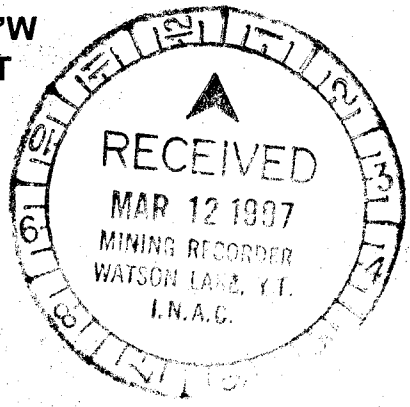
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1996 SUMMARY REPORT

AIRBORNE AND GROUND GEOPHYSICAL, AND DIAMOND DRILL PROGRAMS CONDUCTED ON THE PUCK 1-80 CLAIMS, FINLAYSON LAKE AREA, YUKON TERRITORY

YB55979-YB56058
NTS 105 G/8
Latitude 61 23'N, Longitude 130 03'W
WATSON LAKE MINING DISTRICT



prepared for

Westmin Resources Limited
Suite 904, 1055 Dunsmuir Street
P.O. Box 49066, The Bentall Center
Vancouver, B.C. Canada V7X 1C4

by

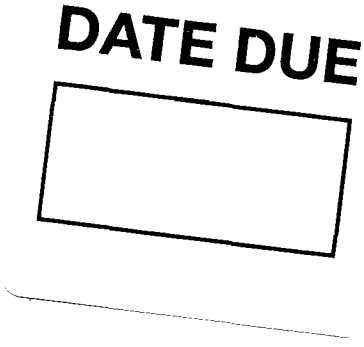
Andrew J. Turner
and
David A. Terry

Decmber 20, 1996

RPT/97-003

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1.0 INTRODUCTION

The PUCK property, located in the Finlayson Lake area of Southeast Yukon, consists of 80 claims owned by Expatriate Resources Limited (Expatriate) and is currently operated under an Option Agreement by Westmin Resources Limited (Westmin). The property now also consists of a further 24 fractional claims staked by Westmin Resources Limited in 1996. The PUCK property lies immediately south of the Westmin/ATNA FOOT claims which host the Wolverine Deposit, and covers the southern extension of the stratigraphic package which is believed to host both the Wolverine and the Kudz Ze Kayah (or ABM) Volcanogenic Massive Sulfide deposit.

The PUCK property was staked in 1994 by Archer, Cathro and Associates Ltd. (ACA) on behalf of Expatriate Resources Ltd. During the summer of 1995 a soil geochemical sampling program was conducted by ACA on the northern half of the property. In November and December of 1995 Westmin flew an Airborne Geophysical Survey over all of its properties in the Finlayson Lake area which included the PUCK. In December of 1995 Westmin entered into an agreement with Expatriate to select four of its properties in the area for evaluation as potential joint venture projects. The PUCK property was one of the four selected and, due to its proximity to Westmin's infrastructure at Wolverine Lake, the 1996 exploration program was opperated by Wesmin.

In order to properly assess the PUCK property a two phase exploration program was initiated by Westmin during the spring of 1996 which was designed to quickly advance the property to the drilling stage. The first phase of the program consisted of ground geophysical surveys which included cutting and surveying of some 35km of grid lines spaced 100m apart along a 4.5km long baseline which covered most of the northern two thirds of the property. The second phase of the program consisted of a diamond drill program which was

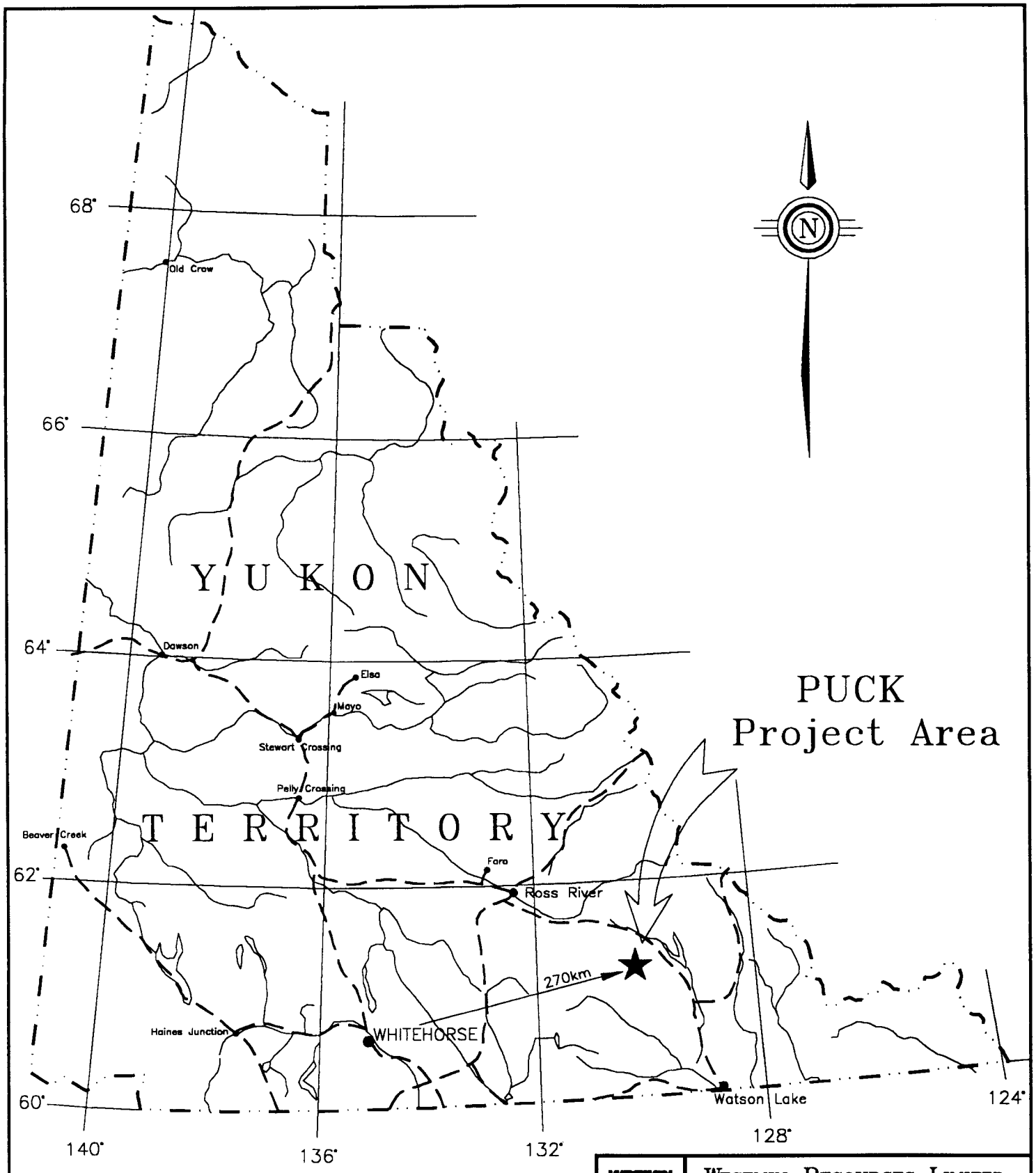
designed to investigate geophysical anomalies resulting from the first phase, as well as to examine the general stratigraphy of the property which has yet to be mapped on surface. A total of 2982' of diamond drilling was completed during the month of May in four widely spaced holes. Following Westmin's formal selection to enter into an option agreement with Expatriate on the PUCK property in September of 1996, a further two drill holes totaling 1396' were completed.

The most encouraging results of the drilling to date were located in holes PK96-01 and PK96-03 both of which contained minor Zinc mineralization as thin stringers, and a sample of a badly broken section of core from hole #1 contained a 10-15cm zone of remobilized Galena and Sphalerite mineralization which averaged out to 1.16% Pb and 2.72% Zn over 2.8m.

Geologically, there exists considerable potential for the discovery of a massive sulfide orebody on the PUCK property. Drill hole PK96-03 intersected 1.4m of massive and semi-massive pyrite within a exhalative carbonate unit. This Carbonate-Pyrite (+/-Barite) Horizon was intersected in various forms in all of the first four drill holes over a strike length of approximately 2km. This unit, along with the overlying Iron Formations, is evidence of at least one exhalative system that perhaps had a relatively long, if episodic, history. This may be inferred from geochemical data, in particular elevated Zn, V and Mn, that occur from just below the Carbonate Unit to the upper Iron Formation.

2.1 PROPERTY LOCATION AND CLAIM INFORMATION

The PUCK property is located in southeast Yukon and is roughly centered on latitude 61°23'N and longitude 130°03'W (UTM 442500E, 6807000N) on NTS map sheet 105G/8 (figure 1). The property lies approximately 270 kilometres to the east-northeast of Whitehorse, and roughly half way (or 150 kilometres) between Ross River and Watson lake. It comprises 80 contiguous quartz mineral



WESTMIN	WESTMIN RESOURCES LIMITED EXPATRIATE RESOURCES LTD.
Work By: Westmin	PUCK PROJECT
Date Drafted: Nov. 24, 1996	Property Location Sketch
Drafted By: A. Turner	
N.T.S. Number	50 0 50 100 150km Scale 1 : 5 000 000
File Name: PUCK_LOC.DWG	Figure 1

mineral claims which are located within the Watson Lake Mining District and are registered in the name of Archer, Cathro & Associates (1981) Limited which holds them in trust for Expatriate Resources Limited. An additional 24 fractional claims were staked in October of 1996 by Westmin Resources Limited (see figure 2). Claim registration data is tabulated below.

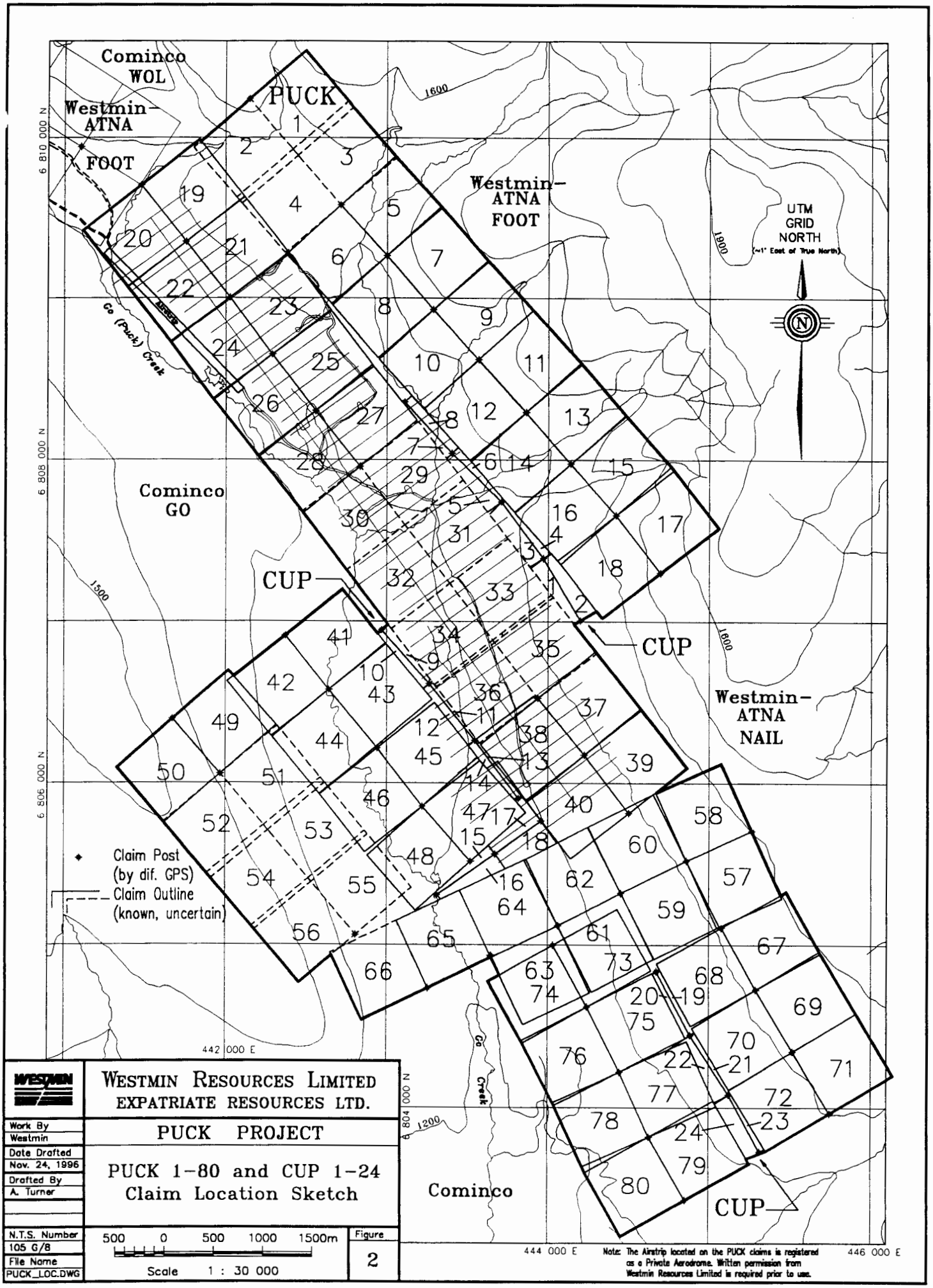
Claim Name	Grant Number	Date of Expiration
PUCK 1 - 80	YB55979 - YB56058	March 17, 2001
CUP 1 - 24	not yet received	not yet received

Table 1. Summary of Claim Registration Information.

2.2 PROPERTY ACCESS

The 1996 exploration program on the PUCK property was coordinated from, and was aided by its proximity to, Westmin's Wolverine Lake basecamp. In order to support their basecamp efficiently, Westmin constructed a ~3000 foot gravel airstrip in February and March of 1996 which is located in the northwest corner of the PUCK property. The property can now be accessed in approximately 1.5 hours from Whitehorse by light fixed wing aircraft (Cessna 207, or Shorts Sky Van) operated by Summit Air Charters Ltd.

The property may also be accessed by a combination of road and helicopter from Watson Lake to the south or Ross River to the north. The property is a short 5 minute helicopter trip from a staging area which is located approximately 150km north of Watson Lake at the turn off to the Frances Lake campground on the Robert Campbell Highway. The property is a slightly longer 10-15 minute helicopter trip from a second staging area located in a gravel pit approximately 150km south of Ross River, also on the Robert Campbell Highway, at the Nouga (or Wolverine) Creek crossing. Direct helicopter access from either Watson Lake or Ross River requires a little more than 1 hour of flying.



	WESTMIN RESOURCES LIMITED EXPATRIATE RESOURCES LTD.
Work By Westmin	PUCK PROJECT
Date Drafted Nov. 24, 1996	PUCK 1-80 and CUP 1-24 Claim Location Sketch
Drafted By A. Turner	
N.T.S. Number 105 G/8	500 0 500 1000 1500m Scale 1 : 30 000
File Name PUCK_LOC.DWG	Figure 2

Note: The Airstrip located on the PUCK claims is registered as a Private Aerodrome. Written permission from Westmin Resources Limited is required prior to use.

2.3 PROPERTY PHYSIOGRAPHY

The PUCK Property covers the bottom and northeast sides of a fairly narrow U-shaped glacial valley and adjacent upland area near the northern edge of the Campbell Range in the Pelly Mountains. Elevations range from a minimum of approximately 1210m (3975') in the southern portions of the property to nearly 1700m (5575') on the east central edge of the property. The airstrip is at an elevation of approximately 1325m (or 4350').

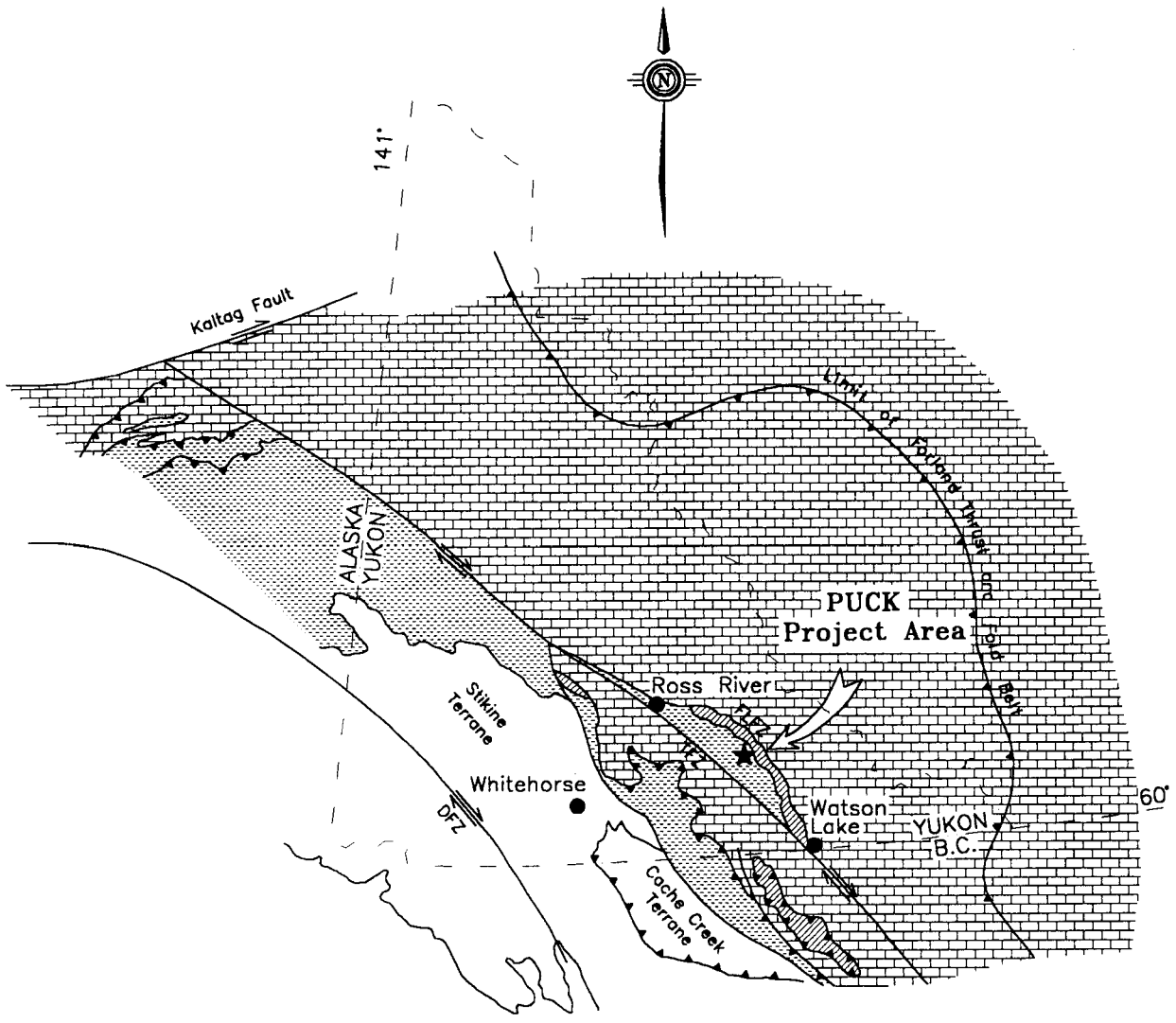
Vegetation on the property consists of thick patches of buckbrush and willow in the bottom of the valleys which give way up slope to thickets of stunted black spruce, balsam, and willow which in turn give way to a mixture of thick buckbrush and open grassy patches nearer the tops of the hills. The southern two thirds of the southwest facing side of the main valley was burned by a natural forest fire in 1994. Permafrost may be encountered throughout the property where the insulation provided by tree cover exists.

The main geographic feature on the property is a U-shaped valley which hosts the informally named "Puck" Creek which flows to the south to Money Creek, a tributary to Frances River, which is a part of the Liard River watershed. Puck creek itself has a very gentle grade of approximately 1-2°. However, slopes on the sides of the valley average 10-15° and can reach upwards of 20°. The valley bottoms are filled with coarse glacial/fluvial material which gives way up slope to till covered terraces and finally tallus-covered slopes (Wengzynowski, 1996). Overburden thicknesses encountered during the 1996 drill program ranged from 2.1m to 7.9m and consisted primarily of clay-rich till. Overburden thickness is presumed to increase to greater than 10m in the bottom of the main valley. Outcrop on the PUCK property is limited to the upper portions of the hilly areas above 1400m and averages only 1-2%.

3.0 REGIONAL GEOLOGY

The property is situated within the Finlayson Lake Belt of the southeastern Yukon, an elongate composite body bounded on the southwest by the Tintina Fault Zone and on the northeast by the Finlayson Lake Fault Zone (figure 3). The Tintina Fault Zone is a major transcurrent structure along which approximately 450 km of dextral offset occurred in Late Cretaceous and/or early Tertiary time (Tempelman-Kluit et al., 1976). The Finlayson Lake Fault Zone is described by Mortensen (1996, personal communication) as a complex structure which may in part represent a transgressive dextral paleosuture.

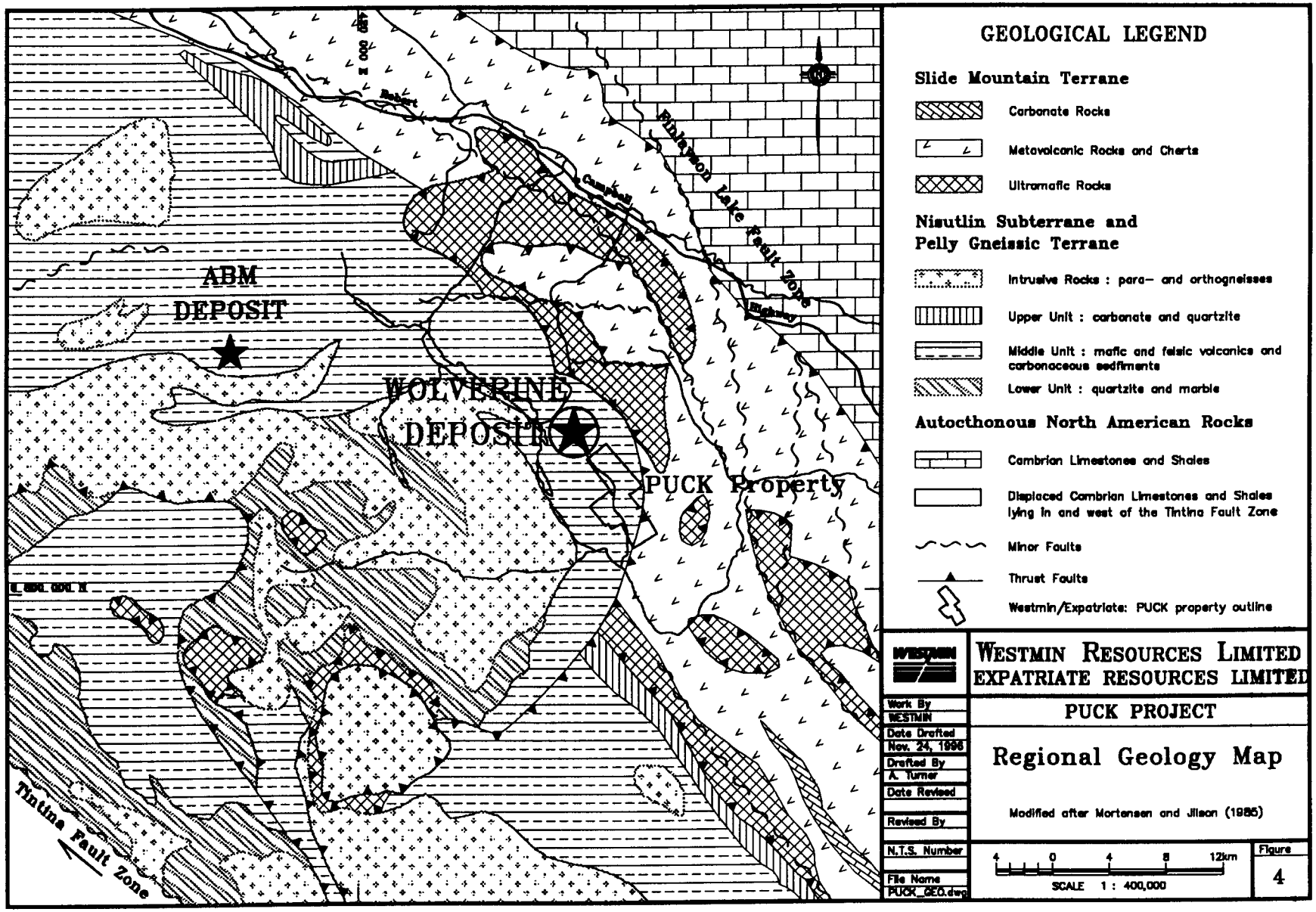
Much of the Finlayson Lake Belt is underlain by rocks grouped with the Yukon Tanana Terrane (YTT) by Mortensen and Jilson (1985) (see figure 4). The YTT underlies a large area of western to southeastern Yukon and east-central Alaska. The YTT rocks in the Finlayson Lake Belt are believed to be offset along the Tintina Fault from the main body of the YTT in the western Yukon. Mortensen (1992) has divided the YTT in the Yukon into 3 main structural assemblages: 1) the Nisling assemblage, a lower quartzite and marble package of possible Proterozoic and/or Cambrian age; 2) the middle Nasina assemblage, a package of Late Devonian to mid Mississippian carbonaceous metasedimentary and mafic to felsic metavolcanic rocks; and 3) an upper package of mid-Permian felsic metavolcanics (Klondike Schist) and metaplutonic rocks. Recent interpretations conclude that the YTT represents a mid-Paleozoic volcanic-plutonic arc assemblage built on continental crust (Nokleberg and Aleinikoff, 1985; Mortensen and Jilson, 1985; Foster et al., 1987; and Mortensen, 1992). Although the andesitic volcanics one would expect to be voluminous in a continental margin arc setting are seemingly not present in the Finlayson Lake Belt, Mortensen (1996, personal communication) suggests that large K-feldspar megacrystic granitoids which form part of the core of the belt are intermediate in



LEGEND

- North American Miogeoclinal Strata
- Yukon – Tanana Terrane
- Slide Mountain Terrane
- Thrust Fault
- Strike–Slip Fault, with sense of movement
  - FLFZ – Finlayson Lake Fault Zone
  - TFZ – Tintina Fault Zone
  - DFZ – Denali Fault Zone

WESTMIN	WESTMIN RESOURCES LIMITED EXPATRIATE RESOURCES LTD.
Work By	PUCK PROJECT
Date Drafted Nov. 24, 1996	Tectonic Setting
Drafted By A.T. & J.K.	after Mortensen and Jilson (1985)
N.T.S. Number	100 0 100 200 250km
File Name YUK_TAN.DWG	Scale1 : 10 000 000
	Figure 3


ABM
DEPOSIT
WOLVERINE
DEPOSIT
PUCK Property
Tintina Fault Zone
Robert
Campbell
Pinkerton Lake Fault Zone
Rabbit
GEOLOGICAL LEGEND
Slide Mountain Terrane
Carbonate Rocks
Metavolcanic Rocks and Cherts
Ultramafic Rocks
Nisutlin Subterrane and
Pelly Gneissic Terrane
Intrusive Rocks : para- and orthogneisses
Upper Unit : carbonate and quartzite
Middle Unit : mafic and felsic volcanics and carbonaceous sedfiments
Lower Unit : quartzite and marble
Autocthonous North American Rocks
Cambrian Limestones and Shales
Displaced Cambrian Limestones and Shales lying in and west of the Tintina Fault Zone
Minor Faults
Thrust Faults
Westmin/Expatriate: PUCK property outline
WESTMIN RESOURCES LIMITED
EXPATRIATE RESOURCES LIMITED
Work By
WESTMIN
Date Drafted
Nov. 24, 1998
Drafted By
A. Turner
Date Revised
Revised By
N.T.S. Number
File Name
PUCK_GEO.dwg
PUCK PROJECT
Regional Geology Map
Modified after Mortensen and Jilson (1985)
4 0 4 8 12km
SCALE 1 : 400,000
Figure
4

composition and therefore, together with the volcanics, represent a differentiated igneous suite.

Regional metamorphism throughout the YTT ranges from very low grade to amphibolite facies. Radiometric dating suggests that metamorphic events may have occurred at different times in different subterranes. Mortensen and Jilson (1985) have subdivided the YTT in the Finlayson Lake Belt into six major lithologic packages: 1) a sequence of layered metasediments and metamorphic rocks; 2) Paleozoic metaplutonic rocks; 3) middle to late Paleozoic mafic and ultramafic igneous rocks and chert; 4) early Mesozoic clastic rocks; 5) Mesozoic plutonic rocks; and 6) Late Cretaceous and/or early Tertiary volcanic rocks. The layered metamorphic package (LMP) is approximately 3 km thick and is divisible into: 1) a lower Devonian and older quartz+mica+/-garnet schist and quartzite package with an upper marble/calcareous schist unit; 2) a middle dark siliceous to carbonaceous phyllite unit interlayered with mafic and felsic volcanics. U-Pb zircon ages of the felsic metavolcanics range from Late Devonian to mid-Mississippian; and 3) an upper white carbonate/quartzite package of Early Pennsylvanian to Permian age (Mortensen and Jilson, 1985). Paleozoic metaplutonic rocks are divided by Mortensen and Jilson (1985) into: 1) the Simpson range plutonic suite of quartz-monzonite to quartz-diorite (349-359 Ma, U-Pb zircon); 2) augen orthogneiss (342 Ma, Rb-Sr); and 3) monzonitic orthogneiss (340-345 Ma, U-Pb zircon). The first two are considered to have an intrusive relationship with the lower layered metamorphic suite due to pyritization of wallrocks in the case of the Simpson suite and a hornfelsed aureole bordering the augen orthogneiss.

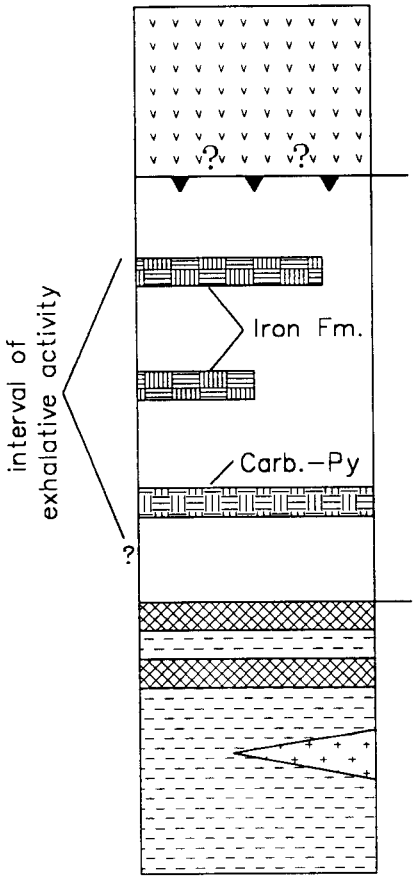
Large bodies of massive to pillowed greenstone, chert, and variably serpentinized ultramafic to mafic plutonic rocks are common in the northeastern portion of the Finlayson Lake belt and have been interpreted (Tempelman-Kluit, 1979 and Mortensen and Jilson, 1985) as fragments of a dismembered ophiolite.

Tempelman-Kluit (1979) mapped these rocks as part of the Anvil allochthon whereas they are referred to as the Campbell Range Belt by Mortensen and Jilson (1985). They are thought to correlate with the Slide Mountain terrane in British Columbia and based upon U-Pb zircon dates and fossil ages they range from latest Devonian to Early Permian in age. The southern portion of the Finlayson Lake Fault Zone adjacent to the Wolverine Lake area is overlapped by thrust sheets of the Campbell Range Belt in a flower-fault structural relationship (Mortensen, 1996 personal communication). The ophiolitic package is interpreted to have been thrust from northeast to southwest over the middle package of the LMP in the Wolverine Lake area.

The middle package of the LMP comprises dark fine-grained strongly carbonaceous metasediments interlayered with massive to schistose felsic volcanic to tuffaceous rocks and chloritic to amphibolitic schists after mafic tuffaceous rocks. The most significant massive sulfide occurrences in the Finlayson Lake area (Wolverine, ABM/Kudz Ze Kayah, and Fire Lake) are hosted by this volcano-sedimentary package and are associated with carbonaceous metasediments and/or felsic metavolcanics.

4.0 PROPERTY GEOLOGY

The property has not yet been mapped. This is due primarily to the limited amount of outcrop on the property (less than 5%), the limited budget of the 1995 ACA exploration program, and also to the rapid advancement of the property to the drilling stage in early 1996 which occurred while the property was still snow covered. As a result of the drill program, which totaled approximately 4400' in six widely spaced holes (see Appendices G and H), the subsurface geology of the property is now fairly well understood and a relatively consistent stratagraphic column (figure 5) has emerged.



Upper Unit

Fairly massive, dark green, fine–grained, intermediate to mafic volcanics; with minor interbedded thinly banded Rhyolite

possible fault contact

Middle Unit

Thinly banded, grey to greenish grey, fine–grained, apheric Rhyolite; with minor Iron Formation and an exhalative Carbonate – Pyrite horizon

Lower Unit

Marked by the appearance of quartz and/or feldspar – pheric Rhyolites, with minor Feldspar Porphyrytic Augen Schists, giving way to carbonaceous sediments

The stratigraphic column was generated from the 1996 drill program which totalled 6 holes and covered 3.5km of strike length to an average depth of 200m

	WESTMIN RESOURCES LIMITED EXPATRIATE RESOURCES LTD.
Work By WESTMIN'	PUCK PROJECT
Date Drafted Nov. 24, 1996	Stratigraphic Column
Drafted By A.Turner	
N.T.S. Number 105 G/8	Figure 5
File Name PUCK_STR.dwg	

The property is underlain by phyllites with interbedded mafic and felsic volcanics which are part of the middle unit of the Paleozoic Layered Metamorphic Sequence of Mortensen and Jilson (1985). Three basic lithologic packages have been identified on the PUCK property thus far. The lowermost unit in the stratigraphic section is a basal sedimentary sequence which is dominated by carbonaceous argillites and becomes mixed toward its top with quartz and/or feldspar-pheric Rhyolitic tuffs and flows. The lower sedimentary sequence gives way to a middle unit of primarily very fine-grained banded aphyric Rhyolitic volcanics, and minor argillites, and includes several exhalative horizons beginning with a Carbonate-Pyrite+/-Barite unit which is overlain by at least two Iron Formation horizons. The uppermost unit, which was only intersected in hole PK96-04, consists of dominantly fine-grained intermediate to mafic volcanic rocks with minor interbedded cherty Rhyolites. The contact between the lower and middle units appears to be conformable, however, the contact between the middle and upper units appears to be faulted. It is not known whether this fault is simply a localised structure or whether it represents a major detachment zone as would be expected below rocks of the Slide Terrane.

Although the property has not yet been mapped in detail, the author was able to spend portions of several days prospecting on parts of the gridded area. Several outcrops of grey and greenish-grey, fine-grained, aphyric Rhyolite with up to 3-5% disseminated magnetite and minor disseminated pyrite, along with several small outcrops of magnetite-rich Iron Formation, were located. These outcrops represent portions of the middle unit of the stratigraphic package. No significant mineralization or alteration was observed, and the attitude of the rocks was consistent with that observed in the drill core and averages 060°/25°.

5.0 PREVIOUS WORK

The PUCK 1-80 claims were staked in August of 1994 by ACA in order to cover the southeast extension of the aeromagnetic anomaly which is closely associated with both the Kudz Ze Kayah and Wolverine Deposits (then known as the Kink Showing). This anomaly was first published as part of a Regional Airborne Geophysical survey undertaken by the Geological Survey of Canada in 1961 (DMTS, 1963). The only previously reported work on the property, following its staking, was a soil geochemical sampling program conducted by ACA in the summer of 1995. Later that year, Westmin Resources conducted a large scale Airborne Geophysical survey which included the area of the property.

5.1 1994 SOIL GEOCHEMICAL SURVEY

Personnel from ACA carried out a brief exploration program on the property between August 23 and September 4 of 1995 which consisted primarily of a soil geochemical sampling program with some prospecting (Wengzynowski, 1996). A total of 210 soil samples were collected on a 100m x 200m spaced grid which covered the northern third of the property. The samples were analyzed for 32 elements by the Inductively Coupled Plasma Emission Spectrometry method (ICP), but were not analyzed for Au.

The geochemical response of all elements was extremely subdued with the possible exception of Cu, which produced isolated anomalies with values ranging between 17ppm and 152ppm. All but 8 of the silver values are below detectable limits and of these only two samples returned the maximum value of 0.4ppm. Lead and Zinc values were similarly low with respective minima and maxima of <2ppm and 26ppm for Pb and 26ppm and 150ppm for Zn. Geochemical plots for Ag, Cu, Pb, Zn, As, Sb, and Mo are provided in Appendix C.

5.2 1995 AIRBORNE GEOPHYSICAL SURVEY

A DIGHEM^V electromagnetic/resistivity/magnetic/VLF survey was flown on behalf of Westmin Resources Limited over the PUCK property as part of a larger survey which covered most of the nearly 3000 claims in the Finlayson lake area of southeast Yukon in which the company holds an interest. The survey was conducted between November 3 and December 5, 1995. Of the 3509 line-km flown during the survey, only 70.3 line-km were flown directly over the PUCK property. An condensed version of the original Dighem report is presented in Appendix D along with a full set of maps showing the area of the PUCK property.

In general, the 1996 Dighem survey agrees very well with the 1961 government aeromagnetic survey. A number of subtle magnetic anomalies, which indicate the extents of the Iron Formation(s) on the PUCK property, have been resolved out of the previously recognized broader anomaly. The positive magnetic anomalies indicate a consistent trend of the stratigraphy to the southeast across the entire length of the claim block. However, the intensity if the anomalies is quite variable. The discontinuity in the magnetic signature of the Iron Formations is interpreted as facies changes or as "pinch-outs" rather than structural breaks due to the lack of apparent offset of the anomalies and the apparent continuity of the adjacent conductive units. The broad band of conductive strata on the south west side, stratigraphically below, the Iron Formation were interpreted as carbonaceous argillites, possible thrust faults, and potential sulfidic horizons, and were clearly shown to extend well to the south beyond the limits of the Iron Formation.

6.0 1996 PROGRAM OF WORK

Thus, the 1995 Airborne Geophysical Survey was able to show that the same stratigraphic package that hosts the Wolverine Deposit 2km to the north,

complete with Iron Formation(s) and in particular the underlying highly conductive units, extends southward and underlies the entire PUCK property. It was then proposed that the geophysical anomalies on the northern portion of the property, underlain by Iron Formation and most closely resembling the Wolverine Deposit, should be covered in greater detail by ground geophysical surveys in order to establish drill targets.

6.1 1996 GROUND GEOPHYSICAL SURVEY

A total of approximately 35km of Max-Min Electromagnetic and 40km of Magnetics and VLF surveys were completed on the PUCK grid by personnel from Scott Geophysics Ltd. between March 25 and April 19, 1996. A preliminary report on the PUCK geophysical program, complete with technical specifications and a full set of maps, was prepared by supervising Geophysicist Jim Hawkins and is appended at the back of this report (Appendix E). The ground magnetic survey was successful in further resolving and clearly outlining the extent of the Iron Formation across the PUCK property. Also, the Max-Min survey, was able to outline a series of strong conductors which parallel and stratigraphically underlie the Iron Formation along the full length of the grid.

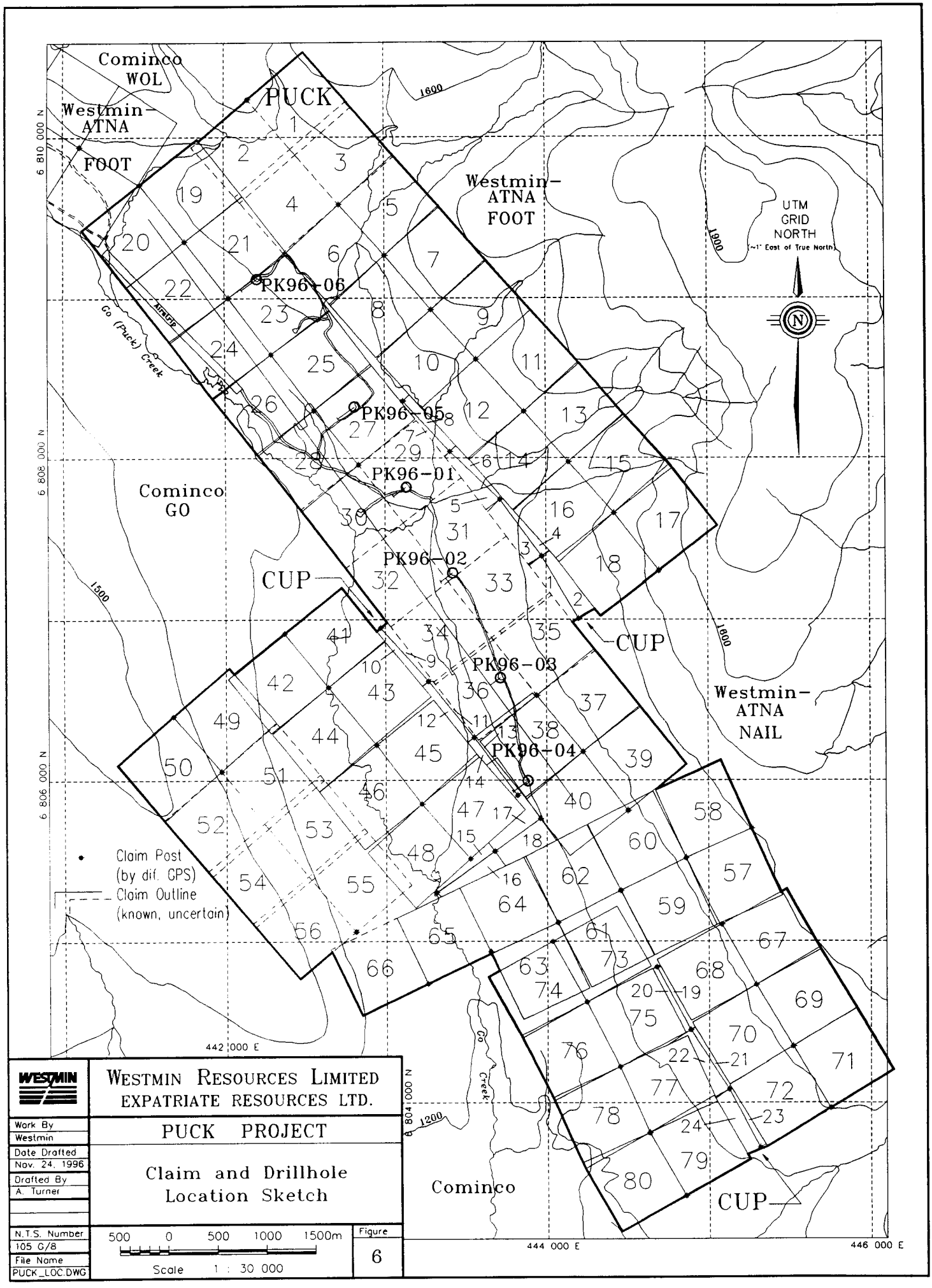
Immediately following the completion of the ground geophysical survey, all of the geophysical data available, including that from three test lines which covered the known extent of the Wolverine Deposit, was presented for interpretation to J. B. Boniwell of Excalibur International Consultants Ltd. A brief memo-style report was presented to Westmin Resources at the end of April 1996 (see Appendix F and H).

The Iron Formation on the PUCK property was again recognized as the same one that exists in the hanging wall to the ore sequence at the Wolverine Deposit which occurs only 2km to the north. In addition to further resolving the

Iron Formations and allowing for an estimation of the relative abundance of magnetite, the ground magnetic survey was also able to show an approximate 50nT jump from the argillite dominated lower unit of the stratigraphic package to the rhyolite dominated middle unit which presumably reflects trace amounts of finely disseminated magnetite. A preliminary interpretation of the electromagnetic anomalies was also presented which suggested that the first conductor to the southwest, stratigraphically below the Iron Formation, was too closely related spacially and too continuous over the full extent of the gridded area to be the sulfide-bearing horizon. Instead the second conductor below the Iron Formation was considered as the primary target and was tentatively identified as the "base of the ore sequence". All of the conclusions and recommendations of the report were of an extremely tentative and preliminary nature due to the lack of hard geological data from the property, and thus the main recommendation of the report was a stratigraphic drill program to further investigate the geophysical anomalies across the gridded area in the northern portions of the PUCK property.

6.2 1996 DIAMOND DRILL PROGRAM

Following the completion of the ground geophysical program, and subsequent preliminary interpretation, a four hole stratigraphic drill program was carried out on the gridded area of the PUCK property during May of 1996. A total of approximately 2982 feet (908.9m) of NQII diamond drilling was completed in four widely spaced holes (PK96-01 to 04, figure 6) which were chosen in order to test specific geophysical anomalies and also to examine the stratigraphy of the property over as much strike length as possible. A total of 316 samples were collected from the drill core and analyzed by the Inductively Coupled Plasma Emission Spectrometry method (ICP). All certificates of analysis and technical specifications of the analytical procedures involved are presented in Appendix B. Also, a copy of the original drill logs as well as drill sections which include Geology and Geochemistry are appended at the back of this report (Appendix G).



WESTMIN	WESTMIN RESOURCES LIMITED EXPATRIATE RESOURCES LTD.
Work By Westmin	PUCK PROJECT
Date Drafted Nov. 24, 1996	Claim and Drillhole Location Sketch
Drafted By A. Turner	
N.T.S. Number 105 G/8	500 0 500 1000 1500m Scale 1 : 30 000
File Name PUCK_LOC.DWG	Figure 6

Following the formal decision by Westmin to enter into an option agreement with Expatriate Resources on the PUCK property in August of 1996, a further two drill holes totaling 1396 feet (425.5m) were completed between September 8 and 19, 1996 (PK96-05 and 06, see figure 6). A further 192 samples, for a total of 508 were collected and were also analyzed by Chemex Laboratories by ICP (see Appendices B and G). A compilation map summarizing all of the geophysical anomalies, along with diamond drill hole locations, is presented in Appendix H.

The 1996 diamond drill program was successful in allowing the examination of the property in the subsurface and allowing for the formation of a stratigraphic column which was presented in the Property Geology section of this report. The most significant geological discovery resulting from the drill program was the identification of a Carbonate-Pyrite (+/- Barite) unit which contained zones of up to 25cm of massive and semi-massive pyrite and has been interpreted as being of an exhalative origin. It was already known from the various geophysical surveys that there are Iron Formations present in the stratigraphic package, however, with the identification of the Carbonate-Pyrite Unit, a distinct zone of exhalative activity can be outlined on the property. This zone is part of the middle unit of the stratigraphic column (see figure 4) and starts with the Carbonate-Pyrite Unit just above the porphyritic Rhyolites, but is actually hosted by fairly massive fine-grained aphyric Rhyolites, and extends up to the Iron Formation(s). This zone of exhalative activity is undoubtedly the same as that present at the Wolverine and contains the majority of the significant lithogeochemical anomalies.

A preliminary discussion of the results of the 1996 drill program is presented in this report as detailed geochemical modeling of the data has not yet been completed. A statistical summary of the major elements from the lithogeochemical database is presented in table 2. Although no true Massive

Statistical Summary			(n=508)		Percentile Classes					
Element	n<det.	MIN	MAX	MEAN	10th	50th	75th	80th	90th	95th
Au ppb	393	<5	890	7.77	<5	<5	<5	5	15	20
Ag ppm	377	<0.2	>100	0.68	<0.2	<0.2	0.2	0.36	0.6	1.2
Cu ppm	6	<2	344	53.94	6	59	74	77	97.9	122.7
Pb ppm	76	<2	11600	56.70	<2	18	30	40	87	137
Zn ppm	0	10	27200	354.78	28	102	242	344	811	1296
Ba ppm	0	10	>10000	1566.36	110	610	1940	2516	4286	6516
As ppm	0	1	500	9.82	1	2	8	10	22	34
Sb ppm	115	<0.2	91	1.52	<0.2	0.4	1.4	1.8	3.6	5.8
Hg ppb	135	<10	5430	111.58	<10	20	80	100	256	400
Al %	0	0.57	9.82	4.43	1.94	3.82	6.65	6.80	7.37	7.70
Be ppm	0	0.25	11.5	2.05	0.5	2.0	2.5	3.0	4.0	5.0
Bi ppm	380	<2	10	1.60	<2	<2	2	2	2	6
Ca %	0	0.01	13.45	1.58	0.10	0.77	1.76	2.28	4.15	6.16
Cd ppm	229	<0.5	101.5	1.62	<0.5	0.5	1.5	2.0	3.5	5.5
Co ppm	4	<1	61	8.74	4	8	11	12	14	17
Cr ppm	0	30	473	168.34	90	155	213	227	264	290
Fe %	0	0.5	25	3.21	1.14	2.07	3.33	3.66	6.37	10.09
K %	0	0.08	5.85	1.82	0.62	1.51	2.77	2.89	3.25	3.65
Mg %	0	0.06	3.99	0.64	0.20	0.53	0.84	0.92	1.17	1.35
Mn ppm	0	10	>10000	876.74	79	295	1060	1290	2173	3668
Mo ppm	52	<1	89	4.67	<1	3	5	5	10	16
Na %	1	<0.01	2.81	0.27	0.04	0.13	0.22	0.27	0.59	1.36
Ni ppm	0	1	244	35.74	5	32	48	51	69	95
P ppm	0	40	7320	709.25	167	600	810	890	1220	1790
Sr ppm	0	6	1010	125.92	44	96	151	166	236	315
Ti %	0	0.02	0.89	0.16	0.08	0.14	0.18	0.19	0.27	0.37
V ppm	0	11	1325	122.42	25	93	159	176	242	286
W ppm	428	<10	620	9.06	<10	<10	<10	<10	10	30

Table 2. Statistical Summary of the Lithogeochemical Data from the 1996 Drill Program.

Sulfide mineralization was encountered (other than within the Carbonate-Pyrite Unit) a number of very significant geochemical anomalies were found to occur in the middle zone of the stratigraphic package which has further outlined the "zone of exhalative activity". In fact, the majority of the geochemical anomalies occur within this zone, with the exception of a few base metal and Ag anomalies located in the carbonaceous argillites of the lower unit.

In general, the concentration of Au and Ag in drill core was fairly low with samples returning values less than detectable limits being quite common. This is also supported by the relatively low average values of only 7.76ppb Au and 0.83ppm Ag (calculated with values less than detection replaced by half the detection limit). The most interesting of the precious metal anomalies is a value of 890ppb (or 0.89 grams) Au which was obtained from a sample of the Carbonate-Pyrite unit in hole PK96-02. This sample was part of a much larger zone of aphyric Rhyolite and thin bands of exhalative Silica-Magnetite, Carbonate-Magnetite, Carbonate-Pyrite and Chloritic Fe-Formation which was anomalous in Au averaging 81.7ppb over 21.4m. The largest Ag value of >100ppm (along with the greatest Cu value of 344ppm) was returned from a sample of fairly massive black carbonaceous argillite with minor disseminated pyrite in PK96-01 (225.2m-229.0m). The only other Ag anomalies occur as 12 spotty values ranging from 1ppm to 30ppm throughout PK96-04. The highest value of 30ppm Ag remains unexplained and was returned from a section of badly faulted core.

In contrast to the precious metals, the major base metals Cu, Pb, and Zn, are present in high enough concentrations to illustrate some interesting lithogeochemical patterns. The higher values for Pb and Zn in particular represent very significant anomalies.

The highest Cu value of 344ppm, as previously mentioned, was returned from a sample of pyritic, and somewhat carbonaceous, argillite near the bottom of

PK96-01. In fact, the majority of the strongly anomalous Cu values (>100ppm - 90th percentile) were obtained from argillites primarily located below the zone of exhalative activity. However, there were several other anomalous Cu values including values of 169ppm and 141ppm which were obtained from a section of Magnetite-bearing aphyric Rhyolite (Mt-poor Fe Fm. ?) within the zone of exhalative activity between 86.3m and 88.9m in PK96-03. The most interesting pattern illustrated by Cu throughout all of the holes was the dramatic drop in its concentration in the Porphyritic Rhyolites located below the exhalative zone. Throughout the majority of the holes the concentration of Cu stays very near its average value of approximately 50ppm, however, in the Quartz and/or Feldspar Porphyritic Rhyolites near the top of the lower stratigraphic unit the value of Cu drops abruptly to less than 10ppm.

The average concentration of Pb is only 48.7ppm, which includes a maximum value of 11600ppm (1.16%), and the 90th percentile value is 87ppm. The abundance of Lead throughout the drill holes shows a very strong association with the zone of exhalative activity and, in particular, the Carbonate-Exhalite Unit. The best example of this trend can be seen in a section of hole PK96-01 that contained an average of 206.8ppm Pb over 9.3m of thinly interbedded Calcareous exhalative bands in an otherwise fairly massive aphyric Rhyolite. Also, a number of spotty but very strongly anomalous Pb values are associated with the "zone of exhalative activity" in nearly all of the drill holes. For example, values of 440ppm, 680ppm, 172ppm and 128ppm Pb were returned from four isolated samples located between 83.4m and 97.7m in PK96-03, and 12 samples returned values of Pb greater than 100ppm in hole PK96-06.

The distribution of Zn in the stratigraphic section is very similar to that of Pb in that they are both strongly associated with the zone of exhalative activity and in particular, the Iron formations and the Carbonate-Pyrite unit. Zinc values throughout the drill core are quite high with an average value of 323.2ppm and a

90th percentile value of 811ppm. The highest Zn value of 2.72%, along with the highest Pb value of 1.16%, was returned from a sample of crushed core with a small zone of remobilized (vein-like) Galena and Sphalerite mineralization which was averaged over a sample width of 2.9m. A sample of banded aphyric Rhyolite immediately above the Iron formation in PK96-03 which contained a number of very thin Sphalerite stringers returned a value of 1.35% Zn over 0.5m. The zone of anomalous Pb values in drill hole PK96-01 also contained 1162ppm Zn over the same 9.3m interval. Also, a zone of mixed Carbonate-Pyrite unit and aphyric Rhyolite located between 87.85m and 98.85m in PK96-02 averaged 1546ppm Zn.

The relative concentrations of other base metals such as Cd, Co, Ni, and V, along with Zn, correlate very well with lithological breaks between the Argillites and the Porphyritic Rhyolites in the lower unit of the stratigraphic package. This pattern is best illustrated in hole PK96-01 where, due to extensive faulting and gouging of the various units, lithological boundaries are obscured. The base metal lithogeochemistry shows an abrupt drop in As, Ni, Co, Cd, V and Zn in the Porphyritic Rhyolite between 133.8m and 175.5m relative to the surrounding Argillites.

Another key element in the exploration for Massive Sulfide Deposits is Barium. The highest values of Ba, which were greater than 10000ppm, were located within isolated portions of the zone of exhalative activity, and in particular, were associated with the Carbonate-Pyrite unit which, in several instances, would best be described as a Carbonate-Barite unit (ie. PK96-04). There also appears to be a consistent increase in the concentration of Ba in otherwise ordinary and apparently unaltered aphyric Rhyolites (ie. PK96-01 and 05) suggesting that the exhalative activity may have continued after the deposition of the Iron Formation(s). Barium is also slightly elevated in certain areas of the lower stratigraphic unit near the top (or end) of the deposition of porphyritic Rhyolites.

7.0 CONCLUSIONS AND RECOMMENDATIONS

As a result of the 1996 exploration program it has been shown that the same stratigraphic package which hosts the Wolverine Deposit, only 2km to the north, extends on to and across the entire PUCK property. It was also shown that a "zone of exhalative activity" exists in the stratigraphy evidenced lithologically by a Carbonate-Pyrite+/-Barite unit and one or more Magnetite Iron Formations. This zone can be traced lithologically and geochemically through all of the drill holes on the property. However, values such as 1.16% Pb and 2.72% Zn in PK96-01, 0.40% Zn in PK96-02, and 1.35% Zn in PK96-03, along with zones of semi-massive pyrite in the Carbonate-Pyrite unit in holes PK96-02 and 03, would appear to indicate that the area of the grid between approximately L2400N and L3700N has the highest potential for hosting massive sulfide mineralization.

As a result of the 1996 exploration program, and the subsequent identification of a fairly specific area of interest on the gridded portion of the PUCK property, a number of recommendations for the 1997 program can be made. Firstly, it is recommended that the grid be extended in order to cover the remainder of the property, thus allowing for the completion of ground geophysics. Secondly, It is recommended that the property be prospected and mapped in detail, and that the grid be soil sampled at least in the southern portions of the property where no other soil sampling has been conducted and outcrop is likely to be extremely scarce. Finally, the area around drill holes PK96-01 through to PK96-03 should be examined further with a number of drill holes that should be arrayed in order to test between as well as down dip from the existing drill holes.

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APPENDIX A

STATEMENTS OF QUALIFICATIONS,
PERSONNEL LIST
AND
STATEMENT OF EXPENDITURES

PERSONNEL LIST

1. Andrew J. Turner, P.Geol. (Project Geologist)
   #302, 1144 St. George's Avenue
   North Vancouver, B.C.
   V7L 3H8

2. David A. Terry, Ph D. (Geologist)
   #904, 1055 Dunsmuir St.
   Vancouver, B.C.
   V7X 1C4

3. Vicente Chow Meza (assistant)
   1453 East 21St Street
   Vancouver, B.C.

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 seven 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 property work that I have either personally conducted or supervised between April 13 and October 1, 1996.

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

DATED at Vancouver, British Columbia this ____ day of _____, 1996.

_____

Andrew J. Turner, P. Geol.

STATEMENT OF QUALIFICATIONS

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, and Alaska for eight years.

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

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

5. THAT this report is based on property work I personally supervised between June 1 and October 1, 1996.

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 ____ day of _____, 1996.

_____

David A. Terry, Project Geologist

APPENDIX B

CERTIFICATES OF ANALYSIS AND ANALYTICAL PROCEDURES

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

Sample Preparation - Crushing

The entire sample is passed through TM Rhino crusher to yield a crushed product where greater than 60% of the sample passes a -10 mesh screen. A split in the range of 200-250g (weight depends on parameters requested) is then taken using a stainless steel Jones riffle splitter.

Different crushing codes are used depending on the weight of the original sample:

Chemex Code	Sample Weight
226	0 - 3 Kg (Small rock chip samples packed in porous bags only)
294	4 - 7 Kg
276	8 - 12 Kg
273	13 - 18 Kg
270	19 - 26 Kg

Sample Preparation - Ring Grinding

Geochem, Assay & Geochem Ring

A crushed sample split (200 - 300 g) is ground using a ring mill pulverizer with a chrome steel ring set. The Chemex specification for this procedure is that greater than 90% of the ground material passes a 106 micron (Tyler 150 mesh) screen.

Chemex Codes:
- 205 Geochem samples
- 208 Assay samples
- 255 Rush Geochem samples
- 258 Rush Assay samples

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Fire Assay - Gold and Silver

Fire Assay - Gravimetric Finish

Gold analyses are done by standard fire assay techniques. A prepared sample (1 assay ton (29.166 grams)) is fused in litharge, carbonate and silicious fluxes. The lead button containing the precious metals is cupelled in a muffle furnace. The Ag and Au bead is weighed, parted in dilute nitric acid, annealed and weighed as Au. The difference in weights is the Ag.

Chemex Code	Element	Symbol	Detection Limit	Upper Limit
955	Gold - rush	Au	0.07 g/t	1,000 g/t
997	Gold	Au	0.07 g/t	1,000 g/t
473	Silver - rush	Ag	3 g/t	1,000 g/t
384	Silver	Ag	3 g/t	1,000 g/t

Fire Assay - Gold

Atomic Absorption Spectroscopy (FA-AA)

A 30g sample is fused with a neutral lead oxide flux inquarted with 6mg of gold-free silver and then cupelled to yield a precious metal bead.

These beads are digested for 30 minutes in 0.5ml diluted 75% nitric acid, then 1.5ml of concentrated hydrochloric acid are added and the mixture is digested for 1 hr. The samples are cooled, diluted to a final volume of 5ml, homogenized and analyzed by atomic absorption spectroscopy.

Chemex Code	Element	Symbol	Detection Limit	Upper Limit
983	Gold	Au	5 ppb	10,000 ppb
991	Gold - rush	Au	5 ppb	10,000 ppb

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Assay - Copper, Lead, Zinc

A prepared sample (0.4g) is digested in a hot nitric - hydrochloric acid mixture and taken to dryness, cooled, and then transferred into a 100ml volumetric flask. The final matrix is 25% hydrochloric acid. The solutions are then analyzed on an atomic absorption instrument.

Chemex Code	Element	Symbol	Detection Limit	Upper Limit
301	Copper	Cu	0.01%	100%
312	Lead	Pb	0.01%	100%
316	Zinc	Zn	0.01%	100%

Assay - Arsenic and Antimony

A prepared sample (2g) is digested with concentrated nitric acid and potassium chlorate. Hydrochloric acid is added and taken just to dryness. Tartaric acid, hydrochloric and water is added and the sample is transferred to a volumetric flask. Arsenic and antimony are analyzed on an AA against matched matrix standards.

Chemex Code	Element	Symbol	Detection Limit	Upper Limit
331	Arsenic	As	0.01%	100%
348	Antimony	Sb	0.01%	100%

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XRF - Barium

X-Ray Fluorescence Spectroscopy (XRF)

At least 2 g of sample is required for this procedure. The finely ground sample powder is mixed with a few drops of liquid binder to an evenly moist consistency. The sample is then compressed under approximately 15 ton / in ^{2} onto a backing of boric acid in an aluminum mould to form a disc 40 mm in diameter and 5 mm thick. After pressing, the resultant disc is dried to remove the solvent. The pressed pellet is analyzed by XRF spectrometry.

Chemex Code	Element	Symbol	Detection Limit	Upper Limit
912	Barium	Ba	10 ppm	5 %

Assay - Specific Gravity

(On Pulverized Rock)

A 2 gram sample is weighed in air on an analytical balance then weighed in water using S.G. vial (pycnometer). From the difference in weight the volume of water displaced (buoyancy effect) can be determined. From this data the density or weight per unit volume (gm/cc) is calculated.

$$S.G. = \frac{\text{Density of sample gm/cc}}{\text{Density of water gm/cc}}$$

The accuracy for Specific Gravity (+/- 5%) can be determined from a quartz standard which is used as a check.

Chemex Code	Element	Symbol	Detection Limit	Upper Limit
444	Specific Gravity	Sg	0.01%	20%

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Geochemical Procedure - 30-Element Geochemistry Package (30-ICP)

Nitric Aqua Regia Digestion
Inductively-Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES)

This package was developed to provide a ICP qualitative scan of material with significant mineralization.

A prepared sample (0.4g) is digested with concentrated nitric and aqua regia acids at medium heat for two hours. The acid solution is diluted to 100ml with de-mineralized water, mixed and analyzed using a inductively coupled plasma spectrometer after calibration with proper standards. The analytical results are corrected for spectral inter-element interferences.

Chemex Code		Element	Symbol	Detection Limit	Upper Limit
233		Digestion		N/A	N/A
4002	*	Aluminum	Al	0.01%	15%
4001		Silver	Ag	1 ppm	0.01%
4003		Arsenic	As	10 ppm	5%
4004	*	Barium	Ba	20 ppm	20%
4005	*	Beryllium	Be	5 ppm	0.01%
4006		Bismuth	Bi	10 ppm	5%
4007	*	Calcium	Ca	0.01%	30%
4008		Cadmium	Cd	5 ppm	0.01%
4009		Cobalt	Co	5 ppm	5%
4010	*	Chromium	Cr	10 ppm	2%
4011		Copper	Cu	5 ppm	5%
4012		Iron	Fe	0.01%	30%
4013		Mercury	Hg	10 ppm	1%
4014	*	Potassium	K	0.01%	10%
4015	*	Magnesium	Mg	0.01%	30%
4016		Manganese	Mn	10 ppm	5%
4017		Molybdenum	Mo	5 ppm	5%
4018	*	Sodium	Na	0.01%	20%
4019		Nickel	Ni	5 ppm	5%
4020		Phosphorus	P	0.01%	1%
4021		Lead	Pb	5 ppm	5%
4022		Antimony	Sb	10 ppm	1%
4023	*	Scandium	Sc	5 ppm	1%
4024	*	Strontium	Sr	5 ppm	1%
4025	*	Titanium	Ti	0.01%	10%
4026	*	Thallium	Tl	20 ppm	1%
4027		Uranium	U	20 ppm	1%
4028		Vanadium	V	20 ppm	5%
4029	*	Tungsten	W	20 ppm	1%
4030		Zinc	Zn	5 ppm	5%

** Elements for which the digestion is possibly incomplete.*

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Geochemical Procedure - Antimony

Hydrochloric Acid Potassium Chlorate Digestion
Organic Extraction
Atomic Absorption Spectroscopy (AAS)

A prepared sample (2.00g) is digested with concentrated hydrochloric acid and potassium chlorate. The solution is then cooled. Potassium iodide and ascorbic acid are added to reduce iron. Antimony is then extracted using tri-n-octyl phosphine oxide (TOPO) into methyl isobutyl-ketone (MIBK). The antimony is then determined using atomic absorption spectroscopy with correction for background absorption.

Chemex Code	Element	Symbol	Detection Limit	Upper Limit
22	Antimony	Sb	0.2 ppm	0.1%

Geochemical Procedure - Mercury

Nitric Aqua Regia Digestion
Atomic Absorption Spectroscopy (AAS)

A prepared sample (1.00g) is digested with concentrated nitric-aqua regia acid for two hours. The digested solution is diluted to volume and homogenized. A portion of the sample is reacted with stannous chloride to reduce the mercury. The resulting mercury vapor is then measured by cold vapour atomic absorption spectroscopy.

Chemex Code	Element	Symbol	Detection Limit	Upper Limit
20	Mercury	Hg	10 ppb	0.01%

Chemex Labs Ltd.

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24-Element Geochemistry Package (T24)

Inductively-Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

The 24 element rock geochemistry package provides quantitative analysis of all major elements (except silicon) as well as most important trace elements.

A prepared sample (0.50g) is digested with perchloric, nitric and hydrofluoric acids to dryness. The residue is taken up in a volume of 25ml of 10% hydrochloric acid and the resulting solution is analyzed by inductively-coupled plasma atomic emission spectroscopy. Results are corrected for spectral interelement interferences.

Chemex Code	Element	Detection Limit	Upper Limit
285	Digestion		
573	Aluminum	0.01 %	15 %
565	Barium	10 ppm	1 %
575	Beryllium	0.5 ppm	0.01 %
561	Bismuth	2 ppm	1 %
576	Calcium	0.01 %	15 %
562	Cadmium	0.5 ppm	0.05 %
569	Chromium	1 ppm	1 %
563	Cobalt	1 ppm	1 %
577	Copper	1 ppm	1 %
566	Iron	0.01 %	15 %
560	Lead	2 ppm	1 %
570	Magnesium	0.01 %	15 %
568	Manganese	5 ppm	1 %
554	Molybdenum	1 ppm	1 %
564	Nickel	1 ppm	1 %
559	Phosphorus	10 ppm	1 %
584	Potassium	0.01 %	10 %
578	Silver	0.5 ppm	0.02 %
583	Sodium	0.01 %	10 %
582	Strontium	1 ppm	1 %
579	Titanium	0.01 %	10 %
556	Tungsten	10 ppm	1 %
572	Vanadium	1 ppm	1 %
558	Zinc	2 ppm	1 %

Chemex Labs Ltd.

Analytical Chemists *Geochemists* *Registered Assayers*

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Fax: (604) 984-0218

Assay - Mercury

Atomic Absorption Spectroscopy
Aqua Regia - MIBK

A prepared sample (1g) is digested with concentrated nitric acid and potassium chlorate in a 55°C water bath. Hydrochloric acid is added for further digestion. The sample is transferred to a volumetric flask and an aliquot is analyzed by A.A. using the standard flameless technique for mercury, after reduction with stannous chloride.

Chemex Code	Element	Symbol	Detection Limit	Upper Limit
344	Mercury	Hg	0.001%	100%

Geochemical Procedure - Arsenic

Nitric-Aqua regia acid digestion
Atomic Absorption Spectroscopy (AAS)

A prepared sample (1.00g) is digested with nitric-aqua regia acids for two hours. The digested sample is cooled and diluted to 25 ml with de-mineralized water. The resulting solution is mixed and the solids allowed to settle. The metals are then determined using atomic absorption spectroscopy. Background correction is applied in the determination of arsenic.

