arriba							
44												
			60°									
45												
46												

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PAGE 4 OF 54	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										

PAGE 5 OF 54 | PROJECT: Wolverine | HOLE NO. 97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
47											
48				47.55 – 56.83 FRAMENTAL RHYOLITE.							
				RHFR Gris, silice con fragmentos subangulares							
49				irregulares intercalaciones con ARTT.							
50			70°	Trazas de Py en fracturas							
51											
52											
53				- Zona de Falla a 23 m – 24.5 m							
54											
55											
56											
57			80°								
				56.83 – 59.02 RHYOLITE TUFF							
58				RHTT. Gris blanquecca, con mayor contenido							
				de carbonato que la anterior.							
59			90°								
60				59.02 – 67.16							
				RHFR FRAMENTAL RHYOLITE							
61				Similar a la anterior.							
62											
63											
64											
65											
66											
67			90°								
				67.16 – 72.56 La relación Matriz – fragmentos tiende							
68				a ser inversa. Hay presencia de matriz							
				de silicita con bandas de textura, además							
69				aumenta el contenido de carbonato							

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PAGE 6 OF 54	PROJECT: Wolverine	HOLE NO. 97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
47										
48										
49										
50										
51										
52										
53										
54										
55										
56										
57										
58										
59										
60										
61										
62										
63										
64										
65										
66										
67										
68										
69										

PAGE 7 OF 54 | PROJECT: | HOLE NO. VV-97-01

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
70				Continúa –							
				Sin cambio de la textura roca fracturada							
71											
72											
73			→ 70°								
74											
75											
76											
77											
78											
79			→ 80°								
80											
81				81.60 Nueva presencia de bandas de biotita en la roca. Toma una coloración verde-Marrón; por la presencia de clorita + Biotita							
82											
83											
84											
85											
86											
87											
88											
89			→ 80°								
90				89.8: Veta de cuarzo cortada por una veta pequeña de Py							
91											
92											

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PAGE 8 OF 54	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
70		69.93	71.96		173495					
71										
72										
73										
74										
75										
76										
77										
78										
79										
80										
81										
82										
83										
84										
85		85.2	86.64		173496					
86										
87										
88										
89										
90										
91										
92										

PAGE 9 OF 54 | PROJECT: Wolverine | HOLE NO. WV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				Cont.n.a							
93											
94											
95											
96				60°							
97				97.40 - 98.85							
98				STFB Zona de Falla representada por brecha con fragmento compuestos d. Riolita en una matriz arcillosa. El ángulo de la falla posiblemente es paralelo al fracturamiento de la roca							
99				"							
100				- Alteración Sericita + Arcilla (gouge)							
101											
102											
103											
104				103.02 - 103.96 ARGR GRAPHITE ARGILLITE Negra suave con alto contenido de grafito. Asociada a la zona de Falla							
105				103.96 - 106.60 RAFR FRAGMETA RHYOLITE Verde grisacea con alto contenido de Sericita en la matriz.							
106											
107											
108				106.6 - 109.58 RHFS MASSIVE RHYOLITE Gris Negruzca, masiva, afanítica, con pequeños amigdalitos. Delgadas bandas de Arcillita silícea Negra.							
109											
110											
111				60° 109.58 - 112.10 Veta de Sericita con fragmentos de Riolita y cúmulos de Py moderado grado de Lixiviación.							
112											
113				70° <1% Py presente.							
114				112.10 - 115.3 RHFR continúa alto contenido de matriz de sericita en la roca							
115											

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PAGE 10 OF 54	PROJECT:	HOLE NO. XM-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
93										
94										
95										
96										
97										
98										
99										
100		100.96	103.02	2.1	173497					
101										
102										
103		103.02	103.96	0.9	173498					
104										
105										
106										
107										
108										
109		104.58	111.70	2.1	173499					
110										
111										
112										
113										
114										
115		113.3	116.4	1.1	173500					

PAGE 11 OF 54 | PROJECT: Wolverine | HOLE NO. WN-97-108

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				115.30 - 116.1 FAULT.							
116				ST65. Negra con pocos fragmentos de Riolita. Alto contenido de cuarzo							
				116.1 - 126.15							
117				RHFR FRAMENTAL RHYOLITE							
118				Gris - negruzca, con menor contenido de bandas Negras a Verde de sericita separando los fragmentos angulares, dando a la roca una textura Anastamozada							
119				- Además hay presencia de vetas de cuarzo Verde con errática presencia de carbonato							
120											
121											
122				118.5 ≈10 cm Sericite Veins							
				118.4							
123				119.4							
				120.0							
124				120.5							
125											
126											
127				75° FINE GRANE RHYOLITE TUFF							
				126.15 - 131.35							
128				RHTT.? Gris, blanquesca, silicea, pero con alto contenido de carbonatos en la matriz y en hilillos. Presenta mayor contenido de CO2 que las muestras anteriormente en este sondaje.							
129											
130											
131											
132				70°							
133				131.35 - 135.54							
				RHFR Similar a la anterior.							
134											
135											
136				135.2 - 135.40 RHTT							
137				136.1 - 136.25 RHTT							
138											

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PAGE 12 OF 54	PROJECT: Wolverine	HOLE NO. WV-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
116										
117										
118										
119										
120										
121										
122										
123										
124										
125										
126										
127										
128										
129										
130										
131										
132										
133										
134										
135										
136										
137										
138										

PAGE 13 OF 54 | PROJECT: Wolverine | HOLE NO. WV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				136.54 - 192.16 MASSIVE RHYOLITE							
139				RHFS							
				- Gris-blanca a verdosa, Afanítica y fuertemente silícea.							
140				- Errática presencia de Microlitos							
				- La roca esta homogeneamente fracturada, con rellenos de sericita y/o clorita en las fracturas. Errática presencia de lodo en las fracturas							
141											
142											
				- No hay bandeamiento regular, el mismo es oreal.							
143											
				139.4 - 140.50 STFL							
144				Zona de falla representada por un débil contacto de Arc. lla entre fragmentos de riolita							
145											
146											
147											
148											
149											
150											
151											
152											
153											
154											
155											
156											
157											
158											
159											
160											
161											

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PAGE 14 OF 54	PROJECT: Wolverine	HOLE NO. WV-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
139										
140										
141										
142										
143										
144										
145										
146										
147										
148										
149										
150										
151										
152										
153										
154										
155										
156										
157										
158										
159										
160										
161										

PAGE 15 OF 54 | PROJECT: Wolverine | HOLE NO. WV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				Continúa RHFS							
162			→ 85°	roca de color verde arc, producto de la intensa alteración de sericita							
163											
164											
165											
166											
167											
168											
169											
170											
171											
172											
173			→ 80°								
174											
175				Qz Veins con intercalación de vetillas de sericita							
176											
177											
178											
179											
180											
181											
182											
183											
184			→ 90°								

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PAGE 16 OF 54	PROJECT: Wolverine	HOLE NO. WV-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
162										
163										
164										
165										
166										
167										
168										
169										
170										
171										
172										
173										
174										
175										
176										
177										
178										
179										
180										
181										
182										
183										
184										

PAGE 17 OF 54 | PROJECT: Wolverine | HOLE NO. WV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
185											
186				185.31 – 185.80 Mayor presencia de bandas de cuarzita. Además aparece un 1% Py en hilillos y fracturas.							
187											
188				185.8 – 197.16							
189				– Presencia de trazas de Py en hilillos y parches							
190				9-cal vein – Aparece carbonato asociado a vetas de cuarzo							
191				– Mayor presencia de sericita							
192				197.16 – 209.12							
193				– Aumenta la presencia de hilillos de sericita dándole a la roca una textura foliantal discordante							
194				– Hay presencia de diseminaciones de Pirrotina y CPy (207m)							
195				– La Py es más común incluso en cristales cúbicos de 1mm² de cara							
196											
197											
198											
199											
200											
201											
202											
203											
204											
205				205.53 – 205.83							
206				– Veta de Qz + calcita + sericita verde							
207											

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PAGE 18 OF 54 | PROJECT: Wolverine | HOLE NO. WV-97-901

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
185		185.31	185.80		173501					
186										
187										
188		188.06	188.68		173502					
189										
190										
191										
192										
193										
194										
195										
196										
197										
198										
199										
200										
201										
202										
203										
204										
205										
		205.53	206.53		173503					
206										
207										

PAGE 19 OF 54 | PROJECT: Wolverine | HOLE NO. WV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				PHFS continúa de atrás							
208				↓							
209				209.12 – 247.00							
210				EHER FRAMENTAL RHYOLITE							
211				- Verde grisáceo con fragmentos de Riolita marrón							
212				- El tamaño de los fragmentos es rango centimétrico							
213				- Bandeamiento de biotita y cuarzo siguiendo los fragmentos formando una especie de [illegible]							
214				- 213.30 – 215 c. Trazas de Pirrotina siguiendo los bandeamientos en forma de [illegible]							
215											
216				- Trazas de Py a lo largo de todo la roca							
217											
218											
219											
220											
221											
222											
223											
224											
225											
226											
227											
228											
229											
230											

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PAGE 20 OF 54	PROJECT: Wolverine	HOLE NO. WV-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		207.18	209.12		173504					
208										
209										
210										
211										
212										
213		213.79	214.80		173505					
214										
215										
216										
217										
218										
219										
220										
221										
222										
223										
224										
225										
226										
227										
228										
229										
230										

PAGE 21 OF 54 | PROJECT: Wolverine | HOLE NO. WV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
					continue RHFP							
231												
232												
233												
234												
235												
236												
237												
238												
239												
240												
241												
242												
243												
244												
245												
246												
247												
248				247.64–251.17	MASSIVE RHYOLITE							
249				RHFS.	gris-verdoso, debilmente bandeada con finas bandas milimétricas de sericita							
250												
251				251.17–251.93	SILICEOUS ARGILLITE							
252				ARSI	Negro con bandas muy finas. Fuerte mineralización ~1% Py							
253												

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PAGE 22 OF 54	PROJECT: Wolverine	HOLE NO. W1-97-801

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
231										
232										
233										
234										
235										
236										
237										
238										
239										
240										
241										
242										
243										
244										
245										
246										
247										
248										
249										
250										
251		251.17	252.36		173506					
252		252.36	253.7		173507					
253										

PAGE 23 OF 54 | PROJECT: Wolverine | HOLE NO. YY-92101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (SIL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
254				251.42-253.60	FRAMENTAL RHYOLITE							
				PHFR	- Gris Negruzca, distinto a lo de las partes superiores							
255					- Los fragmentos están separados por bandas irregulares de Arcillita							
			80°		- Otro nombre para esta unidad puede ser RHAR con finos alineamientos							
256												
257				253.60-255.2	MASSIVE RHYOLITE							
				RHFS	Similar a lo anterior							
258												
259				255.2-260.34	RHYOLITE-ARGILITE							
				RHAR	- Extensa roca foliada, con presencia de bandas finas (mm) de ARGILITA intercaladas con bandas centimétricas de Riolita masiva							
260			80°		- Se observan oquedades bien formadas que no lograron ser cuarzadas, pero forman fragmentos TRAZAS de Esfalerita							
261												
262												
263				260.34-261.51	FRAMENTAL RHYOLITE							
				PHFR	Similar a lo anterior							
264												
				261.51-267.60								
265				PHFS	MASSIVE RHYOLITE							
					- Gris - Azulado - púrpura - Masiva, parcialmente brechada							
266					- Trazas de Py en las bandas de Sericita							
					- Podría contener pigmentación de Manganeso							
267												
268			80	267.60-268.52	SILICA EXHALITE							
				EXSP	- Gris, principalmente silícea. Débil presencia de carbonato							
269					- Presenta trazas de Py + SPH en bandas							
270					- No presenta adición de sedimentos carbonosos							
271			80									
			50°	268.52-270.65	MASSIVE RHYOLITE							
272				PHFS	Similar a la anterior							
273												
				270.65-270.95	SILICA EXHALITE							
274				EXSP	60% SiO_2 - 38% CO_3, 1% Py, trazas de SPH & HEM, 1% Clorita							
275												
276												

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PAGE 24 OF 54	PROJECT: Wolverine	HOLE NO. WV-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		253.7	255.2		173508					
254										
255		255.2	257.0		173509					
256										
257		257.0	259		173510					
259										
259		259	260.34		173511					
260										
		260.34	261.51		173512					
261										
		261.51	263.25		173513					
262										
263		263.25	265.25		173514					
264		265.25	267.6		173515					
265		267.6	268.52		173516					
266										
267										
268		268.52	270.65		173517					
269										
270		270.65	270.95		173518					
271										
		270.95	272.22		173519					
272										
		272.22	273.9		173520					
273										
		273.9	274.9		173521					
274										
		274.9	276.69		173522					
275										
276		276.69	277.22		173523					

PAGE 25 OF 54 | PROJECT: Wolverine | HOLE NO. WY-93-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHI)	B (SER)	C (FP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
				270.05-272.22 IRON FORMATION.							
277			60°	FxMT - Verde oscuro - Negro.							
				- Diseminada y bandas irregulares de							
278				mag. Intercaladas de Magnetita. 15 a 20 % MT							
				- Presenta silice - calcita ± clorita en la							
279				matriz							
				- 1% Py y trazas de hematita venilla +							
280				estilolitas en fracturas.							
				272.22-276.64 MASSIVE RHYOLITE							
281			86°	RHFS Similar a la anterior.							
				276.64-277.72 IRON FORMATION							
282				FxMT 10% MT. Similar composición a la Anter.							
				277.72-279.76 SILICA EXHALITE.							
284				EXSP Porcentado por silice - Calcita, Halos							
				de Py y. Qz ± calcita en vetas. Débil							
285				clorita							
286				279.76-281.22 IRON FORMATION.							
			73°	FxMT - Gris verdoso, silicea, 8-10% MT.							
287				en bandas finas.							
				- Trazas a 1% de Py							
288				- Restringida concentración de Hematita y/o							
				SPH. (281.0)							
289											
				281.22-282.06 SILICA EXHALITE							
290				EXSC gris - Débil Pirrotina; 84% silica, 13% CO_3							
				2-3% Py, débil Clorita							
291											
				282.06-286.54 CALCITE EXHALITE							
292			77.5°	EXCP - Gris - Morada con alto porcentaje							
				de Py. Presenta vetas de sulfuros masivos							
293				(PYMS).							
294				286.67 - 287.15 : SEMI Py MASSIVE SUPHIDE							
				PYMS							
295				283.0 - 75° - MENA: 80% Py + Tr SPH							
				284.0 - 70° muy finas							
296				286.0 - 75° - GANGA: 19% $CaCO_3$ ± 1% de							
			80°	287.3 - 75° sedimentos carbonosos							
297				288.1 - 70° - Espesor real: 0.46 mts							
				PROM = 73° - Ambos contactos Filosos							
298				- Se presenta la Py en forma de bandas							
				de 5 cm ϕ :							
299											

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PAGE 26 OF 54 | PROJECT: Wolverine | HOLE NO. WR-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
277		277.22	278.55		173524	
278		278.55	279.76		173525	
279						
280		279.76	281.22		173526	
281		281.22	282.06		173527	
282 282.06 – 296.54 Excp con 35% Py, trazas de SPH, CPy y Po		282.06	283.39		173528	
283		283.39	284.60		173529	
284		284.60	285.60		173530	
285		285.60	286.67		173531	
286 286.67 – 287.27: 90% Py fina a grano medio, 8% Calcita 2%						
287 de Sedimentos carbonosos		286.67	287.15		173532	
288 296.77 – 288.99: 50% Py +50% CaCO3 + Sedimentos		287.15	288.62		173533	
289		288.62	290.04		173534	
288.99 – 287.15: 70% Py, 20% CaCO3						
290 10% SiO2		290.04	291.10		173535	
291		291.10	292.43		173536	
292		292.43	292.66		173537	
293		292.66	294.36		173538	
294		294.36	295.49		173539	
295		295.49	296.54		173540	
296		296.54	296.70		173541	
297		296.70	297.42		173542	
298		297.42	298.44		173543	
299		298.44	300.15		173544	

PAGE 27 OF 54 | PROJECT: Volcanic | HOLE NO. VVC-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHLA	ALTERATION SERB	ALTERATION SEPC	ALTERATION CO_3D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
300				Continúa 284.60 – 299.43 : Cristales rosados de qtz y Py en matriz afanítica de 5 a 10 cm							
301				285.2 – Trozos de Py masiva							
302				299.43 – 299.63 : SERIE Py MASSIVE SULPHIDE PyMS							
303				MENA: 90% Py fina a gruesa en forma de bandas orientadas (fino a grueso)							
304				Ganga: 10% $CaCO_3$ + Sedimentos carbonosos							
305				Contactos: Superior gradual							
306				Inferior Filoso							
307				Angulo = 72.5° Esp. Real: 0.22m.							
	70°			299.34 – 297.0							
308				EXSP SILICA EXHALITE							
309				- Principalmente una veta de cuarzo 30%.							
				- Presencia Esporádica Calcita y Sed. Carbonosos							
310				- ≤ 1% de SPH diseminada, 3% Py							
311				297.0 – 297.42 CALCITE EXHALITE							
				EXCP - Gris, presencia de Silice 10%							
312				- 20-25% Py en bandas.							
313				297.42 – 298.44 SILICA EXHALITE							
				EXSP - 70% SiO_2, 20% $CaCO_3$, 8% Py, 2% SPH							
314				298.44 – 307.26 CALCITE EXHALITE							
				EXCP. gris verdosa, 30% Py trazas de SPH, sil.							
315				en forma de vetas y subunidades de (EXSP) de 10 cm ø, Débil presencia de clorita							
316				307.26 – 312.60 SILICA EXHALITE							
				EXSP Rosada – verdosa; Alto contenido de SiO_2							
317				con pigmentación rosada. Bandas delgadas							
				de clorita, 1 a 2% Py, trazas de SPH y							
318				Bandas de Hematita + Magnetita (310.27m)							
319				312.60 – 315.10 TUFFACEOUS ARGILLITE							
	20°			Negra – grisácea, bandas finas presencia							
320				de finos componentes tabulares							
321				- Presencia de finas – muy finas bandas de SPH (< 1%)							
322											

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PAGE 28 OF 54	PROJECT: Wolverine	HOLE NO. WV 97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
300										
		300.15	301.50		173545					
301										
		301.5	303		173546					
302										
303		303	304.5		173547					
304		304.5	305.95		173548					
305		305.95	307.07		173549					
306										
307		307.07	308.68		173550					
308										
		308.68	310.17		173551					
309										
310		310.17	311.30		173552					
311		311.30	312.60		173553					
312										
		312.6	313.90		173554					
313										
314		313.90	315.10		173555					
315		315.1	316.43		173556					
316		316.93	318.2		173557					
317										
318		318.2	319.01		173558					
319		319.01	320.16		173559					
320		320.16	321.2		173560					
321										
322		322.2	323.7		173561					

PAGE 29 OF 54 | PROJECT: Kvolvirca | HOLE NO. KV-93-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				315.1 – 319.20 SILICA EXHALATIVE							
323				EXSP. - Rhy Verdosa con presencia de vetas de calcita 20% Py diseminado y en bandas finas							
324											
325				319.20 – 319.06 CALCITE EXHALATIVE							
				EXCP - 30% de Py, 10% SiO2 y 70% Calcita							
326											
				319.06 – 322.2 TUFFACEOUS ARGILLITE							
327				75° ARTF - Negra - gris con presencia de bandas de Py en el contacto inferior con EXCP							
328				- Son dos finas de argilita que envuelven una roca fragmentada Fuerte Plegamiento							
				- 320.09 – 320.16							
329				EXCP - Subunidad de CALCITE EXH.							
330				- 10% Py, 80% CaCO3, 10% Si							
				- 321.33 – 321.38							
331				EXSP - subunidad de SILICA EXH.							
				- 10% Py, 80% SiO2, 10% CaCO3							
332											
				320.2 – 325.51 SILICA EXHALATIVE							
333				EXSP - Principalmente silice 80% débil dominio en casos bandas y fracturas							
				- 4 - 6% Py y 10% CaCO3							
334											
				325.51 – 329.72 TUFFACEOUS ARGILLITE							
335				ATAF - Negra - Gris, silicea, con bandas finas de argilita bordeando fragmentos roca. Fuertemente plegada.							
336				- Presenta trazas de SPH, 1% Py							
337											
				329.72 – 330.24 SILICA EXHALATIVE							
338				EXSP Gris - Amarillento, débil presencia de cuarzo mat., Difusas bandas de Py. Presencia de trazas de SPH, CAL y Tetraedrita? y/o alguna mineral de Plata							
339											
340											
				330.24 – 330.41 FRAMENTAL RHOLYTE							
341				RHFR gris negruzca, con fragmentos centimétricos y una matriz arcillosa							
342											
				330.41 – 337.3 TUFFACEOUS ARGILLITE							
343				ARTF Negra - verdosa, con mayor contenido Tobacea, cuarzo en fracturas							
344											
345				Py, Py, SPH, CAL							

Westmin Resources

PAGE 30 OF 54	PROJECT: Wolverine	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
323										
		323.7	325.5		173562					
324										
325										
		325.51	326.56		173563					
326										
327		326.56	327.95		173564					
328		327.95	329.27		173565					
329		329.27	330.24		173566					
330		330.24	332.3		173567					
331										
332		332.3	333.76		173568					
333 333.76 - 334.02 : 1-2 % Po, trace sphal & gal		333.76	334.02		173569					
334		334.09	335.02		173570					
335		335.02	336.75		173571					
336		336.25	337.82		173572					
337										
338		337.82	339.0		173573					
339		339.0	340.43		173574					
340										
		340.43	341.14		173575					
341										
342		341.14	343.5		173576					
343		343.5	344.7		173577					
344 344.69 - 344.97: 1% SPH, 1% Py 2% Po, trace sphal & gal		344.10	344.98		173578					
345		344.98	345.35		173579					

PAGE 31 OF 54 | PROJECT: Wolverine | HOLE NO. LL-22-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
346	NQ			332.3-345.35 CALCITE EXHALATIVE - Roca exhalativa de color gris amarillento - Presencia de vetas gruesas de q-calcita con cristales y silicatos pirita							
347	BQ			346.85 - Py existe en forma de bandas difusas y diseminada. Tiene un 6% Py - Otros minerales importantes SPH, Py.							
348											
349											
350				345.35 – 346.25 FAMENTAL RHYOLITE 80° RHER Similar a la anterior.							
351				346.25 – 350.85 TUFFACEOUS ARGILLITE APTF Negra - Verdosa con alto contenido de fragmentos tuboleos. Bandas finas negras y matriz arcillosa.							
352											
353				350.85 – 351.46 LAPILLI TUFF RHLT Verde con ALTO contenido de fragmentos de lapilli y bandas finas de sericita							
354											
355				352.49 – 353.45 FINE RHYOLITE TUFF 80° RHTF - Verde - crema, con bandas muy finas de sericita. Poco % de fragmentos de lapilli							
356											
357				353.45 – 357.88 MASSIVE RHYOLITE RHFS - gris, masiva, afanítica con débil presencia de microlitos. Bandeamientos moderados. - Presente trozos de Py de grano medio diseminada y en hilillos. Trozos de SPH.							
358											
359											
360				357.88 – 359.77 IRON FORMATION EXMT Verde - gris - Amarillento, 60% de Mt en bandas finas y 2% en cristales diseminados de grano medio. Trozos de Py - Bandas finas de clorita en escasos lugares.							
361											
362				115°							
363				359.77 – 361.91 MASSIVE RHYOLITE RHFS Similar a la anterior. No hay presencia de SPH. Trozos de Py.							
364											
365				361.91 – 365.44 FRAMENTAL RHYOLITE RHER Gris Negra, con fragmentos afaníticos de riolita separados por bandas difusas e irregulares de Arcillita - 362.10 Pequeña brecha de falla con ángulos bien definidos en los planos 60° y 45°							
366											
367											
368											

Westmin Resources

PAGE 32 OF 54	PROJECT: Wolverine	HOLE NO. WV-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		[illegible]	[illegible]		[illegible]					
346										
347										
348										
349										
350										
351										
352										
353										
354										
355										
356		355.39	356.71		173580					
357		356.71	357.89		173581					
358		357.89	358.72		173582					
359		358.72	359.58		173583					
360		359.58	361.91		173584					
361										
362		361.91	362.7		173585					
363		362.7	364.42		173586					
364		364.42	365.94		173587					
365										
366		365.94	367.9		173588					
367		367.9	369.0		173589					
368										

PAGE 33 OF 54 | PROJECT: WOLVERINE | HOLE NO. WV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHI)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
				365.44-369	SILICA EXHALATIVE							
364				EXSP	-Gris-verdes, fuertemente silíceo, textura de chert.							
370					-Fuerte presencia de CHI-EP en el contacto inferior con EXMT.							
371					-Py en fracturas principalmente (trozos)							
				369-373.14	IRON FORMATION.							
372				EXMT	-Verde-rosado-Negro. Presenta alto contenido de Magnetita principalmente diseminada de grano medio y en difusas bandas finas.							
373					-La coloración verde está dado por la presencia de EP+clorita y se da en torno al contacto superior como inferior de la unidad							
374					-La coloración rosado está dado por la presencia de Albita teñida con óxidos de Hierro o Limonita por la extensa presencia de sulfuro potásico.							
375					-El color negro lo produce la MT. 70% (Py y Po) 1% diseminadas y en cúmulos							
376												
377												
378												
				373.44-373.98	SILICA EXHALATIVE							
379				EXSP	Gris rosado, presencia moderada de hierro + sericita en bandas. No se observa Py ni Cpy							
380												
				373.98-374.94	CALCITE EXHALATIVE							
381				EXCA	-Blanca-cristalina, principalmente Carbonato.							
382					-Intercalación de delgados niveles de EXTT.							
383					-principalmente masiva							
				374.94-375.59	TUFFACEOUS ARGILLITE							
384				DRTF	-Negra y parcialmente gris, cohesivo a moderados fragmentos de Lapilli							
385												
				375.59-377.14	CARBONACEOUS ARGILLITE							
386				ARCB	-Negra, fina masiva, milillos de $CaCO_3$ matriz carbonosa							
387					-Trozos de Py							
388												
				377.14-383.43	FRAMENTAL RHYOLITE							
389				RHFR	Gris, Negra, fragmentos masivos de riolita separados por bandas difusas de Sericita y/o Argillita							
390												
391												

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PAGE 34 OF 54	PROJECT: Wolverine	HOLE NO. WV-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
369		369	370.17		173590					
370		370.17	371.62		173591					
371		371.62	372.30		173592					
372		372.30	373.44		173593					
373		373.44	373.98		173594					
374		373.98	374.94		173595					
375		374.94	375.73		173596					
376		375.73	377.14		173597					
377		377.14	378.14		173598					
378										
379										
380										
381										
382										
383		383.43	384.63		173599					
384		384.63	385.43		173600					
385										
386		385.43	386.83		173601					
387		386.83	388.83		173602					
388										
389		388.83	391.0		173603					
390		391.0	391.34		173604					
391										

PAGE 35 OF 54 | PROJECT: Wolverine | HOLE NO. WV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				383.43-385.93	SILICA EXHALATIVA							
392				EYSP	-Dominado por sílica criptocristalina, hasta							
					presentar textura de chert en ciertas partes							
393					-Débil presencia de Py al igual que clorita							
				385.93-386.72	IRON FORMATION.							
394				EYMT	- Verde, bandeada con 5-6% Mt selectivamente							
					-Presenta vetillas de calcita							
395												
				386.72-391.0	SILICA EXHALATIVA							
396				EYSP	Similar a la anterior.							
397												
				391.0-391.34	IRON FORMATION							
398				EYMT.	similar a la anterior, 6% Mt							
399				391.34-394.28	SILICA EXHALATIVA							
400				EYSP	Similar al anterior.							
401				394.28-396.08	FRAMENTAL RHYOLITE							
				RHFR	Gris-Negro, con fragmentos subangulares							
402					de riolita masiva y bandeada finos fragmentos							
					formando textura anastomosada							
403												
				396.08-410.95	SILICEOUS ARGILLITE							
404				ARSI	- Negra grisacea, fuertemente foliada,							
					dándole un aspecto fragmental							
405					-Presenta trazas de Py							
406												
407												
408												
409												
410												
				410.95-411.70	MASSIVE RHYOLITE							
411				RHFS.	Masiva, debilmente bandeada, presencia de							
					microlitos. Trazas de Py							
412												
				411.7-412.5								
413					IRON FORMATION.							
					Gris-verdosa, con 4-5% Mt, escasos hilillos							
414					de Epidota. 1% Py							

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PAGE 36 OF 54	PROJECT: Wolverine	HOLE NO. WV-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
392		391.34	393.2		173605					
393		393.2	394.28		173606					
394										
395										
396										
397										
398										
399										
400										
401										
402										
403										
404										
405										
406										
407										
408										
409										
410										
411		410.95	411.70		173607					
412		411.70	412.5		173608					
413		412.5	413.42		173609					
414		413.42	415.42		173610					

PAGE 37 OF 54 | PROJECT: Wolverine | HOLE NO. WV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				412.7 – 413.42 SILICA EXHALATIVE							
415				EXSP - Gris – Negruzca debido a cierto contenido de sedimentos							
416				- 412.6 : Presenta un par de bandas de 2mm de ancho de SPH + débil Py							
417			70°								
418				413.42 – 430.0 IRON FORMATION							
				EXMT. - Negra – verdosa Maroon con variaciones en el % de Magnetita.							
419				- La magnetita esta presente tanto de la roca en bandas milimétricas. Estas bandas estan separadas milimétricamente y hay Mt diseminada entre bandas							
420				- Presencia de Py diseminada, y en fracturas de cristales poco veces alcanza los 3mm de largo.							
421				- Las zonas con mayor concentración de Mt son: 413.86 – 417.5, 417.04 – 425.80 y 428.50 – 430. y contienen ≈ 80% Mt.							
422				- Apartir de 414 es mas notoria la presencia de Hematita (oxidación de Mt)							
423			85°	- Trazas de CPy y ≈ 1% Py							
424											
425											
426											
427											
428											
429											
430			75°								
		V		430.0 – 437.18 MASSIVE RHYOLITE							
431		V		RHFS - Gris – Verdosa, mesiva, difusamente bandeada. Fuertemente silicea. Escaso presencia de microlitos							
432		V		- Trazas de Py en hilillos.							
433		V									
434		V									
435		V									
436		V	80°								
437		V									

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PAGE 38 OF 54 | PROJECT: Wolverine | HOLE NO. WN-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
415		415.42	417.31		173611					
416										
417		417.31	418.81		173612					
418										
419		418.81	420.0		173613					
420		420.0	421.48		173614					
421		421.48	423.11		173615					
422										
423		423.11	424.19		173616					
424		424.19	425.91		173617					
425		425.91	427.23		173618					
426										
427		427.23	428.42		173619					
428		428.42	430.0		173620					
429										
430										
431										
432										
433										
434										
435		435.23	437.18		173621					
436										
437		437.18	438.34		173622					

PAGE 39 OF 54 | PROJECT: Wolverine | HOLE NO. WV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				437.18-439.07 SILICA EXHALATIVA.							
438				EXSP verde clara, moderadamente bandeada							
				- Vetillas de Calcita. Trazas de Py							
439											
440											
				439.07-449.68 IRON FORMATION.							
441				EXMT - Negra - Moderadamente rojiza. Presenta entre un							
442				15% - 20% de Magnetita de grano fino, en							
				bandas de hasta 1cm y diseminada							
443				- La matriz es principalmente Cuarzo + CO_3							
				en vetillas y/o cúmulos.							
444				- 1% Py diseminada con acumulaciones							
				erráticas de Py de grano medio							
445				- Cristales de Calcita, algunas veces botroidales.							
				Se presentan en fracturas							
446											
				→ Cal-Qz Vein.							
447											
448											
449											
	75			449.68-450.28 CALCITE EXHALATIVE							
450				EXCA Blanca - amarillenta: Principalmente							
451				Calcita, con hilillos de Q y trazas de Mt.							
				450.28-453.41 SILICA EXHALATIVE							
452				EXSP. - Verde-Negruzca, bien bandeada							
453				- Presenta hilillos de Py; 1% y trazas de Mt.							
				- Presenta intercalaciones con la EXMT a 451.34							
454				y 451.95							
				453.41-453.7 CALCITE EXHALATIVE							
455				EXCP Pequeño lente de Exhalita de Calcita.							
456				- 2% Py en bandas finas. 1% Mt.							
				453.7-454.3 IRON FORMATION							
457				EXMT - Negra - Blanca aporchonada.							
458				- 10% Mt, cuarzo + CO_3 en la matriz.							
				- 2% Py							
459				454.3-455.45							
				EXCP CALCITE EXHALATIVE							
460				- Principalmente Calcita, hilillos de Q.							
				- 3% Py en bandas difusas, 1% Mt.							

Westmin Resources

PAGE 40 OF 54	PROJECT: Wolverine	HOLE NO. WV-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
438										
		438.39	439.04		173233					
439										
		439.04	440.60		173624					
440										
		440.60	441.30		173625					
441										
		441.8	443.25		173626					
442										
443		443.25	444.76		173627					
444										
		444.76	446.06		173628					
445										
446		446.06	447.54		173629					
447										
		447.54	448.95		173630					
448										
449		448.95	449.64		173631					
450										
		449.68	450.35		173632					
451										
		450.35	451.70		173633					
452										
		451.7	453.41		173634					
453										
		453.41	454.6		173635					
454										
		454.6	456.45		173636					
455										
456		456.45	456.93		173637					
457		456.93	458.43		173638					
458		458.43	460.06		173639					
459		460.06	461.7		173640					
460		461.7	463.18		173641					

PAGE 41 OF 54 | PROJECT: Wolverine | HOLE NO. WV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				455.45-460.06	IRON FORMATION							
461				EXMT	- Negra y con parches blancos, producto de la presencia de calcita y cuarzo							
462				80°	- Bandas de Py de 1mm de ancho también se presenta diseminado							
463					- Trozos de Pirrotina diseminada con Py							
464					- Presenta zonas con mayor concentración de Calcita							
465				460.06-462.58	CALCITE EXHALATIVE							
				EXCP.	- Blanca - grisacea, con escasas bandas de Magnetita 1%, Py fino diseminado y en bandas milimétricas difusas, aproximadamente 4%. Trozos de Pirrotina							
466												
467												
468				462.58-465.07	IRON FORMATION							
				EXMT	- Gris - Negra y Matriz de SiO_2 + $CaCO_3$ 6% Magnetita,							
469					- Bandas irregulares de Pirrotina 1.2% Po							
470					- Trozos de SPH alterado a Pirita en bandas finas milimétricas.							
471				80°								
				465.07-465.38	SILICEOUS ARGILLITE							
472				ARSI	Negra - debilmente foliada. Fuertemente silícea							
					- Hilillos de Po de formas milimétricas							
473												
				465.38-469.89	SILICA EXHALATIVE							
474				EXSP	- Gris - Negruzca, debido a la presencia de bandas de sedimentos silíceos y/o carbonosos.							
475					- Presenta concentraciones de $CaCO_3$							
476					- Py en bandas finas + trozos de SPH.							
477				469.89-472.10	IRON FORMATION							
				EXMT	Color Rojizo - Verde. Presenta mayor contenido de magnetita hacia el centro del lente: 470.5 - 472:							
478					20% Mt hematizada que le da un color rojizo a la roca.							
479					El resto del paquete presenta Mt diseminada de grano medio.							
480					- 1-2% Py en bandas finas y diseminado							
481				50°	- Su contacto inferior con EXSP es transicional con disminución rápida de la presencia de Mt.							
482												
483												

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PAGE 42 OF 54	PROJECT: W/O Iverine	HOLE NO. VV-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
461						
462						
463 463.18 – 463.99 Zone de mayor concentración de Pirrotina, 20% Po		463.18	463.99		173642	
464						
464 – 465.07 : Mayor presencia de SPH ±1%						
465		463.99	465.07		173643	
466		465.07	466.30		173644	
467		466.30	468.30		173645	
468		468.30	469.89		173646	
469		469.89	470.85		173647	
470		470.85	472.08		173648	
471						
472		472.08	473.15		173649	
473		473.15	474.85		173650	
474		474.85	476.34		173651	
475						
476		476.34	478.32		173652	
477						
478						
479						
480						
481		480.95	481.10		173653	
482						
483						

PAGE 43 OF 54 | PROJECT: Wolverine | HOLE NO. WV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (SCH)	B (SER)	C (CLR)	D (CCB)	E	FRACTURE INTENSITY	% VEIN QTZ.
				473.10 – 485.44 SILICEOUS EXHALATIVE							
484				EXSP							
				80° gris-verdosa, fuertemente bandeada,							
				con presencia de Py en las bandas. Fuertemente							
485				Si [illegible] hasta el punto de tener textura							
				SPH "chirty" en forma laminada							
486				- 485.27: Banda de esfalerita de 3mm de espesor.							
				- Py ≈ 1%.							
487											
				485.44 – 489.82 IRON FORMATION							
488				EYMT - Verde – Negruzca producto de la presencia de clorita producto de alteración							
489				- 50 GY. MT en forma de bandas finas, que							
				en algunos casos presenta oxidación de hematita							
490											
				489.82 – 491.4 SILICA EXHALATIVE							
491				EXSP gris-verdosa, fuertemente silícea. Moderadamente bandeada.							
				- Disminución de presencia de clorita.							
492				- Trozos de SPH + Py.							
493											
				491.4 – 500.43							
494				ARSI/ARTF SILICEOUS ARGILITE							
				- Negra, gris y verdosa. Principalmente silícea, sin embargo presenta intercalación con Argilitas tobáceas (ARTF),							
495				finamente bandeada.							
496				- Presenta alteración parcial de clorita y							
				de CCB							
497				- No presenta fuerte mineralización, esca							
				sa presencia de Py y ocasional presencia							
498				de SPH (trozos)							
499											
500				Alteración de CCB.							
501											
502				502.? pequeña estructura, principalmente arcillosa							
503											
504											
505											
506											

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PAGE 44 OF 54	PROJECT: Wolverine	HOLE NO. WV-97-[illegible]

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
484		484	485.44		173654					
485		485.44	487.05		173655					
486										
487		487.05	488.44		173656					
488										
489		488.44	489.93		173657					
490		489.93	492.4		173658					
491										
492		492.4	493.56		173659					
493										
494										
495		495.45	496.9		173660					
496										
497										
498										
499										
500										
501										
502										
503		502.29	503.72		173661					
504										
505										
506		506.67	508.43		173662					

PAGE 45 OF 54 | PROJECT: Wolverine | HOLE NO. WV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EP)	ALTERATION D (CO_3)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
507					506.8 Banda de SPH 2mm ø							
508												
509				509.43-509.46	SILICA EXHALATIVE							
510				EXSP	- Gris-Verdosa a Negruzca, bien bandeada con presencia de Clorita en fracturas							
511				90°	- Trazas de Py diseminada							
512				509.46-509.79	IRON FORMATION							
513				EXMT	- GVO - Verdosa - Moteada, matriz silicea y presencia de bandas milimétricas de Mt, aproximadamente 6%.							
514				80°	- Py diseminada y en bandas también.							
515				509.79-510.75	SILICA EXHALATIVE							
516				EXSP	- Gris amarillento, con presencia de silica y carbonato en la matriz.							
517					- Presenta bandas de Py ≤ 1% y bandas milimétricas de SPH (trazas)							
518				510.75-513.15	IRON FORMATION							
519				EXMT	- Gris Amarillento, presenta ambos; silica + CO_3 en la matriz.							
520					- Bandas finas y dispersas de Magnetita ≈ 4% Mt.							
521					- 1% Py en bandas finas y trazas de Po							
522				513.15-517.25	CALCITE EXHALATIVE							
523				EXCP	- Blanca Amarillenta con matriz de calcita basicamente, 5% Py en bandas finas.							
524					- Bandas dispersas de Po ≤ 1%							
525	80°				Presenta subunidades de EXSP y EXMT.							
526					- 513.15-513.60 : EXSP							
527					- 515.87-516.77 : EXMT.							
528				517.25-518.10	RHYOLITE TUFF							
529				RHTT	- Gris-blanquisca, de dureza moderada fina con fragmentos de Lapilli y alto componente de ceniza							
					- Presenta vetillas de cuarzo de Py							
				518.10-519.54	FRAMENTAL RHYOLITE							
				RHFR	Gris-Negra, con fragmentos angulares centimétricos, trazas de Py							

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PAGE 96 OF 54 | PROJECT: Wolverine | HOLE NO. WV-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
507						
508		508.43	509.46		173663	
509						
		509.46	509.79		173664	
510						
		509.79	510.75		173665	
511						
		510.75	512.23		173666	
512						
		512.23	513.15		173667	
513						
		513.15	513.60		173668	
514						
		513.60	515.10		173669	
515						
		515.10	516.02		173670	
516						
		516.02	517.25		173671	
317						
		517.25	518.10		173672	
518						
519						
		519.67	521.23		173673	
520						
521						
522		522.54	524		173674	
523						
524						
525						
526						
527						
528						
529						

PAGE 47 OF | PROJECT: Wolverine | HOLE NO. WV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHI)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
530				519.54 - 524.10	MASSIVE RHYOLITE							
				RHES	- Gris verdosa, porcialmente masiva y bandeada							
					- Presenta bandas de Py de fracturas mm ≤ 1%							
531				524.10 - 525.51	SILICEOUS ARGILLITE							
				ARSI	- Negra - grisacea, moderada a fuerte silicea							
532					- Bandas milimétricas de Py ≤ 1%							
533				525.51 - 530.12	RHYOLITE TUFF							
				RHTT	- Gris - porcialmente negruzca, fina y bien							
534					estratificada, bajo contenido de lapilli,							
535					componiéndose principalmente de ceniza.							
536				530.12 - 531.88	FRAMENTAL RHYOLITE							
				RHFR	- Similar a la anterior							
537					- ≤ 1% Py							
538				531.88 - 533.38	RHYOLITE TUFF							
				RHTT	similar a la anterior							
539				533.38 - 544.56	SILICEOUS ARGILLITE							
540				ARSI	Negra grisacea, fuertemente silicea y							
					plegada.							
541					535.15 - 535.5 : Presencia de bandas de SPH +							
					goleta (≤ 1% en ese tramo)							
542					Presenta cierto contenido tabular							
					- 1a 2% de Py de grano fino a medio en ban-							
543					das y acumulaciones							
544												
545				544.56 - 547.70	GRAPHITE ARGILLITE							
				ARGR	Negra - suave, bandeada, con moderado							
546					a alto contenido de grafito							
547												
548				547.70 - 550.55	SILICEOUS ARGILLITE							
				ARSI	similar a la anterior							
549												
550					550 - 550.5 : Zona de falla, débil brechiza-							
					ción en la roca							
551												
552												

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PAGE 48 OF 54	PROJECT: Wolverine	HOLE NO. WV-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
530										
531										
532										
533										
534										
535		535.15	535.5		173675					
536		535.5	537.0		173676					
537										
538										
		538.88	540.39		173677					
539										
540										
541										
542		542.60	543.6		173678					
543										
544		544.51	545.53		173679					
545		545.53	547.2		173680					
546										
547										
548		548.72	550.75		173681					
549										
550		550.75	552.28		173682					
551										
552		552.28	554.55		173683					

PAGE 49 OF 54 | PROJECT: Wolverine | HOLE NO. W-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
				550.35–557.83 LAPILLI TUFF							
553				RHLT – Verde, bien bandeado, fuertemente silicificado. Presencia de fragmentos de Lapilli							
554				aproximadamente 5%. Presenta bandas difusas de Py < 1%							
555				– Probablemente cerca del FOOTWALL							
556											
557											
558											
559				557.83–561.43 INTERBEDED RHYOLITE and ARGILLITE							
				RHAR – Gris-Negro: Intercalación de Riolita masiva							
560				con bandas milimétricas de Argilita silícea.							
561			70°	561: Trazas de SPH en bandas finas							
562											
				561.43–562.50 MASSIVE RHYOLITE							
563				RHFS – Gris, fuertemente bandeado débil a moderado sericita en las fracturas							
564				– Presenta bandas de Py + SPH (Trazas)							
565				562.50–565.0 SILICEOUS ARGILLITE							
				ARSI – Negro a débil gris oscuro, fuertemente silíceo							
566			80°	– Presencia de 10% Py en bandas finas							
567				565.0–565.7 FRAMENTAL RHYOLITE							
				RHFR – Gris Negruzco, con fragmentos subangulares							
568				– Presenta trazas de Py							
569				565.7–567.30 SILICEOUS ARGILLITE							
				ARSI – Similar a la anterior 10% Py y							
570				cloritas en las fracturas							
571				567.30–568.95 MASSIVE RHYOLITE							
				RHFS – Gris – Gris oscuro, con milimétricas y							
572				irregulares bandas de Argillita.							
573				568.95–569.41 GRAPHITE FAULT							
				ST 66 – Negro – blanquecino, presencia de grafito							
574				cobre y cuarzo.							
				– Trazas de Py							
575											

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PAGE 50 OF 54	PROJECT: Wolverine	HOLE NO. W1-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
553										
554		551.55	556.83		173684					
555										
556		556.83	559.12		173685					
557										
558										
559										
560		560.70	561.3		173685					
561		561.3	562.5		173687					
562										
563										
564										
565										
566										
567										
568		568.95	569.44		173688					
569										
570										
571										
572										
573										
574										
575										

PAGE 51 OF 54 | PROJECT: Wolverine | HOLE NO. XV-97-101

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
576				571.44–572.55 LAPILLI TUFF RHLT Negra grisosa con 10 % de fragmentos de lapilli. Algunos presentan bordes difusos de cuarzo? con "recessive shadow" alrededor. Se observaron algunos de cuarzo de 1 mm de largo que no se llaman comunmente lapilli							
577											
578											
579				572.55 – 576.2 EPHER EPISEDIMENTAL RHYOLITE Gris-Negrusco con fragmentos silicios de roca de subangulares con bandeamiento delimitados e irregulares							
580											
581				576.2 – 583.71 ARSI SILICEOUS ARGILLITE -Negra, dura silicea, bien bandeada -7 % Py en nidillos y en los fragmentos de lapilli							
582											
583											
584				583.71 – 595.57 RPTF ? CRYSTALL TUFF -Gris Verdoso, bien bandeado, con cristales de Feldespato y ocasionalmente cuarzo gris de cuarzo azules. -Los granos monocristalinos pueden ser producto de desmembramiento de la roca original en el momento de la resedimentación -Otra interpretación para esta roca es la de un pórfido de feldespato, pues presenta una clara textura porfídica -Considerable contenido de indentificables fragmentos y/o cristales de color oscuro y de poca consistencia (suaves) está presente -Sus contactos superior e inferior con ARSI son bien regulares, típico de depositación -Presenta moderada a débil alteración silicica							
585											
586											
587											
588											
589											
590				80°							
591											
592				595.57 – 607.86 ARSI SILICEOUS ARGILLITE -Negra, semidura, silicea, con ocasionales fragmentos de lapilli, especialmente hacia la parte inferior del segmento -Abundantes vetas de cuarzo con asociación de clorita hacia los bordes							
593											
594											
595											
596											
597											
598											

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PAGE 52 OF 54	PROJECT: Wolverine	HOLE NO. W-97-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
576										
577										
578										
579										
580										
581										
582										
583										
584										
585										
586										
587										
588										
589										
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591										
591										
592										
594										
595										
596										
597										
598										

PAGE 53 OF 54 | PROJECT: Wolverine | HOLE NO. WW-42-01

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				continúa ARST							
599											
600											
601											
602											
				- Mayor contenido de granito de bitio ovna							
603				602.86 estructura							
EOH											

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PAGE 54 OF 54	PROJECT: Wolverine	HOLE NO. WV-92-101

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
599										
600										
601										
602										
603										
EOH										

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DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: 1490m
HOLE NO.: WV 97-102	BEARING: 213° Grid South
LOCATION: 16897.4 E, 16959.1 N	DIP: -79.5
	TOTAL LENGTH: 419.69m
LOGGED BY: R. Chavarría, M. Padberg.	HORIZONTAL PROJECT
DATE: 13 de Julio 97	VERTICAL PROJECT
CONTRACTOR: Boisvenu Diamond Drilling.	
CORE SIZE: NQ	
DATE STARTED: 12 de Julio 97.	
DATE COMPLETED: July 19 / 97	
DIP TESTS: 121.9 m @ -74.5°; 228.6m @ -67°; 320m @ -64.5	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

Intersected 1.68m of massive sulfide from 352.33 - 354.01

- Quartz-eye x-tal tuff in both HW + FW.

LEGEND

- RHFS
- RHFR
- RHAR
- RHFF/RHTT
- ADTT
- ARGR (ARGILLITE)
- FAULTBRECCIA
- FAULT
- QUARTZ VEIN
- EXCP
- EXSP
- RPAT
- RPTF
- SSMS
- RPQL

PAGE 1 OF 42 | PROJECT: Wolverine | HOLE NO. WV-97-102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
1		CASING									
2											
3				3.05 – MASSIVE RHYOLITE							
4		RHFS		- Gris verdosa, silicea, afanitica con bandas de sericita.							
5				- La roca está debilmente fragmentada en esporádicos sectores.							
6			50°	- Fuerte fracturamiento con presencia de oxidación en los planos de fracturas							
7											
8											
9											
10											
11											
12			70°								
13											
14											
15											
16											
17											
18											
19											
20				20.49 Pequeña zona de falla, presencia de arcilla							
21			80°								
22											
23											

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PAGE 2 OF 42	PROJECT: Wolverine	HOLE NO. WV-97-102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

PAGE 3 OF 42 | PROJECT: Wolverine | HOLE NO. WV 97102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION		ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
				Continúa	RHFS							
					Masiva con oxidación en las fracturas.							
24												
25												
26												
			→ 70°									
27												
28												
29												
30												
				30.51 – 34.78	· INTERBEDDED RHYOLITE AND ARGI.							
31				RHAR	- Gris – Negra con irregular intercalación							
32					de bandas finas de argilita con bandas							
					irregulares de RHFS.							
33					- Presencia de interdigitación entre los dos							
					tipos de roca.							
34					- Predominan las bandas de Riolita							
35												
				34.78 – 66.9	MASSIVE RHYOLITE.							
36				RHFS	- similar a la anterior. Ya no presenta							
					oxidación en las fracturas.							
37					- Presenta coloración gris clara oscura							
					- Frecuente presencia de microbitas.							
38												
39												
40												
41												
42												
			→ 70°									
43					43.58 – 44.35 : Pequeña zona de falla con							
			STFL		presencia de óxidos.							
44												
45												
46												

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PAGE 4 OF 42	PROJECT: Wolverine	HOLE NO. WV-97-102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										

PAGE 5 OF 42 | PROJECT: Wolverine | HOLE NO. WV-97-102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				Continúa							
47				47.5 - 48.1 : Pequeña zona de falla con							
48				STFL presencia de arcilla							
49				A Partir de 48' presenta cierto contenido de bandas finas de argilita							
50											
51											
52											
53				70°							
54											
55											
56											
57											
58											
59											
60											
61											
62											
63											
64											
65				66.14							
66				Trazas de Py en fracturas principalmente							
67				85°							
				66.90 - 72.23 FINE RHYOLIT TUFF.							
68				RHTF Gris oscuro a negra. De grano muy fino con escasa presencia de particulas de ceniza							
69				Presenta intrusiones de Argilita							

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PAGE 6 OF 42	PROJECT: Wolverine	HOLE NO. WV-97-102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
46										
48										
49										
50										
51										
52										
53										
54										
55										
56										
57										
58										
59										
60										
61										
62										
63										
64										
65										
66										
67										
68										
69										

PAGE 7 OF 42 | PROJECT: Wolverine | HOLE NO. WV-97-102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D (CO_3)	E	FRACTURE INTENSITY	% VEIN QTZ.
70					Continúa RHFF							
71												
72				72.23-76.02	SILICEOUS ARGILLITE							
73				ARTF	-Negra a gris con matriz silícea y carbonato en hilillos y fracturas							
74					Presenta interdigitaciones con la roca anterior (RHFF)							
75					- Débil a nula presencia de fragmentos tobáceos.							
76				76.02 - 76.93	RHYOLITE TUFF							
77				RHTF	Similar a la anterior							
78				76.93 - 78.70	SILICEOUS ARGILLITE							
79				ARTF	Similar a la anterior pero con mayor interdigitación de la tobe riolítica							
80				78.70 - 81.08	RHYOLITE TUFF							
81				RHTT	- Verde - gris, fina con presencia moderada de fragmentos tobáceos.							
82					- Presencia de carbonato en la matriz.							
83					- Débil a moderada alt sericita							
84				81.08 - 86.74								
85				ARTF	Similar a la anterior							
86					- 81.5 - 82.4: Presenta mayor contenido de fragmentos							
87					- Qz-cale vein							
88				86.74 - 92.54	RHYOLITE TUFF							
89				RHFF	Gris negruzco, ígneo muy fino a fino, con interdigitaciones de Argillita							
90					- presencia errática de carbonato en la matriz							
91					- vetillas de carbonato							
92												

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PAGE 8 OF 42	PROJECT: Wolverine	HOLE NO. WV-97-102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
70										
71										
72										
73										
74										
75										
76										
77										
78		78.7	79.90		203521					
79										
80		79.90	81.08		203522					
81										
82										
83										
84										
85										
86										
87										
88										
89										
90		90.37	90.97		203523					
91										
92										

PAGE 9 OF 42 | PROJECT: Wolverine | HOLE NO. WV-97-102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
93				92.56 - 92.97 ARTF	ARGILLITE Negra, fina, débil presencia de fragmentos de lapilli.							
94												
95				92.97 - 108.32 RHFF	RHIOLITE TUFF. Gris - Negra con bandas gris de grano fino - medio intercala con bandas muy finas de argillita, las cuales van desde fracción milimétricas a centimétricos							
96												
97												
98												
99					- Hay trazas de Pirita en las fracturas.							
100					- La intradigitalización entre estos tipos de roca es más intensa en este intervalo que hace difícil la separación.							
101												
102												
103												
104												
105					105 - 105.26: Sub unidad de Argillita negra con poco % de fragmentos de lapilli							
106												
107												
108												
109				108.32 - 111.86 RHFS	MASSIVE RHYOLITE Gris verdosa con intercalaciones de Argillita en estratos de hasta 10cm de espesor.							
110												
111												
112												
113				111.86 - 113.6 ARGR	GRAPHITE ARGILLITE Negra, suave composición de vena veta de cuarzo							
114				113.6 - 117.95 RHFF	Similar a la anterior							
115												

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PAGE 10 OF 42	PROJECT: Wolverine	HOLE NO. WV-97-102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		92.56	92.96		203524					
93										
94										
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										
105										
106		106.54	108.22		203525					
107										
108										
109										
110										
111		111.86	113.6		203526					
112										
113										
114										
115										

PAGE 11 OF 42 | PROJECT: Wolverine | HOLE NO. WV-97-102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EP)	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				RHFF	Continúa RHFF con intercalaciones de Argillita							
116												
117												
118				117.95-119.63	RHYOLITE TUFF							
				RHTT	-Gris verdosa, suave con moderada							
119			~90°		presencia de fragmentos fibrosos, alonga-							
			→ Calcite Vein.		dos con el bandeamiento.							
120					-Moderada alteración sericita, de alta roca							
					una tonalidad verdosa profunda.							
121					-Es fuerte el contenido de carbonato, presente							
					tanto en la matriz con en forma de vetillas							
122					y vetas.							
				119.63-121.2	GRAPHITE ARGILLITE.							
123				ARGR	-Negra y gris oscura en algunas partes; debido							
124					a la presencia de carbonato.							
					-Trazas de Py.							
125			60°		-Veta de Qz-calc + sericita asociada							
				121.2 - 123.08	ARGILLITE							
126				ARTF	-Negra moderadamente dura, con inter-							
127					dispersiones de fibras rosáceas ≈ 30%							
					-RHFF en forma de bandas							
128												
				123.08 - 124.09	RHYOLITE TUFF							
129				RHFF	- Gris marrón con partículas de cuarzo							
					con cierto contenido de carbonato.							
130												
				124.09 - 127.66	ARGILLITE							
131				ARTF	Negra - grisácea con 20% de componentes							
					fibrosos y 80% de Argilita afanítica							
132												
				127.66 - 127.81	RHYOLITE TUFF							
133				RHTT	Gris de grano medio con dominancia de							
					fragmentos de tamaños fibrosos							
134												
				127.81 - 129.52								
135				ARTF	Similar a la anterior.							
				129.52 - 129.7	RHYOLITE TUFF							
136				RHTT	similar a la anterior pero con mayor pre-							
					sencia de bandas de argilita. 10% ARSI en							
137					la roca.							
138												

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PAGE 12 OF 42	PROJECT: Wolverine	HOLE NO. WY-97-102

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
116											
117			117.95	119.63		203527					
118											
119			119.63	121.2		203528					
120											
121											
122											
123											
124											
125											
126											
127											
128											
129											
130											
131											
132											
133											
134											
135											
136											
137											
138											

PAGE 13 OF 42 | PROJECT: Wolverine | HOLE NO. WV-92-102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				134.9 - 135.35 ANDESITE TUFF							
139				ADTT - Verde grano de medio, con débil cont.							
				medio de CO3							
140				- Débil interdigitación con los rocas Argilíti-							
				cas							
141				135.35 - 142.5 ARGILLITE							
				ARTF ? Negra - Gris con una fuerte interdigita-							
142				lización (Intrusive texture) con los							
			30°	tobas anteriormente mencionadas							
143				- Posible 60% Argillite - 40% RHTF.							
144				142.5 - 143.? ANDESITE TUFF							
				ADTT. - Similar al descrito anteriormente, pero con							
145				presencia de bandas de biotita de tamaños							
				milimétricos							
146				- Aumento del contenido de Vetillas de CO3							
147				143 - 143.92 ARGILLITE							
				ARTF Negra - gris con contenido composicional							
148				de fragmentos y bandas tobáceas							
149				143.92 - 144.21 MASSIVE RHYOLYTE							
				RHFS - Gris verdosa, masiva, con bandas mili-							
150				métricas de biotita y de Argillita.							
151				144.21 - 145.82 ARGILLITE							
				ARTF similar a la anterior, pero con fragmentos							
152				de riolita masiva.							
152.48		RHFS									
153				145.82 - 146.38 Gris verdosa, con fragmentos centimétri-							
153.35				cos separados por bandas irregulares de argillita							
154				silícea (textura Anastomosada)							
154.70											
155				146.38 - 147.66 ARGILLITE							
				ARTF similar a la anterior							
156											
157				147.66 - 149.26 MASSIVE RHYOLITE							
				RHFS similar a la anterior							
158				85							
				149.26 - 152.49 ANDESITE TUFF							
159				ADTT Verde Marron, con bandeamiento milimétrico							
				de biotita, Silice en singulares partes y							
160				extensas zonas de Magnetita Delegados							
				eventos de MASSIVE RHYOLITE incluidos							
161											

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PAGE 14 OF 42	PROJECT: Y/B Service	HOLE NO. Y-97-102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
139										
140										
141										
142										
143										
144										
145										
146										
147										
148										
149										
150										
151										
152										
153		153.35	154.70		203529					
154										
155										
156										
157										
158										
159										
160										
161										

PROJECT: Wolverine

HOLE NO. WV-97-102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				154.70 - 163.6 ARGILLITE - gris - Negra, Calcárea - Silícea con un alto % de bandas y fragmentos tobáceos - Presenta fragmentos ocasionalmente silíceos							
162											
163											
164				163.6 - 197.8 FRAGMENTAL RHYOLITE RHFR gris - blanco, con alto % de fragmentos angulares. Porvenir presencia de bandas irregulares de sericita entre los fragmentos 20% Matriz - 80% Fragmentos. - trazas de Py							
165											
166											
167											
168											
169				168.3 - 168.8: Falla con fragmentos compuestos de riolita y matriz arcillosa							
170											
171											
172											
173											
174											
175											
176											
177											
178											
179											
180											
181											
182				181 - 182.5: Falla similar a la anterior							
183											
184											

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PAGE 16 OF 42	PROJECT: Wolverine	HOLE NO. WI-97-187

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
162										
163										
164										
165										
166										
167										
168										
169										
170										
171										
172										
173										
174										
175										
176										
177										
178										
179										
180										
181										
182										
183										
184										

PAGE 17 OF 42 | PROJECT: Wolverine | HOLE NO. WV-97-102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
185				Continúa RHFR 185. - Disminuye la cantidad de fragmentos y la roca se torna un poco más masiva, pero aún conserva componente fragmental importante - Aumenta la presencia de bandas de biotita. - trazas de Py continúan							
186											
187											
188			85°								
189											
190											
191											
192											
193											
194			80°								
195											
196											
197											
198	80°			197.8 - 227.75 RHFS. MASSIVE RHYOLITE							
199				- Gris-Verdosa, dura, afanítica, fuertemente silícea. - Presenta bandas de sericita y de biotita, producto de metamorfismo de temperaturas milimétricas. - Fuerte presencia de microlitos dolomitizados. Algunas veces lixiviados - trazas de Py a lo largo de todo el núcleo							
200											
201											
202											
203			85°								
204											
205											
206											
207											

RHFR → RHFS.

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PAGE 13 OF 42	PROJECT:	HOLE NO. WI-92-102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
185										
181										
182										
183										
184										
189										
191										
192										
193										
194										
195										
196										
197										
198										
199										
200										
201										
202										
203										
204										
205										
206										
207										

PAGE 19 OF 42 | PROJECT: Wolverine | HOLE NO. WV-92-102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				Continúa RHFS	Lo mismo de arriba, sin veria cuarzo						
208											
209											
210											
211											
212											
213											
214											
215											
216											
217											
218				216.3 - 218.6 : Fuertemente afanítica sin bandas, ni microlitos							
219											
220											
221											
222											
223											
224											
225											
226											
227											
228			90°	227.75 - 230.7 FRAGMENTAL RHYOLITE							
229				RHFR	Verde - gris - Marrón. Presenta fragmentos y bandas separadas por biotita, en la mayoría de los casos						
230											

RHFS ↑ ↓ RHFR

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PAGE 20 OF 42	PROJECT:	HOLE NO. WV-97-152

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
208										
209										
210										
211										
212										
213										
214										
215										
216										
217										
218										
219										
220										
221										
222										
223										
224										
225										
226										
227										
228										
229										
230										

PAGE 21 OF 42 | PROJECT: Wolverine | HOLE NO. WV-07-102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				Continúa RHFR	- Presenta hilillos de Py (Trazas), que cortan la roca en forma oblicua al bandeamiento, sin embargo también muy hilillos siguen el bandeamiento.						
231					- Los fragmentos son subanaubares y elongados con el bandeamiento.						
232					- Algunas clastas de lutitas presentan ovalidad.						
233			80°								
234											
235											
236											
237											
238											
239			80°								
240				239.7 – 244.65 RHFS	MASSIVE RHYOLITE						
241					- Gris - Verdosa a verde: Masiva con presencia de Hierolitos en abundancia.						
242					- Bandas de sericita finas de color verde oscuro.						
243					- Trazas de Py en hilillos						
244											
245			80°	244.65 – 249.48 ARSI	STITCEUS ARGILLITE						
246					- Negra, silícea, moderadamente deformada. Localizada presencia de zonas con mayor contenido de grafito.						
247					- Contacto inferior por falla con la Riolita						
248					- 1% de Py en hilillos paralelos a la estratificación						
249											
250				249.48 – 261.42 STFB	FAULT BRECCIA.						
251					- Gris - verde - Negra.						
252					- Presencia de fragmentos de Argillita y de Riolita.						
253					- La Matriz es principalmente gouge, grafito, clorita y cuarzo.						

RHFS → ARSI → RHFS

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PAGE 22 OF 42	PROJECT: Wolverine	HOLE NO. WI-97-102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
231										
232										
233										
234										
235										
236										
237										
238										
239										
240										
241										
242										
243										
244										
245										
246		246.1	247.2		203530					
247										
248		248.85	249.48		203531					
249										
250										
251		250.97	251.97		203532					
252										
253										

PAGE 23 OF 42 | PROJECT: Wolverine | HOLE NO. WV-92-102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
254				STFB - La relación fragmentos / Matriz es 80% Frag y 20% Matriz							
255				- La parte superior de la falla se domina de por fragmentos de Arcillita, la parte media por fragmentos de violita y la parte inferior por grafito y fragmento de Arcillita							
256				-							
257											
258											
259											
260											
261											
262				262.47-273.39 SILICEOUS ARCILLITE							
263				ARSI Similar a la anterior, con menor contenido de Py (Trazas solamente)							
264											
265				80°							
266											
267											
268											
269											
270											
271											
272											
273											
274				273.94 - 274.63 GRAPHITE ARCILLITE ARGR Negra, suave y con alto contenido grafítico. Asociada a zona de falla							
275				274.63 - 276.8 STGG FAULT Presenta moderado a alto contenido							
276											

PMFS

ARSI

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PAGE 24 OF 42	PROJECT: Wolverine	HOLE NO. WV-97 103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
254										
255										
256										
257										
258										
259										
260										
261										
262										
263										
264										
265										
266										
267		267.7	269		203533					
268										
269										
270										
271										
272										
273										
274		274.4	276.3		203534					
275										
276										

PAGE 25 OF 42 | PROJECT: Wolverine | HOLE NO. WW-97-102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	CEP C	CO_3 D	E	FRACTURE INTENSITY	% VEIN QTZ.
277				continúa de gra. f. to. - roca caja c/ fragmentos de argillite la cual presenta fuerte fracturamiento y los fragmentos están debilmente rotados				D			
278				→ Argillite fragmental → CO_3 + granito → Brechización							
279											
280											
281				279.8-287.05 RHFS MASSIVE RHYOLITE Gris - Masiva fracturada, con presencia de arcilla en las fracturas. - Contiene bandeado biotita y bolsillones de Py (TRAZAS							
282			85								
283											
284											
285											
286											
287											
287.05			70	287.5 : Aumenta el contenido de grafito a la riolita, dándole una coloración gris-Negruzca							
288			85								
289				m.P ↓ 287.05-292.21 ARS1 SILICEOUS ARGILLITE. Black w/ faint wispy siliceous laminae. Tr. mass py blebs as well as rare f.g diss euh py.							
290		ARS1									
291											
292											
292.21			85	m.P ↓ 292.21-297.11 RHFS MASSIVE RHYOLITE Same as above (279.8-287.05). mass. aphyric fog gray w/ tr->1% f.g 5mm thk. py'ic bands + tr faint 5mm thk mass. sph bands							
293											
294											
295		RHFS	85	→ 292.21-297.11: Localized v. faint, fine wkly magnetic bands. Appears to be trying to be Fe-formation							
296											
297											
297.11			80								
297.49		ARCB		297.11-297.69 ARCB CARBONACEOUS ARGILLITE Dk blackish/gray finely intercalated carb'ceous arg + qtzose bands averaging 1mm thk. Tr->1% f.g diss py.							
297.69			70								
298		ARS1	55								
299											

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PAGE 26 OF 42	PROJECT: Wolverine	HOLE NO. WV 97 102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
277										
278										
279										
280										
281										
282										
283										
284										
285										
286										
287										
288										
289										
290										
291										
292		292.21	293.24		203535					
293		293.24	294.73		203536					
294										
295		294.73	296.25		203537					
296		296.25	297.11		203538					
297										
298		297.11	299.00		203539					
299										

PROJECT: Wolverine

HOLE NO. W 97-02

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(297.11 - 297.69 · ARCB cont'd)							
				→ 297.49 - 297.69 · QTVN · QUARTZ VEIN							
				Bull wh. qtz vein w/							
300	300.09	ARSI		5% wallrk frags +							
300.81			95	tr f.g. blebby py.							
301											
				297.69 - 300.81 SILICEOUS ARGILLITE							
302			80	ARSI Black mass. sil. arg. w/ faint							
		EXCP		wispy dk gray silica feathering							
303				throughout. Primarily brkn core							
	303.42			+/or flt gouge. Tr → 1% f.g.							
	303.49										
303.79			72	diss euh. py.							
304.09			77	→ 300.07 - 300.82 : STGG · FAULT GOUGE							
305				Variable grain sized							
				black pasty gouge							
306	306.47		80	w/ 1cm of f.g. mass							
		EXSP		py @ 300.81 → 300.82							
307											
	307.67										
308				300.81 - 303.79 CALCITE PYRITE EXHALITE							
308.75				EXCP Var. f.g + mass diss, stringer, banded							
309.20	ECP		71	+ mass py in a mottled wh./blue							
			71	calcite/py exh. Strly effervescent							
		EXSP		w/ 10% HCl.							
310			80	→ 300.81 - 302.70 : 15% py							
310.46				→ 302.70 - 303.79 : 3% py							
311			70	→ 303.42 - 303.49 : 80% mass							
				dull metallic py.							
312											
				303.79 - 303.92 SILICA EXHALITE							
313				EXSP Dk blackish/gray aphyric							
		EXCP		silica exhalite w/ 1% f.g → mass...							
314				py'ic bands. Fine x-cutting							
	314.74			calcite veinlets @ 30° cax							
314.95			55								
315			70								
				303.92 - 304.09 CALCITE PYRITE EXHALITE							
316				EXCP Same as above (302.70 - 303.79)							
				w/ 3% f.g. diss. py.							
317			78								
				304.09 - 308.75 SILICA EXHALITE							
318				EXSP Questionable sil. exh, very similar							
				to mass. cherty rhyo. Fog gray							
319				sil. exh (?) w/ tr. faint f.g → mass							
		ARCB		orange sph bands (~1mm thk) +							
320				rare v f.g. diss py.							
				→ 306.47 : STFL - FAULT							
321				Flt @ 80° cax							
				→ 307.67 - 308.06 : Continued EXSP w/ localized							
321.95											

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PAGE 28 OF 42	PROJECT: Wolverine	HOLE NO. WV97102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		299.00	300.81		203540	
300						
		300.81	301.72		203541	
301						
		301.72	302.70		203542	
302						
		302.70	303.79		203543	
303						
		303.79	303.92		203544	
304		303.92	304.09		203545	
305		304.09	306.27		203546	
306						
		306.27	307.67		203547	
307						
		307.67	308.06		203548	
308		308.06	308.75		203549	
		308.75	309.00		203550	
309						
		309.00	310.00		203551	
310		310.00	310.46		203552	
311		310.46	311.46		203553	
		311.46	311.89		203554	
312						
		311.89	313.33		203555	
313						
		313.33	314.56		203556	
314						
		314.56	314.95		203557	
315						
		314.96	316.06		203558	
316						
317						
318						
319						
320						
321						
322						

Descriptive Geology Only

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (304.09-308.75: EXSP cont)	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				wk → mod calcic bands.							
				Bands avg < 1cm thk.							
				→ 308.15: 1% fg → mass po stringers.							
308.75-309.00				CALCITE PYRITE EXHALITE							
EXCP				Same as above (302.70-303.79)							
309.00-310.46				SILICA PYRITE EXHALITE							
EXSP				DK gray mass sil/py exh w/ 1% f.g → mass. stringer sph, Tr mass blebby py, rare f.g diss. po. Fine (1mm thk) rhythmic argiceous laminae throughout. Localized finely mottled fe-carb (wk efferv., wkly fe stained). Sph in stringers appear assoc'd w/ fe carb rich regions.							
310.46-314.95				CALCITE PYRITE EXHALITE							
EXCP				Laminated cal/py exh w/ light yellow (wkly fe-stained) carb.+ mass. dull metallic py (5% total py) as well as 1-2% f.g → mass sph stringers/bands. Rare localized mass PbS blebs. Str'ly effervescent w/ 10% HCl.							
				314.78-314.95. QCVN - QUARTZ CARB. VEIN							
				60/40% qtz/carb w/ 3% mass blebby chl, tr py.							
314.95-321.95				CARBONACEOUS ARGILLITE							
ARCB				Black finely laminated carb'ceous arg w/ 1% mass stringer py.							
321.95-325.62				LAPILLI TUFF							
RHLT				DK gray rhy lapilli tuff w/ wk perv ser alt'n. Lapilli sized fragments (1x4mm) mod'ly fol'd, rare → tr f.g. diss. py							

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PAGE 30 OF 42	PROJECT: Wolverine	HOLE NO. WV97102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PROJECT: Wolverine

HOLE NO. W97102

(321.95 - 325.62 : RHLT - cont)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
323	RHLT										
324			80								
325											
325.62			80	325.62-328.00 TUFFACEOUS ARGILLITE							
326	ARTF			ARTF Light black tuffaceous argillite w/ fine rhyolitic lapilli frags. Very similar to above (321.95 - 325.62) w/ ↑'d arg. component.							
327											
328 / 328.00			70								
329	RHFS			328.00-331.30 MASSIVE RHYOLITE RHFS mass. fog gray aphyric rhy w/ random fine sericitic bands + fine calcareous microlites. Rare f.g. diss py.							
330			30								
331 / 331.30			71								
332	RPAT			331.30-341.10 ARGILLICEOUS CRYSTAL TUFF RPAT Str'ly fol'd, dark gray/black laminated arg. x-tal tuff. Variable structure w/ kink bands, gouge, flt's + rapidly changing fol'n. str. graphitic component.							
333											
334											
335				→ 339.44 - 340.13 : mod → str. perv. ser. alt'n.							
336				→ 340.40 - 341.10 : v. wkly fol'd (laminated) w/ lapilli frags + fsp x-tals vis.							
337											
338											
339											
339.44 → 340.13 →	RPAT										
341.10			80								
341.76	RPTF			341.10-341.76 CRYSTAL TUFF RPTF Str. perv. sericitically alt'd, bile green colour x-tal tuff w/ rare v.f.g. diss py. Str'ly fol'd.							
342			65								
343.19	RPAT										
			70								
344	RPTF			341.76-343.19 ARGILLICEOUS CRYSTAL TUFF RPAT Same as above (331.30 - 341.10)							
345			60								

Westmin Resources

PAGE 32 OF 42 | PROJECT: Wolverine | HOLE NO. WV 97 102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
323										
324										
325										
326										
327										
328										
329										
		329.05	330.18		203559					
330										
		330.18	331.30		203560					
331										
332		331.30	333.53		203561					
333										
334		333.53	336.54		203562					
335										
336										
337		336.54	338.03		203563					
338										
		338.03	339.52		203564					
339										
340		339.52	341.10		203565					
341		341.10	341.76		203566					
342		341.76	343.19		203567					
343										
344		343.19	345.11		203568					
345										

PROJECT: Wolverine Stratigraphic

HOLE NO. WV97102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	m	FRACTURE INTENSITY	% VEIN QTZ.
				343.13-347.05 CRYSTAL TUFF							
346	RPTF			RPTF mod perv beige ser alt'd, upper med → upper coarse grained siliceous x-tal tuff. Strly fol'd							
347 347.05											
348				347.05-351.32 QUARTZ EYE CRYSTAL TUFF							
349	RPQL			RPQL Dk gray, qtz-eye x-tal tuff w/ wk perv. ser. alt'n + fine beige ser bands. Blue qtz-eyes ave 2mm² (coarse grd size). Rare f.g. diss py x-tals.							
350											
351 351.14				→ 351.14-351.32: QCVN-QUARTZ-CARB VN 55/45% qtz/carb vn w/ fragmented/clastic appearance 10% wallrock frags incl'd							
351.32	ARGR (50)										
351.89											
352	SEMI			351.32-351.89 GRAPHITIC ARGILLITE (STGG)							
352.33				ARGR Jet black graphitic arg. HW flt gouge 1% f.g. diss. cpy + 1% f.g. diss py. Very friable f.g. gouge.							
353	SSMS										
353.37 ARTF 353.48											
354 354.01				351.89-352.33 SEMI-MASSIVE SULFIDE / ASH TUFF							
354.61				SEMI wk perv chl, mod perv ser alt'd f.g. rhyolitic ash tuff w/ 5% mass. stringer cpy, 3% f.g→mass banded blebby py, 3% mass banded sph, 1% mass x-cutting 1mm thk p.d.c stringers. 8% blebby mass calcite localized from 352.12→352.18.							
354.98											
355 355.04	ARTF										
355.88											
356				352.33-354.01 MASSIVE SULFIDE (1.68m)							
356.49				SSMS Primarily mass. dull metallic py w/ regional sph + gangue rich regions Rare core common Regional effery. w/ 10% HCl. Healed fractures criss-cross unit in a loose spiderweb like							
357	RHLT (1:100)										
358 358.03											
358.36											
358.95				→ 352.33-353.05: 83% PY, 15% SPH, 2% GAN. Dull metallic mass py w/ 5% f.g. buckshot diss. py. 15% faint feathery/wispy reddish sph. Gangue min'y consists of 1mm² diss. chl blebs							
359											
360											
361											
362				→ 353.05-353.17: 45% GANGUE 30% SPH 25% PY							

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PAGE 34 OF 42	PROJECT: Wolverine	HOLE NO. WV97102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
346		345.11	347.05		203569	
347		347.05	348.16		203570	
348						
349		348.16	350.01		203571	
350		350.01	351.32		203572	
351		351.32	351.89		203573	
		351.89	352.33		203574	
352						
		352.33	353.05		203575	
		353.05	353.17		203576	
353		353.17	353.40		203577	
		353.40	354.01		203578	
354		354.01	354.86		203579	
		354.86	355.06		203580	
355		355.06	355.88		203581	
		355.88	356.71		203582	
356						
357		356.71	358.07		203583	
358		358.07	358.26		203584	
		358.26	358.85		203585	
359		358.85	360.91		203586	
360						
361		360.91	362.38		203587	
362						

PROJECT: Wolverine

HOLE NO. WV97102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	* Descriptive Geology Only * GEOLOGICAL DESCRIPTION (352.33 - 354.01 - SSMS cont'd)	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				mass red sph w/ f.g. → m.g. cubic py buckshot diss throughout. Gangue is evenly distributed as graphitic arg. wkly efferv. carb., + 1mm² blebby chl.							
				→ 353.17 - 353.37: 65% GANGUE, 30% PY, 5% SPH. Anastomizing f.g. → mass py stringers over a gangue matrix of fine graphitic arg. partings, wk. efferv. blebby carb., 2mm² gtzose blebs, + 1mm² blebby chl.							
				→ 353.37 - 353.40: ARTF - TUFFACEOUS ARG. Jet black tuffaceous arg. (graphitic) w/ sharp contacts @ 73° cax. wk perv. carb. alt'n. Wispy 0.5 x 3mm wh. carb (lapilli sized) frags comprise <1%. Tr. v.f.g. stringer py.							
				→ 353.40 - 354.01: 95% PY, 3% SPH, 2% GANGUE. mass. dull metallic py. w/ 5% f.g. cubic pyic "buckshot". V. faint wispy sphaleritic stringers localized near 353.95m. Wkly effervescent carb matrix w/ very rare 2mm² calcic rhombs v/s. Tr. diss 1mm² blebby chl.							
				→ 353.48: 1mm thk graphitic surface on fract. plane.							
				★ TOTAL SULFIDE GRADE ★ PYRITE - 90% SPHALERITE - 10% (Zinc: 3%)							
				354.01 - 355.88 ARTF — TUFFACEOUS ARGILLITE. Jet black tuffaceous arg (same as 353.37 - 353.40) w/ high localized Sx content. Fine carb. laminae + tuffaceous fragments.							
				→ 354.16 - 354.36: 20cm long kink band brings fol'n from 60° → 10° → 60°.							
				→ 354.51 - STFL: FAULT @ 60° cax.							
				→ 354.86 - 355.06: 30% mass sph w/ 10% stringer/blebs (1-2cm²) mass cpy.							
				→ 355.30 - 355.88: 10% mass str. sph w/ 3%							

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PAGE 36 OF 42	PROJECT: Wolverine	HOLE NO. WV 97102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 37 OF 42 | PROJECT: Wolverine | HOLE NO. WV97102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(354.01 - 355.88 - ARTF con't) mass cpy stringers + 5% fg → mass diss py.							
363											
364	RHLT			355.88-358.07 FINE GRAINED TUFF							
				RHTT Dk blue/gray fine rhy. tuff							
365				w/ random fine bile green seric							
				banding + localized wispy							
366				wh. carb stringers effery. g							
				mod'ly under 10% HCl. 1% mass							
367				fine sph stringers strung							
				through randomly in the sec.							
368				→ 356.40 - 358.07: wk perv. ser. alt'n,							
				lightens the colour							
369			90								
				358.07-358.26 RHYOLITE LAPILLI TUFF							
370				RHLT Pale greenish/gray rhy. lapilli							
				tuff w/ 1x4 mm sized frags							
371				+ mod perv. ser. alt'n. No sx's							
				358.26-358.85 FINE GRAINED TUFF							
372				RHTT mod perv. ser. alt'n; same as							
				above (355.88-358.07)							
373											
				358.85-400.11 RHYOLITE LAPILLI TUFF							
374	RHLT			RHLT mod perv. ser alt'n to 382.89 changing							
				to wk perv. chl + ser alt'n to 400.11.							
375				Pale greenish/gray changing w/							
				alt'n to a DK greenish gray							
376				rhy lapilli tuff. Slightly variable							
				lapilli fragment size from 1x4m to							
377				2x8 mm. Rare sx occurences.							
				→ 377.10 - 1% mass sph band. 1mm thk							
378											
379											
380			78	Variable structure, str'ly foliated							
381											
382											
383	382.89 → RHLT										
384											
385											

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PAGE 38 OF 42	PROJECT: Wolverine	HOLE NO. WW97 102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		362.38	363.96		203588					
363										
364		363.96	365.35		203589					
365		365.35	366.82		203590					
366										
367		366.82	368.26		203591					
368										
		368.26	369.75		203592					
369										
		369.75	370.43		203593					
370										
		370.43	371.90		203594					
371										
		371.90	373.97		203595					
372										
373										
374		373.97	375.45		203596					
375										
		375.45	376.78		203597					
376										
377		376.78	378.19		203598					
378		378.19	379.61		203599					
379										
380		379.61	381.09		203600					
381										
		381.09	382.38		203601					
382		382.38	383.75		203602					
383										
384		383.75	385.11		203603					
385										

PROJECT: Wolverine

HOLE NO. WV 97102

(358.85-400.11 - RHLT - cont)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
386	RHLT		35								
387											
388											
389											
390											
391											
392											
393			65								
394											
395											
396											
397											
398											
399											
400 400.11			85	400.11-403.10 QUARTZ EYE CRYSTAL TUFF							
401	RPQL			RPQL DK gray crystal tuff w/ lapilli sized rhyolitic frags + 1 mm² pale blue qtz eyes.							
402			80								
403 403.10											
404			65	403.10-409.65 RHYOLITE LAPILLI TUFF							
405	RHLT			RHLT Same as above (358.85-400.11)							
406											
407											
408											

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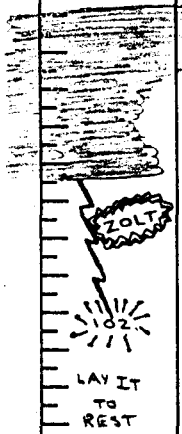
PAGE 40 OF 42	PROJECT: Wolverine	HOLE NO. WV97102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		385.11	386.54		203604	
386						
		386.54	387.85		203605	
387						
388		387.85	389.21		203606	
389						
		389.21	390.65		203607	
390						
		390.65	391.94		203608	
391						
392		391.94	393.38		203609	
393						
		393.38	394.93		203610	
394						
		394.93	396.27		203611	
395						
396						
		396.27	397.58		203612	
397						
398		397.58	400.11		203613	
399						
400						
401						
		400.11	403.10		203614	
402						
403						
		403.10	404.70		203615	
404						
405		404.70	406.32		203616	
406						
		406.32	407.79		203617	
407						
		407.79	409.65		203618	
408						

PAGE 41 OF 42 | PROJECT: Wolverine | HOLE NO. WV97102

(403.10 - 409.65 · RHLT cont)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION		ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
409	RHLT		70									
409.65			35	409.65-411.36	QUARTZ EYE CRYSTAL TUFF							
410	RPQL			RPQL	Same as above (400.11-403.10)							
411					Very gradational contacts.							
411.36			80									
				411.36-419.69	RHYOLITE LAPILLI TUFF							
412				RHLT	Same as above (403.10-409.65)							
413												
414												
415												
416	RHLT		35									
417												
418												
419												
419.69												



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PAGE 42 OF 42	PROJECT: Wolverine	HOLE NO. WV 97102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
410										
		409.65	411.36		203619					
411										
412		411.36	413.00		203620					
413										
		413.00	414.66		203621					
414										
415		414.66	416.55		203622					
416										
		416.55	417.76		203625					
417										
418		417.76	419.69		203624					
419										
420										

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DRILL LOG

PROJECT: Wolverine Stratigraphic	GROUND ELEV.: 1575m
HOLE NO.: WV 97 103	BEARING: 213° (G.S.)
LOCATION: 19050N 10000E	DIP: -70°
	TOTAL LENGTH: 549.86m (1804')
LOGGED BY: M. Padberg	HORIZONTAL PROJECT:
DATE: 07/21/97	VERTICAL PROJECT:
CONTRACTOR: Boisvenu Diamond Drilling	**ALTERATION SCALE**
CORE SIZE: NQ	
DATE STARTED: 07/20/97	**TOTAL SULPHIDE SCALE**
DATE COMPLETED: 08/20/97	
DIP TESTS:	
COMMENTS:	LEGEND



absent
slight
moderate
intense



traces only
< 1%
1% – 3%
3% – 10%
> 10%

RHFR, RHFS, RHTT
RTVN
STGG
RHAR
AR
EXSP
EXCP
EXMT

PAGE 1 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WW 9710-3

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
0	DHCS			0.00 - 6.17 CASING DHCS							
6 6.17				6.17 - 242.41 FRAGMENTAL RHYOLITE RHFR Common Fisher zone fragmental rhyolite w/ variable fragment size downhole No apparent grading. Regional fe-ox'n visible to depths of up to 80m. Chloritic + sericitic partings dominate. Very rare diss euhedral py. x-tals Fragment size is random from coarse to pebble sized clasts							
12	RHFR		55								
17			85								
23											

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PAGE 2 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WR 97 103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11		11.28	12.62		203625					
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

PAGE 3 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WW 97103

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (617 - 342.41 · RHFR · cont)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
24	RHFR		75								
25											
26											
27											
28											
29			70								
30											
31											
32	RHFR										
33											
34											
35			55								
36											
37											
38											
39											
40			58								
41											
42											
43											
44	RHFR										
45											
46			56								

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PAGE 4 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97 103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
24										
25										
26										
27										
28										
		28.28	29.66		203626					
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45		45.49	46.96		203627					
46										

PAGE 5 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97103

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (6.17 - 342.41 - RHFR - cont)	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
47	RHFR										
48											
49											
50			58	→ 50.61 - 50.68: QTVN - QTZ VEIN wkly ox'd, bullish vn. Contacts @ 60° cax							
51			60								
52				→ 52.45 - 52.52: QTVN - QUARTZ VEIN wkly oxidized bullish qtz vn. Contacts @ 70° cax.							
52.45 → 52.52			70								
53											
54											
55				→ 55.18 - 55.38: QTVN - QUARTZ VEIN Same as above (52.45-52.52) U.C. @ 60°, LC @ 71° cax.							
55.18 → 55.38			71								
56											
57			58								
58											
59											
60											
61											
62											
63			58								
64											
65											
66											
67	RHFR										
68											
69											

Westmin Resources

PAGE 6 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
47										
48										
49										
50										
51										
52										
53										
54										
55										
56										
57										
58										
59										
60										
61										
62		62.30	63.72		203628					
63										
64										
65										
66										
67										
68										
69										

PAGE 7 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97103

(6.17 - 312.41 RHFR cont)

→ 80.68-80.93: QCVN. QUARTZ CARB VEIN 90/10% qtz/carb w/ <1% chl blebs. No sx's.

→ 80.93 - sericitic partings diminish to dk green chloritic/arg. mix of partings.

Westmin Resources

PAGE 8 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
70										
71										
72										
73										
74										
75										
76										
77										
78										
79										
80										
		80.57	81.31		203629					
81										
82										
83										
84										
85										
86										
87										
88										
89										
90										
91										
92										

PAGE 9 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97103

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (16.17-342.41 RHFR - cont)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
93	RHFR										
94											
95											
96											
97											
98											
99											
100 100.07 100.27			35°	→ 100.07-100.27 · QCVN - QUARTZ CARB VN 90/10% qtz/carb vn w/ 2% fine chl'ic blebs. No vis sx's. contacts @ 35° cax							
101	RHFR										
102											
103											
104											
105											
106											
107											
108											
109											
110											
111											
112											
113	RHFR										
114											
115											

Westmin Resources

PAGE 10 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
93										
94										
95										
96										
97		96.62	98.09		203630					
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										
112										
113		113.52	114.91		203631					
114										
115										

PAGE 11 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97 103

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (6.17-342.41 -RHFR - cont)	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
116	RHFR										
117											
118											
119											
120											
121											
122											
123											
124											
125											
126											
127			70								
128											
129											
130											
131											
132											
133			75								
134											
135											
136	RHFR										
137											
138											

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PAGE 12 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97 103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
116										
117										
118										
119										
120										
121										
122										
123										
124										
125										
126										
127										
128										
129										
130		130.73	132.13		203632					
131										
132										
133										
134										
135										
136										
137										
138										

PAGE 13 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97103

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (6.17-342.41 - RHFR cont)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
139	RHFR										
140											
141			75								
142											
143											
144											
145											
146											
147			70								
148											
149	RHFR										
150											
151											
152											
153											
154											
155											
156											
157			65								
158											
159	RHFR										
160											
161											

Westmin Resources

PAGE 14 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
139										
140										
141										
142										
143										
144										
145										
146										
147										
		147.77	149.05		203633					
148										
149										
150										
151										
152										
153										
154										
155										
156										
157										
158										
159										
160										
161										

PAGE 15 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97102

(6.17-342.41-RHFR-cont)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
162	RHFR			→ 162.60-162.82 QTVN - QUARTZ VEIN Bull white qtz vn, no other mineralization							
163	162.60-162.82		75	→ 163.54-163.67: QTVN-QUARTZ VEIN Same as above (162.60-162.82)							
164			70 65								
165				→ 165.93-166.15: ST66-FAULT GOUGE Dk gray, variable clast size. Clasts are angular → sub-angular.							
166	165.93-166.15		50								
167											
168				→ 168.91-169.15: QTVN-QUARTZ VEIN Same as above (163.54-163.67)							
169			45								
170											
171											
172			70								
173											
174											
175											
176											
177											
178											
179											
180			80								
181											
182	RHFR										
183											
184											

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PAGE 16 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97 103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
162										
163										
164										
165		165.02	166.45		203634					
166										
167										
168										
169										
170										
171										
172										
173										
174										
175										
176										
177										
178										
179										
180										
181										
182		182.20	183.70		203635					
183										
184										

PAGE 17 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WW9703

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (16.17-342.41-RHFR cont'd)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
185	RHFR										
186											
187			40								
188											
189											
190											
191											
192											
193			70								
194	RHFR										
195											
196											
197											
198											
199			85								
200											
201											
202											
203											
204											
205	RHFR										
206			80								
207											

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PAGE 18 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
185										
186										
187										
188										
189										
190										
191										
192										
193										
194										
195										
196										
197										
198										
199		199.35	200.78		20636					
200										
201										
202										
203										
204										
205										
206										
207										

PAGE 19 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV9710

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	m	FRACTURE INTENSITY	% VEIN QTZ.
				(6.17-342.41-RHFR cont)							
208	RHFR										
209											
210											
211											
212											
213			35								
214											
215											
216											
217											
218	RHFR										
219											
220											
221											
222											
223			65								
224											
225											
226											
227											
228	RHFR										
229											
230											

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PAGE 20 OF 417	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
208										
209										
210										
211										
212										
213										
214										
215										
216		216.55	218.05		203637					
217										
218										
219										
220										
221										
222										
223										
224										
225										
226										
227										
228										
229										
230										

PAGE 21 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97 103

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (16.17 - 342.41. RHFR cont)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
231	RHFR										
232											
233											
234											
235											
236											
237											
238											
239											
240			70								
241											
242											
243											
244											
245			78								
246											
247											
248											
249			55								
250											
251	RHFR										
252											
253											

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PAGE 22 OF 417	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
231										
232										
233										
234		234.06	235.56		203638					
235										
236										
237										
238										
239										
240										
241										
242										
243										
244										
245										
246										
247										
248										
249										
250										
251		251.38	252.80		203639					
252										
253										

PAGE 23 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97103

(6.17-342.41 RHFR-cont'd)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
254	RHFR										
255			80								
256											
257											
258											
259											
260											
261											
262											
263	RHFR										
264			80								
265											
266											
267											
268			80								
269											
270											
271											
272											
273											
274	RHFR										
275			65								
276											

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PAGE 24 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
254										
255										
256										
257										
258										
259										
260										
261										
262										
263										
264										
265										
266										
267										
268		268.64	270.08		203640					
269										
270										
271										
272										
273										
274										
275										
276										

PAGE 25 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97103

(6.17 - 342.41 RHFR cont)

→ 278.30 - 278.39 : QTVN : QUARTZ VEIN
Snowy white qtz vn w/ race fg blebby py, + tr chl ic stringers

→ 278.66 - 278.79 : QTVN : QUARTZ VEIN

→ 279.08 - 279.40 : QTVN : QUARTZ VEIN

→ 279.49 - 279.80 : QTVN : QUARTZ VEIN

→ 279.89 - 280.01 : QTVN : QUARTZ VEIN

→ 280.08 - 280.24 : QTVN : QUARTZ VEIN
Same as above

RHFR

RHFR

RHFR

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PAGE 26 OF 417	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
277										
278										
279										
280										
281										
282										
283										
284										
285		285.88	287.10		203641					
286										
287										
288										
289										
290										
291										
292										
293										
294										
295										
296										
297										
298										
299										

PAGE 27 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97103

(6.17 - 342.41 RHFR cont)

→ 319.98 - 320.15 - QTVN - QUARTZ VEIN
Bullish qtz vein, no mineral.

→ 320.27 - 321.48 - QTVN - QUARTZ VEIN
Snow wh. qtz vein w/
tr → 1% mass stringer py

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PAGE 28 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
300										
301										
302										
		302.69	304.17		203642					
303										
304										
305										
306										
307										
308										
309										
310										
311										
312										
313										
314										
315										
316										
317										
318		318.25	319.63		203643					
319										
320										
321										
322										

PROJECT: Wolverine Stratigraphic

HOLE NO. WV 97103

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (6.17 - 342.41 - RHFR - cont)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
323	RHFR										
324											
325											
326			75								
327											
328											
329											
330											
331											
332											
333			60								
334											
335											
336											
337											
338											
339											
340											
341											
342			75								
342.41				342.41 - 345.62 RHAR	INTERBEDDED ARGILLITE AND FRAGMENTAL RHYOLITE						
343	RHAR		80		Interbedded 5x30 mm lenticular						
			80		rhy frags w/ black siliceous arg.						
344			65		Tr → 1% mass stringer py. (possibly EXSP?)						
345				→ 343.40 - 343.48 · QTVN · QUARTZ VEIN							

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PAGE 30 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
323										
324										
325										
326										
327										
328										
329										
330										
331										
332										
333										
334										
335		335.37	336.84		203644					
336										
337										
338										
339										
340										
341										
342										
343										
344										
345										

PAGE 31 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97103

(342.41 - 345.62 - RHAR - con't)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
345.62	RHAR		35		Bull wh. qtz vn; no min'n							
346				345.62 - 349.79	MASSIVE RHYOLITE							
347				RHFS	London fog gray w/ forest green highlighted mass aphyric rhy.							
348	RHFS		50		wk perv. chl alt'n. Fine rhythmic dk beige sericic bands w/ rare							
349					f.g. diss. euh. py							
349.79			60									
350				349.79 - 354.20	SILICEOUS ARGILLITE							
351			80	ARSI	Black arg. w/ faint feathery, wispy siliceous domains. V. hard							
352					Tr -> 1% mass pyic stringers							
353	ARSI											
354.20			90									
355				354.20 - 357.60	MASSIVE RHYOLITE							
356				RHFS	London fog gray mass aphyric rhy w/ anastomizing fine sericic stringers, regional wk. carbonate microvilles, + localized tr mass							
357	RHFS		70		faint 3-5mm thk sphyric bands							
357.60			85		Tr. fg -> mass stringer py.							
358	ARSI				→ 355.58 - 356.00: Sub-angular -> rounded							
358.40			65		rhyolic pebbles							
359				357.60 - 358.40	SILICEOUS ARGILLITE							
360	RHFS			ARSI	Same as above (349.79 - 354.20)							
361					Primarily brkn core.							
361.45			35	358.40 - 361.45	MASSIVE RHYOLITE							
362				RHFS	Same as above (354.20 - 357.60)							
363				361.45 - 367.55	SILICA EXHALITE.							
364				EXSP	DK gray silica exh (w/ mod -> high arg. component) Random, irregular							
365	EXSP		85		beigish wkly effervescent bands are common. Race -> tr							
366					fg diss. py. V. wispy/feathery siliceous texture.							
367					Chl alt'n?							
367.55												
368	EXSP		30									

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PAGE 32 OF 417	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97 103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
346										
347										
348										
349										
350										
351										
352										
353										
354										
355										
356		356.00	357.60		203645					
357		357.60	358.40		203646					
358		358.40	360.80		203647					
359										
360		360.51	361.45		203648					
361		361.45	362.99		203649					
362										
363		362.99	364.28		203650					
364		364.28	365.91		203651					
365										
366		365.91	367.55		203652					
367		367.55	369.18		203653					
368										

PAGE 33 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97103

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
	EXCP		70	367.55-371.56 CALCITE PYRITE EXHALITE							
369				EXCP Dk gray/bsicich wkly laminated, wk→mod'ly effervescent cal/py exhalite. 3-4% f.g. irregularly banded py, tr localized diss magnetite, regional wk qtzose flooding.							
370											
371											
371.56											
	EXMT		70								
372				371.56-372.66 MAGNETITE IRON FORMATION							
372.66				EXMT Dk purple mass magnetite rich fe formn. 25% magnetite w/ 3% fg diss. py + tr. stringer sph. Regional qtz flooding from 371.56-372.00. wk→mod'ly effervescent.							
373			70								
374			75								
375	EXCP										
376											
				372.66-378.40 CALCITE PYRITE EXHALITE							
377				EXCP Same as above (367.55-371.56)							
378											
378.40			80								
				378.40-379.86 SILICA EXHALITE							
379	EXSP			EXSP Same as above (361.45-367.55)							
379.86											
380			80	379.86-381.08 CALCITE PYRITE EXHALITE							
	EXCP			EXCP Same as above (367.55-371.56)							
381.08			90								
			70	381.08-387.46 SILICA EXHALITE							
382				EXSP Dk black silica exhalite w/ lighter gray faint, feathery/wispy siliceous domains. 1% mass localized stringer py, + 1% mass localized stringer sph.							
383											
384	EXSP		80								
385											
386											
387											
387.46			90								
				387.46-409.92 FINE GRAINED TUFF							
388				RHTT Mod perv ser altd fine grained tuff. Bile green colour modly foliated. Very rare f.g. disseminated py mineralization.							
389											
390	RHTT		75								
391											

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PAGE 34 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
369										
		369.68	370.14		203654					
370		370.14	371.56		203655					
371										
		371.56	372.66		203656					
372										
		372.66	373.97		203657					
373										
		373.97	375.44		203658					
374										
375		375.44	376.90		203659					
376										
		376.90	378.40		203660					
377										
378										
		378.40	379.86		203661					
379										
		379.86	381.08		203662					
380										
381		381.08	382.30		203663					
382		382.30	383.60		203664					
383										
		383.60	384.78		203665					
384										
		384.78	386.16		203666					
385										
386		386.16	387.46		203667					
387		387.46	388.65		203668					
388										
		388.65	390.09		203669					
389										
390		390.09	391.47		203670					
391										

PAGE 35 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97103

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (387.46-407.92 RHTT cont'd)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
392	RHTT										
393											
394											
395											
396											
397											
398											
399											
400			80								
401											
402											
403				→ 403.47-403.84: 5-8% mass. v. finely anastomizing sph'ic stringers. Random + irregular in appearance							
404											
405											
406											
407											
407.92			80	407.92-409.38 MASSIVE RHYOLITE							
408	RHFS			RHFS (FR?) London fog gray massive aphyric rhyolite w/ fine random arg + ser'ic bands. Rare f.g. diss euh py.							
409			60								
409.38			70								
410				409.38-412.64 LAPILLI TUFF							
411	RHLT			RHLT wk perv. chl. mod perv ser alt'd rhy lapilli tuff. Sharp U.C w/ RHFS. Frags avg 1x3 cm + are sparse. V. rare v.f.g. diss py.							
412											
412.64			70								
413	RHFS			412.64-414.33 MASSIVE RHYOLITE							
414				RHFS Laminated, patchy wk chl alt'n							

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PAGE 36 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
392		391.47	392.93		203671	
		392.93	394.40		203672	
393						
394		394.40	395.80		203673	
395						
		395.80	397.23		203674	
396						
397		397.23	398.67		203675	
398						
		398.67	400.14		203676	
399						
400		400.14	401.59		203677	
401						
		401.59	403.47		203678	
402						
403		403.47	403.84		203679	
404		403.84	404.27		203680	
		404.27	406.56		203681	
405						
406						
		406.56	407.92		203682	
407		407.92	409.38		203683	
408						
409		409.38	410.93		203684	
410						
		410.93	412.64		203685	
411						
412						
		412.64	414.33		203686	
413						
414		414.33	416.14		203687	

PAGE 37 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97102

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(412.64-414.33 RHFS cont)							
414.33		ARSI	70	mass. aphyric rhy. Rare diss f.g. py, random fine sericitic bands							
415			75								
416				414.33-422.42 SILICEOUS ARGILLITE							
417				ARSI Black hard siliceous arg. w/ faint, feathery grayish/white siliceous stringers showing disharmonic folding, micro-faulting randomness + discontinuity.							
418				Tr → 1% f.g → mass stringer							
419				py.							
420											
421											
422			75								
422.42			75	422.42-426.62 MASSIVE RHYOLITE							
423		RHFS		RHFS Light gray mass aphyric rhy w/ fine argillaceous laminae + random regional wk, faint hints of tuffaceous argillite							
424				Tr → 1% f.g. stringer py							
425											
426			80								
426.62			80	426.62-434.73 CALCITE PYRITE EXHALITE							
427		EXCP		EXCP mod → strly effervescent, locally variable texture (from mottled light blue → laminated beige carb/qtzose rich).							
428				Regional massive qtz flooding 10-13% f.g → mass diss. + banded							
429				py w/ up to 1% mass sph							
430				stringers. Qtz. flooded regions							
431				are rich w/ dk green blebby							
432				chl + chl'ic septa							
433			75								
434				434.73-435.40 SILICA EXHALITE							
434.73			85	EXSP DK gray, laminated, silica exhalite							
435		EXSP		w/ mod'ly disharmonized fabric							
435.40			82	Localized mass beige carb beads							
436		ARTF	80	(ankerite). Tr → 1% diss f.g. py.							
437			70								

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PAGE 38 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
415										
416		416.14	417.59		203688					
417		417.59	418.98		203689					
418		418.98	420.40		203690					
419										
420		420.40	421.41		203691					
421		421.41	422.42		203692					
422		422.42	423.78		203693					
423		423.78	425.76		203694					
424										
425		425.76	426.62		203695					
426		426.62	428.27		203696					
427										
428		428.27	429.80		203697					
429		429.80	431.32		203698					
430										
431		431.32	433.06		203699					
432										
433		433.06	434.73		203700					
434										
435		434.73	435.40		203701					
436										
437		435.40	437.04		203702					

PROJECT: Wolverine Stratigraphic

HOLE NO. WV97103

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
438	ARTF			435.40-440.07 TUFFACEOUS ARGILLITE							
				ARTF Black massive hard (v. siliceous) tuffaceous argillite. Fine grd to mass pyic stringers (2-3%) Dk gray w/ beigeish carb. bxlli sized tuffaceous frags. Tr sph							
439				438.69-436.76: QTVN - QUARTZ VEIN white qtz vn w/ w/ v. fine mass pyic stringers (<1%)							
440				439.09-439.21: ST66: FAULT GOUGE Pasty black gouge, all grain sizes.							
441	RHTT			440.07-440.97 FINE GRAINED TUFF							
442				RHTT mod → str patchy ser. altn, apple/bile green colour. 2% fine → med grained diss. py x-tals							
443	EXMT										
444				440.97-441.30 TUFFACEOUS ARGILLITE							
445				ARTF Same as above (435.40-440.07)							
446				441.30-442.52 FINE GRAINED TUFF							
447				RHTT Same as above (440.07-440.97)							
448											
449				442.52-445.23 MAGNETITE IRON FORMATION							
450				EXMT wk → mod ly magnetic laminated dark + light grays fe formn. 3 → 4% magnetite. Localized fragmented Fe-carb 1 cm² clast size.							
451	EXSP										
452				445.23-456.04 SILICA EXHALITE							
453				EXSP Very light London fog gray v. siliceous silica exhalite w/ 2-3% f.g banded / stringer py, + 1% f.g honey → orangy/red f.g. sph stringers Fine beigeish / Dijon mustard yellowish sericitic stringers are common. wkly disseminated fine wh carb. microlites present. Trace f.g PbS stringers. Localized white qtz flooding							
454											
455											
456											
457											
458	ARSI			456.04-486.13 SILICEOUS ARGILLITE							
459				ARSI Dk gray → black v. wispy, feathery, v. hard sil. arg (high Si content) 1% f.g → mass py stringers + tr							
460											

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PAGE 40 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		437.04	438.53		203703					
438										
		438.53	440.07		203704					
439										
440		440.07	440.97		203705					
441		440.97	441.30		203706					
442		441.30	442.52		203707					
		442.52	443.91		203708					
443										
		443.91	445.23		203709					
444										
445		445.23	446.70		203710					
446										
		446.70	448.10		203711					
447										
448		448.10	449.57		203712					
449										
		449.57	450.91		203713					
450										
		450.91	451.23		203714					
451										
		451.23	453.36		203715					
452										
453		453.36	454.75		203716					
454										
		454.75	456.04		203717					
455										
456		456.04	457.42		203718					
457		457.42	458.85		203719					
458										
		458.85	460.41		203720					
459										
1100		460.41	461.76		203721					

PAGE 41 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97 103

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (456.04 - 486.13 ARSI - cont)	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
461	ARSI			fine grained → mass red sph stringers.							
462											
463											
464											
465											
466			80								
467											
468											
469											
470			75								
471											
472											
473											
474											
475											
476			75								
477											
478											
479											
480											
481	ARSI		70								
482											
483											

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PAGE 42 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
461						
		461.76	463.21		203722	
462						
		463.21	464.65		203723	
463						
464						
		464.65	465.01		203724	
465		465.01	467.44		203725	
466						
467		467.44	468.93		203726	
468						
		468.93	470.23		203727	
469						
470		470.23	471.68		203728	
471						
		471.68	473.13		203729	
472						
473		473.13	474.55		203730	
474						
		474.55	475.77		203731	
475						
		475.77	477.32		203732	
476						
477		477.32	478.79		203733	
478						
		478.79	480.11		203734	
479						
480		480.11	481.58		203735	
481						
		481.58	482.87		203736	
482						
		482.87	484.36		203737	
483						

PAGE 43 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97 103

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EPI C	CARB D	E	FRACTURE INTENSITY	% VEIN QTZ.
				(456.04 - 486.13 · ARSI cont)							
484	ARSI			→ 484.37 - 484.45 : QTVN · QUARTZ VEIN							
484.37			80	Snow wh w/ tr							
484.45				amts minor creamy							
485				carbonate. Rare f.g							
				blebby py + rare							
456 486.13			85 40	fine chl'ic septa							
486.56	RHFR										
486.77			80 55								
487	RHFS			486.13 - 486.56 FRAGMENTAL RHYOLITE							
				RHFR Dk gray, lenticularly fragmented							
488				RHFR w/ tr → 1% f.g. diss. py.							
				Frag. size averages 5 x 50 mm +							
489			75	has fine sericitic partings.							
490											
				486.56 - 486.77 SILICEOUS ARGILLITE							
491				ARSI Same as above (456.04 - 486.13) w/							
				2-3% dk red mass sph'ic stringers.							
492											
				486.77 - 502.93 MASSIVE RHYOLITE							
493				RHFS Light London fog gray mass aphyric							
				cherty rhy. w/ fine anastomizing,							
494				feathery, sericitic bands + tr →							
				1% f.g. → mass diss. PbS. Tr → 1%							
495				f.g. diss py.							
496											
497											
498											
499											
500	RHFS		75	500.09 - 502.93 : wk → mod perv. chl							
				alt'n giving the rock							
501				a pale forest green							
			80	colour.							
502											
502.93			80	502.93 - 515.23 SILICEOUS ARGILLITE							
503				ARSI Dk gray + black banded / modly							
504				laminated siliceous rock w/							
				1% f.g. → mass diss py, tr. f.g.							
505	ARSI			blebby py. Faint tuffaceous fragmts							
				3 x 10 mm. High Si content.							
506											

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PAGE 44 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV 97-03

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
484		484.30	486.13		203738					
485										
486		486.13	486.56		203739					
		486.56	486.77		203740					
487		486.77	488.24		203741					
488		488.24	489.36		203742					
489		489.36	490.89		203743					
490										
		490.59	492.15		203744					
491										
492		492.15	492.84		203745					
		492.84	493.60		203746					
493										
		493.60	494.34		203747					
494										
		494.34	495.08		203748					
495		495.08	496.42		203749					
496		496.42	500.09		203750					
497										
498										
499										
500		500.09	501.53		203751					
501										
		501.53	502.93		203752					
502										
503										
504										
505										
506										

PAGE 45 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97103

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (502.93-515.23: ARSI cont'd)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
507	ARSI										
508											
509											
510											
511			85								
512											
513											
514											
515			75	→ 514.75-515.23 1% mass. dk red 3mm thk sphic band'g w/ tr diss f.g. py.							
515.23			80								
516	RHFR.										
517				515.23-523.66 FRAGMENTAL RHYOLITE							
518				RHFR mass. aphyric fog gray, frag'l rhy w/ fine beigish sericitic partings. Loosely fragmented							
519			z-folding.	w/ tr→1% f.g. diss py. F.g. diss carb. microlites vis.							
520				→ 517.95-523.66: Wk perv. cor alt'n giving fog gray RHFR a faint pale bilish green colour. z-fold structures are vis. (dilatational)							
521											
522			70								
523											
523.66			75	523.66-549.86 SILICEOUS ARGILLITE							
524	ARSI			ARSI Same as above (502.93-515.23)							
525											
526											
527											
528											
529											

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PAGE 46 OF 47	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97-03

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
507										
508										
509										
510										
511										
512										
513										
514		514.48	515.23		203753					
515		515.23	516.79		203754					
516		516.79	517.95		203755					
517		517.95	519.45		203756					
518										
519		519.45	520.74		203757					
520		520.74	522.15		203758					
521										
522		522.15	523.66		203759					
523										
524		545.86	546.96		203760					
525		546.86	548.03		203761					
526		548.03	549.96		203761					
527										
528										
529										

PAGE 47 OF 47 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97103

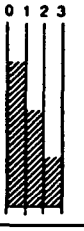
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(523.66-549.86 ARSI cont)							
530	ARSI										
531				→ 531.03-531.16: QTVN-QUARTZ VEIN Bull white qtz vn; no mineral							
532											
533											
534											
535											
536											
537											
538											
539											
540											
541											
542											
543											
544											
545											
545.86				545.86-548.03 MASSIVE RHYOLITE							
546	RHFS / ARSI			RHFS: Fcp gray w/ pale green hue mass rhy w/ wk porv seric altn. Tr→1% f.g. euh diss py + localized olk green sacc chl'ic zits. Fine anastomozing beige rhythmic sacc partings thru.							
547											
548											
548.03											
549	EXMT			548.03-549.86 MAGNETIC IRON FORMATION EXMT: wk porv. chl'ic all'd ExMT w/ 5% f.g. banded mt + tr→1% f→m.g. py.(+ localized 2mm² py'ic knockers). High Si content							
549.86											
550											
551											
552											

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DRILL LOG

PROJECT: Wolverine Stratigraphic	GROUND ELEV.: 1575m
HOLE NO.: WV 97 103-A.	BEARING: 213
LOCATION: 19050N 10000E	DIP: -70
	TOTAL LENGTH: 701.3
LOGGED BY: M. Padberg. + Dave Gale	HORIZONTAL PROJECT
DATE: August 28/97	VERTICAL PROJECT
CONTRACTOR: Boisvenu Diamond Drilling	
CORE SIZE: NQ	
DATE STARTED: August 27/97 (July 21)	
DATE COMPLETED: Sept 6th	
DIP TESTS	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

- Wedge off of WV 97 103 @ 357.82m (1174')
- Rods stuck at 701.3. Had to blast them out. Could not get explosives past wedge therefore lost all rods deeper than 357.82m.

Geology summary

357 - 443 : Package of calcite, silica + magnetite exhalites with interlayered tuffaceous rhyolite + siliceous Argillite.

443 608 : Package of siliceous rocks comprising of siliceous Argillite + Aphyric rhyolite. Minor (<8m) magnetite + calcite exhalites

608-642 : The Fisher mafic unit + an underlying mixed Argillite/andesite unit

642-701.3 : Package of siliceous Argillites, rhyolites + rhyolite fragmentals, as well as a 5m feldspar phyric tuff.

Mineralization:

1-5% in the upper exhalite units. 4-6% py, tr-1% sph, trace cpy and trace galena occurs in the siliceous Argillites between 551m - 608m. Tr py + sph in the mafic unit. No significant mineralization below Fisher mafic unit.

Alteration

No significant Alteration. Moderate sericite alteration over 30m within a rhyolite tuff. Pockets of mod. sericite alteration in siliceous rocks in 582-608 interval. Moderate sericite Alteration in RPTF unit (could be due to regional metamorphism).

LEGEND

PAGE 1 OF 32 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97103A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
0	WV 97 103			0.00-357.82 WEDGE FROM WV 97 103 WV 97-103							
1											
2											
355											
356											
357											
357.82											
358	RHFS			357.82-362.00 MASSIVE RHYOLITE RHFS Rubbly mass shy correlating to RHFS @ 358.40-361.45 of WV 97 103. Primarily lo&s core. 5' piece of steel from wedge also present							
359											
360											
361											
362.00			80°	362.00-368.02 SILICA EXHALITE							
362	EXSP			EXSP (?) Dk gray Si exh (poss. ARSI??) w/ high AR component. Creamy wispy sil'ceous stringers + feathery mottled wkly effery. carb bands common. wk pary. chl alt'n as seen by forest gr. colour on fract's + 90/10 chl/carb veinlets thk. Rare → tr. f.g. diss py. 1% f.g banded mt.							
363											
364											
365											
366			70								
367											
368.02			80°	368.02-371.73 CALCITE PYRITE EXHALITE							
368	EXCP			EXCP Yellowish creamy cal/py exh w/ 7-9% fg. diss. + banded (up to 3cm thk) py. mod'ly effery. w/ 10% HCl. General fragmented "mixed bag" texture w/ localized qtz-flood g. 1% mass dk, irregular mt bands.							
369											
370											
371											
371.73											
372	EXMT		77	371.73-372.73 MAGNETITE IRON FORMATION							
372.73			77	EXMT Dk purple mass mt rich Fe form w/ 25% mt + 3% f.g stringer py. Regional qtz flooding. 1% spherulites 2mm² Fe-carb tht.							
373			77								
374	EXCP										
375											

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PAGE 2 OF 32	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97-103A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1										
2										
355										
356										
357										
358										
359										
360										
361										
362										
363										
364										
365										
366										
367										
368										
369										
370										
371										
372										
373										
374										
375										

PAGE 3 OF 32 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 971024

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EPI C	CARB D	E	FRACTURE INTENSITY	% VEIN QTZ.
376	EXCP			372.73-377.60 CALCITE PYRITE EXHALITE							
				EXCP Sim. to EXCP above (368.02-371.73) but w/ 3% f.g. banded + diss. py. + localized qtz flooding							
377											
377.60			75								
378	EXSP			377.60-379.89 SILICA EXHALITE							
			85	EXSP Lt. grey laminated Si exh w/ wispy efferv. Fe-carb bands + pods + wk. perv. ser alt'n. Tr→1% f.g.→mass stringer py.							
379											
379.89			80								
380	EXCP										
381											
381.27			80								
382	EXSP			379.89-381.27 CALCITE PYRITE EXHALITE							
				EXCP Finely mottled blue/gray cal/py exh w/ 5-7% f.g. anastomozing pyic stringer bands. m/odly efferv. w/ 10% HCl. Fine rhythmic dk brown ser partings tht.							
383											
384											
385											
386				381.27-387.13 SILICA EXHALITE							
				EXSP Sim to high arg Si exh above (362.00-368.02) w/ 4% v.f.g.→mass anastomizing+laminated pyic stringers 1% mass red sph bands (<5mm thk)							
387.13			85	Sharp L.C. w/ RHTT.							
388			70								
389	RHTT			387.13-408.04 FINE GRAINED TUFF							
				RHTT Cdn Armed Forces green f.g. rhyic tuff w/ wk→mod perv. ser. alt'n tht. 1% v.f.g→mass bleb/lay pø disseminated tht. Localized (1%) mass anastomizing sphic bands situated sporadically tht unit Sharp L.C @ 90° cax w/ RHFR on arg. partg.							
390											
391											
392											
393											
394			73								
395											
396											
397											
398											

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PAGE 4 OF 32	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97103A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
376										
377										
378										
379										
380										
381										
382										
383										
384										
385										
386										
387										
388										
389										
390										
391										
392										
393										
394										
395										
396										
397										
398										

PAGE 5 OF 32 | PROJECT: Wolverine Stratigraphic | HOLE NO. W97103A

(387.13-408.04 - RHTT cont)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
399	RHTT											
400												
401												
402												
403												
404												
405												
406												
407												
408.04					408.04-410.24	FRAGMENTAL RHYOLITE						
409	RHFR		70		RHFR	Fine rhythmic black arg partgs for first 35cm (408.04-408.39) grading to faint forest green (chl) + beigeish fine ser partgs around large aphyric fog gray rhy fragments. Large frags (> core width) give appearance of RHFS.						
410 410.24			65									
411	RHTT		60									
412												
412.79			68		410.24-411.79	FINE GRAINED TUFF						
413	RHFR				RHTT	Same as above (387.13-408.04)						
414 414.26			70									
415			78		412.79-414.26	FRAGMENTAL RHYOLITE						
416					RHFR	Same as above (408.04-410.24) yet reversed w/ chl'ic + ser'ic partgs grading to argillaceous from 414.01-414.26.						
417	ARSI				414.26-422.99	SILICEOUS ARGILLITE						
418					ARSI	Blk sil'ceous arg w/ faint feathery grayish white sil'ceous stringers showing dishrmonic folding, micro fltg randomness + discontinuity. 1% fg stringer py, tr mass anastomozing sph bands, rare fg py						
419												
420												
421												

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PAGE 6 OF 32	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97-03A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
399										
400										
401										
402										
403										
404										
405										
406										
407										
408										
409										
410										
411										
412										
413										
414										
415										
416										
417										
418										
419										
420										
421										

PAGE 7 OF 32 | PROJECT: | HOLE NO. WV97103A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(414.26-422.99 - ARSI cont)							
422	ARSI		60								
423.99				422.99-426.75 MASSIVE RHYOLITE							
424	RHFS		80	RHFS DK green-grey, aphyric rhy w/ fine ser + arg patches. Locally appears like ARSI. Fine wh. microlites diss thr. Fine reddish sph'ic stringers (tr → 1%) + 1% f.g. diss py. 3-5cm thk randomly banded fine mottled carbonate (wkly effery.) thr. F'ld L.C.							
425											
426											
426.75											
427	EXCP		60								
428			70	426.75-430.27 CALCITE PYRITE EXHALITE							
429				EXCP Laminated blue/metallic py brown/white/+ yellow cal/py exh w/ 12-15% f.g. semi-mass banded py thr. Regional qtz flooding. Wk→mod effery w/ 10% HCl. DK green chl'ic zits thr. Rare f.g→mass red sph blebs							
430											
430.27			80								
431	EXSP										
432											
433				430.27-435.75 SILICA EXHALITE							
434				EXSP DK Si exh w/ localized patchy cal/py bands (same as above 426.75-430.27). Generally dishormonic fold'g thr (S-flds), mod arg component, regional fine grey, non-effery. mottling, 1% f.g. diss py, tr. f.g. po + sph.							
435											
435.75			80								
436											
437											
438	ARSI			435.75-439.86 SILICEOUS ARGILLITE							
439				ARSI Blk Si argillite w/ wispy localized mottled cream/wh carb bands + 3% v.f.g. laminated py thr. 1% v.f.g. stringer sph. x-cutting localized carb veinlets.							
439.86			70								
440	RHTT										
440.56	RHTT		60								
440.98	RHTT		85								
441				439.86-440.56 FINE GRAINED TUFF							
442	RHTT			RHTT Pale ag. wk perv. ser alt'd f.g. rhy tuff w/ 3-4% diss f.g. py + tr → 1% fg. anastomizing banded sph.							
442.69			85								
443	RHFR EXHT										
443.36			30								
444											

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PAGE 8 OF 32	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97-103A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
422										
423										
424										
425										
426										
427										
428										
429										
430										
431										
432										
433										
434										
435										
436										
437										
438										
439										
440										
441										
442										
443										
444										

PAGE 9 OF 32 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97103A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
444.48				440.56-440.83 SILICEOUS ARGILLITE							
445				ARSI Same as above (435.75 - 439.86)							
446				440.88-442.69 FINE GRAINED TUFF							
			60	RHTT Same as above w/ tr f.g. finely							
447				banded mt.							
448				442.69-443.36 MAGNETITE IRON FORMATION							
				EXMT wk perv. chl alt'd mauvish							
449				5% f.g. mt Fe form. mod'ly rhyth							
				laminae, 2% f.g → mass diss							
450	RHFS			py blebs wk perv carb alt'n.							
451				443.36-444.48 FRAGMENTAL RHYOLITE							
				RHFR Greenish/gray fragl rhy w/ avg							
452				(FS?) frag. size 2×5 cm w/ faint							
452.87				bdy's + chl/ser partgs 3-4%							
453			70	v.f.g → f.g. laminated + stringer							
453.24				py + 1-2% f.g. reddish							
453.68			85	stringer sph. Fragment angular							
454				Fe-carb's near L.C. w/ calcic mtx							
455	ARSI			444.48-453.68 MASSIVE RHYOLITE							
456.02				RHFS Fg gray, mass. cherty aphyric							
456.46	FGS			rhy w/ fine greenish/beige							
457				rhythmic anastomozing sericitic							
				partgs that 1-2% orangy							
458			60	f.g. sphic stringers + 2% f.g.							
				pyic stringers. wk patchy							
459				perv. ser. alt'n, + wk resid'l							
				perv. carb alt'n. Rare v.f.g. FGS							
460				453.68-456.02 SILICEOUS ARGILLITE							
				ARSI Dk gray → blk v. siliceous arg.							
461				w/ localized seins appearing							
				ARRH → RHAR. Tr. v.f.g. blebby							
462				+ laminated py.							
463				456.02-456.46 MASSIVE RHYOLITE							
			65	RHFS mass aphyric unaltered fg							
464				gray rhy w/ finely diss f.g							
				sized microlites + tr. f.g. py							
465				fine sericitic partgs							
466	ARSI			456.46-478.90 SILICEOUS ARGILLITE							
				ARSI v siliceous dk gray → blk arg.							
467											

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PAGE 10 OF 32	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97103A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
445										
446										
447										
448										
449										
450										
451										
452										
453										
454										
455										
456										
457										
458										
459										
460										
461										
462										
463										
464										
465										
466										
467										

PAGE 11 OF 32 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97 103A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
				(456.46 - 486.90 ARSI cont)							
				w/ wispy faint, feathery							
468				gray sil. bands tht. Tr→1%							
				v f.g. pyr. laminated bands							
469				intermittently tht. + rare							
				mass reddish sphic stringers							
470				v rare f.g. diss. cpy. Jet blk							
				graphitic partings on fract							
	ARSI			surfaces							
471			85								
472											
473											
474											
475											
476											
477											
478											
479											
480											
481											
482											
483											
483.52				→ 483.52 - 484.81 · QTVN · QUARTZ VEIN							
				snowy wh w/ 1%							
484				mass bleb by py.							
484.51	ARSI		90	3% pistacchio							
485				green epi stringers,							
486				1% dk gr. chl +							
				local wallrk arg							
486.90			85	stringers							
487											
				486.90 - 501.16 MASSIVE RHYOLITE							
488				RHFS Fog gray mass aphyric rhy							
				(FR?) w/ v pale greenish hue. Fine							
489				anastomizing ser partgs							
				irregularly fltd. Rare fg.							
490											

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PAGE 12 OF 32	PROJECT: Wolverine Stratigraphic	HOLE NO. WR97103A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
468										
469										
470										
471										
472										
473										
474										
475										
476										
477										
478										
479										
480										
481										
482										
483										
484										
485										
486										
487										
488										
489										
490										

PAGE 13 OF 32 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV97103A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(486.90 - 501.10 - RHFS cont)							
				diss py + PbS. Unalt'd (?)							
491				rhy grades to near RCAF							
				military green ⇒ wk perv chl+							
492				ser alt'n @ ~495.10 m. Seric							
				alt'd region shows tr→1%							
493				f.g. banded mt. Localized							
				veins that appear wkly							
494				fragmented (poss local RHFR)							
495	RHFS										
496											
497											
498											
499											
500											
501.10			30	501.10 - 538.09 SILICEOUS ARGILLITE							
502	ARSI			Same as above (456.46-486.90)							
				wk perv chl alt'n to ~508 m							
503											
504											
505											
506											
507											
508	ARSI										
509											
510											
511											
512											
513											

Westmin Resources

PAGE 14 OF 32	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97103A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
491										
492										
493										
494										
495										
496										
497										
498										
499										
500										
501										
502										
503										
504										
505										
506										
507										
508										
509										
510										
511										
512										
513										

PAGE 15 OF 32 | PROJECT: Wolverine Stratigraphic | HOLE NO. WV 97103A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (501.10 - 538.09 ARSI cont.)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
514	ARSI										
515											
516											
517											
518											
519											
520											
521											
522	ARSI										
523											
524											
525											
526											
527											
528											
529											
530											
531											
532											
533	ARSI										
534											
535											
536											

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PAGE 16 OF 32	PROJECT: Wolverine Stratigraphic	HOLE NO. WV97105A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
514										
515										
516										
517										
518										
519										
520										
521										
522										
523										
524										
525										
526										
527										
528										
529										
530										
531										
532										
533										
534										
535										
536										

PROJECT: Wolverine Stratigraphic

HOLE NO. WV97105W3

(501.10 - 538.09 · ARSI cont'd)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EPI C	CARB D	E	FRACTURE INTENSITY	% VEIN QTZ.
537	ARSI											
538.09			90	538.09-544.36	MASSIVE RHYOLITE							
				RHFS	Wk perv. ser ± alt'd mgss rhy w/ faint pale greenish hue. Tr → 1% f.g. diss py + tr f.g. diss mt near L.C w/ EXMT ↑g wk → mod chl alt'n from ~541m to 544.36.							
539												
540												
541	RHFS											
542												
543												
544												
544.36			77	544.36-547.5	MAGNETITE IRON FORMATION							
545	EXMT			EXMT	wk → mod perv chl alt'd mt Fe form w/ 5-7% f.g. diss mt + 1% fine → med grained diss py. Localized wk. calcic stringers + veinlets thru. Regional qtz-flooding. Very siliceous.							
546												
547												
548												
549				547.5-551.67	Light grey, weakly to moderately, foliated, Aphyric							
550	RHFS			RHFS	rhyolite							
551					- Light green sericite defining the foliation. Consists of 0.2cm wide bands spaced 0.5-3cm apart							
552					- Portions of interval show a weakly defined fragmental texture; consists of ~10-15% of interval.							
553					548-548.5: Stringers + pods of calcite/dolomite alteration: weak.							
554												
555			80	551.67-582.6m	Blackish grey, poorly to moderately foliated siliceous							
556	ARSI			ARST	Argillite							
557					- A wispy texture is present throughout interval and is defined by a slightly lighter grey (more siliceous) domains and a blacker argillite "matrix-like" material. The lighter siliceous portion comprises 85% of rock.							
558					QAVN: 577-577.1; 579.2-579.4							
559					- A weak carbonate alteration is present over lowermost 2.3m							

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PAGE 18 OF 32 | PROJECT: | HOLE NO. WH-97-103A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
537						
538						
539						
540						
541						
542						
543						
544		544.36	549.86	1.83	203762	
545		544.36	545.3	0.94	203763	
		545.3	546.65	1.35	203764	
546						
547		546.65	547.53	0.88	203765	
548 RHFS (547.5): 23% fine to coarse grained py typically forming massive (fine grained py)		547.53	548.86	1.33	203766	
549 + discontinuous (coarser py) bands		548.86	550.24	1.38	203767	
Fine grained bands are 0.3-1cm wide + are a brownish yellow colour						
550 The discontinuous bands contain 0.2-0.5cm		550.24	551.67	1.4	203768	
551 dia subhedral-euhedral pyrite						
All py bands are // to the spaced						
552 foliation.		551.67	552.69	1.02	203769	
- Trace dark red-brown sph occuring in a						
553 discontinuous band with fine grained py		552.69	554.14	1.45	203770	
(550.9)						
554						
ARSI (551.6):		554.14	555.59	1.45	203771	
555 Py: 3-4%, fine grained, brownish-gold banded						
py occurs throughout interval						
556 - Also occurs as subhedral to euhedral		555.59	557.06	1.47	203772	
cubic xlts ~ 0.5cm dia.						
557 - Also forms concentrated stringer zones						
where it reaches ~10% of interval: 551.8-		557.06	558.49	1.43	203773	
558 552.1; 553.3-553.6; 573.1-573.4						
- Semi-massive to massive 30cm py zone		558.49	559.89	1.4	203774	
559 at 582.3-582.6 in a carbonate matrix						

PROJECT:

HOLE NO. WV-97-103A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Cal)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
560				Core Angle: 555 m : 80° 575m: 75°							
				565 m : 70°							
561											
562											
563											
564											
565			70°								
566											
567											
568											
569											
570											
571											
572				582.6m-584							
573				PHFF							
574				Brownish-grey very fine grained tuffaceous rhyolite with mineralized siliceous domains							
575			75°	- Strong sericite alteration present throughout which gives the weak brownish green colour.							
576				- Siliceous domains form continuous bands and fragments and typically contain recrystized euhedral pyrite. Siliceous domains comprise ~15% of interval + are a slightly darker grey.							
577				- Rock is a very fine grained rhyolite tuff that has been sericitically altered							
578				- QTVN: 583.9-584.0							
579											
580											
581											
582											

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PAGE 20 OF 32	PROJECT:	HOLE NO. WV-97-103A

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
560	Sph: Trace to 1% sphalerite over interval		559.89	561.40	1.51	203775	
561	Very dark red-brown + very fine grained.						
	Occurs in disseminated bands that are		561.4	562.87	1.47	203776	
563	both continuous + discontinuous. Occurs where						
	there is a concentration of the fine grained						
564	py and on its own.		562.87	564.32	1.45	203777	
	- It rarely forms 0.1-0.3 cm subbedral						
	veins						
	- Also observed in a 0.5-1cm wide qtz		564.32	565.72	1.40	203778	
565	vein as 0.5-1cm clots (5%)						
	Cpy: Trace cpy occurs as very fine grained						
566	flecks and as 1cm clots in a qtz		565.72	567.16	1.44	203779	
	vein (5%). Outside the qtz vein,						
567	cpy is typically associated with sph		567.16	568.57	1.41	203780	
	occurrence						
568	Galena: Silvery coloured galena occurs in						
	1) The qtz vein at 568 (see cpy+sph above) as		568.57	570.02	1.45	203781	
569	a subbedral 0.5-1cm mass.						
	2) In a band containing massive galena		570.02	571.46	1.44	203782	
570	0.5cm thick + // to foliation (50°).						
	The band appears to be associated with		571.46	572.89	1.43	203783	
571	pods of chl which define a vein-like						
	structure within the band, galena is						
572	massive to semi-massive + is fine to		572.89	574.35	1.46	203784	
573	medium grained.						
	Pyrr: Trace pyrr is present over 577.5-						
574	It is fine grained + forms continuous		574.35	575.65	1.30	203785	
	bands 0.5cm wide + discontinuous wisps,						
575	flattened in foliation						
			575.65	576.96	1.31	203786	
576							
			576.96	578.39	1.43	203786	
577							
578			578.39	579.86	1.47	203787	
579			5				
			579.86	581.23	1.37	203788	
580							
581			581.23	582.60	1.37	203789	
582							

PROJECT:

HOLE NO. WN-97-103A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Sil)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
583	RHFF			584 - 585.4 EXCP - Greyish blue calcite-pyrite exhalite - Banding (defined by slight colour changes in the calcite (variations of grey) - ~5% py within unit - QTUN: 584.5-584.6. Numerous other 1-2cm wide qtz-chl veins occur - Calcite bands are interbedded with 10% black, fine grained argillite that defines the moderately developed foliation.		B					
584											
585	EXCP		70°								
586											
587											
588											
589				585.4 - 594.2 ARSI - Blackish grey, siliceous argillite - Same as above (551.67) - The core subtly developed fragmental texture is developed and is defined by the siliceous blackish-grey domains surrounded by the siliceous argillite. - A number of 10-20 cm wide bands show a moderate carbonate alteration: 585.8-586.0; 586.2-586.4; 587.3-587.5; 588.9-589; 590.8-590.9; 590.7-592.9; - Core angle: 585m: 70°							
590	ARSI										
591											
592											
593											
594											
595	EXCP		80°	594.2 - 595.1 EXCP - Greyish-blue, calcite pyrite exhalite - Same as above - QTUN-594.2-594.3 - Py ~30% - Core angle 595: 80°		B					
596	RHFF										
597											
598				595.1 - 596.8 RHFF (??) - Greenish-grey very fine grained, tuffaceous rhyolite - Same as above (582.6) - The same siliceous domains are present + typically contained silica + pyrrhotite - Moderate sericite alteration							
599	RHFS										
600											
601				596.8 - 601.3 RHFS - Grey, massive to weakly fragmental aphyric rhyolite - The fragmental texture is weakly developed over the lower 2m. - 10-20 cm wide band of straw-yellow sericite occur at two locations: 600.2-600.4; 600.8-600.9 - QTUN: 601-601.1							
602											
603	ARSI										
604											
605			90°								

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PAGE 22 OF 32	PROJECT:	HOLE NO. WU97-103A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
6%						
583 RHFF (582.6m) Euh. py, 0.1-0.3 dia vlts, recrystallized; occurring within the sil. domains. Semi-mass. py 583.7-583.8		582.6	584.0	1.4	203791	
584 Tr. pyrr, fn. grd. bands + wisps; occurring with sil. domains. Trace cpy as one single clot associated with pyrr.		584.0	585.4	1.4	203792	
585 EXCP: (584): 5% py in fn grd bands + wisps. Dark brown-yellow colour. 2% fn grd bronze pyrr forming bands + wisps		585.4	586.9	1.5	203793	
586 ARST (585.4): 2% fn grd py in bands		586.9	588.3	1.4	203794	
587 fn. grd. bands + discontinuous wisps. Trace-1% reddish-brown fine grd. sph forming		588.3	589.9	1.6	203795	
588 discontinuous bands 0.1-0.3 cm thick Trace Galena as a purplish-silver colour		589.9	591.3	1.4	203796	
589 typically associated with the sph or pyrr Gal. is aligned in discontinuous bands 0.1-0.2cm		591.3	592.7	1.4	203797	
590 thick		592.7	594.2	1.5	203798	
591		594.2	595.1	0.9	203799	
592 EXCP (594.2) 30% fn + med. grd py in bands and forming a 30cm massive to semi-mass zone (593.9-594.2m)		595.1	596.8	1.7	203800	
593 F. pyrr forming bands + discontinuous wisps Tr sph dark red-brown + forming bands		596.8	598.5	1.7	203801	
594 RHFF: (595.1): Same as RHFF at 582.6. 1% py + 2% pyrr within the sil. domains		598.5	600.0	1.5	203802	
595 RHFS: (596.8) Trace fn grd py. Trace pyrr.		600.0	601.3	1.3	203803	
596		601.3	602.8	1.5	203804	
597		602.8	604.2	1.4	203805	
598		604.2	604.9	0.7	203806	
599		604.9	605.9	1.0	203807	
600						
601 ARST (601.1): 2% fn grd py as continuous + discontinuous						
602 bands. 1% pyrr forming wisps flattened in foliation + 1% sph. Fn. grd., reddish brown Mass.						
603 discontinuous 0.1-0.7cm wide bands						
604 RHFS (604.0): 2% fn grd py, forms 0.1-0.4cm wide						
605 continuous + discont. bands. Trace pyrr. Trace sph.						

PAGE 23 OF 52 | PROJECT: | HOLE NO. WV-97-038

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
606		RHFF		601.1 - 604.9 ARSI — Blackish grey, siliceous Argillite. - Same as above (585.4m)							
607											
608											
609				604.9m - 605.9 RHFS — Grey, massive to weakly fragmental porphyritic rhyolite - Same as above (594.8m) - Core angle 60Sm. 90°							
610											
611											
612		ADTT		605.9 - 608.4 RHFF (??) — Cream coloured, very fine grained, tuffaceous rhyolite - Same as above (595.1) - Strong sericite alteration - QTVN: 606.5-606.6; 607.1-607.3; 607.6-607.8 - Siliceous domains comprise ~5% of interval + are mineralized							
613											
614											
615			70°	*** 606.3 - Sample taken for thin section analysis							
616				608.4 - 621.2 ADTT — Greenish-grey mafic to intermediate lapilli tuff - 5-10% siliceous veins + lapilli size carb. fragments (frags: 0.5-1.5 cm dia) in chlorite + carbonate rich, tuffaceous matrix - Fine grained disseminated magnetite present sporadically throughout unit - Entire unit effervesces vigourously - QTVN: 609.2-609.3; 616.9-617.1; 620.0-620.3 - RHFF: 609.3-609.7 - RHFF grades into intermediate tuff - Not the ADTT of Wolverine hangingwall. This unit is the Fisher mafic unit. - Core angle 615.0: 70° - The exact nature of the carbonate "fragments" is unknown. There is a subtle grading (bedding?) defined by concentration + size of carb. fragments. These fragments vary from 0.5-1cm to 0.1cm - from 25% to 5%. Altered siliceous frags? Altered feldspars? carbonate porphyroblasts? - 10-30cm bands of Argillaceous green tuff are present within the ADTT. - Note: carbonate due to metamorphism + not actual Alteration							
617											
618											
619											
620											
621											
622											
623											
624											
625			80°								
626		ARGT									
627											
628											

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PAGE 24 OF 32	PROJECT:	HOLE NO. WU97-103A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
606 PHFF (605.9) 2% pyrr forming anhedral masses 0.1-0.5cm dia within the sil. bands/		605.9	608.4	2.5	203808	
607 fragments. 3cm zone of semi- to massive						
608 pyrr at 607.3m. 1% py occuring same as pyrr.		608.4	610.1	1.7	203809	
609 ADTT (608.4) Tr. pyrr as fn grl. wisps.						
610 Tr sph, reddish brown, forming fn grl. 0.1-0.3cm wide bands		610.1	611.6	1.5	203810	
611						
612		611.6	613	1.4	203811	
613		613	614.6	1.6	203812	
614						
615		614.6	616	1.4	203813	
		615.2	616.5	0.3	0.3	Whole Pyrk
616		616	617.4	1.4	203815	
617		617.4	618.8	1.4	203816	
618						
619		618.8	621.2	2.4	203817	
620						
621		621.2	623.1	1.9	203818	
622						
623		623.1	624.6	1.5	203819	
624						
625		624.6	626.0	1.4	203820	
626		626.0	627.4	1.4	203821	
627		627.4	628.9	1.5	203822	
628						

PAGE 25 OF 32 | PROJECT: | HOLE NO. WV-97-103A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
629		ARGT		621.2 - 633.3 ARGT: Blackish-green interbedded fine grained tuff and black tuffaceous to carbonaceous Argillite - This rock dominantly consists of dark green tuffaceous andesite (mafic) with minor Argillite bands + A component of Argillite mixed with andesite - No carbonate "fragments" - Strong carbonate alteration throughout matrix. Veins of carbonate also present. - Moderate foliation within interval - Upper contact with AOTT is gradational over 20-30 cm. Positioned on the basis of a loss of the carbonate fragments - Core angles: 625m: 80 - Chlorite is present throughout unit							
630											
631											
632											
633											
634		PHFF ?									
635			75°								
636											
637				633.3-636.1 PHFF (??): Yellowish grey fine grained siliceous tuff - Strong sericitic alteration throughout rock - 10-15% of interval consists of silica/carbonate bands + "fragment-like" domains which are typically mineralized with pyrr +/- py. Fragment-like texture most likely due to alteration. - Upper contact is gradational and is defined by an increase in sericite + a decrease in carbonate → Note: Is this the same mafic tuff that has been strongly sericitically altered or is this a siliceous tuff that has been altered? Both upper + lower contacts are suspiciously gradational (i.e. sericite alteration). QTUN: 634.2 - 634.3m - Core Angle 635: 75°							
638											
639		ARGT									
640											
641											
642											
643											
644			75°								
645				636.1 - 640.4 ARGT: Same as above (621.2). - This unit is variably sericitically altered and increases from no sericite to moderate sericitization. A mafic interval amygdaloidal - 640.7 - 641.9: The tuffaceous andesite can be recognized over this interval but middle 25cm is strongly, pervasively altered and looks like the PHFF of above. Therefore the PHFF could be an alteration product. - QTUN: 641.2 - 641.3							
646											
647											
648											
649											
650											
651		ARGT									

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PAGE 26 OF 32 | PROJECT: | HOLE NO: WU-97-103A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
629		628.9	630.3	1.4	203823	
630		630.3	631.8	1.5	203824	
631		631.8	633.3	1.5	203825	
632						
633 RHFF (633.1): 1% pyrr within the silica/carbonate domains. Fn grd. + forms wisps + continuous bnds. Semi-massive pyrr (40%): 634.8-634.9. Tr. py occurring with pyrr in the silica/carbonate domains		633.3	634.7	1.4	203826	
634						
635		634.7	636.1	1.4	203827	
636 ARGT (636.1): 1% pyrr forming fine grd. bands + discontinuous wisps.		636.1	637.6	1.5	203828	
637						
638		637.6	639.0	1.4	203829	
639		639.0	640.5	1.5	203830	
640						
641		640.5	642.4	1.9	203831	
642		642.4	643.5	1.1	203832	
643						
644		643.5	644.6	1.1	203833	
645 RHFS (644.6): Trace, subdermal pyrrhs growing within the anastomosing cleavage. Trace pyrr. forming fn grd wisps		644.6	646.0	1.4	203834	
646		646.0	647.6	1.6	203835	
647						
648		647.6	649.1	1.5	203836	
649		649.1	650.3	1.2	203837	
650		650.3	651.3	1.0	203838	
651		651.3	652.8	1.5	203839	

PAGE 27 OF 30 | PROJECT: | HOLE NO. WV97-103A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Grb)	E	FRACTURE INTENSITY	% VEIN QTZ.
652				642.4-644.6 RHFR: Medium grey, fragmental rhyolite in a black carbonaceous matrix.							
653				- Fragments are Aphyric 1-2cm in size, and comprise 80% of rock.							
654				- Moderate sericite alteration concentrated at 648.1-648.3							
655		ARST	75	- Carb. argillite defines moderately developed foliation.							
656				- Upper contact with intermediate tuff is sharp + Apparently conformable							
657				- Core Angle 644: 75°							
658				644.6-649.1 RHFS: Greyish-white Aphyric rhyolite							
659				- Poorly foliated; anastomosing cleavage defined by sericite							
660				- The overlying fragmental rhyolite gradationally changes into massive rhyolite over 10-20cm. This RHFR could be the autoclastic flow top on the massive rhyolite flow.							
661				649.1-658.4 ARST: Blackish-grey siliceous argillite							
662				- Weakly developed fragmental texture defined by slightly greyer siliceous argillite domains surrounded by black siliceous argillite							
663				- Massive siliceous bands (<1%) are folded within interval. These bands are 0.3-0.6cm thick + tightly folded. No evidence for this folding within the blackish grey siliceous argillite. Cannot determine vergence.							
664											
665			80								
666				- The fragmental texture could be due to fragmentation of the siliceous argillite (black rhyolite?!) which was then surrounded by the lighter siliceous argillite.							
667				- Core angle: 655cm: 75°							
668		RHFR		658.4-662.2 RHFS: Greyish white Aphyric rhyolite							
669				- Weakly foliated siliceous rock. Yellow-brown sericite developed along the foliation planes which are spaced ~1-3cm apart.							
670				- Upper contact with argillite is gradational over 30cm							
671				- Lower 30 cm of rhyolite is fragmented and there are 0.1-0.4 cm wide Argillite bands.							
672											
673		RPTF									
674											

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PAGE 28 OF 32 | PROJECT: | HOLE NO. W47-103A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
~~652~~										
~~653~~		652.8	654.1	1.3	203840					
~~654~~		654.1	655.4	1.3	203841					
~~655~~		655.4	656.8	1.4	203842					
~~656~~										
~~657~~		656.8	658.4	1.6	203843					
~~658~~ RHFS(6584): Fn. gr. qz forming xtls within the foliation planes		658.4	659.7	1.3	203844					
~~659~~										
~~660~~		659.7	661.0	1.3	203845					
~~661~~		661.0	662.2	1.2	203846					
~~662~~		662.2	663.6	1.4	203847					
~~663~~										
~~664~~		663.6	665.1	1.5	203848					
~~665~~		665.1	666.0	1.5	203849					
~~666~~										
~~667~~		666.0	668.1	1.5	203850					
~~668~~		668.1	669.5	1.4	204259					* Number sequence change
~~669~~										
~~670~~		669.4	670.9	1.4	204260					
~~671~~		670.9	672.4	1.5	204261					
~~672~~										
~~673~~		672.4	673.8	1.4	204262					
~~674~~		673.8	675.9	2.1	204263					

PAGE 29 OF 32 | PROJECT: | HOLE NO. W-97-103

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Fe)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
675	RHFR		90	662.2 - 670.9 RHFR Blackish grey, aphyric rhyolite + siliceous argillite fragments + bands in a carbonaceous argillite matrix - This rock is similar to the ARSI at 649.1 but there is rhyolitic material similar to the RHFS immediately above. This rhyolitic material + the siliceous argillite are fragmented. - Interval consists ± 90-95% siliceous material in an argillaceous matrix - QTUN: 666.1 - 666.3 - Core angle: 665m: 20° - Trace amounts of talc in both the qtz vein + in rare 2-10 cm bands within host rock - Over lowermost 1m bands of yellow-green feldspar bearing material are within the RHFR. See below.							
676											
677											
678											
679											
680	ARSI										
681											
682				670.9 - 675.9 RPTF Yellowish-green feldspar-crystal bearing felsic tuff (flow?) - Feldspars are subhedral to euhedral and are all altered to calcite. No chlorite groundmass feldspars. Feld. are 0.2-0.7cm dia + comprise 6% of interval - Feldspars are in a massive silica to tuffaceous matrix. Difficult to discern original texture of rock to a moderate to strong sericite alteration + the intensity of deformation. It appears to be a feldspar phyric fel. flow - Sericite is throughout rock + also concentrated along the foliation planes. - Core angle 675.0: 90°							
683											
684											
685											
686											
687			80								
688											
689											
690				675.9 - 684.4 ARSI - Siliceous argillite bands + fragments ± rhyolite bands, in a carbonaceous to siliceous argillite matrix. - Similar to ARSI at 649.1. - 677.7 - 678.3: 10% of this interval consists of yellow-green sericite bands. 0.2-0.5 cm width							
691											
692											
693											
694	RHFR			684.4 - 687 ST66 Fault gouge in siliceous argillite							
695			80								
696				687 - 697.5 RHFR Blackish grey, aphyric rhyolite + siliceous argillite fragments in a carbonaceous argillite matrix - Same as above (662.2). - Sericite banding sporadically developed throughout - Stain yellow in colour.							
697											

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PAGE 32 OF 32	PROJECT:	HOLE NO. WV-97-103-A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
ARSI (697.5): Trace fn. gr. py within fb mor silicous domains. Py forms continuous + discontinuous Lmds. Also present along fractures		697.5	699.5	2.0	204278					
		699.5	701.3	1.8	204279					

PAGE	OF	PROJECT:	HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.

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PAGE 30 OF 32	PROJECT:	HOLE NO. WV-97-103A

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
675						
676 ABS (675.9): 2-3 py throughout interval. Occur in very fine grained bands + disseminations. Rare fine to med grd. xlls occur. All of the py mineralization occurs in the siliceous portion of rock + not in argillaceous matrix		675.9	677.9	2.0	204264	
677						
678		677.9	679.3	1.4	204265	
679 681.2: Concentration of fn. grd. py banding over 10cm interval.		679.3	680.5	1.2	204266	
680						
681		680.5	681.9	1.4	204267	
682		681.9	683.3	1.4	204268	
683		683.3	684.4	1.1	204269	
684		684.4	687	2.6	204270	
685						
686						
687 PATR: (687): Trace py forming both fn. grd bands + fine to med grd subeuhl xlls Py also filling some fractures		687.0	689.7	2.9	204271	
688						
689						
690		689.9	691.2	1.3	204272	
691		691.2	692.5	1.3	204273	
692						
693		692.5	6937	1.2	204274	
694		693.7	694.9	1.2	204275	
695		694.9	696.5	1.6	204276	
696						
697		696.5	697.5	1.0	204277	

PAGE 31 OF 32 | PROJECT: | HOLE NO. WU-97-103-A

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
698					STGG 689.4-689.7							
					QTUN: 692-693							
699	ARGI				Core angle 687m 80° 695m: 80°							
700												
701				697.5-701.3	Black siliceous argillite							
				ARSI	- Still can see a very subtle fragmental texture that is defined by slightly grey, siliceous domains in a black siliceous matrix.							
702		EOH			- Foliation is folded + contorted in a chaotic pattern.							
					- Foliation planes are very graphitic							
					→ Rods got stuck + drilling was terminated.							

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DRILL LOG

PROJECT: Wolverine Stratigraphic	GROUND ELEV.: 1505
HOLE NO.: WV-97-104	BEARING: -33°
LOCATION: 17097 N, 16500 E	DIP: -83
	TOTAL LENGTH: 465.4
LOGGED BY: D. Gale	HORIZONTAL PROJECT
DATE: July 31st, 1997	VERTICAL PROJECT
CONTRACTOR: Boisvenu Drilling	**ALTERATION SCALE**
CORE SIZE: NQ - reduced to	
DATE STARTED: Aug 1, 1997	
DATE COMPLETED: Aug 9, 1997	**TOTAL SULPHIDE SCALE**
DIP TESTS	
COMMENTS	LEGEND



absent

slight

moderate

intense



traces only

< 1%

1% – 3%

3% – 10%

> 10%

PAGE 1 OF | PROJECT: | HOLE NO. WV97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Gr6	E	FRACTURE INTENSITY	% VEIN QTZ.
5				0-7.2 DHOB Overburden + broken core							
6											
7		RHTT	50	7.2-10.6m RHTT Light grey to black, tuffaceous siliceous sediment. - Interbedded with 20-50% black, fine grained argillite layers - The more siliceous sections form a "fragmental-like" texture in places but not the characteristic Rhyolite fragmental. - Within the more siliceous sections the rock is tuffaceous (rhyolite?) - Core is extremely broken - Lower most 20cm of interval consists of only 5% argillite and is a light grey/white colour. - Core Angle: 8m: 50° - Some of the whiter, massive siliceous domains could be Aphyric rhyolite.							
8											
9											
10											
11											
12											
13											
14		ARWK									
15			45	10.6m-11.2m STGG Fault gouge within black argillite							
16											
17				11.2m-17.4m ARWK Interbedded black carbonaceous Argillite and grey-black greywacke (70-30 respectively) - Typically the contacts between both rock types are sharp and appear to be conformable. All contacts are parallel to the single, dominant foliation.							
18											
19											
20											
21		RHTT		- The greywacke units vary from 0.5-25cm thickness and are distinguished by a lighter colour and a increase in grain size to 0.05-0.1 cm dia. - Moderate to strong, single foliation developed over this interval. Core angle at 15m: 45°							
22											
23											
24				17.4-24.3 RHTT Light-grey tuffaceous (rhyolite?) sediment with thin bands of interbedded carbonaceous Argillite (85-15 respectively). (1-2cm) - Minor massive Aphyric siliceous domains (frag?) present but mainly fine to med grain size siliceous rock. - The tuffaceous fragments are in a grey-black carbonaceous Argillite matrix.							
25			45								
26											
27											

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PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 3 OF | PROJECT: | HOLE NO. WW-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Cb)	E	FRACTURE INTENSITY	% VEIN QTZ.
28	ARCB			RHTT cont'd - Most likely, this rock is sedimentary in origin, and incorporates siliceous rhyolite fragments, interbedded with black argillite. - Weak carb. alteration as thin wisps + veins							
29											
30				24.3 - 33.3 ARCB Black fine grained carbonaceous Argillite interbedded with minor tuffaceous rhyolite (90-10% respectively.) - Moderate foliation developed within these Argillites - Greyish white siliceous, tuffaceous bands mixed in with Argillites. Same description as above unit (RHTT). - Core Angle: 25m: 45°							
31											
32											
33											
34	RHTT										
35			45°	33.3 - 36.3 RHTT Light grey, tuffaceous (rhyolite?) sediment with thin bands of carbonaceous Argillite - Same description as RHTT above - Some sections are taking on a fragmental texture; defined by aphyric, massive siliceous fragments - Core Angle: 45° - Minor qtz-carb veins ~0.5-1cm wide + 2-3% of interval.							
36											
37											
38	ARWK										
39											
40				36.3 - 40.2 ARWK Black carbonaceous Argillite interbedded with coarser grained greywacke material. - Same description as above (11.2m - 17.4m) - Minor carbonate veins that are isoclinally folded. Dominant foliation lies axial planar to folds. - Thin (3-5cm wide) tuffaceous bands (see above descriptions).							
41	RHTT										
42											
43	ARWK										
44				40.2m - 42m RHTT Greyish-white, tuffaceous (rhyolite) sediment with minor Argillite - Same description as 17.4 - 24.3.							
45			45°								
46	RHTT			42m - 43.6 ARWK Black carbonaceous Argillite interbedded with coarser grained greywacke material. - No change! See above descriptions							
47											
48				43.6 - 48m RHTT Greyish-white, tuffaceous (rhyolite) sediment interbedded with minor (5-10%) Argillite - See above descriptions. - Once again, some siliceous, aphyric 0.5-1cm dia fragments are present that could be rhyolite frags							
49											
50											

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PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40 RHJT: Trace py occuring in veins. Mass fine										
41 grained py.										
42										
43										
44										
45										
46										
47										
48 AFCB: Trace py occuring in bands as massive										
49 fine grained py Bands are 0.2-0.4 cm wide										
50										

PAGE 5 OF | PROJECT: | HOLE NO. WU-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
51				RHTT cont'd							
				Core Angle: 45m: 45°							
				Qtz veins: 46.5-46.6; 47.8-48							
52											
	ARCB			48m-55.0m							
53				ARCB							
				Black, fine grained, carbonaceous Argillite with							
54				minor greyish-white tuffaceous bands,							
				minor greywacke bands.							
				48.7-49 A limey Argillite unit. Fizzes							
55			45	upon application of dilute HCl							
				QTVN: 49.3-49.5; 53.3-53.4							
56											
				-51.1-51.5: STGG in ARCB							
57				-Core Angle at 54m: 45°							
58				55.0m-67.5							
				ARCB							
59				Dark grey, fine grained carbonaceous Argillite							
				with 5-10% slightly coarser siltstone or greywacke							
60				bands.							
				-Rock is a lighter colour compared to previous							
61				ARCB but still a fine grained sediment							
				-A homogeneous unit with little to no							
62				variation at all.							
	ARCB			-The lower most 30-50 cm has 1-2cm wide							
63				massive grey white siliceous bands (rhyolite?)							
				intercalculated with the ARCB.							
64				Core Angle 55m: 45° 65m: 45°							
65				67.5-69.6							
				RHFS							
			45	White to light grey, Aphyric, siliceous rhyolite							
66				with 10-15% dark grey to black Argillite bands							
				interbedded							
				-Interval is variable in that the Argillaceous							
67				component is interbedded with the rhyolite.							
				-Sericite is present along the foliation planes							
68				(weak alteration).							
69	RHFS			69.6m-75.3							
				RHAR							
70				Black to light grey alternating bands of							
				massive, Aphyric silica + siliceous to carbonaceous							
71				Argillite.							
				-Banding occurs on the 0.5-2cm scale							
72	RHAR			-30-40cm intervals of massive RHFS are							
				present within this unit.							
73				-A weak sericite alteration is present.							
				-The siliceous bands consist of both massive							
				rhyolite as well as tuffaceous material.							
				-The Argillite material is both carbonaceous							
				and siliceous.							

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PAGE 6 OF	PROJECT:	HOLE NO. WV-97-104

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
51											
52											
53											
54											
55											
56											
57											
58											
59											
60											
61											
62											
63											
64											
65											
66											
67											
68											
69											
70	RHAR: Trace py occurs along fractures										
71											
72											
73											

PAGE 7 OF | PROJECT: | HOLE NO. WV97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
74				RHAR cont'd	Core angle: 75m: 45°							
					QTVN: 72.2-72.4 ; 75.1-75.3							
75			55°									
76		ARCB										
				75.3-77.1	Black, fine grained, carbonaceous Argillite							
				ARCB	- moderately foliated							
77					- consists mainly of broken core.							
					- QTVN: 76.9-77.1. Right above qtz vein there is a thin 5 cm fault gouge.							
78												
79												
				77.1m-90.8	Light green, banded, strongly foliated tuffaceous andesite.							
80				AOTT	- Banding within this interval is demonstrated by grain size, changing from fine to medium grained over 10-30 cm intervals							
81					- Alteration is variable and becomes a weak to moderate chlorite/sericite over 40cm intervals (over and above the chl. that is present due to metamorphism)							
82					- Minor qtz-carb veins occur over interval							
83					- A deep emerald green mica (fuchsite) is present over over a 20cm interval.							
84		AOTT			- STGG: 79.7-80.5 :							
85			40°		- Core angle: 85m: 40°							
					QTVN: 81.3-81.5							
86					- The upper contact with the Argillite is marked by a qtz vein.							
87												
				90.8-91.9	- Dark green, fine grained tuffaceous Andesite							
88				AOFF	- Same as above except for finer grain size.							
89					- Begin to pick up thin bands of Argillite (2-3 cm thick).							
90					- Does not have the same alteration as above unit.							
91		AOFF		91.9m-97.4	Light green, banded, strongly foliated tuffaceous Andesite							
				AOTT	- same description as above.							
92					- weak chl + ser alteration							
93					Core angle 95m: 45°							
94				97.4-103.7	Greenish-black, banded tuffaceous Argillite with an							
				ARTF	Andesitic component to the grains							
95		AOTT	45°		- Banding defined by fine grained black tuffaceous Argillite, interbedded with greenish black argillite							
					- Upper contact with andesite tuff is gradational over 40-50 cm.							
96												

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PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 9 OF | PROJECT: | HOLE NO: WU-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
97		ADTF		ADTF con'd - Base of interval contains a light green tuffaceous andesite layer (20cm thick).							
98											
99											
100			STGG	103.7-105.8 STGG: Fault breccia + gouge in a light-green "chloritic-paste" matrix - Fragments are sitting in this mush zone reach 1.5-2.5 cm in size; avg 0.5 cm.							
101											
102				105.8-109.7 RHTT: Dark grey, siliceous, tuffaceous rhyolite. - Core broken + fragmented - Subtle banding present defined by massive siliceous bands + tuffaceous bands - Sericite present along the foliation planes. - Cannot determine core angle in this interval because broken core.							
103											
104											
105											
106											
107		RHTT	STGG	109.7-112.7 STGG: Fault gouge within black argillite							
108											
109				112.7-116.7 ARWK: Black to blackish grey, moderately foliated rock consisting of alternating bands of fine grained carbonaceous argillite and slightly coarser siltstone to greywacke. - 2-3% massive siliceous fragments (rhyolite?) 1-2.5cm which are flattened in the foliation. - Contacts between fine + coarser grained units are both sharp and gradational. No consistent grading observable.							
110											
111			STGG								
112											
113			40°	- 1-3%, 1-2cm wide greenish-black tuffaceous andesite bands interbedded with argillite - Core angle: 113m: 40°							
114											
115		ARWK		116.7-121.1 ADTT: Light green, moderately to strongly foliated tuffaceous andesite - Banding occurs on the 10-20cm scale and is defined by a variation in grain size (Max ~ 0.1-0.2cm) - Possible amygdules; 0.1-0.2 dia qtz domains, flattened in the foliation + with a massive portion of interval - qtz-calcite veins present; ~ 5% of interval: 117.7-117.8; 120.9-121.1. - Biotite present within 5-10% of andesite.							
116											
117											
118											
119											

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PAGE 10 OF	PROJECT:	HOLE NO. WV-97-104

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
97										
~~98~~										
~~99~~										
~~100~~										
101										
~~102~~										
103										
~~104~~										
~~105~~										
~~106~~										
~~107~~										
~~108~~										
~~109~~										
~~110~~										
~~111~~										
~~112~~										
~~113~~										
~~114~~										
~~115~~										
~~116~~										
~~117~~										
~~118~~ 117.6 (within ADIT); Massive, fine grained pyrr forming discontinous 0.5-1cm wide x 2-3cm long wisps aligned in the foliation.										
~~119~~										

PAGE 11 OF | PROJECT: | HOLE NO. WV-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Carb	E	FRACTURE INTENSITY	% VEIN QTZ.
120				121.1-129.7 ARTF (ARGT)?	Black to blackish green, moderately foliated tuffaceous argillite, interbedded with 10-15% fine carbonaceous argillite and 10-30% tuffaceous andesite.							
121					- Tuffaceous andesite component is variable and gradational with the black argillite.							
122					- Banding observed throughout this interval on the 1-10cm scale.							
123					- QTVN: 122.3-122.6							
124					- Core angle at 125m = 50°							
125			50		- Biotite occurs in the andesite layers.							
126												
127				129.7-137.3 RHFR	Dark grey, moderately foliated rhyolite fragmental.							
128					- Aphyric, greyish-white siliceous fragments in a black fine grained carbonaceous matrix. Fragments are monolithologic, avg. 2cm in dia. and comprise 50-75% of rock.							
129					- Weak to moderate carbonate alteration present within 30-45% of the siliceous fragments.							
130					- 5% green tuffaceous andesite forming 1-4cm thick bands within the rhy. frag.							
131					- A portion of the white siliceous domains are tuffaceous (app 10%). Therefore fragmented texture could be caused by boudinaging of tuffaceous bands.							
132					- Core angle: 135m: 60°							
133												
134												
135			60	137.3-140.4 ARTF	Greyish-black, moderately foliated, tuffaceous argillite interbedded with greenish-black tuffaceous andesite layers.							
136					- Tuffaceous andesite ~35% of interval. Also minor aphyric, siliceous fragments within an argillite matrix. Andesite bands are typically 0.5-1.5 cm wide.							
137					- Essentially same unit as ARTF (121.1-129.7m) above							
138												
139				140.4-141.5m RHTT	Medium grey, moderately foliated, tuffaceous rhyolite interbedded with tuffaceous andesite + black carbonaceous argillite.							
140					- Note. Very similar to above ARTF unit except that there is a greater component of siliceous material. The same 0.5-1.5 cm andesite bands are interlayered with the tuffaceous rhyolite							
141												
142												

ARTF / RHFR / ARTF / RHTT / RHFR

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PAGE 12 OF	PROJECT:	HOLE NO. WU-97-104

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
120										
121										
122										
122.45: Trace pyrr occurs with the qtz vein.										
123										
124										
125										
126										
127										
128										
129										
130										
131										
132										
133										
134										
135										
136										
137										
138										
139										
140										
141										
141.5: Carb-py vein 0.2cm wide and cutting across core at 40° angle. Py is fine grained.										
142										

PAGE 13 OF | PROJECT: | HOLE NO. WV-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
143	RHTT			RHTT Cont'd - Some intervals have a "fragmental-like" texture but the siliceous domains consist of tuffaceous rhyolite instead of the aphyric rhyolite - Weak carbonate alteration within the siliceous domains throughout interval.							
144											
145			60								
146				141.5 - 142.8 RHFR White-grey aphyric siliceous fragments in a black carbonaceous matrix - Same description as above RHFR unit (129.7 - 137.3)							
147											
148				142.8 - 146.0m RHTT Medium grey siliceous rhyolite tuff interbedded with light green tuffaceous andesite + black carbonaceous argillite - Contacts between the multiple units are gradational and vary on the 0.5-1 cm scale. - Same unit as RHTT above (140.5 - 141.5m) - Core Angle : 145m : 60°							
149											
150											
151											
152	ADTT			146.0 - 148.1 ARTF Greyish-black tuffaceous argillite with 15-20% whitish grey siliceous bands (rhyolite (?) tuff) and 5-10% tuffaceous andesite - Very similar rock to previous unit except that siliceous component has diminished and argillite component has increased. - Same unit as (121.1 - 129.7m) ARTF above - Siliceous layers weakly carbonate altered.							
153											
154											
155			65								
156											
157				148.1 - 151.9 RHTT Bands of light grey moderately foliated tuffaceous rhyolite interbedded with light green tuffaceous andesite (30% of interval) + carbonaceous argillite (15%) Note: Same rock as ARTF above except siliceous component has increased. - 4-6% of unit consists of aphyric siliceous (rhyolite?) fragments - Andesite component increasing towards lower-most contact							
158											
159											
160											
161											
162				151.9 - 162.8 ADTT Greenish black moderately foliated, tuffaceous andesite - Banding observed and defined by grain size of rock + thin argillite bands. Also observe ~3-4% whitish-grey siliceous bands. - Minor biotite within this interval - QTVN: 156.2 - 156.5 - Core Angle : 155m : 65°							
163											
164											
165			60								

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PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 15 OF | PROJECT: | HOLE NO. WV97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
166				162.8-215.9 RHFR Blackish-grey rhyolite fragmental							
167				- Fragments are siliceous, aphyric, monolithologic, and consist of 50-90% of the rock							
168				- Fragmental rhyolite interbedded with minor (10%) carbonaceous argillite and green tuffaceous andesite (5-10%)							
169				- Siliceous fragments within a black argillite matrix							
170				- 196-201.7m: Siliceous fragments take on a greenish white colour over this interval. Alteration? Original rock?							
171				- Fragments are 2-4 cm dia avg + are flattened in the foliation.							
172				- Core Angle 165: 60° 195: 60° 175: 65° 205: 55° 185: 60° 215: 65°							
173				- QTUN: 209.7-209.8							
174				- Lower most 1.5m consists of limey bands + fragments in the same black argillite matrix							
175			65°								
176				215.9-220.3 RHFS Light grey, aphyric siliceous rhyolite							
177				- Moderately foliated with brown sericite along the foliation planes							
178				- Upper contact with fragmental unit is gradational over 10-15cm							
179											
180											
181											
182											
183											
184											
185			60°								
186											
187											
188											

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PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 17 OF | PROJECT: | HOLE NO. WV-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Grb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
189											
190											
191											
192											
193											
194											
195			60								
196											
197											
198											
199											
200											
201											
202											
203											
204											
205			55								
206											
207											
208											
209											
210											
211											

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PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 19 OF | PROJECT: | HOLE NO. W-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Carb	E	FRACTURE INTENSITY	% VEIN QTZ.
212	RHFR			220.3-225.5 RHFF	Dark grey, moderately foliated, tuffaceous rhyolite							
213					- Upper contact is gradational; moving from massive, aphyric rhyolite into a very fine tuff. Transition occurs over a 20-30 cm interval							
214					- A weak banding is developed within this unit							
215			65°		- 3-5% lapilli size aphyric siliceous fragments are observed over this interval.							
216					- Over the lower 30 cm, massive siliceous bands increase and grade into RHFS.							
217					- core angle: 225m: 70°							
218	RHFR			225.5-237.4 RHFS	Greenish grey, aphyric siliceous rhyolite							
219					- For 50% of interval, rock consists of alternating bands of ① white, massive silica and ② greenish-grey massive silica to tuffaceous rhyolite. Banding occurs on the 1-2cm scale							
220					- Upper contact with tuffaceous rhyolite is gradational over 20-30 cm.							
221					- Lower 0.3-0.5 m of this interval begins to develop a fragmented texture							
222					- Core Angle: 235m: 70°							
223				*	- Core reduced to BQ at 234.8m							
224				237.4-238.2 STGG	Fault gouge and broken, fragmented core within							
225			70°		massive to aphyric rhyolite.							
226				238.2-260.8 RHFR	Greyish green fragmental rhyolite							
227					- Fragments are monolithologic, aphyric, white to green in colour and comprise 75-95% of the rock.							
228					- These rhyolite fragments are within a light green tuffaceous matrix until ~252 and then changes to a black argillaceous matrix that only makes up ~3-5% of rock.							
229					- QTVN: 249.9-250; 250.6-251.2							
230					- Core Angle 245m: 70°							
231					255m: 70°							
232	RHFS											
233												
234												

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PAGE 20 OF	PROJECT:	HOLE NO. WV-97-104

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
212											
213											
214											
215											
216	Trace py as wisps within the foliation plane.										
217											
218											
219											
220											
221	RHFF: Trace fine grained aligned in the foliation planes										
222											
223											
224											
225											
226	RHFS Trace py as fine grained aligned in fol. planes and as 0.1-0.3 cm euhedral										
227	xtls within rock.										
228											
229											
230											
231											
232											
233											
234											

PAGE 21 OF	PROJECT:	HOLE NO. WV-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Cb)	E	FRACTURE INTENSITY	% VEIN QTZ.
235	reduced BQ → #		70°								
236											
237											
238											
239											
240											
241											
242											
243											
244		RHFR									
245			70								
246											
247											
248											
249											
250											
251											
252				260.8-267.4 RHFS	Greenish grey moderately foliated, massive aphyric siliceous rock (rhyolite).						
253					- Cleavage is a spaced foliation defined by brown laminae of sericite ~0.1cm wide.						
254					- The massive silica portion of interval (90-95%) varies in colour from grey to green to white.						
255			70°		- QTVN: 261.3-261.4; 261.8-262.2; 262.4-263						
256					- Upper contact with fragmental is gradational over ~ 30-40 cm.						
257					- Core angle: 65° at 265m						

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PAGE 22 OF	PROJECT:	HOLE NO. WV-97-104

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
235 RHFR - Trace py forming euhedral cubes + fine grained bands. Also trace py along fractures										
236										
237										
238										
239										
240										
241										
242										
243										
244										
245										
246										
247										
248										
249										
250										
251										
252										
253										
254										
255										
256										
257										

PROJECT:

HOLE NO. WW-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
258	RHFP			267.4-269.1 ARCB: Black fine grained carbonaceous to siliceous argillite with 10-15% whitish-grey siliceous bands/fragments. - Lower 60cm of interval consists of limey units within the argillite. These 5-10cm wide bands are greyish black in colour and fizz moderately upon application of dilute HCl. These bands comprise 40-50% of lower 60cm.							
259											
260											
261											
262											
263				269.1-271.26 STGG: Fault gouge within black carbonaceous argillite - Very poor core recovery, ~30cm for 2m!							
264											
265	RHFS		65	271.26-274.8 RHFS: Greenish-black banded to structurally brecciated siliceous rock (rhyolite? or siliceous exhalite?) - Core is broken over this interval - 40-50% of interval consists of siliceous fragments cemented in a green siliceous matrix. Frag's are all angular. - Banded portion of rock is greenish-grey, aphyric silica. - Rock is very similar to above RHFS but an exhalitive origen is suspected because of units below.							
266											
267											
268	ARCB										
269											
270	STGG										
271				274.8-275.1 EXSP: Greenish grey, cherty massive siliceous unit - Rock consists of alternating 2-3cm bands of green to grey massive silica. - Very similar to above RHFS units but cherty character + banding suggests an exhalitive precursor - Core angle at 275m: 75°							
272											
273	RHFS										
274											
275	EXSP		75	275.1-278.3 EXMT: Pyrite-magnetite exhalite in a siliceous matrix, interbedded with massive siliceous bands - Magnetite is diss. as fine grained specs throughout interval (except within massive silica caverns) and is also in semimassive to massive 0.3-3cm wide bands. 13% is total amount of magnetite - Hematite (5%) is present with the magnetite bands + as fine grained disseminations in the more magnetite rich portions of interval - Matrix of this exhalite unit is dominantly silica with only minor (3-5%) calcite. - 50cm within this interval consists solely of massive,							
276											
277	EXMT										
278											
279											
280											

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PAGE 24 OF	PROJECT:	HOLE NO. W-97-104

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
258										
259										
260										
261										
262										
263										
264										
265										
266										
267										
268										
269										
270										
271										
272										
273										
274										
275										
276 1-2% py within the EXMT. Occurs both as fine grained bands // to foliation and as		275.1	276.7	1.6	173899					
277 0.1-0.3 cm sized euhedral cubes. Py Also present Along fracture planes.		276.7	278.3	1.6	173900					
278										
279										
280										

PAGE 25 OF | PROJECT: | HOLE NO. WU-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Carb	E	FRACTURE INTENSITY	% VEIN QTZ.
281				EXMT cont'd	green-grey silica with no diss. or mass. mag. Rhyolite? or Silica Exhalite?						
282											
283				278.3-280.6 RHFS	Grayish-white, aphyric, massive siliceous rock (rhyolite).						
284					- Massive aphyric rhyolite with no banding. Weak to moderately developed foliation						
285					- Core is very broken over lower 1 m interval						
286			STGG		- Also, begin to observe a siliceous fault breccia in lower 1m of unit. Rhyolite fragments are angular + ~ 0.5-1.5 cm in size.						
287											
288				280.6-290.0 STGG	Fault gouge, broken core and cemented fault breccia over this interval						
289					- Entire interval consists of greyish white aphyric rhyolite (?)						
290			65								
291				290.0-307.8 ARCB	Black, fine grained, carbonaceous argillite with 3-4% interbedded grey tuffaceous to massive silica bands.						
292					- Upper 2 m of rock below the fault is broken with minor fault gouge. Fault gouge: 295.6-297.7						
293					- Contacts with the interlayered siliceous bands are both gradational (tuff bands) and sharp (massive, aphyric silica). These bands are 0.5-2cm thick						
294					- Core angle: 290m: 65.						
295					305m 70°						
296											
297				307.8-313.4 RHFS	Greenish-grey aphyric siliceous rhyolite						
298					- Weakly to moderately foliated; foliation is a spaced cleavage with light brown sericite aligned in the planes.						
299			ARCB		- Same RHFS as above (278.3-280.6).						
300											
301				313.4-313.8m EXCP	White to steel-grey, moderately foliated, banded calcite-pyrite exhalite.						
302					- Unit consists of massive calcite with bands of 0.2-0.5 cm massive fine grained pyrite						
303					- Upper contact with RHFS is sharp but appears to be conformable						
					- Pyrite ~ 8% of unit. Py also forms a massive band						

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PAGE 26 OF	PROJECT:	HOLE NO. WV-97-104

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
281						
282						
283						
284						
285						
286						
287						
288						
289						
290 AFCB: 3% diss. fine grained py forming wisps + lmls // to the foliation. Also see fine py filling fractures.		290	295.4	5.4	204501	
291						
292						
293						
294						
295		295.4	298.2	2.8	204502	
296						
297						
298		298.2	299.5	1.5	204503	
299						
300		299.5	300.9	1.4	204504	
301		300.9	302.3	1.4	204505	
302		302.3	301.2	1.9	204506	
303						

PAGE 27 OF | PROJECT: | HOLE NO. WN-97-104

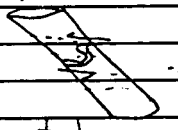
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Cbs)	E	FRACTURE INTENSITY	% VEIN QTZ.
				EXCP cont'd at the lowermost contact with another siliceous unit - Interlayered with the exhalitive silica + calcite is a spotty, dark emerald green mineral that has a hardness of ~1-2. Most likely talc.							
307				313.8m - 318.2 ARSI Black to grey, siliceous Argillite (60%) and massive rhyolite (30%) with minor (10%) bands of calcite pyrite exhalite - Rock grades from a siliceous Argillite into a massive siliceous rock and back into the sil. Arg. - Upper 1m consists of very broken core - EXCP: 314.8 - 315.0; 315.7 - 315.8m. Same description as above for these two units. Pyrite is minimal at only 2-4% for each unit. - Core angle at 315m: 65°							
313				318.2 - 319.0m EXCP (Greenish-grey, moderately foliated, banded) calcite pyrite exhalite - Same description as above (313.4 - 313.8) - More py in this interval; 13-15%. Also trace sph. - Upper contact with siliceous unit is sharp but appears conformable. - Dark green mineral (talc) is spotty throughout interval. ~5%.							
319				319.0 - 320.5 ARSI Blackish-grey siliceous Argillite with 30% bands of massive grey silica (rhyolite?) - Lower 50cm of this interval is networked by a stockwork of qtz with minor calcite veins. Also over this lower interval the siliceous component is increasing and Argillite is decreasing							
323				320.5 - 326.0 RHLT Greyish-green, moderately to strongly sericitically altered lapilli tuff - Very difficult to make out original textures within this rock. - Appears to be very siliceous with 10-20% white 0.5-1.5 cm lapilli. Rock has a tuffaceous character rather than a massive siliceous flow. - Contact with upper ARSI (or RHFS?) is gradational over 10-20cm but is masked by a qtz stockwork zone.							
326											

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PAGE 28 OF	PROJECT:	HOLE NO. WU-97-104

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
304		304.2	307.8	3.6	204507	
305						
306						
307						
308						
309						
310						
311		311	313.4	2.4	204508	
312 Over lower 1.5m of RHFS, trace to 1% py present along foliation planes. Fine grained.						
313 EXCP: 8% fine grained, banded pyrite within the calcite exhalite		313.4	313.8	0.4	204509	
314		313.8	315.8	2.0	204510	
315 A massive "pool"-like accumulation of py occurs at the base of the exhalite ~0.5-1cm thick						
316		315.8	317.30	1.5	204511	
317 Trace sph at 317.7. Fine grained and mixed with bands of argillite with a siliceous section		317.3	318.2	0.9	204512	
318 ARSI: Trace to 1% py aligned along foliation		318.2	319.0	0.8	204513	
319 plane and in fractures. All py is fine grained		319.0	320.5	1.5	204514	
320 Also see fine grained py banded within the exhalative units.						
321		320.5	321.6	1.1	204515	
318.2 EXCP: Banded, fine grained py ~13-15% of unit. Also see trace fine grained		321.6	322.90	1.3	204516	
322 red brown sphalerite (at 318.4m)		322.9	324.1	1.2	204517	
323 319 ARSI: 1% py in mass fine grained bands						
324 // to the foliation. Also occurs in fractures x-cutting foliation.		324.1	326.0	1.9	204518	
325						
326						

PAGE 29 OF | PROJECT: | HOLE NO. WU-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Cb)	E	FRACTURE INTENSITY	% VEIN QTZ.
327	100%	RHFS		RHLT cont'd Core Angle: 325_m: 65°							
328				326.0-327.3 RHAT Thin bands of black Argillite (15%) interlayered with massive, Aphyric, light grey rhyolite. - Argillite bands are defining the foliation while the more siliceous rhyolite bands are void of any fabric							
329											
330											
331				327.3m-332.7 RHFS Greenish grey, Aphyric, siliceous rock (rhyolite) - Moderately developed foliation defined by laminae of black Argillite or brown sericite < 0.1 cm thick.							
332											
333				- In some portions of the massive rhyolite, there is a spaced cleavage (0.2-0.3 cm spacing) that is defined by different colour silica forming 0.1 cm wide foliation planes. These typically form at 45° or greater to the dominant (S_0) foliation defined by the Argillite. The different cleavage is designated as an S_1 because it is folded and the S_0 foliation is axial planar. This foliation is developed over							
334											
335		ARSI	65								
336				About 5% of this interval							
337				- Lower 50-60 cm of interval develops a fragmental texture, with 1-4cm clasts fragments within a siliceous Argillite matrix. Could represent a Auto-brecciated bottom to a massive rhyolitic flow (?!).							
338											
339											
340				Structure:  view looking W-NW -core oriented using core angle							
341				- siliceous fragment shows an S-fold asymmetry (looking west-NW) ∴ vergence is up dip.							
342											
343				332.7-336.2 ARSI Blackish-grey siliceous Argillite - Moderately to strongly foliated with minor massive siliceous bands (5%)							
344				- Core Angle: 335_m: 65°							
345			70	- Lower contact with RHFS is gradational and there are 20-30 cm thick RHFS units within ARSI before becoming massive RHFS at 336.2m.							
346											
347		ARSI		336.2-344 RHFS Whitish-grey, weakly to moderately foliated, Aphyric rhyolite							
348				- light brown sericite present within the 0.5-4cm spaced foliation planes.							
349				- Monotonous rhyolite.....							

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PAGE 30 OF	PROJECT:	HOLE NO. WV-97-104

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
327						
328						
329						
330						
331						
332						
333 332.7 ABT 2-3% Lks py occurring as fine grained laps aligned in the foliation.		332.7	334.6	1.9	204519	
334						
335		334.6	336.2	1.6	204520	
336						
337						
338						
339						
340						
341						
342						
343						
344						
345						
346						
347						
348						
349						

PAGE 31 OF | PROJECT: | HOLE NO. WW-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
350				344 - 355.8	Black, moderately foliated siliceous argillite							
				ARSI	- Banded appearance shown by alternating black argillite + grey-black more siliceous argillite.							
351					- Same rock as ARSI							
352					- Core angle: 345: 70° 355: 70°							
			ARSI		Structure: The same siliceous bands are present within the argillite, defining an earlier cleavage. These bands are folded and S_2 is lying axial planar. Folds are too small to determine asymmetry.							
353												
354												
355			70									
356				355.8 - 360.9	Greyish white, aphyric siliceous rhyolite							
				RHFS	- Same as above (336.2-344)							
357					- QTUN: 356.2-356.6m;							
					- ST66: 356.9-357.2							
358												
				360.9 - 361.2	Calcite exhalite with no pyrite							
359				EXCP	- Moderate banding defined by a slight coarsening of the calcite grains							
360												
				361.2 - 363.8	Greyish-white aphyric siliceous rhyolite							
361				RHFS	- Same as above							
					- Rock is void of any textures and only has a weakly developed foliation							
362					- The contact with the overlying exhalite unit is sharp and appears to be conformable.							
363												
364				363.8 - 368.3	Greyish black moderately to strongly foliated							
				ARSI	siliceous argillite with minor interlayered limey beds							
365			75°		- Core is broken and fragmented over 50-60% of this interval							
366					- 10-30cm thick limey argillaceous bands occur within the siliceous argillite. Contacts are gradational.							
367					- QTUN: 364.7-364.9.							
					- Core angle at 365m: 75°							
368												
369				368.3 - 372.1	Greyish white, aphyric siliceous rhyolite with							
				RHFS	20-30% interlayered siliceous argillite layers							
370					- 40-50% of this unit consists of broken core							
					- ST66: 370.0-370.3; 371.1-371.4							
371					- Same description as above RHFS (361.2-363.8)							
372												

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PAGE 32 OF	PROJECT:	HOLE NO. WV-97-104

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
359										
360										
361										
362										
363										
364										
365										
366										
367										
368										
369										
370										
371										
372										
		358.9	360.3	1.4	204521					
		360.9	361.2	0.3	204522					
ARST: Fine gr. fining fine grained sands parallel to the foliation/layering		363.8	365.1	1.3	204523					
		369.4	370.70	1.3	204524					

PAGE 33 OF | PROJECT: | HOLE NO. WV97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Ch)	ALTERATION B (Ser)	ALTERATION C (Fe)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
373	ARSI			372.1 - 387.3 ARSI Greyish-black moderately foliated siliceous argillite with 10% massive aphanitic rhyolite bands. - Generally broken to very broken core. - A number of 10-40cm wide fault zones discount this unit : 5166: 373.7-373.9; 374.4-374.8; 378.6-378.9; 380.9-381.3 QTVN : 372.2-377.4m; 387.0-387.3 - 3-5% limey bands interlayed within this argillite - Core angle 375m : 75° 385m : 75° - 5-10% calcite veinlets occur throughout this interval							
374											
375			75°								
376											
377											
378											
379				387.3-388.3 EXCP Alternating blue-grey to black calcite interlayered with 0.1-0.3 cm thick bands of pyrite (calcite-pyrite exhalite) - Entire unit effervesces vigorously upon application of dilute HCl - Weak sericitic alteration sporadically developed throughout the unit							
380											
381											
382											
383				388.3-392.5 RHLT Steel grey to light olive green, weakly to moderately sericitically altered, siliceous lapilli tuff. - Very obscure unit !!! - It varies over specified interval from a steel grey, calcareous rock to an olive green, weakly calcareous and variably sericitic, tuffaceous to fragmental rock. - Lower 20 cm of this unit is an obvious siliceous fragmental in a moderately sericitically altered matrix - Sample taken for thin section analysis at the 391.8m interval							
384											
385	ARSI		75°								
386											
387											
388	EXCP										
389											
390											
391				392.5-419.3 ARCB Black, fine grained, carbonaceous argillite with 5-10% calcite veins + veinlets. - 5-10cm thick limey bands are also present within this unit - Core angle : 395: 65° 405: 65° 416: 65° - Calcite variably increase to 10-15% over lower 5m - Thin (3-10cm) limey argillite bands occur within the ARCB - 5166: 410.5-410.7 ; 414.2-414.5							
392											
393											
394											
395			65°								

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PAGE 34 OF	PROJECT:	HOLE NO. MN-97-104

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
373 ARSI: Trace to 1% disc pyrite within this unit						
374						
375		375.3	376.7	1.4	204525	
376						
377						
378						
379						
380						
381						
382						
383						
384						
385						
386		385.9	387.2	1.3	204526	
3861: Within ARSI: fine grained dark red-brown sph forming 4, 0.1-0.2cm wide bands along with 1, 0.2cm fine grained py band.						
387		387.3	388.3	1.0	204527	
388 3873: FXCP: 11% fine grained py interlayed within calcite bands.		388.3	390.5	2.2	204528	
389						
390						
391		390.5	392.5	2.0	204529	
392 ARCB: Trace to 1% py as disc veins // to fol. Py also occurs in fine grained clots associated with the more siliceous domains.						
393		392.5	394.5	2.0	204530	
394						
395		394.5	396.0	1.5	204531	

PAGE 35 OF | PROJECT: | HOLE NO: NV-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Fp)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
396				419.3-420.5 Massive sulphide consisting of:							
397				SS/MS Pyrite: 60% Core angle: 70°							
				Cpy: 8% Cu: 2.5%							
398				Sph: 13% Zn: 8-9%							
				Gangue: 19% Pb: 0.4%							
399				-Upper 10cm consists of discontinuous bands of cpy ± sph interlayed with black carbonaceous argillite							
				-Remainder of intersection consists of yellowish-brown fine grained py with bands (0.2-0.5cm) of sphalerite + pods of fine grained cpy.							
400				-Py coarsens to 0.2-0.3 mm over lower 15cm of intersection							
401				-Gangue consists mostly of silica with minor carbonate material. 10-20cm intervals occur that are rich in calcite.							
402				-No visible galena within the intersection.							
403											
404				419.3-419.4: Interval consists of massive to semi-massive bands of py + sph with pods of cpy interlayed with black carbonaceous argillite and massive silica. Interval consists of py: 35%; sph: 7% cpy: 5%; gangue: argillite: 25%, silica: 28%							
405			65								
406											
407				419.4-420.5: Massive sulphide consisting of fine grained banded py with interbedded sph. + pods of cpy							
408				Pyrite: Py maintains constant grain size throughout interval except over lower most 15cm where rims become recognizable and average 0.1-0.3mm in size. 420.1-420.2, the fine grained py occurs in fragments and shows a weak developed brecciated texture. Py fragments are surrounded by fine grained py + cpy							
409											
410											
411											
412				Sphalerite: Sph forms diss. to mass. 0.1-15cm bands within the py and is also weakly disseminated throughout the py giving a diffuse red colour to py. Sph totals 13% of intersection. Banded sph is dk. brown							
413											
414				Cpy: Cpy forms blebs + pods throughout the intersection. The cpy concentrations are no bigger than 0.3-0.4 in dia.							
415				Gangue: Gangue to the massive sulphide consists mainly of silica which is visible in 0.5-1.5 pod-like domains and discontinuous bands. Calcite consists of approximately 10% of gangue throughout interval. Calcite content increases to 50-60% of gangue over 419.3-419.4m and 420.3-420.4m							
416			65								
417											
418											

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PAGE 36 OF	PROJECT:	HOLE NO. WV-94-104

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
396 392.5 (ARCB)						
2% fine grained py forming bands +		396.0	397.5	1.5	204532	
397 wisps aligned in the foliation. Bands						
Average ~ 0.1-0.2 cm but rare ~						
398 1 cm thick bands		397.5	399.2	1.7	204533	
Py also forms pods with qtz + calcite						
399 veins						
		399.3	400.7	1.4	204534	
400						
401		400.7	402.0	1.3	204535	
402		402	403.5	1.5	204536	
403						
404		403.5	405	1.5	204537	
405						
		405	406.4	1.4	204538	
406		406.4	407.5	1.1	204539	
407						
408		407.5	408.9	1.4	204540	
409		408.9	409.8	0.9	204541	
410		409.8	411.1	1.3	204542	
411		411.1	412.5	1.4	204543	
412						
413		412.5	413.7	1.2	204544	
414		413.7	415.1	1.4	204545	
415		415.1	416.7	1.6	204546	
416						
417		416.7	418.0	1.3	204547	
418		418	419.3	1.3	204548	

PAGE 37 OF | PROJECT: | HOLE NO. N97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (F.P.)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
419		SSMS	70°								
420		RHLT		420.5m - 420.7m RHLT: Dark forest green to light grey chlorite rich (originally siliceous?) tuffaceous to fragmental rock - Mottled texture defined by blotchy dark green chlorite. Strong chlorite alteration over interval - Weak to moderate sericitic alteration - Very difficult to determine original rock type but lapilli size fragments suggest a tuffaceous origin. - Contact with massive sulphide is sharp and is defined by a 0.2 cm wide black Argillite band. - There is no mineralization within this altered unit.							
421		ARTF	65°								
422		RHLT									
423		ARGB									
424		RHLT									
425		ARTF		420.7 - 421.8 RHLT: Greyish-blue, chaotically textured rhyolite tuff(??) - This rock is variably altered: there is a pervasive weak to moderate sericite alteration, A sporadic calcite alteration developed in pods + veins throughout the matrix and a sporadically developed weak chlorite alteration which is developed in 0.2-0.3 cm dia dark forest green pods. - This rock has a chaotic texture defined by fragments of silica Argillite and veins of calcite + silica.							
426		SSMS									
427		RHLT	60°	421.8m - 424.5 ARTF: Variably black, greyish-white and greyish-blue tuffaceous Argillite - This sedimentary rock consists of alternating bands of black carbonaceous Argillite (60%), greyish-white siliceous tuff bands (30%) and greyish-blue limey Argillite units (10%). - The siliceous bands are mainly tuffaceous with minor lapilli size fragments. - Moderate sericite alteration is pervasive throughout interval - QTUN: A qtz-talc vein occurs at 423.3-423.5; 424.3-424.5.							
428											
429											
430											
431											
432											
433											
434											
435											
436											
437											
438											
439											
440											
441											

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PAGE 38 OF	PROJECT:	HOLE NO. W497-104

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
419			419.3	419.4	0.1	204549	
420			419.4	420.5	1.1	204550	
421	PHLT: 2% py as fine grained pods + subhedral xlts.		420.5	420.7	0.2	204551	
			420.7	421.8	1.1	204552	
422	1% pyrr as anhedral to subhedral xlts diss throughout interval		421.8	423.5	1.7	204553	
			423.5	424.5	1.0	204554	
423	trace cpy as anhedral to subhedral 0.2cm xlts						
424							
	421.8 (ARTF) Trace fine grained py		424.5	425.9	1.4	204555	
425	Trace dark reddish-brown sphalerite interbanded with the carbonaceous argillite						
426			425.9	426.7	0.8	204556	
	424.5 (PHLT): 1% subhedral py as 0.2-0.3cm dia. xlts		426.7	428.5	1.8	204557	
427	Trace reddish brown sph. forming discontinuous bands.						
428	Trace cpy. associated with the sph bands.		428.5	429.8	1.3	204558	
429							
430	428.5 (ARTF) 4% fine grained banded pyrite observed throughout interval. Py increases to 10% over the 60 cm immediately		429.8	431.9	2.1	204559	
431	Above sulphide		431.2	432.3	1.1	204560	
432	Trace cpy 15cm above sulphide lense.		432.3	433.8	1.5	204561	
433	432.5-PHLT: 1-2% fine grained banded py throughout the altered rock						
434	Trace pyrr as subhedral to euhedral xlts ~0.1cm in size.		433.8	435.6	1.8	204562	
435	Trace cpy as <0.1cm size anhedral xlts						
436			435.6	437.1	1.5	204563	
437	PHTT 1% diss. <0.1cm dia anhedral to		437.1	438.9	1.8	204564	
438	subhedral xlts of py						
439			438.9	440.2	1.3	204565	
440			440.2	441.7	1.5	204566	
441							

PAGE 3° OF | PROJECT: | HOLE NO. JV-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION Chl A	Ser B	Ep C	Carb D	E	FRACTURE INTENSITY	% VEIN QTZ.
442	RHLT			424.5-425.9 RHLT	Dark, grey siliceous rhyolite (?) lapilli tuff. - Alteration makes determination of original rock difficult - Moderate sericite alteration is present throughout interval - Rock is typically fine grained but some sections show some (5-10%) lapilli size fragments in a fine grained tuffaceous matrix - 20-25% of rock consists of black fine grained 0.3-0.5 cm thick bands of carbonaceous argillite - Could be more of a siliceous sediment (compared to carbonaceous argillite) or a siliceous tuff. - Core angle: 65°							
443												
444												
445			70°									
446												
447												
448												
449				425.9m-426.7 ARCB	Black, fine grained carbonaceous Argillite interbedded with greyish-white tuffaceous bands and thin limey Argillaceous units - Weak sericite alteration and weak chlorite alteration. Sericite is pervasive across interval and chlorite forms a blotchy/mottled texture over top 20cm of unit. - QTVN: 326.2-326.3							
450												
451												
452												
453	RPTF			426.7-428.5 RHTT	Greenish-grey, moderately sericitically altered tuffaceous rhyolite - Moderate sericite alteration developed throughout this unit - Mainly tuffaceous size matrix with 5-10% lapilli size fragments preserved - Weak carbonate alteration throughout interval. - Upper contact with overlying argillite is gradational over 10cm. - 2-3cm wide qtz veins are present throughout this interval.							
454												
455			70°									
456												
457												
458												
459				428.5-431.2 ARTF	Black to greyish-black tuffaceous to carbonaceous Argillite - Both fine grained Argillite + tuffaceous Arg are interlayed over this unit - Weak sericitic alteration developed throughout this unit. - Numerous qtz veins occur over this interval: 427.2-427.5; 429.6-429.9; 430.9-431.0. Other veins are present that are too small to mention. - Lower 50cm (forming the immediate hanging-wall to base lense) is strongly altered by chlorite and sericite.							
460												
461												
462	ARCB											
463												
464												

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PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 41 OF | PROJECT: | HOLE NO. WN-97404

Description Only - No scale

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				431.2-432.3 Massive sulphide with:							
				SSMS Py : 68%							
				Sph : 10% Core angle is 65°							
				Cpy : 3.6							
				Gn : 0.5% Zn : 7%							
				Tetrahedrite : trace Cu : 0.8%							
				Gangue : 17.5% Pb : 0.3%							
				Interval consists almost entirely of banded fine grained pyrite with 0.2-1cm wide bands of sphalerite and minor blebs of cpy. Gangue is typically siliceous with a weak component of carbonate (10-15%). There is little variation over interval with the exception of a concentration of sphalerite banding over basal 10cm (432.1-432.2).							
				Pyrite is fine grained dirty yellow-brown in colour over the 1.1m interval. It contains to from anhedral to subhedral with over 431.3-431.35m (mm size is 0.1cm dia).							
				Sphalerite occurs in 0.1-0.5cm wide disc to mms. bands and as minor disseminations within the fine grained py. Sph is dark- reddish-brown in colour and is fine grained throughout interval. A concentration of sph in 4-5 0.4-1cm wide bands occurs at the base of the interval (432.1-432.2m).							
				Chalcopyrite is not very abundant and, where observed, forms 0.2-0.5 cm dia. clots + anhedral masses within the banded py.							
				Galena: Trace amounts of silver coloured minerals over the 431.3-431.5m interval. Half of these observed minerals consist of galena. Tetrahedrite comprises other portion of observed silver mineral.							
				Gangue: Consists mainly of silica with minor carbonate. Carbonate content increases to 50-60% of gangue at 431.50-431.55 and 431.9-432.1m.							

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PAGE 42 OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
442		441.7	443	1.3	204567	
443		443	444.6	1.6	204568	
444						
445		444.6	446	1.4	204569	
446		446	447.5	1.5	204570	
447						
448		447.5	448.8	1.3		
449		448.8	450.3	1.3	204572	
450		450.3	451.7	1.4	204573	
451						
452		451.7	453.1	1.4	204574	
453		453.1	454.5	1.4	204575	
454						
455		454.5	456.0	1.5	204576	
456		456.0	457.4	1.4	204577	
457						
ARCB: 1% py occurring as fine grained masses associated with silica veins that are within the ARCB. Also py fine grained py bands parallel to foliation.						
458		457.9	458.9	1.0	204578	
459		458.9	460.2	1.3	204579	
460						
		460.2	461.6	1.4	204580	
461		461.6	464.0	2.4	204581	
462						
463						
464		464	465.4	1.4	204582	

PAGE 43 OF | PROJECT: | HOLE NO: N97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Ch)	B (Se)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
				432.3- 432.5 QTUN Massive bull qtz vein.							
465			70°	432.5- 437.1 Variably straw yellow-green to greenish-grey							
				RHLT - siliceous rhyolite (?) lapilli tuff with 5-10cm thick							
466			EOH	interbanded carbonaceous argillite							
				- Strongly altered rock therefore determination of							
467				original rock type is very difficult							
				- Moderate to strong sericite alteration pervasively							
468				developed throughout interval. Sericite is also							
				developed in 5-10cm thick concentrated bands that							
469				show a bright straw yellow green colour.							
				- Chlorite alteration is not obvious but could be							
470				masked by sericite.							
				- Carbonate is present throughout 60-70% of							
471				interval and could reflect alteration or could be							
				original lithology (?). Weak carbonate alteration.							
472				- 5-10cm thick black fine grained carbonaceous							
				argillite is interbedded within this rock.							
473				Note 4cm wide argillite band occurs at the contact							
				below the qtz vein.							
474				- Original rock could possibility have been a							
				lapilli tuff due to the presence of siliceous							
475				lapilli size frags.							
				- Core angle: 435m : 60°							
476											
				437.1m-446m Medium grey, moderately foliated fine grained tuff							
477				RHTT with 3-5% carbonaceous argillite bands							
				- Pervasive weak sericite alteration throughout unit							
478				- Some sections of this interval show a small percentage							
				of lapilli-sized fragments but mainly rock is a fine							
479				tuff.							
				QTUN: 441.5-441.9							
480				- The upper contact of this unit corresponds to							
				where the carbonate (alteration?) stops in the overlying							
481				RHLT.							
				- No vlts of either qtz or feldspar within this unit.							
482				- Core angle 70° at 445°							
483				446m- 457.9 Medium grey moderately foliated lapilli tuff with rare							
				RPTF qtz vlts + minor feldspar vlts							
484				- Weak sericite alteration pervasively developed throughout							
				this interval.							
485				- Qtz eyes are rare and lapilli size fragments consist							
				of siliceous fragments and minor feldspar vlts.							
486				- Lower 60cm of unit carbonaceous argillite is							
				present in thin bands and increases towards lower							
487				contact							
				QTUN: 451.4- 451.5m							

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PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 15 OF | PROJECT: | HOLE NO. WV-97-104

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				RPTF cont'd - Calcite veins or bands occur over lower 3m of unit (~3-5% of rock)							
				- Core angle at 455m: 70°							
				457.9 - 465.4 Black fine grained moderately foliated carbonaceous argillite with 20-30cm RPTF beds							
				ARCB - Upper 3m of interval consists of 20-30% RPTF interbedded with the ARCB. Contacts between units are gradational							
				- 5-10 cm STGb occurs within the Argillite over 15% of interval							
				- A weak sericite alteration is present within the more siliceous beds							
				- Core angle is 70° at 465m							
				E.O.H.							

