

MAP NO. ASSESSMENT REPORT
PROSPECTUS
CONFIDENTIAL
OPEN FILE

DOCUMENT NO.: 092010
MINING DISTRICT: WHITEHORSE
TYPE OF WORK: Diamond Drilling
I.S.N. 134650

115 I 11

REPORT FILED UNDER: Dawson Range Joint Venture

DATE PERFORMED: DATE FILED: August 15, 1974

LOCATION: LAT.: 62°42'0"W AREA: Minto

LONG.: 137°12'W VALUE \$:

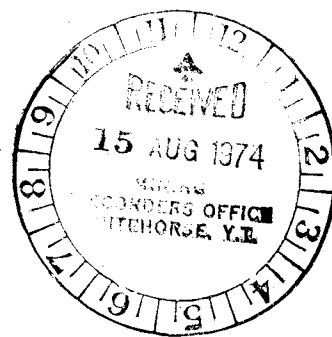
CLAIM NAME & NO.: PAL 1-48
KAP 1-2
BEN 1-53 FR, 54, 65,
BEN 55-58, 65
NEB 1-6 FR

WORK DONE BY: A.R. Archer (Archer, Cathro and Associates (1981) Ltd.)

WORK DONE FOR: Dawson Range Joint Venture

DATE TO GOOD STANDING | REMARKS: #14 MINTO

_____|_____|
_____|_____|



Report On
DIAMOND DRILL PROGRAM
Minto Property (Ben, Pal, Kap, & Neb Claims)

in

Whitehorse Mining District
Claim Sheet 1151/11

Latitude: 62°42'

Longitude: 137°12'

for

DAWSON RANGE JOINT VENTURE

15 August, 1974

092010

A.R. Archer

Geological Consultant

This report has been examined by the
Geological Evaluation Unit and is recom-
mended to the Commissioner to be consid-
ered as representation work in the amount of
\$ _____

Resident Geologist or
Resident Mining Engineer

Considered as representation work under
Section 5B (4) Yukon Quartz Mining Act.

Commissioner of Yukon Territory

092010

ARCHER, CATHRO
AND ASSOCIATES LTD.
CONSULTING GEOLOGICAL ENGINEERS

WHITEHORSE, Y.T. 667-4415

685, TWO BENTALL CENTRE, VANCOUVER, B.C. 688-2568

POST OFFICE BOX 4127
WHITEHORSE, Y.T.

Report On
DIAMOND DRILL PROGRAM
Minto Property (Ben, Pal, Kap, & Neb Claims)

in

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Claim Sheet 115I/11

Latitude: 62°42'

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A.R. Archer

Consulting Geological Engineer

092010

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Appendix 1 - Core Assay Certificates and Core Geochemical Assay Certificates

Figures in Pockets

Pocket 1 - Detailed Core Logs and Core Log LegendScale 1"= 10 feet

Pocket 2

Figure M3 - Geology and Drill Hole LocationScale 1"= 1000 feet

Figure M10- Section Drill Holes B1 and B2Scale 1"= 100 feet

Figure M11- Section Drill Hole B3Scale 1"= 100 feet

Figure M12- Section Drill Hole B4Scale 1"= 100 feet

INTRODUCTION

A drill program consisting of four holes totalling 3,250 feet was conducted on the Minto property of Dawson Range Joint Venture during the period April 23-June 25, 1974. Core logging and field supervision was performed by geologist M.P. Phillips. The purpose of the drilling was to explore geophysical targets and minor copper showings described in a report by the writer titled "1973 Exploration Program Minto Property (Ben & Pal Claims) Yukon, Dawson Range Joint Venture", dated 30 November, 1973.

Yukon Land and Water Use applications were made prior to drilling and the drill sites and camp were inspected and approved by a Resource Management Officer on completion of the program.

PROPERTY LOCATION AND ACCESS

The property consists of 120 mineral claims recorded at Whitehorse, Yukon Territory, as follows:-

<u>Claim Name</u>	<u>Record Numbers</u>	<u>Lapse Date</u>
Pal 1-3	Y62343-Y62345	19 October, 1978
Pal 4-12	Y62346-Y62354	19 October, 1979
Pal 13-23	Y62355-Y62365	19 October, 1978
Pal 24	Y62366	19 October, 1979
Pal 25	Y62367	19 October, 1978
Pal 26	Y62368	19 October, 1979
Pal 27	Y62369	19 October, 1978
Pal 28	Y62370	19 October, 1979
Pal 29	Y62371	19 October, 1978
Pal 30	Y62372	19 October, 1979
Pal 31	Y62373	19 October, 1978
Pal 32	Y62374	19 October, 1979
Pal 33-48	Y62375-Y62390	19 October, 1978
Kap 1-2	Y62391-Y62392	19 October, 1978

<u>Claim Name</u>	<u>Record Numbers</u>	<u>Lapse Date</u>
Ben 1-14 Fr.	Y63234-Y63247	19 October, 1978
Ben 17-26 Fr.	Y63250-Y63259	19 October, 1978
Ben 27-28 Fr.	Y66831-Y66832	19 October, 1979
Ben 29-46 Fr.	Y63262-Y63279	19 October, 1978
Ben 49-50 Fr.	Y63282-Y63283	19 October, 1978
Ben 51-52 Fr.	Y63284-Y63285	19 October, 1979
Ben 53 Fr.	Y63286	19 October, 1978
Ben 54	Y66833	19 October, 1979
Ben 55-58	Y66834-Y66837	19 October, 1978
Ben 60 Fr.	Y63293	19 October, 1978
Ben 62 Fr.	Y63295	19 October, 1978
Ben 65	Y66838	19 October, 1978
Ben 66-72 Fr.	Y63299-Y63305	19 October, 1978
Neb 1-6 Fr.	Y77065-Y77070	19 October, 1978

The property lies ten miles west of Minto on the all weather Klondike Highway. Minto is approximately 160 road miles from Whitehorse. Figure M3 in Pocket 2 illustrates the location of the claims relative to the adjoining Minto claim group jointly owned by Silver Standard Mines Ltd. and Asarco Exploration Company of Canada Ltd. A winter road constructed in early 1974 from Yukon Crossing (near Carmacks on the Klondike Highway) to the Minto claims passes within 3,000 feet of the north boundary of the property. This road is scheduled to be up-graded for all weather use by August, 1975.

GEOLOGICAL SETTING

General

The general geological setting is well described in the writers report of November 30, 1973. Briefly, the area is underlain by the weakly foliated Triassic Klotassin Batholith which is cut by narrow aplite to pegmatite dikes and varies in composition from diorite to granodiorite. Tertiary Carmacks volcanics unconformably overlie the Klotassin Batholith to the south and occasionally occur as dikes cutting the intrusion. Bornite and chalcopyrite with lesser amounts of magnetite and pyrite are found in gneissic zones in the Klotassin Batholith. The gneissic zones, which parallel regional foliation, occur over an area at least two miles wide and three miles long. They vary in width from a few inches to over 100 feet and form up to ten per cent of the

intrusion. Foliation attitudes suggest they lie in an open syncline striking about 20° west of north.

Ben & Pal Claims

Bulldozer trenching in 1973 showed that at least three gneissic zones occur on the western side of the Ben and Pal claims. Deep overburden prevented trenching further east but geophysical surveys suggested that the base of the eastern limb of the syncline could lie as much as 1500 feet east of the western boundary of the claims. Results of each hole are discussed in detail later in this report. The following is a description of the various rock units intersected by drilling.

Tertiary Carmacks Volcanics - noted as occasional dikes of a dark green, fine grained andesite with chilled contacts that are occasionally sheared and weakly altered.

Klotassin Batholith - has been divided into granodiorite and diorite units. The granodiorite is weakly foliated, light coloured, equigranular and contains up to 15 per cent hornblende and biotite. It occurs as porphyritic and non-porphyritic phases. The non-porphyritic phase has a lower quartz content and is gradational to diorite. The porphyritic phase is characterized by higher quartz content, often occurring as crystal clusters, and the presence of pink poikilitic feldspar phenocrysts up to 25 mm long. The porphyritic granodiorite is similar to the wall rocks of the mineralized gneissic zones on the Def and Minto claims. The diorite is dark coloured equigranular and weakly to non-porphyritic. Hornblende is the main mafic material although biotite is present. Narrow mafic rich zones are common.

Both units exhibit irregular feldspar alteration up to six inches away from fault zones. Epidote is common as disseminations and fine fracture fillings.

Gneissic Zones - are found in both the diorite and granodiorite units. They have a similar composition to the enclosing rock but generally contain only biotite. The gneissic appearance is imparted by strong alignment of the biotite in the direction of regional foliation. Biotite rich portions occasionally contain narrow quartz rich, or quartz flooded, sections with associated mineralization consisting of disseminations or thin veinlets of magnetite with bornite, chalcopyrite, pyrite and pyrope garnet.

DIAMOND DRILLING

General

The drilling was contracted to General Drilling Ltd. of Whitehorse, Yukon Territory, at the rate of \$14.50 per foot for non-coring overburden and BQ coring in bedrock. The contractor was responsible for supplying and maintaining the camp and mobilization and demobilization of camp and drill equipment.

The core is stored at the abandoned campsite in two well constructed log pole core racks. Each core box is labelled with a strip of aluminum tape which identifies the hole and box number.

Core recovery was good and no unusual problems were encountered either in overburden or bedrock. Location of hole collars are shown on Figure M3 and sections of each hole are enclosed in Pocket 2 of this report.

All sections with visible copper were split and assayed at Whitehorse Assay Office Ltd., Whitehorse, Yukon. A copy of the assay certificates are included as Appendix 1. In addition, a core sample was taken for each twenty foot section of each hole and assayed geochemically for copper at Chemex Labs Ltd., North Vancouver, by atomic absorption of a nitric-perchloric extraction. Copies of the Chemex certificate of analyses are also included as part of Appendix 1.

Drill Hole Description

Detailed drill logs, following a style which allows easy computerization, are enclosed in Pocket 1 of this report. A summary of the purpose and result of each drill hole follows:

Hole B1 (Figure M10)- drilled to determine the location of the eastern side of the syncline containing gneissic zones in an area of EM 16 response. The hole cut 244 feet of boulder-clay glacial till before reaching bedrock which is diorite and granodiorite. Unmineralized gneissic zones were intersected from 397.1 feet to 410.2 feet, 651.9 feet to 661.7 feet and 956.5 feet to 969.5 feet. No further zones were intersected to the final depth of 1000 feet. Strong faults seen in the core explain the EM 16 conductors. The gneissic zone at 956 feet is geochemically anomalous at 70 ppm copper over a rock background of 12 ppm.

Hole B2 (Figure M10) - drilled to cut gneissic zones located by surface trenching in 1973 and to explore east of these zones beneath deep overburden. The hole intersected bedrock at 27 feet and cut eight gneissic zones in alternating phases of porphyritic granodiorite and diorite to its final depth of 1000 feet. Weakly developed gneissic zones with traces of pyrite and chalcopyrite were cut from bedrock surface at 27.0 feet to 41.0 feet, 81.5 feet to 87.5 feet and 116.4 feet to 128.2 feet. A better mineralized zone, called the No. 1 zone, was cut from 246.8 feet to 300.0 feet. Additional zones with traces of pyrite and chalcopyrite were cut from 314.5 feet to 315.6 feet, 387.5 feet to 421.8 feet, 451.8 feet to 469.0 feet and 707.4 feet to 754.3 feet. Assay results for each zone are illustrated on the drill section and listed in Appendix 1. The No. 1 zone contains oxide copper with minor chalcopyrite in the hanging wall with increasing bornite, chalcopyrite and magnetite toward the footwall. The final 10 feet of the No. 1 zone assayed 1.55 per cent copper.