Chemex Code	Element	Symbol	Detection Limit	Upper Limit
13	Arsenic	As	2 ppm	1%

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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: TERRY TUCKER - VANCOUVER OFFICE

Certificate Date: 30-MAY-96
Invoice No. :I9618667
P.O. Number :6412
Account :GP W

CERTIFICATE OF ANALYSIS A9618667

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)
107001	205	226	< 5	1	0.2	< 10	< 0.2	3.38	5530	1.0	2	0.21	< 0.5	14	244	81
107002	205	226	< 5	2	0.2	< 10	< 0.2	2.97	3230	0.5	2	0.15	< 0.5	15	157	65
107003	205	226	< 5	1	0.2	< 10	< 0.2	2.77	2970	0.5	< 2	0.37	< 0.5	12	199	86
107004	205	226	< 5	1	0.6	20	0.2	4.33	80	1.5	2	0.76	< 0.5	17	232	116
107005	205	226	< 5	1	0.4	< 10	< 0.2	4.81	160	1.5	6	0.22	< 0.5	13	244	122
107006	205	226	< 5	2	0.2	< 10	< 0.2	3.69	310	1.0	2	1.19	< 0.5	12	266	55
107007	205	226	< 5	1	< 0.2	10	0.4	2.00	8370	0.5	2	0.05	< 0.5	5	283	62
107008	205	226	< 5	2	0.4	10	< 0.2	1.80	1060	1.5	< 2	0.08	< 0.5	4	293	56
107009	205	226	< 5	2	5.0	110	< 0.2	2.77	1410	1.5	< 2	0.03	< 0.5	6	96	59
107010	205	226	< 5	1	1.4	330	< 0.2	3.11	1210	1.5	< 2	0.03	< 0.5	8	104	54
107011	205	226	< 5	1	< 0.2	100	< 0.2	3.02	1820	1.5	< 2	0.03	< 0.5	7	110	55
107012	205	226	< 5	1	< 0.2	570	< 0.2	2.92	7230	2.5	< 2	0.03	7.0	6	103	56
107013	205	226	< 5	2	< 0.2	170	< 0.2	1.71	1970	4.5	< 2	0.06	< 0.5	5	250	51
107014	205	226	< 5	1	< 0.2	180	0.2	1.99	7330	3.5	< 2	0.03	< 0.5	5	154	43
107015	205	226	< 5	2	< 0.2	130	0.4	1.22	350	4.0	< 2	0.10	< 0.5	4	237	21
107016	205	226	< 5	1	1.0	540	0.4	2.39	940	2.0	< 2	0.18	0.5	6	225	74
107017	205	226	< 5	1	0.2	< 10	0.2	2.07	110	< 0.5	< 2	4.97	< 0.5	6	150	68
107018	205	226	< 5	2	< 0.2	270	1.8	2.13	420	1.0	< 2	1.27	< 0.5	8	309	73
107019	205	226	10	1	0.8	70	0.4	1.57	230	< 0.5	2	2.40	1.5	13	187	64
107020	205	226	5	2	< 0.2	10	0.2	2.89	780	0.5	6	1.75	< 0.5	8	169	47
107021	205	226	5	2	< 0.2	30	1.0	2.95	2750	1.0	4	0.75	< 0.5	11	148	88
107022	205	226	5	1	< 0.2	30	1.4	1.69	960	< 0.5	10	5.74	< 0.5	13	101	62
107023	205	226	< 5	1	15.0	770	0.8	2.60	170	0.5	2	1.42	1.5	12	240	115
107024	205	226	15	2	0.8	750	0.6	1.93	390	1.0	< 2	0.21	2.0	10	283	136
107025	205	226	10	1	0.2	1170	0.4	2.11	400	1.0	< 2	0.55	3.5	20	292	102
107026	205	226	10	1	< 0.2	480	< 0.2	2.37	430	1.5	< 2	0.79	1.5	11	255	90
107027	205	226	15	1	< 0.2	40	< 0.2	2.12	790	1.5	< 2	0.49	< 0.5	9	194	191
107028	205	226	10	2	< 0.2	400	< 0.2	2.60	180	11.0	< 2	0.19	0.5	5	187	63
107029	205	226	< 5	2	< 0.2	30	0.2	1.46	130	4.5	< 2	0.28	< 0.5	8	226	33
107030	205	226	< 5	1	< 0.2	10	< 0.2	1.51	140	8.0	< 2	0.18	< 0.5	5	262	13
107031	205	226	< 5	2	< 0.2	< 10	< 0.2	1.57	80	8.5	2	0.15	< 0.5	8	164	19
107032	205	226	< 5	1	0.2	280	< 0.2	2.58	170	4.0	< 2	0.09	2.0	6	170	65
107033	205	226	< 5	2	< 0.2	380	< 0.2	1.99	360	2.0	< 2	0.25	3.0	5	229	59
107034	205	226	< 5	1	< 0.2	300	< 0.2	2.24	260	3.0	< 2	0.27	6.0	4	259	54
107035	205	226	< 5	1	0.2	290	< 0.2	2.35	330	2.5	< 2	0.22	4.0	6	289	60
107036	205	226	15	1	1.0	200	< 0.2	2.43	80	2.5	< 2	0.03	4.0	7	217	69
107037	205	226	10	2	0.6	280	0.8	1.96	90	2.5	< 2	0.07	4.0	6	275	57
107038	205	226	15	1	0.8	400	0.2	2.57	80	4.0	< 2	0.06	5.0	6	272	83
107039	205	226	15	4	1.0	130	0.4	1.87	60	3.5	< 2	0.03	< 0.5	4	188	59
107040	205	226	10	2	0.6	40	< 0.2	1.06	60	2.5	2	8.11	< 0.5	4	160	43

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 : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE

Certificate Date: 30-MAY-96
Invoice No. : I9618667
P.O. Number :6412
Account : GP W

CERTIFICATE OF ANALYSIS A9618667

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)
107001	205 226	2.04	1.30	0.72	1645	< 1	0.41	35	290	12	53	0.20	63	< 10	60
107002	205 226	1.89	1.00	0.66	1810	1	0.41	32	270	8	116	0.19	57	< 10	58
107003	205 226	1.89	0.93	0.61	1345	< 1	0.32	37	260	< 2	71	0.17	62	< 10	50
107004	205 226	3.26	1.79	0.87	2570	5	0.13	165	450	8	134	0.22	157	10	358
107005	205 226	2.66	1.97	0.96	865	1	0.19	166	350	4	63	0.28	159	< 10	254
107006	205 226	2.47	1.37	0.74	1085	1	0.10	88	560	< 2	166	0.22	106	< 10	170
107007	205 226	1.40	0.69	0.26	175	2	0.06	24	140	2	76	0.11	67	< 10	94
107008	205 226	1.50	0.62	0.16	60	18	0.04	21	370	8	79	0.08	87	< 10	136
107009	205 226	0.87	1.08	0.28	45	3	0.14	33	130	10	133	0.13	102	< 10	190
107010	205 226	1.02	1.30	0.31	75	3	0.25	46	140	14	204	0.14	103	< 10	580
107011	205 226	0.98	1.36	0.32	75	4	0.18	32	140	8	159	0.14	102	< 10	274
107012	205 226	0.83	1.18	0.30	40	5	0.32	23	120	22	182	0.12	93	< 10	1410
107013	205 226	15.80	0.56	0.13	90	12	0.15	20	310	22	129	0.09	113	< 10	458
107014	205 226	0.95	0.84	0.21	30	3	0.25	27	140	10	389	0.09	144	< 10	122
107015	205 226	20.4	0.30	0.11	155	7	0.05	42	400	10	92	0.06	106	< 10	916
107016	205 226	1.23	1.09	0.25	130	5	0.10	35	210	20	214	0.10	148	< 10	422
107017	205 226	11.70	0.89	0.90	6090	< 1	0.06	12	790	2	350	0.09	114	40	54
107018	205 226	1.79	0.98	0.28	765	8	0.15	32	620	96	152	0.08	138	< 10	402
107019	205 226	11.70	0.51	0.52	4870	1	0.05	95	800	22	202	0.07	93	30	1425
107020	205 226	4.35	1.49	0.35	1990	< 1	0.13	29	460	4	127	0.11	120	10	178
107021	205 226	2.93	1.47	0.37	880	3	0.13	36	640	28	65	0.15	152	10	174
107022	205 226	17.25	0.53	1.53	>10000	1	0.35	24	650	88	437	0.08	68	40	350
107023	205 226	3.84	1.06	0.51	2650	5	0.15	28	400	54	120	0.11	139	10	604
107024	205 226	1.35	0.64	0.19	410	11	0.13	36	140	132	71	0.08	141	< 10	740
107025	205 226	1.93	0.74	0.25	1110	18	0.09	47	220	126	68	0.09	137	< 10	1420
107026	205 226	2.00	0.98	0.25	725	8	0.08	36	300	30	99	0.10	133	< 10	606
107027	205 226	1.78	0.91	0.25	745	9	0.11	43	330	68	67	0.09	114	< 10	248
107028	205 226	2.01	0.98	0.23	175	14	0.08	34	460	16	103	0.12	104	< 10	1100
107029	205 226	11.85	0.42	0.36	1230	9	0.04	55	260	< 2	153	0.08	87	< 10	988
107030	205 226	13.85	0.36	0.33	350	5	0.05	34	460	< 2	210	0.09	88	< 10	362
107031	205 226	8.20	0.24	0.46	795	1	0.03	42	370	< 2	213	0.09	76	< 10	784
107032	205 226	1.52	1.12	0.27	95	4	0.13	38	110	14	119	0.12	126	< 10	826
107033	205 226	1.01	0.75	0.26	120	4	0.14	38	180	14	211	0.10	100	< 10	1210
107034	205 226	1.11	0.97	0.31	135	14	0.20	26	100	24	193	0.10	94	< 10	1535
107035	205 226	1.14	0.99	0.30	135	4	0.10	44	150	16	186	0.11	116	< 10	1020
107036	205 226	1.55	1.15	0.27	80	3	0.05	49	80	54	14	0.10	117	< 10	520
107037	205 226	1.49	0.96	0.20	25	2	0.04	40	340	46	12	0.09	121	< 10	730
107038	205 226	1.64	1.28	0.26	30	2	0.05	35	300	20	13	0.13	165	< 10	934
107039	205 226	2.04	0.91	0.18	35	1	0.04	19	130	40	6	0.08	148	< 10	204
107040	205 226	2.36	0.41	0.14	960	7	0.03	15	520	46	143	0.04	95	10	230

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 : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE

Certificate Date: 30-MAY-96
Invoice No. : I9618667
P.O. Number :6412
Account : GP W

CERTIFICATE OF ANALYSIS A9618667

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)
107041	205	226	20	2	< 0.2	< 10	< 0.2	1.82	100	3.0	6	1.43	< 0.5	5	280	56
107042	205	226	5	1	< 0.2	50	< 0.2	2.55	180	2.5	2	3.00	1.5	7	213	100
107043	205	226	10	2	< 0.2	220	< 0.2	2.38	170	2.5	2	1.83	4.0	7	211	79
107044	205	226	10	1	< 0.2	10	< 0.2	1.16	60	2.0	8	8.93	< 0.5	7	193	85
107045	205	226	10	1	< 0.2	60	< 0.2	2.42	130	2.5	2	2.32	2.0	8	290	78
107046	205	226	< 5	2	0.2	210	0.4	3.39	80	3.0	4	2.92	5.5	8	214	75
107047	205	226	5	2	0.6	190	0.2	4.38	70	4.5	2	1.80	5.5	9	182	73
107048	205	226	20	2	0.6	360	0.2	2.79	50	3.0	2	1.75	5.5	7	248	59
107049	205	226	15	2	0.4	440	0.4	1.43	30	1.5	8	12.40	3.5	7	95	62
107050	205	226	35	26	1.4	5430	0.6	2.64	30	3.5	4	3.17	6.5	8	191	55
107051	205	226	30	10	1.0	10	< 0.2	2.22	30	5.0	4	8.59	< 0.5	8	159	53
107052	205	226	5	2	0.2	80	< 0.2	2.68	50	6.0	2	2.75	2.0	14	209	83
107053	205	226	130	90	4.0	30	0.6	2.01	10	2.0	2	0.81	< 0.5	25	235	108
107054	205	226	20	2	1.0	< 10	< 0.2	4.82	60	6.5	2	0.24	< 0.5	14	196	62
107055	205	226	< 5	2	0.2	< 10	0.4	4.01	100	5.0	6	0.81	< 0.5	17	247	78
107056	205	226	5	10	3.2	30	0.6	1.29	150	1.5	2	4.48	< 0.5	7	232	50
107057	205	226	25	44	7.0	1020	36.8	1.80	40	2.0	2	2.34	3.5	19	265	122

CERTIFICATION:

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V7X 1C4

Project : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE

Certificate Date: 30-MAY-96
Invoice No. : I9618667
P.O. Number :6412
Account : GP W

CERTIFICATE OF ANALYSIS A9618667

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)
107041	205 226	4.42	0.30	0.31	625	9	0.13	14	590	< 2	92	0.09	132	< 10	92
107042	205 226	2.89	1.14	0.27	640	3	0.08	18	620	86	72	0.10	111	< 10	334
107043	205 226	3.87	1.08	0.39	1415	5	0.03	18	540	232	30	0.12	124	10	1310
107044	205 226	7.96	0.29	0.28	1485	3	0.01	10	440	20	155	0.05	86	30	20
107045	205 226	2.90	1.14	0.29	595	4	0.04	19	740	56	36	0.12	117	10	434
107046	205 226	3.05	1.65	0.34	1005	1	0.06	31	1260	156	46	0.16	157	10	1135
107047	205 226	3.65	2.10	0.37	675	2	0.08	50	830	350	28	0.21	175	10	1130
107048	205 226	4.23	1.32	0.32	785	4	0.04	41	790	298	29	0.12	146	10	1370
107049	205 226	10.30	0.66	0.63	5040	7	0.03	34	1460	460	222	0.06	131	40	1845
107050	205 226	7.28	1.02	0.48	2070	5	0.04	30	960	300	71	0.11	182	10	2050
107051	205 226	7.17	0.84	0.55	3840	4	0.07	23	940	110	234	0.10	169	30	40
107052	205 226	5.67	1.32	0.58	2330	2	0.05	41	750	124	82	0.14	159	10	986
107053	205 226	15.80	0.95	0.25	285	2	0.03	49	190	164	13	0.08	120	10	26
107054	205 226	3.33	2.40	0.51	145	3	0.14	36	490	102	18	0.21	172	< 10	36
107055	205 226	2.84	2.09	0.63	480	1	0.11	42	650	66	40	0.18	141	< 10	26
107056	205 226	2.20	0.65	0.21	835	3	0.02	29	1790	84	118	0.06	90	< 10	10
107057	205 226	5.76	0.74	0.30	550	20	0.04	93	730	140	125	0.07	126	40	648

CERTIFICATION:

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PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
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Project : PUCK
Comments: ATTN:TERRY TUCKER CC:ANDREW TURNER

Page Number :1-A
Total Pages :1
Certificate Date: 03-JUN-96
Invoice No. :I9618911
P.O. Number :6412
Account :GP W

CERTIFICATE OF ANALYSIS A9618911

SAMPLE	PREP CODE		Au ppb FA+AA	Ag g/t	Cu %	Pb %	ZnSpec %	GrBa S.G.	(XRF ppm	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)
107058	205	226	< 5	4.9	0.01	< 0.01	0.24	2.73	6000	1	0.6	300	3.4	9.06	510	9.5	< 2	0.87	9.0	7	34
107059	205	226	< 5	0.5	< 0.01	0.01	0.01	2.65	13220	120	0.2	100	< 0.2	2.86	500	0.5	< 2	2.34	0.5	4	206
107060	205	226	15	15.5	0.01	0.85	1.85	2.76	1865	52	11.0	3500	15.2	2.79	90	2.0	< 2	5.30	85.5	24	251
107061	205	226	< 5	1.0	0.01	0.01	0.05	2.68	3780	8	1.6	170	0.8	6.04	320	4.0	< 2	1.80	3.0	9	138
107062	205	226	< 5	0.8	< 0.01	< 0.01	0.01	2.65	6180	1	0.2	10	0.4	6.81	2710	3.0	< 2	0.83	0.5	4	97
107063	205	226	< 5	0.4	< 0.01	< 0.01	0.01	2.71	5220	2	0.6	10	< 0.2	6.52	470	2.5	< 2	1.20	0.5	5	151
107064	205	226	< 5	0.4	< 0.01	< 0.01	< 0.01	2.74	4030	6	2.2	40	< 0.2	8.40	400	2.0	< 2	1.17	< 0.5	5	148
107065	205	226	< 5	0.7	< 0.01	0.01	0.01	2.69	2070	2	0.2	20	< 0.2	6.75	1070	2.0	< 2	1.89	< 0.5	4	129
107066	205	226	< 5	0.6	< 0.01	0.01	0.01	2.65	1635	1	< 0.2	30	< 0.2	6.79	1650	2.0	< 2	1.72	< 0.5	5	162
107067	205	226	< 5	0.9	< 0.01	< 0.01	0.01	2.77	1270	1	2.6	10	< 0.2	6.29	1150	1.5	< 2	0.47	0.5	5	178
107068	205	226	20	2.4	0.01	0.01	0.01	2.66	1010	58	8.2	110	1.4	3.84	90	1.0	< 2	0.55	< 0.5	12	339
107069	205	226	5	1.7	0.01	< 0.01	0.02	2.66	1680	10	5.6	70	0.6	5.40	140	1.5	< 2	0.39	1.0	11	212
107070	205	226	< 5	0.9	0.01	0.01	0.03	2.73	2490	1	1.2	20	0.4	5.45	160	1.5	< 2	0.58	1.5	9	107
107071	205	226	< 5	0.8	0.01	< 0.01	0.03	2.67	2610	1	0.8	< 10	< 0.2	6.17	180	2.0	< 2	0.44	2.5	10	155
107072	205	226	5	0.7	0.01	< 0.01	0.02	2.69	3070	1	1.4	10	0.4	7.47	250	2.0	< 2	0.25	0.5	14	137
107073	205	226	< 5	0.5	0.01	< 0.01	0.02	2.67	3090	1	0.6	10	< 0.2	7.50	530	2.0	< 2	0.19	1.5	13	143
107074	205	226	< 5	0.8	0.01	< 0.01	0.03	2.64	2440	2	1.2	10	< 0.2	5.56	220	1.5	< 2	0.45	1.5	9	182
107075	205	226	< 5	0.8	0.01	< 0.01	0.03	2.51	2340	1	1.0	30	0.4	4.95	170	1.5	< 2	0.41	1.0	8	219
107076	205	226	< 5	0.5	0.01	0.01	0.03	2.65	2610	2	0.8	10	< 0.2	6.08	230	1.5	< 2	0.26	1.5	11	171
107077	205	226	15	1.3	0.01	0.01	0.03	2.60	1865	10	5.4	140	0.4	3.20	100	1.0	< 2	0.21	2.5	7	273
107078	205	226	< 5	1.0	0.01	< 0.01	0.03	2.63	2690	1	2.4	30	0.4	5.04	170	1.5	< 2	0.23	2.5	10	243
107079	205	226	< 5	1.5	0.01	0.01	0.03	2.68	2390	26	5.0	130	0.8	4.33	130	1.5	< 2	0.39	3.5	9	344
107080	205	226	< 5	4.0	0.01	0.01	0.02	2.65	4540	16	5.6	70	3.6	4.24	240	1.5	< 2	0.39	1.0	10	288
107081	205	226	< 5	4.2	0.02	0.01	0.03	2.62	5830	36	10.0	70	3.0	4.71	290	2.0	< 2	1.09	2.5	12	284
107082	205	226	< 5	236	0.04	< 0.01	0.03	2.68	4140	34	10.5	150	>100.0	4.25	160	2.0	< 2	0.96	2.0	14	368
107083	205	226	10	2.4	0.01	0.01	0.05	2.62	2400	18	14.0	100	1.4	3.28	150	1.5	< 2	1.66	4.5	9	338

CERTIFICATION: Ian R. 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 : PUCK
Comments: ATTN:TERRY TUCKER CC:ANDREW TURNER

Page Number :1-B
Total Pages :1
Certificate Date: 03-JUN-96
Invoice No. :I9618911
P.O. Number :6412
Account :GP W

CERTIFICATE OF ANALYSIS A9618911

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)
107058	205	226	34	1.98	4.66	1.23	560	3	0.25	11	50	34	71	0.19	17	10	2200
107059	205	226	22	1.50	0.68	0.30	520	2	0.20	20	320	4	67	0.05	24	< 10	84
107060	205	226	72	4.63	1.10	0.76	1295	7	0.08	93	730	7600	259	0.16	155	50	>10000
107061	205	226	57	2.41	2.82	0.66	430	8	0.17	35	620	92	105	0.18	192	< 10	470
107062	205	226	6	1.45	1.88	0.61	215	< 1	0.16	5	650	20	102	0.10	22	< 10	62
107063	205	226	6	1.78	2.83	0.68	170	1	0.35	4	560	16	42	0.13	28	< 10	52
107064	205	226	8	2.57	3.67	0.27	95	4	0.30	6	1200	20	104	0.18	45	< 10	22
107065	205	226	7	1.29	2.98	0.26	275	3	0.21	6	570	12	90	0.16	33	< 10	30
107066	205	226	6	1.06	3.21	0.28	245	2	0.21	7	720	20	97	0.16	36	< 10	40
107067	205	226	7	1.38	2.84	0.38	190	3	0.22	6	590	24	75	0.13	34	< 10	50
107068	205	226	65	4.01	1.63	0.23	70	16	0.15	64	2560	54	75	0.18	352	10	84
107069	205	226	76	3.13	2.36	0.54	200	12	0.19	68	1440	26	88	0.20	349	10	126
107070	205	226	80	2.49	2.49	0.89	210	4	0.15	55	880	12	92	0.22	272	< 10	218
107071	205	226	67	2.65	2.78	0.83	160	5	0.18	55	690	4	81	0.25	311	< 10	242
107072	205	226	75	3.52	3.14	1.22	225	4	0.21	60	640	< 2	63	0.27	229	< 10	194
107073	205	226	62	3.10	2.88	1.31	230	3	0.22	48	600	< 2	65	0.34	216	< 10	178
107074	205	226	67	2.23	2.37	0.89	180	3	0.16	50	860	6	78	0.21	283	< 10	204
107075	205	226	57	2.07	2.05	0.84	215	4	0.14	44	850	4	68	0.20	252	< 10	198
107076	205	226	63	2.56	2.27	0.89	220	3	0.18	50	770	< 2	70	0.22	241	< 10	200
107077	205	226	76	2.38	1.27	0.26	85	3	0.14	41	920	8	72	0.11	176	< 10	248
107078	205	226	74	2.33	2.02	0.46	115	4	0.20	53	1030	14	78	0.17	243	< 10	268
107079	205	226	90	3.16	1.75	0.30	70	8	0.17	59	1480	40	103	0.12	265	< 10	224
107080	205	226	79	3.35	1.52	0.25	75	5	0.16	48	1830	46	175	0.10	187	< 10	146
107081	205	226	155	3.13	1.78	0.47	100	12	0.14	86	5010	24	366	0.15	331	10	208
107082	205	226	344	2.83	1.61	0.52	115	11	0.12	78	3700	12	273	0.14	293	620	246
107083	205	226	105	2.47	1.38	0.67	310	14	0.06	67	5020	10	189	0.12	314	10	368

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:TERRY TUCKER CC:ANDREW TURNER

Page Number :1-A
Total Pages :1
Certificate Date: 03-JUN-96
Invoice No. :I9618911
P.O. Number :6412
Account :GP W

CERTIFICATE OF ANALYSIS A9618911

SAMPLE	PREP CODE		Au ppb FA+AA	Ag g/t	Cu %	Pb %	ZnSpec %	GrBa (XRF S.G.	ppm	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)
107058	205	226	< 5	4.9	0.01	< 0.01	0.24	2.73	6000	1	0.6	300	3.4	9.06	510	9.5	< 2	0.87	9.0	7	34
107059	205	226	< 5	0.5	< 0.01	0.01	0.01	2.65	13220	120	0.2	100	< 0.2	2.86	500	0.5	< 2	2.34	0.5	4	206
107060	205	226	15	15.5	0.01	0.85	1.85	2.76	1865	52	11.0	3500	15.2	2.79	90	2.0	< 2	5.30	85.5	24	251
107061	205	226	< 5	1.0	0.01	0.01	0.05	2.68	3780	8	1.6	170	0.8	6.04	320	4.0	< 2	1.80	3.0	9	138
107062	205	226	< 5	0.8	< 0.01	< 0.01	0.01	2.65	6180	1	0.2	10	0.4	6.81	2710	3.0	< 2	0.83	0.5	4	97
107063	205	226	< 5	0.4	< 0.01	< 0.01	0.01	2.71	5220	2	0.6	10	< 0.2	6.52	470	2.5	< 2	1.20	0.5	5	151
107064	205	226	< 5	0.4	< 0.01	< 0.01	< 0.01	2.74	4030	6	2.2	40	< 0.2	8.40	400	2.0	< 2	1.17	< 0.5	5	148
107065	205	226	< 5	0.7	< 0.01	0.01	0.01	2.69	2070	2	0.2	20	< 0.2	6.75	1070	2.0	< 2	1.89	< 0.5	4	129
107066	205	226	< 5	0.6	< 0.01	0.01	0.01	2.65	1635	1	< 0.2	30	< 0.2	6.79	1650	2.0	< 2	1.72	< 0.5	5	162
107067	205	226	< 5	0.9	< 0.01	< 0.01	0.01	2.77	1270	1	2.6	10	< 0.2	6.29	1150	1.5	< 2	0.47	0.5	5	178
107068	205	226	20	2.4	0.01	0.01	0.01	2.66	1010	58	8.2	110	1.4	3.84	90	1.0	< 2	0.55	< 0.5	12	339
107069	205	226	5	1.7	0.01	< 0.01	0.02	2.66	1680	10	5.6	70	0.6	5.40	140	1.5	< 2	0.39	1.0	11	212
107070	205	226	< 5	0.9	0.01	0.01	0.03	2.73	2490	1	1.2	20	0.4	5.45	160	1.5	< 2	0.58	1.5	9	107
107071	205	226	< 5	0.8	0.01	< 0.01	0.03	2.67	2610	1	0.8	< 10	< 0.2	6.17	180	2.0	< 2	0.44	2.5	10	155
107072	205	226	5	0.7	0.01	< 0.01	0.02	2.69	3070	1	1.4	10	0.4	7.47	250	2.0	< 2	0.25	0.5	14	137
107073	205	226	< 5	0.5	0.01	< 0.01	0.02	2.67	3090	1	0.6	10	< 0.2	7.50	530	2.0	< 2	0.19	1.5	13	143
107074	205	226	< 5	0.8	0.01	< 0.01	0.03	2.64	2440	2	1.2	10	< 0.2	5.56	220	1.5	< 2	0.45	1.5	9	182
107075	205	226	< 5	0.8	0.01	< 0.01	0.03	2.51	2340	1	1.0	30	0.4	4.95	170	1.5	< 2	0.41	1.0	8	219
107076	205	226	< 5	0.5	0.01	0.01	0.03	2.65	2610	2	0.8	10	< 0.2	6.08	230	1.5	< 2	0.26	1.5	11	171
107077	205	226	15	1.3	0.01	0.01	0.03	2.60	1865	10	5.4	140	0.4	3.20	100	1.0	< 2	0.21	2.5	7	273
107078	205	226	< 5	1.0	0.01	< 0.01	0.03	2.63	2690	1	2.4	30	0.4	5.04	170	1.5	< 2	0.23	2.5	10	243
107079	205	226	< 5	1.5	0.01	0.01	0.03	2.68	2390	26	5.0	130	0.8	4.33	130	1.5	< 2	0.39	3.5	9	344
107080	205	226	< 5	4.0	0.01	0.01	0.02	2.65	4540	16	5.6	70	3.6	4.24	240	1.5	< 2	0.39	1.0	10	288
107081	205	226	< 5	4.2	0.02	0.01	0.03	2.62	5830	36	10.0	70	3.0	4.71	290	2.0	< 2	1.09	2.5	12	284
107082	205	226	< 5	236	0.04	< 0.01	0.03	2.68	4140	34	10.5	150	>100.0	4.25	160	2.0	< 2	0.96	2.0	14	368
107083	205	226	10	2.4	0.01	0.01	0.05	2.62	2400	18	14.0	100	1.4	3.28	150	1.5	< 2	1.66	4.5	9	338

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:TERRY TUCKER CC:ANDREW TURNER

Certificate Date: 03-JUN-96
Invoice No. : I9618911
P.O. Number : 6412
Account : GP W

CERTIFICATE OF ANALYSIS A9618911

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)
107058	205	226	34	1.98	4.66	1.23	560	3	0.25	11	50	34	71	0.19	17	10	2200
107059	205	226	22	1.50	0.68	0.30	520	2	0.20	20	320	4	67	0.05	24	< 10	84
107060	205	226	72	4.63	1.10	0.76	1295	7	0.08	93	730	7600	259	0.16	155	50	>10000
107061	205	226	57	2.41	2.82	0.66	430	8	0.17	35	620	92	105	0.18	192	< 10	470
107062	205	226	6	1.45	1.88	0.61	215	< 1	0.16	5	650	20	102	0.10	22	< 10	62
107063	205	226	6	1.78	2.83	0.68	170	1	0.35	4	560	16	42	0.13	28	< 10	52
107064	205	226	8	2.57	3.67	0.27	95	4	0.30	6	1200	20	104	0.18	45	< 10	22
107065	205	226	7	1.29	2.98	0.26	275	3	0.21	6	570	12	90	0.16	33	< 10	30
107066	205	226	6	1.06	3.21	0.28	245	2	0.21	7	720	20	97	0.16	36	< 10	40
107067	205	226	7	1.38	2.84	0.38	190	3	0.22	6	590	24	75	0.13	34	< 10	50
107068	205	226	65	4.01	1.63	0.23	70	16	0.15	64	2560	54	75	0.18	352	10	84
107069	205	226	76	3.13	2.36	0.54	200	12	0.19	68	1440	26	88	0.20	349	10	126
107070	205	226	80	2.49	2.49	0.89	210	4	0.15	55	880	12	92	0.22	272	< 10	218
107071	205	226	67	2.65	2.78	0.83	160	5	0.18	55	690	4	81	0.25	311	< 10	242
107072	205	226	75	3.52	3.14	1.22	225	4	0.21	60	640	< 2	63	0.27	229	< 10	194
107073	205	226	62	3.10	2.88	1.31	230	3	0.22	48	600	< 2	65	0.34	216	< 10	178
107074	205	226	67	2.23	2.37	0.89	180	3	0.16	50	860	6	78	0.21	283	< 10	204
107075	205	226	57	2.07	2.05	0.84	215	4	0.14	44	850	4	68	0.20	252	< 10	198
107076	205	226	63	2.56	2.27	0.89	220	3	0.18	50	770	< 2	70	0.22	241	< 10	200
107077	205	226	76	2.38	1.27	0.26	85	3	0.14	41	920	8	72	0.11	176	< 10	248
107078	205	226	74	2.33	2.02	0.46	115	4	0.20	53	1030	14	78	0.17	243	< 10	268
107079	205	226	90	3.16	1.75	0.30	70	8	0.17	59	1480	40	103	0.12	265	< 10	224
107080	205	226	79	3.35	1.52	0.25	75	5	0.16	48	1830	46	175	0.10	187	< 10	146
107081	205	226	155	3.13	1.78	0.47	100	12	0.14	86	5010	24	366	0.15	331	10	208
107082	205	226	344	2.83	1.61	0.52	115	11	0.12	78	3700	12	273	0.14	293	620	246
107083.	205	226	105	2.47	1.38	0.67	310	14	0.06	67	5020	10	189	0.12	314	10	368

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

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Page Number :1-A
Total Pages :1
Certificate Date: 03-JUN-96
Invoice No. :I9619453
P.O. Number :6412
Account :GP W

Project : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE CC: ANDREW TURNER

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9619453

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)
107116	258	295	0.14	< 3	0.01	0.02	0.02	30200	3.53	< 0.01	< 0.01	< 0.001	1.0	1.05	300	< 10	< 20	4.25	< 10	10	130
107117	258	295	0.89	< 3	< 0.01	0.05	0.01	>50000	3.23	< 0.01	< 0.01	< 0.001	< 1.0	0.90	500	< 10	< 20	10.45	< 10	< 10	130

CERTIFICATION: Ian Bird

* Ba - ICP RESULTS MAY BE LOW DUE TO PRECIPITATION.

Chemex Labs Ltd.

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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)
107116	258	295	40	23.0	0.4	0.10	3450	10	< 0.05	10	0.017	70	< 0.05	90	140
107117	258	295	50	9.50	0.3	0.25	2360	< 10	0.05	10	0.035	250	< 0.05	80	100

CERTIFICATION: Hart Bichler

* Ba - ICP RESULTS MAY BE LOW DUE TO PRECIPITATION.

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: TERRY TUCKER - VANCOUVER OFFICE

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Certificate Date: 06-JUN-96
Invoice No. : I9619459
P.O. Number : 6412
Account : GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9619459

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)
107118	255	295	20	0.6	0.01	0.01	0.41	>50000	2.90	4	1.0	860	< 0.2	2.72	100	4.0	2	4.36	19.5	7	157
107119	255	295	20	0.8	0.01	0.02	0.17	3730	2.94	8	2.4	360	0.4	3.63	70	5.0	< 2	2.82	6.5	14	117
107120	255	295	25	0.4	0.01	0.02	0.01	6980	2.94	104	0.8	30	< 0.2	2.45	70	4.0	6	7.47	< 0.5	12	107
107121	255	295	10	0.4	< 0.01	0.02	0.08	2820	2.82	10	1.0	70	< 0.2	2.33	100	6.0	8	11.25	4.0	9	86
107122	255	295	15	< 0.3	< 0.01	0.02	0.41	2630	2.87	42	0.4	1240	< 0.2	2.12	90	7.0	4	10.80	17.5	10	85
107123	255	295	15	< 0.3	< 0.01	0.02	< 0.01	1845	2.76	32	1.0	10	< 0.2	2.04	150	6.0	2	7.89	< 0.5	9	72
107124	255	295	20	0.3	< 0.01	0.01	0.02	1875	2.71	24	2.4	50	< 0.2	2.72	150	6.5	< 2	2.35	2.0	11	188
107125	255	295	15	0.6	< 0.01	0.02	0.23	1720	2.72	6	1.0	530	< 0.2	2.91	190	7.5	< 2	4.30	14.5	12	212

CERTIFICATION: Stewart Bichler

* Ba-ICP RESULTS MAY BE LOW DUE TO PRECIPITATION

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
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Total Pages : 1
Certificate Date: 06-JUN-96
Invoice No. : I9619459
P.O. Number : 6412
Account : GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9619459

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)
107118	255	295	65	4.79	0.87	0.64	3820	5	0.18	26	1150	24	258	0.12	167	20	4000
107119	255	295	104	12.55	0.41	1.09	3720	9	0.13	48	1250	164	55	0.14	171	30	1480
107120	255	295	71	10.85	0.82	0.90	8850	6	0.06	25	1190	104	220	0.12	176	40	58
107121	255	295	47	7.14	0.98	0.67	5430	3	0.03	23	1510	116	295	0.11	161	30	702
107122	255	295	59	7.39	0.99	0.54	4630	3	0.03	28	1290	160	317	0.08	175	30	3850
107123	255	295	69	4.85	0.97	0.37	2410	3	0.03	26	810	140	280	0.07	144	10	36
107124	255	295	47	2.67	1.30	0.30	595	1	0.04	25	700	110	88	0.10	155	< 10	180
107125	255	295	59	3.86	1.34	0.40	1545	5	0.07	34	830	146	140	0.11	189	10	2060

CERTIFICATION:

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Project : WOLVERINE
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Total Pages :2
Certificate Date: 09-JUN-96
Invoice No. :I9619460
P.O. Number :6412
Account :GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9619460

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)
107084	205	226	10	1	0.2	10	0.2	2.65	5870	0.5	2	0.28	< 0.5	11	87	59
107085	205	226	< 5	2	0.2	< 10	0.2	3.82	3510	0.5	2	0.45	< 0.5	13	205	85
107086	205	226	< 5	1	0.2	10	0.2	3.92	3800	0.5	4	0.98	< 0.5	11	189	35
107087	205	226	< 5	1	< 0.2	< 10	0.2	3.16	4190	0.5	< 2	0.31	< 0.5	12	311	39
107088	205	226	< 5	2	0.2	< 10	0.2	2.85	4860	0.5	< 2	0.07	< 0.5	12	243	57
107089	205	226	< 5	2	0.2	< 10	0.2	3.21	4440	0.5	2	0.09	< 0.5	13	258	75
107090	205	226	< 5	1	0.4	< 10	< 0.2	2.42	4070	< 0.5	2	0.08	< 0.5	11	157	60
107091	205	226	< 5	2	0.6	20	0.4	4.77	610	1.0	< 2	0.09	0.5	17	268	126
107092	205	226	< 5	1	0.6	60	0.4	2.43	1310	1.5	< 2	0.04	< 0.5	5	269	46
107093	205	226	< 5	1	0.4	20	< 0.2	2.73	200	2.0	< 2	0.07	< 0.5	4	228	38
107094	205	226	< 5	1	0.6	100	0.8	2.84	>10000	1.0	< 2	0.23	0.5	8	149	56
107095	205	226	10	2	0.4	60	< 0.2	2.13	>10000	< 0.5	2	0.10	0.5	8	240	43
107096	205	226	75	1	0.8	730	0.8	1.87	4920	< 0.5	< 2	0.05	3.0	6	223	57
107097	205	226	20	2	0.6	20	< 0.2	2.93	3550	< 0.5	2	0.11	0.5	10	213	61
107098	205	226	10	1	< 0.2	10	< 0.2	3.17	9050	< 0.5	6	0.09	< 0.5	14	125	97
107099	205	226	5	2	0.4	30	< 0.2	3.65	1620	0.5	6	0.21	< 0.5	8	195	76
107100	205	226	5	2	0.2	10	< 0.2	2.53	1580	< 0.5	2	0.37	< 0.5	8	198	116
107101	205	226	< 5	2	< 0.2	< 10	< 0.2	5.13	3780	0.5	2	2.11	< 0.5	10	120	66
107102	205	226	10	6	0.2	30	< 0.2	5.57	3310	< 0.5	6	2.82	0.5	14	115	75
107103	205	226	< 5	2	< 0.2	< 10	< 0.2	4.82	2680	< 0.5	2	3.03	< 0.5	12	91	93
107104	205	226	10	2	0.2	10	0.2	7.44	4210	< 0.5	< 2	5.37	< 0.5	11	45	57
107105	205	226	< 5	20	0.2	20	< 0.2	4.03	960	0.5	4	1.53	< 0.5	8	177	53
107106	205	226	5	1	0.4	50	< 0.2	3.95	720	0.5	6	3.98	0.5	9	139	50
107107	205	226	40	2	1.0	130	0.6	2.74	180	< 0.5	8	1.01	< 0.5	9	173	58
107108	205	226	20	2	0.4	30	0.4	2.57	300	1.5	10	2.42	< 0.5	8	128	56
107109	205	226	25	1	0.6	80	< 0.2	3.82	270	3.5	4	1.45	< 0.5	10	167	74
107110	205	226	30	2	0.4	40	0.6	2.79	460	0.5	8	2.35	0.5	8	177	59
107111	205	226	20	1	< 0.2	170	0.2	3.03	770	1.5	8	2.34	1.0	10	188	65
107112	205	226	15	2	0.4	170	0.3	2.89	400	< 0.5	6	2.53	1.5	9	142	68
107113	205	226	25	2	< 0.2	80	0.2	2.33	420	4.0	< 2	0.73	< 0.5	11	179	86
107114	205	226	10	1	0.2	180	< 0.2	1.93	310	3.5	< 2	7.03	3.5	10	124	25
107115	205	226	< 5	1	< 0.2	30	< 0.2	0.94	240	5.0	< 2	0.79	< 0.5	2	45	12
107126	205	226	25	26	2.4	30	< 0.2	3.73	350	5.5	< 2	2.30	0.5	14	175	67
107127	205	226	5	2	0.6	< 10	< 0.2	4.24	360	5.0	< 2	0.44	< 0.5	12	197	75
107128	205	226	< 5	4	1.2	10	0.4	3.31	200	4.0	2	1.34	< 0.5	12	185	68
107129	205	226	< 5	6	1.4	30	0.4	4.90	350	5.5	< 2	1.73	0.5	6	215	43
107130	205	226	10	18	5.2	180	0.8	3.83	260	4.0	2	1.19	6.5	10	205	67
107131	205	226	< 5	2	0.6	20	< 0.2	6.93	730	4.5	< 2	1.62	< 0.5	5	130	11
107132	205	226	< 5	2	1.4	80	< 0.2	5.84	300	3.0	< 2	1.24	4.0	5	161	25
107133	205	226	< 5	1	0.2	< 10	< 0.2	6.65	1770	3.0	< 2	0.79	< 0.5	4	148	8

CERTIFICATION: Stuart Bridden

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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: TERRY TUCKER - VANCOUVER OFFICE

Certificate Date: 09-JUN-96
Invoice No. :I9619460
P.O. Number :6412
Account :GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9619460

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)
107084	205 226	1.55	1.01	0.65	2060	< 1	0.24	26	220	< 2	139	0.15	45	< 10	46
107085	205 226	2.19	1.48	1.01	1210	1	0.29	39	310	6	66	0.21	73	< 10	74
107086	205 226	2.05	1.48	1.16	1370	1	0.34	37	330	6	67	0.20	75	< 10	68
107087	205 226	1.87	1.19	0.65	815	1	0.29	31	260	< 2	140	0.18	57	< 10	48
107088	205 226	1.77	1.11	0.59	295	1	0.32	28	210	6	107	0.13	54	< 10	46
107089	205 226	2.09	1.18	0.80	1810	1	0.12	36	250	< 2	19	0.17	59	< 10	58
107090	205 226	1.97	0.71	0.55	2430	1	0.26	28	230	8	29	0.14	39	< 10	44
107091	205 226	2.85	1.77	0.87	500	3	0.13	142	370	24	40	0.29	161	< 10	326
107092	205 226	1.29	0.84	0.26	255	5	0.09	29	210	12	65	0.09	84	< 10	220
107093	205 226	6.55	0.59	0.27	75	4	0.09	29	410	< 2	123	0.16	146	< 10	632
107094	205 226	1.55	0.99	0.22	170	4	0.09	41	180	20	74	0.09	111	< 10	356
107095	205 226	2.93	0.67	0.14	240	3	0.07	39	430	10	40	0.07	121	< 10	804
107096	205 226	4.64	0.57	0.13	2550	10	0.09	46	400	16	51	0.06	131	< 10	1445
107097	205 226	10.50	1.06	0.22	1365	6	0.09	28	510	< 2	29	0.11	106	< 10	258
107098	205 226	4.31	1.36	0.22	4540	4	0.20	26	480	10	45	0.12	123	< 10	138
107099	205 226	3.98	1.67	0.39	2490	2	0.11	21	920	4	27	0.19	150	< 10	60
107100	205 226	2.83	1.19	0.35	1475	1	0.04	23	570	50	21	0.12	139	< 10	76
107101	205 226	3.65	2.69	0.80	1875	2	0.13	12	1130	16	84	0.26	111	< 10	40
107102	205 226	4.81	2.87	0.96	2970	1	0.31	20	1230	68	96	0.29	142	10	470
107103	205 226	3.66	2.60	0.89	2270	1	0.33	10	1100	10	92	0.27	117	< 10	32
107104	205 226	4.77	4.15	0.89	3760	1	0.18	7	1480	10	146	0.37	88	10	32
107105	205 226	3.47	1.92	0.58	2170	3	0.06	35	1030	58	44	0.19	132	< 10	172
107106	205 226	3.06	1.64	0.48	2510	3	0.05	32	1180	40	154	0.19	146	< 10	242
107107	205 226	7.81	0.58	0.88	5930	7	0.05	59	1390	38	188	0.13	213	< 10	54
107108	205 226	6.91	1.03	0.71	4600	5	0.07	36	1220	10	412	0.11	186	< 10	32
107109	205 226	3.91	1.39	0.64	1325	4	0.09	32	1050	10	150	0.18	164	< 10	162
107110	205 226	8.86	0.95	0.82	5620	6	0.12	56	1400	270	277	0.12	195	< 10	186
107111	205 226	4.66	1.19	0.68	9100	5	0.11	49	1170	46	332	0.14	177	< 10	742
107112	205 226	7.77	1.16	0.74	6070	6	0.07	46	1190	320	413	0.14	185	< 10	534
107113	205 226	2.50	0.91	0.42	1140	2	0.08	33	820	12	262	0.10	175	< 10	112
107114	205 226	2.17	0.59	0.38	3240	2	0.05	20	790	4	535	0.08	144	< 10	504
107115	205 226	1.64	0.19	0.14	660	2	0.07	4	560	< 2	217	0.03	69	< 10	40
107126	205 226	4.24	1.71	0.47	795	2	0.12	32	690	50	96	0.15	160	< 10	28
107127	205 226	2.91	2.00	0.43	240	3	0.09	40	500	46	30	0.18	147	< 10	24
107128	205 226	2.53	1.57	0.37	325	1	0.05	40	1090	84	74	0.13	138	< 10	22
107129	205 226	2.89	2.23	0.58	555	6	0.09	29	930	26	91	0.18	149	< 10	120
107130	205 226	4.34	1.69	0.44	335	18	0.11	58	980	60	75	0.15	250	10	846
107131	205 226	2.57	2.65	0.78	470	5	0.60	2	420	< 2	90	0.24	16	< 10	64
107132	205 226	1.85	2.62	0.65	220	5	0.11	20	860	38	92	0.14	115	< 10	336
107133	205 226	1.55	2.16	0.39	175	1	1.61	9	810	12	80	0.12	29	< 10	50

CERTIFICATION:

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CERTIFICATE OF ANALYSIS A9619460

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)
107134	205	226	< 5	2	0.4	30	< 0.2	6.63	1880	3.0	< 2	0.88	0.5	5	116	5
107135	205	226	< 5	10	3.2	< 10	< 0.2	7.12	790	2.5	< 2	0.49	0.5	5	115	7
107136	205	226	< 5	2	0.8	< 10	< 0.2	6.43	3350	2.0	< 2	0.51	< 0.5	5	150	4
107137	205	226	< 5	1	0.6	< 10	< 0.2	6.88	600	2.5	< 2	0.65	< 0.5	5	112	5
107138	205	226	< 5	2	1.2	50	< 0.2	7.39	1090	2.0	< 2	1.38	< 0.5	5	141	7
107139	205	226	< 5	4	1.6	170	< 0.2	6.34	1740	1.5	< 2	0.38	< 0.5	4	62	7
107140	205	226	< 5	6	2.4	120	< 0.2	7.21	800	1.5	< 2	0.34	0.5	4	141	9
107141	205	226	< 5	6	2.6	120	< 0.2	7.48	1090	1.5	< 2	0.20	< 0.5	4	109	8
107142	205	226	< 5	12	3.4	430	< 0.2	6.22	1800	0.5	< 2	0.37	0.5	4	144	8
107143	205	226	< 5	20	2.2	50	< 0.2	5.65	1190	1.0	< 2	0.24	0.5	3	107	5

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107134	205	226	1.48	2.21	0.53	185	1	1.64	5	900	14	82	0.14	25	< 10	44
107135	205	226	1.67	3.35	1.06	100	1	0.38	5	600	22	72	0.18	26	< 10	48
107136	205	226	1.36	3.10	0.92	70	1	0.46	7	570	16	65	0.16	22	< 10	46
107137	205	226	1.72	3.39	0.94	80	1	0.36	6	1060	8	107	0.16	29	< 10	50
107138	205	226	1.72	3.20	0.45	165	3	0.43	7	900	12	163	0.13	37	< 10	22
107139	205	226	1.83	3.94	0.15	75	3	0.23	7	790	10	121	0.14	39	< 10	26
107140	205	226	2.07	3.74	0.18	85	4	0.25	8	560	18	101	0.17	47	< 10	16
107141	205	226	1.97	3.34	0.13	45	4	0.24	8	520	28	57	0.18	47	< 10	22
107142	205	226	4.08	3.21	0.18	70	4	0.50	7	1790	90	145	0.14	38	< 10	86
107143	205	226	2.19	3.25	0.13	60	1	0.25	5	610	32	128	0.13	24	< 10	40

CERTIFICATION: Ivan Bulbulian

*Ba - ICP RESULTS MAY BE LOW DUE TO PRECIPITATION.

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: TERRY TUCKER CC: ANDREW TURNER

Certificate Date: 09-JUN-96
Invoice No. : I9619757
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9619757

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)
107144	205	226	< 5	26	1.8	110	< 0.2	5.70	450	1.5	< 2	0.30	0.5	4	139	9
107145	205	226	< 5	10	1.0	50	< 0.2	6.16	350	1.5	< 2	2.67	< 0.5	3	135	6
107146	205	226	< 5	4	1.6	50	< 0.2	6.24	390	1.5	< 2	1.44	< 0.5	4	85	6
107147	205	226	< 5	8	2.0	70	< 0.2	6.21	330	1.5	< 2	0.64	< 0.5	6	186	10
107148	205	226	< 5	10	1.8	30	< 0.2	7.97	610	2.0	< 2	0.40	0.5	5	115	9
107149	205	226	< 5	10	2.4	30	< 0.2	6.92	580	1.0	< 2	0.35	0.5	5	165	8
107150	205	226	< 5	4	1.6	10	< 0.2	7.16	610	1.5	< 2	0.62	0.5	4	127	9
107151	205	226	< 5	12	1.6	300	< 0.2	7.03	500	1.5	< 2	1.31	1.5	4	141	8
107152	205	226	< 5	4	1.4	120	< 0.2	7.25	1990	2.0	< 2	0.33	0.5	4	111	12
107153	205	226	< 5	1	0.2	< 10	< 0.2	7.91	1320	2.0	< 2	0.62	0.5	5	136	6
107154	205	226	< 5	2	< 0.2	< 10	< 0.2	6.50	1030	1.5	< 2	0.93	< 0.5	4	92	5
107155	205	226	< 5	1	0.2	10	< 0.2	6.97	1080	2.0	< 2	0.97	0.5	4	136	6
107156	205	226	< 5	2	0.2	20	< 0.2	6.82	1450	2.0	< 2	2.18	1.0	6	171	10
107157	205	226	< 5	22	0.8	210	< 0.2	5.47	130	1.5	< 2	3.35	2.5	17	350	24
107158	205	226	5	2	1.2	10	1.2	3.05	70	1.0	< 2	0.81	1.5	6	173	89
107159	205	226	5	2	0.2	10	< 0.2	6.55	200	2.0	< 2	0.91	2.5	9	231	73
107160	205	226	< 5	1	< 0.2	< 10	< 0.2	7.07	310	2.5	< 2	1.79	2.5	10	171	57
107161	205	226	< 5	1	0.2	< 10	< 0.2	7.44	400	2.0	< 2	0.64	2.0	12	233	73
107162	205	226	< 5	2	< 0.2	10	0.2	6.67	200	2.0	< 2	0.62	1.5	9	243	65
107163	205	226	< 5	1	< 0.2	< 10	< 0.2	7.05	1940	2.0	< 2	1.37	2.0	10	236	57
107164	205	226	< 5	1	< 0.2	< 10	< 0.2	7.38	790	2.0	< 2	0.49	1.0	12	118	75
107165	205	226	< 5	1	< 0.2	< 10	< 0.2	7.55	320	2.0	< 2	0.50	2.0	13	130	83
107166	205	226	< 5	1	0.2	10	< 0.2	7.29	670	2.0	< 2	0.99	2.0	11	110	60
107167	205	226	< 5	2	< 0.2	< 10	< 0.2	8.16	710	2.5	< 2	0.44	1.0	12	122	70
107168	205	226	< 5	2	< 0.2	< 10	< 0.2	7.32	2870	2.0	< 2	0.52	2.0	11	109	63
107169	205	226	< 5	1	< 0.2	< 10	< 0.2	7.33	3170	2.0	< 2	0.74	1.5	11	122	64
107170	205	226	< 5	2	0.4	10	< 0.2	6.76	730	2.0	< 2	1.32	3.0	11	141	74
107171	205	226	< 5	1	< 0.2	< 10	< 0.2	7.27	530	2.0	< 2	0.56	2.5	10	130	60
107172	205	226	5	2	0.2	< 10	< 0.2	6.94	330	2.0	< 2	0.74	1.5	10	160	67
107173	205	226	5	1	0.4	< 10	< 0.2	7.15	350	2.0	< 2	0.71	2.0	10	141	68
107174	205	226	< 5	1	< 0.2	< 10	< 0.2	7.23	360	2.0	< 2	0.43	2.0	10	125	67
107175	205	226	< 5	2	0.4	10	< 0.2	6.11	530	1.5	< 2	0.41	4.5	10	220	52
107176	205	226	5	1	0.8	< 10	0.2	7.61	260	2.5	< 2	0.54	1.5	11	118	73
107177	205	226	< 5	1	1.2	10	< 0.2	6.24	180	2.0	< 2	0.49	3.5	9	154	64
107178	205	226	< 5	2	1.4	50	< 0.2	5.56	200	1.5	< 2	0.86	2.0	9	140	65
107179	205	226	10	2	4.4	190	< 0.2	3.76	100	1.5	< 2	0.22	2.5	8	255	84
107180	205	226	10	10	5.6	100	1.2	3.80	160	1.5	< 2	0.53	1.0	9	237	88

CERTIFICATION: [signature]

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 : PUCK
Comments: ATTN: TERRY TUCKER CC: ANDREW TURNER

Page nber : 1-B
Total Pages : 1
Certificate Date: 09-JUN-96
Invoice No. : I9619757
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9619757

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)
107144	205	226	2.57	2.95	0.15	80	3	0.27	7	740	60	113	0.13	35	10	42
107145	205	226	2.23	2.87	0.17	495	2	0.17	5	750	40	283	0.15	23	10	14
107146	205	226	1.33	2.70	0.21	300	2	0.16	1	620	20	182	0.15	29	< 10	16
107147	205	226	1.21	2.62	0.15	100	3	0.17	20	790	40	161	0.16	45	< 10	44
107148	205	226	1.39	3.25	0.24	65	1	0.49	5	900	18	121	0.17	49	< 10	10
107149	205	226	1.09	2.54	0.14	60	3	1.06	7	600	18	92	0.14	40	< 10	48
107150	205	226	0.94	2.89	0.16	75	1	0.47	6	610	18	82	0.15	44	< 10	26
107151	205	226	1.26	2.79	0.26	145	3	0.24	6	560	56	70	0.14	40	10	296
107152	205	226	1.41	3.12	0.28	150	3	0.21	7	600	64	56	0.15	40	< 10	214
107153	205	226	2.40	3.41	0.31	325	2	0.22	6	780	16	74	0.16	38	< 10	10
107154	205	226	1.75	2.77	0.27	390	3	0.21	6	610	32	86	0.13	37	< 10	14
107155	205	226	1.72	2.94	0.30	230	2	0.23	9	540	58	100	0.14	38	< 10	34
107156	205	226	1.83	3.00	0.37	510	2	0.19	38	640	40	162	0.15	36	< 10	90
107157	205	226	6.32	2.23	0.45	1380	3	0.14	122	1120	46	206	0.13	44	30	488
107158	205	226	3.45	1.23	0.27	260	1	0.09	52	1330	144	74	0.10	199	10	118
107159	205	226	3.34	2.90	0.89	320	1	0.18	50	760	20	92	0.23	253	< 10	164
107160	205	226	3.50	2.99	0.95	315	3	0.20	44	630	10	124	0.29	229	10	190
107161	205	226	3.83	3.08	1.33	245	3	0.19	51	660	14	98	0.37	246	10	240
107162	205	226	3.38	2.62	1.22	235	4	0.17	49	670	20	75	0.31	258	10	196
107163	205	226	2.80	2.93	1.07	245	3	0.18	45	600	10	163	0.31	212	10	174
107164	205	226	3.73	2.86	1.37	295	1	0.21	48	630	12	76	0.38	182	< 10	170
107165	205	226	3.96	3.01	1.39	315	1	0.19	58	640	14	71	0.39	189	10	188
107166	205	226	3.14	2.52	1.07	280	2	0.20	42	630	16	77	0.38	186	10	154
107167	205	226	3.55	3.26	1.14	255	3	0.22	51	710	14	71	0.42	209	< 10	164
107168	205	226	2.96	2.85	1.09	240	2	0.19	48	610	12	67	0.36	222	< 10	180
107169	205	226	3.15	2.73	1.18	210	1	0.19	47	630	12	73	0.35	217	10	186
107170	205	226	2.83	2.64	1.07	245	2	0.22	49	650	10	93	0.33	263	10	224
107171	205	226	2.90	2.75	1.17	260	3	0.21	45	670	10	68	0.36	260	< 10	194
107172	205	226	3.25	2.72	1.22	290	1	0.18	51	640	6	64	0.27	225	10	168
107173	205	226	3.17	2.83	1.21	285	1	0.20	48	690	< 2	64	0.26	228	< 10	186
107174	205	226	3.28	2.59	1.19	225	2	0.18	45	650	6	56	0.32	232	< 10	198
107175	205	226	2.80	2.18	0.99	195	2	0.18	40	640	10	79	0.30	174	< 10	254
107176	205	226	3.27	3.09	1.24	240	1	0.19	52	780	6	73	0.27	231	< 10	200
107177	205	226	2.38	2.58	0.91	190	4	0.16	52	890	10	56	0.23	331	< 10	284
107178	205	226	2.27	2.23	0.75	215	3	0.14	51	1000	10	81	0.19	286	< 10	208
107179	205	226	3.02	1.21	0.30	60	2	0.12	44	850	18	128	0.10	182	< 10	216
107180	205	226	2.85	1.11	0.22	60	9	0.12	62	2280	14	206	0.10	316	< 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 : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE

Page ..mber : 1-A
Total Pages : 1
Certificate Date: 30-JUL-96
Invoice No. : I9624793
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9624793

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)
107058A	205	226	55	40	1.0	90	0.2	9.14	210	9.5	< 2	1.07	4.5	10	43	28
107059A	205	226	30	70	14.0	4370	13.2	2.03	50	1.5	< 2	5.98	101.5	32	170	59
107060A	205	226	20	66	0.8	40	< 0.2	2.12	2520	< 0.5	< 2	2.05	0.5	4	265	12
107061A	205	226	< 5	6	2.2	110	1.0	5.49	110	4.0	< 2	1.84	4.0	9	178	60

CERTIFICATION: Ian Bird

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers

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Page ..iber : 1-B
Total Pages : 1
Certificate Date: 30-JUL-96
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CERTIFICATE OF ANALYSIS A9624793

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)
107058A	205 226	2.08	4.33	1.30	610	1	0.25	9	130	20	75	0.20	16	< 10	1030
107059A	205 226	5.80	0.85	0.60	1405	5	0.04	99	380	>10000	251	0.11	153	< 10	>10000
107060A	205 226	1.06	0.30	0.21	415	1	0.25	9	280	116	68	0.04	14	< 10	210
107061A	205 226	2.23	2.50	0.63	385	12	0.25	46	580	84	115	0.17	242	10	554

CERTIFICATION: Hartt Bichler

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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

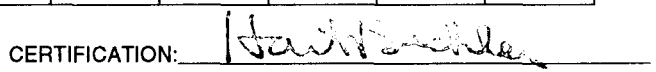
To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE

Certificate Date: 11-JUN-96
Invoice No. :I9620012
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9620012

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)
107181	205	226	15	4	< 0.2	< 10	< 0.2	3.26	890	0.5	< 2	0.86	< 0.5	9	252	68
107182	205	226	< 5	2	< 0.2	< 10	< 0.2	4.54	3170	1.5	2	0.70	< 0.5	9	275	67
107183	205	226	< 5	2	< 0.2	10	< 0.2	2.66	3490	0.5	2	0.33	< 0.5	13	166	71
107184	205	226	< 5	2	< 0.2	< 10	< 0.2	2.73	3770	0.5	< 2	0.40	< 0.5	14	138	71
107185	205	226	< 5	1	< 0.2	10	< 0.2	2.88	5960	0.5	< 2	0.33	< 0.5	12	362	91
107186	205	226	< 5	14	< 0.2	< 10	< 0.2	3.38	490	0.5	< 2	0.22	< 0.5	10	332	73
107187	205	226	60	4	< 0.2	30	< 0.2	2.96	210	< 0.5	< 2	1.64	0.5	8	123	74
107188	205	226	< 5	2	< 0.2	< 10	< 0.2	3.45	4970	0.5	< 2	0.65	< 0.5	10	286	86
107189	205	226	< 5	1	< 0.2	< 10	< 0.2	2.48	2200	0.5	< 2	0.37	< 0.5	8	365	36
107190	205	226	< 5	2	< 0.2	10	< 0.2	3.44	610	0.5	< 2	0.66	< 0.5	11	166	77
107191	205	226	< 5	2	< 0.2	10	< 0.2	4.26	500	1.5	< 2	0.28	< 0.5	15	316	133
107192	205	226	< 5	1	< 0.2	< 10	< 0.2	2.11	2770	0.5	< 2	0.45	< 0.5	12	185	62
107193	205	226	< 5	2	0.2	< 10	< 0.2	2.55	5040	0.5	< 2	0.23	< 0.5	13	164	86
107194	205	226	< 5	1	< 0.2	10	< 0.2	2.66	3060	< 0.5	< 2	0.36	< 0.5	14	121	56
107195	205	226	< 5	1	< 0.2	30	< 0.2	2.74	2720	0.5	< 2	0.33	< 0.5	12	132	38
107196	205	226	< 5	2	< 0.2	< 10	< 0.2	4.81	4730	1.0	< 2	0.77	< 0.5	14	298	78
107197	205	226	< 5	1	< 0.2	10	< 0.2	2.73	5120	0.5	< 2	0.22	< 0.5	11	243	60
107198	205	226	< 5	2	0.2	< 10	< 0.2	3.91	4830	1.0	< 2	0.29	< 0.5	13	159	61
107199	205	226	< 5	1	< 0.2	< 10	< 0.2	2.93	4920	0.5	< 2	0.42	< 0.5	12	160	69
107200	205	226	< 5	2	< 0.2	< 10	< 0.2	2.86	2820	0.5	< 2	0.18	< 0.5	11	225	86
107201	205	226	< 5	10	0.2	10	< 0.2	3.37	380	0.5	< 2	0.56	< 0.5	9	220	65
107202	205	226	< 5	2	0.2	10	< 0.2	2.55	390	0.5	< 2	0.15	< 0.5	5	285	71
107203	205	226	< 5	174	0.2	10	< 0.2	1.78	160	< 0.5	< 2	1.64	< 0.5	12	186	71
107204	205	226	< 5	8	0.2	310	< 0.2	2.55	550	2.5	< 2	0.49	1.5	5	206	64
107205	205	226	< 5	2	< 0.2	100	< 0.2	1.08	630	< 0.5	< 2	0.28	1.0	< 1	104	20
107206	205	226	< 5	1	< 0.2	20	< 0.2	3.06	1960	3.5	< 2	2.23	0.5	5	194	169
107207	205	226	15	90	1.2	3070	1.0	2.74	210	5.5	2	1.07	21.5	28	186	141
107208	205	226	< 5	2	0.2	60	< 0.2	0.76	300	2.0	< 2	0.22	0.5	< 1	135	141
107209	205	226	< 5	2	0.2	30	< 0.2	0.60	280	2.0	< 2	0.17	0.5	< 1	247	18
107210	205	226	< 5	2	< 0.2	320	< 0.2	2.08	820	3.0	< 2	1.59	2.5	5	219	72
107211	205	226	< 5	1	< 0.2	40	< 0.2	2.35	640	1.0	< 2	1.59	< 0.5	6	210	69
107212	205	226	< 5	2	< 0.2	10	< 0.2	1.73	330	< 0.5	< 2	8.00	< 0.5	13	90	44
107213	205	226	< 5	2	0.2	20	0.4	3.01	340	1.5	< 2	1.52	0.5	18	147	108
107214	205	226	< 5	8	0.2	10	< 0.2	4.79	1880	0.5	< 2	1.98	1.0	11	137	75
107215	205	226	< 5	8	0.2	< 10	< 0.2	4.04	360	0.5	< 2	3.22	< 0.5	10	170	70
107221	205	226	< 5	8	3.0	50	0.6	2.70	150	2.0	< 2	2.90	0.5	8	221	45
107222	205	226	< 5	2	0.2	< 10	< 0.2	6.56	380	2.5	< 2	0.92	0.5	3	145	5
107223	205	226	< 5	2	0.4	< 10	< 0.2	6.74	590	2.5	< 2	0.80	0.5	3	123	4
107224	205	226	< 5	14	1.8	70	< 0.2	7.71	380	2.0	< 2	0.43	< 0.5	4	180	6
107225	205	226	< 5	12	2.4	60	< 0.2	6.26	220	1.5	< 2	0.24	0.5	4	100	4

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: TERRY TUCKER - VANCOUVER OFFICE

Page Number :1-B
Total Pages :2
Certificate Date: 11-JUN-96
Invoice No. :I9620012
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9620012

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)
107181	205	226	1.99	1.21	0.76	1520	1	0.08	40	380	8	68	0.16	89	< 10	76
107182	205	226	1.95	1.32	0.76	1475	3	1.50	29	420	18	105	0.18	58	< 10	72
107183	205	226	1.89	0.92	0.80	1350	1	0.12	27	330	8	47	0.16	70	< 10	56
107184	205	226	1.77	1.08	0.67	2440	1	0.29	35	250	4	135	0.16	49	< 10	48
107185	205	226	2.03	1.02	0.80	1140	< 1	0.05	30	350	6	59	0.15	51	< 10	64
107186	205	226	2.43	1.24	0.55	615	7	0.09	67	380	4	76	0.20	109	< 10	122
107187	205	226	6.63	0.61	0.82	3820	2	0.29	36	290	10	231	0.16	143	< 10	64
107188	205	226	2.13	1.47	0.76	1010	< 1	0.41	39	290	8	149	0.21	75	< 10	100
107189	205	226	1.67	1.07	0.53	420	1	0.22	33	210	4	150	0.14	60	< 10	60
107190	205	226	2.35	1.35	0.74	1870	1	0.33	69	410	6	110	0.22	88	< 10	124
107191	205	226	2.62	1.65	0.84	1225	1	0.15	103	370	6	52	0.31	132	< 10	146
107192	205	226	1.54	0.66	0.54	1660	1	0.23	24	220	8	59	0.12	39	< 10	42
107193	205	226	1.84	0.76	0.70	1200	1	0.21	27	240	4	43	0.15	47	< 10	46
107194	205	226	1.88	0.60	0.69	1505	1	0.83	23	280	4	74	0.17	56	< 10	46
107195	205	226	1.71	1.10	0.71	1590	1	0.22	32	210	12	101	0.16	50	< 10	50
107196	205	226	2.73	1.77	1.35	1725	3	0.62	52	440	10	111	0.25	92	< 10	90
107197	205	226	1.58	1.00	0.59	1500	4	0.36	29	250	4	88	0.17	61	< 10	44
107198	205	226	2.25	1.76	0.92	1590	< 1	0.25	36	290	6	56	0.22	78	< 10	68
107199	205	226	1.82	1.14	0.70	1925	1	0.13	34	250	10	54	0.17	48	< 10	54
107200	205	226	1.84	1.10	0.55	435	< 1	0.24	29	200	< 2	76	0.15	40	< 10	44
107201	205	226	2.17	1.26	0.67	660	1	0.28	43	470	10	78	0.19	79	< 10	94
107202	205	226	1.51	0.95	0.36	350	5	0.06	47	160	8	37	0.16	89	< 10	102
107203	205	226	7.51	0.50	0.50	>10000	16	0.02	102	420	4	187	0.08	95	< 10	134
107204	205	226	1.91	0.96	0.30	340	20	0.08	24	270	440	118	0.12	125	< 10	934
107205	205	226	>25.0	0.16	0.13	280	23	0.15	9	220	< 2	380	0.05	92	< 10	28
107206	205	226	5.79	0.65	0.43	680	6	0.05	18	350	4	411	0.16	154	< 10	140
107207	205	226	1.77	1.25	0.71	500	89	0.05	131	1170	680	107	0.12	224	< 10	>10000
107208	205	226	>25.0	0.18	0.12	210	40	0.03	9	190	< 2	324	0.03	110	< 10	218
107209	205	226	18.35	0.13	0.10	255	17	0.01	9	190	< 2	235	0.03	86	< 10	198
107210	205	226	1.21	0.81	0.19	330	42	0.04	42	510	24	240	0.08	121	< 10	520
107211	205	226	2.37	1.13	0.24	650	4	0.08	50	360	30	145	0.09	121	< 10	98
107212	205	226	9.69	0.65	0.64	>10000	1	0.05	13	520	8	475	0.06	103	< 10	44
107213	205	226	3.54	1.62	0.47	3570	9	0.10	45	490	32	132	0.13	132	< 10	318
107214	205	226	4.86	2.54	0.87	2790	1	0.24	16	860	172	107	0.25	109	< 10	120
107215	205	226	4.80	2.04	0.72	3160	1	0.13	37	980	80	207	0.20	157	< 10	168
107221	205	226	2.64	1.32	0.44	655	2	0.04	28	420	48	185	0.15	91	< 10	120
107222	205	226	1.61	2.31	0.35	245	2	2.09	8	690	18	106	0.12	23	< 10	50
107223	205	226	1.48	3.32	0.84	120	< 1	0.86	5	730	22	117	0.16	24	< 10	42
107224	205	226	2.30	3.57	0.46	105	4	1.52	8	810	28	112	0.14	34	< 10	34
107225	205	226	2.15	5.29	0.16	155	1	0.44	7	830	28	107	0.10	28	< 10	52

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: TERRY TUCKER - VANCOUVER OFFICE

Certificate Date: 11-JUN-96
Invoice No. :I9620012
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9620012

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)
107226	205 226	< 5	10	2.4	80	< 0.2	6.51	430	1.5	< 2	0.23	0.5	4	60	5
107227	205 226	< 5	6	2.4	40	< 0.2	8.71	370	1.5	< 2	0.49	0.5	5	202	8
107228	205 226	< 5	16	3.0	190	< 0.2	7.50	290	2.0	< 2	0.27	0.5	4	118	9
107229	205 226	< 5	10	2.6	280	< 0.2	7.38	280	1.5	< 2	0.66	2.0	5	224	10
107230	205 226	< 5	16	2.0	60	< 0.2	6.29	270	2.0	< 2	2.18	0.5	3	227	7
107231	205 226	< 5	6	1.6	30	< 0.2	6.12	380	1.5	< 2	3.27	< 0.5	4	209	7
107232	205 226	< 5	8	1.4	< 10	< 0.2	5.94	230	1.5	< 2	2.34	0.5	3	151	6
107233	205 226	< 5	12	1.8	40	< 0.2	6.73	230	1.5	< 2	1.37	0.5	5	133	20
107234	205 226	< 5	2	1.0	40	< 0.2	6.66	840	1.5	< 2	1.49	1.5	4	74	14
107235	205 226	< 5	2	0.6	< 10	< 0.2	6.83	1630	1.5	< 2	1.28	1.0	4	82	6
107236	205 226	< 5	1	0.6	40	< 0.2	7.43	1310	1.5	< 2	0.67	1.0	16	138	13
107237	205 226	< 5	2	1.0	< 10	< 0.2	6.36	770	2.0	< 2	1.30	< 0.5	3	143	7
107238	205 226	< 5	1	0.8	< 10	< 0.2	7.68	2340	2.0	2	1.16	1.5	12	123	68
107239	205 226	< 5	1	1.0	< 10	< 0.2	7.76	1040	2.0	< 2	0.61	2.5	12	132	64
107240	205 226	< 5	2	1.2	< 10	< 0.2	7.44	980	2.0	< 2	0.74	2.0	11	126	62
107241	205 226	< 5	1	0.8	< 10	< 0.2	7.22	2220	2.0	< 2	1.15	1.5	11	125	55
107242	205 226	< 5	1	0.4	< 10	< 0.2	7.77	580	2.0	< 2	1.58	1.5	12	133	66
107243	205 226	< 5	1	0.2	< 10	< 0.2	7.40	260	2.0	< 2	1.41	1.5	14	136	66
107244	205 226	< 5	2	0.4	< 10	< 0.2	7.37	350	2.0	< 2	0.65	1.0	12	117	62
107245	205 226	< 5	2	0.2	10	< 0.2	7.50	480	2.0	< 2	0.36	2.0	12	129	66
107246	205 226	< 5	2	< 0.2	30	< 0.2	7.81	1890	2.0	< 2	0.58	1.0	11	131	56
107247	205 226	< 5	1	0.6	20	< 0.2	7.21	380	2.0	< 2	0.53	1.5	10	113	57
107248	205 226	< 5	2	0.4	10	< 0.2	7.69	300	2.0	< 2	0.25	2.0	11	131	64
107249	205 226	< 5	2	0.4	10	< 0.2	7.79	380	2.0	< 2	0.34	1.5	15	133	79
107250	205 226	< 5	2	0.2	30	< 0.2	7.49	1460	2.0	< 2	0.23	1.5	15	114	75
107251	205 226	< 5	1	0.6	10	< 0.2	6.96	390	2.0	< 2	0.37	1.5	14	141	69
107252	205 226	< 5	2	1.8	40	< 0.2	6.39	210	2.0	< 2	0.36	2.5	11	135	68
107253	205 226	< 5	1	2.8	50	< 0.2	5.73	180	2.0	< 2	0.35	2.0	8	148	61
107254	205 226	< 5	8	5.2	200	< 0.2	4.63	180	1.5	2	1.14	3.5	8	177	68
107255	205 226	< 5	14	8.6	120	2.6	3.74	130	1.5	< 2	1.74	6.0	8	214	107
107256	205 226	5	20	12.0	200	1.0	3.00	100	1.5	2	2.22	18.0	7	176	76
107257	205 226	< 5	24	8.6	40	0.4	1.54	170	0.5	< 2	1.58	3.5	3	227	43
107258	205 226	< 5	40	14.0	80	0.6	1.74	140	0.5	2	1.19	12.0	4	198	63
107259	205 226	< 5	54	17.0	70	0.8	1.85	140	0.5	2	1.48	10.0	5	216	59

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 : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE

Certificate Date: 11-JUN-96
Invoice No. :I9620012
P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9620012

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)
107226	205	226	1.79	4.93	0.20	420	2	0.37	8	840	26	130	0.11	32	< 10	58
107227	205	226	2.01	4.26	0.27	150	3	0.70	9	790	36	108	0.18	39	< 10	26
107228	205	226	2.78	3.83	0.22	235	3	0.85	10	980	46	100	0.15	46	< 10	112
107229	205	226	2.13	2.73	0.23	180	5	1.93	13	1000	32	139	0.16	54	< 10	232
107230	205	226	2.22	2.85	0.66	225	3	0.43	7	530	28	189	0.14	39	< 10	44
107231	205	226	0.90	2.77	0.10	540	3	0.30	9	570	16	218	0.15	36	< 10	16
107232	205	226	1.05	2.64	0.12	270	3	0.19	7	590	18	158	0.14	32	< 10	10
107233	205	226	2.24	2.88	0.15	230	3	0.43	7	710	24	95	0.16	33	< 10	76
107234	205	226	1.27	3.11	0.18	505	1	0.29	6	710	20	166	0.15	33	< 10	138
107235	205	226	2.04	3.25	0.22	750	1	0.21	4	650	16	157	0.17	32	< 10	90
107236	205	226	2.95	3.60	0.23	640	3	0.20	15	780	36	94	0.37	101	< 10	178
107237	205	226	1.07	2.98	0.23	330	1	0.16	7	530	16	82	0.12	35	< 10	24
107238	205	226	3.33	3.33	1.11	330	3	0.21	48	680	20	106	0.39	205	< 10	188
107239	205	226	3.54	3.27	1.20	230	1	0.21	47	720	18	103	0.40	209	< 10	192
107240	205	226	3.39	3.15	1.17	230	1	0.18	48	670	20	106	0.38	203	< 10	180
107241	205	226	3.00	3.06	1.10	245	2	0.19	44	640	18	117	0.35	193	< 10	180
107242	205	226	3.43	3.28	1.15	235	4	0.20	48	650	22	134	0.39	176	< 10	170
107243	205	226	3.26	3.19	1.07	225	5	0.19	49	650	18	130	0.38	169	< 10	180
107244	205	226	3.38	3.11	1.10	215	3	0.18	49	680	14	116	0.38	186	< 10	174
107245	205	226	3.59	3.04	1.17	255	3	0.17	50	720	16	84	0.40	203	< 10	196
107246	205	226	3.22	3.26	1.23	220	1	0.18	46	740	14	93	0.41	209	< 10	174
107247	205	226	2.91	3.06	1.01	220	3	0.18	49	680	22	73	0.37	202	< 10	166
107248	205	226	3.15	3.12	1.02	280	4	0.19	51	810	14	59	0.39	247	< 10	218
107249	205	226	3.99	3.08	1.42	360	3	0.19	62	750	26	62	0.40	234	< 10	284
107250	205	226	3.76	2.69	1.52	475	3	0.16	71	760	18	48	0.38	226	< 10	366
107251	205	226	3.87	2.58	1.20	370	1	0.14	53	690	12	41	0.30	205	< 10	256
107252	205	226	2.77	2.46	0.72	255	6	0.16	55	1150	14	64	0.20	271	< 10	242
107253	205	226	2.43	2.32	0.51	220	3	0.16	52	890	22	71	0.16	262	< 10	240
107254	205	226	2.48	1.69	0.65	250	12	0.12	64	2650	12	287	0.13	347	< 10	242
107255	205	226	1.98	1.23	0.31	130	24	0.08	112	7320	26	648	0.09	668	< 10	378
107256	205	226	2.06	1.17	1.21	375	13	0.04	76	1290	20	166	0.13	435	< 10	956
107257	205	226	0.95	0.60	0.89	290	10	0.02	66	640	10	95	0.07	357	< 10	138
107258	205	226	1.10	0.62	0.61	240	15	0.03	89	1220	10	96	0.07	520	< 10	754
107259	205	226	1.08	0.68	0.74	255	13	0.03	82	1840	8	112	0.08	469	< 10	426

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
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Project : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE

Page ıber : 1-A
Total Pages : 1
Certificate Date: 12-JUN-96
Invoice No. : I9620014
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9620014

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)
107216	255	295	20	0.6	0.01	0.02	0.08	13920	2.83	2	0.4	120	< 0.2	4.50	360	4.0	< 2	4.71	4.0	8	132
107217	255	295	20	0.5	0.01	0.02	0.14	10910	2.81	4	0.6	290	< 0.2	2.58	160	7.5	4	6.96	8.5	14	159

CERTIFICATION: Hart Bichler

Chemex Labs Ltd.