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DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: 1490m
HOLE NO.: WV97-105	BEARING: 213° (Grid South)
LOCATION: 16955 N, 16950 E	DIP: -89°
	TOTAL LENGTH: 423.35m
LOGGED BY: M. Padberg.	HORIZONTAL PROJECT
DATE: Aug 9/97.	VERTICAL PROJECT
CONTRACTOR: Boisvenu Diamond Drilling.	
CORE SIZE: NQ II	
DATE STARTED: Aug. 8/97	
DATE COMPLETED: Aug 15/97	

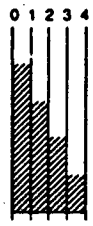
DIP TESTS
@ 91.4m - -80.5°
@ 225.2m - -76
@ 295.4m - -74.5
@ 353.3m - -73.5
@ 422.8m - -70

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

LEGEND

- RHFS
- EXMT
- STGG
- EXSP
- AR
- EXCP
- QTVN
- RPTF
- RHFF, RHLT
- RPQL
- ADTF, ADTT
- RPAT
- ARGT
- SSMS
- ARRH, RHAR
- ARQE
- RHFR
- FDPH

PAGE 1. OF 40 | PROJECT: Wolverine | HOLE NO. WV97105

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (EPI)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
0				0.00 - 5.49 CASING							
				DHCS							
5.49	DHCS			5.49 - 5.79 OVERBURDEN							
5.79				DHOB Andesite cobbles.							
	RHFS.			5.79 - 40.17 MASSIVE RHYOLITE							
				RHFS. Mod → str patchy Fe-oxin of mass aphyric (locally f.g. tuff) pale greenish rhy w/ fairly rhythmic (every 3 → 5 cm) anast 1 → 10 mm thk ser. bands Rare f.g. diss. py. Brkn or shattered core common.							
20.42	RHFS			→ 20.42 - 25.38: wk perv ser altn of RHFS Grayish lt. greenish teale colour. Localized 3-5 mm² py knockers. Patch of str. apple green ser @ 240° (sim. to ser @ K2K)							

Westmin Resources

PAGE 2 OF 40	PROJECT: Wolverine	HOLE NO. WV 97105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

PAGE 3 OF 40 | PROJECT: Wolverine | HOLE NO. WV97105

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (15.79-40.17: RHFS cont'd)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				Tr → 1% f.g. py diss. tht							
25.33	RHFS			→ ~25.38-29.80: wk Fe-oxid. light tan/ rust coloured.							
29.80 30.00				→ 29.80-30.00: ST66: FAULT GOUGE Variable angular clast size (Pebb→silt); rusty tan coloured, wkly Fe-oxid. Primarily sericitic clasts							
				→ ~30.00-34.20: Fair gray colour w/ patchy rusty Fe-oxn							
				→ ~34.20-40.17: Slightly f.g. arg. comp. making RHFS steel gray w/ dk gray ser/ arg. partings							
36.20 36.27 36.42 36.62				→ 36.20-36.27: ST66: FLT GOUGE Steely gray, pasty arg → subang. clast gauge.							
				→ 36.42-36.62: ST66: FLT GOUGE as above (36.20-36.27)							
40.17											
	ARS1			40.17-43.17 SILICEOUS ARGILLITE							
				ARS1 RHFS above grade into dk gray/ blk hard sil. arg w/ 1% v.f.g → mass fine (<1mm thk) pyric blebs + stringers tht. Tr wispy mass effery. Fe-carb vns in siliceous stringers							
43.17											
	ARTF			43.17-48.06 TUFFACEOUS ARGILLITE							
				ARTF Blk arg. w/ 5x25mm calcareous tuffaceous frags + f.g → mass fine pyric stringers (rim to ARS1 above)							

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PAGE 4 OF 40	PROJECT: Wolverine	HOLE NO. WV97105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										

PAGE 5 OF 40 | PROJECT: Wolverine | HOLE NO. WV 97105

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (SER)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
				(43.17-48.06: ARTF cont)							
				Hard.: ↓'s gradational from ARSI → ARTF as litho grades from ARSI → ARTF							
47		ARTF									
48.06				48.06-52.37 MASSIVE RHYOLITE							
				RHFS mass aphyric fsg gray (fragmented?) rhy w/ fine anastomozing carb'ic partings. Rare fine diss. py + a hint of a PbS stringer near 50.15. A faint <1mm thk steel blue stringer 3cm in length. no x-tals seen.						
49											
50											
51		RHFS									
				Localized wk perv. carb. alt'n							
52											
52.37				52.37-61.05 MASSIVE ARGILLITE							
				ARMS v. fg → mass. dk black uniform carbiceous arg w/ 1-2% v.f.g → mass fine pyitic (<1mm thk) stringers: tht mohs hardness of: 3.5 → 4. Randomly set calcareous bands (from 1mm → 5cm, avg ~7mm) w/ mod → str effferv. under 10% HCl. V. rare 2mm² wh. qtz-eye x-tals vis near 57.50m. ↑g Si @ L.C.						
53											
53.87											
53.91											
54											
54.95											
55											
56											
56.87											
56.91											
57		ARMS									
58				→ 53.87-53.99: STGG: FAULT GOUGE Angular clasts, pasty mtx, all grain sizes.							
58.74											
58.82				→ 54.00-54.07: QTVN-QUARTZ VEIN Snowy wk. w/ 3% chl'ic frags. + tr. f.g. py							
59											
59.70											
59.74											
60				→ 54.93-54.95: STGG: FAULT GOUGE as above (53.87-53.99)							
61											
61.05				→ 56.87-56.91: STGG: FAULT GOUGE as above (53.87-53.99)							
62				→ 58.74-58.82: QTVN-QUARTZ VEIN as above (54.00-54.07)							
63				→ 59.70-59.74: QTVN-QUARTZ VEIN as above (54.00-54.07)							
64											
65		RHFF		61.05-68.30 ASH TUFF							
				RHFF Aphanitic gun metal gray ash sized particle rhy'ic tuff w/ localized minor regions of aphyric mass cherty rhy. Rare 5mm² angular felsic frags + more common faint wispy lenticular felsic frags vis over a fine particle groundmass. Seric (beigish colour) partings common.						
66											
67											
68.30											
69		ARMS									

Westmin Resources

PAGE 6 OF 40	PROJECT: Wolverine	HOLE NO. WV97105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
47										
48										
49										
50										
51										
52										
53										
54										
55										
56										
57										
58										
59										
60										
61										
62										
63										
64										
65										
66										
67										
68										
69										

PAGE 7 OF 40 | PROJECT: Wolverine | HOLE NO. WV 97105

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
		ARMS		68.30-71.86 MASSIVE ARGILLITE							
				ARMS Same as above (52.37-61.05)							
71.86			80	71.86-72.54 ASH TUFF							
72.84		RHFF		RHFF Same as above (61.05-65.30)							
			60	72.84-82.20 MASSIVE ARGILLITE							
		ARMS		ARMS as above (52.37-61.05) w/ silty (Wacke) coarser grained dk grey banding common from ~80.00m → 82.20m.							
82.20			70	8220-85.53 TUFFACEOUS ANDESITE							
		ADTT		ADTT Fine grained lt green banded, ctr'ly fol'd tuff coarse andes w/ wk perv chl + ser alt'ns. Fine bands (tuffaceous frags?) of mottled wh. cal. common. Rare fg. diss. py. Sharp L.C w/ ARMS @ 85.53.							
85.53			65								
		ARMS		85.53-88.64 MASSIVE ARGILLITE							
				ARMS As above (7284-82.20) Sharp ctc's							
88.64			69	88.64-90.44 TUFFACEOUS ANDESITE							
		ADTT		ADTT As above (8220-85.53)							
90.19			75	→ 90.19-90.44: Q'CVN-QTZ/CARB VEIN							
90.44				85/15% qtz/carb vn w/							
			70	5% fine chlic stringers +							
		ARGT	80	1% fine green sericitic bands							
			92								

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PAGE 8 OF 40	PROJECT: Wolverine.	HOLE NO. WV 97102

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
70										
71										
72										
73										
74										
75										
76										
77										
78										
79										
80										
81										
82										
83										
84										
85										
86										
87										
88										
89										
90										
91										
92										

PAGE 9 OF 40 | PROJECT: Wolverine | HOLE NO. WV 97105

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
	ARGT			90.44-93.69 RANDED ANDESITE / ARGILLITE							
93				ARGT Intercalated tuffaceous blk calcareous arg. w/ lt. green tuff.							
93.69			78	andes (same andes as above)							
94				90.75 - 90.85 : QTVN · QUARTZ VEIN							
				Sooty wk., 3% blebby chl							
95				91.03 - 91.13 : QTVN · QUARTZ VEIN							
96				91.60 - 91.72 : QTVN · QUARTZ VEIN							
96.38				As above (90.75-90.85)							
96.55			70								
97			40								
97.20				93.69-109.72 MASSIVE ARGILLITE							
97.25				ARMS Jet black mass. arg. w/ tr							
97.51			45	fine (1→3mm) thk Si stringers							
97.68			55	+ wkly calcareous wisps Rare fg							
98				stringer py. Localized silty/wacke							
99				banded w/ mass arg. from ~100.00m							
99.65				to 109.72.							
99.74			60								
100				→ 96.38 - 96.55 · QTVN · QUARTZ VEIN							
100.60			60	→ 97.20 - 97.25 · QTVN · QUARTZ VEIN							
101				→ 97.51 - 97.68 · QTVN · QUARTZ VEIN							
101.05			80	→ 99.65 - 99.74 - QTVN · QUARTZ VEIN							
102				→ 100.60 - 101.05 - QTVN · QUARTZ VEIN							
				Bullish veins, no mineral.							
103											
104											
105											
106											
107				→ 107.57 - 108.10: Localized sub-unit of							
107.57				ARGT, same as above							
108				(90.44 - 93.69)							
108.10											
109											
109.72			90								
110	ARWK			109.72 - 116.25 INTERBEDDED ARGILLITE / SILTSTONE							
				ARWK Interbedded blk mass. arg. (as above)							
111				w/ fine grained dk grey siltstone							
				tr fg → mass py ic stringers.							
112											
113											
114											
115											

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PAGE 10 OF 40	PROJECT: Wolverine	HOLE NO. WV 97105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
93										
94										
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										
112										
113										
114										
115										

PAGE 11 OF 40 | PROJECT: Wolverine | HOLE NO. WV 97105

(109.72 - 116.25 : ARWK cont)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
116.25	ARWK		75	116.25 - 118.46 MASSIVE RHYOLITE							
117	RHFS			RHFS Fg gray aphyric mass rhy w/ rhy ser partings every ~2cm							
118				2-3% fine diss microlites vis							
118.46			80								
119				118.46 - 127.43 INTERBEDDED ARGILLITE/RHYOLITE.							
				ARRH Black mass. argillite w/ tr f.g. → mass fine stringer py interbedded w/ fg gray aphyric mass rhy. layers. 80/20 arg/rhy.							
120											
121											
122											
123											
124	ARRH										
125											
126											
127											
127.43			70	127.43 - 131.70 MASSIVE ARGILLITE							
128	127.80 → 127.94		60	ARMS Black uniform carbonaceous arg w/ fine faint wispy calcareous stringers + rare → tr v.f.g → mass very fine pyr. stringers.							
129			30								
130	ARMS			→ 127.80 - 127.94 : QCVN - QTZ/CARB VN. 70/30 qtz/carb mega-crystic vn No sx's							
131			60								
131.70			80								
132			50	→ 130.75 - 131.20 : QTVN - QUARTZ VEIN Snowy wh. qtz vn w/ tr. carb blebs + 3% fine chl'ic stringers							
133	ADTF										
133.70			70								
134											
134.75			60								
135				131.70 - 133.70 TUFFACEOUS ANDESITE							
136				ADTF Fg/f.g. green banded str'ly fol'd tuff. andes. w/ fine carb stringers (mostly efferv.) No sx's wk perv. chl/ser							
137	ARMS										
138											

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PAGE 12 OF 40	PROJECT: Wolverine	HOLE NO. WV 97105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
116										
117										
118										
119										
120										
121										
122										
123										
124										
125										
126										
127										
128										
129										
130										
131										
132										
133										
134										
135		134.75	135.75		204583					
136		135.75	139.42		204584					
137										
138										

PAGE 13 OF 40 | PROJECT: Wolverine | HOLE NO. WV 97 108

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EPI C	CARB D	E	FRACTURE INTENSITY	% VEIN QTZ.
	ARMS			133.70-143.85 MASSIVE ARGILLITE							
				ARMS As above (127.43-131.70)							
139				→ 134.75-139.40 · ST66 · FAULT GOUGE							
139.40				Black, pasty gouge; tr → 1% f.g. py							
140											
141											
142											
143			65								
143.85				143.85-160.64 BANDED ANDESITE / ARGILLITE							
144	ARGT			ARGT Black tuffaceous arg. (frags. avg. 1×5 mm) w/ rare v.f.g. py filling fract's; 20% random andesitic (ADTT) bands lt green in colour ranging from 2→20cm in thickness w/ tr fine biot. appearing in andesitic bands.							
145											
146											
147											
148											
149											
150											
151											
152											
153			60	→ 153.75-153.95: QTVN-QUARTZ VEIN							
153.75				Bull wh. vn.							
154/153.95			65								
155											
156											
157											
158											
159			75								
160											
160.64				160.64-166.20 ANDESITIC TUFF (?)							
161			75	ADTT(?) Light green variable andesitic							

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PAGE 14 OF 40	PROJECT: Wolverine	HOLE NO. WV 97105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
139										
140										
141										
142										
143										
144										
145										
146										
147										
148										
149										
150										
151										
152										
153										
154										
155										
156										
157										
158										
159										
160										
161										

PAGE 15 OF 40 | PROJECT: Wolverine | HOLE NO. WW 97105

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(160.64 - 166.20 : ADTT cont).							
	ADTT (?)			tuff w/ regional biotite infiltration, + reg. ↑'d Si contents mod perv. /+ patchy ser. alt'n. No vis sx's. Strange unit. (???).							
166.20				166.20-207.54 FRAGMENTAL RHYOLITE							
	RHFR		70	RHFR DK grayish rhyic frag's w/ a variable mixture of sericitic, chl'ic, + arg. cgs matrix; Random green andes tuffaceous bands from ~171.00m → ~176.00m. Frag's are mod-lithologic + slightly variable in sizes. (from 5x25mm → 1x4 cm) Rare fg py + po along parting sht							
			70								
			72								
	RHFR		75								

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PAGE 16 OF 40	PROJECT: Wolverine	HOLE NO. WV 9710

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						
162										
163										
164										
165										
166										
167										
168										
169										
170										
171										
172										
173										
174										
175										
176										
177										
178										
179										
180										
181										
182										
183										
184										

PAGE 17 OF 40 | PROJECT: Wolverine | HOLE NO. WV97105

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	B (SER)	C (EPI)	D (CARB)	E	FRACTURE INTENSITY	% VEIN QTZ.
185	RHFR			(166.20-207.54 - RHFR cont)							
186											
187			80								
188											
189											
190											
191											
192											
193											
194	RHFR			→ 194.41-194.47: QTUN - QUARTZ VEIN							
194.41				Bull wh.; no min							
194.47			70								
195											
196											
197			70								
198											
199											
200											
201											
202											
203											
204	RHFR		70								
205											
206											
207											

Westmin Resources

PAGE 18 OF 40	PROJECT: Wolverine	HOLE NO. WV97105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
185										
186										
187										
188										
189										
190										
191										
192										
193										
194										
195										
196										
197										
198										
199										
200										
201										
202										
203										
204										
205										
206										
207										

PAGE 19 OF 40 | PROJECT: Wolverine | HOLE NO. WV97105

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
207.54				207.54-207.70	FINE GRAINED TUFF							
207.70			70°	RHTT	Dk gray, fine grained phyllic tuff w/ mod perv. carb alt'n. Fine dk gray/wh. mottled text (poss. EXCP?). No vis sxs.							
209			70°									
210												
				207.70-213.25	FRAGMENTAL RHYOLITE							
211	RHFR			RHFR	As above (166.20-207.54)							
212												
213.25												
				213.25-294.25	DK GREEN FRAGMENTAL RHYOLITE							
214				RHFG	(PUCK FRAGMENTAL) Similar to fragmental units seen in Puck holes. Very siliceous, aphanitic, fragmental text. w/ frags avg 1x4 cm in size. Ovoid/lenticular shape. Primarily feathery, anastomozing chl'ic + ser'ic partgs. (Tr. biot also vis.).							
215												
216												
217												
218			75°		Localized qtz flooding.							
219												
220												
221												
222												
223												
224												
225												
226												
226												
227			80°	RHFG								
228												
229												

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PAGE 20 OF 40	PROJECT: Wolverine	HOLE NO. WV97105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
208										
209										
210										
212										
213										
214										
215										
216										
217										
218										
219										
220										
221										
222										
223										
224										
225										
226										
227										
228										
229										
230										
231										

PAGE 21 OF 40 | PROJECT: Wolverine | HOLE NO. WV97105

(213.25 - 254.25 RHFG cont)

243.23 - 243.41 · QTVN - QUARTZ VEIN
245.02 - 245.68 · QTVN · QUARTZ VEIN
246.66 - 246.90 · QTVN · QUARTZ VEIN
247.75 - 248.12 · QTVN - QUARTZ VEIN
248.83 - 249.19 · QTVN - QUARTZ VEIN

All qtz veins are bullish to snowy wh w/ rare → 3% stringers chl + v. rare fg to mass py.

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PAGE 22 OF 40	PROJECT: Wolverine	HOLE NO. WV97-05

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
230										
231										
232										
233										
234										
235										
236										
237										
238										
239										
240										
241										
242										
243										
244										
245										
246										
247										
248										
249										
250										
251										
252										

PROJECT: Wolverine

HOLE NO. WV97105

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EPI C	CARB D	E	FRACTURE INTENSITY	% VEIN QTZ.
				(21325-25425: RHFG cont)							
253	RHFG										
254											
254.25			80	25425-260.58 MASSIVE RHYOLITE							
255	RHFS		70	RHFS Dk green aphanitic mass rhy. v. siliceous w/ chl'ic + ser'ic							
256				parting's. Finely diss micro-lithes							
257				common Tr→1% f.g. diss. py							
258				w/ rare c.g. py'ic knockers vis.							
259											
260											
260.58			80	260.58-265.85 MASSIVE ARGILLITE							
261	ARMS			ARMS Dk black mass arg w/ v.f.g→mass							
262			75	c. siliceous <1mm wide fracts. Tr							
263				wispy, faint siliceous stringers							
264				Patchy (5-10cm) silicified arg							
265				(ARSI)							
265.85			75	→ 264.75-265.85: wk patchy chl. alt'n							
266				Dk green hue on black arg							
267	RHFS			265.85-268.30 MASSIVE RHYOLITE							
268				RHFS Foc gray aphanitic mass rhy							
268.30			80	w/ patchy wk chl + ser alt'n.							
269	EXMT			tr f.g. diss. py. Seric partings							
269.56			70	every 1→2cm, v. blocky core.							
270	EXSP		75	268.30-269.56 MAGNETIC IRON FORMATION							
270.44				EXMT Deep purple mag. Fe form w/							
271	EXMT		75	13-15% f.g diss mag. 3%							
271.25				fine→med grd diss. py. Localized							
272	RHFS			c.g. 3-5cm bands of red hematite.							
273				269.56-270.44 SILICA EXHALITE.							
273.75			77	EXSP Dk gray/beigish banded Si exh							
274	EXMT			w/ 1-2% f.g mag. in 3-5cm							
275				thk bands. Patchy wk epi alt'n							
				vis in mag bands. 2% diss							
				coarse grd. py.							

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PAGE 24 OF 40	PROJECT: Wolverine	HOLE NO. WV97105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
253										
254										
255										
256										
257										
258										
259										
260		260.58	262.02		204585					
261										
262		262.02	263.30		204586					
263		263.30	264.69		204587					
264		264.69	265.85		204588					
265		265.85	267.26		204589					
266										
267		267.26	268.30		204590					
268		268.30	269.56		204591					
269		269.56	270.44		204592					
270		270.44	271.28		204593					
271		271.28	273.17		204594					
272										
273		273.13	274.27		204595					
274		274.27	275.20		204596					
275		275.20	275.42		204597					

PROJECT: Wolverine

HOLE NO. WW97105

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
275.20											
275.42				270.44-271.28	MAGNETIC IRON FORMATION						
276	RHFS			EXMT	V. dk purple/black mt. Fe-form w/ up to 35% f.g. diss mt, 5% f→med grd py + localized 5cm thk effery. creamy, calcic bands. Tr. f.g. sph. near u.c.						
277											
277.35											
278											
279	EXMT			271.28-273.17	MASSIVE RHYOLITE						
279.63				RHFS (EXSP?)	mass. fog gray aphyric cherty rhy w/ tr. f.g. diss py blebs. Rhythmic fine ser. partgs (every 1-2 cm) + finely diss wh. micro-lites vis.						
279.87	RHY										
280											
280.55											
280.65											
281											
282											
283	RHFS			273.17-275.20	MAGNETIC IRON FORMATION						
284				EXMT	Same as above (270.44-271.28) Regional mod→str grd red hem diss. Qtz vns (up to 5cm) are common.						
285											
285.00											
286	ARTF			275.20-275.42	CARBONATE EXHALITE						
287				EXCP	Brownish/beigish finely mottled wkly effervescent carb exh w/ tr→1% py + 1% f.g. banded sph. Localized qtz. floating over 3cm near L.C						
288											
289				275.42-277.35	MASSIVE RHYOLITE						
290				RHFS	Same as above (271.28-273.17)						
291				277.35-279.63	MAGNETIC IRON FORMATION						
292				EXMT	Same as above (270.44-271.28)						
293				279.63-279.87	FINE GRAINED TUFF						
294				RHTT	mod perv carb alt'd dk gray rhyic tuff. Rare f.g. diss py.						
295				279.87-285.00	MASSIVE RHYOLITE						
296				RHFS	Fog gray massive aphyric rhy w/ fine rhythmic (every 1-2cm) anastomizing sericitic partgs + tr→1% f.g. sph'ic stringers ≤1mm thk. V. blocky core. Patchy wk perv. ser. alt'n						
297	ARTF				→ 280.55-280.65: DK green EXMT band w/ 15% f.g. diss mt						
298											

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PAGE 26 OF 40	PROJECT: Wolverine	HOLE NO. WV 97105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		275.42	276.50		204598	
276						
		276.50	277.35		204599	
277						
		277.35	278.40		204600	
278						
		278.40	279.63		204601	
279						
		279.63	279.87		204602	
280		279.87	280.55		204603	
		280.55	280.65		204604	
281		280.65	282.06		204605	
282		282.06	283.50		204606	
283						
		283.50	285.00		204607	
284						
285		285.00	286.49		204608	
286						
		286.49	288.37		204609	
287						
288		288.37	289.64		204610	
289		289.64	291.25		204611	
290						
291		291.25	292.58		204612	
292						
		292.58	293.87		204613	
293						
		293.87	295.41		204614	
294						
295		295.41	296.60		204615	
296						
		296.60	298.58		204616	
297						
298		298.58	299.38		204617	

PROJECT: Wolverine

HOLE NO. WW97105

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				285.00-301.38 TUFFACEOUS ARGILLITE.							
299	ARTF			ARTF Jet blk, modly graphitic tuffaceous arg. w/ fine wispy calcareous stringers common 1% f.g → mass blebby + laminated py as well as wk patchy carb altn.				E			
300											
301											
301.38			85								
302	ARSI			301.38-304.35 SILICEOUS ARGILLITE							
303				ARSI Black ARSI w/ localized v Si rich regions from 302 → 302.50m Primarily brkn core 1% mass blebby py in fracture fill.							
304											
304.35			90								
305	RHFS	K		304.35-310.60 MASSIVE RHYOLITE							
306		K		RHFS Fsg gray ephyric rhy. w/ common rhythmic fine seric patgs, finely diss. wh. microlites, + tr f.g. diss euh. py. Brkn core + rubble @ L.C.							
307		K	80								
308		K									
309		K									
310		K									
310.60		K		310.60-314.38 SILICEOUS ARGILLITE							
311	ARSI			ARSI Dk grayish black v. siliceous arg w/ fine faint feathery silicious wispy stringers flowing tht. Tr. mass. blebby py. Primarily brkn core							
312			66								
313											
314											
314.38				314.38-318.90 MAGNETITE IRON FORMATION							
315	EXMT			EXMT Deep dk forest green/blackish EXMT w/ wk pervasive chl altn. 5% f.g diss py + 1% f.g → mass. pyic stringers + subhedral diss. py. Qtz/carb vn's common.							
315.23			76	→ 315.23-315.31: QCVN-QUARTZ CARB VN							
315.61				80/20 qtz/carb w/ 2-3% f.g pyic stringers + 3% chl'ic blebs.							
316											
317				→ 315.41-315.61: QCVN-QUARTZ CARB VN							
318				10/90 % qtz/carb. mod. strly effesv. tr chl'ic strgrs							
318.90											
319											
320											
321											

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PAGE 28 OF 40	PROJECT: Wolverine	HOLE NO. WW9105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
299										
		299.38	301.38		204618					
300										
301		301.38	302.13		204619					
302		302.13	304.38		204620					
303										
304		304.35	305.50		204621					
305										
		305.50	310.60		204622					
306										
307										
308										
309										
310										
		310.60	313.15		204623					
311										
312										
313		313.15	314.38		204624					
314										
		314.38	316.03		204625					
315										
316		316.03	317.13		204626					
317		317.13	318.90		204627					
318										
		318.90	319.60		204628					
319										
		319.60	321.00		204629					
320										
321		321.00	322.60		204630					

PROJECT: Wolverine

HOLE NO. WW 97105

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				315.90-325.25 SILICA EXHALITE							
322	EXSP			EXSP Lt gray silica exh w/							
				(RHFS→ARSI?) tr→1% f.g. stringer py +							
323				tr→1% f.g.→mass faint							
				reddish sph stringers.							
324				Beigish/green sericitic patches							
				+ up to 10cm thk seins of							
325				wk to mod. perv. ser. alt'n. ↑'g							
325.25			35	arg. component from ~320.90							
				to 325.25 becoming a dker							
326			70	gray. Brkn + filled core common							
	EXCP			V.f.g. laminated py vis near L.C.							
327											
327.74			80								
328				325.25-327.74 CALCITE PYRITE EXHALITE							
				EXCP Sky blue mottled wh cal/py							
329				exh str'ly effery. w/ 5%							
				randomly banded + anastomizing							
330				f.g. py + 1-2% mass reddish							
	EXSP			sph stringers localized near							
331				325.40 m. Sharp L.C. on graphitic part's.							
332			75	327.74-332.26 SILICA EXHALITE							
332.26			80	EXSP Dk gray (blackish) grading							
333				to foggy gray (~75cm) back							
				to dker gray (↑'d arg component							
334				Si exh. w/ 5% randomly banded							
				+ laminated f.g→v.f.g. py, rare PbS, as							
335	EXCP			well as 1-2% f.g. stringer sph.							
				→ 332.10-332.26: QTVN-QUARTZ VEIN							
336				milky wh. w/ tr							
				localized carb rhombs							
337				(3x3mm) + 3-4% chl'ic							
337.43			75	stringers in fract. fill.							
338											
				332.26-337.43 CALCITE PYRITE EXHALITE							
339				EXCP Same sky blue mottled text							
				as above (325.25-327.74) w/ patchy							
340				v. str'ly effery. creamy calcic							
			14	seins w/ 3% mass feathery							
341				bands (up to 5cm thk) of sph +							
	EXSP			7-9% f.g.→mass banded/blebby							
342				py, 3-4% mod gr'd diss rhombic/							
342.75				cubic chl. x-tals from ~336→337.43m							
343			70								
				337.43-342.75 SILICA EXHALITE							
	ARCB			EXSP Same as above (327.74-332.26)							
344											

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PAGE 30 OF 40	PROJECT: Wolverine	HOLE NO. WV 97 105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
322										
		322.60	325.25		204631					
323										
324										
325		325.25	326.87		204632					
326										
		326.87	327.75		204633					
327										
		327.75	329.35		204634					
328										
329		329.35	330.75		204635					
330										
		330.75	332.23		204636					
331										
332		332.23	334.02		204637					
333										
334		334.02	335.75		204638					
335										
		335.75	337.43		204639					
336										
337										
		337.43	338.96		204640					
338										
339		338.96	339.43		204641					
340		339.43	341.67		204642					
341										
		341.67	342.75		204643					
342										
		342.75	343.94		204644					
343										
		343.94	344.88		204645					
344										

PAGE 31 OF 40 | PROJECT: Wolverine | HOLE NO. WV 97-05

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (CHL)	ALTERATION B (SER)	ALTERATION C (CBN)	ALTERATION D (CARB)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
344.88	ARCR			342.75-344.88 CARBONACEOUS ARGILLITE							
				ARCB Jet blk carbiceous arg w/ mod							
				(GR) graphitic component + c v. fine							
				calcereous stockwork locally							
				set in the unit. V. f.g. laminated							
346				py (2-3%) tht unit							
347											
			80	344.88-349.02 LAPILLI TUFF							
349	RHLT			RHLT mod perv. sericitic altd beigish/							
349.02				gray rhyitic lapilli tuff w/							
			70	frags avg. 5x10mm. Sericitic							
350	ARSI			partings. w/ tr. f.g. diss py.							
350.30											
351	RHAR			349.02-350.30 SILICEOUS ARGILLITE							
351.40			80	ARSI Blk, hard (6->7) arg w/ faint							
352	ARTF			wispy siliceous stringers, 1-2%							
				f.g. pyitic bands/stringers. Fltd							
353.25			60	L.C. x-cutting @ 50° cax.							
354				350.30-351.40 INTERBEDDED RHYOLITE/ARGILLITE							
			75	RHAR A real 'mixed-bag' of a unit w/							
355	RHFS			5mm rhythmically alternating							
				layers of ARSI, ARTF, ARMS w/							
356				layers of RHFR + RHFS. Mod. ser							
356.29			65	ser altn from 350.30-350.50 w/							
357	ARSI			1% mass pyitic blebs.							
358.00											
				351.40-353.25 TUFFACEOUS ARGILLITE							
359				ARTF Blk arg w/ faint grayish							
				3x15 mm tuffaceous felsic frags							
360				2-3% v.f.g. diss. py finely							
				laminated text. tht. Regional							
361				qtz floating + veining from							
				~351.70-352.70m.							
362											
			80	353.25-356.29 CHERTY MASSIVE RHYOLITE							
363	ARMS			RHFS (CHERTY) V. lt. gray, mass aphyric							
363.46				cherty rhy w/ calcereous							
			70	fine micro-lites diss tht +							
364				localized (~5cm avg) bands							
				of strong carbonate altn							
365.10				Fine rhythmic seric partgs +							
			70	(to-> 1% f.g. stringer py.							
366	ARTF										
				356.29-358.00 SILICEOUS ARGILLITE							
367				ARSI Same as above (349.02-350.30) Fltd							

L.C. Brkn core common

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PAGE 32 OF 40	PROJECT: Wolverine	HOLE NO. WW 97105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
345		344.38	346.40		204646					
346										
		346.40	347.35		204647					
347										
		347.85	349.02		204648					
348										
349		349.02	350.30		204649					
350		350.30	351.40		204650					
351										
		351.40	353.25		204651					
352										
353		353.25	354.62		204652					
354										
		354.62	356.29		204653					
355										
356		356.29	357.76		204654					
357										
		357.76	359.00		204655					
358										
359		359.00	359.90		204656					
360		359.90	360.35		204657					
361		360.35	362.79		204658					
362										
		362.79	365.10		204659					
363										
364										
365		365.10	366.40		204660					
366										
		366.40	368.10		204661					
367										

PROJECT: Wolverine

HOLE NO. WW9105

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	ALTERATION B SER	ALTERATION C EPI	ALTERATION D CARB	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
368	ARTF			358.00-365.10 MASSIVE ARGILLITE ARMS Dk black pale mass arg. w/ regional fine calcareous stringers + localized ↑'d Si contents Tr → 1% f.g. → mass py'ic blebs tht.							
369											
369.50											
370	RPTF			363.48-365.10: STGG. FAULT GOUGE Black pasty gouge							
371											
372				365.10-369.50 TUFFACEOUS ARGILLITE ARTF Blk tuffaceous arg w/ localized secns of Dk. forest green (chl) + lt. apple green (ser) colours Rare → tr. py'ic stringers. Patchy alt'n => mod perv. chl from 365.10 →							
373											
374											
374.58											
375	RPQL			365.44m.; str. perv ser. from 365.60 → 366.08m Flt'd L.C.							
376											
376.65				369.50-374.58 CRYSTAL TUFF RPTF Mod. perv. ser alt'd rhy lapilli tuff w/ rare blue qtz-eye x-tals vis Wk carb alt'n, Dk beige/gray colour Frags avg 5×35mm in size Rare → tr mass stringer py.							
377	RPAT										
378											
379											
380				371.58-376.65 QUARTZ-EYE TUFF RPQL Continued mod perv. ser alt'n w/ blue qtz eyes + 3×5mm sized frags common Rare f.g. cpy + po (assoc together) blebs vis (@ 375.49)							
380.88											
381											
381.08											
381.22											
381.30											
381.45											
382				376.65-380.88 ARGILLICEOUS CRYSTAL TUFF RPAT V. dk gray (blackish hue) felsic lapilli tuff w/ fine fsp x-tals common + a str. arg. component. Tr → 1% f.g → mass stringer py+cpy Fsp x-tals avg 1mm², lapilli frags avg 5×20mm. Wk chl + ser alt'n. Localized qtz flooding. Strly foliated							
382.05											
383											
383.18											
383.72											
383.78											
384	SSMS										
384.19											
384.76				380.88-386.20 MASSIVE SULFIDE (5.32m) SSMS Flt gouged + gangue rich							
385											

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PAGE 34 OF 40	PROJECT: Wolverine	HOLE NO. WW 97105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
368		368.10	369.50		204662					
369		369.50	371.25		204663					
370										
371		371.25	372.95		204664					
372		372.95	374.58		204665					
373										
374		374.58	375.70		204666					
375		375.70	376.65		204667					
376		376.65	377.99		204668					
377		377.99	379.38		204669					
378										
379		379.38	380.88		204670					
380		380.88	381.08		204671					
381		381.08	381.45		204672					
		381.45	382.05		204673					
382		382.05	383.18		204674					
383		383.18	383.72		204675					
		383.72	383.78		204676					
384		383.78	384.40		204677					
		384.40	384.76		204678					
385										

PROJECT: Wolverine

HOLE NO. WW 97105

Descriptive Geology Only.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (380.88 - 386.20: SSMS cont'd)	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				mass sx. Gangue consists primarily of graphitic arg. bands (up to ~40cm thk) + calcareous / chl matrix for the mass sx.							
				→ 380.88 - 381.08: 70% PY, 28% GANGUE 2% SPH. Flt'd U.C w/ RPAT @ 50° cax. Mass. dull metallic py w/ faint reddish hue of sphic stringers vis. Gangue consists mostly of graph'ic partgs + a fine wkly effervescent calcareous mtx							
				→ 381.08 - 381.45: Jet blk graphic arg. band w/ 3-5% f.g. anastomizing py'ic stringers. Mod Si comp							
				→ 381.22 - 381.30: STGG: FLT GGE Blk graphic gouge; var. clast size (silt → pebble)							
				→ 381.45 - 382.05: 80% PY, 15% GANGUE, 5% SPH, Tr TETRA. Dull metallic mass py w/ faint reddish hued sphic bands (5mm thk @ 53° cax) + tr tetra. vis @ ~381.70. 5mm² qtzose pods + fine x-cutting carb. veinlets comprise gangue. Healed criss-crossing fract's common. Broken core/rubble from 381.90 - 382.04.							
				→ 382.05 - 383.18: STGG-FAULT GOUGE 60% PY 35% GANGUE 5% SPH. Py'ic flt gouge w/ var. clast sizes (silt → pebble), clast are sub-angular → rounded. Graphic partgs + carb stringers + a finely laminated aphyric felsite (from → 382.90-383.05) sharp contacts, U @ 55°, L @ 72° cax.							
				→ 383.18 - 383.72: 55% PY, 30% GANGUE 15% SPH. - F.g. py'ic buckshot over a mix'd calcareous + dull metallic mass py mtx. Graphitic arg. bands + partgs (up to 5cm thk) + a strly efferv. calcareous gangue. Mass. dull red sphic stringers are common from 383.58 - 383.72.							
				→ 383.72 - 383.78: ARGR - GRAPHITIC ARG. Graphic arg. w/ 3% f.g → v.fg. py + 10% fine calcareous wkly. laminae in blk arg. host.							

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PAGE 36 OF 40	PROJECT: Wolverine	HOLE NO. WV97105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 37 OF 40 | PROJECT: Wolverine | HOLE NO. WW 97105

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				(380.88 - 386.20: SSMS cont)							
385.32				→ 383.78 - 384.10: 60% PY, 40% GANGUE							
385.48	SSMS		80	massive dull metallic py over a							
			70	calcareous mtx. 20% f.g. pyic							
386				"buckshot" vis. Primarily brkn core.							
386.20			65	→ 384.10 - 384.76: ARGR-GRAPHITIC ARGILLITE							
				Same as above (383.72 - 383.78)							
				→ 384.76 - 385.32: 60% PY, 30% SPH, 10%							
387			65	GANGUE, massive dull metallic							
	ARQE			py w/ f.g. diss "buckshot" tht							
388				+ alt red sphic bands (2-4cm)							
				common. Effervescent calcareous							
389				mtx.							
				→ 385.32 - 385.48: STGG-FAULT GOUGE							
390	390.05		80	Graphitic gouge w/ 3-5%							
				sub-angular pyic/sphic + 3-5%							
391				felsic frags UCG 80° LCG 70 cax.							
				→ 385.48 - 385.63: 50% GANGUE, 40% PY							
392				10% SPH - Finely laminated mass							
				py + sph over calcareous/graphitic							
393				arg. mtx.							
				→ 385.63 - 386.20: 50% PY, 30% SPH, 28%							
394			75	GANGUE 2% CPY - F.g pyic "buckshot"							
				over mass pyic + sphic mtx. wk =>							
395				modly effer. calcareous gangue tht							
				w/ localized graphitic partgs +							
396				resjoint f.g. cpy blebs. Brkn core							
				@ L.C. of SSMS unit.							
397											
				386.20 - 390.05 QUARTZ-EYE BEARING ARGILLITE							
398				ARQE Black carbonaceous arg w/ 5mm²							
				bluish/wh. qtz-eyes common near							
399				upper part of secn. Localized							
				mass sx bands tht unit. 3% sph							
400				3-5% cpy + 5% po in blebs,							
				stringers, disseminated x-tals +							
401				mass sx bands up to 5cm thk.							
				Localized patchy perv. mod serb							
402			72	alt'n							
403				390.05 - 411.75 FINE GRAINED TUFF							
				RHTT lt gray/apple green rhyolitic tuff							
404				w/ variable wk => mod perv							
				apple green sericitic alt'n. Localized							
405				wk carb alt'n. 2-3% f.g pyic +							
	RHTT			sphic stringers tht tr cpy...							
406				tr po							

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PAGE 38 OF 40	PROJECT: Wolverine	HOLE NO. WV 97-105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		384.76	385.32		204679					
		385.32	385.48		204680					
		385.48	385.63		204681					
386		385.63	386.20		204682					
		386.20	387.70		204683					
387										
		387.70	388.38		204684					
388										
		388.38	388.80		204685					
389		388.80	388.94		204686					
		388.94	390.05		204687					
390		390.05	391.25		204688					
391		391.25	392.62		204689					
392										
		392.62	393.90		204690					
393										
		393.90	395.28		204691					
394										
395		395.28	396.68		204692					
396										
		396.68	398.00		204693					
397										
398		398.00	399.30		204694					
399		399.30	400.70		204695					
400										
		400.70	402.01		204696					
401										
402		402.01	403.50		204697					
403										
		403.50	404.90		204698					
404										
		404.90	406.30		204699					
405										
406		406.30	407.75		204700					

PAGE 39 OF 40 | PROJECT: Wolverine | HOLE NO. WV 97105

(390.05 - 411.75 : RHTT cont)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
407	RHTT										
408											
409											
410											
411											
411.75			75	411.75 - 417.80 FELDSPAR PORPHYRY							
412				FDPH Dk cloud gray mass rhy w/							
413			75	2-3 mm² subhedral fsp x-tals							
414				commonly diss tht. Localized							
415				1% sph/py/PbS stringers. Regional							
416	FDPH			qtz flooding. Fltd L.C @ 60° ca							
417											
417.80				417.80 - 423.35 RHYOLITE LAPILLI TUFF							
418			60	RHLT Dk greenish/gray rhyic lapilli							
419				tuff w/ mod perv. chl + ser							
420				alt'n. 1-2% stringer cpy/sph/							
421			75	py/PbS. Lapilli frags avg 2x6mm							
422	RHLT			in size							
423				423.35 - End of Hole							
423.35											

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PAGE 40 OF 40	PROJECT: Wolverine	HOLE NO. WV97105

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
407										
		407.75	409.06		204701					
408										
409		409.06	410.57		204702					
410										
		410.57	411.75		204703					
411										
		411.75	413.28		204704					
412										
413		413.28	414.70		204705					
414										
		414.70	416.20		204706					
415										
416		416.20	417.80		204707					
417										
		417.80	419.20		204708					
418										
419		419.20	420.70		204709					
420										
		420.70	422.10		204710					
421										
422		422.10	423.35		204711					
423										

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DRILL LOG

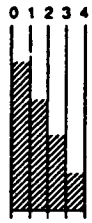
PROJECT: Wolverine	GROUND ELEV.: 1400m
HOLE NO.: WV 97-106	BEARING: 213° (G.S)
LOCATION: 16600N 18500E	DIP: -70°
	TOTAL LENGTH: 222.19m (729')
LOGGED BY: M. Padberg	HORIZONTAL PROJECT
DATE: Aug 22 97	VERTICAL PROJECT
CONTRACTOR: Boisvenu Diamond Drilling.	**ALTERATION SCALE**
CORE SIZE: NQ II	
DATE STARTED: August 15	**TOTAL SULPHIDE SCALE**
DATE COMPLETED: August 17	
DIP TESTS: @ 112.5 -67°	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

Intersected 62cm Zn rich massive sulfide (114.25-114.87m) of the suspected Sable Zone.

LEGEND

- ST66
- RPAT
- AR
- RHTT, RHLT
- EXMT
- EXCT
- RHFS
- SSMS
- RPQL
- RPTF

PAGE 1 OF 18 | PROJECT: Wolverine | HOLE NO. WW97106

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	ALTERATION B SER	ALTERATION C EPI	ALTERATION D CARB	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
0	DHCS			0.00 - 4.57 CASING DHCS							
4.57	DHOB			4.57 - ~45.00 OVERBURDEN DHOB Brkn core, rubble, tuffaceous andesitic bldrs.							
45.00	DHOB	~		45.00 - 54.25 FAULT GOUGE / BRECCIA STGG Variably lithologic (mixed bag) (Bx) fit gouge + bx w/ grain/clast							

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PAGE 2 OF 18	PROJECT: Wolverine	HOLE NO. WV 97 106

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
42		39.10	43.68	4.58	204719					
43										
44		43.68	45.74	2.06	204720					
45		45.74	48.46	2.72	204721					
46										

 PROJECT: Wolverine HOLE NO. WV97106

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				45.00 - 54.25 - ST66 cont)							
				size varying from silt → pebble							
47				Bxid frags are angular + all							
				sizes wk → mod magnetism							
48				near 52.00m.							
49											
50											
51											
52											
53											
54 54.25				54.25-57.60 TUFFACEOUS ARGILLITE.							
				ARTF (?) Blk w/ tan (fe-oxid) highlights							
55				tuffaceous arg w/ felsic frags							
				avg's 2×10 mm. 1% f.g. → mass							
56				stringer py. Localized mod.							
				effery. w/ 10% HCl (wk → mod							
57				carb alt'n?).							
57.60				→ 57.30-57.60: ST66 - FAULT GOUGE							
55				Coarse grained blk							
				gouge							
59											
				57.60-62.75 FAULT GOUGE / BRECCIA							
60				ST66/BX 57.60-60.65: ST66: Heterogeneous							
				dk gray silty grit.							
61				→ 60.65-62.75: STBX: Blk + tan brid							
				angular RHTT frags							
62				on a v.f.g. fe-oxid							
62.75				felsic (?) mtx.							
63											
				62.75-63.80 FINE GRAINED TUFF							
63.80				RHTT Gray f.g. rhyic tuff w/ common							
64 64.30				rhythmic fine scale partings, tr→1%							
65				f.g. diss py + localized tr f.g.							
				mt @ 62.85m.							
66											
				63.80-63.96 MAGNETIC IRON FORMATION							
67				EXMT Blue/green mt Fe form'n w/ 10%							
				f.g. diss mt, + rare → tr f.g. py.							
67.90 68											
				63.96-67.90 CALCITE MAGNETITE EXHALITE							
68.55				EXCM Light mottled sky blue w/ wh							
69											

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PAGE 4 OF 18 | PROJECT: Wolverine | HOLE NO. WV97106

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
47						
48						
		48.46	49.90	1.44	204722	
49						
		49.90	51.51	1.61	204723	
50						
51						
		51.51	54.25	2.74	204724	
52						
53						
54		54.25	60.65	6.40	204725	
55						
56						
57						
58						
59						
60						
		60.65	62.50	1.85	204726	
61						
62						
		62.50	63.80	1.30	204727	
63						
		63.80	63.96	0.16	204728	
64		63.96	65.60	1.64	204729	
65						
		65.60	66.95	1.35	204730	
66						
		66.95	67.90	0.95	204731	
67						
		67.90	68.55	0.65	204732	
68						
		68.55	70.90	2.35	204733	
69						

PAGE 5 OF 18 | PROJECT: Wolverine | HOLE NO. WV 97-1

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(63.96-67.90 : EXCM cont)							
				calcic + dk mt laminae. Strly efferv. w/ 10% HCl. 5-7% f.g. diss. mt w/ localized bands of up to 35% mass mt. X-cutting natural fracts common							
70											
71											
72											
				67.90-68.55 MAGNETIC IRON FORMATION							
73	RHFS			EXMT Same as above (63.80-63.96)							
				68.55-75.55 MASSIVE RHYOLITE							
74				RHFS Fg gray mass aphyric rhy w/ tr fine wh. microlites							
75				rare calcic and magnetic bands (exhalative?). Rare → tr. f.g. bedd mt + rare → tr f.g. diss py.							
75.55											
76.10	EXCP			Brkn core common							
77											
78	RHFS			75.55-76.10 CARBONATE EXHALITE							
				EXCP Sky blue, mottled, strly effervescent calcite exh. Rare							
79				v.f.g. diss. py.							
79.50											
79.78	BX										
80				76.10-79.50 MASSIVE RHYOLITE							
81				RHFS Same as above (68.55-75.55)							
82	ARSI			79.50-79.78 MAGNETIC IRON FORMATION							
82.50				EXMT Black w/ fine wh calcareous							
83	RHFS			laminae, 10% mt, tr blebby py.							
83.56											
84				79.78-82.50 SILICEOUS ARGILLITE							
				ARSI Blk, hard si'ceous arg w/ fine							
85				faint, feathery Si rich stringers							
	EXCM			crossing tht. Primarily brkn							
86				and/or filt'd core. Localized fine							
86.55				mt rich bands (rare)							
87	RHFS										
87.88				82.50-83.56 MASSIVE RHYOLITE							
88				RHFS Same as above (68.55-75.55)							
88.55											
89				83.56-86.55 CALCITE MAGNETITE EXHALITE							
				EXCM Same as above (63.96-6790)							
90	ARSI										
				86.55-87.88 MASSIVE RHYOLITE							
91				RHFS Same as above (68.55-75.55)							
92											

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PAGE 6 OF 18	PROJECT: Wolverine	HOLE NO. WV 97106

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
70										
71										
72										
73										
74										
75										
76										
77										
78										
79										
		79.50	79.78	0.28	204734					
80		79.78	81.18	1.40	204735					
81		81.18	82.50	1.32	204736					
82										
		82.50	83.56	1.06	204737					
83										
		83.56	85.60	2.04	204738					
84										
85		85.60	86.55	0.95	204739					
86										
		86.55	87.88	1.33	204740					
87										
		87.88	90.65	2.77	204741					
88										
89										
90										
		90.65	93.63	2.98	204742					
91										
92										

PROJECT: Wolverine

HOLE NO. WV 97106

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				87.88-95.05 SILICEOUS ARGILLITE							
93	ARSI			ARSI Same as above (79.78-82.50)							
				Fit gouge common.							
94 94.23											
95 95.05				95.05-96.08 LAPILLI TUFF							
	RHLT			RHLT Str. perv. chl'ic alt'd rhyic							
96 96.08				lapilli tuff. Lapilli frags are							
				3x10mm + are rare. Rare v.f.g							
97				diss. py. RCAF green colour.							
				96.08-105.73 TUFFACEOUS ARGILLITE							
98				ARTF Blk arg w/ fine felsic lapilli							
				frags. Primarily fit gouge,							
99				localized carb. alt'n (EXCP?)							
				1% f.g → mass blebby py tht.							
100 100.40				strly deformed.							
	ARTF										
101											
102											
				105.73-106.20 LAPILLI TUFF							
103				RHLT Same as above (95.05-96.08),							
				lapilli frags more common ave →							
104				5x20 mm; mod → str perv. chl							
				+ ser alt'n.							
105											
105.73											
106 106.20				106.20-109.29 GRAPHITIC ARGILLITE/FAULT GOUGE							
				ARGR Coarsely laminated strly deformed							
107				(STGG) unconsolidated ARGR w/ mod							
				sericic alt'n. Alternating black/							
108	ARGR			wh (carb)/green (ser.) bands w/							
				2-3% py + tr → 1% cpy (f.g.							
109 109.29				stringer sx's).							
				109.29-114.25 LAPILLI TUFF							
110				RHLT Str perv ser + wk grading to							
				str perv. chl alt'd rhyic							
111				lapilli tuff. 5% f.g. banded							
				(regular bands up to 2cm thk).							
112	RHLT			py + 3% f.g. banded sph. strly							
				fol'd @ 55° cax.							
113				→ 111.85-114.25: str. perv. apple green							
				ser. alt'n. Lapilli frag							
114				size 1's to 1x3 cm.							
114.25											
	SILT			→ → 111.85: STFL-FAULT · x-cuts @ 50°							

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PAGE 8 OF 18	PROJECT: Wolverine	HOLE NO. WV 97106

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
93						
		93.63	95.05	1.42	204743	
94						
95		95.05	96.08	1.03	204744	
96		96.08	97.80	1.72	204745	
97						
		97.80	99.33	1.53	204746	
98						
		99.33	100.65	1.32	204747	
99						
100						
		100.65	102.71	2.06	204748	
101						
102						
		102.71	104.11	1.40	204749	
103						
104		104.11	105.73	1.62	204750	
105						
		105.73	106.20	0.47	204751	
106		106.20	107.13	0.93	204752	
107		107.13	109.29	2.16	204753	
108						
109		109.29	110.56	1.27	204713	
110						
		110.56	111.90	1.34	204714	
111						
112		111.90	113.00	1.10	204715	
113		113.00	114.25	1.25	204716	
114						
		114.25	114.87	0.62	204712	

PROJECT: Wolverine

HOLE NO. WV 97-16

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	ALTERATION B SER	ALTERATION C EPI	ALTERATION D CARB	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
	SSMS	RHLT	72	114.25-114.87	MASSIVE SULFIDE (62cm)							
114.87				SSMS	50% PY, 35% SPH, 10% GANGUE, 5% CPY							
115			71		Heterogeneous mass sx w/ a							
115.82	RHLT				mass dull metallic py/if mtx							
116			75		+ feathery anastomizing reddish							
116.40	ARCB		75		sph/if stringers + f.g. py/if							
117					buckshot tht. Disseminated							
118					splatters (5%) of buttery mass							
					cpy. tht. Gangue mineralogy							
119			66		consists of 50/50 qtz/carb							
120					pods (5mm² ave), a calcareous							
					mtx tht, + rare graphitic							
121		RHLT			arg'ceous part'gs (← particularly							
					near top of sect'n). Sharp etc's.							
122					★ MASSIVE SULFIDE GRADE ★							
					Zn - 12% Zn - 8%							
					Cu - 2% Cu - 0.7%							
123					Pb - <1% Pb - ~0%							
					MP → CR →							
123.91				114.87-115.82	LAPILLI TUFF							
124			70	RHLT	Same as above w/ 5% irregularly							
125					banded anastomizing f.g. red sph							
					+ tr→1% f.g→mass buttery cpy							
126		RHTT			stringers							
			20									
127				115.82-116.40	CARBONACEOUS ARGILLITE							
127.89				ARCB	BLK carbiceous arg. w/ fine tr							
128	RQL		70		Si'ceous veinlet							
128.49			75		and tr mass py + cpy blebs							
129												
				116.40-123.91	LAPILLI TUFF							
130				RHLT	DK forest green mod perv.							
					chl + ser alt'd rhy/if lapilli tuff							
131					w/ 1-2% mass stringer cpy,							
					localized qtz vn's + flooding,							
132					+ rare mass wh. sph vis. (@ 118.35)							
					Rare blue qtz-eyes vis.							
133			70	123.91-127.89	FINE GRAINED TUFF							
134		RHTT		RHTT	Pale bile green wk perv ser							
					alt'd f.g. rhy/if tuff w/ rhythmic							
135					ser/if part'gs common Tr mass							
					stringer py + sph. (<1%)							
136												
				127.89-128.49	QUARTZ-EYE TUFF							
137				RPQL	Mod perv. ser. alt'd blue qtz							

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PAGE 10 OF 18 | PROJECT: Wolverine | HOLE NO. WV 97106

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		114.87	115.82	0.95	204717					
115										
		115.82	116.40	0.58	204718					
116										
		116.40	118.30	1.90	204754					
117										
118		118.30	119.70	1.40	204755					
119										
		119.70	121.13	1.43	204756					
120										
121		121.13	122.50	1.37	204757					
122										
		122.50	123.91	1.41	204758					
123										
		123.91	125.35	1.44	204759					
124										
125		125.35	126.65	1.30	204760					
126										
		126.65	127.89	1.24	204761					
127										
		127.89	128.49	0.60	204762					
128										
		128.49	129.99	1.50	204763					
129										
130		129.99	131.41	1.42	204764					
131		131.41	132.78	1.37	204765					
132										
		132.78	134.27	1.49	204766					
133										
134		134.27	135.88	1.61	204767					
135										
		135.88	137.42	1.54	204768					
136										
137		137.42	139.66	2.24	204769					

PAGE 11 OF 18 | PROJECT: Wolverine | HOLE NO. WV 91-06

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(127.89 - 128.49 - RPQL cont) eye bearing lapilli tuff (frags avg. 4 x 20 mm). 1% fg. banded py & tr							
139	RPTF										
139.66				128.49 - 139.66 CRYSTAL TUFF							
140				RPTF wk perv. chl/ser alt'n, dk gray in colour, variable arg component (possible RPAT)							
141			35	w/ blue qtz-eyes + fine grained black fsps (?) common.							
142				Lapilli (felsic) frags avg 1 x 5mm							
143	RPQL			Localized qtz vnlg + floodg. Tr fg. diss py. Fit'd LC @ 75° ca.							
144			78								
145				139.66 - 172.57 QUARTZ-EYE TUFF							
146				RPQL Quartz-eye bearing lapilli tuff v sim to that of 127.89 - 128.49. 1% fg diss py, wk perv. ser alt'n. Being (not straw) coloured ser. Both blue qtz-eyes + lt fsps (?) common.							
147											
148				Localized str. deformation + mod-str apple grn ser vns.							
149				Localized qtz veing + fault gouging.							
150											
151											
152											
153											
154											
155											
156											
157											
158											
159	RPQL		74								
160											

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PAGE 12 OF 18	PROJECT: Wolverine	HOLE NO. WV 97106

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
138										
139		139.66	141.25	1.59	204770					
140										
141		141.25	142.94	1.69	204771					
142		142.94	143.86	0.92	204772					
143		143.86	145.99	2.13	204773					
144										
145		145.99	147.30	1.31	204774					
146										
147		147.30	148.84	1.54	204775					
148		148.84	150.26	1.42	204776					
149										
150		150.26	152.00	1.74	204777					
151										
152		152.00	153.50	1.50	204778					
153		153.50	154.70	1.20	204779					
154		154.70	156.11	1.41	204780					
155										
156		156.11	157.75	1.64	204781					
157		157.75	159.20	1.45	204782					
158										
159		159.20	160.59	1.39	204783					
160		160.59	162.05	1.46	204784					

PAGE 13 OF 18 | PROJECT: Wolverine | HOLE NO. WW 97106

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (139.66 - 172.57 - RPQL - cont)		ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
161	RPQL											
162												
163												
164			78									
165												
166												
167												
168												
169												
170												
171	RPQL											
172				172.57-185.18	ARGILLICEOUS CRYSTAL TUFF							
			77	RPAT	Dk grey, blk'ish argillaceous x-tal tuff. Rare blue-qtz eyes + fine disp x-tals viz Lapilli sized Pelvic frags common. Tr→1% fg. stringer ppr. ste layering							
173												
174												
175			80		tht + localized fault gouging							
176												
177												
178	RPAT											
179												
180												
181												
182												
183			80									

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PAGE 14 OF 18	PROJECT: Wolverine	HOLE NO. WV 97106

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
161										
162		162.05	163.33	1.28	204785					
163		163.33	164.78	1.45	204786					
164										
165		164.78	166.57	1.79	204787					
166										
167		166.57	167.90	1.33	204788					
168		167.90	169.94	2.04	204789					
169										
170		169.94	171.30	1.36	204790					
171		171.30	172.04	0.74	204791					
172		172.04	174.10	2.06	204792					
173										
174		174.10	175.75	1.65	204793					
175		175.75	177.20	1.45	204794					
176										
177		177.20	179.52	2.32	204795					
178										
179		179.52	180.95	1.43	204796					
180										
181		180.95	182.40	1.45	204797					
182		182.40	183.70	1.30	204798					
183		183.70	185.18	1.48	204799					

PAGE 15 OF 15 | PROJECT: Wolverine | HOLE NO. WV 97106

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (172.07-185.18 - RPAT cont)		ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
184	RPAT		30									
185.18			30	185.18-195.40	QUARTZ-EYE TUFF							
				RPQL	Same as above (139.66-172.07)							
186												
187												
188												
189												
190												
191	RPQL											
192			10									
193												
194												
195												
			31	195.40-201.77	ARGILLICEOUS CRYSTAL TUFF							
196				RPAT	Same as above (172.07-185.18)							
197												
198												
199	RPAT											
200												
201												
201.77			35									
202				201.77-222.19	ARGILLICEOUS WACKE							
203				ARWK	Dk grey fg argillaceous wacke w/ rare v.f.g. pyr. stringers. Localized ↑d wk arg + local ↑d gritty wacke wk pasv. carb. (wkly efferv.)							
204	ARWK											
205												
206												

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PAGE 16 OF 18	PROJECT: Wolverine	HOLE NO. WV97106

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
184										
185		185.18	186.62	1.44	204800					
186										
		186.62	188.12	1.50	204801					
187										
188		188.12	189.35	1.23	204802					
189										
		189.35	191.16	1.81	204803					
190										
191		191.16	192.60	1.44	204804					
192										
		192.60	194.10	1.50	204805					
193										
194		194.10	195.40	1.30	204806					
195		195.40	197.12	1.72	204807					
196										
197		197.12	198.55	1.43	204808					
198										
		198.55	200.60	2.05	204809					
199										
200										
		200.60	201.77	1.17	204810					
201										
202										
203										
204										
205										
206										

PAGE 17 OF 18 | PROJECT: Wolverine | HOLE NO. WV 97 106

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (2013. 222.19 - ARWK cont)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
207	ARWK										
208			70								
209											
210											
211											
212											
213											
214											
215											
216											
217											
218											
219											
220	ARWK		75								
221											
222 / 222.19				222.19 - End of Hole.							

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PAGE 18 OF 18	PROJECT: Wolverine	HOLE NO. WV 97106

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
207										
208										
209										
210										
211										
212										
213										
214										
215										
216										
217										
218										
219										
220										
221										
222										

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DRILL LOG

PROJECT: Wolverine Stratigraphic	GROUND ELEV.: 1352m
HOLE NO.: WV-97-107	BEARING: 213
LOCATION: 1840E, 16600N	DIP: -70°
	TOTAL LENGTH: 213m
LOGGED BY: D. Gale	HORIZONTAL PROJECT
DATE: Aug 20th	VERTICAL PROJECT
CONTRACTOR: Boisvenu Ltd.	
CORE SIZE: NQ	
DATE STARTED: Aug 26th	
DATE COMPLETED: Aug 28th	
DIP TESTS	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

0-47m: Andesitic tuffs with minor Argillite-green tuff (ARGT) units

47-158: Massive & fragmented rhyolite with 0.4m thick magnetite-silica exhalite at 110m.
Extensive faulting over lower 50m

158: Suspected depth of Wolverine horizon. Occurs within a fault zone but overlain by black, argillitic gouge and underlain by xll bearing material

158-214: Crystal bearing (qtz + fld) lapilli tuff + tuffaceous Argillite.

Alteration: Sericite observed in rocks below 158m. Minor chlorite as well

Mineralization: Very poorly mineralized. Trace cpy present in andesite. Flecks + disseminations of py in fault zone. Trace sph in xlt-tuff.
Trace pyrr in xlt tuff unit.

LEGEND

PAGE 1 OF 20 | PROJECT: | HOLE NO. WW97-107

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
1–23	ADTT	CASING		0-3.05 Drill casing DHCS							
				3.05-23.5 Greenish-grey weakly to moderately foliated, ADTT tuffaceous andesite. - Very poor core recovery + mostly consists of rounded core fragments - Grain size of tuff varies from fine to coarse but cannot see actual contacts between individual beds - Mottle texture developed over some intervals + is defined by green (chlorite) and white material. - 3-6cm wide massive carbonaceous argillite bands within the andesite. App 5-10% of interval. - STGG: 12.4-12.7 - 21.1-21.7: A siliceous component (aphyric rhyolite?) is intermixed with ADTT and brown sericite bands - Core angle at Dm: 55°							
			55	23.5-24.4 ARGT Black to blackish-green carbonaceous argillite with 1-4cm wide tuffaceous andesite bands - Interval consists of 70-80% black argillite with 5-10% white, aphyric siliceous fragments flattened in the moderately developed foliation. A moderate carbonate alteration is pervasive throughout the siliceous fragments. Frag's are 0.5-1.5 cm in size. - 20% of interval consists of greenish black tuffaceous andesite bands with biotite + brown sericite. - Upper contact with ADTT is gradational - Core Angle: 23.5m: 65°							
				24.4-27.0 STGG Fault gouge within the ARGT.							
				27.0-30.2 ARGT Black carbonaceous argillite with aphyric siliceous fragments + minor tuffaceous andesite bands - Same as above but fewer + thinner andesite bands + fewer siliceous fragments - Core is very broken.							
				30.2-30.4 QTVN Qtz-chl vein with finer, subhedral, coarse grained py.							

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PAGE 2 OF 20	PROJECT:	HOLE NO. WW-97-107

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12			11.89	14.93	3.04	204918	(mud)				
13											
14											
15			14.93	17.98	3.05	204919	(mud)				
16											
17											
18			17.98	21.03	3.05	204920	(mud)				
19											
20											
21			21.03	84.08	3.05	204921	(mud)				
22											
23											

PROJECT:

HOLE NO. WV-97-107

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
24	ARGT			30.4-36.5 ADTT - Light green moderately foliated tuffaceous andesite - 80-85% fine grained tuffaceous andesite with 1-10cm bands of coarser tuffaceous andesite. - Biotite present throughout unit; minor sericite alteration - 3-4% dark grey, massive silica, 1-3cm thick bands within the andesite - QTVN: 32.1-32.2 (qtz vein) - CAVN: 5% of interval consists of 0.5-1.5cm thick calcite veins. Core angle: 35m: 75°							
25											
26	STGG										
27											
28	AFGT										
29											
30				36.5-38.3 RHFS Greenish-grey, aphyric siliceous rhyolite with biotite-sericite-rich partings - Massive siliceous portion of interval (85%) has a very weak calcite alteration; occurring as 5mm veinlets within the silica - Weak to moderate foliation defined by mixture of sericite + biotite. Bt. is black and ser. is a brownish yellow colour. Comprises ~ 15% of rock - Moderate sericite alteration.							
31											
32											
33											
34											
35	ADTT		75								
36				38.3-38.8 ADTT - Fine to med. grained, light green, tuffaceous andesite with 10% black argillite bands + white siliceous bands/fragments. - Same as ADTT above (30.4-36.5).							
37											
38	RHFS										
39	RHFSHDY			38.8-39.6 RHFS Greenish-grey, aphyric siliceous rhyolite with bt-ser.-rich partings - Same as above							
40											
41				39.6-47.0 ADTT Light green, fine to med. grained, moderately foliated tuffaceous andesite. - Grain size is variable and varies from very fine grained tuff to med.-coarse grained tuff. - 3-5% bt. throughout unit. Aligned in the foliation. Also see rare, massive, 0.3cm wide bands of bt - Qtz, chl +/- a pink-coloured mineral (rose qtz?) throughout interval. Chl. appears as mass. clots or as 0.1-0.2 cm dia clumps: 41.0-41.1; 41.4-41.5 - RHFS (see above) also within this interval: 43.5-43.7; 44.6-44.8; 45.1-45.7. - Core angle, 45m: 65° - Weak sericite alteration throughout unit							
42											
43	ADTT										
44											
45			65								
46											

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PAGE 4 OF 20	PROJECT:	HOLE NO. WV-97-107

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS			
24		23.5	24.4	0.9	204901				
		24.4	27.0	2.6	204902				
25		24.08	27.13	3.05	204922	Mud			
26									
27		27.13	30.17	3.04	204923	Mud			
28									
29									
30		30.17	33.22	3.05	204924	Mud			
		30.6	32.0	1.4	204903				
31									
32									
33		33.22	36.27	3.05	204925	Mud			
34									
35									
36									
37		36.5	38.3	1.8	204904				
38		38.3	38.8	0.5	204905				
39		38.8	39.6	0.8	204906				
40		40.4	41.3	0.9	204907				
41									
42		41.8	43.3	1.5	204908				
43									
44									
45									
46									

40.9m: Trace cpy as anhedral clots within the ADTT. QTUN is nearby but mineral occurs within the andesite. This is only observed occurrence within ADTT

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Crb)	E	FRACTURE INTENSITY	% VEIN QTZ.
47	100%	RHFS		47.0-48.4 RHFS: Grey, aphyric siliceous rhyolite with 20% brown sericite + bt - Same as above (38.8) - Mod. sericite alteration							
48											
49		ADTT									
50				48.4-49.9 ADTT: Light to dark green tuffaceous andesite - Medium to coarse grained bt-rich andesite - Same as above (38.3)							
51											
52		RHFS		49.9-54.5 RHFS: Whitish-grey to weakly light green, moderately foliated aphyric siliceous rhyolite - Foliation planes are 0.5-1cm apart and defined by sericite + biotite - Siliceous portion of interval is ~85-90% and typically grey coloured with a subtle green (Chl alteration ?) developed							
53											
54											
55		ADTT	70								
56				54.5-55.3 ADTT: Fine to medium grained, biotite bearing, tuffaceous andesite - Same as above (48.4) - Core angle: 55m: 70° - 10% thin (0.1cm) calcite veins within the andesite							
57											
58		ARGT									
59				55.3-61.1 ARGT: Interbanded black carbonaceous argillite* with white siliceous aphyric bands/fragments + green tuffaceous andesite bands. - A "mixed bag" * of argillite, rhyolite (??), + andesitic tuff. Alternating bands are ~0.2-0.5cm thick and Arg: 50%; sil: 30%; ADTT: 20% - Brown sericite/bt aligned along foliation planes - 57.9-58.4: Interval of ADTT within ARGT - 30-40% of white siliceous bands + fragments show a weak to moderate calcite alteration - Foliation is kinked + folded in a number of places but assym. cannot be determined.							
60											
61											
62											
63											
64											
65		RHFR	30	61.1-73.5 RHFR: Alternating white, black, moderately foliated siliceous aphyric fragmental to massive rock (rhyolite ??) - Carbonaceous argillite matrix encompassing white aphyric bands + fragments. - Brown sericite/biotite aligned along foliation planes - Fragments are typically 0.5-1.5cm + bands are ~0.5-1cm thick. Variably comprise 60-85% of rock							
66											
67											
68											
69				* - to quote Geoff "Grman" Bradshaw							

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PAGE 6 OF 20	PROJECT:	HOLE NO. WV-97-107

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
47		47.0	48.4	1.4	204209	
48						
49						
50		49.9	52.1	2.2	204210	
51						
52						
53						
54						
55		54.5	55.3	0.8	204911	
		55.5	57.2	1.7	204912	
56						
57						
58						
59		58.6	60.2	1.6	204913	
60						
61 RHFR: Trace py aligned along fractures and		61.1	63.70	2.6	204914	
62 in foliation planes						
63						
64						
65						
66		65.5	66.8	1.3	204915	
67						
68		68.1	69.6	1.5	204916	
69						

PAGE 7 OF 20 | PROJECT: | HOLE NO: WU-97-107

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
70	RHFR			RHFR cont'd - Andesite tuff bands are minor (<5%) - QTVN's: 68.8-68.9 ; 69.3-69.6 - Core Angle 65m: 70°							
71											
72				73.5-109.5 RHFG Light green to light grey moderately foliated, aphyric, siliceous, massive to fragmental rhyolite ("Pink fragmental") - This interval is an obvious green colour compared to the white-grey rhyolite fragmental above. - The green colour is pervasively developed but in places, where 4-5cm massive bands of silica exist with no foliation planes the green coloration is only developed on edges of siliceous domain Chloritic alteration. (Fpk) - The fragmental-like texture could be due to deformation or could be an original texture. Places show siliceous terminations perpendicular to foliation							
73			70								
74											
75											
76											
77	RHFG										
78				⊥ to dominant fol. ser+chl foliation plane							
79											
80				- Foliation planes spaced ~ 0.4-1cm (up to 4cm) apart + defined by chl/ser partings ~ 0.1-0.2cm wide							
81				- QTVN: 85.0-85.1 - Core Angle: 75m: 70 95m: 75° 85m: 65 105m: 70							
82				- 104-109.5: Core is badly broken + fragmented							
83				- An argillite component begins to form the matrix around the siliceous material over lowermost 3 m							
84											
85			65°	109.5-110.0 ARSJ Black siliceous argillite - Core is very broken and consists entirely of 1cm dia angular fragments							
86											
87				110.0-110.4 EXMT Brownish-black weakly banded magnetite-bearing exhalite. - Magnetite forms black very fine grained bands surrounding light brown siliceous (?) domains. Interval consists of ~ 13% magnetite							
88											
89											
90	RHFG			- Light brown siliceous bands + fragments comprise remainder of rock - Minor carbonate within the magnetite/argillite matrix							
91											
92				- Upper 20cm of interval very broken + fragmented.							

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PAGE 8 OF 20 | PROJECT: | HOLE NO. WV-97-107

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
70										
71		71.0	72.4	1.4	204917					
72										
73										
74 RHFG. Trace py forming euhedral wisps in the foliation planes.		73.7	75.7	2.0	204936					
75 Also see euhedral 0.5cm diameter py clts in bands // to the foliation										
76 Also see py coating fracture surfaces										
77		76.6	77.9	1.3	204937					
78										
79										
80		79.9	80.3	0.4	204938					
81										
82										
83										
84		84.0	85.4	1.4	204938					
85										
86										
87										
88										
89		89	91	2.0	204940					
90										
91										
92										

PAGE 9 OF 20 | PROJECT: | HOLE NO. WV-97-107

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
				EXMT Cont'd: Core angle at 110.4m: 70°							
110.4-115.5 STGG				Fault gouge developed within black argillite. QTUN: 111.7-112.0: broken up qtz vein.							
115.5-124.20 RHFG				Whitish-green moderately foliated massive to fragmental aphyric rhyolite - See above description (73.5m) - Core is badly broken & fragmented							
124.2-139.4 STGG				Fault gouge developed within a light beige-white rock (RHFG??). lowermost 30cm consists of faulted argillite (black).							
139.4-139.6 QTUN				Qtz vein.							
139.6-142.5 ARCB				Black moderately foliated carbonaceous Argillite - 10-15% white to grey, 0.5-1cm dia. siliceous fragments within the argillite matrix. - Core angle 140m: 75°							

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PAGE 10 OF 20	PROJECT:	HOLE NO. WW-97-157

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
93						
94		93.8	95.1	1.3	204941	
95						
96						
97		96.6	98	1.4	204942	
98						
99						
100		99.8	103.3	3.5	204943	
101						
102						
103						
104						
105						
106						
107						
108						
109						
110 ARSI: Trace py along fractures (?) Fine grained coating		109.5	110.0	0.5	204944	
		110	110.4	0.4	204945	
111		110.4	112	1.6	204946	
110.0: FYMT: Fine grained py ~5%. Forms bands // to magnetite bands. Py bands are 0.2-0.3 cm thick						
112		112	115.5	3.5	204947	
113 110.4-57.66: Flecks of fine grained py grains are disseminated throughout this FmIH gneiss material						
114						
115						

PAGE 11 OF 20 | PROJECT: | HOLE NO. W-97-107

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
116				142.5 - 144.8 STGG: Fault gouge within black argillite							
117											
118				144.8 - 151.9 RHFS: White to dark gray, weakly foliated aphyric rhyolite							
119				- Core is extremely broken							
120		RHFG		- Rock is dominated (80%) by the white aphyric siliceous rock but some of the chips show siliceous to carbonaceous argillite							
121											
122											
123				151.9 - 161.2 STGG: Fault gouge is dominantly black argillite but lower 3m grades into a green siliceous unit.							
124											
125				161.2m - 162 RHLT: Greenish gray strongly foliated moderate sericite alteration, rhyolite lapilli tuff							
126				- White siliceous fragments in a green-gray sericite matrix. Frags are ≤ 0.5cm dia. comprise ~40% of rock.							
127				- Rare qtz eye visible							
128				- Wolverine horizon occurs within the overlying fault zone ~ 158.2m point. Black fault gouge turns into green sericite altered fault gouge. Xlts present in this interval (161.2-162).							
129											
130				- Rock is not very cohesive + partly (40-50%) faulted.							
131											
132				162.0 - 169.9 STGG: Green to greenish grey fault gouge with ~5% 5-10cm wide, black bands (argillite?)							
133											
134											
135											
136											
137											
138											

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PAGE 12 OF 20	PROJECT:	HOLE NO. JV-97-107

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
116		115.5	124.2	8.7	204948					
117										
118										
119										
120										
121										
122										
123										
124										
124.2 STRK. Flecks of py occur throughout the gouge material		124.2	129.7	5.5	204949					
125										
126										
127										
128										
129										
130		129.7	139.4	9.7	204950					
131										
132										
133										
134										
135										
136										
137										
138										

PROJECT:

HOLE NO. WV-97-107

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
139				169.9 - 197.6	Variably greenish gray to bluish-gray, moderately							
140				RPTF	foliated, weakly sericitically altered qtz + feld - lapilli							
					size frag. tuff							
141					- Blue qtz eyes present throughout entire unit; ~0.1-							
					0.4 cm dia + typically slightly flattened in foliation.							
142					Qtz eyes ~ 3-5% of interval							
					- Feldspar xlls ~2-4% of interval typically 0.2-0.3 cm							
143					dia							
					- Lapilli frags vary in percentage 5-40% of							
144					rock + are <1 cm - 3-4 cm dia. All are flattened							
					in foliation							
145					- Pervasive weak sericite alteration w/ quartz veinlets throughout							
					interval. Increases to moderate over 30-40 cm							
146					intervals ~5-10% of interval							
					- Variations in size of xlls + fragments are							
147					gradational throughout unit.							
					- Weak chlorite alteration also present throughout							
148					- Core angles 175m 80° 195m : 75°							
					185m 85							
149					- Lower 1m shows argillic bands + fragments							
					within the RPTF							
150					- Weak carbonate alteration throughout unit							
151												
152												
153												
154												
155												
156												
157												
158												
159												
160												
161												

ARCB

STGG

RHES

STGG

Wolverine horizon

Westmin Resources

PAGE 14 OF 20 | PROJECT: | HOLE NO: JV-97-107

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
139						
139.6 2% py throughout ARCB Typically fine grained + coating fracture surfaces or as wisps aligned in foliation plane		139.6	140.7	1.1	204951	
		140.7	142.5	1.8	204952	
142						
		142.5	144.8	2.3	204953	
142.5-5766 Flecks of py within the black argillite fault gouge						
144						
145		144.8	151.9	7.1	204954	
146						
147						
148						
149						
150						
151						
150		151.9	155.3	3.4	204955	
153						
154						
155						
		155.3	157.8	2.5	204956	
156						
157						
158		157.8	161.2	3.4	204957	
159						
160						
161						
		161.2	162.0	0.8	204958	

PAGE 15 OF 20 | PROJECT: | HOLE NO. WV-97-07

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
162					Chl	Ser	Fp	Carb			
163											
164											
165											
166											
167											
168											
169											
170											
171											
172											
173											
174											
175											
176											
177											
178											
179											
180											
181											
182											
183											
184											

SDG

RMF

RMF

Westmin Resources

PAGE 16 OF 20	PROJECT:	HOLE NO. NV-97-107

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
162		162.0	164.3	2.3	204959	
163						
164		164.3	167.6	3.3	204960	
165						
166						
167						
168		167.6	169.9	2.3	204961	
169						
170 169.9: RPTF: 1% py throughout entire interval. Typically fine grained + occurs in fractures + within the foliation plane as continuous + discontinuous bands		169.9	171.2	1.3	204962	
171		171.2	172.7	1.5	204963	
172 Sph: see below. Pyrr - Trace pyrrhotite occurs as 0.5-1cm long wisps aligned in foliation. Occurs over last 5m of unit.						
173		172.7	174.0	1.3	204964	
174 174.4: 0.4cm thick, continuous band of dark red-brown sphalerite. Band is mass. sph with ~30% silica gangue. This is only occurrence....		174.0	175.6	1.6	204965	
175						
176		175.6	177	1.4	204966	
177						
178		178.3	179.7	1.4	204967	
179						
180		179.7	181.3	1.6	204968	
181		181.3	182.6	1.3	204969	
182						
183		182.6	184.1	1.5	204970	
184		184.1	185.5	1.4	204971	

PAGE 17 OF 20 | PROJECT: | HOLE NO. WV-97-107

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Fp)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
185	ARTF		85	1976-1988 ST66 Greyish black fault gouge with broken & fragmented qtz veins							
186											
187											
188				198.8-213.0 ARTF Blackish grey moderately foliated tuffaceous argillite. - Rock is typically fine grained but increases to med grained throughout some of the beds - Grading is observable throughout interval but no consistent patterns are observed. - 203.4-206.9m: over this interval, rock contains and qtz eyes, feldspar xtls + lapilli size fragments are present, interbedded with the tuffaceous argillite. - (Also observed at 209.5-210.0; 211.1-211.7) - Weak carbonate alteration - Core angle: 205m: 85°							
189											
190											
191											
192											
193											
194											
195			75								
196											
197											
198											
199											
200											
201											
202											
203											
204											
205			85								
206											
207											

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PAGE 18 OF 20 | PROJECT: | HOLE NO. WU-97-107

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
185						
186		185.5	186.9	1.4	204972	
187		186.9	188.4	1.5	204973	
188						
189		188.4	189.8	1.4	204974	
190		189.8	191.0	1.2	204975	
191		191.0	192.2	1.2	204976	
192		192.2	193.5	1.3	204977	
193						
194		193.5	195.0	1.5	204978	
195		195	197.6	2.6	204979	
196						
197						
198		197.6	198.8	1.2	204980	
199 198.8 ARIF: trace pyr occurs as wisps over lower 4m of unit		198.8	201.6	2.8	204981	
200						
201						
202		201.6	202.9	1.3	204982	
203		202.9	204.1	1.2	204983	
204		204.1	205.6	1.5	204984	
205						
206		205.6	206.6	1.0	204985	
207		206.6	207.9	1.3	204986	

PAGE 19 OF 20 | PROJECT: | HOLE NO. WV-97-07

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Cal)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
208											
209											
210											
211											
212											
213		EOH									

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PAGE 20 OF 20	PROJECT:	HOLE NO. WV-97-107

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
208		207.9	209	1.1	204987					
209		209	210.3	1.3	204988					
210		210.3	213	2.7	204989					
211										
212										
213										

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DRILL LOG

PROJECT: Wolverine Stratigraphic	GROUND ELEV.: 1355
HOLE NO.: WV-97-108	BEARING: 213
LOCATION: 18570E, 1685 N	DIP: -70
	TOTAL LENGTH: 173.4 m
LOGGED BY: Dave Gale	HORIZONTAL PROJECT
DATE: Aug 23	VERTICAL PROJECT
CONTRACTOR: Boisvenu Drilling	
CORE SIZE: NQ	
DATE STARTED: Aug 28th	
DATE COMPLETED: Aug 31st	
DIP TESTS	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

Geology:
0-54.0: Extensive overburden dominated by andesitic material
54-85: Carbonaceous Argillite with an equal amount of aphyric rhyolite. Also some siliceous Argillite.
85-112: A package of exhalites with 4 separate magnetite-bearing iron formations with interbedded silica + calcite exhalites, siliceous argillite + massive, aphyric rhyolite.
112-132: Black carbonaceous Argillite material with 30% of interval consisting of fault gouge.
132-133.5: Rhyolite lapilli tuff overlying faulted massive sulphide (SSMS: 80cm)
133.5-174.4: Variably sericitically altered crystal-bearing footwall rocks.

Mineralization: Pyritic massive sulphide with ~10% sph banding over bwo 30cm of interval.

Alteration: Sericitic footwall alteration below massive sulphide

LEGEND

PAGE 1 OF 16 | PROJECT: | HOLE NO. NN-97108

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
5	DHOB	D		0 - 53.9 DHOB Overburden material consisting 80% of andesite but also other, rounded rock fragments - With andesite fragments is till material consisting of greenish brown mud + rock fragments - From 39m - 53.9 core consists of 20cm of orange-white siliceous "marbles". DHLC 39.32 - 48.46.							
6		O									
7		D									
8											
9		O									
10		D		53.9 - 63.6 ARCB Black, moderately foliated, carbonaceous argillite - Rock over this area is weakly to moderately oxidized by surficial weathering (i.e. internal has a orange-brown rusty colour). QTVN: 55.4 - 55.9							
11											
12		O		- Core is badly broken + fragmented - 10-20 cm bands of siliceous argillite present within ARCB. - Core angle 55m: 65°							
13											
14		D									
15											
16		O									
17											
18		O									
19		O									
20											
21		O									
22											
23	DHOB	O									
24		O									
25											
26		O									
27											

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PAGE 2 OF 16	PROJECT:	HOLE NO. WN-97-108

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 3 OF 16 | PROJECT: | HOLE NO. WV-97108

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Grt)	E	FRACTURE INTENSITY	% VEIN QTZ.
38	DHOB			63.6 - 64.7 RHFS: Whitish-grey Aphyric siliceous rhyolite(?) with 0.1-0.5 cm wide greenish-brown sericite bands. - Core is badly broken and consists of chips + fragments - Core has a pervasive orange-brown colour due to surficial weathering. Moderate. - Siliceous rock is massive, whitish-grey silica - Sericite bands define foliation and are spaced 1-4cm apart							
39											
30											
31											
32											
33											
34											
35											
36											
37											
38											
39											
40				64.7 - 66.3 ARCB: Black, moderately foliated, carbonaceous argillite - Same as above - Core is extremely broken + fragmented - Moderately (overlap) orange brown surficial weathering throughout interval.							
41											
42											
43											
44											
45											
46											
47	DHOB										
48											
49											
50											

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PAGE 4 OF 16	PROJECT:	HOLE NO. WV-97-108

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 5 OF 16 | PROJECT: | HOLE NO. NV-97108

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
51	OHDB			66.3m – 77.9 RHFS: Variegated grey, weakly foliated massive to fragmental rhyolite - Core is extremely broken ("marbles" + rock chips). - Pervasive orange-brown weathering throughout unit (surficial weathering). - Lower 2.5m Argillite bands are interbedded with rhyolite. Arg. comprises 3-5% over this lower interval - Lowermost 30cm rock is a siliceous fragment breccia cemented by silica. - Core angle, 76m: 60° - True character of rock (fragmental vs massive) is very difficult to tell due to poor core condition							
52											
53											
54											
55			65°								
56											
57											
58											
59	ARCB										
60											
61											
62											
63				77.9 – 79.4 ARSI: Black weakly to moderately foliated siliceous argillite. - Core is extremely broken + fragmented - Weak to mod. orange-brown surficial weathering. - White siliceous bands + veinlets are observed throughout the argillite							
64	RHFS										
65											
66	ARCB										
67											
68				79.4 – 82.0 STGG: Fault gouge developed in black argillite material.							
69											
70											
71	RHFS										
72											
73											

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PAGE 6 OF 16	PROJECT:	HOLE NO. WV-97-108

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
51										
52										
53										
54 53.9-AFCB: Tr. py. Associated with qtz veins fine grained, in veins within qtz.										
55										
56										
57										
58										
59										
60										
61										
62										
63										
64										
65										
66										
67										
68										
69										
70										
71										
72										
73										

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION: Chl A	Ser B	Ep C	Carb D	E	FRACTURE INTENSITY	% VEIN QTZ.
74	RHFS			82.0-85.4 RHFS - Greyish-white poorly foliated, aphyric rhyolite - Uppermost 40cm core is fragmented + fault gouge but becomes cohesive ~ 82.5m. - Orange-brown surficial weathering is weak and decreases to non-existent by the end of the interval - Trace magnetite forms 0.1-0.3cm wide disseminated bands within rhyolite - Upper contact with faulted AR is sharp - Core angle: 85m: 75°							
75											
76			60								
77											
78	ARSI										
79											
80				85.4-89.9 EXMT Alternating black and white bands, moderately foliated calcite-magnetite exhalite - Black bands consist of magnetite that forms massive to disseminated bands 0.2-4cm wide. Magnetite occurs as fine disseminations throughout interval. Mag. within both siliceous + calcite matrix. Mag comprises 16% of interval. - 30-40% of interval consists of massive calcite that forms white, 0.5-3cm wide bands. Calcite also within matrix of magnetite bands - Remainder of rock consists of white to dark grey massive silica (silica exhalitive material). - Only ~ 10-15% of core is broken + fragmented							
81											
82											
83											
84	RHFS										
85			75								
86											
87				89.9-94.7 RHFS - Same as above RHFS (82.0) - Weak surficial alteration (orange-brown staining) throughout interval							
88	EXMT										
89											
90				94.7-97.0 ARSI Dark grey to black, moderately foliated, siliceous argillite - Core is broken + fragmented - 3-5% calcite bands over lower 50cm of interval - Core angle 95m: 80°							
91											
92	RHFS										
93				97.0-99.1 EXCP Blue-grey to white, moderately foliated calcite pyrite exhalite - Interbedded white + blue-grey calcite with thin (0.2-1cm thick) bands of py. - Bands of massive, white to med. grey silica within the calcite exhalite. - QTVN: 97.3-97.5m							
94											
95	ARSI		80								
96											

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PAGE 8 OF 16 | PROJECT: | HOLE NO. WV97103

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
74						
75						
76						
77						
78						
79		79.4	82.0	2.6	204990	
80						
81						
82		82.0	83.3	1.3	204991	
83		83.3	84.7	1.4	204992	
84						
85		84.7	85.4	0.7	204993	
85.4 FMT: Trace py forming 0.2-0.5 cm euhedral to euhedral xtls aligned in bands // to cal.+mag bands.		85.4	86.8	1.4	204994	
86						
87		86.8	88.7	1.9	204995	
88						
89		88.7	89.9	1.2	204996	
90		89.9	91.1	1.2	204997	
91		91.1	92.6	1.5	204998	
92						
93		92.6	94	1.4	204999	
94		94.0	94.7	0.7	20500	
95		94.7	97.0	2.3	175851	
96						

PROJECT:

HOLE NO: NV97-108

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
97	EXCP			EXCP cont'd - Sporadic banding of orange-brown staining throughout unit (~10%) - Core is broken over 40-50% of interval							
98											
99				99.1m - 101.2m EXSP Medium grey to light brown moderately foliated siliceous rock (exhalite? rhyolite? siliceous argillite?) - 2% (disseminated) magnetite weakly concentrated in diffuse bands - Silica is banded, forming 0.4-1cm light grey to black							
100	EXSP										
101	EXMT										
102											
103				101.2m - 102 EXMT Black to medium grey silica-magnetite exhalite - Alternating black (mag) + grey (silica) bands throughout interval. - Magnetite forms massive bands 0.5-3cm thick. Mag comprises 20% of interval. - Magnetite is interbedded with and within a matrix of silica with very minor 3-5% calcite - QTVN: 101.7-101.9m - qtz-chl ± ank vein - Upper contact with siliceous unit is sharp + conformable.							
104											
105	ARSI		70°								
106											
107											
108	EXMT										
109											
110				102m - 107.3 ARSI Dark grey, moderately foliated, siliceous argillite - Same description as above (94.7m) - 105.9-106.1 - Limey argillite unit - blue-grey in colour - Core angle @ 105m: 70°							
111	EXCP										
112	FMS										
113											
114	STGG			107.3-108.7 EXMT Greyish black, weakly to moderately foliated calcite-silica and magnetite exhalite - Same as above (EXMT) with 15-20% calcite forming matrix + distinct bands. - Mag forms 0.5-1.5cm thick massive + diss bands. Comprises 17% of interval - Remainder of unit consists of banded silica + calcite (50-30% respectively)							
115											
116			55°								
117											
118	ARCB										
119											

Westmin Resources

PAGE 10 OF 16	PROJECT:	HOLE NO: WV-97-108

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
EXCP (97.0): Py forms fine grained massive bands // to layering in calcite exhalite. Totals 4% of unit		97.0	97.6	0.6	175852	
		97.6	99.1	1.5	175853	
EXSP (99.1): 1% py as diss. subhedral xlts, 0.1-0.2cm dia, throughout interval. Also see py concentrated in bands // to silica banding		99.1	101.2	2.1	175854	
		101.2	102.0	0.8	175855	
		102.0	103.3	1.3	175856	
		103.3	104.7	1.4	175857	
		104.7	105.9	1.2	175858	
		105.9	106.1	0.2	175859	
		106.1	107.3	1.2	175860	
EXMT (107.3): 3% fine grained py forming 0.2-0.4cm wide bands // to foliation.		107.3	108.7	1.4	175861	
EXCP (108.7): 0.2-0.7cm thick bands of fine grained py. Bands are // to calcite + silica banding		108.7	109.9	1.2	175862	
		109.9	111.7	1.8	175863	
EXMT (111.7): 3, 0.2cm wide bands of reddish brown sphalerite. Fine grained (trace gal).		111.7	112.2	0.5	175864	
		112.2	112.8	0.6	175865	
1% py forming fine grained bands + 0.2-0.7cm dia subhedral xlts.		112.8	115.5	2.7	175866	
ARCB (115.5): 1% fine grained py coating fractures, forming continuous and discontinuous bands + subhedral clots		115.5	116.7	1.2	175867	
		116.7	118.6	1.9	175868	
		118.6	121.8	3.2	175869	

PAGE 11 OF 16 | PROJECT: | HOLE NO. WV-97108

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Ons)	E	FRACTURE INTENSITY	% VEIN QTZ.
120				1108.7-111.7 EXCP	Light grey to blue grey moderately foliated calcite-silica-pyrite exhalite							
121					- Interval consists of calcite-pyrite with interbedded dark grey silica. Bands of calcite +silica are typically 0.5-2cm thick.							
122					- Disc. bands of magnetite forming ~1% to 1% of interval.							
123												
124	ARCB		60	111.7-112.2 EXMT	Blackish grey, moderately foliated silica-magnetite exhalite.							
125					- Same as above (107.3).							
126					- No calcite							
127					- May forms massive bands + is diss. throughout interval. 8% of interval.							
128					- Upper contact with EXCP is gradational over 5-10cm							
129				112.2-112.8 RHFS	Light grey weakly foliated, massive siliceous rock (rhyolite)							
130	STGG				- Same as (89.9) above.							
131				112.8m-115.5 STGG	Fault gouge in black argillite material							
132				115.5-127.7 ARCB	Black, well foliated, carbonaceous argillite with siliceous bands + fragments.							
133	33m/s/ AHLT				- Siliceous bands comprise ~10-15% of rock							
134			50		- 5% of interval consists of med. green chlorite altered tuffaceous argillite material. Green rock is 5-10 cm wide + has sharp, define contacts with black argillite: 117.7-117.8; 121.0-121.1; 124.2-124.3; 127.5-127.7							
135			70		- Core angle at 116m: 75°							
136					- Chaotic perterbations in the foliation at ~118m							
137					- 125.0-126.7: Networking of calcite veins through Argillite							
138	RAGL				- 126.9-127.5: Increase in % of siliceous bands ~ 60% of rock							
139					- Chlorite alteration increases to weak-mod over lower 2m. Core angle at 124~ 60°							
140				127.7-131.7 STGG	Fault gouge in black argillite							
141												
142												

Westmin Resources

PAGE 12 OF 16	PROJECT:	HOLE NO. WN-97-108

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
120						
121						
122		121.8	124.3	2.5	175870	
123						
124		124.3	125.4	1.1	175871	
125		125.4	127.5	2.1	175872	
126						
127						
128		127.5	128.6	1.1	175873	
129		128.6	130.1	1.5	175874	
130		130.1	131.7	1.6	175875	
131						
132 RHLT (131.7): 3% sphalerite forming discontinuous bands ~0.2cm in thickness. Dark, reddish brown in colour. Sph. occurs within RHLT portion of interval (as opposed to ARCR)		131.7	132.9	1.2	175876	
133		132.9	133.7	0.8	175877	
134 → 1% cpy forming discontinuous bands + 0.1-0.2cm dia clots. Cpy mineralization (specially) associated with the sph min. Both minerals are fine grained.		133.7	135.2	1.5	175878	
135		135.2	137.2	2.0	175879	
136						
137 → 1% py forming discontinuous bands in areas of sph + cpy mineralization. Fine grained.		137.2	138.9	1.7	175880	
138						
139 RPQL (133.7): From 133.7 to 138m, bands of fine grained cpy occur. Bands are discontinuous + ~0.2-0.3cm thick. Only trace cpy over this interval.		138.9	140.2	1.3	175881	
140		140.2	142.5	2.3	175882	
141 Py is trace + is fine grained, occurring along fractures. Py is also associated with the cpy occurrences (i.e. in the same discontinuous bands)						
142						

Py is observed over remainder of interval as trace, fine grained, 0.5 cm long wisps flattened in foliation.

PROJECT:

HOLE NO. NV-97-108

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
143				131.7 - 132.9 Blackish-grey, moderately foliated rhyolite tuff							
144				RHLT with interbedded black carbonaceous argillite							
145				- Upper + lower 10-20cm of interval consists of carbonaceous argillite with siliceous bands/fragments that grade into a light grey tuffaceous rock.							
146			65	- Tuffaceous component consists of white siliceous fragments ~0.5-1cm dia. flattened in the foliation							
147				- Weak sericite + chlorite alteration over interval.							
148				Py: 70%; Sph 10% banded 20% Gal. tr.							
149				132.9 - 133.7 Pyrite with minor sphalerite massive sulphide.							
150				SSMS - Core very broken over interval. Upper 50cm of interval consists of a pyritic gouge + pyrite chips while lower 30cm consists of 2-4 cm dia. fragments.							
151				132.9-133.5: Pyritic gouge + 1cm diam. fragments. Frags. appear to consist of 70% fine grained pyrite with a calcite/silica gangue. Calcite in gangue decreased downhole.							
152											
153											
154				2% sph in fragments. Sph is light red in colour + is observed in py-sph breccia within a siliceous matrix							
155			75°								
156											
157				132.5-133.7: Larger rock fragments (2-4cm dia) showing banded py + sph in a siliceous gangue.							
158				→ Py is fine to medium grained and forms bands of euhedral to subhedral xtls. Py comprises ~65% of interval							
159				→ Sph is fine grained and forms bands within the py. It is variably 5-25% of rock. Colour is a dark reddish-brown + bands are 0.2-0.5 cm wide							
160				→ Gangue material consists of mainly silica with only minor calcite.							
161				→ Trace amounts of a very fine grained silver mineral (galena? tetrahedrite?) occurs within the sph rich bands							
162											
163											
164				Estimated percentages: Zn: 9% Cu: <0.5% Pb: 0.5% Core Angle: 50°							
165			70								

RPQL

RPTF

Westmin Resources

PAGE 14 OF 16	PROJECT:	HOLE NO. WV-97-108

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		142.5	143.7	1.2	175883	
		143.7	145.6	1.9	175884	
		145.6	146.8	1.2	175885	
		146.8	149.2	2.4	175886	
		149.2	150.5	1.3	175887	
		150.5	152.3	1.8	175888	
		152.3	153.8	1.5	175889	
		153.8	155.4	1.6	175890	
		155.4	157.0	1.6	175891	
		157.0	158.4	1.4	175892	
RPTF (158.4): Trace, fine grained py forming 0.5-1cm long wisps flattened in foliation		158.4	159.9	1.5	175893	
Trace pyrr as fine grained 0.5-1cm long wisps, flattened in foliation.		159.9	161.5	1.6	175894	
		161.5	162.4	0.9	175895	
		162.4	164.5	2.1	175896	
		164.5	166.0	1.5	175897	

PROJECT:

HOLE NO. WV-97-108

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
166				133.7-158.4 RPQL: Light yellow green to light grey, moderately foliated Qtz-eye bearing lapilli tuff.							
167				- Blue qtz eyes are abundant throughout interval averaging 0.3 cm in diam + ~2-5% of rock. Qtz eyes are weakly flattened in foliation							
168				- Lapilli size fragments are white, siliceous, flattened in foliation averaging 0.5-1 cm in size and comprise 5-30% of rock							
169				- The contact below mass. sul is fault gouge (5cm) + a qtz vein (3 cm)							
170				- Moderate chlorite alteration over 133.7-150m							
171				- Weak sericite alteration over same interval							
172				- Fault gouge in tuff: 144.7-145.1.							
173				- Very fissile, semi-cohesive rock over 146.5-147.2							
				- Core angle: 135m: 70° 155m: 75° 146m: 65°							
				158.4-173.4 RPTF: Light grey moderately foliated, qtz-ep + feldspar xtl bearing lapilli tuff							
				- Same rock as above but no sericite or chlorite alteration							
				- Feld xtls avg 0.2-0.3 cm in dia ~3% of interval							
				- Core angle: 165m: 70							
				- Qtz eyes comprise 7-9% of interval							
				→ EOH.							

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PAGE 16 OF 16	PROJECT:	HOLE NO. WN-97-108

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
~~166~~		166	167.3	1.3	175898					
~~167~~		167.3	168.7	1.4	175899					
~~168~~		168.7	170.4	1.7	175900					
~~169~~		170.4	171.8	1.4	175901					
~~170~~		171.8	173.4	1.6	175902					
~~171~~										
~~172~~										
~~173~~										

Westmin Resources

DRILL LOG

PROJECT: Wolverine Stratigraphic Drilling	GROUND ELEV.: 1370
HOLE NO.: WV-97-109	BEARING: 213
LOCATION: 18500E, 16700N	DIP: -70
	TOTAL LENGTH: 207 m
LOGGED BY: Dave Gale	HORIZONTAL PROJECT:
DATE: Aug 25	VERTICAL PROJECT:
CONTRACTOR: Boisvenu Drilling	ALTERATION SCALE: 0 1 2 3 — absent; slight; moderate; intense
CORE SIZE: NQ	
DATE STARTED: Sept 1	TOTAL SULPHIDE SCALE: 0 1 2 3 4 — traces only; < 1%; 1% – 3%; 3% – 10%; > 10%
DATE COMPLETED: Sept 1	
DIP TESTS:	

COMMENTS

Geology:

0-18m: Overburden consisting of andesitic material

18-133m: Extensive package of sediments consisting of argillaceous greywacke (85%), interbedded argillite + intermediate tuff and calcareous siltstones with minor tuffaceous andesite units.

133-173: Sequence of aphyric rhyolite flows + fragmentals, with rhyolite lapilli tuffs.

173-207m: Fault gouge in grey-green rocks (felsic volcanics?)

→ Hole Abandonned due to fault.

Mineralization

→ No significant mineralization

Alteration

→ Sericite alteration (moderate) present within a rhyolite lapilli tuff

Note: No samples were taken because hole WV-97110 was drilled adjacent to WV-97109

LEGEND

At 207, hole could not progress any further because of sand seam/fault gouge. Cementing was then attempted to block off continuous caving. No progress was made after cement set.

PAGE 1 OF 17 | PROJECT: | HOLE NO. WV97109

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
7–9	DHCS			0-9.1 Drill Casing DHCS							
9–18	DHOB			9.1-18.0 Overburden consisting dominantly of Andesite DHOB							
18–66	DHOB			18.0-66.8 Black, moderately foliated, carbonaceous Argillite interbedded with slightly coarse-grained greywacke ARWK -59-66.8: siliceous band/fragments comprise ~5-10% of Argillite -Changed from NQ-BQ at 50.3 -Core angle 25m: 70° 35m: 70° 45m: 75° 55m: 80° 65m 80°							
66–69	DHOB			66.8-69.8 Fault gouge in Argillite STGG							
69–79	DHOB		10°	69.8-78.9 Same as above (18.0) ARWK - Core is extremely broken + fragmented - Core angle 79m: 65°							
79–29	DHOB										

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PAGE 2 OF 17	PROJECT:	HOLE NO: JV-97-109

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										
24										
25										
26										
27										
28										
29										

PAGE 3 OF 17 | PROJECT: | HOLE NO. WV-97-109

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (So)	ALTERATION C (Fp)	ALTERATION D (Grt)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
30											
31											
32											
33											
34											
35			80								
36	ARWK										
37											
38											
39											
40											
41											
42											
43											
44											
45			75								
46											
47											
48	ARWK										
49											
50											
51											
52											

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PAGE 4 OF 17	PROJECT:	HOLE NO. W97-109

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47										
48										
49										
50										
51										
52										

PAGE 5 OF 17 | PROJECT: | HOLE NO. WV-97109

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Crb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
53	ARLK		80								
54											
55											
56											
57											
58											
59											
60											
61											
62											
63	ARLK										
64											
65			80								
66											
67											
68											
69	STGG										
70											
71											
72											
73	ARLK										
74											
75											

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PAGE 6 OF 17	PROJECT:	HOLE NO. WV-97-109

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
53										
54										
55										
56										
57										
58										
59										
60										
61										
62										
63										
64										
65										
66										
67										
68										
69										
70										
71										
72										
73										
74										
75										

PAGE 7 OF 17 | PROJECT: | HOLE NO: NV-97-109

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Carb	E	FRACTURE INTENSITY	% VEIN QTZ.
78.9				78.9 - 80.6 Greenish white strongly foliated, andesitic tuff							
				ADTT - Moderate calcite veining throughout unit							
				- 3-4% 1cm wide argillite bands within andesite tuff							
79			65								
	ADTT										
80											
81				80.6 - 112.5 Black, moderately foliated carbonaceous argillite							
				ARWK with bands of slightly coarse grained blackish grey greywacke							
82				- 92-100m: Tuffaceous andesite bands 1-3cm thick							
				occur within argillaceous material							
83				Core Angle 85m: 60° 95m: 65° 105m: 70°							
84											
85			60								
86											
87											
88											
89											
90											
	ARWK										
91											
92											
93											
94											
95			65								
96											
97											
98											

Westmin Resources

PAGE 8 OF 17	PROJECT:	HOLE NO. WV-97-109

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
76										
77										
78										
79										
80										
81 ARWk (80.6): Tr. py occurs along fracture										
82 surfaces. Fine grained coatings on these										
83 surfaces										
84 - Py also forms fine grained coatings on the										
85 foliation surfaces										
86										
87										
88										
89										
90										
91										
92										
93										
94										
95										
96										
97										
98										

PAGE 9 OF 17 | PROJECT: | HOLE NO. WV-97-109

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Carb	E	FRACTURE INTENSITY	% VEIN QTZ.
99											
100											
101											
102											
103											
104											
105	ARGK		70°								
106											
107											
108											
109											
110											
111											
112				112.5-114.7 ADTT: Greenish-black, moderately foliated tuffaceous andesite with greyish-white massive siliceous bands - Siliceous bands are 0.5-1.5 cm thick and comprise 10-15% of unit. - Black carbonaceous argillite component increases towards base of interval - Brown sericite defining the foliation planes.							
113											
114	ADTT										
115			65°								
116				114.7-125.7 ARGT: Interbedded black carbonaceous argillite and green tuffaceous argillite - Units are repeated on 0.5-4 cm scale with interval containing 50% of each - The tuffaceous andesite bands have a weak brown colour due to sericite - Contacts between argillite andesite are both sharp + gradational - Core angle: 115: 65° 125: 60°							
117											
118											
119	ARGT										
120											
121											

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PAGE 10 OF 17	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 11 OF 17 | PROJECT: | HOLE NO. WV-97-109

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Fe)	D (Grs)	E	FRACTURE INTENSITY	% VEIN QTZ.
122				125.7 - 126.5 Fault gouge in ARGT + qtz veins							
				STGG							
123											
124				126.5 - 127.4 Same as above (114.7)							
				ARGT							
125			60°								
126				127.4 - 128.6 Light green tuffaceous andesite							
				AOTT							
127											
128											
129				128.6 - 129.2 Black argillite to siltstone with 10-15% siliceous							
				ARTF							
130				bands + 1/2 all size fragments.							
				- All siliceous bands + fragments are flattened in							
131				foliation.							
132											
133				129.2 - 130.0 Greenish brown, moderately foliated, siliceous rock (rhyolite)							
				RHFS							
134				- 0.1-0.3cm wide brown sericite bands define							
				foliation and separate 0.5-1.5 cm wide greenish grey							
135			85°	siliceous bands							
				- Interval is 80-85% massive, aphyric silica							
136											
137				130.0 - 133.5 Light grey, moderately foliated calcareous argillite - siltstone							
				SLSL							
138				- Entire interval effervesces vigorously							
				- 5-10% 1-2cm wide carbonaceous argillite bands within							
139				cal. siltstone							
140				133.5 - 145.7 Same as above (129.2)							
				RHFS							
141				- This has similarities to RHFG (Rock fragmental) but							
				this is more of a massive rhyolite							
142				- Siliceous portion is a greenish grey colour							
				- Brown sericite defines 45 foliation							
143				- A number of tuffaceous andesite beds occur within							
				the RHFS, ranging from 5-50cm. Four such							
144				domains occur							
				- Core angle 135m: 85° 145m: 75°							

STGG / ARGT / AOTT / ARTF / SLCS / RHFS

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PAGE 12 OF 17	PROJECT:	HOLE NO: [illegible]

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 13 OF 17 | PROJECT: | HOLE NO. VV-97-109

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
145	RHFS		75°	145.7-148.2 ADTT: Light green, moderately foliated tuffaceous andesite - Weakly banded by calcite							
146											
147				148.2-154.2 RHLT: Blackish grey, moderately foliated siliceous lapilli tuff with tuffaceous bands - Siliceous bands = lapilli-size fragments in a tuffaceous matrix							
148											
149				- 10% massive rhyolite bands 20-30 cm in width							
150				- CMVN: 148.4-148.8m							
151											
152				154.2-164.3 RHFR: Dark grey, moderately foliated siliceous aphyric fragments in a dark argillaceous matrix - Frag's 90-60% of interval are monolithologic + are 0.5-2.5cm Dia							
153				- Core angle: 155m: 75°							
154				164.3-166.0 ST66: Fault gouge in a grey rock (RHFR?)							
155			75°								
156				166.0-173.4 RHLT: Greyish-green, moderately foliated, rhyolite tuff - Difficult to tell original character of rock							
157				Lenscap core is extremely broken + fragmented							
158				- Moderate sericite alteration throughout - Core Angle 166: 65°							
159				173.4-176.5 ST66: Fault gouge in a green grey rock (RHLT?)							
160	RHFR			176.5-179.5 DHCV: Massive greenish grey rhyolite ??? - Entire run consists of siliceous "mudstone"							
161				- Caving in hole							
162				179.5-180.6 DHLC: Lost core							
163											
164											
165	ST66										
166			65°								
167											

Westmin Resources

PAGE 14 OF 17	PROJECT:	HOLE NO. WJJ-97-107

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 15 OF 17 | PROJECT: | HOLE NO. WV-97109

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Fp)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
168	PHLT										
169											
170											
171											
172											
173											
174	STGG										
175											
176											
177	DHCV										
178			Brittle Gouge								
179											
180	LOST CORE			Lost core							
181											
182											
183	DHCV			182.6-185.6 DHCV: Massive, greenish-grey rhyolite ?? - Caved hole - Entire run consists of siliceous "mudstones" - Mudstones not representative of actual depth. Probable represent caving.							
184											
185				185.6-194.6 STGG: Fault gouge is a green-grey rock - Below the beginning of each run there is 20-30cm of siliceous mudstones that represents caving							
186											
187											
188	STGG			194.6-207 STGG: Start of fault gouge							
189				EOH							
190											

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PAGE 16 OF 17	PROJECT:	HOLE NO. WV-97-109

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 17 OF 17 | PROJECT: | HOLE NO. WV-97-109

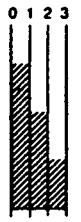
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Grt)	E	FRACTURE INTENSITY	% VEIN QTZ.
191											
192											
193	ST66										
194											
195											
196											
197											
198											
199											
200											
201											
202	ST66										
203											
204											
205											
206											
207				EOH							

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DRILL LOG

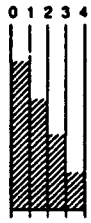
PROJECT: Wolverine Stratigraphic	GROUND ELEV.: 1360m
HOLE NO.: WV-97-110	BEARING: 213
LOCATION: 16700N, 18545E	DIP: -70
	TOTAL LENGTH: 258.8
LOGGED BY: Dave Gale	HORIZONTAL PROJECT
DATE: Sept 1, 1997	VERTICAL PROJECT
CONTRACTOR: Boisvenu	
CORE SIZE: NQ/BQ (switched at 161m.)	
DATE STARTED: Sept 2, 1997	
DATE COMPLETED: Sept 5	
DIP TESTS	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

Geology

0-128m: Interbedded greywacke and carbonaceous argillite with minor rhyolite flows and andesitic tuffs.

128-151m: An almost continuous fault zone with a minor andesite tuff + rhyolite flow unit (2-3m wide units).

151-173: A package of exhalitive units consisting of 2 mag. iron formations and 2 calcite-pyrite exhalites.

173-182: Fault zone

182-205: Tuffaceous argillite overlying rhyolite flow

205-216: Rhyolite lapilli tuff unit containing numerous cpy + pyrr stringer zones + moderate to strong chlorite alteration.

216-258: Crystal bearing footwall rocks. Qtz eyes + feldspar crystals.

Alteration

Proximal alteration consisting of strong to mod chlorite alteration in ~~a RHLT that is located below a possible Wolverine horizon. Sericite alteration~~ continues downhole from this unit

LEGEND

Drilled NQ + switched to BQ at 161m. BQ rods became stuck at 258.8 and dynamite was used. Everything below 161m was lost.

Mineralization

Within same unit (RHLT) that contains Chl. alt., there are a number (45) zones of concentrated cpy-pyrr stringer mineralization.

PAGE 1 OF 23 | PROJECT: | HOLE NO. WV-97-110

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Crb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
12	OHCB			0-13.7 Drill casing OHCB							
13				13.7-15.9 Overburden consisting mainly of Andesite, together with some minor Argillite OHOB							
14											
15				15.9-46.0 Black to blackish-grey, moderately foliated Argillaceous greywacke with minor carbonaceous Argillite bands. ARWK							
16			75°	- Very subtle banding developed and defined by the slightly coarser grained greywacke grading into, or in sharp contact with the finer grained black Argillite.							
17				- 1-3% calcite veins both // to + X-cutting the dominant fabric							
18				- Sheared to fault gouge material developed at 32.7-33.2							
19				- OTUN: 32.3-32.5							
20		ARWK		- Core Angle 16m: 75° 25m: 75°							
21				35m: 75° 45m: 70°							
22											
23											
24											
25			75°								
26											
27											
28											
29											
30											
31		ARWK									
32											
33											
34											

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PAGE 2 OF 23	PROJECT:	HOLE NO. WV-97-110

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 3 OF 23 | PROJECT: | HOLE NO: NV-97-110

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
35				46.0 - 46.8 ARSI: Light grey to white, strongly foliated, siliceous argillite (?)							
36				- This interval is strongly deformed with sporadic fault gouge developed							
37				- There is a strong carbonate alteration through interval							
38				- Appears to be siliceous argillite that has been carbonated, interlayered with 5-10% black argillite.							
39											
40											
41		ARWK		46.8 - 48.6 STGG: Fault gouge in black argillaceous material							
42											
43				48.6m - 56.2 ARCB: Black, moderately foliated, carbonaceous argillite with minor, slightly coarser grained greywacke beds							
44				- 57.1 - 58.1 - Whitish grey massive to fragmented siliceous argillite with a moderate carbonate alteration. Could be a altered rhyolite ??							
45			70°	- Core angle 55m: 70°							
46				- STGG: 53.6 - 53.0							
47		ARSI									
48		STGG		56.2 - 63.6 RHFS: Blk/kish-grey aphyric argillaceous rhyolite							
49				- This interval is consists of massive dark grey siliceous rock with 10-15% interbedded black siliceous argillite							
50				- Weak carbonate alteration pervasively throughout							
51				- Moderate foliation developed							
52											
53		ARCB		63.6 - 64.4 ARCB: Black, fine grained carbonaceous argillite							
54				- 3-4% massive silica bands (rhyolite) 0.5-2cm thick							
55			70°	64.4 - 82.2 ARWK: Black to blackish-grey argillaceous greywacke with minor carbonaceous argillite + massive rhyolite bands.							
56				- Same as ARWK above (15.9)							
57				- Minor bands 0.5-1cm wide of tuffaceous andesite							
				- STGG: 69.5-69.6; 70.6-72.8; 81.3-81.4;							
				- Core angle: 15m: 75° 75m: 75°							

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PAGE 4 OF 23	PROJECT:	HOLE NO. WV97-110

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										
47 ST66(46.8) Flecks ↑ py with the fault zone. Trace.		46.8	48.6	1.8	175903					
48										
49 ARCB(48.6) Trace, fine grained py coating fracture surface and as discontinuous wisps aligned in the foliation										
50										
51										
52										
53										
54										
55										
56										
57										

PAGE 5 OF 23 | PROJECT: | HOLE NO. WV-97-110

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
58				ARWK contd - 79.0-79.1: Strongly sericitically altered zone in the middle of unaltered rock							
59											
60				82.2 - 87.6 RHFS - White-grey to med. grey aphyric rhyolite - Massive siliceous rock, poorly foliated interbedded w. slightly argillaceous rhyolite to siliceous mudstone - Core angle: β_{sm}: 65° - Upper contact with overlying ARWK is gradational.							
61											
62											
63											
64											
65											
66											
67											
68											
69											
70											
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											

RHFS
MRB
ARWK
ARWK

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PAGE 6 OF 23	PROJECT:	HOLE NO. WV-97-110

	MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
58			57.8	60.6	2.8	175904					
59											
60											
61											
62											
63											
64											
65											
66											
67											
68											
69											
70											
71											
72											
73											
74											
75											
76											
77											
78											
79											
80											

PAGE 7 OF 23 | PROJECT: | HOLE NO. WW97-110

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
81	APWK			87.6-109.4 APWK Dark to blackish-grey argillaceous greywacke with minor carbonaceous argillite beds, massive siliceous (fragmental) beds and dacitic tuff beds.							
82				- Same as APWK above							
83				- STGG: 93.6-94.6							
84				- Core angle: 95m: 75° 105m: 70°							
85	RHFS		FS								
86											
87											
88											
89											
90											
91	APWK										
92											
93											
94											
95			FS								
96											
97											
98											
99											
100											
101	APWK										
102											
103											

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PAGE 8 OF 23	PROJECT:	HOLE NO. WV-97-110

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
81		81.0	82.2	1.2	175905					
82										
83										
84										
85		85.0	87.2	2.2	175906					
86										
87										
88										
89										
90										
91		91.12	92.6	1.48	175907					
92										
93										
94										
95										
96										
97										
98										
99										
100										
101										
102										
103										

PAGE 9 OF 23 | PROJECT: | HOLE NO: W1-97-110

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
104				109.4 - 110.2	Light green, chlorite-rich, tuffaceous andesite							
				ADTT	- Upper + lower contact is gradational over 10-20cm with the respective lithology.							
105			70°		- Weak carbonate throughout rock. 1%, 0.1-0.3 cm wide carbonate bands (calcite) // to foliation							
106												
107		APWK										
				110.2 - 115.0	Interbanded light green tuffaceous andesite +							
108				ARGT	black, carbonaceous argillite							
					- And tuff 65%, Arg. 35%							
109					- Biotite present in a number of andesite bands							
		ADTT			- Contacts between the two lithologies are both gradational + sharp.							
110					- Core angle 115m: 65°							
111												
				115.0 - 118.6	Fault gouge within ARGT							
112				STGG								
113		ARGT										
				118.6m - 119.4	Light green to brown tuffaceous andesite							
114				ADTT	- Same as above (109.4)							
					- QTVN: 118.6 - 118.9							
115			65°									
116												
				119.4 - 121.7	Fault gouge in andesitic + argillaceous material							
117		STGG		STGG	QTVN: 120.9 - 121.4							
118												
				121.7 - 127.7	Alternating bands of andesitic tuff carbonaceous							
119		ADTT		ARGT	argillite and siliceous material (rhyolite?).							
					→ This rock is very similar to ARGT above							
120					except for the presence of siliceous bands and,							
					locally, lapilli-sized fragments.							
121					→ And: 40%; Arg: 40%; Rhy: 20%							
					→ 126.5-127.2: interval is dominated by tuffaceous andesite with minor argillite							
122					→ Core angle at 124m: 65°							
					→ Foliation is highly variable over interval. No fold closures observable							
123												
124			45°									
				127.7 - 133.8	Mostly fault gouge developed with argillite (127.7-130.6)							
125		ARGT		STGG	+ andesite with siliceous bands (130.6-133.8)							
126												

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PAGE 10 OF 23	PROJECT:	HOLE NO. WV-97-110

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
104										
105										
106										
		106.3	107.8	1.5	175908					
107										
108										
109										
110										
111										
112										
		111.8	113.2	1.4	175909					
113										
114										
115										
		115.0	118.6	3.6	175910					
116										
117										
118										
119										
120										
121										
		121.9	123.3	1.4	175911					
122										
123										
124										
125										
126										

PAGE 11 OF 23 | PROJECT: | HOLE NO: NV-97-110

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
127		ARGT		133.8-136.9	Greenish-brown tuffaceous andesite							
				ADTT	- same as above							
128					- Core angle 135m: 55°							
				136.9-151.4	Interval is dominated by fault gouge +							
129				STGG	cemented fault breccia.							
					136.9-144.2: ADTT: Chl-Bt rich fault gouge + fault breccia							
130		STGG			144.2-149.3: ARCB(?) fault gouge + cemented fault							
					breccia with minor andesitic bands +							
131					fragments							
					→ within the andesite there are carbonate fragments +							
132					siliceous bands.							
					→ Lower 50cm has a light red to brown colour due							
133					to weak hematite content							
					→ 149.3-151.4: Fault gouge, fault breccia - rock fragments							
134					of andesitic material + minor magnetite siliceous							
					rock. 5-10% greenish grey siliceous fragments.							
135			55									
		ADTT										
136												
137				151.4-155.5	Light-grey aphyric rhyolite							
				RHFS	- Poorly foliated massive siliceous rock							
138					- Core angle: 155m: 65°							
139												
				155.5-158.7	Greyish-blue calcite-pyrite exhalite							
140		STGG		EXCP	- Moderate to well developed banding defined by white to							
					grey calcite bands + dark brown-yellow pyrite							
141					- Unit is very homogeneous over entire interval							
					- Both upper + lower contacts are sharp and apparently							
142					conformable							
143												
				158.7-165m	Blackish grey magnetite +/- pyrite exhalite							
144				EXMT	- Magnetite is banded and forms 0.2-2cm massive							
					black bands. Mag. also diss. throughout interval as 0.1-0.2							
145					cm subvertical vlts. Mag 20% of interval							
					- Matrix is highly variable and be calcite rich +							
146					silica rich.							
					- 5% of interval consists of 1-5cm thick bands of							
147					either silica or calcite with no magnetite							
					- Weak chlorite alteration throughout interval							
148					- Core angle at 165: 65°							
		STGG		*	161.2: Changed from NQ → BQ							
149												

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PAGE 12 OF 23 | PROJECT: | HOLE NO. W1-97-110

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
127		127.2	130.6	3.4	175912	
128						
129						
130						
131						
132						
133						
134						
135						
136						
137 STGG (136.9): Tr. py as fine grd. flakes + grains throughout fault zone.		136.9	140.1	3.2	175913	
138						
139						
140		140.1	141.7	1.6	175914	
141						
142		141.7	142.9	1.2	175915	
143		142.9	144.4	1.5	175916	
144		144.4	146.0	1.6	175917	
145						
146		146	147.5	1.5	175918	
147						
148		147.5	149.0	1.5	175919	
149						

PAGE 13 OF 23 | PROJECT: | HOLE NO. WN-97-110

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
150				165m - 166.5 Med Grey silica-pyrite exhalite							
				EXSP - Silica inbedded with bands of fine grained pyrite							
				- QTUN: 165.6 - 166							
151				- 10-15% calcite bands along with the silica							
152											
153											
				166.5m - 167.3 Black magnetite exhalite							
154		RHFS		EXMT - Siliceous grey fragments in a magnetite + argillic matrix. Sil frag. are aphyric (Rhy? silica exhal?)							
155			65	- Mag is fine grained + completely encompasses the siliceous fragments. 35% Mag.							
156											
157											
		EXCP		167.3 - 168.7 Greyish white aphyric rhyolite (silica exhalite?)							
158				RHFS - Weak sericitic alteration (envelope) throughout interval							
159				- Rock is brecciated at 167.8-167.9. Siliceous fragments in a silica-sericite matrix							
				- Core is broken over interval.							
160											
161	NR										
	BQ										
162				168.7 - 170.7 Grey white, calcite-pyrite exhalite.							
				EXCP - Same as EXCP (155.5) above							
163											
		EXMT									
164											
165			65								
		EXSP									
166											
		EXMT									
167				172.7 - 173.1 Blackish green magnetite exhalite							
		RHFS		EXMT - Black mag in a siliceous/minor calcite matrix. Mag is massive fine grained + banded. 50% mag.							
168				- Moderate chlorite alteration within this unit							
169											
170											
				173.1 - 173.4 Greyish-white, Aphyric rhyolite							
171		EXCP		RHFS - Core is badly broken							
				- Consists of poorly foliated massive silica.							
172											

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PAGE 14 OF 23 | PROJECT: | HOLE NO. WV97-110

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		152	155.1	3.1	175920	
EXCP(155): 8% dark brown-yellow fine to med. grd. banded py Bands are 0.1-1cm thick		155.5	157.2	1.7	175921	
		157.2	158.7	1.5	175922	
EXMT(158.9): 1% py Occurs in fine grd. bands + as subhedral-euhedral xtls 0.2-0.4cm dia		158.7	159.9	1.2	175923	
		159.9	161.2	1.3	175924	
		161.2	162.7	1.5	175925	
		162.7	165	2.3	175926	
EXSP (165): 8% fn. grd. banded py.		165.0	166.5	1.5	175927	
		166.5	167.3	0.8	175928	
		167.3	168.7	1.4	175929	
EXCP (168.7): 7% fine grained brownish yellow py forming 0.1-0.3cm wide bands		168.7	170.0	1.3	175930	
		170	172.7	2.7	175931	

PAGE 15 OF 23 | PROJECT: | HOLE NO. WV-97-110

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION Chl A	Ser B	Ep C	Carb D	E	FRACTURE INTENSITY	% VEIN QTZ.
173				173.4 - 182.6	Fault gouge within black argillaceous material							
				STGG								
174												
175				182.6 - 186.6	Carbonaceous argillite with siliceous bands +							
				ARTF	lapilli-size fragments.							
176					- 5-10% siliceous argillite							
					- Core is broken over interval.							
177					- Weak sericite alteration developed sporadically throughout unit.							
178					- Core angle at 185m: 50°							
		STGG										
179												
180				186.6 - 187.6	Greenish grey, moderately sericitically altered							
				RHLT	rhyolite lapilli tuff							
181					- White siliceous fragments (0.5cm) flattened in the strongly developed foliation + within a tuffaceous matrix							
182					- Moderate sericite alteration. Weak carbonate alteration in matrix. Also, bands of calcite are 0.2-0.7cm wide							
183												
184												
185		ARTF	50	187.6 - 198.8	Greenish-grey, aphyric rhyolite							
				RHFS	- Moderately foliated siliceous rock							
186					- Moderate sericite alteration.							
187		RHLT			- Core is badly broken over interval							
					- 191.7 - 198.8' (actual length 1.5m) consists of siliceous "marbles".							
188												
189												
190				198.8 - 205.2	Fault gouge in what appears to be							
				STGG	black argillite with 10-30% white siliceous							
191					bands.							
192												
193												
194												
195		RHFS										

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PAGE 16 OF 23	PROJECT:	HOLE NO. WN-97-110

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
173		172.7	173.1	0.4	175932					
		173.1	173.4	0.3	175933					
174		173.4	179.8	6.4	175934					
175										
176										
177										
178										
179										
180		179.8	182.6	2.8	175935					
181										
182										
183 ARTF (182.6): Tr. py forming fine grained, discontinuous bands + stringers (184.8m)		182.6	183.9	1.3	175936					
184		183.9	185.0	1.1	175937					
185		185.0	186.6	1.6	175938					
186										
187		186.6	187.6	1.0	175939					
188		187.6	189.4	1.8	175940					
189		189.4	191.4	2.0	175941					
190										
191		191.4	198.8	7.4	175942					
192										
193										
194										
195										

PROJECT:

HOLE NO. WV-97110

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
196		RHFS		205.2m - 207.03 Grey-brown rhyolite lapilli tuff							
197				RHLT							
198				- Lapilli-size siliceous fragments (.3 - 1.5cm dia) in a tuffaceous/chlorite-rich matrix. Size + % of siliceous fragments varies over interval ranging from 35-65% of rock. No grading observed							
199				- Rock has a moderate chlorite alteration + a weak to moderate sericite alt. Chl. is concentrated in fine grd. bands which define the moderately developed foliation and is also within the matrix							
200				- The upper contact with the faulted argillite is sharp + well defined							
201				- At the lower contact with the semi-massive to massive sulphide there is an aphyric rhyolite 5cm in length. This rhyolite appears to grade into the RHLT.							
202				- Core angle: 205cm 60°							
203		STGG									
204				207.03 - 207.2 Chalcopyrite + pyrrhotite rich semi-massive sulphide							
205				SSMS Cpy: 15% Cu: 3.2							
206			60	Pyrr: 40% Zn: 0.5							
207		RHLT		Py: 3% Pb: 0.2							
208				Gangue: 42%							
209		RHFS / RHLT		- Weakly banded pyrr. with wisps + blebs of cpy disseminated throughout interval							
210				- Pyrr is fine grained. Cpy forms masses up to 1cm in dia. Py is not extensive within interval.							
211				- No variation in sulphide percentage or character occurs							
212				- The gangue consists of the same lapilli tuff that occurs above the unit. Individual siliceous fragments are observed within gangue material.							
213		RHLT		- An aphyric rhyolite occurs at the sharp upper contact. Lower contact is also sharp + defined by pyrr band.							
214				- Core angle is 70°							
215			65	- Cpy appears remobilized because of its blotchy appearance through interval.							
216				- The exact nature of this zone is unclear. It occurs below the typical Wolverine horizon (i.e. below lower contact of argillites) and so could be something different from the typical Lynx/Wolverine zone. Very small + could be a vein within footwall rocks.							
217		RHFS									

Possible Wol. Hor.

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PAGE 18 OF 23	PROJECT:	HOLE NO. NF-97-10

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
196						
197						
198						
199		198.8	200.4	1.6	175943	
200						
201		200.4	201.8	1.4	175944	
202						
203		201.8	203.1	1.3	175945	
204						
205		203.1	205.2	2.2	175946	
206						
205 PHLT (205.2): 3% pyrr. Occurs typically as fine grn wisps (flattened) in foliation + discontinuous fine to med grn bands.		205.2	207.03	2.1	175947	
206						
207 Also visible as 0.5-1cm clots that are weakly flattened in foliation.		207.03	207.2	0.17	175948	
208 Trace cpy. Occurs as clots (up to 1.5cm long) + as wisps along the foliation planes. Also		207.2	208.7	1.5	175949	
209 occurs within a qtz vein (208.7) that is 5cm in length. All cpy in this unit		208.7	209.5	0.8	175950	
210 appears to be remobilized (i.e. in vein fractures + within foliation plane)		209.5	211.6	2.1	175951	
211 2% py occurring as clots // to foliation + as discontinuous wisps. Dark						
212 brown-yellow colour		211.6	213.0	1.4	175952	
Trace sph forming contin wisps 0.1-0.3cm wide bands // to foliation. Fn grn + a						
214 dark red-brown colour		213.0	214.3	1.3	175953	
215						
PHLT (207.2): All minerals occur in the same form as above. Trace sph (aligned) in foliation 3-4		214.3	215.8	1.5	175954	
216 <0.1cm bands occur 10cm below mrks						
215 silph. Trace cpy. Trace pyrr.		215.8	216.7	0.9	175955	
217						
RHFS (209.7): 4% cpy + 7% pyrr forming		216.7	218.5	1.8	175956	
veins + stringers. Pyrr is banded w/ sph						
cpy forms clots + blebs wherever pyrr occurs						
Both minerals are fine grained. Footwall						
Stringer zone !!						

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
219	RPAT			207.2-208.7 RHLT	Green rhyolite lapilli tuff - Same mtl as above - Pervasive chlorite alteration (moderate) which increase to strong: 207.6-207.9; 208.2-208.5. Rock consists of massive chlorite + original textures are obliterated. - Weak sericite alteration							
220												
221												
222												
223												
224				208.7-209.5 RHFS	Light grey aphyric rhyolite flow to fragmental rhyolite - Weak to moderately foliated siliceous rock - Extensive qtz veining over lower 40cm and has produced a fragmental like texture in rhyolite. - Weak chloritic alteration in areas where sulphides exist. Chl from wisps - small pods as well as continuous bands							
225			75°									
226												
227												
228												
229				209.5-216.7 RHLT	Greyish-green rhyolite lapilli tuff - Same as above - Pervasive moderate chlorite alteration throughout interval. - Lapilli fragments are all siliceous (aphyric rhyolite?) and are 0.2-1.5cm in size. - QTVN: 214.4-214.6 .1% of unit consists of qtz veins that are <5cm in length - Core angle: 215m: 65° - Copper should run 0.5-0.6 through this unit							
230	RPTF											
231												
232												
233												
234				216.7-218.5 RHFS	Light grey aphyric rhyolite - Same as above (208.7) - Rock is strongly foliated and thin (<5cm) sections of fault gouge are developed. - Weak chlorite + sericite alteration present							
235												
236												
237				218.5-225.5 RFAT	Greenish-grey rare qtz eye bearing rhyolite lapilli tuff - Very strongly deformed. Original texture can be recognized but rock is very soft + fissile. Fault gouge developed over some sections - Moderate chlorite + sericite alteration developed - Rare 01-0.3 dia qtz eyes present. - Tuff fragments are 0.2-0.5cm in size + are siliceous. All frags are flattened in strong foliation. - Thin black argillite bands are interbedded within the tuff. Typically 0.2-1cm, rarely up to 10cm in width							
238												
239												
240												
241												

Westmin Resources

PAGE 20 OF 23	PROJECT:	HOLE NO. NV-97-110

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
RHLT (209.5): A number of stringer to semi-massive sulphide zones occur throughout interval. Zones consist of 10-25% massive sulphide + are composed of just pyrr; 50-50 cpy+pyrr or 65-35% cpy-pyrr. Range in thickness from 3-10cm. 210.7-210.8; 211.4-211.5; 211.6-211.7; 212.5-212.6 Trace sph forming <0.1cm dark red-brown fn. grd. bands.		218.5	220.4	1.9	175957	
		220.4	221.1	0.7	175958	
		221.1	223.4	2.3	175959	
		[illegible]	[illegible]	[illegible]	[illegible]	
		223.4	225.5	2.1	175960	
RPRT (219.2) Trace py. as fine grd. wisps + continuous bands. Also see subhedral to euhedral rhs.		225.5	226.4	0.9	175961	
		226.4	228.0	1.6	175962	
		228.0	229.0	1.3	175963	
		229.3	230.9	1.6	175964	
		230.9	232.4	1.5	175965	
		232.4	233.8	1.4	175966	
		233.8	235.3	1.5	175967	
		235.3	236.6	1.3	175968	
		236.6	238.0	1.4	175969	
		238.0	239.5	1.5	175970	
		239.5	240.9	1.4	175971	
		240.9	242.3	1.4	175972	

PAGE 21 OF 23 | PROJECT: | HOLE NO. WV-97-110

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
242		RPQL		RPAT cont'd	QTUN: 219.5-219.6 ; 225.4-225.5						
					Core angle 225m: 75°						
243											
244				225.5-232.4 RPTF	Qtz-eye +/- feldspar bearing rhyolite lapilli tuff.						
245			75°		- Same as above but there about 3-4% qtz eyes						
					- Moderate foliation. Rock is cohesive and relatively undeformed compared to overlying tuff						
246					- Qtz eyes are blue and are 0.2-0.4 cm dia.						
247					- Majority of fragments are siliceous + 0.2-0.5cm dia. They comprise ~ 30-50% of rock.						
248					- Chlorite alteration has disappeared and only weak sericite alteration present.						
249											
250				232.4-249.3 RPQL	Qtz eye + feldspar xlt bearing rhyolite lapilli tuff						
					- Same as unit above except there are ~10-12% blue qtz eyes that are 0.2-0.7 cm dia. Also see 0.2-0.4 cm dia feldspar xlts.						
251					Qtz-eyes in a tuffaceous to lapilli tuff matrix of siliceous material.						
					- Moderately to strongly foliated						
252		RPAT			- Core angle: 235m: 75° 245m: 75°						
253					- 246.6-248.3 - Rocks are very fissile to fault gouge but original textures can still be made out.						
254			70°		- QTUN: 248.3-248.5						
255		RPAT / RPQL									
256											
257				249.3-254.9 RPAT	Qtz-eye +/- feldspar xlt bearing rhyolite lapilli tuff with 15-25% thin argillite bands						
258		RPTF	70°		- Same as 218.5 but relatively undeformed (still has mod. foli.)						
					- 2-4% qtz-eyes 0.2-0.4 cm in size.						
259					- Dominated by siliceous 0.4-1.5 cm size fragments in a tuffaceous +/- argillite matrix						
					- Argillite bands 0.2-0.7cm wide.						
					- QTUN: 250.9-251.1 ; 254.6-254.9						
					- Core angle 254m: 70°						

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PAGE 22 OF 23 | PROJECT: | HOLE NO. WV-97 110

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
242		242.3	243.7	1.4	175973	
243		243.7	245.2	1.5	175974	
244						
245		245.2	246.6	1.4	175975	
246						
247		246.6	248.0	1.4	175976	
248		248.0	249.3	1.3	175977	
249		249.3	250.5	1.2	175978	
250						
251		250.5	252.1	1.6	175979	
252		252.1	253.8	1.7	175980	
253						
254		253.8	254.6	0.8	175981	
255		254.6	255.4	0.8	175982	
		255.4	257.3	1.9	175983	
256						
257		257.3	258.8	1.5	175984	
APTT(257.3): Fr., coarse grained py forming euhedral to subhedral x/ts in the foliation						
258						
259						

PAGE 23 OF 23 | PROJECT: | HOLE NO. WV-97-110

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				254.9 - 255.4 RPTF ?? Light green, intensely altered felsic rock (crystal tuff?) - Strong sericite - weak to moderate chl alteration throughout interval. - Fault above over some of interval - Alteration so intense that original rock cannot be observed - Upper contact with overlying RPAT is marked by qtz vein. Lower contact is sharp. Alteration simply stops.							
				255.4 - 257.3 RPAT Rare qtz-eye bearing rhyolite lapilli tuff with a argillite component throughout rock - Same as above - Rock is blackish grey - General decrease in size of qtz eyes + tuff fragments. - Increase in argillite component in bottom of interval. 15-20% argillite in matrix and then increases to 0.5cm carbonaceous argillite bands at base							
				257.3 - 258.8 RPTF Light grey to yellow qtz eye + feldspar crystal rhyolite lapilli tuff - Strong sericite alteration + weak chl alt. pervasively developed through the interval. - Also observe subhedral to euhedral chlorite "veins". Replacement of fell(??). Dark green in colour + veins are 0.1-0.3 cm in size. <1%. - Both qtz eyes + felds visible - Core angle at 258.0 - 70°							

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DRILL LOG

PROJECT: Wolverine Deposit Drilling	GROUND ELEV.: 1428.4m
HOLE NO.: WV-97-111	BEARING: 213
LOCATION: 16842.5N, 16947.5 E	DIP: -87°
	TOTAL LENGTH: 341.05
LOGGED BY: Dave Gale	HORIZONTAL PROJECT
DATE: Sept 7	VERTICAL PROJECT
CONTRACTOR: Boisvenu Drilling	
CORE SIZE: NQ	
DATE STARTED: Sept 8th	
DATE COMPLETED: Sept 14th	
DIP TESTS	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



traces only
< 1%
1% – 3%
3% – 10%
> 10%

COMMENTS

Geological Summary

15-72m: Mixed argillite and tuffaceous andesite units, as well as interbedded material consisting of argillaceous greywacke + tuffaceous andesite

72-163: Felsic volcanics composed of rhyolite fragmentals + massive rhyolite flows. Minor interbedded felsic tuff

163-170: Magnetite bearing iron formation

170-214: Mixed package of aphyric rhyolite and carbonaceous argillite with 10m wide fault gouge zone.

214-242: Mixed exhalitive horizon consisting of magnetite bearing iron formation and calcite pyrite exhalite. Interbedded aphyric rhyolite + siliceous argillite.

242-298.14: Argillaceous greywacke with units of tuffaceous and aphyric rhyolite

298.14-298.43: Pyrite-sphalerite massive sulphide

298.43-341.05: Tuffaceous rhyolite + rhyolite breccia tuff.

Mineralization Summary

Trace py throughout hole. Up to 14% py in EXCP horizons. Tr. sph. in lower EXCP.

Tr. to 1% sph occurs at 230m interval and continues until SSMS

Tr. ppy over interval 30m above SSMS

Semi-massive py + sph 15cm below SSMS.

Alteration Summary

250-259 - moderate to strong sericite alteration with no significant alteration

Moderate chl. Alt. extends below SSMS until 306 + decreases to weak until 330m.

Moderate ser. Alt. extends below SSMS until 330m.

LEGEND

PAGE 1 OF 29 | PROJECT: | HOLE NO. WV-97-111

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Cb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
7	DHCS			0-7.6 Casing DHCS							
8				7.6-14.9 Overburden consisting of argillaceous and DHOB Andesitic material							
9											
10				14.9-22.6 Black, fine grained carbonaceous argillite interbedded ARWK with slightly coarser grained, argillaceous greywacke.							
11				- Contact between two lithologies are both sharp + gradational and variation occurs on the 1-5cm							
12	DHOB			scale - Upper 70 cm contains massive siliceous bands (rhy?)							
13				as well as siliceous fragments. - Core Angle: 15m · 60°							
14											
15											
16			60°	22.6-25.5 Light green andesitic tuff ADTT - Subtle grain size variations define tuffaceous bands within interval. Variation occurs on centimetre scale							
17				- Rock altered to chlorite carbonate due to regional metamorphism.							
18				- Moderate foliation - QTVN: 23.6-23.9							
19	ARWK			- Core angle · 25m · 50° - 0.2-0.5 cm thick white calcite bands are aligned							
20				// to foliation. These bands comprise 15-20% of interval.							
21				25.5-37.6 - Greyish-black argillaceous greywacke with minor							
22				ARWK interbedded black carbonaceous argillite							
23				- Very little banding or grain-size variation over interval. Variation occurs over upper 1.5m where							
24				A number of 0.5-2cm thick andesitic tuff bands occur interbedded within the greywacke + fine gr.							
25			50°	carb. arg. - QTVN: 28.1-28.3; 37.3-37.6							
26				- Core angle: 35m: 60°							
27				37.6-38.5 Light green fine grained andesitic tuff							
28	ARWK			ADTT - Same as above (22.6). - Pods of argillaceous + andesitic material occur within							
29				the and. tuff. - QTVN: 37.8-37.9							

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PAGE 2 OF	PROJECT:	HOLE NO. WV-97111

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 3 OF 29 | PROJECT: | HOLE NO. WW-97-111

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
30				38.5m - 51.1 ARGT Interbedded greyish-black greywacke light-green tuffaceous andesite and black fine grained carbonaceous argillite - Units from 0.5-11cm wide bands that typically have sharp, well defined contacts - Interval consists of approx. 25% andesite tuff, 50% fine argillite, 25% greywacke. - QTUN: 42.7-42.8 - 5% massive silica bands (rhy?) occur over lower 1.5m of interval - 20cm wide calcareous argillite occurs at 49.0-49.2 - Core angle: 45m: 60° - 10% of interval consists of white calcite bands 0.5-1cm thick. Bands are both continuous + discontinuous + are aligned // to foliation							
31											
32											
33		ARWK									
34											
35			60°								
36											
37				51.1 - 54.9 ARWK Interbedded Black fine grained carbonaceous argillite and slightly coarser grained greyish-black greywacke. - Same rock as above but there is no tuffaceous andesite - Contacts with greywacke material sharp, well defined							
38		ANDT									
39											
40											
41				54.9 - 57.9 ARGT Interbedded greenish brown tuffaceous andesite + black carbonaceous andesite with minor massive silica bands - Same as ARGT above (38.5) but there is very little greywacke material. - Andesitic material contains biotite along with chlorite + carbonate and forms 1-20cm wide bands. - Lower 50cm shows bands of a massive siliceous material. Aphyric. - Core angle 55m: 60°							
42											
43											
44											
45		ARGT	60°								
46				57.9 - 60.7 RHFS Massive to fragmental, aphyric greyish white rhyolite with thin bands of argillaceous material and andesitic tuff. - Core is broken over interval. - Upper 10-20cm contains rhyolite fragments in a sericite bearing matrix. Interval becomes massive at 60.1m. - 80% siliceous material, 10% andesite, 10% argillite - Fault gouge + rock fragments at 60.0-60.1.							
47											
48											
49											
50											
51											
52											

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PAGE 4 OF 29	PROJECT:	HOLE NO. WI-97-111

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 5 OF 29 | PROJECT: | HOLE NO. WV-97-111

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
53		APWK		60.7m - 66.8	Greenish-brown fine to med. grained tuffaceous							
				ADTT	andesite with minor aphyric rhyolite.							
54					- Same as ADTT above but interval has							
					abundant biotite through the rock.							
55			60°		- Two siliceous bands (5-10cm wide) occur within							
					interval. Core is broken but contacts appear sharp							
56		APGT			- Andesite varies from very fine grained tuff to							
					med (0.1-0.2) grained tuff							
57					- Core angle: 65m: 70°							
58												
59		RHFS										
60												
				66.8-71.1	Blackish-grey, aphyric fragmental rhyolite.							
61				RHFR	- Siliceous fragments (rhy.) are 0.5-2cm in size comprise							
					70-80% of interval and are strongly flattened in							
62					the moderately developed foliation.							
					- Sil. frags are with in a black argillaceous matrix.							
63					- <1% andesitic tuff within the fragmental							
					- 10-15cm of massive rhyolite at top of unit							
64		ADTT			- STGG: Fault gouge developed at 68.9-69.1							
65			70°									
				71.1-72.8	Brownish green finely banded tuffaceous andesite.							
66				ADTT	- Alternating brown-green bands containing Lt-chl							
					respectively. Calcareous white bands also interlayed							
67					with the fine grained tuff.							
					- Upper contact with RHFR is gradational over 10cm.							
68												
69		RHFR										
70												
				72.8-97.8	Greyish black aphyric fragmental rhyolite							
71				RHFR	- Same as above (66.8) but interval consists of							
					90-95% siliceous frags in an black argillaceous							
72		ADTT			matrix							
					- Very weak carbonate alteration within some of the							
73					siliceous fragments. Occurs as small veinlets.							
					- QTVN: 76.5-76.7; 88.0-89.3							
74					- Core Angle 75m: 70°							
					85m: 65° 95m 65°							
		RHFR	70°		- Over this interval + the underlying RHFR (66.8-71.1) a grading							
75					can be observed. Defined by increase in argillic content/							
					decrease in rhyolite fragments.							

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PAGE 6 OF 29	PROJECT:	HOLE NO. WV-97-111

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
53										
54										
55										
56										
57										
58										
59										
60										
61 AITT (60.7): Tr. fn. grd py growing along fractures. Rare subhedral xtls within andesite (0.1-0.3cm dia).										
62										
63										
64										
65										
66										
67										
68										
69										
70										
71										
72										
73										
74										
75										

PAGE 7 OF 29 | PROJECT: | HOLE NO. MV-97-111

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Se)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
76	RHFR										
77											
78											
79											
80											
81											
82											
83											
84											
85			65								
86											
87											
88											
89											
90											
91											
92											
93											
94	RHFR										
95			65								
96											
97											
98											

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PAGE 8 OF 29	PROJECT:	HOLE NO. W97-111

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
76										
77										
79										
80										
81										
82										
83										
84										
85										
86										
87										
88										
89										
90										
91										
92										
93										
94										
95										
96										
97										
98 RHS: Trace subtabular to euhedral py with chy + within foliation planes										
99										

PAGE 9 OF 29 | PROJECT: | HOLE NO: NV97-111

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
99	RHFS			97.8-120.8 RHFS: Greenish-grey Aphyric rhyolite flow with minor rhyolite fragmentals							
100				- Siliceous rock with a weak to moderate foliation. Foliation planes are spaced 0.5-1.5 cm apart + defined by chlorite/sericite growth							
101				- Rock is variable grey to green. The green could reflect a weak pervasive chl. alteration.							
102				- STGS: 117.2-118.2							
103				- Interbedded with the rhyolite are minor felsic tuffs. Rock loses the massive silica appearance and is tuffaceous: 115.5-117.0							
104				- Core Angles: 105m: 65° 115m: 60°							
105			65°								
106											
107											
108											
109											
110											
111											
112											
113											
114											
115			60°								
116											
117											
118	RHFS										
119											
120											
121											

Westmin Resources

PAGE 10 OF 29	PROJECT:	HOLE NO. WV-97-111

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										
112										
113										
114										
115										
116										
117										
118										
119										
120										
121 RHFP(bos): Tr. py occurring in fractures and as subedral to euhedral xtls in the foliation planes. xtls are 0.1-0.3 dia.										

PROJECT:

HOLE NO. WV-97-111

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	ALTERATION B (Ser)	ALTERATION C (Ep)	ALTERATION D (Carb)	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
122	RHFR			120.8-124.8 RHFR: Greenish grey fragmental rhyolite with minor rhyolite flows - The only difference between this interval and the overlying fragmentals is the lack of argillaceous matrix. 95% siliceous fragments surrounded by sericitic material. - QTUN: 124.0-124.2; 124.4-124.8 - Rhyolite fragments are aphyric							
123											
124											
125			70°								
126	RHFS			124.8-126.2 RHFS: Greyish white aphyric rhyolite - Same as above (RHFS 97.8) - Core Angle: 125m: 70°							
127	RHLT										
128											
129				126.2-128.3 RHLT: Brownish grey matrix rich rhyolite fragmental to rhyolite lapilli tuff. - Aphyric siliceous fragments comprise 20-70% of interval but average ~30%. - Frags in a light brown sericitic matrix that could have been a tuffaceous rhyolite. Biotite is present in the more tuffaceous rich sections of interval - Upper contact with RHFS is gradational over 10-15 cm. - Mod. ser alt.							
130											
131											
132	RHFS										
133											
134											
135			65°	128.3-135.7 RHFS: Greyish-white to greenish-grey Aphyric rhyolite - Same as above RHFS (97.8) - Foliation is a moderately developed spaced fabric (0.5-1 cm apart). Subtle fragmental texture develops over lower 1-1.5 m. Foliation begins to develop an anastomosing appearance or actual fragments are present - Ser + Chl present along the foliation plane. - QTUN: 129.2-129.4 - Core Angle: 65° at 135m							
136											
137											
138											
139											
140											
141	RHFR			135.7-151.3 RHFR: Greenish-grey fragmental rhyolite with minor band of massive rhyolite. - Same as RHFR above (120.8m) - 85-90% rhyolite fragments - Weak chlorite alteration over lowermost 1m of interval - Brown sericite + chlorite defining foliation planes - Core angle at 145m: 70°							
142											
143											
144											

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PAGE 12 OF 29	PROJECT:	HOLE NO: WV-97-111

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
122										
123										

PROJECT:

HOLE NO. WV-97-111

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION Chl A	Ser B	Fp C	Carb D	E	FRACTURE INTENSITY	% VEIN QTZ.
145	RHFS		70°	151.3 - 161.2 RHFS	Greenish grey Aphyric rhyolite						
146					- Same as above RHFS (128.3)						
					-- Core is broken over interval						
					- Lowermost 3m (80cm of core in box) is a mixture of aphyric rhyolite + felsic tuffaceous material						
147					- Very weak chlorite alteration giving the sporadically developed green colour						
148					- QTVN: 154.7-154.8; 157.7-157.8; 159.7-159.9						
149					- Core angle 154 70°						
150											
151											
152											
153											
154			70°								
155											
156											
157	RHFS										
158											
159											
160											
161				161.2 - 163.2 STGG	Fault gouge developed in greenish-grey rock + blackish green iron formation. Iron form. begins at ~163						
162	STGG										
163				163.2 - 164.8 EXMT	Magnetite-rich Iron Formation						
164					- Banded rock consisting of alternating magnetite rich layers and silica rich layers.						
165			70°		- Bands rich in mag. are typically 0.3-1cm thick but increase to 5cm. Mag is disseminated within these layers. Mag can be 25% + occurs in a matrix of massive silica.						
166					- Silica is greyish white and forms 0.3-1cm thick layers.						
167					- Core is very broken. Consists mainly of rock chips						

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PAGE 14 OF 29	PROJECT:	HOLE NO. NH97-11

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
145										
146										
147										
148										
149										
150										
151 RHFS (151.3): Tr. subhedral to euhedral py occurring in the foliation plane. Xtls are 0.1-0.2 cm size.										
152										
153										
154										
155										
156										
157										
158										
159										
160										
161		161.2	163.2	2.0	175985					
162										
163 EXMT (163.2): 1% diss, subhedral to euhedral										
164 py. Xtls are 0.1-0.4 cm in size.										
165										
166										
167										

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION Chl A	Ser B	Ep C	Carb D	E	FRACTURE INTENSITY	% VEIN QTZ.
168				FXMT cont'd	Small percentage of carbonate within the matrix.							
169			FXMT	164.8m - 167.3 RHFS	Light grey Aphyric rhyolite - Same as RHFS above (151.3). - No subtle chloritic alteration through the unit. - Spaced, weakly developed foliation defined by light yellow-grey sericite. - Core angle: 165m: 70°							
170												
171												
172												
173			RHFS	167.3 - 169.8 FXMT	Magnetite-rich Iron Formation - Weak banding defined by variations in concentration of magnetite. Mag. occurs throughout interval, forming massive sections + diss bands. - 167.7-168.0 - Massive silica with no magnetite (rhyolite? silica exhalite).							
174												
175			70°									
176					- Mag content is ~65% of interval. It is in a silica rich matrix - Subtle green colour exists due to weak chloritic alteration.							
177												
178												
179				169.8 - 176.2 RHFS	Light grey, aphyric rhyolite with minor silica exhalite - Same rock as above (RHFS: 164.8). - 169.8-169.9 - Upper 10cm definately consists of silica exhalite. It has a banded, cherty appearence. Rock then grades into a massive rhyolite. - No variation over interval - Core angle 175m: 70°							
180												
181			STGG									
182												
183												
184				176.2 - 185.9 STGG	Fault gouge + rock chips/marbles. - Felsic volcanic 176.2 - 182.6 Black argillaceous material: 182.6 - 185.9							
185												
186				185.9 - 191.7 ARCB	Black carbonaceous argillite with 5-15% bands of grey silica. - Core is broken - Massive silica bands could be rhyolite flows within the argillite. - Core Angle 189m: 70° RJTUN: 186.8 - 187.2							
187												
188												
189			70	191.7 - 194.8	DHLC							
190				194.8 - 197.8 ARCB	Same as ARCB above (187.2)							

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PAGE 16 OF 29	PROJECT:	HOLE NO. WW-97-111

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
168 EVMT (167.3): 1% py occurring as euhedral										
169 to subedral, 0.2-0.4 cm dia xtls +										
as flatter) 0.5-1 cm pods within										
foliation plane.										
170 Py also occurs along fracture surfaces										
171										
172										
173										
174										
175										
176										
177										
178										
179										
180										
181										
182										
183		183.0	185.9	2.9	175986					
184										
185										
186										
187										
ARCB (187.2) Trace py occurring as very										
188 fine grained blebs within foliation plane.										
Also occurring within fractures.										
189										
190										

PAGE 17 OF 29 | PROJECT: | HOLE NO. WV97-111

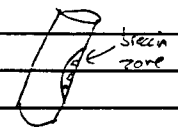
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
191	ARCB			197.8 - 210.0	Grey aphyric rhyolite							
				RHFS	- Interval consists of rock chips + marbles							
192					- Core is badly broken.							
					- Sericite occurs along the visible foliation planes							
193					- Weakly foliated siliceous rock							
194	OHLC											
				210.0 - 213.0	Lost core							
195				OHLC								
196												
	ARCB			213.0 - 214.6	Greenish grey aphyric rhyolite							
197				RHFS	- Same as above but core is in good condition.							
198												
				214.6 - 216.4	Magnetite-poor Imn formation							
199				EXMT	- Black + green magnetite-bearing bands interlayed with grey silica.							
					- Magnetite forms fine grained massive 0.5-2cm wide bands							
200					in a siliceous matrix. Mag. ~ 7% of interval. Trace							
	Broken core				mag. also diss. as small subhedral xtls through interval.							
201					- QTVN: 214.9-215; 215.1-215.3.							
					- Weak chl Alteration throughout							
202					- Core angle at 215m: 60°							
203												
204												
	RHFS											
205												
206												
207												
208	Broken core											
209												
210												
211	OHLC											
212												
213												

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PAGE 18 OF 29	PROJECT:	HOLE NO. WV-97-111

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 19 OF 29 | PROJECT: | HOLE NO.: AN-97-111

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Grb)	E	FRACTURE INTENSITY	% VEIN QTZ.
214											
215		EXMT	60°								
216				216.4 - 219.1 RHFS	Greenish-grey aphyric rhyolite						
217					- Same as "RHFS" above (213.0)						
218		RHFS			- 5% of interval consists of a dte-rhyolite breccia. Rhyolite frags in a dte matrix. Frags are angular.						
219					Core just "skims" fragmental zone → 						
220		ARSI									
221		STGG			- Lower 30cm is entirely broken and has a weak sericite alteration.						
222											
223				219.1 - 220.2 ARSI	Blackish-grey siliceous argillite						
224					- Very siliceous moderately foliated rock						
225		EXCP	70°		- Some bands of rhyolitic material occur within ARSI						
226					- Core is very broken						
227					- 0.2-0.5 cm thick carbonaceous argillite bands occur within interval						
228		ARSI		220.2 - 220.3 STGG	Fault gouge + rock chips within siliceous argillite.						
229				222.3 - 226.1 EXCP	Medium grey calcite-quartz exhalite						
230		RHFS			- Calcite component of this interval is homogeneous in colour + % calcite						
231					- 5-10% argillite bands define the weakly-moderately developed banding. Arg. bands typically 0.2-1.5 cm thick						
232					- Pyrite bands total 15% of interval and appear to occur in association with the argillite breaks.						
233					- Core angle 225m: 70°						
234				226.1 - 228.3 ARSI	Greyish-black siliceous argillite						
235		ARSI	70°		- Same as ARSI above (219.1)						
236					- Some portions of interval consist of rhyolitic material with an argillaceous component (app 15% of interval).						

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PAGE 20 OF 29 | PROJECT: | HOLE NO. WV-97-111

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
214						
215 EXMT(214.6): 1% fine grd. bands of golden brown py forming clots + discontinuous bands. Trace euhedral 0.5-1cm dia xtls of py.						
216						
217						
218						
219 ARSI(219.1) 3% py alined in continuous + discontinuous bands // to foliation. Within the bands py forms med + coarse grd xtls subhedral - euhedral in shape						
220						
221						
222 EXCP(222.3): Pyrite 13% Fine - (some grains) (max 0.5 dia for xtl) bands. Dark golden-brown colour. Bands are typically 0.2-1cm thick; range up to 4cm of massive py (224.6m)		222.3	223.5	1.2	175987	
223						
224		223.5	225.0	1.5	175988	
225						
		225.0	226.1	1.1	175989	
226 ARSI(226.1): 15% dark brownish yellow fine to med. grd py forming bands // to foliation. Bands are typically 0.2-0.7cm thick		226.1	228.3	2.2	175990	
227						
228 RHFS(228.3): Trace py occurring at 1cm of interval. 0.1-0.3cm wide fine to med grd bands // to foliation.		228.3	229.0	0.7	175991	
229		229.0	230.6	1.6	175992	
230						
231		230.6	231.8	0.8	175993	
232 ARSI(231.8): Tr. fn. grd. py forming rare bands + mainly occuring along fractures + clots.		231.8	233.5	1.7	175994	
233						
234		233.5	234.7	1.2	175995	
235		234.7	236.2	1.5	175996	
236						

PROJECT:

HOLE NO: NV-97-111

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Carb	E	FRACTURE INTENSITY	% VEIN QTZ.
237	EXCP			228.3-231.8 RHFS	Greyish-white aphyric rhyolite - Weak to moderate, laveboed banding defined by pyrite and argillite layers ~0.2-0.6cm thick - 3-5% of interval consists of EXCP. These bands are 4-6cm in length. - Portions of this interval could be EXSP because of milky texture + cherty appearance.							
238												
239												
240												
241				231.8-236.7 ARSI	Greyish black siliceous argillite - Same as above (226.1m) - There are a number of EXCP or limey units within this ARSI. Range in thickness 5-20cm. - Core angle 70°							
242												
243												
244	APLVC		75°	236.7-242.6 EXCP	Medium grey to white calcite pyrite exhalite - Calcite is banded and is variably white to grey in colour. Also bands of py, sph and argillite. - Interval is cut by calcite veins ~1-3cm wide and almost // to length of core. Also large calcite vein occurs at 239.1-239.8. - 241.5-241.6: Lower 1m of unit is brecciated. Angular EXCP fragments ~1-2cm in size set in a calcit-chlorite matrix. Matrix to fragments is networked by pyrite veins							
245												
246												
247												
248												
249	STGG			242.6-248.7 ARWK	Black carbonaceous argillite interbedded with slightly coarser grained argillaceous greywacke - Interval is moderately foliated and consists mainly of greywacke. - Lower 1.5m contains siliceous argillite layers within the greywacke. - Core angle 245m: 75m							
250	ARGB											
251												
252												
253												
254	RHTT											
255			55°	248.7-249.6 STGG	Fault gouge in argillaceous material.							
256				249.6-251.1 ARCB	Greyish black carbonaceous argillite with a weak sericite alteration. - Sericite alteration increases to moderate over 20-30cm intervals - 15% of interval consists of siliceous bands & massive silica to tuffaceous material.							
257	ARCB											
258												
259												

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PAGE 22 OF 29 | PROJECT: | HOLE NO. WV-97-111

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
EXCP (236.7): 14% brown fn. grd. py. forming bands 0.2-1.5cm thick. Py also remobilized in Cal-Py veins that X-cut foliation. Py also forms portion of matrix in calcite breccia.		236.2	236.7	0.5	175997	
		236.7	238.4	1.7	175998	
		238.4	240.2	1.8	175999	
Tr. sphalerite forming continuous + discontinuous band // to the foliation. Sph. is fine grained and is dark red-brown to light red-yellow colour.		240.2	241.6	1.4	176000	
		241.6	242.6	1.0	204301	
ARWk (242.6): 1% fine grd py forming dark yellow-brown colored band // to foliation		242.6	244.1	1.5	204302	
		244.1	246.0	1.9	204303	
Tr. sph. forming a continuous band // to foliation. Sph is fine grained + red in colour.		246.0	247.5	1.5	204304	
		247.5	248.7	1.2	204305	
		248.7	249.6	0.9	204306	
ARCB (249.6) 1% fn. grd. dark brown py forming band // to foliation		249.6	251.1	1.5	204307	
1% fn. grd., dark red sph forming disseminated concentrations (pods) + bands // to foliation.		251.1	252.9	1.8	204308	
PHYT (251.1): Tr. py. forming fine grd pods and rare continuous bands // to foliation. (brownish-gold)		252.9	254.2	1.3	204309	
Trace sph. forming continuous, 0.1-0.3cm wide bands + disseminated discontinuous bands. Sph is fn. grd. and dark red-brown in colour.		254.2	256.2	2.0	204310	
ARCB (256.2): 5% fn. grd. golden brown py forming bands + pods. Also filling fractures oriented ⊥ to foliation.		256.2	257.3	1.1	204311	
		257.3	259.5	2.2	204312	

PAGE 23 OF 29 | PROJECT: | HOLE NO. NV-97-111

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A Chl	B Ser	C Ep	D Carb	E	FRACTURE INTENSITY	% VEIN QTZ.
260				251.1-256.2	Greyish yellow, moderately to strongly, sericitically							
				RHTT ??	altered rock							
					- Difficult to tell what protolith is due to alteration.							
261					Upper contact is gradational, from ARCB into							
					sericitically altered tuff(?) over 5-10cm. Argillite							
262					material also observed in center of this interval							
					when alteration decrease to weak-very weak. This							
263					rock could be a tuffaceous argillite or a felsic							
					tuff.							
264					- 15% of interval, core is very fissile, with an							
					almost fault gouge texture developed.							
265			80°		- Core angle 255m: 55°							
					- Strongly foliated.							
266												
				256.2m-257.3	Black carbonaceous argillite							
267				ARCB	- Siliceous wisps + bands occur within argillaceous							
					material							
268												
				257.3-259.5	Greyish white siliceous to tuffaceous felsic rock.							
269				RHFS	- 80-90% of interval consists of aphyric siliceous							
					material (rhyolite). Minor tuffaceous + argillite material							
270					within the rhyolite							
					- Weak sericite alteration							
271												
				259.5-260.1	Black carbonaceous argillite							
272				ARCB	- Same as above (256.2)							
273				260.1-264.9	Greyish white aphyric rhyolite with bands of							
				RHFS	argillite + calcite (EXCP?).							
274					- 80-85% aphyric siliceous material. Portions show							
					a fragmental texture, defined by siliceous frags in							
275			70°		an argillaceous matrix							
					- Calcite rich bands are 5-10cm wide and comprise 5% of interval.							
276					- QTVN: 261.2-261.6							
277				264.9-268.2	Blackish-grey siliceous argillite							
				ARSI	- Same as above (ARSI-231.8)							
278					- Bands of carbonaceous argillite occur over lower							
					1m of this unit							
279					- Core angle 265m: 80							
280				268.2-270.4	Black carbonaceous argillite with massive siliceous							
				ARCB	bands.							
281					- Siliceous bands are typically 0.3-1cm wide							
					and comprise 20-25% of interval.							
282												

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PAGE 24 OF 29 | PROJECT: | HOLE NO. WV-97-111

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		259.5	260.1	0.6	204313					
		260.1	261.6	1.5	204314					
		261.6	262.8	1.2	204315					
		262.8	264.9	2.1	204316					
		264.9	266.8	1.9	204317					
		266.8	268.2	1.4	204318					
		268.2	270.4	2.2	204319					
RHT (270.4): Trace py. forming fn grd bands + med. gr) xtls disseminated throughout interval. Trace pyrr forming wisps // to foliation		270.4	271.4	1.0	204320					
		271.4	272.8	1.4	204321					
Tr. sph forming continuous 0.1-0.2 cm wide bands // to foliation.		272.8	274.3	1.5	204322					
		274.3	275.8	1.5	204323					
		275.8	277.1	1.3	204324					
		277.1	278.6	1.5	204325					
		278.6	280.1	1.5	204326					
		280.1	281.9	1.8	204327					
		281.9	283.0	1.1	204328					

PROJECT:

HOLE NO. WU-97-111

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
283	RPTF			270.4-274.3 RHTT - Pale green tuffaceous rhyolite - Pale green colour due to a pervasive moderate sericite alteration. - Interval has a variably character, varing from tuffaceous rhyolite to rhyolite flow. 20cm intervals (271.6-271.8; 272.3-272.5) next grades into lapilli tuff with siliceous fragments ~0.2-0.5cm dia in a tuffaceous matrix.							
284			75°								
285											
286											
287											
288				274.3-281.9 RHLT - Greenish-grey to blackish grey rhyolite lapilli tuff. - Rounded siliceous lapilli fragments (0.3-2cm dia) in a weakly sericitically altered tuffaceous matrix. 277.8-278.8 the matrix changes to a carbonaceous argillite. - Interval comprises of 10-60% lapilli fragments. All fragments are flattened in moderately developed foliation. - Core Angle: 275m: 70°							
289											
290											
291											
292											
293	ARTF			281.9m-285.3 RPTF - Qtz eye rhyolite lapilli tuff - 0.2-0.4cm dia qtz eyes occur along with the siliceous fragments in the variably argillaceous + rhyolitic tuffaceous matrix - lapilli size fragments comprise ~35-45% of rock, qtz eyes comprise 10-20% of those fragments - Weak sericite alteration perversively developed through interval.							
294											
295			70°								
296											
297											
298				284.2-298.14 ARTF - Greenish grey to blackish grey tuffaceous argillite - Greyish white siliceous fragments + bands in a carbonaceous matrix. Fragments are 0.2-1cm dia and comprise 10-60% of interval. Siliceous bands (Aphyric rhyolite?) are typically 0.5-2cm thick and comprise 15% of interval. - A weak sericitic alteration is sporadically developed over ~10% of interval and occurs in concentrated bands ~1-15cm in width - Core Angle 285m: 75° 295m: 70°							
299											
300											
301											
302											
303	RHTT										
304											
305			75°								

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PAGE 26 OF 29 | PROJECT: | HOLE NO. W-97-111

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		283.0	284.3	1.3	204329	
ARTF (284.2): Tr. fn. grd. py forming wisps ~1cm long + aligned in foliation. Tr pyrr forming wisps ~0.5cm long aligned in the foliation. Tr. sph forming continuous 0.2cm wide bands // to fol. Sph is fn grd + reddish brown in colour.		284.3	285.3	1.0	204330	
		285.3	287.0	1.7	204331	
		287.0	288.6	1.6	204332	
		288.6	289.8	1.2	204333	
		289.8	291.7	1.9	204334	
		291.7	293.1	1.4	204335	
		293.1	294.4	1.3	204336	
		294.4	295.8	1.4	204337	
		295.8	297.6	1.8	204338	
15cm Above SSMS, py increases to 10-15% of interval. It is both fine grained (bands) + buckshot (disseminated)		297.6	298.14	0.54	204339	
Light red (slightly yellow) sphalerite is also interbedded within the py. Sph forms 3-4, 0.2-0.4cm thick bands.		298.14	298.43	0.29	204340	
		298.43	299.0	0.57	204341	
PHTT (299.43): The 15cm below the intersection consists of a number of semi-massive pyrite + sph bands. Sph is a light red colour + is fine grd. Sph also occurs in trace amounts throughout interval. It forms fn. grd continuous + discontinuous bands ~0.1-0.3cm thick.		299.0	299.9	0.9	204342	
		299.9	301.4	1.5	204343	
		301.4	302.7	1.3	204344	
		302.7	304.4	1.7	204345	
		304.4	305.8	1.4	204346	

PAGE OF | PROJECT: | HOLE NO. WV-97-111

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.

298.14-298.43
SSMS

Banded pyrite-sphalerite ± chalcopyrite massive sulphide

Pyrite : 50%
Sphalerite : 25% Zn: 16%
Chalcopyrite : 5% Cu: 1.3%
grey sulphide : <1% Ag: 377 g/t
Gangue : 20% Pb: 0.7%

- Intersection is homogeneous throughout with respect to pyrite sphalerite content. Banding is defined by pyrite + sphalerite layers typically 0.2-0.4cm thick. Chalcopyrite content increases towards top and forms discontinuous bands consisting of fine to med grl cpy.
- Gangue material consists of carbonate + thin bands of argillaceous material. The carbonate occurs in pods ~0.2-1cm dia within banded sulphide. Carbonate is also ubiquitous throughout the matrix of the sulphide. 3-4, 0.2-0.5 cm wide argillite bands occur // to the sulphide banding. Argillite (Black fine grained carbonaceous) occurs at the upper + lower contacts of zone: 2 cm at top + 15 at bottom.

Sphalerite. Fine grained bands 0.1-0.3 cm thick, totalling 25% of interval. Sph is light red to rarely honey in colour (i.e Zn-rich). Slightly greater concentration of sph. within lower half. Banding is more defined over the lower 20cm.

Chalcopyrite: Cpy totals ~5% over interval. A brighter yellow (compared to py) is observed over the top half of interval and represents a fine grained cpy content. Cpy coarsens to max 0.2cm anhedral "blotches" that form discontinuous bands over this top half of interval. Cpy also concentrated in a 0.2cm band at the very top of intersection.

Pyrite. Py occurs in very fine grained bands interlayered with sphalerite-cpy. It is a dark brownish-yellow colour. There is also slightly coarser grained (subhedral 0.1cm dia with) disseminated py occurring dominantly over upper half of intersection.

Tetrahedrite (?): A very fine grained grey sulphide is visible in a 0.2 x 1.5cm long "pod"-like concentration.

- Core angle: 70°

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PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH						

PAGE 27 OF 29 | PROJECT: | HOLE NO. NV-97-111

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
306	RHTT			298.43-306.6 Greenish grey tuffaceous rhyolite							
307				RHTT - Moderate to strong chlorite alteration. Pervasive mod. chl which increases to form strong chlorite altered bands ~ 5-10cm wide							
308				- Weak to mod sericite alteration							
309				- Carbonate bands + "fragments" (boudinaged veins) occur within this rock resulting a moderate level of carbonate alteration.							
310				- Rock is a fine grained tuff with very little variation over interval							
311				- The 15cm immediately below the intersection is black fine grained carbonaceous argillite.							
312				- Core Angle: 305m: 75°							
313				306.6-341.05 Greenish grey rhyolite lapilli tuff							
314				RHLT - Rock is dominantly a rhyolite lapilli tuff but also interlayered with RHTT and ARTF/ARCB.							
315			75	- Siliceous fragments are ~ 0.3-1.5cm in dia and are flattened in the foliation.							
316				- Interval is strongly to intensely foliated with fault gouge developed over some sections: 310.0-310.4; 330.4-333.3. Rock are these highly deformed areas							
317				is soft + friable but original texture can be made out							
318				- Mod. sericite alteration throughout							
319				- Weak chl. alteration							
320				- QTVN: 325.5-325.9; 328.1-328.5; 329.2-329.7							
321				- Core angle 315: 75° 335: 70° orientation of 325: 75°							
322				- The foliation is variable + sometimes complexly folded							
323				EOH							
324											
325			75								
326											
327											
328											

Westmin Resources

PAGE 28 OF 29	PROJECT:	HOLE NO. WU97-111

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		305.8	306.6	0.8	204347					
		306.6	308.7	2.1	204348					
		308.7	310.2	1.5	204349					
		310.2	311.6	1.4	204350					
		311.6	313.1	1.5	204351					
		313.1	314.4	1.3	204352					
		314.4	315.9	1.5	204353					
		315.9	317.4	1.5	204354					
		317.4	318.8	1.4	204355					
		318.8	320.1	1.3	204356					
		320.1	321.7	1.6	204357					
		321.7	323.0	1.3	204358					
		323.0	324.8	1.8	204359					
		324.8	326.1	1.3	204360					
		326.1	327.8	1.7	204361					
		327.8	329.2	1.4	204362					

PAGE 29 OF 29 | PROJECT: | HOLE NO. WV-97-11

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A (Chl)	B (Ser)	C (Ep)	D (Carb)	E	FRACTURE INTENSITY	% VEIN QTZ.
329				SAMPLES:							
				329.2 – 331.0 1.8 204363							
330				331.0 – 332.3 1.3 204364							
				332.3 – 334.1 1.8 204365							
331				334.1 – 335.6 1.5 204366							
				335.6 – 337.2 1.6 204367							
332				337.2 – 338.6 1.4 204368							
				338.6 – 341.05 2.45 204369							
333											
334											
335			70								
336											
337											
338											
339											
340				341.05 – EOH.							
341											
342											
343											
344											
345											
346											
347											
348											
349											
350											
351											

Westmin Resources

DRILL LOG

PROJECT: Wolverine	GROUND ELEV.: 1490m
HOLE NO.: WV 97 - 112	BEARING: 033° (Grid North)
LOCATION: 16955 N, 16950 E	DIP: - 80°
	TOTAL LENGTH: 483.7m (1587')
LOGGED BY: M. Padberg	HORIZONTAL PROJECT
DATE: September 14/97	VERTICAL PROJECT
CONTRACTOR: Boisvenu Diamond Drilling	**ALTERATION SCALE**
CORE SIZE: NQ	
DATE STARTED: 09/13/97	
DATE COMPLETED: 09/21/97	**TOTAL SULPHIDE SCALE**
DIP TESTS	
COMMENTS	LEGEND



absent
slight
moderate
intense



traces only
< 1%
1% – 3%
3% – 10%
> 10%

PAGE 1. OF | PROJECT: Wolverine | HOLE NO. W97112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
0	DHCS			0.00 - 6.10 CASING DHCS							
6.10				6.10 - 38.71 MASSIVE RHYOLITE							
	RHFS			RHFS mod → str. patchy Fe ox'd mass aphyric pale greenish (near teale colour) rhy w/ rhythmic common anastomizing ser. partgs tht. Rare disseminated p.s. py							
17.73 - 17.78				→ 17.73 - 17.78: ST06 - FAULT GOUGE Angular wallrock clasts (avg. 2cm²) over a sandy mtx. clt's @ 50° cax							
	RHFS										
23											

Westmin Resources

PAGE 2 OF	PROJECT: Wolverine	HOLE NO. WV 97 112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
16										
17										
18										
19										
20										
21										
22										
23										

PAGE 3 OF | PROJECT: Wolverine | HOLE NO. WV97112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (6.10-38.71: RHFS - con't)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
24	RHFS										
25											
26											
27											
28			35								
29											
30											
31											
32											
33											
34											
35											
36			38								
37											
38				38.71-42.14 FRAGMENTAL RHYOLITE							
38.71				RHFR Dk gray fragl rhy w/ lt/k arg. partgs. Fragls avg 1x4 cm + are aphyric rhy's. Rhythmic ser + arg partgs tht. Race → tr f.g. py along ser/arg. partgs.							
39	RHFR		48								
40											
41											
42 42.14											
42.14				42.14-45.00 SILICEOUS ARGILLITE							
43	ARSI		45	ARSI Gradational uc w/ RHFS into hard, v. siliceous arg w/ 1% v.f.g. → mass fine py'ic stringers. High Si content. Localized qtz flooding.							
44			60								
45 45.00											
45.00	ARTF		62								
46											

Westmin Resources

PAGE 4 OF	PROJECT: Wolverine	HOLE NO. WV97 112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
24										
25										
26										
27										
28										
29										
30										
31										
32										
33										
34										
35										
36										
37										
38										
39										
40										
41										
42										
43										
44										
45										
46										

PAGE 5 OF | PROJECT: Wolverine | HOLE NO. WV 97112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EPI C	CARB D	E	FRACTURE INTENSITY	% VEIN QTZ.
	ARTF			45.00-58.35 TUFFACEOUS ARGILLITE							
47				ARTF Blk arg. w/ irregular (avg: 5x15 mm) wkly efferv.							
48				wispy calcareous tuffaceous frags + v.f.g → mass (1%)							
49				fine py'ic stringers (sim.							
				to those of ARSI above)							
50											
			70								
51											
52											
53											
54											
55											
56											
57											
58	ARTF										
58.35			60	58.35-58.75 MASSIVE RHYOLITE							
58.75				RHFS DK gray v. wkly fragmented (?)							
59			65	mass rhy w/ rare fine							
60				efferv. wh. microlites +							
				v. faint fine arg. stringers							
61				tht. Rare f.g. py diss tht							
62				58.75-66.14 MASSIVE ARGILLITE							
	ARMS			ARMS v.f.g → mass dk black,							
63				uniform carbonaceous arg.							
64				w/ 1-2% v.f.g mass py'ic							
				stringers tht. Random							
65				wh. calcareous veinlets							
				(from 1mm → 5mm) showing							
66				mod efferv. w/ 10%-HCl							
66.14			60								
				66.14-75.28 ASH TUFF							
67			65	RHFF Aphanitic medium gun metal							
				gray finely laminated Ash tuff							
68	RHFF			w/ wk patchy ser. alt'n.							
				Tr mass blebby py.							
69											

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PAGE 6 OF	PROJECT: Wolverine	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
47										
48										
49										
50										
51										
52										
53										
54										
55										
56										
57										
58										
59										
60										
61										
62										
63										
64										
65										
66										
67										
68										
69										

PAGE 7 OF | PROJECT: Wolverine | HOLE NO. WV97112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (66.14-75.28: RHFF cont)		ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
70	RHFF											
71												
72												
73												
74												
75 / 75.28			60	75.28-87.55	TUFFACEOUS ARGILLITE							
76	ARTF			ARTF	Same as above (45.00-58.35)							
77												
78												
79												
80												
81												
82												
83												
84			65									
85												
86												
87	ARTF											
87.55				87.55-101.00	TUFFACEOUS ANDESITE							
88			60	ADTT	Fine grained lt green bended tuffaceous andes w/ wk perv. chl + ser alt'n. Fine wh. mottled calcic bands (veinlets) common sharp contacts.							
89												
90	ADTT											
91												
92												

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PAGE 8 OF	PROJECT: Wolverine	HOLE NO. WV97 112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
70										
71										
72										
73										
74										
75										
76										
77										
78										
79										
80										
81										
82										
83										
84										
85										
86										
87										
88										
89										
90										
91										
92										

PAGE 9 OF | PROJECT: Wolverine | HOLE NO. WV97112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				(87.55 - 101.00: ADTT cont)							
93											
94											
95											
96			45								
97											
98											
99											
100											
101.00				101.00-102.70 BANDED ANDESITE/ARGILLITE							
	ADTT			ARGT Intercalated tuffaceous blk calcareous arg w/ lt. green tuffaceous andesite (same andes as above)							
102			62								
102.70	ARGT										
103											
104				102.70-110.85 MASSIVE ARGILLITE							
105				ARMS Same as above (58.75-66.14)							
106											
107											
108											
109											
110											
110.85	ARMS			110.85-127.74 ARGILLACEOUS WACKE							
111			62	ARWK Black f.g. arg. w/ fine mottled gray silt/wacke pervasively thut. Tr. f.g. py stringers							
112			40	Rare very fine carb veinlets thut running // to fol'n.							
113											
114											
115	ARWK										

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PAGE 10 OF	PROJECT: Wolverine	HOLE NO. WV97112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
93										
94										
95										
96										
97										
98										
99										
100										
101										
102										
103										
104										
105										
106										
107										
108										
109										
110										
111										
112										
113										
114										
115										

PAGE 11 OF | PROJECT: Wolverine | HOLE NO. WV 97112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
116		ARWK									
117				→ 117.60-121.20: ST66 · FAULT GOUGE							
117.60				Black pasty gouge							
118			40	w/ all grain sizes							
119				of angular frags							
120				present Rare med.							
121.20			60	to coarse grd by vis							
122											
123											
124			70								
125											
126		ARWK									
127											
127.74											
128			75	127.74-136.80	INTERBANDED ANDESITE/ARGILLITE						
				ARGT	Intercalated blk mass. → tuff						
129					arg w/ lt. green f.g. tuffaceous						
130					andesite. Andesitic bands vary						
131					from <1cm → 30cm.						
132			75								
133		ARGT									
134											
135											
136											
136.80											
137			75	136.80-140.21	ARGILLICEOUS WACKE						
		ARWK		ARWK	Same as above (110.85-127.74)						
138											

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PAGE 12 OF	PROJECT: Wolverine	HOLE NO. WV97112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
116										
117										
118										
119										
120										
121										
122										
123										
124										
125										
126										
127										
128										
129										
130										
131										
132										
133										
134										
135										
136										
137										
138										

PAGE 13 OF | PROJECT: Wolverine | HOLE NO. WV 97112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (136.80 - 140.21: ARWK - cont)		ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
139	ARWK											
140.21												
			60°	140.21 - 142.14	INTERBANDED ANDESITE / ARGILLITE							
141	ARGT			ARGT	Same as above (127.74 - 136.80)							
142.14												
			60°	142.14 - 149.20	ARGILLICEOUS WACKE							
143			60°	ARWK	Same as above (110.85 - 127.74)							
144												
145												
146			70°									
147												
148												
149.20				149.20 - 153.28	TUFFACEOUS ANDESITE							
			70°	ADTT	Lt pale green f.g. tuffaceous andesite w/ wk perv. chl + seraltn. Localized qtz floods. Good uniformitism.							
150												
151												
152	ADTT											
153												
			70°	153.28 - 163.72	ARGILLICEOUS WACKE							
154				ARWK	Same as above (110.85 - 127.74)							
155												
156			65°									
157	ARWK											
158												
159												
160												
161												

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PAGE 141 OF	PROJECT: Wolverine	HOLE NO. WV 97112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
139										
140										
141										
142										
143										
144										
145										
146										
147										
148										
149										
150										
151										
152										
153										
154										
155										
156										
157										
158										
159										
160										
161										

PAGE 14 OF | PROJECT: Wolverine | HOLE NO. WV97112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (153.28 - 163.72 ARWK cont)		ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
162	ARWK											
163				163.72 - 170.32	INTERBEDDED ANDESITE / ARGILLITE							
163.72			70	ARGT	Same as above (127.74 - 136.80)							
164												
165												
166			70									
167	ARGT											
168												
169												
170.32			75	170.32 - 174.82	ARGILLICEOUS WACKE							
171	ARWK			ARWK	Same as above (110.85 - 127.74)							
172												
173												
174												
174.82			60	174.82 - 182.30	INTERBEDDED ANDESITE / ARGILLITE							
175				ARGT	Same as above (127.74 - 136.80)							
176												
177												
178												
179												
180	ARGT		70									
181					182.12 - 182.30 : STGG - FAULT GOUGE							
182					Fine grained poly ARGT							
182.12					Gouge Rare f.g. py.							
182.30												
183	ADTT											
183.46				182.30 - 183.46	ANDESITIC TUFF							
184	RHFR			ADTT	Same as above (149.20 - 153.28) Fldcts							

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PAGE 15 OF	PROJECT: Wolverine	HOLE NO. WV 97112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
162										
163										
164										
165										
166										
167										
168										
169										
170										
171										
172										
173										
174										
175										
176										
177										
178										
179										
180										
181										
182										
183										
184										

PAGE 16 OF | PROJECT: Wolverine | HOLE NO. W97112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
185	RHFR			183.46 - 186.74	FRAGMENTAL RHYOLITE							
				RHFR	Dk gray frag. rhy w/ fine anastomizing arg. partgs tht. Frag's avg. 3x10 mm + show generally no grading. Rare -> tr f.g. py along partgs. Rare localized <1cm thk andes bands present, sim to those of ARGT's above (and below)							
186												
186.74			75									
187												
188												
189												
				186.74 - 192.36	INTERBEDDED ANDESITE/ARGILLITE							
190	ARGT			ARGT	Same as above (127.74 - 136.80) Localized qtz flooding + veining common							
191												
192												
192.36			50									
				192.36 - 237.90	FRAGMENTAL RHYOLITE							
193	RHFR			RHFR	Same as above (183.46-186.74) Green tuffaceous bands disappear near 199m.							
194												
195												
196												
197												
198												
199			70									
200												
201												
202												
203												
204												
205	RHFR											
206												
207												

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PAGE 17 OF	PROJECT: Wolverine	HOLE NO. WN 97112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
185										
186										
187										
188										
189										
190										
191										
192										
193										
194										
195										
196										
197										
198										
199										
200										
201										
202										
203										
204										
205										
206										
207										

PAGE 12 OF | PROJECT: Wolverine | HOLE NO. WV97112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (192.36-257.90 RHFR: cont)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
208	RHFR										
209											
210											
211											
212											
213											
214											
215											
216											
217											
218	RHFR										
219											
220											
221											
222											
223											
224											
225											
226											
227											
228	RHFR										
229											
230											

Westmin Resources

PAGE 19 OF	PROJECT: Wolverine	HOLE NO. WV97112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
208										
209										
210										
211										
212										
213										
214										
215										
216										
217										
218										
219										
220										
221										
222										
223										
224										
225										
226										
227										
228										
229										
230										

PAGE 20 OF | PROJECT: Wolverine | HOLE NO. WV97112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (192.36-237.90 RHFR cont)		ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
231	RHFR											
232												
233												
234												
235												
236												
237												
237.90				237.90-286.33 RHFG	'PUCK' FRAGMENTAL Similar to fragmental units seen in Puck holes. Very siliceous, aphanitic, fragmented text w/ frags avg'g 1x4 cm in size. Ovoid/lenticular shape Primarily feathery anastomozing chl'ic + ser'ic partgs. Tr. biot. vis. Localized qtz flooding. Wk localized mt'ism (Tr. mt.)							
238												
239												
240												
241												
242												
243												
244												
245												
246												
247												
248												
249												
250												
251												
252												
253												

Westmin Resources

PAGE 21 OF	PROJECT: Wolverine	HOLE NO. WV97112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
231										
232										
233										
234										
235										
236										
237										
238										
239										
240										
241										
242										
243										
244										
245										
246										
247										
248										
249										
250										
251										
252										
253										

PAGE 22 OF | PROJECT: Wolverine | HOLE NO. WV 97-12

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (237.90 - 286.33 RHFG cont)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
254											
255											
256											
257											
258											
259											
260											
261											
262											
263											
264											
265											
266				266.75 - 267.15: QTVN: QUARTZ VEIN							
266.75 → 267.15 →			80°	Bull wh qtz vn; no mineral.							
268											
269											
270											
271											
272											
273											
274											
275											
276											

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PAGE 23 OF	PROJECT: Wolverine	HOLE NO. WV97112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
254										
255										
256										
257										
258										
259										
260										
261										
262										
263										
264										
265										
266										
267										
265										
269										
270										
271										
272										
273										
274										
275										
276										

PAGE 24 OF | PROJECT: Wolverine | HOLE NO. WV 97 112

(237.90 - 286.33 : RHFG cont)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
277	RHFG										
278											
279											
280											
281											
282											
283											
284											
285											
286											
286.33			75	286.33 288.40 MASSIVE ARGILLITE							
287	ARMS			ARMS Dk blk mass arg w/ v.f.g. → mass py fill in <1mm fnk fracts. Tr wispy/faint siliceous stringers. Patchy (5-10cm) silicic. arg.							
288											
288.40			75								
289											
290	RHAR			288.40-290.85 INTERBEDDED RHYOLITE/ARGILLITE RHAR Interbedded (irregularly) mass arg. (as above) + dk gray aphyric mass rhyolite. Tr→1% v.f.g. fine py stringers fnk							
290.85			75								
291	RHTT										
291.68			80								
292	QTVN										
292.60			85								
292.78	RHFG		80	290.85-291.68 FINE GRAINED TUFF RHTT Dk beigiesh f.g. rhy tuff w/ rare 1x4mm lapilli frags vis. wk pesv. chl + ser altn. wk localized mt'ism. Tr. fg. blebby py.							
293	EXMT		70								
294											
295											
296				291.68-292.60 QUARTZ VEIN QTVN Snowy wh. qtz vn w/ 8-10% mass blebby chl'ic stringers + septa fnk.							
297											
298											
298.54			80								
298.78			80								
299											

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PAGE 25 OF	PROJECT: Wolverine	HOLE NO. WV 97112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
277										
278										
279										
280										
281										
282										
283										
284										
285										
286										
287										
288										
289										
290										
291										
292										
293										
294										
295										
296										
297										
298										
299										

PAGE 26 OF | PROJECT: Wolverine | HOLE NO. WV 97112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
299.60				292.60 - 293.18	MASSIVE RHYOLITE							
300	RHFS			RHFS	mass aphyric fog gray laminated rhy (poss EXSP)							
300.60					w/ tr fine carb microlites tht.							
300.75	EXCP				Tr -> 1% diss fg. py + tr							
301					anastomizing / feathery fine							
302	EXMT				reddish sph. bands. Rhythmic							
303.07					feathery ser'ic part'gs tht.							
303.40	EXCP											
304				293.18 - 298.54	MAGNETIC IRON FORMATION							
				EXMT	Deep purple mt'ic Fe form. w/							
305					up to 18% f.g. diss. euh mt							
					tht + 1-2% diss f.g. py.							
306					Str'ly magnetic + strongly							
					foliated tht Localized qtz							
307					flooding							
308				298.54 - 298.78	SILICA EXHALITE							
				EXSP	mass fog gray cherty							
309					EXSP (poss. RHFS?) w/ 1-2%							
					fg reddish sph stringers +							
310					tr diss. py blebs.							
311				298.78 - 298.98	CARBONATE EXHALITE							
				EXCP	wkly effervescent finely mottled							
312					lt. gray carb exh. No vis sxs.							
313				298.98 - 299.57	MAGNETIC IRON FORMATION							
313.50				EXMT	Same as above (293.18 - 298.54)							
314				299.57 - 300.60	MASSIVE RHYOLITE							
				RHFS	Same as above (292.60 - 293.18)							
315												
316				300.60 - 300.75	CARBONATE EXHALITE							
				EXCP	Same as above (298.78 - 298.98)							
317												
				300.75 - 303.07	MAGNETIC IRON FORMATION							
318				EXMT	Same as above (293.18 - 298.54)							
319				303.07 - 303.40	CARBONATE EXHALITE							
				EXCP	Same as above (298.78 - 298.98)							
320												
				303.40 - 313.50	MASSIVE RHYOLITE							
321				RHFS	Same as above (292.60 - 293.18)							
					303.96 - 303.95: 5% mt in rhy.							
322												

ARTILLERY RHFS

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PAGE 27 OF	PROJECT: Wolverine	HOLE NO. WW97112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
300										
301										
302										
303										
304										
305										
306										
307										
308										
309										
310										
311										
312										
313										
314										
315										
316										
317										
318										
319										
320										
321										
322										

PAGE 28 OF | PROJECT: Wolverine | HOLE NO. WW 97 12

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION		ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
322.62	ARTF		75	313.50-341.57	TUFFACEOUS ARGILLITE							
323				ARTF	Jet black, madly graphitic tuffaceous arg w/ fine wispy calcareous stringers common 1% f.q. → mass bleldby + laminated py as well as wk patchy carb alt'n. Fit'd + brkn core common							
324												
325			75		322.62-324.60: QTVN - QUARTZ VEIN. Bullish pure Si qtz vein. no mineral							
326												
327												
328												
330												
331			20									
332												
333												
334												
335												
336												
337												
338			bc									
339												
340												
341.57				341.57-341.90	MASSIVE RHYOLITE							
341.90	20%			RHFS	Fg gray aphyric rubbly mass rhy.							
342	ARTF											
342.60				341.90-342.60	TUFFACEOUS ARGILLITE							
343			45	ARTF	Same as above (313.50-341.57)							
344												
345	EXMT			342.60-348.20	MAGNETIC IRON FORMATION							
				EXMT	Same as above (293.18-298.54)							
346												

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PAGE 29 OF	PROJECT: Wolverine	HOLE NO. WV97 112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
323										
324										
325										
326										
327										
328										
329										
330										
331										
332										
333										
334										
335										
336										
337										
338										
339										
340										
341										
342										
343		343.73	344.85	1.12	302001					
344		344.85	346.25	1.4	302002					
345										

PAGE 30 OF | PROJECT: Wolverine | HOLE NO. WV 97 112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (342.60 - 348.20 EXMT cont)	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
346	EXMT		75								
347											
348.20			70	348.20-353.50 SILICA EXHALITE EXSP Very lt gray Si exh grading to a dker (↑d argillaceous) EXSP (poss RHFS→ARS(?) Fine rhythmic bile green ser partings tht 1-2% f.g. anastomizing stringer py + 1% f.g. anast stringer red sph Regional brkn core common.							
349	EXSP										
350											
351											
352											
353											
353.50			70	353.50 - 354.10 CALCITE PYRITE EXHALITE EXCP Fine grained mottled sky blue cal/py exh w/ 2-3% f.g→ v.f.g. localized laminated py. Finely laminated txt tht.							
354.10	EXHP		70								
355			70								
356											
357	EXSP			354.10-353.50 SILICA EXHALITE EXSP Sim. to EXSP above (348.20-353.50) w/ variable txt's + colours grading dk→lt→dk grays.							
358											
359											
360											
361											
361.57			70	361.57-363.59 CALCITE PYRITE EXHALITE EXCP Similar sky blue laminated + mottled txt as above (353.50-354.10) w/ patchy v. str'ly effery. creamy calcic seg'ns + 3-4% mass feathery bands (up to 5cm thk) of sph + 7-9% f.g.→mass banded/blebby py.							
362	EXCP		70								
363											
363.59			85								
364	EXSP										
364.30											
365	ARS1		20								
365.93				363.59-364.30 SILICA EXHALITE EXSP Patchy str. ser alt'd (for ~15cm) EXSP w/ 10% mass blebby py. mod'ly foliated w/ localized box folding on the cm scale.							
366	ARTF		75								
366.91			75								
367	RHTT		75								
368											

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PAGE 31 OF	PROJECT: Wolverine	HOLE NO. WV97112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
346		346.25	347.29	1.04	302003					
347		347.29	348.2	0.91	302004					
348		348.2	349.4	1.2	302005					
349		349.4	350.9	1.5	302006					
350										
351		350.9	352.5	1.6	302007					
352		352.5	353.5	1.0	302008					
353		353.5	354.1	0.6	302009					
354		354.1	355.8	1.7	302010					
355		355.8	357.24	1.44	302011					
356										
357		357.24	358.63	1.39	302012					
358		358.63	359.3	0.67	302013					
359		359.3	360.8	1.5	302014					
360		360.8	361.57	0.77	302015					
361		361.57	363.59	2.02	302016					
362										
363		363.59	364.3	0.71	302017					
364		364.3	365.93	1.63	302018					
365		365.93	366.91	0.98	302019					
366		366.91	368.46	1.55	302020					
367										
368										

PAGE 32 OF | PROJECT: Wolverine | HOLE NO. WV97112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	EPI C	CARB D	E	FRACTURE INTENSITY	% VEIN QTZ.
				364.30-365.93	SILICEOUS ARGILLITE							
369				ARSI	Dk grayish/blk v. siliceous rock w/ 2% v.f.-. laminated qtz stringers tht. Wispy faint siliceous streaks + a v. fine carb veinlet stockworking tht.							
370												
371												
372												
				365.93-366.91	TUFFACEOUS ARGILLITE							
373				ARTF	Dk gray finely mottled w/ wh. speckles of tuffaceous grains. Wk perv. dol. altn (Powder effervs). Localized fine harmonic micro-folding. 1% f.g. diss py.							
374												
374.28												
375												
375.35												
375.60												
376												
				366.91-374.28	FINE GRAINED TUFF							
376.32				RHTT	wpd pervasive ser alt'd f.g. rhy tuff greenish/gray in colour. Very consistent tht w/ Tr f.g. diss. py + rare lapilli frags vis.							
377												
378												
379												
379.80												
380.07				374.28-375.35	TUFFACEOUS ARGILLITE							
				ARTF	Same as above (365.93-366.91)							
381												
				375.35-375.60	QUARTZ VEIN							
382				QTVN	white qtz vn w/ tr. py							
382.85												
383.20				375.60-376.32	SILICEOUS ARGILLITE							
				ARSI	Same as above (364.30-365.93)							
384												
				376.32-379.80	MASSIVE RHYOLITE							
385				RHFS	Fog gray mass. aphyric rhy w/ fine rhythmic ser partings + tr. f.g. diss. py. Brkn core common.							
386												
386.73												
387												
				379.80-380.07	TUFFACEOUS ARGILLITE							
388				ARTF	Same as above (365.93-366.91)							
389												
				380.07-382.85	MASSIVE 'CHERTY' RHYOLITE							
389.67				RHFS (CHERTY)	V. lt. gray (mauvish hued) mass aphyric cherty rhy. w/ diss. fine calc. microlites. Fine rhythmic ser partings + tr->1% f.g. stringer py.							
390												
391												

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PAGE 33 OF	PROJECT: Wolverine	HOLE NO. WV 97112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS
		368.46	369.96	1.5	302021	
369						
370		369.96	371.37	1.41	302022	
371						
		371.37	373.0	1.63	302023	
372						
373		373.0	374.28	1.28	302024	
374						
		374.28	375.35	1.07	302025	
375						
376		375.35	376.82	1.47	302026	
377						
		376.82	377.85	1.03	302027	
378						
379		377.85	379.8	1.95	302028	
380						
		379.8	380.07	0.27	302029	
381						
		380.07	382.85	2.78	302030	
382						
383		382.85	383.2	0.35	302031	
384		383.2	384.49	1.29	302032	
385		384.49	385.67	1.18	302033	
386		385.67	386.73	1.06	302034	
387						
		386.73	388.1	1.37	302035	
388						
		388.1	389.67	1.57	302036	
389						
390		389.67	392.27	2.6	302037	
391						

PAGE 34 OF | PROJECT: Wolverine | HOLE NO. WV 97 112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION CHL A	SER B	CEP C	CARB D	E	FRACTURE INTENSITY	% VEIN QTZ.
	ARTF			387.85-388.76	TUFFACEOUS ARGILLITE							
392				ARTF	Same as above (365.93-366.91)							
393			65	385.20-386.73	MASSIVE "CHERTY" RHYOLITE							
				RHFS (CHERTY)	Same as above (380.07-382.85)							
394												
395				386.73-389.67	SILICEOUS ARGILLITE							
				ARSI	mod'ly siliceous ARSI							
396					dk grayish/black in colour							
					w/ feathery, wispy Si bands							
397					tht Tr. f.g. diss py. Localized							
					wk patchy carb alt'n.							
398				389.67-401.00	TUFFACEOUS ARGILLITE							
				ARTF	Blk tuffaceous arg w/ regular							
399					tuffaceous trans ave. 2×10mm							
					1-2% f.g. + v.f.g. laminated							
400					pyitic stringers tht. Dk green							
					chl'ic staining on nat. fract.							
401.00			60		surfaces → wk perv. chl alt'n							
401	RPQL											
402				401.00-402.01	QUARTZ-EYE TUFF							
				RPQL	Mod. perv ser. alt'd blue qtz-							
402.91			70		eye bearing rhy lapilli tuff w/							
403					1% f.g. blebby py + po. Biotitic							
404			60		partings vis. tht							
	RPAT											
405				403.04-405.75	ARGILLICEOUS X-TAL TUFF							
405.75			70	RPAT	V dk gray/blackish felsic lapilli tuff							
406					w/ tr. fine diss fsp x-tals tht							
					Rare blue qtz eyes vis. Tr. f.g.							
407	RPTF				diss. py + po. wk perv. ser alt'n							
407.87			80									
408	RPAT			405.75-407.87	QUARTZ-EYE TUFF							
408.36	RPQL		70	RPQL	Same as above (401.00-403.04)							
409												
				407.87-408.36	ARGILLICEOUS X-TAL TUFF							
410				RPAT	Same as above (407.87-408.36)							
411	ARTF (GR)			408.36-408.93	CRYSTAL TUFF							
				RPTF	Dk gray fsp + qtz eye bearing							
412					x-tal tuff (lapilli) w/ fine							
412.36			70		tr feathery arg stringers/part'gs.							
413					Tr. py + po Sharp etc's. wk							
	RHLT				perv. ser. alt'n.							
414												

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PAGE 35 OF	PROJECT: Wolverine	HOLE NO. WV97112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
392		392.27	393.4	1.13	302038					
393		393.4	395.5	2.1	302039					
394										
395		395.5	398.0	2.5	302040					
396		398.0	401.0	3.0	302041					
397										
398		401.0	401.87	0.87	302042					
399		401.87	403.04	1.17	302043					
400		403.04	404.46	1.42	302044					
401		404.46	405.75	1.29	302045					
402										
403		405.75	407.87	2.12	302046					
404		407.87	408.36	0.49	302047					
405										
406		408.36	408.83	0.47	302048					
407		408.83	410.92	2.09	302049					
408										
409		410.92	412.86	1.94	302050					
410										
411										
412		412.86	414.3	1.44	302051					
413										
414										

PAGE 36 OF | PROJECT: Wolverine | HOLE NO. WV97112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
			70	408.83-412.86	TUFFACEOUS ARGILLITE							
415	RHLT			ARTF (GR/GG)	Primarily f/t aggregd / brkn core str'ly graphitic jet black tuffaceous arg. correlating to SSMS intersection of DDH's WV97105 + WV9636. V.f.g. stringer py (+ diss py x-tals vis tht. DK red mass sph stringers 7mm thk vis in solid core @ 412.80 → locally up to 15% sph.							
416												
417												
418												
419												
420			85									
421				412.86-433.20	LAPILLI TUFF							
422				RHLT	Greenish/gray mod serv. ser. altd rhy lapilli tuff w/ apple green ser. partgs tht + rare localized fine arg. partgs (over seins < 10cm) Regional qtz flooding + veining. 1% f.g. diss. py + po, + tr. f.g. anastomizing sph stringers							
423												
424												
425			75									
426												
427												
428												
429												
430												
431	RHLT											
432			80									
433.20			85	433.20-444.16	FINE GRAINED TUFF							
434	RHTT			RHTT	mod grading to wk serv. ser altd f.g. rhyolitic tuff apple green in colour w/ 2-3% f.g. reddish stringer sph + 3-4% f.g. diss. py + po overall finely laminated tex.							
435												
436												
437												

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PAGE 37 OF	PROJECT: Wolverine	HOLE NO. WV97112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		414.3	416.66	2.36	302052					
415										
416										
		416.66	418.24	1.58	302053					
417										
418		418.24	419.95	1.71	302054					
419										
		419.95	421.61	1.66	302055					
420										
421		421.61	422.65	1.04	302056					
422										
423		422.65	424.95	2.30	302057					
424										
425		424.95	426.0	1.05	302058					
426										
		426.0	427.5	1.50	302059					
427										
428		427.5	428.83	1.33	302060					
429										
		428.83	430.10	1.27	302061					
430										
431		430.10	431.78	1.68	302062					
432										
		431.78	433.20	1.42	302063					
433										
434		433.20	434.58	1.38	302064					
435										
		434.58	435.90	1.32	302065					
436										
		435.90	437.45	1.55	302066					
437										

PAGE 38 OF | PROJECT: Wolverine | HOLE NO. WW97112

(433.20 - 444.16 - RHTT cont)

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
438	RHTT		30									
439												
440												
441												
442												
443												
444.16			80	444.16-453.44	FELDSPAR PORPHORY							
445		FDPH	65	FDPH	DK cloud gray mass. rhy w/ 2-3mm² anhedral fsp x-tals commonly diss. tht Localized 2% sph/py/PbS stringers Regional qtz flooding.							
446												
447												
448												
449												
450												
451												
452												
453												
453.44			75	453.44-456.01	MASSIVE ARGILLITE							
454		ARMS		ARMS (ARWK)	Blk mass arg w/ 5% fg. red anastomizing stringers + 8% fg. py'ic stringers tht. Localized tuffaceous text + crds. wispy streaks							
455												
456.01			60									
456		RHLT		456.01-457.25	LAPILLI TUFF							
457			75	RHLT	lgk perv ser alt'd rhy lapilli tuff w/ 3% fg. anastomizing sph stringers Fine lapilli sized frags.							
457.25		ARWJ										
458			75									
458.32		RHLT										
459												
460												

Westmin Resources

PAGE 39 OF	PROJECT: Wolverine	HOLE NO. WW 97 112

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS				
		437.45	438.78	1.33	302067					
438										
439		438.78	440.3	1.52	302068					
440										
		440.3	441.6	1.30	302069					
441										
442		441.6	443.07	1.47	302070					
443										
		443.07	444.16	1.09	302071					
444										
445		444.16	445.75	1.59	302072					
446										
		445.75	447.12	1.37	302073					
447										
448		447.12	448.5	1.38	302074					
449		448.5	449.96	1.46	302075					
450										
		449.96	451.19	1.23	302076					
451										
452		451.19	452.5	1.31	302077					
453		452.5	453.44	0.94	302078					
454										
		453.44	454.64	1.2	302079					
455										
456		454.64	456.01	1.37	302080					
457										
		456.01	457.25	1.24	302081					
458										
		457.25	458.32	1.07	302082					
459										
		458.32	460.04	1.72	302083					
460										

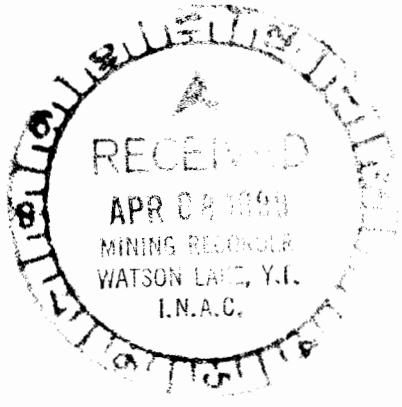
PAGE 40 OF | PROJECT: Wolverine | HOLE NO. WV97-112

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A CHL	B SER	C EPI	D CARB	E	FRACTURE INTENSITY	% VEIN QTZ.
				457.25-458.32 MASSIVE ARGILLITE							
461	RHLT			ARMS Same as above (453.44-456.01)							
				w/ 2% sph + 5% py.							
462											
				458.32-471.8 LAPILLI TUFF							
463				RHLT wk→mod perv sec alt'd							
				rhy. lapilli tuff w/ localized							
464				↑ arg. component (parting)							
				Fairly constant lapilli							
465				Proc size @ 1×1.0 mm Localized							
				qtz. blebbing. 1% ea. sph/py, trace							
466				→ 460.04-460.78: 8-10% fg.							
				banded sph +							
467				py. Bands up							
				to 8cm thk							
468											
469											
470											
471	RHLT										
471.69				471.69-473.55 GRAPHITIC ARGILLITE							
472	AKGK			ARGR Fit sooted graphitic							
				(ST66) occ. 3% fg. py							
473											
				473.55- QUARTZ-EYE TUFF							
474				481.16 DK gray → blk lwr qtz							
				RPDL eye bearing tuff							
475				w/ 3% fg. anastomicing							
				pyic stringers.							
476											
				SAMPLES:							
477				460.04-460.78 302084 469.25-470.31 302091							
				460.78-462.2 302085 470.31-471.69 302092							
478				462.2-463.61 302086 471.69-473.05 302093							
				463.61-465.05 302087 473.05-474.69 302094							
479	RPDL			465.05-466.3 302088 474.69-476.59 302095							
				466.3-467.7 302089 476.59-477.96 302096							
480				467.7-469.25 302090 477.96-479.43 302097							
				479.43-481.16 302098							
481.16				481.16 MASSIVE ARGILLITE							
				483.69 TRUE WIDTH. arg.							
482	ARMS			ARMS Shutdown rock.							
				END OF HOLE 483.69							
483											

1997 SUMMARY REPORT ON THE FOOT 1 - 20, 37 - 80, 83 - 94, 180 - 188, 215 - 231, 11A - 12A, KINK 3, LOW 13 – 14

10.0 CHEMEX ASSAY CERTIFICATES

VOLUME 4



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9723617

Comments: ATTN: VANCOUVER OFFICE

CERTIFICATE A9723617

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 23-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	50	Pulp; prev. prepared at Chemex
251	50	Pulp splitting charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
365	50	Se %: NAA	NAA	0.001	100.0

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: VANCOUVER OFFICE

Certificate Date: 23-JUN-97
Invoice No. : I9723617
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9723617

SAMPLE	PREP CODE		Se NAA %
172290	244	251	< 0.001
172291	244	251	0.004
172292	244	251	0.377
172293	244	251	0.406
172294	244	251	0.188
172295	244	251	0.238
172296	244	251	0.371
172297	244	251	0.302
172298	244	251	0.004
172299	244	251	0.001
175133	244	251	0.032
175252	244	251	0.002
175253	244	251	0.006
175254	244	251	0.058
175255	244	251	0.061
175256	244	251	0.139
175257	244	251	0.091
175258	244	251	0.179
175259	244	251	0.020
175533	244	251	0.003
175534	244	251	0.038
175535	244	251	0.055
175536	244	251	0.027
175537	244	251	0.004
175626	244	251	< 0.001
175627	244	251	0.033
175628	244	251	0.032
175629	244	251	0.097
175630	244	251	0.090
175631	244	251	0.102
175632	244	251	0.192
175633	244	251	0.300
175634	244	251	0.247
175635	244	251	0.089
175636	244	251	0.025
175663	244	251	0.007
175664	244	251	0.136
175665	244	251	0.019
175666	244	251	0.028
175667	244	251	0.056

CERTIFICATION: Liliana Alexandre

Chemex Labs Ltd.