Hole B3 (Figure M11) - drilled 400 feet south of hole B2 to explore the No. 1 zone along strike. The hole intersected bedrock at 35 feet and cut granodiorite to its final depth of 450 feet. The No. 1 zone was intersected from 92.3 feet to 127.0 feet and a second gneissic zone was cut from 279.9 feet to 307.2 feet. Both zones were weakly mineralized with pyrite and chalcopyrite and the No. 1 zone was partially oxidized. All assays are less than 0.15 per cent copper.

Hole B4 (Figure M12) - drilled to explore an EM 16 conductor 1200 feet north of hole B2. Bedrock was intersected at 35 feet and the hole cut porphyritic granodiorite to its final depth of 1000 feet. Gneissic zones with traces of pyrite and chalcopyrite were intersected from 128.7 feet to 137.0 feet, 186.8 feet to 217.0 feet and 453.0 feet to 557.6 feet. The best assay returned 0.32 per cent copper from 517.0 feet to 522.5 feet by virtue of two narrow (about 3 inches) bands well mineralized with chalcopyrite and bornite at 517.5 feet and 521.2 feet respectively. The EM 16 response appears to be explained by strong fault zones cut in the hole.

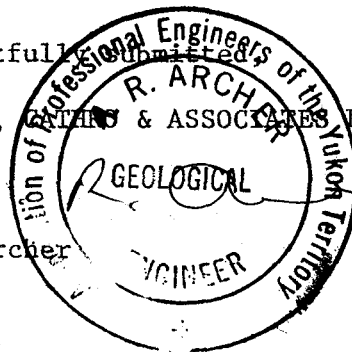
CONCLUSIONS AND RECOMMENDATIONS

The base of the eastern limb of the syncline containing gneissic zones appears to lie at least 2400 feet east of the western boundary of the Ben and Pal claims. The gneissic zones dip about 65° west on the western side of the claims and steepen to about 75° west 2400 feet further east. The EM 16 linears appear to be explained by unmineralized faults.

Further drilling is warranted but should be postponed until road access to the area is improved.

Respectfully,
ARCHER, GUTHRIE & ASSOCIATES LTD.

A.R. Archer



ARA:st

092010

ASSAY CERTIFICATE

WHITEHORSE ASSAY OFFICE LTD.
BOX 4518 WHITEHORSE Y.T.

PHONE 667 2694

DATE. JUNE 5, 1974

FILE NO. 8183-22 (DRJU-BEN)

DAWSON RANGE JOINT VENTURE
BEN AND PAL CLAIMS
SAMPLE RECEIVED FROM ARCHER & CATHERO

SAMPLE NO.	GOLD Oz. Per Ton	SILVER Oz. Per Ton	COPPER				
00224	246.8	255.0	.26				
00226	27.5	41.0	.01				
00227	81.5	87.5	.01				
00228	116.4	129.2	.03				
00230	255.0	260.0	.12				
00231	260.0	267.0	.02				
00232	267.0	275.0	.33				
00233	275.0	282.0	.16				
00234	282.0	285.0	.50				
00235	285.0	290.0	.27				
00236	290.0	300.0	1.55				
00237	314.5	315.6	.04				
00238	387.6	392.5	.07				
00239	392.5	394.0	.63				
00240	394.0	396.0	.26				
00241	396.0	397.1	.17				
00242	397.1	406.0	.03				
00243	406.0	407.1	.75				
00244	418.2	421.8	.02				
00245	424.5	425.5	.01				
00246	451.5	460.0	.02				
00247	460.0	469.0	.02				

HOLE B2



ASSAYER. *[Signature]*
092010

DATE. JUNE 20, 1974.

ASSAY CERTIFICATE

FILE NO. 8215-4

WHITEHORSE ASSAY OFFICE LTD.
BOX 4518 WHITEHORSE Y. T.
PHONE 667 2694 Y1A 2R8

D. R. J. V.

DAWSON RANGE JOINT VENTURE
BEN + PAL CLAIMS

SAMPLE RECEIVED FROM

ARCHER & CATHERO

SAMPLE NO.	GOLD Oz. Per Ton	SILVER Oz. Per Ton	COPPER	MOLYBDENUM MoS ₂				
00248	707.4	720.0	.03	-	HOLE B2			
00249	720.0	730.0	.03	-				
00250	730.0	740.0	.03	.010				
00251	740.0	754.3	.02	-				

ASSAYER. Geo. Spalding



ASSAY CERTIFICATE

DATE: June 28, 1974

FILE NO. 8286-4

(DRJV - Ben)
 DAWSON RANGE JOINT VENTURE
 BEN & PAL PROPERTY

WHITEHORSE ASSAY OFFICE LTD.
 BOX 4518 WHITEHORSE Y. T.
 PHONE 667 2694 Y1A 2R8

SAMPLE RECEIVED FROM

Archer and Cathro

SAMPLE NO.	GOLD Oz. Per Ton	SILVER Oz. Per Ton	COPPER				
00259	517.0'	522.5'	.32	HOLE B 4			
00260	511.0'	517.0'	.07				
00261	186.8'	200.0'	.03				
00262	200.0'	213.0'	.03				

ASSAYER. Geo. Spading



ASSAY CERTIFICATE

DATE: June 25, 1974

FILE NO. 8258-7

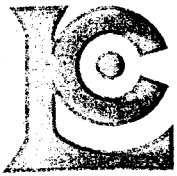
DAWSON RANGE JOINT VENTURE
BEN & PAL PROPERTY

WHITEHORSE ASSAY OFFICE LTD.
BOX 4518 WHITEHORSE Y. T.
PHONE 667 2694 Y1A 2R8

SAMPLE RECEIVED FROM Archer & Cathro

SAMPLE NO.	GOLD Oz. Per Ton	SILVER Oz. Per Ton	COPPER				
00252	92.3'	100.0'	.03	HOLE	B3		
00253	100.0'	110.0'	.11				
00254	110.0'	120.0'	.12				
00255	120.0'	127.0'	.12				
00256	279.9'	290.0'	.03				
00257	290.0'	300.0'	.04				
00258	300.0'	307.2'	.05				

ASSAYER. *K. Houston for G. Spalding*



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Archer Cathro & Associates Ltd.,
Box 4127
Whitehorse, Y. T.

ATTN: MINTO

D.R.J.V.

CERTIFICATE NO. 26961

INVOICE NO. 11520

RECEIVED June 12/74

ANALYSED June 18/74

SAMPLE NO. :	FOOTAGE	PPM Copper	PPM Molybdenum	PPM Silver	Rock Geochem
10401	- - 250	- - 14	< 1	< 0.5	
10402	- - 270	- - 21	< 1	< 0.5	
10403	- 290	12	< 1	< 0.5	
10404	- 310	18	< 1	< 0.5	
10405	- 330	16	2	< 0.5	
10406	- 350	14	1	< 0.5	
10407	- 370	13	2	< 0.5	
10408	- 390	12	1	< 0.5	
10409	- 405	14	< 1	< 0.5	- GNEISSIC ZONE
10410	- 430	12	< 1	< 0.5	
10411	- 450	12	< 1	< 0.5	
10412	- 470	10	< 1	< 0.5	
10413	- 495	10	< 1	< 0.5	
10414	- 510	10	< 1	< 0.5	
10415	- 530	20	< 1	< 0.5	
10416	- 550	21	< 1	< 0.5	
10417	- 570	16	< 1	< 0.5	
10418	- 590	13	< 1	< 0.5	HOLE B1
10419	- 610	10	< 1	< 0.5	
10420	- 630	8	< 1	< 0.5	
10421	- 650	12	< 1	< 0.5	
10422	- 658	36	< 1	< 0.5	- GNEISSIC ZONE
10423	- 670	4	< 1	< 0.5	
10424	- 690	16	< 1	< 0.5	
10425	- 710	13	< 1	< 0.5	
10426	- 730	22	1	< 0.5	
10427	- 750	14	< 1	< 0.5	
10428	- 770	13	< 1	< 0.5	
10429	- 790	13	< 1	< 0.5	
10430	- 810	10	< 1	< 0.5	
10431	- 830	12	< 1	< 0.5	
10432	- 850	14	< 1	< 0.5	
10433	- 870	13	< 1	< 0.5	
10434	- 890	14	< 1	< 0.5	
10435	- 910	12	< 1	< 0.5	
10436	- 930	14	< 1	< 0.5	
10437	- 955	26	< 1	< 0.5	
10438	- 959	70	< 1	< 0.5	- GNEISSIC ZONE
10439	- 968	16	< 1	< 0.5	
10440	- 970	28	< 1	< 0.5	
Std.		72	26		



MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY:

P. Stewart

092010



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212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
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TELEPHONE: 985-0648
AREA CODE: 604

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CERTIFICATE OF ANALYSIS

TO: Archer Cathro & Associates Ltd.,
Box 4127
Whitehorse, Y. T.
ATTN: MINTO

CERTIFICATE NO. 26962
INVOICE NO. 11520
RECEIVED June 12/74
ANALYSED June 13/74

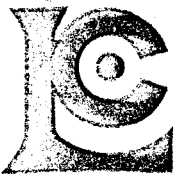
D.R.I.V.

SAMPLE NO. :	FOOTAGE	PPM Copper	PPM Molybdenum	PPM Silver	
10441	990	12	< 1	< 0.5	HOLE B 1
10442	30	13	< 1	< 0.5	
10443	50	20	< 1	< 0.5	
10444	70	22	< 1	< 0.5	
10445	85	12	< 1	< 0.5	
10446	92	12	< 1	< 0.5	
10447	110	12	< 1	< 0.5	
10448	125	28	< 1	< 0.5	
10449	130	22	< 1	< 0.5	
10450	150	16	< 1	< 0.5	
10451	170	16	< 1	< 0.5	HOLE B 2
10452	190	14	< 1	< 0.5	
10453	210	20	< 1	< 0.5	
10454	230	14	< 1	< 0.5	
10455	250	1320	< 1	< 0.5	
10456	270	4000	< 1	3.5	
10457	290	4000	< 1	0.5	
10458	310	41	< 1	< 0.5	
10459	315	200	< 1	< 0.5	
10460	330	31	< 1	< 0.5	
10461	350	14	< 1	< 0.5	
10462	370	28	< 1	< 0.5	
10463	390	310	< 1	< 0.5	
10464	400	14	< 1	< 0.5	
10465	410	13	< 1	< 0.5	
10466	421	800	< 1	0.5	
10467	430	14	< 1	< 0.5	
10468	450	14	< 1	< 0.5	
10469	460	124	< 1	< 0.5	
10470	470	14	< 1	< 0.5	
10471	490	13	< 1	< 0.5	
10472	510	20	< 1	< 0.5	
10473	530	20	< 1	< 0.5	
10474	550	12	< 1	< 0.5	
10475	570	7	< 1	< 0.5	
10476	590	10	< 1	< 0.5	
10477	610	12	< 1	< 0.5	
10478	630	12	< 1	< 0.5	
10479	650	13	< 1	< 0.5	
10480	670	8	< 1	< 0.5	
Std.		72	25		



MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY:



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA V7J 2C1
TELEPHONE: 985-0648
AREA CODE: 604

• ANALYTICAL CHEMISTS • GEOCHEMISTS • REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

CERTIFICATE NO. 26963

TO: Archer Cathro & Associates Ltd.,
Box 4127
Whitehorse, Y. T.

INVOICE NO. 11520

ATTN: MINTO

RECEIVED June 12/74

ANALYSED June 18/74

D.R.I.V.