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CERTIFICATE OF ANALYSIS A9620014

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)
107216	255	295	63	5.30	2.14	0.54	2520	4	0.10	27	1110	128	222	0.23	163	< 10	734
107217	255	295	63	4.72	1.14	0.51	2820	2	0.05	36	870	112	376	0.12	186	< 10	1270

CERTIFICATION: Ian Bichler

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2C1
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Page Number :1-A
Total Pages :1
Certificate Date: 12-JUN-96
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P.O. Number :
Account :GP W

CERTIFICATE OF ANALYSIS A9620015

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)
107218	258	295	< 0.07	< 3.0	0.01	0.01	< 0.01	1350	3.15	< 0.01	< 0.01	< 0.001	< 1.0	1.35	400	< 10	20	10.50	< 10	< 10	90
107219	258	295	< 0.07	< 3.0	0.01	0.01	0.01	4800	2.78	< 0.01	< 0.01	< 0.001	< 1.0	5.35	800	10	< 20	0.30	< 10	20	180
107220	258	295	< 0.07	< 3.0	0.01	0.01	< 0.01	1720	3.01	< 0.01	< 0.01	< 0.001	< 1.0	1.45	300	< 10	< 20	9.15	< 10	< 10	160

CERTIFICATION: Hart Buchler

Chemex Labs Ltd.

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212 Brooksbank Ave., North Vancouver
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To: WESTMIN RESOURCES LTD.
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Project : PUCK
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Page ,ber : 1-B
Total Pages : 1
Certificate Date: 12-JUN-96
Invoice No. : I9620015
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9620015

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)
107218	258	295	40	15.10	0.6	0.20	2490	< 10	0.05	< 10	0.012	270	< 0.05	100	< 20
107219	258	295	80	3.70	2.7	0.50	330	< 10	0.15	40	0.005	20	0.25	230	20
107220	258	295	50	11.00	0.6	0.20	2390	< 10	0.05	10	0.009	380	0.05	80	< 20

CERTIFICATION: Stuart Buchler

Chemex Labs Ltd.

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VANCOUVER, BC
V7X 1C4

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Certificate Date: 21-JUN-96
Invoice No. :I9620740
P.O. Number :6412
Account :GP W

Project : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE CC: ANDREW TURNER

CERTIFICATE OF ANALYSIS A9620740

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)
107260	205 226	75	2	0.2	< 10	< 0.2	7.62	100	< 0.5	< 2	5.98	1.5	32	151	34
107261	205 226	< 5	1	0.2	< 10	< 0.2	8.31	140	< 0.5	< 2	6.46	1.5	30	155	19
107262	205 226	< 5	2	< 0.2	< 10	< 0.2	4.04	1040	0.5	< 2	0.97	< 0.5	15	89	62
107263	205 226	< 5	1	0.2	< 10	< 0.2	8.04	380	< 0.5	< 2	6.08	0.5	29	153	8
107264	205 226	< 5	1	0.2	< 10	< 0.2	3.54	800	< 0.5	2	0.82	< 0.5	14	149	132
107265	205 226	< 5	2	0.4	< 10	< 0.2	7.79	2840	< 0.5	< 2	4.21	0.5	35	263	80
107266	205 226	< 5	1	0.2	< 10	< 0.2	3.62	1230	0.5	< 2	0.57	< 0.5	13	129	46
107267	205 226	< 5	2	< 0.2	< 10	< 0.2	3.53	3100	0.5	< 2	0.71	< 0.5	11	174	75
107268	205 226	< 5	40	0.2	< 10	< 0.2	6.35	2600	< 0.5	< 2	2.92	0.5	31	257	83
107269	205 226	< 5	12	0.2	< 10	< 0.2	4.92	5000	0.5	< 2	1.27	< 0.5	16	221	48
107270	205 226	< 5	2	0.4	< 10	< 0.2	2.96	1740	0.5	< 2	1.70	< 0.5	10	106	64
107271	205 226	< 5	16	0.2	10	9.0	4.24	4190	1.0	< 2	0.46	< 0.5	11	152	67
107272	205 226	< 5	1	0.4	< 10	1.0	3.56	1070	0.5	< 2	2.37	< 0.5	9	220	61
107273	205 226	< 5	2	0.2	< 10	< 0.2	2.54	2840	0.5	< 2	1.28	< 0.5	9	112	64
107274	205 226	< 5	2	< 0.2	< 10	< 0.2	3.38	6860	0.5	< 2	1.29	< 0.5	12	76	83
107275	205 226	< 5	1	0.2	< 10	< 0.2	2.31	4210	< 0.5	< 2	0.70	< 0.5	12	182	72
107276	205 226	< 5	4	0.8	< 10	4.0	3.38	1840	0.5	< 2	1.30	< 0.5	10	171	69
107277	205 226	< 5	2	0.4	< 10	30.0	2.35	2210	< 0.5	< 2	0.54	< 0.5	10	173	147
107278	205 226	< 5	2	0.6	< 10	0.8	3.74	3700	1.0	< 2	0.83	0.5	14	126	80
107279	205 226	10	18	3.2	30	0.4	8.50	>10000	3.5	< 2	1.10	1.5	9	90	11
107280	205 226	< 5	26	2.4	10	< 0.2	4.49	1280	1.0	< 2	5.60	0.5	20	116	90
107281	205 226	< 5	16	1.8	20	< 0.2	2.78	1770	2.5	< 2	1.01	0.5	11	244	76
107282	205 226	< 5	2	1.2	< 10	< 0.2	7.35	1590	2.5	< 2	0.61	0.5	4	120	8
107283	205 226	< 5	2	0.8	< 10	< 0.2	5.04	1450	1.5	< 2	1.31	0.5	3	133	3
107284	205 226	< 5	6	1.6	80	< 0.2	6.30	3570	1.0	< 2	1.99	1.0	5	129	6
107285	205 226	< 5	34	6.0	170	10.4	2.22	280	0.5	2	1.20	16.5	7	220	107
107286	205 226	< 5	2	1.6	< 10	< 0.2	6.90	1960	1.5	< 2	1.64	1.0	4	112	8
107287	205 226	< 5	10	3.6	< 10	1.6	5.25	580	1.5	< 2	1.51	1.0	10	189	117
107288	205 226	< 5	1	2.4	80	< 0.2	5.75	1130	1.0	< 2	2.56	2.0	12	159	63
107289	205 226	< 5	2	3.2	60	< 0.2	6.90	510	1.5	2	3.61	1.0	17	137	106
107290	205 226	< 5	70	2.0	10	0.6	4.96	1120	1.5	2	2.88	1.0	8	162	49
107291	205 226	< 5	2	0.8	30	< 0.2	6.61	1110	1.5	< 2	1.20	12.0	4	128	4
107292	205 226	< 5	1	0.4	< 10	< 0.2	6.48	1680	1.5	< 2	1.83	0.5	3	104	4
107293	205 226	< 5	2	0.4	< 10	< 0.2	6.73	1480	2.0	< 2	1.13	0.5	3	91	< 1
107294	205 226	< 5	2	0.4	< 10	< 0.2	6.63	1390	2.0	< 2	0.99	0.5	3	108	1
107295	205 226	< 5	22	0.8	< 10	< 0.2	6.91	1640	1.5	< 2	1.10	0.5	3	83	4
107296	205 226	< 5	242	1.0	10	< 0.2	6.54	1620	1.5	< 2	1.10	2.0	4	100	6
107297	205 226	< 5	14	0.6	10	< 0.2	6.77	1190	2.0	< 2	1.09	0.5	4	93	< 1
107298	205 226	< 5	424	1.0	< 10	< 0.2	6.78	1400	1.5	< 2	0.94	0.5	3	108	1
107299	205 226	< 5	60	1.2	< 10	< 0.2	8.80	740	1.5	< 2	6.05	0.5	37	340	16

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 : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE CC: ANDREW TURNER

Certificate Date: 21-JUN-96
Invoice No. :I9620740
P.O. Number :6412
Account :GP W

CERTIFICATE OF ANALYSIS A9620740

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)
107260	205	226	6.76	0.08	3.80	1155	< 1	2.44	60	520	14	142	0.84	277	30	70
107261	205	226	5.60	0.17	3.99	1140	< 1	2.36	64	300	4	149	0.61	250	30	58
107262	205	226	2.54	1.14	1.13	1185	< 1	0.74	34	240	4	113	0.28	93	< 10	56
107263	205	226	6.01	0.14	3.69	1060	< 1	2.74	55	370	< 2	161	0.70	248	30	52
107264	205	226	2.38	0.40	0.98	915	2	1.45	31	240	8	54	0.25	68	< 10	84
107265	205	226	6.32	0.79	2.80	1860	< 1	2.81	94	860	< 2	388	0.89	243	30	96
107266	205	226	2.21	1.12	0.75	825	< 1	0.31	33	250	< 2	114	0.25	64	< 10	54
107267	205	226	2.21	1.30	1.07	975	< 1	0.14	34	240	< 2	19	0.23	83	< 10	60
107268	205	226	5.39	0.74	2.98	1670	< 1	2.03	86	640	< 2	73	0.59	201	20	90
107269	205	226	3.29	1.63	1.60	1060	1	0.42	51	570	4	47	0.40	129	10	82
107270	205	226	1.85	0.98	0.61	1785	< 1	0.05	32	230	< 2	33	0.15	64	< 10	64
107271	205	226	2.20	1.24	0.72	1130	7	0.59	26	290	12	45	0.17	53	60	60
107272	205	226	1.88	1.32	0.76	1805	3	0.05	32	420	14	65	0.16	73	10	72
107273	205	226	1.46	0.81	0.58	2180	< 1	0.07	26	180	< 2	40	0.09	31	< 10	36
107274	205	226	1.99	0.96	0.84	2320	< 1	0.22	24	280	< 2	60	0.17	51	< 10	48
107275	205	226	1.70	0.57	0.70	1465	< 1	0.11	21	220	< 2	38	0.13	43	< 10	40
107276	205	226	1.89	0.88	0.79	2030	3	0.07	27	260	4	106	0.13	38	30	50
107277	205	226	1.89	0.64	0.58	1120	3	0.07	36	210	< 2	49	0.15	44	270	76
107278	205	226	3.37	1.12	0.74	1210	1	0.06	39	340	< 2	89	0.19	82	10	118
107279	205	226	4.22	5.85	0.31	385	6	0.22	11	520	84	100	0.18	43	10	58
107280	205	226	6.49	1.53	1.11	7930	3	0.10	52	1030	4	244	0.17	154	30	174
107281	205	226	2.34	0.98	0.41	725	3	0.03	49	1210	44	67	0.10	162	< 10	224
107282	205	226	1.54	3.65	0.92	150	3	0.18	7	770	16	64	0.16	41	< 10	60
107283	205	226	1.06	1.95	0.45	205	1	0.34	4	440	8	75	0.10	25	< 10	28
107284	205	226	0.99	2.41	0.25	250	3	0.12	7	720	18	104	0.13	34	< 10	188
107285	205	226	1.58	0.85	0.61	225	17	0.04	86	1340	6	60	0.08	502	90	1315
107286	205	226	1.22	2.74	0.30	200	3	0.13	6	710	20	93	0.16	37	< 10	66
107287	205	226	2.92	1.96	0.92	180	5	0.08	52	3350	6	167	0.19	196	10	106
107288	205	226	2.09	2.58	1.22	250	1	0.06	30	1010	< 2	88	0.19	86	< 10	126
107289	205	226	3.06	2.96	1.64	330	1	0.08	31	950	< 2	100	0.23	81	10	72
107290	205	226	2.14	2.15	1.50	420	4	0.06	36	800	4	175	0.17	135	10	224
107291	205	226	1.35	2.89	0.59	205	1	0.08	5	590	6	64	0.15	16	< 10	928
107292	205	226	1.43	3.99	0.41	210	2	0.25	3	560	22	95	0.12	17	< 10	30
107293	205	226	1.13	3.76	0.40	125	1	1.18	3	590	18	73	0.13	11	< 10	20
107294	205	226	1.51	3.60	0.44	190	3	1.04	5	630	12	74	0.15	26	< 10	30
107295	205	226	1.39	4.48	0.47	200	1	0.37	3	580	16	86	0.15	14	< 10	22
107296	205	226	1.61	3.65	0.51	205	< 1	0.27	4	580	20	82	0.15	13	< 10	288
107297	205	226	1.60	3.86	0.38	225	1	1.24	4	590	18	98	0.16	11	< 10	28
107298	205	226	2.09	3.92	0.37	155	1	0.85	5	580	28	80	0.14	11	< 10	26
107299	205	226	3.68	4.29	2.15	1020	1	0.18	69	960	2	177	0.68	216	30	24

CERTIFICATION: Ian 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

Page Number :2-A
Total Pages :2
Certificate Date: 21-JUN-96
Invoice No. :I9620740
P.O. Number :6412
Account :GP W

Project : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE CC: ANDREW TURNER

CERTIFICATE OF ANALYSIS A9620740

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)
107300	205	226	< 5	14	2.8	< 10	< 0.2	6.65	1100	1.0	< 2	1.76	< 0.5	3	121	1
107301	205	226	40	500	91	100	4.0	6.73	1210	1.0	< 2	1.13	2.5	3	101	4
107302	205	226	< 5	4	1.4	< 10	< 0.2	6.68	1310	1.5	< 2	1.32	1.0	4	111	1
107303	205	226	< 5	40	6.8	10	< 0.2	6.70	1220	1.5	< 2	1.02	0.5	4	107	2
107304	205	226	65	2	1.2	< 10	< 0.2	6.73	1290	1.5	< 2	1.22	0.5	3	77	4
107305	205	226	< 5	20	4.6	10	< 0.2	5.70	890	1.5	< 2	1.68	0.5	4	149	7
107306	205	226	< 5	2	1.2	20	0.4	6.74	1600	1.5	< 2	1.09	0.5	4	122	11
107307	205	226	10	14	5.6	30	0.6	3.59	530	1.0	< 2	1.44	0.5	5	180	77
107308	205	226	< 5	2	5.8	60	0.4	2.53	460	1.0	2	1.67	0.5	5	285	96
107309	205	226	< 5	12	5.2	80	14.0	3.47	910	0.5	6	2.94	1.5	8	329	104
107310	205	226	< 5	8	5.8	900	1.2	3.02	570	1.5	6	6.21	26.0	4	201	146
107311	205	226	< 5	18	6.0	200	1.2	2.22	440	0.5	8	5.07	6.5	5	358	118
107312	205	226	< 5	4	4.2	130	0.4	3.72	760	1.0	2	4.46	2.0	7	153	47
107313	205	226	< 5	2	3.4	90	< 0.2	4.31	900	1.5	2	3.85	1.5	7	171	44
107314	205	226	< 5	26	6.8	990	1.0	2.92	470	1.5	4	5.22	25.5	4	199	139
107315	205	226	10	28	6.6	430	2.0	2.56	490	0.5	6	4.40	12.5	5	252	132
107316	205	226	< 5	22	5.4	320	0.8	3.09	380	1.5	6	6.69	17.5	5	242	159

CERTIFICATION: Ian Bichler

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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

Page Number :2-B
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Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE CC: ANDREW TURNER

CERTIFICATE OF ANALYSIS A9620740

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)
107300	205	226	1.23	3.65	0.63	365	2	0.24	5	630	6	81	0.16	14	< 10	12
107301	205	226	1.50	4.13	0.54	250	3	0.88	3	590	160	81	0.15	12	< 10	16
107302	205	226	1.52	4.41	0.60	270	1	0.22	3	580	16	87	0.16	12	< 10	20
107303	205	226	1.57	3.72	0.56	265	2	0.19	4	600	18	104	0.16	12	< 10	14
107304	205	226	1.44	3.17	0.62	295	1	0.11	5	580	< 2	86	0.17	12	< 10	44
107305	205	226	1.46	2.77	0.58	340	1	0.08	6	490	< 2	97	0.14	11	< 10	16
107306	205	226	1.75	3.43	0.59	225	1	0.15	5	620	< 2	73	0.16	14	< 10	20
107307	205	226	1.85	1.66	0.96	235	1	0.04	30	510	< 2	60	0.12	62	< 10	36
107308	205	226	1.98	1.11	0.99	250	2	0.02	29	460	< 2	51	0.10	61	10	52
107309	205	226	2.02	1.17	1.95	505	9	0.22	49	610	< 2	94	0.16	226	130	152
107310	205	226	1.57	0.96	3.35	375	54	0.03	135	2230	12	152	0.13	990	10	2240
107311	205	226	1.54	0.74	2.56	330	17	0.01	95	3790	14	148	0.08	538	10	518
107312	205	226	1.59	1.66	2.69	435	6	0.05	36	510	< 2	130	0.13	166	10	144
107313	205	226	1.52	1.93	2.38	420	10	0.04	42	440	< 2	120	0.15	212	< 10	138
107314	205	226	1.24	0.85	2.72	310	66	0.02	148	3070	10	123	0.13	1110	< 10	2210
107315	205	226	1.47	0.87	2.40	310	28	0.02	104	2280	12	109	0.10	767	< 10	1085
107316	205	226	1.40	0.89	3.48	385	57	0.02	153	3110	10	130	0.14	1325	10	1480

CERTIFICATION: Ian Bichler

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 : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE

Page Number : 1
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Certificate Date: 18-JUN-96
Invoice No. : I9620958
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9620958

SAMPLE	PREP CODE		Zn %									
107207	244	--	1.35									

CERTIFICATION: Stuart Bichler

Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
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Invoice No. : I9622479
P.O. Number : 6412
Account : GP W

Project : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE CC: ANDREW TURNER

CERTIFICATE OF ANALYSIS A9622479

SAMPLE	PREP CODE		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)
107116	244	285	16	0.8	70	< 0.2	1.06	80	1.5	< 2	4.12	< 0.5	14	143	39	22.3
107117	244	285	2	0.4	50	< 0.2	0.92	40	3.5	< 2	9.84	3.5	5	77	54	8.62

CERTIFICATION: Ian A Bucklen

Chemex Labs Ltd.

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CERTIFICATE OF ANALYSIS A9622479

SAMPLE	PREP CODE		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)
107116	244	285	0.39	0.13	3220	< 1	0.03	21	440	60	37	0.03	89	30	124
107117	244	285	0.35	0.25	1955	7	0.08	7	220	64	151	0.04	78	30	90

CERTIFICATION: Hart Bichler

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Project : PUCK
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Certificate Date: 11-JUL-96
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P.O. Number :
Account : GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9622481

SAMPLE	PREP CODE		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)
107216	244	285	2	0.4	130	0.4	4.61	170	4.0	2	4.74	3.5	10	92	64	5.54
107217	244	285	4	0.6	320	< 0.2	2.47	130	7.0	2	6.51	8.0	14	152	60	4.60

CERTIFICATION: Ian Bichler

* Ba-ICP RESULTS MAY BE LOW DUE TO PRECIPITATION

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: TERRY TUCKER - VANCOUVER OFFICE

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Invoice No. : I9622481
P.O. Number :
Account : GP W

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CERTIFICATE OF ANALYSIS A9622481

SAMPLE	PREP CODE	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)
107216	244 285	2.29	0.56	2540	1	0.10	29	1100	124	218	0.23	164	10	798
107217	244 285	1.14	0.51	2680	1	0.05	34	830	110	349	0.11	175	10	1290

CERTIFICATION: Stuart Bichler

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CERTIFICATE OF ANALYSIS A9622482

SAMPLE	PREP CODE		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)
107218	244	285	24	6.0	10	< 0.2	1.26	80	2.0	< 2	9.77	< 0.5	8	96	36	14.70
107219	244	285	14	3.4	20	< 0.2	5.34	90	11.5	< 2	0.23	< 0.5	21	199	74	3.54
107220	244	285	28	4.0	10	0.4	1.40	80	1.5	< 2	8.65	< 0.5	9	186	49	10.65

CERTIFICATION: Stewart Bichler

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107218	244 285	0.60	0.16	2280	< 1	0.07	12	500	100	258	0.04	93	40	28
107219	244 285	2.77	0.48	300	1	0.18	51	530	28	23	0.20	220	< 10	66
107220	244 285	0.68	0.17	2200	< 1	0.09	17	650	70	356	0.05	76	30	24

CERTIFICATION: Bart Bichler

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QC Page #: 2-A
Tot QC Pg: 2
Date: 21-OCT-96
Invoice #: I9635277
P.O. #: 6412
GP W

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QC DATA OF CERTIFICATE A9635277

STD/DUP/BLANK DESCRIPTION	QC TYPE	PAGE NO.	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)
172046	Dup	1-01	< 5	2	< 0.2	< 10	< 0.2	3.70	3920	1.0	< 2	1.15	< 0.5	11	198	66
	Orig	1-01	< 5	2	< 0.2	< 10	< 0.2	3.71	3990	1.0	2	1.19	< 0.5	13	199	83
172086	Dup	2-01	< 5	2	< 0.2	70	< 0.2	3.25	720	3.0	4	0.26	2.5	10	76	63
	Orig	2-01	< 5	2	0.2	80	< 0.2	3.24	600	3.0	2	0.26	2.5	9	71	64
172126	Dup	3-01	< 5	2	0.2	10	< 0.2	7.26	3230	3.0	< 2	0.58	< 0.5	6	112	10
	Orig	3-01	< 5	2	< 0.2	< 10	< 0.2	7.28	2280	3.0	< 2	0.57	0.5	4	115	10

CERTIFICATION: Stuart Bachler

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QC Page #: 2-B
Tot QC Pg: 2
Date: 21-OCT-96
Invoice #: I9635277
P.O. #: 6412
GP W

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QC DATA OF CERTIFICATE A9635277

STD/DUP/BLANK DESCRIPTION	QC TYPE	PAGE NO.	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)
172046	Dup	1-01	2.17	1.58	0.89	1320	1	0.13	36	440	12	73	0.23	84	< 10	78
	Orig	1-01	2.19	1.65	0.90	1380	1	0.12	35	460	12	74	0.23	88	< 10	74
172086	Dup	2-01	1.07	1.42	0.29	115	5	0.14	60	160	8	217	0.12	106	< 10	666
	Orig	2-01	1.07	1.39	0.30	115	4	0.14	57	160	10	213	0.12	106	< 10	664
172126	Dup	3-01	1.86	3.47	1.35	95	3	0.14	9	740	22	116	0.17	68	< 10	80
	Orig	3-01	1.85	3.49	1.35	95	1	0.13	11	720	22	117	0.17	67	< 10	78

CERTIFICATION: Ian H Pamphlett

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172046	205	294	< 5	2	< 0.2	< 10	< 0.2	3.71	3990	1.0	2	1.19	< 0.5	13	199	83
172047	205	294	< 5	1	< 0.2	< 10	< 0.2	3.46	4200	0.5	2	0.73	< 0.5	11	194	100
172048	205	294	< 5	4	< 0.2	20	< 0.2	3.62	5190	1.0	< 2	0.95	< 0.5	13	257	81
172049	205	294	< 5	1	< 0.2	< 10	< 0.2	2.16	3790	0.5	< 2	0.36	< 0.5	16	188	72
172050	205	294	< 5	1	< 0.2	10	< 0.2	2.66	4700	0.5	< 2	0.12	< 0.5	12	229	54
172051	205	294	< 5	2	< 0.2	10	< 0.2	3.03	4610	1.0	< 2	0.17	< 0.5	14	136	62
172052	205	294	< 5	1	< 0.2	10	< 0.2	3.40	6360	1.0	2	0.10	< 0.5	13	193	63
172053	205	294	< 5	1	< 0.2	10	< 0.2	2.95	4860	0.5	< 2	0.43	< 0.5	13	130	41
172054	205	294	< 5	1	< 0.2	20	< 0.2	2.82	6660	0.5	2	0.07	< 0.5	10	261	153
172055	205	294	< 5	6	< 0.2	40	< 0.2	2.89	7490	0.5	< 2	0.07	< 0.5	6	220	150
172056	205	294	25	6	0.4	10	< 0.2	5.09	260	1.5	< 2	0.28	< 0.5	19	247	163
172057	205	294	10	4	0.4	10	< 0.2	5.21	270	1.5	< 2	0.22	< 0.5	18	233	169
172058	205	294	< 5	6	0.6	20	< 0.2	3.52	180	0.5	< 2	0.14	< 0.5	12	366	81
172059	205	294	< 5	4	< 0.2	< 10	< 0.2	2.54	1140	0.5	< 2	0.04	< 0.5	7	243	56
172060	205	294	< 5	1	< 0.2	10	< 0.2	2.34	1190	0.5	< 2	0.08	< 0.5	5	189	57
172061	205	294	< 5	1	< 0.2	10	< 0.2	2.63	540	1.0	< 2	0.12	< 0.5	9	229	87
172062	205	294	< 5	2	< 0.2	10	< 0.2	2.55	1280	1.0	< 2	0.11	< 0.5	7	287	115
172063	205	294	10	1	< 0.2	10	< 0.2	2.59	520	2.0	2	0.21	< 0.5	7	270	97
172064	205	294	< 5	1	< 0.2	40	< 0.2	1.65	510	1.5	< 2	0.02	< 0.5	3	258	73
172065	205	294	< 5	18	1.4	1030	< 0.2	2.45	150	1.5	< 2	0.13	3.0	8	254	117
172066	205	294	< 5	4	0.4	360	0.4	2.38	330	2.0	< 2	0.07	1.0	6	171	77
172067	205	294	< 5	1	0.2	430	< 0.2	2.36	340	2.0	< 2	0.06	5.0	5	125	35
172068	205	294	< 5	1	< 0.2	280	< 0.2	2.07	640	1.5	< 2	1.13	< 0.5	6	116	65
172069	205	294	< 5	1	< 0.2	70	< 0.2	2.84	400	3.0	< 2	0.60	< 0.5	9	142	64
172070	205	294	< 5	2	0.2	170	< 0.2	2.12	1940	2.0	2	0.11	< 0.5	7	90	49
172071	205	294	< 5	1	0.2	100	< 0.2	2.83	2100	1.5	< 2	0.10	< 0.5	10	196	72
172072	205	294	10	1	0.2	70	< 0.2	2.39	310	< 0.5	< 2	1.99	< 0.5	9	121	51
172073	205	294	5	1	0.2	30	< 0.2	2.88	550	1.5	< 2	0.77	< 0.5	11	205	78
172074	205	294	< 5	2	< 0.2	10	1.4	2.30	1300	0.5	< 2	0.08	< 0.5	5	101	83
172075	205	294	< 5	1	< 0.2	10	< 0.2	2.60	1400	0.5	< 2	0.19	< 0.5	6	154	89
172076	205	294	< 5	1	0.2	10	< 0.2	1.36	1360	< 0.5	< 2	0.31	< 0.5	4	174	29
172077	205	294	< 5	2	< 0.2	30	< 0.2	1.24	3850	0.5	< 2	0.04	< 0.5	4	186	34
172078	205	294	10	4	0.6	90	< 0.2	1.64	290	1.5	< 2	0.03	< 0.5	6	158	76
172079	205	294	< 5	4	0.4	50	< 0.2	2.56	1190	2.5	< 2	0.01	< 0.5	8	218	66
172080	205	294	< 5	2	< 0.2	30	< 0.2	2.40	1040	2.5	< 2	0.01	< 0.5	12	83	42
172081	205	294	< 5	4	< 0.2	50	< 0.2	3.08	3070	2.5	< 2	0.05	< 0.5	12	101	50
172082	205	294	< 5	4	0.2	20	< 0.2	4.54	3750	4.0	< 2	0.09	< 0.5	12	141	71
172083	205	294	< 5	1	< 0.2	30	< 0.2	2.61	1750	2.0	< 2	0.12	< 0.5	11	107	52
172084	205	294	< 5	1	< 0.2	80	< 0.2	3.07	580	3.0	< 2	0.30	< 0.5	8	90	63
172085	205	294	< 5	1	< 0.2	80	< 0.2	2.85	840	2.0	< 2	0.26	0.5	9	116	47

CERTIFICATION:

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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)
172046	205 294	2.19	1.65	0.90	1380	1	0.12	35	460	12	74	0.23	88	< 10	74
172047	205 294	2.27	1.58	0.94	2370	1	0.06	51	490	4	68	0.22	93	< 10	100
172048	205 294	2.27	1.74	0.78	5220	4	0.07	76	600	12	103	0.23	107	< 10	132
172049	205 294	1.59	0.64	0.43	1120	< 1	0.03	29	200	4	22	0.12	46	< 10	64
172050	205 294	1.69	0.98	0.55	1160	2	0.05	34	200	4	23	0.14	46	< 10	52
172051	205 294	1.83	1.24	0.71	1215	< 1	0.06	33	240	< 2	21	0.18	55	< 10	58
172052	205 294	2.09	1.36	0.66	605	1	0.31	36	220	< 2	63	0.19	57	< 10	60
172053	205 294	1.84	1.04	0.65	1655	1	0.20	40	230	4	58	0.18	60	< 10	66
172054	205 294	2.15	1.14	0.61	860	< 1	0.07	42	250	< 2	170	0.16	63	< 10	82
172055	205 294	1.53	1.09	0.49	190	1	0.17	38	250	24	36	0.17	85	< 10	82
172056	205 294	3.59	1.97	0.85	2600	1	0.27	211	430	< 2	66	0.33	168	< 10	402
172057	205 294	3.37	2.15	0.93	2110	2	0.15	244	350	< 2	59	0.36	175	< 10	392
172058	205 294	2.84	1.25	0.48	2640	3	0.09	118	230	6	37	0.23	106	< 10	278
172059	205 294	1.19	0.99	0.30	375	1	0.05	48	130	2	21	0.15	74	< 10	92
172060	205 294	1.34	0.93	0.32	445	1	0.05	32	120	< 2	35	0.14	70	< 10	100
172061	205 294	2.26	0.89	0.41	840	12	0.15	67	270	4	60	0.15	95	< 10	154
172062	205 294	2.23	0.81	0.37	435	52	0.08	37	430	2	84	0.14	114	< 10	134
172063	205 294	1.82	0.81	0.33	100	37	0.11	43	890	< 2	191	0.13	116	< 10	110
172064	205 294	0.88	0.57	0.16	35	6	0.05	25	70	4	56	0.07	67	< 10	200
172065	205 294	1.46	1.03	0.30	185	10	0.09	83	490	70	75	0.09	120	< 10	3700
172066	205 294	1.17	1.06	0.15	115	10	0.11	69	200	154	102	0.09	116	< 10	946
172067	205 294	3.60	0.92	0.23	125	1	0.07	58	170	20	84	0.11	105	< 10	1805
172068	205 294	1.19	0.91	0.17	405	7	0.11	54	150	32	189	0.09	112	< 10	726
172069	205 294	1.97	1.21	0.24	185	5	0.09	37	190	12	104	0.12	123	< 10	502
172070	205 294	1.01	0.93	0.22	255	1	0.09	47	90	12	145	0.09	123	< 10	584
172071	205 294	2.32	1.18	0.22	845	5	0.10	80	260	120	81	0.12	149	< 10	500
172072	205 294	7.01	0.67	0.57	5250	4	0.05	38	310	8	223	0.08	111	< 10	286
172073	205 294	2.83	1.11	0.39	1395	1	0.08	34	370	40	158	0.12	114	< 10	160
172074	205 294	1.24	0.83	0.20	175	1	0.06	29	100	4	95	0.12	67	< 10	108
172075	205 294	1.44	0.99	0.31	215	1	0.07	38	120	< 2	75	0.16	79	< 10	98
172076	205 294	1.08	0.45	0.22	385	< 1	0.02	26	160	6	74	0.07	41	< 10	86
172077	205 294	0.82	0.32	0.07	210	< 1	0.01	27	80	< 2	71	0.04	27	< 10	80
172078	205 294	1.09	0.47	0.12	150	3	0.05	84	110	36	59	0.06	68	< 10	828
172079	205 294	0.96	0.95	0.20	175	5	0.07	66	70	20	83	0.11	78	< 10	548
172080	205 294	0.74	0.96	0.15	40	1	0.09	69	70	< 2	98	0.09	67	< 10	110
172081	205 294	0.87	1.32	0.22	85	1	0.13	67	90	< 2	153	0.12	75	< 10	310
172082	205 294	1.31	1.92	0.39	130	4	0.16	85	130	6	146	0.18	112	< 10	374
172083	205 294	0.81	1.10	0.22	55	1	0.11	54	70	4	235	0.09	67	< 10	156
172084	205 294	1.01	1.28	0.31	150	1	0.12	39	110	< 2	154	0.12	96	< 10	322
172085	205 294	0.92	1.14	0.28	115	6	0.14	51	100	< 2	155	0.11	82	< 10	572

CERTIFICATION: Stuart Bichler

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Page Number :2-A
Total Pages :3
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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)
172086	205	294	< 5	2	0.2	80	< 0.2	3.24	600	3.0	2	0.26	2.5	9	71	64
172087	205	294	< 5	1	< 0.2	20	< 0.2	3.18	360	4.0	< 2	0.54	< 0.5	5	111	137
172088	205	294	< 5	2	< 0.2	230	< 0.2	2.39	350	2.5	< 2	0.49	4.0	11	82	91
172089	205	294	25	26	1.8	130	< 0.2	3.24	40	6.0	2	0.46	3.0	7	177	139
172090	205	294	< 5	4	0.2	10	< 0.2	3.56	7550	4.0	2	10.60	< 0.5	7	143	71
172091	205	294	< 5	2	0.2	90	0.4	5.61	>10000	4.5	8	10.80	2.5	15	128	108
172092	205	294	20	6	1.4	60	0.4	3.95	260	4.0	< 2	5.71	0.5	16	104	123
172093	205	294	< 5	24	1.2	20	0.6	3.95	120	6.5	< 2	1.39	< 0.5	10	204	93
172094	205	294	< 5	24	2.6	110	2.0	1.97	40	3.0	< 2	0.79	1.0	12	227	217
172095	205	294	< 5	22	3.8	80	1.0	2.44	100	4.0	2	0.34	< 0.5	18	205	75
172096	205	294	< 5	28	3.2	80	1.4	2.26	80	3.5	4	0.64	< 0.5	15	228	91
172097	205	294	< 5	42	3.2	70	1.2	6.53	90	4.5	2	4.67	0.5	61	380	117
172098	205	294	< 5	2	1.2	30	0.4	0.99	70	0.5	2	2.01	< 0.5	22	262	88
172099	205	294	< 5	1	2.6	80	0.8	3.67	150	3.0	2	4.33	1.5	30	283	106
172100	205	294	< 5	4	0.2	10	< 0.2	4.01	1000	1.5	6	1.74	< 0.5	15	177	68
172101	205	294	< 5	4	0.2	< 10	< 0.2	3.68	680	1.0	< 2	0.62	< 0.5	12	170	52
172102	205	294	< 5	1	0.2	10	< 0.2	2.91	1070	0.5	2	0.36	< 0.5	8	197	166
172103	205	294	5	1	0.4	< 10	0.4	4.58	220	1.5	4	0.32	< 0.5	13	196	90
172104	205	294	< 5	1	0.4	10	< 0.2	3.88	210	1.0	2	0.53	< 0.5	11	197	63
172105	205	294	5	2	0.6	10	< 0.2	4.03	280	1.5	< 2	0.46	< 0.5	9	186	61
172106	205	294	< 5	1	0.6	20	< 0.2	2.26	140	0.5	< 2	2.53	< 0.5	5	208	49
172107	205	294	15	22	6.4	150	0.4	3.36	100	2.5	< 2	0.94	1.5	6	201	48
172108	205	294	< 5	2	1.8	50	0.4	5.93	180	2.5	4	2.48	1.5	5	140	28
172109	205	294	< 5	14	1.4	60	0.2	6.16	200	2.5	< 2	1.14	1.5	4	118	13
172110	205	294	< 5	16	3.0	140	0.6	6.60	210	2.5	< 2	1.27	2.5	5	124	15
172111	205	294	< 5	52	2.8	40	< 0.2	9.82	110	4.0	< 2	0.89	1.0	5	96	23
172112	205	294	< 5	8	0.8	10	< 0.2	6.34	170	3.0	< 2	1.24	0.5	3	92	4
172113	205	294	< 5	1	1.0	10	< 0.2	6.77	320	3.0	< 2	0.94	0.5	4	67	5
172114	205	294	< 5	1	1.2	10	< 0.2	6.80	6600	3.0	4	0.80	1.0	5	69	4
172115	205	294	< 5	1	1.2	20	< 0.2	7.37	440	3.5	< 2	0.83	< 0.5	4	84	5
172116	205	294	< 5	2	< 0.2	10	< 0.2	7.03	560	3.5	< 2	0.48	< 0.5	4	60	5
172117	205	294	< 5	1	< 0.2	10	< 0.2	6.78	1010	3.5	< 2	0.33	< 0.5	4	77	5
172118	205	294	< 5	1	< 0.2	< 10	< 0.2	6.38	2260	3.0	2	1.02	0.5	4	106	5
172119	205	294	< 5	1	< 0.2	< 10	0.2	6.33	1940	3.0	< 2	0.78	0.5	4	115	4
172120	205	294	< 5	2	< 0.2	< 10	< 0.2	6.71	1990	3.0	< 2	0.21	0.5	4	146	4
172121	205	294	< 5	1	< 0.2	< 10	< 0.2	7.25	2130	3.0	< 2	1.01	< 0.5	4	113	4
172122	205	294	< 5	1	0.2	< 10	< 0.2	6.96	2130	3.0	< 2	1.01	1.0	4	120	5
172123	205	294	< 5	8	< 0.2	< 10	< 0.2	6.80	2200	2.5	< 2	0.98	< 0.5	4	120	6
172124	205	294	< 5	20	< 0.2	< 10	< 0.2	7.38	2140	3.0	< 2	0.51	< 0.5	6	137	11
172125	205	294	< 5	6	0.2	10	< 0.2	8.06	3860	3.0	< 2	0.58	1.0	5	92	13

CERTIFICATION: Ian R. Scheller

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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: TERRY TUCKER - VANCOUVER OFFICE

Certificate Date: 21-OCT-96
Invoice No. : I9635277
P.O. Number :6412
Account :GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9635277

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)
172086	205	294	1.07	1.39	0.30	115	4	0.14	57	160	10	213	0.12	106	< 10	664
172087	205	294	2.75	0.93	0.46	205	4	0.08	39	230	4	283	0.15	145	< 10	92
172088	205	294	1.18	0.89	0.35	140	11	0.07	66	170	10	152	0.09	106	< 10	1560
172089	205	294	6.24	1.24	0.40	85	13	0.05	44	1840	220	32	0.12	257	< 10	1140
172090	205	294	2.05	0.85	0.31	1255	7	0.05	21	710	60	525	0.14	198	< 10	64
172091	205	294	1.93	1.39	0.33	1060	6	0.12	32	580	270	1010	0.20	248	10	998
172092	205	294	9.50	1.08	1.10	4580	3	0.06	39	1170	154	268	0.16	185	< 10	370
172093	205	294	4.28	1.60	0.58	785	4	0.05	98	2190	46	158	0.14	250	< 10	166
172094	205	294	6.95	0.81	0.41	1040	4	0.01	184	2550	130	49	0.07	258	< 10	486
172095	205	294	2.28	1.27	0.29	240	3	0.04	79	1160	60	18	0.09	140	< 10	20
172096	205	294	2.81	1.08	0.39	305	3	0.03	91	310	66	28	0.08	155	< 10	20
172097	205	294	5.60	2.61	1.14	1480	5	0.12	159	2660	34	213	0.53	299	< 10	116
172098	205	294	3.48	0.36	0.42	1425	< 1	0.01	85	2560	26	80	0.03	171	< 10	166
172099	205	294	4.08	1.33	0.60	1440	14	0.05	100	2850	32	203	0.24	285	< 10	330
172100	205	294	2.08	1.79	1.02	935	22	0.07	46	400	4	159	0.19	86	< 10	80
172101	205	294	1.89	1.50	0.55	740	< 1	0.08	40	340	2	79	0.22	88	< 10	84
172102	205	294	1.61	1.13	0.40	475	1	0.07	32	340	6	67	0.17	84	< 10	88
172103	205	294	2.68	1.91	0.73	235	1	0.11	74	590	6	55	0.29	143	< 10	172
172104	205	294	2.54	1.55	0.65	295	< 1	0.09	55	1050	6	57	0.22	107	< 10	148
172105	205	294	2.63	1.58	0.75	230	2	0.10	49	400	4	57	0.27	131	< 10	114
172106	205	294	1.76	0.93	0.47	500	1	0.04	33	200	4	242	0.10	82	< 10	76
172107	205	294	2.31	1.52	0.39	190	11	0.06	48	1250	52	105	0.15	278	< 10	492
172108	205	294	1.97	2.70	0.65	430	6	0.10	11	510	50	218	0.13	67	< 10	276
172109	205	294	1.53	2.78	0.66	210	2	0.13	9	630	42	85	0.14	54	< 10	168
172110	205	294	1.39	2.98	0.68	230	3	0.13	8	710	42	119	0.15	75	< 10	210
172111	205	294	3.53	4.67	0.59	180	7	0.38	4	580	8	487	0.14	34	< 10	114
172112	205	294	1.57	2.08	0.53	280	< 1	0.13	2	780	4	182	0.09	18	< 10	40
172113	205	294	1.70	2.34	0.59	185	< 1	0.48	3	780	10	138	0.11	20	< 10	42
172114	205	294	1.44	1.93	0.55	180	< 1	0.76	5	720	16	123	0.09	18	< 10	74
172115	205	294	1.83	2.09	0.54	205	1	1.73	3	770	20	118	0.13	19	< 10	50
172116	205	294	1.57	1.95	0.38	140	1	2.15	3	760	20	105	0.11	24	< 10	52
172117	205	294	1.51	2.09	0.46	100	1	1.82	2	720	20	74	0.11	24	< 10	64
172118	205	294	1.22	2.73	0.81	155	1	0.43	1	900	20	84	0.11	23	< 10	48
172119	205	294	1.41	2.94	0.87	130	1	0.13	3	630	28	71	0.12	23	< 10	48
172120	205	294	1.65	2.95	0.94	55	< 1	0.12	3	410	14	67	0.12	24	< 10	48
172121	205	294	1.29	3.50	0.95	120	2	0.13	5	660	20	62	0.14	26	< 10	50
172122	205	294	1.27	3.19	0.93	95	< 1	0.12	4	480	22	84	0.14	26	< 10	50
172123	205	294	1.37	2.98	0.83	100	3	0.11	6	460	24	76	0.14	35	< 10	52
172124	205	294	1.88	3.23	1.01	70	1	0.10	8	740	24	112	0.17	70	< 10	48
172125	205	294	1.86	3.64	1.33	70	3	0.11	11	1170	26	115	0.18	73	< 10	112

CERTIFICATION:

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To: WESTMIN RESOURCES LTD.
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VANCOUVER, BC
V7X 1C4

Project : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE

Page Number :3-A
Total Pages :3
Certificate Date: 21-OCT-96
Invoice No. :I9635277
P.O. Number :6412
Account :GP W

* PLEASE NOTE

CERTIFICATE OF ANALYSIS A9635277

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)
172126	205	294	< 5	2	< 0.2	< 10	< 0.2	7.28	2280	3.0	< 2	0.57	0.5	4	115	10
172127	205	294	< 5	1	< 0.2	< 10	< 0.2	6.95	1120	3.0	< 2	0.75	0.5	7	132	13
172128	205	294	< 5	1	0.2	< 10	< 0.2	6.47	3420	2.5	< 2	0.95	1.5	6	118	11
172129	205	294	< 5	1	0.4	< 10	< 0.2	7.11	2320	3.0	< 2	0.64	0.5	5	98	7
172130	205	294	< 5	12	0.2	< 10	< 0.2	8.16	3740	3.5	< 2	0.55	0.5	6	102	13
172131	205	294	< 5	20	0.2	10	< 0.2	7.93	3060	3.0	< 2	0.67	0.5	5	100	10
172132	205	294	< 5	1	0.4	< 10	< 0.2	8.46	1140	3.5	< 2	1.06	< 0.5	6	87	11
172133	205	294	< 5	4	2.2	30	< 0.2	6.31	760	2.5	< 2	1.26	< 0.5	5	103	11
172134	205	294	< 5	2	1.2	< 10	< 0.2	6.20	2190	2.5	< 2	3.09	0.5	6	109	11
172135	205	294	< 5	1	1.6	< 10	< 0.2	6.37	2030	2.0	< 2	2.70	0.5	5	108	10
172136	205	294	< 5	6	1.2	< 10	0.2	5.16	650	1.5	< 2	11.95	0.5	4	115	7
172137	205	294	< 5	1	1.4	< 10	< 0.2	5.57	1700	1.5	< 2	11.00	< 0.5	4	118	6
172138	205	294	< 5	1	1.2	10	< 0.2	6.61	2230	2.5	< 2	2.20	0.5	4	114	6
172139	205	294	< 5	1	1.6	< 10	< 0.2	6.96	2140	2.5	< 2	1.90	1.0	5	110	7
172140	205	294	< 5	2	0.8	< 10	< 0.2	6.89	1930	2.0	< 2	2.09	0.5	5	115	6
172141	205	294	< 5	2	0.8	10	< 0.2	7.07	1840	2.5	< 2	2.64	1.0	4	119	9
172142	205	294	< 5	1	1.6	< 10	< 0.2	6.75	1500	2.0	< 2	1.73	0.5	5	134	12
172143	205	294	< 5	1	0.8	< 10	< 0.2	6.92	1270	1.0	< 2	2.54	< 0.5	8	139	9
172144	205	294	< 5	1	0.8	< 10	< 0.2	6.82	1750	1.5	< 2	2.40	< 0.5	4	124	8
172145	205	294	< 5	2	1.0	< 10	< 0.2	6.61	1640	0.5	< 2	1.99	0.5	5	129	8
172146	205	294	5	4	3.2	40	0.8	5.80	460	1.5	< 2	0.40	< 0.5	11	168	62
172147	205	294	< 5	2	0.4	< 10	< 0.2	3.52	6940	0.5	2	0.99	< 0.5	12	163	57
172148	205	294	< 5	2	< 0.2	10	< 0.2	2.20	6930	0.5	2	0.04	< 0.5	5	170	68
172149	205	294	< 5	1	0.2	10	< 0.2	1.82	5510	0.5	< 2	0.10	< 0.5	5	157	72
172150	205	294	< 5	2	0.2	10	< 0.2	1.08	5450	0.5	4	0.06	< 0.5	3	195	19
172151	205	294	5	1	0.6	20	< 0.2	2.93	8190	1.5	< 2	0.01	< 0.5	3	159	19
172152	205	294	< 5	1	0.6	20	< 0.2	1.83	4500	0.5	< 2	0.02	< 0.5	3	269	61
172153	205	294	20	16	1.6	30	0.8	3.08	8670	1.5	< 2	0.02	< 0.5	3	179	28
172154	205	294	< 5	4	0.6	20	< 0.1	2.68	7270	1.0	< 2	0.01	< 0.5	4	169	43
172155	205	294	< 5	2	0.6	10	< 0.2	4.11	>10000	1.5	< 2	0.02	< 0.5	5	164	64
172156	205	294	< 5	2	6.2	240	0.2	4.36	>10000	2.0	2	0.03	< 0.5	7	136	68
172157	205	294	< 5	1	0.6	50	< 0.2	2.14	>10000	1.0	< 2	0.02	< 0.5	4	112	27
172158	205	294	< 5	2	0.6	880	0.2	2.52	>10000	1.5	2	0.05	< 0.5	9	97	53
172159	205	294	< 5	1	0.4	340	< 0.4	2.69	>10000	2.0	4	0.03	< 0.5	13	125	62
172160	205	294	< 5	1	0.2	10	0.2	1.99	640	1.5	< 2	8.28	< 0.5	7	123	47
172161	205	294	< 5	1	< 0.2	20	< 0.2	0.57	410	< 0.5	< 2	0.84	< 0.5	< 1	96	21
172162	205	294	< 5	1	0.2	10	< 0.2	1.23	880	2.0	< 2	0.93	< 0.5	1	131	29

CERTIFICATION:_____

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Certificate Date: 21-OCT-96
Invoice No. : I9635277
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Account : GP W

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CERTIFICATE OF ANALYSIS A9635277

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)
172126	205	294	1.85	3.49	1.35	95	1	0.13	11	720	22	117	0.17	67	< 10	78
172127	205	294	1.93	3.31	1.08	105	< 1	0.11	18	890	24	79	0.15	45	< 10	86
172128	205	294	1.83	2.77	1.11	105	1	0.11	9	730	26	151	0.14	59	< 10	104
172129	205	294	1.58	3.20	0.89	75	1	0.12	8	960	18	87	0.15	34	< 10	62
172130	205	294	2.08	3.61	1.32	95	2	0.15	10	640	30	107	0.19	72	< 10	72
172131	205	294	2.19	3.44	1.30	110	1	0.14	12	630	24	78	0.18	66	< 10	80
172132	205	294	2.29	3.96	1.05	155	2	0.15	13	700	20	73	0.18	34	< 10	44
172133	205	294	1.95	2.87	0.62	165	2	0.11	10	680	18	67	0.14	44	< 10	56
172134	205	294	1.27	2.84	0.47	435	1	0.11	9	780	18	82	0.14	50	< 10	52
172135	205	294	1.31	2.92	0.39	325	3	0.12	7	730	18	101	0.12	51	< 10	64
172136	205	294	1.58	2.39	0.30	1325	4	0.12	6	620	18	317	0.11	42	< 10	54
172137	205	294	1.34	2.59	0.30	1145	5	0.12	7	600	20	312	0.12	40	< 10	46
172138	205	294	1.30	2.98	0.38	205	2	0.13	6	610	20	106	0.13	43	< 10	72
172139	205	294	1.75	3.17	0.41	175	< 1	0.16	7	710	20	115	0.16	43	< 10	68
172140	205	294	1.30	3.16	0.36	170	1	0.15	7	620	20	104	0.17	49	< 10	60
172141	205	294	1.36	3.24	0.39	165	3	0.15	7	1090	22	132	0.17	58	< 10	92
172142	205	294	1.60	3.09	0.32	160	3	0.15	11	590	26	100	0.17	83	< 10	78
172143	205	294	1.83	2.89	0.32	545	2	0.16	11	800	24	144	0.26	71	< 10	48
172144	205	294	1.11	2.88	0.32	310	2	0.37	9	640	18	157	0.19	49	< 10	10
172145	205	294	1.26	2.73	0.37	375	< 1	0.20	9	660	20	139	0.15	47	< 10	10
172146	205	294	2.84	2.40	0.53	160	9	0.12	55	1220	34	89	0.23	252	< 10	94
172147	205	294	2.50	1.06	0.62	340	< 1	0.35	40	360	< 2	74	0.27	130	< 10	82
172148	205	294	1.39	0.85	0.33	100	1	0.04	25	160	< 2	25	0.13	65	< 10	60
172149	205	294	2.07	0.39	0.23	215	1	0.02	32	330	< 2	51	0.09	68	< 10	62
172150	205	294	0.53	0.31	0.06	30	1	0.01	12	190	< 2	65	0.03	42	< 10	28
172151	205	294	0.61	1.24	0.31	30	5	0.04	6	60	< 2	20	0.12	87	< 10	18
172152	205	294	1.02	0.69	0.18	45	4	0.03	12	40	< 2	14	0.07	50	< 10	26
172153	205	294	1.36	1.20	0.27	55	4	0.09	8	130	12	161	0.12	99	< 10	12
172154	205	294	0.72	1.13	0.25	15	1	0.06	8	70	< 2	58	0.10	69	< 10	10
172155	205	294	1.19	1.72	0.35	30	4	0.08	9	140	8	85	0.17	97	< 10	28
172156	205	294	0.99	1.58	0.36	30	5	0.12	15	110	22	145	0.11	99	< 10	106
172157	205	294	0.50	0.92	0.20	10	4	0.06	8	50	20	73	0.06	67	< 10	56
172158	205	294	0.66	1.17	0.23	25	11	0.13	21	90	20	143	0.07	111	< 10	236
172159	205	294	0.98	1.18	0.24	230	5	0.08	52	90	12	71	0.10	152	< 10	470
172160	205	294	7.56	0.41	0.37	2000	< 1	0.13	28	460	< 2	418	0.09	80	< 10	90
172161	205	294	19.00	0.08	0.21	1495	6	0.02	8	340	< 2	265	0.02	61	< 10	28
172162	205	294	18.00	0.37	0.21	1290	11	0.08	14	490	< 2	390	0.05	90	< 10	42

CERTIFICATION: Ian Bucklen

* Ba-ICP RESULTS MAY BE LOW DUE TO PRECIPITATION

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: TERRY TUCKER - VANCOUVER OFFICE

Certificate Date: 27-OCT-96
Invoice No. :19635570
P.O. Number :6412
Account :GP W

CERTIFICATE OF ANALYSIS A9635570

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)
172163	205	226	< 5	2	< 0.2	10	< 0.2	1.41	240	1.5	< 2	3.34	3.5	6	314	27
172164	205	226	< 5	1	< 0.2	10	< 0.2	1.52	410	3.0	< 2	3.73	2.5	7	205	53
172165	205	226	< 5	2	< 0.2	30	< 0.2	1.20	7720	2.5	< 2	3.09	2.5	10	295	24
172166	205	226	< 5	1	< 0.2	10	< 0.2	1.04	4300	2.0	< 2	0.72	2.5	4	209	30
172167	205	226	< 5	2	< 0.2	10	< 0.2	0.86	1870	< 0.5	< 2	0.75	4.5	5	216	49
172168	205	226	< 5	1	< 0.2	10	0.4	2.39	>10000	4.0	< 2	0.03	< 0.5	6	225	69
172169	205	226	< 5	8	0.4	10	0.2	1.05	5790	2.0	< 2	0.32	2.5	4	286	46
172170	205	226	< 5	1	0.2	10	< 0.2	0.98	4680	3.0	< 2	0.27	1.5	4	260	43
172171	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
172172	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
172173	205	226	< 5	168	0.6	10	0.4	5.90	580	1.5	< 2	2.85	3.0	17	258	92
172174	205	226	< 5	20	0.4	< 10	0.4	6.61	550	1.5	< 2	10.00	15.0	20	181	74
172175	205	226	< 5	8	0.2	< 10	< 0.2	7.02	430	2.0	< 2	3.10	1.0	20	184	62

CERTIFICATION: Stewart Bradshaw

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: TERRY TUCKER - VANCOUVER OFFICE

Certificate Date: 27-OCT-96
Invoice No. :I9635570
P.O. Number :6412
Account :GP W

CERTIFICATE OF ANALYSIS A9635570

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)
172163	205	226	13.70	0.25	0.22	1135	6	0.07	18	530	< 2	261	0.07	119	< 10	64
172164	205	226	10.60	0.30	0.24	1245	6	0.08	20	940	< 2	253	0.08	93	< 10	46
172165	205	226	8.61	0.12	0.15	1370	6	0.03	35	860	< 2	216	0.06	104	< 10	208
172166	205	226	11.25	0.32	0.17	400	17	0.01	18	1660	< 2	75	0.04	99	< 10	60
172167	205	226	20.3	0.23	0.23	1575	30	< 0.01	17	1600	< 2	70	0.03	118	< 10	62
172168	205	226	1.90	0.95	0.23	75	7	0.05	18	100	< 2	23	0.11	116	< 10	26
172169	205	226	14.25	0.29	0.15	280	48	0.01	20	1720	< 2	72	0.04	104	< 10	40
172170	205	226	8.19	0.26	0.12	450	35	0.01	15	1110	< 2	50	0.04	71	< 10	28
172171	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
172172	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
172173	205	226	3.41	2.77	1.83	540	12	0.82	68	2010	54	92	0.43	314	< 10	298
172174	205	226	5.23	1.81	3.00	2170	< 1	0.41	35	2620	20	1160	0.97	168	10	1245
172175	205	226	3.56	2.61	2.05	750	6	1.42	45	1770	< 2	223	0.36	199	< 10	174

CERTIFICATION: Ian Bickler

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: TERRY TUCKER - VANCOUVER OFFICE

Certificate Date: 27-OCT-96
Invoice No. :I9635706
P.O. Number :6412
Account :GP W

CERTIFICATE OF ANALYSIS A9635706

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)
172171	205	226	1.02	0.85	0.23	110	1	0.06	23	120	4	46	0.14	87	< 10	54
172172	205	226	1.17	0.55	0.21	200	10	0.07	53	250	6	92	0.10	66	< 10	114
172173	205	226	1.00	0.57	0.32	245	3	0.03	45	130	6	135	0.08	58	< 10	166
172174	205	226	2.12	0.41	0.96	915	1	0.02	35	870	2	277	0.13	72	< 10	74
172175	205	226	1.50	0.43	0.46	4410	1	0.02	32	190	4	136	0.07	46	< 10	134
172176	205	226	1.53	0.61	0.48	775	2	0.05	55	180	2	138	0.12	59	< 10	70
172177	205	226	0.81	0.44	0.20	170	1	0.03	30	560	4	198	0.06	49	< 10	158
172178	205	226	0.99	0.82	0.27	120	1	0.08	60	70	4	125	0.08	80	< 10	196
172179	205	226	0.83	0.92	0.24	75	5	0.10	62	110	8	166	0.08	84	< 10	234
172180	205	226	1.00	1.40	0.37	85	1	0.13	46	120	4	154	0.12	82	< 10	48
172181	205	226	1.15	1.94	0.53	85	3	0.10	63	130	2	67	0.17	106	< 10	40
172182	205	226	0.86	1.18	0.34	135	5	0.12	41	120	2	236	0.09	79	< 10	172
172183	205	226	0.98	1.45	0.40	155	4	0.11	66	140	22	145	0.10	103	< 10	932
172184	205	226	1.23	0.82	0.24	70	3	0.07	17	130	< 2	201	0.08	91	< 10	62
172185	205	226	1.35	0.87	0.24	685	3	0.05	63	360	28	236	0.06	98	< 10	1335
172186	205	226	0.92	0.69	0.23	555	8	0.09	53	350	18	228	0.06	80	< 10	1515
172187	205	226	0.98	0.77	0.22	210	3	0.16	33	170	4	125	0.06	86	< 10	724
172188	205	226	1.96	1.38	0.33	95	3	0.06	69	90	38	9	0.12	146	< 10	1460
172189	205	226	1.83	1.00	0.28	745	2	0.01	32	190	92	27	0.07	120	< 10	1250
172190	205	226	2.58	0.79	0.29	1395	9	0.04	27	560	84	259	0.06	114	< 10	136
172191	205	226	1.17	0.87	0.26	440	5	0.05	21	330	20	138	0.07	139	< 10	206
172192	205	226	0.99	0.74	0.21	1465	6	0.03	20	260	12	267	0.04	98	< 10	108
172193	205	226	1.98	0.94	0.23	440	3	0.01	19	510	62	54	0.07	111	< 10	732
172194	205	226	3.03	1.48	0.39	1290	1	0.04	27	590	32	41	0.15	124	< 10	32
172195	205	226	7.20	0.94	0.72	4590	4	0.05	45	1260	70	146	0.11	182	< 10	320
172196	205	226	8.85	1.02	1.46	9450	3	0.04	41	1700	102	267	0.17	332	10	376
172197	205	226	1.21	1.35	0.35	1170	< 1	0.05	26	670	16	31	0.12	160	< 10	14
172198	205	226	2.14	1.70	0.41	950	1	0.07	42	850	38	25	0.13	146	< 10	116
172199	205	226	3.17	1.43	0.38	245	3	0.05	45	1410	90	35	0.10	212	< 10	102
172200	205	226	4.09	1.23	0.30	215	1	0.03	40	2780	114	37	0.09	154	< 10	14
172201	205	226	4.70	1.52	0.41	280	22	0.04	126	2050	104	33	0.10	469	< 10	14
172202	205	226	6.18	1.02	0.52	705	9	0.01	143	3220	88	75	0.07	419	< 10	10
172203	205	226	5.96	1.17	0.96	985	8	0.03	132	2070	86	176	0.10	325	< 10	60
172204	205	226	5.30	2.15	3.84	1005	1	0.18	135	1640	< 2	268	0.25	162	10	70
172205	205	226	2.12	1.82	0.76	700	3	0.07	68	1090	22	120	0.28	181	< 10	840
172206	205	226	1.79	1.47	0.61	495	< 1	0.09	44	340	< 2	132	0.24	92	< 10	82
172207	205	226	2.61	1.70	0.62	335	2	0.10	80	360	8	89	0.29	133	< 10	168
172208	205	226	2.05	2.96	0.73	325	7	0.13	20	630	128	134	0.16	106	< 10	604
172209	205	226	1.57	2.80	0.60	215	2	1.41	4	590	20	140	0.16	20	< 10	62
172210	205	226	1.32	3.12	0.54	250	3	0.16	7	790	22	176	0.12	41	< 10	66

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

To: WESTMIN RESOURCES LTD.
PROJECT: WOLVERINE
P.O. BOX 49066, THE BENTALL CENTRE
VANCOUVER, BC
V7X 1C4

Project : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE

Certificate Date: 27-OCT-96
Invoice No. :19635706
P.O. Number :6412
Account :GP W

CERTIFICATE OF ANALYSIS A9635706

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)
172211	205	226	< 5	12	3.2	100	0.6	7.79	410	3.0	< 2	1.40	2.0	6	63	18
172212	205	226	< 5	6	0.8	10	< 0.2	7.90	540	3.5	2	0.24	< 0.5	4	59	7
172213	205	226	< 5	6	0.6	40	< 0.2	7.63	450	3.5	< 2	1.04	1.0	4	88	6
172214	205	226	< 5	2	0.6	50	< 0.2	8.18	520	3.5	< 2	0.31	0.5	5	35	8
172215	205	226	< 5	2	0.4	10	< 0.2	6.51	700	2.5	2	0.58	< 0.5	5	30	6
172216	205	226	< 5	1	0.4	10	< 0.2	6.28	3760	2.5	2	0.73	< 0.5	4	41	4
172217	205	226	< 5	8	0.4	10	< 0.2	7.56	3210	3.5	< 2	0.41	0.5	4	56	4
172218	205	226	< 5	1	0.2	< 10	< 0.2	6.13	3290	2.5	< 2	0.75	< 0.5	4	108	4
172219	205	226	< 5	2	0.4	10	< 0.2	6.29	3510	2.5	< 2	0.46	< 0.5	5	75	4
172220	205	226	< 5	1	0.4	< 10	< 0.2	6.43	2720	2.5	2	0.85	< 0.5	4	67	5
172221	205	226	< 5	1	0.4	< 10	< 0.2	6.72	2510	2.5	< 2	0.60	< 0.5	5	70	6
172222	205	226	< 5	1	0.2	< 10	< 0.2	6.80	1850	2.5	< 2	0.61	< 0.5	4	59	5
172223	205	226	< 5	1	0.2	10	< 0.2	6.99	1590	2.5	< 2	1.06	0.5	5	69	5
172224	205	226	< 5	2	0.4	< 10	< 0.2	7.40	1390	2.5	2	0.57	0.5	5	86	6
172225	205	226	< 5	1	0.2	< 10	< 0.2	6.66	1400	2.5	< 2	0.46	0.5	4	81	5
172226	205	226	< 5	1	0.2	< 10	< 0.2	7.16	1420	2.5	< 2	0.36	0.5	5	68	6
172227	205	226	< 5	2	0.2	< 10	< 0.2	6.77	1720	2.0	< 2	0.46	< 0.5	5	89	5
172228	205	226	< 5	1	0.4	10	< 0.2	7.29	2010	2.5	2	0.41	0.5	5	94	5
172229	205	226	< 5	2	0.4	20	< 0.2	7.97	2640	2.5	< 2	0.30	0.5	6	90	5
172230	205	226	< 5	6	3.8	1090	< 0.2	6.36	350	2.0	< 2	1.14	3.5	4	94	6
172231	205	226	< 5	34	6.8	1730	< 0.2	5.43	230	0.5	< 2	2.89	5.5	4	146	4
172232	205	226	< 5	12	4.0	210	< 0.2	6.35	340	1.0	< 2	1.39	0.5	5	148	7
172233	205	226	< 5	10	3.6	80	< 0.2	6.92	380	1.5	< 2	0.67	< 0.5	4	115	11
172234	205	226	< 5	24	4.2	140	< 0.2	6.49	330	1.5	< 2	2.37	< 0.5	4	125	12
172235	205	226	< 5	2	2.4	70	< 0.2	6.86	330	2.5	2	0.75	< 0.5	5	99	11
172236	205	226	< 5	6	0.2	10	< 0.2	6.84	2630	2.5	< 2	2.44	< 0.5	5	106	8
172237	205	226	< 5	14	0.2	10	< 0.2	7.14	2600	2.5	< 2	3.74	0.5	5	80	7
172238	205	226	< 5	2	0.6	10	< 0.2	6.87	1370	2.5	< 2	2.62	< 0.5	5	100	8
172239	205	226	< 5	1	0.2	< 10	< 0.2	7.45	1750	2.5	< 2	1.49	< 0.5	5	72	7
172240	205	226	< 5	2	0.2	10	< 0.2	7.30	390	2.5	6	1.87	0.5	6	66	12
172241	205	226	< 5	12	0.6	10	< 0.2	7.17	310	2.0	< 2	4.66	< 0.5	5	59	9
172242	205	226	< 5	20	1.2	70	< 0.2	5.73	230	1.5	< 2	7.01	0.5	5	101	6
172284	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
172285	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
172286	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
172287	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
172288	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd

CERTIFICATION: Ita H Bucholz

Chemex Labs Ltd.

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Page Number :2-B
Total Pages :2
Certificate Date: 27-OCT-96
Invoice No. : I9635706
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Account : GP W

CERTIFICATE OF ANALYSIS A9635706

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)
172211	205	226	2.04	3.74	0.88	180	3	0.18	8	710	80	165	0.15	49	< 10	218
172212	205	226	2.10	3.88	1.30	65	1	0.22	6	400	28	66	0.12	30	< 10	70
172213	205	226	2.02	3.47	1.26	120	< 1	0.34	3	460	40	88	0.11	25	< 10	120
172214	205	226	1.96	3.51	1.48	65	3	0.51	7	550	40	63	0.13	31	< 10	180
172215	205	226	1.45	2.48	1.13	65	2	0.50	4	590	20	77	0.09	24	< 10	48
172216	205	226	1.22	2.19	1.11	65	< 1	0.42	3	830	20	85	0.08	21	< 10	50
172217	205	226	1.53	2.71	1.30	70	1	0.24	4	820	18	96	0.10	26	< 10	66
172218	205	226	1.37	2.04	1.19	75	1	0.21	3	690	20	88	0.08	20	< 10	44
172219	205	226	1.26	1.82	0.99	75	1	1.04	4	750	18	76	0.07	20	< 10	50
172220	205	226	1.21	1.67	0.60	140	2	1.98	3	600	20	80	0.10	23	< 10	32
172221	205	226	1.40	1.84	0.65	165	3	2.23	6	700	16	92	0.14	26	< 10	52
172222	205	226	1.42	1.89	0.68	180	1	2.26	1	730	20	100	0.15	24	< 10	60
172223	205	226	1.39	2.07	0.77	175	1	2.14	5	720	20	134	0.14	24	< 10	66
172224	205	226	1.46	2.18	0.81	140	< 1	2.32	5	580	20	106	0.14	25	< 10	52
172225	205	226	1.41	1.95	0.78	110	< 1	2.08	3	790	22	103	0.12	21	< 10	50
172226	205	226	1.59	2.26	0.88	90	1	2.00	6	720	20	93	0.13	25	< 10	54
172227	205	226	1.44	2.28	0.93	90	2	1.62	3	570	20	85	0.13	25	< 10	42
172228	205	226	1.45	2.51	0.99	80	2	1.73	4	620	18	84	0.15	25	< 10	60
172229	205	226	1.43	2.90	1.12	75	2	1.72	4	770	20	77	0.15	29	< 10	72
172230	205	226	3.44	2.62	0.62	90	3	1.05	4	600	226	92	0.12	20	< 10	1005
172231	205	226	4.79	1.78	0.11	125	2	1.20	5	480	220	536	0.11	13	< 10	1435
172232	205	226	2.27	2.57	0.12	50	1	0.51	5	750	130	609	0.15	28	< 10	174
172233	205	226	1.90	2.80	0.18	80	4	0.30	6	890	34	86	0.17	51	< 10	18
172234	205	226	3.30	2.39	0.39	265	3	1.26	7	960	54	143	0.15	50	< 10	76
172235	205	226	1.63	3.20	0.80	185	5	0.29	7	880	24	62	0.14	53	< 10	114
172236	205	226	1.32	2.89	0.94	400	2	1.02	5	810	22	126	0.13	26	< 10	50
172237	205	226	1.14	2.98	0.92	625	3	1.16	3	590	24	168	0.13	34	< 10	54
172238	205	226	1.35	2.90	0.81	470	1	1.17	5	790	18	113	0.12	24	< 10	56
172239	205	226	1.28	3.34	0.82	260	1	1.14	6	1310	18	78	0.15	28	< 10	32
172240	205	226	1.40	3.44	0.88	285	< 1	0.92	4	920	20	95	0.16	27	< 10	30
172241	205	226	1.45	3.63	0.90	565	3	0.76	4	770	20	267	0.16	27	< 10	34
172242	205	226	1.51	2.81	0.69	800	2	0.71	4	610	18	438	0.13	21	< 10	56
172284	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
172285	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
172286	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
172287	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd
172288	--	--	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd	NotRcd

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

Project : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE

Page ıber : 1
Total Pages : 1
Certificate Date: 28-OCT-96
Invoice No. : I9637768
P.O. Number :
Account : GP W

CERTIFICATE OF ANALYSIS A9637768

SAMPLE	PREP CODE	Au ppb FA+AA
107218	244 --	< 5
107219	244 --	10
107220	244 --	< 5

CERTIFICATION: Mark Vosh

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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V7X 1C4

Project : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE

Page Number : 1-A
Total Pages : 1
Certificate Date: 04-NOV-96
Invoice No. : I9638672
P.O. Number : 6406
Account : GP W

CERTIFICATE OF ANALYSIS A9638672

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)
172243	205	226	15	4	0.2	< 10	< 0.2	6.81	1000	2.0	< 2	1.59	0.5	3	91	6
172244	205	226	20	2	0.4	< 10	< 0.2	6.55	1760	2.0	< 2	2.04	< 0.5	1	93	5
172245	205	226	< 5	4	0.2	< 10	< 0.2	6.99	1770	2.0	< 2	2.41	< 0.5	3	59	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 : PUCK
Comments: ATTN: TERRY TUCKER - VANCOUVER OFFICE

Page . ıber : 1-B
Total Pages : 1
Certificate Date: 04-NOV-96
Invoice No. : 19638672
P.O. Number : 6406
Account : GP W

CERTIFICATE OF ANALYSIS A9638672

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)
172243	205	226	1.25	3.70	0.64	190	< 1	0.55	9	730	20	100	0.16	35	< 10	44
172244	205	226	1.21	3.57	0.46	310	< 1	0.15	7	780	20	121	0.16	31	< 10	50
172245	205	226	1.48	3.78	0.37	355	< 1	0.16	8	610	20	122	0.18	29	< 10	48

CERTIFICATION: Stewart Buchan

APPENDIX C

1994 SOIL GEOCHEMICAL PLOTS (Cu, Pb, Zn, As, Sb, and Mn)

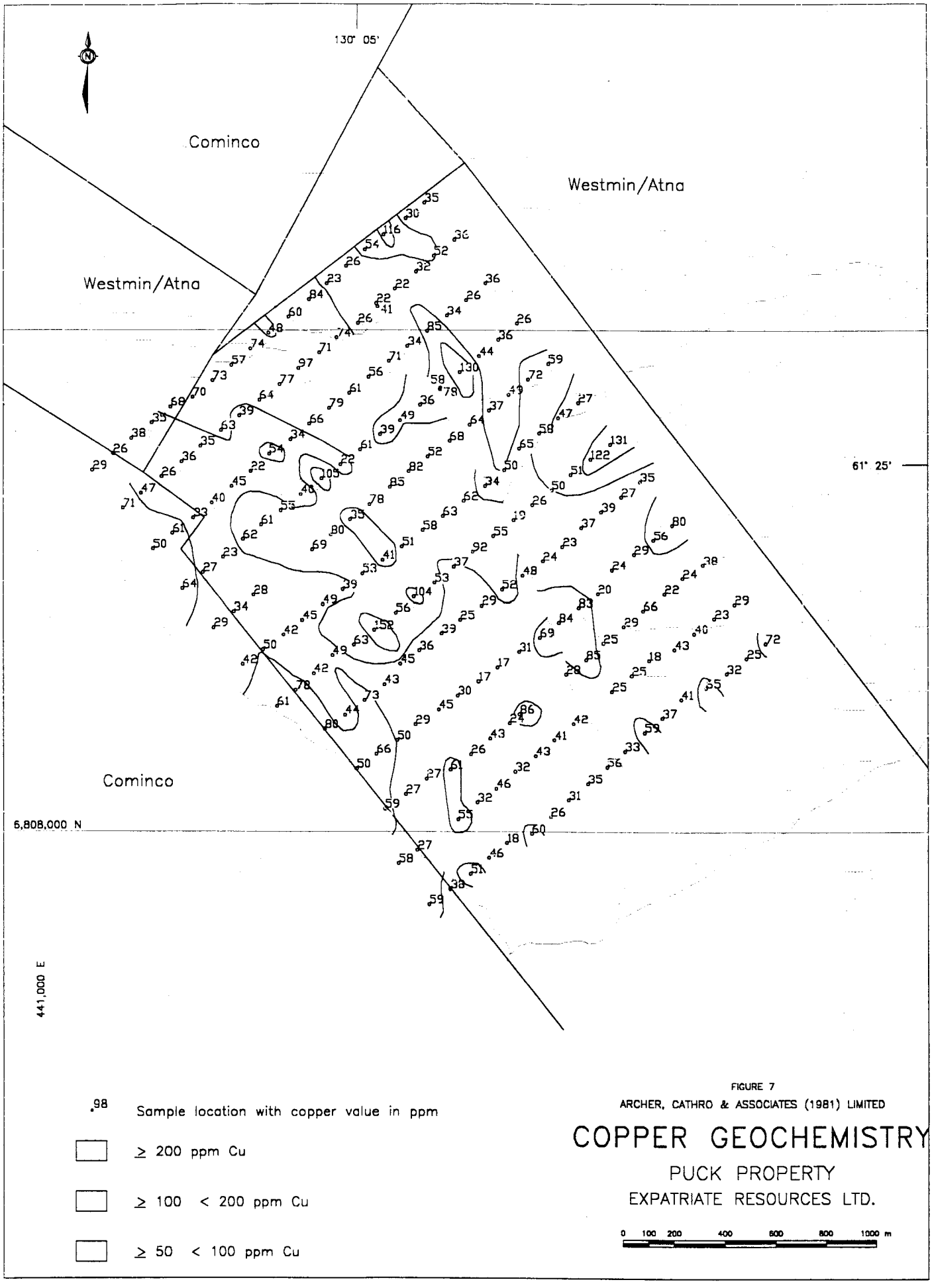


FIGURE 7

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

COPPER GEOCHEMISTRY

PUCK PROPERTY

EXPATRIATE RESOURCES LTD.