Analytical Chemists *Geochemists *Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: VANCOUVER OFFICE

Certificate Date: 23-JUN-97
Invoice No. : I9723617
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9723617

SAMPLE	PREP CODE		Se NAA %
175668	244	251	0.085
175669	244	251	0.085
175670	244	251	0.080
175671	244	251	0.149
175672	244	251	0.118
175673	244	251	0.102
175674	244	251	0.209
175675	244	251	0.084
175676	244	251	0.117
175677	244	251	0.003

CERTIFICATION: Adriana Alexandru

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9724104

Comments: ATTN: VANCOUVER OFFICE

CERTIFICATE A9724104

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 26-MAY-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	50	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
2016	50	Se ppm: HCl-KClO3 digest, ext	AAS-BKGD CORR	2	100

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

.o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: VANCOUVER OFFICE

Certificate Date: 26-MAY-97
Invoice No. : 19724104
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9724104

SAMPLE	PREP CODE	Se ppm
172290	244 --	32
172291	244 --	48
172292	244 --	175
172293	244 --	145
172294	244 --	670
172295	244 --	1200
172296	244 --	780
172297	244 --	1280
172298	244 --	48
172299	244 --	16
175133	244 --	96
175252	244 --	16
175253	244 --	88
175254	244 --	620
175255	244 --	640
175256	244 --	1320
175257	244 --	920
175258	244 --	1680
175259	244 --	200
175533	244 --	48
175534	244 --	410
175535	244 --	560
175536	244 --	320
175537	244 --	230
175626	244 --	8
175627	244 --	340
175628	244 --	380
175629	244 --	1040
175630	244 --	880
175631	244 --	920
175632	244 --	1280
175633	244 --	80
175634	244 --	260
175635	244 --	700
175636	244 --	240
175663	244 --	80
175664	244 --	770
175665	244 --	220
175666	244 --	260
175667	244 --	620

CERTIFICATION: Stewart Bichler

Chemex Labs Ltd.

Analytical Chemists **Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: VANCOUVER OFFICE

Certificate Date: 26-MAY-97
Invoice No. : I9724104
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9724104

SAMPLE	PREP CODE	Se ppm
175668	244 --	840
175669	244 --	720
175670	244 --	800
175671	244 --	1240
175672	244 --	1120
175673	244 --	740
175674	244 --	1160
175675	244 --	760
175676	244 --	1120
175677	244 --	48

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9724828

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9724828

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 11-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	14	RUSH Assay ring approx 150 mesh
295	14	RUSH crush and split (0-3 Kg)
3202	14	Rock - save entire reject
290	14	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	14	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	14	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	14	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	14	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	14	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	14	Ba ppm	XRF	10	50000
444	14	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	14	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	14	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	14	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	14	Ag ppm: high grade 24 element	AAS	0.5	200
4031	14	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	14	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	14	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	14	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	14	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	14	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	14	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	14	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	14	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	14	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	14	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	14	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	14	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	14	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	14	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	14	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	14	Pb %: high grade 24 element	AAS	0.001	10.00
4047	14	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	14	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	14	V ppm: A22 ICP package	ICP-AES	10	50000
4050	14	Zn ppm: A22 ICP package	ICP-AES	20	100000

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number : 1-A
Total Pages : 1
Certificate Date: 11-JUN-97
Invoice No. : I9724828
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9724828

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	Zn %	Ba (XRF ppm	Spec Gr S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
174506	258	295	1.03	298	0.49	3.01	12.10	1960	4.23	0.02	0.03	0.003	>200	2.20	< 100	< 10	< 20	1.65	1010	10	70
174507	258	295	1.20	446	0.60	4.29	11.80	860	4.36	0.39	0.03	0.002	>200	1.65	100	< 10	< 20	0.65	920	10	80
174508	258	295	2.33	401	0.29	2.11	16.90	460	4.47	0.81	0.06	0.005	>200	0.25	100	< 10	20	0.90	1510	40	70
174509	258	295	1.37	161	0.23	0.91	8.13	4600	3.37	0.14	0.04	0.002	163.0	1.45	< 100	< 10	20	3.00	580	60	390
174510	258	295	2.37	449	1.15	3.44	15.70	190	4.43	1.23	0.09	0.002	>200	0.25	100	< 10	< 20	0.90	1540	30	50
174511	258	295	2.88	483	0.91	4.21	23.0	50	4.44	0.63	0.08	0.002	>200	0.15	< 100	< 10	20	0.35	2310	30	70
174512	258	295	1.58	473	1.02	3.50	18.40	310	4.34	0.45	0.06	0.001	>200	0.35	100	< 10	< 20	2.55	1800	10	50
174513	258	295	1.10	254	1.82	2.77	33.2	360	4.20	0.10	0.02	0.001	>200	0.60	200	< 10	40	1.05	3130	40	50
174514	258	295	1.30	315	2.45	1.66	23.8	1830	4.07	0.09	0.03	0.001	>200	1.75	< 100	< 10	120	1.70	2420	60	50
174515	258	295	2.50	549	7.05	0.13	3.46	4280	4.11	0.05	0.07<	0.001	>200	2.85	< 100	< 10	80	1.75	350	120	70
174516	258	295	3.70	538	11.20	0.06	2.86	1800	4.29	0.04	0.05<	0.001	>200	1.15	< 100	< 10	140	2.60	280	130	50
174517	258	295	5.59	199	6.92	0.08	1.19	8520	3.52	0.01	0.02<	0.001	>200	5.25	< 100	< 10	340	2.05	130	60	50
174518	258	295	0.21	72	1.15	0.54	2.28	7330	2.98	< 0.01	< 0.01<	0.001	78.0	6.10	200	< 10	< 20	2.05	210	30	50
174519	258	295	0.96	178	4.07	0.42	2.57	2120	3.47	< 0.01	< 0.01<	0.001	184.0	2.45	100	< 10	80	4.35	230	50	40

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 11-JUN-97
Invoice No. :I9724828
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9724828

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
174506	258	295	4940	29.3	1.0	0.15	480	10	< 0.05	< 10	3.04	70	< 0.05	50	>100000
174507	258	295	6130	>30.0	0.5	0.15	320	40	< 0.05	60	4.35	10	< 0.05	50	>100000
174508	258	295	3060	29.3	< 0.1	0.05	510	80	< 0.05	150	2.13	20	< 0.05	90	>100000
174509	258	295	2300	16.95	0.6	0.20	720	80	< 0.05	190	0.900	50	0.05	1040	74900
174510	258	295	11630	29.5	< 0.1	0.05	480	90	< 0.05	100	3.51	< 10	< 0.05	110	>100000
174511	258	295	9440	26.9	< 0.1	0.10	800	110	0.20	80	4.21	10	< 0.05	70	>100000
174512	258	295	10990	27.7	0.1	0.05	820	60	0.20	30	3.57	130	< 0.05	50	>100000
174513	258	295	17990	19.25	0.1	0.10	720	30	0.35	< 10	2.76	60	< 0.05	40	>100000
174514	258	295	24700	22.0	0.7	0.20	550	20	0.30	10	1.660	70	< 0.05	70	>100000
174515	258	295	67500	>30.0	1.1	0.15	350	10	< 0.05	10	0.121	60	< 0.05	60	31900
174516	258	295	>100000	>30.0	0.4	0.15	280	20	< 0.05	10	0.051	190	< 0.05	50	25500
174517	258	295	66000	22.3	1.9	1.50	760	< 10	0.60	10	0.075	50	0.05	250	11200
174518	258	295	11020	9.15	2.0	3.15	730	10	1.45	10	0.555	70	0.05	150	21800
174519	258	295	40600	24.5	0.8	3.65	1130	10	0.05	50	0.410	100	< 0.05	590	24200

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9725344

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9725344

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # : 19

Samples submitted to our lab in Vancouver, BC.
This report was printed on 30-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	19	RUSH Assay ring approx 150 mesh
295	19	RUSH crush and split (0-3 Kg)
3202	19	Rock - save entire reject
290	19	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	19	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	19	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	19	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	19	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	19	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	19	Ba ppm	XRF	10	50000
444	19	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	19	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	19	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	19	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	19	Ag ppm: high grade 24 element	AAS	0.5	200
4031	19	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	19	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	19	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	19	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	19	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	19	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	19	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	19	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	19	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	19	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	19	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	19	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	19	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	19	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	19	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	19	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	19	Pb %: high grade 24 element	AAS	0.001	10.00
4047	19	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	19	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	19	V ppm: A22 ICP package	ICP-AES	10	50000
4050	19	Zn ppm: A22 ICP package	ICP-AES	20	100000

Chemex Labs Ltd.

Analytical Chemists *Geochemists* *Registered Assayers*

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1
Phone: (604) 984-0221
Fax: (604) 984-0218

June 30, 1997

David Terry
Westmin Resources Ltd.
P.O. Box 49066, The Bentall Centre
Vancouver, BC
V7X 1C4



Dear Mr. Terry;

Re: **Certificate of Analysis A9725344**
Corrected copy for Samples 174715, 174716, and 174718

Certificate of Analysis A9726139
Analysis of Re-splits from A9725344

This is to follow-up on the sample order problem found on Certificate of Analysis A9725344.

After receiving preliminary data from A9725344, you contacted Maryann Anderson with a concern about sample order. Resplits of the samples were taken and the analysis repeated. These results were reported on Certificate of Analysis A9726139.

Comparison of the results from the original and resplit assays indicated a sample mix-up involving 174715, 174716 and 174718 had occurred during sample preparation on A9725344. The data originally reported on A9725344 has been corrected and the sample pulps re-labeled appropriately.

We apologize for the problems this error has caused you and the delays in resolving the mistake. I hope the duplicate analytical data may prove useful for your program. Please contact us if you have any questions or require more information.

Sincerely

B. Caughlin

Brenda Caughlin
Director, Laboratory Services

Enclosures: Certificate of Analysis A9725344
Corrected copy for Samples 174715, 174716, and 174718

Certificate of Analysis A9726139
Analysis of Re-splits from A9725344

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Certificate Date: 17-JUN-97
Invoice No. :19725344
P.O. Number :19
Account :GP W

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9725344

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	ZnBa %	(XRFSpec Gr ppm	S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
174585	258	295	3.29	754	1.43	3.45	19.20	1050	3.97	0.12	0.06	0.002	>200	0.65	100	< 10	120	0.60	1800	50	140
174586	258	295	1.61	497	1.32	3.42	16.00	650	4.23	0.48	0.03	0.001	>200	0.55	100	< 10	60	0.30	1590	40	110
174587	258	295	1.03	113	2.99	0.05	3.10	3330	3.30	0.01	0.01<	0.001	118.0	4.70	100	< 10	< 20	1.50	300	60	60
174588	258	295	0.21	34	0.83	0.05	1.90	4770	3.08	< 0.01	< 0.01<	0.001	34.0	6.60	200	< 10	< 20	3.15	150	30	50
174589	258	295	< 0.07	< 3	0.01	0.01	< 0.01	320	2.74	0.01	< 0.01<	0.001	2.0	0.30	300	< 10	< 20	11.05	< 10	< 10	100
174590	258	295	< 0.07	< 3	< 0.01	0.01	0.01	4630	2.79	< 0.01	< 0.01<	0.001	2.0	4.20	4500	< 10	< 20	8.90	< 10	< 10	70
174638	258	295	0.89	480	0.86	3.30	17.30	220	4.15	0.08	0.02	0.002	>200	0.35	200	< 10	20	0.35	1730	40	120
174639	258	295	1.03	494	2.13	2.88	13.30	1160	4.04	0.18	0.02	0.001	>200	0.90	100	< 10	40	0.80	1300	30	130
174640	258	295	2.88	401	2.13	1.66	14.40	3100	3.78	0.07	0.02	0.001	>200	1.55	100	< 10	20	0.90	1430	30	170
174714	258	295	< 0.07	10	0.02	0.04	0.21	4840	2.71	< 0.01	0.01<	0.001	15.0	6.80	2200	< 10	< 20	0.90	20	< 10	180
* 174715	258	295	2.95	631	0.21	2.58	32.0	110	4.16	0.50	< 0.01	0.008	>200	0.10	< 100	< 10	< 20	1.00	3320	30	100
* 174716	258	295	2.91	895	0.51	2.81	22.0	220	4.09	0.15	< 0.01	0.003	>200	0.15	100	< 10	< 20	1.15	2250	20	100
174717	258	295	< 0.07	< 3	0.01	0.01	0.13	10320	2.75	< 0.01	< 0.01<	0.001	4.0	5.35	8900	< 10	< 20	4.15	10	< 10	60
* 174718	258	295	< 0.07	34	0.18	0.03	0.55	12330	2.80	0.01	0.02<	0.001	46.0	5.60	500	< 10	< 20	2.65	50	10	270
174719	258	295	1.03	319	0.91	2.72	19.90	450	4.05	0.08	< 0.01	0.004	>200	0.15	200	< 10	20	1.80	2080	60	90
174720	258	295	1.10	333	1.46	1.02	13.70	670	4.31	0.11	0.01	0.001	>200	0.15	100	< 10	620	2.45	1450	60	110
174721	258	295	0.58	453	7.73	0.15	3.18	770	3.94	0.02	0.02<	0.001	>200	0.20	200	< 10	1500	6.40	260	100	80
174722	258	295	0.62	106	2.58	0.09	0.50	5770	2.85	< 0.01	0.01<	0.001	112.0	6.50	1900	< 10	260	1.40	40	20	100
174723	258	295	< 0.07	< 3	0.06	< 0.01	0.06	4180	2.72	< 0.01	< 0.01<	0.001	5.0	4.75	3400	< 10	20	0.45	< 10	10	120

CERTIFICATION: Stuart Bichler

* FOR SAMPLES 174715, 174716 AND 174718

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Certificate Date: 17-JUN-97
Invoice No. :I9725344
P.O. Number :19
Account :GP W

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9725344

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
174585	258	295	14490	25.2	0.3	0.10	330	70	< 0.05	130	3.53	10	< 0.05	290	>100000
174586	258	295	14730	28.9	0.1	0.15	350	50	< 0.05	80	3.43	< 10	< 0.05	80	>100000
174587	258	295	28400	21.0	1.1	3.85	750	10	0.10	40	0.041	60	0.05	230	28100
174588	258	295	7900	14.15	2.5	7.30	1150	< 10	0.20	60	0.037	110	0.05	240	17980
174589	258	295	110	2.35	0.3	6.55	490	< 10	< 0.05	10	0.004	380	< 0.05	180	200
174590	258	295	80	3.70	2.3	7.95	560	< 10	0.10	20	0.007	300	0.05	450	320
174638	258	295	8780	27.7	< 0.1	0.20	290	50	< 0.05	90	3.40	40	< 0.05	60	>100000
174639	258	295	21800	27.5	0.3	0.40	520	60	< 0.05	90	2.99	40	< 0.05	120	>100000
174640	258	295	23400	22.5	0.6	0.40	580	30	< 0.05	70	1.840	30	< 0.05	260	>100000
174714	258	295	280	2.95	3.5	0.80	170	< 10	0.15	30	0.034	50	0.15	120	2340
174715	258	295	1990	19.40	< 0.1	< 0.05	480	70	< 0.05	70	2.55	10	< 0.05	50	>100000
174716	258	295	4980	24.1	< 0.1	< 0.05	460	50	< 0.05	70	2.88	< 10	< 0.05	60	>100000
174717	258	295	130	2.35	2.6	2.05	1850	< 10	0.10	< 10	0.016	220	0.15	20	1240
174718	258	295	1700	5.00	2.6	1.00	1050	< 10	0.05	10	0.019	130	0.15	50	5740
174719	258	295	9760	23.8	< 0.1	< 0.05	490	50	< 0.05	100	2.85	30	< 0.05	90	>100000
174720	258	295	16140	>30.0	< 0.1	0.05	540	40	< 0.05	30	1.100	50	< 0.05	50	>100000
174721	258	295	74500	>30.0	< 0.1	0.30	1060	10	< 0.05	20	0.148	140	< 0.05	40	29100
174722	258	295	23900	8.80	1.3	4.55	860	10	0.25	< 10	0.075	50	0.05	160	4720
174723	258	295	590	5.80	0.9	2.10	260	< 10	0.55	< 10	0.007	20	0.05	10	440

CERTIFICATION: Hart Bichler

* FOR SAMPLES 174715, 174716 AND 174718

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9725723

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9725723

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 8-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	20	Geochem ring to approx 150 mesh
226	20	0-3 Kg crush and split
3202	20	Rock - save entire reject
285	20	ICP - HF digestion charge
287	20	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	20	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	20	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	20	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	20	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	20	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	20	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	20	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	20	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	20	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	20	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	20	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	20	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	20	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	20	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	20	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	20	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	20	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	20	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	20	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	20	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	20	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	20	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	20	Pb ppm: 24 element, rock & core	AAS	2	10000
582	20	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	20	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	20	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	20	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	20	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 08-JUN-97
Invoice No. :I9725723
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9725723

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174001	205	226	20	1	3.8	40	< 0.2	2.99	160	4.0	< 2	0.14	< 0.5	4	197	46
174002	205	226	< 5	1	2.4	10	0.4	0.87	330	1.5	< 2	0.24	< 0.5	1	280	19
174003	205	226	< 5	1	4.4	40	0.4	2.29	150	2.5	< 2	0.34	< 0.5	3	218	35
174004	205	226	< 5	1	2.6	290	0.8	2.23	550	3.0	< 2	0.11	0.5	5	308	45
174005	205	226	< 5	16	3.2	150	0.6	1.73	450	3.0	< 2	0.79	2.0	6	278	73
174006	205	226	40	50	3.4	250	0.8	0.98	360	2.5	2	5.32	1.5	6	298	45
174007	205	226	< 5	20	8.4	70	0.2	4.93	440	2.0	< 2	4.31	2.5	10	216	38
174008	205	226	< 5	18	7.6	90	0.6	3.51	300	2.0	< 2	1.44	1.0	6	322	67
174009	205	226	< 5	10	5.8	70	0.2	4.87	510	2.5	< 2	1.28	< 0.5	3	337	59
174010	205	226	< 5	10	5.0	50	0.6	3.04	270	1.5	2	5.25	< 0.5	3	313	45
174011	205	226	< 5	14	5.4	100	0.8	2.68	260	1.0	< 2	3.66	< 0.5	2	298	42
174012	205	226	< 5	12	11.5	90	1.6	4.68	350	1.5	< 2	4.58	2.0	9	221	41
174013	205	226	< 5	18	14.0	90	2.0	5.60	2010	2.0	< 2	5.76	0.5	7	251	36
174014	205	226	< 5	54	24	370	1.6	3.69	380	2.0	< 2	1.94	5.0	5	328	59
174015	205	226	< 5	46	32	860	< 0.2	5.08	660	4.0	< 2	1.27	13.0	4	354	61
174016	205	226	< 5	50	24	860	< 0.2	3.08	240	3.0	< 2	1.14	16.5	1	376	33
174017	205	226	< 5	4	4.0	50	< 0.2	9.58	1130	3.5	< 2	1.00	< 0.5	4	196	7
174018	205	226	< 5	1	3.4	20	< 0.2	6.71	2360	3.0	< 2	0.80	< 0.5	1	216	6
174019	205	226	< 5	4	3.0	30	1.0	7.08	2980	2.5	< 2	0.36	< 0.5	2	153	5
174020	205	226	< 5	1	1.6	< 10	< 0.2	7.41	1600	2.5	< 2	0.48	< 0.5	1	111	5

CERTIFICATION:

Chemex Labs Ltd.

*Analytical Chemists * Geochemists * Registered Assayers*

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 08-JUN-97
Invoice No. :I9725723
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9725723

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174001	205	226	5.26	0.57	0.30	710	7	0.06	25	240	< 1	59	0.15	98	< 10	88
174002	205	226	16.05	0.04	0.19	730	8	< 0.01	16	740	< 1	116	0.05	71	< 10	118
174003	205	226	11.65	0.11	0.31	1030	2	0.01	20	570	< 1	266	0.12	95	< 10	120
174004	205	226	2.12	0.96	0.22	75	13	0.04	31	400	250	23	0.09	127	< 10	1355
174005	205	226	2.13	0.79	0.18	195	3	0.01	36	110	212	20	0.07	126	< 10	870
174006	205	226	5.54	0.32	0.98	725	7	< 0.01	20	2920	332	137	0.02	73	< 10	1435
174007	205	226	2.73	1.94	2.19	1255	12	0.09	56	870	6	399	0.17	251	< 10	246
174008	205	226	2.70	1.50	0.67	295	18	0.04	89	2380	8	115	0.14	265	< 10	344
174009	205	226	2.37	1.99	0.55	240	2	0.07	52	1100	6	102	0.14	193	< 10	140
174010	205	226	1.85	1.19	0.33	775	< 1	0.03	36	3600	6	419	0.11	121	< 10	124
174011	205	226	1.81	1.08	0.26	535	1	0.04	39	2890	12	254	0.09	124	< 10	146
174012	205	226	3.11	2.45	2.25	1125	23	0.05	62	610	10	237	0.21	200	< 10	320
174013	205	226	3.21	2.54	2.73	1540	3	0.05	53	860	10	336	0.24	162	< 10	152
174014	205	226	3.47	1.86	0.54	310	11	0.03	75	1230	26	115	0.13	304	< 10	424
174015	205	226	3.41	2.46	0.56	155	20	0.06	82	1430	44	103	0.15	567	< 10	886
174016	205	226	6.50	1.52	0.41	135	12	0.03	55	750	40	65	0.08	420	< 10	1175
174017	205	226	3.98	4.67	0.81	120	3	0.24	4	500	28	77	0.28	32	< 10	54
174018	205	226	4.71	4.07	0.20	155	3	0.90	2	460	14	96	0.16	21	< 10	40
174019	205	226	3.79	4.92	0.14	75	1	0.79	4	440	24	63	0.17	30	< 10	38
174020	205	226	2.07	5.43	0.12	90	1	1.24	3	470	20	87	0.16	20	< 10	16

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9725730

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9725730

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 19-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	36	Geochem ring to approx 150 mesh
226	36	0-3 Kg crush and split
3202	36	Rock - save entire reject
285	36	ICP - HF digestion charge
287	36	Special dig'n with organic ext'n

* NOTE 1:

Code 1000 is used for repeat gold analyses
It shows typical sample variability due to coarse gold effects. Each value is correct for its particular subsample.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	36	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
1000	3	Au check analysis		1	10000
13	36	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	36	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	36	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	36	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	36	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	36	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	36	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	36	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	36	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	36	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	36	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	36	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	36	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	36	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	36	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	36	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	36	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	36	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	36	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	36	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	36	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	36	Pb ppm: 24 element, rock & core	AAS	2	10000
582	36	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	36	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	36	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	36	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	36	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number : 1-A
Total Pages : 1
Certificate Date: 15-JUN-97
Invoice No. : I9725730
P.O. Number :
Account : GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9725730

SAMPLE	PREP CODE		Au ppb FA+AA	Au check	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)
174501	205	226	< 5	-----	1	1.2	< 10	< 0.2	1.93	1500	0.5	< 2	0.50	< 0.5	3	244	78	5.21	0.32	0.40	445
174502	205	226	< 5	-----	1	0.8	10	< 0.2	1.23	600	< 0.5	< 2	0.22	< 0.5	4	321	39	4.01	0.22	0.25	315
174503	205	226	< 5	-----	26	3.6	60	1.0	1.24	150	5.0	< 2	15.30	< 0.5	4	120	21	8.90	0.48	0.21	2480
174504	205	226	40	50	24	20	190	1.2	3.14	100	2.0	< 2	2.08	1.5	5	268	81	1.80	1.60	0.36	435
174505	205	226	130	140	46	52	390	16.0	6.68	620	2.5	< 2	0.83	2.5	2	151	155	3.54	3.06	0.38	120
174520	205	226	< 5	-----	18	3.0	30	0.4	0.99	620	< 0.5	14	12.70	0.5	5	101	177	2.01	0.29	7.44	675
174521	205	226	< 5	-----	18	2.0	10	0.4	8.20	4990	2.5	2	5.69	< 0.5	7	13	18	3.68	2.45	10.15	1905
174522	205	226	< 5	-----	1	20.0	10	2.6	8.45	1180	2.0	174	3.05	< 0.5	9	42	41	4.61	2.26	5.05	1650
174523	205	226	< 5	-----	8	13.0	70	1.2	5.47	840	1.0	64	0.55	< 0.5	12	93	37	5.05	1.77	0.62	80
174524	205	226	< 5	-----	18	1.6	< 10	< 0.2	6.54	1200	1.5	< 2	0.19	< 0.5	14	59	26	4.24	2.27	1.88	340
174525	205	226	< 5	-----	1	1.0	< 10	0.2	5.90	1070	1.0	18	0.18	0.5	15	62	82	6.36	1.18	3.17	630
174526	205	226	< 5	-----	1	1.0	30	0.6	6.07	1820	1.5	34	0.15	4.5	25	81	64	7.38	1.39	2.38	795
174527	205	226	< 5	-----	1	1.8	40	0.6	5.55	1590	0.5	60	0.83	0.5	12	67	16	6.86	0.76	3.21	1295
174528	205	226	< 5	-----	2	1.4	< 10	1.2	5.57	820	0.5	46	0.99	< 0.5	16	46	18	8.86	0.45	3.37	1450
174529	205	226	< 5	-----	1	6.4	< 10	0.4	6.43	890	0.5	222	0.81	< 0.5	26	110	164	9.87	1.07	2.86	995
174530	205	226	< 5	-----	14	9.2	220	0.4	1.82	320	0.5	106	1.04	8.0	8	185	245	3.03	0.64	0.72	505
174531	205	226	< 5	-----	16	9.0	< 10	3.2	6.58	910	0.5	1060	1.23	< 0.5	21	50	46	10.60	0.51	3.87	1475
174532	205	226	10	-----	1	0.6	< 10	< 0.2	5.65	720	0.5	20	1.54	< 0.5	13	41	12	9.08	0.47	3.21	1660
174533	205	226	< 5	-----	1	0.8	< 10	< 0.2	5.44	670	0.5	56	0.77	< 0.5	13	42	10	8.51	0.46	3.26	1045
174534	205	226	< 5	-----	20	1.2	< 10	0.4	6.66	670	0.5	12	0.59	< 0.5	20	46	18	10.55	0.48	4.00	1020
174535	205	226	< 5	-----	22	2.4	< 10	2.0	6.19	460	0.5	44	0.84	< 0.5	17	58	19	9.96	0.38	3.87	1180
174536	205	226	< 5	-----	4	1.2	< 10	< 0.2	5.52	1280	1.0	34	0.19	< 0.5	10	46	13	6.48	1.15	2.32	625
174537	205	226	< 5	-----	1	1.8	< 10	0.6	5.44	1270	0.5	68	0.34	< 0.5	10	86	12	6.15	1.21	1.99	710
174538	205	226	< 5	-----	1	1.4	< 10	0.6	5.08	1170	0.5	42	0.42	< 0.5	9	246	11	5.90	1.14	1.84	735
174539	205	226	1300	< 5	1	0.6	< 10	< 0.2	6.01	740	0.5	24	0.35	< 0.5	13	47	8	8.18	0.79	2.80	955
174540	205	226	< 5	-----	1	1.6	< 10	0.2	6.47	1010	1.0	40	1.34	0.5	18	52	49	8.18	1.10	3.30	1380
174541	205	226	< 5	-----	1	1.2	< 10	0.4	6.20	1400	1.5	64	0.58	< 0.5	10	71	13	5.41	1.59	2.39	720
174542	205	226	< 5	-----	1	0.8	< 10	0.4	6.97	1440	1.5	46	0.34	< 0.5	13	127	15	5.69	1.80	2.74	680
174543	205	226	< 5	-----	1	0.2	< 10	< 0.2	7.38	860	1.0	< 2	0.92	< 0.5	15	27	6	7.53	1.21	4.13	1225
174544	205	226	< 5	-----	1	0.2	< 10	< 0.2	6.15	930	1.0	2	0.53	< 0.5	10	34	7	5.02	1.34	3.18	725
174545	205	226	< 5	-----	1	1.0	< 10	< 0.2	6.58	1140	1.5	< 2	0.31	< 0.5	8	24	9	4.29	1.78	2.91	510
174546	205	226	< 5	-----	1	1.2	< 10	< 0.2	7.61	1590	2.0	< 2	0.56	< 0.5	8	46	12	3.99	2.44	2.90	645
174547	205	226	< 5	-----	1	2.0	< 10	0.2	7.09	1300	2.0	< 2	0.13	< 0.5	7	25	22	3.89	2.29	2.30	380
174548	205	226	< 5	-----	1	1.0	< 10	< 0.2	6.75	1300	2.0	< 2	0.74	< 0.5	4	20	5	2.83	2.26	2.99	680
174549	205	226	< 5	-----	1	6.4	< 10	< 0.2	7.90	1790	2.5	< 2	0.14	< 0.5	6	25	24	2.79	3.06	2.69	270
174550	205	226	< 5	-----	2	5.4	< 10	< 0.2	7.75	1770	3.0	< 2	0.33	< 0.5	5	18	21	2.59	3.11	2.80	350

CERTIFICATION: Stuart Bichler

* * SAMPLE 174520 EXHIBITS A GOLD NUGGET EFFECT

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 15-JUN-97
Invoice No. :I9725730
P.O. Number :
Account :GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9725730

SAMPLE	PREP CODE		Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174501	205	226	< 1	0.04	24	340	2	279	0.11	76	< 10	36
174502	205	226	< 1	0.01	24	270	3	131	0.07	49	< 10	28
174503	205	226	10	< 0.01	8	830	350	377	0.04	153	< 10	170
174504	205	226	16	0.04	63	680	28	107	0.13	305	110	360
174505	205	226	1	0.17	1	350	32	60	0.17	31	< 10	334
174520	205	226	< 1	0.17	12	40	22	387	< 0.01	151	< 10	94
174521	205	226	3	0.35	12	260	180	152	0.09	144	< 10	178
174522	205	226	3	0.37	5	410	160	84	0.13	43	< 10	154
174523	205	226	2	0.56	8	280	72	19	0.10	19	< 10	26
174524	205	226	< 1	0.17	1	330	4	14	0.12	20	< 10	94
174525	205	226	2	0.17	< 1	260	12	10	0.08	19	< 10	146
174526	205	226	3	0.33	3	320	36	12	0.11	27	< 10	378
174527	205	226	2	0.23	1	280	44	26	0.10	28	< 10	148
174528	205	226	< 1	0.40	5	340	36	27	0.12	50	< 10	154
174529	205	226	3	0.20	18	1200	92	28	0.12	159	< 10	180
174530	205	226	3	0.03	16	1000	40	28	0.02	107	< 10	978
174531	205	226	< 1	0.17	6	250	168	29	0.09	57	< 10	192
174532	205	226	1	0.13	3	270	< 2	47	0.12	39	< 10	138
174533	205	226	1	0.13	< 1	300	4	24	0.13	24	< 10	140
174534	205	226	2	0.17	2	320	14	21	0.16	31	< 10	226
174535	205	226	< 1	0.21	< 1	270	26	25	0.12	27	< 10	166
174536	205	226	< 1	0.15	1	370	4	12	0.14	16	< 10	98
174537	205	226	< 1	0.12	< 1	350	36	17	0.15	19	< 10	94
174538	205	226	1	0.10	2	360	26	15	0.14	19	< 10	98
174539	205	226	< 1	0.18	< 1	400	18	13	0.16	20	< 10	140
174540	205	226	3	0.19	2	360	26	30	0.14	32	< 10	150
174541	205	226	3	0.17	< 1	300	40	19	0.12	19	< 10	86
174542	205	226	2	0.21	1	360	28	18	0.12	24	< 10	96
174543	205	226	2	0.17	1	380	< 2	24	0.11	33	< 10	146
174544	205	226	4	0.16	3	310	< 2	16	0.08	30	< 10	102
174545	205	226	< 1	0.21	2	320	< 2	17	0.09	25	< 10	98
174546	205	226	1	0.23	< 1	400	< 2	34	0.12	22	< 10	94
174547	205	226	< 1	0.25	1	340	< 2	19	0.11	19	< 10	98
174548	205	226	3	0.16	1	340	< 2	35	0.11	21	< 10	86
174549	205	226	4	0.25	2	390	4	29	0.13	23	< 10	106
174550	205	226	2	0.24	< 1	380	< 2	35	0.13	20	< 10	74

CERTIFICATION: [signature]

* Au SAMPLE 174539 EXHIBITS A GOLD NUGGET EFFECT

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9725768

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9725768

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 8-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	60	Geochem ring to approx 150 mesh
226	60	0-3 Kg crush and split
3202	60	Rock - save entire reject
285	60	ICP - HF digestion charge
287	60	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	60	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	60	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	60	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	60	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	60	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	60	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	60	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	60	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	60	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	60	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	60	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	60	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	60	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	60	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	60	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	60	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	60	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	60	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	60	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	60	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	60	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	60	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	60	Pb ppm: 24 element, rock & core	AAS	2	10000
582	60	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	60	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	60	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	60	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	60	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 08-JUN-97
Invoice No. : I9725768
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9725768

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174551	205	226	40	1	1.2	730	0.8	6.58	1440	1.5	< 2	0.53	5.5	10	67	171
174552	205	226	< 5	1	0.6	100	0.4	7.19	1960	2.5	< 2	0.64	0.5	8	49	33
174553	205	226	< 5	1	2.8	220	2.8	7.56	1140	1.5	150	0.45	1.5	16	42	86
174554	205	226	< 5	1	0.8	20	1.0	6.96	1640	2.5	< 2	0.35	< 0.5	4	50	10
174555	205	226	< 5	2	0.2	20	< 0.2	6.23	1410	2.5	< 2	0.45	< 0.5	2	48	5
174556	205	226	< 5	1	0.4	20	< 0.2	6.06	1290	2.0	< 2	0.47	< 0.5	3	79	8
174557	205	226	< 5	1	0.4	10	< 0.2	7.21	1640	3.0	< 2	0.63	< 0.5	1	43	4
174558	205	226	< 5	1	1.8	10	< 0.2	7.88	1730	3.0	< 2	0.20	< 0.5	5	50	13
174559	205	226	< 5	1	1.4	10	0.4	7.63	2010	3.0	< 2	1.30	< 0.5	3	52	6
174560	205	226	< 5	4	1.6	30	< 0.2	7.44	580	3.0	< 2	1.93	< 0.5	1	63	8
174561	205	226	< 5	2	4.6	80	0.8	8.25	970	3.0	< 2	1.63	< 0.5	3	58	16
174562	205	226	< 5	2	2.4	40	< 0.2	7.11	630	2.5	< 2	0.83	< 0.5	3	57	6
174563	205	226	< 5	8	3.2	10	< 0.2	8.50	970	2.5	< 2	1.14	< 0.5	3	59	5
174564	205	226	< 5	1	1.8	10	< 0.2	8.34	2160	3.0	< 2	1.38	< 0.5	2	61	4
174565	205	226	< 5	1	3.0	30	< 0.2	7.36	860	3.0	< 2	1.43	< 0.5	2	71	4
174566	205	226	< 5	1	2.8	10	< 0.2	4.43	390	1.5	2	2.89	< 0.5	2	150	4
174567	205	226	< 5	4	2.4	60	< 0.2	7.85	560	3.0	< 2	1.89	< 0.5	3	58	4
174568	205	226	< 5	1	3.0	30	< 0.2	7.65	720	3.0	< 2	1.70	< 0.5	3	59	4
174569	205	226	< 5	1	1.6	< 10	1.2	5.69	670	0.5	146	0.46	0.5	15	48	29
174701	205	226	< 5	1	1.0	< 10	< 0.2	5.47	1230	0.5	48	0.29	< 0.5	11	50	13
174702	205	226	< 5	1	3.8	200	< 0.2	1.22	150	4.0	2	13.45	< 0.5	5	79	23
174703	205	226	30	18	8.4	40	0.4	0.71	150	3.5	8	20.9	< 0.5	5	43	31
174704	205	226	< 5	10	4.0	110	0.4	0.42	130	2.0	6	>25.0	1.5	4	47	19
174705	205	226	< 5	1	2.0	80	< 0.2	1.95	250	2.5	< 2	8.29	< 0.5	5	95	51
174706	205	226	< 5	1	4.0	40	< 0.2	3.15	230	4.0	6	5.31	0.5	4	124	40
174707	205	226	< 5	1	12.5	480	0.8	2.70	140	3.0	< 2	7.29	10.0	9	120	126
174708	205	226	< 5	1	5.6	130	< 0.2	2.69	170	1.0	< 2	3.24	< 0.5	5	122	65
174709	205	226	< 5	1	6.2	120	0.2	2.33	190	1.0	2	2.81	< 0.5	6	188	62
174710	205	226	< 5	1	4.8	40	< 0.2	3.21	570	2.0	< 2	2.12	< 0.5	7	157	125
174711	205	226	< 5	20	12.0	120	0.6	2.82	130	1.5	2	1.53	< 0.5	4	218	50
174712	205	226	20	28	13.5	150	0.8	3.01	180	1.5	< 2	1.07	< 0.5	5	159	46
174713	205	226	25	38	20	220	1.0	5.51	400	3.0	< 2	0.68	2.0	4	161	38
174724	205	226	< 5	4	1.8	< 10	< 0.2	6.47	820	1.0	20	1.12	< 0.5	17	63	224
174725	205	226	< 5	10	1.6	< 10	0.4	5.92	2150	1.5	28	0.80	< 0.5	11	69	28
174726	205	226	< 5	2	5.6	20	< 0.2	6.16	370	1.5	12	0.13	< 0.5	9	74	28
174727	205	226	< 5	1	3.6	30	< 0.2	7.01	530	1.5	2	0.12	< 0.5	12	72	20
174728	205	226	< 5	1	1.2	< 10	< 0.2	5.95	360	1.0	< 2	0.12	< 0.5	10	66	22
174729	205	226	< 5	1	1.2	10	< 0.2	5.60	2120	1.0	36	0.74	< 0.5	9	53	273
174730	205	226	< 5	1	2.0	30	< 0.2	5.96	1610	1.0	20	1.02	< 0.5	13	56	1030
174731	205	226	< 5	1	1.8	50	1.0	5.79	1610	1.0	32	0.72	0.5	12	59	2060

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 08-JUN-97
Invoice No. :I9725768
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9725768

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174551	205	226	4.18	1.96	2.66	700	< 1	0.20	2	290	164	21	0.08	14	< 10	1500
174552	205	226	3.61	2.54	2.34	730	< 1	0.21	< 1	320	74	29	0.11	17	< 10	320
174553	205	226	6.62	1.77	3.60	780	4	0.22	< 1	330	440	19	0.08	21	< 10	762
174554	205	226	2.38	2.64	2.12	350	< 1	0.20	< 1	300	6	25	0.10	16	< 10	80
174555	205	226	1.60	2.32	2.11	385	1	0.16	3	290	34	22	0.09	17	< 10	68
174556	205	226	1.58	2.25	2.08	375	< 1	0.15	3	280	108	22	0.09	16	< 10	70
174557	205	226	1.87	2.89	1.95	415	1	0.20	1	340	54	47	0.13	17	< 10	72
174558	205	226	2.18	3.16	2.16	285	2	0.22	3	340	14	25	0.12	18	< 10	72
174559	205	226	1.62	3.34	2.18	460	1	0.23	1	350	8	49	0.12	18	< 10	66
174560	205	226	1.96	3.60	1.59	480	< 1	0.21	< 1	360	10	58	0.15	19	< 10	16
174561	205	226	2.03	3.60	2.91	310	4	0.22	1	410	128	58	0.18	22	< 10	66
174562	205	226	1.68	3.23	1.74	145	3	0.20	1	370	80	40	0.16	20	< 10	42
174563	205	226	1.67	3.63	2.47	165	1	0.24	1	350	24	48	0.15	21	< 10	32
174564	205	226	1.50	3.70	3.59	190	3	0.19	1	410	12	60	0.18	22	< 10	48
174565	205	226	1.88	3.40	3.22	200	2	0.17	2	390	14	62	0.17	20	< 10	36
174566	205	226	1.30	2.22	2.87	285	< 1	0.10	2	330	6	81	0.10	14	< 10	38
174567	205	226	1.73	4.19	1.93	195	1	0.17	3	360	10	73	0.17	18	< 10	18
174568	205	226	1.78	3.91	1.73	220	1	0.17	1	350	12	69	0.18	19	< 10	24
174569	205	226	7.94	0.55	3.52	845	< 1	0.14	< 1	220	70	16	0.09	16	< 10	126
174701	205	226	6.65	1.08	2.26	745	1	0.12	< 1	390	16	16	0.14	22	< 10	108
174702	205	226	4.61	0.41	0.35	2330	13	< 0.01	11	570	32	245	0.04	81	< 10	952
174703	205	226	6.56	0.20	0.24	2410	10	< 0.01	16	570	480	232	0.01	110	< 10	624
174704	205	226	3.99	0.11	0.15	2600	6	< 0.01	8	1380	350	365	0.01	93	< 10	1025
174705	205	226	2.82	0.60	0.26	1120	< 1	0.01	11	630	16	186	0.06	110	< 10	352
174706	205	226	3.36	0.98	0.62	1295	< 1	0.03	15	920	30	215	0.10	129	< 10	138
174707	205	226	6.15	0.77	0.93	2740	2	0.02	36	1200	38	201	0.06	154	< 10	2900
174708	205	226	2.09	1.12	0.32	600	< 1	0.03	47	210	18	147	0.08	113	< 10	246
174709	205	226	1.95	0.96	0.39	745	< 1	0.01	43	190	16	112	0.07	115	< 10	248
174710	205	226	2.13	1.40	0.47	3840	< 1	0.04	35	650	12	98	0.13	157	< 10	80
174711	205	226	1.88	1.37	0.31	320	5	0.03	44	1190	12	59	0.09	220	< 10	132
174712	205	226	1.59	1.62	0.33	180	2	0.06	36	1850	16	59	0.11	238	< 10	146
174713	205	226	2.04	2.75	0.67	150	8	0.13	38	720	20	37	0.16	229	< 10	298
174724	205	226	6.21	1.05	3.44	865	4	0.21	1	310	14	43	0.07	17	< 10	138
174725	205	226	6.13	0.74	3.62	825	2	0.19	< 1	270	36	28	0.07	17	< 10	208
174726	205	226	5.22	1.53	1.59	215	1	0.88	2	290	26	15	0.07	16	< 10	82
174727	205	226	3.54	1.88	1.14	140	< 1	1.61	3	360	18	17	0.10	18	< 10	54
174728	205	226	4.88	1.20	2.39	420	< 1	0.46	2	300	< 1	15	0.07	15	< 10	92
174729	205	226	5.30	1.04	2.89	955	< 1	0.20	< 1	260	16	24	0.07	15	< 10	122
174730	205	226	6.32	0.96	3.43	1070	< 1	0.13	< 1	310	12	33	0.07	16	< 10	184
174731	205	226	5.71	1.16	2.92	770	1	0.15	< 1	250	64	23	0.07	14	< 10	194

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page , ,ber :2-A
Total Pages :2
Certificate Date: 08-JUN-97
Invoice No. :I9725768
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9725768

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174732	205	226	< 5	1	2.0	20	< 0.2	6.75	1520	1.5	14	0.59	< 0.5	14	44	90
174733	205	226	< 5	1	0.4	10	< 0.2	5.97	1660	1.5	12	0.30	< 0.5	10	49	21
174734	205	226	< 5	1	1.2	10	< 0.2	6.01	1020	0.5	8	0.47	< 0.5	14	35	43
174735	205	226	< 5	1	0.4	10	< 0.2	5.80	1100	1.0	16	0.27	< 0.5	12	42	20
174736	205	226	< 5	2	1.6	10	0.4	5.89	1210	1.0	42	0.34	< 0.5	13	39	18
174737	205	226	< 5	1	1.6	< 10	1.2	6.96	1640	1.5	72	0.69	< 0.5	15	48	31
174738	205	226	< 5	1	0.4	< 10	< 0.2	6.16	2350	1.5	8	0.23	< 0.5	8	54	17
174739	205	226	< 5	1	0.8	10	< 0.2	5.85	1360	0.5	< 2	0.14	< 0.5	12	40	24
174740	205	226	< 5	14	0.6	10	< 0.2	6.05	1340	0.5	2	0.24	< 0.5	13	38	33
174741	205	226	< 5	2	2.8	10	< 0.2	6.36	1590	1.0	12	0.22	< 0.5	12	43	36
174742	205	226	< 5	30	7.6	30	< 0.2	6.33	1280	1.5	2	0.38	< 0.5	12	47	38
174743	205	226	< 5	4	2.2	10	< 0.2	5.74	1170	1.5	4	0.63	< 0.5	10	49	23
174744	205	226	< 5	1	2.8	90	< 0.2	6.21	1700	2.0	< 2	0.13	< 0.5	8	53	27
174745	205	226	< 5	1	1.2	610	0.6	5.83	1140	1.5	< 2	0.23	6.5	12	52	82
174746	205	226	< 5	1	0.4	100	< 0.2	7.05	1910	2.0	< 2	0.55	1.0	9	40	35
174747	205	226	< 5	1	0.6	20	< 0.2	7.59	2140	2.5	< 2	0.57	< 0.5	6	65	18
174748	205	226	< 5	1	0.6	70	< 0.2	7.39	2080	2.0	< 2	0.53	< 0.5	7	37	40
174749	205	226	< 5	1	1.0	20	< 0.2	6.42	1980	2.0	< 2	0.36	< 0.5	5	62	11
174750	205	226	< 5	2	0.8	20	< 0.2	6.77	1900	2.0	2	0.45	< 0.5	7	41	17
175801	205	226	4680	32	>1000	10	>100.0	6.38	170	2.0	>10000	1.43	75.0	4	108	800

CERTIFICATION: Hart Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :2-B
Total Pages :2
Certificate Date: 08-JUN-97
Invoice No. :I9725768
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9725768

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174732	205	226	7.91	1.07	3.53	945	< 1	0.20	< 1	290	6	22	0.10	18	< 10	212
174733	205	226	6.11	1.23	2.97	660	2	0.16	< 1	270	2	19	0.09	14	< 10	116
174734	205	226	7.90	0.77	3.26	905	4	0.19	< 1	280	< 2	18	0.11	14	< 10	140
174735	205	226	7.17	0.87	3.15	725	2	0.19	< 1	250	6	14	0.10	14	< 10	128
174736	205	226	7.35	0.92	2.92	770	4	0.18	< 1	250	8	16	0.12	16	< 10	154
174737	205	226	7.97	1.32	3.40	1050	3	0.20	< 1	270	44	30	0.15	23	< 10	162
174738	205	226	4.89	1.81	2.02	505	1	0.14	1	260	4	19	0.13	18	< 10	98
174739	205	226	6.56	1.22	2.43	600	< 1	0.14	< 1	280	< 2	13	0.14	16	< 10	110
174740	205	226	6.66	1.27	2.55	710	1	0.15	< 1	290	< 2	15	0.14	18	< 10	114
174741	205	226	6.07	1.58	2.36	660	< 1	0.18	< 1	310	12	16	0.16	19	< 10	124
174742	205	226	6.05	1.68	2.62	670	3	0.18	1	300	18	20	0.12	19	< 10	128
174743	205	226	5.72	1.34	2.48	890	< 1	0.15	< 1	270	14	20	0.11	16	< 10	128
174744	205	226	3.92	2.02	1.72	420	< 1	0.16	< 1	270	6	13	0.10	15	10	146
174745	205	226	5.68	1.37	2.50	605	2	0.14	< 1	260	54	14	0.08	14	< 10	1760
174746	205	226	3.87	2.39	2.54	715	< 1	0.17	1	280	32	24	0.08	16	< 10	434
174747	205	226	3.27	2.74	2.61	700	2	0.21	< 1	320	36	24	0.09	17	< 10	176
174748	205	226	3.53	2.57	2.65	725	1	0.22	< 1	320	156	22	0.09	17	< 10	368
174749	205	226	2.84	2.34	1.98	500	< 1	0.17	1	280	40	22	0.09	15	< 10	122
174750	205	226	2.96	2.43	2.06	585	2	0.17	< 1	310	90	21	0.09	14	< 10	148
175801	205	226	4.88	2.65	1.96	480	33	0.17	12	220	>10000	54	0.09	20	< 10	>10000

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9726117

Comments: ATTN: DAVID TERRY - VAN OFFICE

CERTIFICATE A9726117

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 12-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	9	RUSH Assay ring approx 150 mesh
295	9	RUSH crush and split (0-3 Kg)
3202	9	Rock - save entire reject
290	9	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	9	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	9	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	9	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	9	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	9	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	9	Ba ppm	XRF	10	50000
444	9	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	9	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	9	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	9	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	9	Ag ppm: high grade 24 element	AAS	0.5	200
4031	9	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	9	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	9	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	9	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	9	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	9	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	9	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	9	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	9	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	9	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	9	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	9	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	9	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	9	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	9	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	9	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	9	Pb %: high grade 24 element	AAS	0.001	10.00
4047	9	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	9	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	9	V ppm: A22 ICP package	ICP-AES	10	50000
4050	9	Zn ppm: A22 ICP package	ICP-AES	20	100000

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Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VAN OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 11-JUN-97
Invoice No. :I9726117
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726117

SAMPLE	PREP CODE		Au g/t RUSHRUSH FA	Ag g/t	Cu %	Pb %	ZnBa %	(XRFSpec Gr ppm	S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
174695	258	295	5.93	1330	0.08	3.10	4.40	1850	4.07	0.12	0.11	0.002	>200	0.65	< 100	< 10	< 20	0.20	340	< 10	220
174696	258	295	9.05	5067	0.50	8.25	17.50	2110	3.90	0.14	0.29	0.017	>200	1.30	100	< 10	20	0.25	1450	< 10	190
174697	258	295	7.23	2013	0.17	3.66	8.34	2640	4.14	0.14	0.18	0.005	>200	0.75	< 100	< 10	< 20	0.45	660	< 10	180
174698	258	295	1.17	494	0.11	0.92	3.11	13510	2.98	0.43	0.08	0.002	>200	2.30	100	< 10	< 20	0.15	250	< 10	240
174699	258	295	1.99	182	0.14	1.03	3.07	6890	3.16	1.44	0.08	0.003	193.0	1.25	100	< 10	< 20	0.05	230	< 10	220
174700	258	295	1.37	165	0.11	0.94	1.94	6640	3.04	1.18	0.07	0.002	170.0	1.70	100	< 10	< 20	0.15	160	< 10	240
174751	258	295	0.55	72	0.05	0.72	1.34	4500	2.98	0.41	0.03<	0.001	82.0	1.75	100	< 10	< 20	< 0.05	90	< 10	160
174752	258	295	< 0.07	31	0.02	0.40	0.88	5480	2.93	0.04	0.01<	0.001	38.0	1.80	100	< 10	< 20	0.35	50	< 10	200
174753	258	295	< 0.07	21	0.04	0.30	2.52	11200	2.89	0.01	0.01	0.002	30.0	3.10	300	< 10	< 20	0.50	230	< 10	170

CERTIFICATION: Mark Vinh

Chemex Labs Ltd.

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Total Pages : 1
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Account : GP W

CERTIFICATE OF ANALYSIS A9726117

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
174695	258	295	800	>30.0	0.3	0.05	140	30	0.05	130	2.99	10	< 0.05	440	40400
174696	258	295	4680	18.90	0.1	0.30	540	30	0.45	80	8.03	< 10	< 0.05	310	>100000
174697	258	295	1560	>30.0	0.3	0.05	270	200	< 0.05	150	3.53	< 10	< 0.05	240	75600
174698	258	295	1000	8.30	0.9	0.25	90	10	0.05	10	0.910	< 10	< 0.05	120	28800
174699	258	295	1310	12.45	0.5	0.15	70	< 10	0.05	< 10	0.969	< 10	< 0.05	10	29700
174700	258	295	1060	9.30	0.7	0.20	70	< 10	0.05	< 10	0.903	< 10	< 0.05	30	18960
174751	258	295	490	8.30	0.8	0.20	50	< 10	0.05	< 10	0.673	< 10	< 0.05	30	13260
174752	258	295	180	6.95	0.8	0.20	150	< 10	0.05	10	0.373	< 10	< 0.05	40	8000
174753	258	295	380	5.35	1.4	0.50	310	< 10	0.10	10	0.276	70	0.05	130	23600

CERTIFICATION: Thanh Vinh

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

.o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9726139

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9726139

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O.#: 19

Samples submitted to our lab in Vancouver, BC.
This report was printed on 17-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	19	RUSH Assay ring approx 150 mesh
234	19	0-7 Kg splitting charge
290	19	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	19	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	19	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	19	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	19	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	19	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	19	Ba ppm	XRF	10	50000
444	19	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	19	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	19	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	19	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	19	Ag ppm: high grade 24 element	AAS	0.5	200
4031	19	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	19	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	19	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	19	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	19	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	19	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	19	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	19	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	19	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	19	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	19	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	19	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	19	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	19	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	19	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	19	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	19	Pb %: high grade 24 element	AAS	0.001	10.00
4047	19	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	19	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	19	V ppm: A22 ICP package	ICP-AES	10	50000
4050	19	Zn ppm: A22 ICP package	ICP-AES	20	100000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Certificate Date: 17-JUN-97
Invoice No. :19726139
P.O. Number :19
Account :GP W

CERTIFICATE OF ANALYSIS A9726139

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	Zn %	Ba (XRF) ppm	Spec Gr S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
174585 RS	258	234	2.61	727	1.51	3.55	19.10	1010	4.15	0.11	0.12	0.003	>200	0.65	300	< 10	140	0.60	1730	50	120
174586 RS	258	234	1.85	501	1.56	3.48	16.60	590	4.25	0.50	0.07	0.001	>200	0.60	300	< 10	20	0.30	1540	40	70
174587 RS	258	234	1.44	103	2.90	0.05	3.10	3060	3.34	0.01	0.02<	0.001	112.0	5.35	1400	< 10	< 20	1.75	320	60	60
174588 RS	258	234	0.10	34	0.85	0.05	1.84	4380	3.11	0.01	0.01<	0.001	33.0	6.55	1800	< 10	< 20	3.20	150	40	30
174589 RS	258	234	< 0.07	< 3	0.01	< 0.01	0.02	310	2.73	< 0.01	< 0.01<	0.001	2.0	4.55	3600	< 10	< 20	19.90	< 10	10	130
174590 RS	258	234	< 0.07	< 3	0.01	< 0.01	0.02	4290	2.85	< 0.01	< 0.01<	0.001	1.0	4.15	3900	< 10	< 20	9.10	< 10	< 10	50
174638 RS	258	234	1.03	511	0.89	3.21	16.70	220	4.24	0.08	0.06	0.002	>200	0.35	100	< 10	< 20	1.05	1540	40	100
174539 RS	258	234	1.17	538	2.21	3.01	13.90	1100	4.09	0.20	0.06	0.002	>200	0.90	500	< 10	80	0.80	1220	30	100
174640 RS	258	234	1.58	401	2.39	1.82	14.00	2940	3.97	0.07	0.04	0.002	>200	1.45	600	< 10	80	0.95	1410	30	150
174714 RS	258	234	< 0.07	10	0.03	0.03	0.21	4670	2.72	0.01	0.01<	0.001	15.0	6.60	800	< 10	< 20	0.95	10	< 10	170
174715 RS	258	234	3.29	699	0.24	2.64	31.7	90	2.85	0.50	0.09	0.009	>200	0.10	< 100	< 10	< 20	1.00	3300	30	90
174716 RS	258	234	3.09	891	0.53	2.89	21.1	170	4.14	0.16	0.09	0.004	>200	0.15	< 100	< 10	< 20	1.20	2260	10	110
174717 RS	258	234	< 0.07	< 3	0.01	0.01	0.19	10260	2.77	0.01	< 0.01<	0.001	7.0	5.60	1700	< 10	< 20	4.40	10	< 10	50
174718 RS	258	234	0.14	41	0.16	0.04	0.65	13070	4.19	0.01	0.02<	0.001	47.0	5.70	1700	< 10	< 20	2.80	50	10	110
174719 RS	258	234	1.03	305	0.98	2.79	20.0	560	4.08	0.08	0.14	0.004	>200	0.25	100	< 10	20	1.95	2090	60	90
174720 RS	258	234	0.96	346	1.69	1.06	14.20	690	4.32	0.12	0.04	0.001	>200	0.15	100	< 10	540	2.50	1390	60	80
174721 RS	258	234	2.13	446	7.41	0.15	2.96	840	4.05	0.02	0.02<	0.001	>200	0.25	400	< 10	1340	6.30	250	120	70
174722 RS	258	234	0.38	110	2.60	0.11	0.79	5840	2.91	0.01	0.01<	0.001	115.0	7.85	1300	< 10	220	1.65	70	20	80
174723 RS	258	234	< 0.07	< 3	0.03	< 0.01	0.03	4400	2.76	< 0.01	< 0.01<	0.001	2.0	4.90	1300	< 10	20	0.40	< 10	< 10	110

CERTIFICATION: Ian Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 17-JUN-97
Invoice No. :I9726139
P.O. Number :19
Account :GP W

CERTIFICATE OF ANALYSIS A9726139

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
174585 RS	258	234	14650	24.7	0.3	0.15	330	60	< 0.05	140	3.47	10	< 0.05	290	>100000
174586 RS	258	234	15080	28.2	0.1	0.15	350	50	< 0.05	90	3.41	10	< 0.05	80	>100000
174587 RS	258	234	28500	20.6	1.3	4.35	860	10	0.05	40	0.054	60	0.05	250	31100
174588 RS	258	234	8190	13.80	2.5	7.25	1160	< 10	0.20	60	0.048	120	0.05	240	18260
174589 RS	258	234	190	5.40	2.5	14.25	1030	< 10	0.05	40	0.006	650	0.05	640	380
174590 RS	258	234	80	3.35	2.2	7.95	550	< 10	0.05	20	0.004	290	0.05	470	260
174638 RS	258	234	8550	25.7	< 0.1	0.55	310	50	< 0.05	100	3.11	60	< 0.05	70	>100000
174539 RS	258	234	22100	26.9	0.3	0.40	510	50	< 0.05	90	2.96	40	< 0.05	110	>100000
174640 RS	258	234	23500	22.0	0.5	0.40	540	30	< 0.05	80	1.890	30	< 0.05	250	>100000
174714 RS	258	234	230	3.10	3.2	0.75	180	< 10	0.05	30	0.050	60	0.15	130	2100
174715 RS	258	234	2310	19.50	< 0.1	0.05	490	70	< 0.05	80	2.60	< 10	< 0.05	60	>100000
174716 RS	258	234	4990	24.2	< 0.1	< 0.05	480	70	< 0.05	80	2.87	< 10	< 0.05	60	>100000
174717 RS	258	234	130	2.40	2.7	2.10	1940	< 10	0.05	< 10	0.023	200	0.15	20	1460
174718 RS	258	234	1450	3.65	2.6	1.05	1070	< 10	0.05	< 10	0.039	140	0.15	50	6240
174719 RS	258	234	9430	23.6	< 0.1	0.05	540	40	< 0.05	110	2.80	30	< 0.05	90	>100000
174720 RS	258	234	16550	>30.0	< 0.1	0.05	540	40	< 0.05	40	0.993	50	< 0.05	50	>100000
174721 RS	258	234	72900	>30.0	< 0.1	0.30	1110	< 10	< 0.05	20	0.139	140	< 0.05	40	30500
174722 RS	258	234	27600	10.45	1.6	5.45	1030	10	0.20	10	0.113	40	0.10	190	8440
174723 RS	258	234	270	5.65	0.9	2.15	260	< 10	0.50	< 10	0.007	20	0.05	10	400

CERTIFICATION: Stuart Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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): WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9726405

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9726405

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 24-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	7	RUSH Assay ring approx 150 mesh
295	7	RUSH crush and split (0-3 Kg)
3202	7	Rock - save entire reject
290	7	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	7	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	7	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	7	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	7	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	7	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	7	Ba ppm	XRF	10	50000
444	7	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	7	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	7	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	7	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	7	Ag ppm: high grade 24 element	AAS	0.5	200
4031	7	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	7	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	7	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	7	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	7	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	7	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	7	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	7	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	7	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	7	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	7	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	7	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	7	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	7	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	7	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	7	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	7	Pb %: high grade 24 element	AAS	0.001	10.00
4047	7	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	7	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	7	V ppm: A22 ICP package	ICP-AES	10	50000
4050	7	Zn ppm: A22 ICP package	ICP-AES	20	100000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 24-JUN-97
Invoice No. :I9726405
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726405

SAMPLE	PREP CODE		Au g/t RUSHRUSH FA	Ag g/t	Cu %	Pb %	ZnBa (XRF %	Spec Gr ppm	S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
174800	258	295	1.37	216	1.18	1.86	18.40	1330	3.98	0.83	0.05	0.001	>200	1.55	100	< 10	< 20	1.35	1700	50	80
174801	258	295	0.69	175	0.98	0.71	21.0	3290	3.66	0.07	0.07	0.001	171.0	3.55	100	< 10	< 20	1.40	2010	50	50
174802	258	295	0.55	187	0.95	0.29	18.70	3190	3.56	0.04	0.06	0.001	186.0	3.75	200	< 10	< 20	0.95	1870	50	80
174803	258	295	0.34	113	1.25	0.53	19.90	2960	3.74	0.03	0.02	< 0.001	111.0	3.45	100	< 10	40	1.05	2020	70	50
174804	258	295	< 0.07	3	0.39	< 0.01	2.37	4580	2.75	< 0.01	< 0.01	0.001	11.0	6.85	1400	< 10	< 20	0.30	220	< 10	100
174805	258	295	0.24	68	1.32	0.22	5.87	3780	3.12	0.01	0.01	< 0.001	68.0	5.00	400	< 10	< 20	5.50	550	30	60
174806	258	295	0.48	120	1.72	0.61	13.10	3450	3.63	0.02	0.01	0.001	114.0	4.00	100	< 10	< 20	2.65	1220	50	70

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists "Geochemists " Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 24-JUN-97
Invoice No. :I9726405
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726405

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
174800	258	295	12160	23.7	0.7	0.30	390	< 10	0.05	< 10	1.790	30	< 0.05	40	>100000
174801	258	295	10030	16.85	1.7	0.50	340	< 10	0.10	< 10	0.662	50	< 0.05	40	>100000
174802	258	295	9510	16.15	1.8	0.85	380	< 10	0.10	< 10	0.263	10	0.05	70	>100000
174803	258	295	12350	19.75	1.5	0.70	570	< 10	0.15	< 10	0.487	30	< 0.05	60	>100000
174804	258	295	3450	4.00	2.3	2.25	370	< 10	0.30	< 10	0.009	30	0.10	10	22400
174805	258	295	13020	11.45	2.3	2.60	1630	< 10	0.15	< 10	0.212	130	0.05	50	52500
174806	258	295	17020	20.1	1.8	1.25	790	< 10	0.10	< 10	0.573	60	0.05	50	>100000

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9726603

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9726603

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 18-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	52	Geochem ring to approx 150 mesh
226	52	0-3 Kg crush and split
3202	52	Rock - save entire reject
285	52	ICP - HF digestion charge
287	52	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	52	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	52	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	52	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	52	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	52	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	52	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	52	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	52	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	52	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	52	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	52	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	52	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	52	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	52	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	52	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	52	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	52	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	52	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	52	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	52	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	52	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	52	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	52	Pb ppm: 24 element, rock & core	AAS	2	10000
582	52	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	52	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	52	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	52	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	52	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :2
Certificate Date: 18-JUN-97
Invoice No. :I9726603
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726603

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174635	205	226	305	132	120	14100	50.4	6.88	120	4.5	6	2.63	>500	7	95	2830
174636	205	226	90	154	78	890	6.6	4.06	140	5.0	< 2	1.08	38.5	3	373	280
174637	205	226	580	184	110	1410	31.0	3.33	110	4.0	10	0.47	111.0	5	275	3680
174638	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174639	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174640	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174641	205	226	245	182	155	4530	61.6	5.43	120	4.0	< 2	3.08	121.5	4	290	722
174642	205	226	< 5	10	13.0	80	1.4	9.50	3100	4.5	< 2	6.28	9.0	1	22	102
174643	205	226	< 5	10	7.0	50	0.4	1.49	1460	0.5	< 2	5.42	3.0	< 1	231	26
174644	205	226	< 5	30	25	50	0.8	9.29	840	3.5	< 2	3.31	4.0	6	54	116
174645	205	226	< 5	2	4.6	< 10	0.4	10.10	3410	2.0	< 2	1.66	< 0.5	5	24	31
174646	205	226	< 5	1	8.8	< 10	0.6	11.25	2470	1.5	< 2	0.90	3.0	9	25	42
174647	205	226	< 5	2	11.0	< 10	0.2	8.11	700	2.0	< 2	1.59	2.0	3	60	34
174648	205	226	< 5	1	6.2	120	0.8	7.68	330	2.0	< 2	0.96	5.0	6	74	101
174649	205	226	< 5	2	9.6	< 10	< 0.2	10.20	2780	2.5	2	0.54	2.0	6	30	36
174650	205	226	< 5	2	14.0	< 10	< 0.2	10.70	2060	2.5	< 2	1.02	< 0.5	7	39	64
174651	205	226	< 5	4	4.0	< 10	< 0.2	8.77	1620	2.5	< 2	1.08	< 0.5	4	35	10
174652	205	226	< 5	2	3.8	< 10	< 0.2	9.24	2010	2.5	< 2	1.47	< 0.5	2	48	8
174653	205	226	< 5	12	3.2	< 10	< 0.2	8.57	1640	2.5	< 2	0.76	< 0.5	2	44	9
174654	205	226	< 5	1	4.2	300	< 0.2	8.26	1490	2.5	< 2	0.88	3.0	2	55	17
174655	205	226	< 5	1	5.8	10	< 0.2	7.92	1460	2.0	< 2	0.68	1.5	4	49	43
174656	205	226	< 5	1	4.2	40	< 0.2	8.91	680	2.5	< 2	0.73	1.0	4	47	69
174657	205	226	< 5	16	3.0	< 10	< 0.2	8.75	1600	2.0	< 2	1.05	< 0.5	5	47	83
174658	205	226	< 5	8	2.6	< 10	< 0.2	8.35	730	2.0	< 2	0.48	< 0.5	5	48	26
174659	205	226	< 5	4	5.2	< 10	< 0.2	8.48	1490	1.5	< 2	0.75	< 0.5	3	30	19
174660	205	226	< 5	2	3.6	< 10	< 0.2	10.05	2330	3.0	< 2	1.37	< 0.5	3	47	5
174661	205	226	< 5	10	2.8	30	< 0.2	8.35	460	3.0	< 2	2.17	< 0.5	2	62	7
174662	205	226	< 5	14	3.2	10	< 0.2	7.52	220	3.0	< 2	2.11	< 0.5	1	77	8
174663	205	226	< 5	14	2.8	< 10	< 0.2	7.77	180	3.0	< 2	2.08	< 0.5	3	77	8
174664	205	226	< 5	14	2.4	30	< 0.2	7.93	200	3.0	< 2	1.96	< 0.5	1	86	8
174665	205	226	< 5	6	2.6	70	< 0.2	7.67	200	3.0	< 2	3.62	< 0.5	1	76	8
174666	205	226	< 5	12	3.6	90	0.4	7.80	220	3.0	< 2	1.90	< 0.5	2	73	9
174667	205	226	< 5	8	2.8	40	0.2	7.67	200	3.5	2	1.63	< 0.5	1	67	6
174668	205	226	< 5	6	2.4	20	< 0.2	8.08	210	3.5	< 2	1.41	0.5	3	61	6
174669	205	226	< 5	6	2.6	70	< 0.1	7.81	230	3.0	< 2	1.92	< 0.5	2	53	6
174670	205	226	< 5	30	9.8	500	1.0	7.91	190	3.5	< 2	2.81	3.5	< 1	104	21
174671	205	226	< 5	34	11.5	550	1.2	8.30	120	4.0	< 2	2.02	13.5	1	133	45
174672	205	226	< 5	32	15.0	260	1.6	7.97	170	4.0	< 2	1.92	8.5	2	175	43
174673	205	226	< 5	12	9.8	40	0.4	11.70	520	4.0	< 2	0.76	< 0.5	3	121	13
174674	205	226	< 5	12	4.2	10	0.4	8.78	290	3.0	< 2	1.20	< 0.5	3	112	10

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 18-JUN-97
Invoice No. : I9726603
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9726603

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174635	205	226	8.63	3.42	1.90	3680	2	0.26	122	510	2000	102	0.13	132	< 10	>10000
174636	205	226	1.64	1.42	0.29	125	63	0.14	115	5490	210	481	0.11	1545	< 10	1590
174637	205	226	3.70	1.34	0.31	270	35	0.10	133	1890	700	106	0.09	1050	< 10	8340
174638	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174639	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174640	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174641	205	226	4.10	2.46	1.85	755	32	0.14	95	2320	1560	128	0.12	549	< 10	>10000
174642	205	226	2.91	4.75	8.18	870	3	0.62	32	350	48	266	0.17	303	< 10	722
174643	205	226	1.63	0.71	3.46	625	3	0.03	14	160	12	304	0.02	156	< 10	278
174644	205	226	3.59	4.09	5.32	620	2	0.44	7	370	10	156	0.20	85	< 10	364
174645	205	226	6.05	2.54	6.93	640	1	0.49	1	380	< 2	69	0.15	25	< 10	298
174646	205	226	8.77	2.04	8.11	640	3	0.71	3	470	< 2	41	0.15	29	< 10	366
174647	205	226	3.31	3.27	3.34	480	1	0.34	3	350	< 2	58	0.17	21	< 10	390
174648	205	226	2.54	3.20	2.22	320	2	0.31	8	360	20	35	0.14	18	< 10	794
174649	205	226	3.49	4.05	2.96	335	2	0.44	8	450	2	33	0.19	27	< 10	536
174650	205	226	5.41	3.41	3.90	395	5	0.52	3	540	< 2	35	0.16	25	< 10	204
174651	205	226	3.65	2.84	3.57	360	3	0.41	< 1	420	< 2	33	0.15	20	< 10	116
174652	205	226	2.73	3.37	3.19	425	4	0.42	1	460	< 2	38	0.16	22	< 10	94
174653	205	226	2.09	3.14	2.67	245	1	0.35	< 1	400	< 2	32	0.16	20	< 10	74
174654	205	226	2.15	3.03	2.65	400	3	0.35	2	400	44	35	0.18	20	< 10	1505
174655	205	226	2.55	2.87	2.31	425	3	0.34	2	410	70	36	0.17	20	< 10	320
174656	205	226	2.82	3.45	2.48	470	3	0.40	3	420	70	43	0.17	20	< 10	232
174657	205	226	2.99	3.08	3.41	680	< 1	0.44	1	400	154	47	0.14	20	< 10	172
174658	205	226	4.23	2.70	3.66	645	2	0.36	4	450	< 2	32	0.13	25	< 10	154
174659	205	226	3.78	2.83	4.94	795	< 1	0.39	3	470	< 2	39	0.14	20	< 10	136
174660	205	226	1.86	4.02	3.68	600	< 1	0.44	4	440	< 2	58	0.16	23	< 10	82
174661	205	226	1.97	3.45	2.25	560	1	0.33	4	410	6	51	0.16	20	< 10	70
174662	205	226	2.03	3.49	0.79	330	2	0.29	3	320	12	37	0.17	18	< 10	30
174663	205	226	1.96	3.56	0.76	330	4	0.36	1	350	12	41	0.19	18	< 10	28
174664	205	226	1.98	3.56	0.80	325	1	0.33	2	350	14	42	0.18	19	< 10	30
174665	205	226	1.70	3.67	0.76	350	4	0.31	1	380	14	78	0.19	19	< 10	78
174666	205	226	1.73	3.72	0.78	215	2	0.29	1	380	12	47	0.19	18	< 10	38
174667	205	226	1.90	3.71	0.69	190	1	0.30	1	370	16	46	0.19	19	< 10	20
174668	205	226	1.76	4.01	0.74	180	1	0.30	1	370	16	44	0.20	19	< 10	26
174669	205	226	1.54	3.92	0.73	260	4	0.30	2	360	14	67	0.20	19	< 10	52
174670	205	226	1.73	4.11	0.87	210	5	0.28	10	300	20	152	0.19	91	< 10	206
174671	205	226	2.13	4.70	1.02	140	17	0.24	42	1220	30	154	0.21	418	< 10	762
174672	205	226	2.07	4.21	0.81	175	10	0.24	38	1470	38	96	0.21	338	< 10	486
174673	205	226	2.37	6.01	1.11	95	< 1	0.38	8	620	20	65	0.32	43	< 10	70
174674	205	226	1.88	3.62	0.54	140	< 1	1.87	4	550	28	133	0.22	23	< 10	40

CERTIFICATION: Stan Bucholz

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :2-A
Total Pages :2
Certificate Date: 18-JUN-97
Invoice No. :I9726603
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726603

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174675	205	226	< 5	1	2.4	10	< 0.2	9.19	230	3.5	< 2	0.66	< 0.5	2	124	12
174676	205	226	< 5	1	2.6	< 10	< 0.2	7.88	210	2.0	< 2	0.95	< 0.5	3	148	10
174677	205	226	< 5	2	3.4	10	< 0.2	8.51	280	2.5	< 2	0.68	< 0.5	2	127	13
174678	205	226	< 5	2	4.2	10	< 0.2	7.96	210	3.0	< 2	0.78	< 0.5	1	137	16
174679	205	226	< 5	4	6.4	220	< 0.2	7.47	670	2.5	< 2	0.40	5.5	2	104	20
174680	205	226	< 5	1	3.0	10	0.4	8.14	2540	2.0	< 2	0.25	1.5	1	136	13
174681	205	226	< 5	1	2.6	< 10	< 0.2	7.39	420	2.0	< 2	0.19	0.5	1	122	10
174682	205	226	< 5	1	2.0	< 10	< 0.2	8.71	380	3.0	< 2	0.20	4.0	1	131	8
174683	205	226	< 5	1	1.8	< 10	< 0.2	9.55	2860	3.0	< 2	0.61	< 0.5	1	99	10
174684	205	226	< 5	1	3.2	10	< 0.2	9.48	270	3.5	< 2	0.56	< 0.5	2	123	10
174685	205	226	< 5	1	2.0	< 10	< 0.2	6.96	240	2.5	< 2	0.62	< 0.5	2	176	9
174686	205	226	< 5	1	3.0	< 10	< 0.2	8.64	180	3.5	< 2	1.09	< 0.5	2	174	9
174687	205	226	< 5	1	3.8	30	< 0.2	9.49	290	4.5	< 2	0.39	< 0.5	3	115	8
174688	205	226	< 5	1	4.4	40	0.6	7.81	380	3.5	< 2	0.48	0.5	1	135	8
174689	205	226	< 5	1	3.2	40	< 0.2	7.43	1330	2.0	< 2	0.81	< 0.5	2	113	11

CERTIFICATION:

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To: WESTMIN RESOURCES LTD.
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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 18-JUN-97
Invoice No. :I9726603
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726603

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174675	205	226	1.80	3.32	0.28	125	< 1	2.76	3	590	24	88	0.24	26	< 10	38
174676	205	226	1.93	4.26	0.17	190	1	2.65	4	500	24	137	0.15	17	< 10	40
174677	205	226	1.60	5.54	0.20	115	< 1	1.94	4	510	18	119	0.17	19	< 10	52
174678	205	226	1.92	5.48	0.27	120	4	0.69	4	480	18	84	0.19	20	< 10	114
174679	205	226	2.48	4.95	0.35	65	3	1.23	10	450	16	81	0.19	95	< 10	474
174680	205	226	3.37	5.65	0.28	60	< 1	1.35	3	510	26	88	0.17	19	< 10	214
174681	205	226	2.13	5.29	0.22	45	< 1	1.27	4	440	24	67	0.16	16	< 10	110
174682	205	226	1.56	6.14	0.29	70	1	1.52	4	540	12	75	0.20	25	< 10	520
174683	205	226	3.06	5.80	0.26	100	< 1	2.41	5	560	22	146	0.19	19	< 10	60
174684	205	226	1.91	5.12	0.48	105	< 1	1.33	5	570	16	92	0.24	48	< 10	74
174685	205	226	2.42	3.46	0.28	90	1	0.40	3	460	18	69	0.17	29	< 10	44
174686	205	226	1.93	3.81	0.52	170	1	0.33	6	650	20	100	0.20	39	< 10	92
174687	205	226	1.87	4.65	0.77	90	< 1	0.45	6	550	20	60	0.23	48	< 10	88
174688	205	226	1.11	4.45	0.80	95	2	0.25	5	700	32	69	0.15	29	< 10	72
174689	205	226	1.14	3.16	0.25	140	1	0.29	5	380	20	80	0.15	26	< 10	36

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9726640

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9726640

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 22-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	59	Geochem ring to approx 150 mesh
226	59	0-3 Kg crush and split
3202	59	Rock - save entire reject
285	59	ICP - HF digestion charge
287	59	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	59	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	59	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	59	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	59	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	59	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	59	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	59	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	59	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	59	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	59	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	59	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	59	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	59	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	59	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	59	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	59	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	59	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	59	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	59	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	59	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	59	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	59	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	59	Pb ppm: 24 element, rock & core	AAS	2	10000
582	59	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	59	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	59	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	59	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	59	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 22-JUN-97
Invoice No. :I9726640
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726640

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174570	205	226	100	60	16.0	1340	2.8	6.52	530	2.0	< 2	0.46	< 0.5	2	51	10
174571	205	226	190	96	38	3050	4.4	5.80	1760	1.5	< 2	0.30	< 0.5	1	123	13
174572	205	226	265	118	28	5130	5.2	5.79	1210	2.0	< 2	0.40	< 0.5	1	106	10
174573	205	226	255	102	52	4460	5.4	6.21	390	2.0	< 2	0.40	< 0.5	2	133	12
174574	205	226	260	110	54	4380	6.0	5.97	540	2.0	< 2	0.32	< 0.5	1	142	12
174575	205	226	230	112	42	3920	6.6	6.94	310	2.0	< 2	0.26	< 0.5	3	115	17
174576	205	226	200	118	46	3950	5.0	6.54	550	1.5	< 2	0.34	< 0.5	2	113	13
174577	205	226	155	168	32	8290	5.2	5.51	270	1.0	< 2	0.21	15.0	4	111	22
174578	205	226	100	108	18.0	1100	2.6	5.47	350	0.5	< 2	1.20	< 0.5	1	102	16
174579	205	226	105	96	27	2230	3.2	5.14	360	1.5	< 2	1.50	9.0	2	108	60
174580	205	226	105	90	76	5530	14.6	5.94	3490	2.0	< 2	0.68	43.5	1	79	302
174581	205	226	80	92	30	3370	1.8	6.20	360	2.0	< 2	1.90	27.5	3	47	97
174582	205	226	135	56	36	3530	12.6	6.28	290	1.5	< 2	3.97	68.5	11	49	3820
174583	205	226	165	96	86	2000	42.0	4.57	250	2.0	2	11.50	52.5	8	35	1230
174584	205	226	2930	690	>1000	4120	>100.0	6.94	200	5.5	2	1.44	398	9	49	4340
174591	205	226	50	2	30	190	5.6	4.53	460	2.0	18	10.50	5.0	16	27	1240
174592	205	226	135	64	64	3350	35.0	6.16	1380	2.0	10	2.56	137.0	14	63	772
174593	205	226	20	1	11.0	430	4.0	6.88	1640	1.0	282	1.23	15.5	20	20	36
174594	205	226	< 5	1	7.0	30	0.6	6.74	1070	0.5	40	0.83	0.5	21	29	12
174595	205	226	< 5	2	11.5	20	0.4	6.48	960	0.5	8	0.72	< 0.5	19	28	16
174596	205	226	< 5	1	9.2	20	2.4	6.21	570	0.5	152	0.60	< 0.5	20	30	19
174597	205	226	< 5	1	4.4	10	< 0.2	6.33	1270	1.0	8	0.51	< 0.5	16	51	8
174598	205	226	< 5	1	1.4	10	< 0.2	5.82	1610	1.5	6	0.51	< 0.5	7	57	10
174599	205	226	< 5	1	1.0	10	< 0.2	6.68	2320	2.5	< 2	0.55	< 0.5	3	97	15
174600	205	226	< 5	1	1.4	< 10	< 0.2	6.63	1830	2.0	< 2	0.52	< 0.5	4	60	21
174601	205	226	45	6	1.0	10	< 0.2	6.32	1130	1.5	2	0.57	< 0.5	7	52	21
174602	205	226	< 5	1	1.2	10	0.4	6.30	860	1.5	4	0.88	< 0.5	6	53	30
174603	205	226	< 5	2	1.2	10	< 0.2	6.73	1190	2.0	2	1.15	< 0.5	6	55	33
174604	205	226	< 5	1	1.0	< 10	< 0.2	7.47	1460	2.0	< 2	0.74	< 0.5	4	55	13
174605	205	226	< 5	1	0.4	< 10	< 0.2	8.01	1730	2.5	< 2	0.78	< 0.5	3	45	4
174606	205	226	< 5	1	0.8	10	< 0.2	8.01	1600	2.5	< 2	0.35	< 0.5	3	51	2
174607	205	226	< 5	8	0.6	< 10	< 0.2	8.13	1670	2.5	< 2	0.31	< 0.5	2	56	< 1
174608	205	226	< 5	10	2.0	10	< 0.2	8.08	1510	2.5	< 2	0.47	< 0.5	5	55	4
174609	205	226	< 5	1	2.0	50	< 0.2	7.27	1570	2.0	< 2	3.51	0.5	4	55	4
174610	205	226	< 5	1	7.6	50	< 0.2	6.58	880	2.0	4	2.56	< 0.5	1	64	< 1
174611	205	226	< 5	4	3.6	100	< 0.2	5.95	290	2.0	< 2	2.36	< 0.5	3	101	6
174612	205	226	< 5	1	3.0	60	< 0.2	6.42	370	3.0	< 2	2.18	< 0.5	4	81	5
174613	205	226	< 5	8	4.2	130	< 0.2	7.11	390	3.0	2	1.81	< 0.5	3	38	5
174614	205	226	< 5	8	2.8	70	< 0.2	6.97	390	3.0	< 2	1.31	< 0.5	4	88	5
174615	205	226	< 5	14	5.4	250	< 0.2	7.21	280	2.5	< 2	2.09	1.0	4	105	26

CERTIFICATION: Ian Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :2
Certificate Date: 22-JUN-97
Invoice No. :I9726640
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726640

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174570	205	226	2.04	2.20	0.26	65	4	1.26	3	330	36	38	0.13	27	< 10	30
174571	205	226	2.43	3.23	0.12	40	1	0.63	4	270	42	40	0.11	16	< 10	20
174572	205	226	1.89	4.07	0.10	45	1	0.32	2	270	56	34	0.12	16	< 10	16
174573	205	226	1.99	3.91	0.15	50	2	0.41	3	270	56	34	0.11	15	< 10	14
174574	205	226	2.02	4.19	0.09	45	2	0.28	3	280	50	39	0.11	15	< 10	10
174575	205	226	3.15	4.62	0.09	45	1	0.31	3	310	52	44	0.14	29	< 10	10
174576	205	226	2.20	4.52	0.08	55	1	0.27	3	300	44	39	0.11	17	< 10	10
174577	205	226	4.52	4.20	0.07	45	1	0.27	4	270	48	36	0.09	14	< 10	1600
174578	205	226	3.04	4.16	0.06	100	1	0.25	2	290	22	103	0.09	12	< 10	14
174579	205	226	3.70	3.24	0.15	135	1	0.23	2	250	28	155	0.10	15	< 10	1100
174580	205	226	3.92	2.87	0.36	70	1	0.18	2	290	70	71	0.15	17	< 10	5040
174581	205	226	4.58	2.84	0.49	110	3	0.18	1	300	60	94	0.16	17	< 10	3360
174582	205	226	5.02	3.02	1.94	545	1	0.19	1	390	350	152	0.16	21	< 10	7150
174583	205	226	4.35	2.44	2.59	1645	3	0.06	1	120	610	772	0.08	23	< 10	5720
174584	205	226	13.65	3.33	0.91	340	3	0.20	5	60	7800	55	0.12	128	< 10	>10000
174591	205	226	4.52	2.17	6.48	730	1	0.21	3	90	52	300	0.06	53	< 10	624
174592	205	226	7.02	1.61	3.97	890	8	0.22	28	460	1040	68	0.10	216	< 10	>10000
174593	205	226	8.79	0.76	4.79	1040	5	0.23	8	700	200	38	0.13	79	< 10	1550
174594	205	226	9.33	0.56	4.55	1040	4	0.24	4	840	16	28	0.17	42	< 10	220
174595	205	226	9.08	0.58	4.34	1065	3	0.23	4	780	4	25	0.16	34	< 10	184
174596	205	226	9.56	0.39	4.22	1200	1	0.22	1	550	50	20	0.10	24	< 10	186
174597	205	226	7.28	0.97	3.68	785	3	0.20	3	440	6	19	0.10	32	< 10	130
174598	205	226	3.99	1.54	2.81	625	2	0.17	3	460	4	19	0.08	30	< 10	102
174599	205	226	2.09	2.66	1.77	445	1	0.20	2	320	4	25	0.11	18	< 10	54
174600	205	226	2.21	2.46	1.88	420	1	0.19	1	360	4	21	0.09	19	< 10	60
174601	205	226	3.47	1.78	2.92	600	1	0.22	1	340	4	20	0.08	20	< 10	88
174602	205	226	3.65	1.64	3.65	690	3	0.22	< 1	360	52	27	0.08	20	< 10	168
174603	205	226	2.45	2.40	2.93	580	1	0.23	1	350	10	40	0.09	18	< 10	66
174604	205	226	2.38	2.70	3.15	435	4	0.25	1	420	2	44	0.11	20	< 10	66
174605	205	226	1.78	3.09	3.24	360	3	0.26	2	370	< 2	54	0.11	22	< 10	56
174606	205	226	1.83	2.86	3.15	235	3	0.25	2	390	< 2	27	0.14	19	< 10	56
174607	205	226	1.75	2.91	3.23	170	3	0.26	1	390	< 2	28	0.12	20	< 10	48
174608	205	226	2.40	2.45	4.28	215	2	0.29	< 1	400	< 2	33	0.12	21	< 10	62
174609	205	226	2.19	2.28	4.28	555	< 1	0.67	1	380	4	119	0.13	36	< 10	94
174610	205	226	1.54	2.14	3.08	330	1	0.80	3	370	4	89	0.14	22	< 10	44
174611	205	226	1.59	2.31	0.94	335	1	0.81	2	290	16	71	0.13	18	< 10	8
174612	205	226	2.02	3.07	1.26	390	< 1	0.18	3	320	24	42	0.14	17	< 10	8
174613	205	226	1.81	3.41	1.05	305	1	0.21	1	330	22	44	0.15	18	< 10	12
174614	205	226	1.87	3.32	0.77	175	2	0.21	1	370	16	39	0.17	18	< 10	12
174615	205	226	1.87	3.50	1.08	330	2	0.20	3	340	80	66	0.14	17	< 10	198

CERTIFICATION: [signature]

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :2-A
Total Pages :2
Certificate Date: 22-JUN-97
Invoice No. :I9726640
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726640

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174616	205	226	< 5	2	5.2	200	< 0.2	6.81	1480	2.5	< 2	0.76	5.0	3	75	24
174617	205	226	< 5	1	5.8	40	< 0.2	6.99	1740	2.5	< 2	0.94	1.5	3	56	11
174618	205	226	< 5	1	3.4	20	< 0.2	8.44	2310	3.5	< 2	0.95	0.5	3	55	8
174619	205	226	< 5	1	2.4	10	< 0.2	7.70	2660	4.0	< 2	2.55	< 0.5	1	39	1
174620	205	226	< 5	6	3.0	< 10	< 0.2	7.11	2240	3.0	< 2	2.83	< 0.5	3	45	< 1
174621	205	226	< 5	1	4.2	40	< 0.2	8.40	3140	3.5	2	1.46	2.0	2	68	19
174622	205	226	< 5	8	4.0	300	< 0.2	7.14	310	3.0	< 2	1.55	0.5	4	72	6
174623	205	226	< 5	8	4.0	40	< 0.2	7.08	410	3.0	< 2	2.63	< 0.5	4	54	4
174624	205	226	< 5	1	2.4	20	< 0.2	7.42	580	2.5	< 2	0.90	< 0.5	4	93	5
174625	205	226	< 5	1	1.8	10	0.6	8.10	730	3.0	< 2	0.59	< 0.5	4	68	8
174626	205	226	< 5	1	1.6	10	< 0.2	7.21	420	2.0	< 2	0.75	< 0.5	4	73	4
174627	205	226	< 5	1	3.0	10	< 0.2	7.15	2750	3.0	< 2	0.52	< 0.5	1	66	6
174628	205	226	< 5	1	3.8	20	< 0.2	7.31	1810	2.5	< 2	0.64	< 0.5	3	108	7
174629	205	226	< 5	1	2.8	20	< 0.2	6.36	300	2.5	< 2	0.66	< 0.5	4	73	6
174630	205	226	< 5	2	4.0	20	< 0.2	6.74	400	2.5	< 2	1.63	< 0.5	5	102	5
174631	205	226	< 5	1	2.0	10	< 0.2	6.57	2500	2.0	2	1.04	< 0.5	1	87	5
174632	205	226	< 5	1	3.6	10	< 0.2	7.03	2090	2.0	2	1.14	< 0.5	3	97	4
174633	205	226	< 5	8	3.0	< 10	< 0.2	6.78	1670	2.0	< 2	2.29	< 0.5	3	80	6
174634	205	226	< 5	6	2.6	20	< 0.2	7.22	1570	2.0	< 2	1.21	< 0.5	3	102	5

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 22-JUN-97
Invoice No. : I9726640
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726640

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174616	205 226	1.52	3.26	1.89	155	2	0.16	1	310	132	53	0.14	18	< 10	564
174617	205 226	1.41	3.21	2.63	170	1	0.22	3	390	66	53	0.16	19	< 10	172
174618	205 226	1.70	4.42	3.26	170	< 1	0.25	1	410	50	70	0.19	21	< 10	104
174619	205 226	1.37	4.14	3.30	520	< 1	0.25	1	240	< 2	177	0.18	20	< 10	32
174620	205 226	1.36	3.97	3.65	385	2	0.23	2	360	2	117	0.17	20	< 10	36
174621	205 226	1.52	4.62	2.83	180	1	0.21	3	450	16	69	0.20	24	< 10	180
174622	205 226	1.62	3.63	1.58	185	3	0.17	3	370	20	66	0.17	50	< 10	94
174623	205 226	1.46	3.55	1.01	245	3	0.19	3	350	< 2	73	0.18	21	< 10	34
174624	205 226	1.87	2.81	0.35	100	1	0.68	3	490	20	67	0.19	21	< 10	22
174625	205 226	1.78	3.71	0.32	90	< 1	0.58	4	550	24	63	0.22	22	< 10	30
174626	205 226	1.46	3.97	0.18	115	2	1.26	5	510	18	112	0.17	22	< 10	16
174627	205 226	2.90	4.42	0.20	85	< 1	0.78	3	510	22	90	0.18	22	< 10	22
174628	205 226	3.10	4.35	0.31	85	1	0.50	5	520	22	88	0.19	33	< 10	52
174629	205 226	2.41	3.72	0.59	105	< 1	0.23	3	410	20	90	0.13	25	< 10	56
174630	205 226	1.67	3.36	0.46	265	< 1	0.19	4	420	20	190	0.15	23	< 10	42
174631	205 226	1.20	3.49	0.67	155	< 1	0.15	4	580	18	104	0.16	21	< 10	32
174632	205 226	1.14	3.52	0.21	200	< 1	0.25	3	350	16	129	0.15	24	< 10	20
174633	205 226	1.08	3.79	0.16	305	< 1	0.19	4	460	14	218	0.14	22	< 10	16
174634	205 226	1.01	3.92	0.11	205	< 1	0.25	4	560	12	150	0.15	25	< 10	16

CERTIFICATION:

Chemex Labs Ltd.

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o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9726648

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9726648

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 18-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	97	Geochem ring to approx 150 mesh
226	97	0-3 Kg crush and split
3202	97	Rock - save entire reject
285	97	ICP - HF digestion charge
287	97	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	97	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	97	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	97	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	97	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	97	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	97	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	97	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	97	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	97	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	97	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	97	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	97	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	97	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	97	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	97	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	97	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	97	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	97	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	97	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	97	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	97	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	97	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	97	Pb ppm: 24 element, rock & core	AAS	2	10000
582	97	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	97	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	97	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	97	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	97	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :4
Certificate Date: 18-JUN-97
Invoice No. :19726648
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726648

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174690	205	226	20	48	12.5	120	1.8	2.08	90	3.0	< 2	2.99	0.5	6	282	68
174691	205	226	30	54	12.0	120	2.2	2.12	130	2.0	< 2	2.68	0.5	5	237	73
174692	205	226	20	40	11.0	130	2.4	2.09	120	3.0	< 2	1.91	0.5	5	253	63
174693	205	226	40	38	10.0	120	2.4	3.08	110	3.5	< 2	1.05	< 0.5	4	229	53
174694	205	226	100	256	31	980	7.6	3.40	110	3.5	< 2	1.69	6.5	7	238	58
174695	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174696	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174697	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174698	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
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174703	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174704	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
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174708	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
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174729	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd

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Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 18-JUN-97
Invoice No. :I9726648
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726648

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174690	205	226	2.45	0.67	0.19	285	3	0.04	65	890	12	100	0.07	171	< 10	184
174691	205	226	2.48	0.64	0.31	345	1	0.05	61	910	8	106	0.06	144	< 10	212
174692	205	226	2.53	0.71	0.18	320	3	0.03	64	2150	6	120	0.07	133	< 10	392
174693	205	226	2.79	1.20	0.25	145	1	0.09	53	2220	8	105	0.08	132	< 10	178
174694	205	226	2.77	1.37	0.76	475	6	0.09	64	2190	110	76	0.13	187	< 10	978
174695	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174696	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
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174726	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
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174729	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd

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174730	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
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174747	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174748	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174749	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
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174751	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
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174753	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174754	205	226	< 5	36	11.5	30	1.0	3.68	250	1.5	< 2	0.90	3.0	9	158	84
174755	205	226	< 5	34	5.6	20	0.4	3.50	220	1.5	< 2	1.34	5.0	10	169	95
174756	205	226	< 5	54	7.0	20	< 0.2	3.10	220	1.5	< 2	1.39	5.0	11	181	95
174757	205	226	< 5	22	14.0	10	0.2	3.97	360	2.0	< 2	1.08	12.5	15	136	183
174758	205	226	< 5	2	6.2	10	< 0.2	4.41	380	1.5	< 2	2.03	10.5	13	111	134
174759	205	226	< 5	2	4.8	< 10	< 0.2	4.13	2140	1.5	< 2	1.33	4.0	6	95	62
174760	205	226	< 5	2	3.2	< 10	< 0.2	4.26	6500	1.5	< 2	0.29	7.0	4	104	119
174761	205	226	< 5	2	9.2	< 10	0.4	3.80	230	1.5	< 2	2.52	4.0	11	101	77
174762	205	226	< 5	10	16.0	180	1.0	3.69	250	1.5	< 2	0.59	4.5	11	174	77
174763	205	226	< 5	30	6.0	140	1.0	7.42	830	2.5	2	2.19	2.0	7	47	42
174764	205	226	< 5	2	3.0	50	< 0.2	7.54	3810	2.5	2	2.13	2.5	2	46	36
174765	205	226	< 5	2	1.4	< 10	< 0.2	2.21	1650	0.5	< 2	0.16	< 0.5	8	204	118
174766	205	226	< 5	2	1.2	10	< 0.2	2.22	1050	0.5	2	0.23	< 0.5	4	183	96
174767	205	226	< 5	1	1.2	30	0.8	2.26	320	0.5	< 2	0.20	< 0.5	6	210	96
174768	205	226	< 5	1	1.0	< 10	< 0.2	2.18	1010	1.0	2	0.09	< 0.5	4	223	69
174769	205	226	< 5	8	0.6	40	< 0.2	1.92	430	0.5	< 2	0.11	< 0.5	26	267	64

CERTIFICATION: Brant Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :2-B
Total Pages :4
Certificate Date: 18-JUN-97
Invoice No. :I9726648
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726648

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174730	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174731	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174732	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174733	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174734	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174735	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174736	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174737	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174738	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174739	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174740	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174741	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174742	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174743	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174744	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174745	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174746	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174747	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174748	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174749	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174750	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174751	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174752	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174753	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
174754	205	226	1.92	1.35	0.56	355	< 1	0.10	60	180	8	136	0.13	141	< 10	190
174755	205	226	2.35	1.37	0.84	615	< 1	0.07	62	190	6	258	0.11	133	< 10	180
174756	205	226	2.27	1.24	0.83	690	< 1	0.06	45	120	4	272	0.12	155	< 10	106
174757	205	226	2.15	1.76	0.77	675	< 1	0.09	54	140	4	225	0.16	170	< 10	146
174758	205	226	2.96	2.12	1.26	1945	< 1	0.10	62	370	10	403	0.19	156	< 10	190
174759	205	226	2.29	2.02	0.98	1560	< 1	0.09	31	170	< 2	310	0.20	127	< 10	116
174760	205	226	1.55	1.97	0.55	295	< 1	0.10	36	230	< 2	89	0.20	135	< 10	108
174761	205	226	2.06	2.02	1.32	1195	< 1	0.15	41	250	8	459	0.14	121	< 10	84
174762	205	226	2.12	1.23	0.24	205	3	0.14	77	1720	6	238	0.15	222	< 10	350
174763	205	226	3.59	2.28	4.90	360	3	0.41	4	470	38	94	0.14	24	< 10	422
174764	205	226	2.48	2.90	3.06	300	1	0.30	3	390	20	94	0.16	21	< 10	254
174765	205	226	3.29	0.46	0.40	420	3	0.17	95	170	2	150	0.13	88	< 10	130
174766	205	226	5.36	0.41	0.42	360	3	0.16	45	380	< 2	207	0.12	94	< 10	96
174767	205	226	3.83	0.39	0.40	270	1	0.24	63	640	< 2	228	0.12	84	< 10	130
174768	205	226	2.88	0.52	0.44	290	< 1	0.12	44	130	< 2	142	0.12	80	< 10	78
174769	205	226	2.01	0.51	0.36	640	13	0.11	229	170	4	117	0.11	77	< 10	236

CERTIFICATION:

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SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174770	205	226	< 5	2	0.6	< 10	< 0.2	2.63	760	1.0	< 2	0.26	< 0.5	9	209	143
174771	205	226	< 5	1	1.0	< 10	< 0.2	2.12	800	0.5	< 2	0.14	< 0.5	4	185	45
174772	205	226	< 5	2	0.6	30	< 0.2	1.65	2630	0.5	< 2	0.19	< 0.5	1	201	79
174773	205	226	< 5	1	1.0	10	< 0.2	2.38	400	1.0	< 2	0.08	< 0.5	6	174	76
174774	205	226	< 5	4	1.0	10	< 0.2	1.79	510	0.5	< 2	0.12	< 0.5	4	184	68
174775	205	226	< 5	2	1.6	60	0.2	2.48	260	3.0	< 2	0.08	< 0.5	6	195	80
174776	205	226	< 5	2	1.0	30	< 0.2	3.21	450	4.5	< 2	0.33	< 0.5	9	176	75
174777	205	226	15	8	1.4	10	0.2	3.30	400	4.0	4	0.30	< 0.5	15	180	98
174778	205	226	10	20	4.8	290	2.6	2.20	40	2.5	< 2	0.19	2.0	5	180	47
174779	205	226	5	12	3.8	270	< 0.2	2.77	130	3.5	< 2	0.35	2.5	7	175	59
174780	205	226	10	16	5.8	20	< 0.2	0.38	60	1.5	< 2	24.8	0.5	3	62	20
174781	205	226	< 5	12	5.4	< 10	< 0.2	0.33	40	1.0	< 2	21.3	0.5	3	63	15
174782	205	226	< 5	30	6.8	520	0.4	1.36	40	3.0	2	10.15	3.5	9	130	43
174783	205	226	< 5	10	4.4	340	< 0.2	1.90	80	3.0	< 2	4.26	0.5	6	172	60
174784	205	226	< 5	1	6.2	470	0.4	2.68	60	8.0	< 2	12.15	3.5	12	120	72
174785	205	226	< 5	12	4.8	440	< 0.2	3.10	100	6.0	< 2	0.61	8.0	12	218	75
174786	205	226	< 5	12	15.0	200	< 0.2	3.27	200	2.5	< 2	0.72	4.0	6	244	49
174787	205	226	< 5	14	12.5	30	< 0.2	2.71	170	1.0	< 2	1.45	< 0.5	7	256	63
174788	205	226	< 5	12	6.2	50	< 0.2	2.53	120	1.5	2	0.99	< 0.5	9	198	71
174789	205	226	< 5	14	6.8	30	< 0.2	3.66	160	2.5	< 2	3.00	< 0.5	18	195	92
174790	205	226	< 5	26	8.2	90	0.6	2.46	90	1.5	< 2	2.21	0.5	6	249	53
174791	205	226	20	46	22	190	1.2	4.03	130	3.0	< 2	1.58	1.5	5	230	68
174792	205	226	30	32	9.8	60	0.8	7.31	390	3.5	2	3.29	< 0.5	8	113	19
174793	205	226	35	38	10.5	30	1.0	6.76	350	2.0	< 2	3.47	< 0.5	11	83	20
174794	205	226	25	38	10.0	50	1.0	6.33	1410	2.0	< 2	3.06	< 0.5	10	124	23
174795	205	226	25	28	9.2	30	0.6	5.68	510	2.0	< 2	3.88	< 0.5	8	123	16
174796	205	226	130	94	21	1240	5.6	6.57	450	2.5	2	1.88	0.5	4	136	39
174797	205	226	175	122	29	2390	8.0	7.16	320	1.5	< 2	1.21	< 0.5	4	110	29
174798	205	226	110	100	34	1520	7.6	6.74	430	1.5	< 2	2.01	20.0	12	87	276
174799	205	226	20	1	54	150	5.0	5.84	330	1.5	6	3.52	3.5	15	44	1480
174807	205	226	< 5	6	79	220	8.8	5.65	420	1.5	20	0.79	12.0	18	94	1270
174808	205	226	< 5	1	50	60	0.4	5.92	550	1.0	4	0.17	1.5	9	62	71
174809	205	226	< 5	16	13.0	50	0.6	5.32	350	1.0	10	0.13	1.0	14	87	1765
174810	205	226	< 5	12	9.8	40	0.4	5.87	780	1.5	18	0.09	0.5	16	68	1000
174811	205	226	< 5	8	13.0	< 10	1.0	5.51	340	1.5	20	0.09	< 0.5	12	100	421
174812	205	226	< 5	1	12.0	10	< 0.2	5.36	210	0.5	8	0.08	< 0.5	20	51	54
174813	205	226	< 5	1	4.2	10	1.4	5.72	1160	1.5	40	0.18	< 0.5	13	61	24
174814	205	226	< 5	1	5.4	10	0.4	6.06	1620	2.0	22	0.24	< 0.5	11	31	21
174815	205	226	< 5	1	4.4	50	2.2	6.06	1010	1.0	30	0.40	1.0	16	35	210
174816	205	226	< 5	1	1.2	230	2.2	5.78	1440	1.5	40	1.00	3.5	10	50	200

CERTIFICATION:

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174770	205	226	2.78	0.61	0.42	335	1	0.49	61	160	< 2	164	0.15	121	< 10	108
174771	205	226	3.47	0.46	0.40	325	26	0.34	29	220	< 2	122	0.10	76	< 10	78
174772	205	226	0.79	0.47	0.20	140	1	0.17	27	110	< 2	201	0.06	84	< 10	156
174773	205	226	1.29	0.78	0.30	105	< 1	0.12	53	80	< 2	85	0.10	100	< 10	98
174774	205	226	0.92	0.54	0.23	110	< 1	0.11	38	80	< 2	102	0.06	65	< 10	46
174775	205	226	1.15	0.84	0.29	80	< 1	0.14	89	200	4	43	0.09	109	< 10	156
174776	205	226	1.50	1.25	0.34	200	3	0.14	40	1080	4	109	0.13	99	< 10	40
174777	205	226	3.79	1.10	0.36	540	5	0.19	39	240	< 2	70	0.17	105	< 10	128
174778	205	226	4.53	0.95	0.24	190	20	0.12	33	400	360	29	0.09	122	< 10	912
174779	205	226	1.40	1.22	0.26	115	3	0.12	66	170	144	14	0.09	141	< 10	696
174780	205	226	4.22	0.11	0.13	2430	12	0.09	28	1890	410	375	0.01	78	< 10	358
174781	205	226	4.74	0.06	0.09	1965	10	0.09	16	1370	520	223	< 0.01	66	< 10	416
174782	205	226	5.45	0.54	0.15	1415	12	0.08	47	550	248	144	0.04	134	< 10	2350
174783	205	226	4.15	0.80	0.32	1030	7	0.08	25	360	92	139	0.06	122	< 10	1000
174784	205	226	7.60	0.94	0.70	2990	3	0.07	43	810	240	381	0.09	189	< 10	1490
174785	205	226	2.60	1.20	0.35	385	< 1	0.14	38	650	70	29	0.09	159	< 10	1335
174786	205	226	1.99	1.24	0.44	215	3	0.14	61	250	68	51	0.09	113	< 10	848
174787	205	226	1.60	0.88	0.28	270	< 1	0.09	64	120	8	50	0.09	94	< 10	62
174788	205	226	1.72	1.12	0.28	180	< 1	0.12	48	310	20	39	0.09	111	< 10	136
174789	205	226	2.42	1.76	0.57	1885	< 1	0.12	55	580	12	139	0.16	143	< 10	72
174790	205	226	2.32	1.19	0.34	390	3	0.09	41	2900	24	106	0.09	199	< 10	256
174791	205	226	2.34	2.15	0.47	265	19	0.15	65	1660	80	79	0.14	295	< 10	242
174792	205	226	3.00	3.20	0.63	390	3	0.46	12	710	88	178	0.21	33	< 10	82
174793	205	226	3.27	1.45	0.26	335	1	2.51	11	750	100	197	0.12	9	< 10	14
174794	205	226	2.85	1.16	0.21	240	2	2.68	10	1130	90	163	0.11	8	< 10	12
174795	205	226	2.59	1.25	0.15	260	1	3.10	9	630	68	243	0.15	10	< 10	14
174796	205	226	3.34	2.52	0.38	170	3	0.29	19	490	64	70	0.16	82	< 10	130
174797	205	226	2.05	2.01	0.38	80	2	1.59	3	390	40	57	0.14	16	< 10	60
174798	205	226	3.79	2.86	1.24	440	< 1	0.55	3	350	54	96	0.15	18	< 10	2260
174799	205	226	5.28	3.37	3.73	1205	< 1	0.23	< 1	330	40	175	0.16	15	< 10	500
174807	205	226	4.55	2.06	1.73	440	3	0.19	4	270	310	36	0.09	14	< 10	1290
174808	205	226	3.80	1.87	2.19	245	1	0.22	3	280	20	22	0.10	14	< 10	280
174809	205	226	7.12	1.60	2.02	240	3	0.24	3	260	20	15	0.08	14	< 10	172
174810	205	226	5.12	1.77	2.24	305	3	0.21	1	280	20	11	0.09	13	< 10	130
174811	205	226	4.77	1.46	2.36	400	2	0.19	1	270	22	10	0.08	14	< 10	112
174812	205	226	8.61	0.48	3.34	815	1	0.20	< 1	250	< 2	5	0.10	15	10	120
174813	205	226	6.70	0.95	2.97	655	< 1	0.21	1	240	164	9	0.09	16	10	308
174814	205	226	5.86	1.45	2.64	590	< 1	0.20	< 1	290	50	14	0.10	16	< 10	202
174815	205	226	7.17	0.96	3.19	810	< 1	0.24	1	260	176	18	0.09	16	< 10	512
174816	205	226	5.53	1.39	2.68	975	< 1	0.20	< 1	260	100	34	0.09	15	< 10	966

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SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174817	205	226	< 5	1	2.2	410	1.0	5.83	810	1.0	40	0.49	6.5	16	53	149
174818	205	226	< 5	2	1.6	180	0.6	6.01	1110	1.5	30	0.80	3.5	14	46	179
174819	205	226	< 5	1	< 0.2	30	0.2	6.40	1670	1.5	4	0.70	< 0.5	11	33	41
174820	205	226	< 5	1	< 0.2	10	0.2	6.31	1450	1.5	4	0.36	< 0.5	11	44	50
174821	205	226	< 5	1	< 0.2	< 10	< 0.2	8.28	1680	2.0	< 2	0.35	< 0.5	13	43	22
174822	205	226	< 5	2	0.2	30	0.4	6.73	1600	2.0	2	0.36	1.0	7	60	16
174823	205	226	< 5	1	0.2	40	< 0.2	6.97	1440	2.5	2	0.46	< 0.5	7	40	11
174824	205	226	< 5	1	0.2	< 10	< 0.2	7.14	1460	2.5	< 2	0.47	< 0.5	8	52	18
174825	205	226	< 5	1	< 0.2	< 10	< 0.2	6.68	1410	2.5	2	0.23	< 0.5	1	34	4
174826	205	226	< 5	1	< 0.2	< 10	< 0.2	7.20	1460	2.5	< 2	0.15	< 0.5	3	43	10
174827	205	226	< 5	1	0.6	< 10	< 0.2	7.26	1390	3.0	2	0.32	< 0.5	4	58	7
174828	205	226	< 5	1	0.8	< 10	< 0.2	8.11	1400	3.0	< 2	0.41	< 0.5	4	56	12
174829	205	226	< 5	1	0.4	< 10	< 0.2	7.50	1280	3.0	< 2	0.42	< 0.5	1	59	4
174830	205	226	< 5	2	0.4	10	< 0.2	7.51	1280	3.0	2	0.44	< 0.5	3	41	8
174831	205	226	< 5	2	1.0	< 10	0.2	6.84	1160	3.0	2	0.94	< 0.5	2	42	6
174832	205	226	< 5	1	0.8	< 10	0.4	6.97	1170	3.0	4	0.64	< 0.5	4	27	14
174833	205	226	< 5	1	0.6	< 10	< 0.2	7.58	1130	2.5	2	0.53	< 0.5	3	29	7
174834	205	226	< 5	2	0.8	< 10	< 0.2	9.75	1660	3.5	< 2	0.26	< 0.5	5	23	9
174835	205	226	< 5	1	2.2	< 10	1.0	7.47	1300	2.5	4	0.51	< 0.5	5	55	7
174836	205	226	< 5	1	2.0	< 10	< 0.2	5.56	910	2.0	4	0.75	< 0.5	5	51	15
174837	205	226	< 5	1	2.0	< 10	< 0.2	7.55	1610	3.0	2	0.90	< 0.5	3	33	6
174838	205	226	< 5	2	3.0	< 10	< 0.2	8.32	1870	3.0	< 2	1.39	< 0.5	2	47	3
174839	205	226	< 5	1	0.4	< 10	< 0.2	8.76	2010	3.0	< 2	0.87	< 0.5	3	20	< 1
174840	205	226	< 5	1	0.8	< 10	< 0.2	7.58	1960	2.5	< 2	0.72	< 0.5	2	62	< 1
174841	205	226	< 5	2	0.4	10	< 0.2	11.00	3140	3.5	< 2	1.27	< 0.5	3	17	< 1
174842	205	226	< 5	1	2.2	< 10	< 0.2	8.81	2710	3.0	< 2	4.51	< 0.5	2	42	10
174843	205	226	< 5	1	3.0	100	< 0.2	8.25	2770	3.0	2	3.49	< 0.5	< 1	65	5
174844	205	226	< 5	36	13.0	560	0.8	6.30	460	3.5	< 2	1.63	5.5	6	153	38
174845	205	226	< 5	12	5.4	10	0.2	8.26	840	3.5	< 2	1.20	< 0.5	4	76	7
174846	205	226	< 5	64	3.8	20	0.8	8.26	820	3.0	< 2	2.53	0.5	4	89	8
174847	205	226	< 5	20	5.2	10	0.2	8.48	510	2.5	< 2	1.02	< 0.5	5	76	12
174848	205	226	< 5	6	2.6	< 10	< 0.2	7.70	760	2.0	< 2	1.40	< 0.5	3	98	6
174849	205	226	< 5	6	2.4	10	< 0.2	6.75	240	2.0	< 2	1.42	< 0.5	3	68	7
174850	205	226	< 5	1	4.4	10	< 0.2	6.53	270	2.0	< 2	1.51	< 0.5	4	105	5
174851	205	226	< 5	1	5.4	80	< 0.2	6.89	250	2.0	2	2.38	< 0.5	4	112	5
174852	205	226	< 5	2	3.6	60	< 0.2	7.17	1540	2.0	< 2	0.82	< 0.5	3	129	5

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :4-B
Total Pages :4
Certificate Date: 18-JUN-97
Invoice No. :I9726648
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726648

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174817	205 226	7.06	0.82	3.13	915	1	0.23	< 1	260	56	16	0.09	17	< 10	1830
174818	205 226	6.40	1.18	2.91	950	2	0.21	< 1	290	26	23	0.10	16	< 10	792
174819	205 226	4.44	1.80	2.56	705	1	0.24	< 1	300	6	21	0.08	14	< 10	258
174820	205 226	4.29	1.61	2.88	605	< 1	0.24	< 1	330	16	13	0.08	15	< 10	174
174821	205 226	5.44	2.05	3.64	720	2	0.31	1	440	16	15	0.09	20	< 10	234
174822	205 226	3.28	2.10	2.25	450	< 1	0.27	< 1	320	14	17	0.10	15	< 10	238
174823	205 226	3.23	2.16	2.63	490	1	0.27	< 1	330	4	17	0.09	14	< 10	178
174824	205 226	3.66	2.13	2.72	550	1	0.26	< 1	320	4	18	0.09	15	< 10	168
174825	205 226	2.02	2.28	2.29	270	1	0.26	< 1	320	< 2	15	0.08	14	< 10	60
174826	205 226	1.94	2.57	2.02	240	1	0.28	< 1	310	< 2	18	0.10	15	< 10	64
174827	205 226	1.91	2.63	1.95	350	1	0.31	2	320	10	19	0.10	15	< 10	66
174828	205 226	2.18	3.01	2.10	480	1	0.30	< 1	360	160	21	0.10	16	< 10	78
174829	205 226	1.75	2.82	2.04	360	1	0.28	< 1	360	230	21	0.10	15	< 10	74
174830	205 226	1.70	2.94	1.86	315	1	0.27	< 1	340	60	21	0.10	15	< 10	72
174831	205 226	1.73	2.74	2.00	460	< 1	0.27	< 1	320	470	22	0.10	14	< 10	66
174832	205 226	1.78	2.75	2.09	510	1	0.23	< 1	340	144	23	0.11	14	< 10	84
174833	205 226	2.63	2.65	3.16	575	1	0.26	1	330	8	19	0.10	15	< 10	96
174834	205 226	2.90	3.68	3.55	510	3	0.38	1	510	< 2	23	0.13	23	< 10	116
174835	205 226	2.71	2.87	2.99	560	3	0.29	8	400	170	26	0.11	87	< 10	92
174836	205 226	2.28	2.07	3.22	710	1	0.22	5	450	50	33	0.08	32	< 10	118
174837	205 226	1.76	3.18	3.05	455	1	0.26	1	460	2	45	0.12	23	< 10	80
174838	205 226	2.25	3.57	3.58	490	1	0.29	1	440	20	72	0.15	21	< 10	76
174839	205 226	1.72	3.61	3.58	345	< 1	0.28	1	450	< 2	43	0.17	22	< 10	56
174840	205 226	1.76	3.19	3.18	210	< 1	0.23	2	360	< 2	34	0.13	18	< 10	54
174841	205 226	1.95	5.01	4.23	250	4	0.36	3	520	< 2	68	0.22	32	< 10	86
174842	205 226	2.29	4.32	4.71	585	2	0.37	5	560	20	239	0.18	61	< 10	108
174843	205 226	1.54	4.29	2.50	365	3	0.28	4	430	6	166	0.20	64	< 10	40
174844	205 226	2.33	3.10	0.92	315	7	0.23	49	830	34	60	0.16	305	< 10	406
174845	205 226	2.15	3.19	0.72	105	< 1	0.50	3	530	18	79	0.19	34	< 10	18
174846	205 226	3.51	3.19	0.66	185	< 1	1.33	2	520	130	186	0.18	24	< 10	74
174847	205 226	2.47	2.79	0.38	75	< 1	2.10	5	540	36	110	0.20	24	< 10	20
174848	205 226	2.86	2.38	0.37	140	< 1	1.99	3	520	26	201	0.16	19	< 10	26
174849	205 226	1.70	2.25	0.41	135	1	1.90	3	420	52	184	0.14	18	< 10	32
174850	205 226	2.05	2.80	0.47	255	1	0.28	4	420	26	145	0.14	23	< 10	42
174851	205 226	1.52	2.60	0.32	315	< 1	0.77	4	480	24	257	0.14	24	< 10	62
174852	205 226	1.02	2.56	0.17	120	1	0.37	7	620	38	88	0.14	36	< 10	30

CERTIFICATION: Ivan Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9726809

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9726809

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 15-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
384	1	Ag g/t: Gravimetric	FA-GRAVIMETRIC	3	1000
312	1	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
348	1	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00

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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number : 1
Total Pages : 1
Certificate Date: 15-JUN-97
Invoice No. : I9726809
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9726809

SAMPLE	PREP CODE		Ag FA g/t	Pb %	Zn %	Sb %						
175801	244	--	1255	3.27	1.17	0.40						

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9726845

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9726845

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 22-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	78	Geochem ring to approx 150 mesh
226	78	0-3 Kg crush and split
3202	78	Rock - save entire reject
285	78	ICP - HF digestion charge
287	78	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	78	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	78	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	78	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	78	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	78	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	78	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	78	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	78	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	78	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	78	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	78	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	78	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	78	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	78	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	78	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	78	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	78	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	78	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	78	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	78	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	78	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	78	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	78	Pb ppm: 24 element, rock & core	AAS	2	10000
582	78	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	78	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	78	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	78	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	78	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

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P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :2
Certificate Date: 22-JUN-97
Invoice No. :I9726845
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726845

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174021	205	226	30	1	0.8	270	< 0.2	3.39	>10000	1.5	< 2	0.08	2.5	< 1	203	98
174022	205	226	85	268	5.8	40	< 0.2	1.80	6950	1.0	< 2	0.67	0.5	10	129	54
174023	205	226	40	94	2.8	10	< 0.2	3.09	40	3.5	< 2	0.80	< 0.5	5	155	42
174024	205	226	10	20	1.6	90	< 0.2	1.23	150	2.0	< 2	0.08	2.0	6	187	72
174025	205	226	< 5	1	5.0	200	< 0.2	2.76	50	4.5	< 2	2.62	1.0	12	165	78
174026	205	226	< 5	4	1.4	60	< 0.2	4.50	660	10.0	< 2	0.77	2.5	17	228	55
174027	205	226	< 5	16	5.0	660	0.6	2.45	120	3.0	< 2	0.60	13.5	8	212	47
174028	205	226	< 5	2	0.8	10	< 0.2	2.27	1290	2.0	< 2	0.23	< 0.5	9	176	31
174029	205	226	< 5	2	0.4	10	< 0.2	2.17	1200	1.5	< 2	0.07	< 0.5	2	173	30
174030	205	226	< 5	1	19.0	100	0.6	2.31	390	1.5	< 2	0.33	< 0.5	6	173	65
174031	205	226	< 5	4	7.4	80	0.6	1.84	360	1.5	< 2	0.18	< 0.5	6	181	48
174032	205	226	< 5	6	5.6	120	0.6	2.24	200	1.0	< 2	0.73	< 0.5	6	171	47
174033	205	226	< 5	8	4.8	180	0.8	2.26	350	0.5	< 2	0.72	< 0.5	6	169	53
174034	205	226	< 5	6	5.2	160	0.6	2.96	320	1.5	< 2	0.45	< 0.5	30	127	47
174035	205	226	< 5	4	6.4	170	0.4	3.26	410	1.5	< 2	0.44	< 0.5	10	136	48
174036	205	226	< 5	2	17.0	330	0.2	3.48	270	1.5	< 2	0.62	< 0.5	10	135	42
174037	205	226	< 5	8	3.2	90	0.2	3.55	210	1.5	< 2	0.34	< 0.5	9	154	48
174038	205	226	< 5	2	2.2	40	0.4	3.21	260	1.0	< 2	0.25	< 0.5	9	151	45
174039	205	226	< 5	1	1.0	10	< 0.2	3.63	540	0.5	< 2	0.71	< 0.5	9	151	41
174040	205	226	< 5	1	0.8	< 10	< 0.2	3.65	320	1.5	< 2	0.55	< 0.5	7	156	50
174041	205	226	< 5	1	0.8	< 10	< 0.2	3.52	580	1.5	< 2	0.48	< 0.5	7	134	42
174042	205	226	< 5	1	1.0	< 10	< 0.2	2.93	1420	1.0	< 2	0.67	< 0.5	4	96	24
174043	205	226	< 5	6	2.6	70	0.4	2.39	270	1.0	< 2	0.86	< 0.5	6	147	51
174044	205	226	< 5	4	4.2	60	0.6	2.54	210	1.0	< 2	0.71	< 0.5	6	151	45
174045	205	226	< 5	8	3.0	130	0.6	2.31	160	0.5	< 2	1.38	< 0.5	7	155	55
174046	205	226	< 5	18	3.6	80	0.4	2.06	160	0.5	< 2	1.36	< 0.5	5	170	49
174047	205	226	< 5	6	1.4	20	0.2	1.81	270	0.5	< 2	1.37	< 0.5	6	152	39
174048	205	226	< 5	2	2.4	30	0.4	3.02	200	1.0	< 2	1.41	< 0.5	9	125	59
174049	205	226	< 5	4	1.4	40	0.4	2.33	240	0.5	< 2	1.92	< 0.5	5	134	43
174050	205	226	< 5	10	1.8	60	0.6	3.41	230	1.5	< 2	1.01	9.5	8	152	71
174051	205	226	< 5	6	1.2	30	0.6	2.89	690	1.0	< 2	0.94	6.5	12	85	52
174052	205	226	< 5	14	0.6	90	0.6	2.01	410	1.0	< 2	0.34	4.0	27	92	140
174053	205	226	130	1	3.0	10	0.2	4.07	400	1.0	< 2	1.03	3.0	12	82	59
174054	205	226	20	1	1.6	10	0.4	3.95	330	1.0	< 2	0.95	< 0.5	9	144	56
174055	205	226	10	1	4.8	10	0.4	3.35	230	1.0	< 2	0.53	2.5	11	113	58
174056	205	226	20	1	1.4	30	0.2	3.72	270	1.5	< 2	0.69	< 0.5	14	156	68
174057	205	226	< 5	2	1.6	< 10	< 0.2	3.63	510	1.5	< 2	0.36	2.0	12	110	55
174058	205	226	< 5	1	1.4	< 10	< 0.2	3.60	360	1.5	< 2	0.50	< 0.5	14	152	65
174059	205	226	< 5	20	1.0	< 10	0.4	4.39	1090	2.0	< 2	0.67	0.5	20	108	61
174060	205	226	< 5	8	3.0	< 10	0.4	4.79	160	1.5	< 2	0.44	< 0.5	25	114	60

CERTIFICATION: [signature]

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number : 1-B
Total Pages : 2
Certificate Date: 22-JUN-97
Invoice No. : I9726845
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9726845

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174021	205	226	4.58	1.31	0.28	2650	1	0.10	86	430	12	58	0.12	134	< 10	972
174022	205	226	16.45	0.32	0.30	7090	3	0.15	87	810	< 2	189	0.07	91	< 10	1070
174023	205	226	6.56	0.51	0.54	450	< 1	0.04	18	400	2	47	0.13	110	< 10	122
174024	205	226	1.38	0.47	0.13	125	2	0.02	32	70	112	7	0.05	91	< 10	630
174025	205	226	4.60	1.05	0.45	1910	3	0.04	33	710	120	49	0.11	174	< 10	828
174026	205	226	2.07	1.94	0.53	1450	< 1	0.10	38	630	16	46	0.20	181	< 10	340
174027	205	226	1.91	0.91	0.30	425	1	0.05	46	1500	120	70	0.08	174	< 10	2210
174028	205	226	0.96	0.87	0.25	125	< 1	0.10	25	110	2	162	0.09	57	< 10	62
174029	205	226	0.97	0.94	0.22	70	< 1	0.08	20	110	< 2	251	0.09	62	< 10	58
174030	205	226	1.21	1.05	0.27	150	< 1	0.22	23	120	2	199	0.08	68	< 10	74
174031	205	226	1.07	0.79	0.16	160	1	0.13	33	100	< 2	160	0.06	62	< 10	110
174032	205	226	1.36	1.11	0.30	220	< 1	0.16	44	1960	< 2	321	0.07	88	< 10	132
174033	205	226	1.38	0.82	0.36	390	< 1	0.09	59	830	2	312	0.07	81	< 10	222
174034	205	226	1.36	1.20	0.33	155	< 1	0.20	70	130	2	293	0.10	79	< 10	152
174035	205	226	1.68	1.22	0.37	390	< 1	0.18	82	130	< 2	381	0.09	80	< 10	214
174036	205	226	1.71	1.24	0.45	305	< 1	0.22	75	110	< 2	343	0.12	89	< 10	222
174037	205	226	1.54	1.68	0.48	205	1	0.18	66	120	< 2	270	0.12	97	< 10	142
174038	205	226	1.40	1.53	0.47	160	< 1	0.09	74	120	< 2	123	0.12	94	< 10	122
174039	205	226	1.97	1.69	0.62	425	1	0.20	37	120	< 2	196	0.15	89	< 10	88
174040	205	226	1.77	1.80	0.61	220	< 1	0.09	25	180	< 2	163	0.15	89	< 10	40
174041	205	226	1.64	1.71	0.53	195	< 1	0.08	29	180	< 2	135	0.16	83	< 10	52
174042	205	226	1.27	1.41	0.46	220	< 1	0.08	24	170	2	155	0.13	71	< 10	46
174043	205	226	1.28	1.17	0.43	335	1	0.07	37	130	2	136	0.09	134	< 10	134
174044	205	226	1.43	1.16	0.45	345	< 1	0.07	44	140	2	78	0.10	114	< 10	186
174045	205	226	1.70	1.23	0.45	415	< 1	0.07	43	140	4	161	0.08	111	< 10	182
174046	205	226	1.58	1.02	0.46	490	< 1	0.05	37	140	2	144	0.07	108	< 10	108
174047	205	226	1.22	0.86	0.37	355	< 1	0.04	28	110	2	131	0.06	72	< 10	50
174048	205	226	1.68	1.46	0.51	385	< 1	0.07	40	100	2	153	0.10	113	< 10	50
174049	205	226	1.65	1.11	0.66	590	< 1	0.04	24	130	2	148	0.08	100	< 10	62
174050	205	226	1.68	1.76	0.57	365	< 1	0.14	50	150	6	165	0.10	137	< 10	144
174051	205	226	1.37	1.35	0.53	375	< 1	0.09	54	190	8	172	0.08	67	< 10	120
174052	205	226	1.10	0.99	0.25	200	< 1	0.08	77	120	8	89	0.08	111	< 10	148
174053	205	226	2.60	1.97	0.78	730	< 1	0.09	37	330	2	170	0.20	124	< 10	240
174054	205	226	2.47	1.97	0.68	565	< 1	0.09	51	190	4	159	0.17	123	< 10	188
174055	205	226	2.09	1.58	0.52	305	< 1	0.08	62	170	2	88	0.15	131	< 10	202
174056	205	226	2.95	1.75	0.71	615	1	0.08	93	170	8	123	0.17	160	< 10	324
174057	205	226	1.73	1.73	0.50	185	< 1	0.08	52	190	4	72	0.16	144	< 10	160
174058	205	226	1.74	1.83	0.55	270	< 1	0.08	53	110	8	92	0.16	154	< 10	116
174059	205	226	2.12	2.21	0.69	365	< 1	0.09	64	220	4	111	0.24	183	< 10	100
174060	205	226	2.49	2.41	0.69	220	< 1	0.09	96	210	4	71	0.22	167	< 10	186

CERTIFICATION: Ian Bowler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 22-JUN-97
Invoice No. :I9726845
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726845

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174061	205	226	< 5	1	1.0	< 10	< 0.2	4.75	1420	2.0	2	0.29	< 0.5	15	105	50
174062	205	226	< 5	1	1.8	< 10	< 0.2	4.31	3510	2.0	< 2	0.37	1.0	12	113	58
174063	205	226	< 5	1	1.2	< 10	< 0.2	3.83	8640	1.0	< 2	3.88	1.5	< 1	107	44
174064	205	226	< 5	1	3.6	< 10	< 0.2	4.30	1010	1.5	< 2	0.99	1.5	13	81	51
174065	205	226	< 5	1	2.0	< 10	< 0.2	4.20	1270	1.5	< 2	0.36	0.5	10	84	69
174066	205	226	< 5	1	2.0	< 10	< 0.2	3.80	280	1.5	< 2	0.53	0.5	10	93	41
174067	205	226	< 5	20	7.0	60	0.4	3.84	140	2.0	< 2	0.69	6.0	11	146	102
174068	205	226	< 5	14	9.2	70	0.8	3.36	100	1.5	< 2	3.39	4.5	7	353	46
174069	205	226	< 5	34	11.5	120	1.2	4.61	40	2.5	< 2	0.61	3.0	8	322	64
174070	205	226	< 5	52	15.0	120	1.4	4.25	30	2.0	< 2	0.75	1.0	8	320	95
174071	205	226	< 5	24	9.4	130	0.6	5.48	60	2.5	< 2	0.96	3.5	7	245	46
174072	205	226	< 5	4	6.8	60	0.6	4.46	90	1.5	< 2	5.45	< 0.5	12	139	30
174073	205	226	< 5	12	7.0	50	0.4	5.02	90	2.0	< 2	3.32	< 0.5	12	159	29
174074	205	226	< 5	20	8.2	70	1.0	4.87	60	1.5	< 2	3.89	0.5	14	226	41
174075	205	226	< 5	10	7.8	50	0.6	5.03	230	2.0	2	4.50	0.5	17	145	29
174076	205	226	< 5	14	11.0	120	0.6	4.36	70	1.5	< 2	4.26	< 0.5	10	236	31
174077	205	226	< 5	16	11.0	140	1.0	4.55	80	1.5	< 2	3.43	0.5	11	189	48
174078	205	226	< 5	16	10.0	220	0.8	2.28	70	1.0	< 2	1.21	2.0	5	387	44
174079	205	226	< 5	42	25	1030	2.0	3.95	70	3.5	< 2	1.15	16.5	5	236	51
174080	205	226	< 5	52	19.0	1750	1.8	4.60	40	4.0	< 2	0.76	21.5	6	301	37
174081	205	226	< 5	50	37	1240	2.4	4.17	70	3.5	< 2	3.32	19.0	4	219	43
174082	205	226	< 5	60	19.5	910	2.0	4.32	50	3.5	2	0.89	18.5	5	252	37
174083	205	226	< 5	18	4.6	150	0.4	9.17	120	3.5	2	0.54	2.5	7	106	7
174084	205	226	< 5	28	2.2	10	< 0.2	6.39	120	2.0	< 2	0.80	< 0.5	3	137	3
174085	205	226	< 5	38	2.2	30	0.4	6.32	820	2.0	< 2	0.32	1.5	3	133	4
174086	205	226	< 5	64	11.0	400	29.0	7.12	130	2.0	< 2	0.56	33.5	5	165	7
174087	205	226	< 5	56	2.6	40	0.8	6.70	110	2.0	< 2	0.44	2.0	4	105	3
174088	205	226	< 5	40	1.6	< 10	< 0.2	8.35	130	3.0	< 2	0.48	< 0.5	6	69	5
174089	205	226	< 5	4	2.0	< 10	< 0.2	6.75	800	2.0	< 2	0.57	< 0.5	3	79	4
174090	205	226	< 5	2	1.6	< 10	< 0.2	7.20	130	2.5	< 2	0.36	< 0.5	5	147	4
174091	205	226	< 5	1	1.2	< 10	< 0.2	7.92	140	2.5	< 2	0.27	< 0.5	5	85	3
174092	205	226	< 5	1	1.0	< 10	< 0.2	7.49	110	2.0	< 2	1.07	< 0.5	5	60	5
174093	205	226	< 5	1	1.4	< 10	< 0.2	6.12	550	2.5	2	0.30	< 0.5	2	112	4
174094	205	226	< 5	1	0.6	10	< 0.2	6.88	1060	2.5	2	0.84	< 0.5	3	144	4
174095	205	226	< 5	2	1.0	< 10	< 0.2	6.53	1190	2.0	< 2	1.71	< 0.5	3	89	4
174096	205	226	< 5	1	1.8	30	< 0.2	6.79	1230	2.0	< 2	0.81	< 0.5	2	148	4
174097	205	226	< 5	1	0.8	< 10	< 0.2	7.12	1360	2.0	< 2	1.82	< 0.5	3	96	3
174098	205	226	< 5	4	1.8	30	< 0.2	6.08	980	2.0	2	0.49	< 0.5	3	108	5

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :2-B
Total Pages :2
Certificate Date: 22-JUN-97
Invoice No. :I9726845
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9726845

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174061	205	226	1.76	2.41	0.63	185	< 1	0.09	51	190	2	58	0.22	163	< 10	88
174062	205	226	1.49	2.13	0.59	280	< 1	0.10	46	150	4	77	0.20	158	< 10	132
174063	205	226	3.18	2.10	1.73	2300	< 1	0.14	36	450	2	680	0.21	117	< 10	110
174064	205	226	3.00	2.14	1.00	2810	< 1	0.12	47	230	4	181	0.19	140	< 10	178
174065	205	226	1.76	1.97	0.56	320	< 1	0.11	37	250	2	95	0.21	122	< 10	144
174066	205	226	1.32	1.85	0.56	345	< 1	0.10	32	170	2	111	0.14	120	< 10	68
174067	205	226	2.10	1.61	0.50	305	< 1	0.15	53	720	< 2	190	0.15	161	< 10	304
174068	205	226	2.23	0.93	0.39	840	10	0.04	108	610	< 2	255	0.14	287	< 10	460
174069	205	226	4.14	1.78	0.46	140	17	0.13	134	1510	2	75	0.19	519	< 10	376
174070	205	226	6.44	1.68	0.45	165	16	0.10	116	1260	20	46	0.15	363	< 10	192
174071	205	226	2.63	2.24	0.57	130	13	0.13	92	2500	4	95	0.19	485	< 10	406
174072	205	226	2.68	2.02	2.53	1355	1	0.10	43	1470	2	371	0.19	132	< 10	98
174073	205	226	2.73	2.47	1.71	710	2	0.08	38	390	4	165	0.23	110	< 10	84
174074	205	226	3.01	2.41	2.00	900	10	0.09	61	940	2	205	0.21	162	< 10	162
174075	205	226	2.49	2.51	2.56	1150	3	0.10	46	650	2	221	0.24	108	< 10	132
174076	205	226	2.89	2.23	1.71	790	13	0.06	53	810	4	181	0.20	182	< 10	96
174077	205	226	2.75	2.15	1.40	690	10	0.07	59	920	2	141	0.20	179	< 10	158
174078	205	226	1.76	1.05	0.26	150	3	0.03	48	1500	4	71	0.09	133	< 10	256
174079	205	226	2.71	1.82	0.41	140	20	0.08	73	1110	20	84	0.11	574	< 10	1020
174080	205	226	5.35	2.13	0.46	95	18	0.12	58	1080	20	60	0.14	390	< 10	1270
174081	205	226	2.28	1.94	0.46	310	33	0.05	69	1440	52	268	0.11	631	< 10	1185
174082	205	226	3.02	2.05	0.49	95	20	0.10	72	1300	48	67	0.13	663	< 10	1075
174083	205	226	2.02	4.17	0.90	80	< 1	0.21	7	560	20	35	0.28	54	< 10	188
174084	205	226	2.80	3.48	0.23	100	< 1	0.53	4	470	42	95	0.13	15	< 10	32
174085	205	226	2.18	4.31	0.15	55	< 1	0.28	3	450	156	72	0.13	14	< 10	102
174086	205	226	1.98	4.88	0.26	100	2	0.71	7	530	4000	108	0.15	17	< 10	2520
174087	205	226	1.81	4.73	0.22	60	1	0.72	3	480	364	89	0.13	14	< 10	176
174088	205	226	1.83	5.24	0.22	95	< 1	1.35	4	520	32	105	0.19	21	< 10	30
174089	205	226	4.19	4.35	0.16	90	< 1	1.20	2	460	28	101	0.14	16	< 10	14
174090	205	226	1.75	4.69	0.29	55	1	0.72	4	460	18	78	0.18	19	< 10	20
174091	205	226	1.71	5.65	0.23	55	< 1	1.40	4	510	24	87	0.18	16	< 10	18
174092	205	226	2.31	3.07	0.28	130	1	2.76	3	530	22	173	0.17	15	< 10	24
174093	205	226	1.19	3.22	0.73	50	1	0.17	3	840	20	45	0.13	20	< 10	32
174094	205	226	1.34	3.59	0.75	130	< 1	0.20	4	740	24	85	0.17	21	< 10	44
174095	205	226	1.11	3.16	0.49	270	< 1	0.40	6	670	18	174	0.15	21	< 10	38
174096	205	226	1.41	3.25	0.25	125	1	0.78	9	510	28	115	0.15	24	< 10	46
174097	205	226	1.02	3.43	0.28	225	< 1	0.40	4	570	18	197	0.17	21	< 10	24
174098	205	226	0.75	2.63	0.13	110	3	0.16	8	750	16	60	0.10	58	< 10	48

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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.o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9727535

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9727535

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 27-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	7	RUSH Assay ring approx 150 mesh
295	7	RUSH crush and split (0-3 Kg)
3202	7	Rock - save entire reject
290	7	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	7	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	7	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	7	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	7	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	7	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	7	Ba ppm	XRF	10	50000
444	7	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	7	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	7	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	7	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	7	Ag ppm: high grade 24 element	AAS	0.5	200
4031	7	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	7	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	7	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	7	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	7	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	7	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	7	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	7	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	7	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	7	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	7	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	7	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	7	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	7	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	7	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	7	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	7	Pb %: high grade 24 element	AAS	0.001	10.00
4047	7	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	7	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	7	V ppm: A22 ICP package	ICP-AES	10	50000
4050	7	Zn ppm: A22 ICP package	ICP-AES	20	100000

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page N... : 1-A
Total Pages : 1
Certificate Date: 23-JUN-97
Invoice No. : I9727535
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9727535

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	ZnBa %	(XRFSpec Gr ppm	S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
174866	258	295	3.50	747	0.66	4.83	12.40	8940	4.08	0.81	0.08	0.001	>200	3.50	100	< 10	< 20	0.65	990	10	80
174957	258	295	< 0.07	< 3	< 0.01	0.02	0.08	4640	2.86	< 0.01	< 0.01	< 0.001	< 1.0	1.15	1700	< 10	< 20	7.40	< 10	< 10	90
174958	258	295	< 0.07	40	0.21	0.02	0.10	20200	2.77	< 0.01	< 0.01	< 0.001	40.0	2.50	3500	< 10	< 20	5.00	< 10	< 10	180
174959	258	295	2.67	1241	0.08	0.07	0.59	45200	3.09	< 0.01	0.04	< 0.001	>200	1.60	100	< 10	< 20	9.90	60	< 10	100
174960	258	295	2.57	1104	0.23	2.82	9.37	39000	3.62	0.10	0.11	0.001	>200	0.90	100	< 10	< 20	4.70	720	< 10	90
174961	258	295	3.19	953	0.04	5.65	11.80	2120	4.36	0.18	0.10	0.001	>200	0.30	100	< 10	< 20	3.75	770	< 10	80
174962	258	295	0.24	86	0.14	0.40	0.64	10670	2.75	< 0.01	< 0.01	< 0.001	91.0	1.30	11700	< 10	< 20	0.75	50	< 10	250

CERTIFICATION: [signature]

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

.o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
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Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page : 1-B
Total Pages : 1
Certificate Date: 23-JUN-97
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P.O. Number :
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CERTIFICATE OF ANALYSIS A9727535

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
174866	258	295	6450	22.4	1.6	0.15	320	60	0.05	40	4.64	30	0.05	140	>100000
174957	258	295	30	6.45	0.6	0.20	1250	< 10	0.05	30	0.009	170	< 0.05	50	720
174958	258	295	2010	3.25	1.4	0.45	840	< 10	0.15	10	0.021	220	< 0.05	40	900
174959	258	295	780	9.55	0.4	0.20	1300	< 10	0.25	30	0.074	300	< 0.05	60	5860
174960	258	295	2250	15.55	0.4	0.20	850	10	0.05	60	2.66	170	< 0.05	60	83100
174961	258	295	440	27.4	0.1	0.10	790	10	< 0.05	40	5.46	100	< 0.05	50	>100000
174962	258	295	1390	1.75	0.7	0.30	320	< 10	0.05	10	0.403	90	< 0.05	10	6220

CERTIFICATION:

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o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9727648

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9727648

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 18-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	2	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
384	1	Ag g/t: Gravimetric	FA-GRAVIMETRIC	3	1000
316	2	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

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Page Number : 1
Total Pages : 1
Certificate Date: 18-JUN-97
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P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9727648

SAMPLE	PREP CODE	Ag FA g/t	Zn %
174584	244 --	1145	5.49
174592	244 --	-----	1.51

CERTIFICATION: Mark Vorh

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9727834

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9727834

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 25-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	56	Geochem ring to approx 150 mesh
226	56	0-3 Kg crush and split
3202	56	Rock - save entire reject
285	56	ICP - HF digestion charge
287	56	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	56	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	56	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	56	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	56	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	56	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	56	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	56	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	56	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	56	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	56	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	56	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	56	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	56	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	56	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	56	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	56	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	56	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	56	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	56	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	56	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	56	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	56	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	56	Pb ppm: 24 element, rock & core	AAS	2	10000
582	56	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	56	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	56	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	56	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	56	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-JUN-97
Invoice No. :I9727834
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9727834

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174853	205 226	< 5	4	1.2	10	< 0.2	2.86	1780	1.0	< 2	0.23	< 0.5	5	224	53
174854	205 226	< 5	1	0.8	< 10	< 0.2	1.91	1750	0.5	< 2	0.53	< 0.5	< 1	205	71
174855	205 226	< 5	1	0.8	< 10	< 0.2	1.80	850	1.0	< 2	0.21	< 0.5	7	185	81
174856	205 226	< 5	1	0.6	90	< 0.2	2.42	1130	2.5	< 2	0.19	< 0.5	3	188	48
174857	205 226	15	10	1.6	70	0.2	2.40	890	3.0	< 2	0.15	0.5	4	172	64
174858	205 226	< 5	4	2.2	150	< 0.2	1.62	620	3.0	< 2	0.12	1.5	5	308	68
174859	205 226	< 5	1	0.8	30	< 0.2	0.95	390	5.0	< 2	13.80	< 0.5	< 1	70	59
174860	205 226	20	12	4.4	20	< 0.2	0.42	290	2.0	< 2	>25.0	< 0.5	< 1	47	17
174861	205 226	45	16	5.4	10	< 0.2	0.47	140	1.5	< 2	>25.0	< 0.5	< 1	35	22
174862	205 226	40	24	6.8	690	0.6	1.64	890	3.0	< 2	8.55	3.5	3	174	86
174863	205 226	< 5	2	1.2	< 10	< 0.2	2.70	1430	2.5	< 2	3.08	< 0.5	4	166	76
174864	205 226	< 5	32	4.0	< 10	< 0.2	1.98	580	2.0	< 2	3.02	4.5	8	139	76
174865	205 226	25	22	12.5	10	0.6	1.98	380	2.0	< 2	3.68	4.0	7	114	53
174866	-- --	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
174867	205 226	< 5	6	11.5	30	2.8	4.03	1130	2.0	< 2	0.45	4.5	8	185	426
174868	205 226	20	12	3.6	< 10	< 0.2	4.58	2650	1.5	< 2	0.90	3.5	12	90	156
174869	205 226	< 5	6	3.4	< 10	< 0.2	4.64	2200	1.5	< 2	0.44	3.5	12	95	116
174870	205 226	< 5	1	3.4	< 10	< 0.2	4.45	4700	1.5	< 2	0.25	4.0	6	109	85
174871	205 226	< 5	10	4.0	10	< 0.2	4.64	2040	1.5	< 2	2.69	11.5	24	99	206
174872	205 226	< 5	1	3.2	10	< 0.2	3.88	1650	1.5	< 2	3.25	5.0	14	108	74
174873	205 226	< 5	22	8.8	10	< 0.2	3.52	1640	1.5	< 2	5.14	14.5	11	95	160
174874	205 226	< 5	30	6.6	10	0.6	3.82	1230	1.5	< 2	0.67	2.0	5	129	76
174875	205 226	< 5	6	7.4	10	0.6	4.12	1620	1.5	< 2	1.73	0.5	8	193	45
174876	205 226	< 5	1	4.0	< 10	< 0.2	3.85	1290	1.5	< 2	0.97	2.5	5	99	58
174877	205 226	< 5	1	1.4	< 10	< 0.2	4.46	3410	1.5	< 2	0.33	2.0	9	109	70
174878	205 226	< 5	1	8.8	< 10	< 0.2	4.48	1340	1.5	< 2	1.20	5.5	10	171	86
174879	205 226	10	42	14.0	140	0.8	4.67	1450	3.0	< 2	1.14	4.5	7	278	64
174880	205 226	< 5	8	8.2	30	0.2	5.23	3870	3.0	< 2	5.64	< 0.5	6	141	20
174881	205 226	< 5	1	6.6	30	0.4	4.84	1970	3.5	< 2	6.98	< 0.5	8	171	17
174882	205 226	< 5	22	11.0	90	1.8	4.81	990	4.5	< 2	2.13	3.5	10	210	36
174883	205 226	< 5	32	13.0	150	2.0	3.37	470	3.5	< 2	1.31	5.5	4	323	54
174884	205 226	< 5	90	33	790	2.8	3.83	360	4.0	< 2	0.92	16.5	3	343	52
174885	205 226	< 5	20	8.2	60	0.4	10.45	1480	6.0	< 2	0.17	0.5	2	129	13
174886	205 226	< 5	18	6.4	100	0.4	9.78	1730	5.0	< 2	0.35	2.0	3	101	14
174887	205 226	< 5	10	6.2	70	< 0.2	9.98	1650	5.5	< 2	0.91	1.5	3	178	9
174888	205 226	< 5	10	5.0	10	0.2	8.86	1290	2.5	< 2	0.87	< 0.5	1	105	9
174889	205 226	< 5	6	4.0	< 10	< 0.2	7.46	800	1.5	< 2	1.65	< 0.5	1	158	6
174890	205 226	< 5	8	3.8	10	< 0.2	7.53	1090	2.5	< 2	1.18	< 0.5	1	97	5
174891	205 226	< 5	6	4.8	10	< 0.2	8.06	1380	3.5	< 2	0.46	< 0.5	1	141	7
174892	205 226	< 5	12	4.0	< 10	< 0.2	8.66	1140	2.5	< 2	1.16	< 0.5	2	131	6

CERTIFICATION: _____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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Project : WOLVERINE
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Page I ...r :1-B
Total Pages :2
Certificate Date: 25-JUN-97
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Account :GP W

CERTIFICATE OF ANALYSIS A9727834

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174853	205	226	2.25	0.93	0.47	145	2	0.05	54	160	4	98	0.14	82	< 10	86
174854	205	226	6.85	0.35	0.38	285	2	0.24	15	680	< 2	195	0.11	96	< 10	32
174855	205	226	2.08	0.67	0.23	195	21	0.03	54	310	8	64	0.07	87	< 10	112
174856	205	226	2.03	0.86	0.27	205	7	0.04	35	130	18	42	0.09	91	< 10	746
174857	205	226	1.72	1.06	0.26	135	6	0.03	43	130	190	18	0.09	132	< 10	432
174858	205	226	2.16	0.71	0.17	110	5	0.02	41	80	80	8	0.06	106	< 10	736
174859	205	226	12.10	0.32	0.49	3360	21	0.01	7	230	88	236	0.04	101	< 10	220
174860	205	226	3.25	0.11	0.12	2000	12	< 0.01	6	990	360	285	0.01	82	< 10	46
174861	205	226	4.46	0.13	0.15	2260	15	< 0.01	6	1070	380	579	0.01	83	< 10	16
174862	205	226	5.97	0.66	0.21	1175	19	0.02	18	990	220	195	0.06	155	< 10	2480
174863	205	226	3.66	1.03	0.42	1375	< 1	0.03	16	480	4	112	0.12	132	< 10	38
174864	205	226	1.05	0.91	0.29	615	< 1	0.01	34	170	14	116	0.08	76	< 10	420
174865	205	226	1.60	0.90	0.30	825	1	0.01	31	180	32	116	0.08	74	< 10	352
174866	--	--	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
174867	205	226	1.97	1.85	0.55	380	< 1	0.07	47	170	4	86	0.17	150	< 10	154
174868	205	226	2.59	2.24	0.94	755	< 1	0.05	62	270	6	123	0.24	169	< 10	156
174869	205	226	1.94	2.19	0.65	460	< 1	0.06	56	200	6	96	0.21	157	< 10	154
174870	205	226	1.78	2.09	0.52	340	< 1	0.06	40	230	4	70	0.21	141	< 10	188
174871	205	226	2.39	2.41	1.45	1635	1	0.09	84	250	8	573	0.16	136	< 10	158
174872	205	226	2.73	2.25	1.65	2190	1	0.08	47	260	4	759	0.12	118	< 10	142
174873	205	226	4.06	1.73	2.30	3570	2	0.08	51	240	6	1010	0.12	110	< 10	170
174874	205	226	1.99	1.03	0.50	415	3	0.05	36	280	< 2	156	0.14	186	< 10	120
174875	205	226	2.75	1.10	0.98	1460	< 1	0.04	43	280	4	272	0.16	152	< 10	150
174876	205	226	1.80	1.75	0.71	655	1	0.04	30	240	4	181	0.17	123	< 10	108
174877	205	226	1.62	2.01	0.59	245	1	0.06	46	220	< 2	75	0.21	150	< 10	112
174878	205	226	2.22	1.92	0.88	860	< 1	0.06	41	200	< 2	118	0.19	140	< 10	196
174879	205	226	3.15	1.90	0.76	420	24	0.08	104	1870	4	89	0.18	412	< 10	516
174880	205	226	2.22	2.42	2.88	1765	6	0.06	27	260	< 2	305	0.24	99	< 10	70
174881	205	226	2.44	2.20	3.24	2800	4	0.09	28	250	< 2	353	0.22	89	< 10	76
174882	205	226	2.77	2.20	1.14	910	8	0.06	54	290	8	87	0.22	127	< 10	934
174883	205	226	2.61	1.54	0.53	335	6	0.04	69	1170	14	63	0.12	216	< 10	644
174884	205	226	5.15	1.87	0.42	110	23	0.07	90	1900	44	68	0.10	551	< 10	1020
174885	205	226	3.63	4.53	1.09	65	3	0.18	11	680	12	27	0.33	112	10	66
174886	205	226	2.08	4.53	1.02	80	3	0.17	9	560	20	41	0.30	87	10	164
174887	205	226	2.56	4.60	0.57	150	4	0.57	7	660	20	125	0.28	64	< 10	146
174888	205	226	2.95	3.97	0.18	110	1	2.83	5	600	30	145	0.20	32	< 10	22
174889	205	226	1.73	3.36	0.10	195	1	3.04	6	530	18	202	0.15	20	< 10	14
174890	205	226	1.73	4.49	0.16	155	1	1.68	4	530	18	138	0.17	20	< 10	16
174891	205	226	1.73	4.95	0.23	85	2	1.43	7	590	22	99	0.20	28	< 10	28
174892	205	226	2.58	4.88	0.20	170	4	2.19	6	630	22	165	0.16	21	< 10	22

CERTIFICATION:

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J: WESTMIN RESOURCES LTD.
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Account :GP W

CERTIFICATE OF ANALYSIS A9727834

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174893	205 226	< 5	16	4.6	< 10	< 0.2	8.61	960	3.5	< 2	0.39	< 0.5	3	103	7
174894	205 226	< 5	14	4.6	< 10	< 0.2	7.72	1060	2.0	< 2	0.48	< 0.5	1	119	8
174895	205 226	< 5	18	2.8	< 10	< 0.2	7.42	1040	2.5	< 2	0.63	< 0.5	1	91	7
174896	205 226	< 5	8	3.2	10	< 0.2	9.52	970	5.0	< 2	0.54	< 0.5	1	63	6
174897	205 226	< 5	1	3.2	10	< 0.2	6.66	570	3.5	< 2	0.31	< 0.5	1	73	3
174898	205 226	< 5	2	3.8	10	< 0.2	6.53	860	3.0	< 2	0.79	< 0.5	1	100	4
174899	205 226	< 5	1	2.2	10	< 0.2	7.01	1200	2.5	< 2	0.99	< 0.5	1	77	5
174900	205 226	< 5	1	0.6	10	< 0.2	7.01	2300	2.5	< 2	1.73	0.5	< 1	115	4
174901	205 226	< 5	1	0.8	< 10	< 0.2	7.22	2380	2.5	< 2	1.36	0.5	< 1	105	4
174902	205 226	< 5	1	0.6	< 10	< 0.2	7.12	2190	2.5	< 2	0.95	< 0.5	< 1	77	6
174903	205 226	< 5	1	0.6	< 10	< 0.2	7.16	800	2.5	< 2	1.17	< 0.5	3	63	4
174904	205 226	10	1	0.8	10	< 0.2	7.33	2210	2.5	< 2	1.66	< 0.5	< 1	84	4
174905	205 226	15	2	3.6	< 10	< 0.2	6.98	340	2.5	< 2	1.96	< 0.5	2	89	5
174906	205 226	< 5	1	1.6	< 10	< 0.2	7.21	1010	2.0	< 2	1.74	< 0.5	1	82	4
174907	205 226	< 5	1	1.8	10	< 0.2	6.98	840	2.0	< 2	1.71	< 0.5	1	94	4
174908	205 226	< 5	1	2.4	30	< 0.2	6.58	1570	2.0	< 2	4.15	< 0.5	1	121	4
174909	205 226	< 5	2	3.4	10	< 0.2	7.35	1660	2.0	< 2	2.81	< 0.5	2	136	5

CERTIFICATION: Stuart Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-JUN-97
Invoice No. : I9727834
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9727834

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174893	205	226	3.38	5.35	0.34	75	3	0.66	6	530	28	77	0.22	25	< 10	28
174894	205	226	2.84	5.20	0.26	65	1	1.06	4	520	26	89	0.16	19	< 10	20
174895	205	226	2.37	4.46	0.22	85	1	1.41	3	710	18	133	0.16	21	< 10	28
174896	205	226	1.92	4.78	0.66	100	3	0.89	4	600	12	76	0.20	35	< 10	44
174897	205	226	1.49	3.76	0.82	70	3	0.13	4	610	14	43	0.12	23	< 10	62
174898	205	226	1.32	3.68	0.76	125	1	0.12	4	650	16	71	0.14	31	< 10	58
174899	205	226	1.48	3.91	0.68	155	1	0.13	4	680	18	112	0.18	24	< 10	58
174900	205	226	1.11	3.65	0.56	230	< 1	0.55	4	620	20	200	0.17	23	< 10	60
174901	205	226	1.20	3.75	0.67	170	1	0.34	4	840	16	153	0.18	25	< 10	46
174902	205	226	1.42	3.85	0.69	140	1	0.34	6	740	18	120	0.18	23	< 10	36
174903	205	226	1.46	3.52	0.62	185	1	0.51	4	490	20	163	0.18	25	< 10	40
174904	205	226	1.17	3.51	0.46	235	< 1	0.83	4	400	16	208	0.18	25	< 10	70
174905	205	226	1.80	3.42	0.31	230	1	0.39	5	350	14	197	0.16	27	< 10	24
174906	205	226	1.05	3.61	0.17	170	< 1	0.76	4	380	16	224	0.15	25	< 10	20
174907	205	226	1.10	3.61	0.14	120	< 1	0.59	5	460	10	200	0.16	24	< 10	30
174908	205	226	1.02	3.45	0.11	100	3	0.33	5	460	14	203	0.16	24	< 10	22
174909	205	226	0.89	2.92	0.16	245	< 1	0.27	5	790	20	242	0.20	31	< 10	16

CERTIFICATION: Ian R Bartlett

Chemex Labs Ltd.

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o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9727923

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9727923

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 17-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
349	1	Bi %: Conc. Nitric-HCL dig'n	AAS	0.001	100.00

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1
Total Pages :1
Certificate Date: 17-JUN-97
Invoice No. :19727923
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9727923

SAMPLE	PREP CODE		Bi %									
175801	244	--	7.700									

CERTIFICATION: Said Ceinaf

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212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9728154

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9728154

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 1-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	3	RUSH Assay ring approx 150 mesh
295	3	RUSH crush and split (0-3 Kg)
3202	3	Rock - save entire reject
290	3	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	3	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	3	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	3	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	3	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	3	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	3	Ba ppm	XRF	10	50000
444	3	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	3	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	3	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	3	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	3	Ag ppm: high grade 24 element	AAS	0.5	200
4031	3	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	3	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	3	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	3	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	3	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	3	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	3	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	3	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	3	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	3	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	3	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	3	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	3	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	3	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	3	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	3	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	3	Pb %: high grade 24 element	AAS	0.001	10.00
4047	3	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	3	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	3	V ppm: A22 ICP package	ICP-AES	10	50000
4050	3	Zn ppm: A22 ICP package	ICP-AES	20	100000

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o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page I : 1-A
Total Pages : 1
Certificate Date: 01-JUL-97
Invoice No. : I9728154
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9728154

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	ZnBa %	(XRFSpec ppm	Gr S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
203038	258	295	0.89	155	0.24	1.92	10.60	730	4.14	0.29	0.01<	0.001	154.0	0.55	100	< 10	< 20	3.85	910	< 10	120
203039	258	295	0.31	133	1.00	1.70	21.9	3360	4.08	0.12	0.01<	0.001	140.0	0.20	100	< 10	< 20	3.20	2090	30	130
203040	258	295	0.14	68	0.69	0.45	17.20	2290	3.80	0.02	< 0.01<	0.001	70.0	0.90	< 100	< 10	< 20	2.20	1900	60	140

CERTIFICATION: Stuart Bachler

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212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page [illegible] : 1-B
Total Pages : 1
Certificate Date: 01-JUL-97
Invoice No. : I9728154
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9728154

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
203038	258	295	2500	28.8	0.1	0.60	1200	30	0.05	40	1.800	60	< 0.05	50	94800
203039	258	295	10140	23.4	< 0.1	0.25	770	< 10	0.05	20	1.620	50	< 0.05	20	>100000
203040	258	295	6810	21.9	0.3	0.30	690	< 10	0.05	60	0.449	50	< 0.05	40	>100000

CERTIFICATION: [signature]

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9728160

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9728160

(GP W) - WESTMIN RESOURCES LTD.

Project: EAGLE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 2-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
255	4	RUSH Geo ring to approx 150 mesh
295	4	RUSH crush and split (0-3 Kg)
3202	4	Rock - save entire reject
285	4	ICP - HF digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
991	4	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
956	4	Ag g/t: RUSH, aqua regia digest	AAS	0.3	350
301	4	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	4	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	4	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	4	Ba ppm	XRF	10	50000
444	4	Specific gravity S.G.	PICNOMETER	0.01	20.0
13	4	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	4	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	4	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	4	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	4	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	4	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	4	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	4	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	4	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	4	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	4	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	4	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	4	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	4	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	4	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	4	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	4	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	4	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	4	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	4	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	4	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	4	Pb ppm: 24 element, rock & core	AAS	2	10000
582	4	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	4	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	4	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	4	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	4	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : EAGLE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

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Total Pages :1
Certificate Date: 02-JUL-97
Invoice No. :I9728160
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9728160

SAMPLE	PREP CODE		Au ppb RUSH	Ag g/t RUSH	Cu %	Pb %	ZnBa (XRF %	Spec Gr ppm	S.G.	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
203013	255	295	125	17.1	0.18	0.15	3.17	2280	2.86	184	13.0	36300	18.0	2.63	80	1.0	< 2	0.51	279	9	174
203014	255	295	80	10.8	0.12	0.14	2.21	3620	2.80	100	13.0	29500	10.0	3.93	130	1.5	< 2	0.73	182.0	13	170
203015	255	295	25	5.1	0.05	0.08	1.15	1860	2.72	32	6.4	14700	5.0	1.95	90	0.5	< 2	2.32	88.5	4	171
203016	255	295	35	9.0	0.02	0.06	0.98	3150	2.83	30	18.5	7070	9.0	3.51	80	2.5	< 2	13.40	79.0	1	42

CERTIFICATION: Ian Bichler

Chemex Labs Ltd.

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : EAGLE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 02-JUL-97
Invoice No. : I9728160
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9728160

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
203013	255	295	1575	6.54	1.20	0.22	100	9	0.07	25	180	1360	32	0.07	324	< 10	>10000
203014	255	295	1095	4.69	1.81	0.40	175	6	0.12	17	170	1160	36	0.08	120	< 10	>10000
203015	255	295	440	2.07	0.87	0.20	405	1	0.02	5	40	664	142	0.03	28	< 10	9560
203016	255	295	225	4.88	1.72	5.77	2210	3	0.05	6	200	472	690	0.05	123	< 10	8590

CERTIFICATION: David Bichler

Chemex Labs Ltd.

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V7X 1C4

A9728432

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9728432

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 23-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	2	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	2	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

Chemex Labs Ltd.

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PHONE: 604-984-0221 FAX: 604-984-0218

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PROJECT: WOLVERINE
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V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

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Total Pages :1
Certificate Date: 23-JUN-97
Invoice No. : I9728432
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9728432

SAMPLE	PREP CODE		Zn %
174635	244	--	5.55
174641	244	--	1.07

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9728795

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9728795

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 2-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	45	Geochem ring to approx 150 mesh
226	45	0-3 Kg crush and split
3202	45	Rock - save entire reject
285	45	ICP - HF digestion charge
287	45	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	45	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	45	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	45	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	45	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	45	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	45	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	45	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	45	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	45	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	45	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	45	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	45	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	45	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	45	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	45	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	45	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	45	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	45	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	45	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	45	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	45	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	45	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	45	Pb ppm: 24 element, rock & core	AAS	2	10000
582	45	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	45	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	45	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	45	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	45	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :2
Certificate Date: 02-JUL-97
Invoice No. :I9728795
P.O. Number :
Account :GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9728795

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
203001	205	226	20	1	1.2	30	< 0.2	3.28	260	5.5	< 2	0.15	< 0.5	4	181	92
203002	205	226	< 5	1	2.0	< 10	0.4	3.41	180	4.5	< 2	1.68	< 0.5	5	171	72
203003	205	226	< 5	1	0.2	< 10	< 0.2	2.75	810	4.0	< 2	0.95	< 0.5	7	185	39
203004	205	226	< 5	2	0.2	< 10	< 0.2	1.23	220	4.0	< 2	1.66	< 0.5	1	179	142
203005	205	226	< 5	1	0.6	50	< 0.2	3.24	9130	6.0	< 2	0.45	1.0	< 1	206	54
203006	205	226	< 5	1	1.0	180	< 0.2	2.87	210	4.0	< 2	0.28	< 0.5	1	183	39
203007	205	226	< 5	1	1.8	630	0.4	2.76	180	3.5	< 2	0.47	3.0	6	181	67
203008	205	226	10	1	1.0	250	< 0.2	2.35	170	2.5	< 2	6.38	2.5	7	138	65
203009	205	226	< 5	2	3.2	260	0.4	1.89	100	3.5	< 2	11.70	3.0	4	103	54
203010	205	226	20	14	5.0	100	0.4	3.67	120	7.5	< 2	0.25	5.0	26	164	187
203011	205	226	< 5	6	2.6	20	< 0.2	4.36	750	3.0	< 2	4.26	< 0.5	17	140	64
203012	205	226	10	24	6.0	150	0.6	3.74	220	2.5	< 2	2.40	0.5	6	187	45
203017	205	226	135	110	28	1050	15.6	3.34	140	4.0	< 2	1.37	6.0	4	260	115
203018	205	226	70	52	9.2	220	1.4	4.16	190	2.5	< 2	1.40	1.5	7	206	50
203019	205	226	< 5	50	2.4	70	0.4	3.60	190	1.5	< 2	1.58	< 0.5	10	128	72
203020	205	226	< 5	6	1.6	40	0.2	3.27	360	2.0	< 2	1.62	< 0.5	7	155	48
203021	205	226	< 5	16	2.8	210	0.2	3.10	330	2.5	< 2	1.13	0.5	12	134	75
203022	205	226	15	2	2.6	50	0.4	2.69	330	1.0	< 2	1.71	< 0.5	5	138	44
203023	205	226	< 5	4	1.2	120	0.4	3.14	270	1.5	< 2	4.32	1.5	9	78	52
203024	205	226	< 5	28	4.0	280	0.8	2.26	120	1.0	< 2	2.07	2.0	9	117	55
203025	205	226	< 5	1	3.8	130	0.8	2.05	200	0.5	< 2	18.75	4.0	11	33	31
203026	205	226	15	1	2.6	50	0.8	4.14	330	1.5	2	2.25	2.0	11	117	56
203027	205	226	< 5	1	1.4	20	< 0.2	2.87	1080	1.0	< 2	1.44	1.5	17	133	79
203028	205	226	30	1	1.6	< 10	0.2	3.72	1270	0.5	< 2	1.49	< 0.5	10	75	69
203029	205	226	10	12	3.4	10	0.4	4.31	160	1.5	< 2	2.38	3.5	10	114	76
203030	205	226	5	1	1.2	30	0.4	3.88	560	1.0	< 2	1.57	< 0.5	8	76	57
203031	205	226	< 5	1	0.6	10	0.6	3.61	520	1.0	< 2	0.36	0.5	9	138	55
203032	205	226	< 5	1	3.6	10	0.2	3.24	740	0.5	< 2	3.68	6.0	9	114	45
203033	205	226	< 5	1	3.6	10	0.6	3.62	1780	1.0	< 2	2.79	5.0	9	142	40
203034	205	226	< 5	1	2.0	10	0.4	2.75	760	0.5	< 2	3.43	3.0	6	103	40
203035	205	226	< 5	1	1.8	20	0.4	3.12	390	0.5	< 2	2.11	0.5	7	83	44
203036	205	226	< 5	1	3.0	10	0.2	4.36	350	1.5	< 2	1.48	< 0.5	6	60	85
203037	205	226	15	10	6.0	10	0.6	3.37	320	1.5	< 2	1.78	2.0	7	81	46
203041	205	226	< 5	16	3.4	30	3.4	2.05	1280	0.5	< 2	0.69	6.0	1	158	1265
203042	205	226	55	144	110	11170	>100.0	0.85	330	< 0.5	Intf*	0.37	>500	22	95	>10000
203043	205	226	< 5	38	14.0	140	26.4	3.68	160	2.0	Intf*	1.83	16.0	8	242	>10000
203044	205	226	10	36	8.4	70	1.2	5.21	210	2.5	< 2	3.08	2.5	8	194	334
203045	205	226	< 5	24	7.8	80	0.6	3.04	110	3.0	< 2	2.31	0.5	5	313	104
203046	205	226	10	80	19.5	360	1.4	3.79	90	2.5	< 2	1.45	6.0	3	287	82
203047	205	226	< 5	6	7.0	40	< 0.2	10.85	1040	5.0	< 2	0.34	0.5	3	117	15

CERTIFICATION: Hart Bichler

*INTERFERENCE: Cu on Bi and P

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :2
Certificate Date: 02-JUL-97
Invoice No. :19728795
P.O. Number :
Account :GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9728795

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
203001	205	226	4.37	1.15	0.39	390	5	0.09	24	240	< 2	41	0.15	111	< 10	48
203002	205	226	7.26	0.77	0.51	620	3	0.09	18	520	< 2	165	0.16	109	< 10	48
203003	205	226	8.63	0.79	0.34	215	5	0.28	22	410	< 2	190	0.14	115	< 10	76
203004	205	226	11.85	0.10	0.26	750	6	0.01	6	1070	< 2	385	0.07	73	< 10	12
203005	205	226	1.50	0.87	0.36	145	15	0.51	28	130	24	107	0.12	126	< 10	276
203006	205	226	1.83	1.12	0.28	90	2	0.11	12	140	12	29	0.11	112	< 10	726
203007	205	226	2.38	1.28	0.28	310	5	0.08	30	270	90	12	0.12	140	< 10	2730
203008	205	226	5.67	0.81	0.48	2450	4	0.05	35	760	90	156	0.10	148	< 10	1605
203009	205	226	8.84	0.43	0.67	4360	4	0.02	21	770	166	340	0.09	131	< 10	1400
203010	205	226	3.74	1.45	0.32	325	< 1	0.14	62	520	224	24	0.15	195	< 10	468
203011	205	226	2.94	2.13	0.88	4640	3	0.08	50	300	22	154	0.18	155	< 10	90
203012	205	226	1.84	1.59	0.41	325	5	0.08	31	1580	46	107	0.12	151	< 10	238
203017	205	226	3.45	1.64	0.45	255	25	0.09	73	1870	922	80	0.10	391	< 10	1035
203018	205	226	2.90	2.21	0.77	520	12	0.21	74	1000	12	133	0.14	273	< 10	418
203019	205	226	2.70	1.55	0.85	1055	1	0.10	50	1880	12	356	0.13	147	< 10	160
203020	205	226	2.22	1.61	0.92	785	< 1	0.10	50	170	4	296	0.12	120	< 10	128
203021	205	226	1.79	1.18	0.42	130	< 1	0.11	60	3500	12	354	0.09	92	< 10	288
203022	205	226	1.54	1.22	0.46	375	< 1	0.06	33	120	4	141	0.11	116	< 10	104
203023	205	226	2.27	1.37	0.71	1105	< 1	0.08	53	150	2	353	0.10	121	< 10	726
203024	205	226	3.07	1.30	0.36	540	< 1	0.14	58	140	10	202	0.07	106	< 10	736
203025	205	226	2.52	0.46	0.54	3260	1	0.05	59	120	8	1760	0.06	41	< 10	1805
203026	205	226	2.38	2.23	0.71	720	< 1	0.25	64	220	8	319	0.09	98	< 10	652
203027	205	226	2.03	1.31	0.58	1395	< 1	0.08	61	210	14	235	0.13	111	< 10	158
203028	205	226	2.70	1.85	0.77	890	1	0.13	24	930	6	274	0.19	102	< 10	116
203029	205	226	3.75	2.30	1.05	1310	< 1	0.23	21	710	2	435	0.17	124	< 10	108
203030	205	226	2.75	2.00	0.93	725	< 1	0.14	25	420	6	262	0.18	130	< 10	100
203031	205	226	3.07	1.91	0.72	495	< 1	0.15	50	170	4	81	0.17	116	< 10	134
203032	205	226	2.67	1.60	1.63	1235	< 1	0.11	68	180	6	687	0.12	108	< 10	256
203033	205	226	2.71	1.68	1.27	1170	1	0.10	51	160	8	453	0.15	119	< 10	252
203034	205	226	2.35	1.40	1.41	1220	1	0.07	50	190	4	377	0.09	97	< 10	134
203035	205	226	2.26	1.54	0.98	785	1	0.06	45	180	8	203	0.13	110	< 10	126
203036	205	226	2.55	2.15	0.83	500	< 1	0.14	16	590	6	142	0.18	118	< 10	100
203037	205	226	2.33	1.55	0.78	635	< 1	0.08	38	200	12	81	0.14	112	< 10	326
203041	205	226	1.45	0.32	0.34	300	1	0.03	15	220	< 2	51	0.03	35	< 10	864
203042	205	226	19.10	0.19	0.27	510	6	0.01	82	Intf*	2980	26	< 0.01	25	< 10	>10000
203043	205	226	2.42	1.38	0.89	730	2	0.12	33	Intf*	< 2	188	0.07	126	< 10	702
203044	205	226	3.07	2.24	1.70	775	8	0.11	60	690	12	225	0.21	231	< 10	318
203045	205	226	2.77	1.30	0.40	325	16	0.04	62	1580	8	142	0.11	168	< 10	254
203046	205	226	5.28	1.74	0.38	130	7	0.09	43	940	60	72	0.11	288	< 10	534
203047	205	226	2.14	4.60	0.96	50	1	0.34	8	640	18	38	0.30	92	< 10	80

CERTIFICATION:

* INTERFERENCE: Cu on Bi and P

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :2-A
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CERTIFICATE OF ANALYSIS A9728795

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
203048	205	226	40	78	14.5	310	1.2	5.58	150	3.5	< 2	0.51	13.0	3	208	32
203049	205	226	10	26	6.2	30	< 0.2	11.30	270	6.0	< 2	0.31	< 0.5	4	53	17
203050	205	226	< 5	68	3.8	< 10	< 0.2	8.31	230	3.0	< 2	0.77	< 0.5	3	104	16
203051	205	226	< 5	1	1.6	< 10	< 0.2	6.39	1450	2.0	< 2	2.42	< 0.5	1	61	8
203052	205	226	< 5	1	2.8	40	< 0.2	6.63	1320	2.0	< 2	1.16	1.5	< 1	109	8

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CERTIFICATE OF ANALYSIS A9728795

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
203048	205	226	8.91	2.67	0.54	80	10	0.17	39	500	28	17	0.14	355	< 10	736
203049	205	226	2.52	5.08	0.96	95	2	0.36	7	640	24	32	0.33	77	< 10	72
203050	205	226	2.41	4.17	0.43	115	2	1.05	4	490	16	128	0.18	19	< 10	26
203051	205	226	0.60	3.10	0.14	250	1	0.23	4	460	12	179	0.15	24	< 10	16
203052	205	226	1.00	2.81	0.12	135	2	0.21	6	790	22	116	0.10	38	< 10	112

CERTIFICATION:

* INTERFERENCE: Cu on Bi and P

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J: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9728949

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9728949

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 1-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	4	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
384	4	Ag g/t: Gravimetric	FA-GRAVIMETRIC	3	1000
316	2	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Certificate Date: 01-JUL-97
Invoice No. :19728949
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9728949

SAMPLE	PREP CODE	Ag FA g/t	Zn %
174866	244 --	751	11.70
174959	244 --	1240	-----
174960	244 --	1110	-----
174961	244 --	970	11.30

CERTIFICATION: Hart Buchler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9728953

Comments: ATTN: PETER HOLBECK CC: PAUL LHOTKA FAX: ANDREW TURNER

CERTIFICATE A9728953

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 6-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	18	Geochem ring to approx 150 mesh
226	18	0-3 Kg crush and split
3202	18	Rock - save entire reject
200	18	Whole rock fusion

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
594	18	Al2O3 %: Whole rock	ICP-AES	0.01	100.00
588	18	CaO %: Whole rock	ICP-AES	0.01	100.00
590	18	Cr2O3 %: Whole Rock	ICP-AES	0.01	100.00
586	18	Fe2O3(total) %: Whole rock	ICP-AES	0.01	100.00
821	18	K2O %: Whole rock	ICP-AES	0.01	100.00
593	18	MgO %: Whole rock	ICP-AES	0.01	100.00
596	18	MnO %: Whole rock	ICP-AES	0.01	100.00
599	18	Na2O %: Whole rock	ICP-AES	0.01	100.00
597	18	P2O5 %: Whole rock	ICP-AES	0.01	100.00
592	18	SiO2 %: Whole rock	ICP-AES	0.01	100.00
595	18	TiO2 %: Whole rock	ICP-AES	0.01	100.00
475	18	L.O.I. %: @ 1000 deg.C	FURNACE	0.01	99.99
540	18	Total %	CALCULATION	0.01	105.00
2840	18	Ba ppm: ICP-MS	ICP-MS	1	10000
2841	18	Cs ppm: ICP-MS	ICP-MS	1	10000
2842	18	Hf ppm: ICP-MS	ICP-MS	1	10000
2843	18	La ppm: ICP-MS	ICP-MS	1	10000
2844	18	Nb ppm: ICP-MS	ICP-MS	1	10000
2845	18	Rb ppm: ICP-MS	ICP-MS	1	10000
2846	18	Sr ppm: ICP-MS	ICP-MS	1	10000
2847	18	Ta ppm: ICP-MS	ICP-MS	1	10000
2848	18	Y ppm: ICP-MS	ICP-MS	1	10000
2849	18	Zr ppm: ICP-MS	ICP-MS	1	10000

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Page Number :1-A
Total Pages :1
Certificate Date: 06-JUL-97
Invoice No. :19728953
P.O. Number :
Account :GP W

Project : WOLVERINE
Comments: ATTN: PETER HOLBECK CC: PAUL LHOTKA FAX: ANDREW TURNER

CERTIFICATE OF ANALYSIS A9728953

SAMPLE	PREP CODE		Al2O3 %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %	Ba ppm
N175802	205	226	4.19	0.80	0.04	2.06	0.93	0.66	0.04	0.17	0.03	86.58	0.22	2.06	97.78	8350
N175803	205	226	3.18	0.68	0.03	7.91	0.41	0.64	0.06	0.14	0.34	81.60	0.15	1.96	97.10	9250
N175804	205	226	2.30	27.80	< 0.01	10.80	0.40	0.50	0.30	0.10	0.14	32.00	0.10	10.90	85.34	3230
N175805	205	226	12.29	1.31	0.01	2.62	3.48	1.47	0.06	0.18	0.03	69.51	0.22	4.01	95.19	>10000
N175806	205	226	3.64	1.06	0.03	1.43	0.67	0.55	0.04	0.13	0.04	87.50	0.12	2.49	97.70	3330
N175807	205	226	5.08	5.09	0.03	2.11	1.29	0.59	0.06	0.21	0.22	75.49	0.21	4.34	94.72	>10000
N175808	205	226	9.38	1.19	0.03	4.43	2.95	0.74	0.04	0.17	0.07	74.20	0.34	3.98	97.52	4290
N175809	205	226	12.29	2.07	0.01	8.73	1.69	8.71	0.12	0.20	0.07	56.60	0.30	6.67	97.46	3500
N175810	205	226	7.07	2.14	0.01	9.42	0.66	3.99	0.16	0.16	0.19	69.20	0.20	4.31	97.51	1095
N175811	205	226	9.88	0.87	0.01	9.97	1.24	4.18	0.11	0.15	0.08	67.30	0.28	3.95	98.02	1140
N175812	205	226	12.37	0.49	0.01	5.01	2.61	4.51	0.06	0.21	0.09	68.50	0.35	3.64	97.85	1555
N175813	205	226	14.92	0.86	0.01	2.91	4.38	4.27	0.01	0.23	0.10	65.85	0.41	4.19	98.14	2210
N175814	205	226	13.98	2.29	0.01	2.50	4.42	3.35	0.01	0.21	0.12	65.70	0.39	4.58	97.56	2640
N175815	205	226	17.11	0.30	0.01	2.10	8.67	0.63	< 0.01	1.41	0.18	64.60	0.49	2.20	97.70	3270
N175816	205	226	3.76	0.60	0.03	1.59	0.91	0.62	0.02	0.17	0.04	88.50	0.19	1.40	97.83	7050
N175817	205	226	3.64	0.42	0.03	3.42	0.70	0.60	0.03	0.15	0.06	84.02	0.19	1.35	94.61	>10000
N175818	205	226	3.35	0.50	0.03	1.25	0.74	0.29	< 0.01	0.17	0.03	85.68	0.16	1.19	93.39	>10000
N175819	205	226	2.84	0.42	0.01	0.79	0.75	0.29	< 0.01	0.18	0.02	91.50	0.12	1.08	98.00	9930

CERTIFICATION: Ian Ridley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Page Number :1-B
Total Pages :1
Certificate Date: 06-JUL-97
Invoice No. :I9728953
P.O. Number :
Account :GP W

Project : WOLVERINE
Comments: ATTN: PETER HOLBECK CC: PAUL LHOTKA FAX: ANDREW TURNER

CERTIFICATE OF ANALYSIS A9728953

SAMPLE	PREP CODE		Cs ppm	Hf ppm	La ppm	Nb ppm	Rb ppm	Sr ppm	Ta ppm	Y ppm	Zr ppm					
N175802	205	226	5	1	15	2	65	267	< 1	10	66					
N175803	205	226	4	1	17	< 1	31	238	< 1	20	43					
N175804	205	226	1	< 1	11	< 1	22	544	< 1	19	18					
N175805	205	226	23	14	97	67	184	62	12	112	454					
N175806	205	226	2	1	9	< 1	34	66	< 1	9	47					
N175807	205	226	3	1	33	3	54	390	< 1	33	54					
N175808	205	226	5	5	33	15	117	47	< 1	25	172					
N175809	205	226	12	6	38	20	71	44	3	33	201					
N175810	205	226	3	4	20	13	25	47	< 1	25	154					
N175811	205	226	4	7	53	22	53	16	2	31	224					
N175812	205	226	10	8	47	29	112	23	4	41	291					
N175813	205	226	18	10	57	35	196	39	6	49	349					
N175814	205	226	14	10	53	30	194	66	4	48	335					
N175815	205	226	4	14	113	52	241	89	8	62	511					
N175816	205	226	5	1	14	< 1	62	135	< 1	9	59					
N175817	205	226	5	1	20	< 1	48	208	< 1	12	51					
N175818	205	226	< 1	1	27	< 1	29	84	< 1	7	46					
N175819	205	226	1	< 1	15	< 1	37	43	< 1	5	31					

CERTIFICATION: Ian Buchler

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o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9728973

Comments: ATTN: PETER HOLBECK CC: PAUL LHOTKA FAX: ANDREW TURNER

CERTIFICATE A9728973

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 1-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	13	Pulp; prepped on other workorder
229	13	ICP - AQ Digestion charge
* NOTE	1:	

The 32 element ICP package is suitable for trace metals in soil and rock samples. Elements for which the nitric-aqua regia digestion is possibly incomplete are: Al, Ba, Be, Ca, Cr, Ga, K, La, Mg, Na, Sr, Ti, Tl, W.