SAMPLE NO. :	FOOTAGE	PPM Copper	PPM Molybdenum	PPM Silver
10481	690	12	< 1	< 0.5
10482	710	14	< 1	< 0.5
10483	720	236	< 1	< 0.5
10484	730	206	< 1	< 0.5
10485	740	28	3	< 0.5
10486	750	13	< 1	< 0.5
10487	770	21	< 1	< 0.5
10488	790	6	< 1	< 0.5
10489	810	7	< 1	< 0.5
10490	830	10	< 1	< 0.5
10491	850	8	3	< 0.5
10492	870	14	< 1	< 0.5
10493	890	12	1	< 0.5
10494	910	8	< 1	< 0.5
10495	930	10	< 1	< 0.5
10496	950	13	< 1	< 0.5
10497	970	7	< 1	< 0.5
10498	990	13	< 1	< 0.5

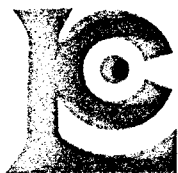
HOLE B 2



MEMBER
CANADIAN TESTING
ASSOCIATION

CERTIFIED BY:

092010



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
 NORTH VANCOUVER, B.C.
 CANADA
 TELEPHONE: 985-0648
 AREA CODE: 604

- ANALYTICAL CHEMISTS
- GEOCHEMISTS
- REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Archer Cathro & Assoc. Ltd.,
 Box 4127
 Whitehorse, Y. T.

CERTIFICATE NO. 27212

INVOICE NO. 11600

RECEIVED June 24.74

ATTN: MINTO

D.R.J.V.

ANALYSED June 28/74

SAMPLE NO. :	FOOTAGE	PPM Copper	Rock Geochem
E 10600	40	41	
10601	60	90	
10602	80	46	
10603	100	206	
10604	110	194	
10605	120	292	
10606	140	62	
10607	160	20	
10608	180	22	
10609	200	16	HOLE B3
10610	220	22	
10611	240	16	
10612	260	18	
10613	280	24	
10614	290	230	
10615	300	248	
10616	320	33	
10617	340	18	
10618	360	18	
10619	380	18	
10620	400	16	
10621	420	16	
10622	440	18	
10623	28	38	
10624	40	33	
10625	60	16	
10626	80	18	
10627	100	14	
10628	120	16	
10629	140	12	
10630	160	16	
10631	180	52	
10632	200	270	HOLE B4
10633	220	18	
10634	240	14	
10635	260	8	
10636	280	16	
10637	300	16	
10638	320	14	
10639	340	31	
Std.		70	

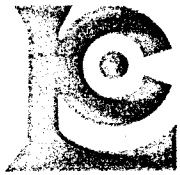


MEMBER
 CANADIAN TESTING
 ASSOCIATION

CERTIFIED BY:

B. Lewites

092010



CHEMEX LABS LTD.

212 BROOKSBANK AVE.
NORTH VANCOUVER, B.C.
CANADA
TELEPHONE: 985-0648
AREA CODE: 604

- ANALYTICAL CHEMISTS
- GEOCHEMISTS
- REGISTERED ASSAYERS

CERTIFICATE OF ANALYSIS

TO: Archer Cathro & Assoc. Ltd.,
Box 4127
Whitehorse, Y. T.

ATTN: MINTO

D.R.J.V.

CERTIFICATE NO. 27213
 INVOICE NO. 11600
 RECEIVED June 24/74
 ANALYSED June 28/74

SAMPLE NO. :	FOOTAGE	PPM Copper	Rock Geochem
E 10640	360	18	
10641	380	14	
10642	400	16	
10643	420	12	
10644	440	13	
10645	460	13	
10646	480	20	
10647	500	52	
10648	520	212	HOLE B 4
10649	540	28	
10650	560	20	
10651	580	14	
10652	600	14	
10653	620	16	
10654	640	16	
10655	660	16	
10656	680	14	
10657	700	18	
10658	720	14	
10659	740	14	
10660	760	24	
10661	780	27	
10662	800	16	



CERTIFIED BY: R. L. Swaine

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER B1
PAGE 3 OF 14

COMPANY: _____

PROPERTY: _____

LOGGED BY: _____

DATE: _____

DIP	AZIM.	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE		HOST ROCK		ALTERATION ASSEMBLAGES														MINERALIZATION																																		
				FRC / FT	W	BX	ROCK TYPE	K-SPAR	BIO-TITE	SERICITE	PYRITE	CLAYS	CHLORITE	EPI-DOTE	CARBONATES	OTHER	OTHER	PY	Bφ	CP	MC	AZ	CU	MG	HE																															
																										RECOVERY	ANGLE INTENSITY COLOR	TEXTURE GRAIN SIZE	USE 4-LETTER CODE	MODE OF OCCURRENCE	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT									
TYPE OF HOLE: DDH <input type="checkbox"/> RDH <input type="checkbox"/> PDH <input type="checkbox"/>		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
CORE		STRUCTURE AND/OR ALTERATION		RECOVERY		ROCK TYPE		ALTERATION ASSEMBLAGES														MINERALIZATION																																		
65° 0.2'		300.0		310 10		55 M		305 A - WB - 0.2' 65° E																																																
65° 0.2'		305.4		310 10		55 M		308.5 - CNT 65° E TO 309.8 65° E - WB - FB QZ + PF + CL																																																
65° 0.2'		308.5		310 10		55 M		300.5 - 302.0 - WSPS W3BI DIOP - QZ + MC = H																																																
65° 0.2'		309.8		310 10		55 M		KF POK TO 20MM BI = L																																																
		320.0		310 10		55 M		AT 310 - POK KF TO 20MM START TO BECOME COMMON																																																
		326.0		310 10		55 M		326 - 337 - FAULT ZONE - 11W? CLAYS = A-H, LOOKS LIKE NO OF FLTSHW																																																
		330.0		310 10		55 M		349 CNT PGRDR & DIOP																																																
		337.0		310 10		55 M		DIOP = HB TO 10MM																																																
		340.0		310 10		55 M		PF TO 20MM = F MAINLY																																																
		349.0		310 10		55 M		5-10 MM																																																
		350.0		310 10		55 M		ROX - BX - 45MM - SPECKLED LOOKING																																																
		360.0		310 10		55 M		349.5 - CNT GROUND - HB - 244 - 349.5 - 5-8MM CHANCE TO 3-5MM - BI GREATER																																																
		360.0		310 10		55 M		ROCK FINER GRAINED - POK KF TO 20MM																																																
		360.0		310 10		55 M		340 - 350 - FRC = A CLAYS																																																
		360.0		310 10		55 M		340 - 350 - FRC = A 1/6"																																																
		360.0		310 10		55 M		AFTER 350 MG = PATCHY																																																
		360.0		310 10		55 M		360 10																																																

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DRILL HOLE GEOLOGIC LOG

 HOLE NUMBER B1

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COMPANY:

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DATE:

STRUCTURE AND/OR ALTERATION	DIP	AZIM.	CONTACTS AND PRINCIPAL ZONES						BOTTOM OF INTERVAL DESCRIBED	STRUCTURE				HOST ROCK				ALTERATION										ASSEMBLAGES					MINERALIZATION																									
			TYPE OF HOLE: DOH, RDH, PDH							RECOVERY	FRC / FT	W	BX	ROCK TYPE	USE 4-LETTER CODE	QUARTZ	K-SPAR	BIO-TITE	SERICITE	PYRITE	CLAYS	CHLORITE	EPI-DOTE	CAP-BON-ATES	OTHER	OTHER	PY	Bφ	CP	MC	AZ	CU LI	MG	HE																								
			430°	30°-60°	60°-90°	AMT	ANGLE INTENSITY	COLOR																											TEXTURE	GRAIN SIZE	MODE OF OCCURRENCE	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT
ESTIMATES & ASSAYS ELEMENTS OR MINERALS			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53			
VISUAL ESTIMATES																																																										
ACTUAL ASSAYS																																																										
VISUAL																																																										
ACTUAL																																																										
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VISUAL																																																										
ACTUAL																																																										

Bx = 10-15%
NOTE ABSENCE OF WDS

393.4 - 10MM BAND - W3BI D1R
397.1 - 398.6 - W(4)3 BI D1R - LEUCO MG-P WITH BANDS OF WALL ROCK BI 25%
398.6 - 399.4 - W(5) BI D1R
399.4 - 400.0 - AS 397.1 - 398.6

NOTE - BANDS < 10% BI LEUCO W-4
401.9 - 410.2 - W(4)3 BI D1R - LEUCO TRIP MG-A WITH BANDS OF KW5 D1R UP TO 0.5'

415.0 - 40° BW - AIGO - CNT LOST = APLT
AFTER 410 HB INCREASING

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40° E

DRILL HOLE GEOLOGIC LOG

 HOLE NUMBER B1

COMPANY:

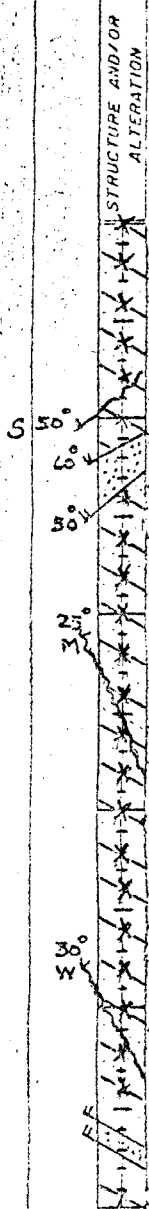
PROPERTY:

LOGGED BY:

DATE:

 PAGE 5 OF 14

DIP CORE	AZIM. TYPE OF HOLE: DDH <input type="checkbox"/> RDH <input type="checkbox"/> PDH <input type="checkbox"/>		CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE			HOST ROCK			ALTERATION ASSEMBLAGES										MINERALIZATION																																		
					RECOVERY	FRC / FT	W	BX	ROCK TYPE USE 4-LETTER CODE	QUARTZ	K-SPAR KF	DIO-TITE RI	SERI-CITE MU	PYR-ITE PY	CLAYS CY	CHLOR-ITE CL	EPI-DOTE EP	CAR-BON-ATES CB	OTHER		PY	Bφ	CP	MC	AZ	CU LI	MG	HE																											
						430°	30°-60°												60-90°	AMT.									ANGLE INTENSITY	COLOR	TEXTURE	GRAIN SIZE	MODE OF OCCURRENCE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT			
ESTIMATES & ASSAYS ELEMENTS OR MINERALS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53		
STRUCTURE AND/OR ALTERATION	431.2 - 60° W to 433.8 - 50° W = WB = KF = H QZ = L ABOVE TOP CNT KF FLOODED																																																						
VISUAL ESTIMATES	429 - FLT - 50° W - S, CL = H																																																						
ACTUAL ASSAYS	430	10																																																					
VISUAL	431.2 C																																																						
ACTUAL	433.8 H																																																						
VISUAL	446.5 W																																																						
ACTUAL	440	10																																																					
VISUAL	446.5 W																																																						
ACTUAL	459.0 TRN - WEATHERED																																																						
VISUAL	461.0 C																																																						
ACTUAL	461.0 - 30° W = FLT = F 10MM GOUGE																																																						
VISUAL	465.2 - 466.3 - DECOMPOSED ROC - SAND																																																						
ACTUAL	466.3 - 467.3 - CNTS TO W? = WB - KF = A																																																						
VISUAL	467.3 - 469.5 - HIGHLY WEATHERED CRUMBLY																																																						
ACTUAL	470	10																																																					
VISUAL	478.0 - 0.5' SANDED K CRDR																																																						
ACTUAL	470 - 480 - 1/2' FLT = F TO 0.05' GOUGE & SAND																																																						
VISUAL	480.0 W																																																						
ACTUAL	480	10																																																					