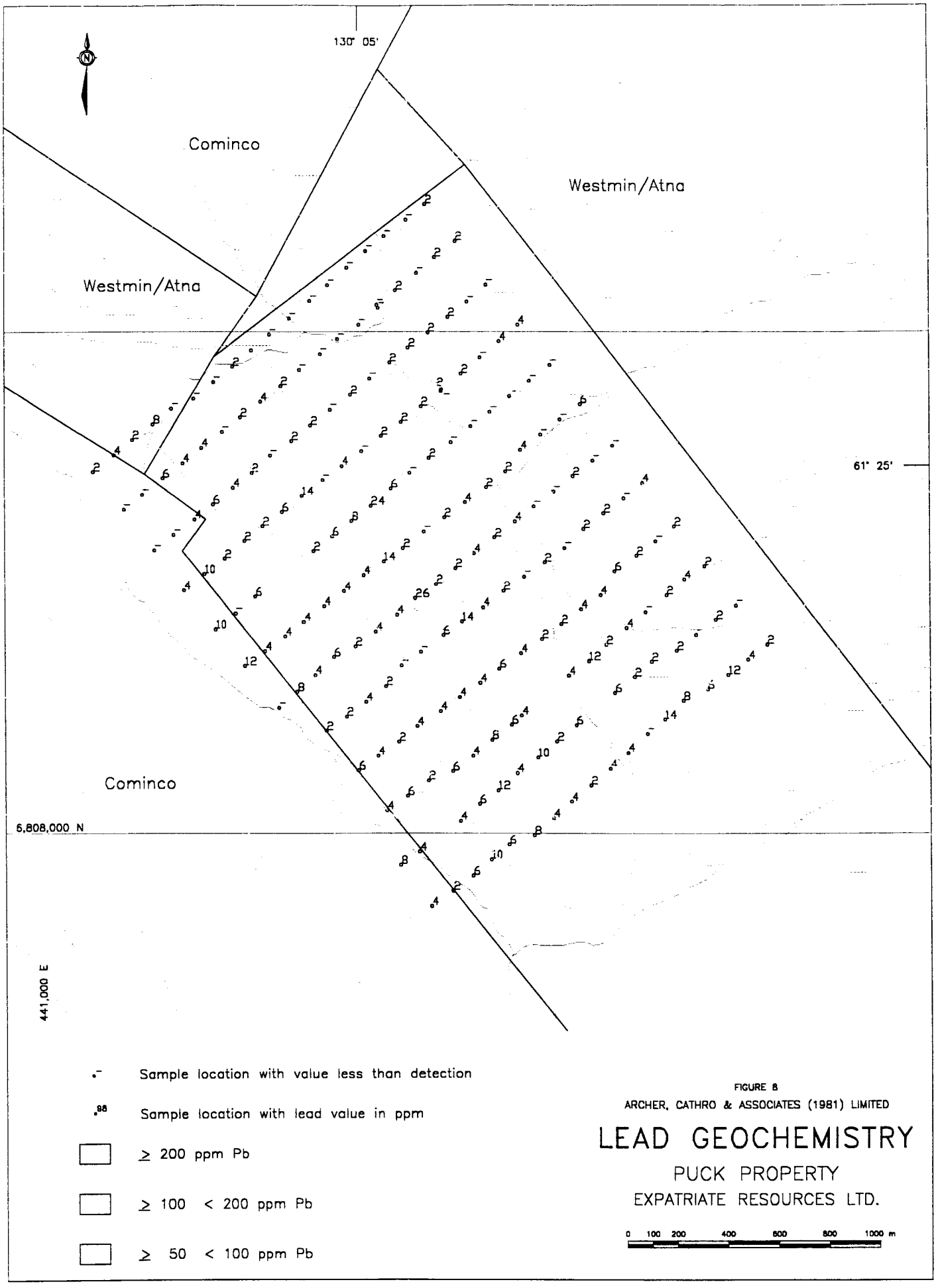


FIGURE 8

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

LEAD GEOCHEMISTRY

PUCK PROPERTY

EXPATRIATE RESOURCES LTD.

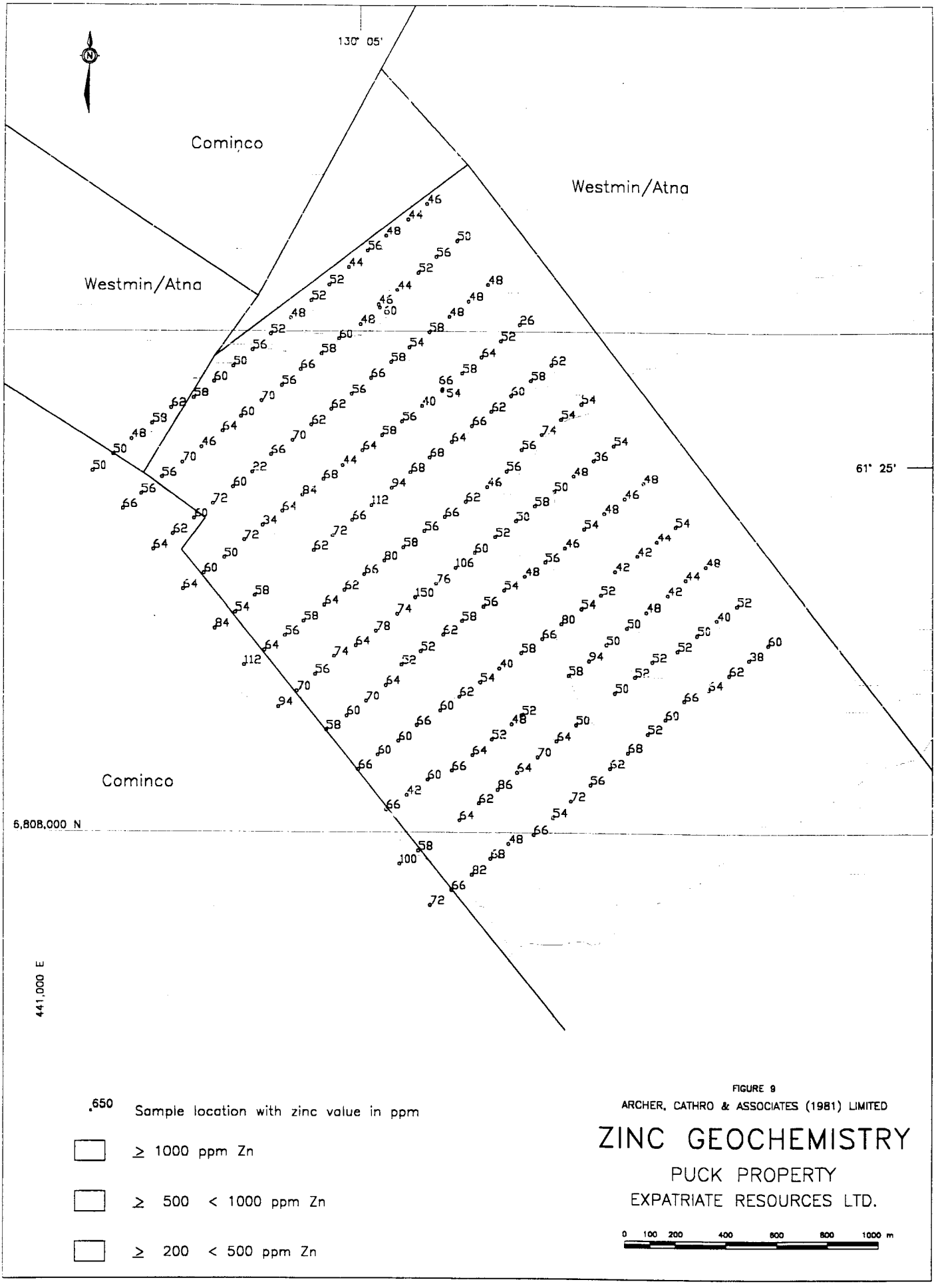


FIGURE 9

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

ZINC GEOCHEMISTRY

PUCK PROPERTY

EXPATRIATE RESOURCES LTD.

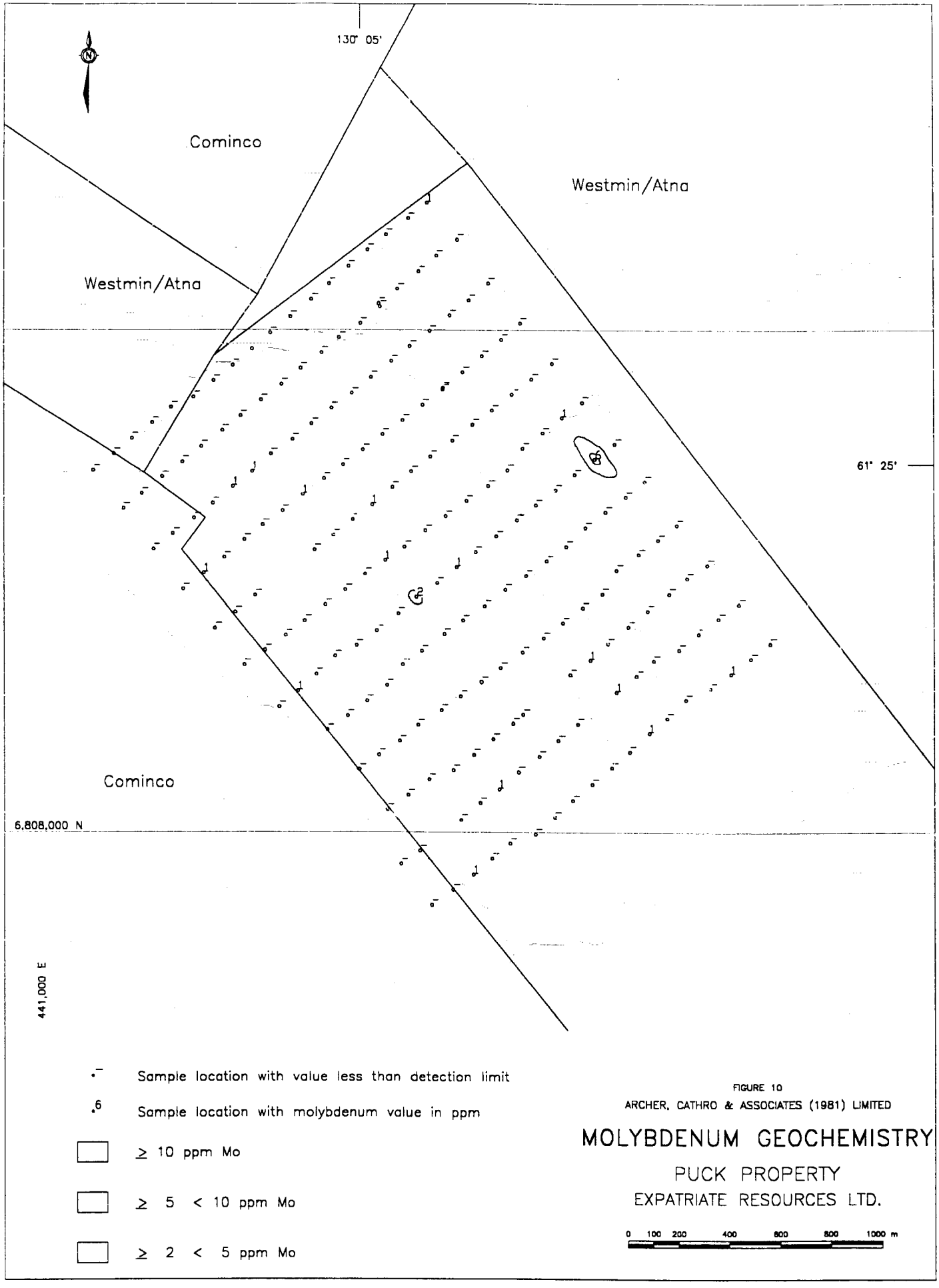


FIGURE 10

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

MOLYBDENUM GEOCHEMISTRY

PUCK PROPERTY

EXPATRIATE RESOURCES LTD.

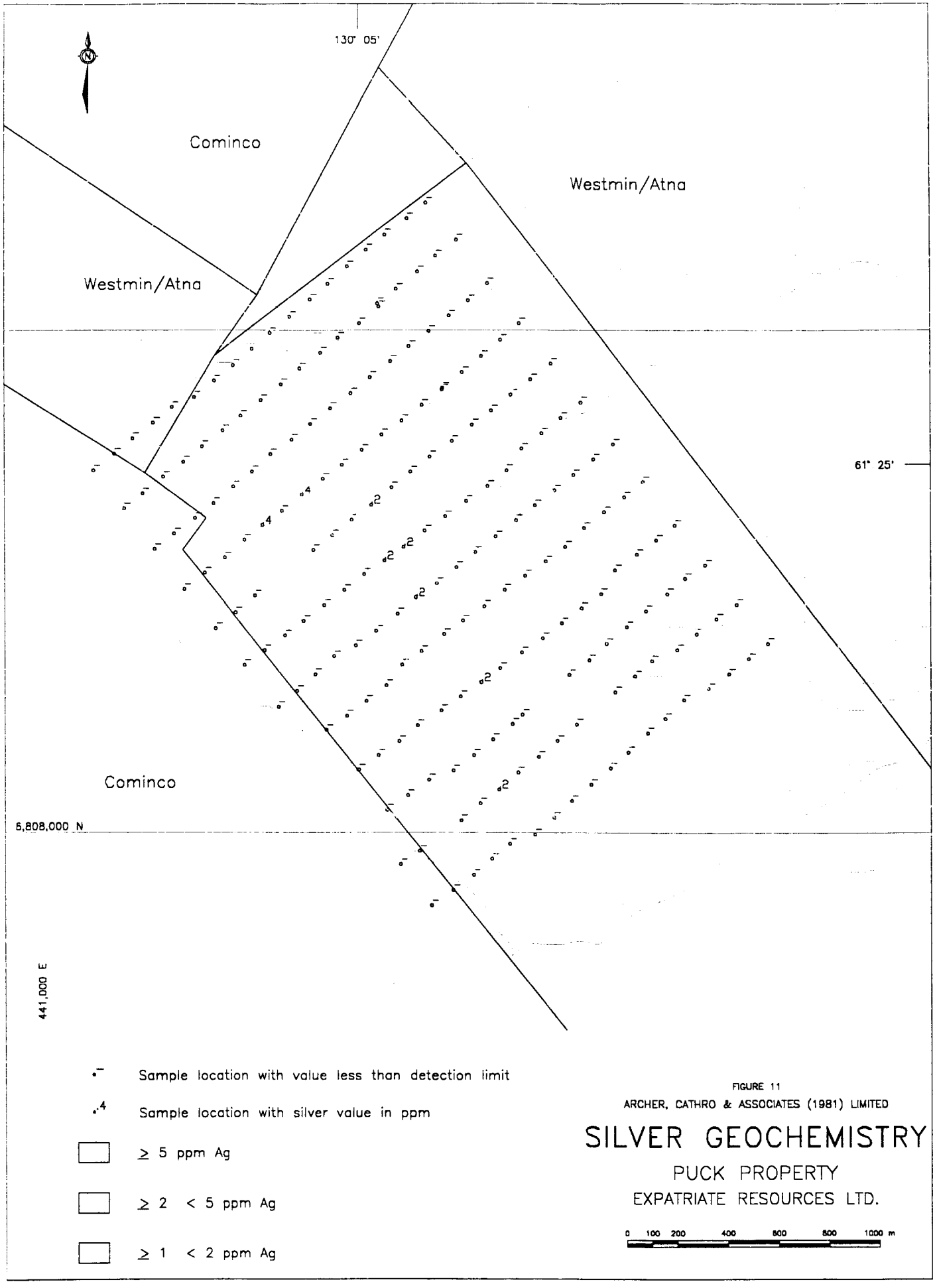


FIGURE 11

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

SILVER GEOCHEMISTRY

PUCK PROPERTY

EXPATRIATE RESOURCES LTD.

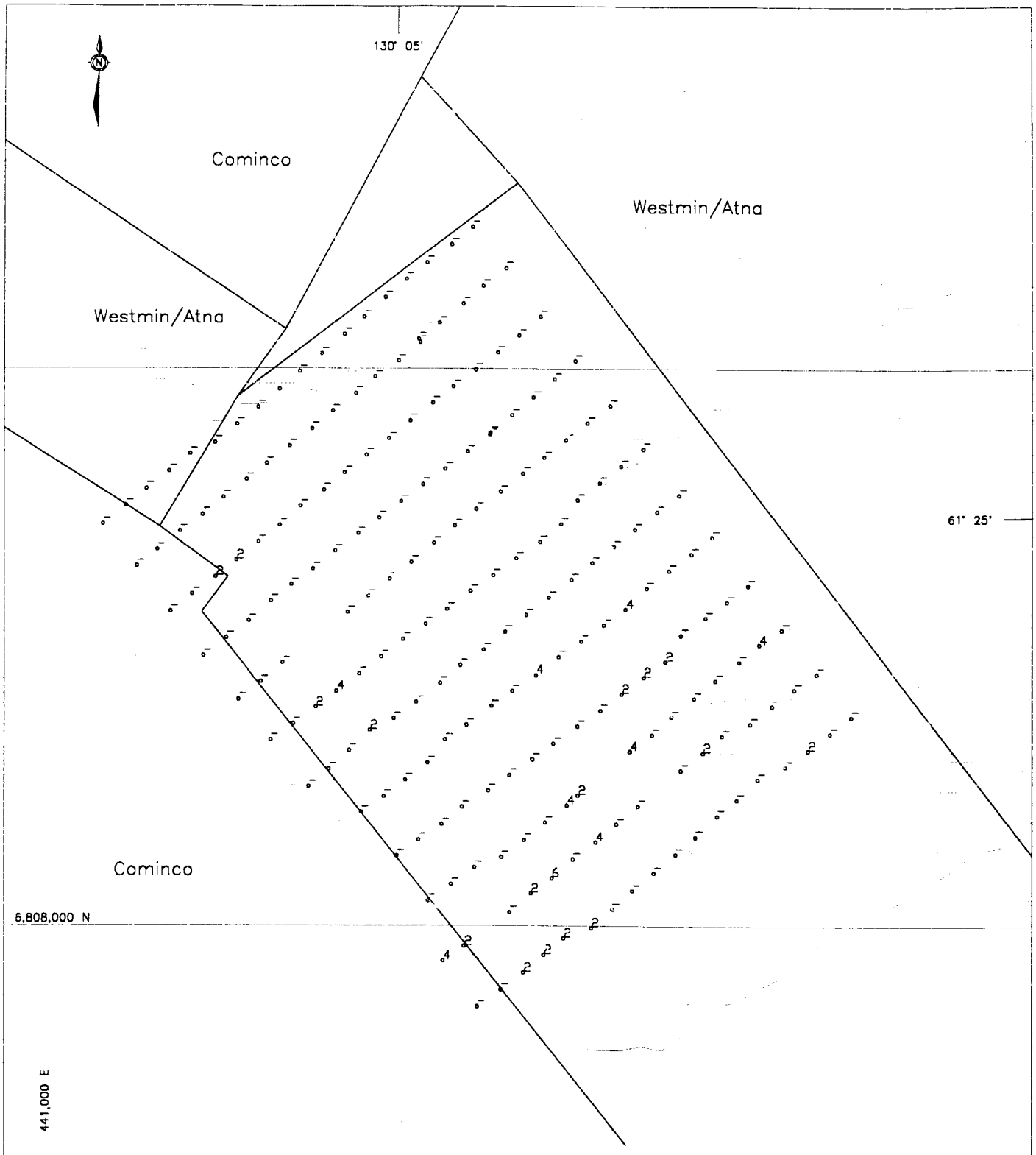


FIGURE 12

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

ANTIMONY GEOCHEMISTRY

PUCK PROPERTY

EXPATRIATE RESOURCES LTD.

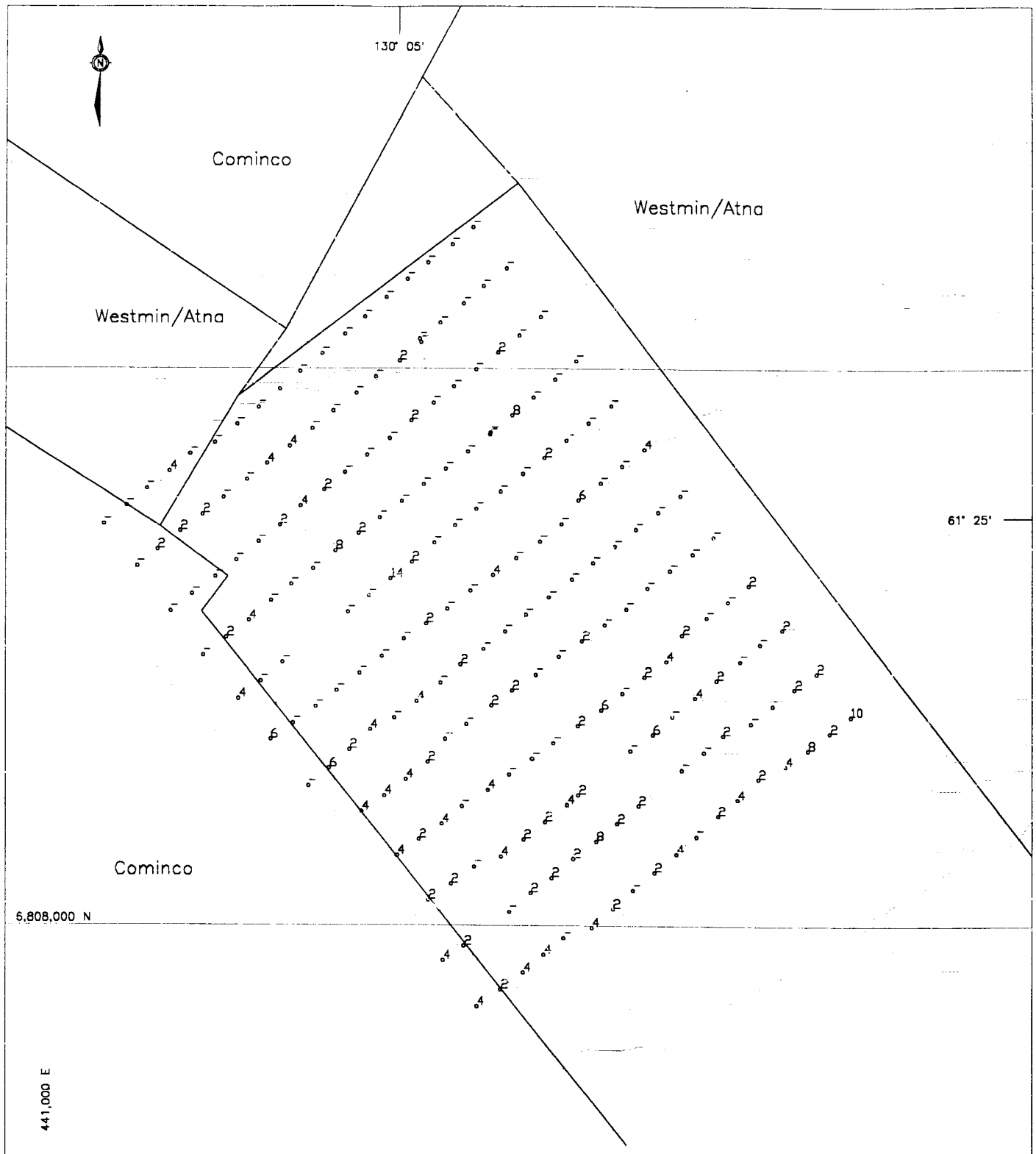


FIGURE 13

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

ARSENIC GEOCHEMISTRY

PUCK PROPERTY

EXPATRIATE RESOURCES LTD.

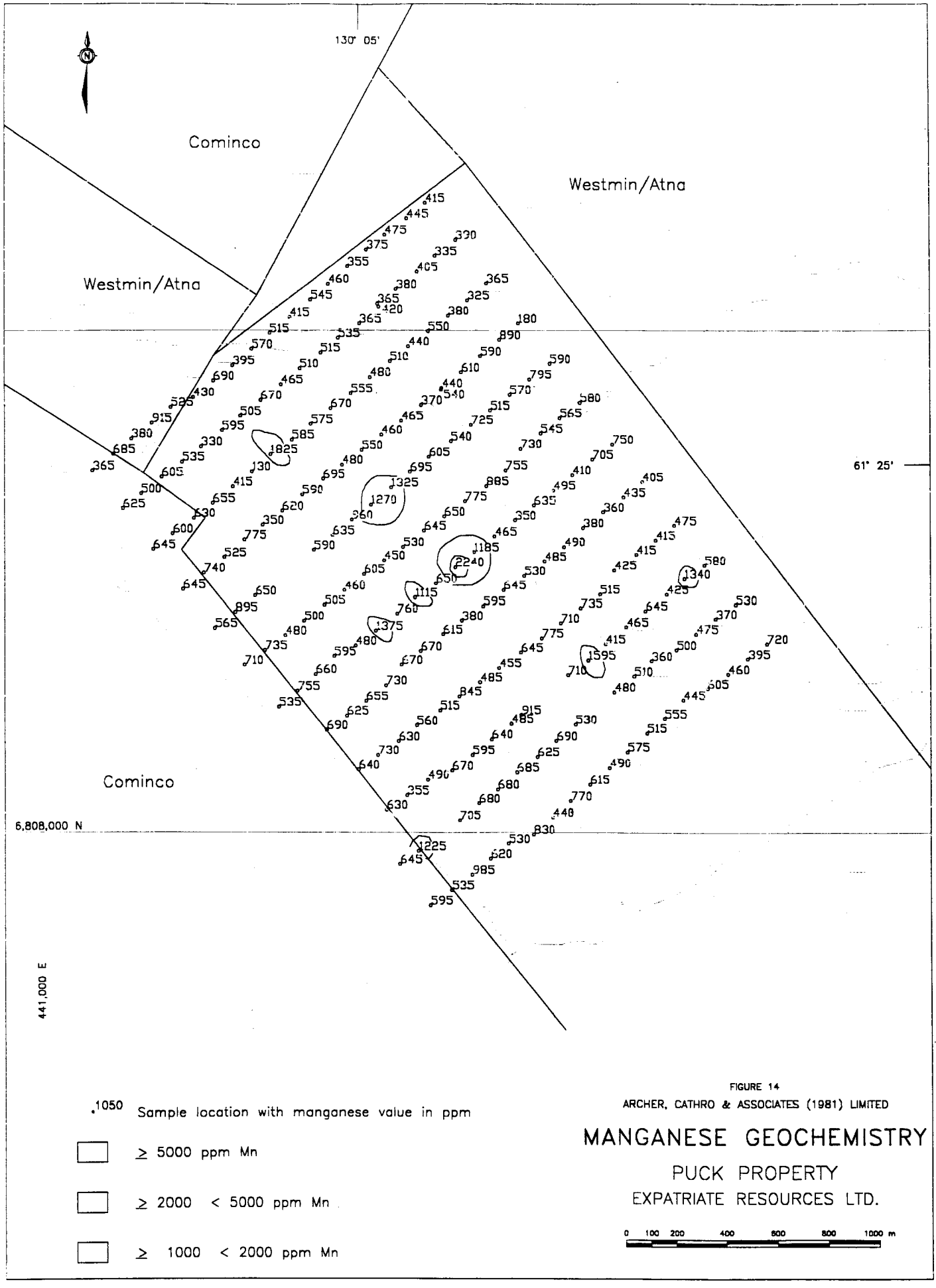


FIGURE 14

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

MANGANESE GEOCHEMISTRY

PUCK PROPERTY

EXPATRIATE RESOURCES LTD.

APPENDIX D

1995 AIRBORNE GEOPHYSICAL SURVEY REPORT AND MAPS

i) TOTAL FIELD MAGNETICS

ii) CALCULATED VERTICAL GRADIENT MAGNETICS

iii) FILTERED VLF

iv) RESISTIVITY - 900Hz COPLANAR

v) RESISTIVITY - 7200Hz COPLANAR

Report #1239

DIGHEM^V SURVEY
FOR
WESTMIN RESOURCES LIMITED
WOLVERINE LAKE PROJECT
YUKON

VOLUME 1

NTS 105G/1,7,8,9, 105H/5,12

Dighem, A division of CGG Canada Ltd.
Mississauga, Ontario
March 29, 1996

Douglas G. Garrie
Geophysicist

A1239MAR.96R

SUMMARY

This report describes the logistics and results of a DIGHEM^V airborne geophysical survey carried out for Westmin Resources Limited, over three properties located near Wolverine Lake, Yukon. Total coverage of the survey block amounted to 3660 km. The survey was flown from November 3 to December 5, 1995.

The purpose of the survey was to detect zones of conductive mineralization and to provide information that could be used to map the geology and structure of the survey areas. This was accomplished by using a DIGHEM^V multi-coil, multi-frequency electromagnetic system, supplemented by a high sensitivity Cesium magnetometer and a four-channel VLF receiver. The information from these sensors was processed to produce maps which display the magnetic and conductive properties of the survey areas. A GPS electronic navigation system, utilizing a UHF link, ensured accurate positioning of the geophysical data with respect to the base maps. Visual flight path recovery techniques were used to confirm the location of the helicopter where visible topographic features could be identified on the ground.

The survey properties contain several anomalous features, many of which are considered to be of moderate to high priority as exploration targets. Most of the inferred bedrock conductors appear to warrant further investigation using appropriate surface exploration techniques. Areas of interest may be assigned priorities on the basis of supporting geophysical, geochemical and/or geological information. After initial

investigations have been carried out, it may be necessary to re-evaluate the remaining anomalies based on information acquired from the follow-up program.

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	Section
INTRODUCTION	1.1
SURVEY EQUIPMENT	2.1
PRODUCTS AND PROCESSING TECHNIQUES	3.1
SURVEY RESULTS	4.1
General Discussion	4.1
Pak Claims	4.11
Ty Claims	4.12
Rope Claims	4.17
Rope Claims East	4.19
Foot Claims	4.20
Foot Claims East	4.22
Nail Claims	4.23
Hang Claims	4.24
BACKGROUND INFORMATION	5.1
Electromagnetics	5.1
Magnetics	5.20
VLF	5.23
CONCLUSIONS AND RECOMMENDATIONS	6.1

APPENDICES

A. List of Personnel
B. Statement of Cost
C. EM Anomaly List

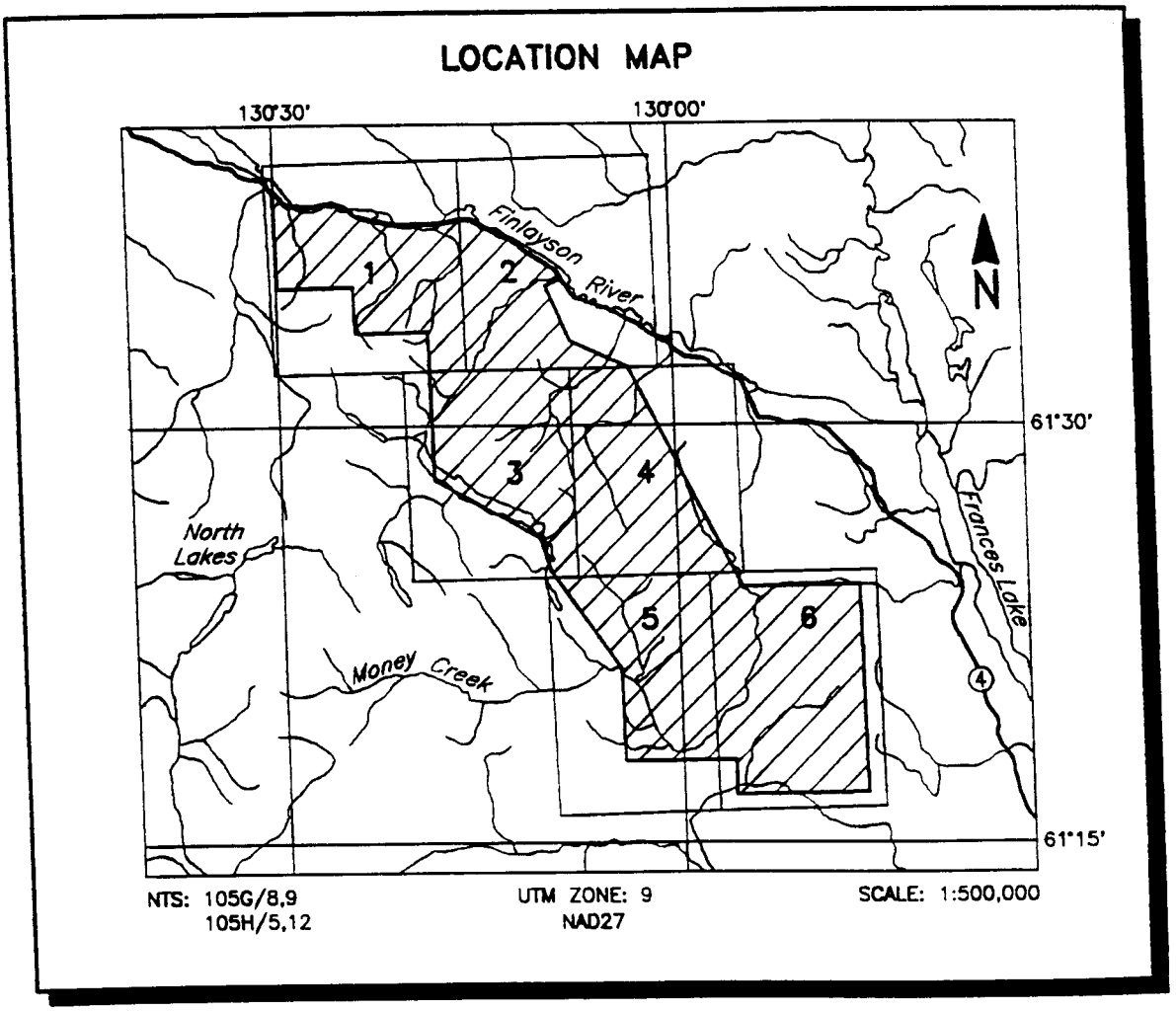


FIGURE 1
WESTMIN RESOURCES LIMITED
FOOT/ROPE/HANG/NAIL CLAIMS, YUKON
JOB 1239

INTRODUCTION

A DIGHEM^V electromagnetic/resistivity/magnetic/VLF survey was flown for Westmin Resources Limited, from November 3 to December 5, 1995, over three survey blocks located near Wolverine Lake, Yukon. The survey area can be located on NTS map sheets 105G/1,7,8,9 and 105H/5,12 (see Figures 1 through 3).

Survey coverage consisted of approximately 3660 line-km, including tie lines. Refer to Table 1-1 for a breakdown of line-km, flight line spacing and azimuthal line direction for each area.

Table 1-1

Block	Flight Line Direction	Line Spacing (m)	Survey Line-km	Tie Line-km
Rope, Foot, Nail and Hang Claims	35°/215°	200	3010	123
Pak Claims	30°/210°	200	132	11
Ty Claims	0°/180°	100	367	17
TOTAL			3509	151

The survey employed the DIGHEM^V electromagnetic system. Ancillary equipment consisted of a magnetometer, radar altimeter, video camera, analog and digital recorders,

a VLF receiver and an electronic navigation system. The instrumentation was installed in an Aerospatiale AS350B turbine helicopter (Registration C-FSWI) which was provided by Hi-Wood Helicopters Ltd. The helicopter flew at an average airspeed of 110 km/h with an EM bird height of approximately 30 m.

Section 2 provides details on the survey equipment, the data channels, their respective sensitivities, and the navigation/flight path recovery procedure. Noise levels of less than 2 ppm are generally maintained for wind speeds up to 35 km/h. Higher winds may cause the system to be grounded because excessive bird swinging produces difficulties in flying the helicopter. The swinging results from the 5 m^2 of area which is presented by the bird to broadside gusts.

In some portions of the survey area, the steep topography forced the pilot to exceed normal terrain clearance for reasons of safety. It is possible that some weak conductors may have escaped detection in areas where the bird height exceeded 120 m. In difficult areas where near-vertical climbs were necessary, the forward speed of the helicopter was reduced to a level which permitted excessive bird swinging. This problem, combined with the severe stresses to which the bird was subjected, gave rise to aerodynamic noise levels which are slightly higher than normal. Where warranted, reflights were carried out to minimize these adverse effects.

SURVEY EQUIPMENT

This section provides a brief description of the geophysical instruments used to acquire the survey data:

Electromagnetic System

Model:	DIGHEM^V
Type:	Towed bird, symmetric dipole configuration operated at a nominal survey altitude of 30 metres. Coil separation is 8 metres for 900 Hz, 5500 Hz and 7200 Hz, and 6.3 metres for the 56,000 Hz coil-pair.
Coil orientations/frequencies:	coaxial / 900 Hz coplanar / 900 Hz coaxial / 5,500 Hz coplanar / 7,200 Hz coplanar / 56,000 Hz
Channels recorded:	5 inphase channels 5 quadrature channels 2 monitor channels
Sensitivity:	0.06 ppm at 900 Hz 0.10 ppm at 5,500 Hz 0.10 ppm at 7,200 Hz 0.30 ppm at 56,000 Hz
Sample rate:	10 per second

The electromagnetic system utilizes a multi-coil coaxial/coplanar technique to energize conductors in different directions. The coaxial coils are vertical with their axes

in the flight direction. The coplanar coils are horizontal. The secondary fields are sensed simultaneously by means of receiver coils which are maximum coupled to their respective transmitter coils. The system yields an inphase and a quadrature channel from each transmitter-receiver coil-pair.

Magnetometer

Model:	Picodas 3340
Type:	Optically pumped Cesium vapour
Sensitivity:	0.01 nT
Sample rate:	10 per second

The magnetometer sensor is towed in a bird 20 m below the helicopter.

Magnetic Base Station

Model:	GEM System Inc.
Type:	Digital recording proton precession
Sensitivity:	0.02 nT
Sample rate:	3 per second

A digital recorder is operated in conjunction with the base station magnetometer to record the diurnal variations of the earth's magnetic field. The clock of the base station is synchronized with that of the airborne system to permit subsequent removal of diurnal drift.

VLF System

Manufacturer:	Herz Industries Ltd.	
Type:	Totem-2A	
Sensitivity:	0.1%	
Stations:	Annapolis, Maryland;	NSS, 21.4 kHz
	Cutler, Maine;	NAA, 24.0 kHz
	Lualualei, Hawaii;	NPM, 23.4 kHz

The VLF receiver measures the total field and vertical quadrature components of the secondary VLF field. Signals from two separate transmitters can be measured simultaneously. The VLF sensor is housed in the same bird as the magnetic sensor, and is towed 20 m below the helicopter.

Radar Altimeter

Manufacturer:	Honeywell/Sperry
Type:	AA 220
Sensitivity:	0.3 m

The radar altimeter measures the vertical distance between the helicopter and the ground. This information is used in the processing algorithm which determines conductor depth.

Analog Recorder

Manufacturer:	RMS Instruments
Type:	DGR33 dot-matrix graphics recorder
Resolution:	4x4 dots/mm
Speed:	1.5 mm/sec

The analog profiles are recorded on chart paper in the aircraft during the survey. Table 2-1 lists the geophysical data channels and the vertical scale of each profile.

Table 2-1. The Analog Profiles

Channel Name	Parameter	Scale units/mm	Designation on digital profile
1X9I	coaxial inphase (900 Hz)	2.5 ppm	CXI (900 Hz)
1X9Q	coaxial quad (900 Hz)	2.5 ppm	CXQ (900 Hz)
3P9I	coplanar inphase (900 Hz)	2.5 ppm	CPI (900 Hz)
3P9Q	coplanar quad (900 Hz)	2.5 ppm	CPQ (900 Hz)
2P7I	coplanar inphase (7200 Hz)	5 ppm	CPI (7200 Hz)
2P7Q	coplanar quad (7200 Hz)	5 ppm	CPQ (7200 Hz)
4X7I	coaxial inphase (5500 Hz)	5 ppm	CXI (5500 Hz)
4X7Q	coaxial quad (5500 Hz)	5 ppm	CXQ (5500 Hz)
5P5I	coplanar inphase(56000 Hz)	10 ppm	CPI (56 kHz)
5P5Q	coplanar quad (56000 Hz)	10 ppm	CPQ (56 kHz)
ALTR	altimeter	3 m	ALT
CMGC	magnetics, coarse	20 nT	MAG
CMGF	magnetics, fine	2.0 nT	
VF1T	VLF-total: primary stn.	2%	
VF1Q	VLF-quad: primary stn.	2%	
VF2T	VLF-total: secondary stn.	2%	
VF2Q	VLF-quad: secondary stn.	2%	
CXSP	coaxial sferics monitor		CXS
CPSP	coplanar sferics monitor		CPS
CXPL	coaxial powerline monitor		CXP
CPPL	coplanar powerline monitor		CPP

Table 2-2. The Digital Profiles

Channel Name (Freq)	Observed parameters	Scale units/mm
MAG	magnetics, fine	5 nT
MAG	magnetics, coarse	50 nT
ALT	bird height	6 m
CXI (900 Hz)	vertical coaxial coil-pair inphase	2 ppm
CXQ (900 Hz)	vertical coaxial coil-pair quadrature	2 ppm
CPI (900 Hz)	horizontal coplanar coil-pair inphase	2 ppm
CPQ (900 Hz)	horizontal coplanar coil-pair quadrature	2 ppm
CXI (5500 Hz)	vertical coaxial coil-pair inphase	4 ppm
CXQ (5500 Hz)	vertical coaxial coil-pair quadrature	4 ppm
CPI (7200 Hz)	horizontal coplanar coil-pair inphase	4 ppm
CPQ (7200 Hz)	horizontal coplanar coil-pair quadrature	4 ppm
CPI (56 kHz)	horizontal coplanar coil-pair inphase	10 ppm
CPQ (56 kHz)	horizontal coplanar coil-pair quadrature	10 ppm
CXS	coaxial sferics monitor	
CXP	coaxial powerline monitor	
CPS	coplanar sferics monitor	
	Computed Parameters	
DFI (900 Hz)	difference function inphase from CXI and CPI	2 ppm
DFQ (900 Hz)	difference function quadrature from CXQ and CPQ	2 ppm
RES (900 Hz)	log resistivity	.06 decade
RES (7200 Hz)	log resistivity	.06 decade
RES (56 kHz)	log resistivity	.06 decade
DP (900 Hz)	apparent depth	6 m
DP (7200 Hz)	apparent depth	6 m
DP (56 kHz)	apparent depth	6 m
CDT	conductance	1 grade

Digital Data Acquisition System

Manufacturer: RMS Instruments

Model: DGR 33

Recorder: RMS TCR-12, 6400 bpi, tape cartridge recorder

The digital data are used to generate several computed parameters. Both measured and computed parameters are plotted as "multi-channel stacked profiles" during data processing. These parameters are shown in Table 2-2. In Table 2-2, the log resistivity scale of 0.06 decade/mm means that the resistivity changes by an order of magnitude in 16.6 mm. The resistivities at 0, 33 and 67 mm up from the bottom of the digital profile are respectively 1, 100 and 10,000 ohm-m.

Tracking Camera

Type: Panasonic Video

Model: AG 2400/WVCD132

Fiducial numbers are recorded continuously and are displayed on the margin of each image. This procedure ensures accurate correlation of analog and digital data with respect to visible features on the ground.

Navigation System (RT-DGPS)

Model:	Sercel NR106, Real-time differential positioning
Type:	SPS (L1 band), 10-channel, C/A code, 1575.42 MHz.
Sensitivity:	-132 dBm, 0.5 second update
Accuracy:	< 5 metres in differential mode, ± 50 metres in S/A (non differential) mode

The Global Positioning System (GPS) is a line of sight, satellite navigation system which utilizes time-coded signals from at least four of the twenty-four NAVSTAR satellites. In the differential mode, two GPS receivers are used. The base station unit is used as a reference which transmits real-time corrections to the mobile unit in the aircraft, via a UHF radio datalink. The on-board system calculates the flight path of the helicopter while providing real-time guidance. The raw XYZ data are recorded for both receivers, thereby permitting post-survey processing for accuracies of approximately 5 metres.

Although the base station receiver is able to calculate its own latitude and longitude, a higher degree of accuracy can be obtained if the reference unit is established on a known benchmark or triangulation point. The GPS records data relative to the WGS84 ellipsoid, which is the basis of the revised North American Datum (NAD83).

Conversion software is used to transform the WGS84 coordinates to the system displayed on the base maps.

Field Workstation

Manufacturer:	Dighem
Model:	FWS: V2.71
Type:	Pentium based P.C.

A portable PC-based field workstation is used at the survey base to verify data quality and completeness. Flight tapes are dumped to a hard drive to permit the creation of a database. This process allows the field operators to display both the positional (flight path) and geophysical data on a screen or printer.

PRODUCTS AND PROCESSING TECHNIQUES

The following products are available from the survey data. Those which are not part of the survey contract may be acquired later. Refer to Table 3-1 for a summary of the maps which accompany this report, some of which may be sent under separate cover. Most parameters can be displayed as contours, profiles, or in colour.

Base Maps

Base maps of the survey areas have been produced from published topographic maps. These provide a relatively accurate, distortion-free base which facilitates correlation of the navigation data to the UTM grid. Photomosaics are useful for visual reference and for subsequent flight path recovery, but usually contain scale distortions. Orthophotos are ideal, but their cost and the time required to produce them, usually precludes their use as base maps.

Electromagnetic Anomalies

Anomalous electromagnetic responses are selected and analysed by computer to provide a preliminary electromagnetic anomaly map. This preliminary map is used, by the geophysicist, in conjunction with the computer-generated digital profiles, to produce

Table 3-1 Survey Products

1. Preliminary Colour Products @ 1:20,000

   EM anomalies with 5500 Hz coaxial profiles
   Total field magnetic contours
   Resistivity (7200 Hz) contours

2. Final Transparent Maps (+3 prints)

   Dighem EM anomalies
   Total field magnetic contours
   Calculated vertical magnetic gradient contours
   Resistivity (900 Hz) contours for Foot/Rope/Hang/Nail Claims
   Resistivity (7200 Hz) contours for all survey blocks
   Resistivity (56,000 Hz) contours for Pak and Ty Claims
   Filtered total field VLF contours

3. Colour Maps (2 sets)

   Total field magnetics
   Calculated vertical magnetic gradient
   Resistivity (900 Hz) for Foot/Rope/Hang/Nail Claims
   Resistivity (7200 Hz) for all survey blocks
   Resistivity (56,000 Hz) for Pak and Ty Claims
   Filtered total field VLF

4. Additional Products

   Digital XYZ archive in Geosoft format (CD-ROM)
   Digital grid archives in I-POWER format (CD-ROM)
   Survey report (3 copies)
   Multi-channel stacked profiles
   Analog chart records
   Flight path video cassettes
   VISION software package

Note: Other products can be produced from existing survey data, if requested. Maps for the Pak and Ty Claims were presented at 1:10,000 and maps for Foot/Rope/Hang/Nail Claims were presented at 1:20,000.

the final interpreted EM anomaly map. This map includes bedrock surficial and cultural conductors. A map containing only bedrock conductors can be generated, if desired.

Resistivity

The apparent resistivity data were calculated using the pseudo-layer half-space model. The inputs to this resistivity algorithm are the amplitude and phase of the EM response. The algorithm calculates the apparent resistivity in ohm-m and the apparent height of the EM bird above the half-space. Any differences between the apparent height and the radar altimeter are ascribed to a highly resistive upper layer, or pseudo-layer. Errors in the radar altimeter will not affect the resistivity calculation as altitude is not an input parameter for the pseudo-layer half-space model. Apparent resistivities calculated in this manner may behave quite differently from those calculated using other models.

A resistivity map portrays all the EM information for that frequency over the entire survey area. This contrasts with the electromagnetic anomaly map which provides information only over interpreted conductors. The large dynamic range makes the resistivity parameter an excellent mapping tool.

EM Magnetite

The apparent percent magnetite by weight is computed wherever magnetite produces a negative inphase EM response. This calculation is more meaningful in resistive areas.

Total Field Magnetics

The aeromagnetic data are corrected for diurnal variation using the magnetic base station data. The regional IGRF can be removed from the data, if requested.

Enhanced Magnetics

The total field magnetic data are subjected to a processing algorithm. This algorithm enhances the response of magnetic bodies in the upper 500 m and attenuates the response of deeper bodies. The resulting enhanced magnetic map provides better definition and resolution of near-surface magnetic units. It also identifies weak magnetic features which may not be evident on the total field magnetic map. However, regional magnetic variations, and magnetic lows caused by remanence, are better defined on the total field magnetic map. The technique is described in more detail in Section 5.

Magnetic Derivatives

The total field magnetic data may be subjected to a variety of filtering techniques to yield maps of the following:

first vertical derivative (vertical gradient)

second vertical derivative

magnetic susceptibility with reduction to the pole

upward/downward continuations

All of these filtering techniques improve the recognition of near-surface magnetic bodies, with the exception of upward continuation. Any of these parameters can be produced on request. Dighem's proprietary enhanced magnetic technique is designed to provide a general "all-purpose" map, combining the more useful features of the above parameters.

VLF

The VLF data are digitally filtered to remove long wavelengths such as those caused by variations in the transmitted field strength.

Multi-channel Stacked Profiles

Distance-based profiles of the digitally recorded geophysical data are generated and plotted by computer. These profiles also contain the calculated parameters which are used in the interpretation process. These are produced as worksheets prior to interpretation, and can also be presented in the final corrected form after interpretation. The profiles display electromagnetic anomalies with their respective interpretive symbols.

Contour, Colour and Shadow Map Displays

The geophysical data are interpolated onto a regular grid using a modified Akima spline technique. The resulting grid is suitable for generating contour maps of excellent quality. The grid cell size is usually 25% of the line interval.

Colour maps are produced by interpolating the grid down to the pixel size. The parameter is then incremented with respect to specific amplitude ranges to provide colour "contour" maps. Colour maps of the total magnetic field are particularly useful in defining the lithology of the survey area.

Monochromatic shadow maps are generated by employing an artificial sun to cast shadows on a surface defined by the geophysical grid. There are many variations in the

shadowing technique. These techniques may be applied to total field or enhanced magnetic data, magnetic derivatives, VLF, resistivity, etc. The shadow of the enhanced magnetic parameter is particularly suited for defining geological structures with crisper images and improved resolution.

Conductivity-depth Sections

The apparent resistivities for all frequencies can be displayed simultaneously as coloured conductivity-depth sections. Usually, only the coplanar data are displayed as the quality tends to be higher than that of the coaxial data.

Conductivity-depth sections can be generated in two formats:

(1) Sengpiel resistivity sections, where the apparent resistivity for each frequency is plotted at the depth of the centroid of the inphase current flow[1]; and,

(2) Differential resistivity sections, where the differential resistivity is plotted at the differential depth[2].

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1 Approximate Inversion of Airborne EM Data from Multilayered Ground: Sengpiel, K.P., Geophysical Prospecting 36, 446-459, 1988.

2 The differential parameter method for multifrequency airborne resistivity mapping: Huang, H. and Fraser, D.C., Geophysics, Vol. 61, No. 1, p.100-109.

Both the Sengpiel and differential methods are derived from the pseudo-layer halfspace model. Both yield a coloured conductivity-depth section which attempts to portray a smoothed approximation of the true resistivity distribution with depth. Conductivity-depth sections are most useful in conductive layered situations, but may be unreliable in areas of moderate to high resistivity where signal amplitudes are weak. In areas where inphase responses have been suppressed by the effects of magnetite, the computed resistivities shown on the sections may be unreliable. The differential resistivity technique was developed by Dighem. It is more sensitive than the Sengpiel section to changes in the earth's resistivity and it reaches deeper.

SURVEY RESULTS

GENERAL DISCUSSION

Tables 4-1 through 4-3 summarize the EM responses in the survey areas, with respect to conductance grade and interpretation.

The anomalies shown on the electromagnetic anomaly maps are based on a near-vertical, half plane model. This model best reflects "discrete" bedrock conductors. Wide bedrock conductors or flat-lying conductive units, whether from surficial or bedrock sources, may give rise to very broad anomalous responses on the EM profiles. These may not appear on the electromagnetic anomaly map if they have a regional character rather than a locally anomalous character. These broad conductors, which more closely approximate a half space model, will be maximum coupled to the horizontal (coplanar) coil-pair and should be more evident on the resistivity parameter. Resistivity maps, therefore, may be more valuable than the electromagnetic anomaly maps, in areas where broad or flat-lying conductors are considered to be of importance.

Excellent resolution and discrimination of conductors was accomplished by using a fast sampling rate of 0.1 sec and by employing a common frequency (900 Hz) on two orthogonal coil-pairs (coaxial and coplanar). The resulting "difference channel" parameters often permit differentiation of bedrock and surficial conductors, even though they may exhibit similar conductance values.

Anomalies which occur near the ends of the survey lines (i.e., outside the survey area), should be viewed with caution. Some of the weaker anomalies could be due to aerodynamic noise, i.e., bird bending, which is created by abnormal stresses to which the bird is subjected during the climb and turn of the aircraft between lines. Such aerodynamic noise is usually manifested by an anomaly on the coaxial inphase channel only, although severe stresses can affect the coplanar inphase channels as well.

Magnetics

A GSM-19T magnetometer was operated at the survey base to record diurnal variations of the earth's magnetic field. The clock of the base station was synchronized with that of the airborne system to permit subsequent removal of diurnal drift.

The background magnetic level has been adjusted to match the International Geomagnetic Reference Field (IGRF) for the survey area. The IGRF gradient across the survey block is left intact.

The total field magnetic data have been presented as contours on the base maps. These maps show the magnetic properties of the rock units underlying the survey area.

The total field magnetic data have been subjected to a processing algorithm to produce first vertical magnetic derivative maps. This procedure enhances near-surface magnetic units and suppresses regional gradients. It also provides better definition and resolution of magnetic units and displays weak magnetic features which may not be clearly evident on the total field maps. Maps of the second vertical magnetic derivative can also be prepared from existing survey data, if requested.

There is some evidence on the magnetic maps which suggests that the survey areas have been subjected to deformation and/or alteration. These structural complexities are evident on the contour maps as variations in magnetic intensity, irregular patterns, and as offsets or changes in strike direction.

If a specific magnetic intensity can be assigned to the rock type which is believed to host the target mineralization, it may be possible to select areas of higher priority on the basis of the total field magnetic data. This is based on the assumption that the magnetite content of the host rocks will give rise to a limited range of contour values which will permit differentiation of various lithological units.

The magnetic results, in conjunction with the other geophysical parameters, should provide valuable information which can be used to effectively map the geology and structure in the survey areas.

VLF

VLF results were obtained from the transmitting stations at Cutler, Maine (NAA - 24.0 kHz), Annapolis, Maryland (NSS - 21.4 kHz) and Lualualei, Hawaii (NPM - 23.4 kHz). The VLF maps show the contoured results of the filtered total field from Cutler. On flights 8-10 and 16-18, data from Lualualei were presented.

The VLF method is quite sensitive to the angle of coupling between the conductor and the propagated EM field. Consequently, conductors which strike towards the VLF station will usually yield a stronger response than conductors which are nearly orthogonal to it.

The VLF parameter does not normally provide the same degree of resolution available from the EM data. Closely-spaced conductors, conductors of short strike length or conductors which are poorly coupled to the VLF field, may escape detection with this method. Erratic signals from the VLF transmitters can also give rise to strong, isolated anomalies which should be viewed with caution. The filtered total field VLF contours are presented with a contour interval of one percent.

Resistivity

Resistivity maps, which display the conductive properties of the survey area, were produced from the 900 Hz, 7200 Hz and 56,000 Hz coplanar data. The maximum resistivity values, which are calculated for each frequency, are 1,000, 8,000 and 20,000 ohm-m respectively. These cutoffs eliminate the meaningless higher resistivities which would result from very small EM amplitudes. The minimum resistivity value is 0.000017 times the frequency. This minimum resistivity cutoff eliminates errors due to the lack of an absolute phase control for the EM data.

Electromagnetics

The EM anomalies resulting from this survey appear to fall within one of two general categories. The first type consists of discrete, well-defined anomalies which yield marked inflections on the difference channels. These anomalies are usually attributed to conductive sulphides or graphite and are generally given a "B" or "D" interpretive symbol, denoting a bedrock source.

The second class of anomalies comprises moderately broad responses which exhibit the characteristics of a half space and do not yield well-defined inflections on the difference channels. Anomalies in this category are usually given an "S" or "H"

interpretive symbol. The lack of a difference channel response usually implies a broad or flat-lying conductive source such as overburden. Some of these anomalies may reflect conductive rock units or zones of deep weathering.

The effects of conductive overburden are evident over portions of the survey area. Although the difference channels (DFI and DFQ) are extremely valuable in detecting bedrock conductors which are partially masked by conductive overburden, sharp undulations in the bedrock/overburden interface can yield anomalies in the difference channels which may be interpreted as possible bedrock conductors. Such anomalies usually fall into the "S?" or "B?" classification but may also be given an "E" interpretive symbol, denoting a resistivity contrast at the edge of a conductive unit.

In areas where EM responses are evident primarily on the quadrature components, zones of poor conductivity are indicated. Where these responses are coincident with magnetic anomalies, it is possible that the inphase component amplitudes have been suppressed by the effects of magnetite. Most of these poorly-conductive magnetic features give rise to resistivity anomalies which are only slightly below background. If it is expected that poorly-conductive economic mineralization may be associated with magnetite-rich units, most of these weakly anomalous features will be of interest. In areas where magnetite causes the inphase components to become negative, the apparent conductance and depth of EM anomalies may be unreliable.

It is difficult to assess the relative merits of EM anomalies on the basis of conductance. It is recommended that an attempt be made to compile a suite of geophysical "signatures" over areas of interest. Anomaly characteristics are clearly defined on the computer-processed geophysical data profiles which are supplied as one of the survey products.

The electromagnetic anomaly maps show the anomaly locations with the interpreted conductor type, dip, conductance and depth being indicated by symbols. Direct magnetic correlation is also shown if it exists. The strike direction and length of the conductors are indicated when anomalies can be correlated from line to line. When studying the map sheets, consult the anomaly listings appended to this report.

In areas where several conductors or conductive trends appear to be related to a common geological unit, these have been outlined as "zones" on the EM anomaly maps. The zone outlines usually approximate the limits of conductive units defined by the 7200 Hz resistivity contours.

A complete assessment and evaluation of the survey data should be carried out by one or more qualified professionals who have access to, and can provide a meaningful compilation of, all available geophysical, geological and geochemical data.

depth indicated. There are no well-defined EM responses within this zone. This zone occurs within a magnetically low area.

Zone B is not as conductive as Zone A, displaying resistivities as low as 200 ohm-m. It is also located within a non-magnetic area. Four conductors have been identified within Zone B. Conductor 40560A-40570A, located at the western extent of the zone, displays a broad but moderately well-defined response with depth indicated. This conductor is indicative of a thin dyke-like source. The second conductor, 40580B-40590B, yields a poorly-defined shape with a strong 7200 Hz coplanar component. The third conductor, 40580A-40620A, yields a typical response due to a thin source. It is moderately well-defined on the higher frequencies and has a more obscured response on the 900 Hz coplanar and coaxial channels. Some depth is indicated to this conductive source. The fourth conductor, 40631A-40660A, displays a broad response typical of a flat-lying conductive unit. None of these four conductors display any magnetic correlation.

Foot/Rope/Hang/Nail Claims

The large survey block was presented on six base maps. Numerous bedrock EM anomalies have been interpreted. The majority of these anomalies have conductances of less than 10 siemens except within areas that have been outlined as zones on the EM anomaly maps. Some anomalies have been joined by conductor axes where line to line

correlation exists. No attempt was made to correlate conductors line to line within the outlined conductive zones. Dip determination was difficult within these zones since, in many cases, the individual anomaly shapes were influenced by the close adjacent anomalies.

Rope Claims - Sheet 1

The 900 Hz resistivity data in Zone A displays values in the range of 5 to 10 ohm-m. Several strong, closely spaced discrete EM anomalies have been identified. Many display a calculated conductance of greater than 50 siemens. This zone ends abruptly in the east between lines 10460 and 10470. East of line 10460, the EM responses are not as strong and well-defined as within Zone A. There is no evidence of this zone within the magnetic data.

A magnetic high extends from line 10440, fiducial 1810 to line 10230, fiducial 2252 trending approximately east/west. This magnetic unit consists of several single or double line magnetic highs separated by northwest/southeast trending breaks. In areas where the magnetic amplitudes are high, there are few discrete EM anomalies. This suggests that these EM anomalies have little correlation to this magnetic unit. Possible sources for these EM anomalies are graphite or non-magnetic sulfides.

Zone B contains well-defined, strong, EM anomalies. The 900 Hz resistivity data yields resistivities of less than 20 ohm-m with depths indicated. Most of these anomalies indicate a thin dyke-like source. There is no direct magnetic correlation with these anomalies.

Conductor 10540A-10580A is located to the southeast of Zone B. The conductor is broad and poorly defined. It is situated along an approximately east/west trending break in the resistivity data. This conductor trends parallel to a magnetic high and three anomalies reveal magnetic correlations.

Zone C and D are separated between line 10400 and line 10410. Caution should be used to confirm any interpreted anomalies as bedrock that occur within close proximity of Highway 4.

Zone C displays a resistivity of 20 to 80 ohm-m on the 900 Hz resistivity map. The EM anomaly shapes indicate a strong conductor at depth. There is no direct magnetic correlation with these anomalies. The strongest anomalies within Zone C are situated in close proximity to northwest/southeast trending breaks evident in the magnetic data.

Conductor 10721A-10790J displays a broad, poorly defined EM response with magnetic correlation indicated. Due to the presence of magnetite, the inphase component

is negative which results in the conductance, depth and resistivity calculations being unreliable.

Rope Claims East - Sheet 2

Zone D is comprised of several discrete bedrock EM anomalies. The zone reveals more conductivity on the lower frequencies which suggests a conductor at depth. The conductance of the EM anomalies is strongest in two locations: one is situated between lines 10670 and 10730, and the other is located on Sheet 1 between lines 10500 and 10525. Both of these areas are located on the northern periphery of magnetic units, although none of the EM anomalies display any direct magnetic correlation.

Conductor 10640I-10670J is poorly defined and is evident mainly on the high frequency EM data. This suggests it is weakly conductive and it has little depth extent. The conductor is located along the southern side of a northwest/southeast trending magnetic unit. This conductor may be associated with the highly conductive area located between lines 10670 and 10730 within Zone D, as the conductor is on strike with this area.

Zone F is fairly conductive, with a low of 15 ohm-m as displayed on the 900 Hz resistivity data. The magnetic data reveals a gradient of approximately 70 nT over the zone. The strongest anomaly, 10691E, reveals a conductance grade of 5. It may be of

Foot Claims - Sheet 3

Zone E and G display similar characteristics. Both consist of multiple, closely spaced EM anomalies. The zones are quite conductive with calculated resistivities ranging from 4 to 40 ohm-m, as displayed by the 900 Hz resistivity contours. Both zones are quite extensive covering a large area and probably reflect formational conductors. The southern extent of both zones corresponds well with a magnetic unit trending generally in a northwest/southeast direction. This magnetic unit is quite long, extending from near line 10670, fiducial 1490, to line 11380, fiducial 3900. The maximum amplitude of this magnetic feature is over 61,000 nT. Numerous breaks, offsets and changes of direction of the contour patterns are evident along its strike length.

Zone J contains well-defined EM anomalies. It yields resistivities of less than 25 ohm-m as displayed on the 900 Hz resistivity map. The discrete EM anomaly shapes are suggestive of a thin dyke-like source. Conductor 10920C-10980E is probably an

extension of Zone J as its anomaly shapes are similar. Neither the conductor or Zone J reveal any magnetic correlation.

Several conductors have been joined with conductor axis on the EM anomaly map just to the southeast of Zone J. None of these anomalies reveal any magnetic correlation. The EM anomaly shapes are all well-defined and are indicative of a thin dyke-like source. Some of the EM anomalies suggest a northward dip.

Three conductors that have been joined with axis occur within lakes. Conductor 10980A-11010B and 11360A-110370B are both broad and poorly defined and yield some difference channel responses. Conductor 110370A-11390A also occurs in a lake but is quite strong and well-defined. All three conductors are non-magnetic and may be due to conductive clays or other lake sediments.

Zone I is the largest of all the outlined zones. It yields the highest conductance grade EM anomalies of any of the zones with conductance values of greater than 50 siemens being typical. The lowest resistivities of the entire survey area also occur within Zone I. Resistivities of less than 2.0 ohm-m are common. The EM anomaly shapes are quite strong and closely spaced and, as a result, dip determinations could not be made.

A magnetic high extends along the northern edge of Zone I from near line 11030, fiducial 2540 to line 11750, fiducial 1040. There are numerous breaks and offsets

evident with the magnetic contour patterns. This suggests that this magnetic unit has been offset and faulted along its strike length.

Foot Claims East - Sheet 4

The conductivity in the northern portion of Sheet 4 is a continuation of Zone G. A few conductors were interpreted at the southern extent of Zone G. Conductor 11430M-11441D yields a broad and poorly defined response but it may be of interest due to its setting within the magnetic data. It is located along the edge of a magnetic high that is approximately 350 nT above background. Conductors 11441A-11480J and 11450A-11500M trend in an east/west direction and are approximately 150 metres apart. These two conductors have different EM response shapes. Conductor 11441A-11480J is typical of a thin dyke-like source and yields a well-defined response on the 900 Hz data, which suggest a strong conductor at depth. Conductor 11450A-11490M has a broader response and is not as well-defined. Both conductors are non-magnetic which suggests that possible sources include graphite and/or non-magnetic sulphides.

Conductor 11590O-11600Q reveals the highest conductance grades of all the anomalies that are outside of the conductive zones within Sheet 4. It displays a high amplitude, broad response on the 900 Hz channels which indicates a strong conductor at depth. The conductor may extend to anomaly 11610T, although it is separated by a small break in the magnetic data.

Conductor 11470J-11530I extends parallel to Zone I. It occurs on the southern edge of the long magnetic feature that extends along the northern edge of Zone I. There is no direct magnetic correlation with this conductor. The conductor is quite well-defined suggesting a thin dyke-like source. Conductor 11550I-11560K is located along the southern edge of the same magnetic unit but occurs on the eastern side of a north/south break in the magnetic data. It yields a higher conductance grade than conductor 11470J-11530I but is very similar in anomaly shape and is probably an extension of the same conductive unit.

Zone L displays resistivities as low as 40 ohm-m. Many of the EM anomalies yield high ampllitude responses, but are broad with moderately well-defined anomaly shapes. The magnetic gradient across this zone is quite low, ranging from approximately 58,190 nT up to 58,215 nT.

Nail Claims - Sheet 5

The resistivity map displays a long conductive unit near the west side of the sheet. This is a continuation of Zone I which occurs on Sheets 3 and 4.

Conductor 11480A-11730A is long with a strike length of just over 5 km. It reveals several well-defined, strong EM anomalies. The anomaly shapes suggest a thin

dyke-like source. Many anomalies indicate a dip direction towards the north. This conductor is located within a magnetically quiet area.

A magnetically active area is located near the southwest corner of Sheet 5. The magnetic contour patterns are quite complex revealing many breaks and offsets. These breaks and offsets indicate that this area is lithologically and/or structurally complex. Numerous conductor axis have been identified within this region. Many of the conductors reveal magnetic correlations.

Anomaly 12070E may be of interest. It appears as a single line response although there is some surficial conductivity to the northwest. This anomaly reveals a strong single peak on the coplanar channels, particularly on the lower frequencies. A depth of approximately 50-55 metres is indicated from the 900 Hz data.

Hang Claims - Sheet 6

BACKGROUND INFORMATION

This section provides background information on parameters which are available from the survey data. Those which have not been supplied as survey products may be generated later from raw data on the digital archive tape.

ELECTROMAGNETICS

DIGHEM electromagnetic responses fall into two general classes, discrete and broad. The discrete class consists of sharp, well-defined anomalies from discrete conductors such as sulfide lenses and steeply dipping sheets of graphite and sulfides. The broad class consists of wide anomalies from conductors having a large horizontal surface such as flatly dipping graphite or sulfide sheets, saline water-saturated sedimentary formations, conductive overburden and rock, and geothermal zones. A vertical conductive slab with a width of 200 m would straddle these two classes.

The vertical sheet (half plane) is the most common model used for the analysis of discrete conductors. All anomalies plotted on the electromagnetic map are analyzed according to this model. The following section entitled **Discrete Conductor Analysis** describes this model in detail, including the effect of using it on anomalies caused by broad conductors such as conductive overburden.

The conductive earth (half space) model is suitable for broad conductors. Resistivity contour maps result from the use of this model. A later section entitled **Resistivity Mapping** describes the method further, including the effect of using it on anomalies caused by discrete conductors such as sulfide bodies.

Geometric interpretation

The geophysical interpreter attempts to determine the geometric shape and dip of the conductor. Figure 5-1 shows typical DIGHEM anomaly shapes which are used to guide the geometric interpretation.

Discrete conductor analysis

The EM anomalies appearing on the electromagnetic map are analyzed by computer to give the conductance (i.e., conductivity-thickness product) in Siemens (mhos) of a vertical sheet model. This is done regardless of the interpreted geometric shape of the conductor. This is not an unreasonable procedure, because the computed conductance increases as the electrical quality of the conductor increases, regardless of its true shape. DIGHEM anomalies are divided into seven grades of conductance, as shown in Table 5-1 below. The conductance in Siemens (mhos) is the reciprocal of resistance in ohms.

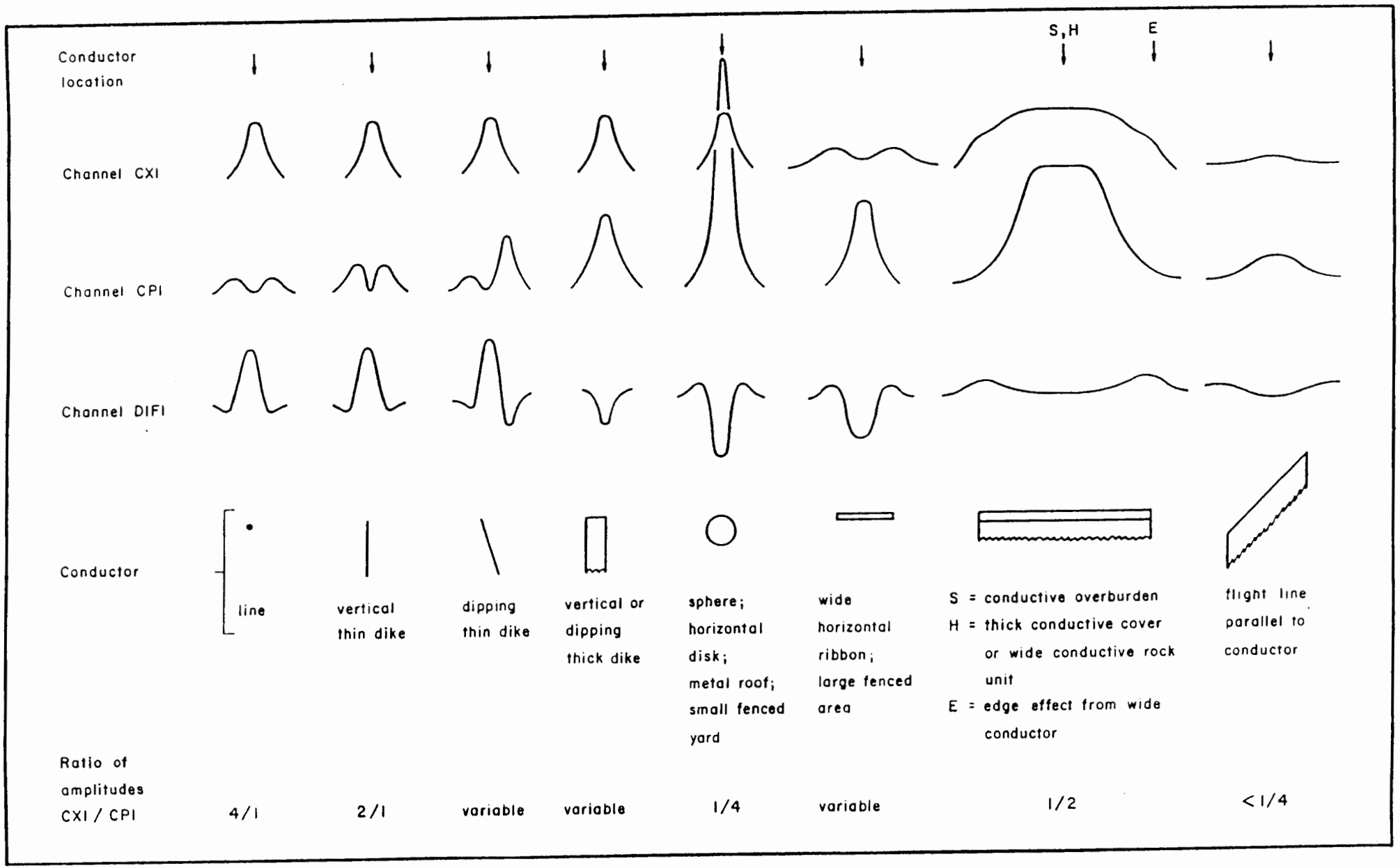


Fig. 5-1 Typical DIGHEM anomaly shapes

Table 5-1. EM Anomaly Grades

Anomaly Grade	Siemens
7	> 100
6	50 - 100
5	20 - 50
4	10 - 20
3	5 - 10
2	1 - 5
1	< 1

The conductance value is a geological parameter because it is a characteristic of the conductor alone. It generally is independent of frequency, flying height or depth of burial, apart from the averaging over a greater portion of the conductor as height increases. Small anomalies from deeply buried strong conductors are not confused with small anomalies from shallow weak conductors because the former will have larger conductance values.