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
2118	13	Ag ppm: 32 element, soil & rock	ICP-AES	0.2	100.0
2119	13	Al %: 32 element, soil & rock	ICP-AES	0.01	15.00
2120	13	As ppm: 32 element, soil & rock	ICP-AES	2	10000
2121	13	Ba ppm: 32 element, soil & rock	ICP-AES	10	10000
2122	13	Be ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2123	13	Bi ppm: 32 element, soil & rock	ICP-AES	2	10000
2124	13	Ca %: 32 element, soil & rock	ICP-AES	0.01	15.00
2125	13	Cd ppm: 32 element, soil & rock	ICP-AES	0.5	100.0
2126	13	Co ppm: 32 element, soil & rock	ICP-AES	1	10000
2127	13	Cr ppm: 32 element, soil & rock	ICP-AES	1	10000
2128	13	Cu ppm: 32 element, soil & rock	ICP-AES	1	10000
2150	13	Fe %: 32 element, soil & rock	ICP-AES	0.01	15.00
2130	13	Ga ppm: 32 element, soil & rock	ICP-AES	10	10000
20	13	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
2132	13	K %: 32 element, soil & rock	ICP-AES	0.01	10.00
2151	13	La ppm: 32 element, soil & rock	ICP-AES	10	10000
2134	13	Mg %: 32 element, soil & rock	ICP-AES	0.01	15.00
2135	13	Mn ppm: 32 element, soil & rock	ICP-AES	5	10000
2136	13	Mo ppm: 32 element, soil & rock	ICP-AES	1	10000
2137	13	Na %: 32 element, soil & rock	ICP-AES	0.01	5.00
2138	13	Ni ppm: 32 element, soil & rock	ICP-AES	1	10000
2139	13	P ppm: 32 element, soil & rock	ICP-AES	10	10000
2140	13	Pb ppm: 32 element, soil & rock	ICP-AES	2	10000
2141	13	Sb ppm: 32 element, soil & rock	ICP-AES	2	10000
2142	13	Sc ppm: 32 elements, soil & rock	ICP-AES	1	10000
2143	13	Sr ppm: 32 element, soil & rock	ICP-AES	1	10000
2144	13	Ti %: 32 element, soil & rock	ICP-AES	0.01	5.00
2145	13	Tl ppm: 32 element, soil & rock	ICP-AES	10	10000
2146	13	U ppm: 32 element, soil & rock	ICP-AES	10	10000
2147	13	V ppm: 32 element, soil & rock	ICP-AES	1	10000
2148	13	W ppm: 32 element, soil & rock	ICP-AES	10	10000
2149	13	Zn ppm: 32 element, soil & rock	ICP-AES	2	10000
21	7	F ppm: Carbonate-nitrate fusion	SPECIFIC ION	20	10000

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Page Number : 1-A
Total Pages : 1
Certificate Date: 01-JUL-97
Invoice No. : I9728973
P.O. Number :
Account : GP W

Project : WOLVERINE
Comments: ATTN: PETER HOLBECK CC: PAUL LHOTKA FAX: ANDREW TURNER

CERTIFICATE OF ANALYSIS A9728973

SAMPLE	PREP CODE		Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Hg ppb	K %	La ppm	Mg %	Mn ppm	Mo ppm
N175802	299	229	< 0.2	0.50	2	1790	< 0.5	< 2	0.53	< 0.5	3	157	34	1.14	< 10	10	0.12	< 10	0.28	340	1
N175803	299	229	< 0.2	1.20	2	1270	< 0.5	< 2	0.43	< 0.5	3	146	39	5.35	< 10	10	0.12	< 10	0.34	445	2
N175804	299	229	1.0	0.19	30	60	< 0.5	< 2	13.80	6.0	4	43	22	5.95	< 10	1270	0.03	< 10	0.15	1740	11
N175805	299	229	< 0.2	0.52	< 2	670	< 0.5	< 2	0.93	1.0	< 1	67	6	1.29	< 10	80	0.20	50	0.38	430	4
N175806	299	229	< 0.2	0.31	< 2	390	< 0.5	< 2	0.72	< 0.5	3	143	35	0.91	< 10	20	0.06	< 10	0.26	275	1
N175807	299	229	< 0.2	0.57	8	130	< 0.5	< 2	3.54	< 0.5	5	96	36	1.36	< 10	20	0.11	< 10	0.25	415	< 1
N175808	299	229	2.2	0.35	30	60	< 0.5	< 2	0.79	< 0.5	14	68	130	2.90	< 10	110	0.21	< 10	0.09	300	5
N175809	299	229	0.8	3.97	2	300	< 0.5	50	1.33	< 0.5	13	40	29	5.30	10	< 10	0.27	30	4.22	795	6
N175810	299	229	0.6	2.89	242	110	< 0.5	56	1.35	1.0	14	51	76	5.98	10	40	0.09	10	2.18	1100	3
N175811	299	229	1.4	3.57	2	90	< 0.5	22	0.50	< 0.5	13	32	26	6.32	10	< 10	0.12	40	2.27	775	2
N175812	299	229	0.2	2.52	14	90	< 0.5	< 2	0.28	< 0.5	6	40	18	3.15	< 10	< 10	0.23	30	2.34	405	3
N175813	299	229	0.2	1.40	14	110	< 0.5	< 2	0.52	< 0.5	3	41	6	1.77	< 10	10	0.47	10	1.81	105	3
N175814	299	229	0.2	0.73	8	110	< 0.5	< 2	1.51	< 0.5	3	48	7	1.51	< 10	50	0.37	< 10	1.15	125	3

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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CERTIFICATE OF ANALYSIS A9728973

SAMPLE	PREP CODE		Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	Tl ppm	U ppm	V ppm	W ppm	Zn ppm	F ppm
N175802	299	229	< 0.01	20	80	2	< 2	1	225	< 0.01	< 10	< 10	9	< 10	58	-----
N175803	299	229	0.01	15	1320	< 2	2	3	202	0.01	< 10	< 10	36	< 10	30	-----
N175804	299	229	< 0.01	12	760	310	6	2	515	< 0.01	< 10	< 10	8	< 10	3990	-----
N175805	299	229	< 0.01	< 1	20	6	< 2	< 1	56	< 0.01	< 10	< 10	< 1	< 10	660	2750
N175806	299	229	< 0.01	33	80	8	< 2	1	59	< 0.01	< 10	< 10	6	< 10	76	350
N175807	299	229	0.01	30	840	10	2	3	213	< 0.01	< 10	< 10	7	< 10	82	710
N175808	299	229	< 0.01	65	250	80	22	< 1	35	< 0.01	< 10	< 10	6	< 10	70	1250
N175809	299	229	< 0.01	3	230	66	2	1	39	0.01	< 10	< 10	46	< 10	142	2880
N175810	299	229	< 0.01	4	740	18	2	1	42	< 0.01	< 10	< 10	14	< 10	400	1100
N175811	299	229	< 0.01	< 1	290	12	2	1	12	0.01	< 10	< 10	3	< 10	102	1250
N175812	299	229	< 0.01	1	290	< 2	2	< 1	8	< 0.01	< 10	< 10	3	< 10	76	-----
N175813	299	229	< 0.01	< 1	310	20	2	< 1	18	0.01	< 10	< 10	1	< 10	26	-----
N175814	299	229	< 0.01	2	340	16	2	< 1	50	< 0.01	< 10	< 10	< 1	< 10	50	-----

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9729015

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9729015

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 7-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	85	Geochem ring to approx 150 mesh
294	85	4-7 Kg crush and split
3202	85	Rock - save entire reject
285	85	ICP - HF digestion charge
287	85	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	85	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	85	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	85	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	85	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	85	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	85	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	85	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	85	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	85	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	85	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	85	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	85	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	85	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	85	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	85	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	85	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	85	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	85	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	85	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	85	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	85	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	85	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	85	Pb ppm: 24 element, rock & core	AAS	2	10000
582	85	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	85	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	85	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	85	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	85	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 07-JUL-97
Invoice No. :I9729015
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9729015

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174910	205	294	20	1	0.4	10	< 0.2	2.42	2210	0.5	< 2	0.16	< 0.5	3	138	91
174911	205	294	20	1	0.6	< 10	< 0.2	1.82	1040	0.5	< 2	0.40	< 0.5	3	160	77
174912	205	294	10	1	0.8	20	< 0.2	2.11	1310	1.5	< 2	0.14	< 0.5	7	177	97
174913	205	294	90	1	1.0	< 10	< 0.2	3.55	1700	4.5	< 2	0.13	< 0.5	5	178	17
174914	205	294	< 5	2	1.2	10	< 0.2	1.64	620	4.5	< 2	0.33	< 0.5	5	190	35
174915	205	294	< 5	1	5.2	60	< 0.2	1.23	930	7.5	< 2	12.25	< 0.5	3	92	52
174916	205	294	50	12	5.8	10	< 0.2	0.44	280	3.0	< 2	24.8	0.5	1	40	19
174917	205	294	35	8	3.4	10	< 0.2	0.31	240	1.5	< 2	>25.0	< 0.5	2	63	24
174918	205	294	10	2	1.8	170	< 0.2	2.10	2170	3.5	< 2	3.15	1.0	4	158	56
174919	205	294	30	10	2.8	< 10	< 0.2	0.53	200	2.0	< 2	>25.0	< 0.5	< 1	31	12
174920	205	294	20	6	1.2	580	< 0.2	0.94	1080	2.0	< 2	0.18	4.0	2	218	29
174921	205	294	< 5	1	1.6	270	< 0.2	1.86	1040	2.5	< 2	9.57	2.0	5	105	58
174922	205	294	15	1	1.6	520	< 0.2	2.08	1060	3.5	< 2	9.62	3.5	8	124	58
174923	205	294	< 5	2	1.0	20	< 0.2	3.17	1100	6.0	< 2	1.00	2.5	13	153	90
174924	205	294	20	12	3.0	160	< 0.2	2.17	940	3.0	< 2	8.66	1.5	5	126	63
174925	205	294	< 5	10	2.0	< 10	< 0.2	0.44	1440	< 0.5	< 2	0.19	< 0.5	3	241	20
174926	205	294	< 5	4	3.6	200	1.4	3.86	940	5.0	< 2	0.44	3.0	11	208	86
174927	205	294	< 5	4	3.2	< 10	< 0.2	0.20	750	< 0.5	< 2	0.11	< 0.5	< 1	139	4
174928	205	294	< 5	1	2.4	30	< 0.2	3.95	3160	1.5	2	1.43	< 0.5	5	211	62
174929	205	294	< 5	20	1.4	< 10	< 0.2	2.39	650	1.0	< 2	4.03	< 0.5	6	183	46
174930	205	294	< 5	4	1.8	< 10	< 0.2	1.07	210	< 0.5	< 2	0.36	0.5	3	267	13
174931	205	294	< 5	1	< 0.2	10	< 0.2	1.05	>10000	< 0.5	< 2	0.34	1.0	< 1	265	6
174932	205	294	< 5	36	2.0	< 10	< 0.2	1.90	5680	0.5	< 2	0.54	0.5	3	247	28
174933	205	294	< 5	26	6.4	10	< 0.2	2.77	1300	1.5	< 2	1.11	< 0.5	10	309	123
174934	205	294	< 5	12	4.0	20	< 0.2	1.70	450	1.0	< 2	14.50	< 0.5	5	129	58
174935	205	294	< 5	6	1.2	< 10	< 0.2	2.24	490	1.5	2	0.36	< 0.5	6	205	40
174936	205	294	20	1	7.0	80	2.0	2.81	1260	1.5	< 2	3.40	2.0	4	132	45
174937	205	294	15	1	0.6	10	< 0.2	1.93	700	1.5	< 2	4.50	2.5	4	165	50
174938	205	294	25	1	3.0	20	0.6	3.62	1200	2.5	< 2	2.79	< 0.5	5	127	81
174939	205	294	20	1	5.8	70	0.2	3.09	1030	2.0	< 2	5.56	< 0.5	4	135	56
174940	205	294	15	2	2.6	10	< 0.2	3.13	880	2.0	< 2	2.16	< 0.5	6	160	40
174941	205	294	15	1	1.6	< 10	< 0.2	3.17	920	2.5	< 2	2.33	< 0.5	8	176	39
174942	205	294	15	1	1.2	100	< 0.2	3.66	820	2.5	< 2	3.13	0.5	14	159	56
174943	205	294	10	1	0.8	40	< 0.2	2.62	970	1.5	< 2	3.08	< 0.5	7	128	50
174944	205	294	< 5	2	1.4	10	< 0.2	2.17	1060	1.5	< 2	4.99	< 0.5	6	106	40
174945	205	294	< 5	6	1.4	50	< 0.2	2.92	900	1.5	< 2	8.72	< 0.5	5	99	41
174946	205	294	10	2	0.4	30	< 0.2	3.72	1270	2.0	< 2	2.67	0.5	8	108	42
174947	205	294	15	4	2.2	70	< 0.2	3.48	1230	2.0	2	3.71	< 0.5	18	82	59
174948	205	294	15	2	2.4	40	< 0.2	1.98	1140	1.5	< 2	0.73	3.5	26	130	123
174949	205	294	< 5	1	1.0	< 10	< 0.2	2.69	1310	2.0	< 2	2.09	4.5	10	152	43

CERTIFICATION: Stuart Buchler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page : 1-B
Total Pages : 3
Certificate Date: 07-JUL-97
Invoice No. : I9729015
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9729015

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174910	205	294	2.05	0.57	0.35	105	8	0.04	35	140	< 2	98	0.13	90	< 10	96
174911	205	294	6.63	0.23	0.41	305	7	0.05	17	550	< 2	457	0.10	96	< 10	42
174912	205	294	2.21	0.60	0.26	80	12	0.03	54	160	10	48	0.11	90	< 10	144
174913	205	294	4.43	0.84	0.42	150	1	0.06	22	360	< 2	132	0.18	111	< 10	64
174914	205	294	12.95	0.06	0.21	415	8	0.01	23	820	< 2	186	0.08	78	< 10	82
174915	205	294	9.04	0.48	0.51	2950	18	< 0.01	17	450	120	171	0.05	136	< 10	98
174916	205	294	2.23	0.16	0.12	1925	15	< 0.01	9	1580	320	191	0.01	92	< 10	52
174917	205	294	4.36	0.11	0.15	2260	16	< 0.01	7	980	544	447	0.01	61	< 10	38
174918	205	294	2.22	0.76	0.22	480	9	0.01	24	420	130	45	0.08	118	10	388
174919	205	294	2.80	0.22	0.16	2270	12	< 0.01	7	590	212	473	0.02	95	< 10	74
174920	205	294	3.75	0.40	0.09	70	4	0.01	16	70	220	6	0.03	67	< 10	2470
174921	205	294	7.73	0.24	0.59	4170	8	0.02	30	530	150	300	0.08	137	< 10	912
174922	205	294	9.24	0.28	0.75	5420	4	0.05	31	770	220	387	0.10	141	< 10	2140
174923	205	294	1.90	1.34	0.35	700	1	0.05	31	390	100	53	0.11	170	< 10	838
174924	205	294	7.50	0.81	0.54	3280	6	0.03	32	900	132	240	0.10	168	< 10	640
174925	205	294	0.66	0.05	0.07	70	1	< 0.01	22	30	4	17	0.03	53	< 10	18
174926	205	294	1.88	1.57	0.43	635	2	0.06	43	620	40	67	0.14	143	< 10	566
174927	205	294	0.46	0.01	0.02	60	< 1	< 0.01	7	< 10	< 2	5	< 0.01	6	< 10	12
174928	205	294	1.30	1.46	0.55	1300	< 1	0.05	52	790	4	99	0.17	101	< 10	166
174929	205	294	1.26	0.50	0.28	575	< 1	0.03	28	140	4	454	0.11	145	< 10	30
174930	205	294	0.70	0.02	0.11	150	< 1	< 0.01	23	60	6	22	0.03	44	< 10	68
174931	205	294	0.29	0.57	0.09	115	< 1	0.05	6	< 10	20	65	< 0.01	10	< 10	92
174932	205	294	0.77	0.83	0.20	160	1	0.08	51	40	6	112	0.05	75	< 10	58
174933	205	294	1.55	0.62	0.37	315	1	0.06	108	300	4	136	0.11	276	< 10	46
174934	205	294	1.63	0.65	0.29	1570	1	0.03	49	120	14	557	0.06	127	< 10	132
174935	205	294	1.16	0.49	0.25	110	1	0.02	28	100	< 2	45	0.06	150	< 10	16
174936	205	294	1.87	1.40	0.59	645	< 1	0.17	37	150	8	381	0.04	86	< 10	276
174937	205	294	1.59	0.96	0.90	1080	< 1	0.09	26	90	8	369	0.04	102	< 10	352
174938	205	294	1.69	1.82	0.61	540	1	0.20	30	150	10	340	0.07	168	< 10	62
174939	205	294	1.81	1.40	0.67	895	< 1	0.18	25	300	8	535	0.04	117	< 10	104
174940	205	294	1.39	1.55	0.62	610	< 1	0.15	31	120	8	192	0.09	111	< 10	118
174941	205	294	1.47	1.48	0.67	695	< 1	0.09	40	120	4	155	0.11	122	< 10	60
174942	205	294	1.65	1.83	0.64	645	< 1	0.11	51	200	14	276	0.10	135	< 10	236
174943	205	294	1.34	1.30	0.45	500	< 1	0.12	34	160	6	311	0.07	81	< 10	58
174944	205	294	1.37	1.06	0.51	965	< 1	0.13	31	120	4	419	0.06	68	< 10	68
174945	205	294	1.39	1.48	0.61	1465	< 1	0.31	27	180	12	629	0.08	72	< 10	116
174946	205	294	1.55	1.96	0.83	615	< 1	0.14	41	150	6	255	0.08	71	< 10	122
174947	205	294	1.89	1.79	0.71	730	< 1	0.29	64	170	6	254	0.06	72	< 10	158
174948	205	294	1.12	0.86	0.30	275	< 1	0.06	80	140	16	63	0.06	93	< 10	488
174949	205	294	1.43	1.28	0.57	665	< 1	0.07	38	230	6	176	0.10	86	< 10	316

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 07-JUL-97
Invoice No. : I9729015
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9729015

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174950	205	294	< 5	1	0.6	< 10	< 0.2	2.34	2370	1.5	< 2	0.74	6.0	5	163	53
174951	205	294	< 5	1	1.2	< 10	< 0.2	4.87	2150	1.5	< 2	1.39	4.0	8	103	80
174952	205	294	< 5	1	3.6	< 10	< 0.2	4.30	1630	1.0	2	2.01	3.0	9	105	70
174953	205	294	< 5	1	1.0	< 10	< 0.2	3.94	1830	1.5	< 2	2.02	2.5	8	128	55
174954	205	294	< 5	2	0.6	< 10	< 0.2	2.00	1030	1.0	< 2	6.66	< 0.5	5	106	44
174955	205	294	< 5	1	0.8	< 10	< 0.2	2.87	1290	1.5	< 2	5.73	< 0.5	5	101	55
174956	205	294	< 5	6	1.2	10	< 0.2	2.15	580	1.5	< 2	8.71	1.0	4	88	55
174963	205	294	10	1	3.6	30	2.2	3.22	1410	1.0	2	0.65	1.0	7	165	177
174964	205	294	25	1	2.8	< 10	< 0.2	3.07	2830	0.5	< 2	0.32	1.5	9	130	60
174965	205	294	10	2	0.8	< 10	< 0.2	3.44	1620	1.0	< 2	0.27	4.0	8	163	40
174966	205	294	< 5	4	1.0	< 10	< 0.2	3.20	2960	0.5	2	0.37	4.5	5	184	61
174967	205	294	< 5	1	1.0	10	< 0.2	3.29	1820	1.0	< 2	0.29	11.5	9	160	77
174968	205	294	< 5	1	0.6	30	< 0.2	3.36	2620	1.0	2	0.82	2.5	9	123	47
174969	205	294	< 5	2	4.0	< 10	< 0.2	3.47	930	1.0	< 2	0.73	1.5	12	177	56
174970	205	294	5	1	1.6	< 10	< 0.2	5.26	2000	2.0	< 2	0.28	1.5	15	134	46
174971	205	294	20	16	2.4	< 10	< 0.2	5.01	2310	1.5	< 2	0.23	5.0	38	172	78
174972	205	294	10	1	0.6	< 10	< 0.2	3.80	1240	1.0	< 2	0.34	2.5	11	104	57
174973	205	294	15	1	0.6	< 10	< 0.2	3.91	1430	1.5	< 2	0.46	2.0	8	134	56
174974	205	294	10	1	1.2	< 10	< 0.2	3.19	1120	1.5	< 2	0.80	3.5	10	89	56
174975	205	294	< 5	2	1.6	< 10	< 0.2	3.34	930	1.5	< 2	1.88	6.0	9	135	52
174976	205	294	< 5	1	1.8	< 10	< 0.2	5.03	1030	2.5	< 2	1.50	1.5	10	203	56
174977	205	294	< 5	2	0.8	< 10	< 0.2	4.96	1230	2.0	< 2	0.73	0.5	16	103	98
174978	205	294	< 5	2	1.2	< 10	< 0.2	4.58	1620	2.0	< 2	0.99	1.5	12	84	53
174979	205	294	< 5	1	6.2	40	< 0.2	9.46	1810	3.5	< 2	1.33	< 0.5	4	89	9
174980	205	294	< 5	1	2.2	< 10	< 0.2	8.69	1940	3.5	< 2	1.03	< 0.5	3	105	5
174981	205	294	< 5	1	1.4	< 10	< 0.2	7.13	1070	2.5	2	1.11	< 0.5	3	100	5
174982	205	294	< 5	2	1.4	< 10	< 0.2	7.61	840	3.5	< 2	0.96	< 0.5	3	100	5
174983	205	294	< 5	1	1.8	< 10	< 0.2	7.54	1200	3.0	< 2	0.32	< 0.5	3	102	4
174984	205	294	< 5	4	1.6	< 10	< 0.2	5.94	540	2.5	2	0.90	0.5	2	65	5
174985	205	294	< 5	10	1.0	20	< 0.2	6.06	1170	2.0	< 2	0.53	0.5	3	149	5
174986	205	294	< 5	14	1.8	< 10	< 0.2	7.14	1590	1.5	< 2	0.56	< 0.5	3	96	6
174987	205	294	< 5	4	1.4	< 10	< 0.2	7.99	3160	2.0	< 2	0.62	0.5	1	86	6
174988	205	294	< 5	10	1.4	< 10	< 0.2	8.15	3210	2.5	< 2	0.43	0.5	2	103	8
174989	205	294	< 5	12	1.2	< 10	< 0.2	8.32	2240	3.0	< 2	0.43	< 0.5	3	104	7
174990	205	294	< 5	12	1.2	< 10	< 0.2	8.14	3450	3.0	< 2	0.47	0.5	1	91	6
174991	205	294	< 5	6	1.4	< 10	< 0.2	8.08	3830	3.0	< 2	0.41	0.5	1	78	9
174992	205	294	< 5	10	1.8	< 10	< 0.2	7.49	2490	2.5	< 2	0.24	< 0.5	3	86	7
174993	205	294	< 5	6	1.4	< 10	< 0.2	8.13	2640	2.5	< 2	0.24	< 0.5	3	84	7
174994	205	294	< 5	12	1.4	< 10	< 0.2	7.38	1790	2.5	< 2	0.47	< 0.5	3	78	5
174995	205	294	< 5	20	2.4	20	< 0.2	7.92	1750	3.5	2	0.33	< 0.5	5	87	9

CERTIFICATION:

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Page : 2-B
Total Pages : 3
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CERTIFICATE OF ANALYSIS A9729015

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174950	205	294	1.14	1.14	0.41	270	< 1	0.06	25	160	8	99	0.08	81	< 10	74
174951	205	294	2.70	2.26	0.91	725	< 1	0.08	21	490	10	201	0.23	106	< 10	264
174952	205	294	3.12	2.01	1.13	1285	< 1	0.06	22	510	12	267	0.22	107	< 10	274
174953	205	294	2.45	1.88	0.85	760	< 1	0.10	19	1020	10	215	0.18	99	< 10	236
174954	205	294	1.32	1.02	0.47	1340	< 1	0.06	16	160	6	415	0.06	53	< 10	76
174955	205	294	1.86	1.56	0.73	1240	< 1	0.07	15	260	4	395	0.10	76	< 10	46
174956	205	294	1.97	1.09	0.47	1520	1	0.04	26	130	26	261	0.07	54	< 10	128
174963	205	294	1.67	1.31	0.51	255	1	0.04	39	160	4	52	0.12	122	< 10	154
174964	205	294	1.46	1.19	0.42	175	< 1	0.05	50	210	8	47	0.12	120	< 10	84
174965	205	294	1.49	1.31	0.44	130	< 1	0.05	43	190	12	47	0.12	115	< 10	86
174966	205	294	1.88	1.23	0.54	310	< 1	0.05	41	220	10	66	0.12	122	< 10	112
174967	205	294	2.16	1.20	0.53	515	< 1	0.06	58	170	8	56	0.14	123	< 10	196
174968	205	294	1.97	1.20	0.66	525	< 1	0.05	59	160	10	138	0.13	118	< 10	222
174969	205	294	2.32	1.26	0.66	570	< 1	0.07	50	210	8	137	0.13	128	< 10	158
174970	205	294	2.29	2.24	0.77	355	< 1	0.10	57	240	12	66	0.23	166	< 10	144
174971	205	294	2.38	2.14	0.77	415	< 1	0.09	157	230	10	51	0.26	194	< 10	150
174972	205	294	1.98	1.64	0.62	735	< 1	0.09	43	240	6	80	0.17	140	< 10	142
174973	205	294	1.74	1.56	0.59	325	< 1	0.08	39	150	8	100	0.16	144	< 10	110
174974	205	294	1.72	1.27	0.56	355	< 1	0.06	46	150	6	106	0.11	117	< 10	90
174975	205	294	2.40	1.32	0.97	1460	1	0.06	42	210	14	189	0.11	127	< 10	276
174976	205	294	2.19	2.17	1.18	850	< 1	0.10	40	140	2	179	0.17	174	< 10	142
174977	205	294	2.07	2.10	0.86	495	3	0.11	48	190	4	114	0.18	160	< 10	142
174978	205	294	1.74	1.91	0.92	715	1	0.08	36	210	< 2	133	0.17	125	< 10	126
174979	205	294	2.38	3.90	0.91	130	3	0.55	4	540	34	119	0.23	44	< 10	46
174980	205	294	2.02	3.41	0.28	125	1	1.42	3	600	24	123	0.17	27	< 10	18
174981	205	294	1.03	3.59	0.19	215	< 1	1.12	3	470	22	112	0.12	16	< 10	14
174982	205	294	1.37	5.16	0.23	165	3	0.57	4	530	24	91	0.15	21	< 10	18
174983	205	294	1.30	4.47	0.19	80	3	1.00	5	470	24	65	0.12	21	< 10	22
174984	205	294	1.42	3.74	0.17	175	2	0.99	3	410	32	99	0.11	17	< 10	62
174985	205	294	1.24	3.01	0.18	110	1	0.90	5	380	20	66	0.11	16	< 10	44
174986	205	294	1.69	3.68	0.14	120	< 1	1.96	5	450	18	89	0.11	16	< 10	10
174987	205	294	1.25	4.52	0.13	120	< 1	1.95	3	520	18	96	0.15	18	< 10	14
174988	205	294	1.63	4.33	0.19	95	< 1	1.50	3	540	22	85	0.15	21	< 10	22
174989	205	294	1.91	4.85	0.21	90	2	1.26	3	530	20	83	0.13	19	< 10	16
174990	205	294	1.33	5.07	0.19	85	1	1.27	3	510	20	92	0.13	18	< 10	16
174991	205	294	2.62	5.97	0.18	80	3	1.20	3	580	20	82	0.17	21	< 10	20
174992	205	294	3.04	4.55	0.14	50	3	1.55	3	470	22	60	0.11	16	< 10	14
174993	205	294	2.19	5.32	0.17	55	1	1.25	4	510	22	66	0.13	19	10	12
174994	205	294	2.00	4.50	0.15	85	< 1	1.46	3	460	14	89	0.11	15	< 10	12
174995	205	294	8.74	4.70	0.45	75	2	0.88	5	510	28	58	0.20	21	< 10	42

CERTIFICATION: Hank Buchler

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P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9729015

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174996	205	294	< 5	14	1.8	< 10	< 0.2	9.66	3770	3.5	< 2	0.59	0.5	2	90	7
174997	205	294	< 5	12	2.0	< 10	< 0.2	7.13	2550	2.0	< 2	0.27	< 0.5	2	78	5
174998	205	294	< 5	14	1.2	< 10	< 0.2	10.25	570	4.0	< 2	1.43	< 0.5	3	59	7
174999	205	294	< 5	2	1.2	< 10	< 0.2	8.42	920	3.0	2	0.40	< 0.5	3	57	4
175000	205	294	< 5	1	1.0	30	< 0.2	6.65	760	3.0	< 2	0.65	0.5	1	102	7

CERTIFICATION: [signature]

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 07-JUL-97
Invoice No. : I9729015
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9729015

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174996	205	294	3.79	6.15	0.48	115	2	1.15	4	600	26	109	0.24	24	< 10	38
174997	205	294	4.43	4.30	0.12	55	3	1.64	1	470	22	58	0.11	13	< 10	18
174998	205	294	3.12	8.29	0.28	205	< 1	0.88	3	730	14	257	0.20	41	< 10	26
174999	205	294	1.68	3.29	0.42	70	3	1.95	3	510	18	86	0.18	23	< 10	16
175000	205	294	1.27	3.33	0.80	85	6	0.14	8	1290	22	67	0.12	86	< 10	126

CERTIFICATION: Ian Pitcher

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9729884

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9729884

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 3-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	2	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
384	1	Ag g/t: Gravimetric	FA-GRAVIMETRIC	3	1000
301	2	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page N : 1
Total Pages : 1
Certificate Date: 03-JUL-97
Invoice No. : I9729884
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9729884

SAMPLE	PREP CODE		Ag FA g/t	Cu %	Zn %							
203042	244	--	525	17.30	9.45							
203043	244	--	-----	1.22	-----							

CERTIFICATION: Said Leinad

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

.o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9730054

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9730054

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 8-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	35	Geochem ring to approx 150 mesh
226	35	0-3 Kg crush and split
3202	35	Rock - save entire reject
285	35	ICP - HF digestion charge
287	35	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	35	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	35	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	35	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	35	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	35	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	35	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	35	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	35	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	35	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	35	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	35	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	35	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	35	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	35	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	35	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	35	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	35	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	35	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	35	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	35	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	35	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	35	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	35	Pb ppm: 24 element, rock & core	AAS	2	10000
582	35	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	35	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	35	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	35	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	35	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 08-JUL-97
Invoice No. : I9730054
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9730054

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203055	205	226	< 5	1	< 0.2	< 10	< 0.2	7.49	50	< 0.5	< 2	5.48	< 0.5	47	359	72
N203056	205	226	< 5	1	1.8	30	< 0.2	3.24	280	1.0	< 2	1.99	< 0.5	7	201	61
N203057	205	226	85	26	13.0	140	2.0	2.49	140	2.0	< 2	1.08	< 0.5	5	129	54
N203058	205	226	70	92	4.0	30	< 0.2	1.36	70	1.0	< 2	0.24	< 0.5	3	107	54
N203059	205	226	15	12	2.2	70	0.4	3.24	160	4.0	< 2	1.52	< 0.5	12	191	114
N203060	205	226	< 5	2	2.6	110	< 0.2	2.13	230	2.5	< 2	0.24	< 0.5	4	160	65
N203061	205	226	40	22	6.2	60	< 0.2	0.67	140	1.5	< 2	21.8	< 0.5	< 1	44	23
N203062	205	226	30	2	1.6	120	< 0.2	2.88	150	4.0	< 2	7.52	0.5	5	119	71
N203063	205	226	40	10	3.8	410	< 0.2	2.00	110	7.5	< 2	11.70	4.5	4	84	66
N203064	205	226	10	8	0.6	70	< 0.2	4.22	300	7.5	< 2	0.79	0.5	16	120	97
N203065	205	226	< 5	4	14.5	30	< 0.2	1.57	540	< 0.5	< 2	3.74	< 0.5	5	114	44
N203066	205	226	< 5	2	5.8	10	< 0.2	1.11	250	< 0.5	< 2	19.25	< 0.5	1	70	14
N203067	205	226	< 5	2	12.5	30	< 0.2	1.31	270	< 0.5	< 2	3.30	< 0.5	4	184	37
N203068	205	226	< 5	4	13.0	10	< 0.2	1.30	280	< 0.5	< 2	20.8	< 0.5	2	64	68
N203069	205	226	< 5	1	6.8	10	< 0.2	1.63	470	0.5	< 2	0.68	< 0.5	4	113	46
N203070	205	226	< 5	1	13.0	40	< 0.2	2.54	280	1.0	< 2	0.72	< 0.5	7	167	61
N203071	205	226	10	1	3.4	20	< 0.2	1.52	2040	0.5	< 2	>25.0	< 0.5	< 1	88	26
N203072	205	226	10	2	5.6	60	< 0.2	1.99	220	0.5	< 2	1.32	< 0.5	5	149	66
N203073	205	226	10	1	1.2	30	< 0.2	5.27	2130	2.0	< 2	0.21	< 0.5	16	147	48
N203074	205	226	15	2	1.4	10	< 0.2	4.08	260	1.5	< 2	0.94	< 0.5	8	105	52
N203075	205	226	< 5	1	7.6	30	< 0.2	4.39	230	1.5	< 2	0.28	< 0.5	9	99	49
N203076	205	226	< 5	2	24	90	0.6	3.92	210	1.5	< 2	1.73	< 0.5	9	108	48
N203077	205	226	< 5	10	22	840	0.4	3.21	350	1.5	< 2	0.64	< 0.5	11	127	64
N203078	205	226	< 5	4	16.0	590	< 0.2	3.39	270	1.5	< 2	1.93	< 0.5	6	155	38
N203079	205	226	< 5	28	44	500	3.8	4.30	200	3.5	< 2	1.48	3.0	6	159	87
N203080	205	226	< 5	12	14.5	70	0.4	3.61	140	1.5	< 2	9.42	< 0.5	6	69	33
N203081	205	226	< 5	1	8.8	60	< 0.2	4.39	300	2.5	< 2	4.07	< 0.5	7	70	18
N203082	205	226	< 5	12	14.0	120	0.4	2.35	260	3.0	< 2	0.47	< 0.5	5	142	30
N203083	205	226	< 5	18	15.0	140	0.6	1.84	140	2.5	< 2	0.63	< 0.5	4	146	40
N203084	205	226	10	24	13.0	120	0.8	2.05	140	2.0	< 2	0.66	< 0.5	3	147	35
N203085	205	226	15	40	22	200	1.0	1.82	130	2.0	< 2	0.11	< 0.5	3	152	41
N203086	205	226	20	38	24	320	1.2	2.40	190	3.0	< 2	0.08	1.5	4	149	49
N203087	205	226	20	58	26	640	1.6	1.89	150	2.0	< 2	0.15	5.0	4	166	49
N203088	205	226	20	74	38	320	2.4	1.67	170	2.0	< 2	0.30	1.5	3	155	53
N203089	205	226	120	134	170	410	22.8	3.54	120	5.0	< 2	0.98	0.5	3	150	4240

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 08-JUL-97
Invoice No. :I9730054
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9730054

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203055	205	226	5.84	0.04	6.30	1085	< 1	1.54	275	240	< 2	105	0.41	220	< 10	50
N203056	205	226	2.75	1.08	1.16	1215	1	0.03	72	530	12	115	0.14	101	< 10	156
N203057	205	226	5.25	0.33	0.57	1095	11	0.01	34	540	4	96	0.10	89	< 10	158
N203058	205	226	14.55	0.05	0.25	705	14	< 0.01	12	210	8	55	0.06	82	< 10	52
N203059	205	226	3.61	0.53	0.73	890	90	0.02	101	1110	116	201	0.14	186	< 10	254
N203060	205	226	1.94	0.84	0.25	230	35	0.03	41	150	62	22	0.08	98	< 10	96
N203061	205	226	4.71	0.27	0.16	2000	16	< 0.01	13	1520	310	543	0.03	104	20	106
N203062	205	226	4.38	1.04	0.41	1850	5	0.02	28	780	92	295	0.13	167	< 10	598
N203063	205	226	9.12	0.63	0.57	4100	9	0.01	19	970	420	407	0.08	154	< 10	1930
N203064	205	226	1.83	1.80	0.52	1020	1	0.08	39	580	76	43	0.16	167	< 10	302
N203065	205	226	0.96	0.04	0.25	910	< 1	< 0.01	52	1070	4	170	0.07	84	< 10	38
N203066	205	226	1.18	0.01	0.19	2660	2	< 0.01	38	7480	170	2320	0.04	34	10	18
N203067	205	226	0.74	0.06	0.18	395	< 1	< 0.01	47	890	8	323	0.06	89	< 10	44
N203068	205	226	1.12	0.23	0.25	1930	2	0.01	54	270	8	2430	0.03	42	20	8
N203069	205	226	0.72	0.40	0.19	105	< 1	0.03	36	60	< 2	80	0.05	95	< 10	34
N203070	205	226	1.48	1.04	0.41	335	< 1	0.03	64	110	6	36	0.10	115	< 10	76
N203071	205	226	1.46	0.46	0.29	3080	3	0.03	27	370	4	880	0.07	57	20	42
N203072	205	226	1.39	0.79	0.25	240	1	0.01	52	170	8	52	0.08	103	< 10	132
N203073	205	226	2.32	2.54	0.71	435	1	0.14	63	250	8	71	0.22	182	< 10	146
N203074	205	226	2.08	2.15	0.86	1010	1	0.12	34	200	< 2	230	0.15	120	< 10	54
N203075	205	226	1.75	2.37	0.66	205	< 1	0.22	33	160	< 2	94	0.15	136	< 10	48
N203076	205	226	1.92	2.13	1.24	1110	< 1	0.41	34	270	2	353	0.12	114	< 10	50
N203077	205	226	1.73	1.97	0.47	140	4	0.26	61	790	2	236	0.16	159	< 10	204
N203078	205	226	2.24	1.91	0.44	455	4	0.05	56	1880	< 2	308	0.15	256	< 10	184
N203079	205	226	3.49	2.09	0.64	335	20	0.11	111	3250	2	204	0.17	385	< 10	566
N203080	205	226	3.31	0.86	3.01	2870	5	0.03	39	340	< 2	917	0.12	89	< 10	56
N203081	205	226	2.02	2.22	1.44	1475	1	0.08	23	240	< 2	365	0.12	54	< 10	36
N203082	205	226	2.20	1.10	0.26	95	9	0.06	49	950	4	110	0.08	128	< 10	104
N203083	205	226	4.47	0.30	0.21	80	5	0.01	47	1630	2	64	0.06	97	< 10	64
N203084	205	226	4.28	0.09	0.14	50	5	0.01	43	1580	6	66	0.06	87	< 10	68
N203085	205	226	4.19	0.14	0.18	35	5	0.03	44	110	20	27	0.06	92	< 10	148
N203086	205	226	2.96	0.50	0.23	35	6	0.05	69	160	14	38	0.06	140	< 10	516
N203087	205	226	2.97	0.14	0.16	35	9	0.04	70	140	22	25	0.06	139	< 10	1130
N203088	205	226	3.93	0.29	0.15	65	7	0.03	66	160	18	26	0.05	179	< 10	344
N203089	205	226	4.97	0.89	0.30	100	12	0.06	87	4710	20	119	0.09	228	< 10	166

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9730167

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9730167

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 15-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	4	RUSH Assay ring approx 150 mesh
295	4	RUSH crush and split (0-3 Kg)
3202	4	Rock - save entire reject
290	4	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	4	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	4	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	4	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	4	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	4	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	4	Ba ppm	XRF	10	50000
444	4	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	4	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	4	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	4	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	4	Ag ppm: high grade 24 element	AAS	0.5	200
4031	4	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	4	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	4	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	4	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	4	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	4	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	4	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	4	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	4	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	4	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	4	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	4	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	4	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	4	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	4	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	4	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	4	Pb %: high grade 24 element	AAS	0.001	10.00
4047	4	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	4	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	4	V ppm: A22 ICP package	ICP-AES	10	50000
4050	4	Zn ppm: A22 ICP package	ICP-AES	20	100000

Chemex Labs Ltd.

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To: WESTMIN RESOURCES LTD.
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P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page : 1-A
Total Pages : 1
Certificate Date: 15-JUL-97
Invoice No. : I9730167
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9730167

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	ZnBa (XRFSpec %	Gr ppm	S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
203110	258	295	0.65	56	0.19	0.69	11.80	2060	3.53	0.03	0.01	0.010	56.0	2.15	200	< 10	< 20	5.40	1050	< 10	60
203116	258	295	0.75	117	1.23	0.51	6.35	610	4.16	0.10	0.14	0.003	121.0	0.15	100	< 10	100	4.60	520	110	50
203117	258	295	0.48	74	2.82	0.11	14.50	1870	4.29	0.06	0.03	0.002	74.0	0.15	200	< 10	100	2.90	930	100	50
203118	258	295	0.75	135	1.37	2.66	8.71	310	4.26	0.07	0.09	0.004	148.0	0.05	200	< 10	100	3.25	1240	80	40

CERTIFICATION: Ian Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number : 1-B
Total Pages : 1
Certificate Date: 15-JUL-97
Invoice No. : I9730167
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9730167

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
203110	258	295	1840	18.95	1.0	0.30	970	10	< 0.05	40	0.699	240	< 0.05	100	>100000
203116	258	295	11970	>30.0	< 0.1	0.05	710	40	< 0.05	50	0.513	130	< 0.05	50	57200
203117	258	295	28600	>30.0	< 0.1	0.05	430	10	< 0.05	10	0.111	90	< 0.05	10	75500
203118	258	295	13260	27.9	< 0.1	0.20	1030	50	< 0.05	100	2.69	120	< 0.05	30	>100000

CERTIFICATION: David Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9730959

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9730959

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 16-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	2	Geochem ring to approx 150 mesh
226	2	0-3 Kg crush and split
3202	2	Rock - save entire reject
285	2	ICP - HF digestion charge
287	2	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	2	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	2	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	2	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	2	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	2	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	2	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	2	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	2	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	2	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	2	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	2	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	2	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	2	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	2	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	2	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	2	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	2	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	2	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	2	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	2	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	2	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	2	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	2	Pb ppm: 24 element, rock & core	AAS	2	10000
582	2	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	2	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	2	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	2	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	2	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 16-JUL-97
Invoice No. :19730959
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9730959

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203053	205 226	< 5	2	0.6	10	0.4	3.19	830	5.0	< 2	0.22	< 0.5	15	182	84
N203054	205 226	10	1	0.6	< 10	< 0.2	3.35	210	7.0	< 2	0.87	< 0.5	4	121	106

CERTIFICATION: Stan Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page N... :1-B
Total Pages :1
Certificate Date: 16-JUL-97
Invoice No. :19730959
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9730959

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203053	205	226	9.68	0.62	0.51	185	24	0.05	40	670	< 2	121	0.18	126	< 10	122
N203054	205	226	12.25	0.44	0.41	615	17	0.07	18	550	< 2	222	0.20	104	< 10	132

CERTIFICATION: Mark Bridle

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9730960

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9730960

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 16-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	54	Geochem ring to approx 150 mesh
294	54	4-7 Kg crush and split
3202	54	Rock - save entire reject
285	54	ICP - HF digestion charge
287	54	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	54	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	54	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	54	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	54	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	54	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	54	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	54	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	54	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	54	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	54	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	54	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	54	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	54	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	54	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	54	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	54	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	54	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	54	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	54	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	54	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	54	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	54	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	54	Pb ppm: 24 element, rock & core	AAS	2	10000
582	54	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	54	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	54	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	54	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	54	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 16-JUL-97
Invoice No. : I9730960
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9730960

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203090	205	294	5	1	4.4	150	< 0.2	2.16	200	0.5	< 2	0.38	< 0.5	6	253	98
N203091	205	294	< 5	1	5.8	70	0.2	1.82	280	2.0	< 2	0.24	< 0.5	5	259	82
N203092	205	294	170	70	6.4	120	1.0	2.61	190	1.5	< 2	0.66	< 0.5	< 1	156	40
N203093	205	294	95	74	10.0	240	0.8	1.87	100	4.0	< 2	1.24	< 0.5	3	263	48
N203094	205	294	60	68	10.5	80	1.2	0.94	110	4.0	< 2	1.30	< 0.5	1	268	36
N203095	205	294	25	20	7.2	740	0.8	1.93	120	4.0	< 2	0.53	4.5	5	327	64
N203096	205	294	15	16	9.2	310	0.6	2.73	180	5.0	< 2	6.94	4.5	6	174	87
N203097	205	294	< 5	1	2.6	120	< 0.2	6.89	810	7.0	< 2	1.71	3.5	3	142	38
N203098	205	294	< 5	4	1.0	20	< 0.2	6.59	5420	6.0	< 2	0.99	< 0.5	< 1	85	16
N203099	205	294	< 5	1	2.0	10	< 0.2	8.69	3180	6.0	< 2	1.34	< 0.5	3	91	33
N203100	205	294	260	2	1.6	30	< 0.2	2.43	400	1.5	< 2	0.80	< 0.5	5	226	50
N203101	205	294	< 5	10	7.2	30	< 0.2	2.12	320	0.5	< 2	3.08	< 0.5	5	191	51
N203102	205	294	< 5	8	5.0	30	< 0.2	1.81	290	0.5	< 2	2.35	< 0.5	5	251	63
N203103	205	294	< 5	60	6.4	10	< 0.2	2.95	320	2.0	< 2	0.35	< 0.5	11	196	71
N203104	205	294	< 5	1	5.2	30	< 0.2	4.16	380	3.0	< 2	3.60	< 0.5	12	185	78
N203105	205	294	< 5	10	8.4	90	< 0.2	2.63	190	2.0	< 2	1.77	< 0.5	6	255	60
N203106	205	294	10	18	6.2	170	< 0.2	2.83	210	2.0	< 2	0.81	0.5	6	229	45
N203107	205	294	10	18	9.8	130	0.4	2.77	140	1.5	< 2	0.64	< 0.5	3	310	58
N203108	205	294	45	36	19.0	210	0.4	3.36	190	2.0	< 2	1.65	< 0.5	5	247	51
N203109	205	294	80	42	24	2860	3.0	6.03	230	3.5	< 2	2.32	28.5	1	156	68
N203111	205	294	145	142	46	1850	3.4	3.25	110	5.0	< 2	1.04	16.0	4	285	137
N203112	205	294	250	306	135	960	6.4	4.53	170	8.5	< 2	1.09	6.5	7	428	250
N203113	205	294	100	118	30	540	3.8	3.13	100	4.5	< 2	1.59	4.5	4	272	73
N203114	205	294	510	214	175	4360	66.0	6.16	190	5.0	< 2	0.99	77.5	3	163	179
N203115	205	294	90	106	40	390	2.4	2.31	100	4.0	< 2	1.36	2.0	4	286	80
N203119	205	294	70	72	22	630	3.2	4.76	130	1.5	26	3.78	9.5	10	112	1040
N203120	205	294	25	40	17.5	140	0.4	6.26	1540	2.0	28	0.22	< 0.5	17	166	21
N203121	205	294	20	24	28	70	< 0.2	5.06	180	1.5	12	0.33	< 0.5	14	167	29
N203122	205	294	10	10	28	40	< 0.2	5.64	170	1.0	6	0.61	< 0.5	11	104	25
N203123	205	294	20	44	18.0	150	0.4	5.76	240	1.5	22	0.88	2.5	8	107	89
N203124	205	294	20	20	26	470	2.0	5.89	150	1.5	10	10.25	21.5	5	24	812
N203125	205	294	< 5	2	42	250	< 0.2	5.09	1920	1.5	< 2	13.65	6.5	< 1	19	22
N203148	205	294	< 5	2	32	1360	0.4	3.91	1190	1.0	< 2	6.22	49.5	< 1	71	77
N203149	205	294	< 5	12	42	550	< 0.2	5.39	320	1.5	< 2	9.71	15.0	2	36	139
N203150	205	294	5	1	24	140	< 0.2	3.66	130	0.5	2	1.91	< 0.5	9	114	1255
N203151	205	294	< 5	12	32	40	< 0.2	5.96	410	2.0	< 2	4.65	< 0.5	3	80	99
N203152	205	294	10	38	48	10	1.2	3.87	230	1.0	14	7.68	< 0.5	11	149	92
N203153	205	294	5	18	14.0	10	0.8	6.91	470	2.0	100	0.17	< 0.5	27	101	79
N203154	205	294	< 5	1	12.0	50	1.0	6.65	1590	1.5	60	0.67	< 0.5	13	92	50
N203155	205	294	< 5	1	4.0	40	0.8	6.28	2840	1.5	86	0.73	< 0.5	10	44	22

CERTIFICATION: _____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 16-JUL-97
Invoice No. : I9730960
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9730960

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203090	205	294	2.86	0.30	0.29	800	17	0.02	47	450	< 2	127	0.10	89	< 10	430
N203091	205	294	1.26	0.59	0.24	140	5	0.03	52	170	< 2	56	0.07	71	< 10	50
N203092	205	294	14.45	0.05	0.28	525	11	0.03	14	830	< 2	83	0.09	94	< 10	60
N203093	205	294	13.50	0.42	0.39	760	23	0.01	15	490	132	57	0.07	131	< 10	578
N203094	205	294	7.75	0.21	0.08	130	27	0.01	12	6250	840	118	0.02	178	< 10	44
N203095	205	294	4.69	0.75	0.15	185	19	0.03	21	580	196	33	0.07	162	< 10	3190
N203096	205	294	6.30	0.87	0.43	2600	8	0.01	31	880	276	191	0.10	183	< 10	2030
N203097	205	294	2.21	2.62	0.93	1035	7	0.11	9	160	12	131	0.16	89	< 10	604
N203098	205	294	1.89	2.99	0.89	495	3	0.12	< 1	70	< 2	110	0.14	10	< 10	62
N203099	205	294	2.89	3.26	1.09	565	6	0.15	7	210	< 2	162	0.21	63	< 10	74
N203100	205	294	1.39	0.72	0.43	385	2	0.03	52	150	< 2	77	0.08	81	< 10	104
N203101	205	294	1.49	0.64	0.85	655	1	0.01	44	110	8	103	0.07	76	< 10	114
N203102	205	294	1.45	0.33	0.41	515	2	0.01	30	70	< 2	232	0.06	54	< 10	20
N203103	205	294	1.79	1.48	0.35	515	1	0.05	38	240	8	24	0.14	106	< 10	80
N203104	205	294	1.89	2.17	0.47	825	2	0.05	43	460	4	122	0.20	145	< 10	48
N203105	205	294	1.87	1.42	0.32	370	3	0.02	36	1650	16	75	0.12	192	< 10	262
N203106	205	294	1.96	1.49	0.33	185	9	0.04	41	970	10	35	0.13	245	< 10	244
N203107	205	294	1.76	1.43	0.30	100	6	0.04	46	1610	12	34	0.12	293	< 10	188
N203108	205	294	2.14	1.73	0.44	375	24	0.04	60	610	10	73	0.15	307	< 10	138
N203109	205	294	2.40	3.07	0.65	325	9	0.10	24	430	376	138	0.16	150	< 10	2890
N203111	205	294	4.59	1.46	0.31	180	15	0.06	98	540	56	55	0.11	281	< 10	1950
N203112	205	294	7.71	2.10	0.43	105	28	0.11	274	4420	44	55	0.16	678	10	1070
N203113	205	294	3.13	1.41	0.36	175	8	0.05	82	4260	36	64	0.12	262	< 10	550
N203114	205	294	4.76	2.66	0.62	190	19	0.12	60	650	1800	28	0.16	318	< 10	7160
N203115	205	294	4.71	0.93	0.26	215	9	0.02	81	200	36	28	0.08	249	< 10	476
N203119	205	294	10.60	2.01	1.57	980	7	0.15	9	270	204	90	0.10	15	< 10	1820
N203120	205	294	6.99	2.38	0.67	45	7	0.18	5	290	42	22	0.12	17	< 10	202
N203121	205	294	6.37	1.93	0.77	135	5	0.13	3	240	22	23	0.09	13	< 10	102
N203122	205	294	5.37	2.31	1.48	230	5	0.12	< 1	280	12	27	0.11	14	< 10	72
N203123	205	294	6.82	2.46	1.03	165	7	0.17	6	280	130	28	0.10	80	< 10	358
N203124	205	294	4.29	2.66	4.94	990	8	0.23	17	160	900	273	0.07	167	< 10	2430
N203125	205	294	2.30	1.99	8.39	1050	5	0.16	6	110	270	406	0.06	120	< 10	836
N203148	205	294	1.33	1.71	4.43	665	< 1	0.15	< 1	60	224	183	0.05	6	< 10	5240
N203149	205	294	5.01	2.27	6.25	990	6	0.22	< 1	190	78	244	0.06	135	< 10	2080
N203150	205	294	5.08	0.88	3.23	325	1	0.24	1	40	8	57	0.04	9	< 10	172
N203151	205	294	3.30	2.59	4.51	495	6	0.22	8	100	< 2	138	0.08	161	< 10	106
N203152	205	294	3.33	1.58	4.37	705	16	0.11	26	300	440	173	0.06	761	< 10	114
N203153	205	294	3.94	2.63	1.26	135	5	0.19	1	340	48	19	0.12	19	< 10	90
N203154	205	294	6.96	1.44	3.13	1090	4	0.18	< 1	320	26	26	0.11	19	< 10	158
N203155	205	294	6.00	1.44	2.89	1110	2	0.14	< 1	280	50	27	0.12	14	< 10	110

CERTIFICATION: Stewart Buchler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

.o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 16-JUL-97
Invoice No. : I9730960
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9730960

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203156	205	294	< 5	1	3.0	60	< 0.2	5.98	2420	1.5	24	0.97	1.5	12	67	35
N203157	205	294	< 5	1	4.2	30	< 0.2	6.26	790	0.5	32	0.87	< 0.5	15	29	20
N203158	205	294	< 5	1	4.0	20	< 0.2	6.20	580	0.5	48	0.79	< 0.5	14	33	22
N203159	205	294	< 5	1	1.6	50	0.6	5.65	1900	1.5	18	0.64	< 0.5	8	29	66
N203160	205	294	< 5	2	2.2	30	1.0	5.17	870	0.5	20	0.86	< 0.5	14	28	12
N203161	205	294	< 5	1	1.4	< 10	1.2	6.11	1750	1.5	14	0.66	< 0.5	11	33	25
N203162	205	294	< 5	4	1.2	20	0.6	6.44	1390	1.5	6	1.08	< 0.5	12	33	23
N203163	205	294	< 5	1	1.8	10	0.6	6.20	1490	1.5	104	0.49	< 0.5	14	28	13
N203164	205	294	< 5	1	2.6	10	1.0	6.02	1250	1.5	150	0.95	< 0.5	13	33	21
N203165	205	294	10	1	1.2	30	0.6	5.72	530	0.5	16	0.54	< 0.5	17	27	17
N203166	205	294	< 5	8	1.6	60	0.8	6.14	790	1.0	16	0.68	< 0.5	18	28	38
N203167	205	294	< 5	10	1.2	30	< 0.2	7.01	1560	1.5	4	0.36	< 0.5	14	28	17
N203168	205	294	< 5	1	0.4	40	< 0.2	6.65	1810	1.5	< 2	1.42	< 0.5	7	40	10
N203169	205	294	< 5	1	0.4	20	< 0.2	6.29	1720	1.5	2	1.12	< 0.5	6	30	11

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 16-JUL-97
Invoice No. : 19730960
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9730960

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203156	205	294	6.22	1.39	2.92	1330	3	0.13	< 1	250	< 2	30	0.10	13	< 10	338
N203157	205	294	9.19	0.50	4.22	1445	4	0.18	< 1	240	< 2	24	0.08	15	< 10	156
N203158	205	294	9.00	0.40	4.28	1290	3	0.17	< 1	270	< 2	22	0.07	13	< 10	154
N203159	205	294	5.43	1.29	2.90	845	2	0.11	< 1	230	< 2	24	0.08	11	< 10	94
N203160	205	294	6.57	0.65	3.77	890	3	0.15	< 1	280	8	28	0.07	15	< 10	116
N203161	205	294	6.59	1.27	3.06	915	5	0.15	< 1	280	< 2	22	0.10	13	< 10	130
N203162	205	294	7.47	1.11	3.80	1160	5	0.16	< 1	280	< 2	30	0.09	13	< 10	128
N203163	205	294	6.94	1.18	3.22	830	4	0.15	< 1	290	40	16	0.11	14	< 10	106
N203164	205	294	7.33	1.12	3.49	1020	3	0.15	< 1	240	30	25	0.09	13	< 10	106
N203165	205	294	8.18	0.46	3.87	845	4	0.13	< 1	260	< 2	14	0.09	13	< 10	142
N203166	205	294	8.23	0.79	3.81	880	5	0.16	< 1	270	32	18	0.09	14	< 10	224
N203167	205	294	6.70	1.58	3.33	775	3	0.18	< 1	310	38	16	0.10	15	< 10	190
N203168	205	294	4.16	2.10	3.37	860	2	0.16	< 1	300	< 2	55	0.09	17	< 10	110
N203169	205	294	4.12	1.88	3.34	780	3	0.16	< 1	280	< 2	39	0.10	15	< 10	84

CERTIFICATION: _____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9731516

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9731516

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 19-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	25	RUSH Assay ring approx 150 mesh
295	25	RUSH crush and split (0-3 Kg)
3202	25	Rock - save entire reject
290	25	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	25	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	25	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	25	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	25	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	25	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	25	Ba ppm	XRF	10	50000
444	25	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	25	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	25	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	25	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	25	Ag ppm: high grade 24 element	AAS	0.5	200
4031	25	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	25	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	25	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	25	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	25	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	25	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	25	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	25	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	25	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	25	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	25	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	25	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	25	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	25	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	25	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	25	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	25	Pb %: high grade 24 element	AAS	0.001	10.00
4047	25	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	25	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	25	V ppm: A22 ICP package	ICP-AES	10	50000
4050	25	Zn ppm: A22 ICP package	ICP-AES	20	100000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Certificate Date: 19-JUL-97
Invoice No. : I9731516
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9731516

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	ZnBa %	(XRFSpec ppm	Gr S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
173201	258	295	< 0.07	< 3	0.01	0.04	0.16	600	2.87	< 0.01	< 0.01	< 0.001	1.0	2.35	600	< 10	< 20	10.10	< 10	< 10	140
173202	258	295	< 0.07	< 3	0.02	0.30	0.04	1320	3.56	< 0.01	< 0.01	< 0.001	3.0	4.75	300	< 10	< 20	2.30	< 10	30	150
173203	258	295	0.27	7	0.02	0.46	0.61	120	4.47	0.01	< 0.01	< 0.001	6.0	0.40	100	< 10	< 20	0.30	10	110	100
203189	258	295	0.89	380	0.83	4.48	23.6	420	4.14	0.25	0.09	0.003	>200	0.40	300	< 10	< 20	1.35	2320	30	70
203190	258	295	1.03	223	1.26	1.57	11.80	420	4.41	0.35	0.03	0.001	>200	0.35	200	< 10	< 20	1.05	1110	< 10	90
203191	258	295	0.86	186	6.54	0.37	9.42	3620	3.22	0.01	0.01	< 0.001	183.0	6.20	400	< 10	80	2.20	970	50	20
203275	258	295	0.17	72	4.85	0.04	0.33	3160	2.89	< 0.01	< 0.01	< 0.001	74.0	4.90	1600	< 10	60	1.35	50	40	90
203276	258	295	0.21	54	3.10	0.06	30.1	1040	3.45	< 0.01	< 0.01	0.001	52.0	1.10	800	< 10	40	4.45	3210	110	70
203277	258	295	0.14	53	2.95	0.22	6.70	3560	3.05	< 0.01	< 0.01	< 0.001	55.0	4.35	700	< 10	60	11.85	670	< 10	30
203278	258	295	0.41	92	4.24	0.36	24.6	4800	3.54	< 0.01	< 0.01	0.001	90.0	5.15	600	< 10	< 20	1.25	2530	50	10
203279	258	295	0.48	205	12.20	0.53	19.50	760	3.75	< 0.01	< 0.01	0.001	>200	0.85	200	< 10	80	3.95	2100	90	< 10
203329	258	295	1.92	471	0.85	2.54	17.60	160	4.30	0.39	0.06	0.003	>200	0.05	100	< 10	< 20	0.70	1670	10	60
203330	258	295	1.51	361	1.34	2.37	8.78	60	4.26	0.27	0.08	0.001	>200	0.05	< 100	< 10	< 20	1.25	670	< 10	110
203331	258	295	1.17	237	1.39	1.13	11.20	< 20	4.56	0.07	0.04	0.001	>200	< 0.05	< 100	< 10	< 20	0.50	940	< 10	80
203332	258	295	0.82	198	1.22	1.47	19.40	< 20	4.49	0.06	0.03	0.001	195.0	0.05	< 100	< 10	< 20	0.25	1940	20	80
203333	258	295	0.82	190	2.29	1.20	26.6	< 20	4.43	0.09	0.01	0.001	193.0	0.10	< 100	< 10	20	0.20	2820	60	70
203334	258	295	1.30	360	3.53	0.72	18.50	80	4.31	0.05	0.03	0.001	>200	0.05	100	< 10	300	1.45	2000	80	70
203335	258	295	1.37	367	1.64	1.46	14.40	460	3.98	0.09	0.11	0.002	>200	0.35	300	< 10	20	6.00	1470	40	70
203336	258	295	0.72	135	0.36	0.81	11.80	4600	3.82	0.04	0.03	0.002	143.0	2.40	900	< 10	< 20	5.50	1340	30	70
203426	258	295	4.15	627	0.32	1.64	8.00	560	3.36	0.06	0.14	0.002	>200	1.25	100	< 10	< 20	0.40	700	10	180
203427	258	295	4.87	636	0.33	2.53	24.9	60	3.95	0.30	0.02	0.007	>200	0.05	< 100	< 10	< 20	0.75	2700	< 10	90
203428	258	295	11.79	1564	0.42	5.67	14.40	80	4.38	0.95	0.18	0.005	>200	0.05	< 100	< 10	< 20	0.50	1140	< 10	70
203429	258	295	1.89	502	0.42	1.19	8.76	1240	3.34	0.28	0.07	0.002	>200	2.35	300	< 10	< 20	1.10	830	20	180
203430	258	295	1.17	168	0.70	0.67	11.90	1400	3.82	0.22	0.02	0.003	168.0	2.95	300	< 10	< 20	2.35	1170	40	100
203431	258	295	0.93	148	0.48	0.48	11.90	6090	2.89	< 0.01	0.02	0.003	143.0	7.40	600	< 10	< 20	0.95	1080	40	120

CERTIFICATION: [illegible]

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 19-JUL-97
Invoice No. :I9731516
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9731516

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
173201	258	295	90	8.30	1.0	0.75	4390	10	< 0.05	60	0.044	130	0.05	150	1540
173202	258	295	230	26.4	2.4	0.90	1190	30	< 0.05	190	0.289	30	0.20	440	500
173203	258	295	220	>30.0	0.2	0.15	890	20	< 0.05	160	0.441	< 10	< 0.05	40	6240
203189	258	295	8020	21.3	0.2	0.40	580	40	< 0.05	60	4.33	30	< 0.05	< 10	>100000
203190	258	295	12420	>30.0	0.1	0.20	370	60	< 0.05	70	1.570	10	< 0.05	70	>100000
203191	258	295	62300	14.45	1.5	4.10	1210	< 10	0.05	< 10	0.350	60	0.05	180	87000
203275	258	295	44300	8.25	1.5	1.50	560	< 10	1.10	< 10	0.041	50	0.05	30	3340
203276	258	295	29800	9.75	0.5	1.90	1620	< 10	< 0.05	< 10	0.063	100	< 0.05	90	>100000
203277	258	295	29200	8.35	2.0	4.00	2410	< 10	0.20	< 10	0.210	300	0.05	130	63000
203278	258	295	40900	12.50	2.3	0.90	390	< 10	< 0.05	< 10	0.346	40	0.05	< 10	>100000
203279	258	295	>100000	21.0	0.4	0.50	1080	< 10	< 0.05	< 10	0.500	100	< 0.05	< 10	>100000
203329	258	295	8150	29.4	< 0.1	< 0.05	400	50	< 0.05	90	2.35	20	< 0.05	30	>100000
203330	258	295	13010	>30.0	< 0.1	0.05	290	50	< 0.05	30	2.21	30	< 0.05	60	77900
203331	258	295	13660	>30.0	< 0.1	0.05	300	20	< 0.05	10	1.120	10	< 0.05	< 10	95800
203332	258	295	11960	>30.0	< 0.1	< 0.05	330	10	< 0.05	10	1.440	< 10	< 0.05	< 10	>100000
203333	258	295	22500	26.9	< 0.1	0.05	390	< 10	< 0.05	10	1.190	< 10	< 0.05	< 10	>100000
203334	258	295	34500	30.0	< 0.1	0.05	460	< 10	< 0.05	10	0.683	40	< 0.05	< 10	>100000
203335	258	295	16190	26.1	0.1	0.05	880	40	< 0.05	70	1.440	160	< 0.05	10	>100000
203336	258	295	3430	21.4	0.9	0.40	950	10	< 0.05	30	0.796	120	< 0.05	30	>100000
203426	258	295	3070	18.65	0.6	0.20	210	20	< 0.05	110	1.610	< 10	< 0.05	150	72800
203427	258	295	3270	21.1	< 0.1	0.05	650	10	< 0.05	60	2.37	10	< 0.05	< 10	>100000
203428	258	295	4040	28.4	< 0.1	0.05	590	60	< 0.05	90	5.54	< 10	< 0.05	60	>100000
203429	258	295	3950	19.05	0.8	0.55	360	120	< 0.05	140	1.120	20	< 0.05	710	79800
203430	258	295	6860	24.0	1.0	0.50	490	< 10	< 0.05	50	0.628	50	< 0.05	310	>100000
203431	258	295	4410	5.20	2.2	0.75	260	< 10	1.40	10	0.443	40	0.10	320	>100000

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9732115

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9732115

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 30-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	86	Geochem ring to approx 150 mesh
226	86	0-3 Kg crush and split
3202	86	Rock - save entire reject
285	86	ICP - HF digestion charge
287	86	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	86	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	86	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	86	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	86	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	86	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	86	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	86	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	86	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	86	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	86	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	86	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	86	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	86	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	86	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	86	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	86	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	86	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	86	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	86	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	86	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	86	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	86	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	86	Pb ppm: 24 element, rock & core	AAS	2	10000
582	86	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	86	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	86	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	86	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	86	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 30-JUL-97
Invoice No. : I9732115
P.O. Number :
Account : GP W

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9732115

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203126	205 226	< 5	1	0.2	50	< 0.2	2.53	840	0.5	< 2	0.21	< 0.5	9	148	99
N203127	205 226	10	1	0.2	10	< 0.2	2.89	3930	1.0	< 2	0.21	< 0.5	3	162	75
N203128	205 226	5	1	0.4	< 10	< 0.2	1.74	1130	0.5	< 2	0.35	< 0.5	4	195	65
N203129	205 226	20	1	0.6	< 10	< 0.2	1.94	1010	0.5	< 2	0.33	< 0.5	1	151	75
N203130	205 226	< 5	1	1.0	< 10	< 0.2	1.99	490	0.5	< 2	0.27	< 0.5	5	168	75
N203131	205 226	< 5	1	1.2	40	< 0.2	1.83	250	1.0	< 2	0.13	< 0.5	5	149	65
N203132	205 226	< 5	1	0.6	100	< 0.2	2.00	290	2.0	< 2	0.07	< 0.5	4	166	71
N203133	205 226	60	1	0.8	< 10	< 0.2	3.00	1380	3.0	< 2	0.16	< 0.5	4	116	69
N203134	205 226	< 5	1	2.0	< 10	< 0.2	3.32	160	2.0	< 2	1.16	< 0.5	1	123	24
N203135	205 226	< 5	1	0.8	< 10	< 0.2	1.57	230	1.5	< 2	3.60	< 0.5	6	120	52
N203136	205 226	< 5	1	1.8	110	0.6	2.78	60	2.5	< 2	0.21	< 0.5	3	155	41
N203137	205 226	10	20	3.8	140	1.8	2.05	40	2.5	< 2	0.28	0.5	4	122	57
N203138	205 226	< 5	8	2.6	180	0.8	2.40	90	3.0	< 2	0.10	0.5	6	149	70
N203139	205 226	10	20	5.4	210	< 0.2	1.64	30	4.0	< 2	0.42	0.5	8	140	64
N203140	205 226	< 5	6	2.0	490	< 0.2	2.12	70	3.5	< 2	0.79	2.5	3	147	59
N203141	205 226	< 5	1	1.6	50	< 0.2	1.82	190	2.5	< 2	5.48	< 0.5	3	115	63
N203142	205 226	< 5	1	1.6	< 10	< 0.2	2.51	450	2.5	< 2	1.97	< 0.5	9	127	68
N203143	205 226	< 5	8	1.6	100	< 0.2	2.34	350	2.0	< 2	2.58	2.0	11	146	87
N203144	205 226	< 5	2	1.6	30	< 0.2	2.47	340	2.0	< 2	10.05	< 0.5	4	86	64
N203145	205 226	20	1	2.6	400	< 0.2	1.94	30	3.5	< 2	10.00	2.5	4	79	49
N203146	205 226	15	4	2.4	470	< 0.2	1.16	20	5.5	< 2	14.10	3.0	< 1	53	47
N203147	205 226	10	14	9.2	500	0.4	2.84	30	9.5	< 2	4.26	4.5	7	108	53
N203170	205 226	< 5	2	10.0	130	< 0.2	3.36	90	4.5	< 2	0.58	0.5	14	147	95
N203171	205 226	< 5	2	10.5	190	< 0.2	2.96	80	4.0	< 2	1.32	4.0	8	145	65
N203172	205 226	10	18	12.5	580	1.6	2.84	70	3.0	< 2	0.96	14.5	7	181	76
N203173	205 226	< 5	1	3.4	10	< 0.2	2.63	2220	0.5	< 2	0.98	< 0.5	5	153	63
N203174	205 226	< 5	1	13.0	20	< 0.2	3.06	290	0.5	< 2	0.95	< 0.5	7	142	62
N203175	205 226	< 5	1	2.4	10	< 0.2	2.46	240	0.5	< 2	1.96	0.5	9	157	47
N203176	205 226	< 5	4	3.6	40	< 0.2	2.20	100	0.5	< 2	0.74	0.5	8	169	58
N203177	205 226	< 5	4	6.6	40	< 0.2	3.09	80	1.5	< 2	0.61	< 0.5	7	152	55
N203178	205 226	< 5	8	5.8	30	< 0.2	2.91	150	1.5	< 2	0.43	< 0.5	11	159	67
N203179	205 226	< 5	8	11.0	60	0.4	2.11	70	1.5	< 2	2.41	< 0.5	10	138	55
N203180	205 226	< 5	4	8.8	100	< 0.2	2.94	120	2.0	< 2	2.06	1.0	14	157	71
N203181	205 226	5	20	10.5	90	0.6	2.97	80	1.5	< 2	0.89	0.5	5	179	60
N203182	205 226	15	28	12.0	70	0.6	3.14	70	2.0	< 2	0.90	< 0.5	4	164	52
N203183	205 226	30	28	14.5	50	0.4	3.31	70	1.5	< 2	0.94	< 0.5	4	161	51
N203184	205 226	20	30	11.5	50	0.4	3.52	90	1.5	< 2	1.54	0.5	3	127	34
N203185	205 226	20	36	11.0	140	0.4	5.63	100	2.5	< 2	2.10	1.5	1	95	26
N203186	205 226	35	44	18.0	110	0.6	3.47	50	2.0	< 2	2.06	0.5	2	163	38
N203187	205 226	130	98	34	1680	5.4	5.99	110	2.0	< 2	1.54	16.0	2	88	92

CERTIFICATION: Stewart Bradden

*INTERFERENCE: Cu ON Bi AND P.

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page I :1-B
Total Pages :3
Certificate Date: 30-JUL-97
Invoice No. : I9732115
P.O. Number :
Account :GP W

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9732115

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203126	205	226	1.47	0.97	0.45	210	5	0.14	85	120	< 2	188	0.15	95	< 10	152
N203127	205	226	1.63	1.15	0.55	195	1	0.24	26	110	< 2	126	0.18	81	< 10	58
N203128	205	226	2.44	0.51	0.41	340	2	0.16	32	110	< 2	209	0.10	70	< 10	38
N203129	205	226	3.74	0.43	0.41	280	1	0.40	26	260	< 2	194	0.11	77	< 10	34
N203130	205	226	0.93	0.67	0.28	145	6	0.10	42	880	< 2	281	0.08	84	< 10	62
N203131	205	226	0.91	0.62	0.26	120	3	0.06	72	150	< 2	94	0.06	83	< 10	88
N203132	205	226	0.81	0.71	0.27	60	< 1	0.06	73	300	< 2	58	0.07	83	< 10	222
N203133	205	226	1.68	1.21	0.35	260	5	0.09	22	170	< 2	44	0.14	93	< 10	32
N203134	205	226	5.90	1.08	0.77	730	5	0.38	17	460	< 2	153	0.17	104	< 10	54
N203135	205	226	6.09	0.32	0.47	2010	10	0.12	19	590	< 2	452	0.08	98	< 10	24
N203136	205	226	3.01	1.27	0.40	360	20	0.08	20	400	72	27	0.12	129	< 10	276
N203137	205	226	3.52	0.96	0.32	265	8	0.06	46	180	320	19	0.07	138	< 10	364
N203138	205	226	1.81	1.10	0.29	155	2	0.07	61	60	180	5	0.09	146	< 10	454
N203139	205	226	3.55	0.72	0.17	110	9	0.02	33	360	280	9	0.06	166	< 10	636
N203140	205	226	1.84	0.97	0.25	110	9	0.04	19	390	88	15	0.07	150	< 10	1505
N203141	205	226	1.34	0.83	0.23	575	6	0.01	18	490	34	85	0.06	123	< 10	306
N203142	205	226	2.23	1.00	0.35	775	2	0.03	32	440	6	47	0.08	116	< 10	184
N203143	205	226	3.15	0.93	0.36	925	1	0.07	26	690	100	75	0.10	125	< 10	730
N203144	205	226	2.25	0.94	0.38	1515	1	0.01	22	800	14	260	0.11	97	< 10	324
N203145	205	226	6.38	0.79	0.47	2560	6	< 0.01	26	700	172	242	0.07	136	< 10	1600
N203146	205	226	8.62	0.45	0.48	3460	5	0.01	10	1630	470	423	0.06	124	< 10	1360
N203147	205	226	6.02	1.06	0.51	1375	2	0.03	36	470	512	165	0.09	180	< 10	1630
N203170	205	226	1.85	1.47	0.38	275	< 1	0.10	38	420	44	26	0.11	155	< 10	358
N203171	205	226	2.04	1.34	0.40	385	1	0.06	36	1760	46	49	0.09	151	< 10	762
N203172	205	226	2.43	1.18	0.52	435	6	0.05	62	980	1160	65	0.09	221	< 10	2660
N203173	205	226	1.27	0.91	0.63	645	1	0.03	48	280	2	106	0.09	77	< 10	108
N203174	205	226	1.50	1.23	0.59	350	< 1	0.05	50	210	< 2	109	0.09	86	< 10	80
N203175	205	226	1.38	0.57	0.42	480	1	0.03	52	110	< 2	168	0.07	83	< 10	456
N203176	205	226	1.49	0.89	0.28	280	< 1	0.02	45	180	12	56	0.06	88	< 10	446
N203177	205	226	1.66	1.46	0.45	185	< 1	0.09	53	510	10	30	0.11	126	< 10	162
N203178	205	226	1.47	1.41	0.42	390	< 1	0.06	55	200	10	28	0.11	142	< 10	116
N203179	205	226	1.80	1.09	0.33	415	2	0.01	35	1540	16	103	0.09	115	< 10	156
N203180	205	226	1.68	1.49	0.45	455	< 1	0.03	46	1080	14	89	0.14	139	< 10	380
N203181	205	226	1.83	1.46	0.37	185	7	0.06	53	1850	12	42	0.11	324	< 10	336
N203182	205	226	1.79	1.62	0.40	150	9	0.06	54	1580	14	46	0.12	306	< 10	134
N203183	205	226	1.74	1.76	0.43	135	9	0.08	57	1420	14	43	0.13	305	< 10	146
N203184	205	226	1.49	1.90	0.52	230	5	0.07	36	300	28	72	0.11	132	< 10	138
N203185	205	226	1.73	2.98	0.75	270	6	0.15	20	420	40	109	0.15	95	< 10	262
N203186	205	226	2.13	1.79	0.50	280	8	0.07	37	840	60	51	0.10	157	< 10	176
N203187	205	226	2.25	2.87	0.62	170	10	0.16	26	840	120	61	0.16	135	< 10	2050

CERTIFICATION:

*INTERFERENCE: Cu ON Bi AND P.

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page I :2-A
Total Pages :3
Certificate Date: 30-JUL-97
Invoice No. : 19732115
P.O. Number :
Account : GP W

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9732115

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203188	205	226	10	16	20	590	1.2	6.90	120	1.5	< 2	3.68	14.5	5	82	133
N203192	205	226	45	1	30	1760	14.4	5.83	70	0.5	10	0.80	258	20	71	4930
N203193	205	226	< 5	1	6.0	10	< 0.2	6.62	1710	0.5	2	0.40	< 0.5	5	63	119
N203194	205	226	< 5	2	6.6	20	< 0.2	6.39	1510	1.0	6	0.55	0.5	8	47	131
N203195	205	226	< 5	6	7.8	10	< 0.2	6.60	500	< 0.5	2	0.65	< 0.5	13	40	950
N203196	205	226	10	66	8.4	10	< 0.2	6.19	530	0.5	2	0.64	< 0.5	10	34	1405
N203197	205	226	< 5	12	5.2	20	< 0.2	6.82	1000	1.0	2	1.55	< 0.5	7	35	980
N203198	205	226	10	1	43	100	5.2	6.60	170	0.5	Intf*	1.38	2.0	23	34	>10000
N203199	205	226	< 5	1	7.2	50	0.6	6.89	380	0.5	14	0.55	< 0.5	15	35	4270
N203200	205	226	< 5	2	1.8	20	< 0.2	6.34	1070	1.0	12	0.34	1.5	11	38	54
N203201	205	226	< 5	1	2.8	< 10	< 0.2	6.51	690	0.5	20	0.67	< 0.5	14	45	104
N203202	205	226	< 5	1	1.6	< 10	< 0.2	6.75	860	1.0	32	0.31	< 0.5	15	36	56
N203203	205	226	< 5	2	1.0	< 10	< 0.2	6.54	1070	1.0	34	0.58	< 0.5	12	41	30
N203204	205	226	< 5	1	0.8	< 10	< 0.2	6.61	710	0.5	6	0.47	< 0.5	15	26	36
N203205	205	226	< 5	20	2.2	< 10	0.4	6.49	1080	1.0	118	0.25	< 0.5	12	34	9
N203206	205	226	< 5	1	1.4	30	0.8	7.05	910	0.5	58	0.26	0.5	13	31	29
N203207	205	226	< 5	1	0.6	< 10	1.0	7.01	1450	1.5	12	0.22	< 0.5	10	36	14
N203208	205	226	< 5	2	0.2	10	0.8	7.14	1930	1.5	8	0.28	0.5	7	41	38
N203209	205	226	< 5	24	1.0	600	3.4	6.69	920	0.5	44	0.58	9.5	15	43	215
N203210	205	226	< 5	1	1.2	160	< 0.2	7.48	460	1.5	32	0.45	3.0	13	38	145
N203211	205	226	< 5	14	0.2	< 10	< 0.2	7.68	1200	1.0	6	1.14	< 0.5	14	34	42
N203212	205	226	< 5	1	1.0	260	1.2	6.92	660	0.5	36	0.87	4.5	23	44	275
N203213	205	226	< 5	1	0.2	80	< 0.2	6.00	1280	1.0	< 2	1.22	1.5	13	77	119
N203214	205	226	< 5	1	0.2	110	< 0.2	8.48	1840	1.5	2	0.91	1.5	14	40	214
N203215	205	226	< 5	1	0.4	40	< 0.2	7.78	580	2.0	4	0.50	1.0	7	55	48
N203216	205	226	< 5	1	0.2	220	< 0.2	7.79	2010	1.5	2	0.31	2.5	7	36	67
N203217	205	226	< 5	1	0.4	60	< 0.2	6.67	1520	1.5	2	0.33	< 0.5	10	43	31
N203218	205	226	< 5	1	0.6	< 10	< 0.2	6.94	1120	1.0	4	0.29	< 0.5	11	34	96
N203219	205	226	< 5	1	0.8	< 10	< 0.2	7.22	1520	2.0	2	0.40	< 0.5	5	51	9
N203220	205	226	< 5	1	0.4	< 10	< 0.2	7.64	1730	2.5	2	0.32	< 0.5	3	48	10
N203221	205	226	< 5	1	0.4	< 10	< 0.2	7.80	1510	2.5	2	0.46	< 0.5	2	56	9
N203222	205	226	< 5	1	1.4	< 10	< 0.2	7.72	1420	2.5	2	0.57	< 0.5	2	45	8
N203223	205	226	< 5	1	0.6	10	< 0.2	7.35	1330	2.5	< 2	0.55	< 0.5	3	47	17
N203224	205	226	< 5	2	1.0	< 10	< 0.2	8.75	1330	2.5	2	0.77	< 0.5	4	41	11
N203225	205	226	< 5	1	3.2	< 10	< 0.2	7.88	1300	2.5	2	0.78	< 0.5	3	57	13
N203226	205	226	< 5	2	2.2	< 10	< 0.2	7.60	1310	2.5	< 2	0.34	< 0.5	1	50	6
N203227	205	226	< 5	1	2.2	< 10	< 0.2	8.94	1590	2.5	2	0.20	< 0.5	3	48	13
N203228	205	226	< 5	2	1.4	< 10	< 0.2	8.52	1370	2.5	2	0.35	< 0.5	3	51	10
N203229	205	226	< 5	1	1.2	< 10	< 0.2	7.46	1280	2.5	2	0.37	< 0.5	2	58	8
N203230	205	226	< 5	1	2.2	< 10	< 0.2	7.49	1260	2.0	2	0.54	< 0.5	2	68	8

CERTIFICATION: _____

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Certificate Date: 30-JUL-97
Invoice No. : I9732115
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Account : GP W

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CERTIFICATE OF ANALYSIS A9732115

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203188	205	226	2.18	2.93	1.35	1225	1	0.16	3	290	128	154	0.13	20	< 10	1805
N203192	205	226	6.08	0.58	3.18	610	< 1	0.12	1	220	570	< 1	0.04	29	30	>10000
N203193	205	226	4.12	1.19	3.05	495	2	0.24	1	240	80	18	0.07	15	< 10	216
N203194	205	226	4.16	1.09	3.83	605	2	0.26	2	250	10	21	0.08	15	< 10	220
N203195	205	226	6.22	0.37	3.41	625	2	0.20	2	220	< 2	< 1	0.04	14	< 10	170
N203196	205	226	5.67	0.46	4.67	740	4	0.24	< 1	220	40	18	0.06	14	< 10	226
N203197	205	226	5.69	0.93	4.92	1030	1	0.24	< 1	300	16	46	0.10	14	< 10	184
N203198	205	226	7.76	0.64	4.21	935	4	0.20	< 1	Intf*	130	35	0.05	14	< 10	350
N203199	205	226	7.68	0.37	4.21	755	3	0.26	1	160	40	16	0.05	14	< 10	244
N203200	205	226	5.49	0.91	3.35	590	3	0.17	< 1	290	10	20	0.06	13	< 10	180
N203201	205	226	6.67	0.67	4.04	780	1	0.23	< 1	280	8	26	0.06	14	10	140
N203202	205	226	7.02	0.85	3.71	725	3	0.22	< 1	280	6	18	0.07	16	< 10	136
N203203	205	226	6.14	1.08	3.44	825	3	0.20	< 1	280	8	30	0.08	15	< 10	106
N203204	205	226	7.13	0.77	3.69	845	1	0.23	< 1	260	< 2	21	0.07	15	< 10	126
N203205	205	226	5.98	1.17	3.38	665	1	0.23	< 1	280	52	18	0.08	16	< 10	108
N203206	205	226	7.23	1.00	3.61	750	2	0.24	1	270	180	17	0.08	17	< 10	408
N203207	205	226	5.68	1.53	2.92	650	3	0.22	< 1	300	112	24	0.09	15	10	254
N203208	205	226	4.66	2.06	2.54	570	1	0.20	< 1	310	58	28	0.10	17	< 10	248
N203209	205	226	7.33	0.92	3.29	900	3	0.22	< 1	270	120	29	0.11	16	< 10	2790
N203210	205	226	6.27	1.80	2.59	755	2	0.23	< 1	300	32	29	0.11	17	< 10	806
N203211	205	226	7.27	1.29	3.41	1250	3	0.25	< 1	300	14	42	0.10	16	< 10	258
N203212	205	226	7.94	0.77	3.69	1070	5	0.22	1	270	70	31	0.07	16	< 10	1240
N203213	205	226	5.03	1.25	2.85	800	3	0.18	< 1	280	22	47	0.07	16	10	444
N203214	205	226	6.02	2.02	3.38	890	4	0.32	1	340	30	41	0.09	19	< 10	580
N203215	205	226	3.54	2.35	2.23	500	< 1	0.21	1	270	10	21	0.08	16	< 10	256
N203216	205	226	3.48	2.22	2.16	405	2	0.22	1	260	14	17	0.07	16	< 10	558
N203217	205	226	4.07	1.71	2.44	465	1	0.21	< 1	240	124	14	0.06	15	< 10	298
N203218	205	226	5.09	1.36	2.96	490	2	0.22	1	250	8	11	0.06	16	< 10	110
N203219	205	226	2.58	2.12	2.60	370	2	0.23	1	250	< 2	17	0.07	15	< 10	78
N203220	205	226	1.81	2.56	2.32	295	1	0.25	1	270	20	18	0.08	16	< 10	68
N203221	205	226	1.90	2.41	2.57	375	2	0.26	1	280	60	19	0.08	16	< 10	76
N203222	205	226	2.06	2.43	2.54	415	< 1	0.25	1	270	2	19	0.08	15	< 10	70
N203223	205	226	1.74	2.41	2.26	430	2	0.26	1	270	< 2	21	0.08	15	< 10	50
N203224	205	226	2.40	2.71	3.20	600	1	0.29	< 1	310	66	24	0.08	18	< 10	84
N203225	205	226	1.81	2.74	2.56	525	3	0.27	1	290	72	25	0.08	16	< 10	78
N203226	205	226	1.69	2.71	2.20	290	< 1	0.23	1	290	16	19	0.08	16	< 10	50
N203227	205	226	1.96	3.15	2.37	235	3	0.26	1	320	< 2	19	0.10	19	< 10	68
N203228	205	226	1.85	2.86	3.12	330	3	0.25	< 1	310	12	19	0.09	17	< 10	80
N203229	205	226	1.68	2.57	3.15	320	1	0.24	1	360	90	20	0.09	16	< 10	70
N203230	205	226	1.86	2.58	2.63	315	3	0.24	1	370	80	24	0.09	16	< 10	78

CERTIFICATION: Ian Bucklen

*INTERFERENCE: Cu ON Bi AND P

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 30-JUL-97
Invoice No. : I9732115
P.O. Number :
Account :GP W

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9732115

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203231	205 226	< 5	1	1.6	< 10	< 0.2	6.84	1450	2.0	2	0.68	< 0.5	2	67	6
N203232	205 226	< 5	1	1.2	< 10	< 0.2	6.51	1330	2.0	2	0.89	< 0.5	2	76	8
N203233	205 226	< 5	4	8.0	50	< 0.2	7.31	230	2.0	2	0.24	2.0	7	65	30
N203234	205 226	< 5	1	2.0	10	< 0.2	7.42	1640	2.0	2	0.46	< 0.5	5	50	34
N203235	205 226	< 5	1	8.0	60	< 0.2	7.26	290	2.0	4	0.71	< 0.5	7	60	38
N203236	205 226	15	60	11.0	190	0.4	5.79	100	2.0	2	1.67	0.5	3	90	23

CERTIFICATION:

INTERFERENCE C. ON P. AND P.

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page N ... :3-B
Total Pages :3
Certificate Date: 30-JUL-97
Invoice No. : I9732115
P.O. Number :
Account : GP W

*PLEASE NOTE:

CERTIFICATE OF ANALYSIS A9732115

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203231	205	226	1.40	2.89	2.09	270	3	0.19	< 1	300	28	31	0.09	15	< 10	66
N203232	205	226	1.50	2.72	2.41	390	1	0.22	1	290	64	36	0.09	15	< 10	94
N203233	205	226	4.21	2.25	3.34	450	5	0.27	1	320	56	26	0.09	20	< 10	318
N203234	205	226	2.96	2.88	2.78	525	1	0.25	5	430	10	41	0.12	65	< 10	166
N203235	205	226	3.42	2.75	1.80	605	3	0.19	6	560	< 2	85	0.12	54	< 10	106
N203236	205	226	2.26	2.61	1.35	355	4	0.17	16	1020	24	120	0.11	166	< 10	90

CERTIFICATION: _____

*INTERFERENCE: Cu ON Bi AND P.

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9732332

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9732332

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 3-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	68	Geochem ring to approx 150 mesh
226	68	0-3 Kg crush and split
3202	68	Rock - save entire reject
285	68	ICP - HF digestion charge
287	68	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	68	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	68	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	68	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	68	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	68	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	68	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	68	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	68	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	68	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	68	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	68	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	68	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	68	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	68	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	68	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	68	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	68	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	68	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	68	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	68	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	68	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	68	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	68	Pb ppm: 24 element, rock & core	AAS	2	10000
582	68	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	68	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	68	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	68	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	68	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
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British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page No. : 1-A
Total Pages : 2
Certificate Date: 03-AUG-97
Invoice No. : I9732332
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9732332

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203237	205	226	10	4	0.2	10	< 0.2	2.33	1250	0.5	< 2	0.23	< 0.5	10	136	81
N203238	205	226	30	1	0.4	10	< 0.2	2.48	370	1.0	< 2	0.17	< 0.5	4	116	92
N203239	205	226	5	1	0.6	40	< 0.2	1.87	390	1.0	< 2	0.08	< 0.5	5	128	59
N203240	205	226	10	1	0.4	60	< 0.2	2.02	210	2.0	< 2	0.20	< 0.5	4	119	74
N203241	205	226	< 5	1	1.4	10	< 0.2	3.38	300	3.5	< 2	0.16	< 0.5	5	112	71
N203242	205	226	< 5	1	11.0	10	< 0.2	3.70	3480	4.5	< 2	0.35	< 0.5	7	131	125
N203243	205	226	< 5	1	1.6	30	< 0.2	2.39	90	3.5	< 2	0.86	< 0.5	1	143	42
N203244	205	226	< 5	6	1.8	230	< 0.2	2.01	70	3.0	< 2	1.39	2.0	4	117	54
N203245	205	226	10	4	5.4	80	< 0.2	1.07	30	4.0	< 2	18.45	< 0.5	1	53	35
N203246	205	226	< 5	12	4.0	50	< 0.2	0.47	50	3.0	< 2	>25.0	< 0.5	< 1	35	19
N203247	205	226	10	22	5.4	540	< 0.2	1.01	10	3.0	< 2	7.13	2.5	1	81	46
N203248	205	226	5	1	2.4	200	< 0.2	2.40	90	3.5	< 2	3.31	2.0	2	103	57
N203249	205	226	10	1	2.0	80	< 0.2	2.29	50	3.5	< 2	8.47	< 0.5	4	108	72
N203250	205	226	10	12	2.6	210	< 0.2	2.35	30	3.5	< 2	9.04	2.0	3	76	48
N203251	205	226	10	16	3.6	250	< 0.2	1.65	30	3.5	< 2	12.10	2.5	1	78	40
N203252	205	226	< 5	2	2.6	350	< 0.2	2.33	20	9.0	< 2	10.30	4.0	6	70	54
N203253	205	226	5	2	2.6	90	< 0.2	3.34	110	5.0	< 2	0.66	3.0	13	122	90
N203254	205	226	< 5	1	4.2	100	< 0.2	3.05	110	4.5	< 2	0.62	6.0	10	83	70
N203255	205	226	10	12	7.4	400	0.4	2.48	40	3.5	< 2	0.94	8.0	8	162	80
N203256	205	226	< 5	1	2.2	20	< 0.2	4.44	460	2.5	< 2	1.08	< 0.5	6	108	67
N203264	205	226	45	1	7.2	30	< 0.2	3.45	170	1.0	< 2	0.53	< 0.5	7	162	74
N203265	205	226	< 5	12	9.8	30	< 0.2	2.31	390	0.5	< 2	1.07	< 0.5	6	134	71
N203266	205	226	10	2	12.5	60	< 0.2	2.36	90	1.0	< 2	0.46	< 0.5	6	111	66
N203267	205	226	10	1	15.0	50	< 0.2	2.63	120	1.5	< 2	0.92	< 0.5	7	121	68
N203268	205	226	10	2	13.5	90	< 0.2	5.99	140	3.0	< 2	1.41	2.0	1	72	20
N203269	205	226	20	18	14.0	180	0.4	7.04	180	3.5	2	1.15	3.0	< 1	66	18
N203270	205	226	60	80	52	1300	4.0	6.29	100	2.5	< 2	1.80	22.5	< 1	69	55
N203271	205	226	65	62	140	1960	5.0	7.03	70	1.5	< 2	6.96	35.0	< 1	28	76
N203272	205	226	15	28	4.8	130	1.0	7.33	140	2.0	< 2	3.57	< 0.5	3	34	32
N203273	205	226	< 5	1	26	30	< 0.2	6.04	80	1.0	< 2	1.51	0.5	5	27	213
N203274	205	226	< 5	14	2.8	340	1.8	5.46	90	1.0	2	1.56	34.0	13	37	1905
N203280	205	226	10	32	11.0	880	7.0	5.58	70	1.0	< 2	0.19	131.5	8	34	6230
N203281	205	226	< 5	1	2.6	720	6.6	5.76	50	1.0	10	0.36	94.5	8	39	7520
N203282	205	226	< 5	1	1.4	270	1.8	6.94	290	1.5	< 2	1.09	28.5	7	29	2580
N203283	205	226	< 5	8	3.6	420	3.0	5.43	270	0.5	2	0.67	76.5	20	41	4600
N203284	205	226	< 5	1	1.0	30	< 0.2	6.45	1930	1.5	< 2	0.42	0.5	6	40	57
N203285	205	226	20	54	6.2	160	12.0	5.00	40	0.5	Intf*	1.53	13.5	20	44	>10000
N203286	205	226	< 5	1	< 0.2	30	0.6	6.04	1380	1.5	< 2	0.70	0.5	6	25	365
N203287	205	226	10	1	3.2	370	1.4	5.40	120	0.5	Intf*	0.97	2.0	11	75	>10000
N203288	205	226	< 5	72	2.8	80	1.0	5.85	810	0.5	52	0.39	4.5	11	27	421

CERTIFICATION: _____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page : 1-B
Total Pages : 2
Certificate Date: 03-AUG-97
Invoice No. : I9732332
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9732332

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203237	205 226	2.39	0.69	0.40	255	4	0.35	96	120	4	132	0.13	86	< 10	268
N203238	205 226	2.05	0.73	0.37	175	< 1	0.33	54	80	6	86	0.12	92	< 10	94
N203239	205 226	0.85	0.64	0.22	70	< 1	0.08	42	60	2	66	0.06	77	< 10	84
N203240	205 226	1.09	0.72	0.27	135	< 1	0.08	71	420	4	117	0.07	89	< 10	106
N203241	205 226	3.53	0.85	0.35	120	1	0.11	28	580	4	73	0.16	106	< 10	22
N203242	205 226	3.36	1.05	0.45	225	< 1	0.16	29	180	2	94	0.19	108	< 10	26
N203243	205 226	6.74	0.50	0.38	835	4	0.09	13	510	< 2	130	0.13	97	< 10	114
N203244	205 226	2.46	0.86	0.25	275	5	0.03	39	390	200	56	0.07	132	< 10	798
N203245	205 226	5.88	0.46	0.27	2010	15	< 0.01	10	490	330	309	0.04	109	10	324
N203246	205 226	3.86	0.13	0.12	2190	12	< 0.01	6	3550	450	245	0.01	110	30	192
N203247	205 226	5.65	0.45	0.11	530	14	< 0.01	15	1690	720	79	0.03	129	< 10	1850
N203248	205 226	2.17	1.05	0.25	445	8	0.04	20	410	120	63	0.08	116	< 10	1005
N203249	205 226	6.93	0.67	0.66	2900	6	0.01	39	770	68	222	0.11	131	< 10	388
N203250	205 226	6.99	0.85	0.51	2520	7	0.01	28	760	170	215	0.10	156	< 10	888
N203251	205 226	6.31	0.70	0.37	2480	5	< 0.01	15	790	160	242	0.05	130	< 10	1055
N203252	205 226	9.51	0.85	0.60	3610	4	0.06	33	610	424	288	0.09	148	< 10	1610
N203253	205 226	1.71	1.45	0.35	520	< 1	0.11	28	370	96	27	0.11	148	< 10	420
N203254	205 226	2.11	1.39	0.41	650	< 1	0.10	39	780	40	37	0.11	138	< 10	606
N203255	205 226	3.68	0.96	0.40	540	1	0.06	63	1330	64	63	0.08	199	< 10	1480
N203256	205 226	1.82	1.76	0.92	740	1	0.14	29	220	6	101	0.14	58	< 10	88
N203264	205 226	2.58	1.34	0.78	255	< 1	0.08	62	280	6	71	0.16	111	< 10	186
N203265	205 226	1.20	0.57	0.29	180	< 1	0.05	54	550	8	192	0.06	109	< 10	96
N203266	205 226	1.57	1.07	0.31	140	< 1	0.05	49	520	16	23	0.08	111	< 10	112
N203267	205 226	1.70	1.30	0.36	345	< 1	0.05	47	150	20	31	0.11	114	< 10	132
N203268	205 226	2.02	3.22	0.82	300	7	0.13	20	790	64	61	0.17	98	< 10	268
N203269	205 226	1.97	3.67	1.10	240	8	0.16	17	380	64	54	0.17	89	< 10	352
N203270	205 226	2.57	3.13	0.84	315	7	0.15	18	380	290	60	0.15	239	< 10	1965
N203271	205 226	2.05	3.55	1.01	1100	1	0.22	< 1	360	1100	254	0.18	16	10	3740
N203272	205 226	2.31	3.69	2.02	845	2	0.22	< 1	370	52	126	0.17	18	< 10	132
N203273	205 226	6.03	1.99	4.46	690	3	0.30	< 1	240	16	52	0.12	13	< 10	250
N203274	205 226	6.72	1.48	3.35	1035	1	0.34	< 1	240	96	50	0.09	11	< 10	3360
N203280	205 226	5.64	1.41	3.29	425	< 1	0.26	< 1	210	310	12	0.09	9	10	>10000
N203281	205 226	7.18	1.24	3.34	670	< 1	0.17	< 1	230	280	14	0.07	9	< 10	9040
N203282	205 226	6.81	1.20	5.17	905	1	0.26	< 1	360	170	31	0.11	13	< 10	3020
N203283	205 226	6.71	0.50	4.59	790	1	0.15	< 1	220	420	13	0.05	7	< 10	6230
N203284	205 226	4.54	1.47	4.18	625	1	0.24	1	270	20	18	0.09	12	< 10	190
N203285	205 226	8.86	0.64	4.21	925	4	0.14	< 1	Intf*	720	36	0.05	8	< 10	1220
N203286	205 226	5.42	1.21	4.21	710	1	0.22	< 1	260	92	25	0.09	12	< 10	332
N203287	205 226	6.61	1.05	3.37	760	3	0.14	< 1	Intf*	26	24	0.05	8	< 10	296
N203288	205 226	7.50	0.75	3.84	775	2	0.19	< 1	240	150	12	0.07	9	< 10	540

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page I. :2-A
Total Pages :2
Certificate Date: 03-AUG-97
Invoice No. :I9732332
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9732332

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203289	205	226	< 5	6	2.8	50	1.2	5.92	1020	1.0	60	0.37	< 0.5	12	36	48
N203290	205	226	< 5	16	2.0	550	4.6	2.45	310	< 0.5	18	0.18	5.0	5	13	84
N203291	205	226	< 5	4	2.2	270	1.6	4.04	1180	1.0	24	0.31	3.5	4	27	125
N203292	205	226	< 5	70	3.0	810	6.4	4.92	700	0.5	38	0.37	11.0	10	28	270
N203293	205	226	< 5	58	3.2	990	11.6	5.24	740	1.0	44	0.58	16.5	11	38	416
N203294	205	226	< 5	24	3.2	110	1.4	5.38	780	1.0	22	0.82	2.0	13	35	95
N203295	205	226	< 5	1	1.4	< 10	0.8	6.26	790	1.0	22	0.50	< 0.5	14	36	50
N203296	205	226	< 5	1	0.8	< 10	< 0.2	6.06	1110	1.5	16	0.51	< 0.5	9	33	26
N203297	205	226	< 5	1	1.6	< 10	< 0.2	7.17	1500	2.5	2	0.33	< 0.5	5	49	24
N203298	205	226	< 5	1	1.6	< 10	< 0.2	7.62	1480	3.0	< 2	0.68	< 0.5	1	43	16
N203299	205	226	< 5	1	1.8	< 10	< 0.2	7.29	1680	2.5	< 2	1.53	< 0.5	1	44	20
N203300	205	226	< 5	1	1.2	< 10	< 0.2	7.05	1460	3.0	< 2	0.32	< 0.5	< 1	42	10
N203301	205	226	< 5	2	0.8	10	< 0.2	7.38	1660	2.5	< 2	0.93	1.5	< 1	44	20
N203302	205	226	< 5	1	1.2	< 10	< 0.2	6.92	1580	3.0	< 2	0.38	< 0.5	1	38	18
N203303	205	226	< 5	1	1.0	10	< 0.2	7.26	1580	3.0	< 2	0.86	< 0.5	1	53	12
N203304	205	226	< 5	1	0.8	10	0.4	7.96	360	2.5	12	0.68	< 0.5	6	46	44
N203305	205	226	< 5	4	3.2	180	0.4	7.10	130	2.5	< 2	1.36	3.5	< 1	59	51
N203306	205	226	10	56	15.0	710	1.0	6.07	80	4.0	< 2	1.85	7.5	< 1	86	35
N203307	205	226	< 5	1	2.8	90	1.0	6.36	350	4.0	< 2	0.65	9.5	< 1	40	8
N203308	205	226	< 5	42	11.5	400	1.2	5.38	110	3.5	< 2	1.18	15.5	< 1	116	64
N203309	205	226	< 5	1	1.8	10	0.2	6.64	290	2.5	< 2	0.95	0.5	< 1	78	9
N203310	205	226	< 5	1	1.0	< 10	< 0.2	6.99	790	2.0	< 2	1.73	< 0.5	< 1	52	8
N203311	205	226	< 5	1	1.6	< 10	< 0.2	7.08	2780	2.0	< 2	1.33	0.5	< 1	70	7
N203312	205	226	< 5	2	3.2	60	< 0.2	6.36	210	2.0	< 2	0.39	< 0.5	< 1	70	8
N203313	205	226	< 5	1	3.2	50	< 0.2	5.80	160	1.5	< 2	0.35	< 0.5	< 1	78	6
N203314	205	226	< 5	1	1.4	10	< 0.2	1.88	670	0.5	< 2	0.05	< 0.5	< 1	174	4
N203315	205	226	< 5	2	2.8	120	< 0.2	6.83	2020	2.0	< 2	0.18	1.5	< 1	70	6
N203316	205	226	< 5	1	2.4	90	< 0.2	6.79	1560	2.5	< 2	0.31	2.5	< 1	62	5

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page : 2-B
Total Pages : 2
Certificate Date: 03-AUG-97
Invoice No. : I9732332
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9732332

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203289	205	226	6.95	0.90	3.53	720	2	0.17	< 1	230	172	12	0.08	12	< 10	342
N203290	205	226	3.38	0.29	1.67	400	< 1	0.09	< 1	100	720	6	0.03	4	< 10	1415
N203291	205	226	3.92	1.03	1.80	550	1	0.11	< 1	170	310	13	0.07	7	< 10	880
N203292	205	226	6.71	0.63	3.04	885	2	0.16	< 1	230	1200	10	0.08	8	< 10	3050
N203293	205	226	7.11	0.74	3.20	1090	< 1	0.17	< 1	230	1800	16	0.08	8	< 10	4210
N203294	205	226	7.04	0.76	3.41	1030	1	0.17	< 1	230	270	19	0.08	9	< 10	694
N203295	205	226	7.80	0.75	4.13	965	2	0.23	< 1	260	140	14	0.08	11	< 10	368
N203296	205	226	6.31	1.04	3.76	840	2	0.21	< 1	250	32	15	0.08	11	< 10	180
N203297	205	226	3.70	2.17	3.48	540	< 1	0.23	< 1	330	36	16	0.09	14	< 10	172
N203298	205	226	1.87	2.88	3.32	455	1	0.23	< 1	340	60	29	0.10	15	< 10	124
N203299	205	226	1.54	3.05	2.81	620	2	0.24	< 1	310	44	53	0.12	14	< 10	90
N203300	205	226	1.61	2.77	2.44	295	2	0.20	< 1	320	6	21	0.10	14	< 10	62
N203301	205	226	1.81	3.05	3.00	500	2	0.21	< 1	320	236	42	0.11	14	< 10	248
N203302	205	226	1.62	3.06	2.28	310	< 1	0.20	< 1	310	90	35	0.12	13	< 10	90
N203303	205	226	2.09	3.23	3.09	610	1	0.22	< 1	350	90	63	0.13	17	< 10	106
N203304	205	226	3.57	3.62	2.50	665	4	0.24	5	550	16	72	0.13	47	< 10	168
N203305	205	226	2.20	3.66	0.97	415	2	0.21	4	610	120	84	0.11	32	< 10	338
N203306	205	226	2.27	3.09	1.19	460	15	0.13	41	930	32	91	0.14	330	< 10	466
N203307	205	226	1.16	3.26	0.86	120	< 1	0.16	3	750	64	47	0.10	31	< 10	94
N203308	205	226	2.28	2.79	0.74	200	23	0.12	73	1670	40	73	0.14	601	< 10	876
N203309	205	226	1.36	3.44	0.69	200	1	0.16	6	710	20	71	0.15	35	< 10	66
N203310	205	226	1.62	3.39	0.46	350	1	0.17	3	650	18	135	0.16	23	< 10	54
N203311	205	226	0.89	2.97	0.26	260	1	0.32	3	560	20	149	0.17	26	< 10	20
N203312	205	226	1.61	2.67	0.15	35	1	0.20	7	1040	42	84	0.12	57	< 10	16
N203313	205	226	1.23	2.56	0.10	25	< 1	0.18	5	920	30	76	0.10	34	< 10	8
N203314	205	226	0.56	0.82	0.03	10	< 1	0.06	4	190	14	23	0.03	10	< 10	2
N203315	205	226	0.83	3.00	0.10	20	< 1	0.22	6	810	30	81	0.12	39	< 10	126
N203316	205	226	0.68	3.06	0.09	30	< 1	0.22	5	850	20	113	0.12	43	< 10	200

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9733072

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9733072

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 31-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	46	Geochem ring to approx 150 mesh
226	46	0-3 Kg crush and split
3202	46	Rock - save entire reject
285	46	ICP - HF digestion charge
287	46	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	46	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	46	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	46	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	46	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	46	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	46	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	46	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	46	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	46	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	46	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	46	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	46	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	46	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	46	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	46	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	46	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	46	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	46	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	46	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	46	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	46	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	46	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	46	Pb ppm: 24 element, rock & core	AAS	2	10000
582	46	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	46	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	46	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	46	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	46	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 31-JUL-97
Invoice No. :19733072
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733072

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
203360	205 226	< 5	2	1.2	10	< 0.2	2.49	1210	1.0	< 2	0.28	< 0.5	4	318	46
203361	205 226	< 5	4	0.2	< 10	< 0.2	4.86	520	1.5	< 2	0.58	< 0.5	7	273	47
203362	205 226	< 5	1	0.2	< 10	< 0.2	0.30	430	< 0.5	< 2	0.84	< 0.5	1	381	12
203363	205 226	< 5	10	0.2	< 10	< 0.2	4.56	260	1.5	< 2	0.70	< 0.5	6	324	47
203364	205 226	< 5	1	0.2	10	< 0.2	4.61	150	1.5	< 2	0.59	< 0.5	12	224	101
203365	205 226	10	1	2.2	20	0.4	5.03	120	1.5	< 2	0.56	< 0.5	14	278	110
203366	205 226	< 5	22	0.2	10	< 0.2	1.79	600	0.5	< 2	0.52	< 0.5	5	354	27
203367	205 226	20	1	3.6	70	< 0.2	4.97	120	1.5	< 2	0.51	< 0.5	13	258	109
203368	205 226	10	1	1.0	20	0.6	2.59	170	0.5	< 2	0.87	< 0.5	8	243	57
203369	205 226	5	1	0.4	< 10	< 0.2	2.22	1370	0.5	< 2	0.68	< 0.5	3	228	49
203370	205 226	< 5	1	0.6	< 10	< 0.2	1.40	870	< 0.5	< 2	0.49	< 0.5	3	260	35
203371	205 226	< 5	1	2.2	10	< 0.2	2.90	230	1.5	< 2	0.13	< 0.5	2	213	28
203372	205 226	< 5	1	1.0	10	< 0.2	3.30	5250	2.5	< 2	3.74	0.5	6	164	28
203373	205 226	< 5	1	1.0	< 10	< 0.2	1.23	190	3.0	< 2	1.40	< 0.5	< 1	212	13
203374	205 226	< 5	1	0.6	< 10	< 0.2	1.57	260	3.0	< 2	1.43	< 0.5	< 1	188	7
203375	205 226	< 5	1	0.2	< 10	< 0.2	2.45	2620	2.5	< 2	1.93	< 0.5	< 1	198	16
203376	205 226	< 5	1	0.2	< 10	< 0.2	3.36	980	2.5	< 2	0.26	< 0.5	3	209	62
203377	205 226	< 5	1	3.6	90	0.6	1.58	90	2.0	< 2	0.14	0.5	2	224	51
203378	205 226	< 5	1	1.6	490	< 0.2	1.74	110	4.0	< 2	0.20	5.0	3	220	45
203379	205 226	< 5	1	1.8	160	< 0.2	0.71	50	4.0	< 2	22.3	< 0.5	< 1	43	26
203380	205 226	15	44	4.2	50	0.4	0.51	40	3.0	< 2	14.00	< 0.5	< 1	75	43
203381	205 226	10	6	1.6	140	< 0.2	1.38	30	3.5	< 2	1.10	< 0.5	4	192	57
203382	205 226	< 5	1	2.8	120	< 0.2	2.08	190	3.0	< 2	5.23	< 0.5	2	169	48
203383	205 226	< 5	1	0.8	1190	< 0.2	2.16	110	4.0	< 2	0.15	1.0	2	184	59
203384	205 226	< 5	1	1.6	10	< 0.2	1.76	340	2.5	< 2	3.65	< 0.5	2	237	68
203385	205 226	< 5	1	1.0	< 10	< 0.2	2.78	330	3.5	< 2	4.68	< 0.5	5	168	69
203386	205 226	60	10	1.2	< 10	< 0.2	2.40	1880	3.0	< 2	1.23	< 0.5	6	194	82
203387	205 226	< 5	4	5.4	10	< 0.2	2.64	110	3.0	< 2	3.02	< 0.5	5	182	93
203388	205 226	< 5	1	2.4	60	< 0.2	3.55	160	6.5	< 2	3.13	0.5	7	188	86
203389	205 226	< 5	1	1.6	230	< 0.2	3.13	70	11.5	< 2	1.24	9.0	5	193	67
203390	205 226	< 5	1	1.2	< 10	< 0.2	2.24	40	11.5	< 2	2.70	< 0.5	2	202	56
203391	205 226	15	24	5.4	790	< 0.2	1.17	30	5.5	< 2	19.15	22.0	< 1	69	35
203392	205 226	5	18	4.4	230	< 0.2	1.77	40	7.0	< 2	16.05	7.0	1	105	38
203393	205 226	10	22	6.6	100	< 0.2	1.26	50	5.0	< 2	17.50	1.5	< 1	63	31
203394	205 226	< 5	1	1.8	90	< 0.2	1.14	50	5.0	< 2	17.85	1.5	< 1	54	28
203395	205 226	10	10	7.8	70	0.6	2.65	40	5.0	< 2	1.62	5.0	5	236	40
203396	205 226	< 5	1	0.8	10	< 0.2	6.96	510	11.5	< 2	1.41	0.5	< 1	191	9
203397	205 226	15	6	3.8	80	0.2	4.76	60	6.0	< 2	1.88	10.5	< 1	152	35
203398	205 226	< 5	1	0.4	< 10	< 0.2	6.91	2540	6.0	< 2	1.17	< 0.5	< 1	112	4
203399	205 226	< 5	1	0.2	< 10	< 0.2	6.50	3660	6.0	< 2	1.21	0.5	< 1	110	5

CERTIFICATION:

Chemex Labs Ltd.

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Page Number :1-B
Total Pages :2
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CERTIFICATE OF ANALYSIS A9733072

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
203360	205 226	1.26	0.77	0.44	240	1	0.05	48	70	4	92	0.11	79	< 10	58
203361	205 226	2.55	1.56	1.01	370	1	0.11	60	370	12	136	0.26	129	< 10	114
203362	205 226	0.66	0.07	0.09	430	< 1	0.01	12	< 10	1	12	< 0.01	7	< 10	40
203363	205 226	2.71	1.60	0.91	395	2	0.10	56	410	14	176	0.18	128	< 10	100
203364	205 226	2.88	1.55	1.03	510	3	0.10	137	440	22	178	0.20	152	< 10	282
203365	205 226	3.36	1.76	1.17	640	4	0.10	150	260	20	192	0.19	170	< 10	280
203366	205 226	1.22	0.55	0.47	420	1	0.01	46	300	6	211	0.06	53	< 10	88
203367	205 226	3.14	1.84	1.03	365	6	0.10	163	400	16	168	0.16	170	< 10	352
203368	205 226	2.22	0.86	0.71	325	3	0.03	77	420	12	216	0.09	78	< 10	168
203369	205 226	1.28	0.73	0.47	180	< 1	0.03	40	1590	10	207	0.12	65	< 10	72
203370	205 226	1.16	0.41	0.40	225	< 1	0.01	34	120	10	142	0.06	39	< 10	106
203371	205 226	2.31	0.62	0.33	115	1	0.06	25	160	8	65	0.12	88	< 10	42
203372	205 226	3.62	0.85	0.53	715	6	0.12	21	240	16	522	0.14	89	< 10	78
203373	205 226	12.10	0.18	0.27	430	14	0.01	5	900	22	169	0.06	72	< 10	14
203374	205 226	11.75	0.10	0.21	355	9	0.02	4	1190	14	230	0.09	94	< 10	8
203375	205 226	4.52	0.92	0.32	320	4	0.09	6	590	10	401	0.11	79	< 10	12
203376	205 226	1.13	1.25	0.42	70	21	0.10	20	100	12	69	0.10	109	< 10	16
203377	205 226	2.07	0.74	0.20	70	6	0.02	20	270	242	15	0.06	93	< 10	460
203378	205 226	2.04	0.77	0.18	50	3	0.04	24	160	70	4	0.06	105	< 10	2120
203379	205 226	5.35	0.29	0.24	2630	14	< 0.01	4	440	214	262	0.02	73	10	788
203380	205 226	9.03	0.20	0.13	1665	24	< 0.01	7	2750	420	126	0.01	131	10	180
203381	205 226	4.81	0.60	0.14	140	10	< 0.01	18	350	148	16	0.04	105	< 10	482
203382	205 226	1.47	0.55	0.21	460	8	0.03	15	430	40	125	0.06	115	< 10	240
203383	205 226	1.39	0.85	0.20	40	3	0.05	16	260	100	11	0.06	142	< 10	2600
203384	205 226	1.62	0.43	0.17	470	4	0.04	12	560	16	121	0.05	87	< 10	42
203385	205 226	2.58	1.20	0.30	640	3	0.03	18	560	26	91	0.10	136	< 10	34
203386	205 226	2.19	1.09	0.30	390	2	0.02	20	540	18	25	0.10	124	< 10	16
203387	205 226	3.67	1.08	0.42	1330	2	0.03	18	810	24	46	0.12	109	< 10	34
203388	205 226	2.18	1.61	0.43	780	1	0.04	53	650	54	38	0.15	191	< 10	648
203389	205 226	4.26	1.36	0.53	830	3	0.03	52	360	100	19	0.14	177	< 10	2050
203390	205 226	8.17	0.94	0.65	1525	3	0.01	38	490	136	33	0.07	159	< 10	76
203391	205 226	8.43	0.48	0.38	2790	11	< 0.01	15	470	424	268	0.03	85	10	5420
203392	205 226	5.96	0.73	0.35	2180	10	< 0.01	19	560	250	225	0.04	116	10	1655
203393	205 226	5.44	0.51	0.28	1990	10	< 0.01	11	680	350	288	0.03	94	10	524
203394	205 226	8.75	0.31	0.63	3900	8	< 0.01	6	510	282	319	0.04	77	10	592
203395	205 226	4.83	0.66	0.36	340	5	0.03	32	1050	166	38	0.07	137	< 10	952
203396	205 226	2.32	2.80	0.95	410	12	0.17	2	50	22	94	0.11	30	< 10	358
203397	205 226	4.47	1.69	0.78	490	3	0.13	17	340	128	88	0.08	34	< 10	1360
203398	205 226	1.99	2.18	1.14	345	3	1.02	< 1	10	18	75	0.10	2	< 10	60
203399	205 226	2.21	2.36	1.04	320	4	0.19	< 1	< 10	14	74	0.10	2	< 10	56

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :2-A
Total Pages :2
Certificate Date: 31-JUL-97
Invoice No. :19733072
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733072

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
203400	205	226	< 5	1	0.2	< 10	< 0.2	6.76	4030	5.5	< 2	0.74	0.5	< 1	119	6
203401	205	226	< 5	1	1.8	30	< 0.2	6.01	250	5.0	< 2	1.29	0.5	1	170	15
203402	205	226	< 5	4	2.2	10	< 0.2	7.06	150	2.5	2	4.51	0.5	20	111	29
203403	205	226	< 5	1	3.0	< 10	< 0.2	2.79	2530	1.5	< 2	1.84	< 0.5	7	245	62
203404	205	226	< 5	1	6.8	10	< 0.2	3.28	280	1.0	< 2	1.32	< 0.5	7	235	60
203405	205	226	< 5	4	4.4	< 10	< 0.2	3.32	210	1.0	< 2	0.40	< 0.5	7	240	72

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 31-JUL-97
Invoice No. :I9733072
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733072

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
203400	205	226	2.44	2.42	1.14	255	9	0.23	< 1	< 10	22	70	0.09	1	< 10	80
203401	205	226	2.34	1.97	1.11	345	4	0.34	13	250	42	89	0.12	41	< 10	192
203402	205	226	3.18	0.91	1.02	870	4	3.40	34	1890	44	375	0.92	196	< 10	154
203403	205	226	1.64	0.73	0.81	650	1	0.04	35	240	12	48	0.12	56	< 10	62
203404	205	226	2.36	0.85	0.86	370	1	0.06	44	310	20	50	0.15	82	< 10	106
203405	205	226	2.21	1.07	0.68	125	1	0.07	59	280	8	56	0.15	92	< 10	130

CERTIFICATION: Stuart Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9733379

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9733379

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 31-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	18	RUSH Assay ring approx 150 mesh
295	18	RUSH crush and split (0-3 Kg)
3202	18	Rock - save entire reject
290	18	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	18	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	18	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	18	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	18	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	18	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	18	Ba ppm	XRF	10	50000
444	18	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	18	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	18	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	18	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	18	Ag ppm: high grade 24 element	AAS	0.5	200
4031	18	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	18	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	18	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	18	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	18	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	18	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	18	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	18	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	18	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	18	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	18	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	18	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	18	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	18	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	18	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	18	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	18	Pb %: high grade 24 element	AAS	0.001	10.00
4047	18	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	18	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	18	V ppm: A22 ICP package	ICP-AES	10	50000
4050	18	Zn ppm: A22 ICP package	ICP-AES	20	100000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 31-JUL-97
Invoice No. :19733379
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733379

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	ZnBa (XRF %	Spec Gr ppm	S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
203541	258	295	< 0.07	< 3	0.01	0.07	0.28	4740	2.97	< 0.01	< 0.01	< 0.001	< 1.0	1.60	100	10	< 20	2.00	< 10	< 10	300
203542	258	295	< 0.07	< 3	< 0.01	0.12	< 0.01	3760	2.94	< 0.01	< 0.01	< 0.001	< 1.0	0.55	100	< 10	< 20	11.25	< 10	< 10	160
203543	258	295	< 0.07	< 3	< 0.01	0.10	< 0.01	2660	2.88	< 0.01	< 0.01	< 0.001	1.0	0.25	300	< 10	< 20	24.7	< 10	< 10	50
203544	258	295	< 0.07	3	< 0.01	0.02	< 0.01	980	2.74	< 0.01	< 0.01	< 0.001	< 1.0	0.30	600	< 10	< 20	3.60	< 10	< 10	250
203545	258	295	< 0.07	< 3	0.02	0.07	0.01	5440	2.90	< 0.01	< 0.01	< 0.001	< 1.0	1.40	100	< 10	< 20	12.20	< 10	< 10	170
203546	258	295	< 0.07	< 3	0.01	< 0.01	0.02	11100	2.68	< 0.01	< 0.01	< 0.001	< 1.0	1.90	3900	< 10	< 20	0.35	< 10	< 10	230
203547	258	295	< 0.07	< 3	0.01	< 0.01	< 0.01	11000	2.72	< 0.01	< 0.01	< 0.001	< 1.0	2.50	9100	< 10	< 20	2.05	< 10	< 10	210
203548	258	295	< 0.07	< 3	0.01	< 0.01	< 0.01	4500	2.69	< 0.01	< 0.01	< 0.001	< 1.0	2.75	4300	< 10	< 20	5.75	< 10	< 10	170
203549	258	295	< 0.07	< 3	0.01	0.02	< 0.01	4410	2.72	< 0.01	< 0.01	< 0.001	< 1.0	3.15	4200	< 10	< 20	2.60	< 10	< 10	150
203550	258	295	< 0.07	< 3	< 0.01	0.01	0.02	2290	2.73	< 0.01	< 0.01	< 0.001	< 1.0	1.75	2200	< 10	< 20	20.8	< 10	< 10	110
203551	258	295	< 0.07	< 3	0.01	0.03	0.29	4600	2.76	< 0.01	< 0.01	< 0.001	< 1.0	2.80	2000	< 10	< 20	1.25	10	< 10	190
203552	258	295	< 0.07	< 3	0.01	0.02	3.61	6660	2.86	< 0.01	< 0.01	< 0.001	< 1.0	3.05	400	10	< 20	1.50	160	< 10	180
203553	258	295	< 0.07	< 3	< 0.01	0.04	0.21	2010	2.94	< 0.01	< 0.01	< 0.001	< 1.0	1.05	300	< 10	< 20	18.10	10	< 10	60
203554	258	295	< 0.07	< 3	< 0.01	0.07	6.77	2300	3.02	< 0.01	< 0.01	< 0.001	< 1.0	1.00	1000	< 10	< 20	14.95	250	< 10	80
203555	258	295	< 0.07	< 3	0.01	0.03	0.15	3300	2.88	< 0.01	< 0.01	< 0.001	< 1.0	1.90	500	< 10	< 20	12.05	< 10	< 10	130
203556	258	295	< 0.07	< 3	0.01	0.02	0.23	1700	2.95	< 0.01	< 0.01	< 0.001	< 1.0	1.55	400	< 10	< 20	10.70	< 10	< 10	120
203557	258	295	< 0.07	< 3	< 0.01	0.06	0.08	710	2.82	< 0.01	< 0.01	< 0.001	< 1.0	1.10	700	< 10	< 20	18.90	< 10	< 10	120
203558	258	295	< 0.07	< 3	0.01	< 0.01	< 0.01	2380	2.73	< 0.01	< 0.01	< 0.001	< 1.0	3.45	2100	< 10	< 20	0.80	< 10	10	200

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 31-JUL-97
Invoice No. :I9733379
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733379

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
203541	258	295	80	16.05	0.6	0.15	310	40	< 0.05	30	0.076	30	0.05	290	3020
203542	258	295	40	9.45	0.1	0.05	1390	20	< 0.05	10	0.124	100	< 0.05	180	60
203543	258	295	30	6.10	< 0.1	0.10	1960	10	< 0.05	10	0.102	220	< 0.05	100	80
203544	258	295	20	3.50	0.1	< 0.05	450	10	< 0.05	10	0.031	80	< 0.05	40	40
203545	258	295	100	9.65	0.6	0.20	1090	30	< 0.05	30	0.079	210	< 0.05	230	120
203546	258	295	70	1.45	0.7	0.20	60	< 10	< 0.05	10	0.008	10	0.05	130	300
203547	258	295	60	1.90	0.9	0.25	390	< 10	< 0.05	20	0.006	50	0.05	110	80
203548	258	295	80	4.75	1.2	0.55	1350	< 10	< 0.05	20	0.004	150	0.15	140	80
203549	258	295	120	2.65	1.4	0.35	430	< 10	0.05	50	0.026	60	0.15	140	120
203550	258	295	10	1.30	0.8	0.25	2100	< 10	< 0.05	10	0.024	490	0.10	50	320
203551	258	295	70	4.15	1.3	0.55	1030	< 10	0.05	50	0.033	30	0.15	180	2760
203552	258	295	70	5.90	1.4	0.50	1080	< 10	0.05	30	0.019	20	0.10	160	32200
203553	258	295	40	9.60	0.5	0.45	2690	10	< 0.05	10	0.045	240	< 0.05	80	1980
203554	258	295	30	10.85	0.4	0.80	4780	< 10	< 0.05	< 10	0.071	180	< 0.05	70	58300
203555	258	295	60	7.50	0.8	0.35	1980	10	< 0.05	30	0.029	170	0.05	140	1320
203556	258	295	80	10.80	0.6	0.45	2430	< 10	< 0.05	30	0.028	180	0.05	130	2080
203557	258	295	40	7.00	0.3	0.45	3530	< 10	< 0.05	10	0.074	600	< 0.05	130	740
203558	258	295	130	2.50	1.4	0.35	150	< 10	0.05	40	0.010	10	0.20	170	100

CERTIFICATION: Stuart Bowden

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9733611

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9733611

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 3-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	32	Geochem ring to approx 150 mesh
226	32	0-3 Kg crush and split
3202	32	Rock - save entire reject
285	32	ICP - HF digestion charge
287	32	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	32	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	32	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	32	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	32	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	32	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	32	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	32	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	32	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	32	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	32	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	32	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	32	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	32	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	32	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	32	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	32	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	32	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	32	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	32	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	32	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	32	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	32	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	32	Pb ppm: 24 element, rock & core	AAS	2	10000
582	32	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	32	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	32	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	32	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	32	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 03-AUG-97
Invoice No. :I9733611
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733611

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203259	205	226	15	1	2.6	10	< 0.2	0.85	90	0.5	< 2	3.65	< 0.5	< 1	117	121
N203260	205	226	< 5	1	0.8	< 10	< 0.2	1.94	130	2.5	2	3.84	< 0.5	< 1	115	15
N203261	205	226	20	6	2.0	100	0.6	1.91	200	2.5	< 2	1.42	< 0.5	4	140	45
N203262	205	226	20	20	3.4	10	0.4	0.39	120	2.0	< 2	>25.0	< 0.5	< 1	70	18
N203263	205	226	20	18	3.2	60	< 0.2	0.69	130	2.0	< 2	24.3	< 0.5	< 1	57	30
N203317	205	226	15	2	4.0	90	< 0.2	3.03	280	4.0	< 2	2.09	< 0.5	4	134	63
N203318	205	226	< 5	1	3.2	30	< 0.2	4.33	440	4.5	2	1.94	< 0.5	5	112	73
N203319	205	226	< 5	1	1.2	10	< 0.2	2.10	510	0.5	< 2	1.35	< 0.5	2	133	37
N203320	205	226	< 5	1	5.6	30	< 0.2	3.80	420	2.0	2	1.02	< 0.5	11	171	81
N203321	205	226	< 5	4	2.8	10	< 0.2	2.88	380	1.0	< 2	1.58	< 0.5	6	127	46
N203322	205	226	< 5	2	4.6	10	< 0.2	2.23	480	0.5	2	1.22	< 0.5	5	115	40
N203323	205	226	< 5	4	9.2	40	< 0.2	3.34	300	2.0	< 2	2.81	< 0.5	6	147	76
N203324	205	226	< 5	22	7.6	110	0.8	2.78	160	1.5	2	3.80	< 0.5	3	176	52
N203325	205	226	< 5	20	7.0	90	1.0	2.90	220	1.5	< 2	1.09	0.5	2	209	58
N203326	205	226	20	24	11.5	120	1.4	2.84	240	1.5	< 2	0.84	0.5	2	211	53
N203327	205	226	25	26	15.0	150	1.4	2.61	190	1.5	< 2	0.84	1.5	3	197	90
N203328	205	226	2340	204	39	15700	>100.0	2.15	90	1.5	< 2	1.75	336	3	188	7330
N203337	205	226	140	348	32	980	18.4	5.10	250	1.5	2	4.04	67.0	5	60	375
N203338	205	226	25	2	9.6	140	2.0	6.97	1640	1.5	14	2.45	8.5	6	64	317
N203339	205	226	20	10	6.0	90	0.8	6.12	670	1.5	24	0.17	< 0.5	12	56	35
N203348	205	226	< 5	1	1.6	< 10	0.4	4.22	630	< 0.5	70	0.50	< 0.5	11	60	24
N203349	205	226	< 5	1	0.6	< 10	< 0.2	4.80	480	0.5	48	0.47	< 0.5	14	52	18
N203350	205	226	< 5	2	0.4	10	0.5	6.68	2190	2.0	8	0.70	< 0.5	9	54	14
N203351	205	226	10	1	3.0	< 10	2.6	5.12	250	0.5	220	0.44	< 0.5	13	47	44
N203352	205	226	< 5	4	1.6	< 10	0.4	2.99	370	< 0.5	48	1.55	< 0.5	7	112	15
N203353	205	226	< 5	1	1.0	10	0.6	6.64	1120	1.0	36	1.30	< 0.5	11	53	20
N203354	205	226	< 5	1	0.4	< 10	0.4	6.46	1090	1.0	36	1.69	< 0.5	7	54	31
N203355	205	226	< 5	1	< 0.2	< 10	< 0.2	7.94	1780	2.0	2	0.86	< 0.5	4	46	17
N203356	205	226	< 5	1	0.4	< 10	< 0.2	7.67	1740	2.5	2	0.36	< 0.5	1	28	7
N203357	205	226	< 5	1	1.0	< 10	< 0.2	8.04	1680	2.5	2	0.46	< 0.5	2	30	14
N203358	205	226	< 5	2	1.4	< 10	< 0.2	8.41	1820	2.5	2	0.88	< 0.5	3	25	6
N203359	205	226	< 5	2	1.0	< 10	< 0.2	8.70	760	2.5	4	1.14	< 0.5	6	25	9

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists *Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 03-AUG-97
Invoice No. :I9733611
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733611

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203259	205	226	11.50	0.04	0.50	2530	11	< 0.01	1	2220	< 2	216	0.04	56	< 10	16
N203260	205	226	11.90	0.05	0.42	1555	10	< 0.01	3	1950	< 2	345	0.09	93	< 10	16
N203261	205	226	2.23	0.49	0.24	300	15	< 0.01	35	320	90	48	0.08	107	< 10	454
N203262	205	226	3.65	0.12	0.54	2840	14	< 0.01	5	1050	240	536	0.01	88	20	20
N203263	205	226	3.25	0.23	0.68	3040	10	< 0.01	9	600	160	521	0.03	82	10	270
N203317	205	226	3.25	1.14	0.39	615	6	0.02	21	900	90	59	0.11	152	< 10	440
N203318	205	226	3.11	1.61	0.69	650	4	0.06	34	420	20	87	0.15	129	< 10	126
N203319	205	226	1.34	0.52	0.41	595	< 1	< 0.01	24	900	6	66	0.08	48	< 10	36
N203320	205	226	2.15	1.17	0.58	515	1	0.05	94	490	4	69	0.12	109	< 10	76
N203321	205	226	1.19	0.91	0.37	310	2	0.01	47	90	6	71	0.10	89	< 10	14
N203322	205	226	0.79	0.33	0.21	240	1	< 0.01	37	60	6	51	0.06	71	< 10	16
N203323	205	226	2.49	1.42	0.45	520	< 1	0.01	61	300	20	122	0.13	154	< 10	106
N203324	205	226	1.83	1.42	0.51	625	6	< 0.01	43	1650	18	112	0.11	232	< 10	118
N203325	205	226	1.80	1.34	0.32	215	2	0.02	44	2060	20	49	0.12	249	< 10	220
N203326	205	226	1.71	1.31	0.32	130	3	0.03	47	2320	14	56	0.12	283	< 10	208
N203327	205	226	1.59	1.25	0.29	110	4	0.02	41	1990	20	47	0.11	251	< 10	346
N203328	205	226	3.99	0.90	0.42	320	< 1	< 0.01	36	2170	140	42	0.09	180	< 10	>10000
N203337	205	226	7.24	1.56	1.64	460	5	0.83	1	170	1800	96	0.07	28	< 10	8470
N203338	205	226	5.07	2.07	5.21	705	8	0.52	15	240	152	75	0.11	237	< 10	1010
N203339	205	226	6.76	1.54	1.67	250	4	1.05	6	220	60	14	0.10	17	< 10	116
N203348	205	226	6.86	0.31	2.54	725	1	0.05	1	450	36	14	0.06	21	< 10	122
N203349	205	226	7.51	0.36	2.92	775	3	0.08	1	430	20	13	0.08	16	< 10	106
N203350	205	226	5.28	1.83	2.89	810	2	0.16	1	470	4	23	0.11	23	< 10	100
N203351	205	226	6.72	0.87	2.88	760	5	0.08	3	410	140	12	0.06	33	< 10	150
N203352	205	226	4.35	0.40	2.33	805	6	0.01	17	1190	34	33	0.03	122	< 10	134
N203353	205	226	6.65	1.25	3.93	985	5	0.24	2	410	28	38	0.10	40	< 10	130
N203354	205	226	5.26	1.56	4.07	1005	5	0.15	7	500	26	47	0.10	53	< 10	106
N203355	205	226	2.85	2.77	3.28	595	3	0.19	< 1	360	6	34	0.15	19	< 10	84
N203356	205	226	1.84	2.98	2.62	260	4	0.16	< 1	360	< 2	29	0.15	19	< 10	50
N203357	205	226	2.30	2.87	3.38	305	3	0.18	< 1	340	4	35	0.17	19	< 10	76
N203358	205	226	2.67	3.40	3.73	500	5	0.18	< 1	370	< 2	69	0.17	19	< 10	72
N203359	205	226	3.67	4.16	4.80	630	6	0.21	< 1	360	< 2	96	0.18	19	< 10	88

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9734200

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9734200

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 5-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	27	Geochem ring to approx 150 mesh
294	27	4-7 Kg crush and split
3202	27	Rock - save entire reject
285	27	ICP - HF digestion charge
287	27	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	27	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	27	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	27	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	27	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	27	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	27	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	27	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	27	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	27	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	27	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	27	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	27	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	27	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	27	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	27	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	27	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	27	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	27	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	27	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	27	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	27	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	27	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	27	Pb ppm: 24 element, rock & core	AAS	2	10000
582	27	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	27	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	27	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	27	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	27	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number : 1-A
Total Pages : 1
Certificate Date: 05-AUG-97
Invoice No. : I9734200
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9734200

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203406	205	294	10	2	4.6	< 10	< 0.2	1.21	390	0.5	2	2.95	< 0.5	2	159	51
N203407	205	294	10	6	6.4	30	< 0.2	2.39	160	1.5	< 2	4.51	< 0.5	5	157	52
N203408	205	294	30	30	17.0	130	0.6	3.14	110	2.0	< 2	1.35	1.5	4	191	53
N203409	205	294	25	28	9.6	90	0.2	3.97	220	2.5	< 2	1.06	0.5	5	176	37
N203410	205	294	10	10	2.6	< 10	< 0.2	7.87	350	4.0	< 2	0.70	< 0.5	1	90	12
N203411	205	294	10	8	1.2	< 10	< 0.2	6.72	2820	3.0	2	0.76	0.5	< 1	96	7
N203412	205	294	< 5	8	1.2	< 10	< 0.2	6.69	3050	2.5	< 2	1.81	< 0.5	< 1	103	5
N203413	205	294	< 5	2	7.6	< 10	< 0.2	6.93	530	3.5	< 2	1.38	< 0.5	< 1	103	23
N203414	205	294	< 5	4	5.0	< 10	< 0.2	6.88	2490	3.5	4	0.86	1.0	1	102	22
N203415	205	294	10	4	5.4	30	< 0.2	7.38	420	3.5	2	1.38	1.5	< 1	61	33
N203416	205	294	10	2	11.0	50	0.8	7.07	310	3.0	6	2.32	1.5	< 1	140	28
N203417	205	294	20	2	6.6	10	0.4	0.57	190	< 0.5	2	3.66	< 0.5	< 1	170	47
N203418	205	294	5	1	4.6	< 10	< 0.2	8.16	370	3.0	6	2.04	< 0.5	4	95	47
N203419	205	294	10	2	0.8	< 10	0.8	7.99	2370	2.5	6	2.31	0.5	2	81	14
N203420	205	294	5	6	0.4	< 10	< 0.2	7.18	1980	2.0	4	1.28	0.5	< 1	105	7
N203421	205	294	5	2	0.4	< 10	< 0.2	7.53	2410	2.0	2	1.48	0.5	1	73	10
N203422	205	294	15	2	0.8	20	< 0.2	7.94	630	3.0	< 2	1.11	3.0	1	79	31
N203423	205	294	25	4	6.8	80	0.6	8.16	520	3.5	< 2	1.07	4.0	< 1	67	30
N203424	205	294	70	4	20	570	9.6	7.97	280	3.5	4	0.97	25.0	< 1	67	108
N203425	205	294	810	182	175	3810	100.0	6.40	200	2.5	< 2	0.71	187.5	4	173	844
N203432	205	294	15	1	39	600	4.2	8.62	1040	2.0	< 2	4.99	37.0	< 1	64	198
N203433	205	294	10	4	8.2	110	< 0.2	9.03	1660	2.0	2	3.13	2.5	< 1	56	21
N203434	205	294	5	1	9.4	640	< 0.2	8.21	1520	2.5	4	2.75	19.0	< 1	49	22
N203435	205	294	70	8	120	1040	< 0.2	8.04	1410	2.5	< 2	2.17	29.5	< 1	52	202
N203436	205	294	10	8	7.8	200	< 0.2	7.49	1420	2.5	< 2	1.21	5.5	< 1	32	22
N203437	205	294	10	4	4.0	200	< 0.2	7.58	1390	3.0	2	0.78	3.5	< 1	42	13
N203438	205	294	5	4	6.2	90	< 0.2	8.08	1820	3.0	< 2	1.17	0.5	< 1	67	13

CERTIFICATION: Stuart Breitlan

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
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P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 05-AUG-97
Invoice No. :I9734200
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Account :GP W

CERTIFICATE OF ANALYSIS A9734200

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203406	205 294	0.84	0.46	0.18	530	< 1	< 0.01	27	120	10	48	0.04	52	< 10	44
N203407	205 294	1.51	1.15	0.33	850	2	0.02	34	1130	10	309	0.08	98	< 10	126
N203408	205 294	2.30	1.62	0.38	210	14	0.04	56	1440	22	54	0.10	309	< 10	312
N203409	205 294	1.76	2.01	0.34	220	6	0.07	39	1100	20	63	0.13	234	< 10	168
N203410	205 294	1.81	3.60	0.16	135	5	0.26	3	310	22	53	0.18	11	< 10	34
N203411	205 294	0.99	2.49	0.21	160	4	0.80	3	160	18	65	0.14	6	< 10	34
N203412	205 294	0.59	2.08	0.35	410	3	1.07	1	160	8	126	0.13	7	< 10	24
N203413	205 294	1.72	3.33	0.69	310	4	0.12	3	140	16	36	0.13	7	< 10	24
N203414	205 294	1.60	3.66	0.76	185	6	0.17	9	270	36	33	0.13	48	< 10	138
N203415	205 294	1.86	3.93	0.90	190	10	0.16	13	320	50	56	0.14	74	< 10	248
N203416	205 294	1.89	3.69	0.86	370	10	0.13	17	300	72	46	0.14	81	< 10	190
N203417	205 294	1.02	0.27	0.12	575	1	< 0.01	4	20	56	36	0.01	5	< 10	50
N203418	205 294	2.94	3.35	0.97	370	4	1.23	2	830	22	97	0.16	30	< 10	102
N203419	205 294	2.10	3.79	0.84	395	3	0.54	3	780	42	107	0.22	28	< 10	122
N203420	205 294	1.77	3.47	0.60	385	3	0.19	1	560	90	55	0.13	21	< 10	88
N203421	205 294	2.00	3.59	0.78	445	2	0.34	1	710	66	65	0.15	24	< 10	140
N203422	205 294	1.92	3.82	0.99	295	8	0.42	9	470	70	62	0.14	67	< 10	410
N203423	205 294	1.98	4.12	1.14	345	12	0.20	15	310	90	55	0.13	106	< 10	458
N203424	205 294	2.15	4.05	1.20	415	17	0.19	17	320	760	47	0.13	102	< 10	2660
N203425	205 294	5.55	3.13	0.83	235	22	0.16	66	570	1700	27	0.10	382	< 10	>10000
N203432	205 294	2.73	2.97	5.77	1405	5	0.61	1	330	204	138	0.09	24	< 10	3750
N203433	205 294	2.17	2.85	6.02	1110	4	0.44	< 1	350	18	77	0.09	17	< 10	406
N203434	205 294	1.86	2.72	4.96	975	5	0.34	< 1	280	250	60	0.10	13	< 10	2170
N203435	205 294	1.95	2.79	4.21	935	3	0.24	< 1	270	220	46	0.09	13	< 10	2920
N203436	205 294	1.54	2.83	2.90	390	3	0.19	1	270	84	33	0.10	14	< 10	626
N203437	205 294	1.48	2.89	2.95	320	2	0.18	< 1	270	80	22	0.11	13	< 10	456
N203438	205 294	1.76	3.25	2.98	410	3	0.20	< 1	280	50	33	0.11	14	< 10	220

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9734367

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9734367

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 6-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	8	RUSH Assay ring approx 150 mesh
295	8	RUSH crush and split (0-3 Kg)
3202	8	Rock - save entire reject
290	8	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	8	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	8	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	8	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	8	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	8	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	8	Ba ppm	XRF	10	50000
444	8	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	8	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	8	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	8	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	8	Ag ppm: high grade 24 element	AAS	0.5	200
4031	8	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	8	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	8	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	8	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	8	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	8	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	8	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	8	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	8	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	8	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	8	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	8	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	8	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	8	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	8	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	8	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	8	Pb %: high grade 24 element	AAS	0.001	10.00
4047	8	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	8	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	8	V ppm: A22 ICP package	ICP-AES	10	50000
4050	8	Zn ppm: A22 ICP package	ICP-AES	20	100000

Chemex Labs Ltd.

Analytical Chemists *Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 05-AUG-97
Invoice No. :I9734367
P.O. Number :
Account :GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9734367

SAMPLE	PREP CODE		Au g/t RUSHRUSH FA	Ag g/t	Cu %	Pb %	Zn %	Ba (XRF) ppm	Spec Gr S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
N203574	258	295	1.99	831	5.59	0.53	4.60	4250	3.27	0.07	0.02	0.001	>200	5.40	100	< 10	Intf*	1.65	480	50	80
N203575	258	295	1.85	322	0.52	1.14	16.00	300	4.34	0.49	0.06	0.003	>200	0.65	100	< 10	< 20	0.25	1710	10	60
N203576	258	295	2.26	284	0.25	1.61	23.5	1060	4.03	0.44	0.08	0.004	>200	1.55	100	< 10	< 20	0.60	2520	10	70
N203577	258	295	1.41	260	0.21	0.49	6.12	4520	3.43	0.16	0.04	0.001	>200	4.30	100	< 10	< 20	1.00	570	< 10	100
N203578	258	295	5.21	1391	0.41	4.11	13.50	180	4.27	0.53	0.16	0.003	>200	0.50	100	< 10	< 20	1.05	1070	< 10	30
N203579	258	295	0.69	48	0.03	0.14	0.63	2580	2.59	0.03	0.02<	0.001	48.0	4.70	1000	< 10	< 20	1.25	60	< 10	210
N203580	258	295	2.57	230	1.37	0.32	16.00	560	3.27	0.07	0.11	0.002	>200	1.15	400	< 10	< 20	0.80	1530	80	150
N203581	258	295	0.69	62	0.88	0.29	10.80	3460	2.96	0.01	0.01	0.001	61.0	3.95	500	< 10	< 20	2.05	990	40	100

CERTIFICATION: Ian R. Bradley

* INTERFERENCE: Cu on Bi

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Certificate Date: 05-AUG-97
Invoice No. : I9734367
P.O. Number :
Account : GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9734367

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
N203574	258	295	53000	18.20	2.3	0.50	490	10	0.15	40	0.498	70	0.05	250	45200
N203575	258	295	5150	>30.0	0.1	0.15	360	60	< 0.05	30	1.150	< 10	< 0.05	70	>100000
N203576	258	295	2530	23.0	0.6	0.45	920	50	0.05	20	1.640	10	< 0.05	60	>100000
N203577	258	295	2130	19.30	1.6	0.60	550	30	0.10	40	0.484	30	0.05	200	61400
N203578	258	295	3840	28.2	0.1	0.15	980	60	< 0.05	60	4.31	10	< 0.05	120	>100000
N203579	258	295	280	4.15	2.0	0.50	160	40	0.15	110	0.131	40	0.10	850	5900
N203580	258	295	13600	10.70	0.4	0.15	240	10	0.05	80	0.308	10	< 0.05	340	>100000
N203581	258	295	8400	4.65	1.2	0.35	220	< 10	0.90	10	0.282	60	< 0.05	160	>100000

CERTIFICATION:

* INTERFERENCE: Cu on Bi

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9734381

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9734381

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 7-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	15	RUSH Assay ring approx 150 mesh
295	15	RUSH crush and split (0-3 Kg)
3202	15	Rock - save entire reject
290	15	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	15	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	15	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	15	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	15	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	15	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	15	Ba ppm	XRF	10	50000
444	15	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	15	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	15	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	15	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	15	Ag ppm: high grade 24 element	AAS	0.5	200
4031	15	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	15	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	15	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	15	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	15	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	15	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	15	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	15	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	15	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	15	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	15	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	15	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	15	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	15	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	15	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	15	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	15	Pb %: high grade 24 element	AAS	0.001	10.00
4047	15	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	15	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	15	V ppm: A22 ICP package	ICP-AES	10	50000
4050	15	Zn ppm: A22 ICP package	ICP-AES	20	100000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 07-AUG-97
Invoice No. :I9734381
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9734381

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	ZnBa %	(XRFSpec Gr ppm	S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
204001	258	295	0.21	7	0.12	0.03	0.08	5270	2.93	0.03	0.02<	0.001	18.0	1.70	300	< 10	< 20	0.60	< 10	< 10	270
204002	258	295	1.23	265	0.73	0.96	7.86	540	4.61	0.10	0.05	0.003	>200	0.35	200	< 10	60	0.05	540	70	180
204003	258	295	1.78	379	2.02	0.21	1.42	330	4.22	0.16	0.07	0.001	>200	0.55	100	< 10	100	0.05	100	60	250
204004	258	295	1.65	237	0.94	0.49	6.43	380	4.73	0.18	0.03	0.002	>200	0.20	< 100	< 10	60	0.40	480	50	120
204005	258	295	0.89	122	1.03	0.31	17.20	550	4.53	0.12	< 0.01	0.003	109.0	0.20	200	< 10	< 20	0.60	1630	90	90
204006	258	295	1.71	386	1.31	3.03	10.80	340	4.77	0.45	0.04	0.002	>200	0.15	100	< 10	20	0.50	910	10	80
204007	258	295	1.23	355	1.43	1.33	19.30	340	4.52	0.13	0.02	0.002	>200	0.15	100	< 10	20	0.95	1670	70	100
204008	258	295	1.92	600	1.50	2.33	13.00	280	4.71	0.17	0.04	0.001	>200	0.15	100	< 10	< 20	0.30	1100	30	90
204009	258	295	2.26	465	2.37	2.20	10.20	330	4.67	0.10	0.04	0.001	>200	0.15	100	< 10	40	0.40	840	10	100
204010	258	295	1.37	411	0.99	2.55	14.00	480	4.47	0.18	0.03	0.002	>200	0.15	200	< 10	< 20	2.00	1240	30	110
204011	258	295	1.71	513	0.79	2.94	16.60	600	4.42	0.57	0.04	0.002	>200	0.40	400	< 10	< 20	2.20	1550	20	90
204012	258	295	2.74	642	4.80	1.61	13.80	3740	3.86	0.05	0.02	0.002	>200	3.05	300	< 10	60	1.55	1420	60	90
204013	258	295	1.78	535	0.98	1.77	13.80	2990	3.91	0.22	0.03	0.002	>200	2.25	500	< 10	< 20	1.85	1340	30	110
204014	258	295	0.14	36	0.38	0.09	1.51	2700	2.77	< 0.01	< 0.01	0.001	45.0	2.65	3200	< 10	< 20	2.90	150	< 10	240
204015	258	295	< 0.07	7	0.09	0.08	0.20	8450	2.83	< 0.01	< 0.01<	0.001	16.0	7.00	2300	< 10	< 20	0.15	10	< 10	70

CERTIFICATION: David Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 07-AUG-97
Invoice No. :I9734381
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9734381

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
204001	258	295	1120	10.20	0.3	0.35	150	50	< 0.05	190	0.030	100	0.05	540	800
204002	258	295	6740	>30.0	< 0.1	0.05	250	40	< 0.05	80	0.953	< 10	< 0.05	80	66400
204003	258	295	18850	>30.0	< 0.1	0.20	110	50	< 0.05	50	0.207	< 10	< 0.05	30	12520
204004	258	295	8640	>30.0	< 0.1	0.15	320	60	< 0.05	50	0.462	< 10	< 0.05	20	54000
204005	258	295	9890	>30.0	< 0.1	0.10	400	150	< 0.05	60	0.302	< 10	< 0.05	50	>100000
204006	258	295	12420	>30.0	< 0.1	0.05	350	110	< 0.05	70	2.88	< 10	< 0.05	30	92300
204007	258	295	13480	28.0	< 0.1	0.05	420	70	< 0.05	60	1.270	< 10	< 0.05	40	>100000
204008	258	295	13230	>30.0	< 0.1	< 0.05	200	90	< 0.05	90	2.19	< 10	< 0.05	60	>100000
204009	258	295	21300	>30.0	< 0.1	0.05	230	60	< 0.05	80	2.18	< 10	< 0.05	50	88000
204010	258	295	9900	>30.0	< 0.1	0.05	710	70	< 0.05	90	2.50	10	< 0.05	60	>100000
204011	258	295	8040	29.1	< 0.1	0.05	780	70	0.05	60	2.81	20	< 0.05	150	>100000
204012	258	295	47900	22.5	1.3	0.40	570	30	0.05	20	1.555	40	< 0.05	110	>100000
204013	258	295	8970	21.8	0.8	0.25	530	10	0.05	10	1.735	10	< 0.05	70	>100000
204014	258	295	3760	2.85	1.2	1.70	640	< 10	0.10	< 10	0.097	80	< 0.05	90	14540
204015	258	295	770	2.90	3.1	0.85	110	< 10	0.20	< 10	0.082	10	0.10	30	1800

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9735204

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9735204

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 3-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	2	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
301	1	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1
Total Pages :1
Certificate Date: 03-AUG-97
Invoice No. :19735204
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735204

SAMPLE	PREP CODE		Cu %	Zn %								
N203192	244	--	-----	2.96								
N203198	244	--	1.76	-----								

CERTIFICATION: Stuart Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9735249

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9735249

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 6-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
384	1	Ag g/t: Gravimetric	FA-GRAVIMETRIC	3	1000
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number : 1
Total Pages : 1
Certificate Date: 06-AUG-97
Invoice No. : I9735249
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9735249

SAMPLE	PREP CODE		Ag FA g/t	Zn %								
N203328	244	--	124	2.81								

CERTIFICATION: Saad Cetinay

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9735843

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9735843

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 20-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	78	Geochem ring to approx 150 mesh
294	78	4-7 Kg crush and split
3202	78	Rock - save entire reject
285	78	ICP - HF digestion charge
287	78	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	78	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	78	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	78	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	78	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	78	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	78	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	78	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	78	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	78	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	78	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	78	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	78	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	78	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	78	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	78	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	78	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	78	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	78	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	78	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	78	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	78	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	78	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	78	Pb ppm: 24 element, rock & core	AAS	2	10000
582	78	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	78	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	78	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	78	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	78	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :2
Certificate Date: 20-AUG-97
Invoice No. :19735843
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735843

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
203521	205	294	< 5	38	< 0.2	< 10	< 0.2	8.98	1100	0.5	< 2	5.97	< 0.5	40	691	81
203522	205	294	< 5	114	0.2	< 10	< 0.2	7.61	420	< 0.5	2	9.24	< 0.5	50	781	58
203523	205	294	10	2	< 0.2	< 10	< 0.2	4.02	880	0.5	< 2	4.71	< 0.5	5	279	22
203524	205	294	< 5	10	< 0.2	< 10	< 0.2	6.72	1150	1.5	2	1.82	< 0.5	10	216	54
203525	205	294	< 5	10	< 0.2	< 10	< 0.2	6.01	2460	1.0	< 2	3.48	0.5	11	267	46
203526	205	294	5	4	< 0.2	< 10	< 0.2	7.68	870	1.5	2	0.79	0.5	12	126	57
203527	205	294	< 5	44	24	< 10	< 0.2	7.61	140	< 0.5	< 2	7.97	< 0.5	50	791	57
203528	205	294	< 5	2	0.6	< 10	< 0.2	6.15	1400	1.5	< 2	1.22	< 0.5	8	155	33
203529	205	294	< 5	28	0.2	< 10	< 0.2	8.39	1550	0.5	< 2	3.69	0.5	29	252	65
203530	205	294	< 5	4	0.8	30	< 0.2	5.82	550	1.5	2	0.62	0.5	14	230	107
203531	205	294	< 5	4	0.4	20	< 0.2	4.19	360	0.5	< 2	1.57	< 0.5	8	302	55
203532	205	294	< 5	2	0.4	130	< 0.2	3.94	890	1.5	< 2	0.61	< 0.5	5	205	46
203533	205	294	10	4	1.2	10	< 0.2	5.78	590	1.5	< 2	0.52	< 0.5	12	206	128
203534	205	294	< 5	4	1.4	10	< 0.2	4.75	550	1.0	< 2	5.23	< 0.5	6	169	33
203535	205	294	< 5	2	0.6	10	< 0.2	5.32	830	3.0	< 2	0.55	< 0.5	5	208	46
203536	205	294	< 5	2	0.6	200	< 0.2	3.54	370	2.5	< 2	0.22	< 0.5	3	221	40
203537	205	294	15	1	1.6	590	0.6	3.62	310	3.5	< 2	0.26	2.0	5	161	47
203538	205	294	25	1	3.0	320	0.6	3.95	310	4.0	< 2	0.10	2.0	6	225	73
203539	205	294	5	1	2.2	150	< 0.2	4.10	330	4.0	< 2	0.14	1.5	5	247	59
203540	205	294	< 5	4	3.0	210	0.4	3.11	260	3.5	< 2	0.21	4.5	4	204	70
203559	205	294	< 5	4	3.4	10	< 0.2	2.60	1090	0.5	< 2	1.25	< 0.5	4	199	59
203560	205	294	< 5	6	6.0	50	< 0.2	3.60	270	1.5	< 2	0.97	< 0.5	12	189	72
203561	205	294	< 5	4	6.0	20	< 0.2	2.97	250	0.5	< 2	9.95	< 0.5	3	156	42
203562	205	294	15	4	5.4	20	< 0.2	4.89	240	2.5	< 2	1.61	< 0.5	9	197	73
203563	205	294	< 5	20	8.8	100	0.6	4.18	190	2.0	< 2	3.92	1.5	5	227	40
203564	205	294	< 5	8	5.6	80	< 0.2	4.21	170	1.5	< 2	6.84	0.5	3	177	19
203565	205	294	< 5	12	5.2	20	< 0.2	7.96	400	3.0	< 2	4.09	0.5	1	102	12
203566	205	294	< 5	8	1.6	< 10	< 0.2	15.50	3490	7.5	< 2	6.47	2.0	3	258	26
203567	205	294	5	10	4.6	40	< 0.2	10.15	810	3.0	< 2	3.24	0.5	6	61	7
203568	205	294	< 5	2	1.4	< 10	< 0.2	8.95	410	2.5	2	4.00	< 0.5	4	106	11
203569	205	294	< 5	1	1.2	< 10	< 0.2	8.20	2720	1.5	< 2	1.55	0.5	3	127	9
203570	205	294	< 5	6	0.4	< 10	< 0.2	8.50	2880	2.5	< 2	1.18	4.0	1	115	13
203571	205	294	< 5	6	9.4	40	1.2	8.15	420	2.5	10	0.64	2.0	4	137	41
203572	205	294	10	20	24	60	1.0	7.58	350	2.5	10	0.59	2.0	4	128	39
203573	205	294	480	202	270	1580	307	6.08	280	3.0	2	1.16	116.0	6	429	1675
203582	205	294	25	16	8.2	310	1.6	8.87	720	1.5	< 2	4.03	51.5	6	87	418
203583	205	294	< 5	6	2.4	50	< 0.2	9.55	1950	2.0	< 2	4.11	4.0	2	93	15
203584	205	294	< 5	4	2.2	30	< 0.2	9.80	1580	2.0	< 2	5.41	4.0	3	54	16
203585	205	294	< 5	8	6.8	560	< 0.2	10.35	2210	2.5	< 2	1.95	45.5	2	72	30
203586	205	294	< 5	4	15.0	290	< 0.2	9.14	1810	2.5	< 2	4.01	20.5	2	67	45

CERTIFICATION: [signature]

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Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :2
Certificate Date: 20-AUG-97
Invoice No. :I9735843
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735843

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
203521	205 294	4.84	1.54	5.25	3010	< 1	0.62	275	120	< 2	262	0.40	199	< 10	62
203522	205 294	4.97	0.64	5.42	4960	< 1	0.53	442	130	4	380	0.33	163	< 10	66
203523	205 294	1.44	1.05	0.45	1260	< 1	0.30	23	190	8	238	0.16	62	< 10	54
203524	205 294	2.69	1.71	1.50	865	< 1	0.61	46	480	4	159	0.32	124	< 10	78
203525	205 294	2.44	1.53	1.43	980	< 1	0.38	41	370	6	170	0.28	107	< 10	64
203526	205 294	2.96	2.47	1.15	875	< 1	0.27	36	610	8	102	0.35	138	< 10	104
203527	205 294	4.86	0.16	7.18	1545	< 1	0.46	353	400	< 2	153	0.53	187	10	58
203528	205 294	2.38	1.61	1.29	500	< 1	0.06	38	560	4	84	0.27	109	< 10	82
203529	205 294	4.68	0.80	3.30	1755	< 1	2.94	88	540	< 2	167	0.63	218	< 10	80
203530	205 294	3.17	1.82	1.11	1625	< 1	0.07	137	550	4	107	0.21	154	< 10	242
203531	205 294	2.03	1.14	0.85	1040	< 1	0.05	69	400	< 2	130	0.11	93	< 10	166
203532	205 294	2.16	1.00	0.50	1330	< 1	0.06	31	290	2	102	0.15	93	< 10	192
203533	205 294	3.12	1.64	1.04	805	< 1	0.09	149	330	< 2	163	0.24	151	< 10	294
203534	205 294	2.49	0.82	1.00	1410	< 1	0.07	44	820	4	413	0.19	104	< 10	122
203535	205 294	3.85	1.32	0.68	390	< 1	0.11	20	260	< 2	192	0.21	129	< 10	92
203536	205 294	1.54	1.04	0.30	100	22	0.06	24	140	8	64	0.10	100	< 10	874
203537	205 294	2.05	1.19	0.31	95	7	0.03	28	400	220	23	0.10	129	< 10	2380
203538	205 294	2.98	1.30	0.32	55	3	0.03	54	50	430	9	0.11	152	< 10	1310
203539	205 294	1.23	1.46	0.34	70	< 1	0.03	37	140	50	12	0.11	134	< 10	440
203540	205 294	2.51	0.98	0.21	50	1	0.02	37	50	200	6	0.07	136	< 10	1040
203559	205 294	0.66	0.19	0.08	185	< 1	0.02	35	60	4	135	0.04	72	< 10	50
203560	205 294	1.50	1.18	0.34	845	< 1	0.03	43	470	24	30	0.10	99	< 10	104
203561	205 294	1.23	0.51	0.22	1270	< 1	0.03	34	80	16	722	0.05	77	< 10	54
203562	205 294	1.61	1.95	0.47	325	< 1	0.04	36	740	10	55	0.15	167	< 10	62
203563	205 294	1.78	1.52	0.41	680	3	0.03	40	1660	44	87	0.12	229	< 10	200
203564	205 294	1.28	1.12	0.40	785	< 1	0.06	19	510	20	250	0.08	99	< 10	118
203565	205 294	1.09	2.37	0.63	465	4	1.55	7	180	30	175	0.15	28	< 10	84
203566	205 294	2.28	7.20	1.64	865	6	1.30	19	500	124	290	0.34	84	20	188
203567	205 294	2.80	4.10	1.05	365	< 1	0.65	5	910	20	135	0.36	35	10	146
203568	205 294	2.63	3.19	0.97	620	< 1	1.26	6	800	20	184	0.24	35	10	100
203569	205 294	2.50	3.20	0.72	705	< 1	0.33	3	550	166	78	0.16	27	< 10	84
203570	205 294	1.77	3.57	0.77	580	3	0.17	9	430	88	56	0.15	63	< 10	310
203571	205 294	2.09	3.48	0.71	400	5	0.14	11	510	60	41	0.15	85	10	244
203572	205 294	1.95	3.28	0.66	370	2	0.14	11	480	60	38	0.13	80	< 10	236
203573	205 294	3.60	2.47	0.57	90	119	0.11	232	3880	680	58	0.14	2250	< 10	9870
203582	205 294	2.39	2.21	3.61	820	< 1	1.55	7	310	450	112	0.11	44	< 10	4650
203583	205 294	1.88	2.86	6.05	1320	< 1	0.34	5	300	80	91	0.14	24	10	454
203584	205 294	2.15	2.60	6.31	1315	1	0.37	2	310	120	103	0.12	19	< 10	476
203585	205 294	1.58	3.32	4.27	530	< 1	0.26	3	370	84	55	0.14	23	10	3270
203586	205 294	1.54	3.20	3.96	855	< 1	0.27	4	320	224	82	0.14	20	10	1725

CERTIFICATION: Stan Butler

Chemex Labs Ltd.

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Page Number :2-A
Total Pages :2
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CERTIFICATE OF ANALYSIS A9735843

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
203587	205	294	< 5	2	14.0	50	< 0.2	7.13	1460	2.5	< 2	3.29	3.0	3	105	46
203588	205	294	10	1	67	630	< 0.2	7.41	1310	2.0	< 2	1.67	38.0	2	66	157
203589	205	294	< 5	10	32	230	< 0.2	7.01	1460	2.5	< 2	1.26	13.5	2	109	64
203590	205	294	< 5	2	3.4	90	< 0.2	6.96	1410	2.5	< 2	1.31	4.5	2	98	32
203591	205	294	< 5	1	16.5	130	< 0.2	7.31	1490	2.5	< 2	1.71	5.0	3	83	43
203592	205	294	< 5	2	15.0	140	< 0.2	7.01	1280	2.5	< 2	1.42	5.0	1	71	29
203593	205	294	< 5	4	3.8	90	< 0.2	7.01	1250	3.0	< 2	1.13	3.5	2	81	11
203594	205	294	< 5	6	6.0	80	< 0.2	7.01	1310	3.0	< 2	1.67	2.5	1	70	18
203595	205	294	< 5	6	4.4	130	< 0.2	6.71	1500	3.0	< 2	1.01	5.5	1	76	13
203596	205	294	< 5	10	8.6	70	< 0.2	7.30	1870	3.0	< 2	0.90	3.5	2	83	22
203597	205	294	< 5	4	2.8	70	< 0.2	7.72	2050	3.0	< 2	2.20	4.5	1	98	13
203598	205	294	40	14	56	250	1.4	7.31	1950	2.5	< 2	1.64	6.0	2	115	19
203599	205	294	< 5	4	2.2	180	< 0.2	7.60	1850	2.5	< 2	4.71	9.0	2	88	23
203600	205	294	< 5	18	2.2	160	0.6	7.82	2050	3.0	< 2	7.47	4.0	1	79	24
203601	205	294	10	14	1.8	2350	1.4	7.21	340	2.0	< 2	5.37	174.0	11	77	1040
203602	205	294	< 5	12	0.8	980	< 0.2	7.21	1530	1.5	< 2	3.64	49.5	5	89	339
203603	205	294	< 5	6	0.6	980	< 0.2	7.64	1470	2.0	< 2	4.53	47.5	4	78	558
203604	205	294	< 5	4	0.8	260	< 0.2	8.31	1600	2.0	< 2	2.96	17.5	2	70	157
203605	205	294	< 5	4	2.2	270	0.4	8.50	1570	2.5	< 2	3.32	18.0	3	62	94
203606	205	294	< 5	6	0.2	70	< 0.2	8.11	1510	2.0	< 2	3.32	3.5	2	47	32
203607	205	294	< 5	1	1.0	340	1.2	7.39	1340	2.0	< 2	5.13	24.5	3	82	93
203608	205	294	< 5	1	0.4	1330	0.4	7.46	1140	2.0	< 2	5.43	83.0	5	27	277
203609	205	294	< 5	1	0.4	70	< 0.2	8.18	1490	2.5	2	2.81	6.0	< 1	110	33
203610	205	294	< 5	1	0.2	10	2.8	8.23	1470	2.5	< 2	2.79	0.5	1	116	13
203611	205	294	< 5	1	0.6	< 10	< 0.2	7.03	1280	2.5	< 2	1.12	< 0.5	< 1	121	10
203612	205	294	< 5	1	0.6	< 10	3.2	6.87	1250	2.5	2	2.30	< 0.5	5	112	3
203613	205	294	< 5	1	0.2	< 10	< 0.2	6.26	1340	2.5	< 2	1.24	< 0.5	1	101	6
203614	205	294	< 5	2	0.4	10	< 0.2	6.35	1580	2.0	< 2	1.55	< 0.5	3	95	11
203615	205	294	< 5	4	3.2	110	< 0.2	6.37	1920	2.5	< 2	1.55	2.5	< 1	127	10
203616	205	294	< 5	10	1.4	40	< 0.2	6.77	800	3.0	< 2	0.73	< 0.5	2	124	5
203617	205	294	< 5	8	0.8	40	< 0.2	7.27	590	2.5	< 2	0.97	< 0.5	1	122	6
203618	205	294	< 5	6	1.2	30	< 0.2	6.56	680	2.5	< 2	0.63	< 0.5	1	119	5
203619	205	294	< 5	6	0.8	30	< 0.2	7.22	840	2.0	< 2	0.58	< 0.5	2	110	5
203620	205	294	< 5	8	0.6	30	< 0.2	7.52	1290	2.5	< 2	0.72	< 0.5	< 1	130	5
203621	205	294	5	8	1.2	60	< 0.2	7.18	780	2.5	< 2	0.61	< 0.5	2	103	4
203622	205	294	< 5	6	1.4	50	< 0.2	6.96	1840	2.5	< 2	1.71	< 0.5	3	128	5
203623	205	294	< 5	2	0.8	20	< 0.2	7.10	2210	2.0	< 2	1.58	< 0.5	2	121	4
203624	205	294	< 5	14	0.4	< 10	< 0.2	7.58	2810	2.0	< 2	1.85	< 0.5	1	131	5

CERTIFICATION:

Chemex Labs Ltd.

*Analytical Chemists * Geochemists * Registered Assayers*

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 20-AUG-97
Invoice No. :I9735843
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735843

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
203587	205	294	1.47	2.79	4.69	990	< 1	0.28	3	280	92	69	0.12	17	< 10	350
203588	205	294	1.73	2.62	4.65	760	1	0.24	2	260	400	38	0.11	15	< 10	3220
203589	205	294	1.38	2.80	2.99	525	< 1	0.20	1	240	174	33	0.11	16	< 10	1200
203590	205	294	1.30	2.77	2.78	455	< 1	0.21	2	260	92	31	0.12	14	10	446
203591	205	294	1.41	2.93	2.97	435	< 1	0.22	2	260	64	39	0.12	15	< 10	480
203592	205	294	1.31	2.84	2.98	425	< 1	0.19	3	260	64	29	0.14	15	10	498
203593	205	294	1.44	2.78	2.99	405	< 1	0.19	1	280	70	27	0.11	16	< 10	370
203594	205	294	1.52	2.86	3.16	550	< 1	0.22	1	270	52	29	0.13	15	< 10	282
203595	205	294	1.48	2.72	3.06	400	< 1	0.17	3	250	180	22	0.13	14	10	574
203596	205	294	1.44	3.15	2.85	340	< 1	0.18	2	290	156	24	0.14	16	< 10	394
203597	205	294	1.49	3.62	2.84	620	< 1	0.20	3	300	54	46	0.15	17	< 10	552
203598	205	294	0.94	3.88	1.01	305	< 1	0.18	2	260	300	35	0.17	16	10	586
203599	205	294	1.21	4.10	1.32	530	< 1	0.18	2	290	500	118	0.16	17	< 10	736
203600	205	294	1.20	4.43	0.87	665	< 1	0.20	3	320	280	280	0.20	18	< 10	378
203601	205	294	3.33	4.03	0.84	685	< 1	0.18	4	330	640	145	0.19	24	10	>10000
203602	205	294	1.80	3.89	0.56	755	< 1	0.17	3	440	640	107	0.21	15	< 10	4440
203603	205	294	2.31	4.10	0.56	800	< 1	0.18	4	430	200	130	0.21	18	< 10	4510
203604	205	294	1.40	4.48	0.66	530	< 1	0.18	5	890	170	79	0.25	40	10	1510
203605	205	294	1.50	4.58	0.67	495	1	0.20	5	890	264	84	0.26	32	< 10	1770
203606	205	294	1.09	4.31	0.59	410	< 1	0.20	3	900	140	88	0.23	28	< 10	378
203607	205	294	2.26	3.77	0.69	985	< 1	0.23	5	830	220	116	0.33	26	< 10	2160
203608	205	294	4.58	3.37	1.36	1190	< 1	0.22	5	760	170	114	0.28	33	< 10	7440
203609	205	294	1.67	4.08	0.89	715	< 1	0.22	5	610	48	59	0.16	21	10	462
203610	205	294	2.04	4.18	1.45	845	3	0.22	4	600	12	66	0.14	19	< 10	90
203611	205	294	1.33	3.44	1.20	475	< 1	0.20	18	630	< 2	41	0.09	30	< 10	62
203612	205	294	2.34	3.22	1.92	860	< 1	0.20	6	760	< 2	78	0.10	27	< 10	76
203613	205	294	1.34	3.14	1.14	415	< 1	0.19	5	560	8	61	0.10	24	10	68
203614	205	294	2.68	3.02	0.97	655	< 1	0.17	6	500	12	72	0.15	24	10	162
203615	205	294	1.72	3.32	0.66	510	1	0.15	11	700	30	84	0.14	82	< 10	258
203616	205	294	1.81	3.53	0.73	115	< 1	0.17	5	510	22	58	0.15	27	< 10	52
203617	205	294	1.97	3.56	0.62	115	< 1	0.60	4	590	10	88	0.15	24	< 10	32
203618	205	294	1.81	2.89	0.44	85	1	0.97	5	420	10	78	0.13	22	< 10	22
203619	205	294	1.74	2.77	0.39	85	< 1	1.73	5	710	14	92	0.15	22	< 10	20
203620	205	294	1.56	3.13	0.50	95	< 1	1.36	6	640	10	91	0.15	22	< 10	22
203621	205	294	2.15	2.70	0.26	90	< 1	1.57	5	610	8	86	0.12	23	10	66
203622	205	294	1.80	3.21	0.46	215	< 1	0.58	5	610	20	149	0.14	26	< 10	46
203623	205	294	1.17	3.41	0.47	225	< 1	0.19	4	520	16	126	0.15	27	< 10	34
203624	205	294	1.00	3.07	0.69	140	< 1	0.23	5	660	10	149	0.15	32	< 10	40

CERTIFICATION:

Chemex Labs Ltd.

*Analytical Chemists * Geochemists **Registered Assayers*

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9735451

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9735451

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 6-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	3	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
301	2	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1
Total Pages :1
Certificate Date: 06-AUG-97
Invoice No. :I9735451
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735451

SAMPLE	PREP CODE	Cu %	Zn %
N203280	244 --	-----	1.40
N203285	244 --	2.16	-----
N203287	244 --	1.16	-----

CERTIFICATION:

Chemex Labs Ltd.

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British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9735877

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9735877

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 12-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	7	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
384	6	Ag g/t: Gravimetric	FA-GRAVIMETRIC	3	1000
316	5	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

Chemex Labs Ltd.

Analytical Chemists * Geochemists *Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number : 1
Total Pages : 1
Certificate Date: 12-AUG-97
Invoice No. : I9735877
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9735877

SAMPLE	PREP CODE	Ag FA g/t	Zn %
N203574	244 --	843	-----
N203575	244 --	337	15.90
N203576	244 --	303	22.3
N203577	244 --	293	-----
N203578	244 --	1370	13.50
N203580	244 --	295	15.60
N203581	244 --	-----	10.70

CERTIFICATION: Said Leing

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9735881

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9735881

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 12-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	12	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
384	11	Ag g/t: Gravimetric	FA-GRAVIMETRIC	3	1000
316	7	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

Chemex Labs Ltd.

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To: WESTMIN RESOURCES LTD.
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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number : 1
Total Pages : 1
Certificate Date: 12-AUG-97
Invoice No. : I9735881
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9735881

SAMPLE	PREP CODE	Ag FA g/t	Zn %
204002	244 --	241	-----
204003	244 --	388	-----
204004	244 --	224	-----
204005	244 --	-----	15.40
204006	244 --	379	-----
204007	244 --	350	17.30
204008	244 --	558	11.80
204009	244 --	483	-----
204010	244 --	413	9.55
204011	244 --	514	15.60
204012	244 --	649	13.40
204013	244 --	539	13.30

CERTIFICATION:

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

TO: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9735886

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9735886

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 9-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1
Total Pages :1
Certificate Date: 09-AUG-97
Invoice No. : I9735886
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9735886

SAMPLE	PREP CODE	Zn %
N203425	244 --	1.92

CERTIFICATION: David Terry

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9736856

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9736856

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 28-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	3	RUSH Assay ring approx 150 mesh
295	3	RUSH crush and split (0-3 Kg)
3202	3	Rock - save entire reject
290	3	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	3	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	3	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	3	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	3	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	3	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	3	Ba ppm	XRF	10	50000
444	3	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	3	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	3	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	3	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	3	Ag ppm: high grade 24 element	AAS	0.5	200
4031	3	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	3	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	3	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	3	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	3	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	3	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	3	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	3	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	3	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	3	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	3	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	3	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	3	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	3	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	3	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	3	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	3	Pb %: high grade 24 element	AAS	0.001	10.00
4047	3	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	3	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	3	V ppm: A22 ICP package	ICP-AES	10	50000
4050	3	Zn ppm: A22 ICP package	ICP-AES	20	100000

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Certificate Date: 28-AUG-97
Invoice No. :19736856
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9736856

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	ZnBa %	(XRFSpec Gr ppm	S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
204549	258	295	1.65	130	1.34	0.34	4.79	4800	3.12	0.09	0.04	0.002	133.0	1.45	< 100	< 10	< 20	1.70	400	30	330
204550	258	295	1.51	363	0.65	1.72	11.00	1350	4.08	0.23	0.06	0.004	>200	0.70	< 100	< 10	< 20	1.15	1080	30	100
204560	258	295	2.95	376	0.10	2.43	9.22	910	4.44	0.33	0.04	0.006	>200	0.25	< 100	< 10	< 20	1.00	710	10	80

CERTIFICATION: Hart Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number : 1-B
Total Pages : 1
Certificate Date: 28-AUG-97
Invoice No. : I9736856
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9736856

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
204549	258	295	12620	14.35	0.6	0.15	190	80	0.05	140	0.353	40	< 0.05	550	42900
204550	258	295	7130	29.7	0.3	0.25	390	110	0.05	140	1.790	10	< 0.05	140	105700
204560	258	295	1090	>30.0	< 0.1	0.05	440	140	0.05	210	2.53	< 10	< 0.05	80	89100

CERTIFICATION: Ian R. Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9737036

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9737036

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 20-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	18	Geochem ring to approx 150 mesh
226	18	0-3 Kg crush and split
3202	18	Rock - save entire reject
285	18	ICP - HF digestion charge
287	18	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	18	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	18	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	18	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	18	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	18	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	18	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	18	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	18	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	18	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	18	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	18	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	18	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	18	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	18	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	18	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	18	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	18	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	18	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	18	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	18	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	18	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	18	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	18	Pb ppm: 24 element, rock & core	AAS	2	10000
582	18	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	18	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	18	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	18	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	18	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 20-AUG-97
Invoice No. :I9737036
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9737036

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N204016	205	226	20	49	16.0	4350	12.0	6.04	110	2.5	8	0.74	90.0	< 1	76	361
N204017	205	226	30	95	14.5	2230	5.8	5.44	90	2.5	2	5.10	30.0	3	112	231
N204018	205	226	20	45	32	1360	6.8	3.73	130	1.5	< 2	6.20	14.0	< 1	128	261
N204019	205	226	< 5	25	8.0	240	< 0.2	3.37	90	1.5	< 2	6.69	1.0	6	143	38
N204020	205	226	< 5	17	11.5	130	< 0.2	3.81	210	1.5	< 2	5.38	< 0.5	3	125	70
N204021	205	226	< 5	69	42	770	0.8	3.32	70	1.5	< 2	2.03	6.0	4	155	959
N204022	205	226	< 5	153	120	5790	4.4	2.10	120	0.5	< 2	2.42	59.0	3	195	523
N204023	205	226	20	110	64	4020	4.6	6.70	170	3.5	< 2	1.10	36.0	1	135	86
N204024	205	226	25	111	92	3060	7.2	4.32	100	2.5	< 2	2.63	35.0	< 1	166	136
N204025	205	226	10	77	24	1300	2.4	5.99	180	3.0	< 2	0.60	18.5	1	159	33
N204026	205	226	< 5	35	6.4	450	0.4	6.49	210	3.0	< 2	2.26	0.5	1	73	10
N204027	205	226	< 5	64	30	590	0.8	5.17	120	3.5	< 2	1.24	10.0	< 1	205	26
N204028	205	226	< 5	13	3.4	30	< 0.2	8.35	290	3.5	< 2	0.73	< 0.5	3	65	10
N204029	205	226	< 5	14	1.2	30	< 0.2	8.90	490	3.5	< 2	1.19	< 0.5	< 1	95	10
N204030	205	226	< 5	6	1.2	30	< 0.2	6.63	2340	3.5	< 2	0.89	< 0.5	< 1	73	9
N204031	205	226	< 5	4	3.2	10	< 0.2	6.31	2940	2.5	2	0.63	< 0.5	< 1	82	6
N204032	205	226	< 5	24	8.6	140	0.4	5.97	260	2.5	< 2	0.35	1.0	5	123	33
N204033	205	226	< 5	11	3.8	40	< 0.2	6.19	1690	2.5	< 2	0.60	< 0.5	< 1	96	9

CERTIFICATION: Stuart Bradden

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 20-AUG-97
Invoice No. :I9737036
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9737036

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N204016	205	226	2.12	2.76	0.55	150	4	0.18	6	90	850	36	0.09	76	30	9030
N204017	205	226	2.39	2.75	0.75	675	5	0.13	15	360	550	240	0.10	140	10	3070
N204018	205	226	1.76	1.51	1.40	650	8	0.17	17	180	440	209	0.07	335	10	1515
N204019	205	226	1.87	1.80	0.64	720	2	0.06	21	190	30	177	0.06	240	< 10	238
N204020	205	226	0.89	1.45	0.45	465	9	0.06	15	110	12	180	0.07	287	10	42
N204021	205	226	2.25	1.74	0.54	275	32	0.06	74	150	48	44	0.07	1590	< 10	720
N204022	205	226	0.82	0.97	0.21	255	32	0.04	65	80	1200	81	0.05	1045	< 10	5690
N204023	205	226	1.83	3.16	0.66	130	10	0.18	34	180	1040	40	0.11	487	10	3230
N204024	205	226	1.65	2.01	0.42	275	5	0.10	27	370	1060	104	0.07	253	10	2710
N204025	205	226	1.70	2.95	0.56	90	7	0.16	23	190	250	33	0.12	291	10	1240
N204026	205	226	1.82	3.35	0.78	245	< 1	0.15	4	280	34	105	0.16	35	10	90
N204027	205	226	2.94	2.48	0.51	155	9	0.11	50	1410	36	97	0.14	406	10	628
N204028	205	226	2.34	4.29	0.40	130	< 1	1.01	4	510	20	100	0.19	32	< 10	52
N204029	205	226	3.00	3.83	0.40	165	< 1	2.05	4	510	32	226	0.20	37	10	48
N204030	205	226	1.40	3.62	0.85	165	< 1	0.17	3	550	22	91	0.12	27	< 10	66
N204031	205	226	1.27	3.55	0.68	150	< 1	0.16	3	490	22	90	0.15	23	< 10	40
N204032	205	226	1.57	2.64	0.16	80	4	0.19	23	1140	30	76	0.12	115	10	132
N204033	205	226	0.89	2.61	0.13	85	1	0.17	5	810	28	98	0.10	38	10	20

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9738874

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9738874

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 24-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1
Total Pages :1
Certificate Date: 24-AUG-97
Invoice No. :I9738874
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9738874

SAMPLE	PREP CODE		Zn %
203601	244	--	1.72

CERTIFICATION: Said Letnaf

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9739256

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9739256

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 4-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	16	RUSH Assay ring approx 150 mesh
295	16	RUSH crush and split (0-3 Kg)
3202	16	Rock - save entire reject
290	16	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	16	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	16	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	16	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	16	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	16	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	16	Ba ppm	XRF	10	50000
444	16	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	16	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	16	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	16	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	16	Ag ppm: high grade 24 element	AAS	1	200
4031	16	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	16	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	16	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	16	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	16	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	16	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	16	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	16	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	16	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	16	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	16	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	16	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	16	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	16	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	16	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	16	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	16	Pb %: high grade 24 element	AAS	0.001	10.00
4047	16	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	16	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	16	V ppm: A22 ICP package	ICP-AES	10	50000
4050	16	Zn ppm: A22 ICP package	ICP-AES	20	100000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 04-SEP-97
Invoice No. :I9739256
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9739256

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	ZnBa %	(XRFSpec Gr ppm	S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
204671	258	295	0.86	576	0.10	2.19	9.01	2220	3.77	0.23	0.08	0.002	>200	2.70	100	< 10	< 20	0.25	800	50	100
204672	258	295	0.45	95	0.30	0.15	1.29	1500	2.63	0.04	0.03	0.001	96	1.90	900	< 10	< 20	0.95	140	< 10	480
204673	258	295	1.51	442	0.34	2.04	10.10	60	4.26	0.30	0.09	0.003	>200	0.10	< 100	< 10	< 20	0.80	900	40	110
204674	258	295	0.55	177	0.50	0.76	9.10	1380	3.28	0.08	0.04	0.002	174	2.85	200	< 10	< 20	0.45	900	60	150
204675	258	295	1.10	184	0.22	0.90	9.40	1090	3.51	0.38	0.02	0.002	187	2.75	300	< 10	20	1.90	930	10	160
204676	258	295	0.24	25	0.05	0.10	0.87	1140	2.55	0.01	0.02<	0.001	28	4.20	1300	< 10	< 20	1.60	90	< 10	360
204677	258	295	3.22	907	0.16	3.26	13.50	50	4.36	0.31	0.14	0.003	>200	0.15	< 100	< 10	< 20	1.95	1090	< 10	90
204678	258	295	0.41	23	0.03	0.15	1.38	2370	2.73	< 0.01	0.02<	0.001	34	5.10	1000	< 10	< 20	2.35	130	< 10	230
204679	258	295	3.36	611	0.55	2.75	24.7	550	4.26	0.43	0.13	0.005	>200	0.40	200	< 10	20	1.20	2670	< 10	80
204680	258	295	0.99	126	0.19	0.27	0.85	1700	2.69	0.02	0.03<	0.001	132	6.25	1800	< 10	< 20	0.80	90	< 10	150
204681	258	295	4.73	574	0.70	1.39	12.90	1650	3.39	0.71	0.06	0.003	>200	2.90	500	< 10	< 20	1.50	1330	20	190
204682	258	295	5.35	614	0.46	1.98	19.70	1270	3.82	1.13	0.14	0.004	>200	1.70	500	< 10	20	2.60	2200	10	130
204683	258	295	0.48	97	0.28	0.39	3.84	6000	2.68	0.01	0.02	0.009	98	6.95	1900	< 10	< 20	1.40	420	< 10	80
204684	258	295	0.27	61	0.38	0.18	5.48	3300	2.82	0.06	0.02	0.002	63	8.55	1400	< 10	< 20	4.65	560	20	90
204685	258	295	< 0.07	6	0.07	0.08	1.28	3100	2.71	< 0.01	< 0.01	0.001	8	8.55	3100	< 10	< 20	3.95	120	< 10	170
204686	258	295	0.89	122	1.76	0.64	6.89	850	3.10	< 0.01	0.01	0.003	119	2.50	1000	< 10	60	6.70	620	30	180

CERTIFICATION: Frank Pardee

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number : 1-B
Total Pages : 1
Certificate Date: 04-SEP-97
Invoice No. : I9739256
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9739256

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
204671	258	295	950	23.4	1.2	0.35	220	10	0.05	50	2.16	10	0.05	290	76600
204672	258	295	2920	6.85	0.9	0.20	70	70	0.05	160	0.137	40	0.05	1400	12700
204673	258	295	3460	>30.0	< 0.1	0.05	450	40	< 0.05	80	2.02	< 10	< 0.05	50	91500
204674	258	295	4870	16.50	1.1	0.30	210	10	0.05	40	0.712	10	< 0.05	160	80100
204675	258	295	2240	18.30	1.0	0.40	630	30	0.05	40	0.873	40	< 0.05	130	86700
204676	258	295	520	3.55	1.1	0.40	310	50	0.15	140	0.094	50	0.15	1250	8400
204677	258	295	1700	29.6	< 0.1	0.05	1110	30	0.05	40	3.24	30	< 0.05	60	>100000
204678	258	295	340	4.00	2.1	0.65	330	20	0.20	50	0.142	60	0.10	420	13240
204679	258	295	5860	24.5	0.1	0.10	640	40	0.05	30	2.74	20	< 0.05	110	>100000
204680	258	295	1700	3.60	1.7	0.55	130	30	0.20	40	0.264	40	0.15	370	8240
204681	258	295	7110	16.35	1.3	0.40	330	30	0.05	60	1.330	20	0.05	520	>100000
204682	258	295	4660	18.30	0.7	0.25	580	10	0.05	60	1.970	30	< 0.05	230	>100000
204683	258	295	2490	4.85	1.7	1.35	300	10	1.00	10	0.364	60	0.10	190	36100
204684	258	295	3590	6.95	3.7	1.95	920	10	0.30	40	0.166	120	0.15	410	50900
204685	258	295	650	2.85	3.7	1.35	640	10	0.35	40	0.081	110	0.20	340	12220
204686	258	295	17370	10.55	1.2	0.40	940	30	0.05	70	0.648	160	0.05	770	64600

CERTIFICATION: [signature]

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9739487

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9739487

(GP W) - WESTMIN RESOURCES LTD.

Project: PUCK
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 9-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	81	Geochem ring to approx 150 mesh
226	81	0-3 Kg crush and split
3202	81	Rock - save entire reject
285	81	ICP - HF digestion charge
287	81	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	81	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	81	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	81	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	81	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	81	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	81	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	81	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	81	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	81	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	81	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	81	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	81	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	81	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	81	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	81	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	81	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	81	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	81	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	81	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	81	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	81	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	81	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	81	Pb ppm: 24 element, rock & core	AAS	2	10000
582	81	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	81	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	81	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	81	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	81	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : PUCK
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 09-SEP-97
Invoice No. :I9739487
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9739487

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173899	205 226	< 5	2	1.2	10	< 0.2	2.49	1480	2.5	< 2	0.72	< 0.5	9	187	37
N173900	205 226	< 5	1	1.8	< 10	< 0.2	0.84	140	1.0	< 2	1.33	< 0.5	1	187	18
N204501	205 226	< 5	2	1.8	20	0.4	3.63	220	1.0	< 2	0.84	< 0.5	11	242	65
N204502	205 226	< 5	2	3.4	80	0.2	3.56	250	1.0	< 2	1.31	< 0.5	12	223	61
N204503	205 226	< 5	2	1.4	60	< 0.2	4.84	280	1.5	< 2	0.44	< 0.5	15	178	106
N204504	205 226	< 5	10	2.4	80	0.2	4.29	200	1.5	< 2	0.61	< 0.5	15	199	95
N204505	205 226	< 5	8	2.6	80	0.2	3.79	210	1.5	2	0.52	< 0.5	13	196	73
N204506	205 226	< 5	16	2.4	60	0.2	4.25	200	1.5	< 2	0.56	< 0.5	14	189	94
N204507	205 226	< 5	2	1.8	40	0.2	3.30	230	1.0	< 2	0.85	< 0.5	11	216	66
N204508	205 226	< 5	2	1.6	< 10	< 0.2	2.41	200	2.0	< 2	0.53	< 0.5	8	262	120
N204509	205 226	< 5	4	2.0	150	0.4	1.12	90	1.5	< 2	15.25	0.5	1	71	54
N204510	205 226	< 5	2	2.0	190	< 0.2	1.89	200	3.0	< 2	2.62	1.5	3	208	52
N204511	205 226	< 5	2	0.8	10	< 0.2	2.44	390	3.0	< 2	3.50	< 0.5	6	141	68
N204512	205 226	< 5	2	0.8	150	< 0.2	3.16	300	4.5	< 2	2.18	3.5	8	180	70
N204513	205 226	< 5	1	1.0	280	< 0.2	1.89	210	4.0	< 2	12.45	6.5	6	98	81
N204514	205 226	< 5	24	5.4	290	< 0.2	2.66	140	5.0	< 2	1.88	8.5	13	257	79
N204515	205 226	< 5	2	1.2	60	< 0.2	6.64	1870	6.5	< 2	1.39	1.0	< 1	86	7
N204516	205 226	< 5	2	0.8	< 10	< 0.2	6.75	5360	6.0	< 2	1.14	0.5	< 1	106	4
N204517	205 226	< 5	2	0.4	< 10	< 0.2	7.48	5910	6.0	2	1.31	0.5	< 1	76	5
N204518	205 226	< 5	2	0.2	< 10	< 0.2	8.42	3520	6.5	< 2	1.47	0.5	3	81	12
N204519	205 226	5	2	0.8	10	2.0	4.36	310	1.5	< 2	0.39	< 0.5	14	195	102
N204520	205 226	< 5	2	0.6	10	0.4	3.90	250	1.5	< 2	0.54	< 0.5	10	212	70
N204521	205 226	< 5	2	5.0	320	< 0.2	1.24	260	< 0.5	< 2	1.30	< 0.5	5	257	43
N204522	205 226	< 5	2	3.2	60	< 0.2	1.37	230	< 0.5	< 2	21.3	< 0.5	2	79	34
N204523	205 226	10	2	5.2	270	< 0.2	2.93	150	1.5	< 2	2.68	< 0.5	7	178	68
N204524	205 226	< 5	4	7.8	70	< 0.2	1.76	530	0.5	< 2	0.24	< 0.5	6	192	72
N204525	205 226	< 5	2	6.4	10	< 0.2	4.05	410	2.5	< 2	0.80	< 0.5	16	151	119
N204526	205 226	< 5	12	7.0	600	0.4	2.50	130	2.5	< 2	1.82	2.5	5	241	37
N204527	205 226	< 5	8	5.8	50	0.2	6.05	550	3.5	< 2	8.61	< 0.5	1	103	15
N204528	205 226	< 5	2	3.0	20	< 0.2	6.82	2960	3.0	2	3.28	< 0.5	< 1	93	4
N204529	205 226	< 5	2	4.6	190	< 0.2	6.64	440	3.5	< 2	4.33	1.5	1	90	6
N204530	205 226	10	36	36	670	2.6	4.08	180	3.0	< 2	1.79	3.5	4	208	119
N204531	205 226	< 5	32	24	170	2.2	3.12	250	3.5	< 2	0.59	< 0.5	4	241	56
N204532	205 226	< 5	36	34	280	1.2	3.09	170	4.0	< 2	1.21	1.5	4	283	62
N204533	205 226	10	76	66	590	1.8	2.97	130	3.5	< 2	2.49	10.0	5	308	77
N204534	205 226	10	34	30	160	1.8	2.58	140	3.5	< 2	0.71	0.5	4	245	62
N204535	205 226	10	24	34	180	1.0	2.49	150	3.0	< 2	2.45	0.5	4	254	62
N204536	205 226	5	26	27	160	0.4	2.47	140	2.5	< 2	7.19	0.5	3	227	52
N204537	205 226	15	26	48	130	1.0	2.86	130	2.5	< 2	1.36	0.5	6	271	66
N204538	205 226	10	24	27	50	0.2	4.75	220	3.0	< 2	5.42	0.5	9	125	30

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : PUCK
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 09-SEP-97
Invoice No. :I9739487
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9739487

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N173899	205 226	10.95	0.34	0.33	3560	12	0.06	33	220	4	161	0.09	95	< 10	62
N173900	205 226	17.80	0.03	0.36	1220	8	0.02	6	300	< 2	213	0.04	89	< 10	46
N204501	205 226	2.79	1.25	0.78	350	2	0.09	85	730	6	180	0.14	114	< 10	186
N204502	205 226	3.36	1.29	0.89	490	2	0.08	105	1010	6	263	0.13	125	< 10	214
N204503	205 226	3.42	1.69	1.06	540	4	0.10	168	330	4	123	0.16	163	< 10	300
N204504	205 226	3.39	1.54	0.94	460	4	0.10	160	620	6	165	0.13	152	< 10	338
N204505	205 226	3.03	1.33	0.85	280	3	0.08	103	700	6	152	0.12	117	< 10	254
N204506	205 226	3.44	1.55	1.00	335	4	0.09	138	480	4	155	0.15	149	< 10	272
N204507	205 226	2.96	1.15	0.81	305	3	0.07	105	520	8	214	0.13	115	< 10	230
N204508	205 226	2.74	0.71	0.36	225	23	0.05	68	90	< 2	81	0.10	92	< 10	60
N204509	205 226	2.41	0.30	0.30	1365	17	0.02	17	1780	330	805	0.04	96	< 10	508
N204510	205 226	1.47	0.79	0.22	345	6	0.04	15	540	52	126	0.06	120	< 10	622
N204511	205 226	4.19	0.95	0.41	855	3	0.05	19	670	28	135	0.11	123	< 10	62
N204512	205 226	3.03	1.30	0.47	915	< 1	0.06	40	540	540	60	0.16	159	< 10	2290
N204513	205 226	9.17	0.64	0.78	4820	5	0.04	23	740	244	345	0.07	154	< 10	1685
N204514	205 226	3.14	0.91	0.63	585	1	0.05	69	1440	146	112	0.08	164	< 10	1335
N204515	205 226	2.36	2.71	0.91	370	4	0.20	4	60	18	69	0.11	11	< 10	232
N204516	205 226	2.24	2.69	1.03	285	2	0.20	2	60	6	63	0.12	6	< 10	64
N204517	205 226	2.28	3.03	1.16	285	5	0.23	3	110	8	76	0.17	7	< 10	48
N204518	205 226	2.57	3.18	1.42	365	3	0.24	10	190	4	91	0.16	23	< 10	42
N204519	205 226	3.15	1.38	0.90	145	1	0.13	98	520	8	56	0.20	134	< 10	206
N204520	205 226	2.79	1.23	0.84	145	< 1	0.10	78	390	6	75	0.16	129	< 10	174
N204521	205 226	0.76	0.11	0.10	175	< 1	0.03	47	90	4	152	0.03	81	< 10	148
N204522	205 226	1.31	0.18	0.17	1965	2	0.04	27	2120	6	1595	0.04	71	< 10	30
N204523	205 226	1.71	1.33	0.36	310	< 1	0.05	54	130	14	101	0.09	144	< 10	314
N204524	205 226	0.82	0.78	0.19	70	< 1	0.08	50	80	6	55	0.05	85	< 10	60
N204525	205 226	2.52	2.09	0.49	1395	< 1	0.10	51	160	22	40	0.21	172	< 10	32
N204526	205 226	1.78	1.30	0.32	320	4	0.03	37	910	18	69	0.10	163	< 10	818
N204527	205 226	2.35	2.91	0.35	1160	3	0.69	8	230	36	375	0.17	66	< 10	30
N204528	205 226	0.71	3.95	0.20	555	3	1.56	2	240	6	209	0.16	8	< 10	22
N204529	205 226	1.21	3.16	0.42	845	3	0.86	3	230	8	250	0.18	16	< 10	134
N204530	205 226	2.60	1.95	0.50	260	7	0.07	58	720	52	109	0.12	156	< 10	400
N204531	205 226	3.09	1.44	0.33	140	3	0.07	55	280	12	42	0.09	125	< 10	108
N204532	205 226	2.34	1.38	0.35	205	6	0.05	77	1340	12	72	0.09	207	< 10	300
N204533	205 226	3.06	1.18	0.34	395	20	0.04	115	2710	32	126	0.09	463	< 10	1215
N204534	205 226	2.81	1.13	0.27	140	3	0.04	63	550	10	49	0.09	122	< 10	170
N204535	205 226	1.98	1.09	0.27	385	5	0.03	68	1440	8	161	0.08	128	< 10	232
N204536	205 226	2.14	1.10	0.33	1120	5	0.04	57	1210	10	522	0.07	119	< 10	174
N204537	205 226	2.56	1.25	0.54	310	7	0.04	77	730	10	82	0.10	164	< 10	268
N204538	205 226	2.77	1.98	2.58	1940	5	0.08	44	500	6	251	0.16	131	< 10	88

CERTIFICATION: Ian Bucklen

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CERTIFICATE OF ANALYSIS A9739487

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N204539	205	226	30	22	21	40	0.2	5.41	290	3.0	< 2	4.70	0.5	13	114	32
N204540	205	226	30	26	22	70	0.6	4.03	170	3.5	< 2	1.67	< 0.5	6	154	45
N204541	205	226	30	26	25	100	1.2	2.35	150	3.0	< 2	0.50	0.5	3	192	47
N204542	205	226	40	34	33	100	1.2	2.43	130	3.0	< 2	1.02	0.5	4	187	49
N204543	205	226	70	44	52	180	2.0	2.51	120	3.5	< 2	2.04	1.0	4	217	65
N204544	205	226	55	52	36	170	2.2	2.32	110	3.0	< 2	1.52	1.0	4	213	56
N204545	205	226	60	64	49	200	4.2	2.03	150	3.5	< 2	0.14	2.0	4	271	316
N204546	205	226	10	190	56	470	6.4	2.80	180	6.0	< 2	4.31	5.0	6	266	133
N204547	205	226	150	230	68	680	5.0	2.98	160	6.5	< 2	3.90	11.0	6	330	172
N204548	205	226	140	234	140	900	6.8	2.89	150	5.5	< 2	2.36	20.5	7	270	252
N204551	205	226	5	2	165	1790	6.8	7.14	700	2.5	2	7.83	25.5	3	24	423
N204552	205	226	50	6	66	150	20.4	3.62	260	1.5	2	10.80	1.0	17	85	1845
N204553	205	226	30	24	32	2270	4.2	7.16	580	2.5	2	2.10	35.0	1	106	290
N204554	205	226	< 5	10	26	3930	2.2	3.84	250	1.5	< 2	5.36	61.5	< 1	174	135
N204555	205	226	< 5	16	58	1560	33.6	8.85	260	4.0	2	4.36	21.0	8	59	1030
N204556	205	226	< 5	56	19.5	960	3.8	6.95	540	3.0	< 2	3.42	21.0	4	216	151
N204557	205	226	< 5	10	5.6	80	0.2	7.27	1150	2.5	< 2	2.96	0.5	5	62	29
N204558	205	226	25	38	20	280	0.8	4.28	360	2.0	< 2	2.06	3.0	5	260	49
N204559	205	226	50	38	30	770	14.4	7.40	780	2.5	6	1.78	4.5	9	118	1830
N204561	205	226	45	48	50	1400	11.8	6.05	670	2.5	2	3.70	18.0	5	134	858
N204562	205	226	5	6	3.8	60	5.4	9.94	610	3.0	6	7.97	0.5	4	20	1555
N204563	205	226	< 5	16	16.5	1750	0.2	6.65	320	2.0	< 2	8.75	28.0	4	84	38
N204564	205	226	< 5	6	7.4	530	0.2	7.64	560	3.0	< 2	3.52	0.5	3	65	25
N204565	205	226	< 5	6	3.8	50	< 0.2	7.27	440	3.0	< 2	2.36	< 0.5	3	93	7
N204566	205	226	< 5	4	4.2	130	< 0.2	6.49	610	3.0	2	0.93	< 0.5	3	110	5
N204567	205	226	< 5	14	7.0	300	0.4	6.94	560	3.0	2	2.70	< 0.5	3	94	7
N204568	205	226	< 5	6	4.2	10	< 0.2	7.25	490	3.0	2	2.19	< 0.5	2	53	5
N204569	205	226	< 5	2	15.0	20	< 0.2	7.46	470	3.5	2	1.45	< 0.5	2	65	6
N204570	205	226	< 5	2	5.2	< 10	< 0.2	6.59	390	2.5	2	1.53	< 0.5	2	78	4
N204571	205	226	< 5	2	4.6	< 10	< 0.2	7.21	390	3.0	< 2	2.25	< 0.5	2	71	4
N204572	205	226	< 5	4	3.6	< 10	< 0.2	7.54	410	3.0	2	2.81	< 0.5	3	65	5
N204573	205	226	< 5	4	3.4	10	< 0.2	7.76	510	3.0	2	3.02	< 0.5	3	102	5
N204574	205	226	< 5	6	3.2	10	< 0.2	7.44	390	3.5	2	2.50	< 0.5	3	66	7
N204575	205	226	< 5	12	4.6	320	< 0.2	7.08	340	3.0	< 2	2.39	< 0.5	3	75	6
N204576	205	226	< 5	14	4.0	440	0.2	7.30	470	2.5	2	0.83	< 0.5	3	68	7
N204577	205	226	< 5	14	6.0	210	< 0.2	7.00	410	2.5	< 2	2.39	< 0.5	2	59	7
N204578	205	226	< 5	64	44	1160	2.0	5.58	210	4.0	< 2	1.49	14.0	3	125	50
N204579	205	226	< 5	14	22	390	0.8	5.34	270	4.0	< 2	0.93	1.0	3	156	38
N204580	205	226	< 5	12	10.0	490	< 0.2	7.10	510	3.5	< 2	1.13	4.5	< 1	63	12
N204581	205	226	< 5	60	54	710	2.4	4.32	150	3.0	< 2	1.80	9.5	4	188	78

CERTIFICATION: _____

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : PUCK
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 09-SEP-97
Invoice No. :I9739487
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Account :GP W

CERTIFICATE OF ANALYSIS A9739487

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N204539	205	226	3.21	2.39	2.36	1615	4	0.11	49	260	10	233	0.20	113	< 10	128
N204540	205	226	2.32	1.83	0.93	520	5	0.06	53	1820	10	104	0.14	148	< 10	172
N204541	205	226	1.62	1.06	0.26	85	4	0.05	58	1310	8	32	0.08	134	< 10	240
N204542	205	226	2.34	1.06	0.31	190	3	0.04	56	1330	12	40	0.08	115	< 10	162
N204543	205	226	2.78	1.06	0.29	365	5	0.04	74	410	12	97	0.08	146	< 10	420
N204544	205	226	2.45	0.91	0.31	235	3	0.04	63	1630	14	69	0.07	121	< 10	436
N204545	205	226	2.68	0.79	0.26	45	6	0.05	77	280	16	18	0.07	163	< 10	296
N204546	205	226	5.34	1.13	0.33	560	21	0.05	180	2690	56	136	0.09	504	< 10	696
N204547	205	226	4.34	1.21	0.37	425	43	0.05	262	3810	64	118	0.10	882	< 10	1240
N204548	205	226	3.48	1.18	0.32	180	83	0.05	224	5050	120	70	0.09	1090	< 10	1840
N204551	205	226	8.41	1.81	6.48	1090	9	0.23	11	470	190	234	0.08	305	< 10	2450
N204552	205	226	4.48	1.59	5.34	885	4	0.10	11	840	160	241	0.04	78	< 10	160
N204553	205	226	1.40	2.74	0.95	145	9	0.36	12	60	440	74	0.09	179	< 10	3950
N204554	205	226	0.78	1.61	0.48	345	22	0.07	13	60	310	120	0.06	583	< 10	7970
N204555	205	226	3.56	4.00	2.66	615	8	0.27	19	120	396	118	0.12	202	< 10	2310
N204556	205	226	2.53	2.89	1.86	610	12	0.44	27	650	60	96	0.12	443	< 10	2030
N204557	205	226	2.56	3.42	3.05	645	2	0.22	4	320	8	93	0.13	38	< 10	122
N204558	205	226	2.71	1.82	0.90	490	8	0.11	53	900	22	56	0.12	308	< 10	316
N204559	205	226	3.39	2.60	1.22	365	4	0.95	11	130	36	59	0.09	104	< 10	484
N204561	205	226	4.06	2.77	1.52	785	6	0.15	17	190	510	104	0.10	92	< 10	2250
N204562	205	226	3.56	4.84	1.35	1030	10	0.28	11	310	22	312	0.14	144	< 10	76
N204563	205	226	2.15	3.18	1.40	725	13	0.20	29	280	20	241	0.12	409	< 10	1760
N204564	205	226	2.12	3.48	0.65	275	3	0.18	4	330	30	83	0.15	26	< 10	92
N204565	205	226	2.00	3.28	1.42	250	3	0.16	4	330	14	57	0.13	25	< 10	22
N204566	205	226	1.52	2.94	2.21	160	3	0.13	2	330	6	33	0.12	16	< 10	30
N204567	205	226	1.92	3.51	1.60	350	3	0.14	2	330	12	90	0.14	17	< 10	20
N204568	205	226	1.66	3.49	2.99	245	3	0.17	1	330	8	83	0.12	15	< 10	38
N204569	205	226	1.97	3.71	2.89	120	3	0.18	2	340	46	56	0.13	17	< 10	70
N204570	205	226	1.53	3.37	2.22	105	2	0.15	1	300	14	56	0.12	16	< 10	48
N204571	205	226	1.61	3.65	2.08	135	3	0.17	1	310	16	71	0.13	16	< 10	36
N204572	205	226	1.82	3.85	2.41	175	1	0.19	3	340	20	82	0.14	18	< 10	44
N204573	205	226	1.86	4.02	1.62	165	4	0.16	3	330	16	94	0.16	19	< 10	34
N204574	205	226	1.87	3.90	1.21	130	4	0.18	3	330	20	90	0.17	19	< 10	28
N204575	205	226	1.76	3.67	0.93	175	2	0.17	3	310	20	88	0.17	18	< 10	16
N204576	205	226	1.79	3.59	0.66	100	3	0.20	2	300	16	36	0.18	19	< 10	18
N204577	205	226	1.71	3.09	0.76	185	2	0.22	3	330	20	95	0.16	24	< 10	38
N204578	205	226	2.51	2.67	0.59	130	26	0.12	71	1700	72	63	0.13	529	< 10	886
N204579	205	226	2.19	2.61	0.76	145	11	0.13	44	350	22	39	0.12	128	< 10	214
N204580	205	226	1.54	3.58	1.02	120	6	0.16	17	280	26	44	0.13	141	< 10	302
N204581	205	226	3.27	2.09	0.59	230	17	0.08	101	2130	44	73	0.12	383	< 10	618

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : PUCK
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :3-A
Total Pages :3
Certificate Date: 09-SEP-97
Invoice No. : I9739487
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9739487

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N204582	205	226	< 5	52	26	950	2.6	4.69	270	4.0	2	1.89	21.0	3	158	61

CERTIFICATION: Brant Buchler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : PUCK
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :3-B
Total Pages :3
Certificate Date: 09-SEP-97
Invoice No. :I9739487
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9739487

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N204582	205	226	3.01	2.29	0.56	205	25	0.10	94	2770	56	103	0.12	666	< 10	1165

CERTIFICATION: [signature]

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9740037

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9740037

(GP W) - WESTMIN RESOURCES LTD.