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DRILL HOLE GEOLOGIO LOG

COMPANY: _____ PROPERTY: _____ LOGGED BY: _____ DATE: _____

CORE ↓ STRUCTURE AND/OR ALTERATION	AZIM. TYPE OF HOLE: DDH RDH PDH	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE				HOST ROCK				ALTERATION ASSEMBLAGES										MINERALIZATION																											
				FRC / FT		W	BX	ROCK TYPE USE 4-LETTER CODE	QUARTZ AMOUNT	K- SPAR KF	BIO- TITE BI	SERI- CITE MU	PYR- ITE PY	CLAYS CY	CHLOR- ITE CL	EPI- DOTE EP	CAR- BON- ATES CB	OTHER		PRINCIPAL FACIES	INTENSITY	PY	Bφ	CP	MC	AZ	CU LI	MG	HE																				
				430°	30°-60°	60°-90°												AMT	ANGLE											INTENSITY	COLOR	TEXTURE	GRAIN SIZE	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.
				Use 2-letter code of each in- terval required, or as headings in spaces above		MODE												AMT.	MODE											AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE
ESTIMATES & ASSAYS ELEMENTS OR MINERALS																																																	
661.7	VISUAL												661.3 - 0.4' = W(N)35BI/GRDR MQ=A																																				
	ACTUAL												661.7 - 677.5 - IN PLACES B< TO B#																																				
	VISUAL												670 - PF DULL WHITE - FRC = LA																																				
	ACTUAL												# M F																																				
677.5	VISUAL												670 10 60 F B7 W6 GRDR PM PA PA VLVLPLVLP																																				
	ACTUAL												WG WT ENT - 677.5																																				
	VISUAL												GARNET = F (LIGHT RED GARNET)																																				
	ACTUAL												VF F																																				
700.0	VISUAL												680 10 60 F HφWT D1 φR PLPMPF VLVLPLVLP																																				
	ACTUAL												F																																				
	VISUAL												700 10 60 F																																				
	ACTUAL												PM																																				
710.0	VISUAL												710 10 60 F																																				
	ACTUAL												PM																																				
	VISUAL												720 10 60 F																																				
	ACTUAL												PM																																				

DRILL HOLE GEOLOGIC LOG

HOLE NUMBER **B1**

COMPANY:

PROPERTY:

LOGGED BY:

DATE:

PAGE **10** OF **14**

DIP	AZIM.	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE		HOST ROCK		ALTERATION										ASSEMBLAGES										MINERALIZATION																										
				RECOVERY	FRC / FT	W	BX	ROCK TYPE	USE 4-LETTER CODE	MODE OF OCCURRENCE	K-SPAR	BIO-TITE	SERI-CITE	PYR-ITE	CLAYS	CHLOR-ITE	EPI-DOTE	CAR-BON-ATES	OTHER	OTHER	PRINCIPAL FACIES	INTENSITY	PY	BØ	CP	MC	AZ	CU	LI	MG	FE																							
																																<30°	30°-60°	60°-90°	AMT.	ANGLE	INTENSITY	COLOR	TEXTURE	GRAIN SIZE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE
TYPE OF HOLE: DDH <input type="checkbox"/> RDH <input type="checkbox"/> PDH <input type="checkbox"/>																																																						
ESTIMATES & ASSAYS ELEMENTS OR MINERALS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
STRUCTURE AND/OR ALTERATION	CORE																																																					
10°	20°																																																					
30°	40°																																																					
50°	60°																																																					
70°	80°																																																					
90°	100°																																																					
110°	120°																																																					
130°	140°																																																					
150°	160°																																																					
170°	180°																																																					
190°	200°																																																					
210°	220°																																																					
230°	240°																																																					
250°	260°																																																					
270°	280°																																																					
290°	300°																																																					
310°	320°																																																					
330°	340°																																																					
350°	360°																																																					
370°	380°																																																					
390°	400°																																																					
410°	420°																																																					
430°	440°																																																					
450°	460°																																																					
470°	480°																																																					
490°	500°																																																					
510°	520°																																																					
530°	540°																																																					
550°	560°																																																					
570°	580°																																																					
590°	600°																																																					
610°	620°																																																					
630°	640°																																																					
650°	660°																																																					
670°	680°																																																					
690°	700°																																																					
710°	720°																																																					
730°	740°																																																					
750°	760°																																																					
770°	780°																																																					
790°	800°																																																					
810°	820°																																																					
830°	840°																																																					
850°	860°																																																					
870°	880°																																																					
890°	900°																																																					
910°	920°																																																					
930°	940°																																																					
950°	960°																																																					
970°	980°																																																					
990°	1000°																																																					

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER **B1**

COMPANY:

PROPERTY:

LOGGED BY:

DATE:

PAGE **14** OF **14**

DIP	AZIM.	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE			HOST ROCK			ALTERATION ASSEMBLAGES										MINERALIZATION																																		
				RECOVERY	FRC / FT	W	BX	ROCK TYPE	USE 4-LETTER CODE	K-SPAR KF	BIO-TITE BI	SERICITE MU	PYRITE PY	CLAYS CY	CHLORITE CL	EPI-DOTE EP	CALC-BOUN-ATES CB	OTHER MG	OTHER	PRINCIPAL FACIES	INTENSITY	PY	BO	CP	MC	AZ	CU	LI	MG	HE																								
																															MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.						
ESTIMATES & ASSAYS ELEMENTS OR MINERALS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
STRUCTURE AND/OR ALTERATION																																																						
VISUAL ESTIMATES																																																						
ACTUAL ASSAYS																																																						
CORE	TYPE OF HOLE: DDH <input type="checkbox"/> RDH <input type="checkbox"/> PDH <input type="checkbox"/>																																																					
30°	40°																																																					
40°	60°																																																					
60°	END																																																					

969.5
 971.9
 972.4
 974.0
 980.7
 984.5
 984.1
 985.1
 1000.0
 END

969.6 - 0.3 CNTS SHF-60° = SHRWB

962.3 - 962.8 - W(H) 3 DIAP. MC=L GARNET=L BI=20%

962.8 - 969.5 W(H) 6 BI DIAP. MC=L-F TR-GA

W(H) 3 BI DIAP. BANDS AT 967.1-967.6

ZONE TO 974? W=M BI 1HB

970.10 60 F

971.9 - 984.5 - W(H) DIAP. ^{PRALF=H}

- 1000.0 PGRDP

971.9 - 972.4 CNTS 60° W WB KF=A

974.0 - 30° W - 980.7 - 40° WB SKF=A

980.10 60 F

984.1 - 40° W - 985.1 - 60° W = WB BI=A (CL?)

980.7 - 989.5 W/B BK

989.5 - 1000.0 W/B BK

990.10 60 F

994.1 - 40° W - 995.1 - 60° W = WB BI=A (CL?)

980.7 - 989.5 W/B BK

989.5 - 1000.0 W/B BK

1000.10 60 F

030

DRILL HOLE GEOLOGIC LOG

 HOLE NUMBER **B2**

 PAGE **2** OF **17**

COMPANY:

PROPERTY:

LOGGED BY:

DATE:

DIP AZIM. TYPE OF HOLE: DDH ROH PDH	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	RECOVERY	STRUCTURE		HOST ROCK		ALTERATION										ASSEMBLAGES					MINERALIZATION																																					
				FRC/FT	W	BX	ROCK TYPE	QUARTZ	K-SPAR	DIO-TITE	SER-CITE	PYR-ITE	CLAYS	CHLOR-ITE	EPI-DATE	CAR-BON-ATES	OTHER	PY	BØ	CP	MC	AZ	CU LI	MG	HE																																			
				ANGLE	INTENSITY	TEXTURE	USE 4-LETTER CODE	MODE OF OCCURRENCE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE																																	
ESTIMATES & ASSAYS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53							
STRUCTURE AND/OR ALTERATION																																																												
VISUAL ESTIMATES																																																												
ACTUAL ASSAYS																																																												
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81.5																																																												
87.5																																																												
89.7																																																												
90.9																																																												
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113.8																																																												
114.5																																																												
116.4																																																												
118.0																																																												
120.0																																																												
124.5																																																												
125.6																																																												
120																																																												

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER B2
PAGE 3 OF 17

COMPANY:

PROPERTY:

LOGGED BY:

DATE:

DIF	AZIM.	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	RECOVERY	STRUCTURE		HOST ROCK				ALTERATION										ASSEMBLAGES										MINERALIZATION									
					FRC		W	BX	ROCK TYPE	USE 4-LETTER CODE	QUARTZ	K-SPAR	BIG-TITE	SERICITE	PYRITE	CLAYS	CHLORITE	EPI-DOTE	CARBONATES	OTHER	OTHER	PY	Bφ	CP	MC	AZ	CU	MG	HE											
					430°	30°-60°	60°-90°																							AMT.	ANGLE	INTENSITY	COLOR	TEXTURE	GRAIN SIZE	MODE OF OCCURRENCE	AMOUNT	MODE	AMOUNT	MODE

ESTIMATES & ASSAYS ELEMENTS OR MINERALS

BTM ZONE 128 - 128.2 - MG=L-N

ZONE - 116.2 - 119.0 - W(N) BK GRDR-BT-HB 123.7 - 124.1 - QUIL-D & FRC

119.0 - 128.2 - W(A) GRDR-W3-S

128.2 | 130 | 65 A | B > W G D | H R P F P M P H | V L 3 F P M V L P L

130.7 | BT-GHB PDR LX STRAINED | 138.5 - 2EN - 0.1' W3 BT(H) GRDR
1-2 BT - L

130.7 - 50° 0.2 ANDS DYK

1385 | 140 | 60 F | B < W G GRDR P M P M P F | V L V L P M V L P F

147.0 - 160 PINKING - FLA KA

1495 | 150 | 65 F | | | P F

149.5 - 157.5 - FRC = H 3 CL = M V CY = F HE SUX FRC

157.5 | 160 | 65 F | | | P F

160.0 - 161.0 - FRC = H CY + CL = H

1650 - 167.5 - FRC = E-M VEP

1660 | 170 | 65 F | | | P F

1675

180 | 65 F | | | P F

DRILL HOLE GEOLOGIC LOG

 HOLE NUMBER 82

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COMPANY:

PROPERTY:

LOGGED BY:

DATE:

STRUCTURE AND/OR ALTERATION	CORE	DIP		AZIM.		CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE		HOST ROCK		ALTERATION										ASSEMBLAGES		MINERALIZATION																															
		TYPE OF HOLE:		DDH	RDH			PDH	FRC/FT	W	BX	ROCK TYPE	QUARTZ	K-SPAR	BIO-TITE	SERICITE	PYRITE	CLAYS	CHLORITE	EPI-DOTE	CARBONATES	OTHER	OTHER	PY	Bφ	CP	MC	AZ	CU	MG	HE																								
		DDH	RDH																													RECOVERY	ANGLE	INTEGRITY	TEXTURE	GRAIN SIZE	USE 4-LETTER CODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE				
		AMT.	INTENSITY	COLOR	COLOR			COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR	COLOR																								
ESTIMATES & ASSAYS																																																							
ELEMENTS OR MINERALS																																																							
245-TRN B< to B>																																																							
TOP CONTACT ZONE																																																							
246.0 TO 256.1 - W(A) 6 BI GRDR - MC=N ; 250-253-FRC-SHINY RED BROWN STREAKS - Bφ & CULT																																																							
W6-BI COARSE CULT																																																							
246.8		VISUAL				250 10		65° F																																															
		ACTUAL																																																					
		VISUAL				256.1 - 256.7 - CP > PY ENT - 1% Bφ - D																																																	
		ACTUAL				256.1 - 0.2'																																																	
		VISUAL				260 - 0.1'																																																	
		ACTUAL																																																					
		VISUAL				260 10		70° A		BI W6 GRDR		PMPMPH																																											
		ACTUAL																																																					
		VISUAL				269.3 - 274.2 - P > V CP > Bφ & CULT																																																	
		ACTUAL				274.2 - 282.5 - P > V CP > Bφ & CULT - 1% Bφ																																																	
		VISUAL																																																					
		ACTUAL																																																					
		VISUAL				270 10		70° H		BI W3 GRDR		PMPMPH																																											
		ACTUAL																																																					
		VISUAL				270.5 - 284.7 W(H) 6 BI GRDR																																																	
		ACTUAL																																																					
		VISUAL				280 10		65° A		BI W6 GRDR																																													
		ACTUAL																																																					
		VISUAL				282.5 - 284.7 - CP > Bφ V 2 P 5% Bφ 12%																																																	
		ACTUAL				284.7 - 286.5 - TR Bφ & CULT																																																	
		VISUAL				286.0 - 290.6 - CP > PY SX = < 1%																																																	
		ACTUAL																																																					
		VISUAL				290 10		70° A																																															
		ACTUAL																																																					
		VISUAL				2900 - 295.8 V P Bφ CULT FRC-P SX = 12%																																																	
		ACTUAL				295.8 - 297.0 - FRC = H																																																	
		VISUAL				Mφ & CULT (COMMON) Bφ & CULT																																																	
		ACTUAL				297.0 - 300.0 - P > V Bφ & P Bφ & V																																																	
		VISUAL				300 10		70° A																																															
		ACTUAL																																																					

092010

DRILL HOLE GEOLOGIC LOG

 HOLE NUMBER B2

COMPANY: _____

PROPERTY: _____

LOGGED BY: _____

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DIP	AZIM.	TYPE OF HOLE: DDH <input type="checkbox"/> RDH <input type="checkbox"/> PDH <input type="checkbox"/>	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE		HOST ROCK		ALTERATION ASSEMBLAGES														MINERALIZATION																															
					RECOVERY	FRC / FT	W	BX	ROCK TYPE	USE 4-LETTER CODE	K-SPAR KF	DIO-TITE BT	SERI-CITE MU	PYR-ITE PY	CLAYS CY	CHLOR-ITE CL	EPI-DOTE EP	CAP-DON-ATES CB	OTHER MG	OTHER	PRINCIPAL FACIES	INTENSITY	PY	Bφ	CP	MC	AZ	CU LI	MG	HE																								
																															MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.								
																																															MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.
ESTIMATES & ASSAYS ELEMENTS OR MINERALS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53

STRUCTURE AND/OR ALTERATION CORE

 307 - MC STARTS
 307 - 317.0 FRC=M-A - CY+CL

314.5 - 315.6 - W(H) GBTORR

 320.0 - 20MMZEN BT(H) GDR
 322.4 - 325.6 - FRC=H 3CL VCYAGB

340 - P-PY=L

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DRILL HOLE GEOLOGIC LOG

COMPANY: _____ PROPERTY: _____ LOGGED BY: _____ DATE: _____

DIP	AZIM.	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE		HOST ROCK		ALTERATION											ASSEMBLAGES											MINERALIZATION																																																				
				RECOVERY	FRC	W	BX	ROCK TYPE	USE 4-LETTER CODE	MODE OF OCCURRENCE	K-SPAR	BIO-TITE	SERI-CITE	PYR-ITE	CLAYS	CHLORITE	EPI-DOTE	CAP-DONATES	OTHER	OTHER	PRINCIPAL FACIES	INTENSITY	PY	Bφ	CP	MC	AZ	CU	LI	MG	HE																																																			
																																ANGLE	INTENSITY	COLOR	TEXTURE	GRAIN SIZE	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT																									
ESTIMATES & ASSAYS ELEMENTS OR MINERALS																														1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
CORE	TYPE OF HOLE: DDH <input type="checkbox"/> RDH <input type="checkbox"/> PDH <input type="checkbox"/>																																																																																	
	STRUCTURE AND/OR ALTERATION																																																																																	

W 26°
 W 15°
 STRUCTURE AND/OR ALTERATION

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER **B 2**

COMPANY: _____

PROPERTY: _____

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DIP	AZIM.	TYPE OF HOLE: ODH RDH PDH	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE		HOST ROCK		ALTERATION										ASSEMBLAGES					MINERALIZATION																																				
					RECOVERY	FRC / FT	W	BX	ROCK TYPE	USE 4-LETTER CODE	QUARTZ	K-SPAR	BIOTITE	SERICITE	PYRITE	CLAYS	CHLORITE	EPI-DOTE	CARBONATES	OTHER	OTHER	PRINCIPAL FACIES	INTENSITY	PY	Bφ	CP	MC	AZ	CU LI	MG	HE																													
																																430°	30°-60°	60°-90°	AMT.	ANGLE	INTENSITY	COLOR	TEXTURE	GRAIN SIZE	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT
																																MODE OF OCCURRENCE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE
ESTIMATES & ASSAYS ELEMENTS OR MINERALS					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53			
STRUCTURE AND/OR ALTERATION		VISUAL ESTIMATES		ACTUAL ASSAYS		550		A 5 F		B < W 6 G R D R P M P M P F		CNT DIAE / PGDR 545 TRN - RIL -> FTM HB 10MM TO 5MM KF=PHN										M					550.2 - CL-L -> S																																	
VISUAL		ACTUAL		559.2		A 5 F														P M																																								
VISUAL		ACTUAL		562.0 563.0		FLT ZONE - 559.2 - 570				561.5 - 562.0 - CRUMBLY CL+CY=H = FLT															562.0 - 563.0 - WB CNTS - 50° 11W? BTM CNT FLT - MAJOR																																			
VISUAL		ACTUAL		570.0		A 6 5 F				570.0 - 585.8 - FRC = A										574.0 - MYL - 40° 11W - 5MM					575.5 - 40° 11W = 20MM CB = H FLT = M																																			
VISUAL		ACTUAL		574.0						578.2 - 20° 11W (?) CB = H FLT = S																																																		
VISUAL		ACTUAL		579.2		A 6 5 F														3A					P M																																			
VISUAL		ACTUAL		585.8						585.8 - 20° 11W = FLT = S CB = H															588.5 20° 11W = CL = H																																			
VISUAL		ACTUAL		588.5		A 6 5 F														3F					P M																																			
VISUAL		ACTUAL		600		A 6 5 F																			P M																																			

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER B2

COMPANY:

PROPERTY:

LOGGED BY:

DATE:

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STRUCTURE AND/OR ALTERATION	CORE	AZIM.		CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE		HOST ROCK		ALTERATION ASSEMBLAGES										MINEFALIZATION																																		
		TYPE OF HOLE: DDH <input type="checkbox"/> RDH <input type="checkbox"/> PDH <input type="checkbox"/>				RECOVERY	FRC / FT	W	BX	ROCK TYPE	USE 4-LETTER CODE	QUARTZ	K-SPAR	DIO-TITE	SERI-CITE	PYR-ITE	CLAYS	CHLOR-ITE	EPI-DOTE	CAR-BON-ATES	OTHER		PY	Bφ	CP	MC	AZ	CU	MG	HC																								
		MG																			PRINCIPAL FACIES	INTENSITY																																
		MODE	AMT.																												MODE	AMT.																						
ESTIMATES & ASSAYS ELEMENTS OR MINERALS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
VISUAL ESTIMATES																																																						
ACTUAL ASSAYS				910		60 M		B7		PH										PM																																		
										-910.0 - 911.0 - FLT 35° NW FLT ± W BANDED CLIX = A																																												
VISUAL								B+																																														
ACTUAL				920		55 F		B<		PM										PM																																		
VISUAL								F																																														
ACTUAL				930		60 M		B<		PF										PM																																		
VISUAL								F																																														
ACTUAL				940		60 M		B<		PF										PM																																		
VISUAL								F																																														
ACTUAL				950		60 F		B7		PM										PM																																		
				953.7		953.7 - 963.8 - COARSE W7 HB → RT				953.7 - 78° NW FLT = M CL = H																																												
				956.1		A FEW NARROW QUASI ZONES				956.1 - 48° NW FLT = M CL = H																																												
				957.2						957.2 - 90° DECC - 957.2 - 70° NW = WB																																												
				958.1						958.1 - 40° NW? 0.2' WB																																												
VISUAL						55																																																
ACTUAL				960		50 F		B7		PM										PM																																		

W 35°
 910.0
 911.0
 953.7
 956.1
 959.1

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DRILL HOLE GEOLOGIC LOG

COMPANY:

PROPERTY:

LOGGED BY:

DATE:

DIP CORE	AZIM. TYPE OF HOLE: DDH RDH PDH	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE				HOST ROCK			ALTERATION										ASSEMBLAGES										MINERALIZATION																																																											
				FRC / FT		W	BOX	ROCK TYPE	QUARTZ	K-SPAR	DIO-TITE	SERICITE	PYRITE	CLAYS	CHLORITE	EPI-DOTE	CARBONATES	OTHER	OTHER	PRINCIPAL FACIES	PY	BØ	CP	MC	AZ	CULI	MG	HE																																																														
				RECOVERY	430°	30°-60°	60°-90°	AMT.	ANGLE	INTENSITY	COLOR	TEXTURE	GRAIN SIZE	USE 4-LETTER CODE	MODE OF OCCURRENCE	MODE	AMOUNT	MODE	AMOUNT		MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT																																																
				ESTIMATES & ASSAYS ELEMENTS OR MINERALS					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53																													
				VISUAL	ACTUAL	130		10	70	A	FW CNT										126.5	-	134.0	-	W(F)	3-5	BI GRDR	-	MIXED	138.0	-	AS	BELOW	133.6	-	W(H)	3-5	BI GRDR	-	MIXED	140.7	0	65	F	B>	W	6	G	EDR	PM	P	A	P	L	VL	3	L	3	F	V	L	P	L	BI	<	10	7	150	10	55	F	B<	#	160	10	60	F	B<	#	170	10	65	F	B<	#	180	10	55	F	B<

3-3
2
7

DRILL HOLE GEOLOGIC LOG

 HOLE NUMBER **B3**

COMPANY:

PROPERTY:

LOGGED BY:

D. T. E.:

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DIP	AZIM.	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE		HOST ROCK				ALTERATION										ASSEMBLAGES										MINERALIZATION																													
				RECOVERY	FRC/FT	W	BX	ROCK TYPE	USE 4-LETTER CODE	K-SPAR	BIO-TITE	SERICITE	PYRITE	CLAYS	CHLORITE	EPIDOTE	CARBONATES	OTHER	OTHER	PRINCIPAL FACIES	INTENSITY	PY	BO	CP	MC	AZ	CU	MG	HC																														
																														430°	30-60°	60-90°	AMT.	ANGLE	INTENSITY	COLOR	TEXTURE	GRAIN SIZE	MODE OF OCCURRENCE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE					
				ESTIMATES & ASSAYS ELEMENTS OR MINERALS		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	
STRUCTURE AND/OR ALTERATION		VISUAL ESTIMATES		ACTUAL ASSAYS		250 10		50 F		B, > W, G, R, D, E		P, M, P, M, P, M		3 M, 3 A, P, F, V, F, N																																													
251.9																																																											
258.0						260 10		N						3 X		N																																											
265.0																																																											
270.0						270 10		50 F						3 H		N																																											
280.0						280 10		60 F						P, A		P, F																																											
280.6																																																											
290.0						290 10																																																					
293.3																																																											
294.2																																																											
295.7																																																											
298.4						300 10		55 A																																																			

251.8 - 258.0 - FLT ZONE - H - HIGHLY SHR. - 15° - 60° NW(?) FLT AT 258 CC CY = H

265.0 - 267.5 - FLT ZONE - 45° NW(?) FLT = A CY + CL = X

279.9 - 307.2 - ZONE - SUP ALT FLT & FRC = H

286.7 - 287.3 - FLT = H 40° CY = X

289.3 - 0.4' NW HYL WB(?)