Conductive overburden generally produces broad EM responses which may not be shown as anomalies on the EM maps. However, patchy conductive overburden in otherwise resistive areas can yield discrete anomalies with a conductance grade (cf. Table 5-1) of 1, 2 or even 3 for conducting clays which have resistivities as low as 50 ohm-m. In areas where ground resistivities are below 10 ohm-m, anomalies caused by weathering variations and similar causes can have any conductance grade. The anomaly shapes from the multiple coils often allow such conductors to be recognized, and these are indicated by the letters S, H, and sometimes E on the electromagnetic anomaly map (see EM map legend).

For bedrock conductors, the higher anomaly grades indicate increasingly higher conductances. Examples: DIGHEM's New Insco copper discovery (Noranda, Canada) yielded a grade 5 anomaly, as did the neighbouring copper-zinc Magusi River ore body; Mattabi (copper-zinc, Sturgeon Lake, Canada) and Whistle (nickel, Sudbury, Canada) gave grade 6; and DIGHEM's Montcalm nickel-copper discovery (Timmins, Canada) yielded a grade 7 anomaly. Graphite and sulfides can span all grades but, in any particular survey area, field work may show that the different grades indicate different types of conductors.

Strong conductors (i.e., grades 6 and 7) are characteristic of massive sulfides or graphite. Moderate conductors (grades 4 and 5) typically reflect graphite or sulfides of a less massive character, while weak bedrock conductors (grades 1 to 3) can signify poorly connected graphite or heavily disseminated sulfides. Grades 1 and 2 conductors may not respond to ground EM equipment using frequencies less than 2000 Hz.

The presence of sphalerite or gangue can result in ore deposits having weak to moderate conductances. As an example, the three million ton lead-zinc deposit of Restigouche Mining Corporation near Bathurst, Canada, yielded a well-defined grade 2 conductor. The 10 percent by volume of sphalerite occurs as a coating around the fine grained massive pyrite, thereby inhibiting electrical conduction.

Faults, fractures and shear zones may produce anomalies which typically have low conductances (e.g., grades 1 to 3). Conductive rock formations can yield anomalies of any

conductance grade. The conductive materials in such rock formations can be salt water, weathered products such as clays, original depositional clays, and carbonaceous material.

On the interpreted electromagnetic map, a letter identifier and an interpretive symbol are plotted beside the EM grade symbol. The horizontal rows of dots, under the interpretive symbol, indicate the anomaly amplitude on the flight record. The vertical column of dots, under the anomaly letter, gives the estimated depth. In areas where anomalies are crowded, the letter identifiers, interpretive symbols and dots may be obliterated. The EM grade symbols, however, will always be discernible, and the obliterated information can be obtained from the anomaly listing appended to this report.

The purpose of indicating the anomaly amplitude by dots is to provide an estimate of the reliability of the conductance calculation. Thus, a conductance value obtained from a large ppm anomaly (3 or 4 dots) will tend to be accurate whereas one obtained from a small ppm anomaly (no dots) could be quite inaccurate. The absence of amplitude dots indicates that the anomaly from the coaxial coil-pair is 5 ppm or less on both the inphase and quadrature channels. Such small anomalies could reflect a weak conductor at the surface or a stronger conductor at depth. The conductance grade and depth estimate illustrates which of these possibilities fits the recorded data best.

Flight line deviations occasionally yield cases where two anomalies, having similar conductance values but dramatically different depth estimates, occur close together on the same

conductor. Such examples illustrate the reliability of the conductance measurement while showing that the depth estimate can be unreliable. There are a number of factors which can produce an error in the depth estimate, including the averaging of topographic variations by the altimeter, overlying conductive overburden, and the location and attitude of the conductor relative to the flight line. Conductor location and attitude can provide an erroneous depth estimate because the stronger part of the conductor may be deeper or to one side of the flight line, or because it has a shallow dip. A heavy tree cover can also produce errors in depth estimates. This is because the depth estimate is computed as the distance of bird from conductor, minus the altimeter reading. The altimeter can lock onto the top of a dense forest canopy. This situation yields an erroneously large depth estimate but does not affect the conductance estimate.

Dip symbols are used to indicate the direction of dip of conductors. These symbols are used only when the anomaly shapes are unambiguous, which usually requires a fairly resistive environment.

A further interpretation is presented on the EM map by means of the line-to-line correlation of anomalies, which is based on a comparison of anomaly shapes on adjacent lines. This provides conductor axes which may define the geological structure over portions of the survey area. The absence of conductor axes in an area implies that anomalies could not be correlated from line to line with reasonable confidence.

DIGHEM electromagnetic maps are designed to provide a correct impression of conductor quality by means of the conductance grade symbols. The symbols can stand alone with geology when planning a follow-up program. The actual conductance values are printed in the attached anomaly list for those who wish quantitative data. The anomaly ppm and depth are indicated by inconspicuous dots which should not distract from the conductor patterns, while being helpful to those who wish this information. The map provides an interpretation of conductors in terms of length, strike and dip, geometric shape, conductance, depth, and thickness. The accuracy is comparable to an interpretation from a high quality ground EM survey having the same line spacing.

The attached EM anomaly list provides a tabulation of anomalies in ppm, conductance, and depth for the vertical sheet model. The EM anomaly list also shows the conductance and depth for a thin horizontal sheet (whole plane) model, but only the vertical sheet parameters appear on the EM map. The horizontal sheet model is suitable for a flatly dipping thin bedrock conductor such as a sulfide sheet having a thickness less than 10 m. The list also shows the resistivity and depth for a conductive earth (half space) model, which is suitable for thicker slabs such as thick conductive overburden. In the EM anomaly list, a depth value of zero for the conductive earth model, in an area of thick cover, warns that the anomaly may be caused by conductive overburden.

Since discrete bodies normally are the targets of EM surveys, local base (or zero) levels are used to compute local anomaly amplitudes. This contrasts with the use of true zero levels

which are used to compute true EM amplitudes. Local anomaly amplitudes are shown in the EM anomaly list and these are used to compute the vertical sheet parameters of conductance and depth. Not shown in the EM anomaly list are the true amplitudes which are used to compute the horizontal sheet and conductive earth parameters.

Questionable Anomalies

DIGHEM maps may contain EM responses which are displayed as asterisks (*). These responses denote weak anomalies of indeterminate conductance, which may reflect one of the following: a weak conductor near the surface, a strong conductor at depth (e.g., 100 to 120 m below surface) or to one side of the flight line, or aerodynamic noise. Those responses that have the appearance of valid bedrock anomalies on the flight profiles are indicated by appropriate interpretive symbols (see EM map legend). The others probably do not warrant further investigation unless their locations are of considerable geological interest.

The thickness parameter

DIGHEM can provide an indication of the thickness of a steeply dipping conductor. The amplitude of the coplanar anomaly (e.g., CPI channel on the digital profile) increases relative to the coaxial anomaly (e.g., CXI) as the apparent thickness increases, i.e., the thickness in the horizontal plane. (The thickness is equal to the conductor width if the conductor dips at 90

degrees and strikes at right angles to the flight line.) This report refers to a conductor as thin when the thickness is likely to be less than 3 m, and thick when in excess of 10 m. Thick conductors are indicated on the EM map by parentheses "( )". For base metal exploration in steeply dipping geology, thick conductors can be high priority targets because many massive sulfide ore bodies are thick, whereas non-economic bedrock conductors are often thin. The system cannot sense the thickness when the strike of the conductor is subparallel to the flight line, when the conductor has a shallow dip, when the anomaly amplitudes are small, or when the resistivity of the environment is below 100 ohm-m.

Resistivity mapping

Areas of widespread conductivity are commonly encountered during surveys. In such areas, anomalies can be generated by decreases of only 5 m in survey altitude as well as by increases in conductivity. The typical flight record in conductive areas is characterized by inphase and quadrature channels which are continuously active. Local EM peaks reflect either increases in conductivity of the earth or decreases in survey altitude. For such conductive areas, apparent resistivity profiles and contour maps are necessary for the correct interpretation of the airborne data. The advantage of the resistivity parameter is that anomalies caused by altitude changes are virtually eliminated, so the resistivity data reflect only those anomalies caused by conductivity changes. The resistivity analysis also helps the interpreter to differentiate between conductive trends in the bedrock and those patterns typical of conductive overburden. For

example, discrete conductors will generally appear as narrow lows on the contour map and broad conductors (e.g., overburden) will appear as wide lows.

The resistivity profiles and the resistivity contour maps present the apparent resistivity using the so-called pseudo-layer (or buried) half space model defined by Fraser (1978)[1]. This model consists of a resistive layer overlying a conductive half space. The depth channels give the apparent depth below surface of the conductive material. The apparent depth is simply the apparent thickness of the overlying resistive layer. The apparent depth (or thickness) parameter will be positive when the upper layer is more resistive than the underlying material, in which case the apparent depth may be quite close to the true depth.

The apparent depth will be negative when the upper layer is more conductive than the underlying material, and will be zero when a homogeneous half space exists. The apparent depth parameter must be interpreted cautiously because it will contain any errors which may exist in the measured altitude of the EM bird (e.g., as caused by a dense tree cover). The inputs to the resistivity algorithm are the inphase and quadrature components of the coplanar coil-pair. The outputs are the apparent resistivity of the conductive half space (the source) and the sensor-source distance. The flying height is not an input variable, and the output resistivity and sensor-source distance are independent of the flying height. The apparent depth, discussed above, is

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[1] Resistivity mapping with an airborne multicoil electromagnetic system: Geophysics, v. 43, p.144-172

simply the sensor-source distance minus the measured altitude or flying height. Consequently, errors in the measured altitude will affect the apparent depth parameter but not the apparent resistivity parameter.

The apparent depth parameter is a useful indicator of simple layering in areas lacking a heavy tree cover. The DIGHEM system has been flown for purposes of permafrost mapping, where positive apparent depths were used as a measure of permafrost thickness. However, little quantitative use has been made of negative apparent depths because the absolute value of the negative depth is not a measure of the thickness of the conductive upper layer and, therefore, is not meaningful physically. Qualitatively, a negative apparent depth estimate usually shows that the EM anomaly is caused by conductive overburden. Consequently, the apparent depth channel can be of significant help in distinguishing between overburden and bedrock conductors.

The resistivity map often yields more useful information on conductivity distributions than the EM map. In comparing the EM and resistivity maps, keep in mind the following:

(a) The resistivity map portrays the apparent value of the earth's resistivity, where resistivity = 1/conductivity.

(b) The EM map portrays anomalies in the earth's resistivity. An anomaly by definition is a change from the norm and so the EM map displays anomalies, (i)

over narrow, conductive bodies and (ii) over the boundary zone between two wide formations of differing conductivity.

The resistivity map might be likened to a total field map and the EM map to a horizontal gradient in the direction of flight[2]. Because gradient maps are usually more sensitive than total field maps, the EM map therefore is to be preferred in resistive areas. However, in conductive areas, the absolute character of the resistivity map usually causes it to be more useful than the EM map.

Interpretation in conductive environments

Environments having background resistivities below 30 ohm-m cause all airborne EM systems to yield very large responses from the conductive ground. This usually prohibits the recognition of discrete bedrock conductors. However, DIGHEM data processing techniques produce three parameters which contribute significantly to the recognition of bedrock conductors. These are the inphase and quadrature difference channels (DFI and DFQ), and the resistivity and depth channels (RES and DP) for each coplanar frequency.

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[2] The gradient analogy is only valid with regard to the identification of anomalous locations.

The EM difference channels (DFI and DFQ) eliminate most of the responses from conductive ground, leaving responses from bedrock conductors, cultural features (e.g., telephone lines, fences, etc.) and edge effects. Edge effects often occur near the perimeter of broad conductive zones. This can be a source of geologic noise. While edge effects yield anomalies on the EM difference channels, they do not produce resistivity anomalies. Consequently, the resistivity channel aids in eliminating anomalies due to edge effects. On the other hand, resistivity anomalies will coincide with the most highly conductive sections of conductive ground, and this is another source of geologic noise. The recognition of a bedrock conductor in a conductive environment therefore is based on the anomalous responses of the two difference channels (DFI and DFQ) and the resistivity channels (RES). The most favourable situation is where anomalies coincide on all channels.

The DP channels, which give the apparent depth to the conductive material, also help to determine whether a conductive response arises from surficial material or from a conductive zone in the bedrock. When these channels ride above the zero level on the digital profiles (i.e., depth is negative), it implies that the EM and resistivity profiles are responding primarily to a conductive upper layer, i.e., conductive overburden. If the DP channels are below the zero level, it indicates that a resistive upper layer exists, and this usually implies the existence of a bedrock conductor. If the low frequency DP channel is below the zero level and the high frequency DP is above, this suggests that a bedrock conductor occurs beneath conductive cover.

The conductance channel CDT identifies discrete conductors which have been selected by computer for appraisal by the geophysicist. Some of these automatically selected anomalies on channel CDT are discarded by the geophysicist. The automatic selection algorithm is intentionally oversensitive to assure that no meaningful responses are missed. The interpreter then classifies the anomalies according to their source and eliminates those that are not substantiated by the data, such as those arising from geologic or aerodynamic noise.

Reduction of geologic noise

Geologic noise refers to unwanted geophysical responses. For purposes of airborne EM surveying, geologic noise refers to EM responses caused by conductive overburden and magnetic permeability. It was mentioned previously that the EM difference channels (i.e., channel DFI for inphase and DFQ for quadrature) tend to eliminate the response of conductive overburden. This marked a unique development in airborne EM technology, as DIGHEM is the only EM system which yields channels having an exceptionally high degree of immunity to conductive overburden.

Magnetite produces a form of geological noise on the inphase channels of all EM systems. Rocks containing less than 1% magnetite can yield negative inphase anomalies caused by magnetic permeability. When magnetite is widely distributed throughout a survey area, the inphase EM channels may continuously rise and fall, reflecting variations in the magnetite percentage, flying height, and overburden thickness. This can lead to difficulties in recognizing

deeply buried bedrock conductors, particularly if conductive overburden also exists. However, the response of broadly distributed magnetite generally vanishes on the inphase difference channel DFI. This feature can be a significant aid in the recognition of conductors which occur in rocks containing accessory magnetite.

EM magnetite mapping

The information content of DIGHEM data consists of a combination of conductive eddy current responses and magnetic permeability responses. The secondary field resulting from conductive eddy current flow is frequency-dependent and consists of both inphase and quadrature components, which are positive in sign. On the other hand, the secondary field resulting from magnetic permeability is independent of frequency and consists of only an inphase component which is negative in sign. When magnetic permeability manifests itself by decreasing the measured amount of positive inphase, its presence may be difficult to recognize. However, when it manifests itself by yielding a negative inphase anomaly (e.g., in the absence of eddy current flow), its presence is assured. In this latter case, the negative component can be used to estimate the percent magnetite content.

A magnetite mapping technique was developed for the coplanar coil-pair of DIGHEM. The technique yields a channel (designated FEO) which displays apparent weight percent

magnetite according to a homogeneous half space model.[3] The method can be complementary to magnetometer mapping in certain cases. Compared to magnetometry, it is far less sensitive but is more able to resolve closely spaced magnetite zones, as well as providing an estimate of the amount of magnetite in the rock. The method is sensitive to 1/4% magnetite by weight when the EM sensor is at a height of 30 m above a magnetitic half space. It can individually resolve steep dipping narrow magnetite-rich bands which are separated by 60 m. Unlike magnetometry, the EM magnetite method is unaffected by remanent magnetism or magnetic latitude.

The EM magnetite mapping technique provides estimates of magnetite content which are usually correct within a factor of 2 when the magnetite is fairly uniformly distributed. EM magnetite maps can be generated when magnetic permeability is evident as negative inphase responses on the data profiles.

Like magnetometry, the EM magnetite method maps only bedrock features, provided that the overburden is characterized by a general lack of magnetite. This contrasts with resistivity mapping which portrays the combined effect of bedrock and overburden.

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[3] Refer to Fraser, 1981, Magnetite mapping with a multi-coil airborne electromagnetic system: Geophysics, v. 46, p. 1579-1594.

Recognition of culture

Cultural responses include all EM anomalies caused by man-made metallic objects. Such anomalies may be caused by inductive coupling or current gathering. The concern of the interpreter is to recognize when an EM response is due to culture. Points of consideration used by the interpreter, when coaxial and coplanar coil-pairs are operated at a common frequency, are as follows:

1. Channels CXP and CPP monitor 60 Hz radiation. An anomaly on these channels shows that the conductor is radiating power. Such an indication is normally a guarantee that the conductor is cultural. However, care must be taken to ensure that the conductor is not a geologic body which strikes across a power line, carrying leakage currents.

2. A flight which crosses a "line" (e.g., fence, telephone line, etc.) yields a center-peaked coaxial anomaly and an m-shaped coplanar anomaly.[4] When the flight crosses the cultural line at a high angle of intersection, the amplitude ratio of coaxial/coplanar response is 4. Such an EM anomaly can only be caused by a line. The geologic body which yields anomalies most closely resembling a line is the vertically dipping thin dike. Such a body, however, yields an amplitude ratio of 2 rather than 4. Consequently, an

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[4] See Figure 5-1 presented earlier.

m-shaped coplanar anomaly with a CXI/CPI amplitude ratio of 4 is virtually a guarantee that the source is a cultural line.

3. A flight which crosses a sphere or horizontal disk yields center-peaked coaxial and coplanar anomalies with a CXI/CPI amplitude ratio (i.e., coaxial/coplanar) of 1/4. In the absence of geologic bodies of this geometry, the most likely conductor is a metal roof or small fenced yard.[5] Anomalies of this type are virtually certain to be cultural if they occur in an area of culture.

4. A flight which crosses a horizontal rectangular body or wide ribbon yields an m-shaped coaxial anomaly and a center-peaked coplanar anomaly. In the absence of geologic bodies of this geometry, the most likely conductor is a large fenced area.[5] Anomalies of this type are virtually certain to be cultural if they occur in an area of culture.

5. EM anomalies which coincide with culture, as seen on the camera film or video display, are usually caused by culture. However, care is taken with such coincidences because a geologic conductor could occur beneath a fence, for example. In this example, the fence would be expected to yield an m-shaped coplanar anomaly as in case #2 above.

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[5] It is a characteristic of EM that geometrically similar anomalies are obtained from: (1) a planar conductor, and (2) a wire which forms a loop having dimensions identical to the perimeter of the equivalent planar conductor.

If, instead, a center-peaked coplanar anomaly occurred, there would be concern that a thick geologic conductor coincided with the cultural line.

6. The above description of anomaly shapes is valid when the culture is not conductively coupled to the environment. In this case, the anomalies arise from inductive coupling to the EM transmitter. However, when the environment is quite conductive (e.g., less than 100 ohm-m at 900 Hz), the cultural conductor may be conductively coupled to the environment. In this latter case, the anomaly shapes tend to be governed by current gathering. Current gathering can completely distort the anomaly shapes, thereby complicating the identification of cultural anomalies. In such circumstances, the interpreter can only rely on the radiation channels and on the camera film or video records.

MAGNETICS

The existence of a magnetic correlation with an EM anomaly is indicated directly on the EM map. In some geological environments, an EM anomaly with magnetic correlation has a greater likelihood of being produced by sulfides than one that is non-magnetic. However, sulfide ore bodies may be non-magnetic (e.g., the Kidd Creek deposit near Timmins, Canada) as well as magnetic (e.g., the Mattabi deposit near Sturgeon Lake, Canada).

The magnetometer data are digitally recorded in the aircraft to an accuracy of 0.01 nT for cesium magnetometers. The digital tape is processed by computer to yield a total field magnetic contour map. When warranted, the magnetic data may also be treated mathematically to enhance the magnetic response of the near-surface geology, and an enhanced magnetic contour map is then produced. The response of the enhancement operator in the frequency domain is illustrated in Figure 5-2. This figure shows that the passband components of the airborne data are amplified 20 times by the enhancement operator. This means, for example, that a 100 nT anomaly on the enhanced map reflects a 5 nT anomaly for the passband components of the airborne data.

The enhanced map, which bears a resemblance to a downward continuation map, is produced by the digital bandpass filtering of the total field data. The enhancement is equivalent to continuing the field downward to a level (above the source) which is 1/20th of the actual sensor-source distance.

Because the enhanced magnetic map bears a resemblance to a ground magnetic map, it simplifies the recognition of trends in the rock strata and the interpretation of geological structure. It defines the near-surface local geology while de-emphasizing deep-seated regional features. It primarily has application when the magnetic rock units are steeply dipping and the earth's field dips in excess of 60 degrees.

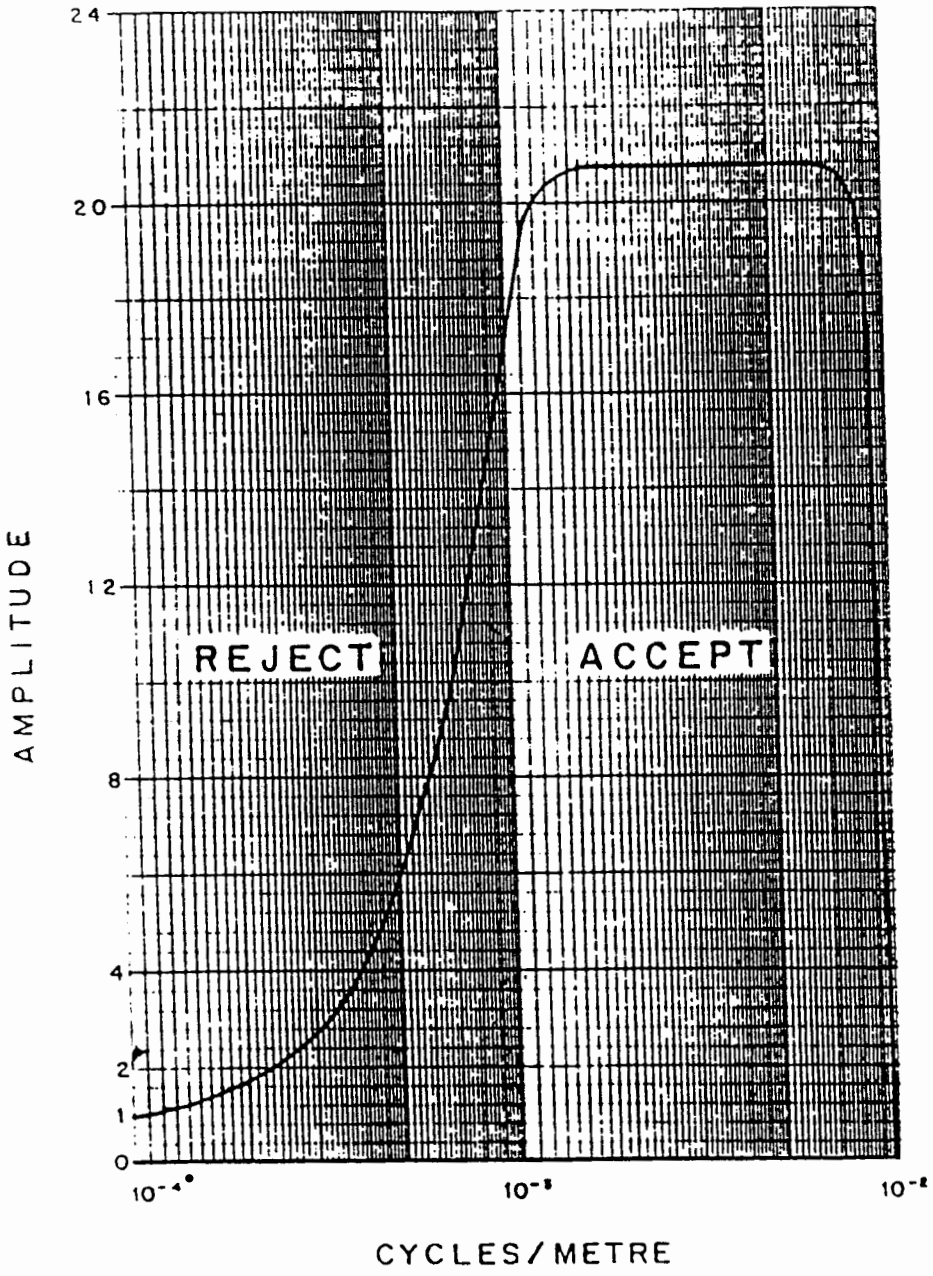


Fig. 5-2 Frequency response of magnetic enhancement operator.

Any of a number of filter operators may be applied to the magnetic data, to yield vertical derivatives, continuations, magnetic susceptibility, etc. These may be displayed in contour, colour or shadow.

VLF

VLF transmitters produce high frequency uniform electromagnetic fields. However, VLF anomalies are not EM anomalies in the conventional sense. EM anomalies primarily reflect eddy currents flowing in conductors which have been energized inductively by the primary field. In contrast, VLF anomalies primarily reflect current gathering, which is a non-inductive phenomenon. The primary field sets up currents which flow weakly in rock and overburden, and these tend to collect in low resistivity zones. Such zones may be due to massive sulfides, shears, river valleys and even unconformities.

The VLF field is horizontal. Because of this, the method is quite sensitive to the angle of coupling between the conductor and the transmitted VLF field. Conductors which strike towards the VLF station will usually yield a stronger response than conductors which are nearly orthogonal to it.

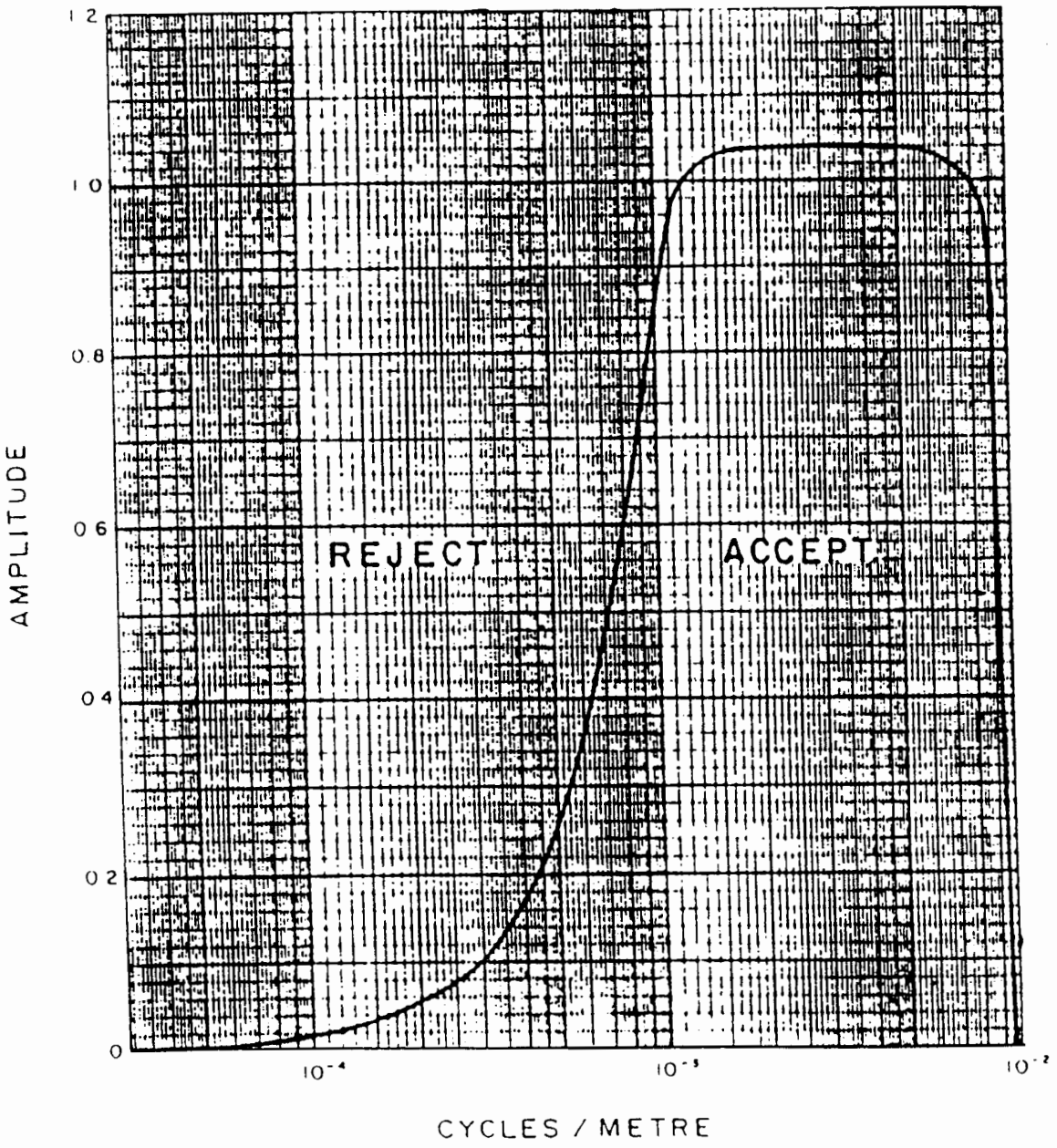


Fig. 5-3 Frequency response of VLF operator.

The Herz Industries Ltd. Totem VLF-electromagnetometer measures the total field and vertical quadrature components. Both of these components are digitally recorded in the aircraft with a sensitivity of 0.1 percent. The total field yields peaks over VLF current concentrations whereas the quadrature component tends to yield crossovers. Both appear as traces on the profile records. The total field data are filtered digitally and displayed as contours to facilitate the recognition of trends in the rock strata and the interpretation of geologic structure.

The response of the VLF total field filter operator in the frequency domain (Figure 5-3) is basically similar to that used to produce the enhanced magnetic map (Figure 5-2). The two filters are identical along the abscissa but different along the ordinant. The VLF filter removes long wavelengths such as those which reflect regional and wave transmission variations. The filter sharpens short wavelength responses such as those which reflect local geological variations.

CONCLUSIONS AND RECOMMENDATIONS

This report provides a very brief description of the survey results and describes the equipment, procedures and logistics of the survey.

The survey was successful in locating a few moderately weak or broad conductors which may warrant additional work. The underlying structure of the survey areas was revealed with the magnetic data. The various maps included with this report display the magnetic and conductive properties of the survey areas. It is recommended that the survey results be reviewed in detail, in conjunction with all available geophysical, geological and geochemical information. Particular reference should be made to the computer generated data profiles which clearly define the characteristics of the individual anomalies.

Most anomalies in the survey areas are moderately weak and poorly-defined except for the areas outlined by zones. Within these conductive zones the anomalies are generally very strong and well-defined. Some anomalies coincide with breaks in the magnetic data which may reflect faults or shears. Such structural breaks may be considered to be of particular interest if they have influenced mineral deposition within the survey area.

The interpreted bedrock conductors defined by the survey should be subjected to further investigation, using appropriate surface exploration techniques. Anomalies which are currently considered to be of moderately low priority may require upgrading if follow-up results are favourable.

It is also recommended that image processing of existing geophysical data be considered, in order to extract the maximum amount of information from the survey results. Current software and imaging techniques often provide valuable information on structure and lithology, which may not be clearly evident on the contour and colour maps. These techniques can yield images which define subtle, but significant, structural details.

Respectfully submitted,

DIGHEM

Douglas G. Garrie
Geophysicist

DGG/sdp

A1239MAR.96R

APPENDIX A

LIST OF PERSONNEL

The following personnel were involved in the acquisition, processing, interpretation and presentation of data, relating to a DIGHEM^{V} airborne geophysical survey carried out for Westmin Resources Limited, near Wolverine Lake, Yukon.

Chris Nind	Manager, Helicopter Geophysics
Greg Paleolog	Manager, Field Operations
Doug McConnell	Manager, Computer Production
Jordan Cronkwright	Geophysical Operator
John McGuire	Geophysical Operator
Mark Stephens	Field Dataman
Paul Kendall	Pilot (Hi-Wood Helicopters Ltd.)
Gordon Smith	Data Processing Supervisor
Theron Greenaway	Computer Processor
Douglas Garrie	Interpretation Geophysicist
Lyn Vanderstarren	Drafting Supervisor
Mike Armstrong	Draftsperson (CAD)
Susan Pothiah	Word Processing Operator
Albina Tonello	Secretary/Expeditor

The survey consisted of 3660 km of coverage, flown from November 3 to December 5, 1995.

All personnel are employees of Dighem, except for the pilot who is an employee of Hi-Wood Helicopters Ltd.

DIGHEM

Douglas G. Garrie
Geophysicist

DGG/sdp

A1239MAR.96R

APPENDIX C

EM ANOMALY LIST

1239 A WOLVERINE LAKE PROJECT B.C.

	COAXIAL	COPLANAR	COPLANAR	VERTICAL	HORIZONTAL	CONDUCTIVE	MAG
	1047 HZ	891 HZ	7314 HZ	DIKE	SHEET	EARTH	CORR
ANOMALY/	REAL QUAD	REAL QUAD	REAL QUAD	COND DEPTH*	COND DEPTH	RESIS DEPTH	
FID/INTERP	PPM PPM	PPM PPM	PPM PPM	SIEMEN M	SIEMEN M	OHM-M M	NT
LINE 11550 (FLIGHT 27)							
H 1472B	83 37	135 63	154 71	39.2 4	11 36	1 26	0
I 1482D	8 4	23 4	5 16	16.0 32	2 98	58 60	0

* ESTIMATED DEPTH MAY BE UNRELIABLE BECAUSE THE STRONGER PART OF THE CONDUCTOR MAY BE DEEPER OR TO ONE SIDE OF THE FLIGHT LINE, OR BECAUSE OF A SHALLOW DIP OR OVERBURDEN EFFECTS.

1239 A WOLVERINE LAKE PROJECT B.C.

ANOMALY/ FID/INTERP	COAXIAL 1047 HZ REAL PPM	COAXIAL 1047 HZ QUAD PPM	COPLANAR 891 HZ REAL PPM	COPLANAR 891 HZ QUAD PPM	COPLANAR 7314 HZ REAL PPM	COPLANAR 7314 HZ QUAD PPM	VERTICAL DIKE COND SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 11560 (FLIGHT 27)													
H 2337D	55	17	119	40	96	15	54.0	3	14	38	1	29	0
I 2335D	55	17	98	29	91	1	54.0	4	13	45	1	36	0
J 2331D	1	2	1	2	2	4	-	-	-	-	-	-	0
K 2329D	10	6	32	8	51	12	14.5	32	3	95	17	69	280
L 2320B?	1	2	1	2	2	4	-	-	-	-	-	-	0
LINE 11570 (FLIGHT 27)													
I 2556D	68	18	126	45	125	32	76.4	4	3	57	13	36	0
J 2559B	68	28	126	46	125	34	40.0	1	12	35	1	25	0
K 2566D?	1	2	1	2	2	4	-	-	-	-	-	-	0
L 2569D	1	2	1	2	2	4	-	-	-	-	-	-	0
M 2599S	1	2	1	2	2	4	-	-	-	-	-	-	0

.* ESTIMATED DEPTH MAY BE UNRELIABLE BECAUSE THE STRONGER PART OF THE CONDUCTOR MAY BE DEEPER OR TO ONE SIDE OF THE FLIGHT LINE, OR BECAUSE OF A SHALLOW DIP OR OVERBURDEN EFFECTS.

1239 A WOLVERINE LAKE PROJECT B.C.

		COAXIAL 1047 HZ		COPLANAR 891 HZ		COPLANAR 7314 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH		MAG CORR
ANOMALY/ FID/INTERP		REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND SIEMEN	DEPTH* M	COND SIEMEN	DEPTH M	RESIS OHM-M	DEPTH M	NT
LINE 11581 (FLIGHT 31)														
L	1281B	34	10	74	22	4	21	53.4	4	12	42	1	32	0
LINE 11590 (FLIGHT 28)														
G	480D	38	8	100	24	87	2	84.5	7	18	36	1	29	19
H	481D	26	8	100	24	87	2	40.8	11	19	36	1	30	0
I	485D	24	4	8	21	76	9	98.0	18	13	61	1	52	0
J	489D	1	2	1	2	2	4	-	-	-	-	-	-	0
K	499D	0	2	1	1	2	4	-	-	-	-	-	-	0
L	508D	5	4	0	3	8	8	7.0	45	1	174	1024	0	0

* ESTIMATED DEPTH MAY BE UNRELIABLE BECAUSE THE STRONGER PART OF THE CONDUCTOR MAY BE DEEPER OR TO ONE SIDE OF THE FLIGHT LINE, OR BECAUSE OF A SHALLOW DIP OR OVERBURDEN EFFECTS.

1239 A WOLVERINE LAKE PROJECT B.C.

ANOMALY/ FID/INTERP	COAXIAL 1047 HZ REAL PPM	COAXIAL 1047 HZ QUAD PPM	COPLANAR 891 HZ REAL PPM	COPLANAR 891 HZ QUAD PPM	COPLANAR 7314 HZ REAL PPM	COPLANAR 7314 HZ QUAD PPM	VERTICAL DIKE COND SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 11600 (FLIGHT 28)													
J 1107D?	1	2	1	2	2	4	-	-	-	-	-	-	0
K 1104D	8	3	34	6	42	12	21.5	37	5	104	9	81	0
L 1083S	0	2	0	2	2	4	-	-	-	-	-	-	8
M 1011S	0	2	0	2	2	4	-	-	-	-	-	-	0
N 903B?	1	6	0	9	20	38	0.9	12	1	43	738	0	0
O 854B?	3	4	5	9	18	11	2.9	23	1	50	607	0	0
P 840B	1	2	1	2	2	4	-	-	-	-	-	-	0
Q 830B	15	4	28	7	18	17	50.7	8	6	49	6	31	0
LINE 11610 (FLIGHT 28)													
A 1270D	47	25	144	86	158	52	25.2	2	9	28	2	17	0
B 1294D	3	6	3	6	31	33	2.1	17	1	94	757	1	0
C 1301B?	1	8	5	19	20	59	0.6	0	1	36	183	0	0
D 1312D	46	16	116	45	100	14	43.9	0	11	27	1	17	0
E 1314D	42	16	116	45	100	4	38.1	0	12	30	1	20	0
F 1320D	9	4	98	9	80	13	24.0	34	5	54	6	37	0
G 1324D	39	29	86	63	125	91	15.6	12	3	41	13	23	0
H 1330D	19	10	58	30	69	23	20.1	13	4	65	13	43	10
I 1333D	19	10	58	30	69	23	19.0	7	8	33	3	20	12
J 1338D	12	7	41	5	76	11	13.3	22	18	39	1	33	0
K 1340D	12	8	41	22	77	11	13.1	28	14	49	1	41	0
L 1347D	11	5	45	6	37	7	22.2	16	4	91	12	66	0
M 1369S?	1	2	0	2	2	4	-	-	-	-	-	-	0
N 1381S	0	2	0	2	2	4	-	-	-	-	-	-	5
O 1402S?	0	2	0	1	3	7	0.4	0	1	142	1024	0	0
P 1522B?	0	2	1	2	2	4	-	-	-	-	-	-	140

.* ESTIMATED DEPTH MAY BE UNRELIABLE BECAUSE THE STRONGER PART OF THE CONDUCTOR MAY BE DEEPER OR TO ONE SIDE OF THE FLIGHT LINE, OR BECAUSE OF A SHALLOW DIP OR OVERBURDEN EFFECTS.

1239 A WOLVERINE LAKE PROJECT B.C.

	COAXIAL 1047 HZ		COPLANAR 891 HZ		COPLANAR 7314 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH		MAG CORR
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND SIEMEN	DEPTH* M	COND SIEMEN	DEPTH M	RESIS OHM-M	DEPTH M	NT
LINE 11630 (FLIGHT 28)													
I 2314B	37	15	78	44	89	32	34.5	13	9	47	2	35	11
J 2323D	18	6	11	2	5	21	30.9	12	4	74	9	53	0
K 2339S?	1	2	0	2	2	4	-	-	-	-	-	-	0
[redacted]													
LINE 11640 (FLIGHT 28)													
[redacted]													
G 3005B	17	9	48	20	53	24	18.0	16	9	53	2	40	0
H 3002D	17	9	48	20	53	24	17.0	10	4	74	10	53	0
I 2986B?	0	5	1	5	12	28	0.4	0	1	77	595	0	0
[redacted]													
LINE 11650 (FLIGHT 29)													
[redacted]													
I 552D	15	6	30	17	35	10	26.6	14	4	62	10	41	0
J 555D	12	7	30	16	35	12	15.1	15	7	54	4	39	0
K 560D	10	5	32	16	34	14	13.9	16	5	89	9	67	0
L 573S?	1	2	1	2	2	11	1.4	40	1	183	116	126	4
[redacted]													

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1239 A WOLVERINE LAKE PROJECT B.C.

ANOMALY/ FID/INTERP	COAXIAL 1047 HZ REAL PPM	COAXIAL 1047 HZ QUAD PPM	COPLANAR 891 HZ REAL PPM	COPLANAR 891 HZ QUAD PPM	COPLANAR 7314 HZ REAL PPM	COPLANAR 7314 HZ QUAD PPM	VERTICAL DIKE COND SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
[redacted]													
LINE 11620 (FLIGHT 28)													
[redacted]													
K 2088D	30	17	66	45	87	41	20.9	7	3	40	15	20	20
L 2083B	18	11	114	25	95	15	14.8	13	17	36	1	29	0
M 2077D	9	5	65	18	59	18	13.7	16	5	84	6	65	0
N 2066B?	0	2	1	2	2	4	-	-	-	-	-	-	0
O 2060B?	0	2	1	2	2	4	-	-	-	-	-	-	0
[redacted]													
LINE 11630 (FLIGHT 28)													
[redacted]													

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1239 A WOLVERINE LAKE PROJECT B.C.

ANOMALY/ FID/INTERP		COAXIAL 1047 HZ REAL PPM	COAXIAL 1047 HZ QUAD PPM	COPLANAR 891 HZ REAL PPM	COPLANAR 891 HZ QUAD PPM	COPLANAR 7314 HZ REAL PPM	COPLANAR 7314 HZ QUAD PPM	VERTICAL DIKE COND SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
[redacted]														
LINE 11660 (FLIGHT 29)														
[redacted]														
B	1274B	10	11	30	32	14	7	6.1	0	2	25	25	1	0
[redacted]														
H	1234D	22	9	34	23	49	22	28.6	0	4	73	12	50	0
I	1232B	22	9	34	23	49	22	28.2	10	6	51	5	35	0
J	1229D	1	2	1	2	2	4	-	-	-	-	-	-	0
K	1207S	0	2	1	2	2	4	-	-	-	-	-	-	60
L	983S?	0	3	0	1	3	7	0.4	0	1	174	1024	0	0
[redacted]														
LINE 11670 (FLIGHT 29)														
[redacted]														
B	1468D	7	9	16	25	49	30	4.5	3	1	30	372	0	0
C	1483B	15	4	64	17	41	1	52.7	11	12	27	1	18	0
[redacted]														
F	1501B	28	9	52	20	49	11	44.1	7	9	50	2	37	4
G	1510D	21	12	38	27	54	22	17.9	4	3	67	14	44	0
H	1512B	21	13	38	27	54	22	16.4	11	5	54	7	36	0
I	1538S?	6	8	0	2	5	16	5.0	25	1	122	773	14	0
[redacted]														
LINE 11680 (FLIGHT 29)														
[redacted]														
B	2267B	11	7	33	22	40	22	11.9	5	1	35	64	2	0
C	2255B	15	3	36	10	33	8	78.9	6	10	31	2	19	0
D	2252D	2	2	36	3	33	9	3.3	38	7	50	4	35	0
E	2246B	34	11	63	33	81	12	43.5	1	10	32	1	21	0
F	2242D	25	7	36	14	81	10	49.1	11	10	54	2	43	13
G	2235B	26	13	62	36	70	30	22.3	16	5	49	6	33	0

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1239 A WOLVERINE LAKE PROJECT B.C.

ANOMALY/ FID/INTERP	COAXIAL 1047 HZ REAL PPM	COAXIAL 1047 HZ QUAD PPM	COPLANAR 891 HZ REAL PPM	COPLANAR 891 HZ QUAD PPM	COPLANAR 7314 HZ REAL PPM	COPLANAR 7314 HZ QUAD PPM	VERTICAL DIKE COND SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 11680 (FLIGHT 29)													
H 2232D?	26	10	62	36	70	30	31.6	11	4	75	9	55	0
[redacted]													
LINE 11690 (FLIGHT 29)													
[redacted]													
C 2456D	20	15	55	45	78	43	12.7	5	3	34	21	11	0
D 2463D	11	5	50	15	35	7	22.2	17	7	36	4	22	0
E 2466D	17	4	50	15	35	6	55.9	13	10	40	2	29	0
F 2475B	1	2	1	2	2	4	-	-	-	-	-	-	0
G 2480B?	1	2	1	2	2	4	-	-	-	-	-	-	0
H 2492B	12	3	24	10	17	11	49.9	19	3	61	14	38	0
[redacted]													
LINE 11700 (FLIGHT 29)													
[redacted]													
B 3225B?	10	6	16	18	40	23	14.6	3	2	41	26	14	0
C 3220D	30	12	50	31	64	25	33.7	6	5	39	6	23	0
D 3206B	5	6	18	12	34	20	4.8	23	7	50	4	35	0
E 3204B	9	7	18	12	34	20	10.2	23	6	45	4	30	0
F 3200B	34	9	50	35	66	26	63.8	8	3	43	13	22	0
G 3196D	34	6	50	35	66	26	106.9	1	3	93	18	66	370
H 3162S?	0	4	1	2	13	13	1.0	0	1	50	230	22	0
[redacted]													

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1239 A WOLVERINE LAKE PROJECT B.C.

ANOMALY/ FID/INTERP	COAXIAL 1047 HZ REAL PPM	COAXIAL 1047 HZ QUAD PPM	COPLANAR 891 HZ REAL PPM	COPLANAR 891 HZ QUAD PPM	COPLANAR 7314 HZ REAL PPM	COPLANAR 7314 HZ QUAD PPM	VERTICAL DIKE COND SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
[redacted]													
LINE 11710 (FLIGHT 29)													
[redacted]													
B 3585D	15	9	2	25	4	16	14.0	9	2	48	42	19	0
C 3592B	19	11	10	5	32	12	16.9	21	6	49	4	34	0
D 3596D	6	8	18	11	18	5	4.7	30	7	52	4	38	0
E 3599D	12	14	46	40	71	36	6.0	26	7	51	4	37	0
F 3601D	23	14	46	40	71	36	17.9	17	7	39	4	26	0
G 3613B	18	6	39	24	46	5	29.9	15	7	37	4	22	0
H 3620D	33	5	58	33	75	19	144.4	12	5	48	7	31	0
I 3624D	7	5	58	32	75	15	9.2	24	4	85	10	63	0
[redacted]													
LINE 11720 (FLIGHT 29)													
[redacted]													
B 4370S	1	2	1	2	2	4	-	-	-	-	-	-	0
C 4337D	13	7	35	6	11	8	16.0	10	1	50	73	15	0
D 4331B	5	5	28	12	28	8	6.2	34	6	50	5	34	0
E 4328D	0	2	1	2	2	4	-	-	-	-	-	-	5
F 4323D	8	3	22	7	17	20	25.9	39	8	50	3	37	0
G 4319D	2	4	22	7	6	22	2.0	22	6	50	5	33	0
H 4314B	9	13	40	30	57	12	4.2	3	6	38	5	23	0
I 4308D	1	2	1	2	2	4	-	-	-	-	-	-	0
J 4305D	4	3	17	10	24	13	7.6	36	3	129	17	100	270
K 4285D?	0	2	0	2	2	4	-	-	-	-	-	-	0
L 4273D?	1	2	1	2	2	4	-	-	-	-	-	-	8
M 4263S?	1	2	0	2	2	4	-	-	-	-	-	-	0
[redacted]													

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1239 A WOLVERINE LAKE PROJECT B.C.

ANOMALY/ FID/INTERP	COAXIAL 1047 HZ REAL PPM	COAXIAL 1047 HZ QUAD PPM	COPLANAR 891 HZ REAL PPM	COPLANAR 891 HZ QUAD PPM	COPLANAR 7314 HZ REAL PPM	COPLANAR 7314 HZ QUAD PPM	VERTICAL DIKE COND SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 11730 (FLIGHT 29)													
[redacted]													
C 4569D	15	7	38	24	9	13	20.4	16	2	55	43	25	0
D 4573D	2	13	14	6	6	13	0.7	0	4	57	11	37	6
E 4576B	2	6	14	6	6	13	1.3	17	7	61	4	46	0
F 4581D	3	2	10	7	15	13	5.1	61	7	57	4	42	0
G 4583D	13	3	10	17	15	6	59.9	32	6	50	4	35	0
H 4588D	5	1	30	17	34	8	47.3	54	5	52	8	33	0
I 4592D	14	8	30	18	37	11	14.3	11	4	57	11	36	0
J 4596D	9	7	30	18	37	9	8.0	14	5	50	7	32	0
K 4600D	11	5	14	11	3	14	18.6	21	3	79	24	51	0
L 4659B?	2	9	3	12	22	51	1.0	7	1	45	297	3	0
M 4665B?	3	3	5	14	31	31	5.0	40	1	46	129	7	0
[redacted]													
[redacted]													
LINE 11741 (FLIGHT 30)													
[redacted]													
C 800D	9	5	40	17	12	11	15.7	26	2	71	41	39	0
D 795D	1	2	1	2	2	4	-	-	-	-	-	-	0
E 793D	1	2	1	2	2	4	-	-	-	-	-	-	0
F 790D	15	14	37	32	34	1	8.6	20	7	54	3	40	0
G 787D	15	14	37	32	34	27	8.6	13	4	48	8	30	0
H 784D	1	2	1	2	2	4	-	-	-	-	-	-	0
I 779D	13	8	5	9	24	18	13.9	12	3	73	21	47	0

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1239 A WOLVERINE LAKE PROJECT B.C.

		COAXIAL 1047 HZ		COPLANAR 891 HZ		COPLANAR 7314 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH		MAG CORR
ANOMALY/ FID/INTERP		REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND SIEMEN	DEPTH* M	COND SIEMEN	DEPTH M	RESIS OHM-M	DEPTH M	NT
LINE 11741		(FLIGHT 30)												
J	740B?	2	3	3	7	15	13	2.6	45	1	64	270	15	0
[redacted]														
LINE 11750		(FLIGHT 30)												
[redacted]														
C	1014D?	9	9	58	26	16	9	6.7	22	2	57	34	29	0
D	1018B	9	11	58	24	16	6	5.6	17	7	52	3	38	0
E	1020D	7	5	58	9	16	17	10.7	38	5	57	6	40	0
F	1029D	20	4	56	28	32	11	70.0	16	5	36	6	21	0
G	1032D	24	13	56	29	32	13	20.3	3	7	33	4	19	0
H	1085D?	0	3	1	5	11	23	0.4	0	1	83	362	22	0
I	1100S?	1	2	1	2	2	4	-	-	-	-	-	-	0
[redacted]														
LINE 11760		(FLIGHT 30)												
[redacted]														
C	1757D	1	2	1	2	2	4	-	-	-	-	-	-	0
D	1753B	25	7	52	25	53	26	46.6	12	5	47	6	31	0
E	1749D	16	10	52	16	36	26	15.6	23	4	65	12	44	4
F	1744D	4	1	49	5	33	3	49.0	67	4	73	8	53	0
G	1740B	27	11	50	27	63	14	29.9	7	6	49	5	33	0
H	1721D?	0	2	0	2	2	4	-	-	-	-	-	-	0
[redacted]														

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. OF THE CONDUCTOR MAY BE DEEPER OR TO ONE SIDE OF THE FLIGHT .
.· LINE, OR BECAUSE OF A SHALLOW DIP OR OVERBURDEN EFFECTS. .

1239 A WOLVERINE LAKE PROJECT B.C.

	COAXIAL 1047 HZ		COPLANAR 891 HZ		COPLANAR 7314 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH		MAG CORR
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND SIEMEN	DEPTH* M	COND SIEMEN	DEPTH M	RESIS OHM-M	DEPTH M	NT
[redacted]													
LINE 11770 (FLIGHT 30)													
[redacted]													
C 2041B	28	13	67	36	76	25	27.1	18	6	50	4	35	0
D 2047D	22	13	30	28	59	28	17.3	7	4	48	12	27	0
E 2060D	7	4	3	6	12	18	10.8	26	2	89	36	56	0
F 2091S?	1	3	1	6	17	24	1.0	8	1	49	290	0	0
[redacted]													
LINE 11780 (FLIGHT 30)													
[redacted]													
D 2744D	1	2	1	2	2	4	-	-	-	-	-	-	0
E 2742D	5	10	15	6	17	28	2.6	9	6	53	5	37	0
F 2739D	5	10	15	30	5	28	2.7	15	5	57	6	40	0
G 2734D	25	15	4	30	67	25	17.0	8	4	50	11	30	0
H 2725D	8	4	9	6	14	12	13.9	22	1	75	100	33	0
I 2712B?	1	6	1	11	28	12	0.9	1	1	45	793	0	0
J 2707B?	3	7	3	12	3	12	1.7	0	1	14	476	0	0
[redacted]													

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1239 A WOLVERINE LAKE PROJECT B.C.

ANOMALY/ FID/INTERP	COAXIAL 1047 HZ REAL PPM	COAXIAL 1047 HZ QUAD PPM	COPLANAR 891 HZ REAL PPM	COPLANAR 891 HZ QUAD PPM	COPLANAR 7314 HZ REAL PPM	COPLANAR 7314 HZ QUAD PPM	VERTICAL DIKE COND SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 11790 (FLIGHT 30)													
[redacted]													
D 2917B	19	10	15	26	49	31	19.0	14	7	47	4	33	0
E 2925D	7	7	31	19	36	14	5.8	25	5	47	6	30	0
F 2929D	23	11	31	31	36	12	22.9	10	5	54	7	36	0
G 2946B?	1	2	1	2	2	4	-	-	-	-	-	-	0
H 2960B?	1	5	0	8	15	53	0.8	9	1	19	634	0	0
[redacted]													
LINE 11800 (FLIGHT 24)													
[redacted]													
F 758D	18	9	6	18	38	15	20.3	17	3	64	16	41	0
[redacted]													
[redacted]													

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1239 A WOLVERINE LAKE PROJECT B.C.

	COAXIAL 1047 HZ		COPLANAR 891 HZ		COPLANAR 7314 HZ		VERTICAL DIKE		HORIZONTAL SHEET		CONDUCTIVE EARTH		MAG CORR
ANOMALY/ FID/INTERP	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	REAL PPM	QUAD PPM	COND SIEMEN	DEPTH* M	COND SIEMEN	DEPTH M	RESIS OHM-M	DEPTH M	NT
LINE 11810 (FLIGHT 23)													
H 1382B	19	12	30	21	42	17	15.7	15	4	59	13	38	0
I 1375D	0	1	1	0	2	4	-	-	-	-	-	-	0
J 1348S	0	5	1	8	14	34	0.4	0	1	48	311	0	0
[redacted]													
LINE 11820 (FLIGHT 23)													
[redacted]													
E 1579D	8	4	12	10	14	5	14.4	30	4	[illegible]	8	34	0
F 1582D	18	8	28	22	15	5	24.7	14	4	63	13	40	0
G 1585D	17	8	29	22	15	2	21.3	11	3	52	15	29	0
[redacted]													
LINE 11830 (FLIGHT 23)													
[redacted]													
F 2179D	4	8	2	3	4	7	2.2	14	4	68	9	48	0
G 2174B	16	12	33	26	52	14	11.5	11	3	52	13	31	0

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1239 A WOLVERINE LAKE PROJECT B.C.

ANOMALY/ FID/INTERP	COAXIAL 1047 HZ REAL PPM	COAXIAL 1047 HZ QUAD PPM	COPLANAR 891 HZ REAL PPM	COPLANAR 891 HZ QUAD PPM	COPLANAR 7314 HZ REAL PPM	COPLANAR 7314 HZ QUAD PPM	VERTICAL DIKE COND SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
[redacted]													
LINE 11840 (FLIGHT 24)													
[redacted]													
J 1373D	17	7	21	10	20	10	26.5	17	4	71	9	50	0
K 1348S	0	2	1	2	2	4	-	-	-	-	-	-	0
L 1337S	0	2	1	2	2	4	-	-	-	-	-	-	0
[redacted]													
[redacted]													

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1239 A WOLVERINE LAKE PROJECT B.C.

ANOMALY/ FID/INTERP	COAXIAL 1047 HZ REAL PPM	COAXIAL 1047 HZ QUAD PPM	COPLANAR 891 HZ REAL PPM	COPLANAR 891 HZ QUAD PPM	COPLANAR 7314 HZ REAL PPM	COPLANAR 7314 HZ QUAD PPM	VERTICAL DIKE COND SIEMEN	VERTICAL DIKE DEPTH* M	HORIZONTAL SHEET COND SIEMEN	HORIZONTAL SHEET DEPTH M	CONDUCTIVE EARTH RESIS OHM-M	CONDUCTIVE EARTH DEPTH M	MAG CORR NT
LINE 11850 (FLIGHT 24)													
[redacted]													
K 1595D	1	0	1	2	2	4	-	-	-	-	-	-	0
L 1600D	13	8	15	8	6	8	13.7	16	2	69	43	38	0
M 1656S	1	3	0	3	4	7	0.6	0	1	78	934	0	0
[redacted]													
LINE 11860 (FLIGHT 24)													
[redacted]													
J 2159D	11	9	22	15	28	8	10.2	10	2	76	27	47	0
K 2155D	1	2	1	2	2	4	-	-	-	-	-	-	0
[redacted]													

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TECHNICAL SUMMARY

Navigation	Sercel differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter 60 m Electromagnetic sensor 30 m Magnetometer, VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM^{v}

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	0.5 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◑	20–50 siemens
4	◔	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	○	< 1 siemens
–	✶	Questionable anomaly

Anomaly identifier

Interpretive symbol

Depth is greater than
- . 15 m
- .. 30 m
- ... 45 m
- .... 60 m

Inphase and Quadrature of coaxial coil is greater than
- . 5 ppm
- .. 10 ppm
- ... 15 ppm
- .... 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

Flight direction

Flight line number

11020
- Reflight Number
- Line Number
- Area Number

Fiducials identified on profiles

Dip direction

EM anomaly (see EM legend)

Conductor axis (on EM maps only)

Arcs indicate the conductor has a thickness > 10m

Magnetic correlation in nT (gammas)

TOTAL FIELD MAGNETIC CONTOURS

——————— . . . . . 250 nT

——————— . . . . . 50 nT

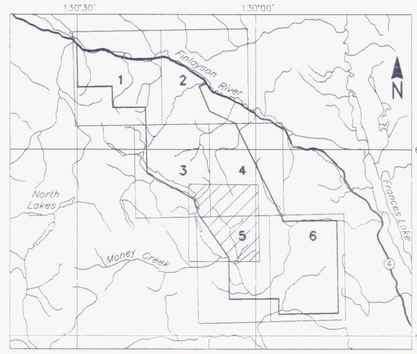
——————— . . . . . 10 nT

— — — — — . . . . . 5 nT

. . . . . magnetic low

Magnetic inclination within the survey area: 78 degrees N
Magnetic declination within the survey area: 29 degrees E

LOCATION MAP



NTS: 105G/8
105H/5

UTM ZONE: 9
NAD27

SCALE: 1:500,000

093652

WESTMIN RESOURCES LIMITED
PUCK CLAIMS, YUKON

TOTAL FIELD MAGNETICS

DIGHEM^{v} SURVEY	NTS: 105G/8; 105H/5	GEOPHYSICIST:
DATE: APRIL, 1996	JOB: 1239	SHEET: 1

DIGHEM, A division of CGG Canada Ltd.

0 1 2 Km

Scale 1:20 000

DIGHEM

Quality and Service in Airborne Geophysics

1

TECHNICAL SUMMARY

Navigation	Sercel differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter 60 m Electromagnetic sensor 30 m Magnetometer, VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM^V

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7700 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	0.5 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◑	20–50 siemens
4	◔	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	◌	< 1 siemens
–	✳	Questionable anomaly

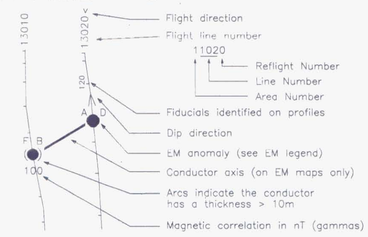
Anomaly identifier — Interpretive symbol

Depth is greater than
- . 15 m
- .. 30 m
- ... 45 m
- .... 60 m

Inphase and Quadrature of coaxial coil is greater than
- . 5 ppm
- .. 10 ppm
- ... 15 ppm
- .... 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

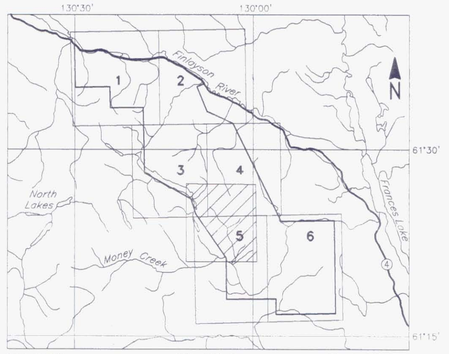
FLIGHT LINES WITH EM ANOMALIES



CALCULATED VERTICAL GRADIENT CONTOURS

- ——— . . . . . 2.5 nT/metre
- ——— . . . . . 0.5 nT/metre
- ——— . . . . . 0.1 nT/metre
- — — — — . . . . . 0.05 nT/metre

LOCATION MAP



NTS: 105G/8
105H/5

UTM ZONE: 9
NAD27

SCALE: 1:500,000

093652

WESTMIN RESOURCES LIMITED
PUCK CLAIMS, YUKON

CALCULATED VERTICAL GRADIENT MAGNETICS

DIGHEM^V SURVEY	NTS: 105G/8; 105H/5	GEOPHYSICIST:
DATE: APRIL, 1996	JOB: 1239	SHEET: 1

DIGHEM, A division of CGG Canada Ltd.

0 1 2 Km

Scale 1:20 000

DIGHEM
Quality and Service in Airborne Geophysics

(2)

TECHNICAL SUMMARY

Navigation	Sercel differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter 60 m Electromagnetic sensor 30 m Magnetometer, VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM*

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	0.5 ppm	Horizontal coplanar

ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◑	20–50 siemens
4	◔	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	◌	< 1 siemens
–	✳	Questionable anomaly

Anomaly identifier; Interpretive symbol; Depth is greater than 15 m / 30 m / 45 m / 60 m; Inphase and Quadrature of coaxial coil is greater than 5 ppm / 10 ppm / 15 ppm / 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

Flight direction
Flight line number
Reflight Number
Line Number
Area Number
Fiducials identified on profiles
Dip direction
EM anomaly (see EM legend)
Conductor axis (on EM maps only)
Arcs indicate the conductor has a thickness > 10m
Magnetic correlation in nT (gammas)

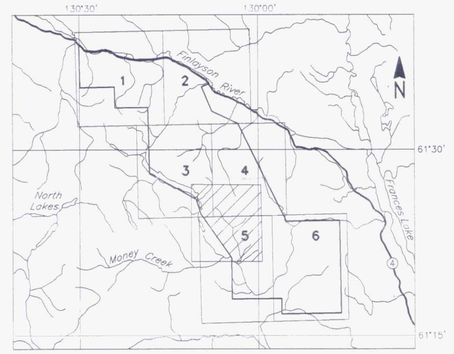
VLF CONTOURS

Contours in percent: 10, 2, 1

Frequency response of VLF–EM filter

STATION
NAA Cutler (Maine) – 24.0 kHz

LOCATION MAP



NTS: 105G/8
105H/5
UTM ZONE: 9
NAD27
SCALE: 1:500,000

093652

WESTMIN RESOURCES LIMITED
PUCK CLAIMS, YUKON

FILTERED VLF

DIGHEM V SURVEY	NTS: 105G/8; 105H/5	GEOPHYSICIST:
DATE: APRIL, 1996	JOB: 1239	SHEET: 1

DIGHEM, A division of CGG Canada Ltd.

0 1 2 Km
Scale 1:20 000

DIGHEM
Quality and Service in Airborne Geophysics

(3)

(3)

TECHNICAL SUMMARY

Navigation	Sercel differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter 60 m Electromagnetic sensor 30 m Magnetometer, VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM^v

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	0.5 ppm	Horizontal coplanar

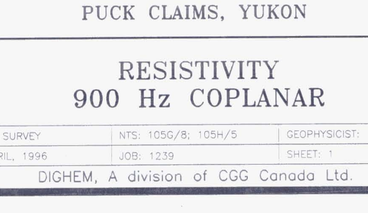
ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◑	20–50 siemens
4	◔	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	◌	< 1 siemens
–	✶	Questionable anomaly



Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

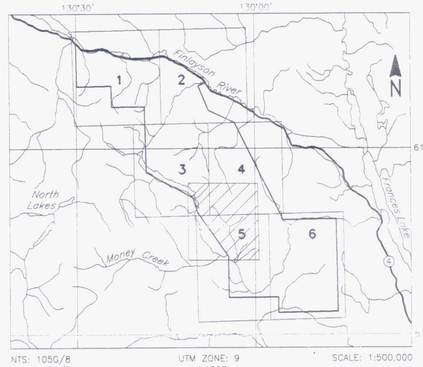


RESISTIVITY CONTOURS

1000
800
600
500
400
300
250
200
150
125
100

Contours in ohm–m at 10 intervals per decade

LOCATION MAP



NTS: 105G/8
105H/5

UTM ZONE: 9
NAD27

SCALE: 1:500,000

093652

WESTMIN RESOURCES LIMITED
PUCK CLAIMS, YUKON

RESISTIVITY
900 Hz COPLANAR

DIGHEM^v SURVEY	NTS: 105G/8; 105H/5	GEOPHYSICIST:
DATE: APRIL, 1996	JOB: 1239	SHEET: 1
DIGHEM, A division of CGG Canada Ltd.		

0 2 Km

Scale 1:20 000

DIGHEM
Quality and Service in Airborne Geophysics

4

4

TECHNICAL SUMMARY

Navigation	Sercel differential GPS positioning
Data reduction grid interval	50 metres
Terrain clearance	Helicopter 60 m Electromagnetic sensor 30 m Magnetometer, VLF receiver 40 m
Data sampling interval	0.1 second
Magnetometer / sensitivity	Scintrex cesium / 0.01 nT
VLF receiver / sensitivity	Herz 2A / 1%
Electromagnetic system	DIGHEM^v

Frequency	Sensitivity	Coil Orientation
900 Hz	0.1 ppm	Vertical coaxial
5500 Hz	0.2 ppm	Vertical coaxial
900 Hz	0.1 ppm	Horizontal coplanar
7200 Hz	0.2 ppm	Horizontal coplanar
56000 Hz	0.5 ppm	Horizontal coplanar

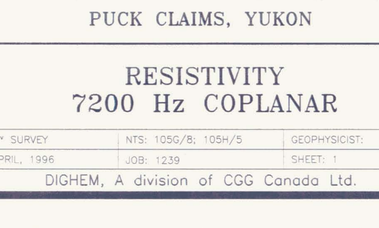
ELECTROMAGNETIC ANOMALIES

Grade	Anomaly	Conductance
7	●	>100 siemens
6	◕	50–100 siemens
5	◑	20–50 siemens
4	◔	10–20 siemens
3	⊕	5–10 siemens
2	○	1–5 siemens
1	◌	< 1 siemens
–	✳	Questionable anomaly

Anomaly identifier
Interpretive symbol
Depth is greater than
: 15 m
: 30 m
: 45 m
: 60 m
Inphase and Quadrature of coaxial coil is greater than
.. 5 ppm
.. 10 ppm
... 15 ppm
.... 20 ppm

Interpretive symbol	Conductor ("model")
B	Bedrock conductor
D	Narrow bedrock conductor ("thin dike")
S	Conductive cover ("horizontal thin sheet")
H	Broad conductive rock unit, deep conductive weathering, thick conductive cover ("half space")
E	Edge of broad conductor ("edge of half space")
L	Culture, e.g. power line, metal building or fence

FLIGHT LINES WITH EM ANOMALIES

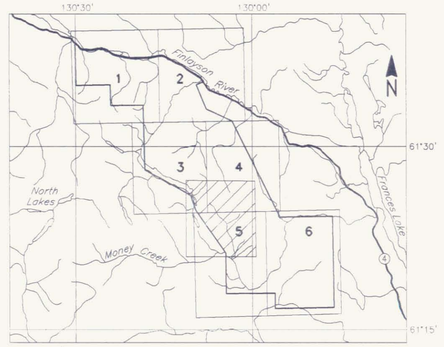


RESISTIVITY CONTOURS

1000
800
600
500
400
300
250
200
150
125
100

Contours in ohm-m at 10 intervals per decade

LOCATION MAP



NTS: 105G/8
105H/5
UTM ZONE: 9
NAD27
SCALE: 1:500,000

093652

WESTMIN RESOURCES LIMITED
PUCK CLAIMS, YUKON

RESISTIVITY
7200 Hz COPLANAR

DIGHEM^v SURVEY	NTS: 105G/8; 105H/5	GEOPHYSICIST:
DATE: APRIL, 1996	JOB: 1239	SHEET: 1

DIGHEM, A division of CGG Canada Ltd.

0 1 2 Km
Scale 1:20 000

DIGHEM
Quality and Service in Airborne Geophysics

5

APPENDIX E

1996 GROUND GEOPHYSICAL SURVEY REPORT AND MAPS

i) CONTOURED TOTAL FIELD MAGNETICS
(200nT Contour Interval)

ii) CONTOURED TOTAL FIELD MAGNETICS
(Background - 50nT Contour Interval
to a Maximum of 59000nT)

iii) TOTAL FIELD MAGNETIC PROFILES

iv) VLF ELECTROMAGNETIC PROFILES - 24.8KHz

v) CONTOURED FRASER FILTERED VLF
IN PHASE COMPONENT

vi) HORIZONTAL LOOP (MAX-MIN) - 444 Hz

vii) HORIZONTAL LOOP (MAX-MIN) - 888 Hz

viii) HORIZONTAL LOOP (MAX-MIN) - 1777 Hz

ix) HORIZONTAL LOOP (MAX-MIN) - 3555 Hz

LOGISTICAL REPORT

HORIZONTAL LOOP (MAX-MIN) ELECTROMAGNETIC, TOTAL FIELD MAGNETOMETER AND VLF EM SURVEY

WOLVERINE AND PUCK PROJECTS
WOLVERINE LAKE,
YUKON TERRITORY

on behalf of

WESTMIN RESOURCES LTD.
904-1055 Dunsmuir St.
Vancouver, B.C. V7X 1C4

Field work completed:
March 25 to April 19, 1996

by

Jim Hawkins, Geophysicist
SCOTT GEOPHYSICS LTD.
4013 West 14th Ave.
Vancouver, B.C. V6R 2X3

April 25, 1996

TABLE OF CONTENTS

	page
1. Introduction	1
2. Personnel	1
3. Instrumentation and Procedures	1
4. Discussion of Results	2
5. Recommendations	2

Appendix

Statement of Qualifications — rear of report

Maps included with report:
(copies)

Wolverine Project - Horizontal Loop EM Profiles: L16600E, L16700E, L16800E, L16600N; (80 m Coil Sep'n) L16700E; (40 m Coil Sep'n). 1:2000 scale — map pocket

Puck Project - Horizontal Loop EM Profiles: 3555, 1777, 888, 444 Hz Frequencies. 1:5000 scale — map pocket

Puck Project - Total Field Magnetometer Contour Maps: 200 nT and 50 nT contours. 1:5000 scale — map pocket

Puck Project - Total Field Magnetometer Profiles: 1:5000 scale — map pocket

Puck Project - VLF Electromagnetic Profiles: 1:5000 scale — map pocket

Puck Project - Fraser Filtered VLF EM Contour Map: 1:5000 scale — map pocket

Maps accompanying report
(originals, reproducible vellums, copies)

As above: — map roll

Additional materials - one copy only

One floppy disk with all survey data — rear of report

1. INTRODUCTION

Horizontal Loop (Max-min) electromagnetic, Total Field magnetometer, and VLF electromagnetic surveys were performed on two projects near Wolverine Lake, Yukon Territory by Scott Geophysics Ltd. on behalf of Westmin Resources Ltd. A total of approximately 36 km of Max-min and 41.5 km of Mag/VLF surveying was surveyed. The field work was done within the period March 25th to April 19th, 1996.

This report describes the instrumentation and procedures, and presents the results of the survey.

2. PERSONNEL

Jim Hawkins, Geophysicist, was the party chief on the survey and acted as primary operator of the Max-min and Mag/VLF units. Gord Stewart, Geophysical Technician, assisted. Peter Thurston, and later, Terry Tucker, geologists, were the client representatives on site for the survey.