Project:
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 10-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	10	Geochem ring to approx 150 mesh
294	10	4-7 Kg crush and split
3202	10	Rock - save entire reject
285	10	ICP - HF digestion charge
287	10	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	10	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	10	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	10	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	10	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	10	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	10	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	10	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	10	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	10	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	10	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	10	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	10	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	10	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	10	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	10	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	10	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	10	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	10	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	10	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	10	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	10	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	10	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	10	Pb ppm: 24 element, rock & core	AAS	2	10000
582	10	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	10	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	10	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	10	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	10	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project :
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page No. :1-A
Total Pages :1
Certificate Date: 10-SEP-97
Invoice No. :19740037
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9740037

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
203257	205	294	25	2	2.0	40	< 0.2	2.32	430	3.0	< 2	0.22	< 0.5	5	167	71
203258	205	294	80	6	4.8	20	< 0.2	2.46	80	1.0	< 2	2.10	< 0.5	4	104	49
203340	205	294	15	6	0.8	< 10	< 0.2	7.43	1590	0.5	12	1.58	< 0.5	21	40	30
203341	205	294	10	20	0.8	< 10	< 0.2	6.16	1090	0.5	12	0.86	< 0.5	18	43	23
203342	205	294	< 5	1	1.0	< 10	< 0.2	5.54	1130	0.5	30	1.55	< 0.5	16	51	12
203343	205	294	< 5	1	0.6	< 10	< 0.2	5.83	1200	0.5	8	0.82	< 0.5	14	41	29
203344	205	294	< 5	1	1.2	< 10	< 0.2	6.19	1040	1.5	16	0.48	< 0.5	13	39	22
203345	205	294	< 5	2	1.4	< 10	0.6	5.61	950	0.5	40	0.51	< 0.5	16	48	22
203346	205	294	< 5	2	4.8	< 10	1.2	6.39	190	1.0	150	0.67	< 0.5	22	63	34
203347	205	294	< 5	18	4.4	< 10	1.6	4.59	900	0.5	160	0.98	0.5	16	68	19

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
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P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project :
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 10-SEP-97
Invoice No. :I9740037
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9740037

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
203257	205	294	0.92	0.85	0.30	105	1	0.06	82	90	4	51	0.08	100	< 10	118
203258	205	294	13.40	0.07	0.92	2370	9	0.05	18	1200	< 2	199	0.08	123	< 10	56
203340	205	294	9.47	0.78	4.65	1450	1	0.26	1	300	< 2	46	0.08	25	< 10	164
203341	205	294	8.42	0.55	3.98	1055	4	0.16	3	270	< 2	30	0.08	19	< 10	138
203342	205	294	7.45	0.61	3.57	1300	3	0.15	1	250	6	50	0.07	19	< 10	126
203343	205	294	7.67	0.89	3.26	1115	1	0.14	1	270	< 2	32	0.08	17	< 10	136
203344	205	294	6.96	1.26	3.16	740	2	0.15	1	280	< 2	24	0.09	18	< 10	156
203345	205	294	8.01	0.54	3.34	920	2	0.13	3	260	32	18	0.08	29	< 10	174
203346	205	294	8.69	1.34	2.60	980	2	0.12	12	1360	60	27	0.08	110	< 10	138
203347	205	294	7.42	0.51	2.26	975	3	0.07	14	1170	100	25	0.05	97	< 10	150

CERTIFICATION:

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212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9740568

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9740568

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 16-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	113	Geochem ring to approx 150 mesh
294	113	4-7 Kg crush and split
3202	113	Rock - save entire reject
285	113	ICP - HF digestion charge
287	113	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	113	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	113	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	113	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	113	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	113	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	113	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	113	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	113	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	113	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	113	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	113	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	113	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	113	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	113	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	113	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	113	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	113	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	113	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	113	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	113	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	113	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	113	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	113	Pb ppm: 24 element, rock & core	AAS	2	10000
582	113	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	113	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	113	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	113	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	113	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :3
Certificate Date: 16-SEP-97
Invoice No. :I9740568
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9740568

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
204583	205	294	< 5	2	1.0	< 10	< 0.2	6.20	1780	1.5	< 2	2.18	< 0.5	10	182	44
204584	205	294	50	1	< 0.2	< 10	< 0.2	6.77	1910	1.5	< 2	1.23	< 0.5	11	145	41
204585	205	294	10	2	2.0	10	< 0.2	4.92	230	1.5	< 2	0.29	< 0.5	14	191	119
204586	205	294	< 5	4	1.8	10	< 0.2	4.69	260	1.5	< 2	0.34	< 0.5	13	243	81
204587	205	294	< 5	2	1.2	< 10	< 0.2	4.14	220	1.5	< 2	0.57	< 0.5	9	216	59
204588	205	294	< 5	1	3.8	30	< 0.2	4.03	300	0.5	< 2	2.65	< 0.5	8	216	53
204589	205	294	< 5	2	0.2	< 10	< 0.2	3.70	340	1.0	< 2	0.75	< 0.5	8	186	56
204590	205	294	< 5	2	0.2	< 10	< 0.2	3.07	270	1.5	< 2	0.69	< 0.5	9	254	68
204591	205	294	< 5	1	< 0.2	10	< 0.2	0.98	90	0.5	< 2	0.58	< 0.5	3	153	24
204592	205	294	< 5	1	0.2	180	< 0.2	3.25	>10000	3.5	< 2	0.61	3.0	4	183	65
204593	205	294	< 5	1	0.4	210	< 0.2	0.87	180	2.0	< 2	3.80	< 0.5	< 1	119	30
204594	205	294	< 5	2	< 0.2	590	< 0.2	1.41	690	2.5	< 2	0.56	< 0.5	3	205	54
204595	205	294	< 5	1	1.2	10	< 0.2	1.41	140	3.0	< 2	1.16	< 0.5	1	141	18
204596	205	294	< 5	1	2.0	40	< 0.2	1.78	70	2.5	< 2	0.75	< 0.5	2	174	25
204597	205	294	< 5	2	0.8	2920	< 0.2	1.95	110	4.5	< 2	4.25	< 0.5	6	210	56
204598	205	294	< 5	1	< 0.2	240	< 0.2	2.36	360	2.5	< 2	0.54	< 0.5	5	183	65
204599	205	294	50	1	0.2	260	< 0.2	2.97	260	3.5	< 2	0.41	< 0.5	7	155	56
204600	205	294	< 5	1	0.6	< 10	< 0.2	1.36	260	5.0	< 2	1.06	< 0.5	1	134	25
204601	205	294	< 5	1	1.0	10	< 0.2	1.54	180	7.5	< 2	1.24	< 0.5	1	126	19
204602	205	294	< 5	2	1.2	2290	< 0.2	1.74	100	3.0	< 2	6.85	< 0.5	4	136	86
204603	205	294	< 5	6	< 0.2	390	< 0.2	2.26	660	3.0	< 2	0.27	< 0.5	4	194	65
204604	205	294	60	2	1.6	130	< 0.2	2.29	80	4.0	< 2	0.74	< 0.5	2	157	52
204605	205	294	< 5	4	0.2	120	< 0.2	3.35	1660	3.0	< 2	0.38	< 0.5	6	216	50
204606	205	294	< 5	4	1.2	30	< 0.2	2.88	270	2.0	< 2	0.76	< 0.5	5	219	69
204607	205	294	< 5	30	1.6	20	< 0.2	2.69	200	1.0	< 2	1.88	< 0.5	10	198	82
204608	205	294	< 5	2	4.8	20	< 0.2	4.45	160	1.5	< 2	0.82	< 0.5	9	178	68
204609	205	294	< 5	4	2.4	20	< 0.2	3.85	220	1.0	< 2	2.25	< 0.5	7	192	51
204610	205	294	15	8	8.6	60	< 0.2	4.61	150	1.5	< 2	0.52	< 0.5	14	168	100
204611	205	294	< 5	6	2.6	20	< 0.2	5.05	170	1.5	< 2	0.24	< 0.5	12	184	96
204612	205	294	< 5	2	0.8	10	< 0.2	4.89	130	1.5	< 2	0.60	< 0.5	15	223	135
204613	205	294	< 5	2	1.0	10	< 0.2	5.40	270	1.5	< 2	0.40	< 0.5	15	252	120
204614	205	294	< 5	2	0.6	10	< 0.2	4.81	190	1.5	< 2	0.46	< 0.5	12	213	118
204615	205	294	< 5	1	1.6	10	< 0.2	4.02	120	1.5	< 2	0.93	< 0.5	10	200	89
204616	205	294	< 5	2	0.4	< 10	< 0.2	2.92	350	0.5	< 2	2.07	< 0.5	5	208	32
204617	205	294	< 5	1	1.4	< 10	< 0.2	3.95	450	1.0	< 2	1.88	< 0.5	6	227	43
204618	205	294	< 5	1	2.6	< 10	< 0.2	3.92	310	1.5	< 2	1.97	< 0.5	6	221	40
204619	205	294	< 5	2	0.6	< 10	< 0.2	1.76	3030	0.5	< 2	0.77	0.5	3	192	48
204620	205	294	< 5	1	1.8	< 10	0.2	3.37	320	1.0	< 2	0.39	< 0.5	6	207	65
204621	205	294	< 5	2	0.4	< 10	< 0.2	2.64	560	1.0	< 2	0.60	< 0.5	6	197	74
204622	205	294	< 5	2	0.2	10	< 0.2	2.73	850	1.0	< 2	0.25	< 0.5	5	260	85

CERTIFICATION: Stuart Breadon

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :3
Certificate Date: 16-SEP-97
Invoice No. :19740568
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9740568

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
204583	205	294	3.46	2.42	1.20	595	2	0.13	32	660	18	81	0.28	131	< 10	90
204584	205	294	3.60	2.67	1.10	535	< 1	0.20	37	760	10	136	0.32	145	< 10	108
204585	205	294	3.42	1.77	1.07	2650	1	0.08	140	320	2	62	0.27	166	< 10	234
204586	205	294	3.13	1.76	0.91	930	1	0.08	127	370	4	68	0.27	164	< 10	216
204587	205	294	2.71	1.57	0.89	630	< 1	0.08	72	340	6	94	0.24	120	< 10	102
204588	205	294	3.01	0.95	1.00	1710	< 1	0.05	57	800	8	71	0.14	113	< 10	120
204589	205	294	2.23	1.55	0.71	570	< 1	0.07	62	430	6	122	0.18	117	< 10	108
204590	205	294	2.54	1.22	0.67	550	< 1	0.04	72	210	12	107	0.18	121	< 10	28
204591	205	294	17.65	0.15	0.25	645	6	< 0.01	15	220	< 2	269	0.06	80	< 10	16
204592	205	294	3.38	0.75	0.36	310	11	0.08	16	230	4	257	0.17	125	< 10	468
204593	205	294	20.1	0.12	0.44	1130	27	< 0.01	17	830	8	369	0.05	99	< 10	528
204594	205	294	1.94	0.38	0.15	195	5	0.03	24	440	8	216	0.05	106	< 10	496
204595	205	294	13.70	0.13	0.41	595	2	< 0.01	8	380	< 2	450	0.06	85	< 10	56
204596	205	294	14.15	0.03	0.46	515	8	< 0.01	8	370	< 2	241	0.07	93	< 10	136
204597	205	294	4.64	0.11	0.86	1535	42	< 0.01	72	1710	160	193	0.06	115	< 10	3370
204598	205	294	1.36	0.68	0.29	235	4	0.04	40	90	26	123	0.07	123	< 10	350
204599	205	294	1.76	1.05	0.37	180	4	0.06	52	190	38	109	0.10	134	< 10	358
204600	205	294	22.1	0.16	0.38	470	9	< 0.01	5	510	< 2	199	0.08	122	< 10	16
204601	205	294	23.0	0.14	0.39	595	6	< 0.01	3	1010	< 2	122	0.09	108	< 10	16
204602	205	294	2.28	0.31	0.44	1385	43	0.02	73	860	96	727	0.04	129	< 10	1905
204603	205	294	1.22	0.50	0.21	120	9	0.06	35	90	16	181	0.07	125	< 10	410
204604	205	294	13.25	0.25	0.71	600	< 1	0.02	11	1200	< 2	289	0.12	117	< 10	190
204605	205	294	1.22	1.07	0.36	195	2	0.10	28	130	10	77	0.12	106	< 10	252
204606	205	294	2.08	0.98	0.46	540	< 1	0.04	32	120	10	69	0.13	87	< 10	172
204607	205	294	1.90	0.91	0.42	1220	7	0.03	54	130	4	67	0.13	87	< 10	100
204608	205	294	2.87	1.56	0.87	345	< 1	0.13	68	530	6	170	0.24	130	< 10	144
204609	205	294	2.63	0.92	0.89	610	< 1	0.08	53	940	20	305	0.17	114	< 10	144
204610	205	294	3.22	1.58	0.99	350	3	0.10	130	840	6	164	0.16	158	< 10	280
204611	205	294	3.05	1.60	1.08	340	< 1	0.11	99	370	2	89	0.27	164	< 10	164
204612	205	294	3.65	1.69	1.14	645	4	0.10	170	410	< 2	182	0.19	179	< 10	406
204613	205	294	3.27	1.77	1.07	865	1	0.10	148	300	< 2	107	0.32	178	< 10	236
204614	205	294	3.43	1.60	1.09	900	1	0.09	120	360	< 2	142	0.27	159	< 10	214
204615	205	294	3.36	1.44	1.01	415	1	0.09	90	490	4	229	0.18	130	< 10	218
204616	205	294	2.15	0.83	0.84	555	< 1	0.04	40	530	< 2	232	0.14	96	< 10	80
204617	205	294	2.32	1.05	1.01	435	< 1	0.08	38	750	4	250	0.19	120	< 10	80
204618	205	294	2.42	0.98	1.12	485	< 1	0.06	48	740	< 2	254	0.19	123	< 10	108
204619	205	294	1.13	0.62	0.48	165	< 1	0.02	29	830	< 2	172	0.08	61	< 10	44
204620	205	294	2.31	1.08	0.71	170	< 1	0.07	52	190	< 2	84	0.16	123	< 10	88
204621	205	294	1.85	0.73	0.52	360	2	0.05	66	210	< 2	135	0.13	77	< 10	98
204622	205	294	1.83	0.77	0.37	160	3	0.06	54	140	< 2	100	0.14	87	< 10	96

CERTIFICATION: _____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :2-A
Total Pages :3
Certificate Date: 16-SEP-97
Invoice No. :I9740568
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9740568

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
204623	205	294	10	6	1.0	30	< 0.2	2.65	410	1.0	< 2	0.26	< 0.5	5	196	66
204624	205	294	30	2	1.2	< 10	< 0.2	3.78	1410	1.5	< 2	0.12	< 0.5	5	192	70
204625	205	294	20	2	1.2	10	< 0.2	3.21	400	1.5	< 2	3.46	< 0.5	5	151	40
204626	205	294	10	2	1.2	< 10	< 0.2	2.72	390	3.0	< 2	0.83	< 0.5	5	188	39
204627	205	294	< 5	1	1.6	10	< 0.2	2.14	180	3.0	< 2	4.17	< 0.5	1	129	54
204628	205	294	< 5	2	0.4	< 10	< 0.2	3.53	890	2.5	< 2	0.44	< 0.5	5	156	54
204629	205	294	< 5	4	1.2	240	< 0.2	3.11	240	2.5	< 2	0.10	< 0.5	5	175	50
204630	205	294	15	4	2.8	180	< 0.2	2.12	90	3.0	< 2	0.29	1.0	4	154	51
204631	205	294	10	12	4.2	200	< 0.2	3.00	90	5.5	< 2	0.51	3.0	4	152	70
204632	205	294	15	28	4.2	630	< 0.2	1.04	60	5.5	< 2	14.95	4.0	< 1	115	30
204633	205	294	10	20	4.6	20	< 0.2	0.26	60	1.5	< 2	20.4	< 0.5	< 1	48	23
204634	205	294	15	18	3.4	210	0.2	2.34	70	4.0	< 2	1.11	1.0	4	140	59
204635	205	294	10	2	1.8	220	< 0.2	2.40	260	4.0	< 2	0.83	0.5	3	157	61
204636	205	294	< 5	4	1.6	120	< 0.2	2.80	130	6.5	< 2	2.95	2.0	3	184	59
204637	205	294	10	2	2.4	2010	< 0.2	1.04	50	4.0	< 2	16.55	58.5	< 1	68	44
204638	205	294	5	4	2.2	370	< 0.2	1.31	70	3.5	< 2	17.85	6.5	2	61	33
204639	205	294	10	4	2.4	1260	< 0.2	1.12	60	2.5	< 2	19.90	40.5	1	44	37
204640	205	294	< 5	4	1.2	260	< 0.2	2.86	80	5.5	< 2	6.36	11.0	13	97	69
204641	205	294	< 5	2	0.8	10	< 0.2	4.28	210	7.0	< 2	0.48	0.5	14	179	81
204642	205	294	< 5	6	2.0	160	< 0.2	1.15	70	2.0	< 2	0.52	3.5	4	144	26
204643	205	294	15	12	3.4	30	0.8	1.53	90	3.0	< 2	0.21	< 0.5	5	213	40
204644	205	294	10	36	7.2	190	0.2	2.57	50	3.5	< 2	1.07	21.5	7	272	38
204645	205	294	10	14	5.0	90	< 0.2	3.71	100	3.0	< 2	1.50	4.5	2	205	21
204646	205	294	< 5	2	0.2	90	< 0.2	6.56	1060	4.5	< 2	1.04	2.0	< 1	54	5
204647	205	294	< 5	2	0.4	< 10	< 0.2	6.69	2920	5.5	< 2	1.14	< 0.5	< 1	106	5
204648	205	294	< 5	2	1.0	< 10	< 0.2	6.48	1880	6.0	< 2	0.97	< 0.5	< 1	124	5
204649	205	294	20	14	5.0	150	0.6	2.68	60	3.0	< 2	1.03	2.0	8	205	61
204650	205	294	< 5	2	1.0	< 10	< 0.2	4.47	830	3.0	< 2	0.83	< 0.5	10	108	55
204651	205	294	5	2	2.4	10	< 0.2	3.72	240	1.5	< 2	0.62	< 0.5	8	226	67
204652	205	294	< 5	12	10.0	80	< 0.2	1.81	390	0.5	< 2	0.91	< 0.5	5	219	74
204653	205	294	< 5	8	16.0	30	< 0.2	1.48	1770	0.5	< 2	1.77	< 0.5	4	210	49
204654	205	294	20	18	5.0	130	< 0.2	2.14	80	1.0	< 2	0.74	< 0.5	7	227	78
204655	205	294	15	6	4.2	160	< 0.2	1.86	90	1.0	< 2	0.68	< 0.5	5	201	61
204656	205	294	< 5	6	6.4	10	< 0.2	3.29	260	2.0	< 2	1.30	< 0.5	11	206	92
204657	205	294	50	6	5.0	10	< 0.2	4.27	300	3.0	< 2	2.45	< 0.5	9	179	38
204658	205	294	15	22	13.0	130	< 0.2	2.90	130	2.0	< 2	1.41	0.5	7	259	47
204659	205	294	15	32	11.0	130	0.4	3.10	70	2.0	< 2	1.80	< 0.5	5	201	50
204660	205	294	5	14	5.0	170	< 0.2	8.16	280	4.0	< 2	0.79	2.5	1	82	64
204661	205	294	< 5	12	6.6	140	< 0.2	6.95	210	3.5	< 2	2.49	0.5	2	95	18
204662	205	294	< 5	8	8.0	150	< 0.2	7.46	670	4.0	< 2	0.68	2.5	2	104	51

CERTIFICATION:

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CERTIFICATE OF ANALYSIS A9740568

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
204623	205 294	1.02	0.96	0.31	85	< 1	0.07	46	540	< 2	191	0.09	88	< 10	86
204624	205 294	1.66	1.50	0.38	90	3	0.09	22	110	< 2	47	0.17	108	< 10	24
204625	205 294	5.33	0.83	0.50	570	2	0.10	18	440	< 2	484	0.15	100	< 10	34
204626	205 294	4.37	1.00	0.39	225	180	0.07	16	220	< 2	74	0.14	83	< 10	32
204627	205 294	10.60	0.22	0.35	500	3	0.02	12	1440	< 2	795	0.09	77	< 10	22
204628	205 294	1.36	1.23	0.33	155	15	0.11	20	140	< 2	83	0.12	109	< 10	38
204629	205 294	1.27	1.32	0.34	50	2	0.07	32	110	30	14	0.11	115	< 10	1330
204630	205 294	2.84	0.94	0.26	100	6	0.04	23	280	272	15	0.07	124	< 10	1230
204631	205 294	2.61	1.32	0.35	115	4	0.07	31	300	80	15	0.10	174	< 10	1020
204632	205 294	7.84	0.40	0.20	1555	18	< 0.01	8	1830	290	165	0.03	161	< 10	2840
204633	205 294	5.01	0.06	0.10	1845	13	< 0.01	9	2900	340	193	0.01	97	< 10	16
204634	205 294	3.95	0.98	0.22	135	8	0.02	17	680	154	19	0.07	139	< 10	656
204635	205 294	1.18	0.80	0.22	120	7	0.04	15	340	30	16	0.09	162	< 10	850
204636	205 294	2.00	1.17	0.32	690	2	0.05	18	400	58	51	0.09	151	< 10	762
204637	205 294	6.94	0.46	0.40	2870	6	< 0.01	13	660	470	269	0.03	78	< 10	>10000
204638	205 294	6.12	0.49	0.36	3110	5	< 0.01	11	570	280	255	0.03	91	< 10	1705
204639	205 294	9.56	0.35	0.63	4200	3	< 0.01	13	1040	330	354	0.04	123	< 10	4540
204640	205 294	3.64	1.25	0.37	1100	1	0.03	24	190	156	50	0.07	157	< 10	1100
204641	205 294	2.03	1.90	0.47	250	< 1	0.13	28	290	12	30	0.11	157	< 10	80
204642	205 294	4.11	0.35	0.10	100	< 1	0.01	14	430	104	20	0.03	49	< 10	518
204643	205 294	4.51	0.53	0.14	55	< 1	0.04	26	590	116	16	0.05	101	< 10	24
204644	205 294	3.51	0.69	0.22	190	13	0.04	47	1620	110	33	0.06	221	< 10	2430
204645	205 294	2.52	0.96	0.64	240	4	0.23	25	890	46	59	0.06	87	< 10	696
204646	205 294	2.05	2.25	1.21	340	< 1	0.44	< 1	40	4	69	0.07	1	< 10	336
204647	205 294	1.84	2.43	1.24	290	3	0.29	< 1	40	58	85	0.08	3	< 10	44
204648	205 294	1.89	2.13	1.30	290	3	0.50	< 1	40	14	67	0.07	4	< 10	34
204649	205 294	3.74	0.71	0.54	255	4	0.05	45	2090	96	55	0.08	188	< 10	460
204650	205 294	1.94	1.57	1.03	605	< 1	0.11	34	260	4	73	0.15	70	< 10	72
204651	205 294	2.39	1.37	0.77	210	1	0.09	60	430	2	79	0.17	115	< 10	140
204652	205 294	0.97	0.42	0.23	220	< 1	0.03	47	80	< 2	120	0.06	88	< 10	92
204653	205 294	0.63	0.29	0.17	220	< 1	0.02	29	70	< 2	183	0.04	71	< 10	14
204654	205 294	1.93	1.00	0.23	150	< 1	0.03	50	230	22	11	0.09	124	< 10	248
204655	205 294	1.67	0.90	0.22	135	< 1	0.01	43	140	22	8	0.06	109	< 10	310
204656	205 294	1.61	1.68	0.45	400	< 1	0.04	38	260	8	22	0.11	116	< 10	20
204657	205 294	1.98	2.24	0.66	585	< 1	0.06	41	1040	16	81	0.17	140	< 10	86
204658	205 294	2.11	1.54	0.40	235	7	0.05	46	1380	18	47	0.12	233	< 10	234
204659	205 294	2.31	1.57	0.38	305	6	0.04	49	1590	20	45	0.12	252	< 10	184
204660	205 294	2.21	4.32	1.03	175	6	0.17	9	450	64	22	0.20	69	< 10	328
204661	205 294	2.53	3.17	0.77	360	4	0.16	10	310	80	105	0.17	32	< 10	158
204662	205 294	1.77	3.92	0.97	175	6	0.17	14	470	84	24	0.18	89	< 10	316

CERTIFICATION: Stewart Bamber

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 16-SEP-97
Invoice No. : I9740568
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CERTIFICATE OF ANALYSIS A9740568

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
204663	205	294	< 5	6	3.8	10	< 0.2	8.23	420	2.5	< 2	3.57	< 0.5	3	106	11
204664	205	294	< 5	14	0.2	< 10	< 0.2	8.46	1190	3.0	< 2	2.63	< 0.5	4	77	7
204665	205	294	< 5	2	0.6	< 10	< 0.2	8.15	700	2.5	< 2	2.84	< 0.5	4	85	9
204666	205	294	< 5	2	0.8	20	< 0.2	7.49	3520	1.5	< 2	1.50	5.0	< 1	108	66
204667	205	294	< 5	54	0.4	< 10	< 0.2	7.21	2370	2.0	< 2	1.45	< 0.5	1	107	123
204668	205	294	15	20	7.0	10	1.0	6.94	410	2.0	46	2.16	< 0.5	6	105	42
204669	205	294	< 5	8	6.6	20	< 0.2	7.61	1080	2.5	2	0.68	1.5	2	115	22
204670	205	294	< 5	2	72	120	0.6	7.64	240	2.5	4	1.83	1.0	2	160	19
204687	205	294	15	2	94	2760	2.4	8.27	170	2.5	< 2	3.84	78.5	4	109	338
204688	205	294	< 5	1	16.5	130	< 0.2	7.38	2130	2.0	< 2	3.72	4.5	1	98	50
204689	205	294	< 5	1	13.0	70	0.6	9.53	2580	3.0	< 2	3.21	2.0	< 1	63	150
204690	205	294	< 5	22	7.2	250	1.6	9.11	2250	3.0	< 2	2.46	10.0	< 1	84	104
204691	205	294	< 5	1	6.4	290	1.0	7.76	1870	2.5	< 2	2.26	24.5	1	82	401
204692	205	294	< 5	2	2.4	170	0.2	8.74	2580	2.5	< 2	1.49	6.5	1	76	28
204693	205	294	5	2	6.4	80	< 0.2	7.28	2740	2.5	< 2	2.40	5.0	< 1	81	22
204694	205	294	< 5	4	8.0	30	< 0.2	8.07	2640	3.0	< 2	3.63	1.5	1	78	34
204695	205	294	< 5	14	7.4	350	1.0	8.41	2090	2.5	< 2	2.68	38.0	< 1	54	79
204696	205	294	< 5	1	7.0	130	2.8	10.25	2570	3.5	< 2	5.91	3.5	< 1	36	54
204697	205	294	< 5	1	4.2	230	2.2	8.79	4080	3.5	< 2	0.82	3.5	< 1	66	10
204698	205	294	< 5	2	2.2	140	< 0.2	7.65	4910	3.0	< 2	0.26	2.5	< 1	77	5
204699	205	294	< 5	6	6.0	340	1.2	6.87	450	2.5	< 2	1.56	3.0	1	90	7
204700	205	294	10	18	7.8	200	2.4	7.31	250	2.5	< 2	0.92	< 0.5	1	117	8
204701	205	294	10	10	9.4	210	4.2	7.35	310	2.5	< 2	0.60	< 0.5	1	141	11
204702	205	294	10	8	7.6	110	2.2	7.17	350	3.0	< 2	0.28	< 0.5	1	120	7
204703	205	294	15	10	9.0	260	2.4	6.64	240	2.5	< 2	0.40	< 0.5	< 1	106	6
204704	205	294	15	10	15.0	790	3.2	6.27	250	2.0	< 2	0.49	3.0	< 1	114	10
204705	205	294	30	20	17.0	700	6.8	6.55	320	3.0	< 2	0.55	2.0	1	127	11
204706	205	294	30	26	11.5	680	3.0	6.95	260	1.5	< 2	0.96	2.5	< 1	125	5
204707	205	294	30	32	11.0	1070	2.8	6.39	290	1.0	< 2	0.51	5.0	1	114	5
204708	205	294	20	18	7.4	510	1.8	6.36	220	1.5	< 2	0.56	0.5	1	128	9
204709	205	294	25	30	8.8	840	1.2	7.38	260	0.5	< 2	2.01	8.0	< 1	102	62
204710	205	294	< 5	1	4.4	370	0.6	8.02	1510	2.0	< 2	4.22	35.5	4	79	512
204711	205	294	< 5	1	0.6	900	0.6	7.08	1110	1.5	< 2	6.13	47.5	4	62	331

CERTIFICATION: _____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 16-SEP-97
Invoice No. :I9740568
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9740568

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
204663	205	294	2.96	3.60	0.98	490	< 1	0.74	3	980	14	152	0.22	34	< 10	90
204664	205	294	2.79	3.65	0.99	410	2	1.08	6	910	20	127	0.32	35	< 10	78
204665	205	294	2.56	3.62	0.91	405	< 1	0.89	5	1000	22	125	0.22	36	< 10	150
204666	205	294	1.80	3.37	0.64	375	< 1	0.48	3	630	84	68	0.16	22	< 10	582
204667	205	294	1.89	3.56	0.64	380	< 1	0.14	3	540	160	59	0.16	21	< 10	52
204668	205	294	4.30	3.37	1.02	785	3	0.14	3	670	52	78	0.15	24	< 10	190
204669	205	294	2.27	3.44	0.76	295	3	0.30	7	550	32	40	0.15	51	< 10	214
204670	205	294	2.60	3.46	0.91	600	4	0.18	5	640	36	63	0.15	41	< 10	192
204687	205	294	2.50	3.97	1.20	655	2	0.26	14	410	470	82	0.16	106	< 10	8260
204688	205	294	2.19	3.25	3.82	1170	1	0.37	3	360	80	90	0.12	19	< 10	550
204689	205	294	2.16	4.94	3.85	1055	1	0.29	< 1	350	86	68	0.19	30	< 10	288
204690	205	294	1.94	4.37	3.79	815	2	0.29	1	380	260	56	0.17	23	< 10	1085
204691	205	294	2.09	3.05	3.59	985	2	0.25	1	330	1200	52	0.13	16	< 10	2560
204692	205	294	2.13	3.69	3.90	570	1	0.25	< 1	380	128	33	0.14	19	< 10	774
204693	205	294	1.78	3.57	2.69	705	< 1	0.23	1	300	88	63	0.15	15	< 10	576
204694	205	294	2.09	4.06	2.92	880	3	0.27	2	340	74	83	0.17	17	< 10	254
204695	205	294	2.76	4.15	3.46	820	2	0.24	< 1	350	1360	60	0.16	16	< 10	4020
204696	205	294	2.56	4.19	3.00	900	2	0.36	1	420	464	164	0.22	20	< 10	488
204697	205	294	0.75	4.37	0.77	100	1	0.21	1	420	404	37	0.21	19	< 10	382
204698	205	294	0.45	3.68	0.60	35	1	0.18	< 1	340	106	15	0.17	17	< 10	154
204699	205	294	1.10	3.09	0.45	65	2	0.18	1	320	64	59	0.16	15	< 10	194
204700	205	294	1.65	3.25	0.52	85	2	0.28	2	280	50	47	0.16	15	< 10	36
204701	205	294	1.66	3.11	0.53	85	2	0.36	2	330	54	56	0.18	16	< 10	46
204702	205	294	1.51	3.79	0.44	65	1	0.24	2	280	32	50	0.18	16	< 10	16
204703	205	294	1.50	3.83	0.44	80	1	0.25	1	280	26	58	0.16	14	< 10	20
204704	205	294	1.58	3.68	0.33	80	< 1	0.26	1	280	44	74	0.14	14	< 10	294
204705	205	294	1.93	2.84	0.29	75	2	0.27	1	290	264	54	0.13	19	< 10	202
204706	205	294	1.70	5.49	0.13	95	1	0.43	2	340	52	90	0.10	12	< 10	270
204707	205	294	1.66	5.26	0.09	60	< 1	0.43	2	330	58	71	0.08	10	< 10	478
204708	205	294	1.60	3.39	0.24	75	< 1	0.40	3	350	38	64	0.11	13	< 10	98
204709	205	294	2.25	4.36	0.23	290	< 1	0.30	4	410	50	103	0.12	14	< 10	764
204710	205	294	3.00	3.61	0.96	760	2	0.26	3	890	210	81	0.26	27	< 10	3510
204711	205	294	4.60	2.13	1.25	935	1	0.25	1	550	64	123	0.18	26	< 10	4900

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9741654

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9741654

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 22-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	6	Geochem ring to approx 150 mesh
294	6	4-7 Kg crush and split
3202	6	Rock - save entire reject
285	6	ICP - HF digestion charge
287	6	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	6	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	6	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	6	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	6	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	6	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	6	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	6	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	6	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	6	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	6	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	6	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	6	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	6	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	6	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	6	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	6	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	6	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	6	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	6	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	6	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	6	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	6	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	6	Pb ppm: 24 element, rock & core	AAS	2	10000
582	6	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	6	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	6	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	6	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	6	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 22-SEP-97
Invoice No. :I9741654
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9741654

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
204750	205	294	25	14	8.8	70	< 0.2	3.52	140	2.5	< 2	0.97	< 0.5	7	170	52
204751	205	294	20	10	5.8	40	< 0.2	8.24	360	3.5	2	0.94	< 0.5	3	76	11
204752	205	294	20	104	15.5	370	2.0	6.65	290	3.0	2	1.10	8.0	3	116	99
204753	205	294	30	130	24	460	2.4	7.72	230	3.5	4	0.81	8.5	5	112	174
204754	205	294	20	1	2.0	200	2.6	7.35	320	1.5	6	1.33	4.5	15	87	5550
204755	205	294	< 5	2	1.6	40	< 0.2	6.89	1680	1.5	2	0.57	< 0.5	6	105	113

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 22-SEP-97
Invoice No. :I9741654
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9741654

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
204750	205	294	1.68	1.43	0.43	330	7	0.09	40	1020	28	87	0.14	236	< 10	198
204751	205	294	2.55	3.04	0.98	185	3	1.00	5	680	16	72	0.22	40	< 10	48
204752	205	294	2.15	3.11	1.12	245	11	0.18	26	1240	144	76	0.16	174	< 10	966
204753	205	294	2.71	3.60	1.25	245	12	0.20	22	660	170	70	0.19	182	< 10	1030
204754	205	294	7.12	2.08	2.37	730	1	0.19	3	800	14	89	0.30	38	< 10	632
204755	205	294	4.90	2.22	1.79	490	< 1	0.18	3	760	30	62	0.28	27	< 10	158

CERTIFICATION: Ian Ridler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9741946

Comments: ATTN: A. TURNER

CERTIFICATE A9741946

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 18-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
208	1	Assay ring to approx 150 mesh
226	1	0-3 Kg crush and split
3202	1	Rock - save entire reject
200	1	Whole rock fusion

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
594	1	Al2O3 %: Whole rock	ICP-AES	0.01	100.00
588	1	CaO %: Whole rock	ICP-AES	0.01	100.00
590	1	Cr2O3 %: Whole Rock	ICP-AES	0.01	100.00
586	1	Fe2O3(total) %: Whole rock	ICP-AES	0.01	100.00
821	1	K2O %: Whole rock	ICP-AES	0.01	100.00
593	1	MgO %: Whole rock	ICP-AES	0.01	100.00
596	1	MnO %: Whole rock	ICP-AES	0.01	100.00
599	1	Na2O %: Whole rock	ICP-AES	0.01	100.00
597	1	P2O5 %: Whole rock	ICP-AES	0.01	100.00
592	1	SiO2 %: Whole rock	ICP-AES	0.01	100.00
595	1	TiO2 %: Whole rock	ICP-AES	0.01	100.00
475	1	L.O.I. %: @ 1000 deg.C	FURNACE	0.01	99.99
540	1	Total %	CALCULATION	0.01	105.00

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: A. TURNER

Certificate Date: 18-SEP-97
Invoice No. : 19741946
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9741946

SAMPLE	PREP CODE		Al2O3 %	CaO %	Cr2O3 %	Fe2O3 %	K2O %	MgO %	MnO %	Na2O %	P2O5 %	SiO2 %	TiO2 %	LOI %	TOTAL %	
203814	208	226	14.57	11.81	< 0.01	10.20	3.48	1.95	0.15	1.03	0.65	43.00	2.88	8.41	98.13	

CERTIFICATION: Ian Pendlebury

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9741947

Comments: ATTN:A.TURNER

CERTIFICATE A9741947

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 29-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
299	1	Pulp; prepped on other workorder
297	1	Meta-borate fusion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
2855	1	Ba ppm: ICP-MS	ICP-MS	0.5	10000
2501	1	Ce ppm: ICP-MS	ICP-MS	0.5	10000
2858	1	Cs ppm: ICP-MS	ICP-MS	0.1	10000
2859	1	Co ppm: ICP-MS	ICP-MS	0.5	10000
2860	1	Cu ppm: ICP-MS	ICP-MS	5	10000
2502	1	Dy ppm: ICP-MS	ICP-MS	0.1	1000
2503	1	Er ppm: ICP-MS	ICP-MS	0.1	1000
2504	1	Eu ppm: ICP-MS	ICP-MS	0.1	1000
2505	1	Gd ppm: ICP-MS	ICP-MS	0.1	1000
2861	1	Ga ppm: ICP-MS	ICP-MS	1	1000
2842	1	Hf ppm: ICP-MS	ICP-MS	1	10000
2506	1	Ho ppm: IPC-MS	ICP-MS	0.1	1000
2507	1	La ppm: ICP-MS	ICP-MS	0.5	10000
2862	1	Pb ppm: ICP-MS	ICP-MS	5	10000
2508	1	Lu ppm: ICP-MS	ICP-MS	0.1	1000
2509	1	Nd ppm: ICP-MS	ICP-MS	0.5	1000
2863	1	Ni ppm: ICP-MS	ICP-MS	5	10000
2844	1	Nb ppm: ICP-MS	ICP-MS	1	10000
2510	1	Pr ppm: ICP-MS	ICP-MS	0.1	1000
2864	1	Rb ppm: ICP-MS	ICP-MS	0.2	10000
2511	1	Sm ppm: ICP-MS	ICP-MS	0.1	1000
2865	1	Ag ppm: ICP-MS	ICP-MS	1	1000
2867	1	Sr ppm: ICP-MS	ICP-MS	0.1	10000
2868	1	Ta ppm: ICP-MS	ICP-MS	0.5	10000
2512	1	Tb ppm: ICP-MS	ICP-MS	0.1	1000
2869	1	Tl ppm: ICP-MS	ICP-MS	0.5	1000
2550	1	Th ppm: ICP-MS	ICP-MS	1	1000
2513	1	Tm ppm: ICP-MS	ICP-MS	0.1	1000
2870	1	Sn ppm: ICP-MS	ICP-MS	1	10000
2871	1	W ppm: ICP-MS	ICP-MS	1	10000
2549	1	U ppm: ICP-MS	ICP-MS	0.5	1000
2872	1	V ppm: ICP-MS	ICP-MS	5	10000
2514	1	Yb ppm: ICP-MS	ICP-MS	0.1	1000
2873	1	Y ppm: ICP-MS	ICP-MS	0.5	10000
2874	1	Zn ppm: ICP-MS	ICP-MS	5	10000
2875	1	Zr ppm: ICP-MS	ICP-MS	0.5	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists **Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:A.TURNER

Page Number : 1-A
Total Pages : 1
Certificate Date: 29-SEP-97
Invoice No. : I9741947
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9741947

SAMPLE	PREP CODE		Ba ppm	Ce ppm	Cs ppm	Co ppm	Cu ppm	Dy ppm	Er ppm	Eu ppm	Gd ppm	Ga ppm	Hf ppm	Ho ppm	La ppm	Pb ppm	Lu ppm	Nd ppm	Ni ppm	Nb ppm	Pr ppm
203814	299	297	2670	88.5	10.9	22.5	15	5.8	3.0	3.0	9.4	21	5	1.2	45.5	10	0.4	41.5	25	88	11.3

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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V7X 1C4

Project : WOLVERINE
Comments: ATTN:A.TURNER

Page Number : 1-B
Total Pages : 1
Certificate Date: 29-SEP-97
Invoice No. : I9741947
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9741947

SAMPLE	PREP CODE		Rb ppm	Sm ppm	Ag ppm	Sr ppm	Ta ppm	Tb ppm	Tl ppm	Th ppm	Tm ppm	Sn ppm	W ppm	U ppm	V ppm	Yb ppm	Y ppm	Zn ppm	Zr ppm
203814	299	297	83.8	9.0	1	305	20.0	1.3	1.5	4	0.5	4	1	1.5	240	2.2	23.5	160	269

W97-103A
615.2-615.5
removed
from
DDH

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9741954

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9741954

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 2-OCT-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
255	6	RUSH Geo ring to approx 150 mesh
295	6	RUSH crush and split (0-3 Kg)
3202	6	Rock - save entire reject
285	6	ICP - HF digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
991	6	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
956	6	Ag g/t: RUSH, aqua regia digest	AAS	0.3	350
301	6	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	6	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	6	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	6	Ba ppm	XRF	10	50000
444	6	Specific gravity S.G.	PICNOMETER	0.01	20.0
13	6	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	6	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	6	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	6	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	6	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	6	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	6	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	6	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	6	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	6	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	6	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	6	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	6	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	6	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	6	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	6	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	6	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	6	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	6	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	6	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	6	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	6	Pb ppm: 24 element, rock & core	AAS	2	10000
582	6	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	6	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	6	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	6	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	6	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Certificate Date: 02-OCT-97
Invoice No. :I9741954
P.O. Number :
Account :GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9741954

SAMPLE	PREP CODE		Au ppb RUSH	Ag g/t RUSH	Cu %	Pb %	Zn %	Ba ppm	XRFSpec Gr S.G.	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
175947	255	295	20	10.3	0.30	0.01	0.61	1100	2.82	2	1.0	1030	7.0	6.16	270	1.0	2	1.74	77.0	13	87
175949	255	295	20	6.7	0.30	< 0.01	0.53	850	2.82	2	0.8	1030	4.0	5.87	470	1.0	10	1.38	67.5	12	82
175950	255	295	15	15.2	1.50	0.01	0.17	900	2.98	1	4.0	450	12.0	3.06	110	1.0	Intf*	0.59	20.5	22	160
175951	255	295	10	4.9	0.37	0.01	0.16	1500	2.82	1	0.4	290	3.0	6.59	320	1.5	24	0.13	16.0	26	83
175952	255	295	120	13.9	1.97	0.02	0.24	700	2.85	2	1.4	620	10.0	5.43	120	0.5	Intf*	0.10	22.0	48	85
175953	255	295	20	4.1	0.30	0.01	0.05	700	2.79	2	< 0.2	130	2.2	5.62	590	0.5	18	0.30	2.0	21	81

CERTIFICATION:

* INTERFERENCES: Cu on Bi and P

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Project : WOLVERINE
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Page Number :1-B
Total Pages :1
Certificate Date: 02-OCT-97
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Account :GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9741954

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
175947	255	295	2640	7.38	1.48	4.68	1120	4	0.18	5	620	104	87	0.08	25	< 10	5350
175949	255	295	2780	6.97	1.34	3.03	865	3	0.25	4	710	18	66	0.11	27	< 10	4660
175950	255	295	>10000	12.60	1.25	0.83	625	4	0.49	19	Intf*	112	58	0.04	115	< 10	1495
175951	255	295	3520	8.10	1.65	2.10	440	3	1.43	7	380	100	38	0.11	20	< 10	1520
175952	255	295	>10000	9.13	0.64	2.17	420	3	1.02	3	Intf*	180	20	0.09	16	< 10	2080
175953	255	295	2660	7.52	1.02	2.70	535	2	0.28	5	460	88	27	0.15	21	< 10	400

CERTIFICATION:

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9741955

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9741955

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 2-OCT-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	1	RUSH Assay ring approx 150 mesh
295	1	RUSH crush and split (0-3 Kg)
3202	1	Rock - save entire reject
290	1	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	1	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	1	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	1	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	1	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	1	Ba ppm	XRF	10	50000
444	1	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	1	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	1	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	1	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	1	Ag ppm: high grade 24 element	AAS	1	200
4031	1	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	1	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	1	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	1	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	1	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	1	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	1	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	1	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	1	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	1	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	1	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	1	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	1	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	1	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	1	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	1	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	1	Pb %: high grade 24 element	AAS	0.001	10.00
4047	1	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	1	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	1	V ppm: A22 ICP package	ICP-AES	10	50000
4050	1	Zn ppm: A22 ICP package	ICP-AES	20	100000

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PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 02-OCT-97
Invoice No. : I9741955
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9741955

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	Zn %	Ba ppm	XRFSpec Gr S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
175948	258	295	0.21	78	4.05	0.06	1.85	400	3.44	< 0.01	< 0.01	0.001	79	2.35	400	< 10	60	1.95	220	110	100

CERTIFICATION: Stan Bulled

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Page N. .r :1-B
Total Pages :1
Certificate Date: 02-OCT-97
Invoice No. :I9741955
P.O. Number :
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CERTIFICATE OF ANALYSIS A9741955

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
175948	258	295	39700	23.6	0.7	1.90	1410	< 10	< 0.05	40	0.049	80	< 0.05	200	18420

CERTIFICATION: [signature]

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To: WESTMIN RESOURCES LTD.
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V7X 1C4

A9741957

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9741957

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 23-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	61	Geochem ring to approx 150 mesh
294	61	4-7 Kg crush and split
3202	61	Rock - save entire reject
285	61	ICP - HF digestion charge
287	61	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	61	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	61	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	61	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	61	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	61	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	61	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	61	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	61	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	61	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	61	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	61	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	61	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	61	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	61	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	61	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	61	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	61	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	61	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	61	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	61	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	61	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	61	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	61	Pb ppm: 24 element, rock & core	AAS	2	10000
582	61	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	61	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	61	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	61	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	61	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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Analytical Chemists * Geochemists * Registered Assayers

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :2
Certificate Date: 23-SEP-97
Invoice No. :I9741957
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9741957

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
175851	205	294	5	10	1.4	250	< 0.2	2.15	160	3.5	< 2	1.54	1.0	3	140	49
175852	205	294	< 5	10	1.0	30	< 0.2	0.77	100	2.5	< 2	11.35	0.5	1	110	22
175853	205	294	5	12	1.8	170	< 0.2	1.22	150	4.0	< 2	11.20	1.0	2	95	42
175854	205	294	5	8	0.2	30	< 0.2	2.58	340	5.0	< 2	3.28	< 0.5	5	129	69
175855	205	294	10	8	0.6	10	< 0.2	2.67	170	6.0	< 2	2.44	< 0.5	5	109	46
175856	205	294	10	100	0.2	10	< 0.2	2.37	360	3.0	< 2	1.56	< 0.5	33	145	133
175857	205	294	< 5	18	0.2	< 10	< 0.2	3.21	3670	2.5	< 2	1.38	0.5	7	153	56
175858	205	294	< 5	20	0.8	< 10	< 0.2	0.61	2640	0.5	< 2	23.0	0.5	< 1	57	7
175859	205	294	< 5	12	0.2	< 10	< 0.2	3.45	240	2.5	2	2.22	< 0.5	8	139	79
175860	205	294	10	10	1.6	120	< 0.2	3.34	350	4.0	< 2	1.57	9.0	6	170	73
175861	205	294	15	2	1.2	190	< 0.2	1.87	150	2.5	< 2	6.81	6.0	3	121	40
175862	205	294	20	18	2.0	80	0.4	2.06	120	2.0	< 2	9.24	2.5	3	100	43
175863	205	294	10	2	1.8	280	< 0.2	1.65	160	2.0	< 2	11.55	5.5	4	72	38
175864	205	294	25	1	0.6	2190	< 0.2	3.27	290	6.5	< 2	3.57	6.5	7	116	49
175865	205	294	< 5	22	< 0.2	10	< 0.2	3.19	580	5.5	< 2	0.61	< 0.5	33	159	87
175866	205	294	15	26	4.4	50	< 0.2	3.50	300	6.5	< 2	0.56	2.0	14	218	78
175867	205	294	35	20	5.4	60	1.4	2.25	140	3.0	< 2	3.07	1.0	12	216	119
175868	205	294	15	6	3.6	380	1.0	4.28	150	4.5	2	4.76	12.0	26	240	116
175869	205	294	20	20	13.5	90	0.8	5.34	180	5.5	< 2	4.54	2.5	29	282	146
175870	205	294	10	18	6.4	20	0.2	5.27	200	5.0	< 2	4.54	< 0.5	33	300	86
175871	205	294	5	14	4.2	10	< 0.2	4.58	360	4.0	< 2	7.30	0.5	18	253	49
175872	205	294	15	60	14.0	360	2.2	4.66	370	3.0	2	2.66	9.5	10	196	82
175873	205	294	< 5	4	2.6	10	< 0.2	4.74	240	3.5	< 2	5.19	1.0	19	249	55
175874	205	294	10	12	5.6	50	0.4	3.74	180	3.0	< 2	3.53	1.5	13	230	85
175875	205	294	80	84	58	1510	7.0	7.55	790	3.0	< 2	0.66	34.5	1	97	86
175878	205	294	55	104	12.0	40	1.8	7.22	1610	1.5	22	0.39	2.0	13	79	744
175879	205	294	< 5	4	2.2	40	< 0.2	6.85	2080	1.5	18	0.39	2.0	11	64	727
175880	205	294	< 5	8	1.4	10	< 0.2	7.01	2230	2.0	10	0.23	1.0	8	61	132
175881	205	294	< 5	8	4.6	90	< 0.2	6.65	1800	1.5	12	0.22	10.5	7	73	29
175882	205	294	< 5	12	1.2	< 10	< 0.2	6.72	1670	1.5	4	0.20	< 0.5	8	61	8
175883	205	294	< 5	24	9.6	260	0.6	5.70	1160	1.0	36	0.19	3.0	17	81	19
175884	205	294	< 5	20	8.2	170	< 0.2	4.06	270	0.5	6	0.20	1.0	8	95	11
175885	205	294	< 5	8	3.4	10	< 0.2	6.57	1270	2.0	< 2	1.60	1.5	4	95	34
175886	205	294	< 5	6	1.8	40	< 0.2	6.77	1360	2.0	2	0.87	2.0	2	97	23
175887	205	294	< 5	14	2.6	50	< 0.2	6.70	410	2.5	2	1.69	2.5	1	135	22
175888	205	294	< 5	38	1.0	< 10	< 0.2	7.09	950	3.0	< 2	0.73	< 0.5	1	88	5
175889	205	294	< 5	8	0.8	< 10	< 0.2	3.97	5290	1.5	< 2	0.66	0.5	< 1	47	3
175890	205	294	< 5	6	0.4	< 10	< 0.2	6.59	2590	2.5	< 2	0.36	0.5	< 1	92	4
175891	205	294	< 5	10	0.4	< 10	< 0.2	6.60	2860	2.5	< 2	0.50	0.5	< 1	92	4
175892	205	294	< 5	8	0.2	< 10	< 0.2	6.57	1710	3.0	< 2	0.44	0.5	< 1	92	4

CERTIFICATION: _____

Chemex Labs Ltd.

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 23-SEP-97
Invoice No. :I9741957
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9741957

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
175851	205	294	1.69	1.09	0.22	235	7	0.02	16	220	30	41	0.08	130	< 10	622
175852	205	294	2.52	0.38	0.12	1260	13	< 0.01	14	680	60	278	0.02	67	< 10	414
175853	205	294	4.26	0.52	0.15	1245	16	0.01	19	1440	172	220	0.04	118	< 10	684
175854	205	294	3.36	0.85	0.49	570	7	0.09	23	440	12	121	0.08	168	< 10	132
175855	205	294	10.10	0.79	0.55	740	2	0.05	15	450	30	59	0.10	99	< 10	98
175856	205	294	4.04	1.07	0.26	470	1	0.03	42	360	24	27	0.10	109	< 10	46
175857	205	294	2.34	1.57	0.37	450	< 1	0.03	22	910	34	31	0.15	157	< 10	90
175858	205	294	1.25	0.30	0.22	3250	3	< 0.01	12	690	34	828	0.03	27	< 10	58
175859	205	294	3.93	1.63	0.59	1315	< 1	0.04	47	830	36	41	0.18	178	< 10	68
175860	205	294	4.26	1.66	0.75	1365	1	0.07	73	600	232	55	0.17	208	< 10	1310
175861	205	294	9.64	0.39	0.93	5480	6	0.04	25	2370	208	353	0.09	193	< 10	1100
175862	205	294	7.60	0.83	0.77	6310	6	0.02	22	850	100	208	0.10	157	< 10	396
175863	205	294	6.87	0.78	0.59	4980	4	0.02	21	930	160	294	0.08	135	< 10	1115
175864	205	294	13.15	1.23	1.20	7140	1	0.06	40	880	172	198	0.17	219	< 10	6070
175865	205	294	1.36	1.49	0.35	1045	< 1	0.06	45	1120	18	49	0.13	183	< 10	46
175866	205	294	2.50	1.60	0.52	1190	4	0.06	46	760	48	50	0.15	201	< 10	270
175867	205	294	3.48	0.97	0.96	1045	18	0.02	112	890	128	118	0.07	207	< 10	184
175868	205	294	3.65	2.10	1.16	995	23	0.08	110	1230	84	216	0.16	351	< 10	3190
175869	205	294	3.88	2.68	1.19	1135	7	0.10	98	1400	70	198	0.30	292	< 10	226
175870	205	294	3.53	2.41	1.51	1180	3	0.09	95	1750	40	147	0.30	249	< 10	72
175871	205	294	3.05	2.27	2.00	1305	4	0.10	70	1160	28	329	0.20	203	< 10	114
175872	205	294	1.96	1.94	0.94	740	5	0.11	47	350	156	79	0.14	158	< 10	1105
175873	205	294	2.89	2.28	1.36	1070	5	0.09	88	900	16	234	0.18	180	< 10	218
175874	205	294	3.26	1.78	1.09	2080	2	0.06	52	1490	92	146	0.15	137	< 10	196
175875	205	294	2.29	3.45	0.84	150	13	0.20	27	660	412	54	0.16	213	< 10	3220
175878	205	294	7.35	1.40	2.79	685	3	0.20	9	850	32	39	0.25	34	< 10	332
175879	205	294	6.40	1.77	1.99	595	1	0.15	5	810	4	44	0.28	31	< 10	140
175880	205	294	3.13	2.13	1.11	250	1	0.22	5	860	16	53	0.26	28	< 10	112
175881	205	294	1.50	2.72	0.41	85	1	0.25	4	860	32	80	0.16	26	< 10	666
175882	205	294	1.52	2.99	0.44	175	< 1	0.26	9	850	4	84	0.18	27	< 10	36
175883	205	294	1.02	1.80	0.26	30	2	0.23	6	660	50	69	0.07	32	< 10	338
175884	205	294	1.05	1.81	0.17	25	2	0.15	11	560	30	46	0.05	27	< 10	170
175885	205	294	3.18	2.45	0.90	705	< 1	0.28	8	730	20	94	0.20	48	< 10	170
175886	205	294	2.76	1.73	0.85	540	1	0.18	12	630	6	94	0.18	38	< 10	276
175887	205	294	2.12	2.31	0.81	280	1	0.25	6	620	20	106	0.11	34	< 10	228
175888	205	294	1.49	2.89	0.93	105	< 1	0.55	5	660	14	76	0.11	24	< 10	42
175889	205	294	0.72	1.35	0.54	85	< 1	0.52	3	360	14	44	0.06	13	< 10	22
175890	205	294	1.34	2.69	1.14	85	1	0.70	4	620	22	64	0.10	24	< 10	48
175891	205	294	1.35	2.32	1.07	90	1	0.92	4	560	22	66	0.09	23	< 10	44
175892	205	294	1.35	1.95	0.77	80	< 1	1.94	5	740	24	72	0.11	24	< 10	44

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 23-SEP-97
Invoice No. : I9741957
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9741957

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
175893	205	294	< 5	2	0.2	< 10	< 0.2	6.58	1890	3.0	< 2	0.53	0.5	< 1	104	4
175894	205	294	< 5	2	0.2	< 10	< 0.2	6.78	1350	2.5	< 2	0.56	< 0.5	1	127	5
175895	205	294	< 5	1	0.2	< 10	< 0.2	6.90	1110	2.5	2	0.75	< 0.5	1	119	5
175896	205	294	< 5	2	0.2	< 10	< 0.2	9.68	5300	3.5	2	0.94	1.0	< 1	146	6
175897	205	294	< 5	1	0.2	< 10	< 0.2	6.88	1670	2.5	2	0.65	0.5	< 1	92	4
175898	205	294	< 5	1	< 0.2	< 10	< 0.2	6.79	1280	2.5	2	0.67	< 0.5	< 1	122	5
175899	205	294	< 5	2	0.4	< 10	< 0.2	6.86	1480	2.5	2	0.69	< 0.5	< 1	105	5
175900	205	294	< 5	1	0.2	< 10	< 0.2	6.87	1400	2.5	< 2	0.80	0.5	< 1	137	5
175901	205	294	< 5	1	0.2	< 10	< 0.2	6.80	1640	2.5	2	0.91	0.5	< 1	120	4
175902	205	294	< 5	2	0.2	< 10	< 0.2	7.08	1730	2.5	< 2	1.46	0.5	< 1	124	5
204990	205	294	< 5	8	0.4	40	< 0.2	3.63	8340	3.0	< 2	0.06	1.0	10	182	78
204991	205	294	< 5	2	< 0.2	< 10	< 0.2	2.46	930	2.0	2	1.62	< 0.5	5	177	40
204992	205	294	< 5	2	< 0.2	< 10	< 0.2	1.84	1480	2.0	2	0.72	< 0.5	2	186	29
204993	205	294	< 5	2	< 0.2	< 10	< 0.2	2.63	2130	2.5	2	1.81	< 0.5	5	171	52
204994	205	294	< 5	1	0.2	< 10	< 0.2	1.60	460	6.0	2	11.70	< 0.5	< 1	69	10
204995	205	294	< 5	1	< 0.2	< 10	< 0.2	0.40	540	5.0	2	9.26	< 0.5	< 1	79	3
204996	205	294	< 5	1	0.2	< 10	< 0.2	1.56	650	5.5	< 2	3.12	< 0.5	< 1	154	10
204997	205	294	< 5	2	< 0.2	10	< 0.2	2.31	2580	4.0	< 2	0.06	< 0.5	< 1	112	40
204998	205	294	< 5	1	0.4	180	< 0.2	2.38	1010	3.5	< 2	0.05	< 0.5	1	184	34
204999	205	294	< 5	1	0.4	280	< 0.2	2.73	940	4.0	< 2	0.12	< 0.5	1	152	41
205000	205	294	< 5	2	0.2	< 10	< 0.2	2.20	650	3.5	2	0.05	< 0.5	1	170	37

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 23-SEP-97
Invoice No. :I9741957
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9741957

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
175893	205	294	1.38	1.95	0.58	130	< 1	2.43	5	590	18	95	0.09	23	< 10	40
175894	205	294	1.26	1.79	0.63	150	< 1	2.35	5	610	22	97	0.12	25	< 10	44
175895	205	294	1.29	2.13	0.90	145	1	2.01	5	850	22	109	0.11	25	< 10	48
175896	205	294	1.93	3.45	1.20	175	2	2.36	7	880	30	120	0.16	31	< 10	54
175897	205	294	1.35	2.51	0.77	170	< 1	1.69	4	700	22	83	0.12	22	< 10	56
175898	205	294	1.40	2.51	0.82	185	1	1.55	5	540	20	91	0.11	25	< 10	44
175899	205	294	1.43	2.08	0.86	165	< 1	1.65	5	620	20	83	0.12	23	< 10	42
175900	205	294	1.35	2.63	0.86	150	2	1.71	5	620	22	87	0.12	24	< 10	56
175901	205	294	1.36	2.81	0.81	155	1	1.30	5	600	22	87	0.12	24	< 10	54
175902	205	294	1.35	3.07	0.79	200	< 1	0.97	5	620	22	124	0.13	27	< 10	56
204990	205	294	1.02	1.56	0.36	35	8	0.07	81	100	8	35	0.15	103	< 10	230
204991	205	294	0.86	0.89	0.30	540	1	0.03	22	70	4	37	0.08	77	< 10	32
204992	205	294	0.89	0.60	0.29	160	< 1	0.04	16	90	< 2	169	0.05	70	< 10	14
204993	205	294	1.22	0.92	0.36	250	10	0.08	46	130	2	418	0.08	84	< 10	32
204994	205	294	9.35	0.25	0.60	1630	5	0.05	6	690	< 2	463	0.08	75	< 10	18
204995	205	294	8.91	0.01	0.25	1335	11	< 0.01	6	2260	< 2	204	0.01	36	< 10	34
204996	205	294	8.84	0.42	0.36	515	10	0.04	15	930	< 2	232	0.09	90	< 10	96
204997	205	294	0.90	0.91	0.27	25	8	0.10	15	90	< 2	341	0.10	110	< 10	88
204998	205	294	1.08	1.20	0.25	35	5	0.13	14	100	4	195	0.10	118	< 10	204
204999	205	294	1.15	1.40	0.27	40	9	0.14	19	110	2	194	0.09	130	< 10	262
205000	205	294	1.11	1.02	0.23	25	6	0.09	16	90	6	88	0.08	106	< 10	196

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9742205

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9742205

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 23-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	3	Geochem ring to approx 150 mesh
226	3	0-3 Kg crush and split
3202	3	Rock - save entire reject
285	3	ICP - HF digestion charge
287	3	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	3	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	3	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	3	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	3	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	3	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	3	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	3	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	3	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	3	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	3	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	3	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	3	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	3	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	3	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	3	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	3	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	3	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	3	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	3	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	3	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	3	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	3	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	3	Pb ppm: 24 element, rock & core	AAS	2	10000
582	3	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	3	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	3	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	3	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	3	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 23-SEP-97
Invoice No. :I9742205
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742205

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203760	205	226	< 5	1	1.2	30	< 0.2	3.35	980	3.0	< 2	0.75	< 0.5	4	154	60
N203761	205	226	< 5	2	0.6	20	< 0.2	2.29	1320	2.5	2	0.52	< 0.5	3	163	61
N203762	205	226	< 5	1	0.4	20	< 0.2	2.18	620	4.5	< 2	0.22	< 0.5	< 1	134	28

CERTIFICATION: Ian Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 23-SEP-97
Invoice No. :I9742205
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742205

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203760	205	226	1.33	1.44	0.42	100	2	0.02	18	100	2	82	0.12	88	< 10	32
N203761	205	226	0.86	0.78	0.25	85	14	0.03	15	80	2	208	0.08	68	< 10	68
N203762	205	226	3.44	0.51	0.25	60	1	0.01	7	190	< 2	240	0.12	89	< 10	12

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9742206

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9742206

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 23-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	71	Geochem ring to approx 150 mesh
226	71	0-3 Kg crush and split
3202	71	Rock - save entire reject
285	71	ICP - HF digestion charge
287	71	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	71	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	71	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	71	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	71	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	71	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	71	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	71	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	71	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	71	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	71	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	71	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	71	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	71	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	71	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	71	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	71	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	71	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	71	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	71	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	71	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	71	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	71	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	71	Pb ppm: 24 element, rock & core	AAS	2	10000
582	71	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	71	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	71	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	71	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	71	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :2
Certificate Date: 23-SEP-97
Invoice No. :I9742206
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742206

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N204901	205	226	< 5	2	0.6	< 10	< 0.2	5.27	2830	0.5	< 2	2.28	< 0.5	19	187	65
N204902	205	226	< 5	16	0.6	10	< 0.2	6.81	2200	1.0	< 2	2.61	< 0.5	35	254	68
N204903	205	226	< 5	8	0.2	10	< 0.2	7.53	780	< 0.5	< 2	6.30	< 0.5	44	372	84
N204904	205	226	< 5	6	0.2	< 10	< 0.2	3.12	2600	0.5	< 2	0.98	< 0.5	13	115	64
N204905	205	226	< 5	1	0.6	10	< 0.2	6.99	960	0.5	< 2	2.29	< 0.5	30	90	64
N204906	205	226	< 5	1	< 0.2	< 10	< 0.2	3.59	1880	1.0	< 2	0.45	< 0.5	11	137	39
N204907	205	226	< 5	2	0.2	20	< 0.2	7.30	120	0.5	< 2	4.25	< 0.5	36	116	64
N204908	205	226	< 5	4	0.2	10	< 0.2	7.74	820	< 0.5	< 2	5.79	< 0.5	35	303	3
N204909	205	226	< 5	2	< 0.2	< 10	< 0.2	3.99	1740	1.0	< 2	0.43	< 0.5	12	130	45
N204910	205	226	< 5	2	< 0.2	< 10	< 0.2	2.90	2610	0.5	< 2	0.41	0.5	10	124	31
N204911	205	226	< 5	22	< 0.2	10	< 0.2	6.44	510	< 0.5	< 2	4.22	< 0.5	31	266	90
N204912	205	226	< 5	2	< 0.2	10	< 0.2	5.10	2650	0.5	< 2	2.08	< 0.5	18	158	85
N204913	205	226	< 5	12	< 0.2	10	< 0.2	5.91	1500	0.5	< 2	2.36	< 0.5	23	166	85
N204914	205	226	< 5	2	< 0.2	10	< 0.2	4.47	380	1.0	< 2	2.14	< 0.5	16	164	85
N204915	205	226	< 5	2	< 0.2	< 10	< 0.2	3.36	570	0.5	< 2	1.08	< 0.5	10	149	90
N204916	205	226	< 5	1	< 0.2	< 10	< 0.2	4.54	480	1.0	< 2	1.53	< 0.5	14	166	94
N204917	205	226	< 5	2	< 0.2	< 10	< 0.2	3.62	1870	1.5	< 2	0.51	< 0.5	11	152	72
N204936	205	226	< 5	1	< 0.2	10	< 0.2	4.46	3300	1.5	< 2	0.69	< 0.5	8	116	52
N204937	205	226	< 5	1	< 0.2	10	< 0.2	3.00	4920	1.0	< 2	0.54	0.5	10	162	43
N204938	205	226	< 5	1	< 0.2	10	< 0.2	2.92	4720	1.0	< 2	1.07	0.5	11	75	39
N204939	205	226	< 5	4	0.2	10	< 0.2	3.75	4620	1.0	< 2	0.48	0.5	14	175	51
N204940	205	226	< 5	2	0.2	< 10	< 0.2	2.73	6280	0.5	< 2	0.42	0.5	9	154	42
N204941	205	226	< 5	1	< 0.2	< 10	< 0.2	2.78	4700	0.5	< 2	0.37	0.5	10	167	35
N204942	205	226	< 5	1	< 0.2	< 10	< 0.2	2.92	5330	1.0	< 2	0.51	0.5	11	134	52
N204943	205	226	< 5	1	< 0.2	< 10	< 0.2	2.51	2110	0.5	< 2	0.31	< 0.5	9	175	46
N204944	205	226	< 5	1	0.6	< 10	< 0.2	1.64	560	0.5	2	0.05	< 0.5	3	171	60
N204945	205	226	260	1	2.0	50	0.6	1.92	240	0.5	2	0.84	< 0.5	3	145	151
N204946	205	226	< 5	2	0.6	10	< 0.2	2.40	1160	1.0	< 2	1.41	< 0.5	2	206	41
N204947	205	226	< 5	1	2.0	10	< 0.2	3.00	260	1.0	2	0.40	< 0.5	5	143	74
N204948	205	226	< 5	1	0.4	20	< 0.2	2.08	1590	0.5	< 2	0.24	< 0.5	3	153	55
N204949	205	226	< 5	2	0.2	20	< 0.2	3.22	2420	1.0	2	0.12	< 0.5	6	137	53
N204950	205	226	< 5	1	0.6	10	< 0.2	4.00	820	1.5	< 2	0.27	< 0.5	12	178	87
N204951	205	226	10	2	1.0	40	0.4	4.96	360	1.5	< 2	0.48	< 0.5	13	199	111
N204952	205	226	5	4	1.6	70	0.4	3.91	190	1.5	< 2	0.67	< 0.5	13	199	79
N204953	205	226	5	2	2.4	50	< 0.2	4.22	330	1.5	2	0.49	< 0.5	13	232	79
N204954	205	226	< 5	1	0.4	10	< 0.2	2.62	360	0.5	< 2	0.67	< 0.5	7	184	54
N204955	205	226	15	46	21	780	2.0	5.83	370	2.5	2	1.04	9.0	9	106	1140
N204956	205	226	180	164	40	1470	15.6	7.55	330	3.5	2	0.82	24.0	3	79	111
N204957	205	226	165	134	70	1460	18.0	8.10	830	2.5	4	1.31	54.0	7	121	308
N204958	205	226	< 5	1	2.4	140	< 0.2	9.84	440	2.0	18	0.31	< 0.5	20	78	453

CERTIFICATION:_____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :2
Certificate Date: 23-SEP-97
Invoice No. :I9742206
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742206

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N204901	205	226	3.54	1.67	2.16	1360	1	0.24	59	480	8	51	0.41	159	< 10	72
N204902	205	226	5.63	1.74	3.64	2000	< 1	0.13	98	540	10	51	0.61	226	< 10	116
N204903	205	226	6.04	0.50	5.29	1360	< 1	2.09	185	310	2	240	0.60	224	< 10	66
N204904	205	226	1.88	1.19	0.77	1590	< 1	0.20	37	260	12	83	0.20	61	< 10	56
N204905	205	226	5.78	0.96	3.18	2140	< 1	2.03	45	590	6	150	0.72	273	< 10	88
N204906	205	226	1.94	1.06	0.95	440	< 1	0.75	41	250	8	57	0.22	69	< 10	54
N204907	205	226	6.20	0.18	3.71	1200	< 1	2.95	55	520	2	198	0.90	291	< 10	58
N204908	205	226	5.01	0.55	4.64	975	< 1	2.46	94	300	< 2	249	0.58	236	< 10	46
N204909	205	226	2.22	1.18	1.01	455	< 1	0.89	41	250	10	52	0.25	75	< 10	66
N204910	205	226	1.58	1.08	0.95	410	< 1	0.30	36	220	2	32	0.17	60	< 10	52
N204911	205	226	4.95	0.42	3.60	1740	< 1	2.19	82	510	4	145	0.55	204	< 10	78
N204912	205	226	3.76	1.00	2.20	2060	1	1.38	62	660	14	178	0.38	165	< 10	78
N204913	205	226	4.44	0.73	2.74	2830	< 1	2.39	71	750	12	171	0.47	191	< 10	92
N204914	205	226	3.42	1.11	1.90	2420	< 1	0.94	56	540	14	140	0.33	160	< 10	74
N204915	205	226	2.17	1.29	1.12	1535	1	0.24	47	260	6	85	0.21	122	< 10	68
N204916	205	226	3.24	1.39	1.69	2830	1	0.76	50	480	8	145	0.31	152	< 10	80
N204917	205	226	1.99	1.65	1.04	1345	1	0.12	46	300	8	62	0.24	76	< 10	76
N204936	205	226	1.61	0.99	0.60	1485	< 1	1.88	27	190	20	134	0.12	40	< 10	50
N204937	205	226	1.70	1.22	0.81	1605	1	0.18	38	220	4	88	0.19	56	< 10	58
N204938	205	226	1.67	1.23	0.69	8460	< 1	0.20	33	190	4	152	0.17	59	< 10	46
N204939	205	226	2.04	1.30	0.98	910	15	0.22	46	250	4	51	0.20	76	< 10	68
N204940	205	226	1.54	0.99	0.71	1610	1	0.16	32	210	< 2	70	0.16	58	< 10	46
N204941	205	226	1.62	1.01	0.67	1445	< 1	0.29	33	200	6	129	0.16	48	< 10	48
N204942	205	226	1.70	1.10	0.77	1940	< 1	0.23	34	220	12	105	0.18	58	< 10	48
N204943	205	226	1.50	0.86	0.66	1165	< 1	0.07	36	190	10	49	0.15	46	< 10	48
N204944	205	226	2.01	0.50	0.29	250	10	0.02	21	80	4	14	0.08	100	< 10	20
N204945	205	226	11.10	0.47	0.57	3830	8	0.01	18	470	10	166	0.09	151	< 10	44
N204946	205	226	2.58	0.78	0.55	1110	10	0.03	25	90	14	80	0.11	99	< 10	30
N204947	205	226	5.40	0.85	0.76	660	10	0.02	26	290	6	58	0.15	124	< 10	60
N204948	205	226	1.89	0.68	0.37	270	1	0.05	35	150	2	128	0.11	67	< 10	40
N204949	205	226	1.59	1.17	0.50	140	< 1	0.04	35	140	6	81	0.20	80	< 10	54
N204950	205	226	2.13	1.21	0.84	395	< 1	0.05	88	220	2	121	0.24	111	< 10	104
N204951	205	226	2.96	1.80	1.09	365	1	0.09	151	780	8	164	0.20	167	< 10	276
N204952	205	226	2.87	1.48	0.92	340	3	0.07	118	1150	10	211	0.13	139	< 10	246
N204953	205	226	3.04	1.46	0.71	265	2	0.08	109	610	12	131	0.17	143	< 10	208
N204954	205	226	1.69	0.94	0.56	535	1	0.03	56	230	8	158	0.14	98	< 10	60
N204955	205	226	3.79	2.20	1.38	390	8	0.13	33	680	108	57	0.16	150	< 10	1000
N204956	205	226	2.40	3.53	0.85	175	18	0.22	25	750	650	61	0.15	182	< 10	2280
N204957	205	226	4.99	3.39	1.53	540	7	0.26	10	840	2000	94	0.18	73	< 10	5050
N204958	205	226	7.05	3.24	2.89	575	3	0.36	7	1270	44	64	0.17	38	< 10	220

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 23-SEP-97
Invoice No. :I9742206
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742206

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N204959	205	226	< 5	1	3.6	100	0.8	8.30	340	1.5	20	1.08	0.5	19	71	1805
N204960	205	226	< 5	4	1.6	70	< 0.2	6.55	1500	2.0	2	0.74	2.5	3	123	28
N204961	205	226	< 5	1	1.2	20	< 0.2	6.76	620	2.5	< 2	1.47	< 0.5	3	125	17
N204962	205	226	< 5	1	0.6	40	< 0.2	5.47	330	1.5	< 2	0.80	< 0.5	4	110	14
N204963	205	226	< 5	2	< 0.2	30	< 0.2	6.28	390	1.5	2	1.61	< 0.5	3	100	10
N204964	205	226	< 5	4	0.2	50	< 0.2	5.64	270	1.5	< 2	1.25	< 0.5	2	91	7
N204965	205	226	< 5	1	0.6	320	< 0.2	5.64	310	1.5	2	1.46	7.0	1	90	7
N204966	205	226	< 5	2	0.8	20	< 0.2	7.32	640	2.5	< 2	1.22	< 0.5	2	88	7
N204967	205	226	< 5	1	0.2	10	< 0.2	7.54	3590	2.5	2	0.87	0.5	3	95	6
N204968	205	226	< 5	1	< 0.2	10	< 0.2	7.64	3150	2.5	2	0.80	0.5	2	78	6
N204969	205	226	< 5	1	0.4	< 10	< 0.2	7.49	3200	2.5	2	0.82	0.5	2	93	6
N204970	205	226	< 5	2	0.4	10	< 0.2	7.11	3180	2.5	< 2	0.74	0.5	2	83	6
N204971	205	226	< 5	1	0.2	< 10	< 0.2	7.13	3550	2.5	< 2	0.76	< 0.5	2	88	7
N204972	205	226	< 5	1	0.2	< 10	< 0.2	6.83	3430	2.5	< 2	0.69	0.5	1	81	6
N204973	205	226	< 5	1	0.2	< 10	< 0.2	7.10	3720	2.5	2	0.77	< 0.5	3	95	5
N204974	205	226	< 5	2	0.2	< 10	0.8	7.16	3710	2.5	< 2	0.97	0.5	2	77	5
N204975	205	226	< 5	8	2.6	10	< 0.2	6.80	2990	2.0	< 2	1.73	0.5	3	108	11
N204976	205	226	< 5	1	0.2	10	< 0.2	6.87	2980	2.0	< 2	1.75	< 0.5	3	73	5
N204977	205	226	< 5	2	0.2	< 10	< 0.2	7.33	2910	2.5	< 2	2.24	< 0.5	2	89	7
N204978	205	226	< 5	1	0.4	20	< 0.2	7.32	2250	2.5	2	2.52	0.5	2	82	6
N204979	205	226	< 5	2	0.6	10	0.6	6.71	850	2.0	< 2	1.85	< 0.5	2	94	11
N204980	205	226	< 5	1	0.4	10	< 0.2	6.37	2040	2.0	< 2	2.79	< 0.5	1	133	8
N204981	205	226	< 5	4	0.2	< 10	0.6	6.86	1880	2.5	< 2	1.27	< 0.5	1	67	8
N204982	205	226	< 5	1	0.2	< 10	< 0.2	6.96	3020	2.0	< 2	1.19	0.5	1	66	9
N204983	205	226	< 5	1	0.2	< 10	< 0.2	6.68	2720	2.0	< 2	0.83	< 0.5	2	84	7
N204984	205	226	< 5	2	0.2	< 10	< 0.2	8.82	300	0.5	< 2	5.08	< 0.5	24	78	49
N204985	205	226	< 5	1	0.2	< 10	< 0.2	6.69	1810	2.0	< 2	2.37	< 0.5	1	100	7
N204986	205	226	< 5	2	0.6	< 10	< 0.2	6.72	1720	2.0	< 2	1.62	< 0.5	1	78	6
N204987	205	226	< 5	1	0.2	< 10	< 0.2	7.14	1570	2.0	< 2	2.38	< 0.5	1	42	10
N204988	205	226	< 5	1	0.4	< 10	< 0.2	6.79	1400	1.5	2	2.18	< 0.5	1	69	9
N204989	205	226	< 5	2	0.6	10	< 0.2	6.34	810	2.0	< 2	4.32	< 0.5	8	142	16

CERTIFICATION:_____

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212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 23-SEP-97
Invoice No. : I9742206
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9742206

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N204959	205 226	8.41	2.15	3.25	885	4	0.24	6	1330	40	66	0.13	32	< 10	334
N204960	205 226	2.10	2.44	1.05	195	2	0.17	8	620	62	75	0.11	46	< 10	274
N204961	205 226	1.75	2.88	0.70	315	1	0.25	9	580	24	99	0.12	30	< 10	42
N204962	205 226	1.74	2.51	0.18	650	3	0.12	9	660	22	66	0.13	44	< 10	102
N204963	205 226	2.69	2.91	0.22	1400	4	0.15	7	700	34	110	0.14	38	< 10	36
N204964	205 226	2.01	2.67	0.20	770	4	0.12	4	770	42	89	0.12	25	< 10	92
N204965	205 226	1.68	2.69	0.22	770	2	0.11	5	710	118	111	0.12	30	< 10	982
N204966	205 226	1.71	3.49	0.71	255	2	0.61	5	760	108	108	0.16	28	< 10	66
N204967	205 226	1.55	2.96	0.76	145	1	1.99	4	760	30	112	0.13	24	< 10	52
N204968	205 226	1.48	2.80	0.69	145	1	2.49	5	690	24	118	0.13	24	< 10	42
N204969	205 226	1.42	2.79	0.60	170	1	2.42	4	640	22	137	0.14	25	< 10	58
N204970	205 226	1.38	2.60	0.62	125	< 1	2.45	5	750	34	142	0.14	23	< 10	56
N204971	205 226	1.35	2.97	0.76	120	< 1	1.92	4	590	26	115	0.15	25	< 10	50
N204972	205 226	1.42	2.84	0.74	90	1	1.82	4	620	24	101	0.14	24	< 10	40
N204973	205 226	1.40	3.02	0.69	100	< 1	1.87	5	540	18	117	0.16	25	< 10	38
N204974	205 226	1.34	3.10	0.63	175	< 1	1.85	5	520	24	203	0.17	27	< 10	44
N204975	205 226	1.43	3.04	0.51	405	1	1.62	5	690	26	287	0.17	26	< 10	104
N204976	205 226	1.51	3.55	0.50	485	< 1	0.68	4	580	28	271	0.17	24	< 10	42
N204977	205 226	1.34	3.85	0.49	420	< 1	0.41	5	590	20	355	0.20	31	< 10	48
N204978	205 226	1.00	3.06	0.35	290	2	1.10	6	730	32	433	0.16	34	< 10	66
N204979	205 226	1.56	3.74	0.23	335	3	0.15	9	950	22	300	0.15	57	< 10	68
N204980	205 226	1.15	3.38	0.36	350	3	0.14	6	1360	30	222	0.11	37	< 10	64
N204981	205 226	1.18	3.74	0.45	190	1	0.13	4	450	24	231	0.13	37	< 10	54
N204982	205 226	1.40	4.44	0.37	210	2	0.33	7	1290	28	285	0.15	37	< 10	52
N204983	205 226	1.11	4.41	0.23	135	1	0.21	9	520	20	211	0.17	47	< 10	56
N204984	205 226	5.36	1.05	2.81	930	< 1	1.15	24	420	2	543	0.39	255	< 10	74
N204985	205 226	1.20	3.25	0.30	235	1	0.13	7	790	16	224	0.18	31	< 10	42
N204986	205 226	0.96	3.29	0.29	155	< 1	0.16	8	730	20	156	0.15	37	< 10	28
N204987	205 226	1.11	3.41	0.40	245	< 1	0.15	7	1100	18	187	0.15	38	< 10	12
N204988	205 226	1.34	1.80	0.32	230	1	0.12	9	1080	22	134	0.16	40	< 10	28
N204989	205 226	2.02	2.71	1.47	750	< 1	0.13	80	1060	24	190	0.15	51	< 10	48

CERTIFICATION:_____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9742334

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9742334

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 25-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	86	Geochem ring to approx 150 mesh
226	86	0-3 Kg crush and split
3202	86	Rock - save entire reject
285	86	ICP - HF digestion charge
287	86	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	86	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	86	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	86	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	86	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	86	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	86	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	86	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	86	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	86	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	86	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	86	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	86	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	86	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	86	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	86	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	86	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	86	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	86	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	86	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	86	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	86	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	86	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	86	Pb ppm: 24 element, rock & core	AAS	2	10000
582	86	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	86	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	86	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	86	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	86	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-SEP-97
Invoice No. :I9742334
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742334

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N204719	205	226	< 5	2	0.6	10	< 0.2	3.23	8210	0.5	2	0.28	1.0	8	175	59
N204720	205	226	< 5	1	0.4	10	< 0.2	1.85	4070	0.5	< 2	0.16	< 0.5	4	128	55
N204721	205	226	20	2	0.8	< 10	< 0.2	2.29	3910	0.5	< 2	0.21	< 0.5	3	165	86
N204722	205	226	5	1	0.6	< 10	< 0.2	1.52	1860	0.5	< 2	0.22	< 0.5	3	81	57
N204723	205	226	70	1	0.8	< 10	< 0.2	2.49	720	1.0	< 2	0.27	< 0.5	5	128	68
N204724	205	226	< 5	1	0.6	< 10	< 0.2	2.68	1690	1.5	< 2	0.20	< 0.5	9	94	62
N204725	205	226	130	2	0.8	< 10	< 0.2	1.49	1160	0.5	< 2	2.45	< 0.5	8	97	56
N204726	205	226	10	2	0.6	10	< 0.2	2.81	810	1.5	< 2	0.07	< 0.5	6	142	71
N204727	205	226	5	1	0.2	< 10	< 0.2	3.16	960	3.0	< 2	0.23	< 0.5	6	138	58
N204728	205	226	< 5	1	0.4	< 10	< 0.2	0.75	210	1.0	< 2	0.39	< 0.5	3	191	65
N204729	205	226	< 5	1	0.2	< 10	< 0.2	1.18	440	4.5	< 2	15.95	< 0.5	< 1	35	10
N204730	205	226	< 5	1	0.4	< 10	< 0.2	1.54	320	4.5	< 2	14.05	< 0.5	< 1	69	12
N204731	205	226	< 5	1	0.2	< 10	< 0.2	0.60	310	2.0	< 2	9.42	< 0.5	< 1	60	11
N204732	205	226	< 5	1	0.4	< 10	< 0.2	0.92	380	6.0	< 2	4.38	< 0.5	< 1	105	8
N204733	205	226	< 5	2	0.2	< 10	< 0.2	3.19	1600	5.0	< 2	0.26	< 0.5	4	144	52
N204734	205	226	< 5	1	1.4	< 10	< 0.2	2.45	200	2.5	< 2	1.96	< 0.5	6	85	54
N204735	205	226	< 5	8	1.0	90	< 0.2	4.69	240	3.0	< 2	3.79	0.5	9	95	153
N204736	205	226	< 5	14	0.8	< 10	< 0.2	3.94	1320	2.5	< 2	1.80	< 0.5	9	104	102
N204737	205	226	< 5	4	1.6	1610	0.8	3.43	140	3.5	< 2	2.20	21.5	7	130	106
N204738	205	226	< 5	2	1.6	20	< 0.2	2.15	50	2.0	< 2	8.39	< 0.5	5	75	57
N204739	205	226	10	2	2.0	170	0.4	2.10	60	2.5	< 2	9.40	< 0.5	6	77	63
N204740	205	226	10	6	1.2	660	< 0.2	3.49	150	6.0	< 2	0.96	3.0	15	141	109
N204741	205	226	< 5	4	0.8	10	< 0.2	4.56	320	7.0	< 2	0.61	< 0.5	15	126	75
N204742	205	226	< 5	6	3.4	50	< 0.2	2.69	100	4.0	< 2	7.91	< 0.5	7	111	64
N204743	205	226	< 5	8	5.6	380	1.2	2.91	60	3.5	< 2	2.61	10.0	10	201	77
N204744	205	226	< 5	62	1.2	< 10	< 0.2	7.45	6490	3.0	< 2	6.75	< 0.5	39	180	48
N204745	205	226	20	24	8.2	60	0.4	3.21	110	2.0	< 2	1.58	0.5	6	185	52
N204746	205	226	20	32	6.8	50	0.6	2.66	90	2.0	< 2	1.48	< 0.5	5	197	49
N204747	205	226	25	30	6.8	60	0.4	3.04	90	2.0	< 2	0.75	0.5	6	211	52
N204748	205	226	35	32	8.6	50	0.6	3.25	100	2.0	< 2	1.09	0.5	6	227	57
N204749	205	226	< 5	8	4.0	20	< 0.2	3.67	130	2.5	< 2	4.16	< 0.5	9	138	59
N204750	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N204751	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N204752	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N204753	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N204754	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N204755	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N204756	205	226	5	2	1.0	10	0.4	7.63	1240	1.5	4	0.59	0.5	11	72	1355
N204757	205	226	< 5	2	1.0	30	< 0.2	7.13	1130	1.0	2	0.65	< 0.5	9	66	827
N204758	205	226	< 5	2	2.8	20	< 0.2	6.24	980	1.0	6	0.23	< 0.5	12	63	339

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Page Number :1-B
Total Pages :3
Certificate Date: 25-SEP-97
Invoice No. :19742334
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Account :GP W

CERTIFICATE OF ANALYSIS A9742334

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N204719	205	226	4.47	1.18	0.54	595	5	0.10	54	630	< 2	80	0.19	119	< 10	122
N204720	205	226	7.44	0.44	0.40	535	6	0.03	32	310	< 2	132	0.11	92	< 10	78
N204721	205	226	5.08	0.68	0.37	305	9	0.05	15	670	< 2	133	0.14	116	< 10	58
N204722	205	226	9.43	0.26	0.21	690	33	< 0.01	19	690	< 2	55	0.08	110	< 10	46
N204723	205	226	5.69	0.64	0.32	985	21	0.05	29	320	6	71	0.12	124	< 10	48
N204724	205	226	4.17	0.67	0.36	460	8	0.07	43	250	< 2	93	0.12	96	< 10	164
N204725	205	226	12.30	0.30	0.55	7480	44	< 0.01	52	1700	< 2	353	0.07	119	< 10	100
N204726	205	226	1.90	0.84	0.45	155	3	0.08	55	170	< 2	79	0.14	108	< 10	106
N204727	205	226	1.59	1.27	0.35	145	7	0.13	30	120	< 2	220	0.12	107	< 10	44
N204728	205	226	4.86	0.10	0.16	140	5	< 0.01	18	280	< 2	117	0.03	40	< 10	26
N204729	205	226	6.50	0.27	0.30	2360	6	0.03	6	380	< 2	408	0.06	51	< 10	14
N204730	205	226	10.50	0.16	0.81	1715	7	< 0.01	8	2590	< 2	354	0.07	67	< 10	16
N204731	205	226	10.35	0.05	0.28	1365	11	< 0.01	6	2770	< 2	346	0.03	48	< 10	14
N204732	205	226	9.70	0.13	0.28	615	12	< 0.01	6	2310	< 2	200	0.05	56	< 10	12
N204733	205	226	1.33	1.23	0.45	85	4	0.16	24	160	< 2	279	0.13	147	< 10	36
N204734	205	226	8.19	0.89	0.44	770	1	< 0.01	21	490	< 2	46	0.10	133	< 10	40
N204735	205	226	4.71	2.09	0.69	1720	< 1	0.09	28	710	250	70	0.23	140	< 10	480
N204736	205	226	2.17	1.92	0.43	615	1	0.07	25	900	38	33	0.22	156	< 10	104
N204737	205	226	4.27	1.54	0.61	1280	4	0.05	52	770	450	79	0.15	215	< 10	4950
N204738	205	226	7.70	0.56	0.79	5380	7	0.01	33	1070	74	185	0.10	154	< 10	120
N204739	205	226	7.60	0.93	0.60	4680	7	0.01	32	760	200	285	0.10	154	< 10	638
N204740	205	226	3.31	1.56	0.48	1985	1	0.07	35	350	60	47	0.14	188	< 10	1650
N204741	205	226	2.16	2.25	0.62	2040	< 1	0.10	43	270	16	39	0.21	151	< 10	90
N204742	205	226	3.71	1.23	1.64	2530	1	0.01	30	1000	36	165	0.11	137	< 10	142
N204743	205	226	3.12	1.36	0.44	595	7	0.03	48	1250	156	115	0.12	213	< 10	1415
N204744	205	226	4.20	2.55	2.72	1200	3	0.29	81	1150	4	289	0.96	247	< 10	82
N204745	205	226	1.72	1.57	0.40	305	12	0.07	51	1060	28	60	0.13	304	< 10	278
N204746	205	226	1.75	1.28	0.33	285	4	0.04	36	1560	24	70	0.12	226	< 10	132
N204747	205	226	1.77	1.45	0.36	175	11	0.08	50	1430	28	45	0.12	313	< 10	336
N204748	205	226	1.93	1.49	0.43	330	9	0.08	49	1350	28	51	0.12	297	< 10	236
N204749	205	226	1.69	1.59	0.54	1505	2	0.08	43	730	8	227	0.13	172	< 10	158
N204750	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N204751	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N204752	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N204753	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N204754	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N204755	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
N204756	205	226	6.70	1.79	2.89	710	< 1	0.25	4	860	20	49	0.31	31	< 10	242
N204757	205	226	6.32	1.64	2.72	750	1	0.20	5	810	4	47	0.27	28	< 10	102
N204758	205	226	5.15	1.72	2.00	450	3	0.18	6	620	30	34	0.16	34	< 10	174

CERTIFICATION: Ian Bradley

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SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N204759	205 226	< 5	2	4.0	80	< 0.2	6.13	1270	1.0	2	0.43	2.5	4	91	10
N204760	205 226	< 5	6	8.6	150	0.6	4.33	770	0.5	14	0.27	1.0	8	84	16
N204761	205 226	< 5	60	7.2	230	< 0.2	5.98	950	1.5	2	0.34	2.0	5	92	8
N204762	205 226	< 5	2	1.4	< 10	< 0.2	6.57	860	1.5	< 2	0.16	< 0.5	6	61	9
N204763	205 226	< 5	1	0.4	< 10	< 0.2	6.47	1080	2.0	2	0.36	< 0.5	4	78	6
N204764	205 226	< 5	1	0.6	10	< 0.2	7.38	1310	2.0	< 2	1.34	1.0	3	59	25
N204765	205 226	< 5	4	0.8	120	< 0.2	6.97	1310	2.0	2	1.75	6.5	2	79	49
N204766	205 226	< 5	36	3.8	90	0.6	6.91	1740	2.0	< 2	2.84	2.0	3	109	44
N204767	205 226	< 5	34	8.4	450	1.0	6.67	160	2.5	2	1.81	2.5	3	101	45
N204768	205 226	< 5	6	5.4	220	0.6	7.74	200	3.0	2	0.69	3.0	3	110	44
N204769	205 226	< 5	1	1.2	< 10	< 0.2	6.55	340	2.5	2	1.34	< 0.5	2	139	11
N204770	205 226	< 5	2	0.4	20	< 0.2	6.95	850	2.0	< 2	0.94	< 0.5	1	84	9
N204771	205 226	< 5	2	0.2	< 10	< 0.2	7.67	2050	3.0	< 2	0.64	< 0.5	2	96	8
N204772	205 226	< 5	1	0.2	< 10	< 0.2	7.45	1370	3.0	< 2	0.65	< 0.5	2	85	8
N204773	205 226	< 5	4	0.2	< 10	< 0.2	7.37	2410	3.0	< 2	0.97	< 0.5	1	100	9
N204774	205 226	< 5	1	< 0.2	< 10	< 0.2	7.20	1460	2.5	< 2	0.66	< 0.5	1	85	7
N204775	205 226	< 5	2	0.2	< 10	< 0.2	7.45	1600	2.5	< 2	0.63	< 0.5	3	107	7
N204776	205 226	< 5	1	0.2	< 10	< 0.2	7.12	1100	2.5	< 2	0.48	< 0.5	1	89	6
N204777	205 226	< 5	1	0.4	< 10	< 0.2	7.83	670	2.5	< 2	0.60	< 0.5	2	97	7
N204778	205 226	< 5	1	0.2	< 10	< 0.2	7.60	1290	2.5	< 2	0.75	< 0.5	2	111	7
N204779	205 226	< 5	1	0.2	< 10	< 0.2	7.37	1540	2.5	< 2	0.77	< 0.5	2	108	7
N204780	205 226	< 5	2	< 0.2	< 10	< 0.2	7.16	1220	2.5	< 2	0.82	< 0.5	2	107	9
N204781	205 226	< 5	2	0.2	< 10	< 0.2	7.15	1740	2.5	< 2	1.21	< 0.5	2	118	10
N204782	205 226	< 5	1	0.2	< 10	< 0.2	7.52	2620	2.5	< 2	1.34	< 0.5	1	115	9
N204783	205 226	< 5	1	0.4	< 10	< 0.2	7.66	1670	2.5	< 2	1.23	< 0.5	1	123	8
N204784	205 226	< 5	2	0.2	< 10	< 0.2	7.00	1580	2.5	< 2	1.60	< 0.5	2	99	7
N204785	205 226	< 5	1	0.4	< 10	< 0.2	7.33	1580	2.5	< 2	2.05	< 0.5	2	95	10
N204786	205 226	< 5	1	0.8	20	< 0.2	6.64	750	2.5	< 2	1.92	< 0.5	3	92	9
N204787	205 226	< 5	1	0.4	< 10	< 0.2	7.24	1520	2.0	< 2	1.60	< 0.5	3	104	8
N204788	205 226	< 5	1	0.8	10	< 0.2	6.87	1880	2.0	< 2	1.69	< 0.5	1	128	7
N204789	205 226	< 5	2	0.6	< 10	< 0.2	6.67	470	2.5	< 2	2.06	< 0.5	2	117	8
N204790	205 226	< 5	10	2.0	100	< 0.2	8.16	360	2.5	< 2	1.51	0.5	3	90	17
N204791	205 226	< 5	20	2.6	330	0.6	6.76	240	2.0	< 2	0.50	2.5	2	98	28
N204792	205 226	< 5	12	3.4	10	< 0.2	6.90	170	1.5	< 2	2.26	< 0.5	3	88	13
N204793	205 226	< 5	2	2.0	10	< 0.2	6.37	260	1.5	< 2	2.21	< 0.5	3	78	12
N204794	205 226	< 5	2	2.2	10	< 0.2	6.11	210	1.5	< 2	2.61	< 0.5	2	65	11
N204795	205 226	< 5	36	4.2	50	< 0.2	6.63	220	2.0	< 2	2.02	< 0.5	11	165	18
N204796	205 226	< 5	10	7.4	< 10	< 0.2	7.18	160	2.0	< 2	2.01	< 0.5	12	217	20
N204797	205 226	< 5	2	2.0	< 10	< 0.2	6.57	350	2.0	< 2	2.31	< 0.5	3	80	8
N204798	205 226	< 5	2	1.4	10	< 0.2	7.25	340	2.5	< 2	2.10	< 0.5	2	61	7

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-SEP-97
Invoice No. : I9742334
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9742334

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N204759	205	226	1.03	2.53	0.63	70	2	0.38	5	900	18	69	0.08	32	< 10	344
N204760	205	226	0.91	2.02	0.33	60	1	0.18	6	510	42	37	0.06	30	< 10	204
N204761	205	226	1.75	2.75	0.45	135	1	0.25	6	620	30	49	0.08	35	< 10	286
N204762	205	226	3.97	2.42	1.13	465	1	0.23	6	590	6	51	0.13	24	< 10	146
N204763	205	226	2.39	2.51	1.30	390	1	0.21	8	730	12	53	0.15	50	< 10	66
N204764	205	226	2.45	3.02	0.96	495	2	0.24	8	690	8	98	0.20	48	< 10	182
N204765	205	226	1.81	3.00	0.52	380	3	0.22	5	650	92	111	0.17	38	< 10	954
N204766	205	226	1.48	3.11	0.58	530	3	0.23	8	650	60	126	0.11	52	< 10	254
N204767	205	226	2.30	2.92	0.59	275	4	0.23	14	600	68	97	0.12	93	< 10	292
N204768	205	226	1.84	3.41	0.79	105	3	0.33	9	700	60	73	0.15	66	< 10	414
N204769	205	226	1.53	2.90	0.93	140	3	0.29	5	520	18	89	0.13	25	< 10	52
N204770	205	226	1.33	1.78	0.62	90	1	2.28	4	610	20	90	0.10	22	< 10	46
N204771	205	226	1.48	2.68	0.89	90	1	1.66	11	670	22	80	0.11	26	< 10	54
N204772	205	226	1.51	2.70	1.00	85	1	1.19	7	740	22	82	0.11	26	< 10	58
N204773	205	226	1.41	2.56	0.85	105	< 1	1.47	5	620	20	106	0.11	27	< 10	54
N204774	205	226	1.22	1.96	0.53	130	1	2.68	5	640	24	104	0.11	25	< 10	42
N204775	205	226	1.26	2.34	0.79	135	1	2.26	4	540	20	99	0.11	26	< 10	46
N204776	205	226	1.33	2.50	0.90	110	< 1	1.79	5	580	22	89	0.11	26	< 10	44
N204777	205	226	1.74	2.58	0.86	145	1	2.10	5	620	18	101	0.12	24	< 10	48
N204778	205	226	1.66	2.65	0.79	185	1	2.04	4	1100	28	107	0.12	25	< 10	58
N204779	205	226	1.39	2.62	0.80	180	1	1.96	4	660	22	99	0.12	25	< 10	50
N204780	205	226	1.28	2.63	0.88	165	2	1.69	6	690	20	91	0.12	24	< 10	46
N204781	205	226	1.33	2.77	0.93	170	2	1.37	4	710	20	91	0.11	25	< 10	52
N204782	205	226	1.35	2.95	0.95	180	1	1.38	5	700	20	93	0.13	25	< 10	48
N204783	205	226	1.42	3.23	0.80	175	< 1	1.03	5	680	24	94	0.14	28	< 10	52
N204784	205	226	1.36	3.34	0.67	190	1	0.45	4	640	22	127	0.13	27	< 10	46
N204785	205	226	1.54	3.74	0.71	225	1	0.22	6	680	22	157	0.14	24	< 10	46
N204786	205	226	1.40	3.31	0.60	145	3	0.18	6	600	20	90	0.14	35	< 10	96
N204787	205	226	1.66	3.69	0.67	105	< 1	0.22	4	650	18	80	0.16	24	< 10	36
N204788	205	226	1.34	3.47	0.60	140	1	0.20	5	520	18	73	0.15	24	< 10	56
N204789	205	226	1.45	3.12	0.59	275	1	0.15	5	640	20	145	0.14	25	< 10	32
N204790	205	226	1.63	3.99	0.54	350	5	0.25	8	810	26	127	0.18	49	< 10	166
N204791	205	226	1.75	3.18	0.29	160	21	0.22	9	970	80	47	0.14	30	< 10	534
N204792	205	226	1.72	3.25	0.30	455	6	0.23	12	860	24	134	0.15	61	< 10	18
N204793	205	226	1.34	2.97	0.32	370	3	0.20	9	800	18	126	0.15	51	< 10	16
N204794	205	226	1.54	2.92	0.31	485	3	0.17	9	690	16	131	0.14	48	< 10	10
N204795	205	226	2.47	3.12	0.29	415	16	0.20	106	680	18	106	0.14	49	< 10	114
N204796	205	226	2.06	3.34	0.32	340	3	0.25	68	840	18	109	0.17	55	< 10	32
N204797	205	226	1.42	3.10	0.32	365	1	0.19	11	540	16	128	0.14	28	< 10	12
N204798	205	226	1.18	3.41	0.36	315	1	0.22	5	520	20	123	0.16	30	< 10	40

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists *Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-SEP-97
Invoice No. :I9742334
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742334

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N204799	205 226	< 5	2	0.8	10	< 0.2	7.07	530	2.0	< 2	2.30	< 0.5	3	79	7
N204800	205 226	< 5	2	0.8	160	< 0.2	7.61	630	2.0	2	1.88	1.0	1	99	6
N204801	205 226	< 5	1	0.4	< 10	< 0.2	7.66	2960	2.5	< 2	1.77	< 0.5	1	75	8
N204802	205 226	< 5	1	0.2	< 10	< 0.2	7.47	2860	2.5	< 2	0.94	0.5	2	101	6
N204803	205 226	< 5	1	0.2	< 10	< 0.2	7.35	3060	2.5	< 2	0.93	< 0.5	2	79	6
N204804	205 226	< 5	1	0.4	< 10	< 0.2	7.30	2000	2.5	< 2	0.95	< 0.5	1	88	6
N204805	205 226	< 5	2	0.2	< 10	< 0.2	7.10	3190	2.0	< 2	1.10	< 0.5	3	98	6
N204806	205 226	< 5	2	0.4	< 10	< 0.2	3.99	1980	1.0	< 2	0.93	< 0.5	< 1	54	4
N204807	205 226	< 5	1	0.2	< 10	< 0.2	7.50	2640	2.0	< 2	1.47	< 0.5	2	86	6
N204808	205 226	< 5	2	0.2	< 10	< 0.2	7.53	2620	2.0	< 2	1.91	< 0.5	1	102	7
N204809	205 226	< 5	1	0.4	40	< 0.2	7.45	2070	2.0	< 2	2.21	0.5	1	107	7
N204810	205 226	< 5	1	0.2	20	< 0.2	7.03	1920	2.0	< 2	2.41	0.5	1	70	7

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists *Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :3-B
Total Pages :3
Certificate Date: 25-SEP-97
Invoice No. :19742334
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742334

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N204799	205	226	0.93	3.32	0.37	280	3	0.19	5	460	22	131	0.15	28	< 10	46
N204800	205	226	1.39	3.46	0.67	270	1	0.36	4	950	84	143	0.15	24	< 10	274
N204801	205	226	1.42	3.07	0.88	245	1	1.02	7	1090	24	132	0.14	24	< 10	48
N204802	205	226	1.28	2.68	0.73	145	< 1	1.89	6	770	24	93	0.12	24	< 10	60
N204803	205	226	1.23	2.49	0.61	170	< 1	2.28	4	730	22	112	0.13	24	< 10	50
N204804	205	226	1.30	2.63	0.82	140	1	1.70	4	690	24	108	0.14	23	< 10	42
N204805	205	226	1.21	2.68	0.72	175	< 1	1.58	5	520	20	114	0.15	29	< 10	40
N204806	205	226	0.76	1.58	0.39	170	< 1	0.70	2	340	10	97	0.09	15	< 10	24
N204807	205	226	1.20	3.34	0.61	225	1	1.13	6	680	20	181	0.17	26	< 10	44
N204808	205	226	1.58	3.77	0.55	345	1	0.35	5	590	24	224	0.21	31	< 10	56
N204809	205	226	1.04	3.47	0.41	245	3	0.28	7	750	18	188	0.14	34	< 10	74
N204810	205	226	1.07	3.34	0.28	240	3	0.20	6	670	20	181	0.15	44	< 10	58

CERTIFICATION: Ian Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9742716

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9742716

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 19-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1
Total Pages :1
Certificate Date: 19-SEP-97
Invoice No. :I9742716
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742716

SAMPLE	PREP CODE	Zn %
204637	244 --	1.71

CERTIFICATION: Saro Lomas

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9742911

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9742911

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 26-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	42	Geochem ring to approx 150 mesh
226	42	0-3 Kg crush and split
3202	42	Rock - save entire reject
285	42	ICP - HF digestion charge
287	42	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	42	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	42	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	42	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	42	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	42	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	42	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	42	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	42	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	42	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	42	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	42	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	42	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	42	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	42	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	42	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	42	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	42	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	42	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	42	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	42	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	42	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	42	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	42	Pb ppm: 24 element, rock & core	AAS	2	10000
582	42	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	42	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	42	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	42	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	42	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :2
Certificate Date: 26-SEP-97
Invoice No. :I9742911
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742911

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N175909	205	226	< 5	6	< 0.2	10	< 0.2	6.37	1890	0.5	2	2.96	< 0.5	22	187	74
N175910	205	226	45	4	0.4	< 10	< 0.2	5.42	2790	1.0	2	1.88	0.5	14	174	43
N175911	205	226	< 5	2	0.2	< 10	< 0.2	5.01	1690	0.5	< 2	2.57	< 0.5	14	158	78
N175912	205	226	< 5	4	0.2	10	< 0.2	2.83	1150	0.5	< 2	7.39	0.5	8	131	25
N175913	205	226	< 5	2	0.2	< 10	< 0.2	4.00	4070	1.0	< 2	0.65	0.5	4	168	53
N175924	205	226	10	1	0.4	10	< 0.2	0.60	120	9.0	< 2	5.87	< 0.5	< 1	70	24
N175925	205	226	< 5	2	0.4	10	< 0.2	2.10	410	7.5	< 2	1.10	< 0.5	1	154	37
N175926	205	226	< 5	1	0.6	10	< 0.2	1.27	90	5.0	< 2	4.84	< 0.5	< 1	95	32
N175927	205	226	< 5	4	0.4	110	< 0.2	1.91	190	3.5	< 2	5.88	0.5	4	119	60
N175928	205	226	< 5	212	1.2	20	< 0.2	2.60	230	3.0	< 2	2.80	< 0.5	7	93	77
N175929	205	226	< 5	42	0.8	10	1.0	3.22	230	2.5	< 2	2.63	< 0.5	5	154	94
N175930	205	226	20	12	1.8	20	< 0.2	1.44	140	1.0	< 2	15.25	< 0.5	1	59	35
N175931	205	226	25	2	0.6	20	< 0.2	1.73	220	2.5	< 2	17.80	< 0.5	3	74	14
N175932	205	226	35	1	0.2	30	< 0.2	3.78	150	4.0	< 2	4.48	< 0.5	12	87	70
N175933	205	226	10	20	0.2	10	< 0.2	3.26	240	5.5	< 2	1.69	< 0.5	22	127	78
N175934	205	226	10	22	6.8	120	0.8	4.95	300	7.0	< 2	1.51	1.5	8	131	98
N175935	205	226	30	50	7.6	140	1.4	3.51	90	4.0	< 2	2.74	2.5	27	304	91
N175936	205	226	< 5	38	3.8	40	< 0.2	6.32	340	5.5	< 2	4.69	1.5	36	177	82
N175937	205	226	20	28	11.0	120	0.6	4.54	110	4.0	< 2	5.06	2.0	12	141	99
N175944	205	226	10	52	15.0	210	0.8	7.22	360	4.0	2	0.96	4.0	2	122	78
N175945	205	226	25	64	19.0	1210	3.6	7.48	390	4.0	< 2	0.93	15.0	3	91	83
N175946	205	226	55	76	40	1310	10.0	7.37	260	4.5	< 2	1.29	17.0	1	115	607
N175960	205	226	< 5	4	3.6	550	0.6	6.33	390	2.5	< 2	1.06	6.5	1	120	40
N175961	205	226	< 5	2	0.6	30	< 0.2	7.47	1470	3.0	2	0.35	1.5	< 1	58	4
N175962	205	226	< 5	2	0.8	10	< 0.2	7.11	3780	3.0	< 2	0.32	0.5	< 1	68	4
N175963	205	226	< 5	1	0.6	10	< 0.2	6.92	2700	3.0	< 2	0.35	0.5	< 1	80	4
N175964	205	226	< 5	1	0.4	< 10	< 0.2	7.02	1450	2.5	< 2	0.53	< 0.5	< 1	83	4
N175965	205	226	< 5	2	0.4	< 10	1.0	7.07	1220	2.5	< 2	0.75	0.5	< 1	73	4
N175966	205	226	< 5	1	0.4	< 10	< 0.2	7.15	1560	2.5	< 2	0.59	0.5	< 1	91	5
N175967	205	226	< 5	1	0.4	10	< 0.2	7.52	1610	2.5	< 2	0.60	< 0.5	< 1	81	4
N175968	205	226	< 5	2	0.2	< 10	< 0.2	7.43	1330	2.5	< 2	0.76	< 0.5	< 1	86	3
N175969	205	226	< 5	2	0.6	< 10	< 0.2	7.26	1180	2.5	< 2	0.89	0.5	< 1	94	4
N175970	205	226	< 5	1	0.2	< 10	< 0.2	7.76	1220	2.5	< 2	0.78	< 0.5	< 1	91	5
N175976	205	226	< 5	1	0.8	< 10	< 0.2	7.30	1730	2.5	< 2	1.66	0.5	< 1	70	4
N175977	205	226	< 5	1	0.4	< 10	< 0.2	6.55	1690	2.5	< 2	1.17	0.5	< 1	135	6
N175978	205	226	< 5	2	0.8	< 10	< 0.2	7.23	1160	2.5	< 2	1.43	0.5	1	97	8
N175979	205	226	< 5	1	0.6	< 10	< 0.2	6.57	1580	2.5	< 2	1.84	0.5	1	116	5
N175980	205	226	< 5	1	0.8	10	< 0.2	7.01	1620	2.5	< 2	1.98	0.5	< 1	113	6
N175981	205	226	< 5	2	1.4	220	< 0.2	6.93	920	2.0	< 2	2.42	2.0	< 1	94	6
N175982	205	226	< 5	2	2.8	80	< 0.2	6.49	510	1.5	< 2	0.48	0.5	1	88	7

CERTIFICATION: _____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 26-SEP-97
Invoice No. :I9742911
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742911

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N175909	205	226	5.11	1.10	2.36	1555	< 1	1.26	66	740	14	131	0.62	218	< 10	104
N175910	205	226	3.52	1.70	1.72	1090	< 1	0.33	49	560	12	156	0.37	142	< 10	88
N175911	205	226	3.46	1.10	1.75	1200	1	1.24	50	490	10	120	0.35	149	< 10	74
N175912	205	226	2.09	0.84	1.12	875	< 1	0.14	25	690	10	177	0.26	87	< 10	52
N175913	205	226	2.01	1.57	0.90	215	< 1	0.13	23	120	10	42	0.20	82	< 10	60
N175924	205	226	17.25	0.08	0.20	1305	1	0.02	4	1120	10	165	0.02	99	< 10	50
N175925	205	226	7.14	0.38	0.40	360	< 1	0.09	12	300	< 2	87	0.09	127	< 10	34
N175926	205	226	16.25	0.16	0.65	2050	4	0.07	10	420	10	213	0.06	103	< 10	50
N175927	205	226	5.52	0.67	0.50	1250	9	0.03	18	690	64	183	0.08	133	< 10	436
N175928	205	226	11.75	0.97	0.58	1615	< 1	0.03	17	390	12	52	0.09	112	< 10	52
N175929	205	226	4.27	1.25	0.56	1280	2	0.05	19	1300	88	53	0.14	164	< 10	64
N175930	205	226	6.09	0.41	0.48	4010	5	0.01	14	790	84	241	0.07	116	< 10	56
N175931	205	226	5.84	0.64	0.70	7800	4	0.03	15	490	84	591	0.07	118	< 10	62
N175932	205	226	22.6	1.50	1.18	9890	6	0.13	50	1450	120	155	0.13	148	< 10	230
N175933	205	226	2.89	1.31	0.49	745	1	0.05	35	420	72	47	0.13	188	< 10	24
N175934	205	226	3.68	2.34	0.74	1220	6	0.09	73	870	66	78	0.16	282	< 10	266
N175935	205	226	4.52	1.48	0.48	625	10	0.04	111	1530	82	121	0.14	294	< 10	608
N175936	205	226	2.83	3.00	1.30	920	3	0.15	82	1400	32	139	0.49	214	< 10	222
N175937	205	226	3.99	2.23	0.84	945	15	0.06	70	2000	84	160	0.21	331	< 10	402
N175944	205	226	2.39	2.92	0.99	270	7	0.17	16	480	80	58	0.14	82	< 10	514
N175945	205	226	2.29	3.18	1.11	210	13	0.19	19	570	160	60	0.14	196	< 10	1465
N175946	205	226	2.37	3.24	0.92	215	25	0.20	56	1250	320	75	0.15	563	< 10	1650
N175960	205	226	1.87	2.70	0.78	180	3	0.17	8	770	92	75	0.09	50	< 10	738
N175961	205	226	1.52	2.73	1.21	80	3	0.71	4	1090	24	63	0.11	29	< 10	70
N175962	205	226	1.47	2.59	1.25	85	< 1	0.57	3	610	24	61	0.10	23	< 10	58
N175963	205	226	1.46	2.33	1.06	80	1	0.99	4	630	24	60	0.09	23	< 10	50
N175964	205	226	1.29	1.63	0.58	95	1	2.66	4	570	20	81	0.09	25	< 10	48
N175965	205	226	1.32	1.70	0.50	195	< 1	2.71	3	580	20	98	0.13	22	< 10	48
N175966	205	226	1.63	2.17	0.67	150	1	2.17	4	610	22	92	0.10	23	< 10	54
N175967	205	226	1.55	2.66	0.91	110	< 1	1.62	5	760	18	87	0.12	24	< 10	44
N175968	205	226	1.50	2.67	0.90	140	< 1	1.53	4	690	20	92	0.12	23	< 10	44
N175969	205	226	1.47	2.43	0.79	190	1	1.98	4	700	22	109	0.12	22	< 10	48
N175970	205	226	1.52	2.53	0.82	155	1	2.23	4	650	20	101	0.11	25	< 10	58
N175976	205	226	1.51	3.64	0.68	180	< 1	0.18	4	560	16	116	0.13	27	< 10	56
N175977	205	226	1.34	3.29	0.63	95	1	0.16	6	620	12	91	0.13	36	< 10	52
N175978	205	226	1.65	3.66	0.73	105	3	0.16	8	750	16	103	0.15	53	< 10	64
N175979	205	226	1.25	3.36	0.60	130	1	0.13	6	540	20	123	0.14	40	< 10	60
N175980	205	226	1.53	3.66	0.63	170	< 1	0.12	6	690	16	151	0.15	35	< 10	58
N175981	205	226	1.39	3.53	0.54	315	1	0.14	6	570	52	275	0.15	29	< 10	358
N175982	205	226	1.71	2.92	0.20	325	1	0.17	6	600	16	84	0.15	28	< 10	128

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 26-SEP-97
Invoice No. : I9742911
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9742911

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N175983	205	226	< 5	2	3.0	10	< 0.2	6.82	580	1.0	< 2	0.69	< 0.5	1	96	8
N175984	205	226	< 5	2	1.0	10	< 0.2	6.68	740	1.5	< 2	2.49	< 0.5	< 1	56	4

CERTIFICATION:

Chemex Labs Ltd.

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Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :2-B
Total Pages :2
Certificate Date: 26-SEP-97
Invoice No. :I9742911
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742911

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N175983	205	226	1.32	3.10	0.15	330	3	0.19	8	750	22	126	0.15	66	< 10	42
N175984	205	226	1.10	3.03	0.15	740	1	0.17	4	670	14	340	0.14	25	< 10	12

CERTIFICATION: [signature]

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9742912

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9742912

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 25-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	95	Geochem ring to approx 150 mesh
294	95	4-7 Kg crush and split
3202	95	Rock - save entire reject
285	95	ICP - HF digestion charge
287	95	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	95	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	95	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	95	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	95	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	95	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	95	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	95	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	95	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	95	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	95	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	95	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	95	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	95	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	95	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	95	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	95	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	95	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	95	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	95	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	95	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	95	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	95	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	95	Pb ppm: 24 element, rock & core	AAS	2	10000
582	95	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	95	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	95	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	95	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	95	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-SEP-97
Invoice No. :I9742912
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742912

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203768	205	294	10	2	2.2	80	0.4	2.63	160	3.0	< 2	0.15	1.5	5	165	62
N203769	205	294	10	16	4.2	70	0.6	1.81	110	2.0	< 2	0.18	< 0.5	3	200	61
N203770	205	294	10	12	3.8	130	< 0.2	1.49	90	1.5	< 2	0.20	3.0	4	165	60
N203771	205	294	5	2	3.4	80	< 0.2	1.79	90	2.0	< 2	0.44	0.5	4	172	49
N203772	205	294	< 5	4	3.0	70	< 0.2	1.81	240	2.0	< 2	0.07	2.5	5	170	77
N203773	205	294	< 5	1	1.4	60	< 0.2	1.14	500	1.5	< 2	0.21	1.5	2	202	45
N203774	205	294	< 5	2	2.0	110	< 0.2	2.20	160	2.5	< 2	0.08	0.5	4	155	58
N203775	205	294	5	2	2.2	190	< 0.2	2.57	130	2.5	< 2	0.62	0.5	5	156	54
N203776	205	294	< 5	2	2.0	190	0.4	2.53	130	2.5	< 2	0.40	0.5	4	168	209
N203777	205	294	< 5	2	1.0	150	< 0.2	2.34	840	2.5	< 2	0.09	< 0.5	1	166	51
N203778	205	294	< 5	1	1.6	110	1.2	3.61	230	4.0	< 2	0.08	< 0.5	3	141	81
N203779	205	294	< 5	1	1.4	90	< 0.2	2.05	720	2.5	< 2	0.43	< 0.5	1	169	56
N203780	205	294	< 5	2	1.4	130	< 0.2	2.89	520	3.5	< 2	0.15	< 0.5	3	146	65
N203781	205	294	< 5	2	2.0	90	< 0.2	2.38	520	3.0	< 2	0.08	< 0.5	4	173	70
N203782	205	294	< 5	2	2.4	70	0.2	2.56	550	3.0	< 2	0.38	< 0.5	5	162	74
N203783	205	294	< 5	2	2.6	40	< 0.2	1.90	150	2.5	< 2	0.12	< 0.5	1	176	57
N203784	205	294	25	12	5.0	180	0.4	2.18	100	3.0	< 2	1.34	2.5	5	149	95
N203785	205	294	5	2	2.6	140	< 0.2	2.76	200	4.0	< 2	0.33	1.0	4	168	55
N203786	205	294	10	4	3.0	380	< 0.2	2.87	220	4.0	< 2	2.49	8.0	9	181	110
N203791	205	294	30	26	8.4	400	< 0.2	4.91	110	12.5	< 2	1.31	8.5	23	171	82
N203792	205	294	25	2	5.8	230	< 0.2	1.97	160	3.5	< 2	17.05	7.0	4	90	59
N203793	205	294	< 5	1	1.2	210	< 0.2	2.91	100	5.5	< 2	5.46	10.5	5	168	63
N203794	205	294	< 5	2	1.2	680	< 0.2	3.14	140	5.0	< 2	5.21	22.5	5	118	59
N203799	205	294	< 5	52	15.0	620	0.4	1.55	80	4.0	< 2	10.90	11.5	3	83	53
N203800	205	294	< 5	2	5.0	10	< 0.2	5.39	70	11.5	< 2	0.46	< 0.5	46	116	131
N203801	205	294	< 5	1	1.0	30	< 0.2	4.38	1090	7.0	< 2	0.73	0.5	3	106	30
N203802	205	294	< 5	2	2.0	260	< 0.2	4.51	150	6.0	< 2	0.78	3.0	7	111	42
N203803	205	294	< 5	1	3.8	670	< 0.2	6.48	140	7.5	< 2	0.52	7.5	5	117	36
N203804	205	294	15	1	9.0	3800	0.4	3.53	160	4.5	< 2	0.41	51.0	7	150	47
N203805	205	294	20	1	11.0	3860	2.4	2.65	110	3.0	< 2	0.96	60.5	10	224	59
N203806	205	294	35	8	11.0	6180	1.8	3.96	70	3.5	< 2	0.68	89.5	12	141	57
N203807	205	294	20	4	3.6	440	0.4	5.21	160	4.5	< 2	0.24	7.5	10	148	65
N203808	205	294	< 5	2	3.0	70	0.8	8.69	90	5.0	< 2	2.48	1.0	42	104	79
N203809	205	294	< 5	4	1.0	< 10	< 0.2	9.24	840	4.0	10	5.76	0.5	19	51	24
N203810	205	294	< 5	18	0.4	< 10	< 0.2	7.76	3040	3.0	< 2	9.28	0.5	9	51	5
N203811	205	294	< 5	4	0.6	890	< 0.2	7.92	990	3.5	2	8.49	22.0	22	37	23
N203812	205	294	< 5	2	0.6	< 10	< 0.2	7.47	3000	2.5	< 2	8.91	0.5	19	37	15
N203813	205	294	< 5	2	0.8	80	< 0.2	7.40	1770	2.5	< 2	8.10	4.0	22	35	20
N203815	205	294	< 5	6	0.6	< 10	< 0.2	7.35	2580	2.5	6	8.85	0.5	18	100	30
N203816	205	294	< 5	8	0.4	20	< 0.2	8.06	890	0.5	< 2	5.89	< 0.5	44	278	56

CERTIFICATION: Ian Buchan

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-SEP-97
Invoice No. :I9742912
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742912

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203768	205	294	2.59	1.24	0.33	125	1	0.05	48	70	70	10	0.08	127	< 10	656
N203769	205	294	7.33	0.83	0.18	55	2	0.03	97	60	140	6	0.05	103	< 10	44
N203770	205	294	6.75	0.69	0.15	40	1	0.02	103	50	124	6	0.04	91	< 10	1400
N203771	205	294	2.70	0.85	0.18	70	< 1	0.01	62	50	180	9	0.04	93	< 10	872
N203772	205	294	4.12	0.87	0.18	25	3	0.03	70	60	272	5	0.06	126	< 10	1390
N203773	205	294	1.22	0.53	0.12	50	< 1	0.01	24	50	330	9	0.04	74	< 10	864
N203774	205	294	1.65	1.09	0.23	40	1	0.04	37	70	150	6	0.08	125	< 10	594
N203775	205	294	1.93	1.28	0.30	185	1	0.04	60	100	140	27	0.09	125	< 10	770
N203776	205	294	2.62	1.23	0.29	135	1	0.04	56	260	250	17	0.08	133	< 10	1095
N203777	205	294	1.01	1.17	0.25	40	1	0.04	20	110	76	6	0.08	125	< 10	108
N203778	205	294	1.42	1.82	0.37	35	1	0.07	28	130	132	7	0.13	200	< 10	260
N203779	205	294	1.10	1.01	0.23	95	< 1	0.04	20	560	50	11	0.07	106	< 10	286
N203780	205	294	1.32	1.43	0.33	55	< 1	0.06	36	300	200	10	0.09	140	< 10	438
N203781	205	294	1.29	1.16	0.27	40	1	0.04	44	80	320	7	0.07	134	< 10	470
N203782	205	294	1.44	1.18	0.34	85	1	0.05	49	110	176	23	0.09	142	< 10	308
N203783	205	294	1.86	0.89	0.20	40	< 1	0.04	18	70	80	5	0.07	106	< 10	186
N203784	205	294	3.24	1.08	0.25	230	< 1	0.02	50	830	160	35	0.07	130	< 10	1575
N203785	205	294	1.86	1.32	0.32	95	< 1	0.05	31	160	86	18	0.09	132	< 10	674
N203786	205	294	1.73	1.37	0.34	375	< 1	0.03	64	180	290	283	0.09	172	< 10	1900
N203791	205	294	7.45	2.46	0.52	260	3	0.10	67	440	680	28	0.13	190	< 10	3390
N203792	205	294	6.26	0.80	0.48	3620	8	0.01	33	910	324	533	0.05	119	< 10	1965
N203793	205	294	6.33	1.44	0.60	3060	1	0.03	42	780	640	145	0.07	157	< 10	3270
N203794	205	294	5.89	1.43	0.71	3170	< 1	0.03	46	290	730	144	0.08	141	< 10	7220
N203799	205	294	15.20	0.80	0.29	1850	11	0.03	30	650	1600	316	0.04	135	< 10	3590
N203800	205	294	5.69	2.90	0.60	215	2	0.09	119	530	370	17	0.18	213	< 10	94
N203801	205	294	2.22	2.30	0.54	210	< 1	0.08	21	200	60	24	0.20	141	< 10	158
N203802	205	294	2.38	2.42	0.60	190	7	0.08	37	400	410	27	0.12	124	< 10	642
N203803	205	294	2.83	3.48	0.78	160	7	0.13	37	200	610	19	0.16	112	< 10	1560
N203804	205	294	2.44	1.84	0.46	105	< 1	0.07	31	190	2400	12	0.11	129	< 10	8060
N203805	205	294	2.74	1.36	0.30	120	1	0.03	36	1680	3000	32	0.08	125	< 10	9400
N203806	205	294	3.55	2.03	0.39	175	4	0.06	48	640	1800	19	0.15	156	< 10	>10000
N203807	205	294	3.55	2.67	0.45	115	2	0.11	46	290	56	10	0.13	117	< 10	964
N203808	205	294	7.36	4.54	0.74	440	< 1	0.22	62	2960	172	89	0.80	250	< 10	158
N203809	205	294	5.00	4.13	0.68	1130	< 1	1.30	22	3290	10	250	1.59	280	< 10	60
N203810	205	294	5.10	3.25	0.60	1460	< 1	1.39	16	2700	< 2	454	1.59	233	< 10	54
N203811	205	294	5.54	3.37	0.62	1700	1	1.53	23	2710	8	413	1.65	241	< 10	1005
N203812	205	294	5.52	2.70	0.76	1210	< 1	1.62	18	2630	< 2	398	1.60	233	< 10	66
N203813	205	294	5.59	3.30	0.98	1065	< 1	0.71	24	2600	< 2	343	1.60	233	< 10	420
N203815	205	294	5.29	3.14	1.17	1060	< 1	0.57	36	2240	< 2	406	1.32	218	< 10	70
N203816	205	294	5.09	1.50	3.23	900	< 1	2.85	95	720	< 2	237	0.19	177	< 10	68

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-SEP-97
Invoice No. :19742912
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742912

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203817	205	294	< 5	8	0.6	< 10	< 0.2	7.76	430	0.5	< 2	6.04	< 0.5	30	296	56
N203818	205	294	< 5	2	1.0	< 10	< 0.2	8.82	560	0.5	< 2	5.73	< 0.5	25	369	59
N203819	205	294	< 5	1	0.4	< 10	< 0.2	8.36	1700	1.5	< 2	7.72	< 0.5	27	356	68
N203820	205	294	< 5	2	0.4	< 10	< 0.2	7.64	1600	1.5	4	8.14	0.5	30	320	71
N203821	205	294	< 5	10	0.6	10	< 0.2	7.72	1700	1.5	< 2	7.89	0.5	34	300	64
N203822	205	294	< 5	6	0.2	< 10	< 0.2	8.32	1740	2.0	< 2	8.04	< 0.5	42	340	69
N203823	205	294	< 5	4	0.2	< 10	< 0.2	7.82	1500	1.5	< 2	7.19	< 0.5	31	339	65
N203824	205	294	< 5	2	0.6	< 10	< 0.2	7.98	1410	1.5	< 2	6.56	< 0.5	30	363	68
N203825	205	294	< 5	2	0.8	10	< 0.2	7.68	2060	3.5	2	7.46	0.5	21	294	57
N203826	205	294	< 5	1	2.0	70	0.4	8.72	180	5.0	< 2	3.40	2.5	60	203	81
N203827	205	294	< 5	1	1.4	60	0.6	8.53	150	5.5	6	2.33	2.5	43	53	58
N203828	205	294	< 5	2	0.6	< 10	< 0.2	8.39	2010	5.0	12	5.88	0.5	11	32	64
N203829	205	294	40	4	0.2	< 10	< 0.2	7.89	2020	4.0	10	7.36	< 0.5	17	38	5
N203830	205	294	< 5	12	1.4	10	< 0.2	7.04	2800	3.5	< 2	6.93	1.0	20	193	27
N203831	205	294	< 5	2	2.0	400	0.6	5.36	130	4.0	< 2	3.06	6.5	25	333	62
N203832	205	294	< 5	1	0.8	80	< 0.2	1.69	1070	0.5	< 2	0.58	0.5	4	89	33
N203833	205	294	< 5	1	0.6	70	< 0.2	2.23	2390	0.5	< 2	0.51	0.5	4	184	67
N203834	205	294	< 5	4	0.8	30	< 0.2	2.26	880	0.5	< 2	0.50	< 0.5	8	132	57
N203835	205	294	< 5	1	1.0	20	< 0.2	2.18	640	0.5	< 2	0.44	< 0.5	2	193	42
N203836	205	294	< 5	1	1.6	20	< 0.2	2.16	490	0.5	< 2	0.31	< 0.5	5	137	62
N203837	205	294	< 5	4	3.0	50	< 0.2	2.09	270	0.5	< 2	0.54	< 0.5	4	148	58
N203838	205	294	< 5	2	4.8	80	0.4	2.13	190	0.5	< 2	1.16	< 0.5	4	173	58
N203839	205	294	< 5	2	2.6	60	0.4	2.08	260	0.5	< 2	0.28	< 0.5	4	132	51
N203840	205	294	< 5	1	1.6	90	< 0.2	2.23	640	0.5	< 2	0.54	< 0.5	4	176	48
N203841	205	294	< 5	1	1.6	50	< 0.2	2.69	1330	0.5	< 2	0.26	< 0.5	3	136	49
N203842	205	294	< 5	1	1.2	20	< 0.2	3.54	870	1.0	< 2	0.33	< 0.5	6	148	58
N203843	205	294	< 5	1	1.6	< 10	< 0.2	3.73	930	1.5	< 2	0.36	< 0.5	6	130	52
N203844	205	294	< 5	2	1.8	< 10	< 0.2	2.68	670	0.5	< 2	0.44	< 0.5	4	158	46
N203845	205	294	< 5	2	7.4	30	< 0.2	2.90	370	1.0	< 2	0.67	< 0.5	5	128	44
N203846	205	294	< 5	8	6.2	30	< 0.2	2.42	230	1.5	< 2	0.29	< 0.5	5	141	52
N203847	205	294	10	4	36	90	< 0.2	2.84	150	2.0	< 2	0.28	< 0.5	6	174	68
N203848	205	294	< 5	12	40	50	< 0.2	2.61	2730	2.0	< 2	0.41	0.5	17	175	121
N203849	205	294	< 5	2	13.5	10	< 0.2	3.04	2740	2.5	< 2	0.64	< 0.5	4	169	64
N203850	205	294	< 5	6	1.8	< 10	< 0.2	4.05	1590	3.0	2	0.96	< 0.5	11	163	71
N204259	205	294	< 5	1	2.0	< 10	< 0.2	3.81	2110	3.0	< 2	1.06	< 0.5	6	144	53
N204260	205	294	< 5	1	5.6	160	< 0.2	5.65	340	3.0	< 2	2.03	2.5	6	120	34
N204261	205	294	< 5	2	1.6	30	< 0.2	6.51	4350	3.0	< 2	1.24	1.5	< 1	79	3
N204262	205	294	< 5	4	1.4	10	< 0.2	6.69	4570	3.0	< 2	1.38	0.5	< 1	76	3
N204263	205	294	< 5	2	1.6	60	< 0.2	6.92	4610	3.0	< 2	1.26	1.5	< 1	72	4
N204264	205	294	15	68	15.5	1460	0.4	5.79	330	3.0	< 2	0.58	13.5	4	174	37

CERTIFICATION:

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Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-SEP-97
Invoice No. :19742912
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9742912

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203817	205 294	4.89	0.78	3.64	895	< 1	3.31	96	620	< 2	266	0.08	151	< 10	70
N203818	205 294	5.45	0.96	2.75	745	< 1	3.71	84	630	< 2	247	0.16	168	< 10	84
N203819	205 294	5.46	3.08	2.98	835	< 1	0.78	86	640	< 2	281	0.22	166	< 10	84
N203820	205 294	4.56	2.85	1.64	830	< 1	1.52	82	520	< 2	274	0.36	162	< 10	80
N203821	205 294	4.94	3.14	2.33	770	< 1	0.74	92	490	< 2	256	0.28	159	< 10	86
N203822	205 294	5.59	3.32	3.20	830	< 1	0.57	104	540	< 2	261	0.19	176	< 10	106
N203823	205 294	5.31	3.15	3.59	805	< 1	0.26	89	520	< 2	224	0.17	167	< 10	80
N203824	205 294	5.56	2.92	3.76	795	< 1	0.33	84	510	< 2	196	0.16	162	< 10	70
N203825	205 294	4.66	3.75	1.56	1120	< 1	0.19	63	540	< 2	230	0.35	141	< 10	74
N203826	205 294	6.84	4.23	0.59	910	< 1	0.16	103	2150	140	121	0.47	276	< 10	196
N203827	205 294	9.84	4.46	0.65	1620	< 1	0.19	79	3490	200	87	1.47	272	< 10	276
N203828	205 294	6.07	4.21	0.62	1265	< 1	0.17	20	4010	24	231	1.78	237	< 10	64
N203829	205 294	6.54	3.42	0.75	1135	< 1	0.23	17	2950	< 2	306	1.65	245	< 10	54
N203830	205 294	4.73	3.40	1.36	1180	< 1	0.14	59	1790	40	268	0.80	188	< 10	142
N203831	205 294	3.67	2.76	0.66	740	2	0.08	103	830	350	117	0.28	225	< 10	1510
N203832	205 294	1.50	0.75	0.34	200	< 1	0.02	24	230	70	26	0.07	50	< 10	174
N203833	205 294	1.30	0.97	0.41	180	< 1	0.03	37	120	6	52	0.09	63	< 10	152
N203834	205 294	1.47	0.96	0.42	290	< 1	0.03	56	130	< 2	89	0.09	55	< 10	74
N203835	205 294	1.28	0.85	0.40	140	< 1	0.03	25	110	< 2	88	0.07	48	< 10	36
N203836	205 294	1.24	0.83	0.38	140	1	0.03	57	60	< 2	62	0.06	88	< 10	82
N203837	205 294	1.42	0.78	0.39	225	< 1	0.03	59	710	< 2	109	0.06	87	< 10	82
N203838	205 294	2.01	0.75	0.47	465	1	0.02	76	2390	< 2	229	0.05	92	< 10	86
N203839	205 294	1.13	0.83	0.32	180	1	0.03	51	90	< 2	50	0.07	94	< 10	80
N203840	205 294	1.18	0.87	0.42	450	1	0.03	53	230	< 2	89	0.07	89	< 10	94
N203841	205 294	1.00	1.15	0.36	135	< 1	0.04	48	150	34	54	0.08	84	< 10	134
N203842	205 294	1.44	1.57	0.46	135	< 1	0.06	57	90	2	64	0.13	91	< 10	74
N203843	205 294	1.61	1.62	0.45	170	< 1	0.06	41	100	< 2	69	0.14	93	< 10	80
N203844	205 294	1.34	1.01	0.36	160	< 1	0.04	38	110	< 2	69	0.09	78	< 10	32
N203845	205 294	1.44	0.95	0.42	210	< 1	0.03	44	100	< 2	86	0.09	95	< 10	60
N203846	205 294	1.12	0.90	0.31	95	< 1	0.03	46	90	< 2	23	0.06	109	< 10	42
N203847	205 294	1.67	1.18	0.33	90	1	0.06	48	280	10	19	0.07	130	< 10	110
N203848	205 294	0.99	1.12	0.37	265	< 1	0.04	47	370	86	23	0.07	118	< 10	106
N203849	205 294	1.14	1.31	0.41	400	< 1	0.04	20	420	8	34	0.08	115	< 10	26
N203850	205 294	1.80	1.72	0.52	520	< 1	0.06	53	180	28	46	0.15	139	< 10	44
N204259	205 294	1.77	1.56	0.52	580	< 1	0.06	40	160	12	47	0.15	132	< 10	34
N204260	205 294	2.91	2.34	1.07	725	3	0.10	29	920	76	84	0.19	141	< 10	438
N204261	205 294	1.04	2.73	0.73	185	1	0.13	3	130	16	51	0.09	10	< 10	98
N204262	205 294	0.98	2.65	0.79	245	< 1	0.13	1	130	8	54	0.09	6	< 10	22
N204263	205 294	0.97	2.77	0.76	240	< 1	0.12	4	170	22	51	0.10	15	< 10	116
N204264	205 294	3.45	2.32	0.64	175	13	0.12	46	700	62	48	0.14	321	< 10	884

CERTIFICATION:_____

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212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-SEP-97
Invoice No. : I9742912
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9742912

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N204265	205	294	< 5	56	13.5	520	0.6	6.22	240	4.5	< 2	0.74	6.0	5	156	38
N204266	205	294	10	36	12.0	550	0.4	3.84	130	3.0	< 2	1.10	7.0	4	133	37
N204267	205	294	5	30	14.0	500	0.6	6.33	350	4.5	< 2	0.72	5.5	3	166	28
N204268	205	294	10	40	17.0	910	1.2	5.29	250	4.0	< 2	0.25	8.5	1	144	46
N204269	205	294	10	102	19.0	690	3.2	4.20	290	3.5	< 2	0.43	20.5	4	234	81
N204270	205	294	< 5	24	9.6	210	1.0	4.94	250	4.0	< 2	0.87	2.0	7	138	39
N204271	205	294	< 5	28	6.4	250	< 0.2	3.52	190	2.0	< 2	1.17	1.0	9	163	58
N204272	205	294	< 5	10	22	30	< 0.2	3.45	390	1.5	< 2	2.14	< 0.5	6	134	55
N204273	205	294	< 5	60	6.8	100	0.4	3.34	150	2.0	< 2	0.49	1.5	6	204	40
N204274	205	294	20	50	14.5	140	0.6	6.14	270	3.0	< 2	1.06	3.0	14	215	56
N204275	205	294	20	72	7.6	160	0.6	3.22	140	2.0	< 2	0.67	2.5	5	165	48
N204276	205	294	20	68	7.2	70	0.6	3.25	180	2.5	< 2	0.62	1.5	5	180	56
N204277	205	294	35	90	11.0	140	1.4	3.21	150	3.0	< 2	0.34	3.5	6	219	62
N204278	205	294	80	242	42	1300	8.4	2.84	140	3.0	2	0.50	51.5	2	286	125
N204279	205	294	70	234	34	700	7.6	1.77	80	2.0	< 2	1.08	41.0	3	361	129

CERTIFICATION:_____

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
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Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-SEP-97
Invoice No. : I9742912
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9742912

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N204265	205	294	2.99	2.70	0.75	215	10	0.16	45	1350	84	42	0.22	318	< 10	576
N204266	205	294	2.97	1.69	0.83	645	6	0.07	42	570	32	49	0.10	151	< 10	656
N204267	205	294	3.02	2.63	0.53	125	11	0.15	37	770	22	36	0.13	207	< 10	402
N204268	205	294	2.77	2.24	0.42	40	25	0.13	53	1140	24	22	0.10	327	< 10	592
N204269	205	294	2.53	1.82	0.40	40	29	0.09	94	1810	72	27	0.10	702	< 10	1290
N204270	205	294	2.31	2.25	0.70	485	3	0.09	37	390	80	45	0.12	123	< 10	242
N204271	205	294	2.44	1.59	0.72	1295	3	0.04	48	370	8	59	0.11	136	< 10	142
N204272	205	294	2.16	1.56	1.14	1060	< 1	0.04	53	160	6	101	0.10	125	< 10	32
N204273	205	294	2.07	1.51	0.44	280	4	0.06	40	530	14	30	0.11	149	< 10	226
N204274	205	294	2.83	2.89	0.85	560	2	0.11	57	980	52	60	0.29	152	< 10	302
N204275	205	294	2.12	1.47	0.54	435	2	0.06	41	320	20	35	0.11	129	< 10	316
N204276	205	294	2.14	1.48	0.54	365	5	0.06	50	720	20	34	0.11	168	< 10	114
N204277	205	294	2.95	1.52	0.38	85	9	0.07	68	1110	30	25	0.11	309	< 10	266
N204278	205	294	2.78	1.39	0.27	30	43	0.05	152	2280	200	42	0.08	1465	< 10	2540
N204279	205	294	2.75	0.87	0.17	20	43	0.01	151	4950	164	99	0.06	1420	< 10	2110

CERTIFICATION: Hawk Buchler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9743477

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9743477

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 30-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	46	Geochem ring to approx 150 mesh
226	46	0-3 Kg crush and split
3202	46	Rock - save entire reject
285	46	ICP - HF digestion charge
287	46	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	46	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	46	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	46	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	46	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	46	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	46	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	46	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	46	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	46	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	46	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	46	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	46	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	46	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	46	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	46	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	46	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	46	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	46	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	46	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	46	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	46	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	46	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	46	Pb ppm: 24 element, rock & core	AAS	2	10000
582	46	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	46	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	46	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	46	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	46	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE OF ANALYSIS A9743477

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N175903	205	226	< 5	1	< 0.2	10	< 0.2	6.35	370	2.0	2	1.10	< 0.5	12	113	73
N175904	205	226	< 5	2	< 0.2	< 10	< 0.2	3.20	1030	1.0	< 2	0.42	< 0.5	7	128	62
N175905	205	226	40	1	< 0.2	40	< 0.2	5.89	1120	1.5	2	0.95	< 0.5	12	156	47
N175906	205	226	< 5	2	< 0.2	< 10	< 0.2	2.62	1940	0.5	2	1.20	< 0.5	8	140	51
N175907	205	226	< 5	1	0.2	< 10	< 0.2	7.06	1450	1.5	< 2	1.15	< 0.5	13	154	36
N175908	205	226	30	1	0.2	30	< 0.2	6.06	2090	1.5	< 2	0.89	< 0.5	13	153	50
N175914	205	226	< 5	6	< 0.2	< 10	< 0.2	6.55	2630	1.0	4	3.65	< 0.5	28	244	66
N175915	205	226	< 5	2	0.2	< 10	< 0.2	6.63	2590	0.5	< 2	4.34	< 0.5	32	224	96
N175916	205	226	< 5	2	0.2	50	< 0.2	4.15	3670	1.0	< 2	2.22	< 0.5	14	142	74
N175917	205	226	< 5	1	0.2	10	< 0.2	4.51	2010	1.5	< 2	0.51	< 0.5	10	199	57
N175918	205	226	< 5	1	0.6	10	< 0.2	4.55	2470	1.5	< 2	0.15	< 0.5	10	153	69
N175919	205	226	5	2	0.8	50	< 0.2	2.75	250	1.5	< 2	0.60	< 0.5	5	110	46
N175920	205	226	< 5	2	0.8	10	< 0.2	0.74	50	3.0	< 2	20.2	< 0.5	2	45	40
N175921	205	226	< 5	1	0.2	30	< 0.2	2.51	1040	2.0	< 2	0.09	< 0.5	6	152	40
N175922	205	226	< 5	1	0.8	10	< 0.2	0.35	50	3.0	2	21.3	< 0.5	< 1	51	22
N175923	205	226	< 5	1	0.2	< 10	< 0.2	1.05	130	7.0	< 2	6.02	< 0.5	1	76	23
N175938	205	226	5	4	6.8	10	0.6	2.93	100	2.5	< 2	4.39	< 0.5	29	245	79
N175939	205	226	< 5	6	0.6	10	< 0.2	7.82	1160	3.5	< 2	8.81	< 0.5	37	228	70
N175940	205	226	< 5	6	0.2	< 10	< 0.2	3.01	1920	1.5	< 2	1.76	< 0.5	9	138	49
N175941	205	226	< 5	4	0.6	< 10	< 0.2	3.54	4900	1.0	< 2	0.81	0.5	11	190	48
N175942	205	226	< 5	6	3.4	20	< 0.2	2.19	210	1.0	< 2	1.72	< 0.5	7	150	37
N175943	205	226	< 5	32	13.0	140	< 0.2	3.92	110	3.0	< 2	1.93	2.0	5	134	45
N175954	205	226	< 5	2	0.4	< 10	0.2	6.23	810	0.5	8	0.45	< 0.5	10	113	48
N175955	205	226	< 5	2	0.6	< 10	< 0.2	7.15	790	1.0	18	0.20	< 0.5	13	69	12
N175956	205	226	< 5	6	0.6	< 10	< 0.2	6.11	1290	1.5	2	0.16	< 0.5	8	59	4
N175957	205	226	< 5	38	1.6	< 10	< 0.2	6.47	1220	2.0	2	0.45	< 0.5	4	131	32
N175958	205	226	< 5	18	1.0	10	< 0.2	6.78	1260	2.0	2	1.82	0.5	2	114	22
N175959	205	226	< 5	1	1.0	140	< 0.2	6.34	1180	2.0	< 2	2.85	3.5	3	94	931
N175971	205	226	< 5	1	0.4	< 10	< 0.2	7.59	1320	2.5	< 2	0.94	< 0.5	3	91	8
N175972	205	226	< 5	6	0.4	< 10	< 0.2	7.46	1430	2.5	2	1.00	< 0.5	3	132	8
N175973	205	226	< 5	4	0.2	< 10	< 0.2	7.48	1560	2.5	2	1.14	< 0.5	3	65	47
N175974	205	226	< 5	4	0.4	< 10	< 0.2	7.04	1630	2.5	< 2	1.33	< 0.5	3	114	6
N175975	205	226	< 5	1	0.4	< 10	< 0.2	7.10	1680	2.5	< 2	1.70	< 0.5	3	105	8
N203763	205	226	< 5	1	0.2	< 10	< 0.2	2.10	780	3.5	< 2	1.10	< 0.5	1	144	63
N203764	205	226	< 5	2	0.2	< 10	< 0.2	1.88	3300	10.5	< 2	1.25	0.5	< 1	182	27
N203765	205	226	< 5	1	1.6	< 10	< 0.2	2.40	940	10.0	< 2	1.27	< 0.5	1	168	10
N203766	205	226	< 5	2	0.2	30	< 0.2	2.91	190	5.0	< 2	1.13	0.5	1	115	65
N203767	205	226	10	14	1.4	40	< 0.2	2.53	80	3.0	< 2	0.13	0.5	3	104	51
N203787	205	226	< 5	1	0.8	60	< 0.2	2.97	200	4.5	< 2	0.49	1.0	7	180	134
N203788	205	226	< 5	2	0.8	450	< 0.2	3.77	160	6.0	< 2	1.59	22.5	7	160	109

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :2
Certificate Date: 30-SEP-97
Invoice No. : I9743477
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9743477

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N175903	205 226	3.49	2.47	1.15	985	1	0.20	36	680	18	44	0.29	138	< 10	106
N175904	205 226	1.62	1.17	0.73	840	< 1	0.08	29	110	4	31	0.14	76	< 10	64
N175905	205 226	3.05	1.80	0.95	825	1	0.69	34	600	8	122	0.30	109	< 10	96
N175906	205 226	1.52	0.97	0.55	670	< 1	0.05	27	330	4	39	0.12	50	< 10	54
N175907	205 226	3.51	2.52	0.93	440	< 1	0.76	32	600	10	39	0.29	127	< 10	100
N175908	205 226	3.19	2.28	0.90	705	1	0.54	36	720	8	59	0.30	120	< 10	102
N175914	205 226	4.71	1.15	2.47	1665	< 1	1.11	70	690	< 2	136	0.55	186	< 10	86
N175915	205 226	5.16	0.82	3.17	2340	< 1	2.20	79	580	< 2	203	0.44	177	< 10	80
N175916	205 226	2.70	1.02	1.48	2540	< 1	0.20	40	470	4	89	0.23	92	< 10	70
N175917	205 226	2.54	1.40	0.86	185	< 1	0.10	48	520	4	106	0.21	107	< 10	110
N175918	205 226	2.44	1.41	0.71	130	< 1	0.11	47	300	< 2	51	0.23	108	< 10	122
N175919	205 226	2.01	0.81	0.65	325	< 1	0.05	42	340	4	135	0.09	90	< 10	140
N175920	205 226	5.28	0.33	0.14	2420	19	0.01	8	540	80	303	0.01	78	< 10	44
N175921	205 226	0.74	1.10	0.25	40	1	0.08	36	90	4	38	0.08	69	< 10	82
N175922	205 226	4.58	0.08	0.09	2530	23	0.05	5	140	104	272	0.01	41	< 10	18
N175923	205 226	7.42	0.21	0.16	855	4	0.04	4	1500	6	169	0.04	92	< 10	30
N175938	205 226	3.27	1.21	0.59	855	12	0.03	85	1760	40	166	0.09	175	< 10	30
N175939	205 226	3.84	3.21	2.81	2920	2	0.30	81	470	10	266	0.17	191	< 10	58
N175940	205 226	1.70	1.26	0.84	885	1	0.06	34	290	4	96	0.11	63	< 10	62
N175941	205 226	1.87	1.20	0.97	440	< 1	0.08	41	300	4	81	0.13	77	< 10	74
N175942	205 226	1.97	0.78	0.61	625	2	0.04	32	180	6	120	0.07	61	< 10	56
N175943	205 226	2.44	1.56	0.70	770	7	0.10	30	800	30	67	0.08	135	< 10	464
N175954	205 226	6.38	1.24	2.35	685	1	0.24	4	690	22	41	0.14	23	< 10	194
N175955	205 226	7.64	1.41	2.62	885	1	0.22	6	920	10	35	0.15	59	< 10	134
N175956	205 226	1.13	2.58	0.40	65	1	0.25	4	720	< 2	51	0.07	31	< 10	26
N175957	205 226	2.00	2.68	0.53	220	< 1	0.25	6	770	24	62	0.08	39	< 10	64
N175958	205 226	1.75	2.80	0.68	475	< 1	0.25	7	630	40	107	0.10	36	< 10	136
N175959	205 226	1.70	2.76	0.72	650	2	0.24	7	640	64	141	0.09	41	< 10	454
N175971	205 226	1.52	2.69	0.79	200	< 1	1.83	4	660	26	103	0.11	22	< 10	68
N175972	205 226	1.54	2.74	0.69	195	< 1	1.68	5	620	24	108	0.11	24	< 10	50
N175973	205 226	1.47	2.91	0.61	175	< 1	1.47	4	680	24	118	0.11	24	< 10	56
N175974	205 226	1.36	3.17	0.61	190	< 1	0.67	5	570	22	116	0.11	24	< 10	48
N175975	205 226	1.59	3.44	0.65	225	< 1	0.22	6	700	20	134	0.12	23	< 10	38
N203763	205 226	6.45	0.76	0.30	385	1	0.16	6	350	< 2	474	0.09	82	< 10	14
N203764	205 226	6.43	0.44	0.26	520	3	0.34	5	580	< 2	386	0.09	78	< 10	14
N203765	205 226	8.47	0.35	0.29	345	3	0.41	7	960	< 2	477	0.11	87	< 10	46
N203766	205 226	2.88	0.89	0.41	395	3	0.37	11	240	20	190	0.12	102	< 10	292
N203767	205 226	3.33	1.16	0.26	75	1	0.07	54	110	210	8	0.08	99	< 10	440
N203787	205 226	1.71	1.44	0.28	90	< 1	0.08	21	250	140	18	0.07	118	< 10	328
N203788	205 226	2.73	1.91	0.50	875	< 1	0.07	32	470	610	39	0.11	170	< 10	5250

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :2-A
Total Pages :2
Certificate Date: 30-SEP-97
Invoice No. :19743477
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9743477

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203789	205	226	< 5	1	2.4	320	< 0.2	3.08	210	5.5	2	2.66	10.0	6	156	69
N203790	205	226	60	28	8.8	150	< 0.2	2.11	40	4.5	< 2	5.86	3.5	7	120	71
N203795	205	226	< 5	1	1.2	290	< 0.2	3.15	130	5.5	< 2	5.81	11.5	5	108	73
N203796	205	226	< 5	1	1.4	300	< 0.2	2.95	60	6.0	2	4.63	11.5	7	121	78
N203797	205	226	< 5	2	3.2	600	1.0	3.10	70	6.0	< 2	3.51	28.5	6	136	73
N203798	205	226	5	2	4.8	270	< 0.2	3.23	70	9.0	< 2	3.49	10.0	7	104	70

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 30-SEP-97
Invoice No. :I9743477
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9743477

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203789	205	226	4.36	1.51	0.56	2310	3	0.03	43	1790	2560	75	0.08	161	< 10	3500
N203790	205	226	12.20	0.96	0.48	2720	9	0.05	43	680	1360	161	0.05	127	< 10	1525
N203795	205	226	5.60	1.50	0.71	3940	2	0.01	41	380	1200	180	0.07	140	< 10	3910
N203796	205	226	6.35	1.49	0.57	3130	2	0.02	49	340	860	145	0.06	145	< 10	3590
N203797	205	226	6.81	1.52	0.48	1945	3	0.03	50	690	2960	112	0.07	153	< 10	7030
N203798	205	226	7.41	1.65	0.55	2990	5	0.03	57	1270	1640	102	0.07	179	< 10	2910

CERTIFICATION: Stan Pindler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9743801

Comments: ATTN:ANDREW TURNER

CERTIFICATE A9743801

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O.#:

Samples submitted to our lab in Vancouver, BC.
This report was printed on 3-OCT-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	3	RUSH Assay ring approx 150 mesh
295	3	RUSH crush and split (0-3 Kg)
3202	3	Rock - save entire reject
290	3	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	3	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	3	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	3	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	3	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	3	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	3	Ba ppm	XRF	10	50000
444	3	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	3	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	3	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	3	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	3	Ag ppm: high grade 24 element	AAS	1	200
4031	3	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	3	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	3	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	3	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	3	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	3	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	3	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	3	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	3	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	3	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	3	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	3	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	3	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	3	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	3	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	3	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	3	Pb %: high grade 24 element	AAS	0.001	10.00
4047	3	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	3	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	3	V ppm: A22 ICP package	ICP-AES	10	50000
4050	3	Zn ppm: A22 ICP package	ICP-AES	20	100000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:ANDREW TURNER

Page Number :1-A
Total Pages :1
Certificate Date: 03-OCT-97
Invoice No. :I9743801
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9743801

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	Zn %	Ba ppm	XRFSpec Gr S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
N204339	258	295	0.69	111	0.36	0.48	2.90	4000	2.91	0.06	< 0.01	0.001	110	7.45	200	< 10	< 20	7.15	270	< 10	80
N204340	258	295	5.31	1974	0.73	7.86	15.20	450	4.28	0.11	0.32	0.005	>200	0.65	< 100	< 10	< 20	2.35	1150	< 10	80
N204341	258	295	0.79	149	0.22	0.44	5.00	5000	2.84	0.02	0.03	0.002	152	7.35	300	< 10	< 20	0.30	440	< 10	110

CERTIFICATION: Bart Bichler

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
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Project : WOLVERINE
Comments: ATTN:ANDREW TURNER

Page Number :1-B
Total Pages :1
Certificate Date: 03-OCT-97
Invoice No. :I9743801
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9743801

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
N204339	258	295	3790	7.95	3.3	1.20	1120	10	0.25	20	0.446	200	0.15	200	28700
N204340	258	295	7810	25.7	0.3	0.20	700	10	0.05	30	6.81	60	< 0.05	90	>100000
N204341	258	295	2370	6.05	3.0	0.80	160	20	0.50	20	0.389	30	0.10	280	44400

CERTIFICATION: Bart Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9744370

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9744370

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 29-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

Chemex Labs Ltd.

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Project : WOLVERINE
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Page , ..er :1
Total Pages :1
Certificate Date: 29-SEP-97
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Account :GP W

CERTIFICATE OF ANALYSIS A9744370

SAMPLE	PREP CODE		Zn %									
N203806	244	--	1.46									

CERTIFICATION: Saad Ghani

Chemex Labs Ltd.

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9745426

Comments: ATTN:ANDREW TURNER FAX CHRIS ROCKINGHAM

CERTIFICATE A9745426

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 9-OCT-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	60	Geochem ring to approx 150 mesh
294	60	4-7 Kg crush and split
3202	60	Rock - save entire reject
285	60	ICP - HF digestion charge
287	60	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	60	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	60	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	60	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	60	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	60	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	60	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	60	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	60	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	60	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	60	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	60	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	60	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	60	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	60	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	60	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	60	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	60	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	60	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	60	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	60	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	60	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	60	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	60	Pb ppm: 24 element, rock & core	AAS	2	10000
582	60	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	60	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	60	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	60	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	60	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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To: WESTMIN RESOURCES LTD.
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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:ANDREW TURNER FAX CHRIS ROCKINGHAM

Page Number :1-A
Total Pages :2
Certificate Date: 09-OCT-97
Invoice No. :19745426
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9745426

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
302000	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
302001	205	294	< 5	1	0.2	< 10	< 0.2	0.94	4300	0.5	4	3.55	< 0.5	< 1	101	17
302002	205	294	25	1	0.2	< 10	< 0.2	2.57	5990	4.5	2	1.76	< 0.5	< 1	123	14
302003	205	294	< 5	1	1.0	< 10	< 0.2	1.14	120	2.0	2	1.32	< 0.5	< 1	169	10
302004	205	294	< 5	2	0.2	< 10	< 0.2	2.24	340	2.0	< 2	3.41	< 0.5	< 1	197	12
302005	205	294	< 5	6	0.2	40	< 0.2	2.77	590	2.0	< 2	0.29	< 0.5	4	178	47
302006	205	294	< 5	2	1.2	200	< 0.2	3.05	310	3.0	< 2	0.11	< 0.5	6	193	45
302007	205	294	< 5	10	1.8	130	< 0.2	2.03	210	2.5	< 2	0.94	< 0.5	2	229	39
302008	205	294	< 5	4	1.8	60	0.6	1.92	220	3.0	< 2	0.13	0.5	2	212	50
302009	205	294	25	20	3.8	30	0.8	0.66	110	1.0	< 2	15.85	0.5	< 1	95	36
302010	205	294	< 5	10	1.8	60	< 0.2	2.51	180	4.5	< 2	0.37	0.5	3	154	65
302011	205	294	< 5	4	0.4	< 10	< 0.2	2.40	280	3.5	< 2	0.78	< 0.5	6	172	82
302012	205	294	< 5	2	0.2	< 10	< 0.2	2.62	400	3.5	< 2	3.30	< 0.5	7	127	73
302013	205	294	< 5	4	< 0.2	< 10	< 0.2	3.21	4580	4.5	< 2	0.85	0.5	4	180	56
302014	205	294	< 5	2	1.0	330	< 0.2	3.59	230	6.0	< 2	1.07	6.0	8	203	99
302015	205	294	< 5	1	1.0	560	< 0.2	4.09	290	11.0	< 2	0.94	16.0	6	211	70
302016	205	294	< 5	1	1.0	480	< 0.2	1.25	110	3.5	< 2	16.65	13.0	< 1	99	42
302017	205	294	< 5	10	2.4	10	< 0.2	3.59	170	10.0	2	0.25	< 0.5	17	186	89
302018	205	294	< 5	34	6.6	130	0.6	2.51	140	4.0	< 2	2.47	8.5	6	171	47
302019	205	294	< 5	2	1.4	40	< 0.2	7.38	1870	5.5	< 2	1.66	4.0	< 1	103	8
302020	205	294	< 5	1	0.6	< 10	< 0.2	6.21	2990	4.5	< 2	1.65	< 0.5	< 1	84	3
302021	205	294	< 5	1	0.8	10	< 0.2	6.33	3620	5.0	< 2	1.24	< 0.5	< 1	90	5
302022	205	294	< 5	2	0.4	< 10	< 0.2	6.51	5880	5.5	< 2	0.99	0.5	< 1	77	5
302023	205	294	< 5	2	0.2	< 10	< 0.2	6.88	6890	6.0	2	0.57	0.5	< 1	122	3
302024	205	294	< 5	1	0.6	< 10	< 0.2	6.64	7180	6.0	2	0.78	0.5	< 1	110	4
302025	205	294	< 5	1	1.6	< 10	< 0.2	7.20	6830	4.5	< 2	2.34	0.5	< 1	101	5
302026	205	294	< 5	2	18.0	20	< 0.2	2.63	1120	1.5	< 2	2.66	< 0.5	5	186	40
302027	205	294	< 5	2	7.4	50	< 0.2	2.47	330	1.0	< 2	1.10	< 0.5	5	170	36
302028	205	294	< 5	10	1.8	50	< 0.2	2.43	210	0.5	2	0.47	< 0.5	7	157	55
302029	205	294	15	10	4.4	90	< 0.2	3.24	210	1.5	< 2	0.66	< 0.5	6	164	35
302030	205	294	< 5	2	2.4	30	< 0.2	2.09	390	0.5	< 2	1.58	< 0.5	4	213	50
302031	205	294	15	8	5.4	110	< 0.2	3.30	230	1.0	< 2	3.11	< 0.5	5	143	32
302032	205	294	< 5	6	18.5	70	< 0.2	1.68	530	0.5	< 2	0.68	< 0.5	5	148	53
302033	205	294	< 5	12	18.0	40	< 0.2	1.62	510	0.5	< 2	0.49	< 0.5	4	104	68
302034	205	294	< 5	14	3.4	60	< 0.2	1.65	610	0.5	< 2	8.40	< 0.5	4	136	65
302035	205	294	< 5	12	8.4	50	< 0.2	2.41	190	1.0	< 2	3.08	< 0.5	6	166	60
302036	205	294	< 5	6	7.6	40	< 0.2	1.45	290	0.5	< 2	10.50	0.5	6	105	49
302037	205	294	< 5	4	16.0	< 10	< 0.2	3.75	390	2.5	< 2	1.49	< 0.5	18	191	115
302038	205	294	< 5	6	3.0	10	< 0.2	4.15	1950	2.5	< 2	2.82	< 0.5	12	156	61
302039	205	294	< 5	6	6.4	70	< 0.2	2.32	860	2.0	< 2	2.76	1.0	7	177	44

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:ANDREW TURNER FAX CHRIS ROCKINGHAM

Certificate Date: 09-OCT-97
Invoice No. :19745426
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9745426

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
302000	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
302001	205	294	14.45	0.21	0.20	860	9	0.04	7	790	< 2	276	0.05	52	< 10	14
302002	205	294	13.40	0.41	0.50	455	5	0.08	9	370	< 2	179	0.14	105	< 10	16
302003	205	294	13.25	0.01	0.38	355	32	0.03	8	1170	< 2	80	0.06	62	< 10	10
302004	205	294	4.19	0.59	0.31	665	3	0.05	7	450	< 2	205	0.10	80	< 10	12
302005	205	294	0.97	0.98	0.25	90	8	0.07	24	100	66	23	0.09	94	< 10	214
302006	205	294	1.26	1.37	0.33	55	1	0.06	44	120	26	9	0.12	118	< 10	1385
302007	205	294	2.85	0.91	0.22	235	11	0.03	23	70	310	15	0.07	104	< 10	1180
302008	205	294	3.17	0.89	0.24	40	1	0.04	27	120	570	8	0.07	118	< 10	346
302009	205	294	3.49	0.30	0.17	1420	14	0.02	13	1200	400	601	0.02	93	< 10	150
302010	205	294	2.38	1.05	0.25	55	6	0.06	20	400	64	12	0.08	155	< 10	232
302011	205	294	1.45	0.86	0.21	120	1	0.05	23	430	24	22	0.07	98	< 10	16
302012	205	294	2.71	1.12	0.35	600	2	0.05	19	770	44	91	0.11	144	< 10	30
302013	205	294	1.50	1.46	0.32	260	< 1	0.06	14	610	10	23	0.14	130	< 10	24
302014	205	294	1.73	1.64	0.35	260	< 1	0.08	50	1120	244	28	0.17	169	< 10	2800
302015	205	294	2.45	1.79	0.48	350	< 1	0.10	55	1220	200	28	0.15	231	< 10	4450
302016	205	294	8.69	0.45	0.56	3690	5	0.03	14	600	224	412	0.05	107	< 10	2500
302017	205	294	5.32	1.56	0.37	155	1	0.09	39	400	440	13	0.09	199	< 10	70
302018	205	294	4.59	0.97	0.28	410	7	0.06	38	550	180	34	0.07	147	< 10	562
302019	205	294	2.07	1.77	1.18	440	3	0.20	5	30	12	125	0.10	27	< 10	242
302020	205	294	1.97	2.39	1.22	570	7	0.22	1	10	6	131	0.08	2	< 10	34
302021	205	294	1.85	2.36	1.08	355	2	0.23	1	10	4	113	0.08	3	< 10	42
302022	205	294	1.81	2.40	1.11	285	4	0.23	1	30	4	96	0.08	3	< 10	46
302023	205	294	2.07	2.39	1.14	230	3	0.22	2	20	4	78	0.11	4	< 10	40
302024	205	294	2.10	2.32	1.19	305	1	0.22	3	10	6	108	0.08	3	< 10	34
302025	205	294	2.45	1.76	1.25	470	< 1	0.46	4	50	6	138	0.10	11	< 10	24
302026	205	294	1.31	0.73	0.57	750	1	0.06	46	340	10	106	0.09	70	< 10	56
302027	205	294	1.76	0.85	0.49	425	< 1	0.06	47	100	4	100	0.12	80	< 10	76
302028	205	294	1.52	0.57	0.37	150	< 1	0.05	54	100	8	59	0.08	104	< 10	84
302029	205	294	1.64	1.26	0.50	275	< 1	0.08	40	140	8	47	0.11	148	< 10	138
302030	205	294	1.05	0.61	0.25	225	< 1	0.05	40	280	6	150	0.06	98	< 10	66
302031	205	294	1.67	1.33	0.62	505	< 1	0.06	37	170	12	241	0.11	140	< 10	114
302032	205	294	0.81	0.36	0.21	120	< 1	0.04	42	130	6	70	0.05	103	< 10	92
302033	205	294	0.96	0.36	0.18	75	1	0.04	47	70	6	52	0.06	87	< 10	74
302034	205	294	0.87	0.41	0.22	625	< 1	0.04	43	1840	6	728	0.06	70	< 10	98
302035	205	294	1.48	1.13	0.31	490	< 1	0.05	56	370	14	170	0.10	120	< 10	86
302036	205	294	1.37	0.65	0.36	2270	1	0.05	36	240	24	586	0.05	72	< 10	96
302037	205	294	2.22	1.79	0.61	2000	1	0.05	42	270	10	72	0.16	154	< 10	28
302038	205	294	2.13	2.16	0.67	1130	< 1	0.06	39	350	8	157	0.18	127	< 10	28
302039	205	294	1.51	1.23	0.34	360	< 1	0.04	29	1740	16	147	0.09	117	< 10	168

CERTIFICATION:

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
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Project : WOLVERINE
Comments: ATTN:ANDREW TURNER FAX CHRIS ROCKINGHAM

Certificate Date: 09-OCT-97
Invoice No. :19745426
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9745426

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
302040	205	294	< 5	16	16.5	80	0.6	1.98	160	2.0	< 2	3.15	0.5	6	159	50
302041	205	294	< 5	24	18.0	80	0.4	3.62	160	2.5	< 2	1.87	0.5	5	207	36
302042	205	294	< 5	1	8.4	50	0.6	7.21	910	2.5	< 2	1.54	2.5	3	95	10
302043	205	294	< 5	2	5.6	30	< 0.2	6.89	2390	2.0	< 2	0.47	1.0	1	95	11
302044	205	294	< 5	2	21	10	< 0.2	7.88	1200	2.5	< 2	2.49	0.5	4	75	11
302045	205	294	< 5	1	1.6	10	1.0	8.64	3740	3.0	< 2	2.40	0.5	4	64	10
302046	205	294	< 5	4	3.8	30	0.6	6.72	3000	2.0	2	1.36	1.5	< 1	77	9
302047	205	294	< 5	26	32	180	< 0.2	7.58	410	3.0	2	0.48	2.5	2	87	19
302048	205	294	< 5	2	62	130	< 0.2	7.02	540	3.0	< 2	1.45	0.5	4	68	17
302049	205	294	80	72	84	1160	15.4	7.57	440	5.5	4	1.16	19.5	1	117	65
302050	205	294	210	164	440	5700	40.0	5.31	160	2.5	< 2	2.85	252	7	129	1640
302051	205	294	< 5	4	10.0	420	< 0.2	7.86	2890	3.0	< 2	1.98	16.5	< 1	49	31
302052	205	294	< 5	12	9.2	40	< 0.2	7.75	2160	3.0	< 2	1.55	2.0	1	56	15
302053	205	294	< 5	1	7.4	< 10	< 0.2	7.32	1590	2.5	< 2	1.49	0.5	1	57	13
302054	205	294	< 5	1	22	60	< 0.2	8.51	1760	2.5	< 2	1.85	2.5	< 1	43	37
302055	205	294	< 5	4	10.5	90	< 0.2	8.32	2000	3.0	< 2	0.59	3.5	1	67	62
302056	205	294	< 5	20	6.8	150	< 0.2	6.94	1670	2.5	2	1.14	5.0	1	112	72
302057	205	294	< 5	6	5.0	200	< 0.2	8.69	2220	3.0	< 2	1.46	7.0	2	50	46
302058	205	294	< 5	2	4.0	190	1.2	7.74	2270	4.0	< 2	1.83	4.5	1	55	38
302059	205	294	< 5	2	3.8	40	< 0.2	7.54	2530	4.0	< 2	3.53	1.0	< 1	97	25
302060	205	294	< 5	6	2.0	240	< 0.2	7.83	3100	3.5	< 2	1.80	5.5	< 1	85	32

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:ANDREW TURNER FAX CHRIS ROCKINGHAM

Page Number :2-B
Total Pages :2
Certificate Date: 09-OCT-97
Invoice No. :I9745426
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9745426

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
302040	205	294	2.56	1.04	0.27	330	< 1	0.04	33	2460	24	151	0.08	126	< 10	106
302041	205	294	2.29	1.88	0.45	340	6	0.07	37	1310	26	85	0.11	192	< 10	148
302042	205	294	2.63	3.25	0.88	355	3	0.16	6	710	20	95	0.17	36	< 10	236
302043	205	294	2.28	3.29	0.69	225	1	0.16	5	480	6	32	0.16	23	< 10	170
302044	205	294	2.64	3.54	0.99	690	3	0.21	8	810	16	157	0.35	46	< 10	74
302045	205	294	3.13	4.18	1.11	610	1	0.25	5	1030	18	134	0.38	38	< 10	90
302046	205	294	2.36	3.10	0.74	405	2	0.13	3	630	40	59	0.16	25	< 10	190
302047	205	294	2.09	3.78	0.75	160	10	0.16	13	370	60	25	0.15	88	< 10	324
302048	205	294	2.22	3.50	0.76	350	3	0.16	5	750	24	39	0.17	35	< 10	100
302049	205	294	2.94	3.53	0.86	305	19	0.17	37	600	520	44	0.17	522	< 10	1985
302050	205	294	4.01	2.01	0.92	410	21	0.11	47	1240	530	87	0.09	537	< 10	>10000
302051	205	294	2.10	2.79	5.07	585	4	0.28	1	360	180	78	0.12	22	< 10	1595
302052	205	294	1.67	2.91	4.66	465	4	0.26	3	320	120	86	0.12	19	< 10	268
302053	205	294	1.68	2.52	4.93	585	5	0.25	2	300	400	44	0.13	16	< 10	142
302054	205	294	2.29	3.02	5.42	795	4	0.29	2	350	336	51	0.13	17	< 10	358
302055	205	294	1.82	3.66	2.70	290	4	0.21	3	330	84	30	0.14	18	< 10	434
302056	205	294	1.73	3.25	2.27	340	3	0.16	3	300	220	48	0.13	16	< 10	524
302057	205	294	2.12	4.27	3.22	545	3	0.25	4	400	470	55	0.17	23	< 10	768
302058	205	294	1.80	4.48	2.80	510	3	0.21	4	330	210	77	0.17	21	< 10	478
302059	205	294	1.88	4.27	2.93	910	3	0.23	2	280	44	141	0.15	21	< 10	128
302060	205	294	1.67	4.49	1.92	455	3	0.19	4	340	70	70	0.17	19	< 10	564

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9745462

Comments: ATTN:ANDREW TURNER FAX: CHRIS ROCKINGHAM

CERTIFICATE A9745462

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 11-OCT-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	80	Geochem ring to approx 150 mesh
294	80	4-7 Kg crush and split
3202	80	Rock - save entire reject
285	80	ICP - HF digestion charge
287	80	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	80	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	80	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	80	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	80	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	80	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	80	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	80	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	80	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	80	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	80	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	80	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	80	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	80	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	80	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	80	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	80	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	80	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	80	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	80	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	80	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	80	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	80	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	80	Pb ppm: 24 element, rock & core	AAS	2	10000
582	80	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	80	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	80	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	80	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	80	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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To: WESTMIN RESOURCES LTD.
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P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:ANDREW TURNER FAX: CHRIS ROCKINGHAM

Certificate Date: 11-OCT-97
Invoice No. :I9745462
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9745462

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
175987	205	294	10	12	5.6	40	0.4	0.87	100	3.5	< 2	20.3	0.5	< 1	74	31
175988	205	294	< 5	20	3.2	10	0.2	0.51	150	3.5	< 2	17.35	< 0.5	< 1	56	23
175989	205	294	< 5	22	2.0	10	< 0.2	0.27	90	2.0	< 2	17.15	< 0.5	< 1	41	23
175990	205	294	< 5	16	2.2	260	0.2	1.45	100	3.5	2	1.29	1.5	1	106	48
175991	205	294	< 5	4	1.0	140	< 0.2	2.82	210	4.5	< 2	1.63	< 0.5	3	112	68
175992	205	294	< 5	4	0.8	60	< 0.2	2.20	860	3.5	< 2	2.58	< 0.5	3	179	60
175993	205	294	< 5	2	1.0	< 10	< 0.2	2.59	520	3.5	< 2	1.39	< 0.5	4	142	87
175994	205	294	< 5	2	0.6	< 10	< 0.2	2.57	2550	3.5	2	2.45	< 0.5	4	151	83
175995	205	294	< 5	6	0.6	< 10	< 0.2	3.54	2350	5.0	< 2	3.77	< 0.5	4	121	62
175996	205	294	< 5	4	1.2	60	< 0.2	3.45	250	7.0	< 2	5.59	1.5	6	140	73
175997	205	294	< 5	2	1.8	< 10	< 0.2	2.52	140	7.0	< 2	2.01	< 0.5	2	131	38
175998	205	294	40	18	4.4	930	< 0.2	1.21	130	5.5	4	17.05	21.0	< 1	53	38
175999	205	294	< 5	8	3.4	230	< 0.2	1.13	80	5.0	2	18.80	5.0	1	65	36
176000	205	294	< 5	10	3.6	600	< 0.2	1.57	130	6.5	< 2	15.00	11.0	1	59	37
204301	205	294	< 5	1	1.4	2160	< 0.2	1.44	100	5.0	4	15.95	19.0	5	44	40
204302	205	294	< 5	14	2.4	860	< 0.2	3.69	140	9.5	< 2	0.60	20.0	22	124	147
204303	205	294	< 5	1	0.6	10	< 0.2	4.27	120	8.0	< 2	0.40	< 0.5	13	112	71
204304	205	294	< 5	4	2.6	40	0.2	2.79	100	4.5	< 2	0.36	1.0	6	156	55
204305	205	294	< 5	30	5.2	40	0.6	1.86	50	2.5	2	1.37	0.5	4	173	44
204306	205	294	< 5	6	2.6	90	0.4	10.30	670	9.0	< 2	0.92	3.0	< 1	27	12
204307	205	294	< 5	2	2.0	1500	0.6	8.32	370	4.0	< 2	1.12	28.5	1	36	7
204308	205	294	< 5	2	0.6	350	< 0.2	7.76	560	4.5	< 2	0.75	6.5	< 1	59	5
204309	205	294	< 5	4	1.6	930	0.4	7.95	390	4.0	< 2	0.64	12.5	< 1	52	8
204310	205	294	< 5	2	0.8	610	< 0.2	7.12	460	5.0	< 2	0.90	12.0	1	74	7
204311	205	294	20	30	6.2	90	1.2	3.19	140	3.0	< 2	1.28	1.5	5	162	59
204312	205	294	< 5	2	2.2	10	< 0.2	3.11	400	1.5	< 2	1.50	< 0.5	8	169	63
204313	205	294	20	2	6.6	40	< 0.2	3.70	230	1.5	< 2	0.15	< 0.5	10	190	87
204314	205	294	10	2	5.0	< 10	0.2	2.81	300	1.0	< 2	0.70	< 0.5	7	211	66
204315	205	294	< 5	10	3.8	40	< 0.2	2.17	220	0.5	< 2	3.80	< 0.5	5	154	54
204316	205	294	< 5	8	3.6	30	< 0.2	1.71	210	0.5	< 2	3.01	< 0.5	4	157	53
204317	205	294	20	22	5.6	70	< 0.2	2.27	160	1.5	< 2	0.69	< 0.5	10	169	69
204318	205	294	< 5	8	3.0	40	< 0.2	3.97	270	3.5	< 2	0.64	< 0.5	13	179	78
204319	205	294	< 5	26	9.4	200	< 0.2	2.86	90	2.0	< 2	1.81	1.0	4	172	43
204320	205	294	< 5	16	3.2	10	< 0.2	6.24	180	4.5	< 2	1.29	< 0.5	1	77	9
204321	205	294	< 5	4	0.8	10	< 0.2	7.42	2560	4.5	< 2	0.59	0.5	1	61	6
204322	205	294	< 5	2	0.6	< 10	< 0.2	6.81	360	4.5	< 2	0.34	< 0.5	< 1	56	6
204323	205	294	< 5	4	0.2	< 10	< 0.2	6.31	1820	4.5	< 2	0.90	< 0.5	< 1	72	4
204324	205	294	< 5	4	0.4	< 10	< 0.2	7.30	2200	5.0	< 2	0.78	0.5	1	74	13
204325	205	294	< 5	12	0.2	< 10	< 0.2	7.41	1640	2.5	< 2	1.74	< 0.5	3	58	6
204326	205	294	< 5	6	1.2	20	< 0.2	6.75	210	3.0	< 2	1.45	1.5	1	78	20

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
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CERTIFICATE OF ANALYSIS A9745462

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
175987	205	294	4.79	0.37	0.17	1735	13	0.02	11	1690	490	276	0.03	132	< 10	86
175988	205	294	7.19	0.08	0.10	1485	17	0.02	9	2760	680	111	0.01	140	< 10	14
175989	205	294	4.04	0.13	0.08	1375	10	0.01	8	2110	170	133	< 0.01	88	< 10	14
175990	205	294	4.00	0.69	0.14	125	10	0.03	15	1470	170	18	0.05	124	< 10	822
175991	205	294	2.56	0.93	0.23	160	11	0.07	21	500	56	48	0.08	162	< 10	88
175992	205	294	1.08	0.83	0.19	370	5	0.08	14	470	14	128	0.06	110	< 10	144
175993	205	294	2.01	1.10	0.30	270	3	0.06	19	410	26	31	0.09	133	< 10	28
175994	205	294	3.15	1.27	0.42	830	< 1	0.05	16	560	14	51	0.12	133	< 10	28
175995	205	294	1.66	1.80	0.39	640	1	0.07	18	610	12	61	0.18	129	< 10	26
175996	205	294	2.94	1.72	0.49	1250	2	0.09	47	900	54	64	0.14	168	< 10	460
175997	205	294	4.94	1.17	0.53	1235	3	0.06	25	1440	84	24	0.11	164	< 10	40
175998	205	294	8.70	0.59	0.40	3210	6	0.03	16	630	240	133	0.03	94	< 10	5460
175999	205	294	6.27	0.54	0.29	3380	6	0.04	13	440	240	183	0.03	85	< 10	1215
176000	205	294	6.40	0.62	0.40	2690	5	0.04	14	940	180	231	0.05	118	< 10	2150
204301	205	294	9.33	0.56	0.71	3860	4	0.05	26	1070	320	225	0.05	129	< 10	4130
204302	205	294	2.81	1.70	0.40	100	1	0.12	41	340	124	17	0.11	173	< 10	1835
204303	205	294	2.33	2.05	0.54	165	< 1	0.15	41	420	46	24	0.13	144	< 10	66
204304	205	294	2.62	1.30	0.34	125	< 1	0.10	22	380	70	15	0.10	115	< 10	176
204305	205	294	4.60	0.51	0.20	195	2	0.05	31	1500	164	57	0.05	130	< 10	152
204306	205	294	2.22	3.55	1.58	120	7	0.38	11	80	60	127	0.10	31	< 10	352
204307	205	294	3.13	2.11	1.37	165	9	1.99	6	100	360	69	0.07	4	< 10	4990
204308	205	294	2.13	3.30	1.21	150	5	0.39	3	50	46	80	0.08	4	< 10	1045
204309	205	294	3.72	3.09	1.41	140	8	0.39	7	60	84	70	0.08	3	< 10	2370
204310	205	294	1.98	2.74	1.33	245	4	0.45	6	40	28	81	0.08	6	< 10	1640
204311	205	294	4.36	0.90	0.64	345	5	0.12	46	1140	112	62	0.08	168	< 10	272
204312	205	294	1.87	0.98	0.99	1015	< 1	0.08	36	300	4	98	0.13	67	< 10	70
204313	205	294	2.79	1.33	0.83	90	1	0.11	77	260	6	33	0.19	119	< 10	158
204314	205	294	1.81	1.08	0.62	205	< 1	0.12	42	270	8	84	0.11	77	< 10	86
204315	205	294	1.17	0.51	0.20	670	< 1	0.05	38	160	12	365	0.05	90	< 10	54
204316	205	294	1.08	0.33	0.14	410	< 1	0.04	34	130	6	91	0.04	70	< 10	32
204317	205	294	1.99	1.18	0.31	185	< 1	0.08	44	240	36	24	0.08	111	< 10	120
204318	205	294	1.73	2.23	0.52	235	< 1	0.12	40	690	10	49	0.17	184	< 10	40
204319	205	294	1.88	1.58	0.39	310	7	0.07	41	1260	22	68	0.11	217	< 10	262
204320	205	294	1.99	2.53	0.19	190	3	1.06	4	210	42	92	0.16	13	< 10	16
204321	205	294	1.04	2.58	0.28	115	3	2.62	4	300	18	56	0.17	8	< 10	70
204322	205	294	1.90	3.49	0.64	60	3	1.01	5	150	40	38	0.12	12	< 10	18
204323	205	294	1.37	2.80	0.59	150	2	1.60	4	240	6	66	0.15	18	< 10	24
204324	205	294	1.78	3.88	0.85	155	1	0.68	3	300	20	46	0.17	18	< 10	46
204325	205	294	2.59	2.76	0.98	260	1	2.34	4	920	20	97	0.30	33	< 10	82
204326	205	294	2.83	3.32	0.94	250	7	0.87	10	620	84	62	0.15	54	< 10	190

CERTIFICATION:

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:ANDREW TURNER FAX: CHRIS ROCKINGHAM

Certificate Date: 11-OCT-97
Invoice No. :I9745462
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9745462

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
204327	205 294	< 5	2	0.2	< 10	< 0.2	7.46	1660	2.5	< 2	2.78	0.5	3	86	6
204328	205 294	< 5	2	0.4	< 10	< 0.2	7.38	1610	2.0	< 2	0.99	1.0	< 1	76	8
204329	205 294	< 5	1	< 0.2	< 10	< 0.2	7.58	1590	2.0	< 2	1.40	0.5	1	72	8
204330	205 294	< 5	2	0.2	< 10	< 0.2	8.17	1920	2.5	< 2	1.02	0.5	1	81	3
204331	205 294	60	32	18.0	590	2.2	6.54	180	2.5	< 2	1.38	9.0	1	120	27
204332	205 294	< 5	2	11.5	420	2.4	6.93	240	3.0	2	2.44	26.0	1	87	43
204333	205 294	10	6	7.6	100	0.8	7.57	210	3.5	2	0.96	8.0	< 1	86	41
204334	205 294	25	24	5.4	140	0.8	7.75	220	4.0	< 2	1.43	4.5	< 1	70	28
204335	205 294	20	40	7.6	140	0.8	7.03	220	4.0	2	1.84	5.5	< 1	88	24
204336	205 294	20	20	9.2	140	1.2	7.29	210	4.0	< 2	1.42	4.5	< 1	101	24
204337	205 294	20	34	7.2	290	1.0	7.07	200	3.5	< 2	1.65	7.0	< 1	95	31
204338	205 294	35	32	11.0	390	3.2	7.73	210	3.5	< 2	1.37	11.0	< 1	94	63
204342	205 294	< 5	2	7.2	390	0.8	8.65	1940	1.5	< 2	4.01	39.5	< 1	30	59
204343	205 294	< 5	2	18.0	580	< 0.2	7.83	2030	2.0	< 2	3.20	28.5	< 1	38	32
204344	205 294	< 5	1	20	720	< 0.2	7.49	1700	2.0	< 2	3.99	28.0	1	30	31
204345	205 294	< 5	2	34	430	< 0.2	8.26	1760	2.5	< 2	2.59	12.0	< 1	30	63
204346	205 294	< 5	2	38	630	< 0.2	7.90	2060	2.5	2	2.47	19.5	< 1	42	67
204347	205 294	< 5	4	42	1040	0.8	8.21	1650	2.5	< 2	1.90	26.0	1	42	73
204348	205 294	< 5	4	19.0	520	0.6	8.20	1620	2.5	< 2	1.33	11.0	1	58	40
204349	205 294	< 5	2	13.5	180	< 0.2	7.35	1450	2.5	< 2	1.51	4.0	< 1	52	27
204350	205 294	10	2	5.8	300	< 0.2	7.67	2010	2.5	< 2	1.38	5.5	< 1	56	12
204351	205 294	< 5	2	2.8	690	< 0.2	8.56	2310	2.5	< 2	2.51	19.5	1	38	17
204352	205 294	< 5	1	2.2	190	1.6	7.68	1810	2.5	2	1.49	6.0	< 1	44	16
204353	205 294	< 5	8	4.2	350	0.8	8.90	2180	2.5	< 2	4.05	11.5	< 1	38	18
204354	205 294	10	18	2.0	< 10	1.0	8.03	730	2.5	< 2	5.34	0.5	< 1	35	11
204355	205 294	10	28	8.8	1070	1.0	7.62	180	2.5	< 2	2.25	3.0	2	45	34
204356	205 294	40	36	105	1800	5.0	7.13	160	2.5	< 2	5.58	11.5	1	70	126
204357	205 294	20	860	11.5	1750	1.6	7.31	280	2.0	2	4.63	17.0	< 1	55	73
204358	205 294	< 5	4	7.0	540	1.4	8.03	660	2.0	< 2	4.93	8.0	1	60	67
204359	205 294	40	32	52	18500	36.6	5.49	110	2.0	2	3.47	146.5	6	110	994
204360	205 294	< 5	18	5.6	860	1.8	8.34	2400	2.0	< 2	2.63	17.0	< 1	60	112
204361	205 294	< 5	6	3.4	410	2.0	7.28	210	2.5	< 2	2.14	9.0	1	116	63
204362	205 294	< 5	6	0.6	80	0.6	6.01	1890	2.5	< 2	1.19	1.0	< 1	123	11
204363	205 294	< 5	50	1.2	30	1.2	6.94	1790	2.5	< 2	1.28	0.5	< 1	109	13
204364	205 294	< 5	52	1.2	10	0.2	9.10	1780	2.5	2	1.09	< 0.5	< 1	79	2
204365	205 294	< 5	8	1.2	20	< 0.2	8.84	1580	2.5	< 2	2.46	0.5	< 1	72	2
204366	205 294	< 5	1	1.2	40	0.4	7.10	1460	2.5	10	1.65	3.5	3	80	29
204367	205 294	< 5	2	0.4	10	< 0.2	6.48	1410	2.5	2	1.34	< 0.5	< 1	86	4
204368	205 294	< 5	1	0.2	10	< 0.2	6.53	1740	2.5	2	1.83	0.5	< 1	94	4
204369	205 294	< 5	6	3.8	90	< 0.2	6.38	330	3.0	< 2	2.00	2.0	1	110	18

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:ANDREW TURNER FAX: CHRIS ROCKINGHAM

Certificate Date: 11-OCT-97
Invoice No. :19745462
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9745462

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
204327	205	294	2.63	2.96	0.80	630	2	1.39	5	960	18	141	0.34	32	< 10	70
204328	205	294	2.34	2.99	0.78	500	3	0.27	4	660	6	62	0.19	22	< 10	134
204329	205	294	2.91	3.46	1.29	760	1	0.26	4	690	60	72	0.17	23	< 10	124
204330	205	294	2.13	3.45	1.65	740	1	0.27	6	720	36	57	0.15	25	< 10	84
204331	205	294	3.03	3.25	0.96	390	7	0.20	21	970	104	67	0.13	164	< 10	856
204332	205	294	1.81	3.52	1.38	625	4	0.23	7	320	264	140	0.14	65	< 10	2290
204333	205	294	2.03	3.58	1.26	265	14	0.26	17	440	120	56	0.15	121	< 10	758
204334	205	294	2.04	3.89	1.29	325	13	0.33	13	220	116	56	0.13	66	< 10	554
204335	205	294	1.76	2.97	1.22	320	12	0.33	14	210	104	65	0.11	89	< 10	582
204336	205	294	1.87	3.24	1.23	230	10	0.73	15	260	96	65	0.13	86	< 10	504
204337	205	294	2.00	2.64	1.23	280	15	0.54	21	430	110	64	0.13	132	< 10	754
204338	205	294	2.02	3.07	1.21	275	10	1.29	13	420	200	59	0.15	85	< 10	1180
204342	205	294	2.54	2.29	3.91	1085	3	1.84	3	380	360	121	0.11	24	< 10	3660
204343	205	294	2.04	2.66	4.47	1075	2	0.33	3	380	70	92	0.10	19	< 10	2850
204344	205	294	2.09	2.47	5.08	1540	2	0.31	3	320	260	106	0.09	16	< 10	2860
204345	205	294	2.31	2.81	5.00	1255	3	0.33	3	340	28	71	0.12	17	< 10	1190
204346	205	294	1.72	3.20	3.66	1140	3	0.28	3	320	80	63	0.13	16	< 10	1865
204347	205	294	2.34	3.11	3.71	920	3	0.30	3	340	300	50	0.11	17	< 10	2610
204348	205	294	2.17	2.66	3.95	805	2	0.27	3	330	190	38	0.11	17	< 10	1140
204349	205	294	1.86	2.39	3.98	805	3	0.25	3	320	90	37	0.11	16	< 10	454
204350	205	294	1.89	2.83	3.59	650	3	0.27	2	320	90	31	0.11	15	< 10	614
204351	205	294	2.38	3.36	3.57	885	1	0.29	3	360	290	46	0.14	17	< 10	1880
204352	205	294	2.18	3.30	3.03	600	3	0.23	2	320	84	36	0.12	16	< 10	640
204353	205	294	2.62	4.07	3.67	920	3	0.31	1	410	1100	101	0.16	18	< 10	1270
204354	205	294	1.45	4.33	1.12	510	3	0.23	3	370	76	152	0.18	17	< 10	58
204355	205	294	1.88	4.07	0.76	220	3	0.20	7	350	270	82	0.19	22	< 10	392
204356	205	294	1.69	3.48	0.73	430	4	0.19	12	470	1700	196	0.18	52	< 10	1815
204357	205	294	1.79	3.95	0.61	510	3	0.19	7	660	300	156	0.20	50	< 10	1800
204358	205	294	2.52	4.40	0.74	830	4	0.21	3	850	140	167	0.23	33	< 10	836
204359	205	294	3.27	2.94	0.52	520	1	0.13	3	290	1700	123	0.13	16	< 10	>10000
204360	205	294	2.03	4.60	0.73	560	3	0.21	4	610	230	111	0.21	21	< 10	1865
204361	205	294	2.24	3.64	0.85	585	3	0.17	6	680	160	90	0.16	50	< 10	912
204362	205	294	1.16	3.26	0.62	295	1	0.17	3	490	46	60	0.11	14	< 10	90
204363	205	294	1.37	3.14	0.81	375	1	0.19	3	630	26	52	0.13	23	< 10	50
204364	205	294	1.61	3.86	1.18	390	1	0.25	4	760	30	51	0.15	22	< 10	52
204365	205	294	2.58	4.66	2.13	935	2	0.29	7	750	2	98	0.14	25	< 10	84
204366	205	294	2.80	3.23	1.62	770	1	0.21	6	680	14	113	0.10	24	< 10	672
204367	205	294	1.64	3.20	1.11	440	1	0.22	4	620	4	109	0.10	23	< 10	78
204368	205	294	1.80	3.22	0.84	585	1	0.20	4	670	22	120	0.15	27	< 10	68
204369	205	294	1.72	3.19	0.68	460	3	0.18	14	670	28	92	0.13	81	< 10	154

CERTIFICATION: _____

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A9745472

Comments: ATTN:ANDREW TURNER FAX:CHRIS ROCKINGHAM

CERTIFICATE A9745472

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 14-OCT-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	38	Geochem ring to approx 150 mesh
294	38	4-7 Kg crush and split
3202	38	Rock - save entire reject
285	38	ICP - HF digestion charge
287	38	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	38	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	38	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	38	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	38	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	38	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	38	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	38	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	38	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	38	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	38	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	38	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	38	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	38	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	38	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	38	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	38	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	38	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	38	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	38	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	38	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	38	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	38	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	38	Pb ppm: 24 element, rock & core	AAS	2	10000
582	38	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	38	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	38	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	38	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	38	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
302061	205	294	< 5	2	3.6	300	0.6	8.42	3230	2.5	< 2	3.44	10.5	3	75	47
302062	205	294	< 5	4	2.4	310	< 0.2	6.88	2290	2.0	< 2	4.36	6.0	2	83	30
302063	205	294	< 5	28	3.4	1540	1.2	6.41	330	2.5	< 2	3.68	15.5	3	106	70
302064	205	294	< 5	8	6.0	170	1.0	7.02	470	3.0	< 2	1.09	2.0	2	120	24
302065	205	294	5	10	19.0	400	1.2	7.12	2200	2.0	< 2	0.36	4.5	1	79	27
302066	205	294	< 5	6	8.8	380	0.4	7.38	720	2.0	< 2	0.58	2.5	2	68	21
302067	205	294	< 5	2	12.0	820	0.8	7.11	830	2.0	< 2	1.02	4.5	1	78	19
302068	205	294	< 5	1	8.4	160	0.4	7.08	980	2.0	< 2	0.57	1.0	1	66	13
302069	205	294	< 5	18	5.8	700	0.8	6.87	540	2.0	< 2	0.73	7.5	2	82	10
302070	205	294	5	20	6.4	120	2.0	6.29	1340	2.5	< 2	0.67	< 0.5	2	145	10
302071	205	294	15	22	7.2	520	3.4	6.95	580	3.0	< 2	1.63	2.0	3	71	11
302072	205	294	50	40	32	2640	18.8	5.18	830	2.0	< 2	0.62	12.0	1	119	8
302073	205	294	50	30	42	3220	8.6	5.12	1120	2.5	< 2	0.73	4.0	1	209	14
302074	205	294	45	48	28	1000	4.8	6.08	1130	1.5	< 2	0.35	1.5	1	94	11
302075	205	294	40	40	18.5	580	20.0	7.52	4290	2.5	< 2	1.22	9.5	2	83	9
302076	205	294	30	46	26	920	4.8	5.25	770	1.5	< 2	0.79	4.0	2	144	48
302077	205	294	30	28	15.0	640	6.2	5.48	710	2.0	< 2	0.82	2.0	1	107	8
302078	205	294	35	54	19.0	430	8.0	6.29	700	2.5	< 2	1.23	0.5	2	182	14
302079	205	294	85	182	58	15500	17.4	4.19	280	2.0	< 2	0.45	109.5	1	156	62
302080	205	294	50	116	28	2370	7.0	5.38	560	2.5	< 2	0.30	22.0	1	201	45
302081	205	294	20	40	17.5	3010	7.6	5.65	1030	2.0	< 2	1.31	39.5	3	101	37
302082	205	294	80	106	35	4470	14.4	6.51	400	2.5	< 2	0.22	52.0	1	119	76
302083	205	294	15	30	44	1720	4.6	6.87	2020	1.5	2	1.18	44.5	2	61	80
302084	205	294	25	218	490	9760	11.0	6.09	1270	1.5	10	1.41	>500	< 1	91	1370
302085	205	294	< 5	22	4.4	830	0.4	7.81	320	2.0	< 2	4.88	29.5	2	59	80
302086	205	294	< 5	2	3.2	540	0.4	8.00	1380	2.5	< 2	4.59	9.5	3	55	23
302087	205	294	< 5	1	4.6	1130	0.8	7.36	510	1.5	< 2	5.80	52.5	6	59	1040
302088	205	294	< 5	6	1.0	120	< 0.2	8.45	1420	2.0	< 2	2.96	2.0	8	83	76
302089	205	294	< 5	4	0.6	50	0.6	6.34	1090	1.5	2	2.03	2.0	4	79	44
302090	205	294	< 5	2	1.0	140	0.4	7.47	1450	2.5	2	1.72	6.0	7	99	66
302091	205	294	< 5	2	0.6	20	< 0.2	6.40	1360	2.0	< 2	2.56	2.0	< 1	75	3
302092	205	294	< 5	4	0.6	< 10	< 0.2	5.88	790	2.0	< 2	2.64	< 0.5	2	89	86
302093	205	294	< 5	8	4.0	100	< 0.2	5.51	230	2.5	< 2	3.08	3.5	2	107	38
302094	205	294	< 5	6	2.0	10	< 0.2	7.59	470	2.5	< 2	0.76	< 0.5	3	110	6
302095	205	294	< 5	12	2.4	20	< 0.2	6.03	220	2.0	< 2	1.11	< 0.5	3	98	6
302096	205	294	< 5	8	2.2	30	< 0.2	5.74	700	2.0	< 2	0.47	< 0.5	2	100	6
302097	205	294	< 5	4	2.0	50	< 0.2	6.01	320	2.0	< 2	0.44	< 0.5	1	114	6
302098	205	294	< 5	2	1.6	< 10	< 0.2	6.41	540	2.0	< 2	1.03	< 0.5	2	116	7

CERTIFICATION: Ian R. Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
302061	205	294	2.48	4.59	1.65	705	1	0.21	2	380	284	101	0.21	21	< 10	1235
302062	205	294	1.34	3.69	0.66	605	< 1	0.15	2	320	150	128	0.17	15	< 10	676
302063	205	294	1.65	3.42	0.63	505	< 1	0.11	3	270	172	165	0.15	15	< 10	1810
302064	205	294	1.87	3.60	0.54	100	< 1	0.15	3	260	132	69	0.16	17	< 10	204
302065	205	294	2.84	3.38	0.43	35	< 1	0.16	2	350	190	29	0.16	15	< 10	410
302066	205	294	1.15	3.11	0.36	40	< 1	0.20	2	350	150	48	0.17	17	< 10	238
302067	205	294	0.88	3.61	0.25	100	< 1	0.32	1	360	350	106	0.17	14	< 10	524
302068	205	294	0.64	4.51	0.22	35	< 1	0.21	1	340	84	94	0.16	15	< 10	90
302069	205	294	1.22	5.05	0.25	40	< 1	0.22	2	380	66	112	0.13	13	< 10	342
302070	205	294	1.79	3.63	0.36	85	< 1	0.20	3	330	34	122	0.15	16	< 10	22
302071	205	294	1.96	3.50	0.45	180	< 1	0.21	1	360	38	182	0.17	20	< 10	156
302072	205	294	1.88	3.59	0.16	90	< 1	0.72	1	310	3400	128	0.09	18	< 10	1240
302073	205	294	2.81	2.83	0.24	120	1	0.82	3	320	770	94	0.10	14	< 10	392
302074	205	294	1.59	5.36	0.12	70	< 1	0.73	2	270	96	118	0.07	11	< 10	134
302075	205	294	2.78	5.21	0.31	125	< 1	0.52	3	420	1600	251	0.14	22	< 10	942
302076	205	294	1.78	3.19	0.20	150	2	0.71	3	280	280	122	0.09	15	< 10	420
302077	205	294	1.52	3.12	0.24	140	4	0.65	1	250	1160	128	0.09	11	< 10	244
302078	205	294	2.27	2.91	0.29	220	< 1	0.54	3	310	1400	123	0.13	21	< 10	90
302079	205	294	3.50	2.17	0.47	95	13	0.10	34	360	950	49	0.11	464	< 10	9180
302080	205	294	3.33	2.72	0.56	75	9	0.14	21	560	360	28	0.13	226	< 10	2300
302081	205	294	2.21	2.69	0.39	180	< 1	0.16	3	280	340	109	0.14	50	< 10	2870
302082	205	294	2.75	3.18	0.51	60	7	0.17	22	320	490	27	0.14	310	< 10	5230
302083	205	294	2.59	3.02	0.23	110	< 1	0.18	< 1	310	560	83	0.15	20	< 10	3870
302084	205	294	6.88	2.67	0.19	90	< 1	0.18	< 1	260	940	67	0.12	8	10	>10000
302085	205	294	1.86	3.94	0.75	410	< 1	0.19	5	660	190	154	0.20	52	< 10	2920
302086	205	294	1.24	3.18	0.65	380	< 1	0.21	4	960	144	135	0.24	27	< 10	1010
302087	205	294	3.19	3.64	0.70	1045	< 1	0.21	4	670	470	143	0.17	25	< 10	5260
302088	205	294	4.68	4.19	0.85	735	< 1	0.24	10	820	32	79	0.20	37	< 10	318
302089	205	294	2.47	3.19	1.22	705	< 1	0.17	5	650	220	53	0.12	30	< 10	516
302090	205	294	2.97	3.54	0.99	545	< 1	0.26	7	710	50	70	0.16	38	< 10	1065
302091	205	294	1.24	3.04	0.49	520	< 1	0.16	2	670	124	87	0.13	24	< 10	278
302092	205	294	1.80	2.85	0.51	660	< 1	0.13	3	590	58	103	0.12	26	< 10	46
302093	205	294	1.42	2.67	0.53	325	8	0.11	26	950	60	153	0.12	174	< 10	268
302094	205	294	1.86	3.30	0.56	90	< 1	0.31	6	870	18	64	0.15	28	< 10	26
302095	205	294	2.64	2.34	0.29	105	< 1	1.02	4	730	26	91	0.12	20	< 10	30
302096	205	294	1.63	1.99	0.15	70	< 1	1.15	4	450	28	56	0.10	19	< 10	42
302097	205	294	1.69	2.14	0.17	80	< 1	1.09	5	510	20	54	0.11	19	< 10	18
302098	205	294	1.63	2.79	0.43	130	< 1	0.71	5	510	22	81	0.13	24	< 10	28

CERTIFICATION: Ian Pardoe

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

.o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9746521

Comments: ATTN:ANDREW TURNER FAX CHRIS ROCKINGHAM

CERTIFICATE A9746521

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 14-OCT-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

Chemex Labs Ltd.