290.6 - 0.1' MUD - FLT NW

293.3 - FLT = M 65° NW 0.1' CY ; 294.2 - 0.3' WB NW

295.7 - HYL - 20MM - 50° NW

298.4 - 40° NW = 20MM HYL FLT

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER BA

COMPANY:

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DIP	AZIM	TYPE OF HOLE: DDH RDH PDH	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE		HOST ROCK		ALTERATION ASSEMBLAGES										MINERALIZATION																																											
					RECOVERY	FRC / FT	W	BX	ROCK TYPE	K-SPAR KF	DIO-TITE BI	SERI-CITE MU	PYR-ITE PY	CLAYS CY	CHLOR-ITE CL	EPI-DOTE EP	CAR-BON-ATES CB	OTHER MG	OTHER	PRINCIPAL FACIES	INTENSITY	PY	B ϕ	CP	MC	AZ	CU LI	MG	HE																																	
																						MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE	MODE																							
																						AMT.	AMT.	AMT.	AMT.	AMT.	AMT.	AMT.	AMT.	AMT.	AMT.	AMT.	AMT.	AMT.	AMT.	AMT.	AMT.	AMT.	AMT.																							
ESTIMATES & ASSAYS ELEMENTS OR MINERALS										1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53
STRUCTURE AND/OR ALTERATION	VISUAL ESTIMATES			ACTUAL ASSAYS		130 10		5 5																																																						
	127.0		129.7																																																											
STRUCTURE AND/OR ALTERATION	VISUAL			ACTUAL		140 10		5 5 M																																																						
	132.0		133.7																																																											
STRUCTURE AND/OR ALTERATION	VISUAL			ACTUAL		150 10		5 5 F		B< W 6 G RDR		PM PA PF		VL VLPF		VL PM																																														
	151.4		152.4																																																											
STRUCTURE AND/OR ALTERATION	VISUAL			ACTUAL		160 10		5 5 F		B<																																																				
	153.8		157.4																																																											
STRUCTURE AND/OR ALTERATION	VISUAL			ACTUAL		170 10		6 0 F		B<																																																				
	177.0		173.4																																																											
STRUCTURE AND/OR ALTERATION	VISUAL			ACTUAL		180 10		6 0 F		B<																																																				
	180 10																																																													

6
20
0.3
37.0
55
0.1
50
0.36
57.4

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER 34
PAGE 6 OF 14

COMPANY: _____

PROPERTY: _____

LOGGED BY: _____

DATE: _____

STRUCTURE AND/OR ALTERATION	AZIM.	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE		HOST ROCK		ALTERATION ASSEMBLAGES										MINERALIZATION														
				FRC / FT		W	BX	ROCK TYPE	Q	K-SPAR	BIO-TITE	SER-CITE	PYR-ITE	CLAYS	CHLORITE	EPI-DOTE	CARBONATES	OTHER	OTHER	PRINCIPAL FACIES	INTENSITY	PY	Bφ	CP	MC	AZ	CU	MG	FE			
				RECOVERY	ANGLE	INTENSITY	COLOR	TEXTURE	GRAIN SIZE	USE 4-LETTER CODE	MODE OF OCCURRENCE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT	MODE	AMOUNT
				230°	30°-60°	60°-90°	AMT.	ANGLE	INTENSITY	COLOR																						
TYPE OF HOLE: DDH <input type="checkbox"/> RDH <input type="checkbox"/> PDH <input type="checkbox"/>																																
ESTIMATES & ASSAYS ELEMENTS OR MINERALS																																
303.0																																
VISUAL ESTIMATES																																
ACTUAL ASSAYS																																
315.1																																
VISUAL																																
ACTUAL																																
322.6																																
VISUAL																																
ACTUAL																																
341.9																																
VISUAL																																
ACTUAL																																
350.1																																
VISUAL																																
ACTUAL																																
356.6																																
VISUAL																																
ACTUAL																																

303.0 - 0.3' PINKING EP=A FLT=M
304.0 - 306.0 PINKING 1EP FRC 1/6'

310 10 50 F BCWB
FINE FRC PINKING
1-2' - 300' - 341.9

315.1 - 60° LW - 0.2' WB

320 10 55 F

322.6 - 323.5 = WB VEINING

330 10 50 F

341.9 - 20° LW(?) SHR-MTL EP PINKING

350 10 55 F

PINKING 353.0 -

350.1 - 35° LW = 0.2' WB

356.6 - FLT = M 30° CYCL = GOUGE - 20MM

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DRILL HOLE GEOLOGIC LOG

 HOLE NUMBER 84

COMPANY:

PROPERTY:

LOGGED BY:

DATE:

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DIP	AZIM.	TYPE OF HOLE: DDH RDH PDH	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE		HOST ROCK		ALTERATION ASSEMBLAGES															MINERALIZATION										
					RECOVERY	FRC / FT	W	BX	ROCK TYPE	USE 4-LETTER CODE	QUARTZ	K-SPAR	BIO-TITE	SERICITE	PYRITE	CLAYS	CHLORITE	EPI-DOTE	CARBONATES	OTHER	OTHER	PRINCIPAL FACIES	INTENSITY	PY	BO	CP	MC	AZ	CU	MG	HE			
																																MODE	AMT.	MODE
		ESTIMATES & ASSAYS		ELEMENTS OR MINERALS																														
		VISUAL ESTIMATES																																
		ACTUAL ASSAYS																																
		491.2		C		* 494.5 - 521.5 - W(A)G B7 TO BT																												
		493.0		H		DIP 2 FAIR TO MOD 13 GRAD																												
				W		W3 BT(H) GRDR - MC COMMON																												
						UP TO 0.3'																												
		490		C		55 M																			PF									
		491.0		H		491.0 - 494.5 - TYPICAL PCGRDR BK																			493.0 - 0.8' FLT - S. CY & CL & CB = H.									
		493.0		W		PHN KF = A																			494.5 - 500 = W(A) SHE W6 B7 DIP 2 MELANO - BT - HB TO 20MM PHN KF = A SMALLER									
																									MORE SUBDUED THAN PCGRDR.									
		500		C		50 M																			PH									
		500.0		H		500.0 -																			1-3' SHE 45-40 IMPACT W(A) CL + CB = M HE FRC COMMON									
				W		W(A)G B7 TO BT DIP MELANOCLASTIC STREAKS OF BITO 20MM FINE SHRED BT																			(ALT HB?) PHN KF - SUBDUED 5-15MM AMT = F-M - SMALLER DIA PCGRDR									
		510		C		50 M																			PH									
		517.5		H		517.5 - 0.3' BLACK MC = H B0 CP = 20%																												
		520		C		520 M																			PH									
		521.2		H		521.2 - 0.8 W(H) 3 BT GRDR - CP & B0																												
				W		MC = M																												
						521.5 - BTM CONTACT ? ZONE																												
		529.5		C		530 M																			M									
		531.0		H		521.5 - 523.5 - W(H) AC B7 DIPP - PHN KF																			PF									
				W		= F, A FEW PARTING OF W3(BT) GRDR																			531.0 - 542.5 = FLT ZONE CL = X, CY & CB = A FLT AT 540 - 45°?? ROCKS CRUMBLY IN PLACES									
						TYPICAL HB TO 10MM																												
		540		C		?																			PF									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER B4

COMPANY:

PROPERTY:

LOGGED BY:

DATE:

PAGE 10 OF 14

CORE	DIP _____ AZIM. _____		CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE		HOST ROCK		ALTERATION														ASSEMBLAGES										MINERALIZATION																				
	TYPE OF HOLE: DDH RDH PDH				RECOVERY	FRC / FT	W	BX	ROCK TYPE	K-SPAR KF	DIO-TITE RT	SERI-CITE MU	PYR-ITE PY	CLAYS CY	CHLOR-ITE CL	EPI-DOTE EP	CAR-BON-ATES CR	OTHER MA	OTHER	PRINCIPAL FACIES	INTENSITY	PY	Bφ	CP	MC	AZ	CU LI	MG	HE																								
	ESTIMATES & ASSAYS ELEMENTS OR MINERALS																													ANGLE	INTENSITY	TEXTURE	GRAIN SIZE	USE 4-LETTER CODE	MODE OF OCCURRENCE	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT	MODE AMOUNT
	1	2																												3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
550	C	547.4			529.5 - 549.0 - GREENISH DARK		547.4 - 548.4 = 55° CHTS II & III = W-B-FEZ																																														
		548.4			BX=15% W(F) G BK 2 Hφ DIR MAINLY		548.4 - 557.6 = CL=F-H CY=H IN PLACES																																														
555	H	553.1			WHTO 15MM WHITE PE? PHN KF=L-F 2 HW																																																
		553.8			LEUCO KF=L B>																																																
555	W	555.0			550 10		45 F																																														
		556.3																																																			
560	C	557.6																																																			
		563.5			560 10		65 F																																														
565	H	564.5																																																			
		569.0			570 10		50 F																																														
570	W	571.6																																																			
		576.0			580 10		?																																														
580	C	580.0																																																			
		587.6																																																			
590	H	590.0			590 10		55 F																																														
		593.5																																																			
600	W	600.0																																																			
		600.0																																																			

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER B4

PAGE 12 OF 14

COMPANY: _____

PROPERTY: _____

LOGGED BY: _____

DATE: _____

DIP	AZIM	CONTACTS AND PRINCIPAL ZONES	BOTTOM OF INTERVAL DESCRIBED	STRUCTURE			HOST ROCK		ALTERATION										ASSEMBLAGES					MINERALIZATION															
				RECOVERY	FRC	W	BX	ROCK TYPE	K-SPAR	BIO-TITE	SERICITE	PYRITE	CLAYS	CHLORITE	EPI-DOTE	CARBONATES	OTHER	PRINCIPAL FACIES	INTENSITY	PY	Bφ	CP	MC	AZ	CU	MG	HE												
																												MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.	MODE	AMT.
TYPE OF HOLE: DDH <input type="checkbox"/> RDH <input type="checkbox"/> PDH <input type="checkbox"/>		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS		ESTIMATES & ASSAYS ELEMENTS OR MINERALS			
STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION		STRUCTURE AND/OR ALTERATION			
H 20°		660.0		670.0		N																																	
0.1 30°		677.1		680		60																																	
		690		55F																																			
0.5 40°		710		55F																																			
		712.8		55F																																			
		720		55F																																			

660 - 670.0 = FRC ZONE CL = H CY = M CB = M FLT AT 669-20° FAINT PINKING

677.1 - 30° NW = 0.1' WB

701.5 - CNT NW - 712.4 - W6 HB & B< DIBR - KF = PNT TO 15 MM = FAIR, FINER KF = A?
 708.5 - 0.5 - PINKING EPT 0.1' WB = PEG BTM CNT
 705.8 - 0.5' - 45° NW = WB - S&P HB APLT

712.8 - 0.5' - 40° NW = WB S&P APLT

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LEGEND

DRILL HOLE GEOLOGIC LOG

1. STRUCTURE AND ALTERATION = STRUCTURE AND ROCK TYPE

(1) STRUCTURE



CONTACT - DEFINED, DIP AND WIDTH IN FEET

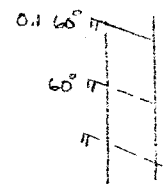
DIP KNOWN, ORIENTATION TO FOLIATION UNKNOWN