3. INSTRUMENTATION AND PROCEDURES

An Apex Parametrics Max-min II electromagnetic system was used for the Horizontal Loop survey. After an initial two day test over the Wolverine deposit, a standard coil separation of 80 meters and station separation of 20 meters was decided on for the rest of the survey, although a single test line over the Wolverine deposit was surveyed using a 40 meter coil separation. Four frequencies, 3555, 1777, 888, and 444 Hz were used during the survey, with only the 444 Hz coverage being less than complete. Tilt and coil separation corrections were calculated prior to the survey due to the rough topography.

A Scintrex IGS base magnetometer and combined field magnetometer/VLF EM unit were used for the Magnetometer and VLF Electromagnetic surveys. The only VLF Transmitter within range was NLK (Seattle), but it provided the best orientation (20 degrees west of the baseline) for detecting the main conductors. Station separation was also 20 meters.

The survey data was processed, archived, and plotted using a Toshiba T3200SX microcomputer running proprietary software.

4. DISCUSSION OF RESULTS

The results from the Puck Project surveys show a high-quality conductor in a similar association with a probable argillitic unit and southwest (grid West) of a strong magnetic response (probable iron formation) as is the Wolverine deposit. The strike length of this conductor is over four kilometers in length.

5. RECOMMENDATIONS

A preliminary examination of the results of the Horizontal Loop electromagnetic survey and the Magnetometer/VLF electromagnetic surveys indicate the presence of good conductors in a similar setting to the Wolverine deposit. Further investigation of these conductors is recommended.

A detailed interpretation of these results, and correlation to geological and geochemical information, is required before any specific targets could be selected.

Respectfully Submitted,

Jim Hawkins

Jim Hawkins, Geophysicist

Statement of Qualifications

for

Jim Hawkins, Geophysicist

of

762 Dehart Road
Kelowna, B.C. V1Y 8R3

I, Jim Hawkins, hereby certify the following statements regarding my qualifications, and my involvement in the program of work described in this report.

1. The work was performed by individuals sufficiently trained and qualified for its performance.

2. I have no material interest in the property under consideration in this report, nor in the company on whose behalf the work was performed.

3. I graduated from the University of Western Ontario with a Bachelor of Science degree (Geophysics) in 1977.

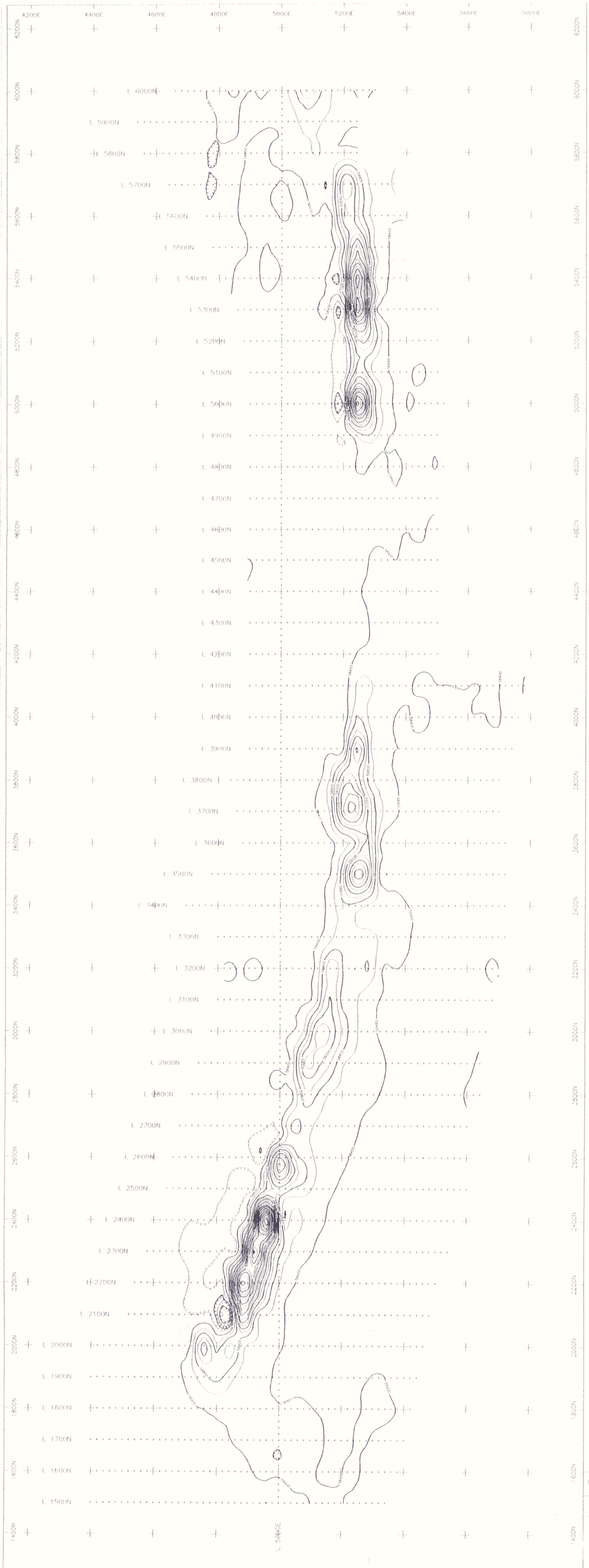
4. I am a licensee of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta (P. Geoph.).

5. I have been practicing my profession as a Geophysicist since 1977.

Respectfully submitted,

Jim Hawkins

Jim Hawkins, P. Geoph.



SURVEY SPECIFICATIONS

survey	magnetometer	Scintrex IGS
base	magnetometer	Scintrex IGS
type		proton
posted value		total field
units		gammas (nT)

contour intervals 200 gammas

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0 100 200 300 400
METERS

WESTMIN RESOURCES LTD.

PUCK PROJECT

YUKON TERRITORY

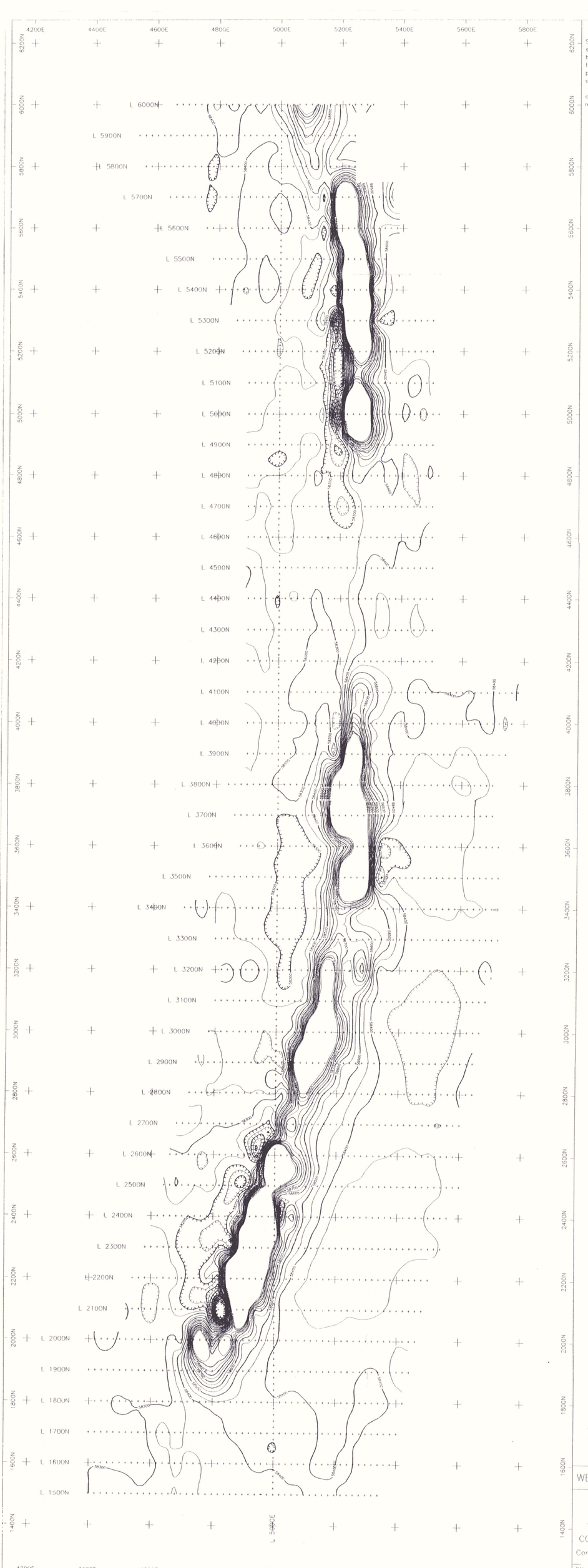
TOTAL FIELD MAGNETOMETER CONTOUR MAP

Contour Interval - 200 nT

DR | By: jph | DATE April/96

SC | GEOPHYSICS LTD.

6



SURVEY SPECIFICATIONS

survey	magnetometer	Scintrex IGS
base	magnetometer	Scintrex IGS
type		proton
posted value		total field
units		gammas (nT)

contour interval: 50 gammas
maximum contour : 59000 gammas

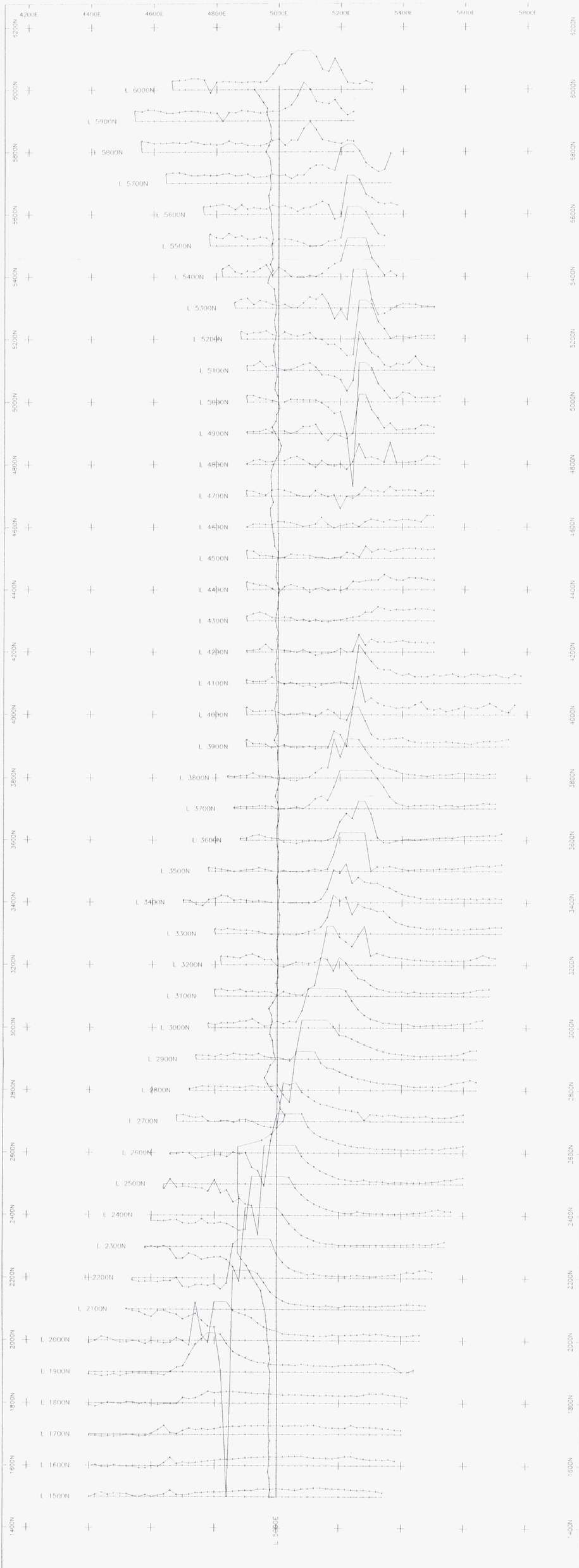
093652

0 100 200 300 400
METERS

WESTMIN RESOURCES LTD.

PUCK PROJECT
YUKON TERRITORY
TOTAL FIELD MAGNETOMETER
CONTOUR MAP – BACKGROUND
Contour interval-50 nT (59000 max)

Drawn By: jph | DATE: April/96
SCALE: GEOPHYSICS LTD.



SURVEY SPECIFICATIONS

survey magnetometer	Scintrex IGS
base magnetometer	Scintrex IGS
type	proton
posted value	total field
units	gammas (nT)
vertical scale	200 nT/cm

Profiles truncated 500 nT above base level of 58300 nT.

093652

0 100 200 300 400

METERS

WESTMIN RESOURCES LTD.

PUCK PROJECT,

YUKON TERRITORY

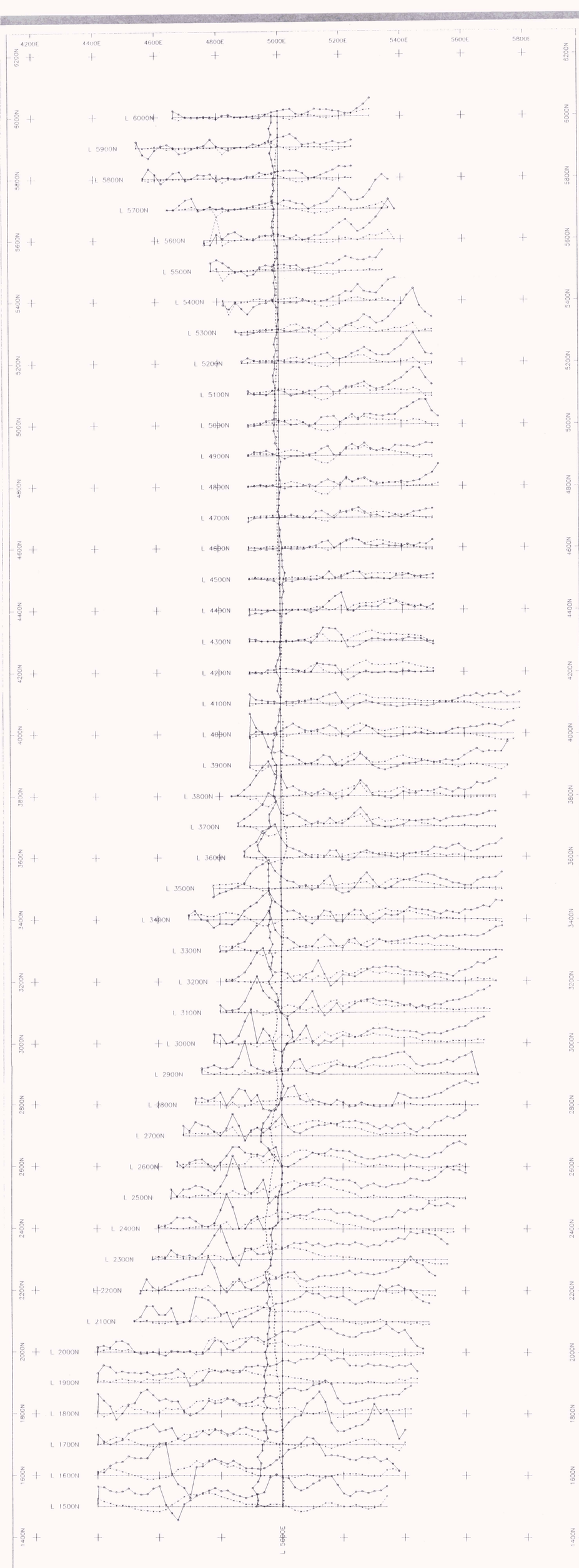
TOTAL FEILD MAGNETOMETER

SURVEY PROFILES

Vertical Scale - 200 nT / cm

DRAWN BY: jds | DATE: April/96

SCOTT GEOPHYSICS LTD.



SURVEY SPECIFICATIONS

VLF system	Scintrex IGS
Measurement	Inphase & Quad-phase components of vertical magnetic field
VLF Tx	NLK 24.8 KHz (Seattle)
Tx bearing	20 deg SW of BL (approx)
Vertical scale	25 % / cm
Inphase	o ——— o
Quad	x - - - x

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0 100 200 300 400

METERS

WESTMIN RESOURCES LTD.

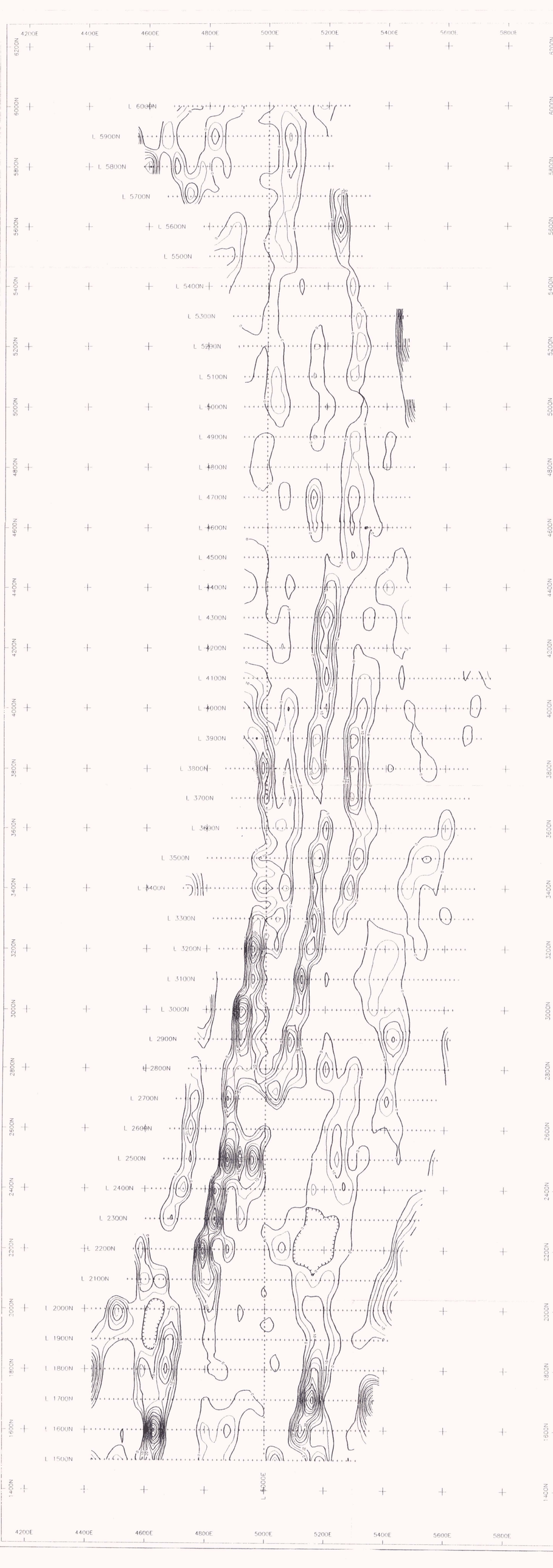
PUCK PROJECT,

YUKON TERRITORY
VLF ELECTROMAGNETIC
SURVEY PROFILES
NLK 24.8 KHz (Seattle)

DRN:	BY: jph	DATE: April/96

SCALE GEOPHYSICS LTD.

9



SURVEY SPECIFICATIONS

VLF system	Scintrex IGS
Value plotted	Fraser filtered inphase component of vertical magnetic field
Filter width	15 m
VLF Tx	NLK 24.8 kHz (Seattle)
Tx bearing	20 deg SW of BL (approx)
Contour interval	5 % (positive values only)

093652

0 100 200 400

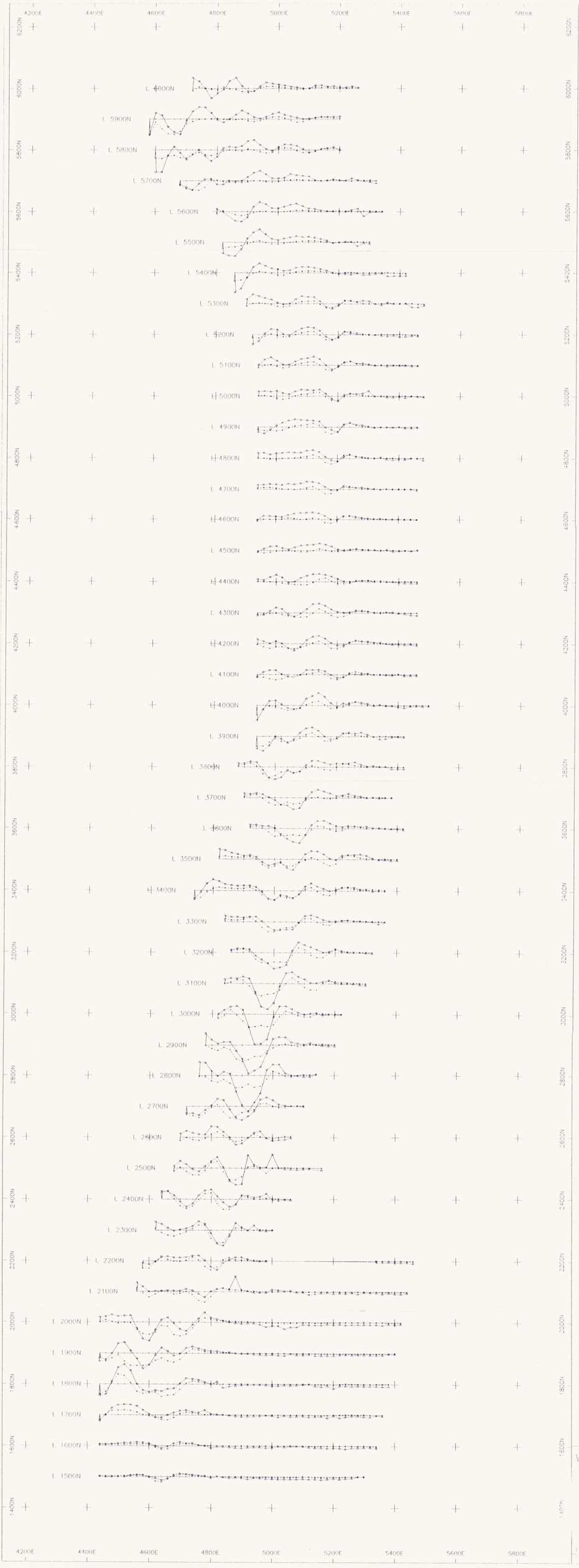
METERS

WESTMIN RESOURCES LTD.

PUCK PROJECT,
YUKON TERRITORY
FRASER FILTERED VLF IN PHASE COMPONENT CONTOURS
Positive Values – 5 % contours

DRAWN BY: jph | DATE: April/96

SCOTT GEOPHYSICS LTD.



SURVEY SPECIFICATIONS

APEX MAX-MIN II SYSTEM

Frequencies 3555, 1777, 888, 444 Hz
Coil Separation 80 meters

In Phase o ——— o
Quadrature x - - - x

Profile scale 25 x per cm

Positive values above line

0 100 200 300 400
METERS

093652

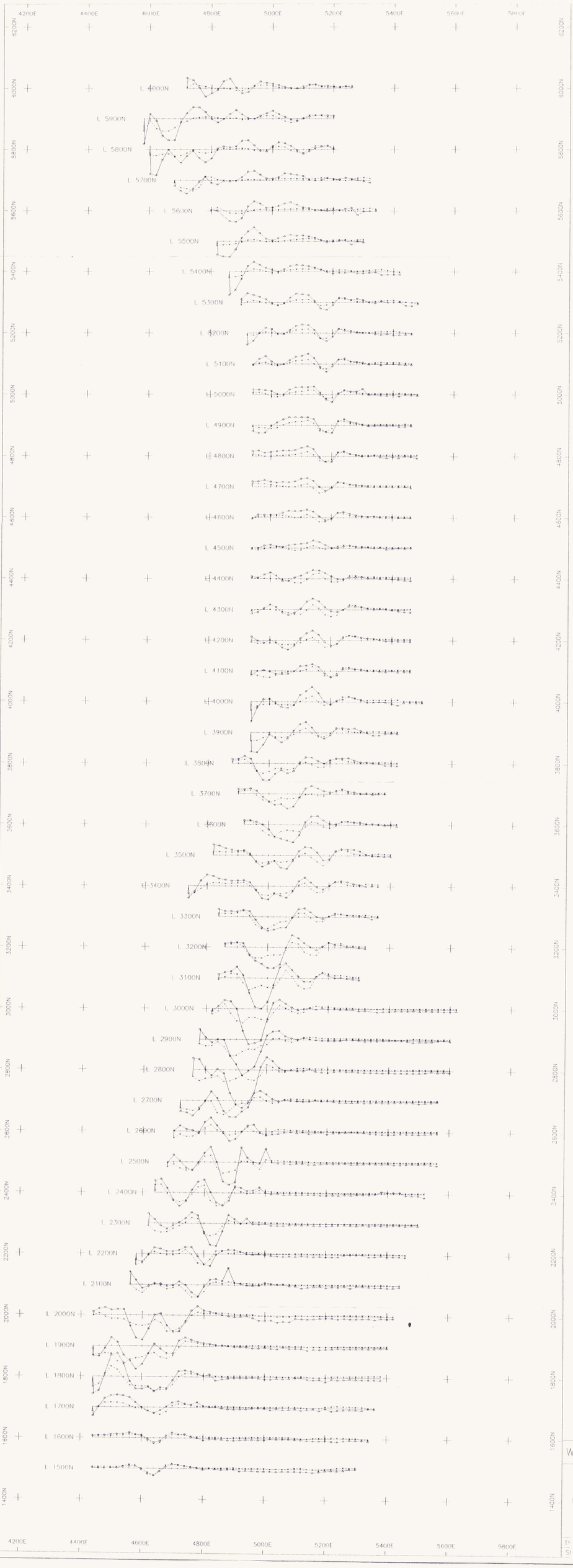
WESTMIN RESOURCES LTD.

PUCK PROJECT

YUKON TERRITORY
HORIZONTAL LOOP (MAX-MIN)
ELECTROMAGNETIC SURVEY
444 Hz

N By: jph | DATE: April/96

GEOPHYSICS LTD.



SURVEY SPECIFICATIONS

APEX MAX-MIN II SYSTEM

Frequencies 3555, 1777, 888, 444 Hz
Coil Separation 80 meters

In Phase o ——— o
Quadrature x - - - x

Profile scale 25 % per cm

Positive values above line

0 100 200 300 400
METERS

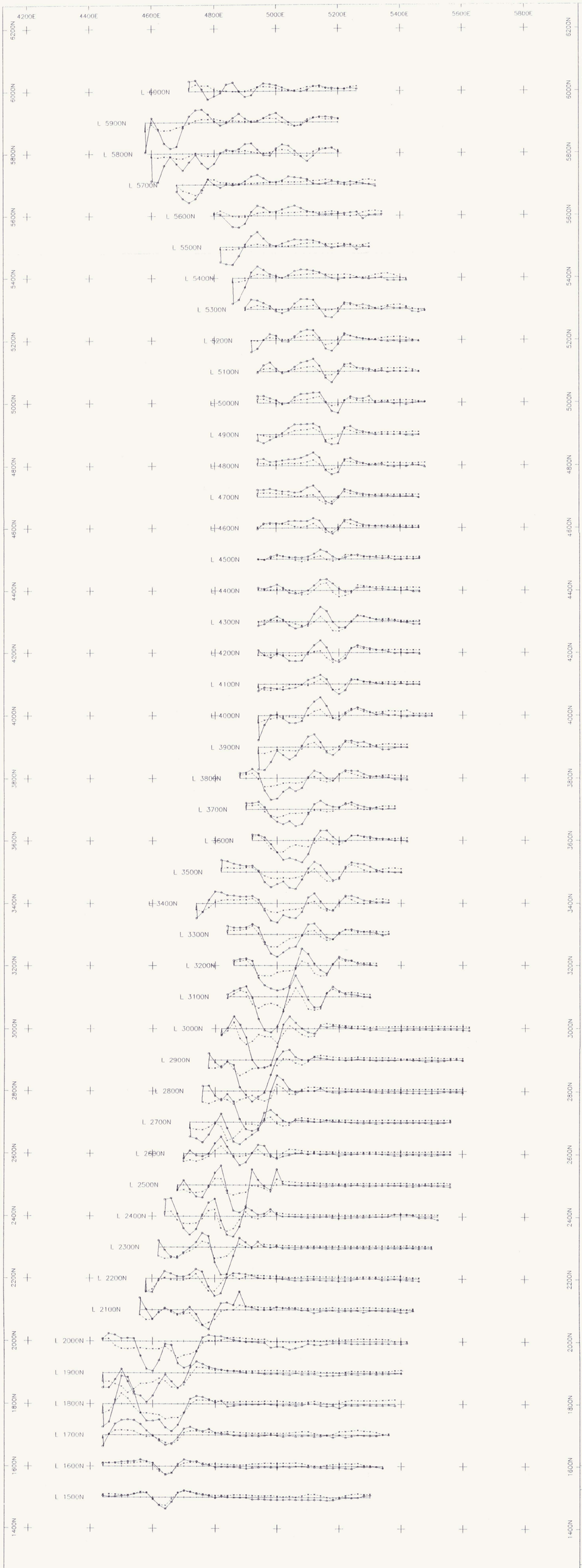
093652

WESTMIN RESOURCES LTD.

PUCK PROJECT
YUKON TERRITORY
HORIZONTAL LOOP (MAX-MIN)
ELECTROMAGNETIC SURVEY
888 Hz

Dr. jph | DATE April/96
GEOPHYSICS LTD.

12



SURVEY SPECIFICATIONS

APEX MAX-MIN II SYSTEM

Frequencies 3555, 1777, 888, 444 Hz
Coil Separation 80 meters

In Phase o ——— o
Quadrature x - - - x

Profile scale 25 x per cm

Positive values above line

0 100 200 300 400
METERS

093652

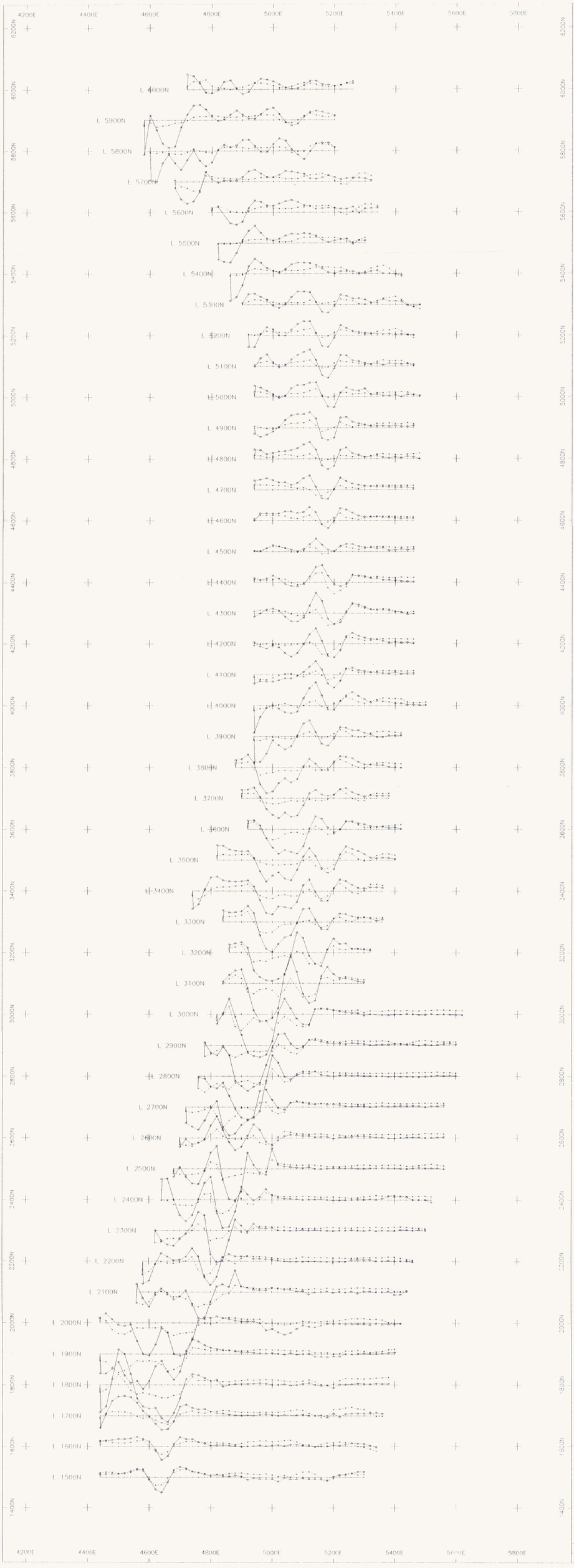
WESTMIN RESOURCES LTD.

PUCK PROJECT
YUKON TERRITORY
HORIZONTAL LOOP (MAX [illegible])
ELECTROMAGNETIC SUR
1777 Hz

DRAWN BY: jph | DATE: April/96

SCOTT GEOPHYSICS LTD.

13



SURVEY SPECIFICATIONS

APEX MAX-MIN II SYSTEM

Frequencies 3555, 1777, 888, 444 Hz
Coil Separation 80 meters

In Phase o ——— o
Quadrature x - - - x

Profile scale 25 * per cm

Positive values above line

0 100 200 300 400
METERS

093652

WESTMIN RESOURCES LTD.

PUCK PROJECT
YUKON TERRITORY
HORIZONTAL LOOP (MAX-MIN)
ELECTROMAGNETIC SURVEY
3555 Hz

DRAWN BY: jph | DATE: April/96

SCOTT GEOPHYSICS LTD.

14

APPENDIX F

1996 GROUND GEOPHYSICAL SURVEY INTERPRETATION
REPORT AND MAP

MEMO TO : Paul Lhotka

MEMO FROM: J. B. Boniwell

SUBJECT : Geophysics on the Puck Claims, Wolverine L., Y.T.

DATE : April 30, 1996

In review of data supplied from a ground grid on the subject claims, the following notes and comments are made:

The Grid

i) lines are spaced 100 m apart oriented 37°T. The station interval along lines is 20 m;

ii) some 30 kms of cut line are involved including 4.5 kms of BL;

iii) the grid is continuous but not of constant width. Line lengths vary from 400 m to 900 m, average 550 m;

iv) the grid as presented is idealized.

The Geophysics

v) full grid coverages by horizontal loop em (MaxMin), total field magnetics and VLF (Scintrex IGS) have been obtained. Quality of the acquisition appears good;

vi) all results (after diurnal correction of the magnetics) have been plotted in stacked profiles against their lines of recording. For the em, this involves a profile presentation for each frequency;

vii) the magnetics and VLF have also been contoured, the latter after (Fraser) filtering. Two presentations have been made in magnetics, one each for contour intervals of 200 nT and 50 nT;

viii) clipping of the peak magnetic anomalies has been resorted to to keep outputs from being overly dominated by the iron formation presence in both the profiles and the 50 nT contouring;

The Em Survey

ix) four frequencies have been employed in survey, viz. 444 Hz, 888 Hz, 1777 Hz, 3555 Hz. Intercoil separations have been maintained at a constant 80 m throughout;

x) a suite of long conductor axes has been delineated up and down the full length of the grid. This suite is essentially confined to the grid western half and remains open at both ends;

xi) most notable is the fact that the majority of conductor responses do not seriously degrade with lowered frequency. Neither are their resolutions impaired. This is taken to mean that the source materials lie at comparatively shallow depths (15 m and less) and that current gathering is making a significant contribution to em anomaly response;

xii) given the long conductor strike lengths exhibited, that current gathering is present here in a substantial way is not surprising. As a corollary, it means that the several conductor horizons detected are strongly continuous over their strike lengths. It also means that any individual response as it is recorded across a conductor axis is em enhanced;

xiii) within the suite, the conductors are sub-parallel and behave conformably overall. The suite is gently arcuate as it runs the length of the grid, concave to the west;

The Magnetics

xiv) an iron formation (BIF) is the major feature of the grid. It flanks the em conduction to the east and rather faithfully follows the strike behaviour thereby prescribed.

However, it is not as continuous as the em, notably suffering a substantial interruption over 600 m between lines 4200 and 4800N; it also abruptly terminates at 1800N at its SE end. Internally, it waxes and wanes in amplitude, and in places gives evidence of twinning and secondary splay axes;

xv) the iron formation system dips to the NE, and quite consistently so except to the far NW end where dips evidently steepen and signatures become confused. Nonetheless, these dip indications are a big improvement over the em whose expressions of dip are commonly far from telling;

xvi) there are places where it would appear that em and magnetic anomaly are in correlation. However in no case does the relationship persist, even though strike expressions to both anomaly axes exist. Where this happens, the original correlation is considered intimate, not one-to-one;

xvii) notwithstanding, the iron formation segment at the SE end of the system has an em axis running along its spine. The conduction involved is weak, mediocre, narrow, and somewhat unconventional in response terms. It is possibly partly due to magnetite: sharp in-phase tweaks along its strike suggest this may be the case. A shear or slip fault could also be possible; even a graphite interbed;

xviii) the iron formation horizon coincides with an underlying lithologic contact. This is especially well seen in the noted gap across lines 4200N - 4800N. Free of the smothering magnetite circumstance, this sector reveals an approximate 100 nT step in background level upwards to the NE. This change is compatible with sediments and/or felsic volcanics inhabiting the SW side, mafic volcanics the NE.

xix) this contact persists beyond the iron formation to the SE;

xx) at its southeast extremity, the iron formation appears folded back on itself. Such a fold however finds no empathy with adjacent conductor behaviour, thus a fault dislocation is considered the likely explanation;

The VLF Survey

xxi) as to be expected with such long strike extents, the established conductors to grid west are favoured by VLF. The field utilized has been NLK broadcasting at 24.8 kHz from Seattle, Washington. With respect to the grid, it directionally locates roughly 20° SW of the BL;

xxii) however anomalies are not confined just to the em and the western parts of the grid but appear in the east as well. As a result, several cross-structures can be perceived and speculations are made about stratigraphic relationships.

xxiii) VLF has been run along the BL, as has magnetics. These data are helpful to certain aspects of interpretation;

Discussion

xxiv) very little has been proven so far. No outcrop geology exists. The immediate challenge therefore is to identify the Wolverine horizon, or failing it, the so-called ore sequence;

xxv) there is little doubt that the iron formation discerned here is the magnetite horizon(s) which occurs in the Wolverine Zone hanging wall. The aeromagnetics underscore the continuity of the system from the Wolverine location into the present grid area, a distance of 2 kms only;

xxvi) the conductor axis which immediately flanks the iron formation on its west side virtually over its entire length is in roughly the correct stratigraphic position but is not likely the Wolverine sulphide horizon itself: it is exceedingly continuous and oftentimes just too intimate a part of the BIF. Its source is judged to be the graphite intercalation which occurs in the Wolverine hanging wall;

xxvii) at Wolverine the separation between this graphite horizon and the ore system is 80 m at surface. Across bedding the true separation may be as little as 15-20 m. Notwithstanding the two horizons have been successfully discriminated by HLEM at all operating frequencies with an intercoil separation of 80 m;

xxviii) in flatter terrain than at Wolverine, and assuming the same easterly dips, the separation at surface could well exceed 120 m;

xxix) on this basis, the next flanking conductor west, variably 60-150 m away, is taken to be the Wolverine horizon at the base of the ore sequence. Fortifying this identification is the fact that in its strike behaviour it shows more harmony with the overlying graphite horizon than it does with the underlying conductor axes populating the carbonaceous sediments directly adjacent west;

xxx) as a potential sulphide horizon, it is remarkably continuous, at least 3 kms long (1500N-4600N). It ostensibly remains open to the SE. What is not clear at this stage is whether it continues NW to the limits of the grid. Present evidence suggests it peters out across line 4800N;

xxxi) to establish the lithologic and stratigraphic realities for the grid area some early discretionary drilling is required. Suitable first holes would be, given in progression from the south:

DDH 96 P-1	Collar at 4700E/1800N to be drilled grid W at -60° for 200 m
DDH 96 P-2	Collar at 4830E/2000N to be drilled grid W at -60° for 220 m
DDH 96 P-3	Collar at 4960E/2300N to be drilled grid W at -60° for 200 m
DDH 96 P-4	Collar at 5040E/3000N to be drilled grid W at -60° for 200 m

DDH 96 P-5 Collar at 5090E/3400N
to be drilled grid W at -60° for 180 m

DDH 96 P-6 Collar at 5120E/3700N
to be drilled grid W at -60° for 200 m

DDH 96 P-7 Collar at 5120E/4300N
to be drilled grid W at -50° for 200 m

To ensure the validity of fundamental projections soonest, a first priority might be granted 96 P-4. Other holes could follow according to how logistics favour. A westerly dip may occur at 96 P-7.

xxxii) cross-faults mainfest themselves in several places. As shown (Dwg. No. EIC-2596), they more affect the sediments than the purported ore sequence. This would imply that a depositional hiatus exists between the two lithologic groups. It also implies that the patent interruptions in the iron formation continuity is more due to lensing, to facies change, and to potential alteration than to cross-structural interaction, except perhaps in the far south;

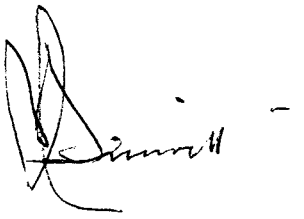
xxxiii) the east contact of the marker iron formation may well be faulted. VLF in the north half of the grid especially impels this notion. In the south, this same fault stays on a more independent yet constant course, and heads off the property in the BL direction free of the iron formation. It is thus considered a throughgoing (fissure) structure with regional connotations;

xxxiv) three felsic intrusions are postulated in the east. Their presence is conjectured from the airborne resistivity mostly, but when found to correlate with magnetic lows on the present grid, albeit these very minor in amplitude, their probability was strengthened. The most southerly in particular also appears to have caused VLF currents to flow circumferentially. It in consequence is the most credible;

xxxv) each of these intrusives could represent old volcanic centres. In any case, they would hold structural bases for their location. Faults emanating from them could

well impinge on the ore sequence and point to where local fummarolic activity, perhaps rhyolite (porphyry) doming may have taken place;

xxxvi) the gaps and diminutions in the iron formation opposite the proposed intrusions could signify hydrothermal alteration consequent thereon. Such concept can not be proved short of drilling. Some test holes have been sited therefore to explore just this possibility.



RECEIVED
JUN - 6 1996
WESTMIN RESOURCES LTD.

MEMO TO : Paul Lhotka, file

MEMO FROM: J. B. Boniwell

SUBJECT : Magnetic Considerations, circa 4900N, Puck Grid

DATE : June 4, 1996

The magnetic lows that exist in the Puck 4900N vicinity, and to the footwall side of the presumed throughgoing ore sequence have been evaluated as follows:

i) dipolar effects associated with the BIF magnetic response occur at 5230E/5000N
5220E/4900N
5220E/4800N
It is seen they partially explain the lows of potential alteration interest hereabouts;

ii) the low at 5200E/4700N is a one-station tweak with no apparent adjacent line support. Although falling within the noted gap in the BIF, it is too small on the odds to represent alteration, or much else of significance. It appears surficial in origin;

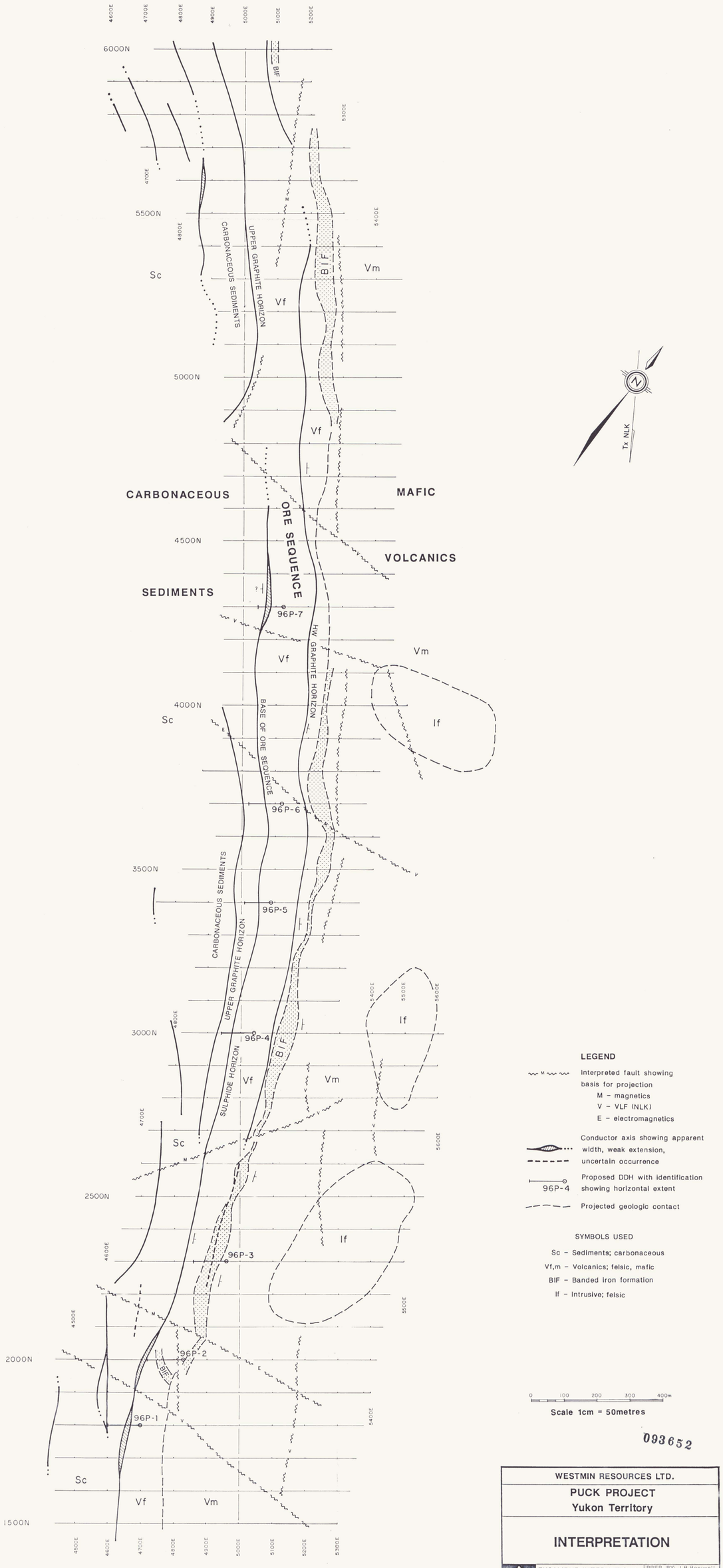
iii) by contrast, an equally weak but more credible magnetic low at 5120E/4800N aligns with others on successive lines to yield a NNW (az.) lineament. A fault is projected thereby angling across the formational geology including the BIF. It transgresses the latter between 5100N and 5200N, and emerges to the (grid) east side in a notable magnetic low at 5300N/5325E. Such structure is thus considered to have formed a passage for geothermal fluids at some time post-deposition, locally altering the wall-rocks. In particular, the magnetics of the BIF appear abated at the point of intercession;

iv) there is evident (in places on lines 48,49,50N specifically) a displacement of up to 20 m (one station interval) between what the magnetic profiles provide in the way of peaks and troughs and what the contours do. This is not a positional error; it is deemed a function of processing. Most likely cause is a filter (3-point rolling mean, say) applied to the posted data before contouring;

v) results of drilling to date (3 holes) places the target sulphide horizon where the HW Graphite had been supposed (Dwg. No. EIC-2596). If there are continuations to this graphite horizon in the grid area, they are not evident in the geophysics;

vi) the drilled sulphides are semi-massive, 20%-40% pyrite with minor sphalerite.




4600E
4700E
4800E
4900E
5000E
5100E
5200E
5300E
5400E
5500E
5600E
6000N
5500N
5000N
4500N
4000N
3500N
3000N
2500N
2000N
1500N
BIF
Sc
Vf
Vm
If
CARBONACEOUS SEDIMENTS
UPPER GRAPHITE HORIZON
CARBONACEOUS
MAFIC
ORE SEQUENCE
VOLCANICS
SEDIMENTS
HW GRAPHITE HORIZON
BASE OF ORE SEQUENCE
SULPHIDE HORIZON
96P-1
96P-2
96P-3
96P-4
96P-5
96P-6
96P-7
Tx NLK
LEGEND
Interpreted fault showing basis for projection
M – magnetics
V – VLF (NLK)
E – electromagnetics
Conductor axis showing apparent width, weak extension, uncertain occurrence
Proposed DDH with identification showing horizontal extent
Projected geologic contact
SYMBOLS USED
Sc – Sediments; carbonaceous
Vf,m – Volcanics; felsic, mafic
BIF – Banded iron formation
If – Intrusive; felsic
0 100 200 300 400m
Scale 1cm = 50metres
093652
WESTMIN RESOURCES LTD.
PUCK PROJECT
Yukon Territory
INTERPRETATION
EXCALIBUR INTERNATIONAL CONSULTANTS LIMITED
TORONTO, ONTARIO
PREP. BY: J.B.Boniwell
DRAWN BY: R.T.M.
DATE: APRIL 1996
SCALE: 1 : 5000
DWG. No. E.I.C.- 2596

APPENDIX G

1996 DIAMOND DRILL PROGRAM

i) DRILL LOGS (PK96-01 - 06)

ii) DRILL HOLE SECTIONS WITH SAMPLE NUMBERS

iii) DRILL HOLE SECTIONS WITH LITHOGEOCHEMISTRY (SHOWING Au, Ag, Cu, Pb, Zn, Ba, and sample width)

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: PUCK	GROUND ELEV.: ~1340 m
HOLE NO.: PK96-01	BEARING: ~233 (Grid West)
LOCATION: L 3700N / 5305E	DIP: -65°
	TOTAL LENGTH: ~~(est 200m)~~ 762' (232.3m)
LOGGED BY: A. Turner	HORIZONTAL PROJECT
DATE: May 12-16/96	VERTICAL PROJECT
CONTRACTOR: F. Boisvenue Diamond Drilling	ALTERATION SCALE
CORE SIZE: NQ II	
DATE STARTED: May 10/96	
DATE COMPLETED: May 15/96	TOTAL SULPHIDE SCALE
DIP TESTS: Acid : -61° @ 339' (103.3m)	



absent
slight
moderate
intense



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

COMMENTS

- Fairly good ground
  3 - 100'+ shifts off the top.
- Encountered MA Fe fms as expected w Graphitic Argillite @ Contacts + a mineralized piece of broken core @ m w Gal-Sph-(Py)
- Intensely Carbonate altered "target" w Qtz-cpy xl lets @ + below "withrock" Argillite

LEGEND

PAGE 1 OF 20 | PROJECT: PUCK (>hCA (-90)) | HOLE NO: PK96-01

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	(From - to)	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
0					CASING (0 - 2.75m)							
1												
2					Sheared Banded (?)							
3 Box 1				2.75m - 11.25	Grey Green Rhyolite (Granular texture)							
4					- overall Grey green color with consistent .5-1.5 cm bands of Fn. grd. Rhyolite separated by .1-.5 mm pale green sericite (+/- chlorite) partings. (whispy)							
5					- unit defined by grainy texture developed in 75-80% of the Rhyolitic bands							
6					- tr-1% dis. cubes of Mt throughout.							
7												
8			20°		Sheared Banded (?)							
9				11.25m - 14.94	Grey - Green Rhyolite (not granular →)							
10					- as above, however no granular texture							
11					- more light grey silica bands, overall pale greenish colored Rhyolite							
12			15°		- Similar amount of darker grey-green sericitic - chloritic partings.							
13					- minor FeO_x coating on fracs							
14					- minor Fe_3O_4 (Mt) as dis. cubes (Gradational Contacts)							
15				14.94m - 15.55	Granular Grey-Green Banded Rhy. - as above - tr dis py +/- Mt							
16												
17			16	15.55 - 15.95	Grey-Green Banded Rhyolite - as above.							
18				15.95 - 17.88	Granular Grey-Green Banded Rhy - as above							
19												
20				17.88 - 18.80	Grey-Green Banded Rhyolite - as above							
21												
22				18.80 - 19.32	Granular Grey-Green Banded Rhy - as above							
23												

PAGE 2 OF 20 | PROJECT: PUCK | HOLE NO. PK96-01

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		4.00	6.00	2.00	107001	86	18	308	<0.2	<5
		16.00	19.00	3.00	107002	65	8	58	<0.2	<5

PAGE 3 OF 20 | PROJECT: PUCK | HOLE NO. 96-01

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
25			13	19.32 - 19.78 Grey-Green Banded Rhyolite							
				19.78 - 20.03 Granular Grey-Green Banded Rhy.							
				20.03 - 20.47 Grey-Green Banded Rhyolite							
28			15	20.47 - 20.87 Granular Grey-Green Banded Rhy							
QV 28.15 to 28.25				20.87 - 21.14 Gr-Green Banded Rhy							
30				21.14 - 21.40 Granular Gr. Green Banded Rhy							
				21.40 - 21.80 Gr-Green Banded Rhy							
			15								
34				21.80 - 22.35 Gran. Gr-Green Banded Rhy							
35				22.35 - 28.05 Grey to Greenish Grey Banded Rhyolite - Fairly Massive Rhyolite tuffs? - 90-95% 1-3cm thick fn. grd Rhy. bands - green to grey-green color, with patches of lighter grey unaltered (?) Rhy. - anastomosing, to wavy partings seperate Rhy bands, - prtngs are dark grey-green sericite/chlorite - upper contact marked by sudden decrease in amount of sericitic partings/bands. - lower contact marked by sudden appearance of argillite bands.							
			12								
40											
FH				28.05 - 37.38 Laminated Argillite - dark grey sub mm. Laminated Argillite with minor lighter grey tuffaceous layers (<10%, 1-3mm) - numerous shear indicators incl.							
45			28								

BRECCIA CORE (Fe Ox)

PAGE 4 OF 20 | PROJECT: PUCIC | HOLE NO. 9601

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		26.05	28.05	2.00	107003	86	<2	50	<0.2	<5
		28.05	30.05	2.00	107004	116	8	358	0.2	<5
		31.40	32.90	1.50	107005	122	4	254	<0.2	<5
		35.35	37.35	2.00	107006	55	<2	120	<0.2	<5
		39.0	40.55	1.55	107007	62	2	94	0.4	<5
		40.55	42.35	1.80	107008	56	8	136	<0.2	<5
		42.35	44.75	2.40	107009	59	10	190	<0.2	<5
		44.75	46.75	2.00	107010	54	14	580	<0.2	<5

PAGE 5 OF 20 | PROJECT: PUCK | HOLE NO. 96-01

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
46				Laminated (Sheared) Argillite contd							
47			10	- Rhyolite component increased to 20-25% in last 1m							
48				- upper + lower contacts are gradational (interbedded)							
49	Sph			- tr-1% dis py throughout							
50	Fe Fm →		6	37.35-40.55 Grey Banded Rhyolite							
51	Fe Fm			- 80-90% grey, Fn grd. Rhy. Bands (without distinctive green ser/chl all'n above)							
52				- separated by oxidized .5-1.5 cm sericite interbands/partings							
53				- tr- dis py							
54	Fe Fm			- highly fractured interval (⊥ to Foln)							
55			12	40.55-42.35 Laminated + Sheared Argillite							
56	Sph 56.80			- as above, however siliceous, much harder than above							
	Carb			- Flt gouge @ 41.90m							
57	Fe Fm →			42.35-49.73 Grey Banded Rhyolite							
	Mt Fe Fm →		10								
58				- massive unit light grey, Fn grd., banded Rhy.							
59				- minor sericite partings (~1-3mm)							
60				- tr-1% dis py throughout							
				- pyrolusite @ 47.4-47.6m							
61				- tr-1% dis + stringer sph 49.35m							
				49.73-49.86 Magnetite-Silica Iron Fm.							
62			19								
				- 60-70% banded Foly xl'ine Mt. in a fine grained silica matrix (Rhyolite)							
63	CARB MT. Fe Fm →			- salt + pepper texture							
				sph. - 1-2% blebby py							
64											
65				49.86-50.26 Grey Rhyolite							
66			15								
				- massive grey silica rock - Rhy.							
67				- v. minor sericite partings							
				- no dis Mt or py							
68											
69	69.9 →										

PAGE 6 OF 20	PROJECT: Puck	HOLE NO. 96-01

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		46.75	48.74	1.99	107011	55	8	1274	<0.2	<5
		48.74	49.73	0.99	107012	56	22	1178	<0.2	<5
		49.73	51.36	1.63	107013	51	22	458	<0.2	<5
		51.36	52.26	0.90	107014	43	10	822	0.2	<5
		52.26	54.66	2.40	107015	21	10	916	0.4	<5
		54.66	57.03	2.37	107016	74	20	422	0.4	<5
		57.03	57.61	0.58	107017	68	2	552	0.2	<5
		57.61	58.60	0.99	107018	73	36	4122	1.8	<5
		58.60	58.90	0.30	107019	54	22	1425	0.4	10
		58.90	60.90	2.00	107020	47	41	178	0.2	5
		60.90	62.55	1.65	107021	88	28	174	1.0	5
		62.55	62.70	0.15	107022	62	88	350	1.4	5
		62.70	64.70	2.00	107023	115	54	604	0.8	<5
		64.70	66.70	2.00	107024	136	132	740	0.6	15
		66.70	68.70	2.00	107025	102	126	1420	0.4	10
		68.70	70.70	2.00	107026	90	30	606	<.2	10

PAGE 7 OF 20 | PROJECT: PUCK | HOLE NO. 96-01

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
69											
70.20 70.24 70 Carb →				50.26-51.36 Magnetite - Silica Iron Fm. - 75% fnly x/line (<1mm cubes) Mt in grey silica - Rhyolite. - banded but overall Salt'n pepper texture @ tr-1% dis Py							
1			13								
2				51.36-52.26 Grey Rhyolite - as above, no Mt., minor sericite banding							
3											
4											
75				52.26-54.66 Magnetite - Silica Iron Fm.							
6	70.00 QV 70.16			- Mt. (coarse) variable. From 50% to 90%, again with Rhyolite (silica Matrix)							
7			14	- top 30cm - banding less regular and silica is v. Fn. grd.							
8			Py.	- tr. dis Py							
9 Mt Fe Fm											
80				54.66-58.03 Grey Rhyolite - grey to dark grey below							
1			FRACTURES	- thinly banded Rhyolite (quartz) and qtz-sericite							
2			10	- Fairly massive overall appearance - thin carbonate horizons at 56.40, 56.44 and 56.55 m.							
3				- tr spk @ 56.58 m							
4 Rhy				Carb-Mt Iron Fm.							
Schist 5				56.63-57.15 - pale creamy-grey colored Fn. grd. silica + carbonate with 10-20% dis, Fnly x/line Mt							
85			15	- sharp contact above + below							
6											
7				57.15-57.60 Mt Silica Iron Fm. - as above (50.26-51.36) - thinly banded - pale discoloration (NO FIZ) in top 15 cm.							
8				Dark							
9				57.60-58.60 V Grey Tuff a clears Rhyolite							
90			14	- dk. gr. bands of Rhy (irregular) 1-3 cm, separated by v. dk gr. to blk. partings							
1											
2											

58.0 - 62.9 - MT-SILICA FE FM -

PAGE 8 OF 20	PROJECT: Puck	HOLE NO. 96-01

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		70.70	72.70	2.00	107027	191	68	248	<0.2	15
		72.70	74.65	1.95	107028	63	16	1150	<0.2	10
		74.65	76.65	2.00	107029	33	<2	988	0.2	<5
		76.65	78.70	2.05	107030	13	<2	362	<0.2	<5
		78.70	79.95	1.25	107031	19	<2	784	<0.2	<5
		79.95	82.00	2.05	107032	65	14	826	<0.2	<5
		82.00	84.00	2.00	107033	59	14	1210	<0.2	<5
		84.00	86.00	2.00	107034	54	24	1535	<0.2	<5
		86.00	88.20	2.20	107035	60	16	1020	<0.2	<5
		88.20	90.20	2.00	107036	69	54	510	<0.2	15
		90.20	92.20	2.00	107037	57	46	730	0.8	10

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION (CA L OIC ↓)	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
92				- tr. ds MT + py							
				- 1cm sparry dolomite (?) vein. @ 25° to CA, 35° to Fol'n.							
				- PO (Webs) @ 62.03 m							
				58.90-62.55 - DK GREY BAND-TUFF/LAVA(?) RHY	as above						
95				62.55-62.70 Carbonate-Mt-Iron Fm.							
				- bands of up to 60% fn-lg xl'in Mt (<1cm) - 25%)							
				- pale creamy-grey carb-silica bands (1-5cm)							
				- tr-1%							
				62.70-63.73 - Dark Grey Rhyolite							
				- (as above - 57.60 to 62.55 m)							
				- tr ds py, sph str @							
100				63.73-63.80 Carbonate-Mt Iron Fm							
				-(as above) thin band, ~70% xl'in Mt, 3 pale creamy carb-silica matrix (Fn grd.)							
				63.80-74.65 Light Grey Massive Rhyolite							
				- composed of 75-80%, M. grey, fn. grained Rhyolite (QUTZ ROCK) with 20-25% darker greenish-grey sericite - chl partings.							
105				- partings are irregular - wavy .2-.5cm thick							
				- traces of py + Mt + sph stgs							
				sph @ : 64.16, 64.70 - Gal, 67.04, 67.15, 69.2 & 69.3 + 73.05 m							
				qtz - 1cm, 60° to CA @ 68.92 m							
110				68.9m - 5cm Carb-MT Fe Fm.							
				69.6-69.8 - 5% ds Mt/py							
				70.1 - 4cm carb horizon							
				70.5 - 70. - 3-5% ds Mt							
				74.65-79.95 Mt-Silica Fe Fm							
				- up to 85-90% Fn + coarsely xl'in Mt in a Fn. grd. silica (Rhyolite) matrix.							
				- overall dark grey color + a peppery texture (MT xls).							
				- QV (+chl/sericite) 76.0-76.16m							
				- QV 77.87-77.90 m							
115				- .5cm Fract Filled @ py @ 78.1 (10° to CA)							
				- tr blebby py							

PAGE 10 OF 20 | PROJECT: PUCK | HOLE NO. 96-01

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		92.20	94.20	2.00	107038	83	20	934	0.2	15
		94.20	95.18	0.98	107039	59	40	204	0.4	15
		95.18	97.05	1.87	107040	43	46	230	<0.2	10
		97.05	97.63	0.58	107041	56	<2	92	<0.2	20
		97.63	98.94	1.31	107042	100	36	334	<0.2	5
		98.94	100.70	1.13	107043	79	232	1310	<0.2	10
		100.70	101.10	0.40	107044	85	20	20	<0.2	10
		101.10	102.60	1.50	107045	78	58	434	<0.2	10
		102.60	103.60	1.00	107046	75	156	1135	<0.2	<5
		103.60	104.60	1.00	107047	73	350	1130	0.4	5
		104.60	105.62	1.02	107048	55	298	1370	0.2	20
		105.62	106.44	0.82	107049	62	460	1845	0.4	15
		106.44	107.20	0.76	107050	55	300	2050	0.6	35
		107.20	108.22	1.02	107051	53	110	40	<0.2	30
		108.22	109.70	1.48	107052	83	124	986	<0.2	5
		109.70	109.90	0.20	107053	108	164	26	0.6	130
		109.90	112.47	2.57	107054	62	102	36	<0.2	20
		112.47	115.51	3.04	107055	78	66	26	0.4	<5

PAGE 11 OF 20 | PROJECT: PUCR | HOLE NO. 96-01

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
115				79.95-88.20 - Lt Grey Banded Rhyolite							
16				• as above (63.80 - 74.65)							
				- 1-2% dis + stringers of py 84.5-84.6 + 85.25							
17				- stgr + dis sph 84.2 - 84.5 m							
				- sph - 86.75m, ↓							
18				- gradational contact below,							
				interbedded with laminated,							
19				sil argillite in last .6m							
				(sharp contact above)							
120											
				88.20-95.20 Laminated (Sheared) Rhyolite							
21				and siliceous Argillite							
				- thin wispy laminae. <1mm-2mm							
22				alternating dark grey, sericite							
				and usually graphitic + siliceous							
23				argillite and light grey, Fn							
				grd. qtz bands (Rhyolite)							
24				- minor carbonate							
				- abundant py laminae + dis (1-2%)							
25				- .5-.75cm sph/py/carb stringers at							
				- 93.05m, 92.85, 92.75							
26				- gang. @ 93.25 (± 5%)							
27				95.20-108.22 Alternating Carbonate Units							
				and Rhyolite Units							
28											
				C 95.20-95.29 Carbonate (Exhalites?)							
29				S 95.29-95.50							
				C 95.50-95.62 - Fairly distinctive mottled appearance							
130				S 95.62-96.02 with med. grd. lt grey siliceous							
				C 96.02-96.35 material and up to 50-60% lt. gr.							
31				S 96.35-96.60 to white, med-crsgrd carbonate							
				C 96.60-96.72 interbands (white/orange Mg/Fe?)							
32				S 96.72-97.05 - two Carbonate-Mt Fe Fm (?) with							
				C/MT 97.05-97.63 up to 60-70% Mt - 10-20% average							
33				S 97.63-97.89 - weak to mod HCl reaction, Fairly							
				C 97.89-98.94 hard, relatively sharp contacts or							
34				S 98.94-100.07 Facies changes.							
				C 100.07-100.30							
				S 100.30-100.70							
35				C/MT 100.70-101.10 Rhyolite Units							
				C 101.10-101.30 Fn. grd.							
36				C/S 101.30-102.97 - Grey to Greenish Grey, thinly banded,							
				C 102.97-103.13 with sericite segregations /							
37				S 103.13-105.62 seatings up to 5mm.							
				C/MT 105.62-106.44 +/- thin (.5-1cm) v. lt. gr. Carb							
38				C/S 106.44-108.22 layers.							

OJECT: PUCK | HOLE NO. 96-01

TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au	
	115.51	118.56	3.05	107056	50	84	10	0.6	5	
	118.56	123.42	4.86	107057	122	140	648	36.8	25	
	123.42	124.30	0.88	107058 107058A	34	34	2200	3.4	<5	
	124.30	127.20	2.90	107059 107059A	22	4	84	<0.2	<5	← original sample mixed up
Carb/Rhy - 2-3 1cm py stgrs 10 - 1-2% dissl stgrs sphalerite 20 - tr-1% sph-stgrs 29 - sph-stgrs	127.20	128.25	1.05	107060	72	7600	40000	15.2	15	↵
109.7m - Lamt (1-2%) stgrs of po + sph · 109.90m 30-40% vein py/po)	128.25	133.80	5.55	107061	57	92	470	0.8	<5	
	po stgrs @ 105.6 + 105.9m									
	133.80	136.85	3.05	107062	6	20	62	0.4	<5	

PAGE 13 OF 20 | PROJECT: PUCK | HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
138				108.22-118.56 DK. Grey Argillite ± Rhyolite - variable amounts of v. Fn grd, thinly lam'd to bdd (<1mm to 2cm), dk. grey Argillite - up to 30%, thin (.5-2cm)							
9											
140											
1				poor recovery broken core 109.42-118.56 ~50 %	lighter grey, Fn grd. ± lt. gn (Rhyolite) interbands. - (as a whole, unit scratches easily) - thin light colored Rhy. bands show extensive deformation, shearing, micro-Folding, minor Brecciation ± carbonate veining (?). - 116.05m, 118.45m. - 50/spl min'n above continues in this unit to ~112 m with a 20cm zone (109.7-109.9m) of semi-massive bleachy banded po/py - 110m → Bio-fr[illegible] ht py/cpy vein/Frac.						
2											
3											
4											
5											
6											
7											
8				118.56-123.42 GAUGE - GRAPHITIC ARGILLITE							
9				- rubbly core @ black graphitic argillite ± thin soft gouge mud (30% recovery) - upper contact destroyed, lower contact sharp @ polished graphitic slickensides. (FAULT ZONE) Good conductor - lots of Graphite -							
150											
1											
2											
3				123.42 - 124.30 Chl-Ser ALTERED RHY TUFF (?) - green ± grey thinly banded (sheared) ~50 qtz (± carb) and 50% sericite / chlorite - 2-3% finely dis. py							
4											
5											
6											
7				124.30 - 127.20 Argillite, Graphite ± Carbonate -							
8				poor rec.: ~40-50% - Dark Grey - Black - Gauge and minor Carbonate vein (127.0-127.1) - 1-2% finely vein py stringers, dis.							
9											
160											
1											

PAGE 14 OF 20	PROJECT: Puck	HOLE NO. 96-01

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		139.90	142.95	3.05	107063	6	16	52	<0.2	<5
		146.0	147.0	1.00	107064	8	20	22	<0.2	<5
		152.10	155.10	3.00	107065	7	12	30	<0.2	<5

PAGE 15 OF 20 | PROJECT: PUCK | HOLE NO.

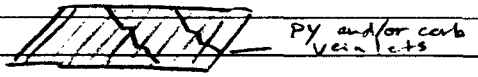
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
161				127.20m to 128.25m - Qtz-Carb-chl-ser +/- py vein - 90% bull white qtz, ±5% c.grd. carb. ±2-3% chl/ser, & Wisby py - overall white + green color, irregular texture - contacts obliterated, bx'd.							
				128.25m to 133.80m Graphitic Argillite - very poor recovery. - large amount of crushed core - blk marl - small sec of core at top of Box 22 shows ~10cm of gouge @ 90° to CA Followed by 20-25cm of v. dk grey to blk. graphitic Argillite (not siliceous at all) - light green ser/chl alt'd vole component increasing toward the end of the section.							
170				133.80m to 142.95 CHL-SER ALTR'D RHYOLITE - pale green rock - well deformed, sheared gouge zones in top 75cm - originally thinly bedded - laminated, minor thicker Rhyolite (silica) bands (5 to 1cm) which have been brecciated (134.80m) - numerous qtz-eyes? / bluish gives a mylonite-sheared - 10% to the unit (& relict Feldspar v/s) - possible lapilli tuff (?) - Fol'n ~ 12-16° From ⊥							
180				142.95 to 176.96. CHL ALTRD LIMEY GRAPHITIC ARGILLITE - overall dk. grey color, composed of 50-60% ~1mm, dk. green-grey graphitic partings and 40% 1-2mm lt. grey to white carbonate (± silica) layers. - mud - strong HCl reaction. - Fol'n consistently 10-20° From ⊥ - occasional small scale folds + numerous chevrons. Fol'n 40° to CA - badly crushed rock! - less carb. in last 2-3m							

Very incompetent rock! Rec. OK. 60-80%. Very incompetent rock! easily impressionable by Finger nail!

PAGE 16 OF 20	PROJECT: PUCK	HOLE NO. 96-01

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		168.0	170.0	2.00	107066	6	20	40	<02	<5
		173.5	175.5	2.00	107067	7	24	50	<02	<5
CHL. ALTN'D LIMEY GRAPH. ARG. - 1-2% Fnly dis + stgr of Py throughout - several small QTZ VNS 142.95 - 143.00		176.95	179.00	2.05	107068	65	54	84	14	20
11 Fol'ns 174.80 - 175.00 176.48 - 176.50 - Carb vein -		179.0	180.9	1.90	107069	76	26	126	0.6	5
		180.90	183.15	2.25	107070	80	12	218	0.4	<5
		183.15	184.40	1.25	107071	67	4	248	0.2	<5

PAGE 17 OF 20 | PROJECT: PUCK | HOLE NO.