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:ANDREW TURNER FAX CHRIS ROCKINGHAM

Certificate Date: 14-OCT-97
Invoice No. :19746521
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9746521

SAMPLE	PREP CODE		Zn %									
302050	244	--	2.49									

CERTIFICATION: Sara Latimer

Chemex Labs Ltd.

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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9746567

Comments: ATTN:ANDREW TURNER FAX: CHRIS ROCKINGHAM

CERTIFICATE A9746567

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 14-OCT-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

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Project : WOLVERINE
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Page Number :1
Total Pages :1
Certificate Date: 14-OCT-97
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P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9746567

SAMPLE	PREP CODE		Zn %
204359	244	--	1.68

CERTIFICATION:

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
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A9747348

Comments: ATTN:ANDREW TURNER FAX:CHRIS ROCKINGHAM

CERTIFICATE A9747348

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 28-OCT-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

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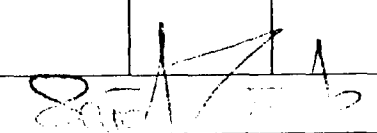
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Project : WOLVERINE
Comments: ATTN:ANDREW TURNER FAX:CHRIS ROCKINGHAM

Page Number :1
Total Pages :1
Certificate Date: 28-OCT-97
Invoice No. :I9747348
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9747348

SAMPLE	PREP CODE	Zn %
302084	244 --	4.84

CERTIFICATION: 

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9725729

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9725729

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 15-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	47	Geochem ring to approx 150 mesh
226	47	0-3 Kg crush and split
3202	47	Rock - save entire reject
285	47	ICP - HF digestion charge
287	47	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	47	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	47	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	47	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	47	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	47	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	47	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	47	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	47	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	47	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	47	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	47	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	47	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	47	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	47	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	47	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	47	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	47	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	47	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	47	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	47	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	47	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	47	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	47	Pb ppm: 24 element, rock & core	AAS	2	10000
582	47	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	47	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	47	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	47	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	47	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :2
Certificate Date: 15-JUN-97
Invoice No. :19725729
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9725729

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172501	205 226	< 5	4	< 0.2	< 10	< 0.2	7.57	630	0.5	< 2	6.39	< 0.5	33	196	64
172502	205 226	< 5	1	< 0.2	< 10	< 0.2	3.26	610	0.5	< 2	4.26	0.5	5	142	67
172503	205 226	< 5	1	0.2	20	0.4	3.58	5430	3.5	< 2	1.60	< 0.5	7	118	76
172504	205 226	< 5	1	0.4	20	< 0.2	2.16	2380	1.0	2	14.30	< 0.5	5	143	57
172505	205 226	< 5	2	0.2	400	< 0.2	2.06	800	2.0	< 2	0.34	< 0.5	6	164	63
172506	205 226	15	1	0.6	< 10	0.4	1.42	370	< 0.5	< 2	1.43	< 0.5	1	165	43
172507	205 226	< 5	1	0.6	10	< 0.2	2.01	2870	0.5	< 2	0.16	< 0.5	7	130	26
172508	205 226	< 5	1	0.4	10	< 0.2	1.68	2770	0.5	< 2	0.27	< 0.5	6	171	37
172509	205 226	< 5	1	0.2	10	< 0.2	1.82	790	0.5	< 2	0.08	< 0.5	8	148	75
172510	205 226	< 5	30	1.8	30	0.6	2.41	260	0.5	< 2	1.70	< 0.5	1	143	24
172511	205 226	< 5	1	0.4	30	< 0.2	1.27	1700	< 0.5	< 2	0.22	< 0.5	4	175	16
172512	205 226	< 5	1	0.2	< 10	< 0.2	1.47	1970	0.5	< 2	0.06	< 0.5	4	181	31
172513	205 226	< 5	2	1.6	10	< 0.2	1.89	200	0.5	< 2	0.20	< 0.5	4	152	52
172514	205 226	< 5	1	0.6	10	0.4	1.47	660	0.5	< 2	0.24	< 0.5	1	202	55
172515	205 226	140	18	4.0	10	0.6	0.45	620	0.5	< 2	0.42	< 0.5	6	174	48
172516	205 226	< 5	1	0.4	10	< 0.2	2.48	250	2.0	< 2	1.22	< 0.5	5	161	26
172517	205 226	< 5	1	< 0.2	< 10	< 0.2	3.45	920	2.5	< 2	0.24	< 0.5	3	160	12
172518	205 226	< 5	1	< 0.2	< 10	< 0.2	2.98	680	2.5	< 2	0.18	< 0.5	1	97	44
172519	205 226	10	1	0.2	40	< 0.2	2.11	190	2.5	< 2	0.83	< 0.5	2	163	33
172520	205 226	< 5	1	0.4	60	< 0.2	0.94	190	2.5	< 2	16.80	< 0.5	3	65	26
172521	205 226	< 5	8	2.8	110	< 0.2	0.61	160	3.5	< 2	22.3	1.0	1	61	31
172522	205 226	< 5	1	1.2	120	0.4	2.18	130	2.5	< 2	3.57	< 0.5	6	143	66
172523	205 226	< 5	4	2.8	270	0.4	1.98	160	2.0	< 2	7.21	6.5	8	117	68
172524	205 226	< 5	124	2.6	70	2.2	2.65	110	2.5	< 2	1.62	1.0	7	242	243
172525	205 226	< 5	1	0.6	10	0.6	5.85	490	4.5	< 2	2.59	< 0.5	5	167	40
172526	205 226	< 5	1	0.2	110	< 0.2	2.60	810	0.5	< 2	0.73	< 0.5	5	186	67
172527	205 226	< 5	1	0.2	10	< 0.2	2.99	480	1.5	< 2	0.50	< 0.5	7	189	55
172528	205 226	< 5	12	1.2	50	< 0.2	1.44	350	0.5	< 2	4.94	< 0.5	3	154	44
172529	205 226	< 5	6	2.4	60	< 0.2	2.41	320	1.5	< 2	5.45	< 0.5	7	135	70
172530	205 226	< 5	4	0.6	< 10	< 0.2	2.55	1810	2.0	< 2	6.13	< 0.5	7	172	43
172531	205 226	< 5	1	1.2	10	0.4	2.30	170	1.5	< 2	1.74	< 0.5	7	191	50
172532	205 226	< 5	1	0.6	130	0.6	6.57	700	2.5	< 2	4.15	1.5	17	148	71
172533	205 226	< 5	1	0.6	60	0.2	7.18	450	2.5	< 2	4.76	0.5	32	104	56
172534	205 226	10	44	11.0	580	2.6	2.98	180	2.5	< 2	2.07	13.5	5	206	90
172535	205 226	< 5	1	0.8	30	< 0.2	2.76	330	0.5	< 2	0.98	< 0.5	5	123	49
172536	205 226	< 5	32	7.2	260	1.0	7.05	440	3.0	< 2	0.34	7.5	3	161	21
172537	205 226	< 5	1	0.8	< 10	< 0.2	5.98	3280	1.5	< 2	1.67	< 0.5	19	187	79
172538	205 226	10	20	6.0	420	2.2	3.05	190	1.5	2	1.68	11.0	13	359	87
172539	205 226	15	36	6.8	300	2.0	3.81	230	2.0	< 2	0.47	8.5	10	231	75
172540	205 226	< 5	4	1.4	100	0.4	7.05	2330	3.0	< 2	0.77	< 0.5	2	135	11

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :2
Certificate Date: 15-JUN-97
Invoice No. :I9725729
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9725729

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172501	205	226	5.32	0.62	3.30	2730	1	3.28	118	1800	< 2	276	0.99	241	< 10	90
172502	205	226	1.79	1.14	0.59	1430	1	0.03	41	760	10	211	0.16	80	< 10	92
172503	205	226	1.29	1.45	0.27	725	2	0.10	42	200	12	119	0.09	110	< 10	40
172504	205	226	1.88	0.80	0.32	4110	< 2	0.07	18	240	14	1260	0.03	41	< 10	24
172505	205	226	1.00	0.66	0.20	450	12	0.04	34	100	4	126	0.07	116	< 10	358
172506	205	226	3.93	0.19	0.27	1130	7	0.01	17	4490	< 2	433	0.06	83	< 10	82
172507	205	226	7.16	0.24	0.37	725	5	0.01	40	260	< 2	52	0.11	84	< 10	50
172508	205	226	8.25	0.17	0.33	985	7	< 0.01	33	810	< 2	106	0.10	74	< 10	144
172509	205	226	2.19	0.36	0.16	460	< 1	0.03	38	130	< 2	122	0.10	66	< 10	76
172510	205	226	2.85	0.20	0.22	>10000	12	< 0.01	30	130	< 2	111	0.09	120	< 10	140
172511	205	226	6.87	0.09	0.24	2910	4	< 0.01	32	650	< 2	121	0.06	66	< 10	274
172512	205	226	4.13	0.36	0.19	640	< 1	0.03	31	140	< 2	74	0.08	58	< 10	60
172513	205	226	5.74	0.36	0.24	1245	< 1	0.02	23	600	< 2	87	0.10	73	< 10	80
172514	205	226	0.95	0.40	0.13	1635	12	0.01	31	80	< 2	35	0.05	57	< 10	64
172515	205	226	11.65	0.08	0.15	7430	60	< 0.01	104	950	< 2	32	0.01	56	< 10	128
172516	205	226	7.83	0.86	0.29	1040	6	0.08	20	310	< 2	288	0.12	88	< 10	28
172517	205	226	3.21	1.49	0.35	415	< 1	0.07	11	210	< 2	157	0.17	100	< 10	32
172518	205	226	2.57	1.16	0.28	435	3	0.06	10	190	< 2	140	0.14	89	< 10	24
172519	205	226	9.07	0.52	0.38	1410	< 1	0.03	8	470	< 2	296	0.09	91	< 10	72
172520	205	226	2.43	0.21	0.14	2680	18	< 0.01	6	260	12	380	0.03	68	< 10	162
172521	205	226	6.00	0.29	0.30	3230	16	< 0.01	7	440	152	253	0.01	90	< 10	594
172522	205	226	6.99	0.43	0.55	3690	5	0.03	32	950	80	115	0.09	154	< 10	518
172523	205	226	7.38	0.30	0.69	4640	2	< 0.01	33	670	180	251	0.07	128	< 10	1395
172524	205	226	5.97	0.96	0.33	510	7	0.03	114	1450	80	66	0.06	282	< 10	192
172525	205	226	2.74	2.39	1.20	495	7	0.46	26	440	36	145	0.12	90	< 10	100
172526	205	226	1.46	1.08	0.56	495	< 1	0.04	28	250	6	80	0.11	56	< 10	188
172527	205	226	2.06	1.24	0.62	320	< 1	0.05	48	230	6	76	0.19	92	< 10	58
172528	205	226	1.06	0.48	0.26	645	< 1	0.01	37	90	6	322	0.04	62	< 10	120
172529	205	226	1.91	1.08	0.28	745	< 1	0.01	50	260	32	312	0.08	96	< 10	156
172530	205	226	1.81	1.29	0.39	2250	2	0.04	26	300	12	272	0.11	92	< 10	24
172531	205	226	2.09	1.08	0.32	245	3	0.05	33	740	44	77	0.08	106	< 10	22
172532	205	226	4.50	2.65	1.46	755	5	0.89	33	480	64	245	0.32	142	< 10	476
172533	205	226	6.46	3.03	2.55	1165	4	0.87	38	590	6	326	0.33	248	< 10	286
172534	205	226	2.58	1.08	0.40	240	20	0.32	103	3040	104	150	0.10	616	< 10	1100
172535	205	226	1.55	1.20	0.73	470	< 1	0.04	44	150	6	199	0.10	91	< 10	142
172536	205	226	3.18	2.96	0.88	80	9	0.16	34	700	16	39	0.16	249	< 10	366
172537	205	226	3.69	1.41	1.68	1970	3	0.51	56	650	18	145	0.27	144	< 10	98
172538	205	226	2.04	1.32	0.54	395	18	0.06	218	5160	220	221	0.10	608	< 10	1190
172539	205	226	2.35	1.50	0.26	145	25	0.12	107	2030	216	81	0.11	516	< 10	810
172540	205	226	0.98	2.53	0.49	155	1	0.25	12	1010	24	97	0.10	46	< 10	68

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :2-A
Total Pages :2
Certificate Date: 15-JUN-97
Invoice No. :I9725729
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9725729

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172541	205	226	< 5	6	3.0	30	0.4	8.20	660	0.5	< 2	0.16	< 0.5	3	166	18
172542	205	226	< 5	8	1.2	340	< 0.2	6.92	1480	1.5	< 2	1.80	5.5	3	171	10
172543	205	226	< 5	4	0.6	20	< 0.2	6.23	1050	1.5	< 2	1.56	0.5	3	158	13
172544	205	226	< 5	4	0.6	< 10	0.4	6.37	1110	1.5	< 2	0.79	< 0.5	3	114	12
172545	205	226	< 5	1	0.4	< 10	< 0.2	6.56	1420	2.0	6	3.13	< 0.5	2	87	7
172546	205	226	< 5	1	0.2	< 10	0.4	6.67	1510	2.0	< 2	1.53	< 0.5	3	120	8
172547	205	226	< 5	1	< 0.2	< 10	< 0.2	6.67	1450	1.5	< 2	2.88	< 0.5	1	63	8
172548	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
172549	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd

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Page Number :2-B
Total Pages :2
Certificate Date: 15-JUN-97
Invoice No. :I9725729
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9725729

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172541	205	226	0.75	3.08	0.11	20	< 1	0.38	13	720	16	117	0.11	72	< 10	18
172542	205	226	1.91	2.75	0.28	340	1	0.59	9	760	16	173	0.13	32	< 10	778
172543	205	226	1.24	2.82	0.36	110	2	0.18	18	580	28	77	0.11	57	< 10	174
172544	205	226	0.93	3.02	0.41	195	1	0.15	12	1060	24	53	0.12	57	< 10	26
172545	205	226	1.23	3.16	0.49	365	< 1	0.14	6	950	28	140	0.12	38	< 10	56
172546	205	226	1.39	3.25	0.46	295	< 1	0.13	8	900	26	73	0.14	41	< 10	70
172547	205	226	1.08	3.29	0.33	255	1	0.13	6	1080	30	123	0.12	32	< 10	40
172548	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
172549	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd

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o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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VANCOUVER, BC
V7X 1C4

A9727814

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9727814

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 25-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	66	Geochem ring to approx 150 mesh
226	66	0-3 Kg crush and split
3202	66	Rock - save entire reject
285	66	ICP - HF digestion charge
287	66	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	66	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	66	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	66	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	66	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	66	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	66	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	66	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	66	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	66	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	66	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	66	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	66	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	66	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	66	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	66	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	66	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	66	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	66	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	66	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	66	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	66	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	66	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	66	Pb ppm: 24 element, rock & core	AAS	2	10000
582	66	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	66	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	66	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	66	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	66	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-JUN-97
Invoice No. : I9727814
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9727814

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172639	205	226	< 5	12	0.8	< 10	< 0.2	3.59	5540	1.5	2	0.09	0.5	8	165	87
172640	205	226	< 5	8	1.2	< 10	< 0.2	3.19	4690	1.0	4	0.12	0.5	10	169	69
172641	205	226	< 5	4	0.6	< 10	< 0.2	3.12	5230	1.0	2	0.70	0.5	6	189	79
172642	205	226	< 5	6	0.6	< 10	< 0.2	2.60	3760	0.5	< 2	0.36	< 0.5	5	181	55
172643	205	226	< 5	2	0.4	< 10	< 0.2	3.73	5820	1.5	< 2	0.72	0.5	7	161	59
172644	205	226	< 5	4	0.6	< 10	0.4	3.36	2000	1.5	2	0.99	< 0.5	9	183	90
172645	205	226	< 5	1	0.4	< 10	< 0.2	2.85	2120	1.5	< 2	0.10	< 0.5	8	125	50
172646	205	226	< 5	4	0.4	< 10	< 0.2	2.74	2150	1.5	2	0.30	< 0.5	9	169	43
172647	205	226	< 5	4	0.4	< 10	< 0.2	3.32	2830	1.5	2	1.21	< 0.5	8	220	136
172648	205	226	< 5	1	0.4	< 10	< 0.2	2.43	3480	1.0	2	0.20	< 0.5	6	204	41
172649	205	226	< 5	4	0.4	< 10	< 0.2	2.90	3830	1.0	< 2	0.84	< 0.5	5	166	33
172650	205	226	< 5	4	0.6	< 10	< 0.2	3.73	410	1.5	2	1.13	< 0.5	9	192	56
172651	205	226	< 5	2	1.6	< 10	< 0.2	5.07	230	1.5	2	2.41	< 0.5	10	182	40
172652	205	226	< 5	1	0.6	< 10	< 0.2	4.90	460	1.0	< 2	1.07	< 0.5	7	166	47
172653	205	226	< 5	2	0.6	< 10	< 0.2	2.59	4510	0.5	< 2	0.12	< 0.5	4	222	87
172654	205	226	< 5	4	0.8	< 10	< 0.2	2.78	7720	1.0	2	0.07	0.5	3	120	63
172655	205	226	< 5	2	0.6	< 10	< 0.2	2.14	5250	0.5	2	0.06	0.5	< 1	142	51
172656	205	226	< 5	2	0.6	< 10	< 0.2	2.37	5050	0.5	2	0.13	< 0.5	6	194	52
172657	205	226	10	1	0.8	10	< 0.2	4.03	200	4.5	< 2	1.51	1.5	10	114	51
172658	205	226	< 5	1	0.8	< 10	< 0.2	1.56	60	9.5	< 2	1.10	< 0.5	11	118	164
172659	205	226	< 5	1	1.8	< 10	< 0.2	2.04	40	11.0	< 2	4.69	1.5	36	144	157
172660	205	226	< 5	1	1.2	< 10	< 0.2	0.62	50	7.0	8	1.37	< 0.5	< 1	102	35
172661	205	226	< 5	2	3.0	< 10	< 0.2	1.13	30	8.0	4	6.54	0.5	30	153	44
172662	205	226	< 5	1	1.6	10	< 0.2	1.70	30	11.5	2	1.94	1.0	50	102	257
172663	205	226	< 5	1	6.8	40	0.4	2.88	110	5.0	2	2.39	17.0	31	176	91
172664	205	226	< 5	1	3.0	10	0.4	2.22	30	8.0	< 2	2.61	5.5	38	154	158
172665	205	226	< 5	1	1.0	< 10	< 0.2	1.94	80	3.5	< 2	3.41	0.5	29	92	53
172666	205	226	< 5	2	1.8	< 10	< 0.2	2.11	30	5.0	< 2	5.21	3.0	20	149	100
172667	205	226	< 5	2	3.6	10	< 0.2	3.30	90	3.0	< 2	1.62	< 0.5	20	116	96
172668	205	226	< 5	1	2.6	< 10	< 0.2	2.14	60	2.0	< 2	0.85	< 0.5	4	188	88
172669	205	226	< 5	1	2.2	10	0.4	1.80	30	2.0	4	0.69	< 0.5	< 1	103	322
172670	205	226	< 5	1	2.0	150	< 0.2	2.57	260	2.0	2	14.40	0.5	7	105	74
172671	205	226	< 5	1	1.8	< 10	< 0.2	2.62	100	2.0	< 2	1.17	< 0.5	5	206	67
172672	205	226	< 5	1	5.0	40	< 0.2	4.30	60	6.5	2	3.94	< 0.5	13	119	175
172673	205	226	< 5	1	1.4	10	< 0.2	2.12	150	1.5	< 2	0.45	< 0.5	4	186	35
172674	205	226	< 5	1	1.0	< 10	< 0.2	1.74	380	2.0	2	1.14	< 0.5	3	169	11
172675	205	226	< 5	2	0.8	20	< 0.2	2.21	360	1.5	< 2	2.06	< 0.5	12	214	46
172676	205	226	< 5	1	1.0	10	< 0.2	2.52	190	5.0	< 2	9.72	< 0.5	1	90	91
172677	205	226	< 5	1	0.2	< 10	< 0.2	1.15	830	1.5	< 2	0.24	< 0.5	2	184	32
172678	205	226	< 5	2	0.8	30	< 0.2	2.48	210	3.0	< 2	1.06	< 0.5	5	220	46

CERTIFICATION:

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o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-JUN-97
Invoice No. :I9727814
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9727814

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172639	205 226	1.99	1.22	0.79	1035	< 1	0.09	42	300	< 2	22	0.18	80	< 10	62
172640	205 226	2.04	1.05	0.69	1335	1	0.05	43	220	6	19	0.14	80	< 10	52
172641	205 226	1.76	1.16	0.51	1805	3	0.04	34	540	< 2	54	0.13	85	< 10	56
172642	205 226	2.04	0.81	0.53	1005	< 1	0.04	31	230	< 2	25	0.09	74	< 10	36
172643	205 226	2.72	1.16	0.90	770	4	0.06	45	320	< 2	52	0.19	88	< 10	46
172644	205 226	2.53	1.03	0.79	730	< 1	0.16	43	220	< 2	137	0.17	68	< 10	52
172645	205 226	1.65	1.03	0.48	390	< 1	0.06	33	180	< 2	221	0.12	48	< 10	44
172646	205 226	1.55	1.00	0.46	740	< 1	0.06	35	230	< 2	70	0.12	58	< 10	44
172647	205 226	1.95	1.24	0.68	710	< 1	0.05	40	240	< 2	87	0.15	63	< 10	50
172648	205 226	1.56	0.73	0.48	225	< 1	0.05	29	210	< 2	20	0.12	53	< 10	32
172649	205 226	1.90	0.92	0.61	615	1	0.03	40	210	< 2	70	0.13	58	< 10	38
172650	205 226	2.39	1.32	0.76	770	1	0.05	66	490	6	77	0.18	104	< 10	72
172651	205 226	2.58	1.14	1.10	925	2	1.09	76	540	2	196	0.20	166	< 10	66
172652	205 226	1.88	1.19	0.83	315	< 1	1.41	64	190	2	136	0.12	110	< 10	68
172653	205 226	1.30	0.95	0.38	210	< 1	0.08	50	130	< 2	26	0.10	84	< 10	90
172654	205 226	1.37	0.99	0.40	145	1	0.06	66	140	6	23	0.14	95	< 10	86
172655	205 226	1.22	0.87	0.19	80	1	0.05	50	120	< 2	32	0.11	74	< 10	68
172656	205 226	1.30	0.97	0.31	435	1	0.06	73	120	< 2	28	0.12	78	< 10	74
172657	205 226	5.64	1.57	0.62	4050	5	0.19	59	1390	16	196	0.17	166	< 10	328
172658	205 226	13.75	0.24	0.55	5370	5	0.04	49	1610	10	345	0.08	163	< 10	236
172659	205 226	12.60	0.33	0.56	>10000	10	0.04	103	780	48	153	0.06	130	< 10	1320
172660	205 226	21.0	0.05	0.55	6000	4	0.01	16	1280	< 2	76	0.08	222	< 10	282
172661	205 226	23.0	0.05	1.66	>10000	9	0.05	111	1000	68	142	0.03	125	< 10	976
172662	205 226	24.9	0.05	1.38	>10000	5	0.08	221	1880	156	52	0.08	230	< 10	1355
172663	205 226	6.63	0.76	0.74	9710	3	0.04	127	1540	620	105	0.12	217	< 10	2750
172664	205 226	14.75	0.50	0.98	>10000	3	0.04	151	1870	214	110	0.12	230	< 10	1035
172665	205 226	6.01	0.81	1.05	8670	4	0.02	82	880	40	126	0.08	162	< 10	224
172666	205 226	12.85	0.66	0.68	>10000	4	0.05	75	1300	164	118	0.08	143	< 10	918
172667	205 226	5.32	1.02	0.51	6040	5	0.08	65	270	4	86	0.11	119	< 10	52
172668	205 226	10.35	0.36	0.48	3860	6	0.03	32	330	< 2	80	0.07	117	< 10	50
172669	205 226	>25.0	0.03	0.57	3440	7	0.03	18	80	< 2	33	0.01	91	< 10	24
172670	205 226	4.26	0.04	0.63	4640	49	< 0.01	56	730	76	531	0.04	51	< 10	1130
172671	205 226	3.93	0.05	0.35	1655	11	0.02	27	460	40	67	0.05	60	< 10	124
172672	205 226	7.82	0.26	0.36	3410	35	0.06	63	400	10	125	0.06	68	< 10	254
172673	205 226	2.65	0.31	0.21	785	4	0.03	19	140	8	37	0.08	70	< 10	40
172674	205 226	7.64	0.58	0.26	1400	1	0.01	17	360	< 2	105	0.09	102	< 10	42
172675	205 226	1.49	0.50	0.19	890	18	0.02	56	160	6	159	0.10	98	< 10	440
172676	205 226	12.05	0.71	0.32	2390	5	0.04	37	630	< 2	384	0.12	149	< 10	34
172677	205 226	0.62	0.25	0.12	115	8	< 0.01	16	100	8	30	0.04	67	< 10	14
172678	205 226	2.55	0.42	0.27	910	13	0.03	33	1010	4	134	0.10	135	< 10	34

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-JUN-97
Invoice No. :I9727814
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9727814

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172679	205	226	< 5	8	0.8	10	< 0.2	1.31	760	2.0	2	0.52	< 0.5	3	155	18
172680	205	226	< 5	1	1.2	30	< 0.2	1.72	310	2.5	2	0.53	1.0	4	128	39
172681	205	226	< 5	1	2.4	10	< 0.2	2.68	810	4.0	4	0.50	< 0.5	5	203	44
172682	205	226	< 5	1	1.6	20	< 0.2	2.72	480	4.5	2	0.87	2.5	6	140	42
172683	205	226	< 5	1	1.0	< 10	< 0.2	3.63	>10000	4.5	2	0.99	1.5	1	127	21
172684	205	226	< 5	1	0.4	10	< 0.2	2.55	1060	2.5	6	0.29	< 0.5	10	116	25
172685	205	226	< 5	2	2.8	60	< 0.2	3.24	230	3.5	< 2	0.43	< 0.5	10	191	68
172686	205	226	< 5	1	9.8	90	< 0.2	6.95	110	2.5	2	2.93	2.0	16	122	77
172687	205	226	10	8	6.4	40	0.6	5.88	70	1.5	< 2	2.08	1.0	3	89	257
172688	205	226	< 5	1	9.4	410	1.2	5.07	60	3.5	< 2	0.39	2.5	6	80	320
172689	205	226	< 5	20	9.8	60	1.2	3.14	140	2.0	2	1.11	9.0	6	306	92
172690	205	226	< 5	1	1.6	< 10	0.2	6.61	5530	2.0	6	1.74	< 0.5	1	66	25
172691	205	226	< 5	1	1.8	< 10	0.2	6.34	2350	1.5	2	2.67	< 0.5	3	93	23
172692	205	226	< 5	1	3.4	20	0.6	6.16	180	2.0	2	2.26	2.0	9	165	46
172693	205	226	< 5	12	6.0	40	0.8	3.57	130	1.5	14	1.86	11.5	6	273	61
172694	205	226	< 5	28	8.2	30	1.6	2.31	140	1.0	2	0.54	15.5	6	238	84
172695	205	226	< 5	28	8.6	50	1.4	2.24	120	1.0	< 2	0.77	17.5	5	290	79
172696	205	226	< 5	1	1.2	< 10	0.8	2.50	330	0.5	< 2	0.66	0.5	6	178	36
172697	205	226	< 5	2	2.4	< 10	0.4	3.89	150	1.5	< 2	1.34	0.5	7	205	52
172698	205	226	< 5	34	8.4	50	1.8	3.48	80	2.0	< 2	1.97	6.5	10	257	103
172699	205	226	< 5	14	3.6	30	0.8	4.99	230	1.5	< 2	2.28	1.5	4	225	26
172700	205	226	< 5	6	2.8	< 10	0.4	6.21	410	2.0	2	2.19	0.5	3	122	17
172701	205	226	< 5	40	6.2	60	1.6	2.82	120	1.5	< 2	1.68	14.5	5	348	98
172702	205	226	< 5	22	8.0	70	1.6	1.97	150	1.0	< 2	0.67	16.5	7	272	88
172703	205	226	< 5	30	11.0	60	1.2	2.20	140	1.0	< 2	0.39	4.5	6	256	61
172704	205	226	< 5	28	8.4	80	1.2	2.31	140	1.0	4	0.81	13.0	5	223	98

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page . .er :2-B
Total Pages :2
Certificate Date: 25-JUN-97
Invoice No. :I9727814
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9727814

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172679	205	226	0.62	0.05	0.15	205	1	< 0.01	21	240	6	50	0.05	59	< 10	12
172680	205	226	1.02	0.10	0.18	200	3	0.02	36	110	20	73	0.07	100	< 10	1240
172681	205	226	1.23	0.64	0.20	465	3	0.08	59	340	54	96	0.10	114	< 10	890
172682	205	226	1.51	0.49	0.29	380	6	0.05	61	400	44	104	0.11	92	< 10	2100
172683	205	226	1.43	0.64	0.38	620	6	0.09	36	150	6	137	0.15	109	< 10	328
172684	205	226	1.61	0.98	0.17	615	42	0.09	41	200	10	96	0.14	119	< 10	966
172685	205	226	2.90	0.56	0.22	785	14	0.08	40	330	< 2	93	0.15	134	< 10	522
172686	205	226	5.36	0.11	1.05	2690	29	0.11	83	490	< 2	94	0.18	316	< 10	1280
172687	205	226	17.85	0.03	0.81	2070	4	0.15	47	750	< 2	41	0.12	278	< 10	310
172688	205	226	19.90	0.03	0.61	4220	8	0.09	112	800	< 2	53	0.11	271	< 10	412
172689	205	226	2.13	1.20	0.37	400	19	0.06	129	3990	8	134	0.15	586	< 10	676
172690	205	226	1.43	1.79	0.51	595	1	0.11	14	340	14	116	0.18	47	< 10	62
172691	205	226	1.46	1.59	0.52	840	< 1	0.11	14	280	14	165	0.18	44	< 10	52
172692	205	226	2.52	2.35	0.69	475	6	0.13	52	760	8	122	0.20	197	< 10	200
172693	205	226	1.69	1.06	0.28	530	26	0.06	89	1370	14	194	0.10	383	< 10	786
172694	205	226	1.43	0.80	0.16	75	22	0.06	129	2130	8	158	0.06	726	< 10	910
172695	205	226	1.74	0.88	0.20	90	37	0.05	123	2820	8	112	0.08	771	< 10	1365
172696	205	226	1.45	0.92	0.44	215	1	0.04	38	600	< 2	34	0.10	109	< 10	94
172697	205	226	2.12	1.60	0.81	445	2	0.07	46	870	< 2	73	0.14	162	< 10	128
172698	205	226	3.29	1.53	0.40	120	15	0.06	135	7750	10	196	0.14	633	< 10	606
172699	205	226	1.55	2.15	0.34	195	8	0.10	46	1170	12	133	0.15	265	< 10	166
172700	205	226	1.29	3.17	0.28	200	1	0.13	16	1270	22	138	0.16	91	< 10	80
172701	205	226	1.67	1.01	0.37	165	21	0.05	128	4470	24	223	0.10	733	< 10	1160
172702	205	226	1.62	0.64	0.18	105	24	0.04	133	2110	14	137	0.06	756	< 10	1440
172703	205	226	1.48	0.86	0.15	70	32	0.07	96	1590	24	133	0.09	390	< 10	304
172704	205	226	1.82	0.86	0.36	75	24	0.05	88	1980	8	133	0.10	538	< 10	862

CERTIFICATION: Stuart Buchler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9727833

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9727833

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 25-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	28	Geochem ring to approx 150 mesh
226	28	0-3 Kg crush and split
3202	28	Rock - save entire reject
285	28	ICP - HF digestion charge
287	28	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	28	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	28	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	28	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	28	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	28	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	28	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	28	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	28	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	28	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	28	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	28	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	28	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	28	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	28	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	28	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	28	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	28	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	28	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	28	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	28	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	28	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	28	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	28	Pb ppm: 24 element, rock & core	AAS	2	10000
582	28	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	28	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	28	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	28	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	28	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-JUN-97
Invoice No. :19727833
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9727833

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172548	205	226	10	1	2.0	150	< 0.2	1.78	3000	2.0	< 2	0.13	< 0.5	< 1	181	36
172549	205	226	40	1	2.8	30	< 0.2	1.13	420	0.5	< 2	0.74	< 0.5	4	245	87
172550	205	226	15	1	1.0	< 10	< 0.2	1.59	1430	0.5	< 2	0.10	< 0.5	1	169	71
172551	205	226	15	1	1.4	10	< 0.2	2.14	640	0.5	< 2	0.79	< 0.5	4	118	48
172552	205	226	< 5	2	0.6	10	< 0.2	2.25	440	0.5	2	4.42	< 0.5	4	72	31
172553	205	226	10	1	0.4	< 10	0.6	2.62	950	0.5	< 2	2.93	< 0.5	5	112	39
172554	205	226	10	1	3.4	110	0.6	1.74	120	0.5	< 2	13.00	< 0.5	6	28	89
172555	205	226	15	1	0.4	< 10	< 0.2	2.88	280	2.0	2	1.17	< 0.5	4	159	38
172556	205	226	< 5	1	0.4	< 10	< 0.2	1.76	950	2.5	2	1.92	< 0.5	< 1	92	12
172557	205	226	< 5	1	0.4	< 10	< 0.2	3.32	940	3.5	< 2	0.61	< 0.5	< 1	173	57
172558	205	226	< 5	1	0.4	< 10	< 0.2	3.77	1470	3.5	< 2	0.50	< 0.5	3	128	50
172559	205	226	25	1	0.4	< 10	< 0.2	1.20	110	15.5	< 2	1.99	< 0.5	< 1	147	21
172560	205	226	70	1	0.6	< 10	< 0.2	0.72	140	13.5	< 2	2.92	< 0.5	< 1	57	11
172561	205	226	30	1	0.8	530	< 0.2	1.62	60	7.0	4	11.30	0.5	4	60	45
172562	205	226	10	1	0.8	60	< 0.2	1.59	90	2.0	< 2	>25.0	0.5	3	20	29
172563	205	226	30	32	8.4	120	0.6	1.64	40	3.0	2	2.57	3.5	4	199	64
172564	205	226	< 5	4	0.8	< 10	< 0.2	2.34	190	2.0	2	10.55	< 0.5	5	90	39
172565	205	226	< 5	1	0.6	10	< 0.2	3.97	590	2.0	< 2	6.84	0.5	5	124	42
172566	205	226	< 5	1	3.0	300	< 0.2	6.44	250	7.0	< 2	1.40	3.5	1	103	20
172567	205	226	< 5	6	0.8	< 10	< 0.2	6.73	490	6.5	2	2.46	< 0.5	12	78	10
172568	205	226	15	10	3.0	50	< 0.2	1.20	80	1.5	2	0.42	< 0.5	3	263	37
172569	205	226	20	4	5.0	630	1.2	3.17	90	4.0	2	1.27	5.0	10	256	181
172570	205	226	15	30	9.8	260	2.0	3.83	90	1.5	2	1.35	10.5	7	224	96
172571	205	226	10	8	2.8	40	0.6	3.26	210	1.5	< 2	4.17	1.5	3	244	52
172572	205	226	5	10	3.4	< 10	0.4	7.81	210	2.0	< 2	1.61	1.0	4	159	14
172573	205	226	10	48	11.5	1910	2.4	4.24	110	0.5	< 2	1.04	34.0	8	253	78
172574	205	226	10	8	3.6	170	0.6	7.20	330	1.5	< 2	0.44	4.0	4	198	14
172575	205	226	< 5	2	1.8	< 10	< 0.2	7.02	1520	1.5	< 2	2.86	< 0.5	2	194	10

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 25-JUN-97
Invoice No. :I9727833
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9727833

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172548	205	226	1.18	0.77	0.20	125	7	0.09	18	110	18	8	0.09	120	< 10	176
172549	205	226	13.50	0.06	0.13	1970	34	0.01	36	3870	< 2	162	0.06	83	< 10	324
172550	205	226	4.65	0.19	0.07	530	11	0.03	38	380	< 2	80	0.07	108	< 10	238
172551	205	226	9.47	0.42	0.32	3350	12	0.04	56	2660	< 2	192	0.10	124	< 10	136
172552	205	226	7.27	0.97	0.48	>10000	21	0.05	72	260	< 2	246	0.09	87	< 10	62
172553	205	226	9.56	1.20	0.46	>10000	76	0.04	57	320	8	188	0.11	98	< 10	60
172554	205	226	12.00	0.13	1.08	>10000	4	0.01	61	650	< 2	1165	0.09	291	< 10	110
172555	205	226	3.62	1.19	0.36	1175	4	0.05	36	230	< 2	219	0.15	96	< 10	34
172556	205	226	8.65	0.50	0.22	4560	11	0.05	14	1270	< 2	333	0.08	98	< 10	22
172557	205	226	6.85	1.32	0.36	595	7	0.08	12	420	< 2	241	0.15	105	< 10	22
172558	205	226	2.24	1.47	0.38	420	1	0.10	20	960	< 2	288	0.20	124	< 10	18
172559	205	226	15.10	0.18	0.22	1220	8	0.01	8	320	< 2	332	0.07	98	< 10	14
172560	205	226	15.75	0.05	0.23	1950	7	0.01	6	200	< 2	346	0.03	65	< 10	16
172561	205	226	5.75	0.22	0.21	2550	42	< 0.01	13	600	16	226	0.06	78	< 10	1905
172562	205	226	4.47	0.04	0.39	5120	33	< 0.01	17	510	12	576	0.12	21	< 10	422
172563	205	226	5.69	0.68	0.14	525	13	0.02	31	810	112	50	0.06	115	< 10	894
172564	205	226	3.18	0.87	0.31	2300	4	0.02	14	800	18	189	0.10	93	< 10	90
172565	205	226	3.23	1.73	0.42	2270	< 1	0.07	17	1030	10	180	0.17	83	< 10	134
172566	205	226	2.33	2.92	0.94	340	7	0.14	18	260	232	61	0.14	133	< 10	822
172567	205	226	2.89	2.98	1.28	640	2	0.25	24	210	4	127	0.17	36	< 10	56
172568	205	226	2.18	0.50	0.18	105	1	0.01	31	60	54	16	0.05	53	< 10	40
172569	205	226	4.48	1.40	0.56	855	7	0.08	58	460	126	67	0.14	144	250	1275
172570	205	226	2.17	1.66	0.66	185	25	0.10	102	2010	10	207	0.15	557	< 10	836
172571	205	226	1.25	1.42	0.66	220	4	0.04	31	>10000	6	614	0.13	285	< 10	118
172572	205	226	2.37	2.76	0.49	205	3	0.30	19	700	20	105	0.23	94	< 10	90
172573	205	226	2.62	1.73	0.15	55	4	0.17	74	4440	42	80	0.11	155	< 10	4770
172574	205	226	1.09	3.02	0.26	65	3	0.26	15	770	390	73	0.15	67	< 10	588
172575	205	226	1.16	2.75	0.39	250	3	0.34	11	1280	28	154	0.16	47	< 10	34

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9727835

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9727835

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 25-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	63	Geochem ring to approx 150 mesh
226	63	0-3 Kg crush and split
3202	63	Rock - save entire reject
285	63	ICP - HF digestion charge
287	63	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	63	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	63	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	63	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	63	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	63	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	63	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	63	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	63	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	63	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	63	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	63	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	63	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	63	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	63	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	63	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	63	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	63	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	63	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	63	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	63	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	63	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	63	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	63	Pb ppm: 24 element, rock & core	AAS	2	10000
582	63	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	63	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	63	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	63	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	63	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

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o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-JUN-97
Invoice No. :19727835
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9727835

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172576	205	226	15	6	0.8	10	< 0.2	4.95	7580	1.5	< 2	1.25	0.5	7	130	83
172577	205	226	20	1	1.0	10	< 0.2	1.80	870	1.5	< 2	5.35	< 0.5	8	95	32
172578	205	226	15	1	0.6	< 10	1.0	3.04	>10000	2.5	< 2	1.09	1.5	11	164	116
172579	205	226	10	1	0.6	30	< 0.2	1.38	740	2.5	< 2	4.95	< 0.5	3	132	32
172580	205	226	< 5	2	0.4	< 10	< 0.2	1.40	1510	3.5	< 2	1.11	< 0.5	< 1	171	28
172581	205	226	< 5	1	0.6	180	0.4	2.69	3550	2.0	< 2	0.35	< 0.5	6	151	46
172582	205	226	< 5	1	1.0	< 10	< 0.2	1.91	2200	2.0	< 2	5.62	< 0.5	< 1	79	22
172583	205	226	< 5	1	0.8	10	< 0.2	1.39	2570	1.5	< 2	2.33	< 0.5	< 1	66	7
172584	205	226	< 5	1	0.8	30	< 0.2	1.96	2250	1.5	< 2	2.06	< 0.5	3	225	40
172585	205	226	< 5	1	0.6	40	< 0.2	1.17	3140	0.5	< 2	21.8	< 0.5	< 1	29	9
172586	205	226	20	1	0.8	10	< 0.2	2.70	460	1.5	< 2	5.07	< 0.5	< 1	109	15
172587	205	226	< 5	1	0.8	10	< 0.2	2.39	2960	0.5	< 2	1.35	< 0.5	3	142	43
172588	205	226	< 5	1	0.8	170	< 0.2	1.93	1180	0.5	< 2	0.33	< 0.5	4	190	49
172589	205	226	20	1	0.8	< 10	< 0.2	1.49	1400	0.5	< 2	0.77	< 0.5	1	211	41
172590	205	226	20	1	1.0	10	< 0.2	3.23	890	1.5	< 2	0.24	< 0.5	5	199	35
172591	205	226	15	1	1.6	50	< 0.2	2.68	1930	1.5	< 2	0.22	< 0.5	1	148	36
172592	205	226	< 5	1	1.6	< 10	< 0.2	1.76	980	0.5	< 2	0.29	< 0.5	4	200	57
172593	205	226	10	2	1.6	40	< 0.2	3.87	1710	2.0	< 2	0.42	< 0.5	2	153	16
172594	205	226	10	1	1.6	10	< 0.2	2.39	650	1.0	< 2	0.26	< 0.5	3	159	37
172595	205	226	10	1	0.6	40	< 0.2	1.56	640	0.5	< 2	4.65	< 0.5	6	157	47
172596	205	226	5	1	0.8	< 10	< 0.2	1.84	410	1.0	< 2	0.50	< 0.5	< 1	173	8
172597	205	226	< 5	1	0.8	10	< 0.2	2.45	1560	1.5	< 2	0.78	< 0.5	< 1	179	18
172598	205	226	< 5	2	1.4	< 10	< 0.2	3.60	570	1.5	< 2	0.64	< 0.5	1	172	33
172599	205	226	< 5	1	0.6	150	< 0.2	1.54	1550	0.5	< 2	0.46	< 0.5	2	173	42
172600	205	226	< 5	1	0.8	< 10	< 0.2	1.96	2790	1.5	< 2	2.44	< 0.5	< 1	163	29
172601	205	226	< 5	1	0.2	< 10	< 0.2	2.51	2990	2.5	< 2	1.07	< 0.5	< 1	183	19
172602	205	226	< 5	1	0.2	120	< 0.2	3.11	1190	2.5	< 2	0.52	< 0.5	4	147	46
172603	205	226	< 5	1	0.2	< 10	< 0.2	2.73	2260	5.0	< 2	2.08	< 0.5	< 1	139	45
172604	205	226	< 5	2	0.4	< 10	1.4	0.94	2610	4.0	< 2	1.05	< 0.5	< 1	97	28
172605	205	226	< 5	1	0.4	10	< 0.2	0.94	630	2.5	< 2	0.69	< 0.5	< 1	76	16
172606	205	226	< 5	1	0.6	420	< 0.2	1.91	210	3.0	< 2	9.06	0.5	8	141	76
172607	205	226	< 5	1	1.6	530	< 0.2	1.72	450	2.0	< 2	2.01	< 0.5	6	182	66
172608	205	226	10	6	2.8	90	< 0.2	1.20	280	1.5	< 2	0.14	< 0.5	3	206	53
172609	205	226	10	2	2.0	230	< 0.2	2.17	290	3.0	< 2	0.10	3.0	4	183	65
172610	205	226	10	12	5.4	420	< 0.2	1.92	200	3.0	< 2	0.08	8.0	11	158	106
172611	205	226	15	12	6.0	120	0.4	1.92	240	4.0	< 2	1.54	3.5	3	198	82
172612	205	226	10	6	4.6	30	< 0.2	0.44	220	1.5	< 2	>25.0	< 0.5	< 1	41	26
172613	205	226	< 5	14	1.6	< 10	< 0.2	3.17	410	2.0	< 2	2.57	< 0.5	13	180	151
172614	205	226	20	4	3.6	10	2.8	2.68	250	2.0	< 2	5.80	< 0.5	6	134	62
172615	205	226	20	8	6.8	200	0.6	2.89	220	5.0	< 2	1.15	4.0	8	217	68

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :2
Certificate Date: 25-JUN-97
Invoice No. :I9727835
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9727835

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172576	205	226	4.46	2.67	0.44	2690	1	0.08	22	1050	32	37	0.26	134	< 10	44
172577	205	226	11.20	0.72	0.24	>10000	5	0.04	35	350	< 2	181	0.06	104	< 10	36
172578	205	226	2.29	1.05	0.15	3060	13	0.08	82	240	12	50	0.09	143	< 10	72
172579	205	226	5.52	0.42	0.27	5080	31	0.03	29	740	16	227	0.06	90	< 10	64
172580	205	226	5.09	0.31	0.14	425	1	0.01	12	290	< 2	220	0.06	115	< 10	16
172581	205	226	1.45	0.88	0.16	280	14	0.08	34	250	10	59	0.09	114	< 10	738
172582	205	226	11.85	0.50	0.36	3830	6	0.02	11	840	< 2	625	0.10	75	< 10	66
172583	205	226	13.30	0.40	0.37	5800	4	0.03	7	650	< 2	307	0.07	55	< 10	80
172584	205	226	4.87	0.62	0.66	1430	14	0.02	13	720	< 2	82	0.08	83	< 10	166
172585	205	226	5.35	0.38	0.32	8160	3	< 0.01	5	720	< 2	997	0.06	56	< 10	16
172586	205	226	7.72	0.90	0.43	2760	2	0.03	9	740	< 2	206	0.14	106	< 10	32
172587	205	226	4.99	0.43	0.55	750	8	0.01	25	2210	< 2	62	0.10	87	< 10	86
172588	205	226	1.41	0.73	0.20	225	7	0.02	22	140	6	30	0.08	80	< 10	442
172589	205	226	2.18	0.56	0.29	410	2	0.01	12	270	< 2	95	0.06	74	< 10	26
172590	205	226	3.10	1.38	0.57	475	4	0.04	31	170	< 2	47	0.13	92	< 10	60
172591	205	226	1.36	1.19	0.27	215	3	0.04	18	90	4	50	0.12	84	< 10	172
172592	205	226	1.11	0.60	0.18	335	2	0.03	17	280	< 2	53	0.07	68	< 10	172
172593	205	226	3.74	1.40	0.38	1020	3	0.09	16	310	< 2	83	0.20	104	< 10	42
172594	205	226	1.38	1.11	0.25	250	1	0.04	15	90	< 2	42	0.12	79	< 10	24
172595	205	226	1.60	0.43	0.18	1790	27	0.01	15	700	4	289	0.06	62	< 10	150
172596	205	226	7.52	0.64	0.20	275	4	0.05	6	1070	< 2	64	0.11	90	< 10	16
172597	205	226	6.41	0.84	0.26	355	26	0.04	10	1730	< 2	132	0.13	112	< 10	54
172598	205	226	4.19	1.29	0.45	580	1	0.08	13	480	< 2	101	0.16	100	< 10	34
172599	205	226	0.96	0.56	0.16	295	24	0.04	14	490	6	82	0.06	67	< 10	226
172600	205	226	8.27	0.60	0.24	890	4	0.06	9	1550	< 2	342	0.10	90	< 10	18
172601	205	226	7.99	0.96	0.31	440	2	0.06	10	350	< 2	288	0.11	92	< 10	22
172602	205	226	2.50	1.33	0.35	210	4	0.09	19	200	< 2	152	0.14	106	< 10	216
172603	205	226	8.42	1.02	0.32	485	6	0.05	7	370	< 2	468	0.11	102	< 10	18
172604	205	226	18.55	0.14	0.21	420	9	0.01	6	250	< 2	678	0.03	75	10	18
172605	205	226	>25.0	0.21	0.20	1315	11	0.12	6	260	< 2	287	0.05	86	< 10	18
172606	205	226	3.81	0.44	0.31	1705	15	< 0.01	34	730	6	340	0.08	125	< 10	1285
172607	205	226	2.04	0.42	0.26	330	9	< 0.01	65	410	22	107	0.06	126	< 10	1430
172608	205	226	1.84	0.59	0.12	60	4	0.01	32	70	76	11	0.04	86	< 10	374
172609	205	226	1.37	1.06	0.20	55	3	0.04	34	90	36	7	0.08	126	< 10	920
172610	205	226	3.50	1.01	0.19	70	17	0.04	84	60	32	3	0.07	99	< 10	1190
172611	205	226	5.81	0.91	0.19	190	7	0.01	39	890	300	34	0.06	159	< 10	394
172612	205	226	2.36	0.19	0.23	2570	11	< 0.01	8	780	110	437	0.01	77	< 10	194
172613	205	226	3.13	1.40	0.37	1645	2	0.02	39	530	32	49	0.12	129	< 10	56
172614	205	226	7.01	0.88	0.64	4740	7	0.03	46	1120	50	221	0.11	190	10	40
172615	205	226	2.51	1.23	0.32	350	3	0.04	52	1890	124	56	0.10	219	< 10	852

CERTIFICATION:

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V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 25-JUN-97
Invoice No. :19727835
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9727835

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172616	205	226	20	20	9.2	530	0.6	4.18	180	5.5	< 2	1.03	4.5	6	212	57
172617	205	226	35	1	9.6	870	3.4	1.62	150	2.0	< 2	4.49	14.5	9	204	296
172618	205	226	20	82	6.2	1530	1.4	5.12	2450	2.0	< 2	0.27	49.5	< 1	181	16
172619	205	226	10	6	3.6	< 10	0.4	3.41	310	1.5	< 2	0.92	< 0.5	4	241	41
172620	205	226	10	1	2.6	20	0.4	4.42	230	1.5	< 2	2.80	1.0	9	174	58
172621	205	226	< 5	1	2.0	10	< 0.2	8.33	620	0.5	< 2	1.70	0.5	4	126	9
172622	205	226	< 5	1	1.6	< 10	< 0.2	8.20	560	0.5	< 2	2.83	< 0.5	3	101	8
172623	205	226	< 5	1	0.6	< 10	< 0.2	6.61	3000	1.5	< 2	0.98	< 0.5	6	100	37
172624	205	226	< 5	1	0.4	< 10	< 0.2	5.37	3270	1.5	< 2	0.93	< 0.5	9	118	51
172625	205	226	10	2	1.6	10	0.4	3.26	400	1.0	< 2	1.06	1.5	9	191	49
172626	205	226	< 5	1	2.4	< 10	< 0.2	3.45	440	1.0	< 2	1.47	< 0.5	7	155	51
172627	205	226	< 5	1	3.2	50	0.4	4.69	270	1.5	< 2	2.36	1.0	7	194	44
172628	205	226	25	32	8.6	260	1.0	3.94	270	1.5	< 2	0.52	12.5	7	186	85
172629	205	226	10	1	6.6	70	0.4	4.96	630	1.5	< 2	2.09	2.0	7	200	55
172630	205	226	20	66	13.0	60	2.2	3.10	100	1.5	< 2	0.73	< 0.5	7	213	86
172631	205	226	20	32	12.0	160	2.4	3.01	130	1.5	< 2	0.80	2.0	7	221	104
172632	205	226	10	32	12.0	180	2.2	2.39	170	1.0	< 2	1.31	3.5	4	300	117
172633	205	226	15	40	12.5	310	1.4	4.18	140	2.0	< 2	0.25	5.5	8	241	85
172634	205	226	15	54	15.0	530	2.4	2.74	170	1.5	< 2	0.63	8.0	6	298	130
172635	205	226	10	38	19.5	670	9.6	1.63	300	1.0	< 2	1.28	8.0	4	401	204
172636	205	226	10	38	16.0	270	2.6	1.71	210	0.5	< 2	1.32	2.0	5	390	176
172637	205	226	10	28	13.0	210	1.2	4.57	300	2.0	< 2	0.59	2.0	10	194	72
172638	205	226	15	44	15.5	130	2.0	3.40	130	2.0	< 2	0.48	0.5	8	163	77

CERTIFICATION: Ian Bucklen

Chemex Labs Ltd.

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SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172616	205 226	2.78	1.79	0.43	305	12	0.09	60	840	80	45	0.13	276	< 10	1270
172617	205 226	10.10	0.79	0.95	2460	2	0.03	230	3750	440	178	0.05	210	< 10	3420
172618	205 226	6.73	2.07	0.30	65	6	0.12	23	610	110	33	0.10	60	< 10	5860
172619	205 226	1.30	1.37	0.20	65	4	0.09	47	3870	6	613	0.09	351	< 10	78
172620	205 226	2.09	2.22	1.60	395	6	0.05	53	1020	4	244	0.16	250	< 10	174
172621	205 226	1.61	2.94	0.15	160	1	1.34	10	610	28	240	0.19	49	< 10	84
172622	205 226	1.14	2.90	0.16	210	2	1.43	8	540	24	336	0.19	44	< 10	50
172623	205 226	2.15	1.58	0.74	835	< 1	2.41	19	310	14	118	0.22	63	< 10	64
172624	205 226	2.35	1.34	0.91	1650	4	1.48	29	450	18	124	0.20	90	< 10	74
172625	205 226	2.07	1.22	0.72	900	5	0.09	49	740	10	107	0.13	153	< 10	142
172626	205 226	1.69	1.34	0.81	890	2	0.07	38	400	4	115	0.14	114	< 10	86
172627	205 226	2.36	2.10	1.15	415	6	0.08	46	760	4	184	0.16	194	< 10	166
172628	205 226	2.71	1.81	0.46	95	51	0.10	150	1250	14	64	0.16	913	< 10	1230
172629	205 226	2.38	2.10	0.60	305	5	0.09	53	1040	4	102	0.18	229	< 10	174
172630	205 226	2.84	1.22	0.21	70	11	0.09	89	3040	32	51	0.12	392	< 10	14
172631	205 226	2.22	1.16	0.21	70	16	0.08	75	3500	36	46	0.11	486	< 10	254
172632	205 226	1.74	1.01	0.18	45	20	0.04	137	5620	34	60	0.11	683	< 10	264
172633	205 226	2.84	1.84	0.40	65	22	0.10	105	1030	32	26	0.19	702	< 10	468
172634	205 226	2.08	1.15	0.22	60	55	0.08	200	2720	370	33	0.11	1105	< 10	806
172635	205 226	1.42	0.68	0.12	35	22	0.02	181	5760	3000	59	0.08	362	< 10	1155
172636	205 226	1.47	0.74	0.12	35	17	0.02	164	5630	270	58	0.08	495	< 10	398
172637	205 226	2.84	1.88	0.93	130	39	0.08	121	730	54	36	0.23	545	< 10	296
172638	205 226	2.40	1.46	0.65	75	95	0.06	216	1110	76	37	0.16	705	< 10	102

CERTIFICATION: Ita A Beddes

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9728158

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9728158

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 28-JUN-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
255	8	RUSH Geo ring to approx 150 mesh
295	8	RUSH crush and split (0-3 Kg)
3202	8	Rock - save entire reject
285	8	ICP - HF digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
991	8	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
956	8	Ag g/t: RUSH, aqua regia digest	AAS	0.3	350
301	8	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	8	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	8	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	8	Ba ppm	XRF	10	50000
444	8	Specific gravity S.G.	PICNOMETER	0.01	20.0
13	8	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	8	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	8	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	8	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	8	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	8	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	8	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	8	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	8	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	8	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	8	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	8	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	8	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	8	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	8	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	8	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	8	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	8	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	8	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	8	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	8	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	8	Pb ppm: 24 element, rock & core	AAS	2	10000
582	8	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	8	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	8	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	8	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	8	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 28-JUN-97
Invoice No. :I9728158
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9728158

SAMPLE	PREP CODE		Au ppb RUSH	Ag g/t RUSH	Cu %	Pb %	ZnBa (XRF %	Spec Gr ppm	S.G.	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
172825	255	295	5	0.3	0.01	0.02	0.47	2400	2.94	14	1.8	460	< 0.2	3.58	560	8.5	< 2	3.75	10.0	3	130
172826	255	295	< 5	0.5	0.01	0.10	0.82	1400	2.80	1	1.2	540	< 0.2	3.09	150	7.0	< 2	3.31	19.5	5	181
172827	255	295	< 5	0.3	0.01	0.08	0.39	1180	2.88	1	0.6	270	< 0.2	3.04	330	7.0	< 2	2.14	10.0	3	141
172828	255	295	10	0.5	0.01	0.03	0.21	1200	2.91	4	1.6	300	< 0.2	3.60	340	8.0	< 2	4.93	6.0	3	151
172829	255	295	30	1.2	0.01	0.03	0.66	1020	2.79	42	2.4	870	1.0	2.43	400	7.0	< 2	3.42	19.0	1	163
172830	255	295	10	0.6	0.01	0.04	2.40	1030	3.00	24	1.8	3020	0.2	2.02	250	7.5	< 2	3.20	64.5	3	174
172831	255	295	< 5	0.4	0.01	0.02	1.55	1140	2.93	14	2.4	2200	< 0.2	1.93	180	7.5	< 2	8.92	57.0	1	111
172832	255	295	< 5	< 0.3	< 0.01	0.04	< 0.01	720	2.98	30	5.6	40	< 0.2	0.95	160	5.0	< 2	17.15	< 0.5	< 1	70

CERTIFICATION: [signature]

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page : 1-B
Total Pages : 1
Certificate Date: 28-JUN-97
Invoice No. : I9728158
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9728158

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172825	255	295	71	7.20	1.83	0.70	3680	4	0.04	34	1040	120	25	0.10	173	< 10	4710
172826	255	295	79	5.31	1.61	0.60	2760	3	0.03	57	1500	900	24	0.11	212	< 10	7910
172827	255	295	64	8.00	1.58	0.93	3800	< 1	0.03	49	1240	680	21	0.13	183	< 10	3730
172828	255	295	80	8.58	1.80	0.67	3070	9	0.05	43	990	268	37	0.10	168	< 10	2050
172829	255	295	49	7.30	1.25	0.36	1295	6	0.02	23	1960	208	27	0.08	190	< 10	6110
172830	255	295	96	9.55	1.07	0.53	3140	10	0.02	39	2950	320	23	0.06	205	< 10	>10000
172831	255	295	55	8.53	1.00	0.63	3290	5	0.02	18	1440	120	55	0.06	158	< 10	>10000
172832	255	295	33	11.30	0.49	0.43	3900	10	< 0.01	10	1830	330	117	0.03	144	< 10	110

CERTIFICATION: [illegible]

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

): WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9729963

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9729963

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 20-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	289	Geochem ring to approx 150 mesh
226	289	0-3 Kg crush and split
3202	289	Rock - save entire reject
285	289	ICP - HF digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	289	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	289	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	289	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	289	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	289	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	289	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	289	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	289	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	289	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	289	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	289	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	289	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	289	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	289	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	289	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	289	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	289	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	289	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	289	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	289	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	289	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	289	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	289	Pb ppm: 24 element, rock & core	AAS	2	10000
582	289	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	289	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	289	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	289	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	289	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Certificate Date: 20-JUL-97
Invoice No. : I9729963
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172705	205	226	10	1	0.2	< 10	< 0.2	3.61	4330	1.0	< 2	0.30	< 0.5	9	96	55
172706	205	226	< 5	6	0.4	< 10	< 0.2	3.50	4000	1.0	< 2	0.08	< 0.5	13	101	60
172707	205	226	< 5	1	1.2	10	< 0.2	1.61	1040	< 0.5	< 2	4.20	< 0.5	4	138	9
172708	205	226	5	1	4.2	30	0.4	2.43	1000	0.5	< 2	3.12	< 0.5	3	200	15
172709	205	226	15	1	3.2	10	0.4	1.48	350	< 0.5	< 2	4.72	< 0.5	2	145	7
172710	205	226	< 5	2	2.2	40	< 0.2	0.90	550	< 0.5	2	10.35	< 0.5	< 1	103	6
172711	205	226	< 5	1	0.4	40	< 0.2	2.95	3410	0.5	< 2	0.96	< 0.5	2	166	52
172712	205	226	< 5	1	< 0.2	20	< 0.2	3.36	2830	0.5	< 2	0.91	< 0.5	8	160	77
172713	205	226	< 5	1	< 0.2	20	< 0.2	3.40	3000	0.5	< 2	0.55	< 0.5	6	181	95
172714	205	226	< 5	2	0.6	30	< 0.2	3.09	3240	0.5	< 2	0.42	< 0.5	6	159	65
172715	205	226	< 5	2	0.2	30	< 0.2	3.10	680	0.5	< 2	0.70	< 0.5	6	127	72
172716	205	226	10	2	< 0.2	30	< 0.2	4.06	1770	1.5	< 2	0.69	< 0.5	7	119	71
172717	205	226	< 5	1	< 0.2	20	< 0.2	3.41	970	1.0	< 2	0.60	< 0.5	6	116	62
172718	205	226	< 5	1	0.2	30	< 0.2	0.92	1120	< 0.5	< 2	14.05	< 0.5	< 1	79	11
172719	205	226	10	1	< 0.2	10	< 0.2	1.55	2420	< 0.5	< 2	8.87	< 0.5	2	131	16
172720	205	226	< 5	2	0.2	10	< 0.2	1.31	1940	< 0.5	< 2	10.15	< 0.5	1	121	11
172721	205	226	20	1	< 0.2	30	< 0.2	2.89	300	0.5	< 2	0.89	< 0.5	11	152	70
172722	205	226	5	1	0.2	30	< 0.2	1.60	1990	< 0.5	< 2	7.24	< 0.5	3	129	17
172723	205	226	< 5	1	< 0.2	10	< 0.2	1.26	1880	< 0.5	< 2	10.40	< 0.5	< 1	131	10
172724	205	226	5	1	< 0.2	20	< 0.2	3.20	350	1.0	< 2	1.09	< 0.5	6	84	92
172725	205	226	< 5	6	0.2	20	< 0.2	2.18	2970	0.5	< 2	7.75	< 0.5	3	119	19
172726	205	226	< 5	2	< 0.2	20	< 0.2	3.21	590	0.5	< 2	1.18	< 0.5	9	137	83
172727	205	226	< 5	2	< 0.2	100	< 0.2	2.77	420	0.5	< 2	1.85	< 0.5	6	136	63
172728	205	226	< 5	1	< 0.2	20	< 0.2	2.63	1020	0.5	< 2	0.57	< 0.5	5	129	81
172729	205	226	< 5	1	< 0.2	10	< 0.2	3.54	670	1.0	< 2	1.33	< 0.5	7	142	73
172730	205	226	10	2	0.8	< 10	< 0.2	3.46	640	0.5	2	1.53	< 0.5	9	144	92
172731	205	226	< 5	1	< 0.2	< 10	< 0.2	3.33	1060	0.5	< 2	0.46	< 0.5	7	86	56
172732	205	226	< 5	1	< 0.2	< 10	< 0.2	4.13	3720	1.5	< 2	1.27	< 0.5	6	80	57
172733	205	226	< 5	6	< 0.2	< 10	< 0.2	4.79	3250	1.5	< 2	0.86	0.5	8	81	48
172734	205	226	< 5	1	< 0.2	10	< 0.2	3.07	290	1.0	< 2	1.68	< 0.5	6	117	79
172735	205	226	10	4	< 0.2	30	< 0.2	3.19	250	1.0	< 2	1.44	0.5	10	149	62
172736	205	226	< 5	1	< 0.2	10	< 0.2	7.83	3040	4.0	< 2	0.42	0.5	< 1	69	9
172737	205	226	< 5	1	< 0.2	< 10	< 0.2	6.71	1450	3.5	2	0.45	< 0.5	1	49	5
172738	205	226	5	1	0.2	< 10	< 0.2	3.49	870	1.0	< 2	1.89	< 0.5	8	136	74
172739	205	226	10	6	0.2	10	< 0.2	3.83	270	1.5	< 2	3.32	< 0.5	14	140	67
172740	205	226	< 5	8	< 0.2	20	< 0.2	2.95	2370	0.5	2	2.72	< 0.5	6	107	44
172741	205	226	< 5	2	0.2	30	< 0.2	2.51	710	1.0	< 2	7.98	< 0.5	4	140	29
172742	205	226	< 5	1	0.2	20	< 0.2	1.99	1890	0.5	< 2	5.38	< 0.5	3	134	26
172743	205	226	< 5	2	< 0.2	10	< 0.2	3.30	1190	1.0	< 2	2.16	< 0.5	6	155	56
172744	205	226	< 5	10	< 0.2	10	< 0.2	2.93	2170	0.5	< 2	3.76	< 0.5	7	140	45

CERTIFICATION: Hart Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page : 1-B
Total Pages : 8
Certificate Date: 20-JUL-97
Invoice No. : I9729963
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172705	205 226	2.18	1.18	0.65	1555	2	0.12	32	260	6	33	0.20	77	< 10	68
172706	205 226	2.30	1.16	0.61	1625	2	0.03	44	250	8	34	0.18	69	< 10	70
172707	205 226	1.14	0.66	0.32	370	4	0.01	30	720	4	209	0.12	39	< 10	52
172708	205 226	1.41	1.09	0.36	170	3	0.01	28	910	6	164	0.18	67	< 10	74
172709	205 226	0.94	0.67	0.30	175	3	< 0.01	15	1040	4	165	0.11	39	< 10	42
172710	205 226	0.46	0.39	0.37	220	3	< 0.01	12	1020	2	315	0.09	28	< 10	36
172711	205 226	1.92	0.94	0.55	295	1	0.33	17	260	14	79	0.15	104	< 10	54
172712	205 226	1.88	1.29	0.97	760	3	0.22	34	370	< 2	49	0.16	75	< 10	74
172713	205 226	1.82	1.40	1.11	890	< 1	0.04	33	540	< 2	66	0.17	87	< 10	76
172714	205 226	1.77	1.24	0.98	625	3	0.06	31	390	6	49	0.16	76	< 10	78
172715	205 226	1.70	1.33	0.80	1755	3	0.11	35	210	< 2	84	0.15	93	< 10	66
172716	205 226	2.15	1.71	0.68	1950	1	0.20	30	180	< 2	57	0.18	109	< 10	64
172717	205 226	1.83	1.41	0.57	1300	3	0.23	26	140	< 2	48	0.14	102	< 10	54
172718	205 226	0.85	0.38	0.29	445	5	0.11	14	2090	8	866	0.06	32	< 10	42
172719	205 226	0.97	0.73	0.62	650	2	< 0.01	17	1160	8	571	0.11	47	< 10	50
172720	205 226	0.89	0.56	0.59	575	3	< 0.01	15	1090	10	638	0.09	36	< 10	42
172721	205 226	1.73	1.24	0.54	360	3	0.04	61	280	16	52	0.14	98	< 10	100
172722	205 226	1.18	0.74	0.84	765	3	< 0.01	16	950	6	365	0.08	50	< 10	54
172723	205 226	0.81	0.56	0.61	415	6	< 0.01	11	1090	2	749	0.09	37	< 10	38
172724	205 226	1.97	1.42	0.88	2110	4	0.04	36	260	6	80	0.15	120	< 10	78
172725	205 226	1.23	1.00	0.80	795	3	0.08	22	920	8	765	0.13	59	< 10	56
172726	205 226	2.26	1.21	1.01	2240	4	0.23	37	380	8	119	0.16	114	< 10	66
172727	205 226	1.81	1.20	0.75	2020	3	0.15	32	590	8	195	0.15	85	< 10	70
172728	205 226	1.68	1.16	0.75	1715	2	0.01	37	180	4	76	0.13	98	< 10	70
172729	205 226	2.23	1.49	1.00	1840	3	0.11	37	450	4	141	0.21	116	< 10	70
172730	205 226	2.45	1.44	1.02	3420	1	0.06	42	490	6	144	0.19	148	< 10	90
172731	205 226	1.82	1.39	0.74	950	1	0.04	28	170	4	49	0.16	93	< 10	56
172732	205 226	1.76	1.20	0.77	1760	1	0.05	25	190	18	87	0.14	67	< 10	56
172733	205 226	2.11	1.29	0.76	1550	1	1.03	23	240	12	96	0.17	56	< 10	58
172734	205 226	1.85	1.63	0.54	1730	4	0.01	38	530	34	146	0.12	124	< 10	72
172735	205 226	2.35	1.41	0.65	1595	4	0.02	37	530	24	90	0.13	146	< 10	150
172736	205 226	2.71	3.18	1.35	115	2	1.43	10	410	24	49	0.22	64	< 10	106
172737	205 226	2.24	2.96	1.25	155	3	0.99	6	340	84	43	0.19	43	< 10	68
172738	205 226	6.25	0.72	1.06	3220	3	0.03	32	1460	16	168	0.16	303	< 10	154
172739	205 226	3.78	1.43	1.42	1875	5	0.04	46	890	8	141	0.32	199	< 10	112
172740	205 226	1.50	1.21	0.87	905	< 1	0.21	24	430	6	142	0.15	69	< 10	60
172741	205 226	1.35	1.18	0.74	625	3	0.03	31	850	14	392	0.15	73	< 10	80
172742	205 226	1.31	0.86	0.96	805	3	0.20	20	580	6	328	0.10	66	< 10	68
172743	205 226	2.07	1.22	0.89	1900	2	0.15	29	240	8	131	0.16	99	< 10	68
172744	205 226	1.59	1.24	0.97	1150	3	0.10	30	510	10	396	0.15	69	< 10	64

CERTIFICATION: Ivan Bridden

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Certificate Date: 20-JUL-97
Invoice No. :19729963
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172745	205	226	10	2	< 0.2	10	< 0.2	4.08	1240	1.5	< 2	0.93	0.5	8	88	59
172746	205	226	< 5	1	< 0.2	30	< 0.2	3.74	3530	2.0	< 2	0.37	< 0.5	7	157	51
172747	205	226	5	2	< 0.2	10	< 0.2	2.25	500	0.5	< 2	0.70	< 0.5	12	159	74
172748	205	226	< 5	1	< 0.2	30	< 0.2	3.19	2080	1.0	< 2	0.47	< 0.5	12	137	63
172749	205	226	< 5	4	< 0.2	10	< 0.2	2.06	3050	< 0.5	< 2	0.62	< 0.5	13	103	110
172750	205	226	< 5	2	< 0.2	10	< 0.2	2.89	3880	0.5	< 2	0.27	< 0.5	12	173	43
172751	205	226	< 5	1	< 0.2	10	< 0.2	2.91	3220	0.5	< 2	0.48	< 0.5	9	108	51
172752	205	226	< 5	2	< 0.2	10	< 0.2	2.89	4030	1.0	< 2	0.24	0.5	9	116	55
172753	205	226	5	1	< 0.2	20	< 0.2	3.69	2740	1.5	< 2	0.60	0.5	12	153	37
172754	205	226	5	1	< 0.2	20	< 0.2	3.88	2540	1.5	< 2	1.13	< 0.5	11	167	82
172755	205	226	25	6	< 0.2	250	< 0.2	3.60	290	1.5	< 2	1.07	0.5	12	147	146
172756	205	226	5	4	0.6	540	< 0.2	3.03	270	1.0	< 2	1.24	1.5	10	176	81
172757	205	226	< 5	2	< 0.2	30	< 0.2	3.36	2140	2.0	< 2	1.47	< 0.5	7	189	65
172758	205	226	< 5	4	< 0.2	110	< 0.2	2.98	1980	1.5	< 2	2.43	0.5	5	96	63
172759	205	226	< 5	1	< 0.2	20	< 0.2	3.82	6260	1.5	2	1.52	0.5	9	98	80
172760	205	226	< 5	2	< 0.2	30	< 0.2	3.06	3500	1.5	< 2	0.49	< 0.5	6	182	64
172761	205	226	< 5	6	< 0.2	950	< 0.2	2.62	240	1.5	2	0.54	5.0	6	178	67
172762	205	226	< 5	6	0.2	280	< 0.2	1.25	250	0.5	< 2	8.67	0.5	4	116	14
172763	205	226	< 5	4	< 0.2	30	< 0.2	1.20	460	0.5	< 2	8.16	< 0.5	4	136	17
172764	205	226	< 5	4	< 0.2	20	< 0.2	3.15	2070	1.5	< 2	0.83	< 0.5	9	112	96
172765	205	226	< 5	1	< 0.2	10	< 0.2	3.05	5020	1.0	< 2	0.88	< 0.5	10	194	57
172766	205	226	< 5	2	< 0.2	10	< 0.2	3.32	3370	1.0	< 2	0.36	< 0.5	10	188	68
172767	205	226	< 5	2	1.0	20	< 0.2	3.24	2500	1.0	< 2	0.63	< 0.5	9	136	527
172768	205	226	< 5	4	< 0.2	< 10	< 0.2	2.39	1460	0.5	< 2	0.50	< 0.5	13	161	55
172769	205	226	< 5	1	< 0.2	10	< 0.2	2.01	1820	0.5	< 2	0.66	< 0.5	10	118	85
172770	205	226	< 5	2	0.2	30	< 0.2	2.12	610	1.0	< 2	0.29	< 0.5	9	136	54
172771	205	226	< 5	1	< 0.2	10	< 0.2	2.15	1420	0.5	< 2	0.44	< 0.5	2	131	61
172772	205	226	< 5	1	0.4	120	< 0.2	2.44	190	1.0	< 2	0.32	< 0.5	6	104	72
172773	205	226	< 5	1	0.2	170	< 0.2	2.42	210	1.5	< 2	0.39	< 0.5	4	176	52
172774	205	226	< 5	1	0.4	50	< 0.2	3.93	810	2.5	< 2	2.12	< 0.5	5	91	69
172775	205	226	< 5	1	0.6	30	0.6	0.46	280	5.0	< 2	1.97	< 0.5	< 1	51	8
172776	205	226	< 5	1	0.2	10	< 0.2	0.26	670	6.0	< 2	4.65	< 0.5	< 1	34	6
172777	205	226	< 5	1	0.2	30	< 0.2	0.29	890	5.0	2	8.51	< 0.5	2	35	18
172778	205	226	< 5	1	0.2	< 10	< 0.2	0.35	1590	3.0	< 2	0.91	< 0.5	< 1	43	6
172779	205	226	< 5	1	< 0.2	< 10	< 0.2	0.41	1110	3.0	< 2	1.04	< 0.5	< 1	48	5
172780	205	226	< 5	1	0.2	10	< 0.2	0.52	1180	3.0	< 2	0.58	< 0.5	< 1	46	7
172781	205	226	< 5	1	0.2	10	< 0.2	1.06	350	2.0	< 2	1.87	< 0.5	< 1	89	13
172782	205	226	30	20	1.6	110	< 0.2	1.17	120	3.0	< 2	6.63	< 0.5	< 1	90	38
172783	205	226	20	20	0.4	20	< 0.2	1.16	80	1.0	< 2	13.20	< 0.5	1	72	49
172784	205	226	10	78	< 0.2	110	< 0.2	3.18	420	4.5	< 2	2.58	1.0	11	102	88

CERTIFICATION:

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Analytical Chemists * Geochemists * Registered Assayers

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :2-B
Total Pages :8
Certificate Date: 20-JUL-97
Invoice No. :I9729963
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172745	205	226	2.07	1.62	0.92	735	7	0.10	37	290	24	109	0.16	83	< 10	92
172746	205	226	1.56	0.85	0.67	1270	3	1.19	32	160	24	61	0.12	45	< 10	64
172747	205	226	1.69	0.43	0.65	1440	3	0.02	29	210	4	73	0.12	41	< 10	40
172748	205	226	2.04	0.64	0.56	1985	2	0.03	21	270	6	65	0.21	86	< 10	52
172749	205	226	1.71	0.37	0.64	1510	1	0.32	20	180	< 2	160	0.13	41	< 10	40
172750	205	226	1.81	0.97	0.72	1010	< 1	0.29	34	190	6	128	0.18	50	< 10	52
172751	205	226	1.72	0.99	0.76	1650	2	0.10	33	190	10	195	0.17	55	< 10	54
172752	205	226	1.67	1.10	0.59	1220	2	0.04	26	160	4	71	0.15	53	< 10	48
172753	205	226	1.99	1.47	0.81	1210	1	0.05	34	210	6	57	0.15	77	< 10	64
172754	205	226	2.20	1.50	0.96	1165	2	0.05	36	240	8	110	0.16	82	< 10	74
172755	205	226	2.87	1.25	0.58	695	1	0.06	46	180	< 2	100	0.16	110	< 10	264
172756	205	226	1.86	0.72	0.51	870	3	0.03	26	160	8	110	0.11	60	< 10	842
172757	205	226	2.17	1.16	0.75	1120	1	0.04	32	250	4	93	0.17	84	< 10	82
172758	205	226	1.90	1.00	0.73	1405	2	0.01	28	160	4	66	0.12	79	< 10	126
172759	205	226	2.28	1.13	0.98	1590	1	0.41	34	310	10	132	0.21	79	< 10	66
172760	205	226	1.95	1.05	0.73	840	3	0.10	35	270	4	39	0.18	85	< 10	52
172761	205	226	1.91	1.03	0.52	350	2	0.04	31	180	< 2	42	0.12	69	< 10	1155
172762	205	226	0.93	0.51	0.48	2460	5	< 0.01	13	760	16	672	0.11	42	< 10	274
172763	205	226	0.96	0.38	1.31	2840	5	< 0.01	10	820	18	519	0.08	33	< 10	34
172764	205	226	1.83	1.10	0.74	855	1	0.03	34	220	< 2	48	0.15	56	< 10	52
172765	205	226	1.58	1.08	0.72	1700	4	0.03	33	230	12	81	0.14	75	< 10	50
172766	205	226	2.07	1.25	0.67	590	3	0.06	35	190	6	162	0.16	57	< 10	56
172767	205	226	1.91	1.14	0.87	1300	3	0.05	37	230	< 2	162	0.14	63	< 10	88
172768	205	226	1.55	0.86	0.57	1855	< 1	0.03	27	190	4	121	0.14	47	< 10	42
172769	205	226	1.54	0.40	0.56	1550	1	0.04	21	200	< 2	65	0.11	36	< 10	48
172770	205	226	1.35	0.72	0.37	230	5	0.03	47	100	4	60	0.10	66	< 10	48
172771	205	226	2.37	0.94	0.45	440	2	0.01	21	160	< 2	116	0.12	72	< 10	30
172772	205	226	0.95	0.11	0.17	150	1	0.04	47	70	34	108	0.10	123	< 10	170
172773	205	226	1.11	0.55	0.27	295	1	0.04	41	100	18	99	0.10	129	< 10	274
172774	205	226	5.19	1.42	0.74	3700	3	0.01	19	770	40	186	0.19	127	< 10	96
172775	205	226	16.35	0.01	0.39	3040	9	< 0.01	4	630	< 2	488	0.01	75	< 10	32
172776	205	226	14.05	0.05	0.36	3430	8	< 0.01	4	870	< 2	675	0.01	59	< 10	26
172777	205	226	11.60	0.05	0.34	4320	19	< 0.01	12	550	< 2	721	0.01	58	< 10	60
172778	205	226	19.55	0.07	0.28	2880	9	0.10	4	360	< 2	483	0.01	68	< 10	24
172779	205	226	20.7	0.10	0.31	3470	11	0.12	4	510	< 2	455	0.01	76	< 10	28
172780	205	226	16.70	0.06	0.23	1915	8	0.01	5	590	< 2	387	0.01	90	< 10	28
172781	205	226	18.40	0.15	0.52	5810	9	0.01	7	1170	< 2	266	0.05	140	< 10	42
172782	205	226	17.50	0.30	0.67	8090	10	0.01	18	1950	128	237	0.05	191	< 10	352
172783	205	226	6.56	0.16	0.42	6090	7	< 0.01	16	1490	42	564	0.05	125	< 10	38
172784	205	226	5.09	1.39	0.86	4580	3	< 0.01	62	1700	120	124	0.15	283	< 10	270

CERTIFICATION:

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To: WESTMIN RESOURCES LTD.
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Project : WOLVERINE
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Page N :3-A
Total Pages :8
Certificate Date: 20-JUL-97
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CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172785	205	226	< 5	28	0.4	100	< 0.2	3.58	310	5.5	< 2	3.53	6.0	13	133	93
172786	205	226	20	94	4.2	40	< 0.2	0.82	140	2.0	< 2	10.45	< 0.5	< 1	39	28
172787	205	226	50	66	3.0	40	< 0.2	1.11	160	3.0	< 2	10.70	< 0.5	3	60	50
172788	205	226	< 5	1	< 0.2	< 10	< 0.2	7.74	570	7.0	< 2	1.70	< 0.5	< 1	31	10
172789	205	226	< 5	1	< 0.2	3000	< 0.2	9.45	380	9.0	< 2	1.01	30.5	< 1	42	12
172790	205	226	< 5	26	1.2	70	0.6	2.88	100	4.5	< 2	0.31	< 0.5	10	101	38
172791	205	226	30	10	1.8	30	1.0	1.23	90	4.0	2	14.35	< 0.5	6	74	67
172792	205	226	< 5	1	0.2	980	0.4	1.57	90	8.5	< 2	9.46	9.5	3	75	55
172793	205	226	< 5	2	0.2	120	0.4	2.83	420	4.0	< 2	1.64	0.5	5	114	72
172794	205	226	< 5	1	0.2	10	< 0.2	3.43	>10000	4.0	< 2	6.87	0.5	1	55	28
172795	205	226	< 5	1	0.6	340	< 0.2	1.84	170	4.0	< 2	5.55	6.0	4	67	40
172796	205	226	15	1	2.8	50	< 0.2	1.78	130	7.5	< 2	10.65	< 0.5	5	59	43
172797	205	226	10	2	0.4	200	< 0.2	2.33	270	2.5	< 2	1.87	0.5	4	83	53
172798	205	226	< 5	1	1.2	20	< 0.2	1.32	60	5.0	< 2	7.71	< 0.5	< 1	44	40
172799	205	226	10	1	2.0	20	< 0.2	1.06	80	3.5	< 2	9.31	< 0.5	< 1	43	29
172800	205	226	5	30	4.8	100	< 0.2	0.99	100	5.0	< 2	22.5	< 0.5	< 1	36	27
172801	205	226	< 5	36	2.0	1200	< 0.2	1.01	110	7.5	2	22.3	14.0	< 1	31	29
172802	205	226	10	14	1.0	1280	0.6	2.36	100	9.5	< 2	6.38	3.0	5	85	51
172803	205	226	10	36	0.4	20	< 0.2	2.35	1710	4.5	< 2	2.35	< 0.5	5	184	65
172804	205	226	5	1	0.8	20	< 0.2	2.94	190	6.0	< 2	5.89	< 0.5	4	103	46
172805	205	226	10	22	3.0	80	0.6	1.87	120	10.0	< 2	11.70	0.5	3	84	46
172806	205	226	15	28	2.4	10	< 0.2	0.49	70	4.5	< 2	17.65	< 0.5	< 1	22	16
172807	205	226	5	22	2.0	200	3.6	0.38	150	3.5	2	14.25	4.0	< 1	40	19
172808	205	226	20	50	2.6	10	0.4	0.61	120	3.0	< 2	14.50	< 0.5	< 1	42	15
172809	205	226	50	88	7.2	100	0.4	0.67	110	3.0	6	12.80	0.5	2	34	31
172810	205	226	5	2	1.6	< 10	< 0.2	1.14	100	3.0	8	11.25	0.5	5	68	59
172811	205	226	15	22	3.2	10	< 0.2	0.75	110	3.5	10	15.75	< 0.5	< 1	25	22
172812	205	226	15	22	4.2	10	< 0.2	0.73	110	3.0	6	12.00	< 0.5	1	28	29
172813	205	226	10	6	2.6	10	< 0.2	0.48	60	0.5	8	8.05	< 0.5	2	21	32
172814	205	226	10	18	3.6	130	< 0.2	1.84	140	6.5	8	9.35	4.5	9	64	56
172815	205	226	< 5	1	0.2	10	< 0.2	2.69	250	9.0	6	2.84	1.0	6	146	23
172816	205	226	< 5	1	0.4	140	< 0.2	2.22	260	8.0	6	3.17	3.0	5	166	20
172817	205	226	< 5	16	2.2	40	< 0.2	3.76	330	15.0	6	3.36	1.5	14	116	45
172818	205	226	< 5	1	1.6	20	< 0.2	2.60	370	7.5	2	4.14	0.5	15	174	29
172819	205	226	< 5	1	0.6	10	< 0.2	1.46	510	2.5	10	3.35	0.5	5	108	14
172820	205	226	< 5	6	2.4	30	< 0.2	2.79	100	6.0	6	3.18	1.5	14	144	73
172821	205	226	< 5	18	3.0	10	< 0.2	4.00	70	15.0	6	6.25	0.5	7	71	43
172822	205	226	< 5	10	1.0	240	< 0.2	3.37	310	6.5	6	1.90	6.5	8	158	76
172823	205	226	55	12	1.8	250	0.8	2.83	320	3.5	6	3.15	6.0	8	93	105
172824	205	226	10	6	4.0	180	4.0	2.56	310	5.0	4	9.11	7.0	10	178	90

CERTIFICATION: Stuart Bichlan

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Certificate Date: 20-JUL-97
Invoice No. : I9729963
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172785	205	226	5.52	1.58	0.89	3320	4	< 0.01	36	1990	38	82	0.17	316	< 10	618
172786	205	226	17.00	0.41	0.20	3260	8	0.03	9	980	132	254	0.03	108	< 10	42
172787	205	226	15.35	0.53	0.26	2380	8	0.02	12	720	140	173	0.04	104	< 10	46
172788	205	226	2.72	3.99	1.25	625	4	0.15	5	90	6	43	0.16	7	< 10	52
172789	205	226	2.78	4.94	1.24	385	1	0.20	7	100	38	30	0.19	20	< 10	8710
172790	205	226	4.70	1.41	0.34	160	7	0.07	41	190	104	10	0.09	124	< 10	188
172791	205	226	9.92	0.31	0.44	3870	9	0.07	20	1210	252	608	0.05	108	< 10	148
172792	205	226	7.99	0.12	0.50	3290	18	0.13	23	1360	18	563	0.07	132	< 10	2180
172793	205	226	4.12	1.22	0.54	1585	4	0.27	48	920	54	155	0.14	189	< 10	164
172794	205	226	7.65	1.31	0.68	4180	5	0.47	13	810	8	583	0.10	111	< 10	34
172795	205	226	10.50	0.40	0.76	4390	8	0.03	37	1380	14	421	0.07	137	< 10	1645
172796	205	226	10.65	0.28	1.27	3640	14	< 0.01	19	990	216	246	0.07	165	< 10	144
172797	205	226	2.52	0.71	0.34	810	4	< 0.01	22	360	22	121	0.11	120	< 10	416
172798	205	226	15.15	0.24	0.73	5970	12	0.03	15	1570	100	149	0.06	132	< 10	154
172799	205	226	23.9	0.02	1.32	8300	13	0.01	5	1310	76	126	0.04	70	< 10	156
172800	205	226	8.00	0.39	0.43	4860	9	< 0.01	11	1480	192	219	0.04	127	10	276
172801	205	226	8.00	0.46	0.42	4840	11	< 0.01	13	810	230	194	0.05	123	< 10	3220
172802	205	226	5.70	0.95	0.46	3200	8	< 0.01	33	1990	128	103	0.10	211	< 10	3480
172803	205	226	6.48	0.82	0.65	2630	7	< 0.01	52	900	30	38	0.12	225	< 10	54
172804	205	226	6.21	0.70	0.67	5610	6	0.01	36	1010	28	109	0.11	175	< 10	32
172805	205	226	7.87	0.81	0.54	3360	11	< 0.01	20	1400	252	91	0.07	176	< 10	590
172806	205	226	11.60	0.21	0.36	3890	12	< 0.01	6	750	480	80	0.02	77	< 10	40
172807	205	226	10.70	0.09	0.22	3730	17	< 0.01	7	1180	604	138	0.01	80	< 10	1310
172808	205	226	12.60	0.11	0.36	3980	14	0.02	13	660	440	245	0.01	72	< 10	42
172809	205	226	18.80	0.28	0.39	3480	21	0.01	14	960	580	126	0.01	130	< 10	568
172810	205	226	11.50	0.38	0.70	5070	9	< 0.01	31	1100	300	119	0.04	121	< 10	86
172811	205	226	14.55	0.34	0.50	4390	10	< 0.01	6	910	460	118	0.03	106	10	76
172812	205	226	16.05	0.35	0.48	4380	12	0.01	3	800	510	91	0.03	98	< 10	62
172813	205	226	16.60	0.22	0.67	6140	9	0.01	5	680	290	83	0.01	92	< 10	60
172814	205	226	14.30	0.78	0.72	5610	8	0.01	22	2200	188	100	0.08	214	< 10	1155
172815	205	226	4.22	1.20	0.55	1595	< 1	0.01	15	1050	24	33	0.11	254	< 10	42
172816	205	226	3.75	1.03	0.45	1455	< 1	< 0.01	17	1410	70	35	0.10	229	< 10	928
172817	205	226	6.85	1.65	0.56	1560	< 1	0.08	31	2390	160	39	0.15	369	< 10	256
172818	205	226	6.19	0.95	0.57	1860	2	< 0.01	21	1410	34	39	0.10	221	< 10	54
172819	205	226	7.63	0.62	0.83	4970	< 1	< 0.01	11	1160	8	46	0.07	148	< 10	40
172820	205	226	4.45	1.28	0.39	1425	< 1	< 0.01	28	870	52	32	0.11	184	< 10	184
172821	205	226	7.76	1.97	0.45	2050	3	0.06	19	1800	32	55	0.16	167	< 10	36
172822	205	226	4.17	1.50	0.62	1590	< 1	0.02	77	400	70	22	0.15	228	< 10	2890
172823	205	226	10.10	1.25	0.65	2990	5	0.03	46	1090	308	26	0.09	183	< 10	2600
172824	205	226	5.88	1.27	0.80	2960	7	0.01	40	1480	490	167	0.09	187	60	1770

CERTIFICATION: Stewart Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Certificate Date: 20-JUL-97
Invoice No. : I9729963
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172833	205	226	10	52	8.4	10	< 0.2	0.50	40	3.5	< 2	18.15	< 0.5	< 1	69	23
172834	205	226	25	30	6.2	40	< 0.2	1.23	10	7.0	< 2	14.20	< 0.5	< 1	68	32
172835	205	226	< 5	8	0.6	10	< 0.2	2.74	210	4.5	< 2	2.68	< 0.5	10	115	123
172836	205	226	< 5	1	0.2	20	< 0.2	3.02	240	2.0	< 2	1.45	< 0.5	7	124	68
172837	205	226	10	1	9.2	60	< 0.2	1.76	90	2.5	< 2	7.60	< 0.5	3	88	33
172838	205	226	< 5	1	0.8	150	< 0.2	3.72	170	4.5	< 2	1.47	< 0.5	8	124	58
172839	205	226	< 5	1	< 0.2	110	< 0.2	2.31	260	2.5	< 2	6.13	0.5	8	110	43
172840	205	226	< 5	2	< 0.2	40	< 0.2	2.56	190	2.5	< 2	2.08	0.5	8	105	42
172841	205	226	< 5	10	0.2	10	< 0.2	3.44	7240	2.0	< 2	0.88	0.5	12	92	66
172842	205	226	< 5	8	0.8	30	< 0.2	2.75	600	1.5	< 2	0.67	< 0.5	5	160	41
172843	205	226	25	1	0.8	30	< 0.2	2.12	200	1.0	< 2	0.79	< 0.5	3	119	69
172844	205	226	< 5	1	1.6	30	< 0.2	2.60	340	1.5	< 2	0.71	< 0.5	2	109	89
172845	205	226	< 5	4	0.6	30	< 0.2	3.41	270	1.5	< 2	1.58	< 0.5	11	142	56
172846	205	226	< 5	1	0.8	40	< 0.2	3.26	190	2.0	< 2	1.48	< 0.5	5	129	67
172847	205	226	< 5	22	0.2	30	< 0.2	3.48	890	3.0	< 2	1.17	< 0.5	12	147	45
172848	205	226	< 5	1	< 0.2	20	< 0.2	2.35	380	3.0	< 2	0.32	< 0.5	3	163	57
172849	205	226	< 5	1	0.2	20	< 0.2	2.33	370	3.5	< 2	0.27	< 0.5	1	160	62
172850	205	226	< 5	1	0.2	20	< 0.2	2.32	410	3.0	< 2	0.40	< 0.5	3	174	59
172851	205	226	10	1	< 0.2	< 10	< 0.2	2.30	930	2.5	< 2	0.33	< 0.5	2	157	56
172852	205	226	< 5	1	0.2	20	0.6	2.42	380	3.0	< 2	0.22	< 0.5	1	169	52
172853	205	226	< 5	2	1.2	20	0.4	3.20	120	2.0	< 2	0.40	< 0.5	3	146	90
172854	205	226	5	1	4.0	210	< 0.2	3.49	120	2.0	< 2	4.51	< 0.5	3	83	38
172855	205	226	< 5	1	0.4	90	< 0.2	3.02	150	3.0	< 2	1.55	< 0.5	3	143	51
172856	205	226	< 5	1	2.8	170	< 0.2	2.24	30	3.0	< 2	0.50	1.5	1	139	55
172857	205	226	< 5	8	3.2	30	< 0.2	0.99	20	2.5	< 2	15.20	< 0.5	< 1	59	31
172858	205	226	< 5	8	2.2	10	< 0.2	0.91	30	3.0	< 2	18.45	< 0.5	1	43	26
172859	205	226	< 5	14	4.4	60	< 0.2	1.70	20	6.0	< 2	14.60	< 0.5	3	63	52
172860	205	226	< 5	4	1.8	40	< 0.2	0.37	30	2.0	< 2	>25.0	< 0.5	< 1	31	13
172861	205	226	< 5	1	1.2	20	< 0.2	0.56	40	2.0	< 2	>25.0	< 0.5	< 1	21	8
172862	205	226	< 5	6	1.8	50	< 0.2	0.74	20	5.0	< 2	21.5	< 0.5	2	28	19
172863	205	226	< 5	1	1.0	30	< 0.2	0.29	120	1.0	< 2	5.84	< 0.5	< 1	56	11
172864	205	226	< 5	1	0.8	< 10	< 0.2	0.17	340	0.5	< 2	24.2	< 0.5	< 1	10	4
172865	205	226	< 5	4	1.6	1680	< 0.2	3.73	120	10.5	< 2	0.86	8.0	3	71	151
172866	205	226	10	2	2.8	880	< 0.2	3.45	80	9.0	< 2	3.33	5.0	3	74	90
172867	205	226	10	1	1.8	200	< 0.2	1.16	10	5.0	< 2	12.25	1.0	< 1	51	43
172868	205	226	15	1	1.4	640	< 0.2	0.80	40	4.5	2	19.65	1.0	< 1	30	23
172869	205	226	< 5	1	1.4	470	< 0.2	0.27	30	2.5	< 2	10.55	2.5	3	48	36
172870	205	226	< 5	10	1.0	170	< 0.2	1.23	20	3.0	< 2	0.71	0.5	1	65	42
172871	205	226	< 5	6	0.6	70	< 0.2	1.79	30	5.5	< 2	1.97	< 0.5	4	77	50
172872	205	226	< 5	1	< 0.2	10	< 0.2	0.75	80	4.0	< 2	8.05	< 0.5	< 1	26	21

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
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British Columbia, Canada V7J 2C1
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Certificate Date: 20-JUL-97
Invoice No. : 19729963
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172833	205	226	9.63	0.22	0.35	3660	13	0.01	15	1750	656	131	0.01	121	10	30
172834	205	226	12.15	0.56	0.45	3600	15	0.04	16	1300	510	142	0.04	146	< 10	164
172835	205	226	3.98	1.16	0.50	2780	4	0.02	41	420	40	39	0.11	134	< 10	70
172836	205	226	2.29	1.04	0.40	1390	4	0.04	43	340	16	55	0.10	108	< 10	26
172837	205	226	9.97	0.11	1.86	2630	12	0.01	8	430	8	200	0.05	77	< 10	28
172838	205	226	3.19	1.12	0.66	545	11	0.07	31	260	54	59	0.14	139	< 10	464
172839	205	226	2.00	0.42	0.27	980	26	0.01	35	840	36	309	0.09	95	< 10	510
172840	205	226	2.42	0.48	0.30	430	15	0.03	32	830	28	139	0.11	105	< 10	268
172841	205	226	2.72	1.34	0.41	480	11	0.06	47	700	14	75	0.16	105	< 10	130
172842	205	226	3.66	1.05	0.40	1045	4	0.05	25	230	< 2	64	0.13	84	< 10	52
172843	205	226	6.58	0.34	0.43	2770	7	0.02	16	500	< 2	75	0.08	105	< 10	40
172844	205	226	8.53	0.07	0.58	3120	12	0.01	16	670	< 2	84	0.11	126	< 10	38
172845	205	226	4.68	0.76	0.59	5830	34	0.04	75	310	4	154	0.15	98	< 10	52
172846	205	226	3.07	1.06	0.63	1040	4	0.06	21	440	< 2	103	0.10	98	< 10	66
172847	205	226	2.09	1.32	0.47	870	15	0.06	53	510	20	170	0.15	109	< 10	264
172848	205	226	1.36	0.83	0.31	340	6	0.05	23	90	4	77	0.09	100	< 10	62
172849	205	226	1.08	0.88	0.31	310	1	0.06	13	70	4	71	0.08	98	< 10	80
172850	205	226	1.25	0.83	0.36	425	16	0.05	19	110	4	122	0.08	104	< 10	120
172851	205	226	1.45	0.75	0.35	245	7	0.05	19	90	< 2	77	0.08	106	< 10	22
172852	205	226	1.13	0.91	0.31	235	2	0.06	15	80	< 2	76	0.09	104	< 10	54
172853	205	226	2.15	1.12	0.33	120	4	0.08	17	100	4	23	0.12	95	< 10	24
172854	205	226	15.25	0.04	0.84	2930	16	0.04	28	530	6	272	0.14	153	< 10	62
172855	205	226	1.30	0.89	0.30	270	9	0.04	20	80	26	46	0.09	87	< 10	506
172856	205	226	4.38	0.81	0.31	110	11	0.05	15	530	132	16	0.09	110	< 10	1075
172857	205	226	5.51	0.43	0.15	1935	23	< 0.01	8	360	624	282	0.03	109	10	178
172858	205	226	3.82	0.42	0.14	1680	21	< 0.01	7	350	600	104	0.03	98	10	16
172859	205	226	5.30	0.83	0.24	1530	24	< 0.01	11	210	244	94	0.06	129	10	206
172860	205	226	4.32	0.08	0.12	2830	30	< 0.01	2	40	250	239	0.01	61	30	126
172861	205	226	3.34	0.11	0.10	2750	21	< 0.01	3	40	200	153	0.01	51	20	70
172862	205	226	5.53	0.29	0.16	2590	40	< 0.01	4	20	430	101	0.02	83	10	148
172863	205	226	6.97	0.06	0.33	2700	12	< 0.01	1	40	88	30	< 0.01	30	< 10	112
172864	205	226	1.99	0.05	0.10	2550	12	< 0.01	2	50	70	140	< 0.01	50	10	8
172865	205	226	2.14	1.69	0.33	215	9	0.09	12	250	44	7	0.14	208	< 10	3720
172866	205	226	2.70	1.32	0.33	445	5	0.04	16	110	74	27	0.12	169	< 10	2200
172867	205	226	15.40	0.33	0.63	3890	30	0.02	3	60	90	75	0.06	123	< 10	1490
172868	205	226	13.25	0.31	0.62	5300	36	< 0.01	3	130	40	187	0.04	88	< 10	2220
172869	205	226	6.19	0.03	0.19	1815	34	< 0.01	2	50	46	136	0.01	43	< 10	2800
172870	205	226	4.25	0.60	0.12	160	18	0.01	7	310	356	7	0.04	122	< 10	840
172871	205	226	4.36	0.87	0.19	295	19	< 0.01	10	160	72	43	0.07	139	< 10	314
172872	205	226	19.30	0.07	0.62	4090	9	< 0.01	< 1	280	< 2	520	0.04	105	< 10	46

CERTIFICATION: Ian Buchler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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Page N :5-A
Total Pages :8
Certificate Date: 20-JUL-97
Invoice No. : I9729963
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CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172873	205 226	< 5	1	0.2	< 10	< 0.2	0.54	200	3.5	< 2	2.07	< 0.5	< 1	87	9
172874	205 226	< 5	2	< 0.2	< 10	< 0.2	0.96	570	5.5	< 2	1.60	< 0.5	< 1	105	12
172875	205 226	< 5	1	< 0.2	< 10	< 0.2	0.57	350	4.5	< 2	1.95	< 0.5	< 1	63	14
172876	205 226	< 5	2	0.6	< 10	< 0.2	0.59	50	5.5	< 2	10.20	< 0.5	< 1	56	55
172877	205 226	< 5	1	0.4	10	< 0.2	0.80	50	7.0	< 2	6.64	< 0.5	< 1	81	22
172878	205 226	< 5	1	0.2	< 10	< 0.2	0.52	2710	5.0	< 2	2.92	< 0.5	< 1	58	19
172879	205 226	< 5	1	0.2	< 10	< 0.2	0.59	4690	6.5	< 2	5.54	< 0.5	< 1	47	18
172880	205 226	< 5	1	0.2	< 10	< 0.2	0.89	80	8.0	< 2	6.47	< 0.5	< 1	81	43
172881	205 226	< 5	4	0.8	130	< 0.2	0.12	50	0.5	< 2	19.80	< 0.5	< 1	49	17
172882	205 226	< 5	2	< 0.2	390	< 0.2	1.88	130	5.5	< 2	0.78	0.5	1	152	47
172883	205 226	< 5	6	< 0.2	100	< 0.2	2.34	140	5.0	< 2	4.67	< 0.5	3	94	51
172884	205 226	< 5	4	0.2	50	0.4	2.58	110	4.0	< 2	0.26	< 0.5	5	206	91
172885	205 226	< 5	14	0.6	40	0.4	2.32	80	4.0	< 2	3.25	< 0.5	3	173	74
172886	205 226	< 5	8	0.6	50	0.2	2.34	90	4.0	< 2	4.61	< 0.5	3	149	62
172887	205 226	< 5	1	0.8	100	< 0.2	2.07	190	3.5	< 2	3.70	0.5	5	233	73
172888	205 226	< 5	1	1.4	70	< 0.2	2.12	70	3.5	< 2	3.85	< 0.5	3	149	63
172889	205 226	< 5	1	2.0	130	< 0.2	2.19	50	3.5	< 2	8.71	< 0.5	2	134	40
172890	205 226	< 5	14	9.0	220	< 0.2	2.76	70	4.0	< 2	8.31	< 0.5	< 1	152	51
172891	205 226	< 5	20	3.4	170	< 0.2	1.73	80	2.5	< 2	6.23	1.5	< 1	154	27
172892	205 226	< 5	1	0.4	< 10	< 0.2	0.27	210	0.5	< 2	>25.0	< 0.5	< 1	15	5
172893	205 226	< 5	6	4.4	730	< 0.2	1.28	60	2.0	< 2	5.22	10.5	< 1	106	32
172894	205 226	< 5	4	1.6	240	< 0.2	2.14	100	3.0	< 2	4.37	5.5	2	182	50
172895	205 226	< 5	1	4.2	1510	0.4	2.56	70	3.0	< 2	5.83	16.0	3	145	66
172896	205 226	< 5	2	2.4	350	< 0.2	2.42	80	3.5	< 2	1.54	4.0	3	197	77
172897	205 226	< 5	1	2.6	290	< 0.2	2.33	120	3.0	< 2	5.03	4.0	4	166	62
172898	205 226	< 5	6	2.2	180	< 0.2	1.48	70	2.5	< 2	0.78	1.5	1	209	49
172899	205 226	25	12	3.4	130	0.4	2.05	70	3.5	< 2	0.83	1.5	< 1	202	63
172900	205 226	25	12	3.6	290	0.8	2.05	80	3.5	< 2	0.93	2.0	3	199	63
172901	205 226	10	6	3.8	170	0.6	2.26	90	3.5	< 2	0.69	2.0	3	199	64
172902	205 226	20	12	3.8	50	0.6	1.66	70	2.5	< 2	0.27	< 0.5	1	189	55
172903	205 226	35	14	6.0	670	0.6	1.63	30	2.5	< 2	0.20	8.0	1	208	52
172904	205 226	15	10	3.4	240	0.4	2.44	80	3.5	< 2	0.36	3.0	3	234	65
172905	205 226	10	1	1.8	240	< 0.2	2.36	150	3.0	< 2	3.84	3.5	4	175	56
172906	205 226	< 5	1	2.0	120	< 0.2	3.13	110	4.5	< 2	1.21	0.5	4	188	54
172907	205 226	< 5	6	1.8	90	< 0.2	2.85	140	4.5	< 2	5.99	0.5	3	174	109
172908	205 226	< 5	38	1.8	170	< 0.2	1.19	130	1.0	< 2	10.70	1.0	4	111	86
172909	205 226	< 5	4	1.4	40	< 0.2	1.91	520	3.0	< 2	8.95	< 0.5	4	124	75
172910	205 226	< 5	1	0.4	30	< 0.2	2.33	260	5.0	< 2	4.54	< 0.5	9	149	61
172911	205 226	< 5	1	0.8	20	< 0.2	3.00	290	6.5	< 2	1.00	< 0.5	12	187	72
172912	205 226	< 5	2	0.6	20	0.4	2.89	870	5.0	< 2	4.71	< 0.5	4	183	37

CERTIFICATION: Ian Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page : :5-B
Total Pages :8
Certificate Date: 20-JUL-97
Invoice No. :I9729963
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172873	205	226	10.30	0.01	0.37	1965	3	< 0.01	3	250	< 2	316	0.02	62	< 10	16
172874	205	226	11.65	0.06	0.37	1430	5	< 0.01	4	330	< 2	467	0.04	88	< 10	12
172875	205	226	9.22	0.04	0.23	965	4	< 0.01	2	290	< 2	338	0.03	85	< 10	8
172876	205	226	10.20	0.04	0.47	2580	12	< 0.01	5	240	26	350	0.03	76	< 10	20
172877	205	226	11.90	0.02	0.36	1940	7	< 0.01	6	460	12	215	0.04	131	< 10	40
172878	205	226	8.14	0.01	0.22	1155	2	< 0.01	5	250	< 2	338	0.03	73	< 10	16
172879	205	226	14.65	< 0.01	0.56	2490	5	< 0.01	6	770	< 2	375	0.03	115	< 10	44
172880	205	226	15.10	0.01	0.56	2440	21	< 0.01	10	520	26	255	0.04	120	< 10	54
172881	205	226	4.01	< 0.01	0.11	2020	14	< 0.01	6	1590	154	391	0.01	24	10	196
172882	205	226	2.37	0.20	0.25	150	8	0.09	16	280	18	50	0.07	117	< 10	356
172883	205	226	1.47	0.46	0.27	510	4	0.01	16	510	34	152	0.07	124	< 10	284
172884	205	226	1.90	0.48	0.28	90	5	0.04	24	350	44	6	0.09	163	< 10	144
172885	205	226	2.20	0.43	0.25	305	4	0.01	22	480	58	59	0.07	152	< 10	16
172886	205	226	1.77	0.44	0.28	460	5	0.01	20	210	58	55	0.08	149	< 10	18
172887	205	226	2.28	0.39	0.37	515	12	0.01	22	860	80	34	0.06	145	< 10	594
172888	205	226	3.57	0.39	0.29	545	8	0.01	24	350	120	62	0.07	111	< 10	168
172889	205	226	2.69	0.40	0.31	1020	8	0.01	22	380	100	102	0.07	101	< 10	466
172890	205	226	4.43	0.40	0.37	640	12	0.01	27	1150	224	58	0.09	153	10	380
172891	205	226	3.02	0.32	0.25	480	12	0.01	18	910	208	41	0.04	100	< 10	678
172892	205	226	1.17	0.06	0.20	1860	5	< 0.01	4	120	26	213	0.01	20	20	28
172893	205	226	3.27	0.26	0.17	365	4	0.01	14	40	32	32	0.04	98	< 10	2740
172894	205	226	2.13	0.41	0.24	330	2	0.03	14	70	28	26	0.05	119	< 10	976
172895	205	226	2.83	0.40	0.36	650	8	0.02	24	460	140	55	0.06	110	< 10	5690
172896	205	226	2.08	0.47	0.27	195	7	0.03	23	650	160	17	0.06	146	< 10	1255
172897	205	226	2.28	0.41	0.31	405	4	0.02	23	270	70	41	0.07	139	< 10	1020
172898	205	226	2.08	0.28	0.16	100	3	0.01	20	130	62	9	0.04	80	< 10	510
172899	205	226	2.57	0.94	0.21	75	5	0.04	27	80	160	8	0.08	138	< 10	438
172900	205	226	2.26	0.91	0.23	100	8	0.04	39	1130	280	13	0.07	129	< 10	1075
172901	205	226	2.38	1.01	0.26	110	7	0.07	39	400	216	9	0.09	122	< 10	584
172902	205	226	2.90	0.79	0.17	60	4	0.05	34	80	164	4	0.06	123	< 10	64
172903	205	226	3.76	0.76	0.15	35	4	0.04	28	100	90	4	0.06	123	< 10	2510
172904	205	226	2.41	1.05	0.22	70	3	0.07	25	100	52	4	0.08	142	< 10	984
172905	205	226	2.12	0.95	0.30	530	13	0.04	24	550	54	57	0.09	112	< 10	1095
172906	205	226	1.95	1.28	0.43	115	8	0.07	19	500	44	61	0.12	167	< 10	544
172907	205	226	2.51	1.30	1.58	415	6	0.06	29	240	110	452	0.09	195	< 10	854
172908	205	226	4.93	0.20	0.98	1625	11	< 0.01	11	330	836	970	0.03	69	< 10	3460
172909	205	226	2.34	0.68	0.50	970	4	0.01	26	520	80	242	0.07	103	< 10	186
172910	205	226	3.26	1.07	0.36	820	5	0.03	44	470	140	65	0.08	138	< 10	36
172911	205	226	2.35	1.45	0.29	200	6	0.07	56	470	146	12	0.11	153	< 10	170
172912	205	226	1.93	1.37	0.36	540	3	0.05	16	660	20	55	0.12	138	10	218

CERTIFICATION:

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CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172913	205	226	< 5	2	< 0.2	< 10	< 0.2	2.81	600	5.0	< 2	1.29	< 0.5	5	212	52
172914	205	226	5	1	< 0.2	10	< 0.2	2.97	930	4.5	< 2	4.41	< 0.5	5	225	132
172915	205	226	< 5	1	0.6	< 10	< 0.2	2.68	140	4.0	< 2	1.99	< 0.5	8	187	73
172916	205	226	< 5	2	< 0.2	50	< 0.2	3.25	260	4.5	< 2	2.65	3.0	9	185	98
172917	205	226	< 5	2	< 0.2	10	< 0.2	3.21	690	4.0	< 2	2.02	0.5	6	200	58
172918	205	226	35	1	< 0.2	20	< 0.2	2.65	210	3.5	< 2	4.82	< 0.5	7	159	181
172919	205	226	< 5	1	< 0.2	< 10	< 0.2	3.87	450	5.5	< 2	3.50	< 0.5	6	164	74
172920	205	226	< 5	1	< 0.2	< 10	< 0.2	1.28	820	1.5	2	>25.0	< 0.5	< 1	22	29
172921	205	226	< 5	1	< 0.2	10	< 0.2	3.40	180	4.5	< 2	2.41	< 0.5	8	167	87
172922	205	226	< 5	1	0.4	30	< 0.2	3.61	230	6.0	< 2	0.66	< 0.5	6	151	81
172923	205	226	< 5	1	0.2	1020	< 0.2	2.53	160	4.5	< 2	1.52	14.0	4	164	54
172924	205	226	10	2	< 0.2	470	< 0.2	3.06	130	7.5	< 2	2.29	8.5	6	160	70
172925	205	226	10	1	1.0	870	< 0.2	3.04	50	10.0	< 2	3.62	21.0	7	136	67
172926	205	226	20	2	1.2	290	< 0.2	1.56	20	8.0	< 2	10.75	2.0	1	74	66
172927	205	226	10	12	1.2	240	< 0.2	3.19	60	7.5	< 2	0.30	3.0	14	130	479
172928	205	226	10	6	1.0	440	< 0.2	3.47	170	5.5	2	0.84	10.0	11	188	129
172929	205	226	< 5	4	0.2	< 10	< 0.2	4.95	310	7.5	< 2	0.39	< 0.5	13	180	84
172930	205	226	< 5	8	0.4	< 10	0.6	4.49	380	7.0	< 2	0.29	< 0.5	18	178	300
172931	205	226	< 5	2	0.4	< 10	< 0.2	4.42	170	6.5	< 2	0.32	< 0.5	11	152	161
172932	205	226	< 5	1	< 0.2	< 10	< 0.2	4.45	880	6.5	< 2	0.31	< 0.5	4	153	52
172933	205	226	< 5	1	0.4	10	< 0.2	3.34	170	5.0	< 2	3.73	< 0.5	15	225	60
172934	205	226	< 5	6	0.2	< 10	< 0.2	3.75	1030	6.5	< 2	0.24	< 0.5	8	241	39
172935	205	226	5	10	< 0.2	< 10	< 0.2	4.97	250	8.0	< 2	0.69	< 0.5	11	251	45
172936	205	226	< 5	1	< 0.2	< 10	< 0.2	3.22	190	6.0	< 2	0.44	< 0.5	12	268	60
172937	205	226	< 5	2	2.4	40	< 0.2	1.94	110	3.5	< 2	0.35	0.5	8	197	49
172938	205	226	10	6	2.0	30	< 0.2	2.26	120	4.0	< 2	0.32	0.5	10	215	57
172939	205	226	< 5	1	1.0	< 10	< 0.2	3.51	390	6.0	< 2	0.41	< 0.5	6	251	49
172940	205	226	< 5	1	0.4	< 10	< 0.2	4.22	350	6.5	< 2	1.36	< 0.5	11	160	59
172941	205	226	< 5	4	2.4	110	< 0.2	3.53	120	6.0	< 2	0.71	2.0	9	171	46
172942	205	226	10	16	5.0	620	< 0.2	2.52	70	4.0	< 2	0.43	9.5	9	204	69
172943	205	226	35	14	3.8	200	< 0.2	3.44	130	4.0	< 2	1.75	4.5	6	187	75
172944	205	226	< 5	2	0.6	10	< 0.2	3.60	340	3.5	< 2	1.57	< 0.5	3	175	51
172945	205	226	< 5	1	0.8	50	< 0.2	8.65	300	8.0	< 2	2.65	0.5	9	109	29
172946	205	226	< 5	1	10.0	840	10.4	7.66	180	6.0	< 2	2.50	24.5	3	92	18
172947	205	226	< 5	1	1.6	< 10	< 0.2	8.53	200	6.0	< 2	3.95	< 0.5	16	109	91
172948	205	226	< 5	40	0.2	< 10	< 0.2	8.39	1630	2.5	< 2	8.04	< 0.5	38	352	54
172949	205	226	< 5	36	0.2	< 10	< 0.2	7.52	1960	2.0	2	7.73	< 0.5	37	358	65
172950	205	226	< 5	34	0.2	< 10	< 0.2	7.39	2580	1.5	< 2	6.29	< 0.5	27	356	61
172951	205	226	< 5	8	1.2	170	< 0.2	8.82	180	4.5	2	5.90	0.5	44	297	96
172952	205	226	< 5	1	3.8	400	< 0.2	3.45	60	3.5	< 2	0.95	2.5	11	211	68

CERTIFICATION: _____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
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V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page : 6-B
Total Pages : 8
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SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172913	205	226	1.62	1.35	0.29	185	1	0.06	17	340	12	19	0.12	141	< 10	18
172914	205	226	1.81	1.36	0.30	475	2	0.04	22	670	8	118	0.13	154	< 10	22
172915	205	226	2.57	1.22	0.29	315	4	0.05	36	640	106	34	0.10	139	< 10	36
172916	205	226	2.63	1.37	0.36	420	6	0.05	52	940	84	43	0.13	154	< 10	1395
172917	205	226	1.97	1.45	0.31	280	3	0.05	30	650	164	67	0.13	149	< 10	376
172918	205	226	3.41	1.12	0.56	985	3	0.03	31	570	44	187	0.09	139	< 10	130
172919	205	226	1.75	1.89	0.34	470	3	0.07	14	560	28	60	0.18	144	< 10	54
172920	205	226	1.04	0.56	0.21	2260	1	0.16	6	210	22	336	0.05	51	20	40
172921	205	226	2.59	1.73	0.37	600	3	0.05	39	1190	60	37	0.16	160	< 10	32
172922	205	226	1.60	1.82	0.32	140	2	0.09	44	460	216	13	0.14	213	< 10	102
172923	205	226	4.31	1.30	0.51	1390	3	0.04	45	270	340	31	0.10	178	< 10	3710
172924	205	226	5.18	1.20	0.70	2070	6	0.04	51	690	58	108	0.13	181	< 10	2010
172925	205	226	6.90	1.43	0.55	2290	9	0.03	41	780	84	78	0.11	194	< 10	2240
172926	205	226	15.05	0.76	0.63	4340	13	0.04	12	980	228	340	0.07	172	< 10	674
172927	205	226	3.13	1.55	0.28	115	3	0.08	40	230	216	10	0.13	193	< 10	474
172928	205	226	1.45	1.63	0.34	535	3	0.07	30	230	30	28	0.15	133	< 10	832
172929	205	226	1.92	2.44	0.53	275	1	0.11	37	230	14	23	0.18	160	< 10	40
172930	205	226	1.89	2.20	0.46	250	1	0.11	51	220	12	18	0.16	152	< 10	40
172931	205	226	1.74	2.20	0.51	340	1	0.10	37	230	16	21	0.17	148	< 10	36
172932	205	226	1.40	2.27	0.50	315	1	0.09	17	200	< 2	21	0.17	152	< 10	30
172933	205	226	4.18	1.57	0.68	5690	3	0.03	39	260	20	173	0.11	107	< 10	94
172934	205	226	1.18	1.94	0.40	330	1	0.09	23	140	6	14	0.14	136	< 10	24
172935	205	226	2.36	2.37	0.60	745	2	0.10	40	200	14	27	0.18	157	< 10	26
172936	205	226	1.75	1.66	0.36	515	2	0.08	41	380	18	22	0.13	143	< 10	24
172937	205	226	1.50	0.99	0.21	90	1	0.05	26	1110	28	22	0.06	115	< 10	82
172938	205	226	1.45	1.16	0.24	70	1	0.06	29	1020	22	20	0.08	143	< 10	68
172939	205	226	1.55	1.75	0.39	455	1	0.09	23	170	22	24	0.13	123	< 10	26
172940	205	226	2.06	2.20	0.63	3510	1	0.07	30	960	12	78	0.15	144	< 10	40
172941	205	226	2.09	1.85	0.48	1355	3	0.08	40	290	26	37	0.12	178	< 10	414
172942	205	226	2.24	1.28	0.30	110	6	0.07	42	670	60	20	0.10	169	< 10	1400
172943	205	226	2.02	1.56	0.49	480	9	0.05	50	240	236	54	0.10	156	< 10	930
172944	205	226	1.31	1.77	0.34	260	4	0.07	36	340	56	86	0.09	96	< 10	86
172945	205	226	3.47	4.58	1.18	1045	6	0.18	22	420	66	137	0.21	67	< 10	398
172946	205	226	2.53	3.77	0.86	460	4	0.15	6	380	3300	108	0.18	14	< 10	3300
172947	205	226	4.49	4.46	1.01	940	4	0.26	25	1620	60	169	0.50	107	< 10	142
172948	205	226	4.66	2.51	1.16	1175	3	1.92	74	870	10	448	0.44	180	< 10	88
172949	205	226	4.16	2.75	1.95	1250	3	1.60	81	500	4	413	0.29	168	< 10	72
172950	205	226	4.41	2.44	2.63	1240	2	1.58	69	530	12	338	0.27	159	< 10	70
172951	205	226	5.42	3.55	1.71	1480	4	0.55	85	1530	120	334	0.48	216	< 10	400
172952	205	226	2.85	1.72	0.41	850	3	0.09	39	310	130	31	0.11	140	< 10	746

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page N :7-A
Total Pages :8
Certificate Date: 20-JUL-97
Invoice No. :19729963
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172953	205	226	20	14	4.2	620	< 0.2	1.99	130	2.0	< 2	0.11	1.5	11	208	69
172954	205	226	15	10	4.8	180	< 0.2	2.60	90	2.5	< 2	0.13	0.5	10	179	82
172955	205	226	10	2	3.0	550	< 0.2	2.98	60	3.0	< 2	0.33	5.0	9	172	69
172956	205	226	< 5	1	0.6	10	< 0.2	3.39	290	1.5	< 2	0.70	< 0.5	8	182	66
172957	205	226	5	1	0.6	70	< 0.2	3.48	240	1.5	< 2	0.65	1.0	7	191	69
172958	205	226	5	1	2.4	2560	0.6	3.95	90	3.5	< 2	0.79	19.5	12	169	83
172959	205	226	5	2	1.2	10	< 0.2	1.97	380	0.5	< 2	0.38	< 0.5	5	186	57
172960	205	226	< 5	2	2.4	10	< 0.2	2.57	240	1.5	< 2	0.83	< 0.5	6	187	57
172961	205	226	< 5	2	4.0	< 10	< 0.2	3.67	200	1.5	< 2	0.56	< 0.5	8	177	66
172962	205	226	< 5	1	1.0	10	< 0.2	3.25	560	1.0	< 2	0.36	< 0.5	6	181	57
172963	205	226	< 5	1	0.8	< 10	< 0.2	2.87	2070	0.5	< 2	0.37	< 0.5	5	185	38
172964	205	226	10	6	2.8	110	< 0.2	2.23	160	1.0	< 2	0.89	< 0.5	6	180	54
172965	205	226	< 5	1	1.0	< 10	< 0.2	2.15	310	0.5	< 2	0.60	< 0.5	5	189	41
172966	205	226	< 5	6	2.4	10	< 0.2	2.26	160	1.0	< 2	0.74	< 0.5	5	181	50
172967	205	226	15	30	11.0	70	0.8	5.34	110	3.0	< 2	1.98	1.0	6	196	43
172968	205	226	10	72	11.0	130	1.0	5.85	90	3.0	< 2	1.54	2.5	4	182	41
172969	205	226	15	108	12.0	250	1.6	5.56	80	3.0	< 2	1.62	5.0	5	155	39
172970	205	226	20	40	8.8	180	1.2	5.12	100	3.0	< 2	1.44	5.5	4	154	33
172971	205	226	15	28	7.6	120	1.2	6.01	130	3.5	< 2	1.43	2.5	3	120	29
172972	205	226	20	40	10.5	280	2.4	5.20	100	3.0	< 2	3.30	7.0	8	177	54
172973	205	226	15	128	2.6	30	< 0.2	3.11	70	2.0	< 2	3.14	0.5	6	269	29
172974	205	226	25	46	7.8	50	1.2	4.57	80	3.0	2	1.37	1.5	3	175	36
172975	205	226	20	34	7.2	90	1.4	4.35	70	2.0	< 2	2.00	4.0	6	227	55
172976	205	226	20	14	6.6	100	1.4	3.42	70	2.0	< 2	0.76	4.5	6	223	52
172977	205	226	< 5	1	5.2	< 10	0.4	3.63	180	1.5	< 2	0.68	< 0.5	8	175	58
172978	205	226	10	6	1.2	< 10	< 0.2	3.48	1830	1.0	< 2	0.57	< 0.5	9	135	68
172979	205	226	5	14	1.0	< 10	< 0.2	4.20	>10000	1.5	< 2	0.50	1.5	9	124	84
172980	205	226	10	10	1.6	< 10	< 0.2	3.72	2620	1.5	< 2	0.68	< 0.5	16	137	51
172981	205	226	< 5	12	1.2	< 10	< 0.2	3.55	410	1.5	< 2	0.90	< 0.5	17	135	58
172982	205	226	< 5	1	0.6	< 10	< 0.2	2.36	160	1.0	< 2	1.56	< 0.5	7	152	71
172983	205	226	< 5	1	1.0	< 10	< 0.2	5.32	250	2.0	< 2	0.43	< 0.5	13	126	43
172984	205	226	< 5	12	1.2	< 10	< 0.2	3.08	1340	1.0	< 2	2.50	< 0.5	17	118	72
172985	205	226	5	4	1.0	< 10	< 0.2	3.55	480	1.5	< 2	0.94	< 0.5	12	98	69
172986	205	226	10	6	0.4	< 10	< 0.2	4.57	1640	1.5	< 2	0.94	< 0.5	15	126	67
172987	205	226	10	1	0.4	< 10	< 0.2	3.87	430	1.5	< 2	0.77	< 0.5	12	141	51
172988	205	226	25	1	< 0.2	< 10	0.4	2.97	800	1.0	< 2	1.21	< 0.5	6	188	54
172989	205	226	10	1	0.2	< 10	< 0.2	3.80	370	2.0	< 2	1.76	< 0.5	11	131	74
172990	205	226	< 5	10	0.2	< 10	< 0.2	3.39	240	1.5	< 2	0.87	< 0.5	20	200	54
172991	205	226	25	68	1.0	< 10	< 0.2	4.10	140	2.0	< 2	1.19	< 0.5	15	147	56
172992	205	226	25	20	7.8	280	0.4	2.76	40	2.0	< 2	0.21	0.5	5	289	72

CERTIFICATION: Stan Beckler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Certificate Date: 20-JUL-97
Invoice No. : 19729963
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172953	205	226	1.36	0.98	0.20	60	1	0.06	56	160	108	7	0.07	124	< 10	1140
172954	205	226	1.50	1.27	0.26	105	1	0.07	52	150	116	8	0.09	151	< 10	314
172955	205	226	2.30	1.39	0.35	200	2	0.07	41	330	136	25	0.10	130	< 10	1110
172956	205	226	2.49	1.53	0.70	190	1	0.07	43	360	8	78	0.19	93	< 10	96
172957	205	226	2.55	1.51	0.67	200	2	0.07	42	360	32	68	0.19	95	< 10	364
172958	205	226	2.74	1.64	0.58	400	2	0.10	48	300	150	66	0.13	130	< 10	4380
172959	205	226	1.11	0.85	0.29	175	2	0.05	55	110	8	40	0.07	83	< 10	76
172960	205	226	1.49	1.04	0.46	235	1	0.04	40	120	6	77	0.09	85	< 10	68
172961	205	226	2.45	1.52	0.60	195	2	0.10	57	290	6	69	0.18	110	< 10	114
172962	205	226	2.08	1.21	0.54	100	1	0.06	50	210	4	50	0.18	92	< 10	136
172963	205	226	1.94	1.08	0.51	110	< 1	0.07	44	130	2	45	0.16	72	< 10	66
172964	205	226	1.19	0.81	0.28	180	1	0.04	50	100	8	61	0.08	103	< 10	178
172965	205	226	1.28	0.83	0.34	215	1	0.04	29	70	6	56	0.06	67	< 10	22
172966	205	226	1.30	0.89	0.29	180	1	0.04	45	80	8	64	0.08	84	< 10	48
172967	205	226	2.23	2.30	0.70	380	7	0.11	36	640	52	97	0.19	149	< 10	194
172968	205	226	2.27	2.62	0.67	255	11	0.15	39	890	46	92	0.17	170	< 10	392
172969	205	226	2.61	2.62	0.66	250	11	0.12	36	1020	70	72	0.17	189	< 10	640
172970	205	226	1.97	2.28	0.60	240	8	0.13	30	1140	48	76	0.15	158	< 10	672
172971	205	226	2.07	2.70	0.81	275	8	0.14	26	570	66	81	0.17	98	< 10	404
172972	205	226	2.79	2.37	1.18	550	8	0.10	46	950	140	209	0.21	149	< 10	884
172973	205	226	1.73	1.39	0.51	440	4	0.05	33	1450	46	106	0.10	133	< 10	174
172974	205	226	2.09	2.02	0.56	220	9	0.10	36	1010	54	85	0.14	159	< 10	254
172975	205	226	2.55	1.94	0.61	435	8	0.08	45	1240	48	224	0.18	207	< 10	510
172976	205	226	2.43	1.43	0.54	385	6	0.10	47	1200	42	102	0.13	224	< 10	636
172977	205	226	2.02	1.54	0.60	380	1	0.09	66	170	20	106	0.13	121	< 10	100
172978	205	226	2.02	1.47	0.60	2360	1	0.08	45	170	8	107	0.14	144	< 10	60
172979	205	226	2.08	1.80	0.69	4780	1	0.09	42	310	8	106	0.19	196	< 10	44
172980	205	226	2.01	1.57	0.66	1050	1	0.07	56	180	16	145	0.16	155	< 10	80
172981	205	226	1.85	1.48	0.69	790	1	0.08	42	210	18	206	0.15	133	< 10	64
172982	205	226	2.49	0.95	0.69	2200	< 1	0.03	30	2150	10	464	0.08	68	< 10	44
172983	205	226	2.34	2.26	0.66	340	3	0.11	45	360	16	128	0.23	167	< 10	72
172984	205	226	2.33	1.24	1.18	1940	1	0.04	47	150	14	641	0.13	89	< 10	34
172985	205	226	2.25	1.47	0.71	1050	1	0.07	41	160	12	243	0.15	108	< 10	38
172986	205	226	2.67	1.90	0.86	1895	2	0.09	44	350	10	203	0.24	165	< 10	64
172987	205	226	2.11	1.63	0.66	1785	1	0.10	44	180	14	182	0.15	152	< 10	90
172988	205	226	2.64	1.23	0.80	3190	1	0.07	24	220	4	254	0.14	122	< 10	44
172989	205	226	2.26	1.57	0.95	1550	2	0.08	44	410	10	297	0.14	123	< 10	50
172990	205	226	1.87	1.40	0.60	905	1	0.08	58	160	14	126	0.12	138	< 10	54
172991	205	226	1.99	1.71	0.80	755	2	0.09	51	220	10	141	0.15	139	< 10	66
172992	205	226	3.78	1.14	0.28	105	4	0.08	44	620	18	34	0.10	126	< 10	112

CERTIFICATION: Jean Pandlan

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
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Page Number :8-A
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CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
172993	205	226	20	1	7.4	90	0.6	4.18	70	1.5	< 2	0.24	< 0.5	10	266	111
172994	205	226	5	1	3.4	90	< 0.2	3.86	130	1.5	< 2	0.15	< 0.5	6	294	72
172995	205	226	20	6	5.4	100	0.4	3.80	80	1.5	< 2	0.21	< 0.5	9	263	85
172996	205	226	10	2	3.2	90	0.4	5.56	90	2.0	< 2	0.24	< 0.5	11	299	121
172997	205	226	< 5	1	1.8	10	1.0	3.37	90	1.0	< 2	0.24	< 0.5	7	243	78
172998	205	226	40	14	6.2	170	0.8	5.57	60	2.0	< 2	0.60	< 0.5	12	263	97
172999	205	226	70	28	8.0	170	1.0	3.97	50	1.5	< 2	0.40	0.5	11	260	76
173000	205	226	10	1	1.0	50	< 0.2	6.37	130	2.0	< 2	4.02	1.0	9	233	64
173001	205	226	5	2	1.0	20	< 0.2	8.33	190	2.5	< 2	5.56	< 0.5	15	142	37

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
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British Columbia, Canada V7J 2C1
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WESTMIN RESOURCES LTD.
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Project : WOLVERINE
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Certificate Date: 20-JUL-97
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CERTIFICATE OF ANALYSIS A9729963

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
172993	205 226	3.46	1.76	0.44	165	4	0.13	60	700	18	45	0.18	175	< 10	114
172994	205 226	2.35	1.58	0.38	125	2	0.11	30	360	4	35	0.15	135	< 10	68
172995	205 226	2.87	1.59	0.39	150	2	0.12	34	510	6	43	0.15	148	< 10	92
172996	205 226	3.19	2.29	0.54	120	2	0.17	45	800	4	57	0.23	196	< 10	182
172997	205 226	2.22	1.36	0.30	150	2	0.12	28	870	12	64	0.13	111	< 10	60
172998	205 226	2.90	2.18	0.44	95	3	0.17	50	2720	10	148	0.20	237	< 10	88
172999	205 226	3.09	1.57	0.28	55	11	0.14	60	1830	18	116	0.14	233	< 10	92
173000	205 226	2.85	2.62	1.50	525	5	0.16	49	570	< 2	300	0.24	208	< 10	230
173001	205 226	3.13	3.57	1.90	605	3	0.24	37	530	< 2	400	0.26	110	< 10	80

CERTIFICATION: Ian Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

o: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9730990

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9730990

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 20-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	82	Geochem ring to approx 150 mesh
294	82	4-7 Kg crush and split
3202	82	Rock - save entire reject
285	82	ICP - HF digestion charge
287	82	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	82	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	82	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	82	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	82	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	82	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	82	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	82	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	82	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	82	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	82	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	82	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	82	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	82	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	82	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	82	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	82	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	82	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	82	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	82	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	82	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	82	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	82	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	82	Pb ppm: 24 element, rock & core	AAS	2	10000
582	82	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	82	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	82	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	82	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	82	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :3
Certificate Date: 20-JUL-97
Invoice No. :I9730990
P.O. Number :
Account :GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9730990

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174349	205	294	< 5	6	0.2	< 10	< 0.2	2.32	1650	0.5	< 2	0.67	< 0.5	6	263	77
174350	205	294	30	1	1.0	30	< 0.2	1.36	290	< 0.5	< 2	1.67	< 0.5	< 1	118	70
174351	205	294	< 5	6	1.0	40	< 0.2	1.32	230	0.5	< 2	0.70	< 0.5	4	228	66
174352	205	294	< 5	6	0.4	40	< 0.2	3.10	800	1.0	< 2	0.53	< 0.5	3	149	56
174353	205	294	< 5	1	0.4	20	< 0.2	2.99	230	0.5	< 2	1.00	< 0.5	1	137	87
174354	205	294	20	1	< 0.2	20	< 0.2	3.02	310	0.5	< 2	1.99	< 0.5	1	122	30
174355	205	294	< 5	2	0.2	< 10	0.4	2.91	980	1.0	< 2	0.14	< 0.5	5	152	87
174356	205	294	350	1	< 0.2	< 10	0.4	2.80	160	0.5	< 2	1.36	< 0.5	< 1	129	60
174357	205	294	< 5	1	0.4	30	< 0.2	3.01	400	1.0	< 2	0.64	< 0.5	5	174	68
174358	205	294	10	1	0.6	10	< 0.2	2.13	310	0.5	< 2	4.55	< 0.5	1	121	38
174359	205	294	< 5	1	1.2	10	< 0.2	1.60	260	0.5	< 2	2.98	< 0.5	2	142	41
174360	205	294	10	1	0.8	10	< 0.2	1.74	270	0.5	< 2	1.92	< 0.5	3	140	64
174361	205	294	5	4	0.2	60	< 0.2	2.00	710	0.5	< 2	0.20	< 0.5	6	180	66
174362	205	294	< 5	4	< 0.2	80	< 0.2	2.23	610	0.5	< 2	0.31	< 0.5	2	207	92
174363	205	294	< 5	4	0.2	70	< 0.2	2.52	1200	0.5	< 2	0.25	< 0.5	3	117	61
174364	205	294	< 5	1	0.2	20	< 0.2	1.75	1260	0.5	< 2	0.26	< 0.5	2	148	68
174365	205	294	10	8	0.8	90	< 0.2	4.12	230	1.5	< 2	0.59	< 0.5	10	218	71
174366	205	294	15	6	1.6	110	0.6	4.60	200	1.5	< 2	0.58	< 0.5	15	211	111
174367	205	294	10	1	0.8	40	< 0.2	3.00	240	0.5	2	0.54	< 0.5	7	272	56
174368	205	294	< 5	1	0.4	30	< 0.2	2.71	480	0.5	< 2	0.41	< 0.5	7	182	73
174369	205	294	< 5	1	1.0	50	< 0.2	1.94	310	1.0	< 2	0.14	< 0.5	6	249	82
174370	205	294	10	6	1.0	150	< 0.2	2.48	330	2.5	< 2	1.63	< 0.5	5	166	91
174371	205	294	10	1	0.6	60	< 0.2	2.38	510	2.5	< 2	7.17	< 0.5	4	154	58
174372	205	294	< 5	1	0.6	10	< 0.2	3.35	420	3.0	< 2	0.18	< 0.5	2	178	44
174373	205	294	< 5	1	0.2	< 10	< 0.2	1.49	260	2.0	< 2	2.71	< 0.5	< 1	139	7
174374	205	294	< 5	1	0.2	10	< 0.2	3.36	2150	4.5	< 2	1.57	< 0.5	1	133	26
174375	205	294	< 5	1	0.4	50	< 0.2	2.82	430	2.5	< 2	0.16	< 0.5	7	185	58
174376	205	294	< 5	1	0.2	30	< 0.2	2.13	1170	2.0	< 2	0.07	< 0.5	3	145	43
174377	205	294	< 5	1	0.4	430	< 0.2	2.34	300	3.0	< 2	0.26	< 0.5	2	155	43
174378	205	294	< 5	1	0.8	660	< 0.2	2.25	140	3.0	< 2	0.09	< 0.5	2	182	44
174379	205	294	< 5	6	1.4	150	< 0.2	2.37	150	3.5	< 2	2.20	< 0.5	2	171	63
174380	205	294	15	14	2.2	180	< 0.2	2.16	110	4.0	< 2	3.33	< 0.5	4	97	48
174381	205	294	< 5	6	1.2	10	< 0.2	0.27	100	2.5	< 2	>25.0	< 0.5	< 1	26	23
174382	205	294	< 5	2	0.8	100	< 0.2	0.28	90	3.5	< 2	>25.0	< 0.5	1	27	38
174383	205	294	< 5	1	1.6	10	< 0.2	0.32	110	5.0	< 2	10.80	< 0.5	< 1	24	9
174384	205	294	< 5	1	1.4	40	< 0.2	0.98	90	4.0	< 2	12.70	< 0.5	3	43	62
174385	205	294	< 5	1	1.0	30	< 0.2	2.28	80	8.0	< 2	8.24	< 0.5	9	143	96
174386	205	294	5	1	0.8	30	< 0.2	0.61	60	4.5	< 2	10.20	< 0.5	< 1	47	26
174387	205	294	10	6	1.4	210	< 0.2	1.41	70	4.5	< 2	12.85	< 0.5	1	96	48
174388	205	294	10	14	2.0	80	< 0.2	0.47	110	2.0	< 2	22.6	< 0.5	< 1	53	34

CERTIFICATION:

* INTERFERENCES: Cu on Bi and P

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To: WESTMIN RESOURCES LTD.
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P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

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Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :3
Certificate Date: 20-JUL-97
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Account :GP W

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CERTIFICATE OF ANALYSIS A9730990

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174349	205	294	2.00	0.84	0.54	1200	3	0.06	36	240	< 2	135	0.13	62	< 10	58
174350	205	294	16.95	0.13	0.66	8660	24	0.05	15	1230	< 2	264	0.06	108	< 10	136
174351	205	294	3.93	0.35	0.35	1780	53	0.01	27	130	< 2	110	0.07	117	< 10	32
174352	205	294	5.41	1.03	0.47	1155	13	0.10	16	450	< 2	101	0.16	106	< 10	32
174353	205	294	9.55	0.90	0.57	2180	17	0.10	14	670	< 2	176	0.15	95	< 10	40
174354	205	294	11.95	0.68	0.59	1265	5	0.24	4	550	< 2	429	0.15	104	< 10	34
174355	205	294	1.85	1.10	0.32	270	7	0.06	38	160	4	28	0.14	92	< 10	76
174356	205	294	11.70	0.78	0.60	1450	6	0.04	8	690	< 2	254	0.14	101	< 10	38
174357	205	294	2.23	1.03	0.36	460	11	0.07	21	140	6	103	0.13	92	< 10	58
174358	205	294	13.00	0.63	0.63	3210	19	0.03	11	1030	< 2	572	0.11	99	< 10	64
174359	205	294	16.40	0.38	0.73	3530	37	0.01	22	1860	< 2	564	0.08	100	< 10	112
174360	205	294	11.95	0.41	0.52	1615	41	0.05	38	1490	< 2	331	0.08	140	< 10	222
174361	205	294	1.26	0.74	0.29	165	3	0.04	57	130	< 2	45	0.10	68	< 10	70
174362	205	294	1.32	0.79	0.35	200	1	0.04	26	130	< 2	44	0.12	72	< 10	70
174363	205	294	1.33	0.89	0.34	195	1	0.05	33	110	< 2	114	0.15	74	< 10	62
174364	205	294	1.28	0.55	0.25	205	1	0.03	19	80	< 2	97	0.11	56	< 10	26
174365	205	294	2.48	1.31	0.61	570	1	0.07	97	330	< 2	127	0.21	137	< 10	144
174366	205	294	3.12	1.65	0.71	755	6	0.10	162	970	< 2	179	0.18	171	< 10	340
174367	205	294	2.25	0.98	0.69	395	4	0.05	73	300	< 2	140	0.14	109	< 10	152
174368	205	294	2.32	0.83	0.51	3560	3	0.05	69	200	< 2	112	0.17	85	< 10	112
174369	205	294	1.33	0.58	0.29	110	3	0.04	56	80	< 2	90	0.07	69	< 10	104
174370	205	294	1.04	1.00	0.58	260	2	0.03	133	250	14	53	0.08	114	< 10	438
174371	205	294	1.31	0.98	1.21	505	3	0.03	59	60	< 2	219	0.08	91	< 10	148
174372	205	294	2.03	1.17	0.34	70	3	0.13	9	130	< 2	105	0.13	116	< 10	16
174373	205	294	7.40	0.29	0.27	485	5	0.05	4	670	< 2	244	0.08	73	< 10	12
174374	205	294	6.78	1.16	0.44	320	5	0.11	7	540	< 2	285	0.16	113	< 10	18
174375	205	294	1.00	1.17	0.29	50	6	0.09	47	100	< 2	108	0.10	100	< 10	138
174376	205	294	0.65	0.86	0.17	20	7	0.09	21	80	< 2	234	0.07	89	< 10	88
174377	205	294	1.15	1.13	0.22	65	7	0.12	16	170	< 2	144	0.07	104	< 10	816
174378	205	294	1.92	1.09	0.24	20	4	0.03	13	270	2	10	0.09	117	< 10	2950
174379	205	294	2.19	1.09	0.27	295	8	0.01	23	180	34	50	0.10	153	< 10	718
174380	205	294	2.99	1.03	0.27	420	21	0.01	24	830	90	64	0.08	161	< 10	892
174381	205	294	3.26	0.12	0.12	2860	15	< 0.01	3	120	188	275	< 0.01	60	20	10
174382	205	294	4.09	0.05	0.23	2820	22	< 0.01	4	170	116	181	0.01	54	10	496
174383	205	294	14.75	0.03	0.44	1410	9	< 0.01	< 1	260	< 2	348	0.01	56	< 10	24
174384	205	294	8.77	0.19	0.70	1270	10	< 0.01	9	300	14	272	0.04	84	< 10	16
174385	205	294	6.66	0.59	1.15	1115	15	< 0.01	19	230	76	130	0.11	164	< 10	32
174386	205	294	11.30	0.05	0.79	2020	9	< 0.01	2	270	32	266	0.03	68	< 10	32
174387	205	294	4.57	0.56	0.34	1470	12	< 0.01	12	1110	180	157	0.06	157	< 10	562
174388	205	294	5.78	0.09	0.26	1700	11	< 0.01	6	1030	230	274	0.01	84	10	156

CERTIFICATION: Hart Bichler

* INTERFERENCES: Cu on Bi and P

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 20-JUL-97
Invoice No. :I9730990
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CERTIFICATE OF ANALYSIS A9730990

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174389	205 294	10	1	0.6	10	< 0.2	2.37	700	4.5	< 2	4.44	< 0.5	4	184	57
174390	205 294	< 5	1	0.4	40	0.4	2.44	970	4.0	< 2	0.35	< 0.5	6	164	62
174391	205 294	< 5	1	0.4	20	< 0.2	3.10	100	4.5	< 2	2.39	< 0.5	4	109	54
174392	205 294	20	2	0.6	10	< 0.2	2.87	160	2.5	< 2	5.06	< 0.5	6	151	69
174393	205 294	10	1	0.8	180	0.4	2.05	80	3.0	< 2	13.95	3.0	3	102	49
174394	205 294	5	12	1.2	450	0.6	2.78	100	5.5	< 2	2.22	12.0	11	223	91
174395	205 294	20	34	7.4	210	1.4	3.47	90	6.0	< 2	1.14	5.5	8	194	98
174396	205 294	< 5	1	1.8	30	< 0.2	6.42	270	9.5	< 2	1.25	2.0	2	113	31
174397	205 294	20	26	7.6	70	1.2	1.97	110	3.0	< 2	1.05	< 0.5	4	208	45
174398	205 294	< 5	26	2.4	20	< 0.2	5.73	150	5.0	< 2	7.30	< 0.5	34	313	87
174399	205 294	< 5	36	2.4	40	< 0.2	8.73	300	5.0	8	8.91	< 0.5	47	286	86
174400	205 294	< 5	1	0.2	70	< 0.2	4.68	380	2.5	2	2.61	2.0	24	211	98
174401	205 294	< 5	1	0.2	10	< 0.2	3.81	890	1.5	< 2	2.45	< 0.5	9	174	41
174402	205 294	< 5	2	0.4	10	< 0.2	3.93	1660	1.0	< 2	2.23	< 0.5	9	92	39
174403	205 294	< 5	1	0.2	< 10	< 0.2	2.93	1510	1.0	< 2	0.82	< 0.5	8	147	81
174404	205 294	10	1	0.6	20	< 0.2	4.07	240	1.5	< 2	0.48	< 0.5	11	188	74
174405	205 294	5	1	0.8	10	< 0.2	3.15	260	1.0	< 2	1.04	< 0.5	5	205	46
174406	205 294	< 5	1	0.2	< 10	< 0.2	2.23	720	0.5	< 2	0.43	< 0.5	4	178	58
174407	205 294	< 5	2	2.4	10	< 0.2	2.26	230	1.0	< 2	1.55	< 0.5	5	202	54
174408	205 294	< 5	48	5.0	580	0.8	7.04	290	4.5	< 2	1.48	7.0	< 1	86	91
174409	205 294	< 5	2	0.6	100	< 0.2	7.52	430	3.5	< 2	1.26	2.0	1	69	23
174410	205 294	< 5	1	0.8	40	< 0.2	8.19	460	3.5	< 2	0.70	1.0	1	95	13
174411	205 294	15	58	4.4	330	2.0	5.83	500	3.0	4	0.88	6.0	8	165	108
174412	205 294	35	60	16.0	700	2.0	6.71	440	4.0	2	1.09	10.0	2	116	117
174413	205 294	25	90	7.6	670	3.4	6.83	290	4.0	< 2	2.94	13.5	< 1	186	90
174414	205 294	< 5	10	3.8	220	1.0	3.11	140	1.0	< 2	3.22	7.0	1	181	66
174415	205 294	10	1	0.8	100	2.0	7.24	310	0.5	16	3.68	< 0.5	16	38	3220
174416	205 294	370	36	4.6	1340	90.0	2.18	120	< 0.5	Intf*	5.77	301	169	106	>10000
174417	205 294	< 5	1	0.8	290	1.4	4.87	300	0.5	12	0.67	18.5	14	81	592
174418	205 294	< 5	1	1.6	20	0.4	7.10	1450	1.5	6	0.78	0.5	8	62	419
174419	205 294	< 5	2	0.6	140	< 0.2	6.39	830	1.5	4	1.10	7.5	5	71	242
174420	205 294	20	1	2.4	840	12.0	8.52	170	< 0.5	Intf*	1.47	205	44	16	>10000
174421	205 294	< 5	1	3.8	320	1.8	7.20	240	2.5	< 2	1.61	10.0	1	93	64
174422	205 294	< 5	1	5.0	100	0.8	6.30	300	1.0	< 2	1.84	3.0	1	81	82
174423	205 294	< 5	1	6.6	10	0.4	6.38	290	1.5	< 2	1.31	< 0.5	1	104	11
174424	205 294	< 5	1	1.8	< 10	< 0.2	6.76	310	2.0	< 2	2.72	< 0.5	1	79	15
174425	205 294	< 5	1	1.2	< 10	< 0.2	7.07	440	2.0	< 2	2.89	< 0.5	1	68	7
174426	205 294	< 5	6	2.0	110	< 0.2	6.42	320	1.5	< 2	2.60	0.5	1	76	9
174427	205 294	< 5	1	1.2	30	< 0.2	6.87	570	2.0	< 2	1.35	< 0.5	< 1	53	5
174428	205 294	< 5	1	0.2	< 10	< 0.2	7.30	2110	2.5	< 2	1.04	< 0.5	1	58	7

CERTIFICATION:

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174389	205	294	2.36	0.73	0.56	860	5	0.07	19	410	18	161	0.09	134	< 10	40
174390	205	294	1.15	0.70	0.30	60	14	0.24	21	500	18	49	0.09	162	< 10	168
174391	205	294	10.30	0.65	0.67	695	6	0.03	7	410	< 2	56	0.10	103	< 10	32
174392	205	294	7.13	1.11	0.55	2370	7	0.02	19	990	8	102	0.12	160	< 10	128
174393	205	294	7.54	0.70	0.73	5370	8	0.01	20	820	200	286	0.10	155	< 10	1595
174394	205	294	4.63	1.28	0.46	910	6	0.01	58	1970	88	51	0.11	224	< 10	2090
174395	205	294	4.22	1.60	0.52	460	17	0.04	81	1710	100	50	0.12	455	< 10	784
174396	205	294	2.47	3.17	0.86	510	14	0.12	24	480	18	39	0.20	163	< 10	326
174397	205	294	2.33	0.88	0.28	255	18	0.02	47	1120	68	38	0.07	222	< 10	66
174398	205	294	2.22	3.00	0.76	1325	4	0.07	75	2170	22	302	0.50	245	< 10	16
174399	205	294	3.26	3.48	0.91	1545	4	0.44	92	1810	8	346	0.88	289	< 10	190
174400	205	294	2.50	2.06	1.07	960	6	0.08	56	610	24	114	0.31	176	< 10	398
174401	205	294	2.32	1.41	1.36	1390	3	0.08	38	350	< 2	113	0.20	87	< 10	76
174402	205	294	2.19	1.56	1.46	2000	2	0.15	39	400	< 2	188	0.22	79	< 10	74
174403	205	294	1.86	1.03	0.86	670	1	0.06	36	240	< 2	61	0.17	70	< 10	52
174404	205	294	2.73	1.55	0.77	215	3	0.09	75	420	< 2	41	0.24	134	< 10	190
174405	205	294	2.21	1.14	0.77	235	3	0.05	41	340	< 2	72	0.18	118	< 10	100
174406	205	294	1.29	0.76	0.40	210	< 1	0.04	39	120	< 2	52	0.11	67	< 10	56
174407	205	294	1.33	0.82	0.35	565	3	0.03	48	550	< 2	73	0.08	101	< 10	98
174408	205	294	3.43	3.27	0.79	360	12	0.26	18	180	190	85	0.11	44	< 10	1465
174409	205	294	1.47	3.12	0.85	240	5	0.98	3	470	60	78	0.17	42	< 10	344
174410	205	294	1.63	3.47	0.90	145	4	0.82	3	460	32	57	0.18	50	< 10	250
174411	205	294	4.34	2.28	1.26	280	11	0.14	12	460	128	47	0.12	94	< 10	782
174412	205	294	2.74	2.99	0.99	245	18	0.16	28	680	184	71	0.15	188	< 10	1220
174413	205	294	2.07	3.26	1.22	610	25	0.14	31	860	204	114	0.14	329	< 10	1470
174414	205	294	2.79	1.18	1.18	1030	4	0.05	2	160	100	34	0.06	20	< 10	676
174415	205	294	11.40	0.50	6.09	1190	7	0.19	< 1	450	16	137	0.17	38	< 10	316
174416	205	294	19.15	0.59	2.53	1215	13	0.02	26	Intf*	2500	245	0.03	370	< 10	>10000
174417	205	294	6.42	0.91	2.28	515	4	0.08	3	420	60	34	0.10	24	< 10	1835
174418	205	294	5.49	2.13	2.60	735	5	0.15	1	610	16	57	0.16	45	< 10	210
174419	205	294	5.64	1.57	2.85	690	5	0.15	< 1	490	22	64	0.14	21	< 10	940
174420	205	294	16.45	0.22	4.80	1895	6	0.20	1	Intf*	256	59	0.21	25	< 10	>10000
174421	205	294	2.19	2.97	0.65	440	4	0.17	3	680	510	150	0.15	27	< 10	726
174422	205	294	2.14	2.83	0.29	935	3	0.14	3	640	140	172	0.16	31	< 10	310
174423	205	294	2.10	2.93	0.26	590	4	0.15	4	670	20	113	0.16	40	< 10	14
174424	205	294	1.22	3.15	0.28	570	3	0.13	1	530	18	186	0.14	23	< 10	16
174425	205	294	1.04	3.31	0.29	515	4	0.15	3	510	18	185	0.15	24	< 10	12
174426	205	294	1.66	3.05	0.29	600	5	0.14	< 1	530	80	184	0.14	22	< 10	190
174427	205	294	1.36	3.42	0.69	270	2	0.15	3	530	22	113	0.16	21	< 10	72
174428	205	294	1.47	3.05	0.87	200	3	1.03	3	560	16	96	0.15	24	< 10	42

CERTIFICATION:

* INTERFERENCES: Cu on Bi and P

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 20-JUL-97
Invoice No. : I9730990
P.O. Number :
Account : GP W

*PLEASE NOTE

CERTIFICATE OF ANALYSIS A9730990

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
174429	205	294	< 5	1	0.2	10	< 0.2	7.17	1700	2.5	< 2	0.85	< 0.5	1	66	6
174430	205	294	< 5	1	< 0.2	< 10	< 0.2	7.20	1140	2.5	< 2	0.83	< 0.5	1	61	7

CERTIFICATION: Stewart Bichler

*INTERFERENCES: Cu on Bi and P

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

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Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 20-JUL-97
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P.O. Number :
Account : GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9730990

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
174429	205	294	1.36	2.33	0.62	135	3	2.14	3	540	16	101	0.13	23	< 10	48
174430	205	294	1.43	2.41	0.67	135	3	2.07	1	580	16	106	0.13	24	< 10	40

CERTIFICATION: Ian J. Butler

* INTERFERENCES: Cu on Bi and P

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9732112

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9732112

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 30-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	51	Geochem ring to approx 150 mesh
226	51	0-3 Kg crush and split
3202	51	Rock - save entire reject
285	51	ICP - HF digestion charge
287	51	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	51	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	51	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	51	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	51	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	51	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	51	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	51	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	51	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	51	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	51	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	51	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	51	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	51	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	51	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	51	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	51	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	51	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	51	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	51	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	51	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	51	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	51	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	51	Pb ppm: 24 element, rock & core	AAS	2	10000
582	51	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	51	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	51	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	51	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	51	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 30-JUL-97
Invoice No. :I9732112
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9732112

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173204	205	226	< 5	2	2.2	130	< 0.2	4.87	90	6.5	< 2	0.43	< 0.5	20	145	156
N173205	205	226	< 5	1	0.6	20	< 0.2	2.33	690	2.0	< 2	1.54	< 0.5	6	318	32
N173206	205	226	< 5	1	0.4	100	< 0.2	7.87	70	4.5	< 2	4.29	4.0	30	467	65
N173207	205	226	< 5	1	0.8	460	0.8	7.30	60	4.0	< 2	5.95	33.0	35	355	90
N173208	205	226	< 5	1	0.6	790	0.4	7.58	90	3.0	< 2	2.40	20.5	21	75	39
N173209	205	226	< 5	1	0.4	40	< 0.2	8.26	320	4.5	< 2	4.11	2.5	23	423	44
N173210	205	226	< 5	1	0.4	90	0.4	6.88	100	4.0	< 2	4.11	3.0	24	261	90
N173211	205	226	< 5	14	0.2	< 10	< 0.2	6.97	1620	2.5	< 2	6.78	< 0.5	22	57	28
N173212	205	226	< 5	4	4.0	2110	1.4	6.29	60	2.5	< 2	9.88	73.0	20	52	28
N173213	205	226	< 5	18	1.8	40	< 0.2	7.76	150	4.0	< 2	4.33	0.5	18	47	27
N173214	205	226	< 5	2	1.2	940	1.0	6.03	100	2.5	< 2	8.00	14.0	26	69	42
N173215	205	226	< 5	1	0.2	10	< 0.2	5.63	1690	2.5	< 2	7.01	< 0.5	14	34	8
N173216	205	226	< 5	1	3.0	190	1.0	3.88	90	3.0	< 2	1.65	4.0	10	167	89
N173217	205	226	< 5	1	3.8	60	< 0.2	2.08	200	0.5	< 2	0.60	< 0.5	4	247	57
N173218	205	226	< 5	1	1.6	20	< 0.2	3.45	1430	1.0	< 2	0.31	< 0.5	7	144	58
N173219	205	226	< 5	1	1.0	< 10	< 0.2	2.48	320	0.5	< 2	0.36	< 0.5	5	162	56
N173220	205	226	< 5	10	1.0	10	0.4	1.41	180	0.5	< 2	0.58	< 0.5	4	90	55
N173221	205	226	< 5	104	2.0	60	1.0	2.87	80	2.0	< 2	1.44	2.5	9	97	90
N173222	205	226	20	262	1.0	< 10	0.6	3.07	60	2.5	< 2	3.97	< 0.5	7	108	74
N173223	205	226	10	176	1.2	< 10	0.4	2.61	70	2.0	< 2	5.93	< 0.5	8	124	62
N173224	205	226	< 5	144	1.6	20	0.4	2.39	60	1.5	< 2	2.43	0.5	17	135	77
N173225	205	226	< 5	76	2.4	40	0.6	2.15	70	1.5	< 2	0.48	< 0.5	6	236	59
N173226	205	226	< 5	74	2.2	20	0.6	2.23	70	1.5	< 2	0.40	2.0	7	219	54
N173227	205	226	20	48	8.2	110	4.0	5.05	40	2.0	2	0.30	2.5	1	271	42
N173228	205	226	< 5	8	4.8	60	0.4	5.96	180	2.0	< 2	0.08	< 0.5	< 1	110	13
N173229	205	226	< 5	1	2.2	40	< 0.2	6.09	170	2.0	< 2	0.11	< 0.5	< 1	96	6
N173230	205	226	< 5	32	11.0	190	1.2	6.38	40	2.5	< 2	0.45	0.5	10	183	37
N173231	205	226	< 5	6	4.4	40	0.8	3.94	90	1.5	< 2	0.74	0.5	10	148	57
N173232	205	226	20	92	9.8	480	2.4	4.03	40	2.5	< 2	0.65	14.5	15	255	106
N173233	205	226	< 5	42	15.5	4730	1.0	2.28	20	0.5	< 2	0.19	73.5	2	192	371
N173234	205	226	< 5	94	2.8	500	< 0.2	6.94	90	2.0	< 2	0.47	15.5	1	95	132
N173235	205	226	< 5	76	24	3910	5.4	1.24	30	< 0.5	2	0.91	184.0	7	202	2940
N173236	205	226	< 5	100	16.0	40	0.4	9.06	150	2.5	< 2	0.68	< 0.5	1	69	26
N173237	205	226	< 5	14	3.2	40	0.4	8.38	530	2.0	< 2	3.41	0.5	1	58	29
N173238	205	226	< 5	76	6.4	80	2.8	7.43	80	2.0	< 2	1.53	9.5	3	102	102
N173239	205	226	< 5	16	1.8	10	< 0.2	6.29	600	2.0	< 2	2.72	< 0.5	< 1	65	15
N173240	205	226	< 5	24	1.8	< 10	< 0.2	6.10	360	2.0	< 2	1.58	< 0.5	1	53	8
N173241	205	226	< 5	4	1.2	< 10	< 0.2	6.71	2520	2.0	< 2	1.31	< 0.5	< 1	56	10
N173242	205	226	< 5	62	2.0	< 10	< 0.2	6.70	530	2.0	< 2	1.75	< 0.5	1	39	12
N173243	205	226	< 5	170	2.0	20	0.6	6.29	110	1.5	< 2	3.85	< 0.5	2	62	15

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :2
Certificate Date: 30-JUL-97
Invoice No. :I9732112
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9732112

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N173204	205 226	2.86	2.65	0.57	195	3	0.10	55	350	130	14	0.17	239	< 10	472
N173205	205 226	1.57	1.16	0.37	220	1	< 0.01	21	900	26	29	0.16	75	< 10	142
N173206	205 226	5.56	4.22	1.16	1000	2	0.14	69	720	32	104	0.40	208	< 10	768
N173207	205 226	5.57	4.15	0.94	1005	< 1	0.14	72	760	152	168	0.39	185	< 10	2850
N173208	205 226	9.11	2.94	1.39	715	< 1	0.06	39	3110	66	80	1.32	275	< 10	3860
N173209	205 226	4.47	4.69	1.22	965	< 1	0.15	65	630	14	101	0.40	208	< 10	296
N173210	205 226	4.54	3.88	0.91	760	2	0.12	56	550	68	94	0.30	135	< 10	428
N173211	205 226	4.94	3.03	1.14	820	1	0.06	24	2140	4	215	1.31	251	< 10	112
N173212	205 226	4.86	2.78	0.68	1035	< 1	0.05	27	2020	172	170	1.31	231	10	5460
N173213	205 226	3.69	3.85	0.76	555	< 1	0.07	35	2880	50	108	1.59	298	< 10	190
N173214	205 226	4.95	2.63	0.73	1180	1	0.10	41	1980	430	270	1.16	235	10	5570
N173215	205 226	4.47	2.65	0.55	1070	< 1	0.57	12	2960	4	287	1.51	232	< 10	122
N173216	205 226	2.48	2.05	0.54	425	5	0.05	67	680	430	52	0.18	246	< 10	1160
N173217	205 226	1.23	0.85	0.46	410	< 1	0.01	62	280	4	105	0.09	93	< 10	90
N173218	205 226	1.18	1.56	0.47	110	< 1	0.05	46	90	4	67	0.16	102	< 10	96
N173219	205 226	1.18	0.92	0.37	125	< 1	0.03	46	80	< 2	67	0.11	87	< 10	52
N173220	205 226	0.73	0.42	0.18	95	< 1	< 0.01	43	60	4	17	0.05	97	< 10	56
N173221	205 226	1.88	1.25	0.35	200	< 1	0.04	43	210	62	63	0.11	133	< 10	432
N173222	205 226	2.28	1.38	0.51	475	1	0.04	37	240	16	143	0.12	114	< 10	36
N173223	205 226	2.03	1.15	0.53	570	1	0.01	38	320	64	180	0.09	102	< 10	64
N173224	205 226	1.82	1.11	0.28	300	1	0.01	56	290	24	67	0.08	123	< 10	124
N173225	205 226	1.74	0.98	0.23	85	< 1	0.01	59	100	14	14	0.08	136	< 10	100
N173226	205 226	1.76	0.98	0.23	70	1	0.03	49	200	42	12	0.07	125	< 10	232
N173227	205 226	4.21	1.44	0.22	60	7	0.12	27	530	450	25	0.11	143	10	280
N173228	205 226	2.66	1.50	0.09	25	3	0.14	6	260	20	15	0.11	26	< 10	16
N173229	205 226	1.68	1.77	0.05	30	3	0.14	3	270	20	20	0.13	18	< 10	24
N173230	205 226	3.61	2.63	0.47	170	8	0.12	44	790	36	36	0.21	141	< 10	142
N173231	205 226	2.25	1.97	0.65	455	< 1	0.05	48	270	36	42	0.15	139	< 10	224
N173232	205 226	3.49	2.03	0.48	180	13	0.05	94	2220	200	44	0.18	388	< 10	1665
N173233	205 226	4.95	1.03	0.15	20	8	0.03	44	940	490	18	0.04	275	< 10	8060
N173234	205 226	1.79	3.36	0.69	345	4	0.13	5	640	130	32	0.14	61	< 10	1750
N173235	205 226	4.72	0.60	0.11	45	5	< 0.01	92	3720	2000	46	0.02	304	< 10	>10000
N173236	205 226	1.43	4.07	0.86	185	4	0.19	5	450	390	35	0.19	52	< 10	70
N173237	205 226	1.69	3.71	1.94	905	3	0.18	4	450	560	135	0.19	34	< 10	180
N173238	205 226	2.21	3.08	0.86	395	4	0.16	15	940	820	59	0.16	74	< 10	1245
N173239	205 226	1.59	2.98	1.37	515	1	0.13	1	360	32	92	0.14	19	< 10	42
N173240	205 226	1.23	2.88	0.91	360	2	0.12	1	320	18	63	0.13	17	< 10	32
N173241	205 226	1.10	3.12	0.86	330	3	0.15	1	390	4	62	0.15	20	< 10	26
N173242	205 226	1.41	3.14	1.11	415	3	0.15	< 1	370	30	70	0.15	21	< 10	26
N173243	205 226	2.44	2.85	2.18	850	4	0.14	1	330	100	119	0.13	22	< 10	38

CERTIFICATION:

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V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 30-JUL-97
Invoice No. :I9732112
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9732112

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173244	205	226	< 5	186	1.4	< 10	< 0.2	5.43	150	1.5	< 2	3.48	< 0.5	< 1	119	9
N173245	205	226	< 5	28	6.8	60	0.4	9.10	150	2.0	< 2	0.83	< 0.5	4	109	19
N173246	205	226	< 5	68	2.2	50	< 0.2	7.84	260	1.5	< 2	1.25	< 0.5	1	111	8
N173247	205	226	< 5	52	13.5	90	1.8	2.80	70	0.5	< 2	0.22	< 0.5	3	265	41
N173248	205	226	< 5	34	3.6	30	0.4	7.55	1330	1.5	< 2	0.73	< 0.5	1	105	11
N173249	205	226	10	100	8.6	40	0.8	5.37	80	1.5	< 2	2.03	< 0.5	8	219	70
N173250	205	226	< 5	30	28	50	0.4	3.51	120	1.0	< 2	1.59	5.0	6	233	63
N173251	205	226	5	10	4.6	70	0.6	5.06	120	1.5	< 2	1.65	< 0.5	3	137	31
N173252	205	226	5	18	3.2	60	0.4	6.91	180	1.5	< 2	0.74	0.5	< 1	40	7
N173253	205	226	< 5	10	2.6	< 10	0.4	6.73	150	1.5	< 2	1.12	< 0.5	1	95	11
N173254	205	226	30	16	4.8	20	1.4	7.53	290	2.0	< 2	0.92	< 0.5	< 1	126	8

CERTIFICATION: Hart Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 30-JUL-97
Invoice No. : I9732112
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9732112

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N173244	205	226	1.43	2.26	1.71	710	1	0.10	2	270	22	93	0.12	26	< 10	42
N173245	205	226	1.48	3.29	0.35	115	3	0.25	20	980	8	88	0.19	126	< 10	26
N173246	205	226	0.85	3.07	0.77	225	3	0.21	11	460	10	133	0.14	196	< 10	84
N173247	205	226	1.60	1.10	0.17	40	4	0.06	38	870	14	28	0.10	229	< 10	44
N173248	205	226	0.99	2.60	0.30	200	< 1	0.20	9	770	14	52	0.15	59	< 10	50
N173249	205	226	2.64	2.29	1.29	390	2	0.09	44	1000	12	131	0.19	195	< 10	62
N173250	205	226	1.66	1.49	0.84	200	2	0.04	42	1640	10	112	0.12	229	< 10	408
N173251	205	226	1.48	2.17	0.68	255	< 1	0.09	25	1160	12	105	0.13	141	< 10	98
N173252	205	226	1.15	2.68	0.46	65	< 1	0.18	5	1020	28	56	0.10	48	< 10	180
N173253	205	226	1.36	2.54	0.41	130	< 1	0.14	6	680	30	74	0.10	48	< 10	46
N173254	205	226	0.87	2.68	0.45	95	< 1	0.17	6	880	410	59	0.11	72	< 10	34

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists *Geochemists* *Registered Assayers*

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1
Phone: (604) 984-0221
Fax: (604) 984-0218



October 16, 1997

David Terry
Westmin Resources Ltd.
Project: Wolverine
P.O. BOX 49066, The Bentall Centre
Vancouver, B.C.
V7X - 1C4

Dear Mr. Terry,

RE: Certificate of Analysis A9732113
Corrected Copy For Zn - Samples N173171 through N173190

As per Andrew Turner's inquiry about ICP Zinc data reported on Certificate of Analysis A9732113, we initiated some check analyses and found that the Zn data was indeed low by approximately 10 ppm. A corrected copy for samples N173171 through N173190 has been enclosed with the new data.

Please accept our apologies for any inconvenience that this may have caused you. If you have any further inquiries or any questions regarding this, please feel free to contact David Tye.