DIP AND ORIENTATION TO FOLIATION UNKNOWN

FAULT - DEFINED, INTENSITY W=WEAK, M=MODERATE, S=STRONG

DIP KNOWN, ORIENTATION TO FOLIATION UNKNOWN

DIP AND ORIENTATION TO FOLIATION UNKNOWN



WHITE BANDS (we) = APLITE - PEGMATITE DIKES

DEFINED, DIP AND WIDTH IN FEET

DIP KNOWN, ORIENTATION TO FOLIATION UNKNOWN

DIP AND ORIENTATION TO FOLIATION UNKNOWN

(2) ROCK TYPE

TERTIARY CARMACKS VOLCANICS

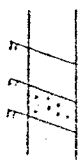


ANDESITE



DACITE

CRETACEOUS APLITE - PEGMATITE DIKES - WHITE BANDS (we)



TRIASSIC KLOTASSIN BATHOLITH

WALLROCK

DIORITE



GRANODIORITE

GNEISSIC ZONES



FINE GRAINED

MEDIUM - COARSE GRAINED

2 CONTACTS AND PRINCIPAL ZONES

OV3 = OVERBURDEN

SUP = SUPERGENE

FRX = FRESH

3 BOTTOM OF INTERVAL DESCRIBED

4 RECOVERY = CORE RECOVERED

5 STRUCTURE

(1) FRC/FT = FRACTURES PER FOOT

< 30°

30-60° NOT USED

60-90°

(2) AMT = AMOUNT = RELATIVE ABUNDANCE

N = NIL

L = LOW

F = FAIR

M = MEDIUM

A = ABOVE MEDIUM

H = HIGH

X = EXTREMELY HIGH

(3) W = FOLIATION

ANGLE = ANGLE TO CORE AXIS

INTENSITY = RELATIVE ABUNDANCE

6 BX = BIOTITE/HORNBLLENDE MINERAL COMBINATION

BX = PROPORTIONS UNSPECIFIED

BI = BIOTITE ALONE

B> = BIOTITE GREATER THAN HORNBLLENDE

B# = BIOTITE EQUALS HORNBLLENDE

B< = BIOTITE LESS THAN HORNBLLENDE

HØ = HORNBLLENDE ALONE

7 TEXTURE

W = FOLIATED

E = EQUIGRANULAR

8 GRAIN SIZE

3 = FINE GRAINED

3-5 = FINE-MEDIUM GRAINED

5 = MEDIUM GRAINED

6 = MEDIUM-COARSE GRAINED

7 = COARSE GRAINED

9 ROCK TYPE

DIØR = DIORITE

GRDR = GRANODIORITE

ANDS = ANDESITE

PPRY = PORPHYRY

APLT = APLITE

10 ALTERATION ASSEMBLAGE

(1) MINERAL

QZ = QUARTZ

KF = K-SPAR = ORTHOCLASE

BI = BIOTITE

MU = SERICITE

PY = PYRITE

CY = CLAY

CL = CHLORITE

EP = EPIDOTE

CB = CARBONATE

MG = MAGNETITE

(2) MODE OF OCCURRENCE

- V VEINS
- E ENVELOPES
- P PERVASIVE
- 2 VEINS & ENVELOPES
- 3 VEINS & PERVASIVE
- 4 ENVELOPES & PERVASIVE

(3) AMT = AMOUNT = RELATIVE ABUNDANCE -SEE 5(2)

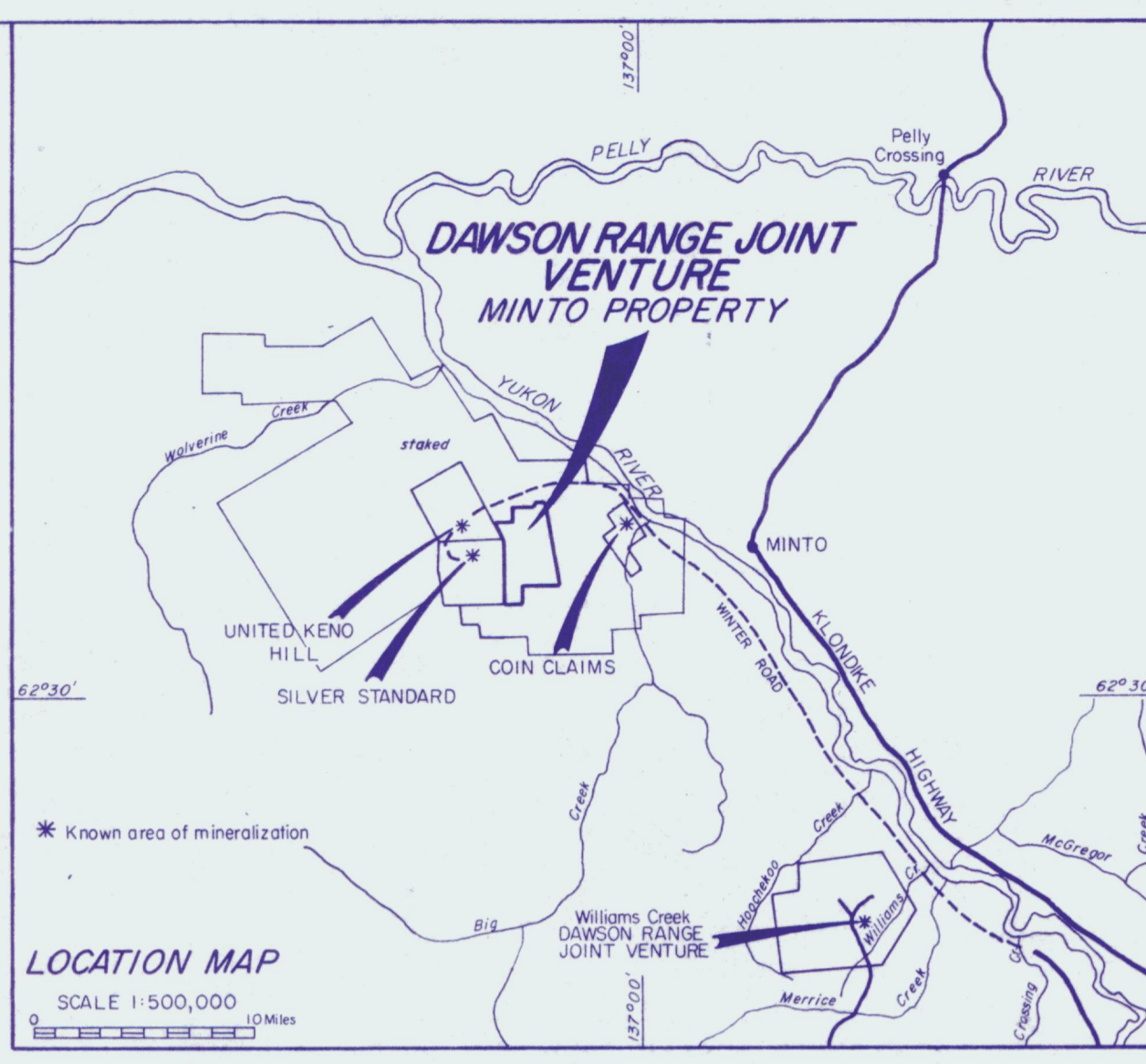
TWO LETTER MINERAL CODE

- FL = FELDSPAR
- PF = PLAGIOCLASE
- HB = HORNBLLENDE
- WB = WB = WHITE BAND
- Bφ = BORNITE
- CP CHALCOPYRITE
- Mφ MALACHITE
- AZ AZURITE
- Mφ MOLYBDENITE
- GA CARNET
- GY GYPSUM
- HE HEMATITE
- LA LAUMONTITE

ONE, THREE AND FIVE CHARACTER
CONTRACTIONS

- CNT, CNTS = CONTACT, CONTACTS
- L = ANGLE TO FOLIATION
- ||, ||W = PARALLEL TO FOLIATION
- FRC = FRACTURE
- ZEN = ZENOLITH

PEG	= PEGMATITE
FLT	FAULT
LEUCO	LEUCOCRATIC = LIGHT COLORED
SHR	SHEARED
CULI	COPPER LIMONITE
DYK	DIKE
MAF	MAFIC
>	GREATER THAN
<	LESS THAN
∠	ANGLE TO CORE AXIS
SUP	SUPERCENE
REC	RECOVERY
POK	POIKOLITIC
ALT	ALTERED
D	DISSEMINATED
PHN	PHENOCRYSTS
PORPH	PORPHYRITIC
TEX	TEXTURE
L	LIGHT
D	DARK



AGE	UNIT	GEOLOGY
TERTIARY	GARMACKS VOLCANICS	Andesite & porphyritic dacite
PERMIAN (?)	KLOTASSIN BATHOLITH	A. Granodiorite B. Granodiorite with copper bands

- LEGEND**
- Outcrop or float
 - Outcrop with minor malachite
 - Copper float
 - Foliation - strike & dip - number of attitudes measured
 - Tote trail
 - Trench
 - Assumed contact
 - Strong EM 16 linear
 - Holes drilled in 1974

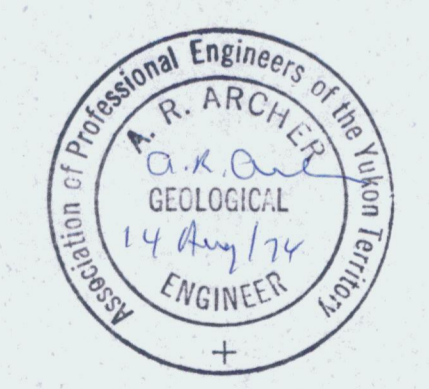
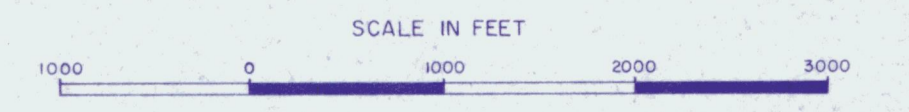


FIG. M3
 ARCHER, CATHRO & ASSOCIATES LTD.
GEOLOGY
PAL, BEN & KAP CLAIMS
 MINTO PROPERTY
 DAWSON RANGE JOINT VENTURE 092010