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
184				176.96 to 181.15. (poor-60% rec. mud, poorly consld.)	GRAPHITIC ARGILLITE (BLACK) - v.dk grey - BLACK., v. poorly consolidated, sheared, Graphitic Argillite - Massive Black appearance - 1-2% dis py throughout - occasional 1-2cm py stringer bands @ 178.60m + 181.1m - numerous 1mm stringers ∥ throughout py. - could be a lot of Blk. chl also						
190				181.15 - 191.90m more comp. than overlying units	ARGILLITE - GREY ±GRAPHITE - Grey to dk grey - (lighter than unit above ie. not Black) - fairly competent - well laminated (sub-mm) with very few lighter grey, sil. laminae. - abundant (1-2%) dis & stngrs ∥ py throughout - Occasionally graphitic - green chl on partings - carb ± py veinlets - Fracs @ 45° to CA - Fol'n @ 65° to CA.  - QV @ 188.9m - 188.97m @ 2-3% blebby py - Gauzey Graphitic zones - 183.33 - 183.50m 183.90 - 184.00m 184.70 - 184.75m 186.70 - 188.15m						
200				191.90m to 232.25m (Fol'n From 45-90° to CA; V. poor rec. (40%).)	Black (Ganged) Graphitic Argillite - as above (176.96 - 181.15m) - very broken - rubbly core < 50% recovery - very highly graphitic (massive) in places. @ qtz/py bands + dis & stngr ∥py (2-3% total) between 198.0m + 199.0m						

PAGE 18 OF 20 | PROJECT: PUCK | HOLE NO. 96-01

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		184.4	185.6	1.20	107072	75	<2	194	0.4	5
Core photos plus close ups of		185.6	186.6	1.00	107073	62	<2	178	<0.2	<5
		186.6	188.7	2.10	107074	67	6	204	<0.2	<5
- Crushed Arg. Unit - Graphitic Arg. Unit + Py - Py/po zone (30-40%) -Box 20-		188.7	190.2	1.50	107075	57	4	198	0.4	<5
		190.20	191.90	1.70	107076	63	<2	200	<0.2	<5
		191.90	194.77	2.87	107077	76	8	248	0.4	15
		194.77	197.82	3.05	107078	74	14	268	0.4	<5
		197.82	203.90	5.98	107079	90	40	224	0.8	<5
		203.9	206.9	3.00	107080	79	46	146	3.6	<5

PAGE 19 OF 20 | PROJECT: QUICK | HOLE NO. 96-01

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
207				232.25m EOH							
8											
9											
210											
1											
2											
3											
4											
5											
6											
7											
8											
9											
220											
1											
2											
3											
4											
5											
6											
7											
8											
9											
230											

PAGE 20 OF 20	PROJECT: Rick	HOLE NO. 96-01

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Cu	Pb	Zn	Ag	Au
		222.2	225.2	3.00	107081	155	24	208	3	<5
		225.2	229.0	3.80	107082	344	12	2%	<100	<5
		229.0	232.25	3.25	107083	105	10	366	1.4	10

PAGE OF | PROJECT: Rock | HOLE NO. 96-01

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
230											
1											
2											
3											
4											
5											
6											
7											
8											
9											
240											

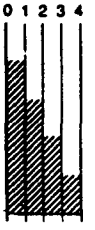
EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: PUCK	GROUND ELEV.: ~ 1330m
HOLE NO.: PK-96-02	BEARING: ~ 233° (Grid West)
LOCATION: L 3100N / 5225 E	DIP: -65°
	TOTAL LENGTH: 718' - 218.85m
LOGGED BY: A. Turner	HORIZONTAL PROJECT
DATE: May 17 - 21, 96	VERTICAL PROJECT
CONTRACTOR: F. Boisvenu Diamond Drilling	**ALTERATION SCALE**
CORE SIZE: NQII	
DATE STARTED: May 16/96	
DATE COMPLETED: May 20/96.	**TOTAL SULPHIDE SCALE**
DIP TESTS: Azd - 200m - -60°	



absent
slight
moderate
intense



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

COMMENTS

- Very Interesting Calcite - Py Exhalites @ 84.57m - 87.35m

LEGEND

PAGE 1 OF 36 | PROJECT: | HOLE NO. 22-36-22

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
0	100			0 - 5.49 CASING							
				5.49 to 41.40m Grey-Green Rhyolite							
1				- overall green in core w/ top 5m is slightly weathered (some Rhy bands have a distinct grainy-pitted texture and a pale orange-red discoloration - no HCl reaction)							
2				- unit is irregularly banded - frag material (?) with .5 to 3cm, fine grd silica (Rhy bands) seperated by .1-.5cm sericitic (+chl?) partings which are anastomosing which gives the appearance of frags.							
3				- Overall 80% Rhy bands, 20% ser.							
4				- dis py (traces) in top 5m, below is +-1% disp'd Mt (?? alter Mt) particularly along partings.							
				- foliation consistent (75° to CA)							
5			CASING	- grainy texture may be result of weathering - carbs (?) - not observed below 11.5m							
5.49m			75	- unit gradually becomes massive with 80-90% fine 5cm lt. green-grey silica (Rhy) bands and 10-20% sericitic bands.							
6				- Tr dis py traces dis Mt.							
7				ps - anastamosing irregular nature of sericitic selvages gives a sort of fragmental appearance to rock in places.							
8			Grainy Rhy Frz bands	- Very consistent unit, slight increase in sericitic bands in last 5m grading out of the underlying Porp. Rhy unit?							
9				- Attn: along with increased ser/tuffaceous bands, Rhy. bands ? in last 5m of unit are pitted weathered carbs. grains (or pale yellow alt'n mineral)							
10											
				DS. MT. 65							
11											

PAGE 2 OF 36	PROJECT:	HOLE NO. 96-02

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Cu	Pb	Zn	Ag	Au
		8.5	10.0	1.50	107084	59	L2	46	0.2	10

PAGE 3 OF 35 | PROJECT: AUCK | HOLE NO. AK-96-02

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
12	~100			Grey-Green Rhy Schist (Cont'd)							
13											
14	QV										
15			65								
16											
17											
18	QV										
19											
20	60-70%		65	- 19.7m to 34.0m - Massive Grey Green Rhy - as above however >% 1 Rhy Bands vs sericite - trds NOT throughout							
21	80-90% H. green - grey Rhy	QV									
22											
23											

PAGE 4 OF 35	PROJECT: MCK	HOLE NO. 96-02

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		13.0	14.5	1.50	107085	85	6	74	0.2	L5
		17.5	19.0	1.50	107086	35	6	68	0.2	L5
		22.0	29.5	5.5	107087	39	L2	48	0.2	L5

PAGE 5 OF 35 | PROJECT: Pulk | HOLE NO. 96-02

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

23 — 2/100 — drill fluid

Grey-Green Rhyolite (cont'd)

View = N collar.

24

25 — 65/

26 — 65/05

27

28

29

30 — 20/

31

32

33

34 — 20/ FLT.

- gradual increase in sericite (navy) intervals to ~20-25% of rock.
- minor carbonate alt'n

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Cu	Pb	Zn	Ag	Au
		26.5	29.5	3.00	107088	57	6	46	0.2	L5
		34.5	36.0	1.50	107089	75	12	57	0.2	L5

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION chl A	ser B	carb C	sil D	? E	FRACTURE INTENSITY	% VEIN QTZ.
35				Grey-Green Rhyolite (cont'd)							
				- as above, more sericite interbands + minor carb alt'n (?)							
36				- 40.90-40.98m - Carb/Qtz Rhy band - 50-60% med. grd. creamy carb. mass aphanitic sil matrix.							
			63								
37											
38											
39											
40											
41											
			70	41.40 to 48.60 m. THINLY INTERBANDED ARGILLITE AND RHYOLITE							
42				- overall dark grey color composed of 60-70%, v. thinly laminated, dk grey to black argillite bands and 30-40%, lt. grey, silica-rich (Rhyolite bands (.5-1cm thick)							
43	~50% REC (BROKEN)			- traces of disseminated + stringers & fracs + fol'n (tr%)							
				- Foln consistent, 70-75% to CA (w numerous shear structures incl. minor fault shears.							
44			58								
45	NO CORE			45.00 m to 48.10 m (?) GRAPHITIC ARGILLITE ?							
				- only 10cm of core recovered before last interval (45.11-48.16)							
46											

carb alt'n

PAGE 9 OF 35	PROJECT: Puck	HOLE NO. 96-02

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		39.0	41.4	2.40	107090	60	8	44	0.2	.25
		41.4	45.1	3.70	107091	126	24	326	0.4	.25

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E (Ox)	FRACTURE INTENSITY	% VEIN QTZ.
46	NO CORE	?									
47		?									
48		?									
		OXIDIZED RUSTY		48.16 to 49.90m Grey & Greenish Grey RHYOLITE - lt. grey to greenish grey color - massively banded <15% sericite partings - minor oxidization.							
50		MT	65	49.90m to 50.20m SILICA - MAGNETITE ROCK (Fe Fm) - weak MT Fe-Fm. - grey & lt. grey, thinly banded (1-10mm) Rhyolite bands with up to 10% dis to weakly banded, .5-1mm, x/line, MT							
51		MnOx									
52		MT		50.20m to 56.85m MASSIVE GREY RHYOLITE +/- SILICA-MT Fe/Fm's							
53				50.20-52.5 RHY Massive Grey Rhy. 52.5-52.55 RHY-MT -Fm grd., ser-poor, 52.55-54.2 RHY with dis MT which 54.2-54.3 RHY-MT occassionally reaches 54.3-54.7 RHY concentration approachy 54.7-54.85 FAULT GRNGE Fe Fm (10-20%) 54.85-55.45 RHY - MT generally +/-3%							
54		MT									
FLT 54.70 GGE 54.85		MT									
55			70	- Mn^{ox} coatings on Fracture (?) @ 54m							
56		MT		55.45 to 58.0m SILICA-MAGNETITE ROCK (Fe Fm) - as above (49.9-50.2m) - dis MT (.5-2mm cubes) with local concentrations over +5cm / up to 20-30% MT.							
57		MT									

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		48.16	49.90	1.74	107092	46	12	220	0.4	<5
		49.9	50.2	0.3	107093	38	<2	632	1.02	<5
		50.2	52.2	2.00	107094	56	20	356	0.8	<5
		52.2	54.2	2.00	107095	43	10	804	1.02	10
		54.20	55.45	1.25	107096	57	16	1445	0.8	75
		55.45	56.45	1.00	107097	61	<2	258	1.02	20
		56.45	58.00	1.55	107098	97	10	138	1.02	10

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION (CARB) A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				58.0m to 61.7m — DARK GREY RHYOLITE (+/- ARG)							
58				- Grey and Dark grey Rhyolite (fn-grd) (silica-rich) bands .5-3cm thick with wavy to stylolitic borders seperated by v. dark grey-blk argillaceous (?) partings.							
59				- occasional thin (.5cm) green chlorite rich bands							
				- increasing amount (generally < 10%) of thin light grey-brown, lam'd, argillite bands							
60				- two carbonate rich units - 61.0m to 61.2m + 61.50m - 61.58m							
61				- QV + py (blebby) +/- whisps of chl @ 59.5m - 28° to CA							
				- disseminated py (tr-1%), Fine Fill @ 58.2m + QV + py @ 59.5m							
62				61.7m to 69.3m — ARGILLITE							
				- gradational contact above into a more consistently argillitic unit							
63			carb	- 75-80% thinly laminated, v. fn. grd., brown to grey brown argillite and lesser, fn-grd., Rhyolite (silica-rich) interbands							
64				- occasional carbonate-rich zones - 62.8-63.4m is largest							
				- Carb - v.e.s.d, pale green alter + minor Qtz vein ⊥ CA @ 68.97m to 69.10m							
65											
66			67								
67											
68											
				Carb vn							

Broken core

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		58.0	60.0	2.00	107099	76	4	60	.02	5
		60.0	62.0	2.00	107100	116	50	76	.02	5
		62.0	64.0	2.00	107101	66	16	40	.02	5
		64.0	66.0	2.00	107102	75	68	470	.02	10
		66.0	68.0	2.00	107103	93	10	32	.02	5
		68.00	69.35	1.35	107104	57	10	32	0.2	10

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION chl A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
69											
Carb. vn Arg.				69.3 m to 71.1 m — ARGILLITE AND RHYOLITE - thinly banded (1-5 mm) dark grey, fn. grd. siliceous rock (Rhyolite ?) bands and thin, (1-10 mm), v. fn grd., dark grey, argillite (+/- sericitic bands. - reminiscent of silicarous argillite in PK-96-01 - traces of py on partings + dis.s traces of sfal or sph (?) crushed + broken core obscures lower contact, upper is quite sharp. - Carb +/- chl alt'n (?), some graph.							
70			66								
71			GG								
carb			96								
72											
73			66	71.1m to 73.8m two thin CARB EX UNITS — CHLORITIC RHYOLITES - thinly banded (.5-1 cm) light grey fn-med. grd., silica (+/- carb) ~ 60-70% of rock; with 30-40% distinct dark green, chlorite-rich (+/- ser) fn grd., interbands - traces of MT - rare thin bands of isolated x/s - trace of dis + blebby py - minor carbonate-rich zones (altrid ?) - 71.20-71.25 m + 71.40-71.60 m							
74		MT MT MT									
		MT MT	67								
75		MT MT MT MT MT MT MT									
76		py		73.8m to 74.33m — SILICA - MT Iron Formation (?) - thinly banded, light & med. grey Rhyolite, overall light grey color, with dis MT x/s (exhibiting weak banding) 1-5% - minor chl +/- ser alt'n illustrated by light green sericitic partings (<5% of rock) - chl on fracs.							
		66									
		MT									
77											
78		MT MT MT MT MT									
		MT MT		74.33m to 74.66 m — CARBONATE - MT Fe Fm (?) - as above with fn grained, creamy white, Carbonate-rich bands (up to 40-50% of rock)							
79	sph	MT									
	sph										
	sph	MT									
				74.66 m to 75.59 — SILICA - MT Fe Fm (?) - as above, - lt. grey thinly banded fn-med grd silica + MT (+/- carb), tr py - looks little should have some carb - v. minor reaction however!							
80	sph										

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		69.35	71.10	1.75	107105	53	58	172	0.2	5
		71.1	72.5	1.40	107106	50	40	242	0.2	5
		72.5	73.8	1.3	107107	58	38	54	0.6	40
		73.8	75.6	1.80	107108	56	10	32	0.4	20
		75.60	76.65	1.05	107109	74	10	162	0.2	25
		76.65	78.20	1.55	107110	59	270	186	0.6	30
		78.20	79.45	1.25	107111	65	46	742	0.2	20
		79.45	81.45	2.00	107112	68	320	534	0.3	15

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				78.59 to	SILICA - CHLORITE (CHL-RHY above)						
				76.55	- v. similar to chloritic Rhy unit above						
					- minor Carbonate in upper 20-25cm						
					- grad. cont. above, sharp below from Sil/chl to sil. (only).						
82	Py				- 3-5% py @ 76.2m, tr-1% elsewhere						
	Py										
carb				76.55m to	GREY RHYOLITE (SILICA UNIT)						
83				76.65m	- Fairly massive, thin unit, light grey, Fn. grd. silica, only traces of sericitic partings.						
dis. Mt		MT	66		- tr dispy						
84		MT									
		MT		76.65m to	CARBONATE - MT Fe Fm (?)						
		MT		76.75m	- as abov, Fn-med grd, thinly banded sil - +/- carb (up to 50%) with up to 10% dis & banded Mt x/s.						
85	Py										
semi-massive py.	Py										
	Py			76.75m to	SILICA - MT Fe Fm (?)						
	Py			82.60m	- as above						
86 QTZ	CARB VN				- thinly banded, Fn. grd, light grey silica-Rhy matrix with up to 30-40% Mt (> concentr. between 77.45 & 78.20m) x/s. - Mt content is variable.						
5-10% py	Py				- Mt-rich bands at 78.3-78.5, 78.8, 78.9, Mt-Carb 79.45-79.53, 80.3-80.45, 80.75-80.9, 81.50m						
87	Py				- 3-5% strgr Sph @ 78.95-79.45m (80.05m)						
Gal. 1-2% py	Py				- tr-1% dis/Hobby py 82.0-82.6m						
	Py				- last 1.5m of unit are Rhy-rich, Mt-poor						
88											
1-2% sph strgrs											
	Py										
89			70	82.60m to	LIMEY RHYOLITE						
				83.20m	- lt. grey, fn-med grd, thinly banded, (clean looking) minor ser+chl partings						
sph (?) chl			45		- Fairly vigorous reac to HCl						
90					- 80% cal. last 10cm.						
	Py				- traces of dispy, minor chl clots						
91				83.2m to	SILICA - MT ROCK (Fe Fm?)						
atz-carb vein				84.57m	- as above 73.8-74.3m						
			55		- med. grained, grey to lt. gran. dis MT (up to 1-2%), minor ser. partings						
bx-+	Py				- (NO HCl reaction)						
92											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		81.45	82.60	1.15	107113	26	12	112	0.2	25
		82.60	83.20	0.60	107114	25	4	584	<0.2	10
		83.20	84.57	1.37	107115	12	<2	40	<0.2	<5
		84.57	86.5	1.93	107116	39	60	124	<0.2	
		86.50	87.85	1.35	107117	54	64	90	<0.2	
		87.85	89.57	1.72	107118	65	24	4000	<0.2	20
		89.57	90.00	0.43	107119	104	164	1480	0.4	20
		90.0	91.0	1.00	107120	71	104	58	<0.2	25
		91.0	92.5	1.5	107121	47	116	702	<0.2	10

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
92											
	py			84.57 to 87.85 m — PYRITE - CALCITE EXHALITE - thinly banded, fnly x'line (<1mm) py and med. grained, lt. grey, carbonate - sucrosic texture. - py content overall ≈ 30%							
93				CARBONATE EXHALITE (?) semi massive py From 84.65 to 86.50m 5-10% py From 86.50m to 87.10m, 2-3% py From 87.10m to 87.85m							
93.35 sph? 93.7	py		73	- py content is concentrated in bands which appear semi-massive and are seperated by +/- pure carb layers.							
94				- NO visible sph; 1-2 x/s of gal @ 87.5 - minor chloritic/sericitic wash (?)							
95	py			RHYOLITE							
96				87.85m to 89.57m — CARBONATE +/- SILICA ROCK - lt. grey unit, thinly banded, carbonate/Rhy (?)							
97	py			- similar to above except sharp disappearance of py, only trace amounts present, including occasional coarse blebs + fracture fillings.							
sph 1-2% 98	py		small fit 75°	- ~10% sericite +/- chl., 1-5mm, inter-bands to partings - abundant, 1-2%, thin (<1cm), sphalerite stringers.							
Calcareous			65	89.57m to 90.0m — CHLORITIC CARB EXHALITE (?) - as above, however, 30-40% chl/ser layers - overall dark green color. - several carb + py fractures @ 40° to CA. - by - flt gauge (2cm wide) 45° to CA - fr. sph (?)							
99	py										
100											
			calc								
101				90.0m to 93.85m — CARBONATE / RHYOLITE ROCK - as above (87.85m to 89.57m) - increasing amount of Rhy and argillic interbands in last 1-1.5m -							
102	py			maybe 2-3% py tr sph (?) → - 1-2% py as isolated disseminations and as thin py-rich bands — always fnly x'line —							
103			65	- Qtz-Carb vn @ 91.3m (93.35-93.70) - Flt/Frac - by + py + qtz + chl 91.67-91.72							
103.2 qtz →											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zr	Ag	Au
		92.50	93.88	1.38	107122	59	160	3850	<0.2	15
		93.88	94.85	0.97	107123	69	140	36	<0.2	15
		94.85	96.85	2.00	107124	47	110	180	<0.2	20
		96.85	98.85	2.00	107125	59	146	2060	<0.2	15
		98.85	100.65	1.80	107126	67	50	28	<0.2	25
		100.65	102.65	2.00	107127	75	46	24	<0.2	5
		102.65	104.00	1.35	107128	62	84	22	0.4	<5

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2 photos of sheared and not sheared → 96.15/101.3m

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
104	PY	qv		93.85m to 107.75m — ARGILLITE AND RHYOLITE - overall dark green color - thinly banded; 75-90% light to dk grey, siliceous (Rhyolite) bands, band thickness variable, .5-1cm, but also shearing created fragmental appearance with stylolitic boundaries - Rhyolite bands seperated by to 5mm (rarely 1cm thick) argillite inter. bands - gradational contact above, into the carbonate exhalite (Unit is however calcareous from top 93.85m to ~100.7m - thin v. calcareous Argillite unit from 100.35 - 100.60m - entire interval contains between 3 + 5% finely x'line py as disseminations in thin, slightly coarser grd Rhy units and as laminations @ silica units (PYRITE SILICA ROCK WITH ARGILLITIC COMPONENT) - stngrs of sph (1-2%) 97.2m - 98.6m - increasing Graphitic component below, grading onto Graph. Arg. (last 3m quite graphitic-rich)						
105	PY		66								
106	PY	Graph		(Loss of Carb. coincident with strong shear fabric)							
107	PY										
108	PY	FLT		☆							
109		GREEN	70								
110											
111		CMTD-Q. VN Q. VN		107.75m to 108.0m — GRAPHITIC FAULT GAUGE - crushed black graphitic argillite + irreg. carb. vein.							
112		DK GREY	55	108.0m to 109.5m — CHL/SER ALTN'D RHY/ARG - light grey + green color - highly sheared to crushed rock with mod to intense chl/ser altn of argillitic component. WAXY TEXTURE - tr-1% dis py - weak HCl reaction throughout							
113			Small Kink Folds								
114		Brecc-dGrey	68	109.5m to 111.3m — GRAPHITIC FAULT GAUGE - as above @ qtz carb. vng.							
115											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		104.0	106.0	2.00	107129	43	26	120	0.4	<5
		106.0	108.0	2.00	107130	67	60	846	0.8	10
		108.0	109.5	1.50	107131	11	<2	64	<0.2	<5
		109.5	111.3	1.80	107132	25	29	336	<0.2	<5
		111.3	113.3	2.00	107133	8	12	50	<0.2	<5
		113.3	115.3	2.00	107134	5	14	44	<0.2	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
115	GREY-BRWN	QV QV QV		111.3m to 145.8m QFT2 +/- FLD PORPH SERICITIC RHY - color varies from lt to dk gray, pale brown, lt gray & pale greenish-grey - texture is fairly consistent, massive appearance (i.e. little textural variation) - thinly bedded, med-crs grd - sericitic Rhyolitic TUFF (?) - Qtz-Fld-ser schist - Fld phenos up to 10% (2-3mm) - occasional to abundant quartz-eyes. (3-8mm elongated // foln), grey to blue-grey.							
116			GG								
117			GT								
118											
119	GREY-GREEN			111.3-113.5m - Dark Grey. Few phenos Few lt grey silica bands							
120			GG	113.5-117.9m - Brown-Grey - Good phenos massive appearance 117.9-120.5m - Green-Grey - Good phenos Sericitic - Wavy - massive 1-2% dis py							
121	DARK GREY		FLT BADLY LOCATED	120.5-127.4m - DK Grey - good Fld phenos, v. Fnly lam (more ashy ?) fn grd.							
122			GT	127.4-130.3. Light Grey - consv grd. to sph (?), 1-3% py good 2-3m white Fld. sp phenos + dk grey - Q eyes.							
123		QV	FLT GG.	Flt'd green ser. Rhy + QV's 115.5-116.1 Flt'd dk. grey Rhy + QV @ 122.5-123.8							
124			GG.	- dis py throughout (traces) - tr dis sphal (?) - 28.4 - 1-3% blebby + dis py (128m - 132m) occasional .5-3cm band with up to 10% e.grd. blebby py							
125	pyrite gravel (some lost core)			130.3m-133.0m V.lt. grey, leached, wavy, sericitic, crushed Calcareous - gangy looking - altd Rhy - dis py throughout 133.0m-145.8 - DK. Grey - abundant white Fld (+ qtz) phenos, Fairly distinctive white speckled texture							
126											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		118.3	116.5	1.20	107135	7	22	48	.02	.05
		116.5	117.9	1.40	107136	4	16	46	.02	.05
		117.90	119.25	1.35	107137	5	8	50	.02	.05
		119.25	120.50	1.25	107138	7	12	22	.02	.05
		120.50	122.00	1.50	107139	7	10	26	.02	.05
		122.0	123.5	1.50	107140	9	8	16	.02	.05
		123.50	124.35	0.85	107141	8	28	22	.02	.05
		124.35	129.40	3.05	107142	8	90	86	.02	.05

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION Ser A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
127	some lost core			- last 2-3 m have undergone some degree of crushing							
128		DARK GREY	70								
129											
130											
131		CALCAREOUS LIGHT GREY		crushed Faulted.							
132											
133											
134		Dark Grey		crushed Faulted.							
135				crushed							
136		lost core		white speckled unit							
137		QV									
138											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Cu	Pb	Zn	Ag	Au
		127.40	128.90	1.50	107143	5	32	40	0.2	<5
		128.90	130.35	1.45	107144	9	60	42	0.2	<5
		130.35	132.50	2.15	107145	6	40	14	0.2	<5
		132.50	134.50	2.00	107146	6	20	16	0.2	<5
		134.5	139.6	5.10	107147	10	40	44	0.2	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
138				Dark grey quartz sericite schists							
139		PY									
140		PY	66								
141											
		RVN →		White speckled unit							
142											
143			60								
144											
145											
				145.6m to 154.84m CRUSHED FLD/QTZ PORPHYRITIC (?) RHYODACITIC TUFF							
146				- crushed version of white speckled gray banded rock above							
147				- sheared looking white phenos (Feldspar ?) that appear to have tales (shear structures) with occassional qtz eyes dark blue-grey, similar size to white phenos (2-4mm)							
148				- clay-sericite rich, dark grey laminae-matrix with lighter grey silica rich laminae to bands (1-2mm)							
149				- moderate HCl reaction							

PAGE 26 OF 35 | PROJECT: Puck | HOLE NO. 96-02

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		139.6	141.1	1.50	107148	9	18	10	0.2	.5
		141.10	142.65	1.55	107149	8	18	48	0.2	.5
		142.65	145.7	3.05	107150	9	18	26	0.2	.5
		145.7	147.2	1.50	107151	8	56	296	0.2	.5
		147.2	154.8	7.60	107152	12	64	214	0.2	.5

PAGE 27 OF 35 | PROJECT: PLCK | HOLE NO. PK-9602

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
150				Crushed white speckled Rock (contd)							
151											
152											
153											
154											
155				154.8m to 159.5m PALE GREEN CALCAREOUS SERICITIC GAUGE - name says it all							
156											
157											
158											
159				to Greenish Grey							
160				159.5m to 160.4m as above DARK GREY CALCAREOUS GAUGE - name says it all - thinly banded (1-2mm) clay rich laminae + white carbonate rich laminae							
161											

Some lost core — Some lost core - soil

OK
PY
PY

PAGE 28 OF ~~36~~	PROJECT: Pluck	HOLE NO. 96-02

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		154.84	155.20	0.36	107153	6	16	10	0.2	.5
		155.20	157.99	2.79	107154	5	32	14	0.2	.5
		157.90	159.50	1.60	107155	6	58	34	0.2	.5
		159.5	160.4	0.90	107156	10	40	90	0.2	.5
		160.4	161.1	0.70	107157	24	46	488	0.2	.5

PAGE 29 OF 35 | PROJECT: PUCK | HOLE NO. PK-96-02

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
151				160.4m to 161.0m	PALE to DARK GREEN ALTR'D ?							
162					- thinly laminated to banded - calcareous - chl - ep.d ? altr'd argillaceous bands (?) - 3-5% dis py (top 30-40 cm) - dk green chlorite rock (lower 30 cm)							
163				161.0m to 169.7m	GRAPHITIC ARGILLITE - v. dk gray - black - variable disturbed from foliated to crushed - numerous Quartz veins - up to 3-5% py locally, 1-2% throughout, occurring as large (~1 x 3 cm) clots of fnly vlike py. - some v. dk. green chl. associated w Q.V's.							
164	QV											
165	QV Q-C V		50-60% rec.									
166												
167	QV			169.7m to 176.2m	DK GREY GRAPH ARG + QV's - 25-30% thin 1-10 cm quartz veins (+/- chl, +/- py), very irregular orientations. - in a well consolidated, thinly laminated, v. dk. gray, graphitic argillite - tr-1% bleb/dis + stgrs, fnly vlike py - dk blue-green chl on fracs.							
168												
169				176.2m to	MASSIVE DK GREY ARGILLITE - with numerous, thin (1-3 mm) irregular carb veinlets - trace - 1% py as dis + stgrs - chl. on fractures - Mercuric appearance.							
170												
171												
172			60									

PAGE 30 OF 35 | PROJECT: Puck | HOLE NO. 96-02

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		161.1	165.0	3.90	107158	89	144	118	1.2	5
		165.0	167.0	2.00	107159	73	20	164	0.2	5
		167.0	169.8	2.80	107160	57	10	90	0.2	5
		169.8	171.0	1.20	107161	73	14	240	0.2	5
		171.0	174.0	3.00	107162	65	20	96	0.2	5

PAGE 31 OF 36 | PROJECT: PUCK | HOLE NO. PK-96-02

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
173											
QV's											
174			62	← sph (1-2%) @ 171.75 (?)							
175 QV's											
176				← Massive DK Gray Arg. Lith.							
177											
	P1		58								
178											
179											
180	P1										
	P1										
181											
	P1		60								
182											
183											
184											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		174.00	176.17	2.17	107163	57	10	174	0.2	5
		176.17	178.20	2.03	107164	75	12	170	0.2	5
		178.20	180.20	2.00	107165	73	14	188	0.2	5
		180.2	182.2	2.00	107166	60	16	154	0.2	5
		182.2	184.2	2.00	107167	70	14	164	0.2	5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
184											
5											
6											
7											
8											
9											
190											
1											
2											
3											
4											
5											
6											
7											
8											
9											
200											
1											
2											
3											
4											
5											
6											
7											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		184.2	186.2	2.00	107168	63	12	180	<0.2	<5
		186.2	188.2	2.00	107169	64	12	186	<0.2	<5
		188.2	191.2	3.00	107170	74	18	224	<0.2	<5
		191.2	193.0	1.80	107171	60	[illegible]	94	<0.2	<5
		193.0	195.9	2.90	107172	67	6	168	<0.2	5
		195.9	197.5	1.60	107173	66	<2	186	<0.2	5
		197.5	200.5	3.00	107174	67	6	198	<0.2	<5
		200.5	203.6	3.10	107175	52	10	254	<0.2	<5
		203.6	205.6	2.00	107176	73	6	200	0.2	5
		205.6	207.7	2.10	107177	64	10	284	<0.2	<5

PAGE 35 OF 36 | PROJECT: Pluck | HOLE NO. 96-02

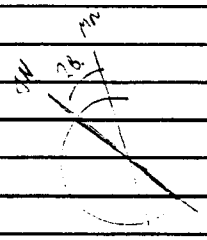
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
207											
8											
9											
210											
1											
2											
3											
4											
5											
6											
7											
8											
9											
220											

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MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	ASSAYS Pt	ASSAYS Zn	ASSAYS Pd	ASSAYS Au
		207.7	209.7	2.00	107178	65	10	208	<0.2	15
		209.7	212.75	3.05	107179	84	18	216	<0.2	10
		212.75	218.85	6.10	107180	52	14	66	1.2	10

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: PUCK	GROUND ELEV.: ~1350m
HOLE NO.: PK-96-03	BEARING: 233° (Grid West)
LOCATION: L2400N - 5080E	DIP: -65°
	TOTAL LENGTH: 186.84m - 615'
LOGGED BY: Andrew Turner	HORIZONTAL PROJECT
DATE: May 23/96	VERTICAL PROJECT
CONTRACTOR: F. Borsveen Diamond Drilling	
CORE SIZE: NQII	
DATE STARTED: May 21/96	
DATE COMPLETED: May 26/96	
DIP TESTS: Sperry -100' - 30.5m - 208°/-63° (+28 = 236°); 600' - 182.9m - 209°/-61.5° (↳ 237°)	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



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

COMMENTS

- 98.25m - 99.03m - Calcite Pyrrhotite Chalcopyrite

LEGEND

PAGE 1 OF 31 | PROJECT: PUCK | HOLE NO. PK-9603

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
0				0-7.01m CASING - bouldery 0/13							
				7.01m-19.00m THINLY BANDED GREENISH-GREY RHYOLITE							
1				- Thin (<1cm) light grey to greenish grey (fine grained) Rhyolite bands with approx. 30%-40%, v fine-grained grey to pinkish grey sericitic, laminated (sheared) interbands.							
2				- Sericitic bands are wispy and discontinuous and wavy to anastomosing adding to sheared texture							
3				- traces of dis py (1.5-2mm cubes) and fg mt.							
4				- gradational change below into a more massive Rhy.							
5											
6											
7											
8											
9											
10			68								
11											

PAGE 2 OF	PROJECT: MCK	HOLE NO. 96-03

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Cu	Pb	Zn	~~Ag~~	Au
		10.0	11.5	1.50	107181	68	8	76	02	15

PAGE 3 OF 31 | PROJECT: PUCK | HOLE NO. PK-96-03

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
12											
13											
14											
15			71								
16											
17											
18			69								
19				19.00m to 58.60m	GREENISH-GREY RHYOLITE - as above, however, lesser (<10%), thin (.1-.5cm) whispy sericitic interbands seperating 1-4 cm, fn. grd., lt. grey to gr-grey Rhyolite bands. - trace of dk3 pg / MT (rare) - Contacts gradational - QV's - massive white qtz 28.85-29.65 - [redacted] QV Rhy - semi-to pods. (75-80% qtz)						
20											
21											
22			41								
23											

+ ~30-40% sericitic interbands

<10% sericitic interbands

PAGE 4 OF	PROJECT: MCK	HOLE NO. 96-03

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Cu	Pb	Zn	Ag	Au
		14.5	16.0	1.50	107182	67	18	72	.02	.5
		19.0	20.5	1.50	107183	71	8	56	.02	.5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
23											
24											
25			70								
26											
27											
28			60								
29		QV →									
30			70								
31				31.10m to 31.35m — VERY THINLY BANDED RHYOLITE - 50-60% thin (<1mm) sericite bands/laminae & greenish-grey qtz							
32		QV →		31.35m to 31.70m — QUARTZ VEIN - massive white qtz, minor chl/ser.							
33			65	31.70m to 33.70m — GREENISH-GREY RHYOLITE - as above 19.0m - 31.1m (tr-3% py/pt) - gradational lower contact							
34		QV →		33.70m to 34.20m — VERY THINLY BANDED/LAMINATED ARGILLITE AND RHYOLITE - grey to dark grey, thinly banded to laminated (1-2mm), fn grd. - small FRD.							
		SIL-MT Fc Fm →									

PAGE 6 OF	PROJECT: Puck	HOLE NO. 96-03

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		23.5	25.6	2.10	107184	71	4	48	<0.2	<5
		28.5	30.0	1.50	107185	91	6	64	<0.2	<5
		33.0	34.5	1.50	107186	73	4	22	<0.2	<5
		34.50	34.75	0.25	107187	74	10	64	<0.2	60

PAGE 7 OF 31 | PROJECT: PUCK | HOLE NO. PK-96-03

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
SIL-MT Fe-Fm's				34.20m to 34.48m — GREENISH-GREY RHYOLITE — as above (ds3 py / mt)							
				34.48m to 34.52m — SILICA-MT Fe Fm (?) — thin massive, dk. green (chl?) band @ 10-20%, 1-2mm Mt x/s							
				34.52m to 34.66m — GREENISH GREY RHYOLITE — as above							
			70	34.68m to 34.75m — SILICA-MT Fe Fm (?) — as above, Mt. crs grd (3-5mm) — (20-30%)							
				34.75m to 35.25m — THINLY BANDED GREENISH-GREY RHYOLITE — as above (50-60%, 4cm Rhy bands) — gradational contact below — Fairly sharp ctct above							
QV's carb+py vein											
			02	35.25m to 38.40m — GREENISH-GREY RHYOLITE — as above — ~1cm Frag'd. green-grey Rhy bands @ ~10%, 1-3mm, wispy, ser partings to laminae, 1% ds Mt.							
				38.40m to 39.55m — VERY THINLY BANDED RHY + QV's — 38.4m to 38.51 - RHY; 38.51m to 38.57m - QV; 38.57m to 38.90m - RHY; 38.9m to 39.55m - QV (wht-massive) — V.T.B. RHY - pale greenish-grey, laminated to v. thinly banded (<1mm - 2mm), ser. silic (50%) — trace py (ds) + @ thin (<1cm) carb vein @ 38.88m							
			63	39.55m to 83.00m — GREENISH-GREY RHYOLITE — ~85-90% v.l.l. grey to green-gray, Fn. grd, 1-4cm Rhy bands seperated by grey-ser silic partings / laminae, (wispy) — 1-2% ds, 1-2mm Mt x/s (cubes) primarily in ser silic partings. — Z fold @ 58.5 - 58.9m — up ← → DWN — Qtz-chl vein (photo)							
46											

PAGE 8 OF	PROJECT: Bulk	HOLE NO. 96-03

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		34.75	36.00	1.25	107188	86	8	100	<0.2	<5
		36.0	37.5	1.50	107189	36	4	60	<0.2	<5
		37.5	38.4	0.90	107190	7	6	24	<0.2	<5
		38.4	39.5	1.10	107191	132	6	146	<0.2	<5
		39.5	41.0	1.5	107192	62	8	42	<0.2	<5
		44.0	45.5	1.50	107193	86	4	46	<0.2	<5

PAGE 9 OF 31 | PROJECT: PUCK | HOLE NO. PK-96-03

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
46				- brittle fault (breccia - gouge zone) @ 56.6m - micro fractures (small) ~ bedding between 41-60m, quite numerous (rare carb filling). - Thin white QV @ 77.6m							
47											
48			49								
49											
50											
51											
52			73								
53											
54											
55			69								
56											
br-flt. →			55								
57											

PAGE 10 OF | PROJECT: PUCK | HOLE NO. 96-03

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		48.5	50.0	1.50	107194	<.1	.4	.4	<.2	<.5
		53.0	54.5	1.50	107195	.38	.12	.50	<.2	<.5
		57.5	59.0	1.5	107196	.78	.15	.90	<.2	<.5

PAGE 11 OF 31 | PROJECT: PUCR | HOLE NO. PK-96-03

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
58			70								
			80								
QTZ-CHL VN → 59											
			60								
60			75								
61											
62											
63											
64											
			75								
65											
66											
67											
68											
69											

PAGE 12 OF	PROJECT: Duck	HOLE NO. 96-03

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Cu	Pb	Zn	Ag	Au
		62.0	63.5	1.50	107197	60	4	44	<0.2	<5
		66.5	68.0	1.50	107198	61	6	68	<0.2	<5

PAGE 13 OF 31 | PROJECT: PUCK | HOLE NO. PK-96-03

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
69				Rig. 36m to [illegible] 69.47m							
70		QV	22								
71											
72			77								
73											
74											
75			75								
76											
77											
78		QV →									
79			TD								
80											

PAGE 14 OF	PROJECT: MUCK	HOLE NO. 96-03

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		71.0	72.5	1.50	107199	69	10	54	<0.2	<5
		75.5	77.0	1.50	107200	86	<2	44	<0.2	<5
		80.0	81.5	1.50	107201	65	10	94	<0.2	<5

PROJECT: PUCK

HOLE NO. PK-96-03

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
81				83.00m to 83.40m — RHYOLITE AND CARBONATE - thinly banded / laminated, finely xln, green chlorite and light grey silica bands (Rhyolite), with 2-4 (broken core) 1-3cm, cream colored carbonate bands - 1-2% fnly xlins py stngrs in the chl / Rhy bands.		~0	2	Gr-Grn Rhy.			
82			72								
83		carb.		83.40 to 83.88 — MASSIVE LIGHT GREY RHYOLITE - thin (~10mm), vague banding ~~with minor~~ in Aphanitic Rhy with <10% thin lns py <1mm sericite partings. - tr dss py							
84		weak Fe fm's									
85		MT	75	83.88m to 84.65m — MASSIVE LIGHT GREY RHYOLITE WITH BANDS OF DIS. MT. - as above - with 1-10cm zones with up to 5% dss .5mm MT xls. forming vague bands. - also contains 1-2% blebby dss + fnly xlins stngr py. - upper contact marked by 1st occurrence of Mt, lower contact strong with Mt poor Rhy to altered Mt-rich rock. (Trans Fe Fm.)	4-20% Weak Mt Fe fm						
86		MT									
		dss Mt									
87		stringers									
88				84.65m to 86.28m — Mt- SILICA Fe Fm - Banded to semi-massive (up to 80-90%) med-crs xlins (.5-1mm) black MT + lt. grey silica - 1-2% crs xlins (1-4mm) py cubes + dissemination. - chl on Free @ 84.75m		4-10% Mod Mt Fe fm					
89											
90											
91			29	86.28m to 86.86m — LIGHT GREY RHYOLITE +/- MT - as above. - minor dss MT (<3%) - occasional thin carbonate bands.							
92											

PAGE 17 OF | PROJECT: PUCK | HOLE NO. 96-03

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		81.5	83.0	1.5	107202	71	8	102	<0.2	<5
		83.0	84.4	1.4	107203	71	4	134	<0.2	<5
		83.40	84.65	1.25	107204	64	440	934	<0.2	<5
		84.65	86.28	1.63	107205	20	<2	28	<0.2	<5
		86.28	86.86	0.58	107206	169	4	140	<0.2	<5
		86.86	87.36	0.50	107207	141	680	13500	1	15
		87.36	88.86	1.50	107208	141	<2	218	<0.2	<5
		88.86	89.67	0.81	107209	18	<2	98	<0.2	<5
		89.67	91.27	1.60	107210	72	24	580	<0.2	<5
		91.27	92.87	1.60	107211	69	30	98	<0.2	<5

PAGE 17 OF 31 | PROJECT: PUCK | HOLE NO. PK-96-03

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
92				86.86m to 87.36m — LIGHT GREY RHYOLITE - thinly banded v. light grey + creamy grey, aphanitic silica rock with up to 3% Sph +/- py stngrs - creamy-grey layers are sericite							
93			72								
94				87.36m to 89.67m — Mt-SILICA FeFm - as above, semi-massive + massive (70%) blebby Mt +/- Sl with minor siliceous component - thinly banded to massive - 1-2% blebby py throughout - abundant qtz veining throughout, irregular to 5%/m + CA							
95											
96				10cm - FeFm 2cm - qtz 15cm - FeFm 1cm - Qtz 15cm - FeFm							
97				20cm - qtz + chl + 2-3% blebby py. 7cm - FeFm 5cm - Qtz (~10% Qtz Vn) 20cm - FeFm (~5% FeFm)							
98			67	2cm - Qtz 8cm - FeFm 15cm - Qtz 2cm - FeFm 6cm - Qtz 3cm - FeFm 3cm - Qtz 2cm - FeFm							
99			90								
100				6cm - Qtz 3cm - FeFm 3cm - Qtz 5cm - FeFm 20cm - Qtz 15cm - FeFm 16cm - Qtz 6cm - FeFm 8cm - Qtz 12cm - FeFm.							
101											
102											
103											

PUCKRB 2-10-52

Alt (low temp)

100-00-52

PAGE 18 OF	PROJECT: Rock	HOLE NO. 98-03

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		92.87	93.10	0.27	107212	44	8	44	<0.2	<5
		93.10	94.30	1.20	107213	108	32	38	0.4	<5
		94.3	95.3	1.00	107214	75	172	120	<0.2	<5
		95.30	96.55	1.25	107215	70	80	168	<0.2	<5
		96.55	97.70	1.15	107216	63	128	734	<0.2	20
		97.70	98.25	0.55	107217	63	112	270	<0.2	20
		98.25	99.63	1.38	107218	36	100	68	<0.2	
		99.63	99.90	0.27	107219	74	28	166	<0.2	
		99.9	100.6	0.70	107220	49	70	24	0.4	
		100.6	106.85	6.25	107221	45	48	120	0.6	<5

PROJECT: PUCK

HOLE NO. PK-96-03

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
				89.67m to 94.30m — LIGHT GREY RHYOLITE							
				- vaguely banded (i.e. <10% very thin (~1mm), wispy, discontinuous sericite partings) in a fairly massive, v. fine grained silica rock - Rhyolite						Arg @ 100.52	
104											
105			?	sph stgr @ 93.75m?							
				- 1-2% disp py throughout @ occasional stgrs.							
				- gradational contact below becoming slightly more sericite-rich (i.e. >4% of prtgs)							
106				- QV @ 93.77m to 93.95m @ chl/ser walls.							
				- two thin (1 & 3cm respect.), v. lt. grey carbonate layers, with 2-3% Mt.							
107			75	- One (carb/Mt Fe Fm (?) @ 92.87m to 93.10, as above with up to 10-20% Mt						Rhy Tuff @ 93.52	
108				94.30m to 98.25m — THINLY BANDED RHYOLITE + ARGILLITE (bit of a mixed bag)							
				- v. thinly bdd to laminated (1-5mm), interlayered grey silica rich and dark grey to green chl/ser-rich bands, with minor thin carb-Mt bands throughout							
109											
110			72	- numerous examples of small scale boudinage, i.e. pinching of 1-2cm bands over a wavelength of 5- to perhaps 10cm (?).							
111				- 2 zones approach Carb-Mt Fe Fm "status" with up to 10% Mt @ 96.17m to 96.55m + 97.12m to 97.75m							
				- often with py in pinched zone.							
112											
113				- up to 2-3% py as disp stringer to 1-2% sph as stgrs. from 97.75 to 98.25m.							
				98.25m to 99.63m — PYRITE-CARBONATE EXHALITE (?)							
114			77	- overall 30-40%, fnly xl'ln py (lam to semi massive), in a carbonate-rich matrix (v. lt. gray).							
115											

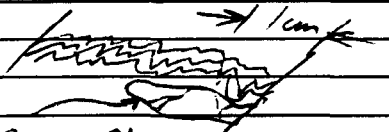
Arg

Rhy Tuff

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
									U	
		106.85	107.70	0.85	107222	5	2	50	<0.2	<5
		107.70	109.25	1.55	107223	4	22	42	<0.2	<5
		109.25	110.75	1.50	107224	6	28	34	<0.2	<5
		110.75	112.25	1.50	107225	4	28	52	<0.2	<5
		112.75	113.75	1.00	107226	5	26	58	<0.2	<5
		113.75	114.4	0.65	107227	8	36	56	<0.2	<5
		114.4	115.5	1.10	107228	9	46	112	<0.2	<5

PAGE 21 OF 31 | PROJECT: PUCK | HOLE NO. PIL-96-03

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
115				Py-carb Ex (Contd)							
				- orientation of lam variable - distorted							
				& abundant patchy QV'ing.							
				- delimits siliceous component							
116				- occasional small dark spots, resembling Mt above - Chl.ite							
				- No vis sph / Gal							
				- different texture to PIL-96-02 NOT SUCROSIC							
117											
				99.63m to 99.90m LAMINATED ~~BRECK~~ ARGILLITE							
				- v. dark grey to black, competent, sil'c argillite							
118				- very thinly banded to laminated							
				- small scale crenulation - chevron folds.							
119											
				- 1-3 cm Qtz pods +/- py+chl							
120				99.90m to 100.60m QTZ VN MIXED WITH PY-CAL EX							
				- 1± 35 cm - Bull wht qtz vn & minor green chl/ser bands							
				- remaining 35 cm composed of 2/3 Qtz vein + laminated PY-CARB EXHALITE & up to 20% finely vein Py.							
121											
				- fol'n distorted - too variable							
122											
				100.60m to 106.85m LAMINATED ARGILLITE (SIL ARG)							
				- broken to crushed to missing core							
			69	- 14m OK - blocks of brecciated (py-sil healed) sil'c Argillite & up to 5% finely vein py.							
123				- con formed fol'n variable from 40-75° to CA.							
124				- single 20cm block of competent grey carbonate rock in crushed zone (?) & Qtz-carb-chl vein.							
125											
				106.85 m to 107.70 m QTZ PORPHYRITIC SER SCHIST							
				- thinly banded very lt grey-white silica rich and grey to green chl-ser rich bands with dark fine recrystd qtz-eyes to 5mm (v. coarse).							
126											

lost core - Gouge

BROKEN CORE

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Cu	Pb	Zn	Ag	Au
									0	
		115.5	116.75	1.25	107229	10	32	232	<0.2	<5
		116.75	119.79	3.04	107230	7	28	44	<0.2	<5
		119.79	122.83	3.04	107231	7	16	16	<0.2	<5
		122.83	125.88	3.05	107232	6	18	10	<0.2	<5
		125.88	128.0	2.15	107233	60	24	76	<0.2	<5

PROJECT: PUCK

HOLE NO. PK-96-03

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
				- contains numerous dark-blue-grey Qtz eyes-							
127		QV		- this is the top of the "Qtz-eye" unit							
				- not as altrd as PK-96-01, but thicker, but not as thick as PK-96-02							
128											
				107.70m to "TYPICAL "QTZ-EYE" UNIT							
				109.25m - overall lt grey-brown color							
				- Qtz > Ser schist							
129				- with vague banding, primarily massive in appearance							
				- with numerous small (2-4mm), rounded, white + grey-(glassy) Qtz eyes							
130			BD	- 1-2% dis py throughout							
				- gradational contacts							
				109.25m to NON-PORPH. LT GREY RHYOLITE							
131				113.75m - light grey color with vague Banding defined by slight color variations. Not as apparent as previous grey Rhy units							
		chl/ser		- Finer grained tuff?							
132		Alt'n		- Fairly massive "grainy" appearance resembling Mt-Silica Rock above Carb-Ex in hole 02							
133				- 2-3% py as 1-5mm py-rich stngrs							
				113.75m to QTZ-PORPH RHYOLITE - "QTZ-EYE" UNIT							
134				114.40m - grey to dark grey color							
				- v. thinly banded - sheared appearance - emphasized by lenticular shape to the 1-2mm white or grey qtz-eyes							
135				- tr dis py.							
				- gradational but quick contacts							
136											
				114.40m to NON-PORPH. LT GREY RHYOLITE							
137				115.50m - as above							
				- with 2-3% py as py-rich stngrs							
138											

BROKEN CORE

LOST CORE

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
									U	
		128.0	130.0	2.00	107234	14	20	138	<0.2	<5
		130.0	131.6	1.60	107235	6	16	90	<0.2	<5
		131.6	132.7	1.10	107236	13	36	178	<0.2	<5
		132.7	138.0	5.37	107237	7	16	24	<0.2	<5

PROJECT: PUCK

HOLE NO. AK-96-03

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
138				115.50m to 131.60m: VERY THINLY BANDED TO SHEARED, QTZ-PORPH. (?), ARGILLACEOUS RHYOLITE (?) (TUFFACEOUS ?) - resembles "qtz-eye" unit but darker grey, more distinct banding (laminations) - very thin lt. grey ser. argillitic lam. + lt or grey U sil lam. with 5-10% lenticular ("lineated" ?) qtz phenos. - 1-2% disp py throughout - looks like shearing textures! - gradational but rapid contacts							
139											
140											
141											
142	PY		Str to Foli to CA	131.60m to 132.70m: SERICITE ALTR'D - as above, however, V. lt grey (leached ?) to green-grey (ser+chl altr'd) - overall pale light green-grey color - small broken QV @ end of unit. - contact below lost - spiny straight into grey gouge							
143											
144											
145				132.70m to 138.07m: GREY GOUGE - Graphitic - poor crushed Argillite (?) 138.07m to 152.95m: VARIABLY CRUSHED AND GOUGEY to CONTORTED GRAPHITIC ARGIL. - v. dark grey to black - graphitic - crushed to badly contorted - tr-1% blebs of Fe-Ty-xln py to 1-2 cm + dissemination. - 5-6 cm qtz-carb vn @ 147.3m							
146	PY		60 to 75° to CA								
147											
148	PY										
149	PY										

Qtz carb.

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		138.07	141.12	3.05	107238	68	20	188	<0.2	<5
		141.12	142.65	1.53	107239	64	18	198	<0.2	<5
		142.65	144.17	1.52	107240	62	20	180	<0.2	<5
		144.17	145.70	1.53	107241	<2	12	120	<0.2	<5
		145.70	147.22	1.52	107242	66	22	190	<0.2	<5
		147.22	148.70	1.48	107243	66	18	180	<0.2	<5
		148.70	150.27	1.57	107244	62	14	174	<0.2	<5

PAGE 27 OF 31 | PROJECT: PUCK | HOLE NO. PL-9603

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
150				152.15m to 161.0m ARGILLITE (+/- GRAPHITE)							
				- dark grey							
				- v. fine grained, moderate?							
				- occasionally graphitic							
				- Fairly competent!							
151				- tr dis py							
				- with occasional Graphite + Gouge zones							
				- occasional, thin (1-4cm), Qtz-Carb veins.							
152				- abundant py + blue-green chl on Fracture surfaces.							
				- highly resistive - 200-∞ Ω							
153			60								
154											
155											
156											
157											
158											
159			70								
160											
161											

Gouge, Ay, Broken core, Qtz-Carb Vn

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Mo	Au
		150.27	152.15	1.88	107245	66	16	96	<0.2	<5
		152.15	154.15	2.00	107246	56	14	174	<0.2	<5
		154.15	156.00	1.85	107247	57	20	166	<0.2	<5
		156.0	158.0	2.00	107248	60	4	34	<0.2	<5
		158.0	160.0	2.00	107249	79	26	284	<0.2	<5
		160.0	162.0	2.00	107250	75	18	366	<0.2	<5

PAGE 29 OF 31 | PROJECT: PUCK | HOLE NO. PK-96-03

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
161											
162			70								
	Broken core										
163											
164											
165			70								
166				166.0m to EOH 188.34m	CRUSHED - GOUGED GRAPH ARG - black graphite-rich argillite - contorted bedding - brecciation - qtz +/- carb veining - ?range WACKED !!! • ~2% dz - show il Enly x/im py throughout - thin, brkd qtz +/- carb +/- chl +/- py veining 167.75 - 188.5m - thick brkd - lam'd graph Sty + Fn grnd. dk. gy. Sil's (Rhy) +/- py 180.75 - 181.5m						
167											
168	qtz carb vn		py vns								
169											
170											
171											
172											

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		162.0	164.0	2.00	107251	69	12	256	0.2	<5
		164.0	166.0	2.00	107252	66	14	248	0.2	<5
		166.0	167.0	1.00	107253	61	22	240	0.2	<5
		167.0	168.55	1.55	107254	68	12	242	0.2	<5
		171.60	174.65	3.05	107255	107	26	378	2.6	<5

PAGE 31 OF 31 | PROJECT: PUCK | HOLE NO. PK-96-03

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
173											
174											
175											
176											
177											
178											
179											
180											
181											
182											
183											
184											
185 qtz vn											
186 carb vn											
187			EOH	EOH 186.84 m							
188											

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	ASSAYS Pb	ASSAYS Zn	ASSAYS Fe	ASSAYS Au
		177.7	180.75	3.05	107256	76	20	956	1	5
		180.75	181.25	0.50	107257	43	10	138	0.4	<5
		181.25	185.93	4.68	107258	63	10	754	0.6	<5
		185.93	186.84	0.91	107259	59	8	426	0.8	<5

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: RICK	GROUND ELEV.: ~1390m
HOLE NO.: PK-96-54	BEARING: 233 (Grid West)
LOCATION: (L) 1885 N, 4840E	DIP: -65
	TOTAL LENGTH: 271.0m - 889'
LOGGED BY: Andrew Turner	HORIZONTAL PROJECT
DATE: May 28/96 - Jun. 2/96	VERTICAL PROJECT
CONTRACTOR: F. BOISVENU DIAMOND DRILLING	
CORE SIZE: NQ II	
DATE STARTED: May 27, 1996	
DATE COMPLETED: May 31, 1996	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



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

DIP TESTS

	Survey Sum.	dip	Azm (uncorrected)	cor.
	100' -	-65	222	240°
v. dark →	879' -	-60(?)	220?	?

COMMENTS

- open void encountered @ 139' (to 145')
- Fault + gouge 30cm between 200' + 600'

LEGEND

PAGE 2 OF | PROJECT: PUC/C | HOLE NO. PC-93-04

(m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
0				0m - 2.13m CASING							
				2.13m to 23.70m MASSIVE ANDESITIC TUFFS (?)							
				- consistent green to grey-green colour							
				- pervassive (regional) chlorite altn, very weak Fol'n							
				- texture - green rock with vern vague banding defined by .5 to 1mm light grey-white xls/phenos?							
			75								
				- appears to be a Fairly massive Andesitic TUFF (?)							
				- minor coarser sections							
				- Silica flooding/banding/veinlets between ~ 6 + 8 m							
7		Amyg.									
				- tr of po @ 15.4m							
				- thin, light grey, thinly banded sil's (Rhyolitic) bands @ 19.25m to 19.50m + at 20.9m, 21.1m, 21.2m, and From 21.5m to 21.85m.							
10			73								
		Qtz-Carb Vn →		- lower contact obscured by QV.							
				- Qtz-carb vein - wthn'l ~10.5m - 10.65m							
				23.70m to 23.77m QV							
				- massive, white, barlatz vein							
				23.77m to 26.70m V. THINLY BANDED INTERMEDIATE TUFF (?)							
				- alternating brownish-grey and white bands (.5-2mm) - lam'd							
			72	- Fairly siliceous rock							
		po →		- abundant Fractures ⊥ Fol'n - broken core - @ FeOx stngs.							
				26.70m to 30.50m Fn. Grd ANDESITIC - TUFFS (?)							
				- as above, however, more variable textures							
				- some zones exhibit v Fine grd thin vague banding, other patches show 1-2mm size xls and/or frags.							
20			70								
				30.50m to 33.75m COARSE GRAINED ANDESITE (?)							
				- probably Dacitic - 60% light grey, siliceous, green-grey, chlitic matrix supporting ~40% chlor'd mafic phenos							
				- massive unit							

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Cu	Pb	Zn	Ag	Au
	—	14.0	15.5	1.5	107260	34	14	70	0.2	75

PAGE 4 OF | PROJECT: PUCK | HOLE NO. PK-96-04

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
23				31.65m - 31.75m - 35° to CA							
				- Carb/Qtz vein - 33.37 - 33.45m - ⊥ CA							
24	QV										
	broken core			Box 8 - 38.4m - 46.4m							
25			80	Dropped by Driller's Helper							
26				33.75m to THINLY BANDED TUFFACEOUS RHY							
				~38.90m - as above slightly wider banding							
27				- alternating, thin (1-20mm), Fn. grd, grey to pinkish or brownish grey sericite (tuffaceous), and lt. grey to white siliceous bands.							
28				(looks like banded Rhy From previous holes)							
29											
30			85	-							
				~38.90m to COARSE GRAINED ANDESITIC TUFF (?)							
31				48.0m - as above							
				? - also with 25-30cm - Qtz - Carb - chl - vein							
32				- very massive, very weak Fol'n alignment of slightly elongated mafic (chloritized) phenos.							
33	Qtz-Carb vn										
34											
				~40.0m to MASSIVE ANDESITIC TUFFS							
35			70	53.85m - as above							
36				- massive green chlorite weakly foliated Fn grd rock with vague ~.5-1mm lt. grey phenos (?)							
37				- coarse grained zones at: 49.60 - 49.70m, 50.65 - 50.9m, 50.0m to 50.1m							
38				- Qtz-Carb vns - 48.25 - 48.27 & 51.30m - 51.40m							
39											
				53.85m to THINLY BANDED TUFFACEOUS RHY							
40			?	58.45m - as above, 33.75m to 38.90m							
41				- alternating, thin, Fn. grd, brownish-grey, sericitic (tuffaceous) & light grey siliceous (Rhyolitic) bands.							
42			70	- sericitic bands are 1-20mm, thick bands have straight surfaces, while the thinner bands are wispy & occasionally anastomose							
43											
44											
45											
46											

38.4m - 46.4m - Box 8 Dropped

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Cu	Pb	Zn	Ag	Au
		23.8	25.7	1.90	107266	(see chemex bottle).				
		32.0	33.5	1.50	107261	19	4	58	40.2	25
		35.0	36.5	1.50	107262	10	4	50	10.2	25

PAGE 6 OF | PROJECT: PUCK | HOLE NO. PK-93-04

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
46											
		✓		58.45m to 60.15 m — THINLY BANDED ANDESITIC TUFFS - alternating, dark grey, dark green (chloritic) and pale-limey green (epidote-rich), fine grd., thin to thickly (1-20mm), bands. - ⇒ definite chl/epid alt'n. - with tr-1%, thin thickly Mt lam.							
47		✓									
48		✓									
49											
		✓									
50			70 weak								
		✓		60.15 m to 63.43 m — THINLY BANDED RHYOLITE - as above (52.85m - 58.45m) - alternating, fn grd, thin lt/dk grey siliceous (Rhyolitic) and grey to br-gr sericitic bands - top ½ - lt/dk tan-grey - silica-rich (70% silicic - 30% ser. bands) - lower ½ - ~40% lt. grey sil'ic bands ~60% dk. grey. argillite (?) interbands							
51											
52		✓									
53		✓									
54		✓									
			63								
55											
				63.43m to 65.70m — THINLY BANDED ANDESITIC TUFFS - as above - with minor (<20%, .5-1cm, lt. gr, siliceous - Rhy? - bands) - 9 cm zone of crushed rock - Flt gouge - at 65.23m to 65.32m ~ ⊥ to Fol'n (~65° to CA)							
56											
57											
58											
59											
			60								
60			70	65.70m to 66.75m — THINLY BANDED RHYOLITE - as above - abundant fractures, with FeOx etchings, ~ ⊥ to Fol'n.  Fractures sericitic bands siliceous bands (Feeling anticlinal today)							
61											
62											
63											
64											
			65								
65				Kink folds.							
				66.75m to 75.90m — CRUSHED CORE							
66											
67				BANDED RHYOLITE UNIT							
68				(?)							
69											

FLT GOUGE (11 Fol'n)

(CRUSHED CORE)

± Mt

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		50.00	51.50	1.50	107263	8	<2	52	<0.2	<5
		52.85	55.50	2.65	107264	32	8	84	<0.2	<5
		58.55	60.15	1.60	107265	80	<2	70	<0.2	<5
		60.15	61.80	1.65	107267	75	<2	60	402	<5
		61.8	63.4	1.60	107268	83	<2	90	<0.2	<5
		63.4	65.7	2.30	107269	48	4	82	<0.2	15

PAGE 8 OF | PROJECT: PUCK | HOLE NO. PL-96-04

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
69											
70				75.90m to 97.23m THINLY BANDED TUFFACEOUS (?) RHY							
71				- broken, crushed, fault zoned (50% recovery. - 35 of 70')							
72				- as above (65.7 - 68.75m)							
73				- thin (.5-2cm) fractured fn. grd, lt. grey, silic rhy bands with up to 30%, v. thinly bedd (1-5mm), sericitic, grey to greenish grey and pinkish-grey diffuse bands							
74				- increasing greenish chl/ser alt'n downward (from 84m onw.)							
75				- fr dis + occas. x/l qtz (up to 3mm) ag							
76				- fol'n - variable to unrecognizable - 70-80° to CA.							
77											
78											
79											
80											
81											
82											
83											
84											
85			75								
86											
87											
88											
89											
90											
91											
92											

CRUSHED CORE — 50% RECOVERY [75.9m - 97.23m]

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		75.90	78.94	3.04	107270	64	<2	64	<0.2	<5
		78.94	82.00	3.06	107271	67	12	60	9	<5
		82.00	85.04	3.04	107272	61	14	72	1	<5
		85.04	86.20	1.16	107273	64	<2	36	<0.2	<5
		86.2	88.5	2.30	107274	83	<2	48	<0.2	<5
		88.50	91.14	2.64	107275	72	<2	40	<0.2	<5
		91.14	112.47	20.61	107276	69	4	50	4	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
92											
93	80%										
94											
95											
96											
97											
98				97.23m to 112.47m — CRUSHED THINLY BANDED RHY UNIT (?)							
99				- only 3% of crushed, siliceous, green/grey (sericite) rock recovered in 5-10' runs.							
100				- 10 cm piece of brecciated/crushed Qtz-Carb +/- chl/ser +/- py vein							
101				- to followed by 20cm chunk of sericite Rhy.							
102											
103				Qtz-Carb Vn							
104											
105											
106											
107											
108											
109											
110											
111											
112											
113				112.47m to 118.57m — SAND — (CAVE that produced sand up the Rods) — unconsolidated, clean, light greenish-grey							
114											
115	15%										

100.28 — 109.42 — REC COVERED (97.23m - 112.47m) — 50% recovery

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Cu	Pb	Zn	Ag	Au
									0	
		112.47	118.57	6.10	107277	147	42	76	30	45

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
115											
116		S									
117		A									
118		N									
118.57		D									
119				118.57m to ~120.5(?) GOUGE - grn to greenish-grey, crushed fault gouge of sericite Rhy unit (?) - width uncertain due to poor rec.							
120											
121		PY									
121.62		PY									
122		PY		~120.5m to 122.75m BARITE - CARB - PY EXHALITE - thinly banded (2-5mm); Fn.grd, lt. grey, Barite + Calcite with up to 10% - 5% average - py (+ tr. sph.) - unit also containing ~10%, thin, dark green-grey chlorite bands - zone is brecciated + fractured @ py leading some fracs							
123											
124											
124.46			G								
125											
126											
126.9		PY									
127			G	122.75m to 124.60m V. THINLY BANDED TO LAMINATED RHYOLITE AND ARGILLITE - 1-2mm laminae of lt-grey siliceous (Fn.grd) and dark grey-black argillite - trace to 1% finely xlline py as stringers + discs - Fractured + broken core, poor recovery. - minor HCl reaction.							
128											
129											
130											
131			G								
132											
133				124.60m to 139.60m GREY QTZ-EYE UNIT - v. thinly banded / sheared-out looking - v. Fn.grd. dk grey base @ light grey to white wispy intra bands - occasional qtz eyes (sub-rnded) 2-4mm - traces of dis. finely xline py. - unit is highly fractured (along foln) and contains numerous gouge zones - unit looks very argillaceous tuffish. G: gouge zone							
134											
135			G								
136											
137											
138											

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		118.57	120.50	1.93	107278	80	<2	118	0.8	<5
		120.5	122.75	2.25	107279	11	84	58	0.4	10
		122.75	124.66	1.91	107280	90	4	174	<0.2	<5
		124.66	127.71	3.05	107281	74	44	224	<0.2	<5
		127.71	130.76	3.05	107282	8	16	60	<0.2	<5
		130.76	133.81	3.05	107283	3	8	28	<0.2	<5
		133.81	136.86	3.05	107284	6	18	88	<0.2	<5
		136.86	139.6		107285	107	6	1315	10.4	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
139			32	139.6 m to 146.0 m — GRAPHITIC ARGILLITE GOUGE - crushed, black, fg-vf, graphitic argillite							
139.6			6								
140											
141											
142			7								
LSA 142.7	TCA										
143			6								
144											
145											
146	146.0			146.0 m to 170.4 m — ARGILLITE - v. thinly banded to laminated, v. fg-vf, grey to dark grey, argillite bands, occasionally graphitic - Fairly competent compared to most of the overlying 50m (core) of section - minor thin (2-5mm), carbonate filled fractures. - shallow foliation angle to CA. ~25°							
147											
148											
149											
150											
151											
152											
153											
154											
155											
156											
157											
158			25								
159											
160											
161											

15-2016

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Cu	Pb	Zn	Ag	Au
		139.6	146.0	6.40	107286	8	20	66	0.2	<5
		146.0	158.2	12.20	107287	117	6	106	1.6	<5
		158.20	167.33	9.13	107288	63	22	126	0.2	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
161											
162											
163											
164											
165											
166											
167											
168											
169											
170											
170.38				170.38m to 176.48m GRAPHITIC ARGILLITE GOUGE - as above - single 8cm chunk of Qtz + brecciated argillite @ 170.38 - end of section contains .5m of black sand in Box 18 - caving problems.							
171											
172											
173											
174											
175											
176											
176.48				176.48m to ~183.0m CRUSHED AND GOUGED ARGILLITE - says it all - not particularly graphitic - only traces of finely xhln py - content @ underlying porphyritic flow obscured by (183.0m) → QV + crushing. - minor sericite alt'n							
177											
178											
179											
180											
181											
182											
182.58											
183											
184											

15-20% rec — crushed - broken core

25% rec

~30% rec

QV ?

QV

= near top of Box 19 — overall 55-60% recovery from collar to 600'

= 25-30% rec from 300' to 600'

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		167.33	176.48	9.16	107289	106	<2	72	0.2	<5
		176.48	183.00	6.52	107290	49	4	224	0.6	<5
		183.0	185.0	2.00	107291	4	6	908	0.2	<5

PAGE 18 OF | PROJECT: PUCIC | HOLE NO. PC-96-04

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
184				183.0m to 206.4m **QTZ-FELP PORPHYRITIC RHY**							
185				"The Rock Porphyry"							
186			73	• 10-20%, 3-5mm, lenticular, grey-glassy qtz-eyes and white feldspar phenos in a finer grained siliceous matrix							
187				• Matrix is also sericite-rich and is foliated giving a Mylonite texture to the rock							
188				- Fol'n believed to be primary ie. Flow banding.							
189											
190											
191											
192											
193				- tr. fely xln dis. py.							
194											
195				- Faulting + QVng (+- chl altd sides) between 204.3m and obscured lower contact at 206.4m							
196											
197			72	- Prominent qtz-eyes are distinctive of this unit vs the underlying Feld (Mag xl) porphyry.							
198				Sample Removed							
199											
200											
201											
202			75								
203											
204											
205				Fractured, Faulted zone							
206				QV @ .5-1cm chl + py altd walls.							
207											

QV → 205

QV → 206

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Cu	Pb	Zn	Ag	Au
		188.0	189.5	1.50	107292	4	22	30	<0.2	<5
		192.5	194.0	1.50	107293	<1	18	20	<0.2	<5
		197.0	198.5	1.50	107294	1	8	30	<0.2	<5
		201.5	203.0	1.50	107295	4	16	22	<0.2	<5
		206.0	207.5	1.50	107296	6	28	22	<0.2	<5

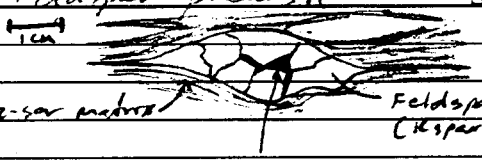
PAGE 20 OF | PROJECT: PUCK | HOLE NO. PX-96-04

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

207

206.4 m to 216.6 m — Mega crystic Qtz-Feldspar Porphyrytic Rhyolite

- overall light grey color
- composed of ~10%, dark grey (glassy), 3mm x 5mm, lenticular qtz-eyes; + up to 30%, very coarse (up to Mega crystic) (0.5-5cm) white, slightly lenticular Feldspar phenos. (look like Augen)



P1 P2 P3 P4

unidentified Fn grd. black material (groundmass of a rhyolith?)

- rock appears to be strongly foliated (may however be reflective of primary flow banding?) of the underlying + overlying Faults have taken up the strain in the section.
- Qtz + Feld pheno/mega crysts suspended in a foliated (?) finer grained qtz + sericite matrix

5cm Fit gauge 218

- very minor sericitic alt'n associated @ qtz veins @ top of unit
- fr dk fely phenocrysts, but occasional blebs of fely phenocrysts up to 1cm
- 3-5% remobilized by as large (1-2cm) blebs + Free. Filling between 213 + 215.5m.

Sample Removed

216.6 - 217.6m — LAMINATED RHYOLITIC TUFF

- overall grey to brownish-gray color
- laminated upon close inspection otherwise Fairly massive
- Fn. grd silica with wispy sericite (~25-30%) lam.

occasional 228 1-3 cm Qtz bands

230

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		210.5	212.0	1.50	107297	<1	18	28	<0.2	<5
		213.5	215.0	1.50	107298	1	28	26	<0.2	<5
		216.6	217.6	1.00	107299	16	2	24	<0.2	<5
		220.5	222.0	1.50	107300	1	6	12	<0.2	<5
		225.0	226.5	1.50	107301	4	160	16	4	40
		229.5	231.0	1.50	107302	1	16	20	<0.2	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
230				217.6m to 243.75m "MEGACRYSTIC" FELD-PORPHYRITIC RHY - as above - - no appreciable difference - Qtz-feld ppy towards bottom.							
231											
232											
233											
234											
235			80								
236											
237											
238											
239			70								
240											
	CORE										
241											
242				broken to crushed ser. calc'd core.							
243	243.53										
244				243.75m to 253.75m CRUSHED ARGILLITE AND GRAPHITIC ARGILLITE - 50-50% Grey, thinly bedded to laminated and Dark Grey to Black, laminated, Graphitic Argillite. - mixed & caved sand from above @ 252-253.75m - Some 2-4cm chunks of greenish-grey. Rhy ?) material near bottom of sec'n.							
245	55%										
246	246.58										
247											
248	55%										
249	249.63										
250											
251	20%										
252	252.68										
253											

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Cu	Pb	Zn	Ag	Au
		234.0	235.5	1.50	107303	2	18	14	<0.2	<5
		238.5	240.5	2.00	107304	4	<2	44	<0.2	65
		240.5	241.8	1.30	107305	7	<2	16	<0.2	<5
		241.8	243.9	2.10	107306	11	<2	20	0.4	<5
		243.90	246.58	2.68	107307	77	<2	36	0.6	10
		246.58	249.63	3.05	107308	96	<2	52	0.4	<5
		249.63	253.90	4.27	107309	104	<2	152	14	<5

PAGE 24 OF 24 | PROJECT: PUCK. | HOLE NO. PK-93-04

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
253	50%			253.9 m bh ARGILLITE AND GRAPHITIC ARG							
254	90		65	271.1 m - alternating, fn. grd., v thinly bedded to laminated, light grey siliceous argillite and dark grey to black graphitic argillite.							
255				Folding							
256	256			- bedding is often contorted and generally variable,							
257	256.5 80%			- primarily between 60 + 90° to CA							
258				Graphite - fr-1% dks. & Free FeOx py.							
259	86			- Abundant thin (1-5 mm) brittle Fracturing & Qtz ± carb veining throughout							
260											
261	70%			Folding							
262	261		90								
263	90-100%										
264			76								
265	264.87										
266	~100% py										
267	267 61		86								
268											
269	95%										
270			62								
271				EOH 271.0 m (889')							
272											
273											
274											
275											

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		253.9	256.0	2.10	107310	146	12	2240	1.2	<5
		256.0	257.3	1.30	107311	118	14	518	1.2	<5
		257.30	259.25	1.95	107312	47	<2	144	0.4	<5
		259.25	260.50	1.25	107313	44	<2	138	0.2	<5
		260.5	264.0	3.50	107314	139	10	2210	1	<5
		264.5	266.4	1.90	107315	132	12	1085	2	10
		268.5	271.0	2.50	107316	159	10	480	0.8	<5

EQUITY ENGINEERING LTD.

DRILL LOG

PROJECT: PUCK	GROUND ELEV.: ~1350m
HOLE NO.: PK-96-05	BEARING: GRID WEST ~233°
LOCATION: L4300N / 5340E	DIP: -55°
	TOTAL LENGTH: 728' - 221.7m
LOGGED BY: Andrew Turner	HORIZONTAL PROJECT:
DATE: September 10 - /96	VERTICAL PROJECT:
CONTRACTOR: F. Boisvenu Diamond Drilling	**ALTERATION SCALE**
CORE SIZE: NQII	
DATE STARTED: Sept 9/96	**TOTAL SULPHIDE SCALE**
DATE COMPLETED: Sept 11/96	
DIP TESTS: AZIMUTH: (1) - mean collar - -55° (2) 350' - 106.5m - -51° (3) 720' - 219.5m - -50°	

0 1 2 3

absent
slight
moderate
intense

0 1 2 3 4

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

COMMENTS

- Testing EM anomaly immediately below horizon of FeFm. (but no mag at this point).
- black chert @ approximate location of FeFm.