Regards,

Michele Wonghen,
Quality Assurance Chemist

Enclosures: Certificate of Analysis A9732113
Corrected Copy For Zn - Samples N173171 through N173190

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9732113

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9732113

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 10-OCT-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	199	Geochem ring to approx 150 mesh
226	199	0-3 Kg crush and split
3202	199	Rock - save entire reject
285	199	ICP - HF digestion charge
287	199	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	199	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	199	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	199	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	199	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	199	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	199	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	199	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	199	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	199	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	199	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	199	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	199	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	199	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	199	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	199	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	199	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	199	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	199	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	199	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	199	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	199	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	199	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	199	Pb ppm: 24 element, rock & core	AAS	2	10000
582	199	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	199	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	199	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	199	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	199	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 29-JUL-97
Invoice No. :I9732113
P.O. Number :
Account :GP W

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9732113

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173002	205	226	< 5	4	0.8	< 10	< 0.2	2.98	1450	0.5	< 2	1.41	< 0.5	7	153	72
N173003	205	226	< 5	4	0.6	20	< 0.2	2.98	2620	0.5	< 2	0.37	< 0.5	7	170	81
N173004	205	226	< 5	2	0.4	20	< 0.2	3.08	270	0.5	< 2	1.56	< 0.5	9	127	90
N173005	205	226	< 5	10	0.4	< 10	< 0.2	4.87	570	0.5	< 2	1.87	< 0.5	17	180	79
N173006	205	226	< 5	6	0.4	10	< 0.2	3.14	1490	0.5	< 2	0.51	< 0.5	10	132	72
N173007	205	226	< 5	10	0.8	10	< 0.2	3.07	3730	0.5	< 2	0.27	0.5	8	124	61
N173008	205	226	< 5	2	0.6	10	< 0.2	3.81	360	0.5	< 2	2.09	< 0.5	11	137	80
N173009	205	226	< 5	2	0.6	20	< 0.2	3.17	410	0.5	< 2	1.18	< 0.5	9	141	84
N173010	205	226	40	4	0.6	20	< 0.2	3.81	510	0.5	< 2	1.29	< 0.5	10	151	82
N173011	205	226	< 5	1	0.4	10	< 0.2	3.32	440	0.5	< 2	0.66	< 0.5	7	142	82
N173012	205	226	< 5	6	0.6	< 10	< 0.2	3.17	750	0.5	< 2	1.20	< 0.5	8	144	73
N173013	205	226	< 5	4	0.2	< 10	< 0.2	4.33	2890	1.0	< 2	0.44	< 0.5	10	69	60
N173014	205	226	< 5	2	0.2	< 10	< 0.2	3.12	1150	0.5	< 2	0.58	< 0.5	7	122	71
N173015	205	226	< 5	10	0.4	30	< 0.2	4.29	1050	0.5	< 2	0.76	< 0.5	15	107	96
N173016	205	226	< 5	8	0.2	10	< 0.2	3.28	3670	0.5	< 2	0.45	< 0.5	12	141	44
N173017	205	226	< 5	2	0.2	< 10	< 0.2	3.15	1320	0.5	< 2	0.72	< 0.5	6	126	54
N173018	205	226	< 5	14	0.4	20	< 0.2	4.88	240	1.0	< 2	2.34	< 0.5	17	170	78
N173019	205	226	< 5	12	2.4	70	< 0.2	0.96	650	< 0.5	< 2	8.33	< 0.5	< 1	109	9
N173020	205	226	< 5	12	2.2	30	< 0.2	0.77	380	< 0.5	< 2	9.97	< 0.5	< 1	86	8
N173021	205	226	< 5	1	0.6	30	< 0.2	3.01	260	0.5	< 2	2.74	< 0.5	6	146	45
N173022	205	226	< 5	10	0.4	20	< 0.2	3.35	790	0.5	< 2	0.65	< 0.5	9	142	78
N173023	205	226	< 5	4	0.4	10	< 0.2	2.79	1000	0.5	< 2	0.28	< 0.5	8	129	66
N173024	205	226	< 5	6	0.6	40	< 0.2	3.12	1140	0.5	< 2	1.33	< 0.5	7	145	80
N173025	205	226	< 5	10	0.4	20	< 0.2	3.01	1580	0.5	< 2	0.48	< 0.5	8	168	79
N173026	205	226	< 5	4	0.8	30	< 0.2	2.95	540	0.5	< 2	0.27	< 0.5	9	203	86
N173027	205	226	< 5	2	0.2	30	< 0.2	2.30	1360	0.5	< 2	0.34	< 0.5	5	132	63
N173028	205	226	< 5	6	0.2	10	< 0.2	2.87	3670	0.5	< 2	0.57	0.5	8	151	67
N173029	205	226	< 5	4	0.6	10	< 0.2	2.53	1750	0.5	< 2	1.46	< 0.5	5	151	63
N173030	205	226	< 5	6	0.6	30	< 0.2	3.08	2290	0.5	< 2	0.69	< 0.5	6	163	60
N173031	205	226	40	6	0.4	20	< 0.2	2.85	350	0.5	< 2	0.40	< 0.5	6	171	70
N173032	205	226	< 5	6	0.4	20	< 0.2	3.18	1620	0.5	< 2	0.33	< 0.5	12	156	71
N173033	205	226	5	4	0.6	30	< 0.2	3.15	410	0.5	< 2	0.30	< 0.5	7	156	83
N173034	205	226	< 5	2	0.4	10	< 0.2	2.97	630	0.5	< 2	1.12	< 0.5	8	188	75
N173035	205	226	< 5	1	0.2	< 10	< 0.2	2.33	3230	0.5	< 2	0.70	0.5	6	138	31
N173036	205	226	< 5	1	0.6	< 10	< 0.2	1.52	730	0.5	< 2	0.60	< 0.5	12	133	76
N173037	205	226	< 5	1	0.2	< 10	< 0.2	1.65	1980	0.5	< 2	0.35	< 0.5	10	162	52
N173038	205	226	< 5	1	0.2	< 10	< 0.2	2.79	2850	0.5	< 2	0.45	< 0.5	10	128	44
N173039	205	226	< 5	1	0.2	< 10	< 0.2	2.55	940	1.5	< 2	0.61	< 0.5	11	179	32
N173040	205	226	< 5	6	0.6	10	< 0.2	2.83	780	1.5	< 2	0.39	< 0.5	7	143	80
N173041	205	226	< 5	6	0.6	440	< 0.2	2.33	150	1.5	< 2	0.96	< 0.5	7	169	45

CERTIFICATION: David Saddler

* FOR Zn VALUES ON SAMPLES N173171 THRU N173190

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 29-JUL-97
Invoice No. :I9732113
P.O. Number :
Account :GP W

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9732113

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N173002	205 226	1.83	1.29	1.03	1475	1	0.07	37	400	8	150	0.15	94	< 10	64
N173003	205 226	1.88	1.29	0.95	1310	< 1	0.07	40	280	6	47	0.16	107	< 10	64
N173004	205 226	2.03	1.44	1.05	1495	5	0.04	44	460	10	163	0.17	106	< 10	80
N173005	205 226	3.65	1.28	2.29	2670	1	0.84	59	590	4	217	0.33	166	< 10	104
N173006	205 226	1.68	1.52	0.90	1010	< 1	0.13	30	260	4	69	0.19	65	< 10	58
N173007	205 226	1.65	1.42	0.82	1135	< 1	0.26	31	270	4	41	0.19	65	< 10	56
N173008	205 226	2.67	1.33	1.58	1870	1	0.16	41	900	10	238	0.36	131	< 10	90
N173009	205 226	1.88	1.35	1.12	1520	3	0.19	49	360	6	119	0.17	107	< 10	70
N173010	205 226	2.51	1.40	1.62	1700	< 1	0.15	49	680	6	141	0.27	128	< 10	86
N173011	205 226	1.76	1.56	1.07	1240	< 1	0.09	37	280	6	75	0.16	110	60	70
N173012	205 226	1.84	1.13	1.16	1580	< 1	0.41	41	270	6	174	0.14	95	30	60
N173013	205 226	2.08	1.46	0.82	1505	< 1	1.17	28	350	14	90	0.20	65	< 10	64
N173014	205 226	1.63	1.58	0.85	810	1	0.04	36	270	6	84	0.18	86	< 10	68
N173015	205 226	2.89	1.31	1.69	1315	< 1	0.67	41	400	4	121	0.38	135	< 10	82
N173016	205 226	1.90	1.27	0.70	780	< 1	0.13	39	280	8	52	0.21	71	< 10	62
N173017	205 226	1.51	1.45	0.78	375	1	0.06	28	240	10	67	0.13	67	< 10	62
N173018	205 226	3.21	1.73	1.49	1355	3	0.14	72	780	8	170	0.29	193	< 10	130
N173019	205 226	0.51	0.47	0.63	255	1	0.05	13	1340	6	259	0.08	29	< 10	38
N173020	205 226	0.41	0.31	0.51	120	1	0.16	12	950	4	268	0.06	22	< 10	28
N173021	205 226	1.44	1.36	1.15	750	3	0.14	36	550	10	178	0.15	76	< 10	78
N173022	205 226	1.65	1.30	0.92	760	< 1	0.06	46	310	4	72	0.15	81	< 10	76
N173023	205 226	1.53	0.98	0.87	775	< 1	0.16	35	220	6	65	0.13	78	< 10	62
N173024	205 226	1.67	1.13	0.95	1275	2	0.03	46	380	8	159	0.13	87	< 10	78
N173025	205 226	1.67	0.99	0.96	850	< 1	0.08	39	300	8	124	0.14	76	< 10	64
N173026	205 226	1.64	1.19	0.84	470	1	0.08	34	200	6	64	0.14	84	< 10	62
N173027	205 226	1.26	0.88	0.68	495	1	0.04	30	180	4	83	0.11	62	< 10	48
N173028	205 226	1.58	1.02	0.68	965	< 1	0.04	34	190	12	101	0.13	69	< 10	56
N173029	205 226	1.47	1.03	0.76	1140	1	< 0.01	26	210	6	130	0.12	64	< 10	68
N173030	205 226	1.45	1.20	0.71	800	< 1	0.04	34	180	8	113	0.15	78	< 10	64
N173031	205 226	1.45	0.94	0.85	660	1	0.04	33	150	6	74	0.12	83	< 10	56
N173032	205 226	1.78	1.01	0.99	825	< 1	0.11	37	210	6	66	0.14	77	< 10	66
N173033	205 226	1.66	1.06	0.91	860	< 1	0.04	35	220	8	62	0.14	91	< 10	64
N173034	205 226	1.74	0.90	0.99	1440	1	0.19	39	310	10	132	0.14	82	< 10	68
N173035	205 226	1.15	0.94	0.74	1195	1	0.03	28	180	< 2	164	0.10	41	< 10	42
N173036	205 226	1.12	0.44	0.58	1485	< 1	< 0.01	22	120	< 2	74	0.07	38	< 10	26
N173037	205 226	1.16	0.38	0.62	850	< 1	0.04	21	150	< 2	103	0.09	27	< 10	30
N173038	205 226	1.68	0.50	0.82	965	< 1	0.65	27	260	< 2	54	0.16	64	< 10	42
N173039	205 226	1.32	0.98	0.66	1245	1	0.07	32	210	< 2	79	0.12	63	< 10	36
N173040	205 226	1.87	1.12	0.70	595	1	0.05	40	180	< 2	54	0.13	63	< 10	50
N173041	205 226	1.28	0.74	0.48	355	6	0.03	50	300	40	177	0.10	104	< 10	646

CERTIFICATION: Stan Bachlen

* FOR Zn VALUES ON SAMPLES N173171 THRU N173190

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 29-JUL-97
Invoice No. : I9732113
P.O. Number :
Account : GP W

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9732113

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173042	205	226	< 5	4	1.0	50	< 0.2	2.92	230	2.0	< 2	0.62	< 0.5	7	172	72
N173043	205	226	< 5	1	0.6	< 10	< 0.2	2.05	1050	0.5	< 2	3.59	< 0.5	6	109	69
N173044	205	226	< 5	4	0.6	< 10	< 0.2	4.05	4250	1.0	< 2	2.80	< 0.5	6	110	71
N173045	205	226	< 5	1	0.2	< 10	< 0.2	3.90	900	0.5	< 2	13.20	< 0.5	4	42	40
N173046	205	226	< 5	6	0.2	< 10	< 0.2	4.61	5070	0.5	< 2	3.83	0.5	8	70	89
N173047	205	226	< 5	8	0.2	< 10	< 0.2	5.34	2920	1.0	< 2	3.75	< 0.5	9	54	72
N173048	205	226	< 5	2	1.0	< 10	< 0.2	4.55	1130	1.0	< 2	2.68	< 0.5	7	58	60
N173049	205	226	< 5	2	0.4	< 10	< 0.2	4.51	3100	1.5	< 2	2.19	< 0.5	5	79	51
N173050	205	226	< 5	4	0.2	< 10	< 0.2	4.98	3250	1.5	< 2	2.16	< 0.5	3	71	26
N173051	205	226	< 5	20	0.2	< 10	< 0.2	5.72	7210	1.5	< 2	5.12	0.5	4	52	29
N173052	205	226	< 5	1	0.2	30	< 0.2	5.56	760	1.5	< 2	4.41	< 0.5	2	70	30
N173053	205	226	< 5	1	0.6	< 10	0.6	2.22	900	1.5	< 2	1.71	< 0.5	4	123	76
N173054	205	226	35	18	0.2	40	< 0.2	5.60	5300	1.5	< 2	3.60	< 0.5	< 1	37	16
N173055	205	226	35	8	0.4	10	< 0.2	2.24	490	2.0	< 2	1.94	< 0.5	3	121	54
N173056	205	226	15	10	0.4	10	0.4	2.25	230	2.0	< 2	2.00	< 0.5	5	82	91
N173057	205	226	10	6	< 0.2	< 10	< 0.2	3.28	380	1.5	< 2	3.66	< 0.5	3	70	41
N173058	205	226	10	1	< 0.2	< 10	< 0.2	3.57	500	2.0	< 2	3.28	< 0.5	2	89	35
N173059	205	226	5	1	< 0.2	< 10	< 0.2	3.21	2080	3.0	< 2	1.26	< 0.5	2	95	28
N173060	205	226	10	2	< 0.2	50	0.6	2.37	610	3.5	< 2	1.14	< 0.5	4	115	76
N173061	205	226	10	8	0.2	1260	1.0	2.64	340	4.0	< 2	1.60	2.5	9	129	82
N173062	205	226	< 5	1	0.2	790	0.6	2.12	230	10.5	< 2	1.72	2.5	5	131	57
N173063	205	226	< 5	1	0.2	400	< 0.2	0.92	280	8.5	< 2	1.26	2.5	5	146	24
N173064	205	226	10	1	0.6	10	< 0.2	1.37	30	4.5	< 2	7.34	< 0.5	1	92	59
N173065	205	226	10	24	0.4	10	< 0.2	3.60	220	3.5	< 2	1.46	< 0.5	18	229	58
N173066	205	226	20	76	0.4	10	0.4	2.67	160	2.0	< 2	3.33	< 0.5	30	115	102
N173067	205	226	20	14	0.6	20	0.4	2.30	190	1.5	< 2	3.38	< 0.5	11	111	88
N173068	205	226	10	14	0.8	10	< 0.2	2.57	80	2.5	< 2	3.57	< 0.5	19	108	62
N173069	205	226	< 5	48	1.4	20	< 0.2	2.79	90	3.0	< 2	4.83	< 0.5	19	102	38
N173070	205	226	< 5	24	0.2	100	< 0.2	2.75	730	2.5	< 2	3.78	5.0	22	103	35
N173071	205	226	< 5	18	0.2	50	< 0.2	2.60	310	3.0	< 2	2.11	3.5	24	110	54
N173072	205	226	< 5	12	1.0	10	< 0.2	2.66	50	3.5	< 2	4.97	< 0.5	14	111	55
N173073	205	226	90	38	5.2	60	< 0.2	1.97	20	3.0	< 2	10.30	< 0.5	11	71	90
N173074	205	226	10	14	1.8	10	< 0.2	3.72	50	6.0	< 2	1.38	< 0.5	10	128	65
N173075	205	226	40	40	5.6	30	< 0.2	2.47	20	4.0	< 2	5.88	< 0.5	18	92	83
N173076	205	226	5	6	1.0	10	< 0.2	3.13	130	5.0	< 2	0.85	< 0.5	12	158	93
N173077	205	226	< 5	1	0.6	< 10	< 0.2	3.01	50	2.5	< 2	3.33	< 0.5	10	83	59
N173078	205	226	< 5	8	0.6	< 10	< 0.2	2.90	50	4.0	< 2	3.86	< 0.5	15	147	107
N173079	205	226	< 5	1	0.4	< 10	< 0.2	2.51	30	2.5	< 2	3.07	< 0.5	12	147	71
N173080	205	226	< 5	1	0.4	< 10	< 0.2	4.35	120	5.5	< 2	1.15	< 0.5	11	119	50
N173081	205	226	< 5	2	0.2	< 10	< 0.2	4.46	250	5.5	< 2	0.86	< 0.5	11	98	100

CERTIFICATION: Stewart Bradley

* FOR Zn VALUES ON SAMPLES N173171 THRU N173190

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :2-B
Total Pages :5
Certificate Date: 29-JUL-97
Invoice No. :I9732113
P.O. Number :
Account :GP W

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CERTIFICATE OF ANALYSIS A9732113

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N173042	205	226	1.08	0.71	0.41	265	3	0.56	78	350	18	99	0.07	174	< 10	108
N173043	205	226	4.06	0.98	0.61	4400	1	0.01	20	460	18	114	0.08	115	< 10	26
N173044	205	226	3.73	1.98	0.77	2480	1	0.09	17	610	14	103	0.17	111	< 10	18
N173045	205	226	3.55	1.61	0.78	3810	3	0.36	5	530	28	507	0.13	48	10	16
N173046	205	226	3.17	2.11	0.74	2280	2	0.05	10	970	18	110	0.19	106	< 10	18
N173047	205	226	3.24	2.49	0.83	1965	2	0.11	10	1370	18	114	0.21	128	< 10	20
N173048	205	226	5.57	2.21	1.03	3570	1	0.09	15	820	32	85	0.20	99	< 10	38
N173049	205	226	4.34	2.27	0.74	3340	1	0.10	31	760	28	67	0.16	88	< 10	18
N173050	205	226	2.59	2.50	0.63	2300	2	0.11	16	520	18	60	0.17	84	< 10	14
N173051	205	226	1.96	2.87	0.48	2130	2	0.14	16	650	20	169	0.23	93	< 10	10
N173052	205	226	2.91	2.71	0.47	2560	3	0.11	19	740	32	150	0.23	70	< 10	56
N173053	205	226	4.76	1.04	0.69	2930	3	< 0.01	60	250	230	70	0.10	174	< 10	118
N173054	205	226	3.77	2.70	0.61	3670	3	0.07	11	1800	10	105	0.25	62	< 10	22
N173055	205	226	4.68	1.06	0.70	2900	1	< 0.01	57	410	26	94	0.08	218	< 10	22
N173056	205	226	6.36	1.02	0.79	3910	1	< 0.01	44	1070	24	113	0.11	168	< 10	24
N173057	205	226	6.75	1.10	0.89	9630	3	0.03	33	1910	20	262	0.09	144	< 10	18
N173058	205	226	6.18	1.46	0.66	3370	3	0.08	22	1240	8	328	0.10	121	< 10	14
N173059	205	226	5.43	1.24	0.50	1470	1	0.10	19	1230	8	288	0.11	176	< 10	14
N173060	205	226	2.50	0.86	0.38	900	5	0.04	43	1620	26	246	0.09	188	< 10	120
N173061	205	226	4.67	0.74	0.58	2810	13	0.05	110	650	110	202	0.09	220	< 10	2190
N173062	205	226	6.60	0.79	0.62	3990	10	0.03	95	1030	100	253	0.10	220	< 10	2040
N173063	205	226	2.18	0.25	0.22	640	4	0.01	43	470	10	146	0.05	97	< 10	1985
N173064	205	226	10.40	0.27	0.54	5520	8	0.03	21	1440	42	384	0.07	109	< 10	106
N173065	205	226	4.50	1.38	0.73	4140	1	0.04	47	1860	30	152	0.16	347	< 10	34
N173066	205	226	4.50	0.96	0.72	7040	4	0.03	87	1300	92	254	0.11	249	< 10	24
N173067	205	226	5.70	0.77	0.78	7180	1	0.02	40	1210	400	234	0.09	228	< 10	28
N173068	205	226	4.93	1.04	0.87	4920	3	0.03	40	650	76	162	0.08	172	< 10	14
N173069	205	226	3.24	1.31	1.17	3820	2	0.04	47	700	90	176	0.08	164	< 10	26
N173070	205	226	3.05	1.34	1.32	4590	1	0.05	47	440	36	129	0.09	138	< 10	966
N173071	205	226	4.01	1.23	0.90	4850	1	0.01	52	770	62	69	0.10	180	< 10	634
N173072	205	226	4.80	1.32	0.84	5280	3	0.03	31	1190	40	123	0.07	213	< 10	28
N173073	205	226	7.00	0.98	0.64	3890	1	< 0.01	32	1200	130	290	0.05	150	< 10	388
N173074	205	226	3.37	1.83	0.48	835	1	0.10	37	760	36	39	0.10	231	< 10	26
N173075	205	226	5.45	1.22	0.49	2050	2	0.03	46	1360	120	187	0.06	186	< 10	70
N173076	205	226	1.79	1.50	0.38	620	1	0.03	24	830	10	34	0.08	195	< 10	16
N173077	205	226	3.97	0.51	0.46	2210	2	0.04	13	780	50	197	0.09	95	< 10	20
N173078	205	226	3.40	0.91	0.56	4830	3	0.03	26	1130	36	260	0.09	129	< 10	16
N173079	205	226	4.72	0.48	0.51	2820	2	0.03	16	410	26	240	0.06	97	< 10	16
N173080	205	226	2.60	2.04	0.64	570	1	0.10	33	240	12	83	0.12	155	< 10	28
N173081	205	226	2.28	2.05	0.56	540	< 1	0.10	36	550	16	60	0.13	152	< 10	24

CERTIFICATION:

* FOR Zn VALUES ON SAMPLES N173171 THRU N173190

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :3-A
Total Pages :5
Certificate Date: 29-JUL-97
Invoice No. :I9732113
P.O. Number :
Account :GP W

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CERTIFICATE OF ANALYSIS A9732113

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173082	205	226	< 5	10	1.2	20	< 0.2	3.66	40	6.0	< 2	0.65	< 0.5	11	172	98
N173083	205	226	< 5	18	2.0	90	< 0.2	2.65	70	4.0	< 2	1.12	2.5	8	228	68
N173084	205	226	< 5	22	4.8	90	0.4	4.21	80	5.0	< 2	0.36	1.5	6	304	45
N173085	205	226	< 5	38	5.2	90	0.4	5.15	130	5.0	< 2	0.64	2.5	6	201	43
N173086	205	226	< 5	14	2.4	20	< 0.2	5.20	130	4.0	< 2	4.82	< 0.5	9	139	27
N173087	205	226	< 5	12	3.2	810	< 0.2	2.97	190	3.0	< 2	1.36	14.5	5	177	36
N173088	205	226	< 5	1	0.2	20	< 0.2	7.73	950	6.0	< 2	0.86	< 0.5	1	53	11
N173089	205	226	< 5	1	0.2	< 10	< 0.2	7.29	2480	5.5	< 2	0.87	< 0.5	< 1	53	8
N173090	205	226	20	6	2.0	40	< 0.2	2.53	20	3.5	< 2	8.53	0.5	1	108	37
N173091	205	226	< 5	4	0.2	20	< 0.2	2.57	450	2.5	< 2	0.36	< 0.5	4	180	61
N173092	205	226	< 5	4	0.6	150	< 0.2	2.45	350	1.5	< 2	0.45	< 0.5	5	161	51
N173093	205	226	< 5	10	0.8	160	< 0.2	2.15	120	2.0	< 2	0.59	< 0.5	4	155	73
N173094	205	226	< 5	1	0.2	20	< 0.2	1.29	1250	0.5	2	24.0	< 0.5	< 1	24	28
N173095	205	226	45	16	1.0	210	< 0.2	3.53	190	3.0	< 2	0.36	< 0.5	8	156	88
N173096	205	226	10	2	0.4	10	< 0.2	2.11	220	0.5	2	18.15	< 0.5	1	35	31
N173097	205	226	20	10	0.8	290	< 0.2	3.26	140	2.0	< 2	1.28	< 0.5	8	184	94
N173098	205	226	20	16	0.6	110	< 0.2	3.02	200	2.0	< 2	0.99	< 0.5	7	164	73
N173099	205	226	15	12	0.6	100	< 0.2	3.58	170	2.0	< 2	1.39	< 0.5	6	170	76
N173100	205	226	< 5	2	0.4	90	< 0.2	4.54	420	3.0	< 2	2.20	< 0.5	7	125	69
N173101	205	226	< 5	1	0.4	70	< 0.2	3.64	230	6.0	< 2	3.00	0.5	3	150	47
N173102	205	226	10	12	1.6	150	< 0.2	1.53	40	7.0	< 2	9.72	< 0.5	3	100	43
N173103	205	226	15	20	3.2	30	< 0.2	1.71	30	9.0	< 2	9.85	< 0.5	3	85	55
N173104	205	226	< 5	16	2.4	260	< 0.2	2.70	100	5.0	< 2	2.85	25.0	18	143	67
N173105	205	226	< 5	14	0.2	< 10	< 0.2	3.05	1130	4.0	< 2	1.04	< 0.5	17	139	96
N173106	205	226	10	12	3.0	40	< 0.2	3.04	30	3.5	< 2	2.87	< 0.5	15	102	61
N173107	205	226	10	16	3.0	270	< 0.2	3.77	40	4.0	< 2	4.60	1.5	6	108	44
N173108	205	226	< 5	6	0.6	10	< 0.2	3.42	100	7.0	< 2	3.54	< 0.5	18	157	127
N173109	205	226	< 5	18	0.4	< 10	< 0.2	3.09	4510	7.5	< 2	3.71	0.5	15	152	19
N173110	205	226	30	14	2.0	880	< 0.2	2.10	30	6.0	< 2	8.55	7.5	4	112	104
N173111	205	226	5	4	1.2	60	< 0.2	2.04	100	4.5	< 2	3.91	< 0.5	7	225	52
N173112	205	226	20	12	1.2	10	< 0.2	2.12	70	3.0	< 2	10.50	< 0.5	27	132	199
N173113	205	226	20	20	1.8	130	1.4	3.87	10	6.0	< 2	1.86	1.0	18	131	55
N173114	205	226	< 5	1	0.6	1890	< 0.2	4.06	140	3.0	< 2	1.07	3.5	5	97	75
N173115	205	226	< 5	1	0.2	680	< 0.2	3.22	210	3.5	< 2	0.67	2.5	5	133	59
N173116	205	226	< 5	1	0.2	110	< 0.2	2.62	900	2.0	< 2	0.50	1.5	10	116	47
N173117	205	226	< 5	1	0.2	870	< 0.2	3.80	460	3.0	< 2	0.26	1.5	9	168	61
N173118	205	226	< 5	1	0.2	780	< 0.2	2.90	760	2.5	< 2	0.22	2.5	3	166	41
N173119	205	226	< 5	1	0.4	450	< 0.2	2.47	410	2.5	< 2	0.33	2.0	3	152	63
N173120	205	226	20	6	2.2	1770	0.4	2.20	50	2.5	< 2	0.35	6.0	7	146	41
N173121	205	226	< 5	2	1.2	930	< 0.2	1.36	80	2.0	< 2	0.18	5.0	4	144	45

CERTIFICATION: _____

* FOR Zn VALUES ON SAMPLES N173171 THRU N173190

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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 29-JUL-97
Invoice No. :19732113
P.O. Number :
Account :GP W

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9732113

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N173082	205 226	3.91	1.65	0.47	480	1	0.09	38	300	26	36	0.10	155	< 10	56
N173083	205 226	1.99	1.21	0.39	545	2	0.03	59	340	36	41	0.07	179	< 10	532
N173084	205 226	2.08	1.96	0.41	205	13	0.14	52	460	60	20	0.15	348	< 10	394
N173085	205 226	1.99	2.43	0.52	225	8	0.16	66	670	74	30	0.17	381	< 10	660
N173086	205 226	3.16	2.13	2.31	1465	4	0.16	28	260	74	186	0.12	101	< 10	30
N173087	205 226	1.84	1.23	0.74	465	2	0.05	27	160	96	64	0.07	81	< 10	4520
N173088	205 226	2.46	3.80	1.20	500	6	0.26	9	50	20	56	0.11	5	< 10	250
N173089	205 226	2.24	3.65	1.10	410	2	0.23	3	20	14	54	0.10	4	< 10	58
N173090	205 226	7.40	0.72	0.62	2990	4	0.05	18	900	250	374	0.04	104	< 10	508
N173091	205 226	1.23	1.07	0.38	250	5	0.06	50	210	10	40	0.07	103	< 10	152
N173092	205 226	0.84	0.76	0.30	105	3	0.10	28	80	56	68	0.07	98	< 10	484
N173093	205 226	1.28	0.94	0.28	140	1	0.03	38	1220	64	51	0.07	127	< 10	386
N173094	205 226	1.45	0.35	0.48	6160	< 1	0.24	23	190	22	1390	0.05	41	10	14
N173095	205 226	1.14	1.56	0.35	155	1	0.11	67	150	80	19	0.13	208	< 10	434
N173096	205 226	2.74	0.51	0.76	5360	3	0.62	35	140	28	1070	0.06	57	10	18
N173097	205 226	1.49	1.37	0.44	720	1	0.07	59	220	44	43	0.09	159	< 10	786
N173098	205 226	1.20	1.39	0.35	270	1	0.07	58	180	44	29	0.11	157	< 10	178
N173099	205 226	2.31	1.62	0.50	800	2	0.04	44	320	50	36	0.10	149	< 10	222
N173100	205 226	3.47	2.13	0.61	1705	1	0.11	23	840	80	56	0.16	128	< 10	662
N173101	205 226	3.48	1.23	0.56	2220	5	0.28	39	650	750	125	0.11	156	< 10	308
N173102	205 226	8.27	0.48	0.83	6820	8	0.01	29	1770	96	292	0.04	132	< 10	596
N173103	205 226	7.46	0.78	0.64	4520	7	0.01	27	1100	144	157	0.05	153	< 10	164
N173104	205 226	4.03	1.26	0.81	3960	2	0.01	45	840	1900	49	0.09	189	< 10	2150
N173105	205 226	1.26	1.57	0.36	1535	1	0.04	25	440	10	21	0.11	178	< 10	58
N173106	205 226	5.32	1.56	0.45	7160	3	0.06	17	480	76	58	0.10	123	< 10	108
N173107	205 226	5.01	1.98	0.70	2900	6	0.08	21	370	116	99	0.08	88	< 10	716
N173108	205 226	4.98	1.81	0.68	2940	3	0.06	86	1980	260	95	0.11	284	< 10	144
N173109	205 226	2.71	1.57	0.60	3270	3	0.03	61	3470	450	118	0.11	335	< 10	42
N173110	205 226	8.67	1.03	0.84	5950	8	0.02	32	1570	260	255	0.07	191	< 10	2650
N173111	205 226	4.05	0.71	0.65	3050	2	0.03	17	350	56	201	0.10	227	< 10	184
N173112	205 226	3.69	0.66	0.57	2840	8	0.06	35	1140	30	904	0.09	131	< 10	58
N173113	205 226	9.91	1.45	0.35	905	4	0.18	24	540	500	68	0.13	184	< 10	540
N173114	205 226	2.36	0.35	0.36	315	30	0.11	25	1220	60	110	0.10	97	< 10	4410
N173115	205 226	1.39	0.97	0.44	175	58	0.11	23	220	60	121	0.09	128	< 10	1680
N173116	205 226	0.85	1.14	0.36	140	10	0.07	35	80	22	76	0.09	84	< 10	252
N173117	205 226	1.23	1.71	0.48	115	8	0.11	29	140	110	84	0.12	130	< 10	1135
N173118	205 226	0.94	1.33	0.37	70	8	0.10	12	230	116	65	0.09	115	< 10	1600
N173119	205 226	0.80	1.05	0.33	95	14	0.09	13	80	84	110	0.06	103	< 10	968
N173120	205 226	2.51	0.92	0.28	105	15	0.07	48	640	480	86	0.06	165	< 10	5340
N173121	205 226	1.57	0.51	0.17	60	2	0.03	20	50	370	55	0.04	96	< 10	2390

CERTIFICATION: Ineo J. Pardi Jan

* FOR Zn VALUES ON SAMPLES N173171 THRU N173190

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :4-A
Total Pages :5
Certificate Date: 29-JUL-97
Invoice No. :I9732113
P.O. Number :
Account :GP W

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9732113

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173122	205 226	< 5	2	0.6	220	< 0.2	3.14	330	3.0	< 2	0.19	1.0	7	133	47
N173123	205 226	< 5	1	0.4	30	< 0.2	2.70	920	2.5	< 2	0.34	< 0.5	5	158	42
N173124	205 226	< 5	2	0.2	190	< 0.2	3.90	930	2.5	< 2	0.34	0.5	6	164	52
N173125	205 226	< 5	14	0.4	50	< 0.2	4.14	1420	2.0	< 2	0.20	< 0.5	14	142	66
N173126	205 226	< 5	240	1.2	670	< 0.2	2.65	280	1.0	< 2	0.36	< 0.5	93	206	62
N173127	205 226	< 5	40	0.8	60	< 0.2	2.85	480	1.5	< 2	0.35	< 0.5	29	182	56
N173128	205 226	< 5	34	1.4	90	0.4	3.19	170	1.5	< 2	0.34	< 0.5	11	169	64
N173129	205 226	< 5	4	0.8	60	< 0.2	3.47	490	1.5	< 2	0.30	< 0.5	6	163	63
N173130	205 226	< 5	6	1.8	40	0.4	3.21	180	1.5	< 2	0.34	< 0.5	7	199	53
N173131	205 226	< 5	8	1.2	50	0.4	2.64	150	1.0	< 2	0.31	< 0.5	6	206	76
N173132	205 226	< 5	12	0.6	30	1.0	2.31	550	1.0	< 2	0.79	< 0.5	6	174	73
N173133	205 226	< 5	4	0.6	20	< 0.2	1.64	480	0.5	< 2	0.22	< 0.5	1	176	53
N173134	205 226	< 5	2	0.8	50	0.4	3.07	350	1.5	< 2	0.09	< 0.5	4	187	96
N173135	205 226	< 5	2	0.6	40	< 0.2	2.41	300	1.0	< 2	0.28	< 0.5	4	170	58
N173136	205 226	< 5	2	0.4	20	0.4	1.90	260	0.5	< 2	0.52	< 0.5	2	206	82
N173137	205 226	< 5	4	0.6	10	0.4	2.16	390	0.5	< 2	0.20	< 0.5	3	175	74
N173138	205 226	< 5	12	1.4	40	0.6	2.30	210	0.5	< 2	0.24	< 0.5	4	167	71
N173139	205 226	< 5	12	0.4	40	0.4	1.72	390	< 0.5	< 2	0.43	< 0.5	4	168	59
N173140	205 226	< 5	4	0.4	30	< 0.2	1.64	400	0.5	< 2	0.34	< 0.5	1	182	51
N173141	205 226	< 5	6	0.8	70	0.4	2.26	290	0.5	< 2	0.19	< 0.5	3	186	69
N173142	205 226	< 5	1	0.2	< 10	< 0.2	0.50	1830	< 0.5	< 2	3.36	< 0.5	< 1	233	11
N173143	205 226	< 5	1	< 0.2	< 10	< 0.2	1.06	1540	< 0.5	< 2	1.05	< 0.5	< 1	75	26
N173144	205 226	< 5	1	0.4	10	< 0.2	1.98	170	0.5	< 2	0.87	< 0.5	1	171	60
N173145	205 226	< 5	1	0.4	< 10	< 0.2	2.62	2810	1.0	< 2	0.23	< 0.5	2	190	73
N173146	205 226	< 5	1	0.2	< 10	< 0.2	1.36	260	0.5	< 2	0.31	< 0.5	< 1	187	18
N173147	205 226	< 5	1	0.6	< 10	< 0.2	1.90	140	0.5	< 2	0.39	< 0.5	< 1	155	25
N173148	205 226	< 5	8	0.6	60	< 0.2	3.69	290	1.5	< 2	0.30	< 0.5	17	246	76
N173149	205 226	< 5	1	0.4	20	< 0.2	3.07	320	1.0	< 2	0.48	< 0.5	10	243	58
N173150	205 226	< 5	1	0.4	10	< 0.2	2.05	220	0.5	< 2	0.86	< 0.5	4	239	39
N173151	205 226	< 5	1	0.2	10	< 0.2	3.49	260	1.0	< 2	0.38	< 0.5	5	198	48
N173152	205 226	< 5	1	0.4	40	< 0.2	3.27	250	1.5	< 2	0.24	< 0.5	6	194	89
N173153	205 226	< 5	1	1.0	50	< 0.2	3.64	360	2.5	< 2	0.26	< 0.5	1	157	58
N173154	205 226	< 5	1	< 0.2	400	< 0.2	2.53	670	3.0	< 2	0.14	5.5	2	175	52
N173155	205 226	< 5	1	< 0.2	< 10	< 0.2	3.27	1490	3.0	< 2	0.29	< 0.5	3	164	55
N173156	205 226	< 5	1	< 0.2	< 10	< 0.2	3.22	760	4.0	< 2	0.34	< 0.5	< 1	197	23
N173157	205 226	< 5	1	< 0.2	< 10	< 0.2	3.43	480	4.5	< 2	0.60	< 0.5	< 1	194	36
N173158	205 226	< 5	1	< 0.2	< 10	< 0.2	2.84	250	5.0	< 2	1.23	< 0.5	< 1	159	17
N173159	205 226	< 5	1	< 0.2	< 10	< 0.2	4.26	320	14.0	< 2	0.45	< 0.5	2	121	72
N173160	205 226	10	12	2.4	10	< 0.2	1.22	30	3.0	< 2	1.49	< 0.5	1	172	75
N173161	205 226	< 5	1	0.2	10	< 0.2	2.04	450	9.5	< 2	2.54	< 0.5	8	68	80

CERTIFICATION: David Buckler

* FOR Zn VALUES ON SAMPLES N173171 THRU N173190

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 29-JUL-97
Invoice No. :I9732113
P.O. Number :
Account :GP W

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9732113

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N173122	205 226	0.99	1.47	0.37	60	8	0.11	30	150	52	70	0.10	139	< 10	610
N173123	205 226	1.18	1.07	0.33	100	5	0.08	17	220	128	76	0.09	86	< 10	90
N173124	205 226	1.46	1.63	0.48	175	1	0.14	29	120	32	87	0.14	110	< 10	532
N173125	205 226	1.01	1.67	0.52	195	9	0.11	55	60	32	59	0.12	99	< 10	126
N173126	205 226	1.02	1.02	0.44	535	16	0.06	229	60	18	152	0.08	95	< 10	1480
N173127	205 226	0.92	1.13	0.46	295	14	0.07	86	40	16	142	0.09	93	< 10	160
N173128	205 226	1.40	1.27	0.51	330	9	0.09	146	100	24	152	0.10	108	< 10	198
N173129	205 226	0.95	1.47	0.50	135	5	0.10	48	60	12	99	0.11	97	< 10	120
N173130	205 226	1.54	1.26	0.54	390	14	0.10	100	110	26	172	0.11	110	< 10	86
N173131	205 226	1.61	0.81	0.43	405	19	0.07	74	280	14	177	0.07	106	< 10	110
N173132	205 226	1.02	0.78	0.37	260	13	0.01	67	250	18	147	0.07	113	< 10	58
N173133	205 226	0.85	0.47	0.26	110	1	0.03	18	30	8	115	0.05	84	< 10	14
N173134	205 226	1.13	1.16	0.39	65	6	0.08	60	30	8	35	0.11	164	< 10	78
N173135	205 226	0.97	0.83	0.34	110	8	0.06	40	60	6	77	0.07	99	< 10	60
N173136	205 226	0.97	0.37	0.26	190	8	0.02	25	70	6	187	0.05	94	< 10	22
N173137	205 226	0.98	0.67	0.28	95	6	0.06	32	50	8	98	0.05	101	< 10	22
N173138	205 226	1.27	0.68	0.29	105	6	0.07	33	40	8	115	0.05	105	< 10	36
N173139	205 226	1.03	0.10	0.16	220	5	0.03	32	60	4	226	0.04	71	< 10	82
N173140	205 226	0.99	0.36	0.27	165	7	0.03	17	70	6	175	0.03	75	< 10	12
N173141	205 226	1.02	0.65	0.29	115	8	0.07	37	60	8	83	0.06	102	< 10	154
N173142	205 226	4.86	0.03	0.22	1575	4	< 0.01	4	560	8	408	0.01	38	< 10	6
N173143	205 226	18.25	0.09	0.74	7630	7	< 0.01	3	1540	< 2	179	0.04	99	< 10	14
N173144	205 226	4.72	0.52	0.42	480	12	< 0.01	16	1770	8	229	0.07	121	< 10	26
N173145	205 226	2.21	0.91	0.34	135	12	0.07	26	500	6	81	0.11	145	< 10	18
N173146	205 226	6.53	0.16	0.32	355	6	< 0.01	6	370	6	74	0.05	87	< 10	8
N173147	205 226	6.01	0.14	0.40	445	6	0.02	6	430	6	138	0.07	97	< 10	12
N173148	205 226	2.05	1.36	0.50	210	29	0.11	70	60	56	131	0.15	145	< 10	510
N173149	205 226	1.74	1.22	0.48	275	8	0.08	59	490	22	249	0.12	118	< 10	144
N173150	205 226	2.37	0.52	0.42	435	13	0.02	32	1360	8	450	0.08	75	< 10	70
N173151	205 226	2.70	1.06	0.50	380	18	0.10	45	100	14	141	0.14	126	< 10	58
N173152	205 226	2.63	1.16	0.44	120	5	0.08	41	130	18	80	0.13	103	< 10	172
N173153	205 226	2.79	1.13	0.47	75	4	0.10	16	250	18	91	0.12	94	< 10	184
N173154	205 226	0.77	0.94	0.29	40	< 1	0.07	10	60	156	157	0.08	85	< 10	632
N173155	205 226	1.06	1.34	0.40	75	3	0.10	13	110	4	314	0.10	102	< 10	24
N173156	205 226	2.22	1.31	0.38	105	1	0.10	8	330	8	302	0.14	118	< 10	16
N173157	205 226	2.42	1.39	0.41	80	4	0.09	8	2020	8	366	0.17	121	< 10	16
N173158	205 226	7.93	0.91	0.44	330	1	0.06	5	430	8	387	0.14	109	< 10	16
N173159	205 226	4.98	1.14	0.52	110	36	0.11	8	260	8	273	0.16	105	< 10	18
N173160	205 226	8.33	0.02	0.53	790	3	< 0.01	4	180	6	215	0.03	57	< 10	20
N173161	205 226	0.85	0.41	0.23	290	19	< 0.01	14	850	6	303	0.06	126	< 10	100

CERTIFICATION: David Bartlett

* FOR Zn VALUES ON SAMPLES N173171 THRU N173190

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Certificate Date: 29-JUL-97
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Account :GP W

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CERTIFICATE OF ANALYSIS A9732113

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173162	205	226	< 5	1	2.4	10	< 0.2	0.61	50	1.5	< 2	17.40	< 0.5	< 1	41	22
N173163	205	226	5	16	5.0	520	< 0.2	1.81	20	4.5	< 2	2.96	13.0	5	175	90
N173164	205	226	< 5	2	2.2	50	< 0.2	0.46	50	1.0	< 2	17.40	< 0.5	< 1	30	33
N173165	205	226	< 5	2	1.8	220	< 0.2	2.60	50	3.5	< 2	0.17	8.5	5	156	64
N173166	205	226	25	4	2.8	350	< 0.2	1.86	20	2.5	< 2	1.30	4.5	4	108	72
N173167	205	226	10	8	4.6	640	< 0.2	2.41	20	3.5	< 2	0.30	6.5	6	159	84
N173168	205	226	10	6	2.6	440	< 0.2	2.33	30	3.5	< 2	0.46	3.5	3	120	59
N173169	205	226	< 5	1	1.4	1300	< 0.2	1.45	200	1.5	< 2	1.13	1.5	1	79	19
N173170	205	226	< 5	1	0.8	630	< 0.2	1.96	40	3.5	< 2	0.59	0.5	7	92	48
N173171	205	226	< 5	1	2.0	50	< 0.2	1.05	40	7.0	< 2	1.02	< 0.5	1	92	22
N173172	205	226	< 5	1	0.4	< 10	< 0.2	1.64	120	3.5	< 2	0.71	< 0.5	< 1	121	18
N173173	205	226	< 5	1	< 0.2	< 10	< 0.2	2.59	1680	3.0	< 2	0.99	< 0.5	< 1	136	33
N173174	205	226	60	1	1.2	40	< 0.2	2.40	130	6.0	< 2	1.53	< 0.5	< 1	105	25
N173175	205	226	< 5	1	0.4	< 10	< 0.2	0.81	250	6.0	< 2	3.66	< 0.5	< 1	114	10
N173176	205	226	< 5	1	1.0	10	< 0.2	2.79	180	6.0	2	0.35	< 0.5	1	139	52
N173177	205	226	< 5	1	0.2	< 10	< 0.2	2.49	290	3.5	< 2	0.46	< 0.5	< 1	108	40
N173178	205	226	< 5	1	0.2	< 10	< 0.2	1.46	280	9.5	< 2	0.30	< 0.5	< 1	99	27
N173179	205	226	< 5	1	0.4	280	< 0.2	1.49	120	2.5	< 2	0.45	1.5	2	83	30
N173180	205	226	< 5	1	0.2	< 10	< 0.2	1.23	210	6.5	< 2	0.57	< 0.5	< 1	80	18
N173181	205	226	< 5	1	< 0.2	< 10	< 0.2	1.13	2100	8.5	< 2	0.59	< 0.5	< 1	61	18
N173182	205	226	< 5	1	0.2	< 10	< 0.2	0.89	1240	5.5	< 2	0.85	< 0.5	< 1	63	14
N173183	205	226	< 5	1	0.2	< 10	< 0.2	0.95	990	7.0	< 2	0.97	< 0.5	< 1	61	16
N173184	205	226	< 5	1	2.2	10	< 0.2	0.78	30	5.0	< 2	1.03	< 0.5	< 1	100	17
N173185	205	226	< 5	1	0.6	< 10	< 0.2	0.71	140	5.5	< 2	0.56	< 0.5	< 1	81	13
N173186	205	226	< 5	1	1.4	60	< 0.2	0.97	60	4.0	< 2	2.95	< 0.5	< 1	83	17
N173187	205	226	< 5	1	6.8	1440	< 0.2	1.41	10	9.5	< 2	5.09	< 0.5	< 1	40	21
N173188	205	226	< 5	1	2.0	90	< 0.2	1.58	40	11.0	< 2	5.23	< 0.5	< 1	68	25
N173189	205	226	< 5	1	1.6	30	< 0.2	1.14	30	8.5	< 2	0.55	< 0.5	< 1	94	19
N173190	205	226	< 5	1	0.8	< 10	< 0.2	0.70	90	10.5	< 2	1.17	< 0.5	< 1	74	8
N173191	205	226	< 5	1	3.2	380	< 0.2	2.20	50	3.0	< 2	2.31	1.0	1	99	41
N173192	205	226	10	18	6.4	350	< 0.2	2.17	30	3.0	< 2	1.73	2.0	3	153	44
N173193	205	226	5	20	4.0	100	< 0.2	2.41	60	3.0	< 2	0.94	< 0.5	6	196	58
N173194	205	226	5	8	2.6	150	< 0.2	1.37	60	2.0	< 2	0.12	< 0.5	1	171	63
N173195	205	226	10	8	4.2	130	< 0.2	1.63	70	2.5	< 2	0.65	< 0.5	1	201	62
N173196	205	226	5	1	14.0	890	< 0.2	1.77	80	2.5	< 2	3.21	3.0	3	126	105
N173197	205	226	< 5	1	2.4	110	< 0.2	2.45	890	3.0	< 2	2.66	0.5	4	149	95
N173198	205	226	< 5	1	4.6	480	< 0.2	3.16	570	4.0	< 2	1.15	7.0	7	164	102
N173199	205	226	< 5	1	4.8	690	< 0.2	2.10	320	3.0	< 2	1.11	7.0	4	173	68
N173200	205	226	< 5	1	4.0	720	< 0.2	3.27	300	4.5	< 2	0.91	18.0	6	166	74

CERTIFICATION: Ivan Bruckler

* FOR Zn VALUES ON SAMPLES N173171 THRU N173190

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 29-JUL-97
Invoice No. :I9732113
P.O. Number :
Account :GP W

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9732113

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N173162	205	226	2.21	0.20	0.17	2330	12	< 0.01	6	210	72	329	0.02	59	10	36
N173163	205	226	4.61	0.88	0.35	435	31	0.01	44	540	530	124	0.05	215	< 10	5730
N173164	205	226	3.87	0.23	0.11	1800	19	< 0.01	5	210	760	207	0.01	71	10	398
N173165	205	226	4.20	1.29	0.28	50	18	0.09	48	200	1000	4	0.07	182	< 10	2520
N173166	205	226	4.86	0.93	0.27	190	17	< 0.01	72	370	1300	23	0.05	161	< 10	3830
N173167	205	226	5.84	1.18	0.31	110	33	0.06	30	440	1600	8	0.08	227	< 10	5710
N173168	205	226	4.40	1.10	0.31	155	19	0.05	112	240	850	21	0.07	164	< 10	2690
N173169	205	226	0.53	0.12	0.17	100	4	< 0.01	7	50	4	169	0.05	76	< 10	2100
N173170	205	226	2.68	0.29	0.28	45	37	0.02	13	280	16	79	0.05	127	< 10	1430
N173171	205	226	12.90	0.11	0.44	245	11	< 0.01	1	190	12	366	0.04	65	< 10	273
N173172	205	226	3.75	0.49	0.32	245	3	0.01	5	260	10	318	0.07	68	< 10	18
N173173	205	226	1.86	1.04	0.33	160	3	0.05	6	300	< 2	319	0.13	87	< 10	17
N173174	205	226	7.77	0.75	0.45	480	3	< 0.01	4	420	< 2	483	0.10	92	< 10	21
N173175	205	226	10.35	0.19	0.23	615	6	< 0.01	< 1	370	< 2	696	0.03	43	< 10	14
N173176	205	226	3.97	0.97	0.42	285	27	0.06	9	230	< 2	285	0.12	103	< 10	15
N173177	205	226	3.16	0.93	0.38	210	2	0.05	7	500	< 2	472	0.12	88	< 10	16
N173178	205	226	12.15	0.46	0.25	160	7	< 0.01	< 1	170	< 2	617	0.06	66	< 10	21
N173179	205	226	1.15	0.45	0.18	60	39	0.02	8	290	< 2	114	0.04	103	< 10	2770
N173180	205	226	13.30	0.35	0.22	200	15	0.14	< 1	260	< 2	555	0.03	61	< 10	18
N173181	205	226	13.55	0.19	0.09	170	12	0.54	< 1	140	< 2	641	0.03	52	< 10	18
N173182	205	226	13.30	0.10	0.13	255	13	0.43	< 1	160	< 2	633	0.03	53	< 10	11
N173183	205	226	14.05	0.15	0.19	250	10	0.06	< 1	120	< 2	593	0.04	59	< 10	15
N173184	205	226	13.50	0.15	0.46	350	9	< 0.01	< 1	170	< 2	125	0.02	42	< 10	12
N173185	205	226	11.70	0.13	0.27	200	28	< 0.01	< 1	140	< 2	400	0.01	48	< 10	11
N173186	205	226	7.74	0.07	0.68	645	9	< 0.01	1	180	< 2	425	0.01	40	< 10	10
N173187	205	226	11.80	0.23	0.55	875	11	0.05	3	110	< 2	137	0.02	51	< 10	13
N173188	205	226	12.60	0.28	0.77	740	14	0.03	1	150	< 2	293	0.02	55	< 10	13
N173189	205	226	15.50	0.17	0.53	425	57	< 0.01	< 1	140	< 2	184	0.02	52	< 10	14
N173190	205	226	10.65	0.11	0.32	295	13	< 0.01	< 1	200	< 2	340	0.01	57	< 10	9
N173191	205	226	3.39	0.76	0.34	385	44	0.01	15	1370	32	86	0.06	119	< 10	1645
N173192	205	226	4.43	0.97	0.33	260	5	< 0.01	46	100	440	29	0.06	119	< 10	1745
N173193	205	226	2.20	1.11	0.30	155	3	0.02	72	60	176	13	0.06	108	< 10	420
N173194	205	226	1.97	0.68	0.16	20	1	0.03	51	50	180	5	0.04	93	< 10	606
N173195	205	226	2.10	0.84	0.20	85	1	0.01	21	160	48	14	0.05	90	< 10	348
N173196	205	226	2.46	0.89	0.28	245	1	0.01	24	330	196	31	0.04	91	< 10	2060
N173197	205	226	1.08	1.28	0.31	175	1	0.01	14	410	54	33	0.07	117	< 10	330
N173198	205	226	1.19	1.65	0.40	120	1	0.06	54	410	300	17	0.10	191	< 10	3500
N173199	205	226	1.28	1.09	0.26	145	1	0.02	48	280	196	15	0.07	172	< 10	4670
N173200	205	226	1.61	1.72	0.38	155	1	0.06	43	310	1200	15	0.09	209	< 10	5940

CERTIFICATION: David Buchan

* FOR Zn VALUES ON SAMPLES N173171 THRU N173190

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9733033

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9733033

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 30-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	98	Geochem ring to approx 150 mesh
226	98	0-3 Kg crush and split
3202	98	Rock - save entire reject
285	98	ICP - HF digestion charge
287	98	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	98	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	98	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	98	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	98	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	98	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	98	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	98	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	98	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	98	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	98	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	98	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	98	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	98	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	98	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	98	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	98	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	98	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	98	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	98	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	98	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	98	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	98	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	98	Pb ppm: 24 element, rock & core	AAS	2	10000
582	98	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	98	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	98	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	98	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	98	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 30-JUL-97
Invoice No. :I9733033
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733033

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N174485	205	226	< 5	1	< 0.2	< 10	< 0.2	1.98	2300	0.5	< 2	0.60	< 0.5	11	149	48
N174486	205	226	20	1	2.2	20	< 0.2	4.22	160	1.5	< 2	1.67	< 0.5	17	173	98
N174487	205	226	< 5	22	< 0.2	10	< 0.2	3.49	2590	1.0	< 2	0.33	< 0.5	7	186	96
N174488	205	226	< 5	6	< 0.2	< 10	< 0.2	3.13	7380	1.0	< 2	0.37	1.0	4	181	55
N174489	205	226	< 5	4	0.6	< 10	< 0.2	1.65	250	< 0.5	< 2	0.26	< 0.5	< 1	141	39
N174490	205	226	< 5	74	0.2	< 10	< 0.2	2.02	300	0.5	< 2	0.32	< 0.5	2	181	54
N174491	205	226	< 5	16	< 0.2	10	< 0.2	2.15	2450	0.5	< 2	0.21	< 0.5	2	104	53
N174492	205	226	< 5	4	0.2	< 10	< 0.2	1.78	380	0.5	< 2	0.16	< 0.5	4	168	80
N174493	205	226	125	1	0.4	< 10	< 0.2	1.35	200	0.5	< 2	1.04	< 0.5	< 1	144	73
N174494	205	226	< 5	1	0.2	< 10	< 0.2	2.98	460	0.5	< 2	0.19	< 0.5	3	150	60
N174495	205	226	60	1	0.2	< 10	< 0.2	1.37	160	< 0.5	< 2	1.95	< 0.5	< 1	152	77
N174496	205	226	< 5	1	< 0.2	< 10	< 0.2	3.12	310	1.0	< 2	0.28	< 0.5	5	146	64
N174497	205	226	< 5	1	< 0.2	< 10	< 0.2	3.07	430	0.5	< 2	0.32	< 0.5	4	181	50
N174498	205	226	< 5	4	0.2	30	< 0.2	3.08	3570	1.5	< 2	0.22	< 0.5	5	159	54
N174499	205	226	< 5	12	0.8	< 10	< 0.2	2.98	250	1.5	< 2	0.66	< 0.5	4	136	37
N174500	205	226	< 5	1	1.2	< 10	< 0.2	0.99	420	< 0.5	< 2	0.94	< 0.5	< 1	119	53
N203439	205	226	< 5	10	1.2	< 10	< 0.2	3.18	270	1.5	< 2	0.54	< 0.5	8	164	65
N203440	205	226	< 5	6	1.2	< 10	< 0.2	1.73	570	< 0.5	< 2	0.22	< 0.5	5	107	71
N203441	205	226	35	12	1.4	< 10	< 0.2	1.32	890	< 0.5	2	0.47	< 0.5	< 1	109	58
N203442	205	226	< 5	4	0.8	< 10	< 0.2	1.64	520	0.5	< 2	1.83	< 0.5	< 1	118	74
N203443	205	226	< 5	1	0.4	10	< 0.2	1.09	180	< 0.5	< 2	7.40	< 0.5	< 1	107	65
N203444	205	226	< 5	1	< 0.2	10	< 0.2	2.34	2610	0.5	< 2	0.86	< 0.5	2	175	42
N203445	205	226	< 5	2	< 0.2	40	< 0.2	2.67	710	0.5	< 2	0.40	< 0.5	6	160	95
N203446	205	226	< 5	1	< 0.2	10	< 0.2	2.86	1000	1.0	< 2	0.25	< 0.5	6	157	84
N203447	205	226	< 5	4	0.2	< 10	< 0.2	2.26	400	0.5	< 2	0.64	< 0.5	6	154	70
N203448	205	226	< 5	1	0.2	< 10	< 0.2	2.77	490	0.5	< 2	0.57	< 0.5	5	177	46
N203449	205	226	< 5	1	0.4	< 10	< 0.2	2.72	190	0.5	< 2	1.21	< 0.5	5	168	59
N203450	205	226	< 5	1	< 0.2	50	< 0.2	3.27	230	1.0	< 2	0.93	< 0.5	11	270	89
N203451	205	226	< 5	1	0.4	40	< 0.2	4.40	210	1.5	< 2	0.89	< 0.5	12	199	100
N203452	205	226	< 5	2	0.6	80	< 0.2	4.98	200	2.0	< 2	0.75	0.5	15	218	114
N203453	205	226	< 5	1	0.6	60	< 0.2	4.53	200	1.5	< 2	0.55	< 0.5	12	175	106
N203454	205	226	10	1	1.4	120	< 0.2	4.22	200	1.5	< 2	1.05	< 0.5	11	208	87
N203455	205	226	680	22	0.4	10	< 0.2	4.10	640	1.5	< 2	0.32	< 0.5	7	170	65
N203456	205	226	< 5	2	0.4	10	< 0.2	3.55	1340	1.0	2	1.53	< 0.5	6	183	47
N203457	205	226	< 5	1	0.6	10	< 0.2	2.90	280	1.0	< 2	2.14	< 0.5	6	178	52
N203458	205	226	< 5	1	0.4	10	< 0.2	3.18	370	1.0	2	0.75	< 0.5	6	179	65
N203459	205	226	< 5	2	< 0.2	< 10	< 0.2	2.48	5290	0.5	< 2	0.35	0.5	4	179	66
N203460	205	226	< 5	2	0.6	10	< 0.2	2.05	900	0.5	< 2	0.27	< 0.5	5	173	63
N203461	205	226	< 5	4	0.6	130	< 0.2	2.18	780	2.0	< 2	0.33	< 0.5	4	160	75
N203462	205	226	5	4	1.0	110	< 0.2	1.93	310	2.0	< 2	0.60	< 0.5	4	160	71

CERTIFICATION: Ian R. Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :3
Certificate Date: 30-JUL-97
Invoice No. :I9733033
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733033

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N174485	205	226	1.45	0.52	0.54	1055	< 1	0.43	22	150	< 2	46	0.12	35	< 10	34
N174486	205	226	3.18	1.21	1.43	3690	6	0.07	189	1830	8	191	0.18	167	< 10	320
N174487	205	226	1.79	1.10	0.71	715	13	0.09	100	140	4	84	0.22	87	< 10	126
N174488	205	226	1.67	0.96	0.55	945	2	0.15	42	120	< 2	95	0.17	74	< 10	110
N174489	205	226	8.57	0.27	0.47	925	2	0.02	16	390	< 2	160	0.09	80	< 10	32
N174490	205	226	3.34	0.42	0.45	540	8	0.03	27	240	8	72	0.11	75	< 10	28
N174491	205	226	1.23	0.77	0.46	4620	5	0.03	47	120	< 2	76	0.11	66	< 10	66
N174492	205	226	1.40	0.60	0.30	390	9	0.03	46	90	< 2	41	0.08	73	< 10	128
N174493	205	226	13.30	0.31	0.57	4730	28	0.15	14	950	< 2	195	0.06	89	< 10	42
N174494	205	226	2.28	1.08	0.41	445	5	0.07	19	140	< 2	46	0.13	100	< 10	32
N174495	205	226	11.20	0.40	0.60	4820	33	0.07	20	1760	< 2	414	0.07	105	< 10	66
N174496	205	226	2.29	1.14	0.44	375	7	0.07	25	120	< 2	57	0.14	98	< 10	30
N174497	205	226	2.02	1.13	0.51	510	6	0.06	28	120	< 2	82	0.13	95	< 10	28
N174498	205	226	1.26	1.03	0.44	235	5	0.08	47	90	10	52	0.13	103	< 10	100
N174499	205	226	5.38	0.72	0.86	700	14	0.04	28	340	< 2	55	0.15	110	< 10	200
N174500	205	226	14.05	0.26	0.36	2910	30	0.02	8	690	4	184	0.04	118	< 10	34
N203439	205	226	7.42	0.93	0.50	495	22	0.09	45	350	< 2	82	0.17	125	< 10	122
N203440	205	226	12.90	0.29	0.30	630	36	0.03	14	490	< 2	103	0.09	119	< 10	46
N203441	205	226	18.35	0.25	0.20	715	11	0.07	1	1190	< 2	125	0.06	124	< 10	20
N203442	205	226	9.49	0.27	0.51	2400	78	0.03	11	1000	< 2	244	0.07	112	< 10	40
N203443	205	226	13.50	0.08	0.77	7030	57	< 0.01	26	2670	< 2	1205	0.06	122	< 10	124
N203444	205	226	1.75	0.58	0.51	415	1	0.03	25	230	4	164	0.13	67	< 10	46
N203445	205	226	1.59	0.86	0.51	220	3	0.05	70	150	2	55	0.15	83	< 10	118
N203446	205	226	1.55	0.91	0.54	170	2	0.05	58	110	< 2	35	0.17	82	< 10	88
N203447	205	226	1.45	0.68	0.50	300	1	0.03	55	110	< 2	29	0.12	71	< 10	82
N203448	205	226	1.69	0.86	0.73	195	< 1	0.04	52	200	4	58	0.14	103	< 10	96
N203449	205	226	2.26	0.84	0.73	685	3	0.03	65	340	4	65	0.12	103	< 10	92
N203450	205	226	2.43	0.99	0.93	830	1	0.10	107	220	10	135	0.15	110	< 10	264
N203451	205	226	3.14	1.56	1.08	1040	4	0.08	139	430	20	193	0.22	154	< 10	236
N203452	205	226	3.34	1.79	1.06	845	1	0.10	162	370	10	160	0.29	169	< 10	542
N203453	205	226	2.86	1.64	0.99	615	3	0.09	133	280	8	126	0.21	152	< 10	238
N203454	205	226	3.04	1.46	1.17	625	4	0.08	132	700	8	165	0.20	154	< 10	310
N203455	205	226	2.26	1.30	0.92	165	< 1	0.07	38	240	< 2	45	0.24	100	< 10	100
N203456	205	226	2.07	1.04	0.98	375	1	0.05	45	400	4	78	0.21	101	< 10	92
N203457	205	226	2.16	0.88	0.92	490	2	0.02	52	220	4	109	0.15	115	< 10	118
N203458	205	226	2.20	0.97	0.93	390	1	0.06	80	250	4	135	0.16	118	< 10	136
N203459	205	226	1.29	0.80	0.48	370	1	0.04	51	100	< 2	82	0.13	84	< 10	68
N203460	205	226	1.80	0.56	0.57	200	2	0.01	47	120	< 2	62	0.12	72	< 10	68
N203461	205	226	1.11	0.55	0.29	140	3	0.05	54	30	4	96	0.07	93	< 10	614
N203462	205	226	0.92	0.65	0.26	180	1	0.03	95	30	20	41	0.07	79	< 10	574

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 30-JUL-97
Invoice No. : I9733033
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733033

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203463	205	226	10	6	1.2	90	< 0.2	2.78	280	3.0	< 2	0.12	< 0.5	5	186	77
N203464	205	226	< 5	4	1.0	40	< 0.2	2.26	350	2.0	< 2	0.04	< 0.5	5	178	58
N203465	205	226	< 5	1	0.4	< 10	< 0.2	3.15	930	2.5	< 2	0.05	< 0.5	4	171	60
N203466	205	226	< 5	2	0.4	< 10	< 0.2	2.98	940	2.5	< 2	0.05	< 0.5	6	179	61
N203467	205	226	< 5	1	0.2	10	< 0.2	2.66	770	2.5	< 2	1.02	< 0.5	5	144	42
N203468	205	226	< 5	1	0.2	< 10	< 0.2	1.79	1150	2.0	< 2	0.59	< 0.5	< 1	188	18
N203469	205	226	< 5	1	0.2	< 10	< 0.2	2.22	1300	3.5	< 2	0.48	< 0.5	< 1	153	14
N203470	205	226	< 5	1	0.2	< 10	< 0.2	1.87	4080	1.5	< 2	0.72	0.5	1	127	30
N203471	205	226	< 5	1	0.2	70	< 0.2	3.12	700	2.5	< 2	0.24	< 0.5	8	84	52
N203472	205	226	< 5	1	0.2	230	< 0.2	2.03	620	2.0	< 2	0.16	< 0.5	4	105	38
N203473	205	226	< 5	2	0.2	80	< 0.2	2.13	530	2.5	< 2	4.49	< 0.5	2	140	45
N203474	205	226	15	16	3.4	210	< 0.2	2.03	100	4.0	< 2	1.99	< 0.5	3	181	44
N203475	205	226	< 5	10	1.6	100	< 0.2	0.87	80	2.5	< 2	20.3	< 0.5	< 1	43	27
N203476	205	226	< 5	6	1.2	< 10	< 0.2	1.89	920	3.0	< 2	0.28	< 0.5	3	126	78
N203477	205	226	< 5	1	1.6	< 10	< 0.2	1.64	830	2.5	< 2	0.66	< 0.5	6	115	80
N203478	205	226	< 5	1	0.2	< 10	< 0.2	2.89	1320	6.0	< 2	2.15	< 0.5	8	158	82
N203479	205	226	40	40	0.4	80	< 0.2	2.67	770	2.5	2	1.07	2.0	13	161	120
N203480	205	226	10	20	0.4	20	< 0.2	3.79	700	2.5	< 2	4.32	0.5	8	122	81
N203481	205	226	< 5	46	0.8	2280	< 0.2	3.37	220	2.5	< 2	1.71	47.5	9	151	48
N203482	205	226	< 5	6	0.6	80	< 0.2	2.85	200	2.5	< 2	1.68	3.5	6	190	63
N203483	205	226	60	4	1.0	30	< 0.2	2.54	100	3.0	< 2	4.18	1.0	6	107	60
N203484	205	226	10	1	1.2	100	< 0.2	2.11	80	2.5	< 2	9.27	< 0.5	3	89	54
N203485	205	226	10	4	1.8	160	< 0.2	2.89	60	5.5	< 2	6.56	4.5	21	140	71
N203486	205	226	10	6	0.4	70	< 0.2	3.39	140	5.5	< 2	0.46	2.5	17	138	103
N203487	205	226	< 5	1	0.2	10	< 0.2	3.77	220	6.0	2	0.68	4.5	17	158	114
N203488	205	226	< 5	6	2.4	20	< 0.2	2.32	110	3.5	< 2	1.84	< 0.5	8	200	54
N203489	205	226	10	12	3.4	40	< 0.2	1.91	80	3.0	< 2	1.52	< 0.5	5	226	51
N203490	205	226	< 5	28	4.0	50	0.2	2.51	80	4.0	< 2	0.43	1.0	5	237	40
N203491	205	226	< 5	6	2.2	10	0.4	1.81	70	2.5	2	0.82	< 0.5	5	234	54
N203492	205	226	< 5	26	1.0	< 10	< 0.2	7.71	1120	5.0	< 2	8.77	< 0.5	27	327	73
N203493	205	226	< 5	1	1.8	60	< 0.2	3.83	120	2.5	< 2	0.83	0.5	12	202	98
N203494	205	226	< 5	1	0.8	< 10	< 0.2	2.72	280	0.5	< 2	0.45	< 0.5	7	191	59
N203495	205	226	< 5	1	1.2	< 10	< 0.2	3.01	410	1.0	< 2	0.49	< 0.5	7	179	53
N203496	205	226	< 5	8	2.8	20	< 0.2	2.26	370	0.5	< 2	0.78	< 0.5	5	180	52
N203497	205	226	< 5	6	9.6	50	< 0.2	2.78	120	1.5	< 2	2.49	1.0	10	195	88
N203498	205	226	< 5	20	7.8	50	0.4	4.59	180	2.5	< 2	1.27	1.5	10	148	78
N203499	205	226	< 5	4	2.2	110	< 0.2	7.33	1130	3.0	< 2	0.75	3.5	1	102	39
N203500	205	226	< 5	1	0.8	< 10	< 0.2	6.40	4730	3.0	< 2	1.17	0.5	< 1	97	5
N203501	205	226	< 5	1	0.6	< 10	< 0.2	6.90	2590	2.5	< 2	1.05	< 0.5	1	73	5
N203502	205	226	< 5	1	0.4	< 10	0.8	6.66	1890	2.5	< 2	1.18	< 0.5	1	94	5

CERTIFICATION:_____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 30-JUL-97
Invoice No. :I9733033
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733033

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203463	205	226	1.17	0.95	0.34	55	< 1	0.06	107	50	8	48	0.11	121	< 10	406
N203464	205	226	0.76	0.72	0.25	20	1	0.04	51	60	6	28	0.08	84	< 10	114
N203465	205	226	1.04	1.14	0.38	35	2	0.06	50	70	4	42	0.13	96	< 10	22
N203466	205	226	0.98	1.14	0.37	35	6	0.05	36	70	6	29	0.12	87	< 10	24
N203467	205	226	1.48	1.03	0.32	210	20	0.05	19	270	< 2	262	0.11	84	< 10	26
N203468	205	226	2.15	0.57	0.23	165	1	0.04	6	170	< 2	201	0.08	69	< 10	8
N203469	205	226	3.00	0.68	0.25	130	< 1	0.08	6	150	< 2	345	0.10	100	< 10	12
N203470	205	226	1.40	0.68	0.20	165	< 1	0.05	14	120	< 2	531	0.08	57	< 10	8
N203471	205	226	1.00	1.30	0.37	60	11	0.08	40	90	< 2	200	0.12	93	< 10	136
N203472	205	226	0.73	0.82	0.28	40	6	0.07	31	70	4	132	0.08	76	< 10	310
N203473	205	226	0.98	0.85	0.60	520	8	0.05	14	140	< 2	187	0.08	95	< 10	230
N203474	205	226	2.77	0.89	0.27	265	14	< 0.01	18	370	50	43	0.08	130	< 10	788
N203475	205	226	3.75	0.33	0.25	2630	21	< 0.01	7	470	128	359	0.03	79	10	424
N203476	205	226	0.86	0.70	0.18	45	10	0.06	16	530	90	46	0.07	142	< 10	28
N203477	205	226	0.77	0.47	0.15	70	7	0.03	15	620	38	60	0.05	114	< 10	50
N203478	205	226	11.00	0.81	0.32	650	4	0.03	16	520	4	116	0.10	125	< 10	42
N203479	205	226	2.99	1.14	0.41	625	2	0.01	38	480	32	25	0.13	139	< 10	856
N203480	205	226	3.19	1.74	0.50	1390	1	0.02	21	970	100	101	0.18	131	< 10	242
N203481	205	226	2.70	1.55	0.41	1035	< 1	0.02	47	2550	740	42	0.17	170	< 10	>10000
N203482	205	226	2.66	1.34	0.43	1010	5	< 0.01	51	580	336	34	0.15	172	< 10	1715
N203483	205	226	8.84	0.75	0.83	9880	7	0.08	50	710	54	182	0.12	170	< 10	376
N203484	205	226	8.91	1.00	0.66	5330	6	< 0.01	18	920	100	227	0.10	146	< 10	836
N203485	205	226	9.47	0.86	0.92	5140	5	0.03	64	780	240	195	0.14	208	< 10	1885
N203486	205	226	2.01	1.55	0.38	1020	2	0.04	33	320	28	20	0.15	165	< 10	230
N203487	205	226	2.06	1.76	0.50	2150	1	0.05	40	520	38	29	0.18	156	< 10	374
N203488	205	226	2.70	1.07	0.37	515	1	< 0.01	31	1370	48	54	0.10	130	< 10	16
N203489	205	226	3.51	0.83	0.31	475	< 1	< 0.01	32	1520	72	48	0.08	131	< 10	70
N203490	205	226	3.62	1.03	0.32	140	6	0.03	50	890	104	47	0.10	177	< 10	144
N203491	205	226	2.50	0.81	0.22	230	1	0.01	64	150	236	20	0.06	90	< 10	14
N203492	205	226	3.08	3.48	1.52	1830	2	0.15	61	1500	4	399	0.84	248	< 10	26
N203493	205	226	3.14	1.59	0.62	305	5	0.08	104	590	20	65	0.17	176	< 10	502
N203494	205	226	1.72	1.04	0.45	225	< 1	0.05	53	160	6	59	0.13	83	< 10	78
N203495	205	226	1.63	1.06	0.42	290	< 1	0.06	50	100	2	46	0.13	91	< 10	106
N203496	205	226	1.07	0.69	0.24	185	1	0.03	47	80	4	72	0.09	93	< 10	68
N203497	205	226	1.91	1.15	0.32	545	1	0.02	52	490	26	102	0.10	116	< 10	366
N203498	205	226	1.86	1.86	0.82	585	2	0.09	32	310	26	52	0.14	123	< 10	214
N203499	205	226	2.42	2.32	2.35	220	3	0.17	2	460	16	63	0.13	21	< 10	400
N203500	205	226	1.23	1.83	0.93	190	1	0.71	5	560	22	75	0.09	20	< 10	42
N203501	205	226	1.37	2.28	0.89	180	2	0.96	3	550	22	89	0.11	22	< 10	48
N203502	205	226	1.47	2.47	0.65	170	3	0.60	2	590	22	96	0.13	21	< 10	66

CERTIFICATION:_____

Chemex Labs Ltd.

Analytical Chemists **Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :3-A
Total Pages :3
Certificate Date: 30-JUL-97
Invoice No. :I9733033
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733033

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203503	205	226	< 5	1	0.4	< 10	< 0.2	6.16	1470	2.0	< 2	1.96	0.5	1	137	10
N203504	205	226	< 5	1	< 0.2	< 10	< 0.2	6.00	660	1.5	< 2	2.03	< 0.5	1	72	9
N203505	205	226	< 5	1	0.6	10	< 0.2	6.15	240	1.5	< 2	2.17	< 0.5	1	85	11
N203506	205	226	< 5	14	2.2	200	< 0.2	6.93	150	1.0	< 2	0.47	1.0	1	107	4
N203507	205	226	< 5	8	1.6	330	< 0.1	6.99	290	1.0	< 2	0.48	4.5	1	79	3
N203508	205	226	< 5	18	3.8	2710	1.0	6.84	1740	1.0	< 2	0.73	22.5	< 1	77	2
N203509	205	226	< 5	8	2.0	280	< 0.2	6.81	540	1.0	< 2	0.54	1.5	< 1	66	3
N203510	205	226	< 5	1	0.6	50	< 0.2	7.25	260	1.5	< 2	0.99	< 0.5	1	99	3
N203511	205	226	< 5	2	1.4	180	< 0.2	6.74	2400	1.5	< 2	0.65	1.5	< 1	147	3
N203512	205	226	< 5	18	2.6	910	0.4	7.19	190	1.5	< 2	0.91	8.0	1	134	4
N203513	205	226	< 5	16	3.0	470	1.8	7.12	170	1.5	< 2	1.60	3.0	< 1	72	5
N203514	205	226	< 5	2	0.6	130	< 0.2	7.06	560	2.5	< 2	1.11	3.0	1	85	11
N203515	205	226	< 5	1	0.2	10	< 0.2	7.24	3000	2.0	< 2	1.16	1.0	1	79	5
N203516	205	226	< 5	1	0.2	10	< 0.2	7.09	3250	2.5	< 2	1.12	0.5	1	76	4
N203517	205	226	< 5	1	0.4	40	< 0.2	7.37	1960	2.5	< 2	1.85	< 0.5	1	80	6
N203518	205	226	< 5	1	0.2	70	< 0.2	6.40	1420	2.0	< 2	2.00	< 0.5	1	53	6
N203519	205	226	< 5	1	0.2	< 10	< 0.2	6.78	2080	2.0	< 2	2.16	< 0.5	< 1	90	6
N203520	205	226	< 5	1	0.2	20	< 0.2	6.86	1910	2.0	< 2	2.00	< 0.5	< 1	62	7

CERTIFICATION: Hart Buchan

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :3-B
Total Pages :3
Certificate Date: 30-JUL-97
Invoice No. :I9733033
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733033

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203503	205 226	1.49	2.86	0.35	295	4	0.12	8	750	24	128	0.15	54	< 10	70
N203504	205 226	1.42	2.70	0.23	410	4	0.11	8	660	18	142	0.15	53	< 10	58
N203505	205 226	1.43	2.69	0.24	450	3	0.13	10	720	16	160	0.16	55	< 10	56
N203506	205 226	2.64	2.79	0.07	375	1	0.17	2	450	164	57	0.14	10	< 10	326
N203507	205 226	1.97	2.76	0.05	270	3	0.20	1	510	60	72	0.14	10	< 10	1030
N203508	205 226	2.81	2.65	0.05	160	3	0.18	2	510	192	99	0.14	8	< 10	5390
N203509	205 226	1.92	2.70	0.05	175	3	0.22	3	520	360	83	0.13	10	< 10	470
N203510	205 226	1.36	2.83	0.10	365	2	0.74	2	580	36	173	0.15	12	< 10	116
N203511	205 226	1.41	2.61	0.10	185	1	0.43	3	520	120	142	0.14	11	< 10	332
N203512	205 226	2.50	2.84	0.18	175	4	0.36	4	670	460	129	0.15	24	< 10	1525
N203513	205 226	2.62	2.99	0.21	295	3	0.28	3	660	700	176	0.15	27	< 10	794
N203514	205 226	1.52	3.16	0.75	230	3	0.27	3	1070	52	122	0.16	24	< 10	256
N203515	205 226	1.47	2.55	0.75	230	3	1.36	3	620	28	127	0.14	24	< 10	74
N203516	205 226	1.44	2.23	0.60	190	< 1	1.45	2	570	24	163	0.12	23	< 10	42
N203517	205 226	1.32	3.63	0.44	235	4	0.15	5	970	22	95	0.13	41	< 10	60
N203518	205 226	1.36	3.08	0.27	230	4	0.11	6	660	14	145	0.16	31	< 10	44
N203519	205 226	1.13	2.88	0.24	165	3	0.11	7	2490	20	256	0.15	30	< 10	40
N203520	205 226	1.39	3.13	0.42	265	4	0.11	5	1110	18	155	0.13	36	< 10	46

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9732114

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9732114

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 29-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	54	Geochem ring to approx 150 mesh
226	54	0-3 Kg crush and split
3202	54	Rock - save entire reject
285	54	ICP - HF digestion charge
287	54	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	54	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	54	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	54	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	54	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	54	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	54	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	54	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	54	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	54	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	54	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	54	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	54	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	54	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	54	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	54	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	54	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	54	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	54	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	54	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	54	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	54	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	54	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	54	Pb ppm: 24 element, rock & core	AAS	2	10000
582	54	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	54	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	54	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	54	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	54	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :2
Certificate Date: 29-JUL-97
Invoice No. :I9732114
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9732114

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N174431	205	226	< 5	2	0.6	40	< 0.2	2.57	340	0.5	< 2	0.33	< 0.5	6	155	58
N174432	205	226	< 5	8	0.4	120	< 0.2	2.91	1170	1.0	< 2	0.30	< 0.5	5	183	52
N174433	205	226	< 5	1	0.2	620	< 0.2	2.98	1420	1.0	< 2	0.29	< 0.5	3	176	47
N174434	205	226	< 5	1	2.0	10	< 0.2	2.44	830	0.5	< 2	1.24	< 0.5	5	117	45
N174435	205	226	< 5	1	1.4	< 10	< 0.2	2.06	340	0.5	< 2	1.00	< 0.5	< 1	122	34
N174436	205	226	< 5	2	0.4	10	< 0.2	3.31	750	1.5	< 2	0.29	< 0.5	4	166	48
N174437	205	226	< 5	1	0.2	50	< 0.2	2.75	860	1.5	< 2	0.22	< 0.5	3	160	51
N174438	205	226	5	1	0.4	80	< 0.2	2.10	320	1.0	< 2	2.57	< 0.5	3	147	45
N174439	205	226	< 5	2	0.4	90	< 0.2	1.38	3530	< 0.5	< 2	0.13	< 0.5	2	172	38
N174440	205	226	< 5	1	0.2	< 10	< 0.2	2.82	2470	1.5	< 2	0.34	< 0.5	5	174	41
N174441	205	226	< 5	1	0.8	10	< 0.2	1.51	300	0.5	< 2	0.10	< 0.5	2	180	43
N174442	205	226	< 5	2	0.4	< 10	< 0.2	1.53	730	< 0.5	< 2	0.37	< 0.5	3	287	41
N174443	205	226	10	1	1.0	30	< 0.2	3.58	120	0.5	< 2	0.52	< 0.5	9	220	86
N174444	205	226	10	1	2.4	70	0.4	3.85	70	1.0	< 2	0.75	< 0.5	12	152	79
N174445	205	226	10	1	0.6	80	< 0.2	2.81	1150	2.5	< 2	0.51	< 0.5	4	150	70
N174446	205	226	5	1	0.6	< 10	< 0.2	3.17	4780	3.0	< 2	0.37	< 0.5	< 1	130	16
N174447	205	226	< 5	1	0.2	< 10	< 0.2	3.30	7250	4.0	< 2	0.42	0.5	1	124	15
N174448	205	226	< 5	1	< 0.2	< 10	< 0.2	2.08	1510	3.5	< 2	0.96	< 0.5	< 1	156	362
N174449	205	226	< 5	1	0.2	< 10	< 0.2	0.53	260	2.0	2	5.32	< 0.5	1	59	34
N174450	205	226	< 5	1	< 0.2	< 10	< 0.2	1.29	370	3.0	< 2	1.61	< 0.5	< 1	103	14
N174451	205	226	< 5	1	0.2	70	< 0.2	3.30	510	3.5	< 2	0.39	< 0.5	8	163	62
N174452	205	226	< 5	1	0.6	310	< 0.2	2.28	100	2.0	< 2	0.11	< 0.5	2	149	48
N174453	205	226	10	6	1.4	160	< 0.2	1.48	40	2.5	< 2	0.83	0.5	4	189	56
N174454	205	226	10	20	2.6	220	< 0.2	0.44	20	1.5	2	17.05	0.5	< 1	45	25
N174455	205	226	10	1	1.6	80	< 0.2	2.30	70	4.0	< 2	0.32	< 0.5	5	157	63
N174456	205	226	< 5	1	0.6	40	< 0.2	1.94	90	3.5	< 2	3.33	< 0.5	1	115	34
N174457	205	226	45	1	0.4	< 10	< 0.2	2.49	330	2.5	< 2	3.46	< 0.5	7	139	68
N174458	205	226	< 5	4	0.8	20	< 0.2	2.11	260	2.0	< 2	1.79	< 0.5	5	204	64
N174459	205	226	< 5	2	3.0	630	0.4	2.69	50	4.5	< 2	5.46	4.0	8	124	72
N174460	205	226	< 5	1	3.0	540	< 0.2	3.65	70	5.5	< 2	0.93	6.5	11	212	78
N174461	205	226	10	20	5.6	480	0.4	2.75	50	3.0	< 2	1.51	9.0	5	223	49
N174462	205	226	< 5	8	0.6	10	< 0.2	5.10	1240	4.0	< 2	1.07	< 0.5	< 1	167	5
N174463	205	226	< 5	10	0.6	< 10	< 0.2	6.80	280	5.0	< 2	1.25	< 0.5	< 1	89	10
N174464	205	226	< 5	2	0.2	< 10	< 0.2	6.51	1000	4.5	< 2	0.88	< 0.5	< 1	58	4
N174465	205	226	< 5	6	0.6	< 10	< 0.2	6.83	460	5.0	< 2	0.64	< 0.5	< 1	62	7
N174466	205	226	20	20	9.8	220	1.4	3.07	50	2.5	< 2	2.40	5.5	19	157	58
N174467	205	226	< 5	2	3.0	40	< 0.2	5.83	150	3.5	< 2	2.96	0.5	13	197	34
N174468	205	226	< 5	12	5.2	140	0.8	3.23	40	3.5	< 2	3.60	5.0	12	230	56
N174469	205	226	< 5	2	4.2	10	< 0.1	4.17	290	2.5	< 2	2.00	< 0.5	3	214	30
N174470	205	226	< 5	8	6.0	340	1.2	6.70	160	3.0	< 2	1.60	4.5	< 1	81	51

CERTIFICATION: Ian Buchler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :2
Certificate Date: 29-JUL-97
Invoice No. :19732114
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9732114

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N174431	205 226	2.00	0.89	0.43	675	6	0.07	49	130	< 2	95	0.12	93	< 10	192
N174432	205 226	1.00	1.19	0.36	275	3	0.15	30	180	< 2	94	0.11	100	< 10	168
N174433	205 226	1.40	1.31	0.39	255	6	0.13	25	120	4	50	0.12	101	< 10	896
N174434	205 226	13.70	0.87	0.37	1150	19	0.10	25	280	< 2	308	0.12	76	< 10	86
N174435	205 226	14.70	0.67	0.33	1040	5	0.07	4	540	< 2	231	0.11	74	< 10	18
N174436	205 226	1.48	1.43	0.45	295	5	0.27	28	340	< 2	133	0.13	125	< 10	20
N174437	205 226	0.99	1.18	0.34	135	1	0.23	23	90	< 2	150	0.10	118	< 10	46
N174438	205 226	3.13	0.79	0.34	735	3	0.13	23	340	< 2	389	0.08	74	< 10	108
N174439	205 226	0.49	0.51	0.18	110	< 1	0.06	18	60	10	63	0.05	51	< 10	158
N174440	205 226	1.11	1.06	0.38	235	2	0.15	28	150	< 2	139	0.11	87	< 10	30
N174441	205 226	0.99	0.51	0.23	100	5	0.05	23	90	< 2	51	0.06	65	< 10	32
N174442	205 226	1.04	0.58	0.30	240	< 1	0.03	21	100	< 2	43	0.08	47	< 10	48
N174443	205 226	2.30	1.28	0.90	895	1	0.12	124	470	8	159	0.19	127	< 10	222
N174444	205 226	2.44	1.50	0.87	515	4	0.13	125	1160	4	205	0.14	140	< 10	240
N174445	205 226	1.20	1.09	0.34	145	3	0.09	56	190	8	69	0.11	110	< 10	238
N174446	205 226	10.05	1.05	0.50	180	1	0.22	12	780	< 2	100	0.17	105	< 10	18
N174447	205 226	4.36	1.48	0.53	190	1	0.17	11	240	< 2	114	0.19	98	< 10	18
N174448	205 226	7.90	0.38	0.30	320	8	0.05	9	390	< 2	91	0.11	68	< 10	10
N174449	205 226	18.45	0.07	0.13	1815	16	< 0.01	5	390	< 2	247	0.03	66	< 10	8
N174450	205 226	20.4	0.34	0.22	510	14	0.01	4	380	< 2	105	0.07	73	< 10	10
N174451	205 226	1.61	1.48	0.36	135	4	0.17	45	80	< 2	126	0.10	113	< 10	130
N174452	205 226	1.89	1.13	0.17	35	3	0.13	23	70	50	111	0.08	93	< 10	806
N174453	205 226	2.82	0.70	0.18	105	7	< 0.01	20	340	336	21	0.05	97	< 10	796
N174454	205 226	5.01	0.17	0.11	1285	9	< 0.01	6	1250	264	188	0.01	89	< 10	900
N174455	205 226	2.08	1.08	0.24	120	8	0.09	24	340	20	5	0.09	130	< 10	380
N174456	205 226	4.32	0.56	0.45	490	6	0.01	15	610	22	65	0.06	111	< 10	102
N174457	205 226	2.70	1.14	0.40	715	4	0.02	23	690	20	63	0.10	131	< 10	54
N174458	205 226	2.25	1.01	0.38	820	1	0.01	26	510	46	31	0.11	106	< 10	172
N174459	205 226	4.28	1.16	0.50	1445	4	0.05	57	860	492	99	0.11	162	< 10	1260
N174460	205 226	2.61	1.65	0.54	465	2	0.12	45	1190	64	36	0.15	189	< 10	1275
N174461	205 226	2.49	1.10	0.39	470	7	0.06	56	1200	70	33	0.09	214	< 10	1670
N174462	205 226	1.68	2.28	1.06	300	5	0.15	3	10	8	50	0.10	24	< 10	52
N174463	205 226	1.96	3.31	1.36	355	3	0.24	1	40	2	65	0.14	11	< 10	38
N174464	205 226	1.67	3.19	1.16	340	1	0.22	< 1	< 10	6	50	0.14	< 1	< 10	28
N174465	205 226	1.61	3.31	1.11	275	3	0.22	3	< 10	< 2	43	0.14	8	< 10	36
N174466	205 226	3.12	1.19	1.01	625	12	0.06	91	1000	80	72	0.09	216	< 10	886
N174467	205 226	2.50	2.68	1.30	680	6	0.17	49	740	24	112	0.21	109	< 10	230
N174468	205 226	3.61	1.39	0.86	960	4	0.06	49	960	192	105	0.16	184	< 10	870
N174469	205 226	1.40	2.01	0.61	655	6	0.09	25	570	8	55	0.11	144	< 10	112
N174470	205 226	2.01	3.18	0.95	270	8	0.32	14	500	120	75	0.15	86	< 10	626

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 29-JUL-97
Invoice No. :I9732114
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9732114

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N174471	205	226	10	4	3.4	30	0.4	6.34	130	2.0	< 2	1.22	< 0.5	2	76	6
N174472	205	226	< 5	6	1.0	10	< 0.2	6.15	690	1.5	< 2	0.61	< 0.5	1	63	8
N174473	205	226	< 5	1	1.2	30	< 0.2	6.74	710	1.5	< 2	1.34	< 0.5	1	63	6
N174474	205	226	105	70	210	2790	11.0	6.64	80	3.0	6	1.89	25.5	6	83	276
N174475	205	226	25	82	20	1330	3.0	5.31	90	2.5	< 2	3.87	8.0	3	140	64
N174476	205	226	5	26	5.8	290	0.6	7.41	110	2.0	< 2	2.99	2.5	1	98	17
N174477	205	226	40	66	200	840	3.2	7.57	90	1.5	6	2.25	9.0	13	113	363
N174478	205	226	< 5	1	2.0	70	0.4	7.00	270	1.5	< 2	3.17	1.5	4	90	18
N174479	205	226	30	1	2.6	70	< 0.2	6.00	690	1.5	2	0.56	< 0.5	6	106	1230
N174480	205	226	< 5	1	1.4	10	< 0.2	5.53	170	1.0	8	0.55	< 0.5	11	77	46
N174481	205	226	< 5	1	0.6	< 10	< 0.2	5.60	1230	1.0	< 2	0.35	< 0.5	6	99	7
N174482	205	226	< 5	1	2.0	10	0.6	5.81	320	2.0	< 2	1.26	< 0.5	2	136	18
N174483	205	226	< 5	1	0.8	40	< 0.2	6.52	510	2.0	< 2	1.04	< 0.5	1	53	4
N174484	205	226	< 5	1	0.4	10	< 0.2	6.73	1640	1.5	< 2	0.60	< 0.5	1	119	5

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 29-JUL-97
Invoice No. : I9732114
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9732114

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N174471	205	226	1.65	2.77	0.68	250	2	0.72	4	580	18	58	0.11	31	< 10	74
N174472	205	226	1.97	2.89	1.03	370	3	0.24	5	560	< 2	27	0.11	34	< 10	72
N174473	205	226	1.51	3.14	0.60	435	2	0.23	1	640	4	46	0.15	31	< 10	96
N174474	205	226	2.11	3.34	1.02	230	15	0.19	28	520	720	45	0.14	199	< 10	3020
N174475	205	226	1.60	2.83	0.75	360	14	0.13	35	600	160	57	0.12	212	< 10	1005
N174476	205	226	1.68	3.60	0.68	295	4	0.22	3	620	30	125	0.17	20	< 10	272
N174477	205	226	3.05	3.66	0.62	260	5	0.26	8	1090	40	121	0.20	49	< 10	958
N174478	205	226	2.82	3.46	1.83	685	4	0.29	3	670	24	157	0.17	20	< 10	216
N174479	205	226	2.29	2.80	1.00	225	2	0.22	1	620	10	42	0.12	31	< 10	120
N174480	205	226	5.10	1.88	1.60	565	3	0.17	2	510	8	39	0.12	25	< 10	170
N174481	205	226	2.97	2.30	1.27	235	1	0.18	3	490	< 2	35	0.12	27	< 10	72
N174482	205	226	1.78	2.84	0.81	395	3	0.20	6	560	6	71	0.10	47	< 10	84
N174483	205	226	1.10	2.66	0.79	125	1	0.50	1	450	30	51	0.11	20	< 10	64
N174484	205	226	1.21	2.07	0.58	80	2	2.19	4	560	18	71	0.09	23	< 10	42

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9733071

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9733071

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 3-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	198	Geochem ring to approx 150 mesh
226	198	0-3 Kg crush and split
3202	198	Rock - save entire reject
285	198	ICP - HF digestion charge
287	198	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	198	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	198	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	198	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	198	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	198	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	198	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	198	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	198	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	198	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	198	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	198	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	198	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	198	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	198	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	198	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	198	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	198	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	198	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	198	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	198	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	198	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	198	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	198	Pb ppm: 24 element, rock & core	AAS	2	10000
582	198	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	198	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	198	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	198	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	198	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page .per :1-A
Total Pages :5
Certificate Date: 03-AUG-97
Invoice No. :I9733071
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733071

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
173255	205	226	< 5	1	0.2	10	< 0.2	3.57	4840	1.5	< 2	0.10	1.0	14	142	46
173256	205	226	< 5	1	0.2	30	< 0.2	3.02	3040	1.0	< 2	0.07	< 0.5	10	173	44
173257	205	226	< 5	2	< 0.2	< 10	< 0.2	3.72	4730	1.5	< 2	0.11	0.5	9	202	88
173258	205	226	< 5	1	0.2	10	< 0.2	3.34	5010	1.0	< 2	0.08	1.0	8	160	34
173259	205	226	< 5	1	< 0.2	10	< 0.2	3.14	4570	1.0	< 2	0.09	0.5	7	181	41
173260	205	226	< 5	1	0.2	10	< 0.2	2.45	4250	0.5	< 2	0.12	0.5	9	147	36
173261	205	226	< 5	1	0.2	< 10	< 0.2	3.86	2840	0.5	< 2	0.50	0.5	11	87	68
173262	205	226	< 5	1	0.2	30	< 0.2	2.71	3600	0.5	< 2	0.08	0.5	12	90	58
173263	205	226	< 5	1	0.2	10	< 0.2	4.00	2900	1.0	< 2	0.60	< 0.5	10	64	79
173264	205	226	< 5	2	0.2	30	< 0.2	3.94	3540	0.5	< 2	0.39	0.5	10	76	80
173265	205	226	< 5	6	< 0.2	< 10	< 0.2	5.44	2420	2.0	< 2	0.29	0.5	5	138	36
173266	205	226	< 5	4	1.6	70	< 0.2	2.63	6450	0.5	< 2	0.01	1.5	3	194	62
173267	205	226	< 5	2	0.6	40	< 0.2	2.94	5720	0.5	< 2	0.05	1.5	6	194	84
173268	205	226	< 5	4	0.4	< 10	< 0.2	3.10	4570	0.5	< 2	0.21	0.5	7	164	61
173269	205	226	< 5	2	0.2	< 10	< 0.2	3.64	4870	1.0	< 2	0.05	0.5	4	143	70
173270	205	226	< 5	1	0.2	< 10	< 0.2	2.79	4540	1.0	< 2	0.03	1.0	5	147	64
173271	205	226	< 5	4	< 0.2	< 10	< 0.2	2.63	3550	0.5	< 2	0.11	0.5	7	140	53
173272	205	226	< 5	1	0.4	< 10	< 0.2	8.06	7230	2.0	< 2	0.96	1.0	11	111	40
173273	205	226	< 5	2	0.2	10	< 0.2	2.74	9170	0.5	< 2	0.04	2.0	5	133	66
173274	205	226	< 5	4	0.4	< 10	< 0.2	2.68	1130	1.5	< 2	0.22	< 0.5	6	165	92
173275	205	226	< 5	6	0.6	30	< 0.2	3.49	110	4.5	< 2	2.65	< 0.5	5	131	120
173276	205	226	< 5	2	0.2	< 10	< 0.2	2.99	110	3.0	< 2	2.69	< 0.5	4	167	71
173277	205	226	< 5	6	0.2	< 10	< 0.2	3.76	40	2.5	< 2	4.30	< 0.5	8	125	162
173278	205	226	< 5	14	0.4	< 10	< 0.2	3.06	230	2.0	2	0.78	< 0.5	9	187	38
173279	205	226	< 5	20	0.4	50	0.2	3.07	90	3.5	< 2	3.95	0.5	17	126	104
173280	205	226	< 5	18	1.0	80	0.4	4.33	160	5.5	< 2	2.48	1.5	13	197	73
173281	205	226	< 5	24	2.2	240	0.4	4.42	200	8.0	< 2	0.17	8.0	4	163	44
173282	205	226	< 5	68	9.8	1070	1.2	4.54	80	6.5	< 2	0.51	21.5	8	173	43
173283	205	226	< 5	20	4.6	230	0.4	5.15	130	5.5	< 2	2.87	5.0	5	182	43
173284	205	226	< 5	4	1.0	20	< 0.2	7.83	210	6.5	< 2	1.21	< 0.5	< 1	70	17
173285	205	226	< 5	1	0.4	100	< 0.2	8.22	740	6.0	< 2	1.08	1.0	< 1	61	7
173286	205	226	< 5	1	0.4	< 10	< 0.2	7.30	2420	5.5	< 2	0.79	0.5	< 1	69	7
173287	205	226	< 5	1	0.2	320	< 0.2	7.51	2010	6.0	< 2	1.00	2.5	< 1	76	8
173288	205	226	< 5	1	0.2	< 10	< 0.2	7.18	1900	6.0	< 2	1.04	< 0.5	< 1	65	6
173289	205	226	< 5	2	0.4	< 10	< 0.2	7.67	890	6.5	< 2	0.79	< 0.5	< 1	74	8
173290	205	226	< 5	1	0.2	80	< 0.2	7.41	2420	5.5	< 2	1.29	2.0	< 1	82	7
173291	205	226	< 5	1	0.6	660	< 0.2	7.32	620	6.0	< 2	0.96	8.5	< 1	71	9
173292	205	226	< 5	1	0.4	< 10	< 0.2	7.55	3290	6.0	< 2	1.18	0.5	< 1	65	8
173293	205	226	< 5	2	0.2	170	< 0.2	6.16	240	5.0	< 2	4.39	1.0	3	82	11
173294	205	226	< 5	1	< 0.2	< 10	< 0.2	7.32	2290	5.5	< 2	1.59	< 0.5	< 1	63	7

CERTIFICATION: Stuart Bichler

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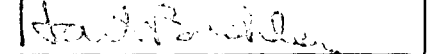
To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 03-AUG-97
Invoice No. :I9733071
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733071

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
173255	205 226	2.22	1.50	0.70	890	< 1	0.23	41	270	24	55	0.20	64	< 10	64
173256	205 226	1.50	1.16	0.36	570	< 1	0.04	32	250	36	18	0.19	64	< 10	46
173257	205 226	2.36	1.60	0.63	1020	< 1	0.04	38	370	22	31	0.20	77	< 10	68
173258	205 226	2.16	1.42	0.61	435	< 1	0.04	35	270	16	19	0.17	59	< 10	64
173259	205 226	1.95	1.35	0.56	1205	< 1	0.02	31	230	16	21	0.17	59	< 10	60
173260	205 226	1.51	1.04	0.47	980	< 1	0.31	30	520	14	71	0.17	65	< 10	44
173261	205 226	2.47	1.72	0.80	1725	< 1	0.83	17	290	30	98	0.24	76	< 10	54
173262	205 226	1.74	1.30	0.47	1545	< 1	0.03	35	290	18	25	0.18	58	< 10	50
173263	205 226	2.12	1.68	0.71	2170	< 1	0.66	21	460	20	108	0.23	67	< 10	58
173264	205 226	2.70	1.80	0.74	2230	< 1	0.65	15	440	18	71	0.28	79	< 10	58
173265	205 226	1.82	0.62	0.59	1240	< 1	2.87	20	210	38	47	0.12	39	< 10	58
173266	205 226	1.71	1.08	0.27	90	< 1	0.05	43	170	12	7	0.13	97	< 10	100
173267	205 226	1.88	1.15	0.39	1725	< 1	0.06	39	330	16	26	0.14	81	< 10	78
173268	205 226	1.95	1.04	0.78	745	< 1	0.22	41	250	22	64	0.14	72	< 10	64
173269	205 226	2.20	1.20	0.83	720	< 1	0.10	22	280	18	34	0.12	93	< 10	58
173270	205 226	1.75	1.10	0.36	170	< 1	0.04	20	200	16	14	0.11	85	< 10	48
173271	205 226	1.59	0.93	0.51	865	< 1	0.03	29	290	8	23	0.12	62	< 10	54
173272	205 226	4.85	2.22	2.85	1235	< 1	0.15	38	2230	38	101	0.65	134	< 10	98
173273	205 226	1.33	0.96	0.41	645	< 1	0.03	57	140	12	21	0.13	84	< 10	88
173274	205 226	2.68	1.07	0.29	575	< 1	0.05	31	450	18	27	0.12	144	< 10	28
173275	205 226	5.71	1.55	0.59	1870	< 1	0.01	60	230	42	139	0.18	286	< 10	28
173276	205 226	4.98	0.19	0.51	1630	< 1	0.01	36	1640	32	163	0.13	120	< 10	30
173277	205 226	9.59	0.05	0.85	4800	2	0.06	41	1970	34	135	0.13	88	< 10	66
173278	205 226	3.15	0.06	0.10	720	< 1	0.06	37	1090	30	54	0.09	83	< 10	60
173279	205 226	4.91	0.68	0.55	2380	1	0.01	66	1600	110	160	0.11	231	< 10	224
173280	205 226	4.40	1.57	0.84	2350	11	0.06	71	1950	76	88	0.19	447	< 10	430
173281	205 226	1.60	1.71	0.32	70	6	0.10	48	820	136	15	0.19	440	< 10	994
173282	205 226	2.84	1.90	0.41	200	21	0.12	72	1630	420	27	0.17	327	< 10	2160
173283	205 226	2.65	2.30	1.13	990	4	0.13	37	510	112	118	0.18	123	< 10	1030
173284	205 226	2.70	3.77	1.10	445	2	0.21	12	330	42	50	0.11	19	< 10	142
173285	205 226	2.87	3.77	1.41	560	< 1	0.22	6	70	32	42	0.10	3	< 10	744
173286	205 226	2.15	3.28	1.15	315	2	0.25	1	40	22	35	0.10	1	< 10	84
173287	205 226	2.69	3.14	1.35	400	3	0.51	3	60	36	46	0.11	2	< 10	1335
173288	205 226	2.24	2.83	1.24	315	5	0.48	1	50	24	52	0.10	1	< 10	60
173289	205 226	2.07	3.20	1.07	230	3	0.26	< 1	50	38	43	0.11	1	< 10	78
173290	205 226	2.27	2.97	1.07	240	1	0.21	1	90	62	84	0.10	3	< 10	564
173291	205 226	2.33	2.90	1.10	290	6	0.21	1	70	588	54	0.08	4	< 10	4450
173292	205 226	2.45	3.03	1.38	415	1	0.22	1	70	24	50	0.10	6	< 10	56
173293	205 226	3.47	2.74	2.34	1470	4	0.22	11	30	54	81	0.07	5	< 10	818
173294	205 226	2.43	2.61	1.24	535	1	0.99	3	60	28	59	0.12	5	< 10	108

CERTIFICATION: 

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 03-AUG-97
Invoice No. : I9733071
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9733071

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
173295	205	226	15	8	2.6	330	< 0.2	2.68	130	3.0	< 2	0.86	10.0	9	188	90
173296	205	226	10	10	1.0	210	< 0.2	1.76	200	1.5	< 2	0.24	0.5	5	197	70
173297	205	226	< 5	1	0.4	360	< 0.2	5.31	460	6.5	< 2	2.92	4.0	5	138	40
173298	205	226	< 5	2	0.2	50	< 0.2	5.59	690	4.5	< 2	2.35	< 0.5	8	134	63
173299	205	226	45	16	4.2	610	< 0.2	1.92	90	7.0	< 2	9.97	10.5	< 1	92	47
173300	205	226	25	14	2.6	90	< 0.2	1.44	80	5.0	< 2	15.95	< 0.5	< 1	67	50
173301	205	226	< 5	2	0.2	< 10	< 0.2	5.15	780	4.5	< 2	4.80	< 0.5	11	60	73
173302	205	226	< 5	4	0.4	40	< 0.2	4.55	390	2.5	< 2	2.79	< 0.5	7	94	81
173303	205	226	< 5	6	2.2	60	< 0.2	4.78	620	5.5	< 2	1.83	< 0.5	7	95	77
173304	205	226	25	30	5.6	80	< 0.2	1.42	70	7.0	< 2	13.40	< 0.5	< 1	95	46
173305	205	226	10	10	2.4	170	< 0.2	2.08	70	11.0	< 2	11.55	1.5	1	122	48
173306	205	226	< 5	10	0.6	10	< 0.2	2.93	200	6.5	< 2	3.30	< 0.5	11	134	95
173307	205	226	< 5	14	1.6	30	< 0.2	2.75	130	4.5	< 2	2.22	< 0.5	16	161	60
173308	205	226	< 5	18	2.0	840	< 0.2	3.21	100	4.0	< 2	3.48	7.0	7	149	51
173309	205	226	< 5	4	0.8	280	< 0.2	5.78	470	5.5	< 2	1.26	2.0	1	102	21
173310	205	226	< 5	10	0.6	140	< 0.2	7.98	420	7.0	< 2	0.58	1.5	1	61	15
173311	205	226	< 5	4	0.2	< 10	< 0.2	8.22	9710	7.0	< 2	0.46	2.5	3	55	18
173312	205	226	< 5	1	0.8	110	< 0.2	5.38	170	17.0	< 2	6.77	2.5	12	152	20
173313	205	226	15	4	1.0	340	< 0.2	5.68	140	14.0	< 2	2.67	8.0	11	147	19
173314	205	226	15	20	1.8	1360	0.8	5.86	90	11.5	< 2	1.69	22.0	9	126	28
173315	205	226	10	14	2.8	960	0.6	4.32	100	7.0	< 2	1.49	7.5	7	161	66
173316	205	226	< 5	6	1.8	920	0.6	3.12	100	4.0	< 2	1.17	11.5	7	303	83
173317	205	226	< 5	1	0.2	50	< 0.2	1.80	140	3.5	< 2	2.68	0.5	< 1	187	22
173318	205	226	< 5	1	< 0.2	200	< 0.2	1.96	460	9.5	< 2	2.53	6.0	1	95	30
173319	205	226	< 5	1	1.2	130	< 0.2	0.82	230	6.0	< 2	16.40	0.5	1	79	21
173320	205	226	< 5	2	0.6	210	1.0	0.69	130	4.0	< 2	22.1	2.5	1	92	18
173321	205	226	< 5	10	0.6	90	< 0.2	0.76	110	5.0	< 2	16.05	0.5	6	108	47
173322	205	226	< 5	6	1.4	370	< 0.2	1.84	90	7.0	< 2	2.62	12.0	3	85	47
173323	205	226	< 5	6	1.2	210	< 0.2	2.61	370	6.5	< 2	0.23	8.0	4	189	83
173324	205	226	< 5	8	1.8	440	< 0.2	2.08	>10000	4.0	< 2	0.22	6.5	1	240	46
173325	205	226	< 5	4	0.6	140	< 0.2	3.34	2970	2.5	< 2	0.06	0.5	4	190	36
173326	205	226	< 5	4	0.8	100	< 0.2	2.31	4020	0.5	< 2	0.04	0.5	4	348	64
173327	205	226	< 5	1	0.6	50	< 0.2	1.91	740	0.5	< 2	0.03	< 0.5	2	130	56
173328	205	226	< 5	6	0.8	30	< 0.2	1.83	500	0.5	< 2	0.05	< 0.5	1	150	64
173329	205	226	< 5	2	0.6	10	0.4	1.99	9920	0.5	< 2	0.04	2.0	1	224	58
173330	205	226	< 5	10	2.0	90	0.4	2.73	320	1.0	< 2	0.16	3.5	10	498	66
173331	205	226	10	1	1.4	70	< 0.2	2.20	260	1.0	< 2	0.13	1.5	7	202	55
173332	205	226	< 5	1	1.4	80	< 0.2	2.18	270	1.0	< 2	0.23	0.5	7	313	62
173333	205	226	< 5	2	0.8	30	0.4	2.40	480	0.5	< 2	0.32	< 0.5	4	196	72
173334	205	226	20	1	0.4	40	< 0.2	2.28	280	0.5	< 2	0.50	< 0.5	3	333	59

CERTIFICATION: _____

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Certificate Date: 03-AUG-97
Invoice No. :I9733071
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CERTIFICATE OF ANALYSIS A9733071

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
173295	205	226	3.72	0.76	0.66	725	1	0.07	50	370	62	34	0.10	113	< 10	1525
173296	205	226	1.45	0.72	0.40	175	< 1	0.01	53	60	82	11	0.06	102	< 10	780
173297	205	226	3.74	2.21	0.52	1930	1	0.10	28	1010	214	63	0.18	119	< 10	2370
173298	205	226	3.29	2.38	0.59	1345	< 1	0.09	25	1070	54	65	0.24	177	< 10	404
173299	205	226	9.99	0.85	0.87	6900	6	< 0.01	25	1300	172	163	0.05	152	10	3470
173300	205	226	9.50	0.63	0.65	4460	6	< 0.01	17	1290	194	206	0.04	130	< 10	400
173301	205	226	4.43	2.11	0.78	2250	2	0.09	14	1100	46	91	0.19	122	< 10	60
173302	205	226	3.70	1.97	0.62	1660	1	0.04	27	1070	76	52	0.16	137	< 10	386
173303	205	226	2.90	2.15	0.52	1095	< 1	0.03	32	650	70	30	0.18	157	< 10	256
173304	205	226	13.95	0.63	0.55	4680	10	< 0.01	17	1780	350	193	0.05	151	< 10	350
173305	205	226	13.15	0.92	0.78	6400	3	0.01	18	2370	158	169	0.07	225	10	970
173306	205	226	4.36	1.31	0.64	2890	< 1	< 0.01	37	1370	72	81	0.11	263	< 10	52
173307	205	226	3.73	1.25	0.56	2830	< 1	< 0.01	49	930	102	50	0.09	192	< 10	134
173308	205	226	2.35	1.50	0.37	1100	< 1	0.01	32	200	40	52	0.10	117	< 10	2060
173309	205	226	1.90	2.87	0.80	345	1	0.08	13	130	40	26	0.10	30	< 10	712
173310	205	226	2.58	3.96	1.06	240	5	0.11	14	140	52	23	0.14	19	< 10	608
173311	205	226	2.09	4.03	1.07	205	1	0.11	15	80	30	21	0.15	6	< 10	102
173312	205	226	6.43	1.44	1.09	3060	6	0.07	40	160	66	184	0.12	220	< 10	832
173313	205	226	8.62	2.43	0.95	1015	6	0.17	29	90	84	80	0.17	129	< 10	2500
173314	205	226	8.73	2.71	0.73	545	7	0.07	30	310	286	31	0.19	40	10	4700
173315	205	226	7.68	1.79	0.70	1900	30	0.04	35	1160	190	57	0.15	144	< 10	4140
173316	205	226	2.82	0.33	0.41	90	35	0.78	48	1410	96	47	0.12	209	< 10	4510
173317	205	226	7.99	0.12	0.43	510	4	0.25	7	440	36	287	0.05	64	< 10	452
173318	205	226	4.34	0.10	0.29	1085	33	0.07	13	610	26	252	0.08	80	< 10	988
173319	205	226	2.13	0.01	0.16	2020	40	< 0.01	20	540	66	390	0.04	33	10	392
173320	205	226	2.55	0.01	0.15	2350	22	< 0.01	20	2550	64	576	0.03	22	20	886
173321	205	226	4.36	< 0.01	0.21	2220	36	< 0.01	40	2120	58	289	0.05	21	10	934
173322	205	226	3.15	0.53	0.25	605	26	< 0.01	27	1810	128	116	0.06	120	< 10	3840
173323	205	226	2.33	1.08	0.25	210	1	0.02	44	250	108	15	0.10	200	< 10	2530
173324	205	226	9.00	0.37	0.12	445	5	0.04	30	600	92	140	0.06	93	< 10	2640
173325	205	226	1.66	1.07	0.27	105	< 1	0.04	25	120	92	58	0.11	98	< 10	530
173326	205	226	1.50	0.64	0.18	250	< 1	0.03	42	80	12	32	0.07	96	< 10	354
173327	205	226	0.90	0.56	0.15	75	< 1	0.02	17	60	8	25	0.05	88	< 10	160
173328	205	226	1.07	0.47	0.12	80	< 1	0.04	21	70	2	51	0.04	80	< 10	152
173329	205	226	1.19	0.39	0.11	75	< 1	0.03	19	70	4	78	0.05	85	< 10	116
173330	205	226	2.87	0.69	0.25	1575	13	0.03	64	220	18	75	0.08	111	< 10	1375
173331	205	226	3.70	0.46	0.27	1700	14	0.01	47	130	8	34	0.07	113	< 10	1870
173332	205	226	4.03	0.42	0.27	1330	25	0.01	52	580	12	77	0.08	111	< 10	1540
173333	205	226	1.44	0.77	0.26	230	17	0.03	30	600	6	130	0.09	115	< 10	154
173334	205	226	4.90	0.59	0.33	900	29	< 0.01	29	1240	10	162	0.09	116	< 10	194

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 03-AUG-97
Invoice No. :19733071
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733071

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
173335	205	226	< 5	4	1.2	30	< 0.2	2.81	220	1.0	< 2	0.41	< 0.5	8	206	44
173336	205	226	< 5	1	1.0	10	< 0.2	2.96	310	1.0	< 2	0.24	< 0.5	3	214	77
173337	205	226	< 5	6	1.2	120	0.6	2.20	210	0.5	< 2	0.33	< 0.5	10	322	60
173338	205	226	< 5	2	0.8	40	< 0.2	2.70	290	1.0	< 2	0.30	< 0.5	6	241	55
173339	205	226	< 5	2	1.0	100	< 0.2	2.52	520	1.0	< 2	0.31	< 0.5	4	242	47
173340	205	226	< 5	12	1.2	70	0.6	2.66	200	1.0	< 2	0.18	< 0.5	7	198	66
173341	205	226	< 5	4	0.8	80	0.8	3.03	300	1.0	< 2	0.30	< 0.5	11	210	67
173342	205	226	< 5	1	0.4	10	< 0.2	3.22	500	1.0	< 2	0.36	< 0.5	< 1	178	56
173343	205	226	< 5	10	1.0	130	0.2	3.51	510	3.0	< 2	0.27	< 0.5	8	175	47
173344	205	226	< 5	4	0.6	10	< 0.2	3.62	8980	3.5	< 2	0.04	2.0	1	139	36
173345	205	226	< 5	2	0.4	30	< 0.2	3.13	3040	3.0	< 2	0.20	0.5	2	148	32
173346	205	226	< 5	2	0.4	260	< 0.2	2.96	820	3.0	< 2	0.28	5.5	1	142	50
173347	205	226	< 5	1	0.2	160	< 0.2	2.00	840	2.5	< 2	0.32	3.5	1	176	29
173348	205	226	< 5	2	0.4	150	< 0.2	3.39	1780	3.5	< 2	0.25	3.0	4	152	59
173349	205	226	5	1	0.4	30	< 0.2	4.97	660	5.5	< 2	0.48	< 0.5	< 1	135	61
173350	205	226	< 5	1	0.4	10	< 0.2	3.68	2690	4.0	< 2	0.15	< 0.5	7	143	46
173351	205	226	55	1	0.4	< 10	< 0.2	3.88	1160	4.0	< 2	0.62	< 0.5	4	129	43
173352	205	226	< 5	1	0.4	< 10	< 0.2	3.88	1200	4.5	< 2	1.47	< 0.5	1	153	35
173353	205	226	< 5	1	0.2	< 10	< 0.2	3.39	2170	5.5	< 2	0.94	< 0.5	6	94	69
173354	205	226	< 5	6	2.8	50	< 0.2	3.00	80	8.5	< 2	4.03	< 0.5	< 1	112	71
173355	205	226	35	1	0.6	10	< 0.2	2.79	90	8.0	< 2	2.84	< 0.5	< 1	121	56
173356	205	226	< 5	1	0.6	< 10	< 0.2	1.49	130	4.0	< 2	2.22	< 0.5	1	199	38
173357	205	226	< 5	6	1.2	50	< 0.2	1.52	40	3.0	< 2	0.13	3.0	3	150	60
173358	205	226	< 5	16	4.0	260	< 0.2	1.82	50	3.0	< 2	0.23	5.5	4	255	68
173359	205	226	5	12	3.6	10	< 0.2	1.60	40	3.0	< 2	0.29	6.5	4	232	63
173360	205	226	< 5	10	1.4	350	< 0.2	2.28	60	4.0	< 2	0.14	7.0	4	108	59
173361	205	226	< 5	1	0.4	30	< 0.2	1.48	70	5.0	< 2	0.96	0.5	< 1	156	29
173362	205	226	< 5	1	< 0.2	10	< 0.2	1.65	150	8.5	< 2	0.77	< 0.5	< 1	141	21
173363	205	226	< 5	1	< 0.2	< 10	< 0.2	1.83	550	11.5	< 2	0.68	< 0.5	< 1	146	49
173364	205	226	< 5	1	1.4	40	< 0.2	1.69	160	10.5	< 2	0.32	< 0.5	< 1	180	30
173365	205	226	< 5	1	0.2	10	< 0.2	3.24	420	6.5	< 2	0.22	< 0.5	1	224	56
173366	205	226	< 5	2	0.2	< 10	< 0.2	3.85	850	5.5	< 2	2.16	< 0.5	< 1	159	72
173367	205	226	< 5	1	< 0.2	< 10	< 0.2	2.27	1520	4.5	< 2	0.32	< 0.5	< 1	196	74
173368	205	226	< 5	1	0.2	< 10	< 0.2	2.26	450	5.0	< 2	0.25	< 0.5	1	151	76
173369	205	226	< 5	1	< 0.2	< 10	< 0.2	1.58	3070	8.5	< 2	1.06	< 0.5	< 1	167	27
173370	205	226	< 5	1	0.2	< 10	< 0.2	1.50	340	11.5	< 2	1.00	< 0.5	< 1	117	19
173371	205	226	< 5	1	< 0.2	< 10	< 0.2	1.50	2970	9.0	< 2	0.47	< 0.5	< 1	136	16
173372	205	226	< 5	1	< 0.2	< 10	< 0.2	1.32	540	9.0	< 2	0.69	< 0.5	< 1	131	13
173373	205	226	< 5	2	0.4	110	< 0.2	1.47	490	3.0	< 2	0.63	3.5	5	58	25
173374	205	226	< 5	1	1.2	660	< 0.2	2.52	60	3.5	< 2	0.23	5.5	4	196	40

CERTIFICATION: Ian Buchler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :3-B
Total Pages :5
Certificate Date: 03-AUG-97
Invoice No. :I9733071
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733071

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
173335	205 226	6.53	0.75	0.35	1110	26	0.01	67	890	26	118	0.12	114	< 10	320
173336	205 226	3.31	1.17	0.46	1625	5	0.03	48	30	12	70	0.13	122	< 10	154
173337	205 226	2.00	0.82	0.30	410	6	0.02	95	200	54	105	0.09	78	< 10	728
173338	205 226	2.15	0.82	0.34	485	8	0.03	49	170	18	105	0.10	113	< 10	158
173339	205 226	1.33	0.67	0.31	195	6	0.01	34	90	12	123	0.08	98	< 10	252
173340	205 226	1.65	0.71	0.31	305	22	0.03	44	50	12	78	0.09	105	< 10	152
173341	205 226	2.64	0.96	0.42	685	14	0.03	64	140	42	93	0.12	99	< 10	244
173342	205 226	4.69	1.02	0.46	505	2	0.03	11	410	10	79	0.11	85	< 10	26
173343	205 226	2.58	1.20	0.40	410	11	0.04	43	170	24	69	0.13	94	< 10	590
173344	205 226	1.29	1.23	0.32	130	1	0.04	14	100	52	23	0.12	87	< 10	168
173345	205 226	1.06	1.33	0.31	100	< 1	0.03	9	70	54	54	0.12	81	< 10	96
173346	205 226	0.84	1.17	0.29	95	< 1	0.04	10	70	252	101	0.10	80	< 10	348
173347	205 226	0.65	0.74	0.21	55	< 1	0.01	9	40	74	70	0.06	69	< 10	220
173348	205 226	1.14	1.28	0.33	40	15	0.03	16	100	44	126	0.12	94	< 10	302
173349	205 226	4.59	2.17	0.51	105	5	0.05	7	330	8	198	0.14	73	< 10	34
173350	205 226	2.93	1.51	0.37	90	3	0.04	20	370	10	269	0.15	100	< 10	30
173351	205 226	2.73	1.76	0.54	230	3	0.08	13	540	10	329	0.16	105	< 10	24
173352	205 226	2.26	1.67	0.61	225	2	0.02	8	110	12	207	0.17	118	< 10	28
173353	205 226	1.20	0.94	0.35	155	2	0.02	14	90	8	167	0.13	99	< 10	16
173354	205 226	8.80	0.22	0.89	645	8	< 0.01	8	810	22	224	0.12	113	< 10	22
173355	205 226	19.35	0.36	0.63	510	15	0.03	5	1300	48	308	0.11	140	< 10	106
173356	205 226	7.51	0.38	0.36	420	4	< 0.01	12	370	14	264	0.06	62	< 10	286
173357	205 226	11.55	0.62	0.18	115	37	< 0.01	24	540	10	18	0.05	143	< 10	468
173358	205 226	7.31	0.84	0.23	95	35	< 0.01	24	610	450	15	0.06	170	< 10	4080
173359	205 226	6.70	0.75	0.19	95	82	< 0.01	19	1020	1240	18	0.05	172	< 10	3980
173360	205 226	4.50	1.06	0.24	40	33	0.01	24	610	420	11	0.08	197	10	5460
173361	205 226	8.91	0.45	0.21	105	29	< 0.01	7	470	24	130	0.06	109	< 10	468
173362	205 226	10.45	0.42	0.20	140	15	0.02	5	300	16	293	0.07	93	< 10	178
173363	205 226	14.15	0.40	0.27	345	22	0.01	2	340	20	539	0.06	83	< 10	14
173364	205 226	16.20	0.38	0.31	855	11	< 0.01	3	350	18	416	0.06	65	< 10	34
173365	205 226	5.30	1.17	0.47	110	6	0.03	10	310	8	272	0.16	106	< 10	28
173366	205 226	4.23	1.37	0.54	475	6	0.03	9	510	22	316	0.19	117	< 10	22
173367	205 226	7.07	0.78	0.34	135	7	0.01	7	350	14	380	0.10	80	< 10	28
173368	205 226	7.58	0.80	0.31	100	7	< 0.01	7	300	10	408	0.10	89	< 10	28
173369	205 226	17.50	0.37	0.30	420	11	0.17	2	330	24	615	0.05	73	< 10	20
173370	205 226	20.6	0.43	0.30	420	18	0.17	1	310	28	476	0.04	77	< 10	20
173371	205 226	23.5	0.36	0.20	385	18	0.19	1	150	30	565	0.03	74	< 10	22
173372	205 226	23.6	0.33	0.27	530	15	< 0.01	3	310	26	475	0.05	75	< 10	132
173373	205 226	1.26	0.31	0.25	610	38	< 0.01	17	280	14	262	0.05	87	< 10	1755
173374	205 226	4.68	1.01	0.28	310	18	0.03	37	130	486	17	0.10	133	< 10	3640

CERTIFICATION: Stuart Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 03-AUG-97
Invoice No. :19733071
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733071

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
173375	205 226	< 5	6	1.2	100	< 0.2	2.74	90	4.0	< 2	1.80	6.0	9	70	45
173376	205 226	5	10	2.0	160	< 0.2	1.95	160	3.0	< 2	0.17	3.0	4	157	57
173377	205 226	< 5	6	2.2	80	< 0.2	2.05	120	3.5	< 2	0.12	2.0	1	149	67
173378	205 226	< 5	6	1.6	250	< 0.2	2.49	200	4.0	< 2	0.06	2.5	4	135	63
173379	205 226	5	6	2.6	240	0.4	2.23	100	3.5	< 2	0.20	2.5	5	145	81
173380	205 226	15	8	2.2	70	< 0.2	1.24	90	2.0	< 2	0.17	2.5	2	132	48
173381	205 226	< 5	4	1.6	110	< 0.2	1.92	190	3.0	< 2	0.06	3.0	3	181	63
173382	205 226	< 5	4	2.0	170	< 0.2	2.99	200	4.5	< 2	0.13	2.5	5	162	86
173383	205 226	15	10	3.4	50	< 0.2	2.30	70	3.5	< 2	0.09	1.0	4	152	64
173384	205 226	10	12	2.4	330	< 0.2	2.45	160	4.0	< 2	0.17	2.5	6	161	64
173385	205 226	< 5	6	1.2	230	< 0.2	2.60	190	5.0	< 2	0.22	2.5	5	153	65
173386	205 226	10	4	2.2	390	< 0.2	2.73	180	4.5	< 2	0.17	2.0	4	135	91
173387	205 226	5	2	2.2	210	< 0.2	2.46	160	3.5	< 2	0.14	1.0	4	158	54
173388	205 226	< 5	2	1.6	150	< 0.2	2.34	160	3.5	< 2	0.34	0.5	2	138	76
173389	205 226	5	10	2.8	310	< 0.2	1.78	70	2.5	< 2	0.52	0.5	4	168	53
173390	205 226	< 5	6	4.0	440	< 0.2	2.76	120	3.5	< 2	0.17	1.5	3	122	52
173391	205 226	< 5	10	5.0	280	< 0.2	2.99	120	3.5	< 2	0.28	1.5	3	124	61
173392	205 226	< 5	8	2.4	190	< 0.2	1.74	90	2.0	< 2	1.82	1.0	4	157	59
173393	205 226	< 5	6	4.2	210	< 0.2	2.02	70	2.5	< 2	1.17	1.0	4	166	89
173394	205 226	< 5	4	2.4	140	< 0.2	2.73	160	3.5	< 2	0.57	1.5	5	128	71
173395	205 226	< 5	4	1.0	350	< 0.2	3.47	180	4.5	< 2	0.75	3.0	7	138	114
173396	205 226	< 5	1	1.2	1370	< 0.2	3.52	140	5.0	< 2	3.42	11.0	7	152	106
173397	205 226	< 5	1	0.8	530	< 0.2	3.18	160	4.5	< 2	1.73	7.0	6	176	61
173398	205 226	< 5	1	0.8	1330	< 0.2	3.13	140	5.0	< 2	1.99	10.5	4	158	73
173399	205 226	< 5	1	1.2	490	< 0.2	3.36	150	4.0	< 2	4.95	6.5	3	192	46
173400	205 226	< 5	1	0.8	40	< 0.2	7.52	140	6.5	< 2	4.19	0.5	24	114	32
173401	205 226	< 5	4	0.6	320	< 0.2	10.35	250	8.0	< 2	2.27	10.0	29	224	48
173402	205 226	< 5	2	0.4	620	< 0.2	3.38	150	2.5	< 2	1.12	35.0	10	150	44
173403	205 226	< 5	2	0.6	140	< 0.2	8.64	180	6.0	< 2	2.89	5.5	17	115	32
173404	205 226	< 5	1	0.2	< 10	< 0.2	7.85	410	5.0	< 2	6.69	< 0.5	20	229	45
173405	205 226	< 5	6	0.2	600	< 0.2	8.05	170	4.5	< 2	3.71	15.0	35	212	50
173406	205 226	< 5	2	1.0	1340	< 0.2	8.19	120	3.5	< 2	5.75	26.0	48	175	85
173407	205 226	< 5	1	0.8	3940	0.4	8.62	120	4.5	< 2	4.49	127.5	47	67	80
173408	205 226	< 5	1	1.2	90	1.2	5.95	100	3.5	< 2	5.77	18.0	30	138	180
173409	205 226	< 5	10	0.2	460	< 0.2	9.15	310	5.0	< 2	5.56	24.0	24	61	41
173410	205 226	< 5	12	< 0.2	110	< 0.2	8.72	2690	5.0	< 2	6.11	6.0	20	87	5
173411	205 226	35	12	0.6	17300	0.6	0.78	40	0.5	< 2	1.95	>500	11	167	8
173412	205 226	< 5	8	0.6	1010	< 0.2	7.61	210	4.0	< 2	6.09	21.5	15	58	37
173413	205 226	< 5	1	1.0	450	0.8	6.50	170	4.5	< 2	2.49	22.5	11	176	78
173414	205 226	< 5	1	1.8	7720	1.0	6.65	160	3.0	< 2	6.80	208	6	48	64

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 03-AUG-97
Invoice No. :I9733071
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733071

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
173375	205	226	3.93	1.24	0.39	840	1	< 0.01	97	90	370	37	0.09	154	< 10	1770
173376	205	226	1.79	0.88	0.23	360	< 1	0.01	33	90	158	14	0.07	121	< 10	1075
173377	205	226	2.06	0.95	0.22	80	< 1	0.01	22	60	90	8	0.08	120	< 10	436
173378	205	226	1.27	1.16	0.24	95	5	0.02	29	100	86	5	0.09	131	< 10	1465
173379	205	226	2.67	1.04	0.25	145	1	0.01	36	110	132	11	0.07	136	< 10	1375
173380	205	226	2.35	0.57	0.15	220	2	< 0.01	20	50	46	8	0.04	82	< 10	502
173381	205	226	1.72	0.89	0.18	265	< 1	0.01	31	80	96	5	0.07	114	< 10	912
173382	205	226	1.36	1.40	0.29	130	< 1	0.04	36	90	88	9	0.10	182	< 10	720
173383	205	226	3.26	1.04	0.22	225	< 1	0.03	36	70	72	6	0.08	118	< 10	434
173384	205	226	1.99	1.08	0.26	260	3	0.03	39	110	134	10	0.09	136	< 10	1525
173385	205	226	1.77	1.04	0.29	330	< 1	0.03	34	110	88	22	0.10	174	< 10	1305
173386	205	226	1.80	1.30	0.29	140	2	0.03	34	170	178	12	0.10	179	< 10	1155
173387	205	226	1.92	1.17	0.26	205	1	0.03	29	150	104	9	0.08	118	< 10	644
173388	205	226	1.62	1.14	0.28	130	< 1	0.01	27	90	102	12	0.09	133	< 10	432
173389	205	226	2.72	0.86	0.20	165	< 1	< 0.01	51	50	136	20	0.06	107	< 10	966
173390	205	226	2.63	1.32	0.33	105	1	0.03	32	100	268	12	0.11	113	< 10	1630
173391	205	226	2.95	1.43	0.35	90	< 1	0.03	28	110	192	13	0.12	101	< 10	1100
173392	205	226	2.70	0.85	0.27	250	< 1	< 0.01	46	50	156	16	0.06	105	< 10	870
173393	205	226	3.65	0.98	0.43	95	2	< 0.01	95	50	234	36	0.07	107	< 10	962
173394	205	226	1.97	1.36	0.31	185	< 1	0.03	44	110	122	13	0.10	141	< 10	944
173395	205	226	1.72	1.78	0.37	165	< 1	0.03	32	780	220	25	0.13	158	< 10	1190
173396	205	226	2.61	1.89	0.40	500	< 1	0.01	49	770	990	91	0.13	190	10	5400
173397	205	226	1.77	1.68	0.37	365	< 1	0.02	35	770	506	37	0.14	167	< 10	2610
173398	205	226	2.49	1.66	0.42	500	< 1	0.01	54	750	500	73	0.11	188	10	6310
173399	205	226	3.43	1.71	0.54	1340	3	0.04	32	420	444	221	0.13	153	< 10	2180
173400	205	226	5.19	3.98	0.85	1145	< 1	0.03	32	2410	66	185	0.98	238	< 10	252
173401	205	226	4.88	4.95	1.05	715	1	0.14	75	1170	98	74	0.50	212	< 10	1750
173402	205	226	2.80	1.82	0.33	315	1	0.02	53	300	80	28	0.14	131	< 10	3170
173403	205	226	5.09	4.61	0.67	830	< 1	0.05	42	2410	136	99	1.18	266	< 10	870
173404	205	226	4.89	3.77	0.67	1425	< 1	0.07	53	1630	70	266	1.07	267	< 10	160
173405	205	226	5.03	3.52	0.57	960	< 1	0.11	74	2170	92	159	1.18	283	< 10	3310
173406	205	226	5.29	3.93	0.40	1390	< 1	1.09	87	2120	186	295	1.30	268	10	4850
173407	205	226	4.68	4.03	0.45	1065	< 1	0.72	78	2190	124	216	1.08	273	< 10	>10000
173408	205	226	5.41	3.20	0.39	1080	13	< 0.01	125	2130	408	228	0.90	936	< 10	1710
173409	205	226	5.86	4.21	0.67	990	2	0.39	46	3370	112	125	1.90	290	< 10	2250
173410	205	226	5.63	4.04	0.80	1025	< 1	0.01	35	3000	34	147	1.64	294	< 10	698
173411	205	226	1.20	0.39	0.07	240	< 1	< 0.01	14	80	68	44	0.03	44	< 10	>10000
173412	205	226	2.91	2.89	0.47	840	12	0.06	43	1470	168	292	0.70	270	10	3060
173413	205	226	4.00	3.41	0.61	450	13	0.05	71	1420	172	108	0.46	308	< 10	3130
173414	205	226	4.21	2.22	0.90	1025	13	0.05	32	370	188	170	0.27	170	< 10	>10000

CERTIFICATION:

Chemex Labs Ltd.

*Analytical Chemists * Geochemists * Registered Assayers*

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page .ber :5-A
Total Pages :5
Certificate Date: 03-AUG-97
Invoice No. :19733071
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733071

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
173415	205	226	< 5	1	0.6	180	0.6	4.99	190	3.5	< 2	3.41	8.0	12	174	68
173416	205	226	< 5	1	0.4	70	< 0.2	8.12	320	6.5	< 2	1.33	1.5	2	50	30
173417	205	226	10	1	0.8	560	1.8	6.77	130	5.5	< 2	2.64	19.0	10	86	97
173418	205	226	< 5	1	1.0	100	< 0.2	7.03	100	4.5	< 2	6.80	< 0.5	23	78	108
173419	205	226	< 5	2	0.6	390	1.0	5.35	130	4.0	< 2	2.90	8.5	11	98	95
173420	205	226	< 5	1	0.4	30	< 0.2	2.87	330	1.5	< 2	1.07	< 0.5	5	190	39
173421	205	226	< 5	1	< 0.2	< 10	< 0.2	3.24	640	1.5	< 2	0.67	< 0.5	4	124	44
173422	205	226	< 5	32	0.8	10	0.4	4.02	260	2.0	< 2	0.97	0.5	5	286	58
173423	205	226	< 5	2	0.6	< 10	< 0.2	2.37	470	1.0	< 2	0.51	< 0.5	4	112	58
173424	205	226	< 5	2	1.6	10	< 0.2	1.74	290	0.5	< 2	0.23	< 0.5	4	181	52
173425	205	226	< 5	1	1.0	20	< 0.2	2.05	350	0.5	< 2	0.32	< 0.5	4	231	56
173426	205	226	< 5	2	1.8	10	< 0.2	2.59	400	0.5	< 2	0.38	< 0.5	6	115	51
173427	205	226	< 5	1	1.2	30	< 0.2	2.73	380	1.0	< 2	0.98	< 0.5	6	187	52
173428	205	226	< 5	6	2.6	40	< 0.2	2.19	160	1.0	< 2	2.28	< 0.5	4	194	40
173429	205	226	< 5	14	1.8	50	0.6	2.80	100	2.0	< 2	0.57	< 0.5	9	134	81
173430	205	226	< 5	1	0.4	< 10	0.4	3.73	410	3.0	< 2	1.52	< 0.5	5	197	89
173431	205	226	< 5	12	0.6	< 10	0.4	6.08	100	3.5	< 2	2.39	< 0.5	12	108	61
173432	205	226	< 5	12	0.8	30	< 0.2	7.17	420	2.5	< 2	7.23	< 0.5	16	87	18
173433	205	226	5	1	2.4	80	0.8	4.46	80	3.5	< 2	4.71	2.0	9	158	46
173434	205	226	< 5	10	0.6	10	< 0.2	6.21	240	3.5	< 2	2.22	< 0.5	6	197	23
173435	205	226	< 5	1	0.6	20	0.4	6.85	250	4.5	< 2	2.46	0.5	9	175	26
173436	205	226	< 5	1	0.2	< 10	< 0.2	6.97	3900	3.0	< 2	1.73	0.5	< 1	114	3
173437	205	226	< 5	1	0.2	< 10	< 0.2	6.76	4190	3.0	< 2	2.15	0.5	< 1	80	3
173438	205	226	< 5	1	1.2	60	< 0.2	6.57	3920	3.0	< 2	1.42	1.5	< 1	88	5
173439	205	226	< 5	1	0.6	10	< 0.2	6.80	2710	3.5	< 2	1.39	0.5	1	71	9
173440	205	226	25	62	15.5	260	1.2	5.45	100	3.0	< 2	1.39	15.0	1	153	40
173441	205	226	< 5	1	1.0	110	0.6	5.68	340	2.5	< 2	2.79	2.5	3	120	28
173442	205	226	< 5	60	12.0	640	1.2	9.29	120	4.5	< 2	1.49	5.0	1	144	30
173443	205	226	40	98	14.0	980	3.8	6.87	120	3.0	< 2	0.39	13.0	< 1	95	37
173444	205	226	15	10	4.2	160	1.0	9.24	370	3.0	< 2	0.50	< 0.5	2	72	6
173445	205	226	< 5	22	5.4	190	1.6	6.07	130	2.5	< 2	0.44	< 0.5	< 1	109	5
173446	205	226	10	32	6.8	260	3.2	6.56	160	1.5	< 2	0.92	< 0.5	2	103	7
173447	205	226	25	680	8.0	100	5.2	2.87	90	1.0	< 2	0.52	2.5	1	250	20
173448	205	226	10	16	3.6	20	1.0	7.42	830	3.0	< 2	0.36	< 0.5	< 1	77	6
173449	205	226	< 5	18	3.0	30	0.6	7.72	270	3.0	< 2	1.58	< 0.5	2	45	8
173450	205	226	< 5	6	3.2	40	< 0.2	7.47	1010	3.0	< 2	0.85	< 0.5	< 1	88	5
173451	205	226	< 5	12	2.6	20	0.4	8.40	1170	3.0	< 2	1.63	0.5	3	31	6
173452	205	226	< 5	1	2.0	60	< 0.2	7.71	1040	2.5	< 2	1.03	2.0	1	55	36

CERTIFICATION: Ian Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 03-AUG-97
Invoice No. : I9733071
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9733071

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
173415	205	226	3.79	2.50	0.74	935	3	0.03	51	1140	214	177	0.36	182	< 10	1675
173416	205	226	3.46	4.10	1.08	490	6	0.11	11	340	62	77	0.28	66	< 10	484
173417	205	226	4.16	3.49	0.78	515	28	0.05	72	940	470	113	0.45	447	< 10	3290
173418	205	226	4.75	3.12	0.95	1150	3	0.07	34	1750	122	265	0.81	250	< 10	236
173419	205	226	3.67	2.60	0.83	810	7	0.04	47	900	308	160	0.31	204	< 10	1910
173420	205	226	1.97	1.37	0.62	255	< 1	0.01	31	200	66	80	0.10	65	< 10	154
173421	205	226	2.16	1.41	0.58	175	< 1	0.03	32	330	10	74	0.12	74	< 10	90
173422	205	226	2.75	1.52	0.65	315	1	0.05	50	210	26	84	0.19	135	< 10	120
173423	205	226	1.06	0.98	0.35	130	< 1	0.01	53	150	10	48	0.09	98	< 10	68
173424	205	226	1.07	0.67	0.29	115	< 1	0.01	46	60	< 2	45	0.07	70	< 10	72
173425	205	226	1.08	0.82	0.34	145	< 1	0.01	62	410	6	88	0.08	87	< 10	88
173426	205	226	1.13	1.11	0.40	250	< 1	0.03	53	310	10	91	0.09	86	< 10	130
173427	205	226	1.39	0.94	0.35	190	< 1	0.01	48	90	6	88	0.10	91	< 10	68
173428	205	226	1.26	0.54	0.24	275	< 1	< 0.01	39	90	14	94	0.07	99	< 10	56
173429	205	226	1.79	1.29	0.32	100	< 1	0.04	53	190	40	24	0.09	127	< 10	222
173430	205	226	1.72	1.65	0.48	330	< 1	0.02	20	820	18	58	0.13	125	< 10	20
173431	205	226	4.60	2.70	1.21	485	2	0.04	28	1190	30	119	0.53	146	< 10	158
173432	205	226	5.32	2.49	1.20	1030	< 1	0.55	15	1600	36	322	0.80	151	< 10	254
173433	205	226	4.38	2.04	1.14	710	11	0.04	60	1490	78	133	0.20	189	< 10	562
173434	205	226	2.59	2.90	1.00	325	3	0.14	32	900	46	107	0.26	113	< 10	134
173435	205	226	2.70	3.24	1.10	310	5	0.08	38	1270	62	122	0.36	136	< 10	188
173436	205	226	1.06	2.97	0.77	180	1	0.23	< 1	130	20	70	0.11	6	< 10	28
173437	205	226	1.16	3.11	0.82	260	2	0.13	< 1	120	100	104	0.11	6	< 10	50
173438	205	226	1.36	3.11	0.89	205	5	0.11	5	140	108	57	0.12	10	< 10	202
173439	205	226	1.23	3.04	0.77	190	1	0.11	7	190	54	65	0.12	21	< 10	104
173440	205	226	3.00	2.29	0.44	165	16	0.10	44	990	96	50	0.14	404	< 10	930
173441	205	226	1.43	2.64	0.64	305	3	0.07	13	250	92	77	0.12	48	< 10	436
173442	205	226	3.36	4.22	0.75	275	16	0.19	33	690	92	79	0.17	379	< 10	436
173443	205	226	3.24	2.85	0.34	50	20	0.17	54	1470	98	39	0.13	726	< 10	696
173444	205	226	2.21	3.85	0.33	65	2	0.35	2	350	48	40	0.19	30	< 10	12
173445	205	226	2.87	2.59	0.41	45	1	0.32	1	280	50	32	0.14	19	< 10	6
173446	205	226	2.81	2.77	0.41	30	< 1	0.42	2	350	52	60	0.14	19	< 10	8
173447	205	226	2.52	1.39	0.24	135	4	0.06	31	1290	58	57	0.05	207	< 10	344
173448	205	226	2.87	3.77	0.68	135	1	0.14	1	440	60	33	0.15	22	< 10	20
173449	205	226	4.78	4.09	1.38	410	3	0.12	2	460	58	85	0.17	22	< 10	10
173450	205	226	2.19	3.99	0.91	235	1	0.13	1	470	44	61	0.18	16	< 10	18
173451	205	226	3.11	4.69	1.33	875	2	0.13	5	620	122	92	0.21	18	< 10	154
173452	205	226	2.05	4.45	1.04	320	1	0.17	3	520	62	93	0.21	21	< 10	212

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9733086

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9733086

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 23-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	2	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
301	2	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	2	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

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Page Number : 1
Total Pages : 1
Certificate Date: 23-JUL-97
Invoice No. : I9733086
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Account : GP W

CERTIFICATE OF ANALYSIS A9733086

SAMPLE	PREP CODE	Cu %	Zn %
174416	244 --	0.01	3.48
174420	244 --	0.03	1.32

CERTIFICATION: Said Leung

Chemex Labs Ltd.

Analytical Chemists *Geochemists* *Registered Assayers*

212 Brooksbank Ave.
North Vancouver, B.C.
Canada V7J 2C1
Phone: (604) 984-0221
Fax: (604) 984-0218

RECEIVED
OCT 16 1997
WESTMIN RESOURCES LIMITED

October 11, 1997

David Terry
Westmin Resources Ltd.
Project: Wolverine
P.O. BOX 49066, The Bentall Centre
Vancouver, B.C.
V7X - 1C4

Dear Mr. Terry,

RE: Certificate of Analysis A9733086
Corrected Copy for Cu - Samples 174416 and 174420

We have investigated Andrew Turner's inquiry about the Cu results reported for samples 174416 and 174420 on Certificate of Analysis A9733086. Unfortunately, during the original analysis, the flasks containing the two samples were switched. Re-analysis was performed to confirm the results and a corrected copy has been attached.

Please accept our apologies for any inconvenience that this may have caused you and feel free to contact me or Said Zeinab if you have any further questions or inquiries.

Sincerely,

Michele Wonghen,
Quality Assurance Chemist

Enclosures: Certificate of Analysis A9733086
Corrected Copy for Cu - Samples 174416 and 174420

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9733086

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9733086

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 9-OCT-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	2	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
301	2	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	2	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

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V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1
Total Pages :1
Certificate Date: 23-JUL-97
Invoice No. :I9733086
P.O. Number :
Account :GP W

* CORRECTED COPY

CERTIFICATE OF ANALYSIS A9733086

SAMPLE	PREP CODE	Cu %	Zn %
174416	244 --	7.86	3.48
174420	244 --	1.80	1.32

CERTIFICATION:

* FOR VALUES

Chemex Labs Ltd.

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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9733378

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9733378

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 31-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	3	RUSH Assay ring approx 150 mesh
295	3	RUSH crush and split (0-3 Kg)
3202	3	Rock - save entire reject
290	3	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	3	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	3	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	3	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	3	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	3	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	3	Ba ppm	XRF	10	50000
444	3	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	3	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	3	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	3	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	3	Ag ppm: high grade 24 element	AAS	0.5	200
4031	3	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	3	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	3	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	3	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	3	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	3	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	3	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	3	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	3	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	3	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	3	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	3	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	3	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	3	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	3	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	3	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	3	Pb %: high grade 24 element	AAS	0.001	10.00
4047	3	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	3	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	3	V ppm: A22 ICP package	ICP-AES	10	50000
4050	3	Zn ppm: A22 ICP package	ICP-AES	20	100000

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page .. .ıber : 1-A
Total Pages : 1
Certificate Date: 31-JUL-97
Invoice No. : I9733378
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9733378

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	ZnBa %	(XRFSpec Gr ppm	S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
173532	258	295	< 0.07	< 3	0.01	0.08	< 0.01	760	3.84	< 0.01	< 0.01	< 0.001	< 1.0	0.35	< 100	< 10	< 20	5.05	< 10	< 10	110
173537	258	295	< 0.07	< 3	< 0.01	0.15	< 0.01	1720	3.79	< 0.01	< 0.01	< 0.001	< 1.0	0.70	< 100	< 10	< 20	3.50	< 10	< 10	130
173541	258	295	< 0.07	< 3	< 0.01	0.01	0.01	1420	3.63	< 0.01	< 0.01	< 0.001	< 1.0	0.35	100	< 10	< 20	9.05	< 10	< 10	30

CERTIFICATION: Stan Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number : 1-B
Total Pages : 1
Certificate Date: 31-JUL-97
Invoice No. : I9733378
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9733378

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
173532	258	295	50	>30.0	0.1	0.20	1090	10	< 0.05	< 10	0.094	10	< 0.05	90	60
173537	258	295	10	29.6	0.3	0.05	410	10	< 0.05	< 10	0.151	< 10	< 0.05	110	60
173541	258	295	50	>30.0	0.1	1.30	11130	< 10	< 0.05	< 10	0.013	60	< 0.05	100	120

CERTIFICATION: Stewart Bradley

Chemex Labs Ltd.

*Analytical Chemists * Geochemists * Registered Assayers*

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9734202

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9734202

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 5-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	42	Geochem ring to approx 150 mesh
226	42	0-3 Kg crush and split
3202	42	Rock - save entire reject
285	42	ICP - HF digestion charge
287	42	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	42	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	42	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	42	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	42	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	42	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	42	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	42	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	42	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	42	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	42	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	42	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	42	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	42	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	42	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	42	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	42	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	42	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	42	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	42	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	42	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	42	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	42	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	42	Pb ppm: 24 element, rock & core	AAS	2	10000
582	42	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	42	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	42	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	42	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	42	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 05-AUG-97
Invoice No. :19734202
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9734202

SAMPLE	PREP CODE	Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
173453	205 226	< 5	8	1.0	< 10	< 0.2	7.87	1010	2.5	2	1.16	< 0.5	1	62	5
173454	205 226	< 5	4	1.0	< 10	< 0.2	8.51	1140	2.5	4	0.93	< 0.5	1	64	8
173455	205 226	< 5	4	1.2	< 10	< 0.2	8.19	1460	2.5	< 2	0.71	< 0.5	< 1	61	6
173456	205 226	< 5	4	0.8	< 10	< 0.2	7.83	980	2.0	< 2	1.19	< 0.5	< 1	50	8
173457	205 226	< 5	2	0.8	< 10	< 0.2	7.80	1140	2.5	< 2	1.24	< 0.5	1	51	10
173458	205 226	< 5	2	0.6	< 10	< 0.2	7.62	1060	2.0	2	1.56	< 0.5	< 1	41	23
173459	205 226	< 5	2	0.8	< 10	< 0.2	7.83	820	2.5	2	2.15	< 0.5	< 1	38	39
173460	205 226	< 5	6	0.8	< 10	< 0.2	7.47	1010	2.5	2	1.47	< 0.5	< 1	52	11
173461	205 226	< 5	2	0.6	< 10	< 0.2	7.97	1310	2.5	< 2	1.02	< 0.5	< 1	40	6
173462	205 226	< 5	2	0.6	< 10	< 0.2	8.00	1220	3.0	2	1.67	< 0.5	1	38	5
173463	205 226	< 5	2	0.6	20	< 0.2	7.89	1230	2.5	< 2	1.20	0.5	1	40	7
173464	205 226	< 5	1	0.2	10	< 0.2	7.93	1440	2.0	2	1.92	< 0.5	< 1	43	29
173465	205 226	< 5	1	0.6	50	< 0.2	8.08	1340	2.0	< 2	2.39	2.0	< 1	44	92
173466	205 226	< 5	1	1.2	150	0.4	8.30	1520	2.0	2	2.49	8.0	1	30	29
173467	205 226	< 5	2	0.4	60	< 0.2	8.12	1490	2.5	2	1.35	2.5	< 1	29	29
173468	205 226	< 5	1	2.2	2080	2.0	7.53	440	2.0	2	1.54	94.0	< 1	48	249
173469	205 226	< 5	1	0.6	160	< 0.2	7.87	1770	2.0	2	0.85	7.5	< 1	34	64
173470	205 226	< 5	1	1.0	30	< 0.2	8.10	2230	2.0	2	0.92	8.0	< 1	41	59
173471	205 226	< 5	2	0.4	820	< 0.2	8.22	2170	2.5	2	0.98	47.5	1	35	97
173472	205 226	< 5	2	1.4	2490	< 0.2	7.94	2160	2.0	< 2	0.86	147.0	3	37	137
173473	205 226	< 5	1	2.4	1340	2.2	7.44	1750	2.0	4	1.69	120.0	3	41	303
173474	205 226	< 5	2	0.2	110	< 0.2	7.96	2230	2.0	< 2	1.18	8.5	< 1	50	33
173475	205 226	< 5	1	0.6	520	0.6	7.38	690	2.0	2	1.00	28.0	1	46	487
173476	205 226	< 5	16	1.8	130	< 0.2	8.23	2170	2.0	2	1.09	14.0	< 1	48	37
173477	205 226	< 5	1	2.6	110	< 0.2	7.49	300	1.5	< 2	1.43	12.5	1	89	251
173478	205 226	< 5	2	4.4	40	< 0.2	8.28	1850	2.0	< 2	0.80	3.5	3	49	37
173479	205 226	< 5	2	3.8	50	< 0.2	7.84	1970	1.5	2	1.35	3.5	< 1	72	63
173480	205 226	< 5	18	1.8	60	< 0.2	7.37	1950	2.0	< 2	0.89	6.5	1	67	30
173481	205 226	< 5	1	1.0	170	< 0.2	7.98	2200	2.0	2	1.52	13.5	1	54	195
173482	205 226	< 5	1	8.4	2110	1.4	7.62	1910	1.5	2	1.14	118.0	4	76	1960
173483	205 226	< 5	2	11.0	230	< 0.2	7.70	1940	1.5	< 2	0.84	9.0	2	72	152
173484	205 226	< 5	2	10.5	350	< 0.2	7.15	1820	2.0	< 2	0.18	13.5	1	89	139
173485	205 226	< 5	2	17.0	1210	< 0.2	8.30	1820	1.5	< 2	0.68	48.0	4	88	276
173486	205 226	< 5	1	1.0	250	< 0.2	6.94	1650	1.5	< 2	1.90	9.5	1	48	267
173487	205 226	< 5	1	0.6	130	< 0.2	6.96	1700	1.5	< 2	1.93	4.0	1	50	53
173488	205 226	< 5	2	0.2	80	< 0.2	7.06	1630	1.5	< 2	2.20	3.5	1	53	76
173489	205 226	< 5	22	0.4	60	< 0.2	7.07	1630	1.5	< 2	1.78	3.0	1	54	79
173490	205 226	45	100	120	2880	4.2	7.14	1250	1.5	< 2	0.31	67.0	5	92	1110
173491	205 226	55	76	28	390	2.2	7.46	1670	2.0	< 2	0.40	22.0	1	127	527
173492	205 226	10	22	7.4	250	< 0.2	5.75	210	1.5	< 2	0.94	13.0	5	226	68

CERTIFICATION: Ivan Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :2
Certificate Date: 05-AUG-97
Invoice No. :I9734202
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9734202

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
173453	205	226	1.68	4.60	1.06	400	3	0.60	1	470	46	129	0.20	15	< 10	50
173454	205	226	1.42	4.94	0.90	330	2	0.97	1	480	32	123	0.19	17	< 10	28
173455	205	226	1.07	6.01	0.68	210	3	0.42	3	490	40	111	0.17	16	< 10	10
173456	205	226	2.59	6.10	0.92	545	3	0.26	1	460	30	155	0.18	14	< 10	76
173457	205	226	2.85	5.37	1.22	595	3	0.14	1	440	52	207	0.22	14	< 10	92
173458	205	226	2.61	5.14	1.37	615	2	0.13	< 1	500	36	250	0.21	14	< 10	106
173459	205	226	2.87	4.95	1.89	820	4	0.12	< 1	410	92	341	0.22	15	< 10	150
173460	205	226	2.53	4.47	1.19	700	3	0.11	1	420	40	169	0.21	14	< 10	92
173461	205	226	2.09	5.22	0.94	540	3	0.17	< 1	460	44	143	0.21	14	< 10	80
173462	205	226	2.33	4.82	1.22	815	1	0.13	2	490	38	182	0.22	16	< 10	60
173463	205	226	2.02	4.71	1.10	675	3	0.13	1	480	50	130	0.22	15	< 10	126
173464	205	226	1.60	4.93	1.32	715	3	0.23	1	550	60	283	0.21	15	< 10	76
173465	205	226	2.12	5.13	2.07	910	3	0.18	2	470	128	369	0.23	14	< 10	320
173466	205	226	2.35	5.32	2.21	830	3	0.22	1	520	410	393	0.23	15	< 10	992
173467	205	226	2.10	5.08	1.82	530	4	0.16	1	530	110	230	0.23	16	< 10	372
173468	205	226	5.80	4.89	2.75	885	4	0.22	1	450	470	211	0.22	46	< 10	8460
173469	205	226	2.49	4.85	1.36	505	2	0.16	1	470	60	139	0.22	14	< 10	718
173470	205	226	2.51	5.01	1.32	540	1	0.19	1	470	34	186	0.24	15	< 10	778
173471	205	226	3.00	5.24	1.54	730	3	0.17	< 1	450	32	247	0.25	14	< 10	3960
173472	205	226	3.06	5.02	1.32	690	2	0.15	3	470	76	208	0.24	11	< 10	>10000
173473	205	226	4.88	4.78	1.88	1190	3	0.17	1	370	420	352	0.22	10	< 10	9710
173474	205	226	3.21	5.01	1.28	715	2	0.14	< 1	480	36	259	0.24	15	< 10	844
173475	205	226	4.06	4.58	1.24	820	4	0.13	1	460	60	208	0.22	12	< 10	2550
173476	205	226	2.42	4.91	1.22	610	2	0.15	< 1	510	36	195	0.22	15	< 10	1240
173477	205	226	4.26	4.76	1.14	1260	3	0.18	2	400	116	273	0.18	12	< 10	1205
173478	205	226	1.57	4.03	0.65	385	3	1.20	5	540	66	149	0.18	16	< 10	372
173479	205	226	0.96	3.80	0.55	430	2	0.96	1	450	46	298	0.16	14	< 10	356
173480	205	226	1.13	3.82	0.59	335	3	0.18	2	440	42	145	0.17	14	< 10	638
173481	205	226	1.35	4.28	0.64	465	4	0.22	1	460	26	390	0.18	14	< 10	1295
173482	205	226	1.09	3.66	0.46	265	< 1	0.38	1	450	200	269	0.16	11	< 10	>10000
173483	205	226	0.57	3.39	0.50	145	1	0.27	4	540	32	128	0.15	17	< 10	892
173484	205	226	0.64	3.27	0.45	40	1	0.16	7	500	26	48	0.14	20	< 10	1305
173485	205	226	0.93	3.61	0.46	105	3	0.28	10	560	8	116	0.15	36	< 10	4420
173486	205	226	1.68	3.47	0.85	525	3	0.13	4	440	18	189	0.13	14	< 10	936
173487	205	226	1.85	3.42	1.00	565	3	0.12	4	490	22	169	0.14	15	< 10	390
173488	205	226	1.82	3.49	1.07	590	3	0.13	2	470	36	178	0.13	15	< 10	370
173489	205	226	1.44	3.30	0.86	500	3	0.14	3	500	52	133	0.13	17	< 10	328
173490	205	226	1.47	2.85	0.43	95	2	0.17	14	530	144	35	0.12	36	< 10	6240
173491	205	226	1.86	2.92	0.61	325	3	0.17	18	640	132	47	0.11	123	< 10	2320
173492	205	226	1.49	2.23	0.58	160	13	0.11	51	1480	24	67	0.14	352	< 10	1245

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 05-AUG-97
Invoice No. :I9734202
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9734202

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
173493	205	226	< 5	14	2.8	110	< 0.2	4.88	310	1.5	2	1.31	6.0	2	216	47
173494	205	226	20	28	7.0	110	0.6	3.20	130	1.5	< 2	1.04	4.0	11	205	99

CERTIFICATION:

Chemex Labs Ltd.

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British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page .ber : 2-B
Total Pages : 2
Certificate Date: 05-AUG-97
Invoice No. : I9734202
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9734202

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
173493	205	226	1.19	2.01	0.41	265	7	0.10	30	690	14	74	0.10	188	< 10	534
173494	205	226	2.10	1.40	0.48	120	12	0.05	95	2760	8	150	0.09	463	< 10	584

CERTIFICATION: Hart Bichler

Chemex Labs Ltd.

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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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A9734664

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9734664

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 31-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

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British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page er :1
Total Pages :1
Certificate Date: 31-JUL-97
Invoice No. :I9734664
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9734664

SAMPLE	PREP CODE		Zn %									
N173235	244	--	2.22									

CERTIFICATION: Sarah Leitch

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212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
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V7X 1C4

A9734843

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9734843

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 31-JUL-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1
Total Pages :1
Certificate Date: 31-JUL-97
Invoice No. :I9734843
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9734843

SAMPLE	PREP CODE		Zn %									
N203481	244	--	2.02									

CERTIFICATION: Stewart Buchler

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A9735450

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9735450

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 6-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	3	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	3	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 06-AUG-97
Invoice No. :19735450
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735450

SAMPLE	PREP CODE	Zn %
173407	244 --	1.82
173411	244 --	8.08
173414	244 --	2.86

CERTIFICATION: David Terry

Chemex Labs Ltd.

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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9735887

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9735887

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 9-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	2	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	2	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

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British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 09-AUG-97
Invoice No. :I9735887
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735887

SAMPLE	PREP CODE	Zn %
173472	244 --	1.18
173482	244 --	1.08

CERTIFICATION: Said Zeinab

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9735918

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9735918

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 18-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	197	Geochem ring to approx 150 mesh
294	197	4-7 Kg crush and split
3202	197	Rock - save entire reject
285	197	ICP - HF digestion charge
287	197	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	197	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	197	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	197	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	197	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	197	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	197	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	197	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	197	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	197	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	197	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	197	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	197	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	197	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	197	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	197	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	197	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	197	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	197	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	197	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	197	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	197	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	197	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	197	Pb ppm: 24 element, rock & core	AAS	2	10000
582	197	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	197	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	197	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	197	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	197	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

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British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :5
Certificate Date: 18-AUG-97
Invoice No. :I9735918
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735918

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
173495	205	294	< 5	10	0.6	< 10	< 0.2	6.68	2360	0.5	< 2	3.16	< 0.5	30	249	97
173496	205	294	60	12	< 0.2	< 10	< 0.2	4.84	4040	2.0	< 2	0.62	< 0.5	11	112	58
173497	205	294	110	4	0.2	< 10	< 0.2	3.27	270	1.0	< 2	2.05	< 0.5	10	138	61
173498	205	294	< 5	1	0.2	10	< 0.2	3.81	440	2.0	2	1.71	0.5	11	154	73
173499	205	294	< 5	1	< 0.2	< 10	< 0.2	7.61	2120	4.0	< 2	0.21	1.0	2	46	13
173500	205	294	< 5	1	< 0.2	< 10	< 0.2	5.84	1150	2.5	2	0.73	1.0	6	123	41
173501	205	294	10	1	1.0	180	< 0.2	4.05	130	2.0	< 2	1.91	2.0	10	161	63
173502	205	294	< 5	1	< 0.2	1410	< 0.2	2.05	170	0.5	< 2	0.63	7.0	7	198	57
173503	205	294	< 5	2	< 0.2	20	< 0.2	4.48	360	1.5	4	4.14	< 0.5	15	104	74
173504	205	294	< 5	4	< 0.2	< 10	< 0.2	3.40	2970	1.0	2	0.67	< 0.5	11	165	81
173505	205	294	< 5	4	< 0.2	< 10	< 0.2	3.09	1400	0.5	< 2	0.38	< 0.5	9	144	82
173506	205	294	< 5	1	1.4	60	< 0.2	4.63	160	1.5	< 2	0.65	< 0.5	15	175	96
173507	205	294	< 5	2	0.2	10	< 0.2	3.63	350	1.0	< 2	0.46	< 0.5	8	152	61
173508	205	294	< 5	1	< 0.2	< 10	< 0.2	2.57	1130	0.5	2	0.23	< 0.5	7	179	81
173509	205	294	< 5	6	0.2	30	< 0.2	1.94	330	0.5	< 2	0.30	< 0.5	4	159	75
173510	205	294	< 5	12	< 0.2	< 10	< 0.2	2.02	2300	0.5	< 2	0.26	< 0.5	4	183	67
173511	205	294	< 5	12	0.2	30	< 0.2	2.61	630	1.0	2	0.30	< 0.5	7	155	62
173512	205	294	< 5	4	< 0.2	10	< 0.2	3.84	800	1.5	2	0.12	< 0.5	7	134	66
173513	205	294	< 5	14	< 0.2	60	< 0.2	2.39	470	1.5	2	0.17	< 0.5	7	124	55
173514	205	294	< 5	8	3.0	250	< 0.2	2.42	210	1.5	< 2	0.48	< 0.5	7	169	77
173515	205	294	< 5	8	< 0.2	50	< 0.2	2.82	270	2.0	< 2	0.55	< 0.5	7	125	71
173516	205	294	< 5	4	< 0.2	210	< 0.2	2.62	3650	0.5	< 2	1.48	0.5	4	156	57
173517	205	294	< 5	22	< 0.2	120	< 0.2	2.19	260	1.5	< 2	0.46	< 0.5	6	142	74
173518	205	294	< 5	8	< 0.2	1720	< 0.2	1.75	180	0.5	< 2	11.45	3.0	10	106	42
173519	205	294	< 5	1	< 0.2	180	< 0.2	2.12	370	2.0	< 2	1.86	< 0.5	8	118	77
173520	205	294	< 5	4	< 0.2	100	< 0.2	2.22	1240	1.5	2	0.47	0.5	5	143	57
173521	205	294	< 5	14	< 0.2	70	< 0.2	2.61	780	1.5	< 2	0.16	0.5	6	126	67
173522	205	294	< 5	4	< 0.2	10	< 0.2	3.05	1340	2.0	< 2	0.29	< 0.5	6	124	45
173523	205	294	< 5	1	< 0.2	50	< 0.2	2.90	240	4.5	< 2	1.15	< 0.5	3	120	36
173524	205	294	< 5	2	< 0.2	30	< 0.2	2.06	520	1.5	< 2	0.85	< 0.5	4	156	64
173525	205	294	10	2	< 0.2	10	< 0.2	2.51	130	1.5	< 2	7.10	< 0.5	6	125	53
173526	205	294	10	2	< 0.2	30	< 0.2	3.50	150	6.0	< 2	3.46	0.5	7	136	45
173527	205	294	20	4	1.4	40	< 0.2	2.81	60	8.5	< 2	5.52	< 0.5	4	108	50
173528	205	294	< 5	30	2.2	10	< 0.2	1.78	50	8.0	< 2	11.20	< 0.5	4	76	40
173529	205	294	< 5	24	1.6	50	< 0.2	1.18	70	6.0	< 2	15.65	< 0.5	3	51	32
173530	205	294	< 5	22	0.6	< 10	< 0.2	0.65	50	4.0	< 2	16.80	< 0.5	1	42	16
173531	205	294	< 5	20	0.2	10	< 0.2	0.36	40	2.5	< 2	16.80	< 0.5	1	41	14
173532	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
173533	205	294	< 5	12	< 0.2	50	< 0.2	0.31	30	3.0	< 2	16.90	< 0.5	< 1	32	13
173534	205	294	< 5	12	0.4	30	< 0.2	0.40	50	4.0	< 2	16.40	< 0.5	3	37	15

CERTIFICATION: Stewart Buchan

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Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE OF ANALYSIS A9735918

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
173495	205	294	4.49	0.81	3.17	1915	< 1	2.16	93	470	< 2	162	0.49	214	< 10	96
173496	205	294	1.98	1.70	0.69	1855	< 1	1.00	36	290	16	85	0.16	75	< 10	62
173497	205	294	2.95	1.15	0.75	2190	< 1	0.04	39	850	46	143	0.14	156	< 10	96
173498	205	294	2.16	1.67	0.62	1215	1	0.05	68	540	46	144	0.12	162	< 10	176
173499	205	294	2.34	4.16	1.15	130	< 1	0.12	20	220	32	28	0.16	63	< 10	114
173500	205	294	2.09	2.81	1.05	255	2	0.09	38	470	32	44	0.18	117	< 10	150
173501	205	294	2.61	1.64	0.70	1120	< 1	0.06	66	490	10	202	0.18	119	< 10	678
173502	205	294	1.46	0.83	0.36	470	3	0.03	38	160	4	69	0.10	65	< 10	1910
173503	205	294	3.07	1.37	1.03	1610	< 1	0.48	34	380	< 2	620	0.43	163	< 10	100
173504	205	294	1.84	1.33	0.79	795	< 1	0.09	49	330	4	107	0.15	84	< 10	74
173505	205	294	1.82	1.16	0.78	980	< 1	0.20	37	150	6	73	0.13	80	< 10	60
173506	205	294	2.90	1.90	0.81	770	1	0.10	146	860	12	161	0.15	160	< 10	322
173507	205	294	1.91	1.31	0.68	405	< 1	0.07	66	320	< 2	96	0.12	102	< 10	110
173508	205	294	1.37	0.95	0.38	220	1	0.05	57	150	2	62	0.09	85	< 10	100
173509	205	294	1.14	0.70	0.32	180	1	0.03	29	70	< 2	63	0.06	88	< 10	232
173510	205	294	0.74	0.77	0.31	120	13	0.03	81	60	< 2	50	0.07	92	< 10	46
173511	205	294	0.87	0.96	0.39	175	1	0.05	77	70	< 2	63	0.08	99	< 10	50
173512	205	294	1.17	1.65	0.44	110	< 1	0.08	37	100	< 2	48	0.14	94	< 10	46
173513	205	294	0.96	0.83	0.27	105	2	0.04	35	70	12	58	0.08	86	< 10	228
173514	205	294	1.25	0.65	0.31	215	< 1	0.24	68	340	44	139	0.08	126	< 10	640
173515	205	294	1.29	1.18	0.38	520	< 1	0.04	67	160	20	73	0.10	150	< 10	114
173516	205	294	0.92	0.53	0.30	855	< 1	0.07	55	140	14	301	0.04	105	< 10	694
173517	205	294	1.08	0.86	0.25	215	1	0.06	50	120	36	96	0.06	125	< 10	482
173518	205	294	1.37	0.46	0.52	3180	15	0.07	62	490	120	1445	0.05	47	< 10	2810
173519	205	294	11.50	0.31	0.54	840	11	0.03	17	460	< 2	290	0.13	98	< 10	334
173520	205	294	0.69	0.79	0.22	130	4	0.04	25	70	14	63	0.08	80	< 10	334
173521	205	294	0.68	0.88	0.26	55	1	0.05	33	70	30	22	0.09	103	< 10	250
173522	205	294	1.01	1.21	0.33	145	1	0.14	21	440	12	84	0.11	117	< 10	40
173523	205	294	9.81	0.98	0.47	455	< 1	0.05	8	480	< 2	132	0.13	112	< 10	112
173524	205	294	1.54	0.77	0.28	835	< 1	0.05	40	180	34	134	0.07	110	< 10	98
173525	205	294	3.47	1.04	0.56	3170	< 1	0.23	40	440	4	479	0.08	133	< 10	68
173526	205	294	6.82	1.15	0.70	2700	4	0.19	36	1200	34	268	0.13	183	< 10	74
173527	205	294	4.69	0.38	0.33	1460	4	0.06	26	1670	32	165	0.07	175	< 10	52
173528	205	294	6.78	0.86	0.32	2560	6	0.01	10	1110	290	162	0.05	149	< 10	12
173529	205	294	8.33	0.56	0.45	4350	8	0.03	12	1430	490	126	0.03	129	< 10	24
173530	205	294	10.50	0.31	0.25	3090	10	0.01	9	880	570	83	0.01	110	< 10	18
173531	205	294	10.90	0.17	0.10	2040	9	0.01	7	820	580	53	0.01	84	< 10	18
173532	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
173533	205	294	12.50	0.14	0.16	2740	5	0.01	4	1000	344	48	< 0.01	67	< 10	62
173534	205	294	10.55	0.19	0.17	2500	7	0.01	5	1000	250	45	0.01	81	< 10	18

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :2-A
Total Pages :5
Certificate Date: 18-AUG-97
Invoice No. :I9735918
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735918

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
173535	205	294	< 5	20	1.0	60	< 0.2	0.45	40	5.0	< 2	16.75	< 0.5	3	47	10
173536	205	294	< 5	28	1.4	40	< 0.2	0.33	30	4.0	< 2	15.20	< 0.5	1	59	13
173537	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
173538	205	294	< 5	22	1.4	10	< 0.2	0.57	60	6.5	< 2	14.75	< 0.5	< 1	34	17
173539	205	294	< 5	36	2.6	60	< 0.2	0.49	50	6.0	< 2	12.25	< 0.5	< 1	41	14
173540	205	294	< 5	26	3.0	100	< 0.2	0.53	50	8.0	6	14.10	< 0.5	< 1	45	12
173541	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
173542	205	294	20	18	3.8	70	< 0.2	0.30	50	6.0	< 2	17.35	< 0.5	< 1	70	5
173543	205	294	< 5	4	1.8	10	< 0.2	0.26	50	3.0	< 2	11.10	< 0.5	< 1	44	16
173544	205	294	< 5	26	5.6	30	< 0.2	0.34	80	5.5	2	17.95	< 0.5	< 1	39	11
173545	205	294	< 5	30	2.8	100	< 0.2	0.93	50	8.0	2	12.55	0.5	3	46	23
173546	205	294	< 5	44	2.4	10	< 0.2	0.24	50	3.5	< 2	19.35	< 0.5	1	23	9
173547	205	294	< 5	48	0.6	< 10	< 0.2	0.49	70	4.5	< 2	17.95	< 0.5	2	24	13
173548	205	294	< 5	98	0.8	510	< 0.2	1.03	90	5.5	2	12.30	4.0	4	55	26
173549	205	294	5	10	0.2	310	< 0.2	1.75	40	4.5	< 2	11.80	0.5	5	71	41
173550	205	294	10	12	< 0.2	30	< 0.2	3.04	270	4.5	2	5.95	< 0.5	11	110	52
173551	205	294	20	12	< 0.2	30	< 0.2	2.90	330	4.0	< 2	2.49	< 0.5	18	124	65
173552	205	294	10	4	< 0.2	40	< 0.2	2.87	150	4.0	2	1.03	< 0.5	10	132	55
173553	205	294	< 5	24	< 0.2	10	< 0.2	2.86	170	4.5	< 2	5.32	< 0.5	17	97	39
173554	205	294	< 5	28	1.0	260	< 0.2	3.36	150	4.0	< 2	2.05	5.5	26	141	43
173555	205	294	< 5	8	1.2	320	< 0.2	2.57	250	3.0	< 2	3.23	9.5	23	120	37
173556	205	294	< 5	6	0.8	20	< 0.2	2.44	70	4.0	< 2	6.81	< 0.5	11	96	34
173557	205	294	10	6	1.0	20	< 0.2	2.39	50	6.0	< 2	6.36	< 0.5	8	76	36
173558	205	294	15	14	1.6	20	< 0.2	1.45	80	3.5	< 2	14.30	< 0.5	8	49	37
173559	205	294	5	8	1.4	20	< 0.2	3.74	110	4.5	2	1.54	< 0.5	13	119	60
173560	205	294	10	10	1.0	30	< 0.2	3.59	120	4.0	< 2	2.55	< 0.5	18	112	98
173561	205	294	< 5	4	0.4	50	< 0.2	2.81	150	4.0	< 2	2.78	0.5	14	114	57
173562	205	294	< 5	8	0.4	10	< 0.2	2.38	130	4.0	< 2	4.32	< 0.5	13	117	73
173563	205	294	< 5	14	0.8	230	< 0.2	2.86	90	4.0	< 2	2.70	5.5	22	122	51
173564	205	294	< 5	4	0.6	140	< 0.2	2.89	160	4.0	< 2	2.36	4.5	17	131	67
173565	205	294	< 5	14	1.0	120	< 0.2	3.33	60	4.5	< 2	2.57	3.5	15	119	104
173566	205	294	< 5	1	0.8	360	< 0.2	2.01	80	4.0	< 2	8.71	2.5	5	85	47
173567	205	294	< 5	4	0.4	< 10	< 0.2	5.29	600	4.5	2	2.09	< 0.5	9	91	72
173568	205	294	< 5	18	2.2	20	< 0.2	2.83	80	8.5	< 2	10.70	< 0.5	6	89	44
173569	205	294	20	20	2.6	< 10	< 0.2	3.25	70	13.5	< 2	7.91	< 0.5	9	102	85
173570	205	294	< 5	58	3.8	< 10	< 0.2	2.02	90	10.0	< 2	11.95	< 0.5	5	79	42
173571	205	294	< 5	10	4.2	< 10	< 0.2	0.96	80	7.5	2	17.35	< 0.5	3	45	26
173572	205	294	< 5	32	4.8	< 10	< 0.2	1.47	70	10.0	< 2	13.15	< 0.5	5	102	32
173573	205	294	< 5	22	4.2	< 10	< 0.2	0.93	60	6.5	< 2	16.50	< 0.5	3	74	18
173574	205	294	5	14	2.0	< 10	< 0.2	0.41	100	2.5	< 2	15.55	< 0.5	< 1	105	8

CERTIFICATION:

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 18-AUG-97
Invoice No. : I9735918
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735918

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
173535	205	294	11.35	0.22	0.12	2150	7	0.02	6	1180	244	75	0.01	111	< 10	72
173536	205	294	12.65	0.15	0.12	2000	12	0.01	6	1410	660	87	< 0.01	83	< 10	38
173537	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
173538	205	294	11.95	0.24	0.35	3690	8	0.01	4	1250	284	54	0.01	92	< 10	32
173539	205	294	13.55	0.22	0.11	1585	9	0.03	6	1550	830	49	0.01	89	< 10	72
173540	205	294	12.65	0.23	0.31	3530	6	0.01	3	1270	440	66	0.01	84	< 10	180
173541	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
173542	205	294	8.73	0.13	0.21	3220	7	< 0.01	3	1190	200	148	0.01	83	< 10	108
173543	205	294	16.60	0.06	1.10	9300	2	0.03	4	740	148	99	< 0.01	56	< 10	74
173544	205	294	10.80	0.13	0.31	3140	4	< 0.01	3	940	570	143	0.01	76	< 10	38
173545	205	294	13.45	0.21	0.70	8830	4	0.04	13	1670	244	127	0.04	169	< 10	244
173546	205	294	9.07	0.10	0.36	4860	4	< 0.01	3	740	280	126	< 0.01	68	< 10	18
173547	205	294	11.80	0.23	0.59	7220	6	0.01	6	1330	140	100	0.02	108	< 10	32
173548	205	294	9.46	0.52	0.60	>10000	3	0.03	20	1810	130	140	0.05	151	< 10	1145
173549	205	294	7.15	0.59	0.63	7160	1	0.05	25	2970	100	171	0.06	180	< 10	436
173550	205	294	3.20	1.05	0.64	2440	< 1	0.04	33	1930	12	197	0.12	265	< 10	46
173551	205	294	3.22	1.26	0.54	2810	< 1	0.07	47	1420	26	202	0.11	298	< 10	38
173552	205	294	2.88	1.05	0.40	850	< 1	0.07	30	1150	24	151	0.11	239	< 10	22
173553	205	294	2.84	1.35	0.60	2700	< 1	0.02	54	700	64	193	0.10	184	< 10	22
173554	205	294	2.94	1.59	0.67	2230	< 1	0.04	63	610	180	54	0.12	186	< 10	1335
173555	205	294	2.36	1.27	0.93	3070	< 1	0.02	54	560	136	80	0.09	157	< 10	1545
173556	205	294	3.46	0.84	0.35	1770	< 1	0.02	28	1050	30	151	0.07	202	< 10	28
173557	205	294	8.54	1.16	0.27	1370	< 1	0.04	17	1050	250	110	0.07	162	< 10	64
173558	205	294	7.94	0.67	0.33	2880	< 1	0.04	27	610	290	278	0.04	99	< 10	60
173559	205	294	2.79	1.79	0.41	1785	< 1	0.07	24	300	40	35	0.12	176	< 10	36
173560	205	294	4.39	1.72	0.48	4220	1	0.04	38	330	46	52	0.14	147	< 10	48
173561	205	294	3.92	1.06	0.64	3060	< 1	0.02	35	840	56	111	0.10	192	< 10	224
173562	205	294	3.95	0.76	0.60	3410	< 1	0.02	32	1010	54	162	0.09	199	< 10	22
173563	205	294	3.62	1.33	0.59	2020	< 1	0.02	53	800	150	45	0.09	173	< 10	1260
173564	205	294	2.79	1.43	0.51	2090	< 1	0.02	32	560	34	35	0.11	174	< 10	944
173565	205	294	2.63	1.58	0.35	955	< 1	0.04	26	490	40	28	0.10	167	< 10	572
173566	205	294	7.97	0.93	1.09	>10000	13	0.02	31	1310	66	128	0.06	149	< 10	1190
173567	205	294	3.45	2.47	0.61	1615	< 1	0.08	26	1300	92	31	0.21	149	< 10	100
173568	205	294	5.21	1.38	0.46	3050	4	0.02	18	1430	86	120	0.09	181	< 10	26
173569	205	294	9.23	1.58	0.56	3640	8	0.06	40	3170	180	83	0.10	260	< 10	30
173570	205	294	8.61	0.98	0.56	4440	11	0.03	23	2000	104	127	0.06	178	< 10	20
173571	205	294	9.40	0.46	0.53	5150	6	0.02	14	1270	320	134	0.03	123	< 10	18
173572	205	294	7.23	0.69	0.45	4030	5	0.01	22	1000	220	115	0.05	126	< 10	20
173573	205	294	6.21	0.45	0.48	4670	7	< 0.01	11	850	152	156	0.03	92	< 10	30
173574	205	294	3.98	0.17	0.28	3110	5	< 0.01	7	1070	192	200	< 0.01	54	< 10	12

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Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 18-AUG-97
Invoice No. :19735918
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735918

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
173575	205	294	< 5	38	10.5	< 10	< 0.2	0.38	80	3.0	< 2	19.70	< 0.5	3	78	19
173576	205	294	< 5	10	2.4	10	< 0.2	0.41	50	3.0	< 2	15.70	< 0.5	1	47	34
173577	205	294	20	32	3.0	60	< 0.2	0.79	70	5.5	< 2	13.70	0.5	2	79	27
173578	205	294	10	22	3.2	1830	0.6	3.11	70	16.5	< 2	3.59	19.0	10	115	47
173579	205	294	10	1	1.4	240	< 0.2	2.29	90	5.5	< 2	12.50	1.5	7	53	56
173580	205	294	10	8	1.2	150	< 0.2	3.42	300	2.0	2	0.62	0.5	8	69	73
173581	205	294	15	10	1.2	100	< 0.2	3.37	300	2.0	< 2	2.98	< 0.5	8	81	67
173582	205	294	10	1	0.8	20	< 0.2	2.32	340	1.5	2	6.60	< 0.5	3	107	28
173583	205	294	< 5	4	0.6	80	< 0.2	2.34	2380	2.0	< 2	0.71	0.5	7	143	62
173584	205	294	< 5	18	0.4	40	< 0.2	3.28	1450	1.5	< 2	0.20	0.5	19	132	72
173585	205	294	< 5	2	1.2	260	< 0.2	3.91	5150	1.5	2	0.38	< 0.5	7	129	52
173586	205	294	< 5	6	0.8	120	< 0.2	2.78	2080	0.5	2	0.35	< 0.5	5	130	54
173587	205	294	< 5	8	0.6	120	< 0.2	3.23	7720	1.0	< 2	0.35	0.5	4	119	49
173588	205	294	< 5	10	0.6	50	< 0.2	2.03	3980	0.5	< 2	0.11	< 0.5	5	139	40
173589	205	294	< 5	10	0.6	70	< 0.2	4.11	3640	2.0	< 2	0.48	0.5	13	127	67
173590	205	294	< 5	1	0.6	30	< 0.2	3.87	1470	1.5	2	1.11	< 0.5	7	142	23
173591	205	294	< 5	1	0.2	< 10	< 0.2	2.46	>10000	0.5	< 2	0.64	0.5	19	101	60
173592	205	294	< 5	1	0.2	< 10	< 0.2	4.18	4430	1.0	< 2	0.27	0.5	29	101	76
173593	205	294	< 5	2	0.4	< 10	< 0.2	4.04	6810	1.5	< 2	0.32	< 0.5	13	121	44
173594	205	294	< 5	14	0.6	< 10	0.4	4.13	9360	1.5	2	0.34	0.5	9	166	108
173595	205	294	< 5	60	1.0	30	< 0.2	2.02	3410	0.5	2	17.05	< 0.5	32	71	25
173596	205	294	< 5	38	0.2	< 10	< 0.2	4.03	7440	1.5	2	2.98	0.5	20	132	54
173597	205	294	< 5	26	0.6	170	< 0.2	2.74	840	0.5	< 2	4.00	0.5	26	120	45
173598	205	294	< 5	2	0.4	10	< 0.2	3.56	1700	1.0	< 2	3.55	< 0.5	2	119	15
173599	205	294	< 5	2	0.4	30	< 0.2	1.99	4170	0.5	2	0.75	0.5	3	116	190
173600	205	294	< 5	1	0.4	40	< 0.2	2.00	4660	1.0	< 2	0.63	0.5	1	149	81
173601	205	294	10	2	0.4	60	< 0.2	2.08	390	0.5	2	2.44	< 0.5	3	134	11
173602	205	294	< 5	1	0.2	30	< 0.2	2.28	470	1.0	2	0.54	< 0.5	3	140	59
173603	205	294	< 5	1	0.2	< 10	< 0.2	2.75	1830	1.5	< 2	0.25	< 0.5	6	121	90
173604	205	294	< 5	1	0.2	30	< 0.2	2.03	580	1.0	< 2	1.06	< 0.5	< 1	132	6
173605	205	294	< 5	4	0.2	< 10	< 0.2	2.84	920	1.5	< 2	0.19	< 0.5	10	110	124
173606	205	294	< 5	4	1.8	90	< 0.2	3.76	220	2.0	< 2	0.31	< 0.5	13	126	65
173607	205	294	< 5	12	0.4	90	0.8	3.24	7690	3.5	2	0.22	0.5	5	142	97
173608	205	294	10	4	1.2	100	< 0.2	3.24	130	2.0	< 2	0.41	< 0.5	12	133	76
173609	205	294	10	62	1.4	1110	0.6	3.64	200	2.5	< 2	0.04	1.5	58	144	140
173610	205	294	< 5	1	0.2	< 10	< 0.2	2.14	>10000	3.5	2	0.28	0.5	1	126	13
173611	205	294	< 5	1	0.2	< 10	< 0.2	1.27	4730	1.5	2	0.23	< 0.5	9	108	46
173612	205	294	< 5	1	0.2	< 10	< 0.2	3.41	5370	3.5	< 2	0.14	< 0.5	3	122	22
173613	205	294	< 5	2	0.2	< 10	< 0.2	2.84	5210	2.0	< 2	0.39	0.5	1	100	39
173614	205	294	< 5	1	< 0.2	< 10	< 0.2	2.43	790	2.5	< 2	0.23	< 0.5	3	127	10

CERTIFICATION: Ian Pendleton

Chemex Labs Ltd.

*Analytical Chemists * Geochemists * Registered Assayers*

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

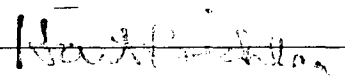
To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 18-AUG-97
Invoice No. :I9735918
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735918

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
173575	205	294	9.43	0.18	0.54	5190	8	0.01	17	500	400	234	0.01	64	< 10	24
173576	205	294	12.35	0.18	0.92	8730	6	0.03	9	380	200	137	0.01	70	< 10	54
173577	205	294	9.26	0.35	0.57	5460	6	0.03	16	1310	244	197	0.03	118	< 10	134
173578	205	294	6.96	1.43	0.51	2370	3	0.03	71	950	1900	38	0.11	259	< 10	5640
173579	205	294	7.50	0.94	0.81	5490	4	0.03	29	800	200	387	0.09	108	< 10	1365
173580	205	294	1.53	1.45	0.39	465	< 1	0.06	57	230	26	48	0.13	146	< 10	210
173581	205	294	1.75	1.51	0.37	1005	< 1	0.04	55	460	20	172	0.13	154	< 10	134
173582	205	294	6.10	0.84	0.47	2530	1	0.07	14	560	< 2	365	0.10	139	< 10	30
173583	205	294	1.76	0.75	0.27	210	16	0.07	38	1000	26	128	0.09	139	< 10	292
173584	205	294	1.14	1.33	0.32	85	< 1	0.07	42	100	10	18	0.13	100	< 10	136
173585	205	294	1.02	1.76	0.39	155	1	0.07	32	120	6	20	0.15	99	< 10	524
173586	205	294	0.65	1.25	0.29	105	< 1	0.05	30	70	10	15	0.11	86	< 10	162
173587	205	294	0.60	1.46	0.32	115	1	0.06	44	90	8	13	0.12	85	< 10	170
173588	205	294	0.65	0.80	0.18	55	38	0.04	17	90	12	6	0.08	70	< 10	98
173589	205	294	4.14	1.22	0.35	545	228	0.11	43	250	6	55	0.16	115	< 10	138
173590	205	294	15.60	0.57	0.64	2340	3	0.08	25	550	< 2	133	0.21	132	10	34
173591	205	294	20.0	0.39	0.31	1140	16	0.62	26	240	10	196	0.13	90	10	34
173592	205	294	15.55	0.32	0.27	505	5	2.63	27	170	4	128	0.22	89	< 10	34
173593	205	294	11.40	0.84	0.42	540	18	1.43	24	350	< 2	116	0.20	113	< 10	30
173594	205	294	1.45	1.14	0.31	290	67	1.23	50	130	120	49	0.21	147	< 10	16
173595	205	294	2.15	0.86	0.44	4240	22	0.13	142	640	40	1555	0.10	68	< 10	106
173596	205	294	1.37	1.90	0.42	1030	25	0.05	84	470	20	226	0.19	138	< 10	40
173597	205	294	1.82	1.27	0.42	1605	14	0.03	105	230	28	266	0.13	88	< 10	728
173598	205	294	2.05	1.57	0.50	1165	< 1	0.04	9	320	4	229	0.17	98	< 10	20
173599	205	294	0.82	0.61	0.17	45	27	0.02	17	60	224	17	0.09	84	< 10	96
173600	205	294	2.16	0.68	0.23	280	5	0.02	10	740	20	71	0.09	70	< 10	62
173601	205	294	4.80	0.59	0.32	935	< 1	0.04	7	1590	2	273	0.10	83	< 10	18
173602	205	294	1.44	0.89	0.25	165	< 1	0.03	11	80	28	52	0.10	81	< 10	12
173603	205	294	1.17	1.07	0.30	75	< 1	0.06	16	90	8	43	0.11	91	< 10	14
173604	205	294	2.76	0.55	0.25	155	< 1	0.02	6	480	< 2	177	0.09	77	< 10	14
173605	205	294	1.07	1.15	0.27	55	< 1	0.05	23	90	2	42	0.11	96	< 10	14
173606	205	294	2.68	1.15	0.38	105	< 1	0.07	23	160	6	46	0.17	112	< 10	32
173607	205	294	0.95	1.35	0.31	60	3	0.07	45	70	48	52	0.12	108	< 10	222
173608	205	294	5.26	0.96	0.36	230	2	0.08	37	200	2	87	0.14	109	< 10	104
173609	205	294	1.55	1.53	0.31	20	60	0.08	196	150	100	13	0.13	130	< 10	3070
173610	205	294	15.05	0.62	0.19	250	1	0.31	17	340	< 2	334	0.10	84	< 10	50
173611	205	294	17.10	0.27	0.14	445	3	0.53	25	220	8	575	0.05	76	< 10	34
173612	205	294	8.48	1.11	0.39	175	3	0.83	14	230	< 2	286	0.17	106	< 10	34
173613	205	294	3.40	1.02	0.35	205	< 1	0.24	9	130	< 2	245	0.13	74	< 10	22
173614	205	294	8.67	0.99	0.25	115	1	0.08	9	410	< 2	177	0.10	136	< 10	28

CERTIFICATION: 

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 18-AUG-97
Invoice No. :I9735918
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735918

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
173615	205	294	< 5	1	0.2	10	< 0.2	2.79	6800	4.5	< 2	0.28	0.5	4	165	27
173616	205	294	< 5	2	0.2	< 10	< 0.2	2.55	460	3.5	< 2	0.40	< 0.5	64	143	3320
173617	205	294	< 5	1	0.2	< 10	< 0.2	1.53	2280	2.0	< 2	0.41	< 0.5	9	121	96
173618	205	294	< 5	1	< 0.2	< 10	< 0.2	3.12	5680	3.0	< 2	0.30	< 0.5	3	126	23
173619	205	294	< 5	2	0.2	< 10	< 0.2	2.21	690	3.5	< 2	0.19	< 0.5	3	196	19
173620	205	294	< 5	2	< 0.2	10	< 0.2	0.89	3090	4.5	< 2	0.35	< 0.5	2	180	19
173621	205	294	< 5	1	0.2	360	< 0.2	2.70	680	3.0	< 2	0.48	0.5	9	192	53
173622	205	294	< 5	2	0.2	10	< 0.2	1.44	820	14.5	< 2	0.87	< 0.5	6	186	28
173623	205	294	< 5	1	0.2	< 10	< 0.2	4.63	>10000	25.5	< 2	0.36	1.5	7	183	195
173624	205	294	< 5	1	< 0.2	< 10	< 0.2	0.62	1810	10.0	< 2	2.04	< 0.5	3	170	14
173625	205	294	< 5	1	0.2	< 10	< 0.2	0.40	2500	10.0	< 2	8.33	< 0.5	1	93	9
173626	205	294	< 5	1	< 0.2	< 10	< 0.2	1.52	3110	16.0	< 2	0.26	< 0.5	3	108	19
173627	205	294	< 5	2	0.2	< 10	< 0.2	0.51	1820	8.0	< 2	1.02	< 0.5	3	147	22
173628	205	294	< 5	1	< 0.2	10	< 0.2	0.52	720	5.0	< 2	6.74	< 0.5	< 1	90	16
173629	205	294	< 5	2	< 0.2	< 10	< 0.2	0.81	1410	10.0	< 2	4.52	< 0.5	4	62	13
173630	205	294	< 5	2	0.2	< 10	< 0.2	1.65	3720	22.5	< 2	0.60	< 0.5	2	115	14
173631	205	294	< 5	1	0.2	< 10	< 0.2	1.63	460	20.5	< 2	1.76	< 0.5	2	154	30
173632	205	294	< 5	2	0.6	40	< 0.2	0.54	150	6.0	< 2	>25.0	< 0.5	< 1	43	34
173633	205	294	< 5	1	1.0	30	< 0.2	2.08	100	8.0	< 2	9.10	< 0.5	5	110	46
173634	205	294	< 5	1	1.2	50	< 0.2	0.25	50	1.0	< 2	1.88	< 0.5	2	162	14
173635	205	294	< 5	2	1.0	20	< 0.2	0.22	50	3.0	< 2	17.70	< 0.5	1	69	9
173636	205	294	< 5	1	0.4	10	< 0.2	0.15	90	2.5	< 2	22.5	< 0.5	1	57	7
173637	205	294	< 5	2	1.0	10	< 0.2	0.27	40	4.0	< 2	15.85	< 0.5	2	29	19
173638	205	294	< 5	1	1.6	< 10	< 0.2	0.26	50	5.5	< 2	15.80	< 0.5	1	24	23
173639	205	294	< 5	1	1.4	10	< 0.2	0.23	50	5.0	< 2	16.95	< 0.5	< 1	16	19
173640	205	294	10	2	1.0	< 10	< 0.2	0.18	50	5.0	< 2	21.8	< 0.5	1	15	13
173641	205	294	30	1	1.6	20	< 0.2	0.30	40	5.0	< 2	18.30	< 0.5	3	27	21
173642	205	294	15	1	1.4	200	< 0.2	0.48	30	5.0	< 2	4.39	1.5	8	44	85
173643	205	294	10	1	2.2	250	< 0.2	0.70	30	3.5	< 2	4.73	3.5	6	61	42
173644	205	294	10	1	1.4	120	< 0.2	2.13	60	5.0	< 2	6.94	3.5	8	101	75
173645	205	294	< 5	8	1.4	190	< 0.2	1.98	100	4.0	< 2	3.15	2.0	4	118	56
173646	205	294	< 5	4	1.0	90	< 0.2	2.14	110	4.5	< 2	6.10	< 0.5	6	115	59
173647	205	294	< 5	1	0.2	20	< 0.2	1.17	100	3.5	< 2	4.36	< 0.5	4	80	15
173648	205	294	< 5	2	0.2	< 10	< 0.2	0.55	150	3.5	2	4.65	< 0.5	4	48	23
173649	205	294	< 5	1	0.2	10	< 0.2	1.43	70	2.0	< 2	3.53	< 0.5	8	91	241
173650	205	294	< 5	1	< 0.2	20	< 0.2	2.26	260	4.0	< 2	6.21	< 0.5	3	63	38
173651	205	294	5	2	< 0.2	20	< 0.2	2.53	370	3.5	< 2	0.94	< 0.5	4	104	58
173652	205	294	< 5	1	< 0.2	10	0.4	1.99	480	3.0	< 2	0.48	< 0.5	3	118	70
173653	205	294	< 5	2	0.2	10	< 0.2	2.83	4270	5.0	< 2	0.25	0.5	1	126	81
173654	205	294	< 5	42	1.0	990	< 0.2	2.10	140	3.5	< 2	0.65	1.5	7	145	73

CERTIFICATION:

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Analytical Chemists * Geochemists * Registered Assayers
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British Columbia, Canada V7J 2C1
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 18-AUG-97
Invoice No. :19735918
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735918

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
173615	205	294	10.40	1.06	0.33	210	4	0.40	15	270	< 2	324	0.12	104	< 10	32
173616	205	294	11.80	0.83	0.42	285	15	0.14	62	290	10	567	0.12	97	< 10	26
173617	205	294	19.65	0.14	0.35	400	1	0.25	23	300	6	659	0.05	74	< 10	28
173618	205	294	8.65	1.06	0.42	210	6	0.56	12	240	< 2	348	0.14	103	< 10	28
173619	205	294	8.68	0.93	0.24	120	4	0.15	10	310	< 2	276	0.09	98	< 10	22
173620	205	294	13.65	0.24	0.09	220	5	0.12	8	430	< 2	424	0.03	53	< 10	20
173621	205	294	1.33	1.08	0.32	105	27	0.29	32	110	2	361	0.08	104	< 10	1170
173622	205	294	12.40	0.37	0.31	1090	3	0.03	7	600	< 2	384	0.08	108	< 10	22
173623	205	294	1.91	1.61	0.48	120	9	0.44	31	180	< 2	200	0.24	166	< 10	18
173624	205	294	15.30	0.18	0.19	930	3	0.02	1	360	< 2	407	0.03	61	< 10	18
173625	205	294	14.65	0.10	0.15	1555	5	0.03	< 1	250	< 2	980	0.01	39	< 10	16
173626	205	294	21.1	0.59	0.18	520	5	0.15	4	310	< 2	486	0.07	108	< 10	18
173627	205	294	13.90	0.10	0.11	470	11	0.03	2	280	< 2	398	0.01	64	< 10	20
173628	205	294	19.35	0.10	0.15	1250	8	0.03	2	240	< 2	699	0.02	68	< 10	60
173629	205	294	21.2	0.24	0.20	1570	5	0.13	3	290	< 2	511	0.04	95	< 10	28
173630	205	294	19.25	0.50	0.23	460	6	0.05	5	480	< 2	241	0.08	139	< 10	20
173631	205	294	19.25	0.18	0.24	630	2	0.03	6	470	< 2	213	0.09	142	< 10	26
173632	205	294	4.11	0.07	0.28	3700	28	< 0.01	6	110	60	1240	0.02	44	< 10	42
173633	205	294	7.95	0.86	0.60	2710	12	0.02	11	210	28	210	0.09	119	< 10	168
173634	205	294	6.01	0.06	0.20	835	24	0.01	4	20	260	29	0.01	27	< 10	314
173635	205	294	9.23	0.09	0.44	2720	14	0.01	< 1	40	200	152	0.01	56	< 10	38
173636	205	294	5.95	0.07	0.28	2990	11	< 0.01	< 1	40	116	136	< 0.01	47	< 10	26
173637	205	294	9.35	0.11	0.42	2570	18	0.01	1	120	180	103	0.01	62	< 10	56
173638	205	294	10.10	0.12	0.45	2550	18	0.01	1	140	170	78	0.01	75	< 10	92
173639	205	294	10.55	0.10	0.49	2790	16	0.01	< 1	130	150	90	0.01	71	< 10	86
173640	205	294	8.73	0.06	0.37	3130	17	< 0.01	< 1	90	164	160	0.01	65	< 10	72
173641	205	294	13.70	0.05	0.58	3430	33	0.01	1	70	260	182	0.03	93	< 10	136
173642	205	294	16.40	0.21	0.72	2500	37	0.01	20	270	520	30	0.02	108	< 10	818
173643	205	294	11.25	0.32	0.52	2370	34	0.01	12	440	400	40	0.02	117	< 10	1260
173644	205	294	3.57	1.02	0.28	770	6	0.02	19	430	132	56	0.06	198	< 10	782
173645	205	294	2.28	0.94	0.20	270	5	0.02	18	420	94	22	0.06	133	< 10	700
173646	205	294	3.78	0.86	0.38	1015	6	0.02	21	430	48	125	0.08	139	< 10	160
173647	205	294	16.85	0.08	0.58	2130	3	0.01	3	300	< 2	199	0.04	114	< 10	18
173648	205	294	23.1	0.01	0.48	2400	11	0.01	2	520	< 2	253	0.01	80	10	20
173649	205	294	6.44	0.24	0.28	720	17	0.03	20	490	< 2	255	0.05	108	< 10	14
173650	205	294	1.65	0.91	0.32	700	1	0.13	13	610	6	395	0.07	131	< 10	12
173651	205	294	1.28	0.93	0.27	160	2	0.21	19	430	6	132	0.09	132	< 10	12
173652	205	294	0.84	0.63	0.19	50	3	0.05	16	790	12	51	0.06	134	< 10	6
173653	205	294	1.25	0.91	0.25	55	< 1	0.06	13	150	4	50	0.10	224	< 10	10
173654	205	294	1.53	0.90	0.20	140	7	0.03	20	770	60	10	0.07	144	< 10	1440

CERTIFICATION:

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Page Number :5-A
Total Pages :5
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Account :GP W

CERTIFICATE OF ANALYSIS A9735918

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
173655	205	294	< 5	1	0.8	80	< 0.2	4.67	150	8.0	< 2	4.71	< 0.5	15	82	70
173656	205	294	< 5	1	0.2	< 10	< 0.2	1.14	3390	0.5	< 2	4.38	< 0.5	5	87	18
173657	205	294	< 5	1	0.2	< 10	< 0.2	1.48	2710	2.0	< 2	4.64	< 0.5	6	70	28
173658	205	294	20	2	0.4	830	< 0.2	2.52	180	4.0	< 2	2.86	3.5	13	124	110
173659	205	294	10	1	0.2	10	< 0.2	2.02	1080	2.5	< 2	2.44	< 0.5	5	119	63
173660	205	294	10	50	0.2	20	< 0.2	3.55	1510	2.5	< 2	3.00	< 0.5	19	105	110
173661	205	294	< 5	1	0.2	< 10	0.6	5.19	2360	3.5	< 2	2.72	< 0.5	5	92	40
173662	205	294	45	1	0.6	70	< 0.2	3.50	470	4.0	< 2	4.19	0.5	6	134	61
173663	205	294	15	1	0.2	10	< 0.2	2.75	360	3.0	< 2	3.04	< 0.5	7	126	57
173664	205	294	< 5	1	0.6	10	< 0.2	3.25	470	2.5	< 2	2.13	< 0.5	9	132	51
173665	205	294	15	2	1.6	110	0.8	2.24	80	2.5	< 2	8.56	1.5	7	84	54
173666	205	294	10	1	1.2	20	0.6	2.50	70	3.5	< 2	6.18	< 0.5	6	112	60
173667	205	294	< 5	1	1.4	10	< 0.2	2.89	90	6.0	2	4.94	< 0.5	8	94	64
173668	205	294	5	4	2.0	1420	< 0.2	2.86	50	6.5	< 2	4.28	16.5	6	104	65
173669	205	294	30	8	5.2	10	0.4	1.57	40	5.0	< 2	10.00	< 0.5	5	55	42
173670	205	294	20	2	3.2	370	< 0.2	1.71	50	6.5	< 2	10.50	3.0	6	51	48
173671	205	294	45	14	9.6	640	< 0.2	1.53	40	5.5	< 2	10.70	4.5	3	41	62
173672	205	294	< 5	6	1.4	10	< 0.2	3.99	170	7.0	< 2	0.59	< 0.5	21	91	37
173673	205	294	10	2	0.8	70	< 0.2	2.94	500	5.5	< 2	0.67	< 0.5	16	71	116
173674	205	294	< 5	1	1.0	10	< 0.2	4.15	300	6.0	< 2	0.42	< 0.5	8	115	45
173675	205	294	5	1	0.8	4530	< 0.2	5.40	130	9.0	< 2	0.68	86.0	18	172	63
173676	205	294	< 5	1	2.2	240	< 0.2	3.22	110	5.5	< 2	0.68	4.0	9	170	70
173677	205	294	10	18	6.6	80	1.0	1.97	50	3.5	< 2	0.31	< 0.5	6	123	52
173678	205	294	10	4	1.4	540	< 0.2	0.59	250	0.5	< 2	1.89	10.0	2	223	33
173679	205	294	10	58	3.2	200	0.4	5.63	700	6.0	< 2	7.40	5.0	6	130	59
173680	205	294	10	30	6.4	190	0.6	4.62	180	5.5	< 2	5.12	5.0	9	125	32
173681	205	294	25	60	9.6	220	1.6	1.71	120	2.0	< 2	2.91	4.5	5	168	92
173682	205	294	< 5	40	19.0	470	2.8	9.53	200	8.0	< 2	0.83	4.0	2	55	115
173683	205	294	< 5	38	11.0	780	4.0	7.41	220	5.0	< 2	1.70	5.0	3	87	177
173684	205	294	10	106	15.5	540	5.2	6.15	180	4.5	< 2	0.63	1.0	1	88	85
173685	205	294	5	20	7.4	190	1.0	2.72	130	2.0	< 2	2.06	0.5	5	131	58
173686	205	294	< 5	1	5.2	1990	< 0.2	4.04	170	5.0	< 2	1.84	19.5	8	148	84
173687	205	294	15	4	5.6	3090	0.4	3.85	70	5.0	< 2	3.12	36.5	11	125	64
173688	205	294	25	96	3.6	200	0.8	4.38	100	3.0	< 2	0.97	4.5	4	183	83
173689	205	294	< 5	1	9.6	40	0.4	3.00	190	1.5	< 2	1.35	< 0.5	6	128	57
173690	205	294	20	34	5.0	150	0.8	3.83	110	2.5	< 2	0.65	1.5	4	176	40
173691	205	294	< 5	1	10.0	30	0.2	8.81	3870	3.0	< 2	0.47	0.5	< 1	113	9
173692	205	294	< 5	8	5.2	100	0.4	8.74	2630	2.5	< 2	0.53	< 0.5	1	115	8
173693	205	294	< 5	1	2.0	50	< 0.2	6.99	360	3.0	< 2	0.52	< 0.5	2	95	7
173694	205	294	< 5	1	4.0	270	< 0.2	6.98	580	2.0	< 2	4.11	< 0.5	11	158	40

CERTIFICATION:_____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 18-AUG-97
Invoice No. :19735918
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9735918

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
173655	205 294	8.58	0.87	0.48	660	< 1	0.66	23	360	4	84	0.12	94	< 10	24
173656	205 294	12.30	0.11	0.36	2060	4	0.01	12	400	< 2	113	0.05	71	< 10	16
173657	205 294	16.05	0.16	0.33	2010	6	0.02	14	380	< 2	131	0.04	88	< 10	18
173658	205 294	4.29	0.88	0.38	1470	1	0.03	26	620	26	33	0.07	133	< 10	1235
173659	205 294	2.42	0.86	0.39	2970	1	0.03	16	420	40	27	0.06	103	< 10	18
173660	205 294	5.84	1.22	0.63	3140	< 1	0.05	39	710	10	41	0.14	158	< 10	38
173661	205 294	2.89	2.27	0.46	745	< 1	0.11	14	870	4	40	0.20	96	< 10	18
173662	205 294	3.54	1.52	0.52	1375	< 1	0.04	68	1840	60	83	0.14	204	< 10	288
173663	205 294	4.45	1.13	0.57	1290	1	0.04	50	700	8	92	0.11	193	< 10	20
173664	205 294	5.21	0.86	0.64	885	< 1	0.11	47	550	6	190	0.13	193	< 10	28
173665	205 294	5.41	0.81	0.50	4250	5	0.29	45	1280	54	317	0.08	147	< 10	212
173666	205 294	7.00	0.97	0.57	3090	6	0.11	36	930	44	241	0.10	172	< 10	44
173667	205 294	8.75	1.22	0.83	5640	3	0.05	30	1120	28	187	0.12	181	< 10	50
173668	205 294	7.65	1.33	0.66	3670	3	0.04	24	2150	52	126	0.12	227	< 10	3860
173669	205 294	9.84	0.76	0.76	5790	4	0.02	15	970	124	289	0.07	147	< 10	38
173670	205 294	15.30	0.85	1.03	8350	3	0.02	15	430	128	334	0.08	132	< 10	1365
173671	205 294	15.55	0.75	0.94	7930	1	0.03	26	720	350	396	0.07	155	< 10	1910
173672	205 294	2.55	1.93	0.43	460	< 1	0.06	50	650	80	39	0.14	216	< 10	42
173673	205 294	1.19	1.21	0.29	475	< 1	0.08	32	380	28	124	0.10	168	< 10	136
173674	205 294	1.70	2.01	0.52	385	< 1	0.15	23	290	8	283	0.12	140	< 10	24
173675	205 294	3.05	2.79	0.83	1045	< 1	0.14	40	210	40	70	0.16	248	< 10	>10000
173676	205 294	2.92	1.63	0.58	800	< 1	0.06	31	300	62	50	0.10	139	< 10	536
173677	205 294	4.98	1.01	0.26	180	1	0.06	24	280	100	16	0.06	117	< 10	44
173678	205 294	0.80	0.24	0.16	225	< 1	0.02	30	50	68	20	0.01	31	< 10	1215
173679	205 294	3.68	2.36	3.41	1450	13	0.16	49	360	44	227	0.14	183	< 10	646
173680	205 294	2.88	2.26	1.99	980	4	0.11	38	230	30	154	0.14	121	< 10	656
173681	205 294	3.06	0.69	0.85	685	5	0.03	57	150	88	75	0.04	143	< 10	658
173682	205 294	3.71	4.44	1.33	365	< 1	0.25	11	300	200	48	0.21	22	< 10	898
173683	205 294	2.70	2.94	0.86	295	4	0.19	5	380	490	53	0.17	21	< 10	1345
173684	205 294	3.01	2.74	0.72	90	7	0.17	4	80	190	16	0.11	15	< 10	400
173685	205 294	1.29	1.13	0.36	135	< 1	0.05	35	100	40	30	0.07	89	< 10	280
173686	205 294	2.46	1.76	0.52	935	< 1	0.09	58	310	232	46	0.12	192	< 10	3390
173687	205 294	4.58	1.50	0.52	920	< 1	0.08	40	780	400	146	0.10	196	< 10	4860
173688	205 294	3.29	1.45	0.49	250	8	0.14	54	1360	48	60	0.13	284	< 10	748
173689	205 294	2.57	1.22	0.87	1315	< 1	0.08	32	190	12	245	0.10	121	< 10	126
173690	205 294	2.49	1.58	0.36	125	10	0.14	56	1340	18	71	0.12	228	< 10	206
173691	205 294	3.27	3.06	0.21	90	< 1	0.31	4	510	20	80	0.17	43	< 10	42
173692	205 294	4.53	2.72	0.22	95	< 1	0.57	5	630	30	110	0.14	39	< 10	34
173693	205 294	1.42	2.67	0.44	145	< 1	0.20	5	550	14	63	0.11	27	10	50
173694	205 294	3.01	2.57	2.26	730	< 1	0.22	31	460	< 2	346	0.14	96	< 10	78

CERTIFICATION: Hart Buchler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

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VANCOUVER, BC
V7X 1C4

A9736929

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9736929

(GP) - WESTMIN RESOURCES LTD.

Project: ROPE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 21-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	25	Geochem ring to approx 150 mesh
226	25	0-3 Kg crush and split
3202	25	Rock - save entire reject
285	25	ICP - HF digestion charge
287	25	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	25	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	25	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	25	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	25	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	25	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	25	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	25	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	25	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	25	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	25	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	25	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	25	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	25	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	25	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	25	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	25	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	25	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	25	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	25	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	25	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	25	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	25	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	25	Pb ppm: 24 element, rock & core	AAS	2	10000
582	25	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	25	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	25	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	25	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	25	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.

P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : ROPE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 21-AUG-97
Invoice No. : I9736929
P.O. Number :
Account :GP

CERTIFICATE OF ANALYSIS A9736929

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173915	205	226	130	827	86	140	3.8	2.25	570	1.0	< 2	1.50	4.5	9	292	131
N173916	205	226	55	160	30	120	3.6	2.91	540	1.5	< 2	0.80	3.0	13	213	206
N173917	205	226	90	501	17.5	50	0.4	1.82	790	0.5	< 2	2.36	7.0	8	162	41
N173918	205	226	90	232	13.5	30	0.4	1.79	720	0.5	< 2	1.53	3.0	6	178	33
N173919	205	226	90	254	81	100	0.8	2.85	540	1.0	< 2	0.95	6.0	8	248	147
N173920	205	226	135	292	98	170	1.4	3.12	620	1.5	< 2	0.51	4.0	11	215	206
N173921	205	226	200	264	82	270	1.2	2.75	470	1.0	< 2	0.19	2.5	11	248	179
N173922	205	226	65	236	46	80	1.8	2.94	590	1.0	< 2	0.93	4.0	9	212	107
N173923	205	226	40	60	16.0	50	0.8	2.32	440	0.5	< 2	1.48	< 0.5	6	200	63
N173924	205	226	5	60	5.4	190	1.0	1.88	430	0.5	< 2	3.63	8.5	3	193	78
N173925	205	226	15	79	28	200	1.8	2.19	350	1.0	< 2	2.75	6.5	7	258	115
N173926	205	226	25	89	20	60	0.8	3.71	230	1.0	< 2	2.94	< 0.5	9	176	75
N173927	205	226	30	435	9.8	< 10	< 0.2	7.11	530	1.5	< 2	4.19	< 0.5	32	193	99
N173928	205	226	15	308	13.5	10	0.6	6.92	360	1.0	< 2	3.57	< 0.5	29	162	117
N173929	205	226	15	71	13.5	10	< 0.2	7.16	1620	0.5	< 2	2.69	< 0.5	25	164	137
N173930	205	226	< 5	28	5.4	10	< 0.2	7.18	3060	1.0	< 2	2.78	< 0.5	32	208	125
N173931	205	226	< 5	17	3.2	10	< 0.2	6.69	2640	0.5	< 2	2.78	< 0.5	25	172	106
N173932	205	226	< 5	20	4.4	< 10	< 0.2	8.46	3310	0.5	< 2	4.29	< 0.5	21	237	147
N173933	205	226	< 5	18	3.4	10	< 0.2	6.89	1810	1.0	< 2	6.02	< 0.5	28	81	192
N173934	205	226	< 5	16	5.8	< 10	< 0.2	7.10	2310	1.0	< 2	4.55	< 0.5	35	77	196
N173935	205	226	10	45	12.0	40	0.2	5.56	260	0.5	< 2	4.74	< 0.5	23	77	83
N173936	205	226	65	1020	6.2	10	< 0.2	7.47	810	0.5	< 2	4.38	< 0.5	31	79	169
N173937	205	226	< 5	61	4.4	< 10	< 0.2	6.83	3100	1.5	< 2	4.17	< 0.5	21	61	45
N173938	205	226	< 5	27	4.8	< 10	< 0.2	7.15	4160	1.5	< 2	1.45	< 0.5	7	52	18
N173939	205	226	< 5	17	8.8	20	< 0.2	6.35	970	1.5	< 2	1.71	< 0.5	19	72	32

CERTIFICATION: Ian Bridden

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.