Bearing of baselines 350°

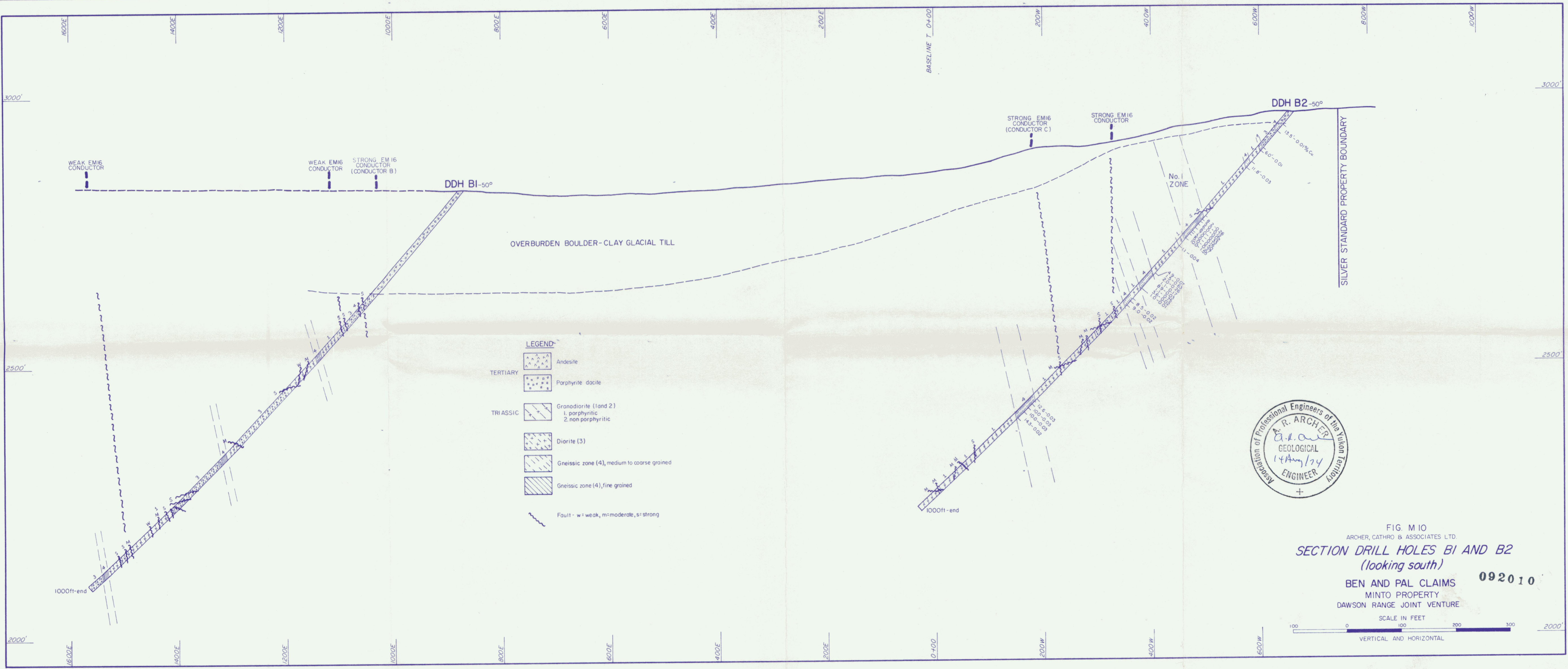
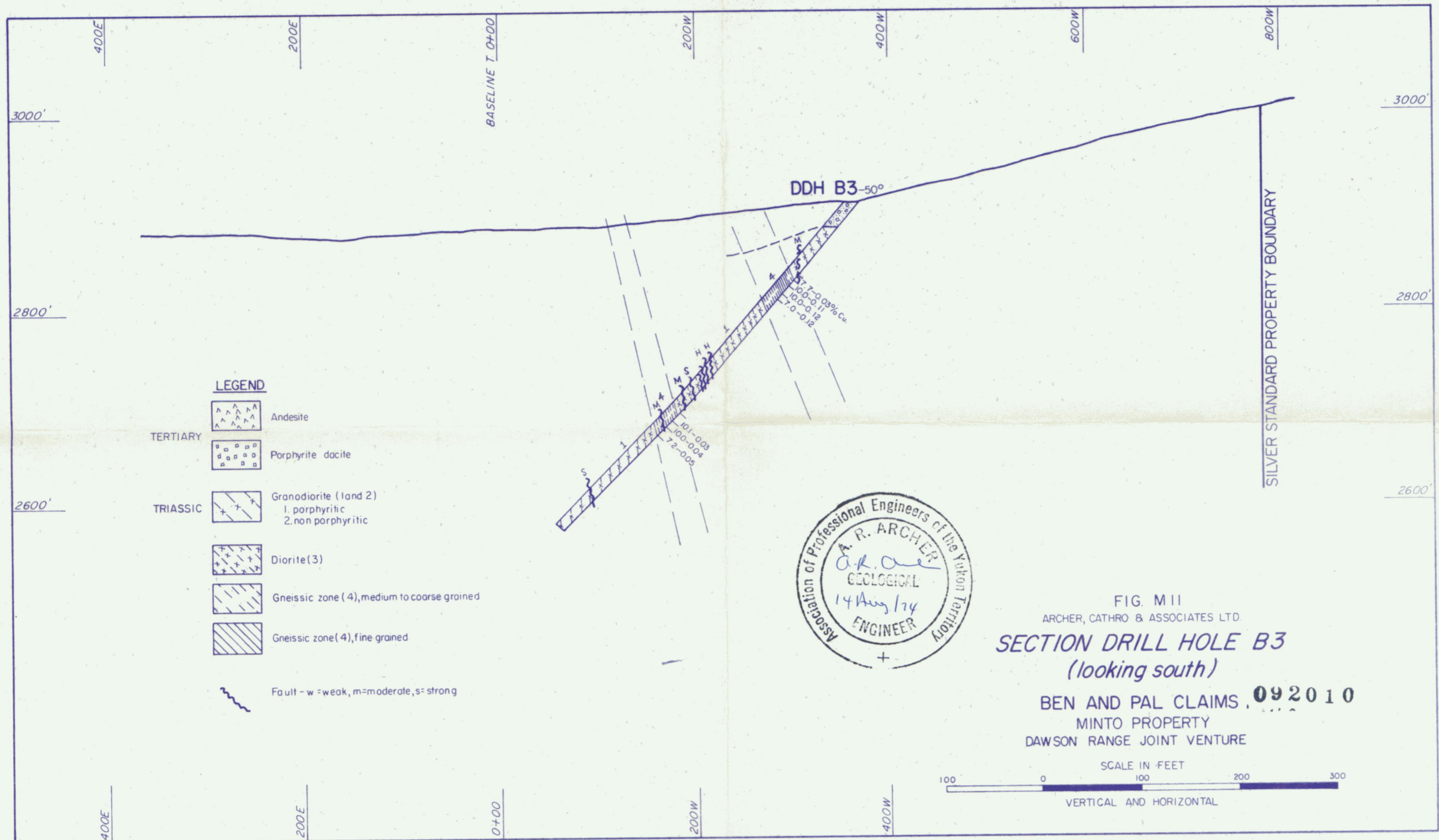


FIG. M 10
 ARCHER, CATHRO & ASSOCIATES LTD.
SECTION DRILL HOLES B1 AND B2
(looking south)
 BEN AND PAL CLAIMS
 MINTO PROPERTY
 DAWSON RANGE JOINT VENTURE

092010





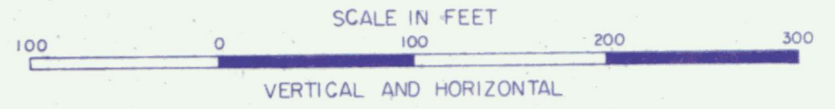
LEGEND

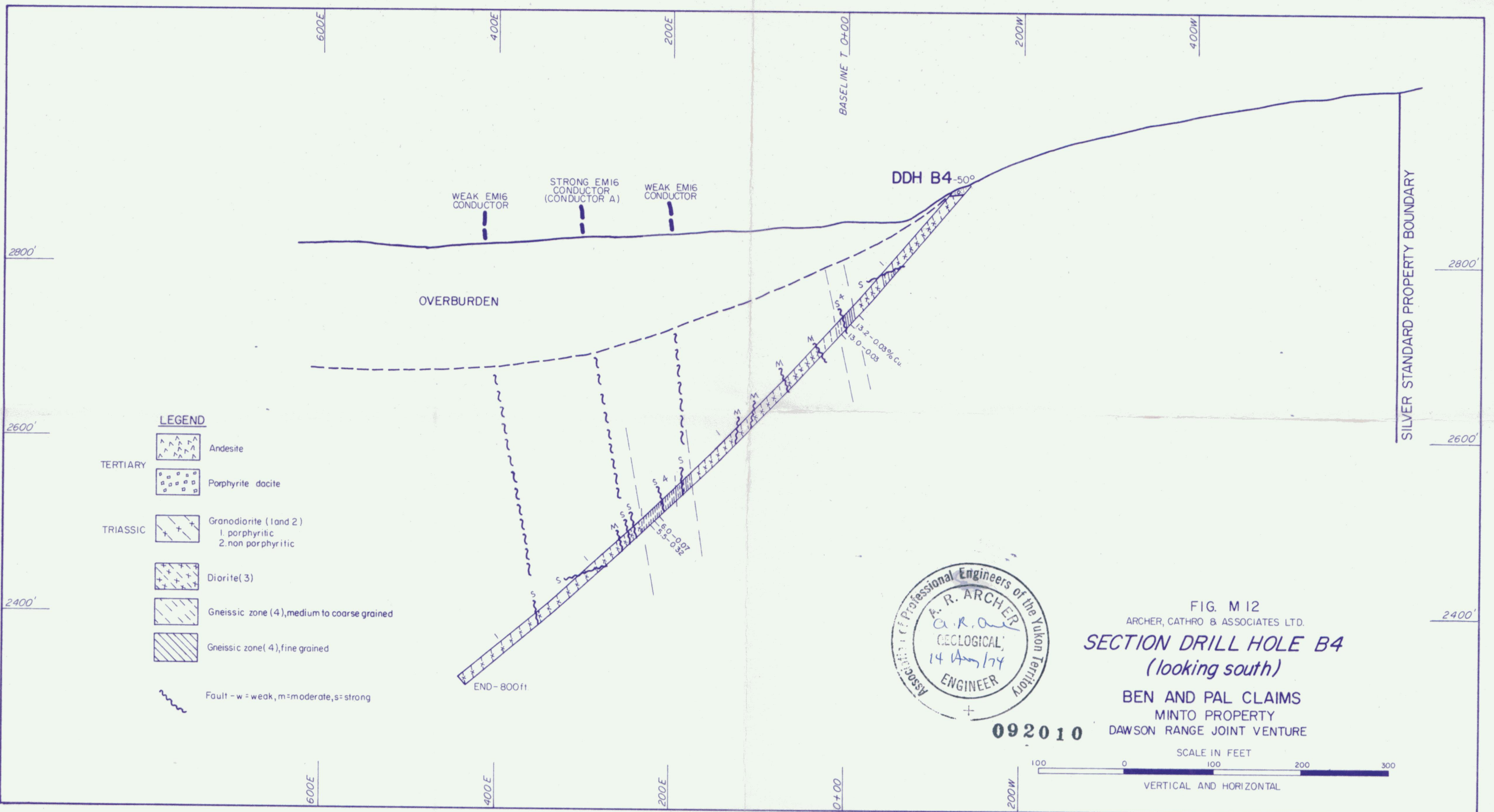
- TERTIARY
 - Andesite
 - Porphyrite dacite
- TRIASSIC
 - Granodiorite (land 2)
1. porphyritic
 - Granodiorite (land 2)
2. non porphyritic
 - Diorite (3)
 - Gneissic zone (4), medium to coarse grained
 - Gneissic zone (4), fine grained

Fault - w = weak, m = moderate, s = strong



FIG. M11
 ARCHER, CATHRO & ASSOCIATES LTD.
SECTION DRILL HOLE B3
(looking south)
 BEN AND PAL CLAIMS, 092010
 MINTO PROPERTY
 DAWSON RANGE JOINT VENTURE





LEGEND

- TERTIARY
 - Andesite
 - Porphyrite dacite
- TRIASSIC
 - Granodiorite (1 and 2)
 - 1. porphyritic
 - 2. non porphyritic
 - Diorite (3)
 - Gneissic zone (4), medium to coarse grained
 - Gneissic zone (4), fine grained
- Fault - w = weak, m = moderate, s = strong



FIG. M 12
 ARCHER, CATHRO & ASSOCIATES LTD.
SECTION DRILL HOLE B4
(looking south)

BEN AND PAL CLAIMS
 MINTO PROPERTY
 DAWSON RANGE JOINT VENTURE

092010