LEGEND

PAGE 2 OF | PROJECT: PUCIC | HOLE NO. PK96-05

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
0				0.0m to 5.5m DMCS - CASING OVERBURDEN							
5			60°	5.5m to 12.45m RHTF - LIGHT AND DARK GREY, VERY THINLY BANDED TO LAMINATED (FLATTENED?) APHYRIC FRAGMENTAL RHY - very thin, light grey (to orange-weathered (Fe-ox stain)), fn.grd, aphyric, rhy bands/laminae with occasional thicker bands (4cm) resembling fragments. - fragments seperated by ~40-50% thin black argillaceous bands. i.e. argillaceous Rhyolite Tuff - tr dis py, minor calcareous lam.							
10			80°								
12				12.45m to 43.2m RHAT - DARK GREENISH-GREY SERICITIC, MATRIX-RICH, THINLY BANDED, APHYRIC RHYOLITE - Thin (.5-1cm), v.fn.grd, aphyric, dk greenish-grey, sericitic (?) Rhyolite bands seperated by 2-3 mm sheared-foliated, dk. green sericite-rich laminae/partings - Rhy layers are thin but continuous across the core, well banded, not fragmental looking - tr-1% crs. dis py - minor thin gouge zones - 16-16.5m, 25.9-26.1m - minor orangy discoloration (weathering).							
15			75°								
20			80°								

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES			SAMPLE NUMBER	ASSAYS				
		FROM	TO	WIDTH		Au	Pt	Zn	Fe %	Cu
		5.5	7.0		172046	32	3	74	<0.2	<5
		9.5	11.0		172047	100	41	100	<0.2	<5
		11.0	12.45		172048	81	19	132	<0.2	<5
		16.7	18.2		172049	72	41	64	<0.2	<5
		20.0	21.5		172050	54	4	52	<0.2	<5

PAGE 4 OF | PROJECT: PUCK | HOLE NO. PK96-05

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
23											
24		✓									
25		✓	90								
26	SR GG.										
27		✓									
28		✓									
29											
30		✓	90								
31		✓									
32											
33		✓									
34		✓									
35			80								
36		✓									
37											
38		✓									
39				43.2m to 43.8m — RHAT - PALE LIGHT GREENISH-GREY, SERICITE MATRIX RICH, BANDED APHANITIC RHYOLITE - similar to above, however, bands are thicker (2-3cm) and much lighter grey / grey-green in color - also, matrix or interbands are thicker (2-10mm) - tr sh 3 py.							
40		✓	80								
41											
42		✓									
43		✓									
44		✓		43.8m to 46.0m — ARSI - VERY HARD, SILICEOUS BLACK ARGILLITE - very thinly banded to laminated, v hard + siliceous, minor thin light grey tuffaceous component. tr sh 3 py							
45			84								
46											

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		25.0	26.15		172051	62	<2	58	<0.2	<5
		34.5	36.0		172052	63	<2	60	<0.2	<5
		38.5	40.0		172053	41	4	66	<0.2	<5
		42.0	43.2		172054	153	<2	82	<0.2	<5
		43.2	43.8		172055	50	24	82	<0.2	<5
		43.8	45.0		172056	162	<2	402	<0.2	25
		45.0	46.0		172057	129	<2	292	<0.2	10
		46.0	47.55		172058	31	6	379	<0.2	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
46				46.0m to QTVN / STGG - ARSI							
QTVN/STGG				47.35m. - Bull white qtz vein & minor gouge ARSI							
47											
		V		47.35m RHAT (minor RHTF) - minor tuffaceous							
48				55.30m Rhyolite bands within a...							
				LIGHT GREY, MATRIX-POOR,							
49		V		BANDED, APHYRIC, RHYOLITE							
			80	- mainly 2-3 cm thick, bands of							
50				light grey, sericite poor, fn. grd.,							
		V		aphyric Rhyolite, tr 1-2 mm,							
51				brownish-grey to dk. green-grey							
				sericite partings - laminae.							
52		V		- occassionally the partings(?)							
				become dominant - Tuffaceous							
53				bands -							
		V		- minor argillaceous component							
54				increasing towards bottom							
ARSI				- tr-1% cvs. dsp py.							
		V	80								
55											
				55.30m to DK GREY TO BLACK, VERY							
56				59.50m THINLY BANDED TO LAMINATED							
				SILICEOUS ARGILLITE TO CHERT							
57				- upper half of unit contains ~40%							
				thin (1cm) light grey, v. fn. grd.,							
58				siliceous bands w dk. gy-blk. bands.							
				resembling a siliceous argillite							
59				and grades into the banded							
			85	Rhyolite above							
60		V		- the lower ½ of the unit is basically							
				a black chert w a minor argill-							
61		V		aceous component, 1-2% dsp py							
FE				- black chert rock contains numerous,							
OX.				thin (1-2mm) white laminae w a							
62				vuggy appearance - No Mel reac'n.							
				- sharp lower contact.							
63											
64											
			85	59.5m to RHFS - LIGHT GREY, THINLY							
65				61.5m BANDED, FELSITE							
				- very matrix-poor (to absent),							
66				v lt. grey, v. fn. grd, thinly							
				banded (1mm-1cm) aphyric							
67				Felsite (Rhyolite tuff?)							
				- tr-1% dsp py. abundant							
68				orange-red Fe-ox stain on							
				fracture surfaces.							
69				- minor greenish colours (chl. partings)							

BADLY BROKEN CORE

BROKEN CORE

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Fe	Ag
		47.55	49.0		172059	56	2	92	<0.2	<5
		49.0	50.75		172060	57	<2	100	<0.2	<5
		50.75	52.5		172061	87	4	154	<0.2	<5
		52.5	54.25		172062	115	2	134	<0.2	<5
		54.25	55.3		172063	97	<2	110	<0.2	10
		55.3	57.3		172064	73	4	200	<0.2	<5
		57.3	59.5		172065	117	70	3700	<0.2	<5
		59.5	61.5		172066	71	154	946	0.4	<5
		61.5	62.3		172067	35	20	1805	<0.2	<5
		62.3	63.9		172068	65	32	726	<0.2	<5
		63.9	65.0		172069	64	12	502	<0.2	<5
		65.0	66.0		172070	49	12	584	<0.2	<5
		66.0	67.7		172071	72	120	500	<0.2	<5
		67.7	69.2		172072	51	8	226	<0.2	10
		69.2	72.5		172073	78	40	160	<0.2	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
69	BROKEN CORE			61.5m to 61.65m EXMT - MAGNETITE - POOR MT-SILICA Fe Fm. - very similar to RMFS above, however, minor dark green chloritic partings and 3-5% fine disseminated Mt. (spotted) - overall dark green/grey color							
70											
71											
72	(drill spl)										
				61.65m to 61.90m RMFS - LIGHT GREY, THINLY BANDED, MATRIX-POOR FELSITE - as above							
73											
74											
75				61.90m to 62.3m EXMT - MT-POOR, MT-SILICA Fe Fm. - as above							
76	10% rec. 75-95m										
77				62.3m to 63.9m RMFS - LIGHT GREY, THINLY BANDED FELSITE (1% chl. partings) - as above							
78	RUBBLY CORE										
79				63.9m to 64.2m EXMT - MT-POOR, MT-SILICA Fe Fm. - as above							
80											
				64.2m to 66.85m RMFS - LIGHT GREY; THINLY BANDED FELSITE (1% chl. partings) - as above							
81											
82				66.85m to 67.05m EXMT - MT-POOR, MT-SILICA Fe Fm. - as above							
83											
84				67.05m to 67.70m RMFS - LIGHT GREY, THINLY BANDED FELSITE (1% chl partings) - as above							
85											
86				67.70m to 69.20m EXMT - MT-POOR, MT-SILICA Fe Fm - as above, with minor white carbonate bands (sugary - 1-2cm)							
87											
88				69.20m to ~94.5m RMFS - LIGHT GREY / GREENISH GREY, THINLY BANDED, APHANITIC FELSITE - as above very rubbly core, poor recovery (~10-20%) - +/- 1% fully dev. py. - minor sor - chl (?) on partings - spotted sph (+py) @ 72.4m							
89											
90											
91											
92											

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zr	Ag	Au
		72.5	73.5		172074	83	4	108	1.4	<5
		73.5	75.6		172075	89	<2	98	<0.2	<5
		75.6	90.8		172076	29	6	86	<0.2	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
92	RUBBLY CORE / BROKEN CORE			~94.5m to 101.35m	ARGI - GREY AND DARK GREY, VERY THINLY BANDED TO LAMINATED SILICEOUS ARGILLITE (?) - overall dark grey color, w v. thin (1-2mm) bands of light + dark grey, v. fn grd, siliceous argillite - tr dissem py.							
93												
94												
95												
96												
97												
98												
99												
100												
101				101.35m to 104.5m	RMFS - LIGHT GREY, THINLY BANDED, APHANITIC FELSITE - overall very light grey color w thin (<1cm), light grey, v. fn grd, aphanitic Rhy white bands w minor light grey-green sericitic partings, - tr. dissem py, very similar to above however no dark grey (argillaceous) bands.							
102												
103												
104												
105				104.5m to 106.5m	ARGI - GREY AND DARK GREY, VERY THINLY BANDED TO LAMINATED SILICEOUS ARGILLITE (?) - as above (94.5m to 101.35m)							
106												
107												
108				106.5m to ~121.7m	RMFS - LIGHT GREY, THINLY BANDED, APHANITIC FELSITE - as above (101.35m - 104.5m) - increased chlorite (dark green) component between 117.5m + 118.85m. - STGG - 108.5 ≈ 111.5m, 112.2m ≈ 114.0m,							
109												
110												
111												
112												
113												
114												
115												

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		94.5	97.5		172078	76	36	888	<0.2	10
		97.5	101.35		172079	66	20	548	<0.2	<5
		101.35	103.2		172080	42	<2	110	<0.2	<5
		103.2	104.5		172081	50	<2	30	<0.2	<5
		104.5	106.5		172082	71	6	374	<0.2	<5
		106.5	108.3		172083	52	4	56	<0.2	<5
		108.3	111.3		172084	62	<2	252	<0.2	<5
		111.3	115.2		172085	47	<2	572	<0.2	<5
		115.2	117.5		172086	64	10	664	<0.2	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
115	BROKEN CORE										
116											
117											
118											
119											
120			70								
121				121.7m to 122.4m ARGR - DARK GREY - BLACK, THINLY BANDED GRAPHITIC ARGILLITE - mostly Fault gouge s/a thinly banded, v. dk. grey to black, graphitic argillite ~ 3-5% Fuly z'lion of bands (.5-1cm thick)							
122	STGG. Py										
123											
124											
125			60	122.4m to 129.5m EXCP (?) - PY-POOR (CHLORITIC) ACARBONATIC EXHALITE - Thinly banded grey - glassy, v. fn. g-d. silica (rhyolitic) bands, white, sucrosic carbonate and thinner dark green chlorite partings, tr. py. only. - lower 1/2 Faulted - gouged (126.5m →) - tr. sph @ 126.0m							
126	Sph										
127	STGG.										
128											
129											
130			70	129.5m to 142.65m ARGR (STGG) - FAULTED / GOUGED, BLACK, V. THINLY BANDED TO LAMINATED GRAPHITIC ARG. - thin black & lighter grey laminae fv. fn g-d, graphite-rich, argillite ~ up to 2-3% blebby py. - Bouys from 129.5 ± 131.5m, very badly broken, rubbly core to ~137m, Broug. to ~142.65m							
131											
132	RUBBLY CORE										
133											
134	Py		50								
135											
136											
137											
138	STGG										

PAGE	OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Mo	Zn	Ag	Au
		117.5	118.85		172087	137	4	90	<0.2	<5
		118.85	121.7		172088	91	10	560	<0.2	<5
		121.7	122.4		172089	139	220	140	<0.2	25
		122.4	124.35		172090	21	60	64	<0.2	<5
		124.35	126.8		172091	108	270	990	0.4	<5
		126.8	129.5		172092	132	54	370	0.4	20
		129.5	131.68		172093	93	46	160	0.6	<5
		131.68	133.5		172094	217	130	486	2	<5
		133.5	136.5		172095	75	60	20	1	<5
		136.5	138.5		172096	91	66	20	1.4	<5
		138.5	140.0		172097	117	24	116	1.2	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
133	FAULT GOUGE										
134											
135											
136											
137											
138											
139				142.65m to 143.2m ARTF - GREY AND DARK GREY, THINLY BANDED ARGILLITE w 10-20%, 1-2cm Rhy Frags - up to 10-20%, 1-2cm, rounded, grey, aphanitic Rhyolite fragments (clasts), in a v. dk grey - blk argillite matrix - tr. dis. py							
140											
141											
142											
143				143.2m to 146.3m RHAT - GREY, THINLY BANDED APHANITIC RHYOLITE w GREEN SERICITIC (+- CHLORITIC) PARTINGS - gradational contacts defining a thinly banded (1-3cm), grey, fn. grd. aphanitic Rhyolite w thin (~1mm) green ser/chl (?) partings - tr. dis. py							
144											
145			65								
146											
147											
148				146.3m to 151.0m ARMS - THINLY BANDED, DK GREY TO BLACK, ARGILLITE - very thinly banded to laminated black, fn. grd., argillite; +- graphite, +- lighter grey calcsil. fn. grd., rhyolite bands/frags - tr. dis + stringy py - minor gouge between 147.4 - 147.7m							
149											
150	RUBBLY CORE		65								
151											
152				151.0m to 154.1m RHAL - GREY TO DARK GREY, ARGILLACEOUS THINLY BANDED APHANITIC RHYOLITE - broken to rubbly core - appears like fairly typical siliceous thinly banded argillaceous fn. grd. aphanitic Rhyolite - tr. dis py.							
153											
154											
155	GOUGE		7								
156											

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE-NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		140	141.5		172098	88	26	160	0.4	<5
		141.5	142.65		172099	106	32	330	0.8	<5
		142.65	143.2		172100	68	4	80	<0.2	<5
		143.2	144.7		172101	52	2	84	<0.2	<5
		144.7	146.3		172102	160	6	88	<0.2	<5
		146.3	148.0		172103	90	6	72	0.4	5
		148.0	149.5		172104	63	6	148	<0.2	<5
		149.5	151.0		172105	61	4	114	<0.2	5
		151.0	154.4		172106	49	4	76	<0.2	<5
		154.4	155.35		172107	48	58	492	0.4	15
		155.35	157.5		172108	88	50	276	0.4	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
156	GOUGE			154.1m to 155.35m ARGR-STGG: BLACK, GRAPHITIC ARGILLITE FAULT GOUGE - 1-2% ds - blebby py.							
157											
158				155.35m to 161.1m ARMS(?)-STGG: GREY TO DARK GREY ARGILLACEOUS FLT GOUGE - tr-1% ds blebby py - abundant (20%), thin (<1mm), light grey siliceous, +/- calcareous bands. - complex folding + faulting → GOUGE							
159											
160			?								
161	161.1m										
162	WOLV? → Py			161.1m to 169.0m RHQL - PALE GREENISH-GREY THINLY BANDED, QUARTZ-EYE-BEARING, RHYOLITIC LAPILLI TUFF - very thinly banded (<1cm) to variable textures over 10-20cm ranging from a grey-green fn. grd fiss. qtz-eye-bearing tuff to a qtz-eye-rich, Lapilli tuff w fragments up to 3cm. qtz-eyes up to 2mm. - 2-3% fn. ds py throughout - minor oxide throughout - trace apple green Be-mica development +/- dravmic tourmaline in top 1m							
163	Be-Mica										
164											
165			80								
166											
167											
168											
169											
170			85	169.0m to 179.5m RHFT - GREY TO GREENISH-GREY, VISTY THINLY BANDED, QTZ-EYE-BEARING FINELY [illegible] TUFF - intervals green to dark green to greenish-green chlor, fsm thinly banded (<1cm), sericite-rich, 1-2mm qtz-eye-bearing, fine tuffaceous rhyolite - pervasive anastomosing component more sericitic/chl. - tr-1% rnd. ds py. - minor gouge - 173-174m, 175.5-175.85, 176.35-176.5m, - gradational contact w RHQL above.							
171											
172											
173											
174											
175			85								
176											
177											
178											
179											

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		157.5	159		172109	3	42	168	0.2	<5
		159	161.1		172110	15	42	210	0.6	<5
		161.1	161.7		172111	23	8	114	<0.2	<5
		161.7	162.5		172112	4	4	40	<0.2	<5
		162.5	164.0		172113	5	10	42	<0.2	<5
		164.0	165.5		172114	4	16	74	<0.2	<5
		165.5	167.0		172115	5	20	50	<0.2	<5
		167.0	168.5		172116	5	20	52	<0.2	<5
		168.5	170.0		172117	5	20	64	<0.2	<5
		170.0	171.5		172118	5	20	48	<0.2	<5
		171.5	173.0		172119	4	28	48	0.2	<5
		173.0	174.5		172120	4	14	48	<0.2	<5
		174.5	176.0		172121	4	20	50	<0.2	<5
		176	177.5		172122	5	22	50	<0.2	<5
		177.5	179.55		172123	6	24	52	<0.2	<5
		179.55	181.0		172124	11	24	48	<0.2	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
179											
				179.5m ARQE - QUARTZ-EYE-BEARING DK. GREY-BLK ARGILLITE							
180				to 182.7m - gradational from Phyllitic fine TUFF above, increased argillite content, w thin (2-5cm) lapilli tuffs zones							
181				- very thin (1mm) siliceous laminae, w abundant 1-2mm (upto 4mm) grey and blue-grey qtz-eyes.							
182				- tr-1% dissem py							
183				182.7m RHYT - PALE GREEN-GREY, SERICITIC,							
184				to 187.8m BOUDED, QTZ-FELD XL TUFF							
185				- pale greenish grey colour, sericite altered, zones of thinly banded-laminated w abundant, small (<2mm) Qtz & Feldspar x/s.							
186				- tr diss py.							
187				- gradational contacts, + BOUDS							
188											
189				187.8m ARQE - QUARTZ-EY-BEARING.							
190				to 192.25m DK GREY-BLK ARGILLITE							
191				- as above							
192				192.25m RHYT - PALE GREENISH-GREY, SERICITIC,							
193				to 192.75m BOUDED, QTZ-FELD, XL TUFF							
194				- as above							
				- gradational contacts resulting from variable argillite content							
				192.75m ARQE / ARTI= (1) - DK. GREY to BLACK,							
195				to ~205.0m VERY THINLY BANDED TO LAMINATED, BOUDED, TUFFACEOUS (QTZ-EYE BEARING) ARGILLITE							
196				- as above, however, contains contacts of gouged zones w distinct, thin (1-2mm), lighter grey, fn.grd., siliceous laminae. ~> tuffaceous argillite w occasional qtz-eyes +/- Feld x/s (<1mm)							
197											
198				- tr diss & blebby py							
199											
200											
201											
202											

(CONTACT FAULT - INFERRED)

PAGE OF	PROJECT:	HOLE NO.

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pt	Zn	Pd	Au
		181.0	182.5		172125	12	26	112	<0.2	<5
		182.5	183.8		172126	10	28	78	<0.2	<5
		183.8	185.3		172127	12	24	86	<0.2	<5
		185.3	186.75		172128	11	26	104	<0.2	<5
		186.75	188.4		172129	7	18	62	<0.2	<5
		188.4	190.2		172130	13	30	78	<0.2	<5
		190.2	192.0		172131	9	24	80	<0.2	<5
		192.0	192.5		172132	1	80	44	<0.2	<5
		192.5	193.9		172133	4	12	56	<0.2	<5
		193.9	195.7		172134	11	18	52	<0.2	<5
		195.7	197.5		172135	10	18	64	<0.2	<5
		197.5	199.0		172136	7	18	54	0.2	<5
		199.0	200.56		172137	6	20	46	<0.2	<5
		200.56	202.8		172138	6	20	72	<0.2	<5
		202.8	204.3		172139	7	20	68	<0.2	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
202				205.0m to 219.2m ARGILLITE - LAMINATED QUARTZ-EYE + FELDSPAR WACKE RIBBON ARGILLACEOUS TUFFS ?							
203				- abundant qtz-eyes, blue-glassy, ~1mm, + white Feldspar (?) xls in an argillaceous (+ sericitic) matrix							
204				- overall dark grey to black w/ brn ± pale-yellowish appearance							
205			60	- ~1% disp.							
206				- extensively gouged							
207											
208											
209											
210			70								
211											
212											
213											
214											
215			75								
216				219.2m to 221.7m ARMS - BLACK, LAMINATED, PYRITIC, ARGILLITE							
217				- v. fn.-grd., laminated, pyritic, but competent w/ chl-on fractures							
218											
219											
220			65								
221											
222				EOM 221.7m - 728'							
223											
224											
225											
226											
227											

PAGE	OF	PROJECT: Puck	HOLE NO. 96-05

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		204.3	206.0		172140	16	20	60	<0.2	<5
		206.0	207.5		172141	9	22	92	<0.2	<5
		207.5	209.7		172142	12	26	78	<0.2	<5
		212.5	215.20		172143	9	24	48	<0.2	<5
		215.20	217.4		172144	8	18	10	<0.2	<5
		217.4	218.25		172145	8	20	10	<0.2	<5
		218.25	226.7		172146	62	34	94	0.8	5

EQUITY ENGINEERING LTD.

DRILL LOG

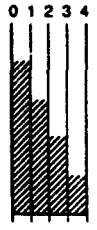
PROJECT: PUCK	GROUND ELEV.: 1360m
HOLE NO.: PK-96-06	BEARING: Grid South ~ 233°
LOCATION: L 5300N / 5320E	DIP: -55°
	TOTAL LENGTH: 203.61m.
LOGGED BY: Andrew Turner / David Terry	HORIZONTAL PROJECT
DATE: September 14/96	VERTICAL PROJECT
CONTRACTOR: F. BOISUENUE DIAMOND DRILLING	
CORE SIZE: NQ II	
DATE STARTED: September 12/96	
DATE COMPLETED: September 19/96	
DIP TESTS ACID ETCH: EOH - ~~86.5~~ 85°	

ALTERATION SCALE



absent
slight
moderate
intense

TOTAL SULPHIDE SCALE



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

COMMENTS

LEGEND

PAGE 2 OF 19 | PROJECT: DUCK | HOLE NO. PR 96-06

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
0				0.0m to 7.9m DMES - OVERBURDEN (Permafrost)							
7.9				7.9m to 9.2m ARRM - INTERBANDED, BLACK ARGILLITE AND DARK GREY ARGILLACEOUS APHERIC RHYOLITE							
			BD	- up to 60-70%, 1-4 cm banded V. Fn. grd, V. Vaguely laminated Argillite; and 30-40%, 1-3cm, V. Fn. grd., aphenic, dark grey (argillaceous) Rhyolite bands							
				- tr-1% diss py.							
9.2				9.2m to 14.65m RHAL - GREY-GREEN (AND Fe Ox stained orange), SERICITE MATRIX-RICH, BANDED APHERIC RHYOLITE							
			BC	- 70-80%, grey-green, 1-3cm, Fn. grd., aphenic rhyolite to 20-30%, .5-1cm, dark grey-green, sericitic, matrix.							
				- tr diss py							
14.65				14.65m to 17.2m DMLC - LOST CORE (No recovery)							
17.2				17.2m to 29.3m ARRM - INTERBANDED, BLACK ARGILLITE AND DARK GREY ARGILLACEOUS APHERIC RHY.							
			BZ	- as above (17.2m - 9.2m)							
				- thinner banding (~1cm wide)							

EOH
EOT

PAGE 3 OF 19 | PROJECT: PUCK | HOLE NO. PK-96-06

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		7.9	9.2		172147	57	<2	82	<0.2	<5
		9.2	11.6		172148	68	<2	60	<0.2	<5
		11.6	14.6		172149	72	<2	62	<0.2	<5
		14.6	17.7		172150	19	<2	28	<0.2	<5
		17.7	19.2		172151	19	<2	18	<0.2	5
		19.2	20.0		172152	61	<2	26	<0.2	<5
		20.0	21.5		172153	28	12	12	0.8	20
		23.0	24.5		172154	43	<2	10	<0.2	<5

PAGE 4 OF 19 | PROJECT: PUCIK | HOLE NO. PUC96-06

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
23											
24											
25			75								
26											
27											
28											
29				29.3m to 41.9m RHFS - Fe Ox stained, SERICITE MATRIX - POOR, BANDING. APHANITIC RHYOLITE - 2-5 cm, v. Fine-grd., aphanitic, grey (orange Fe Ox stained), rhyolite bands to <1mm thick sericitic partings. - tr disc py. - minor Fault gouge zones.							
30											
31											
32											
33											
34											
35			80								
36											
37											
38											
39											
40			80	41.9m to 57.55 EXMT - MT-RICH - MT-CARB±SIL. Fg Fm. - 60-80%, med-coarse (.5-1mm), x/s of Mt forming more + less concentrated bands in a calcareous matrix (+ silica). - tr-1% coarse disc py - Mt-poor Carbonate bands between 42.25m + 47.45m, and 47.55m + 47.65m							
41											
42											
43											
44											
45			75								
46											

PAGE 5 OF 19 | PROJECT: POCK | HOLE NO. PK-96-06

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		26.0	27.5		172155	64	8	28	<0.2	<5
		29.3	31.0		172156	68	22	106	0.2	<5
		32.5	34.0		172157	27	20	56	<0.2	<5
		36.75	38.25		172158	53	20	336	0.2	<5
		40.4	41.9		172159	62	12	470	<0.2	<5
		41.9	42.65		172160	47	<2	90	0.2	<5
		42.65	43.5		172161	21	<2	28	<0.2	<5
		43.5	45.0		172162	29	<2	42	<0.2	<5
		45.0	46.5		172163	27	<2	64	<0.2	<5
		46.5	48.0		172164	53	<2	46	<0.2	<5

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
47				50.46-57.55 m - dark grey-black FxMT; fg black and siliceous.							
			75	- fracs con FeO							
48				- 2-5mm FeO stained qz ± qz-carb veinlets at 85-75° to c/a. @ 1-20 cm spacing							
49				54.11-54.16 - FeO stained grey qv ± py @ 90-60° to c/a							
50				55.86-55.93 - aa. @ 75° to c/a - py-fg mt concentrated in bands to 7cm and							
51				45.2-50.46 - mod to strong ser alt'n - light/dark banded; locally fragmental light clasts - siliceous							
52	qv			- mod Fe carb content? (starting to oxidize?)							
53				- 1-3% diss'd to finely banded fg-mg sulf on bedded py.							
54				- overall 20-25% mt							
55				qv.							
56											
57			80	57.55 to 64.30 RHFR FRAGMENTAL TO BANDED RHYOLITE							
58				- light grey-green							
59				- massive grey "fragments" up to 5cm in size; generally ≤ 1cm ± a flattening ratio of 1:3-1:4							
60				- bounded by light green ser domains - ser also defines banded Rhyolite ± ~5mm spacing							
61				- moderate fracture FeO							
62			85	- diffuse fg-mg (<1mm) saussur fabl xts.							
63											
64				64.30 to 69.50 ARCB CARBONACEOUS ARGILLITE							
65	qv			- lam'd; partly broken core; - graphitic foil planes.							
66				- tr-1% py; sub fg-cg (7-8mm) diss'd.							
67				- 1mm - light - siliceous ~ 1mm							
68				64.30-64.52 - med grained buff-white glassy qv ± irregular fracture coatings of green chl							
69				- dark grey-black.							

PAGE 7 OF 19	PROJECT: PUCK	HOLE NO. PK-96-06

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		48.0	49.5		172165	24	<2	208	<0.2	<5
		49.5	51.0		172166	30	<2	60	<0.2	<5
		51.0	52.5		172167	49	<2	62	<0.2	<5
		52.5	54.0		172168	69	<2	26	0.4	<5
		54.0	55.56		172169	46	<2	40	0.2	<5
		55.56	57.55		172170	43	<2	28	<0.2	<5
		57.55	60.35		172171					
		60.35	62.00		172172					
		62.00	64.3		172173					
		64.3	69.5		172174					
		69.5	78.64		172175					

PAGE 8 OF 19 | PROJECT: PUCK | HOLE NO. PK-96-06

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
70				69.50 to 94.00 STFL FAULT ZONE - 1cm or less broken core - lithology grades between a light grey coloured fine-grained silicic Rhyolite and a light grey-green coloured sericite schist. 81.69-81.69 - grey med-grained glassy qtz & fracture green chlorite clots. (irregularly oriented). * - lost ~ 25.53 m in this box => V. poor core recovery - for ~ 0.25 m around 85 m depth the recovery improves. 93.0 m- more of an argillaceous component - overall +/- 2% py - occurs as localized irregular subhedral nuggets to 8 mm in size, & weakly fg disseminated.							
71											
72											
73											
74											
75											
76											
77											
78											
79											
80				- 93.88-96.93 - No core recovery							
81											
82		qv									
83											
84											
85			90								
86											
87											
88											
89											
90											
91											
92											

PAGE 9 OF 19	PROJECT: PUCK	HOLE NO. PK-96-06

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		78.64	84.74		172176	74	2	70	<0.2	<5
		84.74	93.88		172177	59	4	158	<0.2	<5

PROJECT: POCIC

HOLE NO. PK-96-06

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
93												
94												
95		NO CORE										
96												
97												
98												
99			87	99.00-101.96	RHFS - BANDED APHYRIC RHYOLITE							
100					- light grey-green coloured							
					- fine-grained-chert; set to 1-2% qtz							
101			70	101.96-102.32	ARSI SILICEOUS ARGILLITE							
					- dark grey-black							
102					- finely laminated, 2-3% disseminated py							
				102.32-111.58	RHFS BANDED TO MASSIVE APHYRIC RHYOLITE							
103			85		- light grey-green banded on cm scale							
104					- hard, siliceous, cherty, with							
					occasional foliation parallel							
105					fine veins.							
					- local siliceous areas commonly							
106					have a pale blue							
					- trace - 1% fine-grained disseminated							
107					py, occurs as fine & concentrated							
					in fine parallel stringers							
108					- @ 108.16 - fine grained stringers							
					2-3 mm.							
109			80		- 108.16-108.32 - vein with 5-10%							
110					3-5 mm apophyses at 2 directions per							
					to 2-4 mm wide							
111												
				111.58-112.52	RHAR SILICEOUS RHYOLITE							
112					- dark grey-green							
			85		- fine grained banded, 3-5% py							
113				112.52-115.54	STFL FAULT ZONE							
					- dark to mixed brecciated							
114					fault zone of RHAR							
					clasts							
115												

PAGE 11 OF 19	PROJECT: PUCk	HOLE NO. PK-96-06

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		96.93	98.76		172178	65	4	196	<0.2	<5
		98.76	100.00		172179	60	8	231	0.4	<5
		100.0	101.46		172180	54	4	48	<0.2	<5
		101.46	102.32		172181	66	2	40	<0.2	<5
		102.32	103.82		172182	56	3	172	<0.2	<5
		103.82	105.32		172183	57	22	932	<0.2	<5
		105.32	106.82		172184	38	<2	62	<0.2	<5
		106.82	108.32		172185	58	28	1335	<0.2	<5
		108.32	109.82		172186	60	18	1515	<0.2	<5
		109.82	111.58		172187	45	4	754	<0.2	35
		111.58	112.52		172188	74	38	1460	<0.2	25
		112.52	115.55		172189	62	92	1260	<0.2	15
		115.55	117.05		172190	57	84	136	<0.2	<5

PAGE 12 OF 19 | PROJECT: PUCK | HOLE NO. PK-96-06

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE	GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
116			80	115.55 to 119.91 EXCP/RHAR - CALCITE/PYRITE - RHYOLITE							
				- light to medium grey coloured							
117				- grades between more siliceous and more ca bearing (1-3% disseminated py.							
				- ca > carbonate - chlorite veins to 10cm							
118				Stained @ ~ 2-3/M; locally contains green "Bull" Mineral (clay clots)							
				- @ 117.81 - 4-5mm [illegible]							
119			80								
120				119.91 - 122.43 ARCR - SILICEOUS - CALCITE BEARING ARGILLITE							
				- [illegible]							
121			85	lam laminations							
				- moderate reaction to HCl							
122				- [illegible]							
				[illegible]							
123				122.43 - 124.36 EXCP/RHAR - CALCITE - PYRITE - CHLORITE EXHALITE							
				- [illegible]							
124	qv			124.36 - 124.84 RHFS [illegible] RHYOLITE							
125				124.84 - 129.96 ARSI SILICEOUS ARGILLITE							
				- med - dark grey/black							
126				- Cherty, mm - cm [illegible]							
				[illegible]							
127			85	- [illegible]							
				- @ 125.0 [illegible]							
128				- 127.0 - 127.66 - [illegible]							
129											
130				129.96 - 135.64 ARTF TUFFACEOUS ARGILLITE							
				- dark grey - black							
131			82	- similar to above however							
				contains variable amounts of							
132				[illegible]							
				[illegible]							
133				[illegible]							
				- [illegible]							
134				- [illegible]							
			75	zone. @ 134.23 - 134.51 12 cm [illegible]							
135				- 135.5 - 135.64 - [illegible]							
				135.64 - 137.66 SCBS SERICITE - CHLORITE - PYRITE							
136	qv			SCHIST							
				-							
137			70	- 30 cm [illegible]							
				137.2 - 137.66 STFL FAULT ZONE							
138				137.66 - [illegible] - dark [illegible]							

PAGE 13 OF 19 | PROJECT: PUCK | HOLE NO. PK-96-06

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
									.J	
		117.05	118.55		172191	63	20	206	<0.2	<5
		118.55	119.91		172192	50	12	108	<0.2	<5
		119.91	121.31		172193	81	62	732	<0.2	<5
		121.31	122.43		172194	90	32	32	<0.2	<5
		122.43	123.93		172195	74	70	320	<0.2	15
		123.93	124.36		172196	38	102	376	<0.2	10
		124.36	124.84		172197	78	16	14	<0.2	5
		124.84	126.34		172198	76	38	116	<0.2	<5
		126.34	127.84		172199	56	90	102	0.6	10
		127.84	129.96		172200	65	114	14	1	10
		129.96	131.5		172201	118	104	14	2	5
		131.5	133.0		172202	151	88	10	2.4	25
		133.0	135.64		172203	127	86	60	2	15
		135.64	137.66		172204	35	<2	70	<0.2	<5
		137.66	139.60		172205	74	22	840	0.2	<5

PROJECT: PUCK

HOLE NO. PK-96-06

DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
					138.16 - 140.7 - broken & faulted light green ser-qz schist .. felsic tuff Protolith.							
140					140.7 - 142.00 m - broken & gouged (mid ARST -- locally coherent core.							
141			80		142.0 - 142.65 - broken ser-qz schist(fau)							
142					142.65 - 146.34 - largely broken & gouged ARST - graphitic gouge							
143					- fracs green (Bt?) mineralization							
144												
145												
146												
				146.34-152.08	RHAT ARGILLACEOUS RHYOLITE -LAPILLI TUFF.							
147			80		- medium grey coloured with variably abundant lighter coloured lap-sized clasts in diffuse mx.							
148					- dark aphanitic rock frags to 8mm							
149					- tr-1% disc'd py.							
150					149.4 - 151.79 - moderately broken core mod.							
151												
152				152.08 to 152.96	STFL FAULT ZONE - black graphitic gouge.							
153				152.96 to 154.84	RHXT RHYOLITE CRYSTAL TUFF - med - light grey coloured - ~5% light grey qzs - 2-3mm - ser'd ; ~1% disc'd fg-mg py.							
154			80									
155				154.84 - 159.95	RHXL RHYOLITE CRYSTAL-LAPILLI TUFF - light grey coloured -- similar to above. - ~10% flattened light coloured lapilli-sized clasts. - ~5% augened blue qz's (5-7mm) - v. ser'c - ~1% fg disc'd & as stringers py.							
156			80									
157												
158												
159												
160				159.95 - 166.21	STFL - SCSC FAULT ZONE/SERICITE CHLORITE SCHIST. - medium grey coloured,							

gV

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		139.60	140.7		172206	71	<2	82	<0.2	<5
		140.7	142.65		172207	111	8	168	<0.2	<5
		142.65	146.34		172208	67	128	604	0.6	10
		146.34	147.84		172209	6	20	62	<0.2	5
		147.84	149.34		172210	7	22	66	<0.2	<5
		149.34	152.96		172211	18	80	218	0.6	<5
		152.96	154.84		172212	7	22	70	<0.2	<5
		154.84	156.34		172213	6	40	120	<0.2	<5
		156.34	157.84		172214	8	40	160	<0.2	<5
		157.84	159.95		172215	6	20	48	<0.2	<5
		159.95	161.45		172216	4	20	50	<0.2	<5
		161.45	162.95		172217	4	18	64	<0.2	<5

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DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	B	C	D	E	FRACTURE INTENSITY	% VEIN QTZ.
					- finely cust'd.							
					- no cc's, strongly broken locally -							
					so good.							
					- tr - 1% fg diss'd/stringers							
					py							
					-							
165												
				166.21 -	RHXL RHYOLITE CRYSTAL-LAPILLI							
			84	168.01	TUFF							
					- med grey colour, sed foliation.							
					- similar to btwn 154.87 - 159.95							
				168.01 - to	RHXT RHYOLITE CRYSTAL TUFF							
				181.60	- Rel homog med grey col/tex.							
					- 7-10% partially disaggregated							
					blue qtz. (2-5mm)							
170					- 5-7% similar dusk dots (1-2mm)							
			80		- strongly sed foliation.							
					~5% V brown bio alt'n							
					- tr - 2% diss'd py							
					- locally py stringers to							
					2mm filling V stylolitic							
					stringers strks // to c/a.							
					- no recrystn mt'c.							
175												
			85									
			80									
180												
				181.60 to	RHAT - ARGILLACEOUS RHYOLITE							
				185.74	CRYSTAL-LITHIC (LAPILLI) TUFF							
					- dusky med grey-green colour ed.							
					- banded w/ lighter-more siliceous							
					domains.							
					- variably concentrated lithic							
					& Argillite clasts throughout							

PAGE 17 OF 19	PROJECT: PUCK	HOLE NO. PK-96-06

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		161.45	162.95		172217	4	18	66	<0.2	<5
		162.95	164.45		172218	4	20	44	<0.2	<5
		164.45	166.21		172219	4	18	50	<0.2	<5
		166.21	168.01		172220	5	20	32	<0.2	<5
		168.01	169.5		172221	6	16	52	<0.2	<5
		169.5	171.0		172222	5	20	60	<0.2	<5
		171.0	172.5		172223	5	20	66	<0.2	<5
		172.5	174.0		172224	6	20	52	<0.2	<5
		174.0	175.5		172225	5	22	30	<0.2	<5
		175.5	177.0		172226	6	20	54	<0.2	<5
		177.0	178.5		172227	5	20	42	<0.2	<5
		178.5	180.0		172228	5	18	60	<0.2	<5
		180.0	181.60		172229	5	20	72	<0.2	<5
		181.6	183.0		172230	6	226	1055	<0.2	<5
		183.0	184.5		172231	4	220	1435	<0.2	<5

PROJECT: POCK

HOLE NO. PK96-06

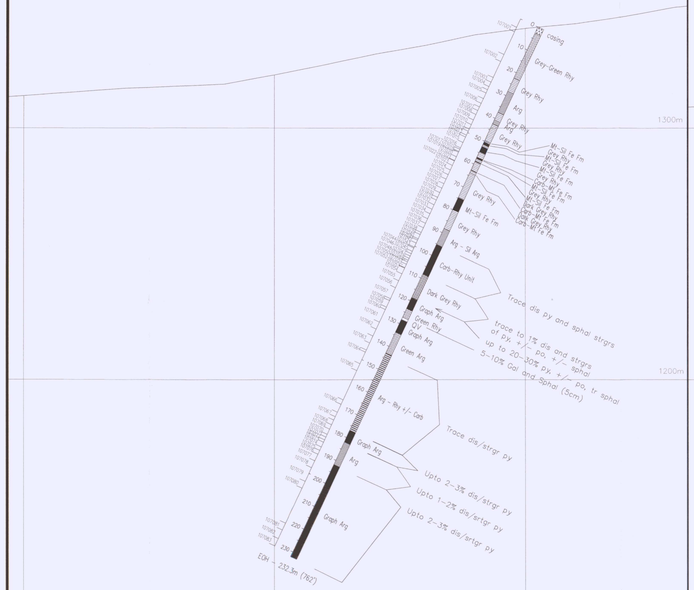
DEPTH (m)	% CORE REC	LITHOLOGY	STRUCTURE		GEOLOGICAL DESCRIPTION	ALTERATION A	ALTERATION B	ALTERATION C	ALTERATION D	ALTERATION E	FRACTURE INTENSITY	% VEIN QTZ.
185	qv				- lithics are Subrounded to sub-angular and up to 8-10mm in size - 1-3% diss'd to Stringer py (1 to 2") overall - rare bluish qtz to 5mm							
186												
187			85		- 182.52 - 183.32 - py/cc bands // fol' to 6cm wide. (30-35% of core length)							
188				185.74 to 189.61	RHAT/ARTF ARGILLACEOUS RHYOLITE ASH - CRYSTAL TUFF - med- to dark grey coloured - fol'd mod- strongly							
189			84		- cc bands to 1cm spaced @ 2-10 cm -- py assoc.							
190					- tr - 2% py overall -- fg-mg diss'd / stringer py.							
191					187.37 - 188.85 - py/cc bands // to fol' to 4cm -- py fg ctc.							
192					- silver dollar core - v. sparse qtz's & lithics (2-3mm)							
193												
194												
195				189.61 to 191.54	RHXT RHYOLITE CRYSTAL TUFF - light grey - yellow coloured							
196					- 7-10% heterogeneously dist'd partially rec/recrystallized blue qtz to 4-6mm							
197			85		- strong Sec fol'n planes; v. minor bio.							
198					189.86 - 189.96 - banded to partly flattened felsic lithic fragments to 1cm and cc alt'n.							
199					- @ 196.61 - fol' kinked @ 35° to c/a.							
200					- overall to ~1% fg-mg diss'd sub-anhedral py							
201				199.54 to 203.61	RHAT ARGILLACEOUS RHYOLITE CRYSTAL TUFF - medium grey coloured -- pinstripe lighter coloured silicic bands.							
202			85		- strongly Argillaceous & locally arg-gouge/gouge							
203					- qtz content decreases from top (7-10%) to EOH - (1-2%)							
204					- tr - 1% fg diss'd py.							
205												
206				203.61	EOH							

PAGE 19 OF 19	PROJECT: POCK	HOLE NO. PK-96-06

MINERALIZATION DESCRIPTION	TOTAL SULPHIDES	SAMPLES FROM	SAMPLES TO	SAMPLES WIDTH	SAMPLE NUMBER	ASSAYS Cu	Pb	Zn	Ag	Au
		184.3	185.74		172232	7	130	174	<0.2	<5
		185.74	187.0		172233	11	34	18	<0.2	<5
		187.0	188.5		172234	12	54	76	<0.2	<5
		188.5	189.61		172235	11	24	114	<0.2	<5
		189.61	191.0		172236	8	22	50	<0.2	<5
		191.0	192.5		172237	7	24	54	<0.2	<5
		192.5	194.0		172238	8	18	56	<0.2	<5
		194.0	195.5		172239	7	18	32	<0.2	<5
		195.5	197.0		172240	12	20	30	<0.2	<5
		197.0	198.5		172241	9	20	34	<0.2	<5
		198.5	199.54		172242	6	18	56	<0.2	<5
		199.54	201.0		172243					
		201.0	202.5		172244					
		202.5	203.61		172245					

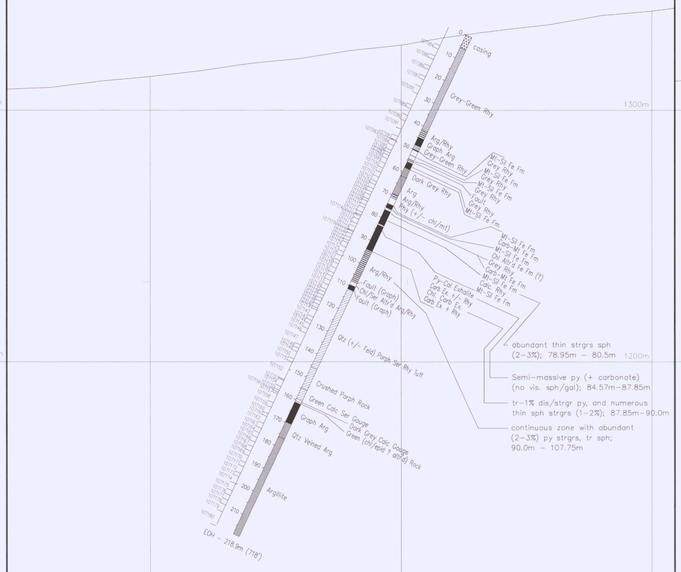
DDH PK-96-01
L3700N/5305E
(Azm: 233, Dip: -65)

- Massive Light Grey Rhyolite
- Grey-Green Rhyolite
- Dark Grey Rhyolite
- Argillite-Rhyolite
- Argillite (and siliceous Argillite)
- Black Graphitic Argillite
- Magnetite-Silica Iron Formation
- Magnetite-Carbonate Iron Formation
- Carbonate-Rhyolite Unit (Carbonate Exhalite and Rhyolite)



DDH PK-96-02
L3100N/5225E
(Azm: 233, Dip: -65)

- Massive Light Grey Rhyolite
- Qtz/Feld Porph Rhy (Tuff ?)
- Grey-Green Rhyolite
- Dark Grey Rhyolite
- Argillite-Rhyolite
- Argillite
- Black Graphitic Argillite
- Magnetite-Silica Iron Formation
- Magnetite-Carbonate Iron Formation
- Carbonate Exhalite Unit



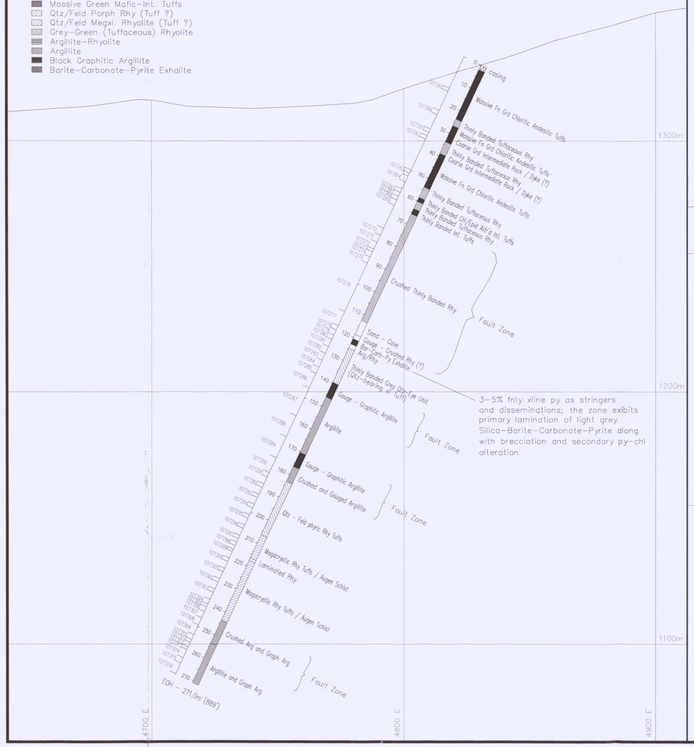
DDH PK-96-03
L2400N/5080E
(Azm: 233, Dip: -65)

- Massive Light Grey Rhyolite
- Qtz/Feld Porph Rhy (Tuff ?)
- Grey-Green Rhyolite
- Dark Grey Rhyolite
- Argillite-Rhyolite
- Argillite
- Black Graphitic Argillite
- Magnetite-Silica Iron Formation
- Magnetite-Carbonate Iron Formation
- Carbonate Exhalite Unit



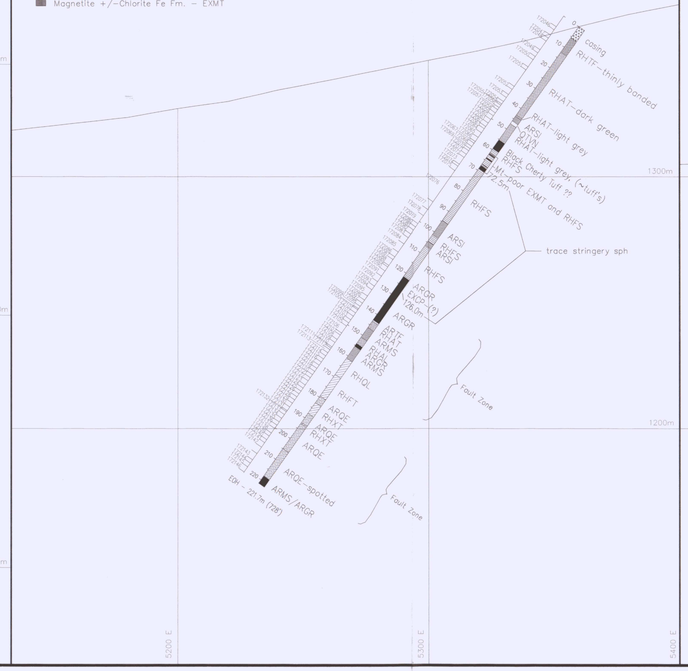
DDH PK-96-04
L1800N/4830E
(Azm: 233, Dip: -65)

- Massive Green Mafic-Int. Tuffs
- Qtz/Feld Porph Rhy (Tuff ?)
- Qtz/Feld Megxl. Rhyolite (Tuff ?)
- Grey-Green (Tuffaceous) Rhyolite
- Argillite-Rhyolite
- Argillite
- Black Graphitic Argillite
- Barite-Carbonate-Pyrite Exhalite



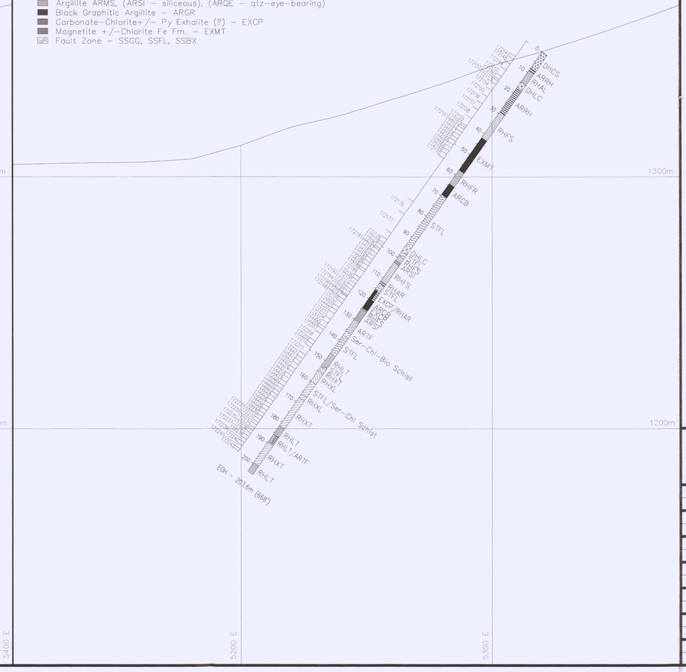
DDH PK-96-05
L4300N/5360E
(Azm: 233', Dip: -55')

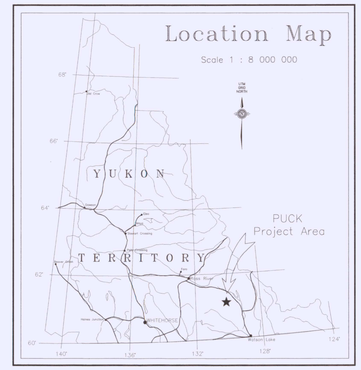
- Light Grey (matrix-poor) Banded Apheric Rhyolite - RHFS
- Grey and Green-Grey Banded Apheric Rhyolite - RHAL, RHAT, RHFR
- Qtz/Feld-pheric Rhyolite Lapilli Tuff - RHFT, RHQL, RHXL
- Tuffaceous Argillite (Arg + Rhy) - ARTF
- Quartz-Eye Bearing Tuffaceous Argillite
- Argillite - ARMS, (ARSI - siliceous), ARQE (Qtz-eye-bearing)
- Black Graphitic Argillite - ARQR
- Carbonate-Chlorite Exhalite (?) - EXCP
- Magnetite +/-Chlorite Fe Fm. - EXMT

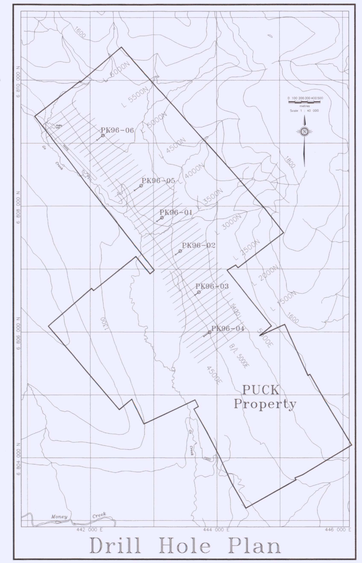


DDH PK-96-06
L5300N/5320E
(Azm: 233', Dip: -55')

- Light Grey (matrix-poor) Massive, to Banded, Apheric Rhyolite - RHFS
- Grey (RHAL) and Green-Grey (RHAT) Banded Apheric Rhyolite
- Qtz/Feld-pheric Rhyolite Crystal and/or Lapilli Tuff - , RHXL, RHXT, RHLT
- Altered Rhyolite - Ser +/- Chl +/- Bio Schist
- Tuffaceous Argillite -ARTF
- Mixed Argillite and Apheric Rhyolite - ARRH
- Argillite ARMS, (ARSI - siliceous), (ARQE - qtz-eye-bearing)
- Black Graphitic Argillite - ARQR
- Carbonate-Chlorite+/- Py Exhalite (?) - EXCP
- Magnetite +/-Chlorite Fe Fm. - EXMT
- Fault Zone - SSCG, SSFL, SSBX







093652

note: All holes logged by A. Turner, except PK96-06 logged by D. Terry

WESTMIN

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EXPATRIATE RESOURCES LIMITED

PUCK PROJECT

Drill Hole Sections with Sample Locations

(view to the northwest)

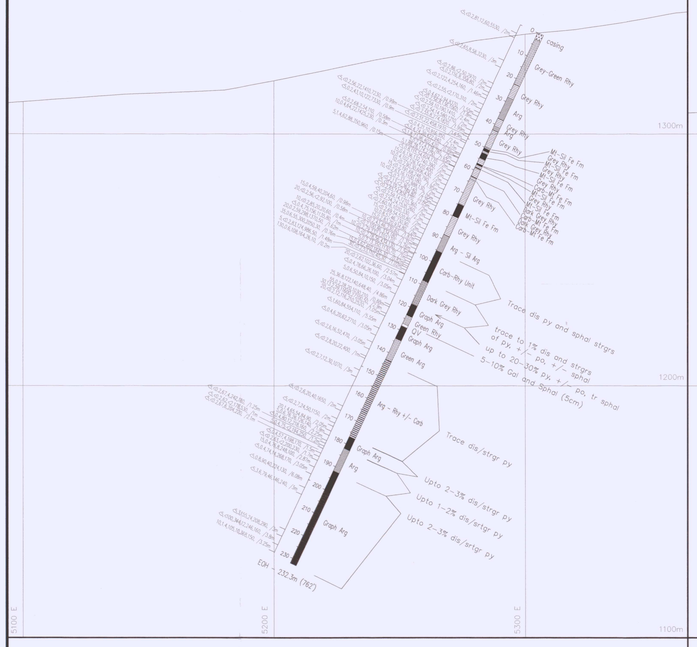
Work By	A.Turner/D.Terry
Date Drafted	Oct. 29, 1996
Drafted By	A. Turner
Date Revised	
Revised By	
N.T.S. Number	105 G/8
File Name	PK_DDH.DWG

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SCALE 1 : 1,000

Figure 7

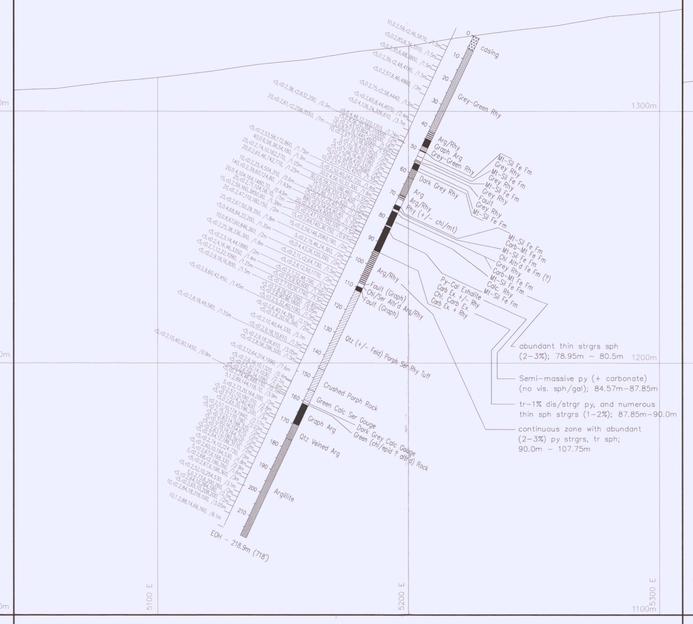
DDH PK-96-01
L3700N/5305E
(Azm: 233, Dip: -65)

- Massive Light Grey Rhyolite
- Grey-Green Rhyolite
- Dark Grey Rhyolite
- Argillite-Rhyolite
- Argillite (and siliceous Argillite)
- Black Graphitic Argillite
- Magnetite-Silica Iron Formation
- Magnetite-Carbonate Iron Formation
- Carbonate-Rhyolite Unit (Carbonate Exhalite and Rhyolite)



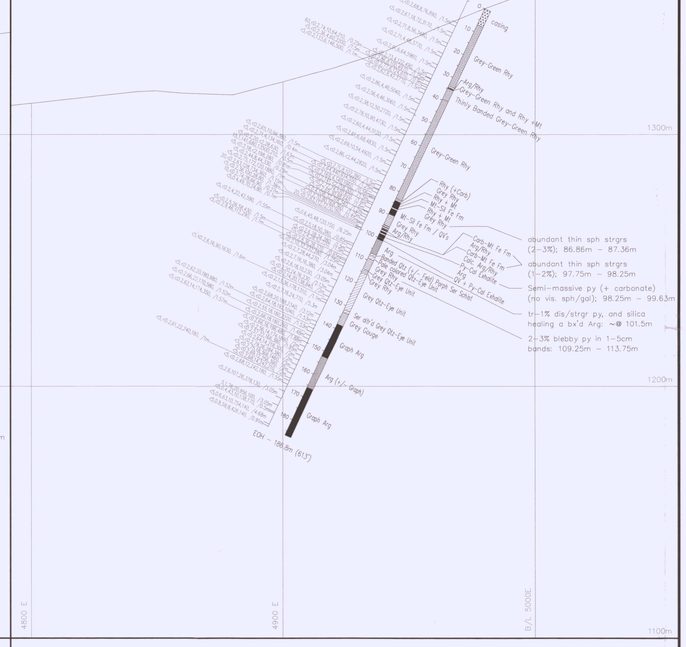
DDH PK-96-02
L3100N/5225E
(Azm: 233, Dip: -65)

- Massive Light Grey Rhyolite
- Qtz/Feld Porph Rhy (Tuff ?)
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- Argillite-Rhyolite
- Argillite
- Black Graphitic Argillite
- Magnetite-Silica Iron Formation
- Magnetite-Carbonate Iron Formation
- Carbonate Exhalite Unit



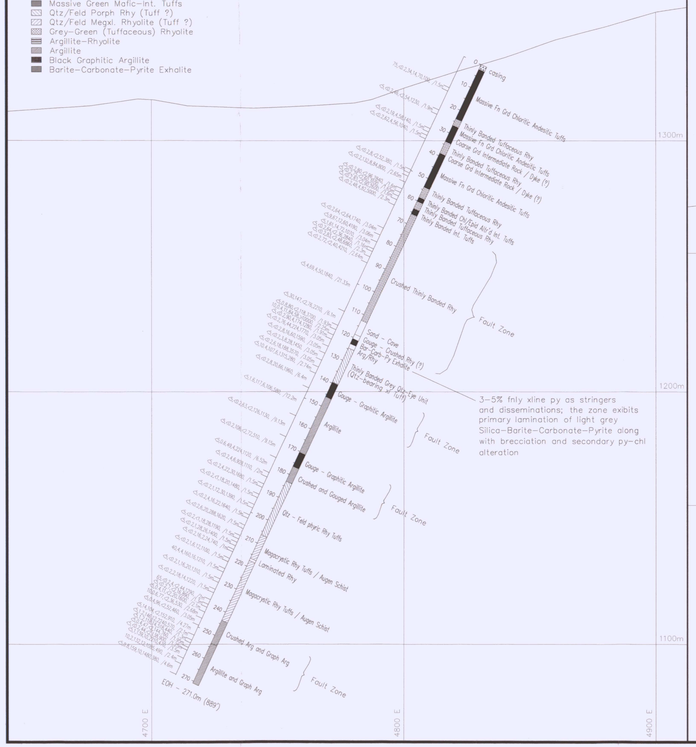
DDH PK-96-03
L2400N/5080E
(Azm: 233, Dip: -65)

- Massive Light Grey Rhyolite
- Qtz/Feld Porph Rhy (Tuff ?)
- Grey-Green Rhyolite
- Dark Grey Rhyolite
- Argillite-Rhyolite
- Argillite
- Black Graphitic Argillite
- Magnetite-Silica Iron Formation
- Magnetite-Carbonate Iron Formation
- Carbonate Exhalite Unit



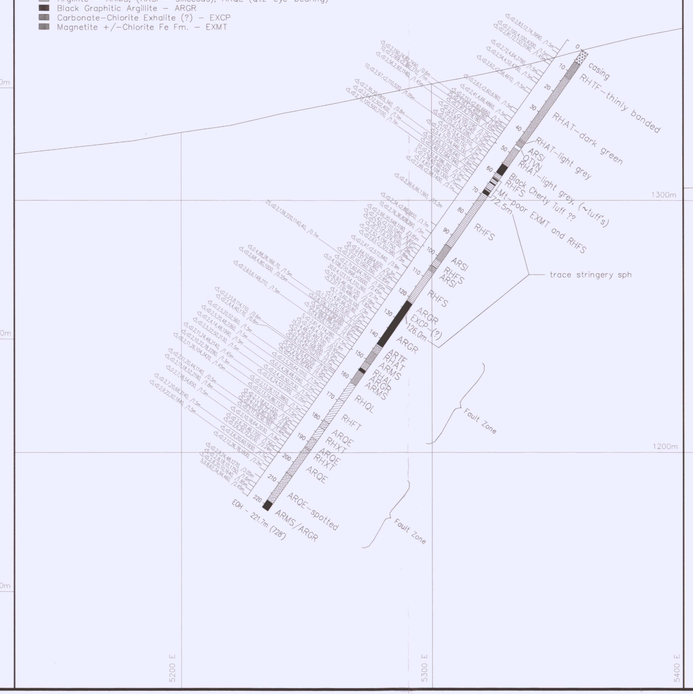
DDH PK-96-04
L1800N/4830E
(Azm: 233, Dip: -65)

- Massive Green Mafic-Int. Tuffs
- Qtz/Feld Porph Rhy (Tuff ?)
- Qtz/Feld Megxl. Rhyolite (Tuff ?)
- Grey-Green (Tuffaceous) Rhyolite
- Argillite-Rhyolite
- Argillite
- Black Graphitic Argillite
- Barite-Carbonate-Pyrite Exhalite



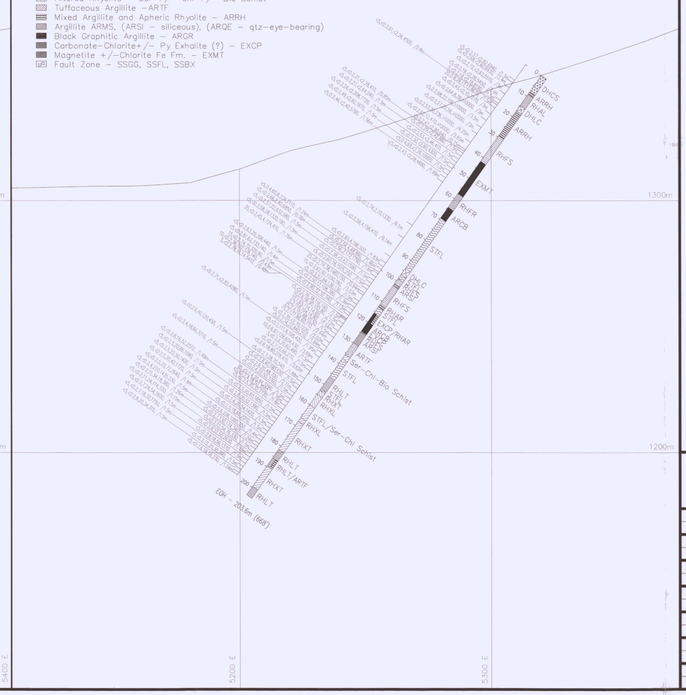
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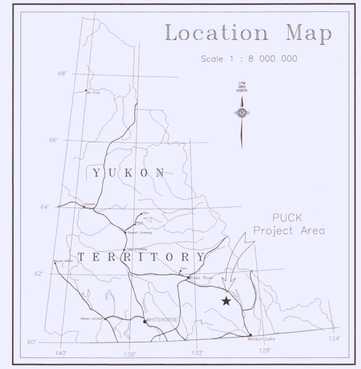
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- Grey and Green-Grey Banded Apheric Rhyolite - RHAL, RHAT, RHFR
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- Quartz-Eye Bearing Tuffaceous Argillite
- Argillite - ARMS, (ARSI - siliceous), ARQE (Qtz-eye-bearing)
- Black Graphitic Argillite - ARGR
- Carbonate-Chlorite Exhalite (?) - EXCP
- Magnetite +/-Chlorite Fe Fm. - EXMT

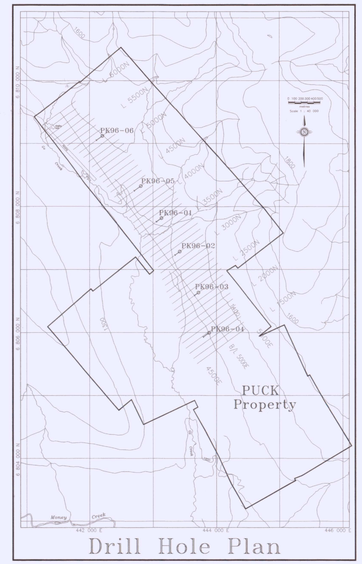


DDH PK-96-06
L5300N/5320E
(Azm: 233', Dip: -55')

- Light Grey (matrix-poor) Massive, to Banded, Apheric Rhyolite - RHFS
- Grey (RHAL) and Green-Grey (RHAT) Banded Apheric Rhyolite
- Qtz/Feld-pheric Rhyolite Crystal and/or Lapilli Tuff - , RHXL, RHXT, RHLT
- Altered Rhyolite - Ser +/- Chl +/- Bio Schist
- Tuffaceous Argillite -ARTF
- Mixed Argillite and Apheric Rhyolite - ARRH
- Argillite ARMS, (ARSI - siliceous), (ARQE - qtz-eye-bearing)
- Black Graphitic Argillite - ARGR
- Carbonate-Chlorite+/- Py Exhalite (?) - EXCP
- Magnetite +/-Chlorite Fe Fm. - EXMT
- Fault Zone - SSOG, SSFL, SSBX







093652



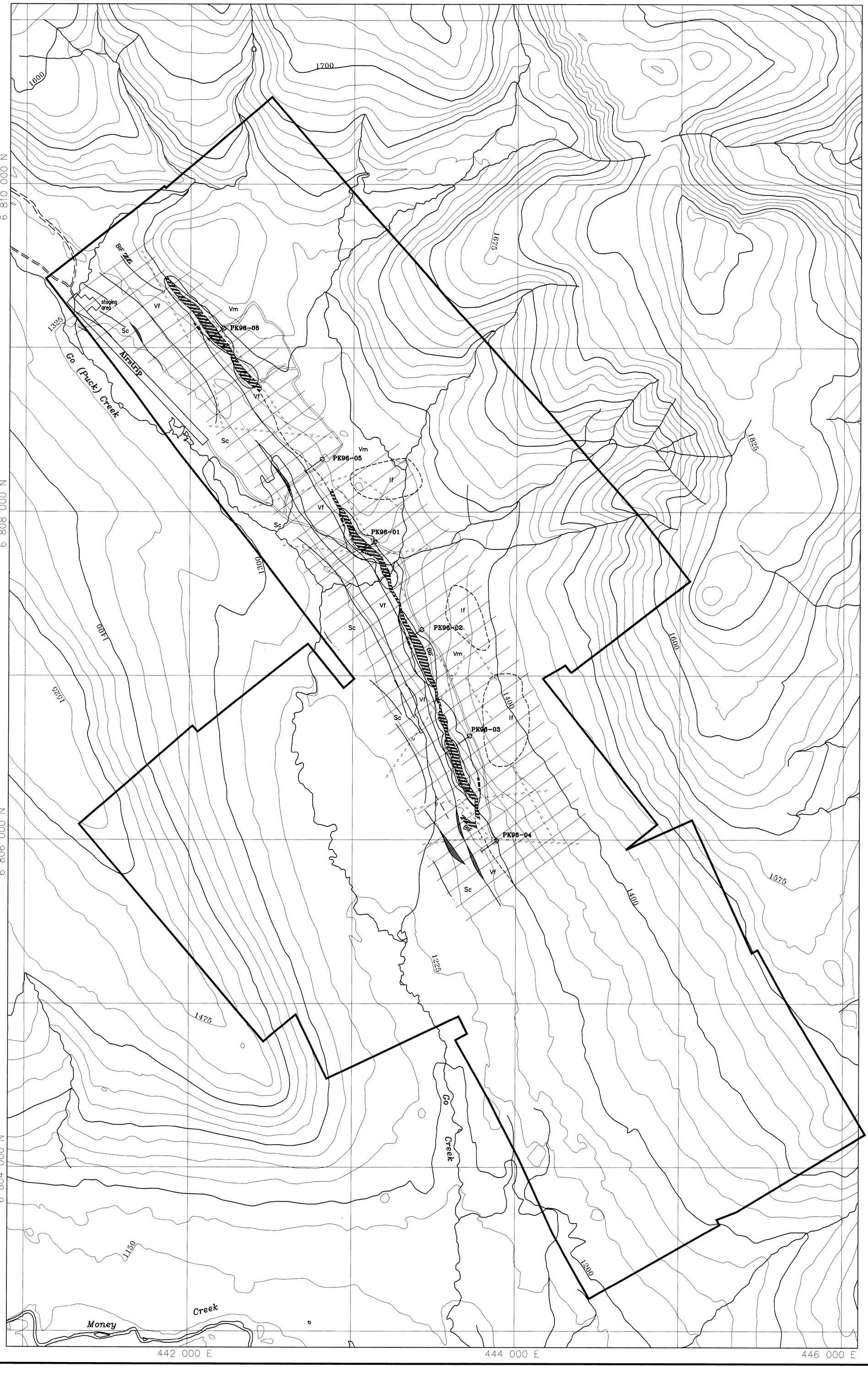
note: All holes logged by A. Turner, except PK96-06 logged by D. Terry

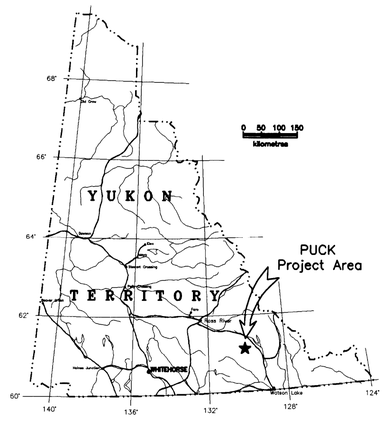
WESTMIN	WESTMIN RESOURCES LIMITED EXPATRIATE RESOURCES LIMITED
Work By A.Turner/D.Terry	PUCK PROJECT
Date Drafted Oct. 29, 1996	Drill Hole Sections showing Au (ppb), Ag (ppm), Cu (ppm), Pb (ppm), Zn (ppm), Ba (ppm), and width (m) (view to the northwest)
Drafted By A. Turner	
Date Revised	
Revised By	
N.T.S. Number 105 G/8	20 0 20 40 60 SCALE 1 : 1,000 Figure 8
File Name PK_DDH.DWG	

(17)

APPENDIX H

PUCK PROPERTY COMPILATION MAP





Location Map

Scale 1 : 10 000 000

UTM GRID NORTH
(~1° East of True North)

LEGEND

- 1600 — Topographic Contours in 25m Intervals
- Lake / Pond
- Stream
- Road / Cat trail
- PK96-06 — Drillhole Location and Identifier, with subsurface trace
- Grid Lines (cut)
- PUCK Property Outline
- Magnetic Contours (ground survey, showing the 58,800 and the 60,000nT contours)
- ^M^^ — Interpreted Fault showing basis for interpretation
  M – magnetics
  V – VLF (NLK)
  E – electromagnetics
- Conductor Axis with apparent width, weak extension, uncertain occurrence
- Inferred Geological Contact (Interpreted from Geophysics)
- Sc – Sediments; carbonaceous
- Vf,m – Volcanics; felsic, mafic
- BIF – Banded Iron Formation
- If – Intrusive; felsic

Topography compiled by the ORTHOSHOP, Calgary, June 1996 (WO 5710)
Magnetic Declination = 28.5° (1996)

PROFESSIONAL GEOLOGIST OF ALBERTA
ANDREW J. TURNER

WESTMIN

WESTMIN RESOURCES LIMITED
EXPATRIATE RESOURCES LTD.

Work By	A. Turner
Date Drafted	Oct. 24, 1996
Drafted By	A. Turner
Date Revised	
Revised By	
N.T.S. Number	105 G/8
File Name	PUCKCOMP.DWG

PUCK PROJECT
093652

Compilation Map

200 0 200 400 600m
SCALE 1 : 10,000

Figure 9