P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : ROPE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number : 1-B
Total Pages : 1
Certificate Date: 21-AUG-97
Invoice No. : I9736929
P.O. Number :
Account : GP

CERTIFICATE OF ANALYSIS A9736929

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N173915	205	226	1.92	0.95	0.57	365	2	0.01	69	3610	10	165	0.11	111	< 10	744
N173916	205	226	2.43	1.19	0.56	500	2	0.02	95	1020	28	129	0.13	102	10	1120
N173917	205	226	2.21	0.76	1.34	545	< 1	0.01	59	190	34	181	0.07	48	< 10	922
N173918	205	226	1.76	0.70	0.93	285	1	0.02	40	170	4	140	0.07	49	< 10	352
N173919	205	226	2.09	1.23	0.61	240	1	0.02	67	1170	< 2	141	0.12	97	< 10	468
N173920	205	226	3.19	1.36	0.52	395	2	0.03	105	330	6	77	0.13	96	< 10	846
N173921	205	226	6.27	1.13	0.36	150	6	0.03	90	220	12	45	0.11	66	< 10	516
N173922	205	226	2.74	1.32	0.62	370	3	0.01	87	1280	6	123	0.12	67	< 10	644
N173923	205	226	2.07	0.98	0.87	260	2	0.01	42	330	< 2	131	0.11	65	< 10	294
N173924	205	226	1.63	0.74	2.12	260	23	0.01	94	500	6	298	0.08	872	< 10	810
N173925	205	226	1.59	0.92	1.08	240	15	0.01	100	5000	16	235	0.09	880	< 10	758
N173926	205	226	2.63	1.69	1.24	560	7	0.02	42	1670	6	141	0.17	216	< 10	112
N173927	205	226	6.79	3.41	3.07	860	1	0.04	101	1390	< 2	220	0.56	196	< 10	90
N173928	205	226	6.26	3.46	2.52	725	3	0.04	77	1140	< 2	209	0.51	239	< 10	146
N173929	205	226	5.47	3.53	2.37	660	1	0.03	83	1220	< 2	143	0.56	234	< 10	130
N173930	205	226	6.70	3.92	3.33	680	< 1	0.02	103	1210	< 2	166	0.61	235	< 10	114
N173931	205	226	4.31	3.60	1.82	725	1	< 0.01	54	1210	< 2	119	0.57	230	< 10	64
N173932	205	226	3.84	4.53	2.20	790	< 1	0.03	59	1580	< 2	141	0.76	287	< 10	42
N173933	205	226	6.22	3.35	2.45	1330	3	0.28	88	1560	< 2	197	0.86	295	< 10	60
N173934	205	226	7.60	3.64	2.37	1335	3	< 0.01	87	1570	< 2	164	0.70	311	< 10	80
N173935	205	226	4.58	2.94	2.11	795	5	< 0.01	55	1010	< 2	124	0.54	188	< 10	46
N173936	205	226	5.27	4.11	2.22	1055	2	< 0.01	79	2100	< 2	120	1.15	340	< 10	68
N173937	205	226	6.09	3.93	2.90	830	5	0.01	53	1260	< 2	151	0.60	174	< 10	132
N173938	205	226	2.94	4.19	1.39	355	3	0.04	24	730	< 2	75	0.29	63	< 10	36
N173939	205	226	4.06	3.79	1.62	375	4	0.01	37	850	10	77	0.44	99	< 10	16

CERTIFICATION: Stewart Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9736930

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9736930

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 21-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	26	Geochem ring to approx 150 mesh
294	26	4-7 Kg crush and split
3202	26	Rock - save entire reject
285	26	ICP - HF digestion charge
287	26	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	26	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	26	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	26	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	26	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	26	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	26	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	26	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	26	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	26	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	26	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	26	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	26	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	26	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	26	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	26	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	26	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	26	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	26	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	26	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	26	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	26	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	26	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	26	Pb ppm: 24 element, rock & core	AAS	2	10000
582	26	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	26	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	26	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	26	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	26	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 21-AUG-97
Invoice No. : I9736930
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9736930

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203681	205	294	< 5	6	0.2	10	< 0.2	7.18	4550	5.5	< 2	0.60	< 0.5	< 1	77	7
N203682	205	294	< 5	2	< 0.2	50	< 0.2	7.37	4150	6.0	< 2	0.93	0.5	< 1	71	10
N203683	205	294	< 5	1	< 0.2	< 10	< 0.2	1.98	2130	2.0	< 2	0.46	< 0.5	1	190	42
N203684	205	294	< 5	5	< 0.2	< 10	< 0.2	7.23	6300	6.0	< 2	0.98	0.5	< 1	58	10
N203685	205	294	< 5	4	< 0.2	< 10	< 0.2	7.66	8530	6.5	< 2	1.05	1.0	< 1	57	7
N203686	205	294	< 5	3	< 0.2	30	< 0.2	2.68	660	1.5	< 2	0.38	< 0.5	5	146	95
N203687	205	294	< 5	1	< 0.2	40	< 0.2	2.51	760	2.5	< 2	0.27	< 0.5	3	151	72
N203688	205	294	< 5	5	0.4	100	0.2	2.70	720	2.5	< 2	0.28	< 0.5	2	173	72
N203689	205	294	10	12	0.8	230	0.4	2.88	950	3.5	< 2	0.23	< 0.5	6	162	75
N203690	205	294	5	12	2.0	120	0.2	3.22	1800	3.5	< 2	0.25	< 0.5	7	206	71
N203691	205	294	15	14	0.4	130	0.4	2.94	1130	3.5	< 2	0.30	< 0.5	4	166	59
N203692	205	294	< 5	8	0.4	120	< 0.2	3.40	2270	3.5	< 2	0.35	< 0.5	7	147	46
N203693	205	294	< 5	9	< 0.2	180	0.2	3.36	990	2.5	< 2	1.28	< 0.5	5	142	50
N203694	205	294	< 5	17	0.2	80	< 0.2	2.75	560	2.0	< 2	3.82	< 0.5	9	136	88
N203695	205	294	< 5	12	0.4	80	< 0.2	4.57	2790	4.0	< 2	3.72	< 0.5	5	78	77
N203696	205	294	20	58	8.0	400	0.4	0.80	20	7.5	2	8.28	4.0	4	76	33
N203697	205	294	30	42	5.0	160	< 0.2	0.96	20	8.5	< 2	9.45	< 0.5	4	117	15
N203698	205	294	15	41	4.2	270	< 0.2	2.14	40	12.5	< 2	15.05	4.0	5	86	34
N203699	205	294	20	57	4.4	290	< 0.2	0.60	40	5.0	2	19.75	5.0	3	46	33
N203700	205	294	10	64	2.8	180	< 0.2	2.64	30	9.0	< 2	7.66	2.0	7	87	63
N203701	205	294	< 5	29	0.6	160	0.4	3.08	110	7.0	< 2	4.69	3.0	7	105	68
N203702	205	294	< 5	27	0.6	50	< 0.2	2.93	170	6.0	2	3.13	1.5	14	126	68
N203703	205	294	5	31	1.4	60	0.4	3.31	50	5.0	< 2	1.03	0.5	12	139	84
N203704	205	294	< 5	27	2.0	560	0.6	3.96	80	4.5	< 2	1.37	8.0	6	158	49
N203705	205	294	< 5	40	1.8	100	0.4	6.89	80	7.0	2	0.97	1.5	4	47	22
N203706	205	294	< 5	32	2.2	700	0.4	4.06	100	6.0	< 2	0.70	14.5	7	144	36

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page .ber :1-B
Total Pages :1
Certificate Date: 21-AUG-97
Invoice No. :I9736930
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9736930

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203681	205	294	2.23	2.56	1.10	225	2	0.91	1	60	10	49	0.09	3	< 10	68
N203682	205	294	2.28	2.89	1.17	395	3	0.82	3	50	6	73	0.11	4	< 10	214
N203683	205	294	0.98	0.68	0.34	115	< 1	0.15	16	80	4	46	0.08	53	< 10	24
N203684	205	294	2.19	2.68	1.12	355	2	0.93	3	60	4	74	0.11	5	< 10	36
N203685	205	294	2.02	3.04	1.08	370	1	0.53	3	60	6	76	0.12	4	< 10	44
N203686	205	294	1.89	0.80	0.42	175	1	0.04	46	120	6	60	0.11	85	< 10	148
N203687	205	294	1.08	0.93	0.28	125	5	0.04	32	320	4	71	0.09	104	< 10	148
N203688	205	294	1.47	1.06	0.33	230	18	0.04	30	60	8	58	0.12	113	< 10	340
N203689	205	294	1.28	1.18	0.36	140	8	0.04	61	60	22	52	0.11	100	< 10	636
N203690	205	294	1.45	1.32	0.44	240	11	0.04	68	80	12	56	0.14	109	< 10	334
N203691	205	294	1.01	1.21	0.39	130	8	0.04	53	80	16	50	0.11	102	< 10	410
N203692	205	294	1.68	1.31	0.45	220	13	0.05	54	190	8	58	0.14	96	< 10	416
N203693	205	294	1.08	1.22	0.40	185	9	0.03	33	140	20	51	0.12	99	< 10	352
N203694	205	294	2.02	1.03	0.77	1450	3	0.01	52	240	20	68	0.11	122	< 10	150
N203695	205	294	4.12	2.00	0.75	2310	2	0.01	22	1250	110	63	0.20	120	< 10	262
N203696	205	294	14.05	0.31	1.42	2940	16	0.06	14	1610	580	66	0.02	135	< 10	926
N203697	205	294	14.55	0.26	1.46	4280	14	0.05	13	1530	350	75	0.04	139	< 10	246
N203698	205	294	10.25	0.38	0.65	5550	8	0.03	31	2870	196	145	0.06	236	< 10	924
N203699	205	294	12.40	0.21	0.74	9480	6	0.01	21	1470	170	200	0.01	110	< 10	808
N203700	205	294	6.21	0.97	0.61	3150	4	0.04	43	2630	210	122	0.08	267	< 10	502
N203701	205	294	3.69	0.75	0.56	2510	4	0.05	46	1340	172	101	0.09	248	< 10	460
N203702	205	294	3.66	1.28	0.72	3030	2	0.04	43	1650	60	93	0.10	235	< 10	222
N203703	205	294	3.38	1.59	0.41	2390	< 1	0.08	32	340	24	26	0.11	139	< 10	192
N203704	205	294	2.30	1.86	0.42	540	3	0.09	40	430	44	35	0.12	137	< 10	1940
N203705	205	294	4.04	3.37	1.05	375	22	0.17	15	100	114	33	0.12	10	10	408
N203706	205	294	2.32	1.95	0.59	475	6	0.12	47	410	62	25	0.16	252	< 10	2580

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9737039

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9737039

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 21-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	56	Geochem ring to approx 150 mesh
226	56	0-3 Kg crush and split
3202	56	Rock - save entire reject
285	56	ICP - HF digestion charge
287	56	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	56	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	56	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	56	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	56	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	56	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	56	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	56	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	56	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	56	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	56	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	56	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	56	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	56	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	56	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	56	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	56	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	56	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	56	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	56	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	56	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	56	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	56	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	56	Pb ppm: 24 element, rock & core	AAS	2	10000
582	56	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	56	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	56	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	56	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	56	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :2
Certificate Date: 21-AUG-97
Invoice No. : I9737039
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9737039

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203625	205	226	5	16	0.2	< 10	< 0.2	3.63	4200	1.0	< 2	0.43	< 0.5	7	204	38
N203626	205	226	< 5	7	< 0.2	< 10	< 0.2	4.13	5860	1.5	2	0.46	< 0.5	9	189	53
N203627	205	226	< 5	11	< 0.2	20	< 0.2	4.27	4760	1.5	2	0.31	< 0.5	9	189	27
N203628	205	226	< 5	4	< 0.2	20	< 0.2	4.11	5690	1.5	< 2	0.19	0.5	6	184	91
N203629	205	226	< 5	28	0.2	10	< 0.2	4.05	420	1.0	2	1.81	< 0.5	14	220	81
N203630	205	226	< 5	10	< 0.2	10	< 0.2	3.44	3760	1.0	< 2	0.17	< 0.5	6	155	77
N203631	205	226	< 5	13	< 0.2	10	< 0.2	3.58	1300	1.0	2	1.19	< 0.5	9	153	62
N203632	205	226	< 5	9	0.2	10	< 0.2	3.52	520	1.0	2	0.89	< 0.5	9	146	88
N203633	205	226	< 5	5	0.2	10	< 0.2	3.16	680	0.5	< 2	0.52	< 0.5	7	149	77
N203634	205	226	10	12	0.2	10	< 0.2	3.79	910	1.0	< 2	0.59	< 0.5	11	163	72
N203635	205	226	< 5	11	< 0.2	10	< 0.2	3.63	680	0.5	2	0.91	< 0.5	9	151	73
N203636	205	226	< 5	10	< 0.2	10	< 0.2	4.03	570	1.0	< 2	0.95	< 0.5	10	161	71
N203637	205	226	< 5	9	< 0.2	< 10	< 0.2	4.39	2750	1.5	2	0.84	< 0.5	6	118	55
N203638	205	226	< 5	22	< 0.2	10	< 0.2	3.20	2150	0.5	< 2	0.47	< 0.5	13	141	54
N203639	205	226	< 5	6	< 0.2	20	< 0.2	2.27	840	0.5	2	5.20	< 0.5	4	175	25
N203640	205	226	< 5	10	0.2	20	< 0.2	3.86	470	1.5	2	1.60	< 0.5	10	181	61
N203641	205	226	< 5	10	< 0.2	10	< 0.2	3.05	950	0.5	< 2	1.94	< 0.5	8	163	54
N203642	205	226	30	8	1.4	40	< 0.2	3.71	1880	1.5	< 2	0.83	< 0.5	9	171	79
N203643	205	226	< 5	6	< 0.2	10	< 0.2	2.74	870	1.0	< 2	1.26	< 0.5	6	155	86
N203644	205	226	< 5	8	< 0.2	< 10	< 0.2	3.82	3680	1.5	< 2	1.01	< 0.5	12	143	92
N203645	205	226	< 5	14	0.2	100	< 0.2	3.05	400	2.0	< 2	0.71	< 0.5	6	162	67
N203646	205	226	20	16	1.4	100	< 0.2	3.08	310	1.5	< 2	0.74	< 0.5	7	165	81
N203647	205	226	10	11	0.2	10	< 0.2	3.03	300	1.5	< 2	0.74	< 0.5	9	154	71
N203648	205	226	5	16	< 0.2	10	< 0.2	3.07	480	1.5	< 2	2.03	< 0.5	8	136	101
N203649	205	226	< 5	20	0.2	< 10	< 0.2	5.03	3790	1.5	< 2	5.21	< 0.5	10	76	84
N203650	205	226	< 5	22	< 0.2	< 10	< 0.2	5.33	1460	1.5	< 2	5.27	< 0.5	11	70	75
N203651	205	226	< 5	16	0.2	10	< 0.2	5.01	3260	2.0	2	3.02	< 0.5	6	92	47
N203652	205	226	5	15	0.6	30	< 0.2	3.27	380	4.0	4	1.74	< 0.5	7	138	79
N203653	205	226	< 5	12	1.0	50	< 0.2	2.22	40	9.0	< 2	7.03	< 0.5	3	118	40
N203654	205	226	< 5	15	2.8	60	< 0.2	0.62	20	7.0	2	14.10	< 0.5	3	40	20
N203655	205	226	< 5	24	3.0	50	< 0.2	0.40	10	5.0	< 2	15.70	< 0.5	3	46	21
N203656	205	226	10	9	< 0.2	10	< 0.2	0.37	110	6.5	6	4.99	< 0.5	3	58	5
N203657	205	226	10	17	0.6	70	< 0.2	1.26	50	5.5	< 2	11.80	1.5	9	55	40
N203658	205	226	15	28	1.6	110	< 0.2	1.03	30	4.0	2	16.50	< 0.5	3	78	43
N203659	205	226	10	63	1.4	40	< 0.2	1.34	50	3.5	< 2	10.40	< 0.5	6	56	41
N203660	205	226	15	35	1.2	60	< 0.2	2.14	40	3.5	< 2	8.12	1.5	7	94	55
N203661	205	226	10	54	0.2	320	< 0.2	3.40	160	5.0	< 2	3.31	13.5	22	103	57
N203662	205	226	< 5	42	1.6	30	< 0.2	2.46	20	5.0	2	8.01	< 0.5	14	97	66
N203663	205	226	10	23	0.6	10	< 0.2	3.32	40	5.5	< 2	2.73	< 0.5	11	112	83
N203664	205	226	15	31	1.4	10	< 0.2	4.04	30	4.5	2	3.67	< 0.5	10	152	60

CERTIFICATION: Stan Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :2
Certificate Date: 21-AUG-97
Invoice No. :I9737039
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9737039

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203625	205	226	1.91	1.40	0.90	1535	< 1	0.09	35	270	10	17	0.14	62	< 10	64
N203626	205	226	2.49	1.72	0.99	1310	< 1	0.17	39	200	4	129	0.17	75	< 10	74
N203627	205	226	2.25	1.53	0.90	1410	< 1	0.44	39	310	6	71	0.21	82	< 10	76
N203628	205	226	2.18	1.74	0.90	325	< 1	0.33	42	350	< 2	172	0.18	117	< 10	62
N203629	205	226	2.77	1.40	1.19	1770	1	0.39	49	640	8	255	0.24	112	< 10	84
N203630	205	226	1.70	1.43	0.59	450	< 1	0.18	31	110	< 2	29	0.13	84	< 10	54
N203631	205	226	2.09	1.29	1.10	1195	1	0.40	45	380	2	140	0.16	96	< 10	66
N203632	205	226	2.14	1.46	1.01	1550	< 1	0.10	41	360	6	100	0.15	108	< 10	72
N203633	205	226	1.91	1.30	0.91	1130	1	0.14	35	150	6	71	0.13	101	< 10	62
N203634	205	226	2.22	1.52	1.04	1090	< 1	0.14	44	330	8	73	0.18	95	< 10	78
N203635	205	226	2.15	1.36	1.06	1240	1	0.44	39	520	4	118	0.19	98	< 10	70
N203636	205	226	2.49	1.51	1.24	2080	< 1	0.41	42	340	2	114	0.21	114	< 10	70
N203637	205	226	1.88	1.88	0.79	1360	1	0.39	29	270	16	106	0.16	72	< 10	64
N203638	205	226	1.88	0.71	0.72	1220	< 1	0.92	24	260	6	56	0.16	56	< 10	50
N203639	205	226	1.14	1.10	0.81	450	< 1	0.04	26	1120	2	276	0.12	60	< 10	58
N203640	205	226	1.91	1.42	0.94	860	3	0.09	41	430	10	113	0.14	79	< 10	78
N203641	205	226	1.64	1.06	1.04	895	1	0.06	35	430	8	137	0.13	67	< 10	62
N203642	205	226	1.81	1.32	0.73	1340	1	0.11	54	330	6	78	0.14	96	< 10	86
N203643	205	226	1.09	1.10	0.38	790	1	0.06	31	100	8	125	0.10	109	< 10	68
N203644	205	226	2.04	1.10	0.84	2120	< 1	0.76	41	310	< 2	273	0.18	64	< 10	40
N203645	205	226	1.63	1.02	0.41	910	2	0.09	55	150	12	82	0.09	126	< 10	350
N203646	205	226	1.54	1.27	0.42	860	1	0.08	52	190	18	46	0.10	155	< 10	160
N203647	205	226	1.58	1.00	0.33	265	3	0.09	36	530	112	52	0.10	134	< 10	20
N203648	205	226	4.27	1.26	0.61	2670	1	0.05	23	640	10	71	0.11	148	< 10	22
N203649	205	226	4.10	2.18	0.69	2920	1	0.11	15	1180	18	120	0.20	123	< 10	24
N203650	205	226	3.52	2.27	0.77	2360	2	0.12	16	1470	20	128	0.22	129	< 10	24
N203651	205	226	2.96	1.98	0.60	1640	1	0.09	24	680	36	79	0.16	116	< 10	52
N203652	205	226	4.39	1.36	0.58	1890	3	0.06	66	940	64	59	0.13	196	< 10	42
N203653	205	226	7.08	0.32	0.55	2380	5	0.04	14	1110	112	154	0.07	139	< 10	142
N203654	205	226	15.85	0.18	1.11	5400	16	0.07	7	740	354	118	0.02	101	< 10	50
N203655	205	226	17.50	0.12	0.48	2760	14	0.08	8	460	850	109	0.01	80	< 10	86
N203656	205	226	18.35	< 0.01	0.47	3450	3	0.03	3	460	< 2	82	0.01	70	10	94
N203657	205	226	9.06	0.09	0.73	6140	8	0.03	24	950	58	170	0.05	119	< 10	470
N203658	205	226	9.16	0.09	0.55	5630	7	0.03	9	1470	66	232	0.04	155	< 10	330
N203659	205	226	15.50	0.07	1.04	8950	5	0.03	22	2510	64	247	0.05	194	< 10	192
N203660	205	226	7.51	0.35	0.69	5730	5	0.07	22	1970	100	269	0.07	184	< 10	382
N203661	205	226	3.67	1.28	0.83	3010	3	0.08	58	780	68	120	0.10	199	< 10	1825
N203662	205	226	8.88	0.94	0.57	3140	1	0.10	32	1230	164	240	0.05	189	< 10	76
N203663	205	226	4.14	1.37	0.33	930	1	0.09	19	390	58	72	0.08	154	< 10	48
N203664	205	226	6.49	1.20	0.57	1855	3	0.13	21	210	52	144	0.09	135	< 10	26

CERTIFICATION: [signature]

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 21-AUG-97
Invoice No. :I9737039
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9737039

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203665	205	226	< 5	28	1.2	30	< 0.2	3.63	40	3.5	< 2	1.95	< 0.5	10	163	54
N203666	205	226	< 5	26	1.0	150	< 0.2	3.49	50	4.0	< 2	0.68	1.5	11	177	66
N203667	205	226	< 5	19	0.6	760	< 0.2	2.74	100	3.5	< 2	0.48	13.5	12	170	81
N203668	205	226	< 5	6	< 0.2	< 10	< 0.2	6.87	1020	6.0	< 2	1.04	< 0.5	< 1	141	15
N203669	205	226	< 5	5	< 0.2	< 10	< 0.2	7.88	1940	6.5	2	0.55	< 0.5	< 1	72	8
N203670	205	226	< 5	5	< 0.2	< 10	< 0.2	8.51	2160	7.5	< 2	1.05	< 0.5	< 1	58	10
N203671	205	226	< 5	5	< 0.2	< 10	< 0.2	8.01	1920	6.5	< 2	0.78	< 0.5	< 1	49	8
N203672	205	226	< 5	7	< 0.2	< 10	< 0.2	7.04	1690	6.0	< 2	0.86	< 0.5	< 1	48	6
N203673	205	226	< 5	4	< 0.2	< 10	< 0.2	7.46	1750	6.0	< 2	0.82	< 0.5	< 1	54	7
N203674	205	226	< 5	7	0.2	< 10	< 0.2	7.13	2100	6.0	< 2	0.82	< 0.5	< 1	66	5
N203675	205	226	< 5	3	< 0.2	< 10	< 0.2	7.20	2050	6.0	< 2	0.74	< 0.5	< 1	59	5
N203676	205	226	< 5	5	< 0.2	< 10	< 0.2	7.18	2310	5.5	< 2	1.08	< 0.5	< 1	86	7
N203677	205	226	< 5	4	< 0.2	< 10	< 0.2	7.39	3050	6.0	< 2	0.95	< 0.5	< 1	66	6
N203678	205	226	< 5	6	< 0.2	< 10	< 0.2	7.46	3230	6.0	< 2	0.94	< 0.5	< 1	65	6
N203679	205	226	10	14	< 0.2	17400	< 0.2	4.77	60	3.0	< 2	1.75	132.5	< 1	71	19
N203680	205	226	< 5	10	< 0.2	370	< 0.2	7.36	2720	7.0	< 2	0.96	3.5	< 1	66	7

CERTIFICATION:

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Project : WOLVERINE
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Page Number :2-B
Total Pages :2
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CERTIFICATE OF ANALYSIS A9737039

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203665	205	226	4.67	1.05	0.52	975	3	0.39	32	280	30	84	0.08	130	< 10	404
N203666	205	226	4.28	1.22	0.44	530	2	0.55	40	310	24	39	0.09	141	< 10	530
N203667	205	226	2.21	1.15	0.39	275	< 1	0.18	53	270	32	32	0.06	148	< 10	3480
N203668	205	226	2.17	2.91	1.10	475	3	1.02	11	50	18	70	0.07	14	< 10	70
N203669	205	226	2.42	3.42	1.28	270	3	0.87	4	30	14	52	0.08	4	< 10	76
N203670	205	226	2.88	4.01	1.59	605	1	0.46	7	70	24	73	0.09	5	< 10	96
N203671	205	226	2.22	3.64	1.35	415	1	0.67	6	60	10	62	0.09	5	< 10	76
N203672	205	226	2.15	3.11	1.22	385	3	0.71	3	40	12	64	0.08	2	< 10	58
N203673	205	226	2.06	3.08	1.19	315	9	1.06	3	40	10	62	0.08	2	< 10	44
N203674	205	226	1.84	2.91	1.09	270	3	0.99	4	50	8	63	0.07	2	< 10	38
N203675	205	226	1.87	2.97	1.15	260	< 1	0.98	3	60	6	60	0.07	2	< 10	48
N203676	205	226	2.01	2.91	1.20	350	1	1.12	5	30	10	74	0.07	4	< 10	42
N203677	205	226	1.89	3.08	1.19	295	4	0.90	2	30	12	63	0.07	2	< 10	74
N203678	205	226	2.08	3.16	1.21	360	7	1.00	3	40	18	69	0.07	3	< 10	54
N203679	205	226	4.71	1.52	1.70	755	29	0.60	1	10	560	80	0.04	< 1	< 10	>10000
N203680	205	226	2.35	2.94	1.28	380	8	0.85	4	40	30	66	0.08	3	< 10	1615

CERTIFICATION: Hart Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9737195

Comments: ATTN:DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9737195

(GP W) - WESTMIN RESOURCES LTD.

Project: ROPE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 20-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	20	Geochem ring to approx 150 mesh
226	20	0-3 Kg crush and split
3202	20	Rock - save entire reject
285	20	ICP - HF digestion charge
287	20	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	20	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	20	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	20	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	20	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	20	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	20	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	20	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	20	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	20	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	20	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	20	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	20	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	20	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	20	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	20	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	20	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	20	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	20	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	20	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	20	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	20	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	20	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	20	Pb ppm: 24 element, rock & core	AAS	2	10000
582	20	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	20	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	20	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	20	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	20	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : ROPE
Comments: ATTN:DAVID TERRY - VANCOUVER OFFICE

Page . oer : 1-A
Total Pages : 1
Certificate Date: 20-AUG-97
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CERTIFICATE OF ANALYSIS A9737195

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173695	205	226	< 5	20	5.6	670	0.8	1.59	2050	0.5	< 2	0.29	< 0.5	1	232	15
N173696	205	226	< 5	18	7.6	1430	1.2	2.14	3300	1.0	< 2	0.04	< 0.5	< 1	211	23
N173697	205	226	< 5	16	14.5	370	1.0	2.93	2450	1.5	< 2	0.22	2.0	< 1	261	35
N173698	205	226	10	198	22	270	1.4	2.52	2340	2.0	< 2	1.46	19.0	< 1	267	150
N173699	205	226	15	109	34	860	2.2	2.99	2920	2.0	< 2	1.57	13.0	2	382	229
N173700	205	226	25	130	26	530	1.4	2.40	1390	1.5	< 2	1.02	11.0	< 1	377	224
N173901	205	226	45	68	64	210	1.2	5.55	80	2.5	< 2	4.78	6.0	11	188	206
N173902	205	226	30	43	24	120	0.6	4.80	180	2.0	2	4.05	3.5	6	193	88
N173903	205	226	< 5	14	8.8	70	0.4	4.07	350	1.5	< 2	2.80	1.5	6	175	47
N173904	205	226	< 5	16	5.4	50	< 0.2	4.08	280	1.5	< 2	3.22	1.0	6	93	31
N173905	205	226	15	71	20	70	0.4	3.86	190	1.5	2	3.38	5.5	9	134	64
N173906	205	226	< 5	35	8.2	80	< 0.2	4.13	270	1.5	< 2	3.17	6.0	8	129	66
N173907	205	226	< 5	34	5.0	80	0.2	4.72	220	2.0	< 2	1.65	3.0	7	118	76
N173908	205	226	< 5	54	6.8	30	< 0.2	4.84	650	2.0	< 2	4.55	19.0	3	206	42
N173909	205	226	< 5	32	13.0	50	< 0.2	5.68	550	2.5	< 2	0.37	0.5	4	374	225
N173910	205	226	10	28	22	140	0.4	2.69	1190	1.5	< 2	0.06	< 0.5	1	317	200
N173911	205	226	15	48	58	130	0.8	3.12	240	1.5	< 2	0.27	< 0.5	3	286	175
N173912	205	226	40	252	48	90	1.0	3.50	210	2.0	< 2	0.44	0.5	6	265	294
N173913	205	226	10	103	30	60	0.4	3.02	240	1.5	< 2	1.86	8.5	8	230	129
N173914	205	226	25	169	60	80	1.4	3.48	170	2.0	< 2	0.91	6.5	14	262	187

CERTIFICATION: Ian Bichler

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N173695	205	226	0.58	0.57	0.31	55	10	0.14	16	720	12	64	0.07	623	< 10	34
N173696	205	226	0.38	0.89	0.26	15	13	0.05	21	180	22	33	0.11	1265	< 10	30
N173697	205	226	0.55	1.23	0.35	25	15	0.06	22	2100	20	76	0.15	977	< 10	38
N173698	205	226	1.78	1.00	0.26	70	15	0.03	21	>10000	16	369	0.09	964	< 10	234
N173699	205	226	0.90	1.38	0.37	40	23	0.03	32	9330	40	275	0.12	2420	10	182
N173700	205	226	1.11	1.11	0.33	55	15	0.03	37	5990	30	169	0.09	1690	< 10	368
N173901	205	226	3.30	2.80	2.49	500	2	0.10	53	6500	10	354	0.22	211	10	572
N173902	205	226	1.88	2.43	2.65	345	3	0.06	35	2400	10	238	0.18	144	< 10	190
N173903	205	226	1.50	2.12	1.98	465	< 1	0.07	27	380	10	149	0.15	60	< 10	276
N173904	205	226	1.26	2.15	2.28	285	< 1	0.06	20	280	8	173	0.14	51	10	90
N173905	205	226	2.11	1.89	2.22	560	< 1	0.06	50	660	8	232	0.12	53	< 10	614
N173906	205	226	1.76	2.12	2.18	370	< 1	0.08	40	520	6	214	0.15	59	< 10	294
N173907	205	226	1.57	2.35	1.36	280	< 1	0.08	44	1240	8	146	0.15	80	< 10	210
N173908	205	226	2.11	2.47	3.04	385	5	0.05	50	1110	6	345	0.15	156	< 10	256
N173909	205	226	0.94	2.83	0.82	30	< 1	0.11	33	2590	4	290	0.20	255	10	82
N173910	205	226	0.64	1.32	0.32	15	< 1	0.06	14	690	< 2	156	0.10	85	< 10	38
N173911	205	226	0.81	1.40	0.31	10	< 1	0.08	22	1940	4	256	0.10	129	10	38
N173912	205	226	0.97	1.36	0.29	10	< 1	0.09	25	4290	6	538	0.10	176	< 10	84
N173913	205	226	1.58	1.33	1.04	285	< 1	0.03	62	3210	< 2	243	0.09	95	10	498
N173914	205	226	2.40	1.38	0.51	560	< 1	0.07	104	4490	8	486	0.11	130	10	1285

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9737721

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9737721

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 26-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	53	Geochem ring to approx 150 mesh
226	53	0-3 Kg crush and split
3202	53	Rock - save entire reject
285	53	ICP - HF digestion charge
287	53	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	53	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	53	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	53	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	53	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	53	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	53	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	53	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	53	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	53	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	53	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	53	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	53	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	53	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	53	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	53	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	53	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	53	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	53	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	53	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	53	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	53	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	53	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	53	Pb ppm: 24 element, rock & core	AAS	2	10000
582	53	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	53	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	53	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	53	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	53	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 26-AUG-97
Invoice No. : I9737721
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9737721

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203707	205	226	< 5	1	1.0	30	< 0.2	3.46	90	5.0	< 2	1.75	0.5	11	153	67
N203708	205	226	< 5	1	0.2	10	< 0.2	2.64	650	4.5	< 2	0.77	< 0.5	3	75	22
N203709	205	226	< 5	1	0.4	10	< 0.2	1.79	390	7.5	< 2	0.83	< 0.5	4	101	18
N203710	205	226	< 5	4	1.8	1020	< 0.2	2.45	230	2.5	< 2	0.57	6.5	2	144	57
N203711	205	226	< 5	2	1.2	1480	< 0.2	2.62	160	2.5	< 2	0.41	8.5	3	157	61
N203712	205	226	< 5	2	0.8	770	< 0.2	2.77	1070	2.5	< 2	0.28	1.5	5	187	63
N203713	205	226	< 5	2	0.4	210	< 0.2	3.33	1520	3.0	< 2	0.27	1.5	7	148	60
N203714	205	226	< 5	1	0.8	640	< 0.2	2.58	1120	2.0	< 2	0.23	1.0	4	187	63
N203715	205	226	< 5	2	0.8	480	< 0.2	3.44	870	2.5	< 2	0.26	1.0	9	124	35
N203716	205	226	< 5	2	1.2	190	< 0.2	3.16	420	2.5	< 2	0.29	0.5	9	187	73
N203717	205	226	< 5	8	0.8	50	< 0.2	2.39	350	1.5	< 2	0.44	< 0.5	6	183	65
N203718	205	226	< 5	12	1.2	90	< 0.2	2.60	270	1.0	< 2	0.35	< 0.5	5	168	73
N203719	205	226	< 5	8	1.0	20	< 0.2	2.06	320	0.5	< 2	0.20	< 0.5	5	190	72
N203720	205	226	< 5	4	0.6	10	< 0.2	1.66	690	0.5	< 2	0.26	< 0.5	3	197	61
N203721	205	226	< 5	6	1.2	30	< 0.2	1.61	390	0.5	< 2	0.24	< 0.5	3	185	65
N203722	205	226	< 5	8	0.8	20	< 0.2	1.33	810	0.5	< 2	0.20	< 0.5	2	210	58
N203723	205	226	< 5	6	1.2	20	< 0.2	1.60	410	0.5	< 2	0.32	< 0.5	4	188	65
N203724	205	226	10	6	1.2	40	< 0.2	1.59	360	0.5	< 2	0.28	< 0.5	4	199	65
N203725	205	226	10	6	1.6	50	< 0.2	2.39	340	0.5	< 2	0.25	< 0.5	5	197	79
N203726	205	226	10	10	1.6	80	< 0.2	1.68	270	0.5	< 2	0.29	< 0.5	4	202	71
N203727	205	226	< 5	6	1.0	10	< 0.2	1.18	310	0.5	< 2	2.08	< 0.5	2	202	51
N203728	205	226	< 5	6	1.0	30	< 0.2	1.40	370	0.5	< 2	0.35	< 0.5	3	181	56
N203729	205	226	< 5	4	1.0	40	< 0.2	2.03	450	0.5	< 2	0.17	< 0.5	4	213	66
N203730	205	226	< 5	22	1.6	40	< 0.2	1.82	270	0.5	< 2	0.24	< 0.5	6	214	82
N203731	205	226	< 5	6	0.8	40	< 0.2	2.27	640	0.5	< 2	0.22	< 0.5	4	200	82
N203732	205	226	10	2	0.8	10	< 0.2	2.54	1330	1.0	< 2	0.22	< 0.5	4	203	65
N203733	205	226	< 5	2	1.0	20	0.4	2.64	560	1.0	< 2	0.30	< 0.5	3	191	73
N203734	205	226	< 5	4	1.0	30	0.6	2.59	720	1.0	< 2	0.25	< 0.5	3	196	62
N203735	205	226	< 5	4	1.6	790	0.4	2.53	400	1.0	< 2	0.42	0.5	3	177	62
N203736	205	226	< 5	20	1.8	160	< 0.2	2.83	310	1.5	< 2	0.23	< 0.5	5	177	63
N203737	205	226	< 5	18	1.4	70	< 0.2	2.87	600	1.5	< 2	0.25	< 0.5	6	198	63
N203738	205	226	< 5	18	1.0	60	< 0.2	3.26	650	2.0	< 2	0.22	< 0.5	10	186	53
N203739	205	226	< 5	14	1.2	60	< 0.2	4.01	4750	3.5	< 2	0.19	0.5	6	144	50
N203740	205	226	< 5	30	1.8	1470	0.6	3.59	230	4.5	< 2	0.26	1.5	22	188	65
N203741	205	226	< 5	8	0.8	260	< 0.2	3.85	1930	4.0	< 2	0.31	2.0	5	150	62
N203742	205	226	< 5	4	0.4	40	< 0.2	4.27	2430	4.0	< 2	0.19	1.5	3	154	68
N203743	205	226	< 5	2	0.4	20	< 0.2	3.32	2530	3.0	< 2	0.26	< 0.5	< 1	144	93
N203744	205	226	< 5	2	0.4	10	< 0.2	2.64	1660	3.0	< 2	0.15	< 0.5	2	131	106
N203745	205	226	< 5	2	< 0.2	10	< 0.2	1.44	1630	1.5	< 2	0.20	< 0.5	< 1	129	23
N203746	205	226	< 5	4	0.4	190	< 0.2	2.72	1230	3.0	< 2	0.18	5.0	1	130	72

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :2
Certificate Date: 26-AUG-97
Invoice No. :I9737721
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9737721

SAMPLE	PREP CODE	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203707	205 226	4.07	1.11	0.51	1670	1	0.45	23	500	16	236	0.11	161	< 10	182
N203708	205 226	3.61	0.82	0.32	780	< 1	0.50	9	650	< 2	593	0.10	104	< 10	14
N203709	205 226	7.73	0.46	0.36	1115	2	0.22	8	180	< 2	630	0.07	71	< 10	12
N203710	205 226	1.65	0.73	0.29	225	13	0.09	16	180	230	166	0.05	96	< 10	3520
N203711	205 226	1.54	0.99	0.26	65	12	0.10	20	280	240	120	0.05	113	< 10	3930
N203712	205 226	1.22	0.90	0.30	60	19	0.12	22	200	56	172	0.08	85	< 10	1575
N203713	205 226	0.90	1.34	0.37	55	10	0.12	31	90	172	78	0.09	99	< 10	304
N203714	205 226	1.28	0.85	0.30	65	16	0.11	18	170	48	149	0.08	85	< 10	1330
N203715	205 226	1.41	1.34	0.43	170	5	0.15	43	120	84	121	0.11	90	< 10	1065
N203716	205 226	1.41	1.20	0.38	130	8	0.07	51	130	146	180	0.09	104	< 10	416
N203717	205 226	1.63	0.70	0.37	250	8	0.05	40	190	12	268	0.07	68	< 10	186
N203718	205 226	1.32	0.82	0.33	170	11	0.06	38	80	10	165	0.08	101	< 10	314
N203719	205 226	1.26	0.73	0.30	125	2	0.04	59	190	6	116	0.06	85	< 10	86
N203720	205 226	0.83	0.52	0.24	90	4	0.03	29	150	6	107	0.04	67	< 10	48
N203721	205 226	0.85	0.47	0.21	95	4	0.04	31	180	10	120	0.04	73	< 10	48
N203722	205 226	0.72	0.35	0.16	70	3	0.03	30	90	6	92	0.03	63	< 10	32
N203723	205 226	0.82	0.46	0.21	105	1	0.03	38	460	6	178	0.03	71	< 10	60
N203724	205 226	0.90	0.45	0.20	105	1	0.05	49	90	12	117	0.04	72	< 10	56
N203725	205 226	1.18	0.81	0.30	80	3	0.15	83	430	8	150	0.07	105	< 10	126
N203726	205 226	0.96	0.53	0.22	70	3	0.03	73	70	8	106	0.05	79	< 10	168
N203727	205 226	0.71	0.22	0.14	180	2	0.01	36	90	< 2	93	0.03	53	< 10	30
N203728	205 226	0.82	0.37	0.19	95	1	0.02	33	60	< 2	87	0.03	60	< 10	30
N203729	205 226	1.00	0.66	0.25	95	3	0.09	46	60	< 2	104	0.05	80	< 10	114
N203730	205 226	1.23	0.65	0.25	125	5	0.05	110	230	< 2	150	0.05	81	< 10	74
N203731	205 226	1.17	0.87	0.30	105	3	0.08	45	200	< 2	137	0.07	101	< 10	98
N203732	205 226	1.32	0.87	0.31	120	1	0.07	30	50	6	108	0.08	123	< 10	26
N203733	205 226	1.44	0.97	0.35	175	1	0.10	39	60	10	223	0.09	121	< 10	28
N203734	205 226	1.19	0.96	0.33	190	3	0.09	29	60	8	263	0.08	115	< 10	46
N203735	205 226	1.27	0.98	0.32	245	5	0.07	34	80	6	148	0.07	115	< 10	1730
N203736	205 226	1.47	0.83	0.32	180	7	0.08	50	190	10	269	0.08	106	< 10	470
N203737	205 226	1.83	0.94	0.39	450	9	0.09	54	80	16	383	0.07	93	< 10	254
N203738	205 226	3.48	0.97	0.53	190	23	0.13	40	260	18	154	0.12	94	< 10	224
N203739	205 226	1.40	1.30	0.36	70	8	0.14	41	90	22	239	0.13	109	< 10	138
N203740	205 226	1.76	1.45	0.39	160	9	0.11	106	210	52	228	0.10	120	< 10	4040
N203741	205 226	1.15	1.39	0.40	125	4	0.12	29	100	18	300	0.10	100	< 10	618
N203742	205 226	1.28	1.91	0.46	70	1	0.23	17	100	34	187	0.14	106	< 10	56
N203743	205 226	1.05	1.48	0.35	75	1	0.19	9	80	90	325	0.10	82	< 10	18
N203744	205 226	0.83	1.20	0.29	35	< 1	0.13	9	70	34	294	0.09	79	< 10	20
N203745	205 226	0.49	0.64	0.16	35	1	0.05	6	50	12	135	0.05	50	< 10	14
N203746	205 226	0.96	1.28	0.30	50	1	0.10	11	70	380	162	0.10	86	< 10	208

CERTIFICATION:

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Project : WOLVERINE
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Page Number :2-A
Total Pages :2
Certificate Date: 26-AUG-97
Invoice No. :I9737721
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Account :GP W

CERTIFICATE OF ANALYSIS A9737721

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N203747	205	226	< 5	4	0.6	60	< 0.2	8.17	730	1.5	< 2	2.21	< 0.5	17	112	32
N203748	205	226	< 5	2	1.4	250	< 0.2	8.01	730	1.5	< 2	2.23	< 0.5	14	108	44
N203749	205	226	< 5	1	0.6	170	< 0.2	7.62	660	1.5	< 2	2.57	< 0.5	11	96	31
N203750	205	226	< 5	2	0.4	140	< 0.2	8.76	820	1.5	< 2	1.63	< 0.5	17	134	40
N203751	205	226	10	1	0.2	70	< 0.2	8.40	750	2.0	< 2	3.43	< 0.5	21	128	49
N203752	205	226	45	2	0.8	10	< 0.2	6.99	650	1.0	< 2	1.96	< 0.5	10	93	45
N203753	205	226	10	8	1.2	450	< 0.2	7.86	740	1.5	< 2	1.66	< 0.5	16	107	1405
N203754	205	226	< 5	4	35	50	< 0.2	9.02	820	2.0	< 2	1.39	< 0.5	22	141	62
N203755	205	226	< 5	2	10.0	10	< 0.2	9.05	840	2.0	< 2	2.32	< 0.5	24	143	53
N203756	205	226	10	2	0.4	20	< 0.2	8.26	760	2.0	< 2	3.64	< 0.5	18	118	54
N203757	205	226	120	2	0.2	< 10	< 0.2	7.43	660	1.5	< 2	5.37	< 0.5	16	101	34
N203758	205	226	< 5	2	< 0.2	< 10	< 0.2	8.20	690	1.5	< 2	2.17	< 0.5	17	106	33
N203759	205	226	20	2	0.4	10	< 0.2	8.65	800	1.5	< 2	2.39	< 0.5	19	125	49

CERTIFICATION:

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Project : WOLVERINE
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Certificate Date: 26-AUG-97
Invoice No. :I9737721
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CERTIFICATE OF ANALYSIS A9737721

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N203747	205	226	3.59	2.55	1.93	645	< 1	2.84	49	590	8	358	0.33	85	< 10	76
N203748	205	226	3.46	2.50	1.89	560	< 1	2.86	48	590	14	363	0.33	83	< 10	76
N203749	205	226	2.86	2.35	1.75	455	< 1	3.02	38	600	10	383	0.30	75	< 10	58
N203750	205	226	4.34	2.78	1.91	650	< 1	2.56	63	830	12	329	0.37	99	< 10	86
N203751	205	226	4.30	2.80	2.43	620	< 1	2.29	59	500	18	321	0.37	97	< 10	98
N203752	205	226	2.75	2.08	1.27	470	< 1	2.81	34	550	22	397	0.27	76	< 10	50
N203753	205	226	3.49	2.48	1.58	615	< 1	2.55	45	520	14	369	0.33	90	< 10	280
N203754	205	226	5.06	3.10	2.17	750	< 1	2.25	64	600	32	303	0.40	115	< 10	114
N203755	205	226	5.13	3.15	2.50	900	< 1	2.37	65	680	18	314	0.40	119	< 10	118
N203756	205	226	4.37	2.90	2.43	685	< 1	2.28	54	590	20	307	0.36	103	< 10	100
N203757	205	226	3.62	2.70	2.79	525	< 1	2.07	46	500	14	305	0.31	86	< 10	80
N203758	205	226	3.66	2.20	1.73	650	1	3.07	48	620	10	415	0.36	92	< 10	70
N203759	205	226	4.18	2.87	2.27	700	1	2.60	58	610	20	350	0.36	95	< 10	94

CERTIFICATION: Stewart Buchler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9737840

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9737840

(GP W) - WESTMIN RESOURCES LTD.

Project: ROPE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 22-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	10	Geochem ring to approx 150 mesh
226	10	0-3 Kg crush and split
3202	10	Rock - save entire reject
285	10	ICP - HF digestion charge
287	10	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	10	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	10	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	10	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	10	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	10	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	10	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	10	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	10	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	10	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	10	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	10	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	10	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	10	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	10	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	10	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	10	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	10	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	10	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	10	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	10	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	10	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	10	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	10	Pb ppm: 24 element, rock & core	AAS	2	10000
582	10	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	10	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	10	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	10	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	10	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : ROPE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page . ..nber : 1-A
Total Pages : 1
Certificate Date: 22-AUG-97
Invoice No. : I9737840
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9737840

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173868	205	226	< 5	68	30	620	2.0	4.29	60	2.0	< 2	2.36	10.5	10	187	100
N173869	205	226	< 5	30	9.2	390	1.8	4.35	80	1.5	< 2	1.91	4.0	12	168	97
N173870	205	226	< 5	36	8.6	1230	2.0	3.89	100	1.5	< 2	2.68	20.0	10	191	123
N173871	205	226	< 5	38	12.0	780	2.0	4.24	100	1.5	< 2	4.69	10.0	8	172	163
N173872	205	226	< 5	22	10.0	630	1.4	5.23	160	2.0	< 2	3.83	9.5	8	147	101
N173873	205	226	< 5	26	9.2	550	1.8	3.45	120	1.5	< 2	1.95	5.0	12	170	62
N173874	205	226	< 5	36	14.0	450	2.2	4.49	100	1.5	< 2	2.50	2.0	15	140	74
N173875	205	226	< 5	32	10.0	710	1.6	5.03	120	2.0	< 2	1.80	10.5	13	126	70
N173876	205	226	< 5	30	18.5	440	1.2	4.78	130	2.0	< 2	3.75	3.0	9	162	99
N173877	205	226	< 5	28	10.5	620	1.2	4.41	140	1.5	< 2	2.97	10.5	9	120	85

CERTIFICATION: Hart Bichler

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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VANCOUVER, BC
V7X 1C4

Project : ROPE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 22-AUG-97
Invoice No. :I9737840
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9737840

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N173868	205	226	3.83	2.18	1.29	165	23	0.04	101	3520	24	86	0.22	1110	< 10	748
N173869	205	226	2.21	2.18	1.12	135	22	0.04	97	2790	20	73	0.24	666	< 10	316
N173870	205	226	2.22	1.89	1.32	185	33	0.01	105	4510	28	105	0.25	1160	< 10	1285
N173871	205	226	2.66	2.18	1.68	270	17	0.01	93	>10000	24	194	0.28	880	< 10	684
N173872	205	226	2.01	2.66	2.51	220	33	0.03	88	1060	24	131	0.25	1045	< 10	766
N173873	205	226	1.86	1.69	1.21	140	26	0.03	107	1550	20	81	0.20	723	< 10	384
N173874	205	226	2.41	2.20	1.67	140	45	0.03	140	1010	30	82	0.24	692	< 10	232
N173875	205	226	2.03	2.61	1.46	115	47	0.07	137	500	24	61	0.25	1125	< 10	900
N173876	205	226	2.27	2.36	2.09	175	21	0.01	78	3930	18	126	0.23	716	< 10	268
N173877	205	226	1.85	2.22	1.85	160	24	0.01	84	2170	16	102	0.22	943	< 10	772

CERTIFICATION:

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9738480

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9738480

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 22-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
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VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page . ber :1
Total Pages :1
Certificate Date: 22-AUG-97
Invoice No. :I9738480
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9738480

SAMPLE	PREP CODE	Zn %
173675	244 --	1.79

CERTIFICATION: Said Leino

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9738738

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9738738

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 24-AUG-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
244	1	Pulp; prev. prepared at Chemex

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0

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V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number : 1
Total Pages : 1
Certificate Date: 24-AUG-97
Invoice No. : I9738738
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Account : GP W

CERTIFICATE OF ANALYSIS A9738738

SAMPLE	PREP CODE		Zn %
N203679	244	--	6.12

CERTIFICATION: _____

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9739257

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9739257

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 1-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	1	RUSH Assay ring approx 150 mesh
295	1	RUSH crush and split (0-3 Kg)
3202	1	Rock - save entire reject
290	1	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	1	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	1	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	1	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	1	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	1	Ba ppm	XRF	10	50000
444	1	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	1	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	1	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	1	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	1	Ag ppm: high grade 24 element	AAS	1	200
4031	1	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	1	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	1	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	1	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	1	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	1	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	1	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	1	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	1	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	1	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	1	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	1	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	1	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	1	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	1	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	1	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	1	Pb %: high grade 24 element	AAS	0.001	10.00
4047	1	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	1	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	1	V ppm: A22 ICP package	ICP-AES	10	50000
4050	1	Zn ppm: A22 ICP package	ICP-AES	20	100000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number : 1-A
Total Pages : 1
Certificate Date: 01-SEP-97
Invoice No. : I9739257
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9739257

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	ZnBa %	(XRFSpec Gr ppm	S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
204712	258	295	2.26	183	0.65	0.62	15.70	200	4.10	0.06	0.03	0.004	176	0.45	200	< 10	60	1.45	1650	40	100

CERTIFICATION: Stuart Bucklen

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page . .ber : 1-B
Total Pages : 1
Certificate Date: 01-SEP-97
Invoice No. : I9739257
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9739257

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
204712	258	295	6810	28.2	0.1	0.05	460	20	0.05	60	0.606	30	< 0.05	40	>100000

CERTIFICATION: [signature]

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9739258

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9739258

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 7-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	6	Geochem ring to approx 150 mesh
226	6	0-3 Kg crush and split
3202	6	Rock - save entire reject
285	6	ICP - HF digestion charge
287	6	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
991	6	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
956	6	Ag g/t: RUSH, aqua regia digest	AAS	0.3	350
301	6	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	6	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	6	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	6	Ba ppm	XRF	10	50000
444	6	Specific gravity S.G.	PICNOMETER	0.01	20.0
13	6	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	6	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	6	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	6	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	6	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	6	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	6	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	6	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	6	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	6	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	6	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	6	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	6	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	6	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	6	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	6	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	6	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	6	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	6	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	6	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	6	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	6	Pb ppm: 24 element, rock & core	AAS	2	10000
582	6	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	6	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	6	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	6	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	6	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 07-SEP-97
Invoice No. :I9739258
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9739258

SAMPLE	PREP CODE		Au ppb RUSH	Ag g/t RUSH	Cu %	Pb %	ZnBa %	(XRFSpec ppm	Gr S.G.	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
204713	205	226	350	48.0	0.04	0.73	1.55	5300	2.89	166	190	4660	44.4	8.19	300	3.0	< 2	0.26	118.0	2	108
204714	205	226	215	8.7	0.06	0.09	1.49	2800	2.97	160	44	990	8.0	6.36	220	2.0	6	1.32	152.0	6	79
204715	205	226	40	1.5	0.01	0.01	0.51	3200	2.71	12	78	1220	1.4	6.60	420	2.5	< 2	0.75	47.0	1	75
204716	205	226	30	4.2	0.04	0.02	1.31	2500	2.79	2	54	2810	3.6	6.22	470	2.0	2	2.26	127.5	1	62
204717	205	226	75	21.9	0.11	0.19	1.89	2550	2.80	10	32	3360	21.0	7.56	390	2.5	< 2	1.23	171.0	5	65
204718	205	226	30	6.6	0.21	0.04	0.45	220	2.73	730	15.5	320	5.8	2.64	160	< 0.5	2	1.66	32.5	27	130

CERTIFICATION: [illegible]

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 07-SEP-97
Invoice No. :I9739258
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9739258

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
204713	205	226	397	5.09	3.80	0.78	100	5	0.29	3	520	6800	43	0.17	26	< 10	>10000
204714	205	226	614	10.65	2.51	2.13	540	6	0.21	< 1	310	810	57	0.11	16	< 10	>10000
204715	205	226	123	2.14	3.03	1.58	320	7	0.23	1	350	140	55	0.14	18	< 10	4780
204716	205	226	461	3.48	2.76	2.66	725	7	0.24	1	370	200	102	0.12	14	< 10	>10000
204717	205	226	1085	4.96	2.86	2.71	740	5	0.24	7	430	2400	61	0.14	51	< 10	>10000
204718	205	226	2110	6.14	0.16	1.52	825	12	0.03	38	490	420	48	0.08	361	< 10	4160

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9739491

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9739491

(GP W) - WESTMIN RESOURCES LTD.

Project: ROPE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 8-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	21	Geochem ring to approx 150 mesh
226	21	0-3 Kg crush and split
3202	21	Rock - save entire reject
285	21	ICP - HF digestion charge
287	21	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	21	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	21	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	21	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	21	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	21	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	21	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	21	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	21	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	21	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	21	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	21	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	21	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	21	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	21	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	21	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	21	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	21	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	21	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	21	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	21	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	21	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	21	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	21	Pb ppm: 24 element, rock & core	AAS	2	10000
582	21	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	21	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	21	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	21	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	21	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : ROPE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 08-SEP-97
Invoice No. :I9739491
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9739491

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173878	205	226	< 5	18	12.0	420	1.2	4.23	120	2.0	< 2	3.51	7.5	8	195	98
N173879	205	226	< 5	20	13.5	230	1.0	3.80	140	1.5	2	3.85	1.0	10	151	59
N173880	205	226	< 5	16	10.0	210	1.0	3.69	160	1.5	< 2	3.77	2.5	9	144	70
N173881	205	226	< 5	26	14.0	260	1.4	4.45	140	2.0	< 2	2.31	2.0	11	200	90
N173882	205	226	< 5	22	14.5	580	1.6	4.52	120	2.0	< 2	3.00	12.0	8	197	137
N173883	205	226	< 5	20	10.0	300	1.2	3.75	140	2.0	< 2	2.95	2.5	11	209	77
N173884	205	226	< 5	20	10.5	640	1.6	4.35	80	2.0	2	2.58	10.0	12	215	100
N173885	205	226	< 5	24	12.0	860	2.6	4.75	120	2.5	< 2	3.68	18.0	12	215	141
N173886	205	226	< 5	20	11.0	970	2.2	5.09	140	2.5	< 2	2.86	22.0	9	218	133
N173887	205	226	< 5	30	14.5	640	2.8	4.89	100	2.5	< 2	2.27	9.5	13	183	113
N173888	205	226	< 5	20	16.0	380	1.8	3.80	100	1.5	< 2	6.34	7.0	7	163	104
N173889	205	226	< 5	20	11.5	530	2.0	4.65	110	2.0	< 2	4.58	10.0	9	213	108
N173890	205	226	< 5	16	9.2	930	2.4	4.00	120	2.0	< 2	5.96	24.5	6	214	155
N173891	205	226	< 5	36	15.5	570	3.2	4.99	100	2.0	< 2	3.64	12.5	14	233	208
N173892	205	226	< 5	32	12.0	550	2.2	5.09	110	2.0	< 2	3.28	14.5	11	205	125
N173893	205	226	< 5	26	11.5	580	2.6	5.92	160	2.5	< 2	2.25	26.0	8	241	196
N173894	205	226	< 5	22	8.0	310	1.8	3.74	120	1.5	2	5.80	14.0	8	211	101
N173895	205	226	< 5	16	8.0	180	1.4	3.46	140	1.5	2	5.66	6.0	9	144	56
N173896	205	226	< 5	22	11.0	340	1.2	4.13	110	2.0	< 2	2.31	13.5	10	172	83
N173897	205	226	< 5	16	7.2	270	1.2	2.38	80	1.0	< 2	7.93	8.0	8	124	87
N173898	205	226	< 5	2	1.4	190	< 0.2	2.12	1090	0.5	< 2	12.50	6.5	8	74	15

CERTIFICATION: _____

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : ROPE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 08-SEP-97
Invoice No. :19739491
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9739491

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N173878	205	226	1.95	2.00	1.67	160	26	0.04	80	7630	14	128	0.19	1030	< 10	508
N173879	205	226	2.58	1.87	2.36	245	19	0.04	73	2400	16	118	0.17	510	< 10	86
N173880	205	226	2.09	1.90	2.39	260	27	0.04	83	1610	12	113	0.18	780	< 10	194
N173881	205	226	2.79	2.30	1.50	150	28	0.06	97	3000	20	76	0.23	826	< 10	146
N173882	205	226	2.21	2.33	1.59	150	22	0.05	81	5900	10	96	0.22	888	< 10	758
N173883	205	226	2.31	1.92	1.74	250	23	0.04	89	2830	14	91	0.21	793	< 10	192
N173884	205	226	2.18	2.13	1.47	150	28	0.05	103	3460	14	90	0.24	872	< 10	638
N173885	205	226	3.40	2.44	2.05	205	22	0.06	105	5560	18	146	0.21	1005	< 10	1060
N173886	205	226	2.40	2.62	1.60	145	22	0.08	86	6300	26	117	0.21	1300	< 10	1290
N173887	205	226	3.20	2.44	1.45	130	21	0.08	96	3810	24	87	0.20	807	< 10	548
N173888	205	226	3.68	1.99	3.46	385	13	0.05	61	5840	12	209	0.16	797	< 10	424
N173889	205	226	2.52	2.30	2.17	200	18	0.06	82	9250	16	171	0.22	1030	< 10	572
N173890	205	226	2.23	2.03	2.16	200	13	0.05	90	>10000	18	266	0.17	1070	< 10	1345
N173891	205	226	3.64	2.57	1.33	105	16	0.06	126	>10000	30	158	0.22	1200	< 10	724
N173892	205	226	2.51	2.58	1.29	110	22	0.06	100	>10000	24	158	0.19	1345	< 10	882
N173893	205	226	2.53	2.99	1.24	90	17	0.10	93	7810	14	118	0.24	1305	< 10	1535
N173894	205	226	2.37	1.94	2.63	240	13	0.04	73	>10000	14	248	0.15	798	< 10	792
N173895	205	226	2.57	1.83	3.48	405	21	0.04	70	2280	16	192	0.16	565	< 10	374
N173896	205	226	1.96	1.91	1.62	170	28	0.05	84	1870	16	122	0.22	877	< 10	886
N173897	205	226	3.38	1.25	4.62	1145	15	0.03	70	1920	16	275	0.12	514	< 10	522
N173898	205	226	3.31	1.02	7.43	2120	15	0.03	62	760	4	436	0.11	480	< 10	476

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9739493

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9739493

(GP W) - WESTMIN RESOURCES LTD.

Project: ROPE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 8-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	20	Geochem ring to approx 150 mesh
294	20	4-7 Kg crush and split
3202	20	Rock - save entire reject
285	20	ICP - HF digestion charge
287	20	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	20	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	20	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	20	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	20	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	20	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	20	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	20	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	20	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	20	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	20	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	20	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	20	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	20	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	20	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	20	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	20	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	20	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	20	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	20	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	20	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	20	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	20	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	20	Pb ppm: 24 element, rock & core	AAS	2	10000
582	20	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	20	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	20	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	20	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	20	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : ROPE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 08-SEP-97
Invoice No. :I9739493
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9739493

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173940	205	294	50	570	11.0	< 10	< 0.2	6.08	320	2.0	< 2	3.23	0.5	14	130	21
N173941	205	294	15	62	12.0	10	< 0.2	8.19	530	2.5	< 2	1.99	< 0.5	10	70	28
N173942	205	294	< 5	8	9.2	10	< 0.2	6.90	370	2.0	24	3.03	< 0.5	24	52	69
N173943	205	294	< 5	6	6.4	50	< 0.2	5.60	200	1.5	< 2	2.63	0.5	19	84	45
N173944	205	294	< 5	14	8.0	190	0.6	6.05	180	2.0	< 2	3.78	7.0	16	135	72
N173945	205	294	< 5	1	4.8	10	< 0.2	7.01	320	1.5	4	5.37	< 0.5	21	50	29
N173946	205	294	< 5	60	7.2	30	< 0.2	6.74	350	1.5	< 2	5.99	0.5	21	53	30
N173947	205	294	200	1640	27	60	1.6	6.42	110	2.0	< 2	3.93	4.5	23	122	70
N173948	205	294	185	1980	18.0	40	< 0.2	7.32	230	2.0	< 2	5.66	1.0	22	103	54
N173949	205	294	10	28	12.5	50	< 0.2	6.96	180	2.0	< 2	3.27	1.5	21	78	35
N173950	205	294	< 5	4	7.2	< 10	< 0.2	8.08	1870	1.5	< 2	4.63	< 0.5	25	28	24
N173951	205	294	< 5	10	15.0	60	< 0.2	6.01	210	2.0	14	2.64	2.5	23	61	50
N173952	205	294	< 5	1	3.4	< 10	< 0.2	6.99	560	1.5	4	2.75	< 0.5	33	39	67
N173953	205	294	< 5	2	3.4	60	< 0.2	6.03	250	2.0	< 2	2.33	2.0	22	85	88
N173954	205	294	< 5	4	3.6	50	< 0.2	5.57	210	1.5	2	1.54	3.5	17	72	71
N173955	205	294	< 5	1	1.0	< 10	< 0.2	6.52	2130	0.5	< 2	2.50	0.5	34	63	95
N173956	205	294	< 5	1	1.6	< 10	< 0.2	6.14	2730	1.0	< 2	4.26	< 0.5	35	108	101
N173957	205	294	< 5	1	0.8	< 10	< 0.2	6.72	2050	0.5	< 2	3.06	0.5	36	114	106
N173958	205	294	< 5	4	2.6	80	< 0.2	5.84	180	1.5	8	1.92	2.5	18	72	64
N173959	205	294	< 5	2	1.6	< 10	< 0.2	5.66	1900	0.5	< 2	3.26	0.5	37	213	116

CERTIFICATION: Stuart Bridley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : ROPE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 08-SEP-97
Invoice No. :I9739493
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9739493

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N173940	205	294	2.56	3.28	2.38	590	2	0.13	29	1150	10	108	0.29	103	< 10	48
N173941	205	294	2.78	3.61	1.99	320	1	0.17	26	760	8	75	0.40	106	< 10	42
N173942	205	294	7.36	3.49	2.39	560	1	0.15	34	2310	< 2	114	0.56	223	< 10	78
N173943	205	294	3.76	3.06	1.53	375	< 1	0.10	27	2010	4	80	0.47	165	< 10	76
N173944	205	294	4.09	3.02	1.97	475	9	0.09	70	3320	14	83	0.39	562	< 10	398
N173945	205	294	6.72	3.39	2.77	730	2	0.17	26	3060	< 2	149	0.43	108	10	78
N173946	205	294	6.78	3.84	2.60	835	5	0.16	34	3070	< 2	165	0.41	96	< 10	106
N173947	205	294	5.53	3.64	2.16	700	5	0.13	50	2920	22	89	0.52	249	< 10	532
N173948	205	294	6.97	3.67	2.87	805	5	0.18	76	3730	< 2	137	0.54	163	< 10	184
N173949	205	294	5.54	4.01	1.95	510	7	0.14	69	2300	14	71	0.56	255	< 10	202
N173950	205	294	8.87	3.56	3.69	750	1	0.22	156	3260	< 2	113	0.48	84	< 10	272
N173951	205	294	4.48	3.47	1.84	500	3	0.11	82	1640	10	67	0.60	348	< 10	250
N173952	205	294	8.68	2.51	3.98	555	3	0.20	96	2820	< 2	76	0.84	232	10	224
N173953	205	294	5.84	2.86	2.77	385	2	0.13	45	2600	14	68	0.65	347	< 10	170
N173954	205	294	5.07	2.52	2.74	360	4	0.11	38	1420	6	54	0.50	327	< 10	218
N173955	205	294	7.95	1.89	4.85	580	< 1	0.23	50	1510	< 2	88	0.65	253	< 10	80
N173956	205	294	6.95	2.20	3.79	825	< 1	0.35	86	1270	< 2	152	0.64	241	< 10	102
N173957	205	294	7.45	1.74	4.72	705	1	0.71	70	1380	< 2	118	0.63	261	< 10	116
N173958	205	294	5.28	2.74	2.86	395	6	0.12	42	1390	12	78	0.49	349	< 10	192
N173959	205	294	7.44	1.84	5.14	720	< 1	0.22	148	1410	< 2	156	0.66	249	< 10	140

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9739513

Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

CERTIFICATE A9739513

(GP W) - WESTMIN RESOURCES LTD.

Project: ROPE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 8-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
205	58	Geochem ring to approx 150 mesh
226	58	0-3 Kg crush and split
3202	58	Rock - save entire reject
285	58	ICP - HF digestion charge
287	58	Special dig'n with organic ext'n

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
983	58	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
13	58	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	58	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	58	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	58	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	58	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	58	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	58	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	58	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	58	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	58	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	58	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	58	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	58	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	58	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	58	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	58	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	58	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	58	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	58	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	58	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	58	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	58	Pb ppm: 24 element, rock & core	AAS	2	10000
582	58	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	58	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	58	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	58	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	58	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : ROPE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 08-SEP-97
Invoice No. :I9739513
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9739513

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173851	205	226	75	70	13.0	60	0.8	4.08	230	1.5	< 2	4.63	1.0	13	187	66
N173852	205	226	50	66	15.0	80	1.0	4.82	190	1.5	< 2	4.06	8.0	14	204	83
N173853	205	226	35	48	19.0	40	1.4	5.40	240	1.5	2	4.61	2.0	21	231	55
N173854	205	226	40	40	15.5	50	1.2	5.38	220	1.5	< 2	7.24	1.5	16	205	39
N173855	205	226	115	70	26	130	1.6	5.81	280	2.0	< 2	5.44	5.0	23	323	90
N173856	205	226	60	76	21	200	1.6	4.38	270	2.0	< 2	5.39	8.5	11	209	144
N173857	205	226	45	72	29	210	2.2	6.38	170	2.5	< 2	4.56	9.5	11	204	204
N173858	205	226	35	62	28	350	2.2	5.99	140	2.5	< 2	5.18	13.0	11	185	175
N173859	205	226	30	66	20	580	1.8	5.95	130	2.5	< 2	4.56	21.5	12	161	142
N173860	205	226	15	48	16.0	250	2.0	4.74	150	2.0	< 2	6.54	6.5	11	118	66
N173861	205	226	5	62	16.0	390	3.0	5.90	120	2.5	< 2	4.92	12.5	13	194	144
N173862	205	226	< 5	46	10.5	1030	2.2	5.12	170	2.0	< 2	4.90	37.5	10	171	130
N173863	205	226	< 5	4	4.6	50	0.4	2.33	1320	1.0	< 2	12.35	0.5	4	89	29
N173864	205	226	< 5	22	8.2	230	1.2	4.45	210	2.0	2	6.44	6.5	8	150	72
N173865	205	226	< 5	32	13.0	490	2.0	4.35	150	2.0	2	7.47	16.0	11	152	95
N173866	205	226	< 5	22	10.0	160	1.4	3.67	180	1.5	< 2	6.29	1.5	10	162	77
N173867	205	226	< 5	28	11.5	340	1.8	4.72	180	2.0	< 2	3.22	6.0	14	202	79
N173960	205	226	20	46	42	110	0.6	4.50	700	2.0	< 2	2.06	1.0	7	170	160
N173961	205	226	25	34	30	90	0.4	4.39	200	2.0	< 2	3.63	1.0	8	146	121
N173962	205	226	15	48	17.0	30	< 0.2	4.09	1120	1.5	< 2	1.40	0.5	7	140	104
N173963	205	226	45	110	36	60	0.2	3.81	360	1.5	2	2.55	0.5	13	146	116
N173964	205	226	30	42	42	20	0.2	4.32	300	1.5	< 2	1.45	0.5	8	146	107
N173965	205	226	85	66	44	50	0.4	4.48	190	2.0	< 2	2.35	1.5	12	181	108
N173966	205	226	75	90	69	60	0.2	4.53	210	2.0	2	2.64	1.5	11	173	118
N173967	205	226	35	54	61	30	0.2	3.28	1670	1.0	< 2	7.18	1.0	5	140	93
N173968	205	226	55	72	64	90	0.6	4.21	190	2.0	2	3.05	1.5	10	151	135
N173969	205	226	35	64	41	80	< 0.2	3.85	310	2.0	< 2	4.75	1.5	8	153	122
N173970	205	226	40	66	62	90	0.6	5.54	200	2.5	< 2	2.56	2.0	12	154	182
N173971	205	226	60	76	78	130	0.6	4.66	190	2.0	< 2	3.19	2.5	10	146	177
N173972	205	226	40	34	58	110	0.2	4.50	190	2.0	2	4.05	1.0	9	146	143
N173973	205	226	70	66	74	50	< 0.2	3.86	180	1.5	< 2	6.12	0.5	10	149	126
N173974	205	226	60	78	56	40	< 0.2	3.57	310	1.5	< 2	4.97	1.0	10	164	108
N173975	205	226	40	60	38	40	0.2	4.80	310	2.0	2	1.47	< 0.5	14	210	104
N173976	205	226	25	40	33	30	0.2	4.85	200	2.0	< 2	2.43	< 0.5	10	197	99
N173977	205	226	50	154	23	30	0.2	6.91	980	2.5	< 2	3.13	< 0.5	22	242	125
N173978	205	226	35	202	32	30	0.4	6.86	300	2.5	2	5.37	1.0	23	218	124
N173979	205	226	5	114	8.8	< 10	< 0.2	9.58	550	3.0	2	2.61	< 0.5	33	114	70
N173980	205	226	10	342	5.6	< 10	< 0.2	9.32	5250	3.0	< 2	0.27	1.0	20	119	32
N173981	205	226	265	2350	8.8	< 10	< 0.2	10.35	530	3.0	4	0.65	0.5	23	151	40
N173982	205	226	80	300	39	30	0.4	6.30	280	2.0	6	6.75	0.5	18	233	122

CERTIFICATION:

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : ROPE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Page Number :1-B
Total Pages :2
Certificate Date: 08-SEP-97
Invoice No. :I9739513
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9739513

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N173851	205	226	2.59	1.92	2.17	490	16	0.04	81	2610	16	194	0.17	601	< 10	100
N173852	205	226	2.47	2.35	1.88	335	21	0.05	94	3810	16	181	0.21	846	< 10	516
N173853	205	226	3.69	2.35	2.09	605	6	0.09	66	1730	16	171	0.32	226	< 10	184
N173854	205	226	3.66	2.43	3.01	735	11	0.12	67	5250	12	243	0.27	285	< 10	148
N173855	205	226	3.93	2.82	2.60	520	20	0.09	104	2940	18	184	0.32	594	< 10	346
N173856	205	226	2.10	2.17	2.11	230	26	0.04	104	9210	16	240	0.18	950	< 10	624
N173857	205	226	2.31	3.13	1.86	135	20	0.07	112	9730	20	235	0.24	1230	< 10	614
N173858	205	226	2.19	2.94	1.94	150	23	0.06	104	>10000	18	263	0.22	1130	< 10	874
N173859	205	226	2.17	2.94	1.58	125	22	0.06	113	>10000	22	229	0.23	1195	< 10	1430
N173860	205	226	2.90	2.38	3.69	330	20	0.07	80	2150	22	219	0.18	669	< 10	428
N173861	205	226	2.85	2.85	1.95	165	25	0.06	123	>10000	32	205	0.26	1020	< 10	776
N173862	205	226	2.01	2.56	1.95	165	20	0.05	98	9560	26	185	0.23	1365	< 10	2250
N173863	205	226	2.36	1.21	6.48	550	11	0.03	38	3070	14	434	0.10	360	< 10	74
N173864	205	226	2.48	2.24	3.06	275	14	0.05	67	6120	22	229	0.17	729	< 10	402
N173865	205	226	2.75	2.18	3.42	340	16	0.04	90	7650	24	247	0.20	817	< 10	1020
N173866	205	226	2.94	1.86	2.96	440	13	0.04	81	4690	16	211	0.17	589	< 10	116
N173867	205	226	2.70	2.36	1.65	210	19	0.05	103	3700	22	138	0.25	865	< 10	416
N173960	205	226	2.14	1.94	0.95	170	6	0.07	43	3720	6	193	0.18	223	< 10	148
N173961	205	226	2.23	1.92	1.31	275	4	0.05	43	7080	8	292	0.18	171	< 10	148
N173962	205	226	1.79	1.73	0.81	330	1	0.07	37	1620	6	130	0.24	160	< 10	160
N173963	205	226	3.66	1.68	1.25	500	1	0.05	59	1550	6	189	0.21	169	< 10	210
N173964	205	226	2.32	1.89	0.90	260	< 1	0.07	36	920	4	115	0.24	154	< 10	128
N173965	205	226	2.59	1.96	1.02	245	6	0.07	62	3240	12	198	0.24	324	< 10	182
N173966	205	226	3.04	2.00	0.98	335	3	0.06	71	4430	10	222	0.26	348	< 10	228
N173967	205	226	2.39	1.40	3.77	740	1	0.04	30	1800	< 2	644	0.16	106	< 10	162
N173968	205	226	2.16	1.84	0.98	215	6	0.05	63	7270	10	282	0.18	304	< 10	198
N173969	205	226	2.19	1.69	2.11	390	5	0.04	53	4810	10	425	0.14	199	< 10	202
N173970	205	226	2.64	2.42	0.98	300	7	0.09	75	5820	6	218	0.19	307	< 10	250
N173971	205	226	2.14	2.05	1.13	240	5	0.06	65	6900	4	251	0.17	294	< 10	244
N173972	205	226	2.40	1.96	1.78	355	5	0.06	51	4670	4	349	0.17	182	< 10	194
N173973	205	226	2.72	1.74	2.27	425	4	0.05	48	9090	< 2	478	0.18	213	< 10	138
N173974	205	226	2.71	1.58	2.26	500	7	0.05	53	3370	< 2	360	0.17	242	< 10	174
N173975	205	226	3.06	2.12	0.85	210	4	0.09	50	1800	< 2	103	0.29	181	< 10	138
N173976	205	226	2.26	2.17	1.28	205	3	0.08	48	2860	< 2	170	0.30	197	< 10	54
N173977	205	226	3.57	3.20	1.52	425	6	0.13	75	2470	< 2	180	0.29	217	< 10	118
N173978	205	226	4.08	3.08	2.12	785	11	0.13	93	6480	6	311	0.24	428	< 10	152
N173979	205	226	6.00	4.31	1.71	1140	< 1	0.21	73	1610	< 2	135	0.44	111	< 10	170
N173980	205	226	4.69	4.14	1.08	530	1	0.19	58	590	< 2	25	0.27	106	< 10	142
N173981	205	226	4.82	4.63	1.04	570	2	0.22	70	710	< 2	49	0.29	163	< 10	190
N173982	205	226	3.89	2.86	2.91	1025	10	0.12	82	4720	< 2	415	0.34	414	< 10	226

CERTIFICATION:

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VANCOUVER, BC
V7X 1C4

Project : ROPE
Comments: ATTN:DAVID TERRY-VANCOUVER OFFICE

Certificate Date: 08-SEP-97
Invoice No. : I9739513
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9739513

SAMPLE	PREP CODE		Au ppb FA+AA	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)	Cu ppm (ICP)
N173983	205	226	80	102	36	90	0.6	3.73	130	1.5	< 2	2.67	4.5	9	251	103
N173984	205	226	95	102	54	50	1.6	4.82	160	2.0	< 2	1.62	0.5	12	226	130
N173985	205	226	60	68	24	30	1.0	4.95	200	2.0	< 2	2.38	< 0.5	11	226	55
N173986	205	226	65	76	24	30	0.4	4.63	130	1.5	< 2	3.58	< 0.5	9	222	46
N173987	205	226	70	106	46	50	0.8	5.47	140	2.0	< 2	3.15	< 0.5	12	311	92
N173988	205	226	< 5	16	7.2	< 10	< 0.2	0.83	370	< 0.5	< 2	0.38	0.5	3	358	19
N173989	205	226	30	62	28	40	0.2	3.17	300	1.5	< 2	2.28	1.5	7	381	56
N173990	205	226	60	104	50	30	0.4	5.95	190	2.5	< 2	1.31	0.5	13	409	86
N173991	205	226	25	48	26	20	0.2	1.83	350	0.5	< 2	4.65	< 0.5	5	365	55
N173992	205	226	275	1530	46	30	0.4	12.05	330	4.5	< 2	1.65	< 0.5	30	175	80
N173993	205	226	590	1930	22	< 10	< 0.2	11.80	270	4.0	< 2	2.47	< 0.5	27	177	47
N173994	205	226	75	520	10.5	10	0.2	7.30	210	2.5	< 2	3.04	< 0.5	16	264	57
N173995	205	226	15	68	11.0	50	0.8	3.78	320	1.5	< 2	5.59	< 0.5	10	191	154
N173996	205	226	< 5	82	8.2	80	0.6	3.23	320	1.5	< 2	5.25	5.0	7	219	125
N173997	205	226	< 5	62	8.6	80	0.6	2.69	240	1.5	< 2	6.65	2.0	6	217	134
N173998	205	226	< 5	66	10.0	120	0.6	2.46	130	1.0	< 2	6.00	3.0	6	240	159
N173999	205	226	20	82	22	80	0.8	4.20	150	2.0	< 2	5.32	2.5	7	243	139
N174000	205	226	40	76	22	110	1.4	3.16	200	1.5	< 2	3.43	10.0	7	250	126

CERTIFICATION: _____

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Page .ber :2-B
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CERTIFICATE OF ANALYSIS A9739513

SAMPLE	PREP CODE		Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
N173983	205	226	2.33	1.80	1.30	230	25	0.02	82	4160	10	168	0.16	787	< 10	344
N173984	205	226	2.08	2.35	1.30	180	20	0.04	104	660	12	86	0.20	854	< 10	78
N173985	205	226	1.96	2.44	1.73	225	21	0.04	94	550	6	102	0.20	971	< 10	34
N173986	205	226	2.66	2.21	2.26	320	17	0.03	89	830	10	140	0.18	881	< 10	42
N173987	205	226	2.50	2.70	1.87	225	17	0.03	119	3560	8	149	0.26	1150	< 10	38
N173988	205	226	0.75	0.33	0.29	100	4	0.07	25	270	4	26	0.05	156	< 10	46
N173989	205	226	1.66	1.54	1.04	265	15	0.02	62	3540	32	145	0.12	645	< 10	128
N173990	205	226	2.16	2.88	1.00	210	33	0.07	128	2110	6	89	0.27	1420	< 10	78
N173991	205	226	2.44	0.91	2.48	530	7	0.02	52	1330	< 2	185	0.07	362	< 10	138
N173992	205	226	6.42	5.26	1.31	420	4	0.20	88	590	< 2	113	0.28	250	< 10	130
N173993	205	226	6.26	5.05	1.62	670	4	0.17	93	1240	< 2	174	0.32	270	< 10	214
N173994	205	226	3.70	3.22	1.54	830	11	0.09	74	2800	< 2	185	0.25	445	< 10	144
N173995	205	226	1.85	1.75	2.24	280	14	0.03	71	9620	< 2	292	0.15	482	< 10	64
N173996	205	226	1.70	1.54	2.01	220	17	0.02	88	9850	6	286	0.12	779	< 10	418
N173997	205	226	1.88	1.32	2.51	190	18	0.03	79	>10000	12	368	0.10	702	< 10	234
N173998	205	226	2.11	1.22	2.67	205	18	0.02	80	8450	16	326	0.09	604	< 10	304
N173999	205	226	2.06	2.03	2.57	240	14	0.03	82	7300	4	286	0.14	665	< 10	240
N174000	205	226	1.64	1.53	1.42	170	22	0.01	79	6300	12	210	0.12	845	< 10	758

CERTIFICATION: Ian Ruddle

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9740675

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9740675

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 18-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
255	1	RUSH Geo ring to approx 150 mesh
295	1	RUSH crush and split (0-3 Kg)
3202	1	Rock - save entire reject
285	1	ICP - HF digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
991	1	Au ppb: Fuse 30 g sample	FA-AAS	5	10000
956	1	Ag g/t: RUSH, aqua regia digest	AAS	0.3	350
301	1	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	1	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	1	Ba ppm	XRF	10	50000
444	1	Specific gravity S.G.	PICNOMETER	0.01	20.0
13	1	As ppm: HNO3-aqua regia digest	AAS-HYDRIDE/EDL	1	10000
22	1	Sb ppm: HCl-KClO3 digest, extrac	AAS-BKGD CORR	0.2	1000
20	1	Hg ppb: HNO3-HCl digestion	AAS-FLAMELESS	10	100000
578	1	Ag ppm: 24 element, rock & core	AAS	0.2	100.0
573	1	Al %: 24 element, rock & core	ICP-AES	0.01	25.0
565	1	Ba ppm: 24 element, rock & core	ICP-AES	10	10000
575	1	Be ppm: 24 element, rock & core	ICP-AES	0.5	1000
561	1	Bi ppm: 24 element, rock & core	ICP-AES	2	10000
576	1	Ca %: 24 element, rock & core	ICP-AES	0.01	25.0
562	1	Cd ppm: 24 element, rock & core	ICP-AES	0.5	500
563	1	Co ppm: 24 element, rock & core	ICP-AES	1	10000
569	1	Cr ppm: 24 element, rock & core	ICP-AES	1	10000
577	1	Cu ppm: 24 element, rock & core	ICP-AES	1	10000
566	1	Fe %: 24 element, rock & core	ICP-AES	0.01	25.0
584	1	K %: 24 element, rock & core	ICP-AES	0.01	10.00
570	1	Mg %: 24 element, rock & core	ICP-AES	0.01	15.00
568	1	Mn ppm: 24 element, rock & core	ICP-AES	5	10000
554	1	Mo ppm: 24 element, rock & core	ICP-AES	1	10000
583	1	Na %: 24 element, rock & core	ICP-AES	0.01	10.00
564	1	Ni ppm: 24 element, rock & core	ICP-AES	1	10000
559	1	P ppm: 24 element, rock & core	ICP-AES	10	10000
560	1	Pb ppm: 24 element, rock & core	AAS	2	10000
582	1	Sr ppm: 24 element, rock & core	ICP-AES	1	10000
579	1	Ti %: 24 element, rock & core	ICP-AES	0.01	10.00
572	1	V ppm: 24 element, rock & core	ICP-AES	1	10000
556	1	W ppm: 24 element, rock & core	ICP-AES	10	10000
558	1	Zn ppm: 24 element, rock & core	ICP-AES	2	10000

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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British Columbia, Canada V7J 2C1
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To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 18-SEP-97
Invoice No. :I9740675
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9740675

SAMPLE	PREP CODE		Au ppb RUSH	Ag g/t RUSH	Cu %	Pb %	ZnBa %	(XRFSpec ppm	Gr S.G.	As ppm	Sb ppm	Hg ppb	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
M175876	255	295	290	25.2	0.08	0.12	2.04	4200	2.79	140	27	7260	20.0	7.11	180	3.5	< 2	0.66	228	3	198

CERTIFICATION: Stewart Bradley

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 18-SEP-97
Invoice No. :19740675
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9740675

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	P ppm (ICP)	Pb ppm AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	W ppm (ICP)	Zn ppm (ICP)
M175876	255	295	768	4.55	3.11	0.69	140	17	0.24	45	930	790	47	0.14	370	< 10	>10000

CERTIFICATION: [signature]

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
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PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

A9740677

Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

CERTIFICATE A9740677

(GP W) - WESTMIN RESOURCES LTD.

Project: WOLVERINE
P.O. # :

Samples submitted to our lab in Vancouver, BC.
This report was printed on 16-SEP-97.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
258	1	RUSH Assay ring approx 150 mesh
295	1	RUSH crush and split (0-3 Kg)
3202	1	Rock - save entire reject
290	1	Assay HF ICP digestion charge

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
955	1	Au g/tonne: RUSH, 1 assay ton	FA-GRAVIMETRIC	0.07	500.0
473	1	Ag g/tonne: RUSH	FA-GRAVIMETRIC	3	1000
301	1	Cu %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
312	1	Pb %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
316	1	Zn %: Conc. Nitric-HCL dig'n	AAS	0.01	100.0
912	1	Ba ppm	XRF	10	50000
444	1	Specific gravity S.G.	PICNOMETER	0.01	20.0
331	1	As %: HClO4-HNO3 digestion	AAS	0.01	100.0
348	1	Sb %: HNO3-chlorate-HCl-ascorbic	AAS	0.01	100.00
344	1	Hg %: Aqua regia-MIBK	AAS	0.001	100.00
1263	1	Ag ppm: high grade 24 element	AAS	1	200
4031	1	Al %: A22 ICP package	ICP-AES	0.05	30.0
4032	1	Ba ppm: A22 ICP package	ICP-AES	100	50000
4033	1	Be ppm: A22 ICP package	ICP-AES	10	10000
4034	1	Bi ppm: A22 ICP package	ICP-AES	20	50000
4035	1	Ca %: A22 ICP package	ICP-AES	0.05	30000
4036	1	Cd ppm: A22 ICP package	ICP-AES	10	10000
4037	1	Co ppm: A22 ICP package	ICP-AES	10	100000
4038	1	Cr ppm: A22 ICP package	ICP-AES	10	100000
4039	1	Cu ppm: A22 ICP package	ICP-AES	10	100000
4040	1	Fe %: A22 ICP package	ICP-AES	0.05	30.0
4041	1	K %: A22 ICP package	ICP-AES	0.1	20.0
4042	1	Mg %: A22 ICP package	ICP-AES	0.05	30.0
4043	1	Mn ppm: A22 ICP package	ICP-AES	10	100000
4044	1	Mo ppm: A22 ICP package	ICP-AES	10	100000
4045	1	Na %: A22 ICP package	ICP-AES	0.05	20.0
4046	1	Ni ppm: A22 ICP package	ICP-AES	10	100000
4075	1	Pb %: high grade 24 element	AAS	0.001	10.00
4047	1	Sr ppm: A22 ICP package	ICP-AES	10	100000
4048	1	Ti %: A22 ICP package	ICP-AES	0.05	20.0
4049	1	V ppm: A22 ICP package	ICP-AES	10	50000
4050	1	Zn ppm: A22 ICP package	ICP-AES	20	100000

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
PHONE: 604-984-0221 FAX: 604-984-0218

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-A
Total Pages :1
Certificate Date: 16-SEP-97
Invoice No. :I9740677
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9740677

SAMPLE	PREP CODE		Au g/t RUSHRUSH	Ag g/t FA	Cu %	Pb %	ZnBa %	(XRFSpec ppm	Gr S.G.	As %	Sb %	Hg %	Ag ppm AAS	Al % (ICP)	Ba ppm (ICP)	Be ppm (ICP)	Bi ppm (ICP)	Ca % (ICP)	Cd ppm (ICP)	Co ppm (ICP)	Cr ppm (ICP)
M175877	258	295	1.92	416	0.80	0.79	13.30	700	4.10	0.08	0.16	0.004	>200	0.85	500	< 10	20	1.15	1530	110	120

CERTIFICATION: Ian Buchler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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Project : WOLVERINE
Comments: ATTN: DAVID TERRY - VANCOUVER OFFICE

Page Number :1-B
Total Pages :1
Certificate Date: 16-SEP-97
Invoice No. :I9740677
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9740677

SAMPLE	PREP CODE		Cu ppm (ICP)	Fe % (ICP)	K % (ICP)	Mg % (ICP)	Mn ppm (ICP)	Mo ppm (ICP)	Na % (ICP)	Ni ppm (ICP)	Pb % AAS	Sr ppm (ICP)	Ti % (ICP)	V ppm (ICP)	Zn ppm (ICP)
M175877	258	295	7820	28.3	0.4	0.15	400	30	0.05	40	0.790	10	< 0.05	180	>100000

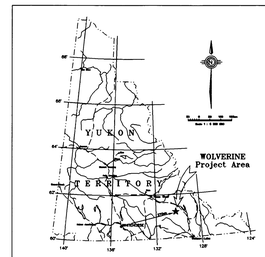
CERTIFICATION: Ian Bradley

1997 SUMMARY REPORT ON THE FOOT 1 - 20, 37 - 80, 83 - 94, 180 - 188, 215 - 231, 11A - 12A, KINK 3, LOW 13 - 14

APPENDED MAPS AND SECTIONS
FIGURES 3, 4, and 6-30

VOLUME 5





Location Map

UTM GRID NORTH

* note: Grid North is 33° East of UTM North.

LEGEND

- WV97-103 — Diamond Drillhole Collar and Identifier
- WESTMIN – ATNA Joint Venture
- 232 — Claim boundary and Identifier
- Lake
- Stream
- 1200 — Topographic Contour (contour Interval = 25m)

* note: detailed claim information provided by COMINCO LIMITED

WESTMIN RESOURCES LIMITED
ATNA Resources Ltd.

WOLVERINE PROJECT

Drillhole Location Map

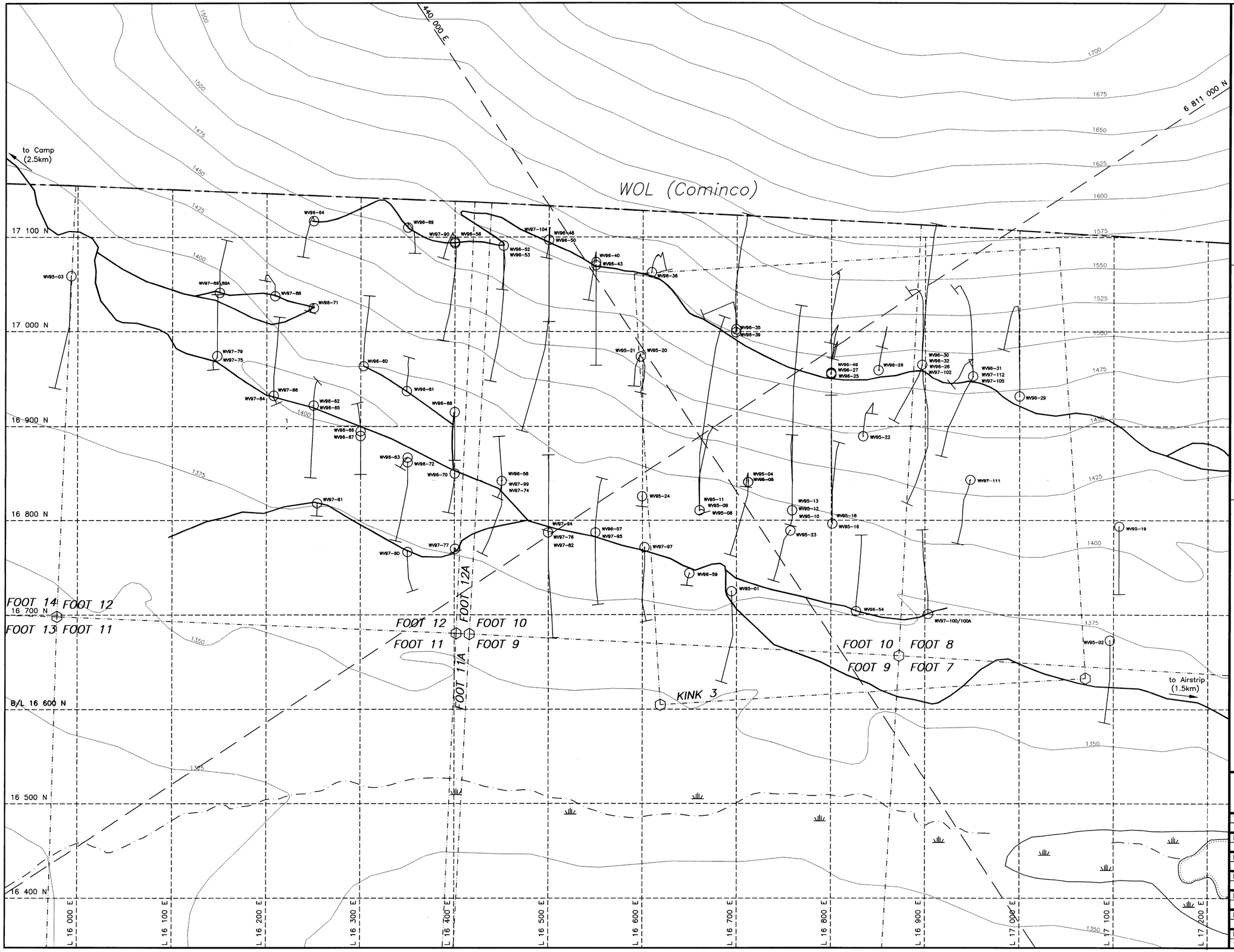
FOOT Claim Block

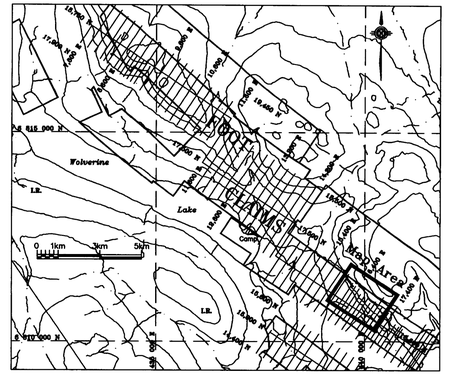
Work By	WESTMIN
Date Drafted	Dec. 17, 1996
Drafted By	* A. Turner
Date Revised	Feb. 16, 1998
Revised By	A. Turner
N.T.S. Number	105 C/8
File Name	FIGURE30.DWG

200 0 200 400 600m
SCALE 1 : 10,000

Figure 3.0

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Location Map

UTM
North

Grid North is
33° East of
UTM North

LEGEND

- Diamond Drillhole Collar, Planview Trace, and Identifier (WV96-36)
- WESTMIN – ATNA Joint Venture Property Boundary
- Claim Post and Boundary with Identifier (FOOT 7)
- Pond
- Stream
- Swamp
- Topographic Contour (contour Interval = 25m) (1200)
- Road
- Grid Lines (N–S lines cut at 50m spacing)

WESTMIN

WESTMIN RESOURCES LIMITED
ATNA Resources Ltd.

Work By	WESTMIN
Date Drafted	Dec. 15, 1997
Drafted By	A. Turner
Date Revised	
Revised By	
N.T.S. Number	105 G/8
File Name	COLARMAP.DWG

WOLVERINE PROJECT

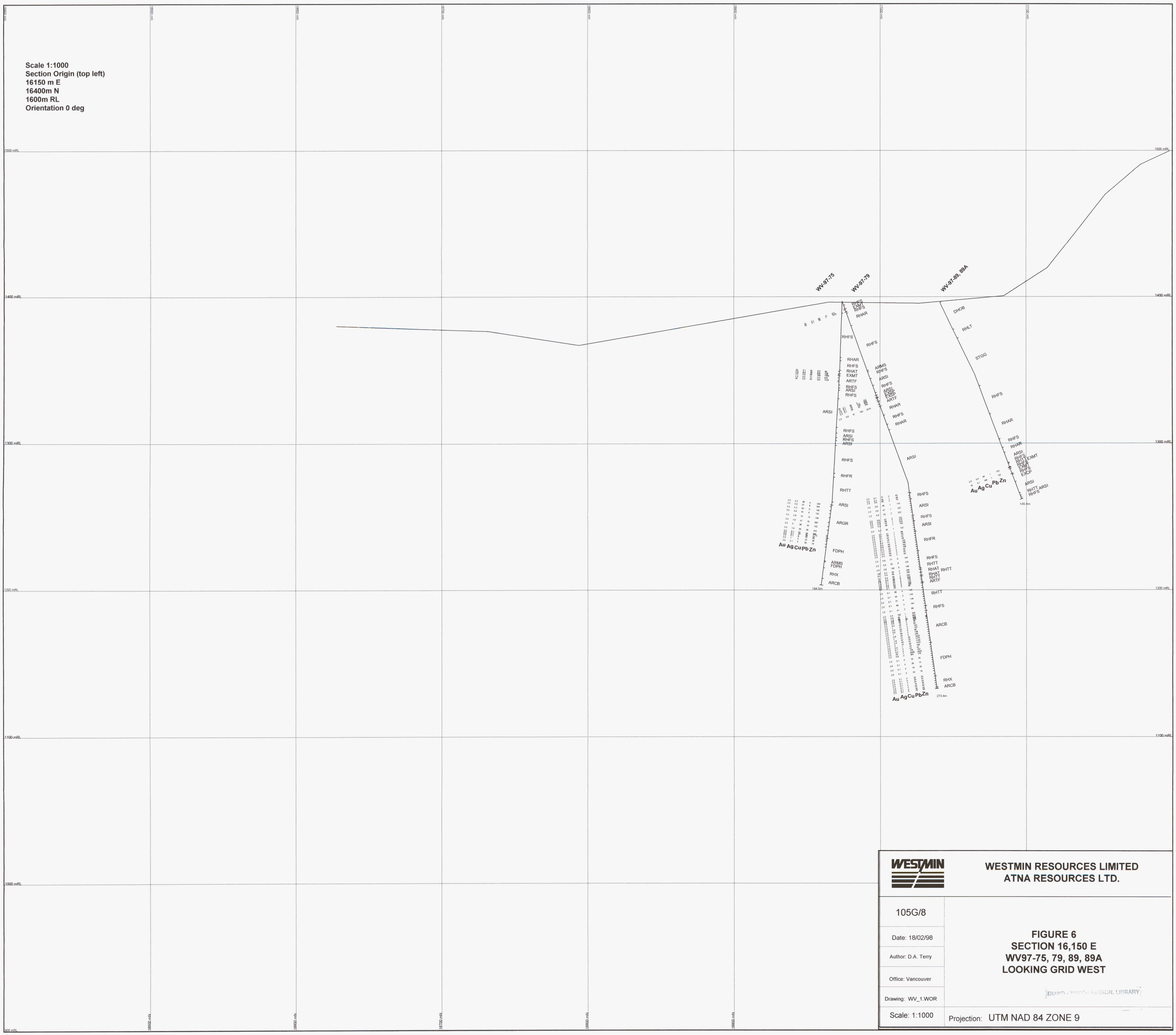
Wolverine Deposit Drillhole Location Map

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0 50 100 150m
SCALE 1 : 2,000

Figure 4.0

Scale 1:1000
Section Origin (top left)
16150 m E
16400m N
1600m RL
Orientation 0 deg



WESTMIN

WESTMIN RESOURCES LIMITED
ATNA RESOURCES LTD.

105G/8

Date: 18/02/98

Author: D.A. Terry

Office: Vancouver

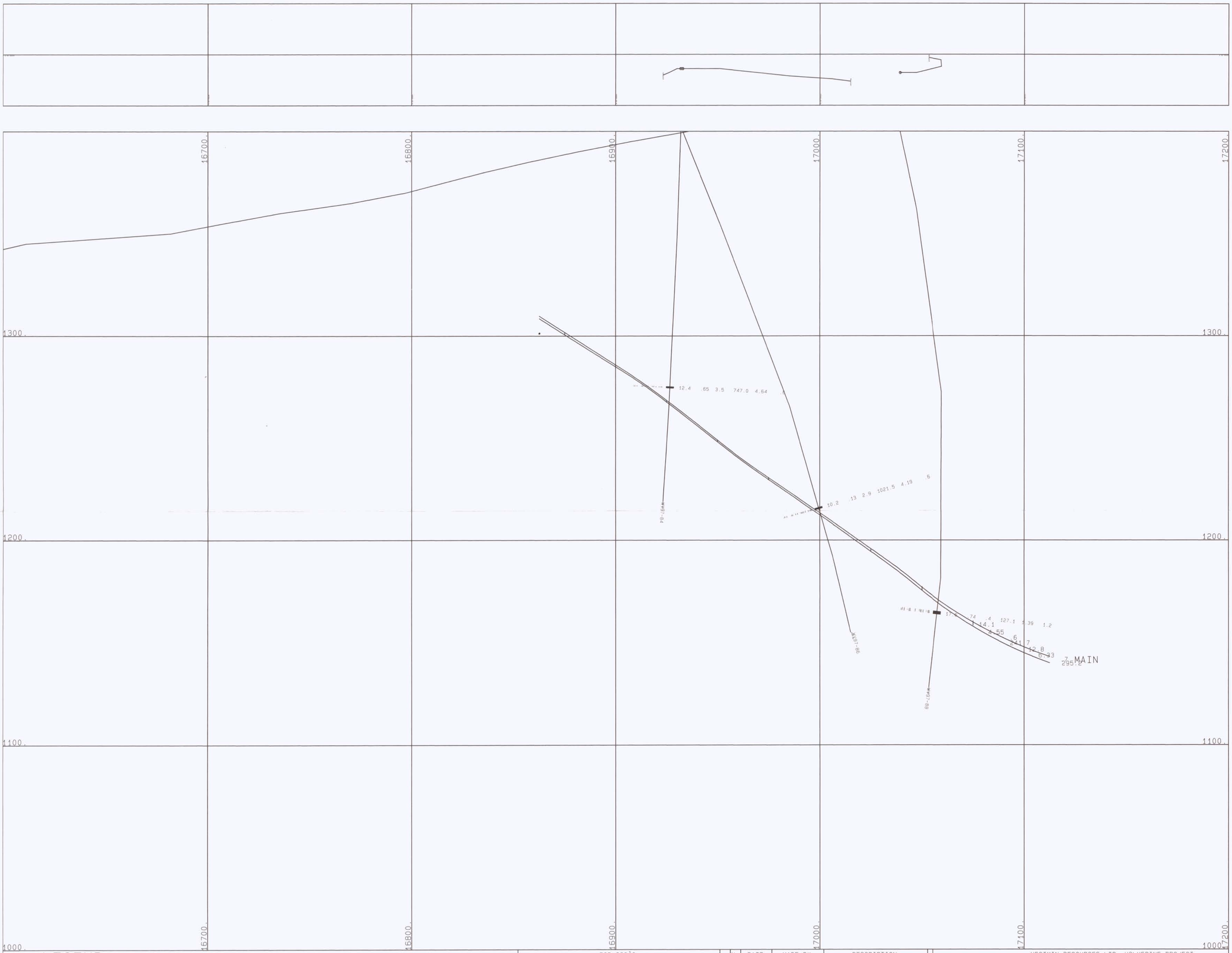
Drawing: WV_1.WOR

Scale: 1:1000

FIGURE 6
SECTION 16,150 E
WV97-75, 79, 89, 89A
LOOKING GRID WEST

[DIAND - MINING DIVISION, LIBRARY]

Projection: UTM NAD 84 ZONE 9



LEGEND

DH GRADES

- ZN < 5.0 %
- ZN < 10.0 %
- ZN < 15.0 %
- ZN < 20.0 %
- ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
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	2			
	3			
	4			
	5			

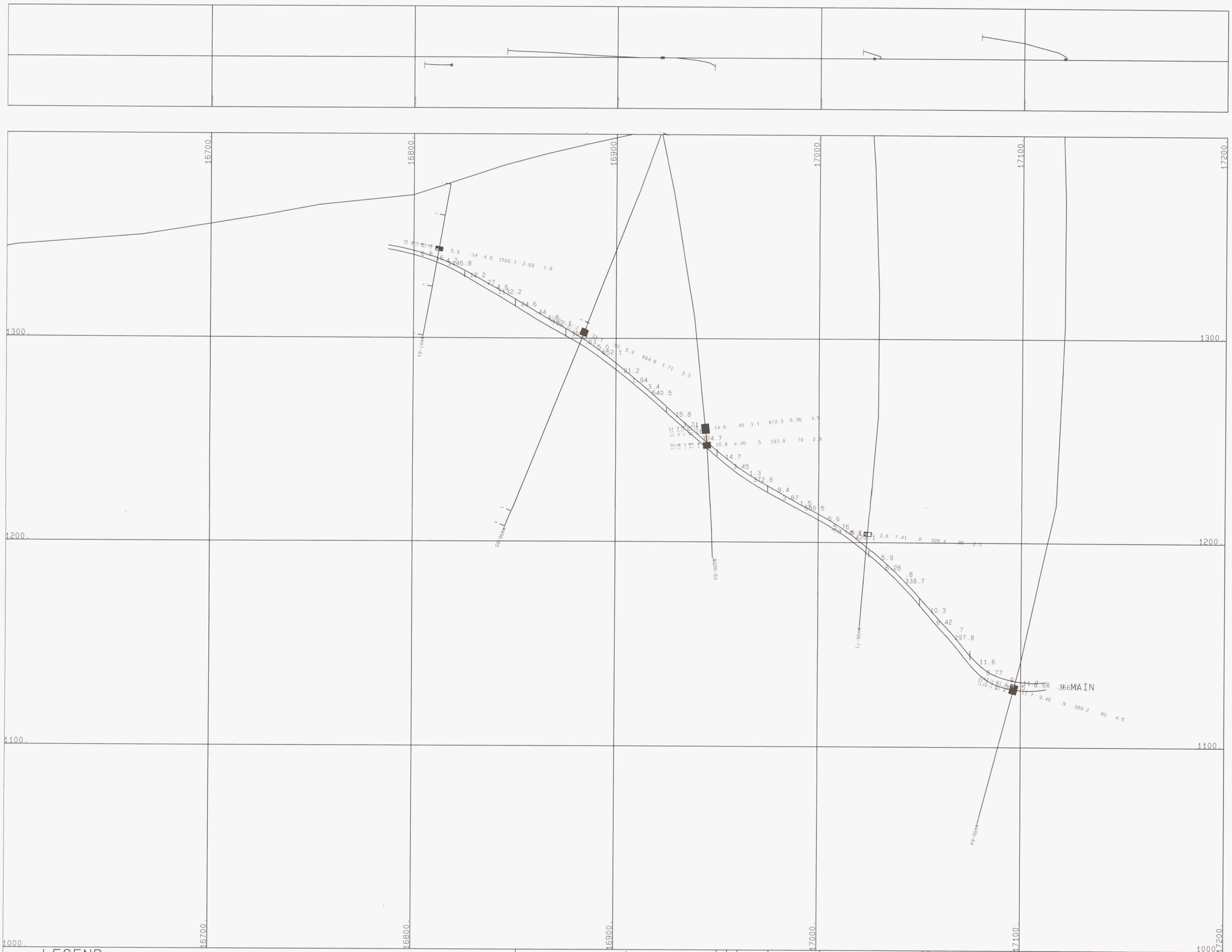
DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16200E Asy Cmp GSM Zn Cu Au Ag Pb (Length)

YUKON - YUKON REGION, LIBRARY

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16200e.plt



LEGEND

DH GRADES

ZN < 5.0 %
ZN < 10.0 %
ZN < 15.0 %
ZN < 20.0 %
ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
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	3			
	4			
	5			

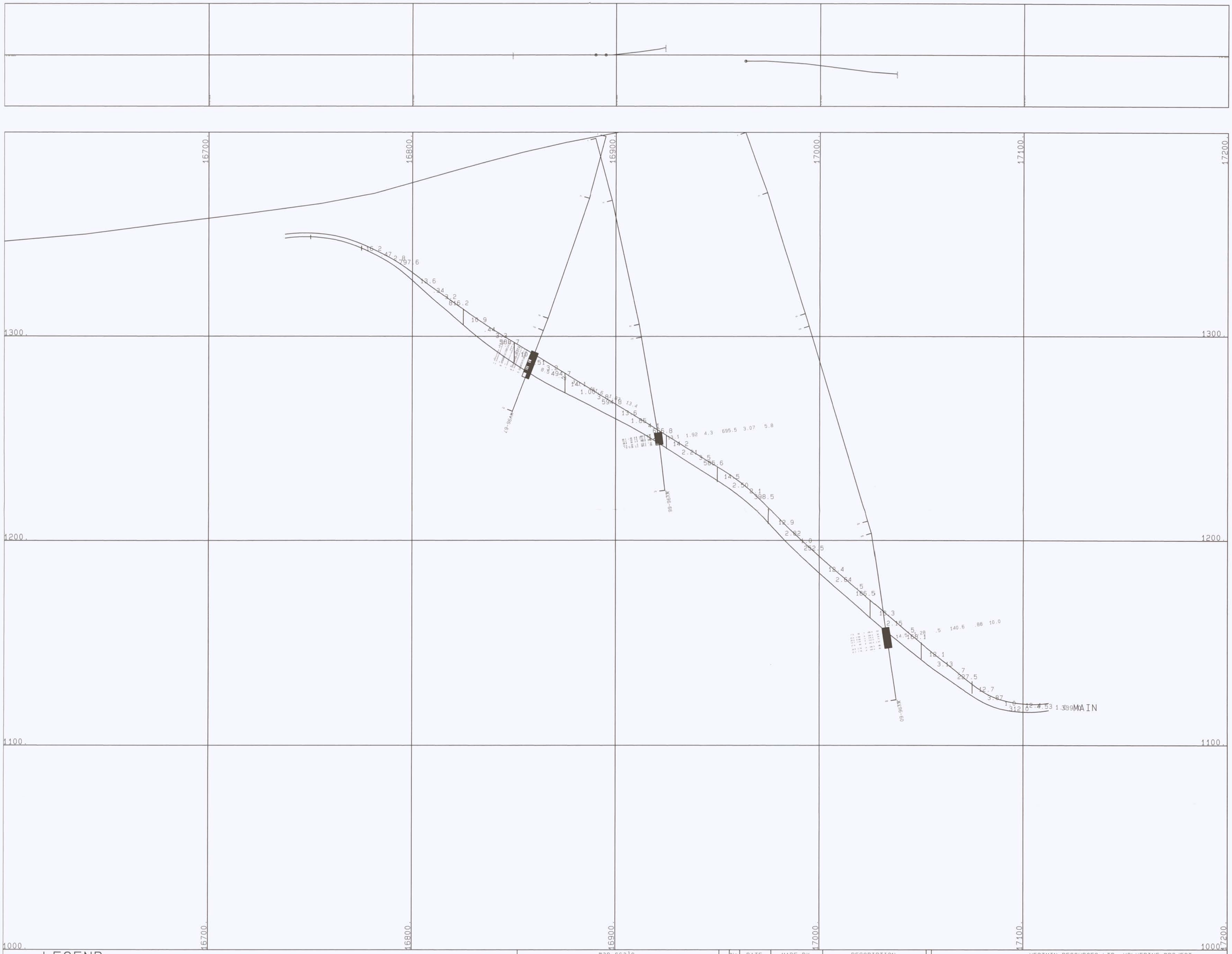
DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16250E Asy Cmp GSM Zn Cu Au Ag Pb (Length)

DIAND - YUKON REGION, LIBRARY

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16250e.plt



LEGEND

DH GRADES

- ZN < 5.0 %
- ZN < 10.0 %
- ZN < 15.0 %
- ZN < 20.0 %
- ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
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	2			
	3			
	4			
	5			

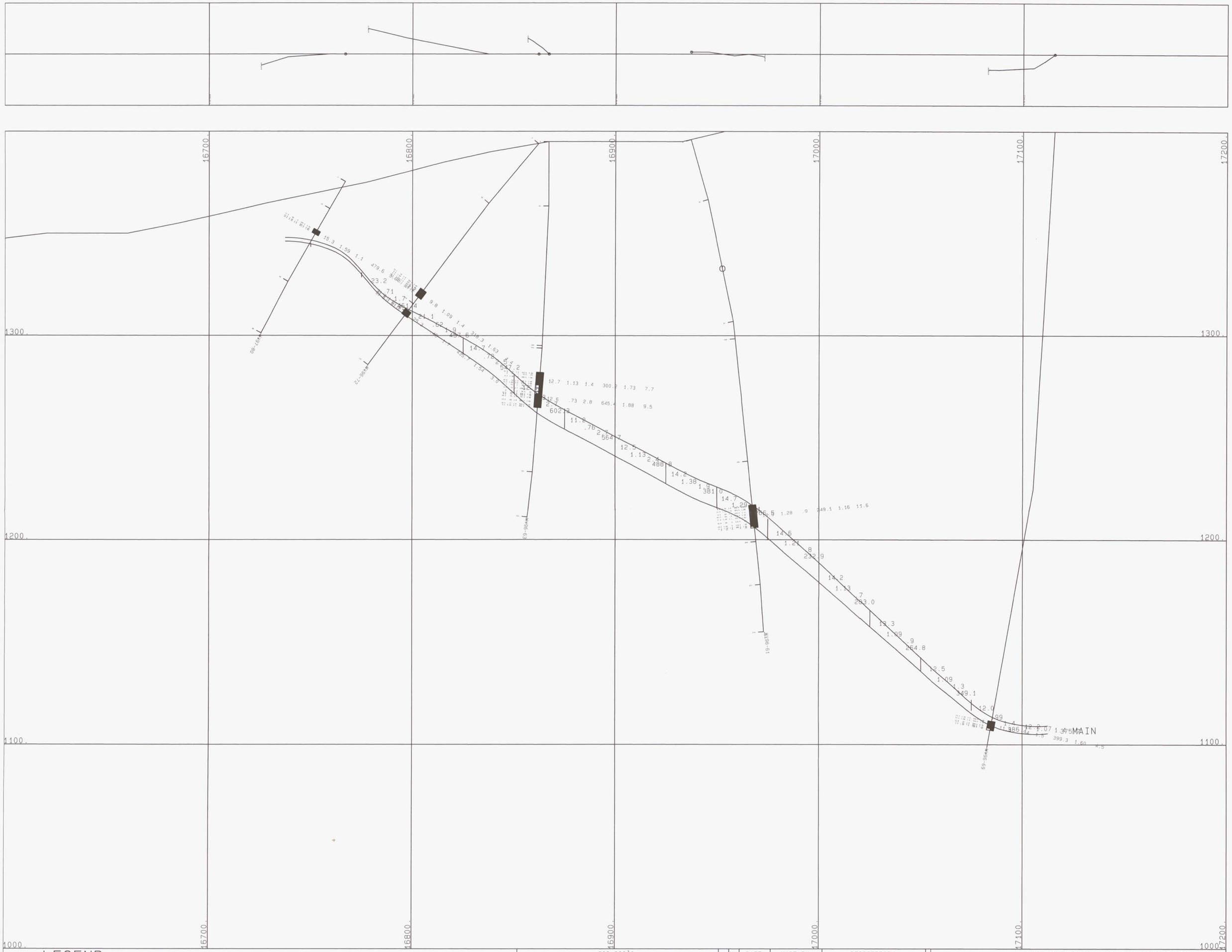
DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16300E Asy Cmp GSM Zn Cu Au Ag Pb (Length)

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MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16300e.plt



LEGEND

DH GRADES

- ZN < 5.0 %
- ZN < 10.0 %
- ZN < 15.0 %
- ZN < 20.0 %
- ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
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	3			
	4			
	5			

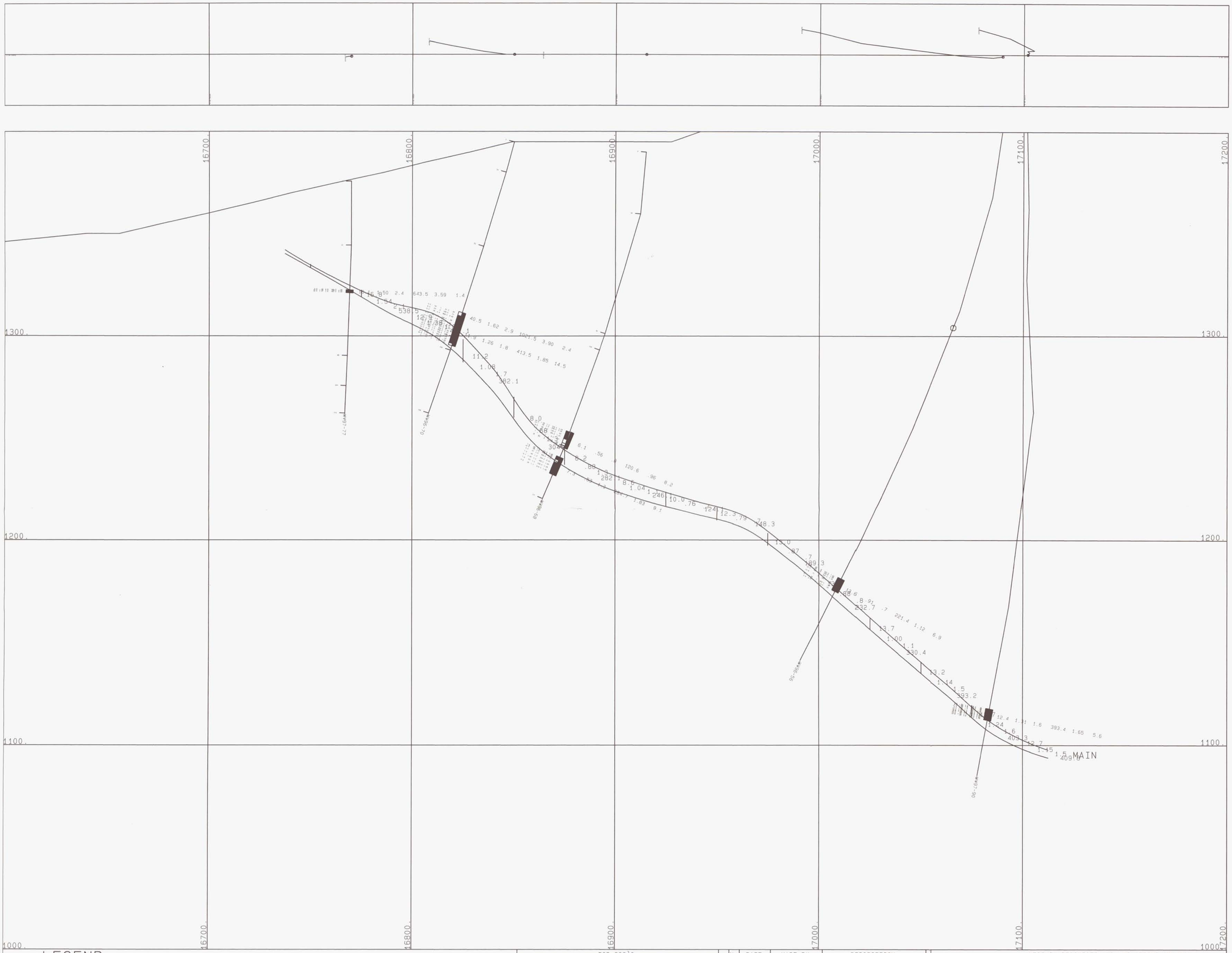
DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16350E Asy Cmp GSM Zn Cu Au Ag Pb (Length)

DIAND - YUKON REGION, LIBRARY

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1: 1000.M	16350e.plt



LEGEND

DH GRADES

- ZN < 5.0 %%
- ZN < 10.0 %%
- ZN < 15.0 %%
- ZN < 20.0 %%
- ZN > 20.0 %%

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
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	2			
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	4			
	5			

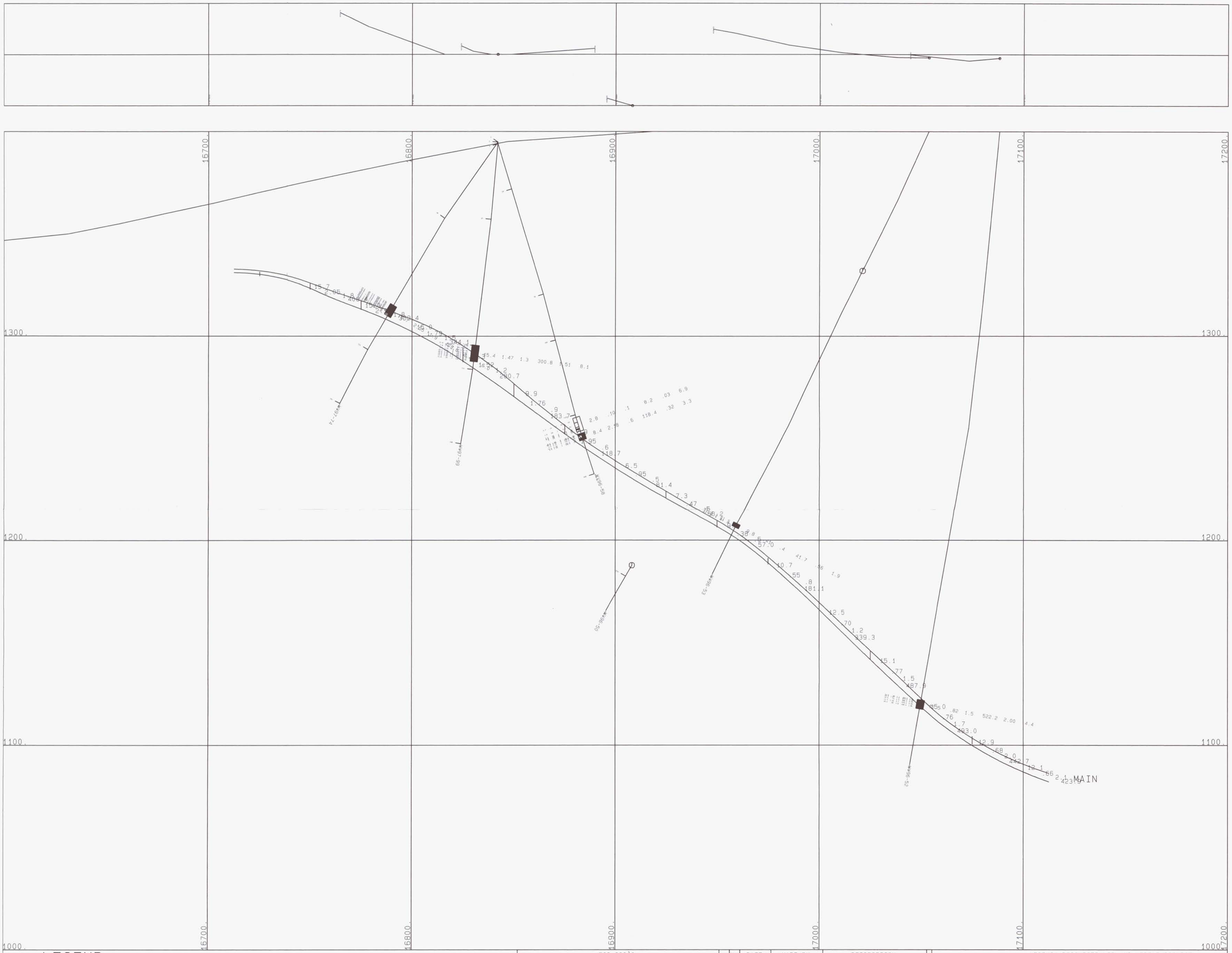
DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16400E Asy Cmp GSM Zn Cu Au Ag Pb (Length)

DIAND - YUKON REGION, LIBRARY

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16400e.plt



LEGEND

DH GRADES

ZN < 5.0 %
ZN < 10.0 %
ZN < 15.0 %
ZN < 20.0 %
ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
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	2			
	3			
	4			
	5			

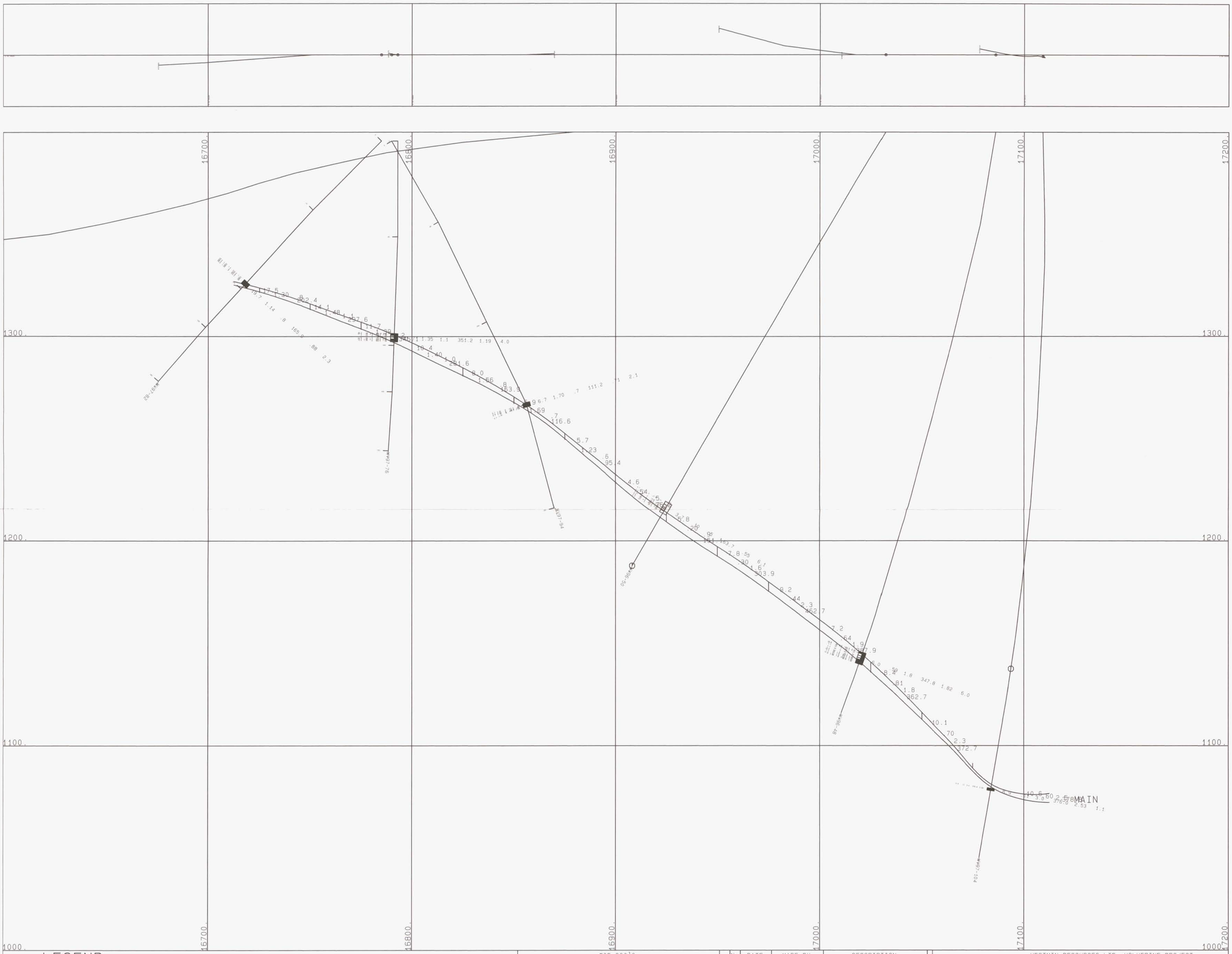
DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16450E Asy Cmp GSM Zn Cu Au Ag Pb (Length)

DIAND - YUKON REGION, LIBRARY

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16450e.plt



LEGEND

DH GRADES

- ZN < 5.0 %
- ZN < 10.0 %
- ZN < 15.0 %
- ZN < 20.0 %
- ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
	1			
	2			
	3			
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	5			

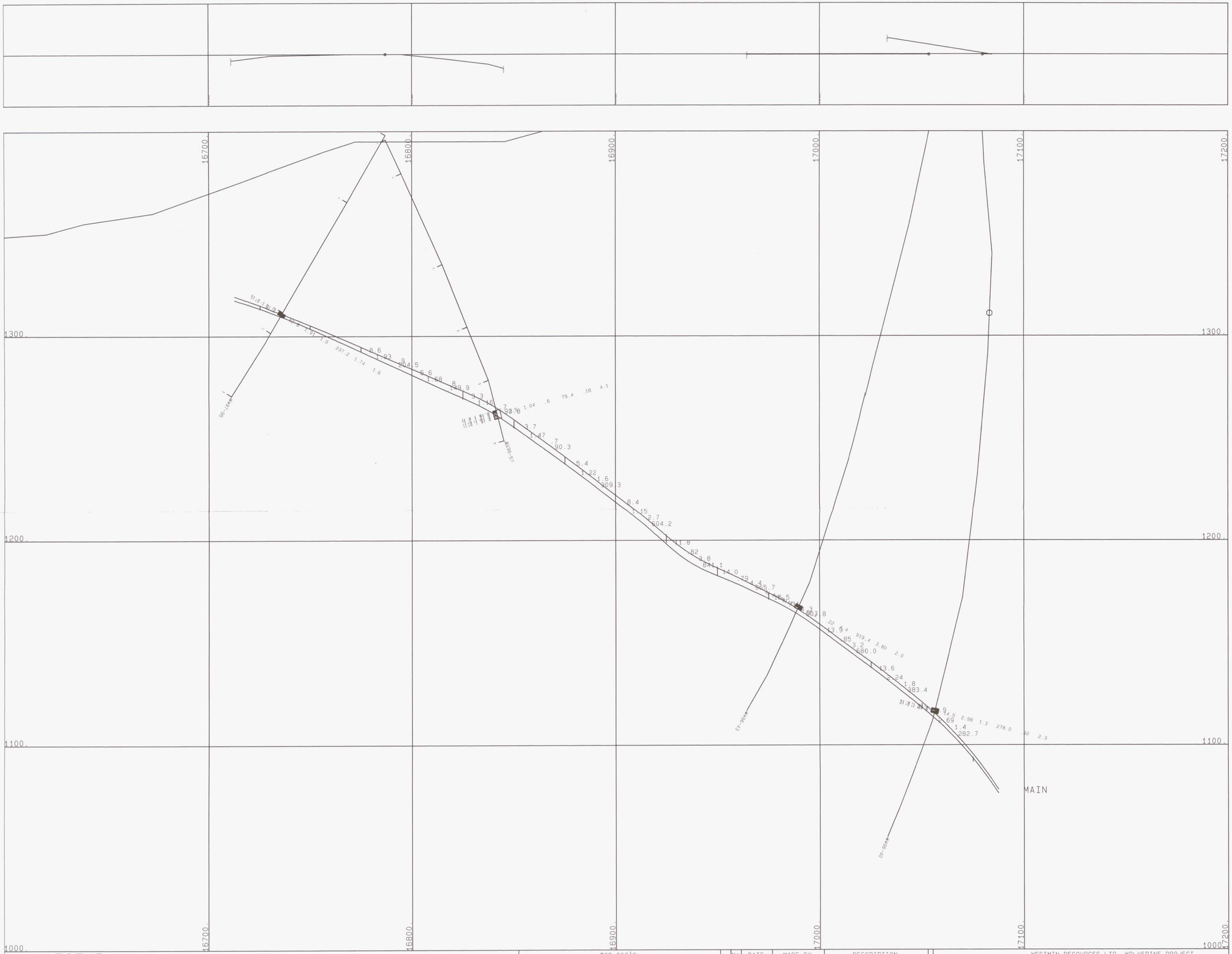
DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16500E Asy Cmp GSM Zn Cu Au Ag Pb (Length)

DIAND - YUKON REGION, LIBRARY

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16500e.plt



LEGEND

DH GRADES

- ZN < 5.0 %
- ZN < 10.0 %
- ZN < 15.0 %
- ZN < 20.0 %
- ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
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	2			
	3			
	4			
	5			

DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16550E Asy Cmp GSM Zn Cu Au Ag Pb (Length)

INDIAN - YUKON REGION, LIBRARY

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16550e.plt



LEGEND

DH GRADES

- ZN < 5.0 %
- ZN < 10.0 %
- ZN < 15.0 %
- ZN < 20.0 %
- ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16600E Asy Cmp GSM Zn Cu Au Ag Pb (Length)

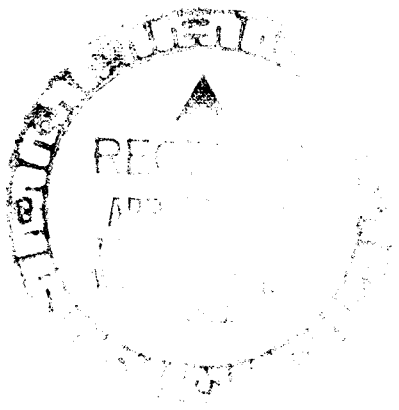
DIAND - YUKON REGION. LIBRARY

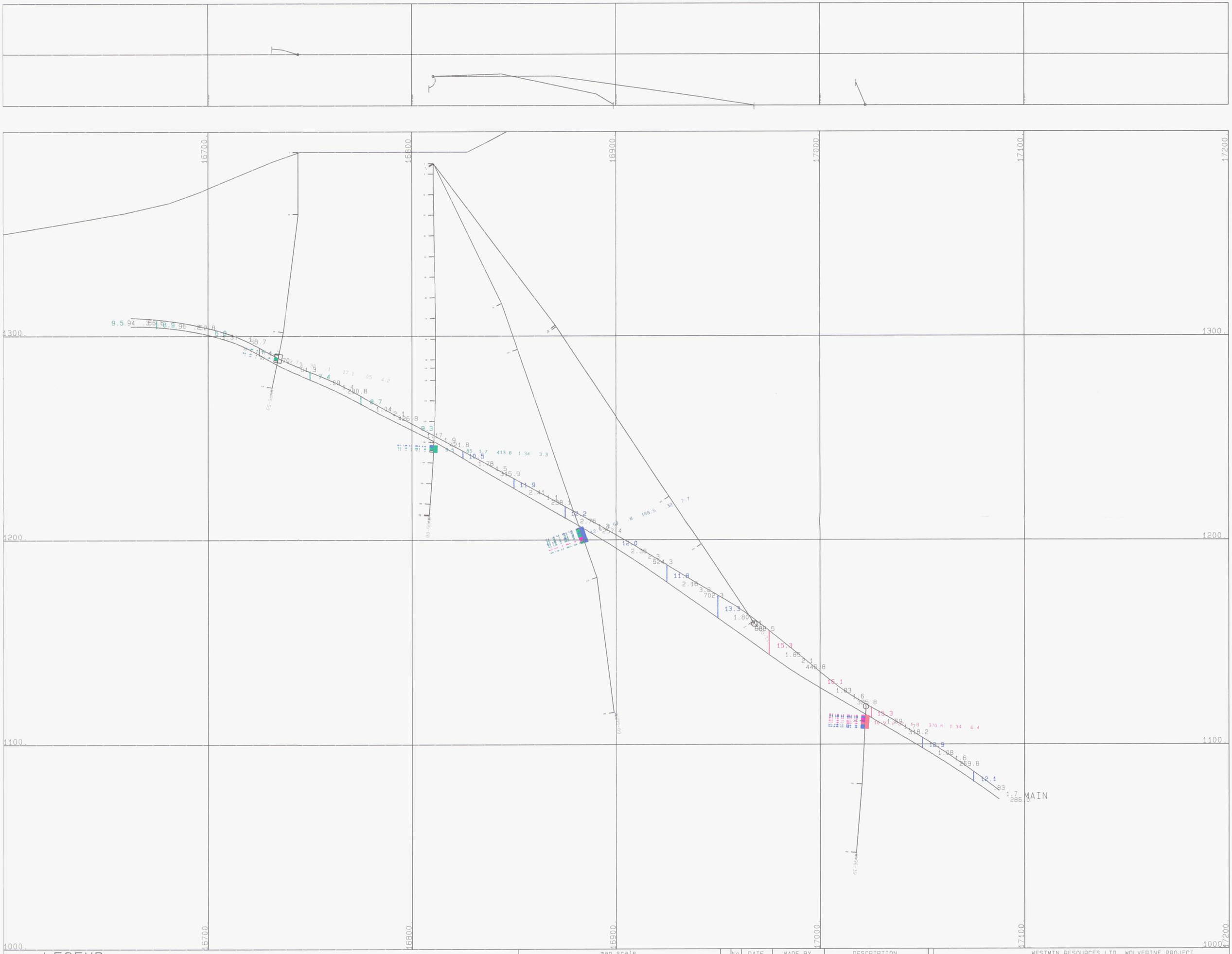
MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16600e.plt

1997 SUMMARY REPORT ON THE FOOT 1 - 20, 37 - 80, 83 - 94, 180 - 188, 215 - 231, 11A - 12A, KINK 3, LOW 13 - 14

APPENDED MAPS AND SECTIONS
FIGURES 3, 4, and 6-30

VOLUME 6





LEGEND

DH GRADES

- ZN < 5.0 %
- ZN < 10.0 %
- ZN < 15.0 %
- ZN < 20.0 %
- ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
	1			
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	3			
	4			
	5			

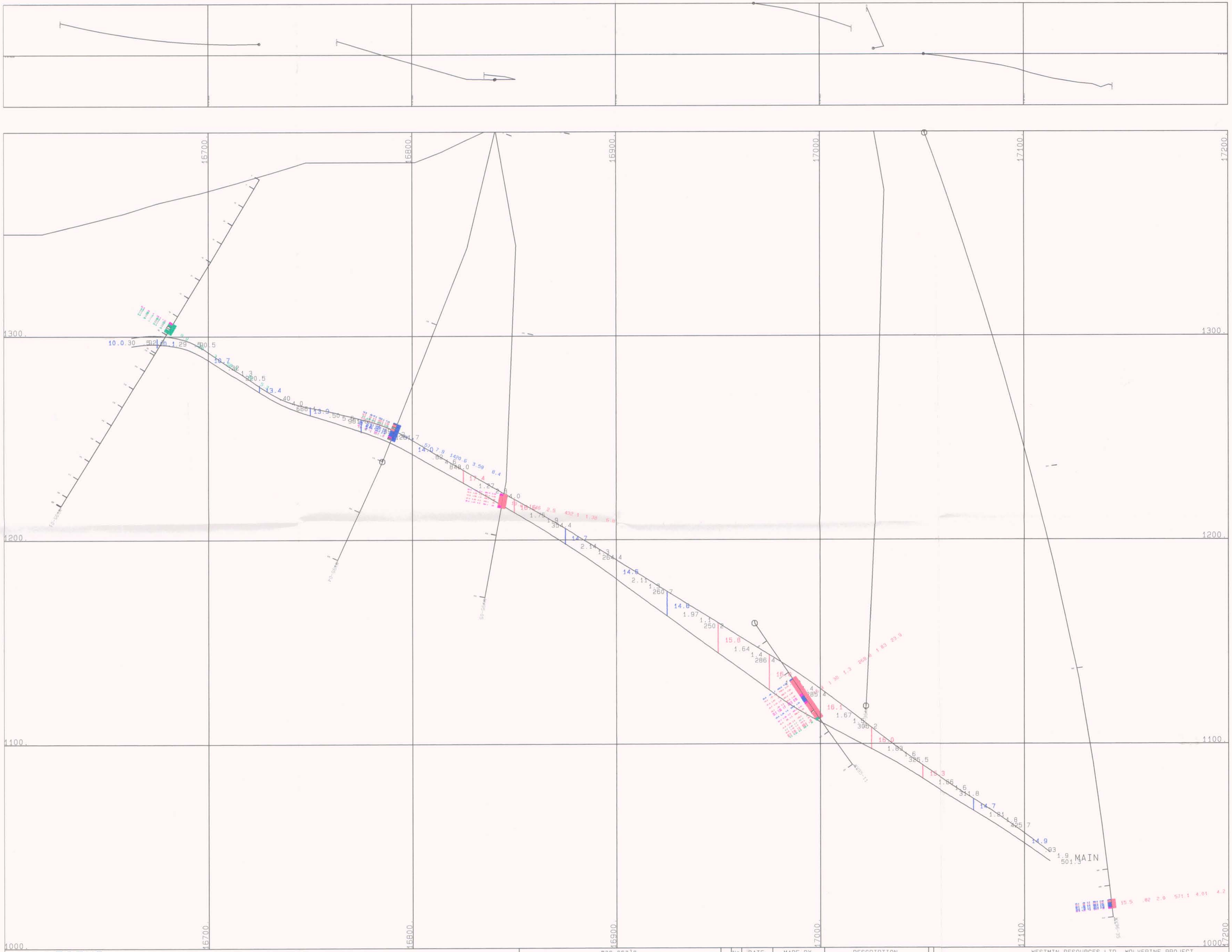
DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16650E Asy Cmp GSM Zn Cu Au Ag Pb (Length)

DIAND - YUKON REGION, LIBRARY

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16650e.plt



LEGEND

DH GRADES

- ZN < 5.0 %
- ZN < 10.0 %
- ZN < 15.0 %
- ZN < 20.0 %
- ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

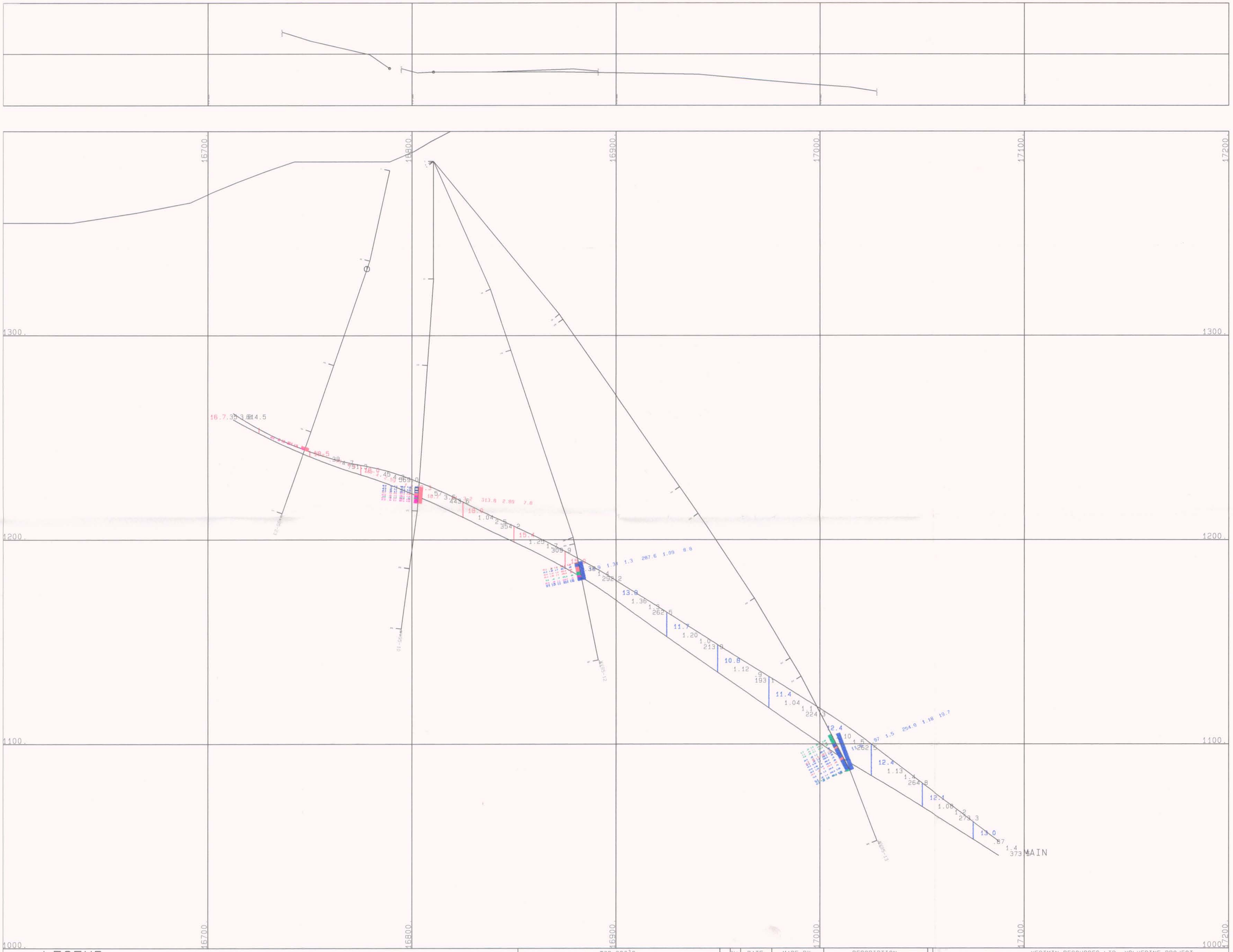
REVISIONS	No	DATE	MADE BY	DESCRIPTION
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	2			
	3			
	4			
	5			

DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16700E Asy Cmp GSM Zn Cu Au Ag Pb (Length)

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16700e.plt



LEGEND

DH GRADES

- ZN < 5.0 %
- ZN < 10.0 %
- ZN < 15.0 %
- ZN < 20.0 %
- ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
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	2			
	3			
	4			
	5			

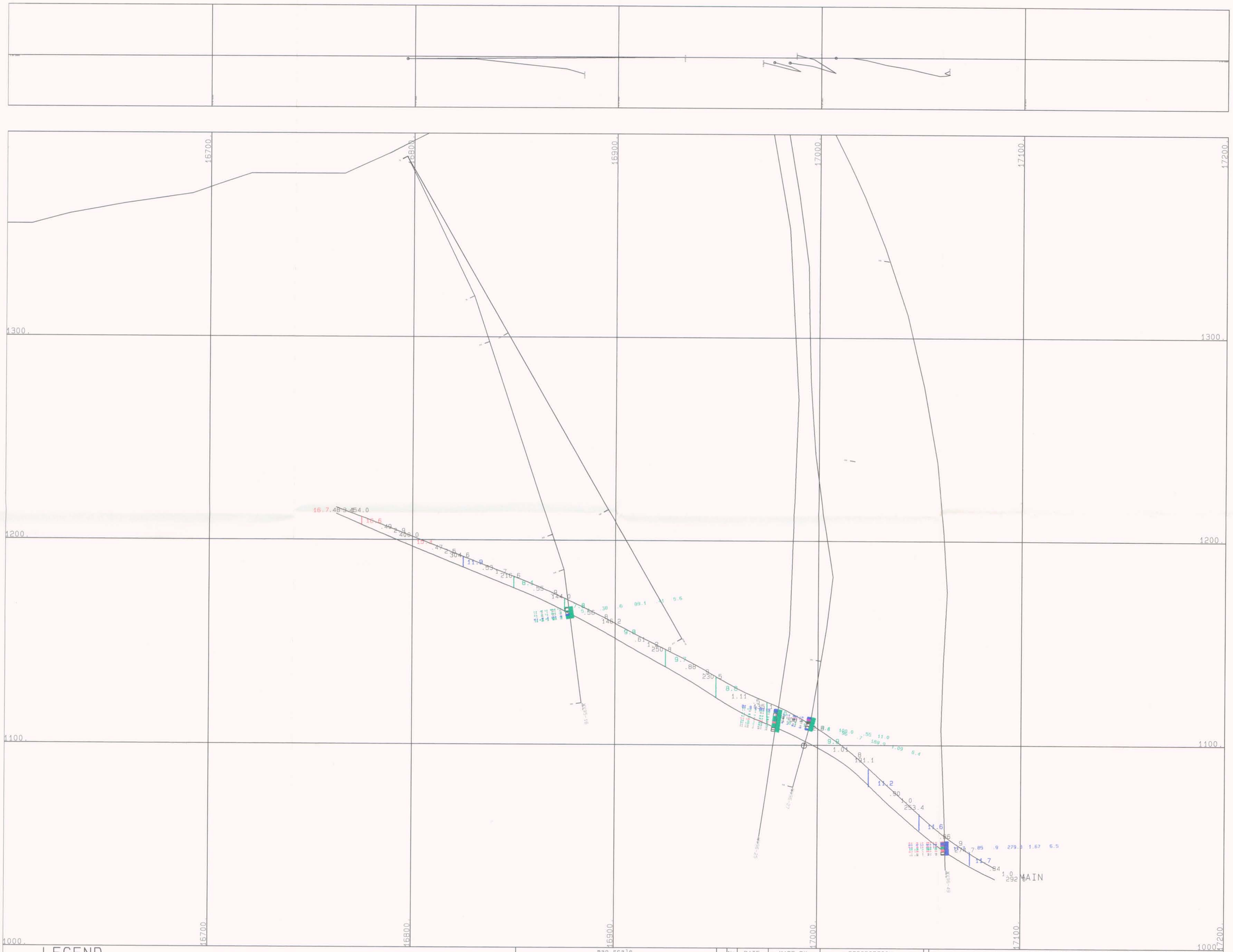
DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16750E Asy Cmp GSM
Zn Cu Au Ag Pb (Length)

YUKON REGION, LIBRARY

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16750e.plt



LEGEND

DH GRADES

- ZN < .5.0 %
- ZN < 10.0 %
- ZN < 15.0 %
- ZN < 20.0 %
- ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
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	2			
	3			
	4			
	5			

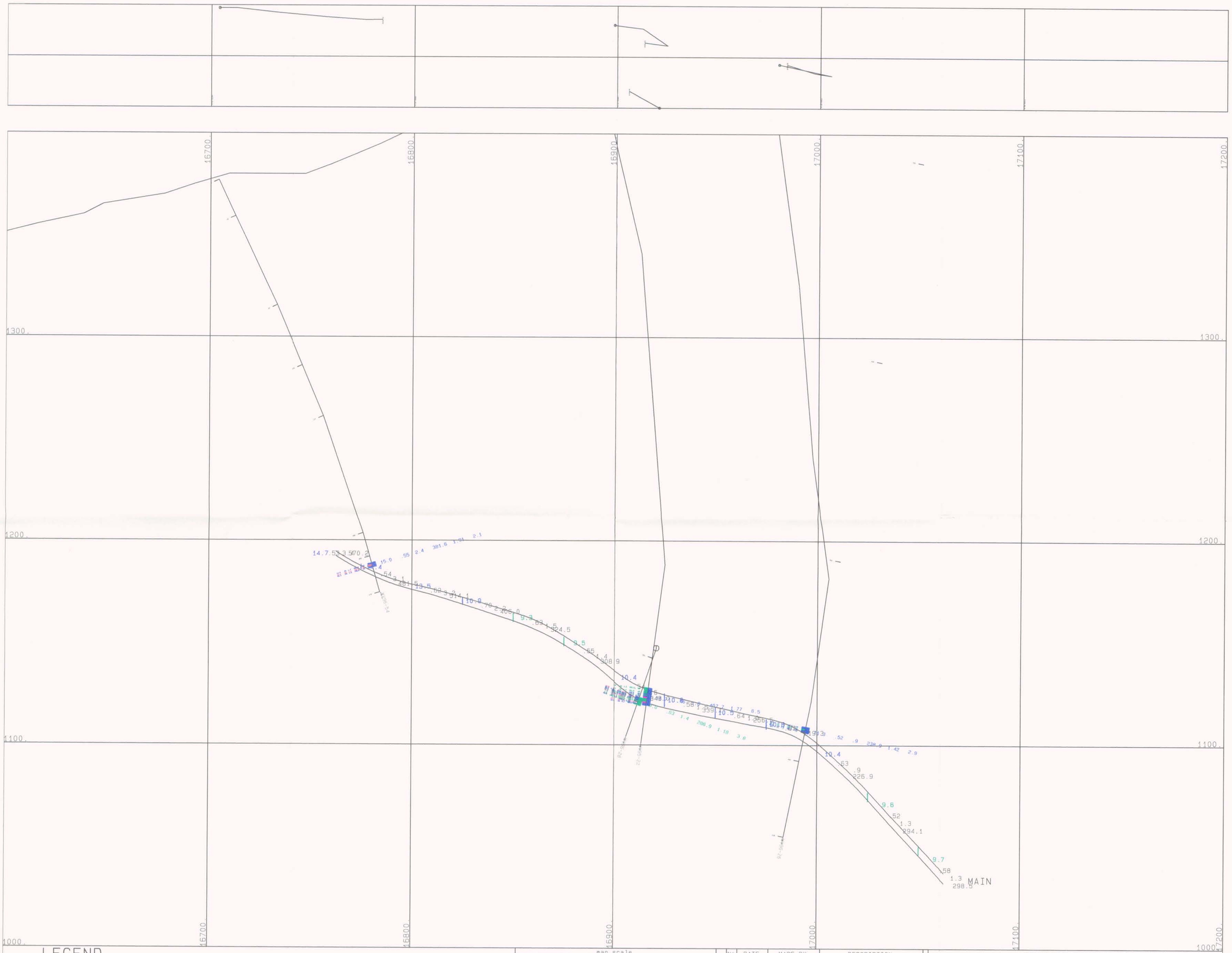
DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16800E Asy Cmp GSM Zn Cu Au Ag Pb (Length)

YUKON REGION, LIBRARY

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16800e.plt



LEGEND

DH GRADES

- ZN < 5.0 %
- ZN < 10.0 %
- ZN < 15.0 %
- ZN < 20.0 %
- ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

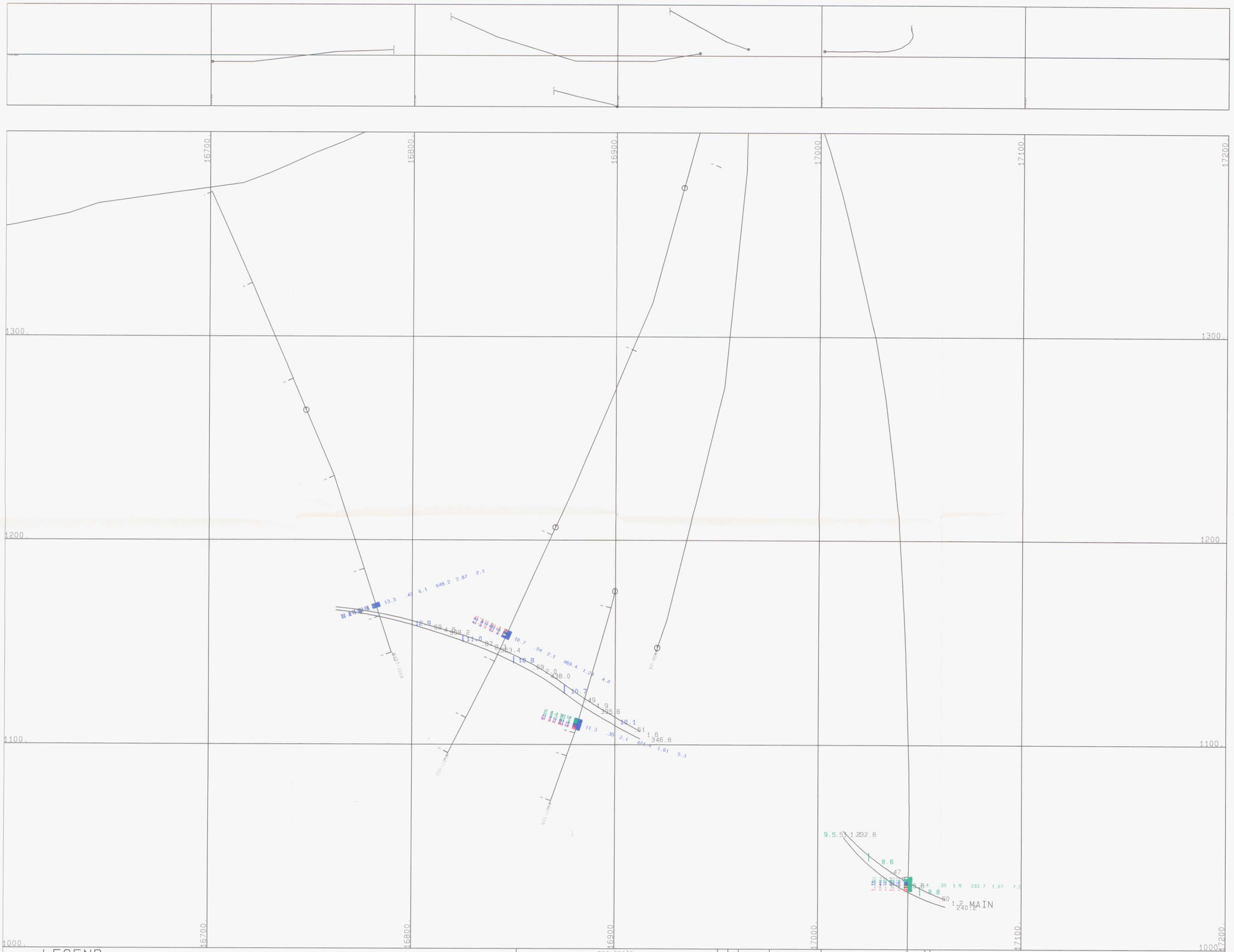
DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16850E Asy Cmp GSM Zn Cu Au Ag Pb (Length)

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MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16850e.plt



LEGEND

DH GRADES

- ZN < 5.0 %
- ZN < 10.0 %
- ZN < 15.0 %
- ZN < 20.0 %
- ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

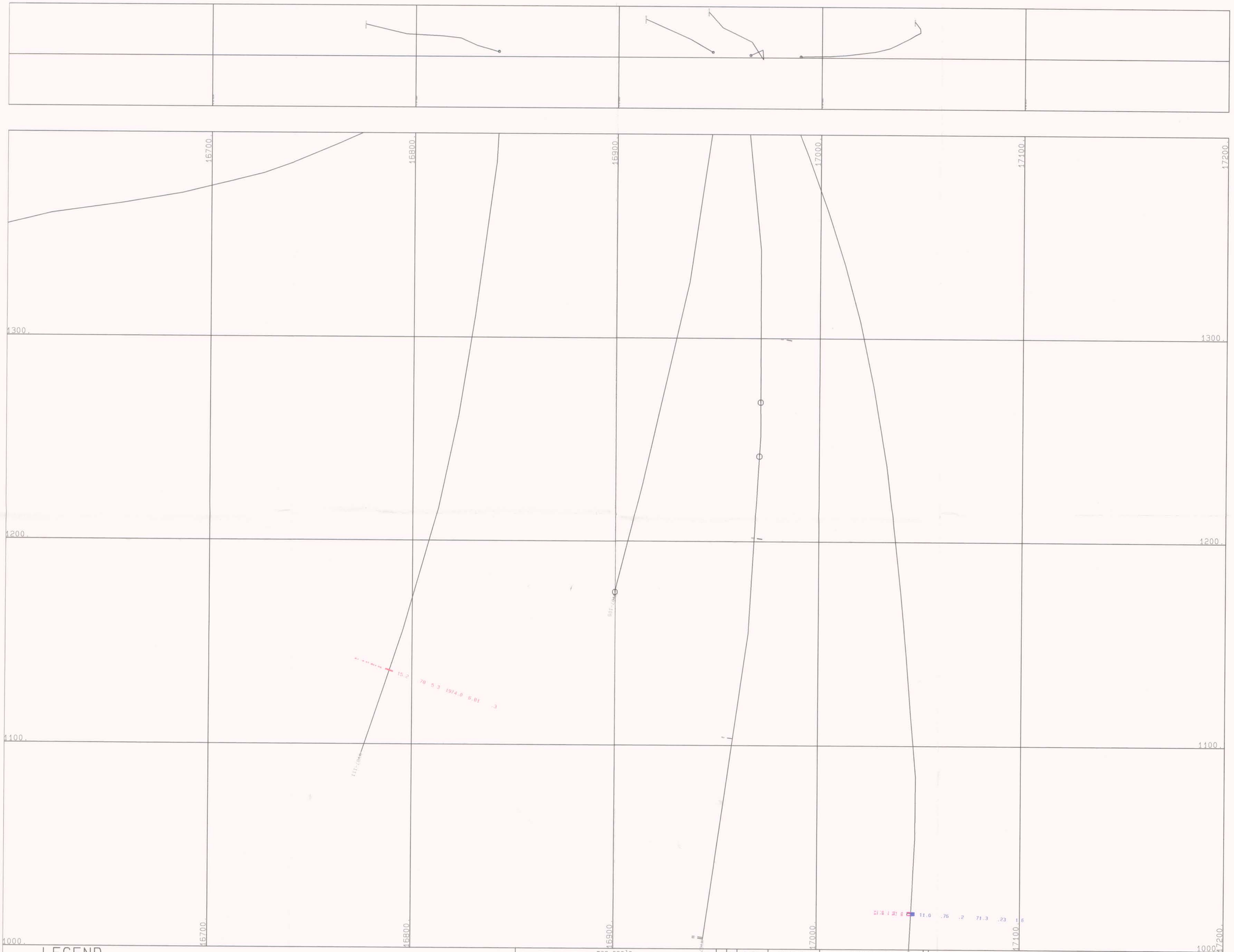
DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16900E Asy Cmp GSM Zn Cu Au Ag Pb (Length)

DIAND - YUKON REGION, LIBRARY

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16900e.plt



LEGEND

DH GRADES
- ZN < 5.0 %
- ZN < 10.0 %
- ZN < 15.0 %
- ZN < 20.0 %
- ZN > 20.0 %

WESTMIN

map scale

0 10 20 30 40 50 60 70

REVISIONS	No	DATE	MADE BY	DESCRIPTION
	1			
	2			
	3			
	4			
	5			

DATE	DRAWN BY	CHECKED	APPROVED
01-12-98	SJJ		

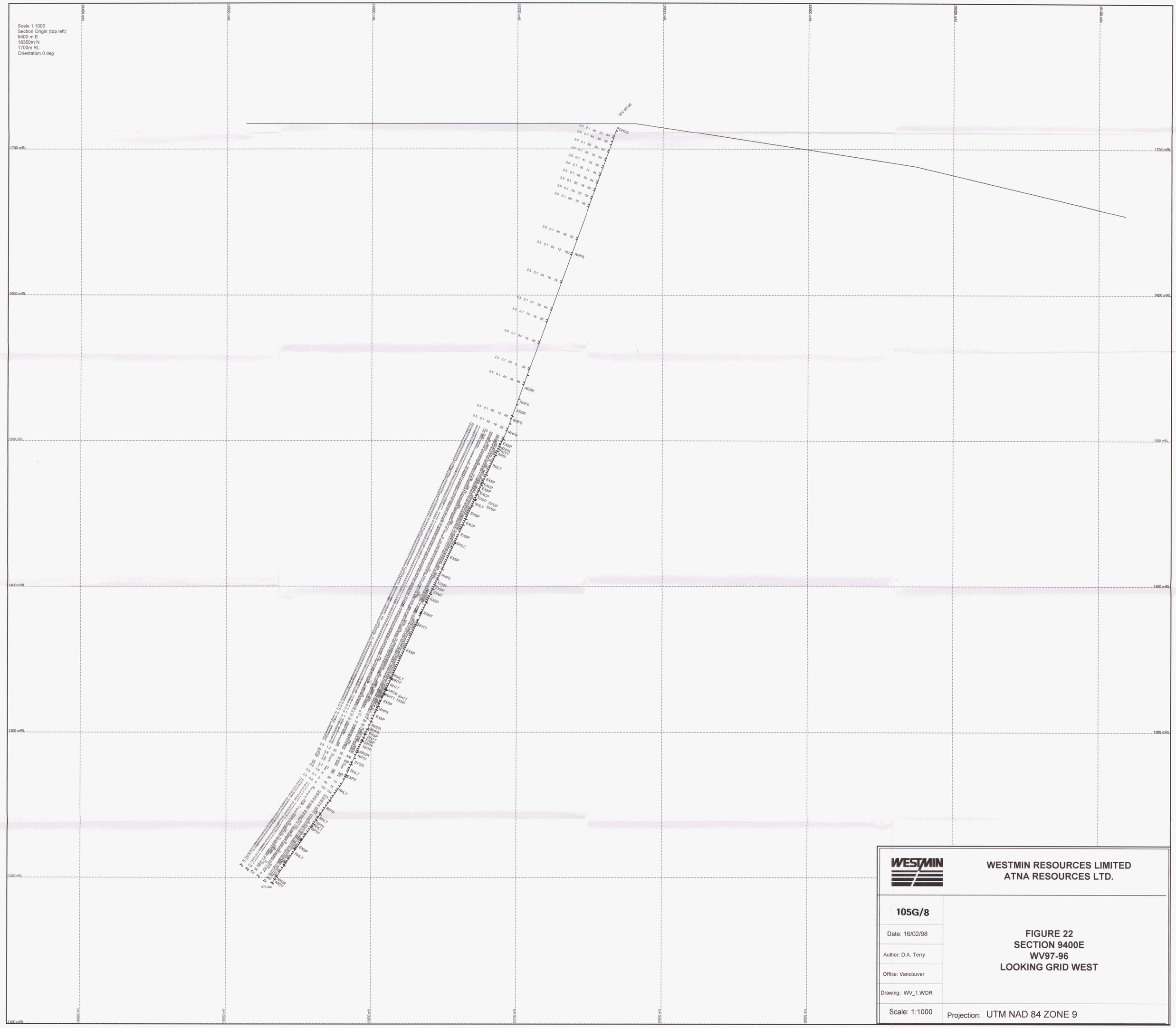
WESTMIN RESOURCES LTD. WOLVERINE PROJECT

WV SECTION 16950E Asy Cmp GSM
Zn Cu Au Ag Pb (Length)

DIAND - YUKON REGION, LIBRARY

MAP INDEX NUMBER	SCALE	DRAWING NUMBER
	1:1000.M	16950e.plt

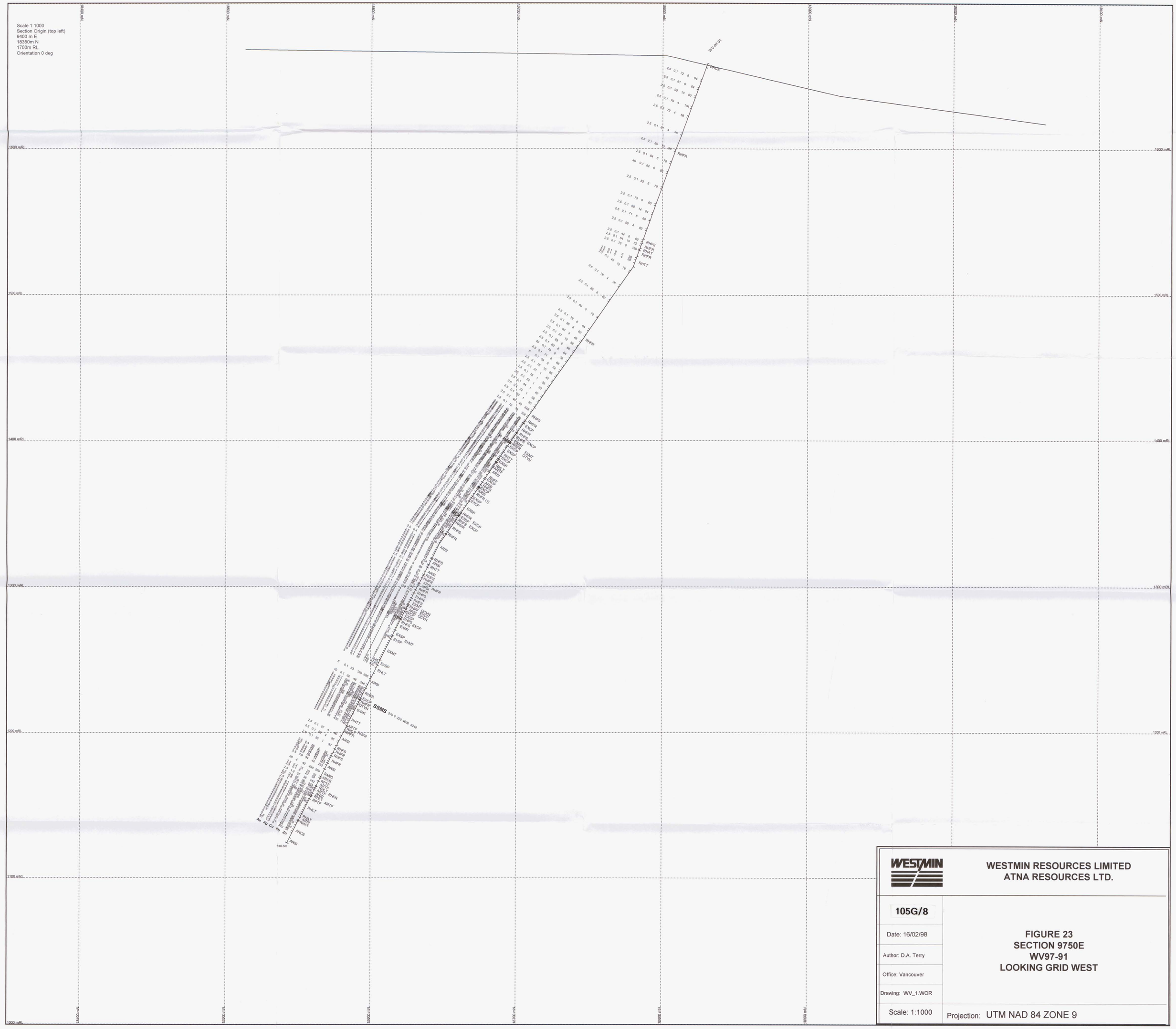
Scale 1:1000
Section Origin (top left)
9400 m E
18350m N
1700m RL
Orientation 0 deg



WESTMIN	WESTMIN RESOURCES LIMITED ATNA RESOURCES LTD.
105G/8	
Date: 16/02/98	FIGURE 22 SECTION 9400E WV97-96 LOOKING GRID WEST
Author: D.A. Terry	
Office: Vancouver	
Drawing: WV_1.WOR	
Scale: 1:1000	Projection: UTM NAD 84 ZONE 9

DIAND - YUKON REGION, LIBRARY

Scale 1:1000
Section Origin (top left)
9400 m E
18350m N
1700m RL
Orientation 0 deg



WESTMIN

WESTMIN RESOURCES LIMITED
ATNA RESOURCES LTD.

105G/8	
Date: 16/02/98	**FIGURE 23** **SECTION 9750E** **WV97-91** **LOOKING GRID WEST**
Author: D.A. Terry	
Office: Vancouver	
Drawing: WV_1.WOR	
Scale: 1:1000	Projection: UTM NAD 84 ZONE 9

DIAND - YUKON REGION, LIBRARY

Scale 1:1000
Section Origin (top left)
9400 m E
18350m N
1700m RL
Orientation 0 deg

WV-96-55

WV-97-103
WV-97-103A

549.9m - End of WV97-103

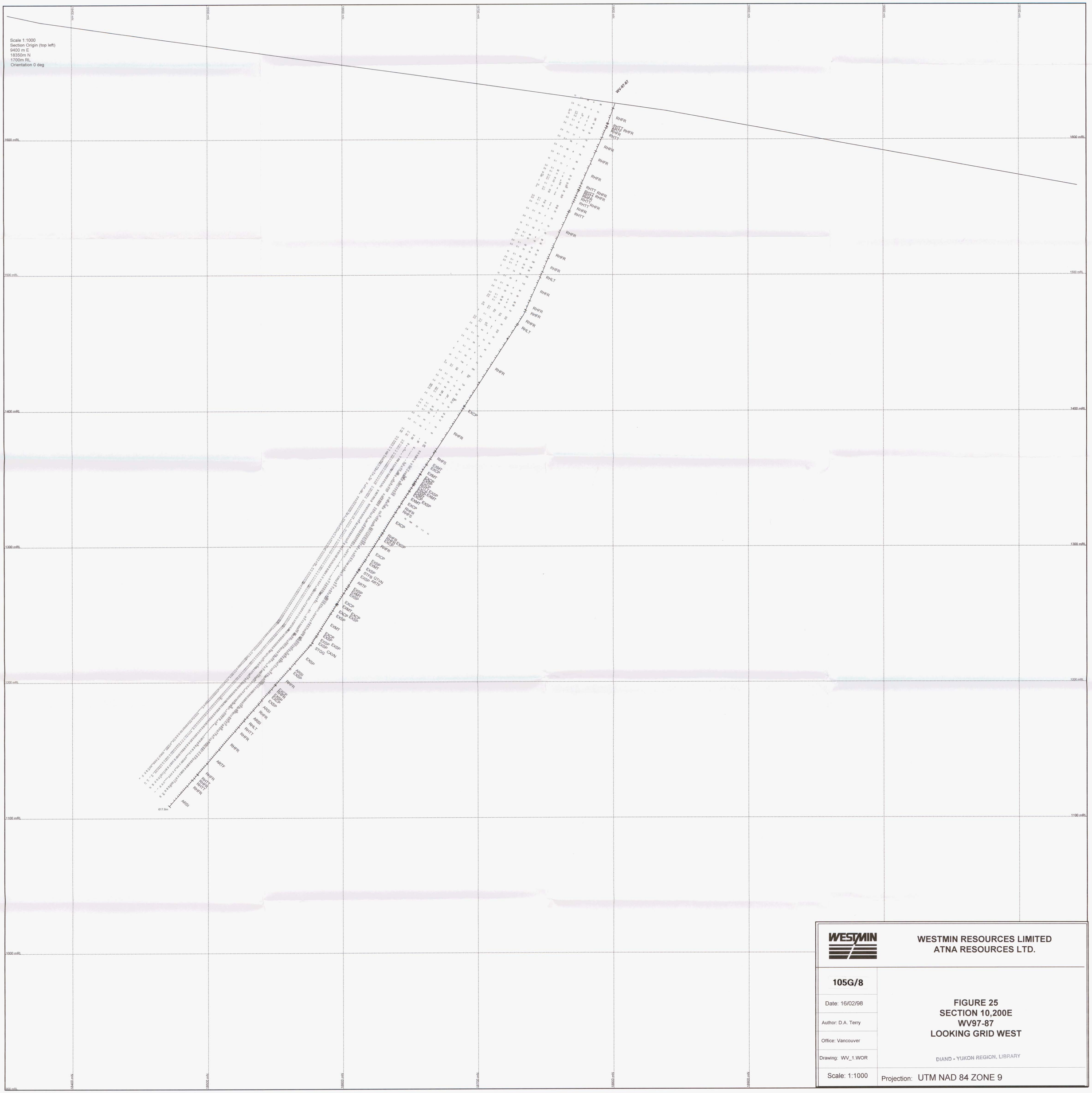
701.3m

DIAND - YUKON REGION, LIBRARY

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WESTMIN RESOURCES LIMITED
ATNA RESOURCES LTD.

105G/8	
Date: 16/02/98	**FIGURE 24** **SECTION 10,000E** **WV96-55 and WV97-103, 103A** **LOOKING GRID WEST**
Author: D.A. Terry	
Office: Vancouver	
Drawing: WV_1.WOR	
Scale: 1:1000	Projection: UTM NAD 84 ZONE 9



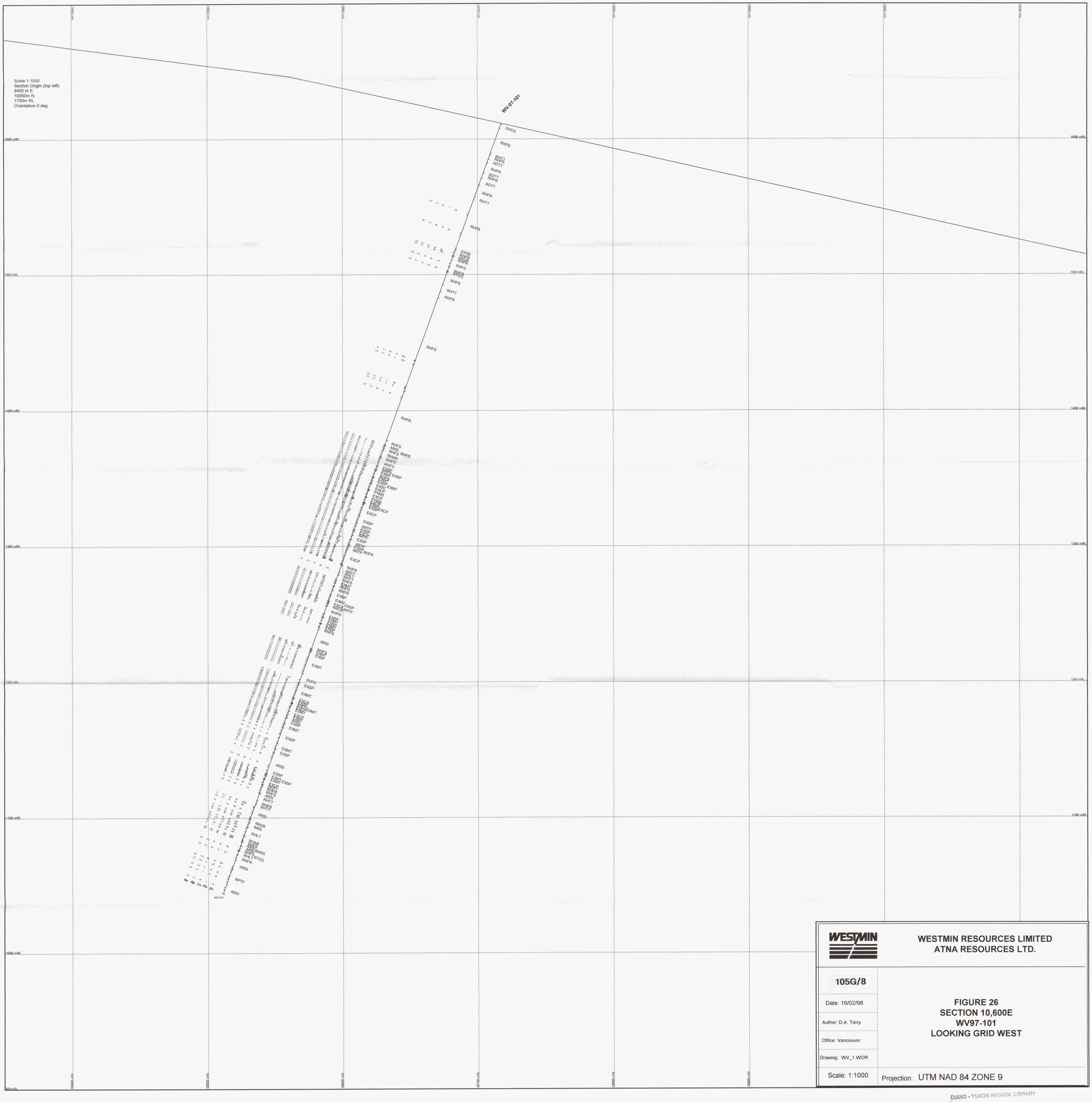
WESTMIN	WESTMIN RESOURCES LIMITED ATNA RESOURCES LTD.
105G/8	
Date: 16/02/98	FIGURE 25 SECTION 10,200E WV97-87 LOOKING GRID WEST
Author: D.A. Terry	
Office: Vancouver	
Drawing: WV_1.WOR	DIAND - YUKON REGION, LIBRARY
Scale: 1:1000	Projection: UTM NAD 84 ZONE 9

1997 SUMMARY REPORT ON THE FOOT 1 - 20, 37 - 80, 83 - 94, 180 - 188, 215 - 231, 11A - 12A, KINK 3, LOW 13 - 14

APPENDED MAPS AND SECTIONS
FIGURES 3, 4, and 6-30

VOLUME 7

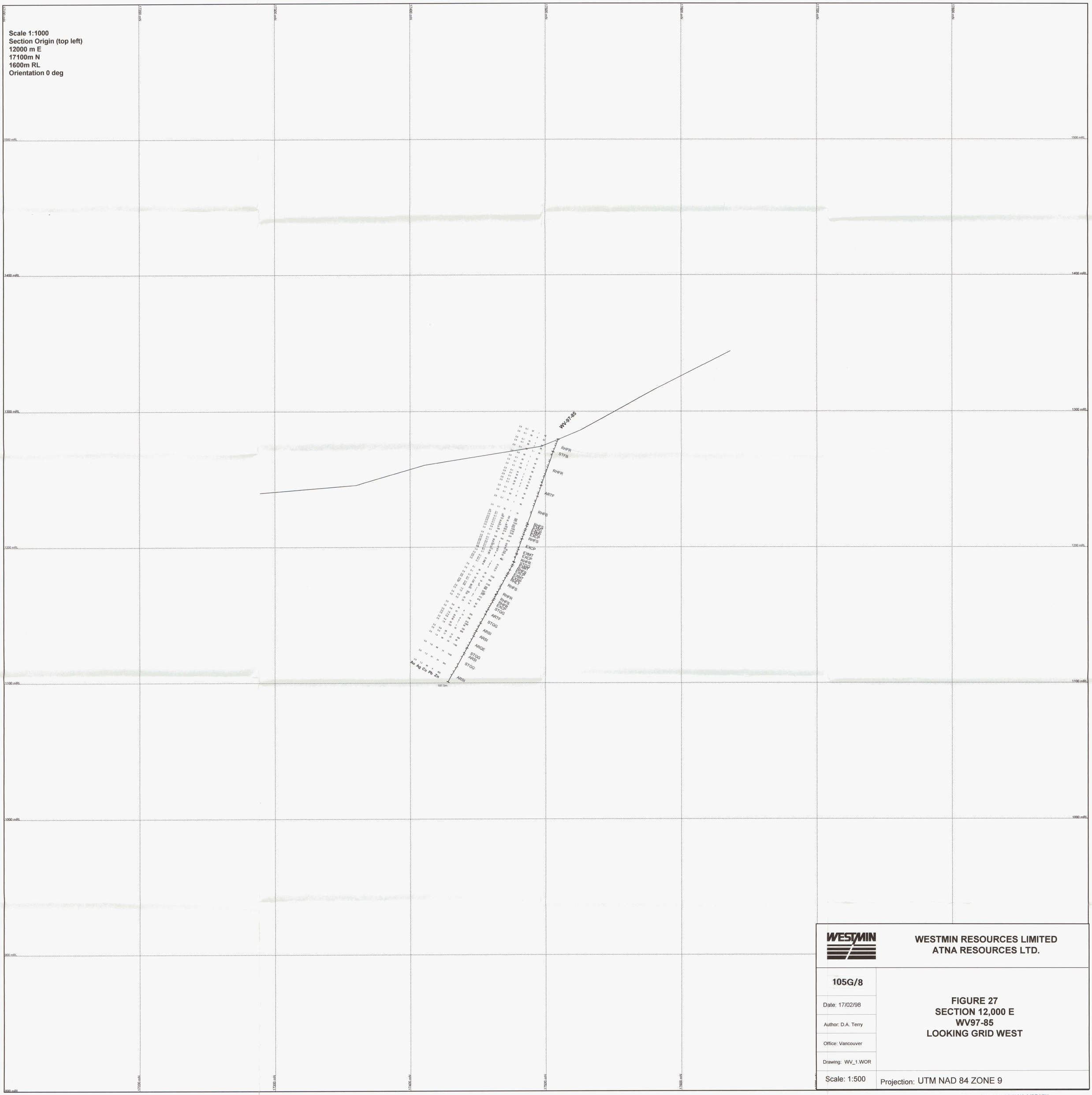




WESTMIN	WESTMIN RESOURCES LIMITED ATNA RESOURCES LTD.
105G/8	
Date: 16/02/98	FIGURE 26 SECTION 10,600E WV97-101 LOOKING GRID WEST
Author: D.A. Terry	
Office: Vancouver	
Drawing: WV_1.WOR	
Scale: 1:1000	Projection: UTM NAD 84 ZONE 9

DIAND - YUKON REGION, LIBRARY

Scale 1:1000
Section Origin (top left)
12000 m E
17100m N
1600m RL
Orientation 0 deg



WESTMIN RESOURCES LIMITED
ATNA RESOURCES LTD.

105G/8

Date: 17/02/98

Author: D.A. Terry

Office: Vancouver

Drawing: WV_1.WOR

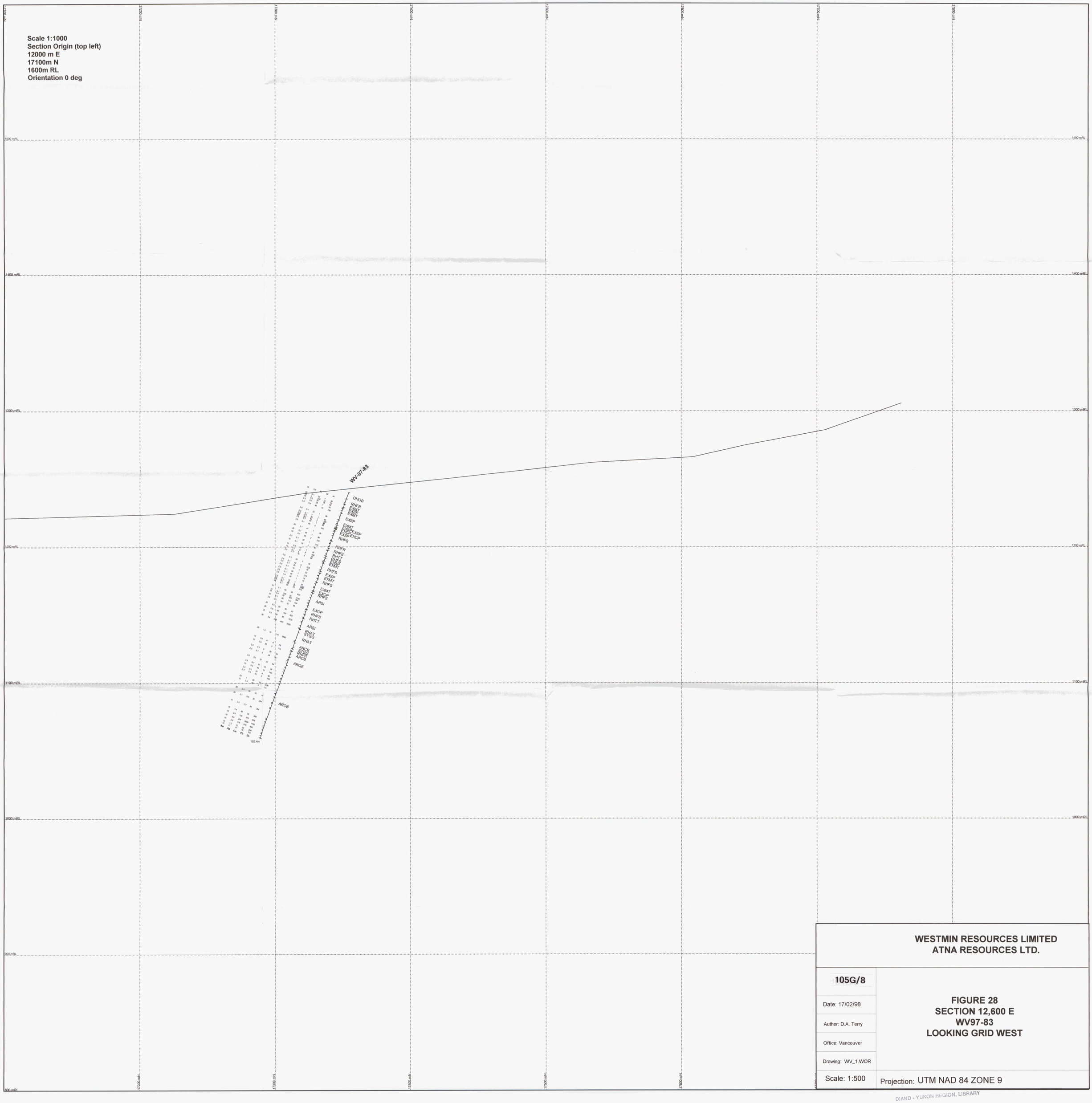
Scale: 1:500

FIGURE 27
SECTION 12,000 E
WV97-85
LOOKING GRID WEST

Projection: UTM NAD 84 ZONE 9

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Scale 1:1000
Section Origin (top left)
12000 m E
17100m N
1600m RL
Orientation 0 deg



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ATNA RESOURCES LTD.

105G/8	**FIGURE 28** **SECTION 12,600 E** **WV97-83** **LOOKING GRID WEST**
Date: 17/02/98	
Author: D.A. Terry	
Office: Vancouver	
Drawing: WV_1.WOR	
Scale: 1:500	Projection: UTM NAD 84 ZONE 9

DIAND - YUKON REGION, LIBRARY

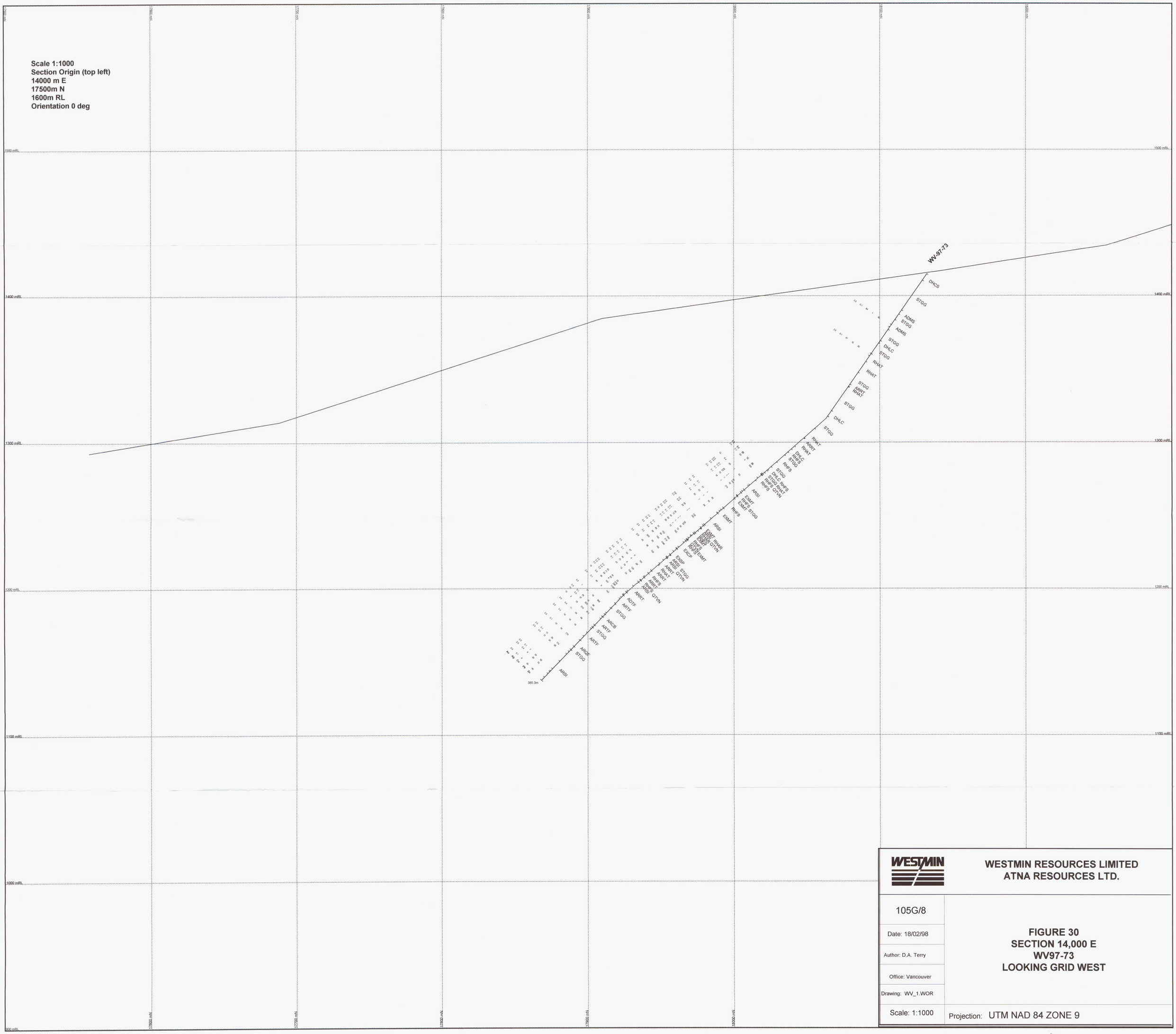
Scale 1:1000
Section Origin (top left)
13600 m E
17500m N
1600m RL
Orientation 0 deg



WESTMIN	WESTMIN RESOURCES LIMITED ATNA RESOURCES LTD.
105G/8	
Date: 18/02/98	FIGURE 29 SECTION 13,600 E WV97-78 LOOKING GRID WEST
Author: D.A. Terry	
Office: Vancouver	
Drawing: WV_1.WOR	
Scale: 1:1000	Projection: UTM NAD 84 ZONE 9

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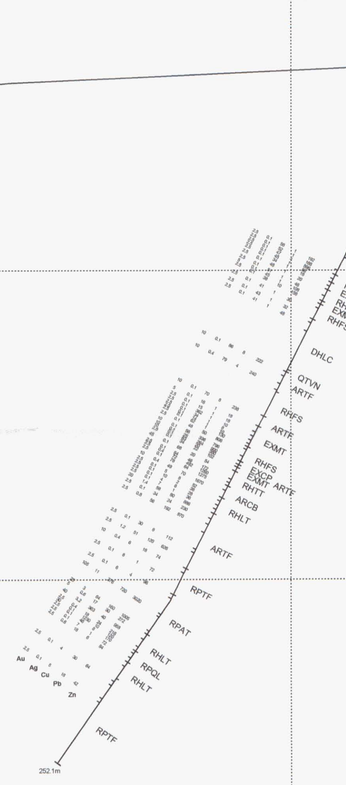
Scale 1:1000
Section Origin (top left)
14000 m E
17500m N
1600m RL
Orientation 0 deg



WESTMIN	WESTMIN RESOURCES LIMITED ATNA RESOURCES LTD.
105G/8	
Date: 18/02/98	FIGURE 30 SECTION 14,000 E WV97-73 LOOKING GRID WEST
Author: D.A. Terry	
Office: Vancouver	
Drawing: WV_1.WOR	
Scale: 1:1000	Projection: UTM NAD 84 ZONE 9

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Scale 1:1000
Section Origin (top left)
17800 m E
16400m N
1600m RL
Orientation 0 deg

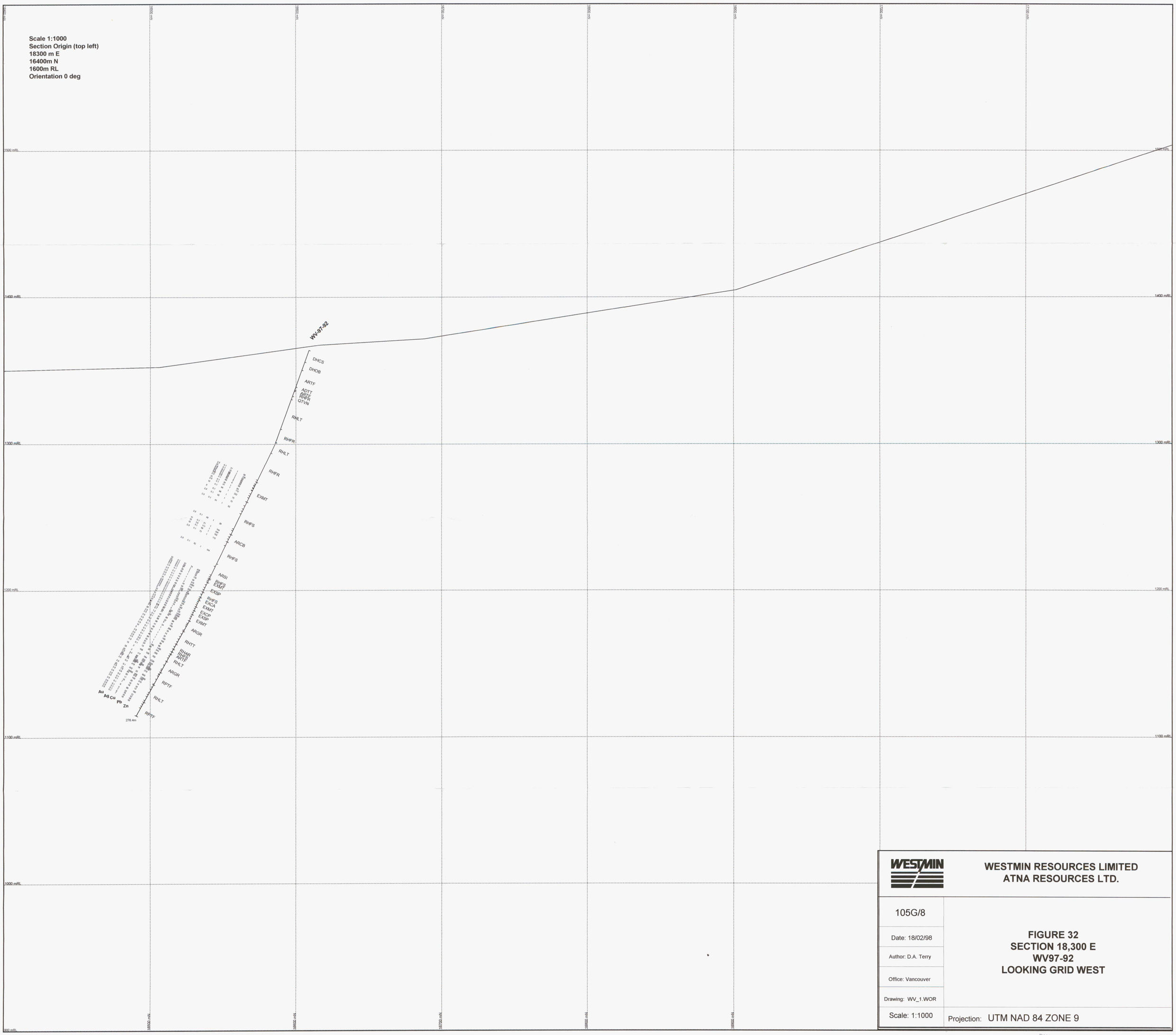


1500 mRL
1400 mRL
1300 mRL
1200 mRL
1100 mRL
1000 mRL
900 mRL

WESTMIN RESOURCES LIMITED **ATNA RESOURCES LTD.**	
105G/8	**FIGURE 31** **SECTION 17,800 E** **WV97-93** **LOOKING GRID WEST**
Date: 18/02/98	
Author: D.A. Terry	
Office: Vancouver	
Drawing: WV_1.WOR	
Scale: 1:1000	Projection: UTM NAD 84 ZONE 9

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Scale 1:1000
Section Origin (top left)
18300 m E
16400m N
1600m RL
Orientation 0 deg



WESTMIN RESOURCES LIMITED
ATNA RESOURCES LTD.

105G/8

Date: 18/02/98

Author: D.A. Terry

Office: Vancouver

Drawing: WV_1.WOR

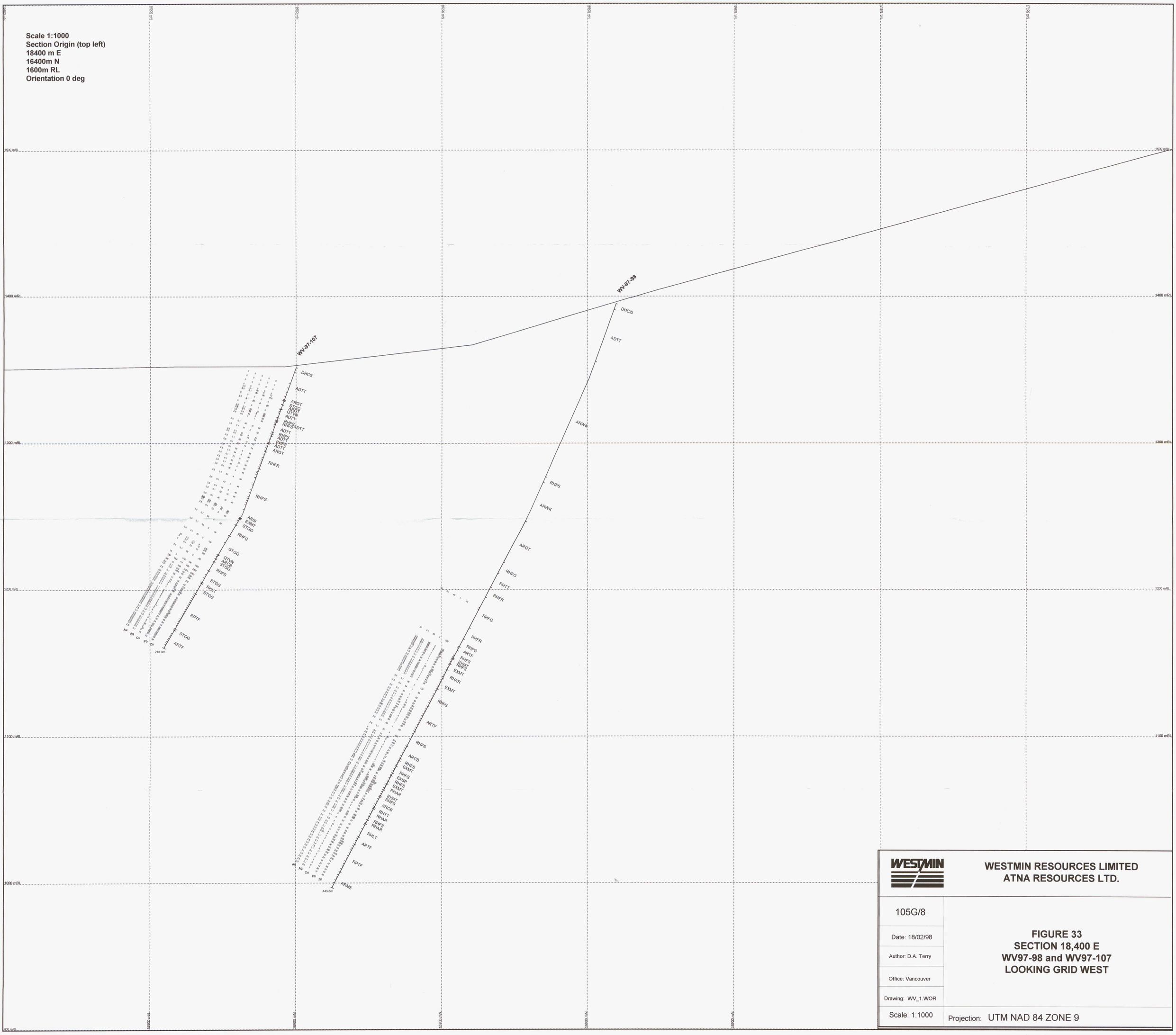
Scale: 1:1000

Projection: UTM NAD 84 ZONE 9

FIGURE 32
SECTION 18,300 E
WV97-92
LOOKING GRID WEST

DIAND - YUKON REGION, LIBRARY

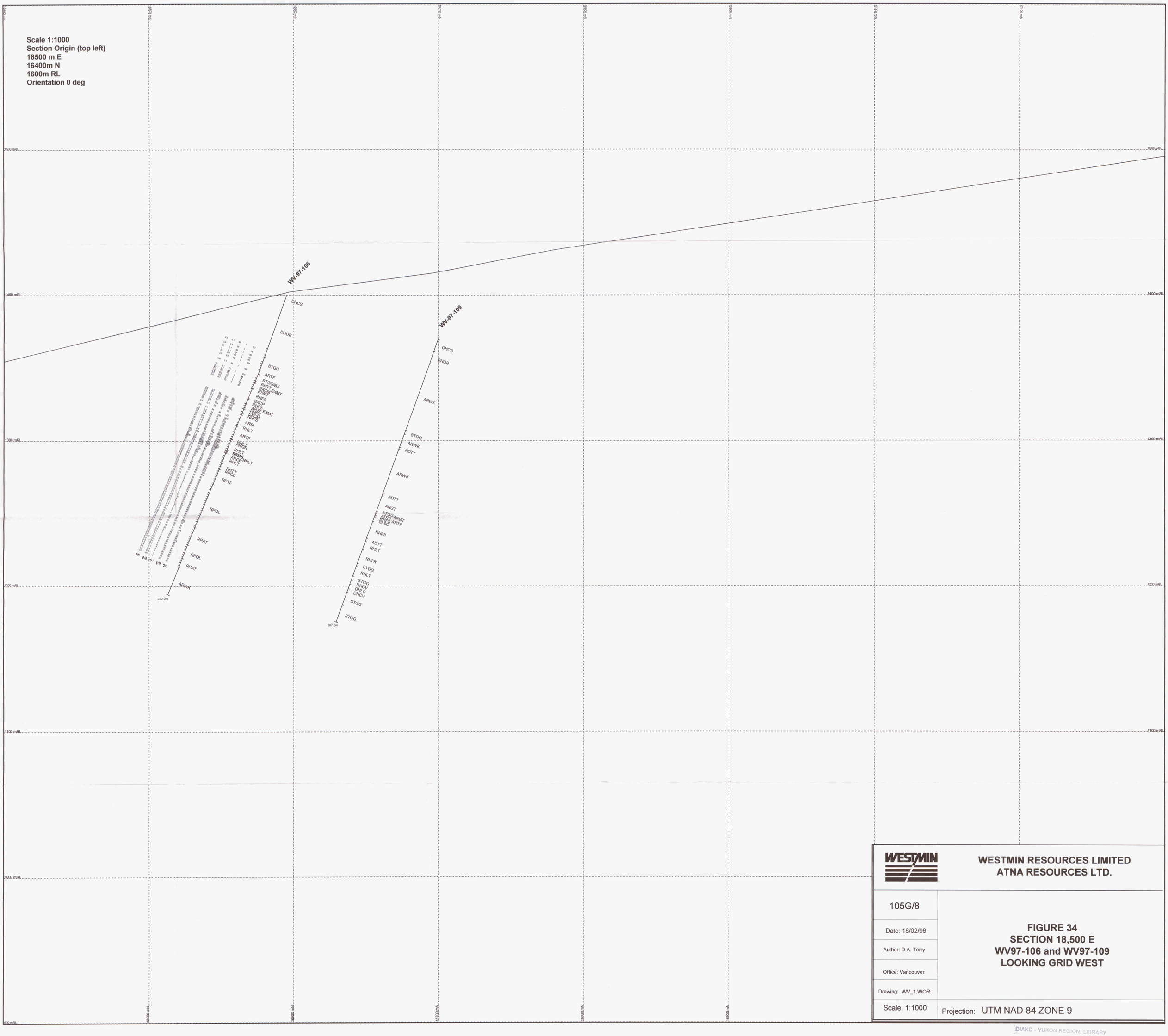
Scale 1:1000
Section Origin (top left)
18400 m E
16400m N
1600m RL
Orientation 0 deg



WESTMIN	WESTMIN RESOURCES LIMITED ATNA RESOURCES LTD.
105G/8	
Date: 18/02/98	FIGURE 33 SECTION 18,400 E WV97-98 and WV97-107 LOOKING GRID WEST
Author: D.A. Terry	
Office: Vancouver	
Drawing: WV_1.WOR	
Scale: 1:1000	Projection: UTM NAD 84 ZONE 9

DIAND - YUKON REGION, LIBRARY

Scale 1:1000
Section Origin (top left)
18500 m E
16400m N
1600m RL
Orientation 0 deg



WESTMIN

WESTMIN RESOURCES LIMITED
ATNA RESOURCES LTD.

105G/8

Date: 18/02/98

Author: D.A. Terry

Office: Vancouver

Drawing: WV_1.WOR

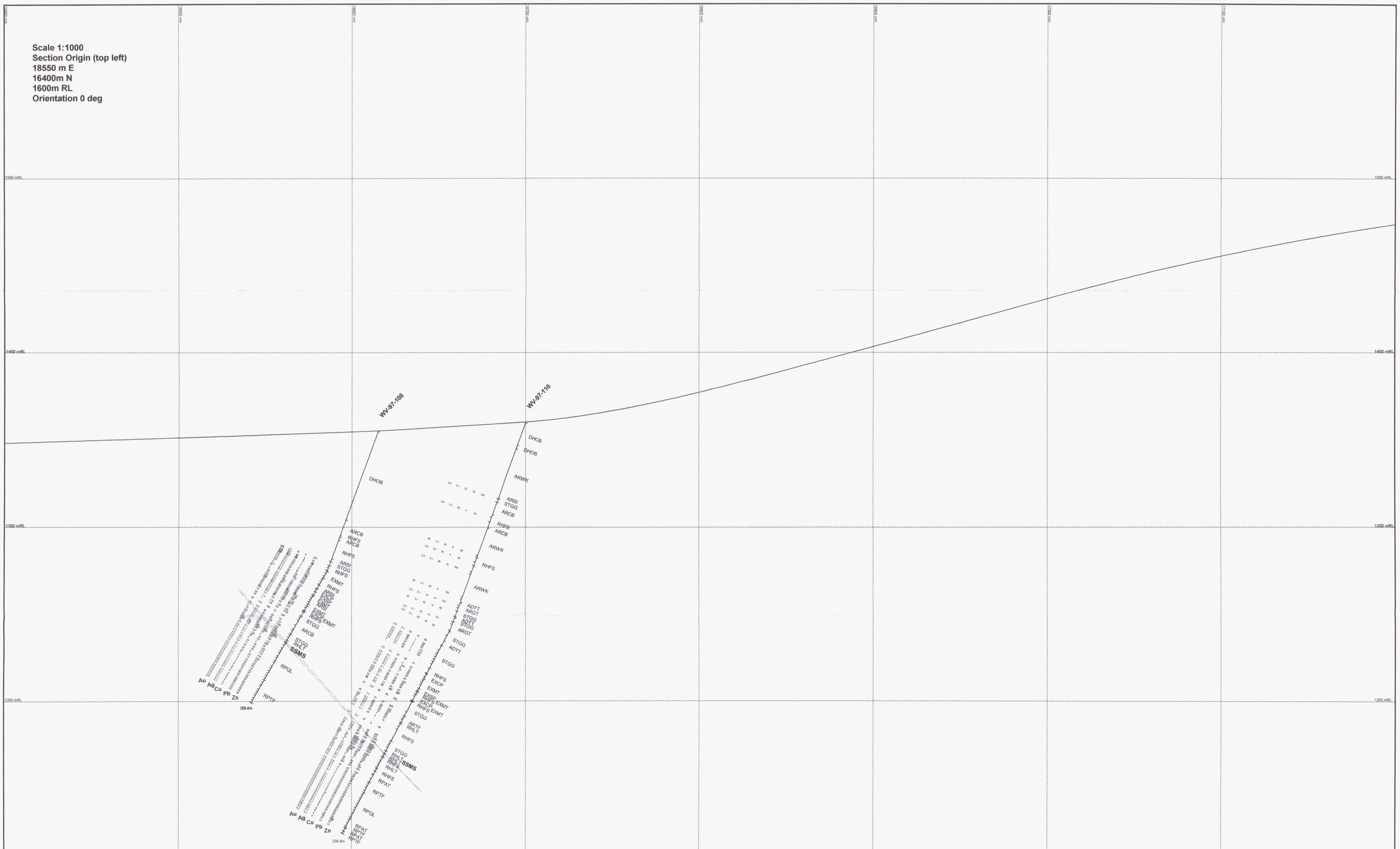
Scale: 1:1000

Projection: UTM NAD 84 ZONE 9

FIGURE 34
SECTION 18,500 E
WV97-106 and WV97-109
LOOKING GRID WEST

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Scale 1:1000
Section Origin (top left)
18550 m E
16400m N
1600m RL
Orientation 0 deg



WESTMIN	WESTMIN RESOURCES LIMITED ATNA RESOURCES LTD.
105G/8	
Date: 18/02/98	FIGURE 35 SECTION 18,550 E WV97-108 and WV97-110 LOOKING GRID WEST
Author: D.A. Terry	
Office: Vancouver	
Drawing: WV_1.WOR	
Scale: 1:1000	Projection: UTM NAD 84 ZONE 9

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