PREVIA RESOURCES LTD.



MAS 1 3 2003

Gold Commissioner's Office VANCOUVER, B.C.

GEDPHYSICAL & GEOLOGICAL ASSESSMENT REPORT

on the

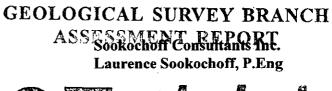
POTHOLE LAKE PROPERTY

Nicola Mining Division

NTS M092H098

1

Vancouver, B.C. March 11, 2003





Geological & Geophysical Assessment Report on the Pothole Lake Property

Table of Contents

Summary	1
Introduction	2
Property Description and Location	2
Accessibility, Climate, Local Resources, Infrastructure and Physiography	2
History	3
Geological Setting	2
Mineralization	4
Exploration Program 2003	7
Geological Mapping	7
VLF-EM & Magnetometer Surveys	7
IP Survey	7
Conclusions	8
Statement of Costs	ç
References	1(
Certificate	11

Illustrations

Figure 1	Location Map	following page	1.
Figure 2	Claim Map	following page	2.
Figure 3	Ortho Photo	following page	3.
Figure 4	Prospective View of Property from Southeast	following page	3.
Figure 5	Regional Geology	following page	4.
Figure 6.	Possible Peripheral Zone	following page	5.
Figure 7.	Pothole Copper Zone Location	following page	6.
Figure 8.	Grid Location	following page	7.
Figure 9.	Mag Survey Draped Over Topo	following page	7.
Figure 10.	VLF-EM Survey Draped Over Topo	following page	7.
Figure 11.	IP Survey Results	following page	7.

Appendices

Appendix I	Geophysical Report – D.G. Mark, P. Geo.
Appendix II	Geological Report – S. Kenwood, P. Geo.
Appendix III	VLF-EM and Magnetometer Raw Data.

page

Geophysical & Geological Assessment Report on the Pothole Lake Property

Summary

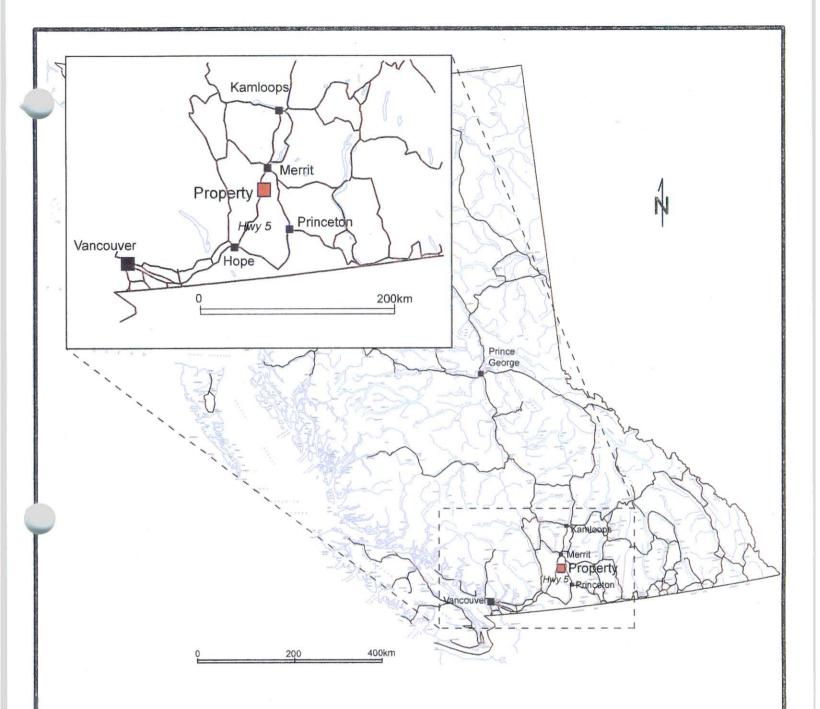
The 100% owned Previa Resources Ltd. Pothole Lake Property, located 25 kilometers southeast of Merritt in the historic Aspen Grove copper camp of southern British Columbia, covers an area of approximately 450 hectares. The property is located within the belt of Nicola rocks which are noted for their copper deposits; the nearest ones being the former producers, Craigmont at Merritt 45 km north, Copper Mountain at Princeton 70 km to the south, and Afton 73 km to the north.

In the Aspen Grove copper camp the Nicola rocks are subdivided into three belts separated by two northerly trending fault systems. The Pothole Lake property is situated within the eastern assemblage of the Nicola rocks that are comprised mainly of volcanic related rocks. The assemblage is characterized by a paucity of intrusive rocks in comparison to the Central Belt and the main Aspen Grove copper camp. A copper-gold-silver showing within the property, designated Pothole Copper Zone has reported mineral values of up to 2.55 grams gold per tonne and 1.9 grams silver per tonne over 130 metres.

On the Grove/Snowflake property in the Central Belt, adjacent to the Pothole Lake property to the west, significant mineral values are reported; 0.29% copper over 45m in trenches and "60 feet" of 0.26% copper at the bottom of a "320 foot" percussion hole. Osatenko (1979) reports that the native copper and chalcocite on the Snowflake property may be primary, much like at Afton. Craigmont Exploration reported increasing copper grades with depth in the percussion holes. As a result of exploration by Cominco in 1979, a broad arcuate band of a "possible peripheral zone" of pyrite was interpreted on the western Snowflake claims with their exploration target area to the east and towards the Pothole Lake property.

The current exploration program on the Pothole Lake property consisted of geological and geophysical surveys. In a geophysical report, D. Mark, P. Geo. reports that the results of the surveys revealed a broad magnetic high to the west of the Pothole copper zone may be reflecting a magnetic intrusive underlying the Nicola volcanics. An IP anomaly, "A' is indicated as the northeastern extension of the Pothole Lake copper zone. The anomaly is also correlative with magnetic lineations that could reflect intersecting fault structures and thus potential mineral controlling structures near the Pothole Copper Zone. IP anomaly B, which occurs to the immediate north of the magnetic high, may reflect sulphides that are associated with faulting.

In a geological report on the Pothole Lake property, S. Kenwood, P.Geo. reports that the property covers a contact between the Upper Triassic Nicola Group and the Lower Cretaceous Kingsvale Group. Predominant regional structures, those that host most of the copper mineralization in the Aspen Grove area, trend north-northwest with local structures trending southwest to northeast. The Pothole Copper Zone is situated at the intersection of the regional northwest trending granitic dykes and the local southwest fault structures.



PREVIA RESOURCES LTD. Pothole Lake Property

Aspen Grove Area Nicola Mining Division, British Columbia N.T.S 92H/15

Location Map

Figure 1

GeoComp Graphic Designs

Introduction

During January & February 2003 an exploration program comprised of geological mapping, magnetometer, VLF-EM, and Induced Potential geophysical surveys was carried out on the Pothole Lake property of Previa Resources Ltd.. The exploration program was carried out based on part of the recommendations as set out in the writers', "Geological Evaluation Report on the Pothole Lake Property" dated February 11, 2002.

Information for this report was obtained from sources as cited under Selected References and from exploration work as reported on herein and from work the writer has performed on the property.

Property Description and Location

The property consists of contiguous 15 unit grid claim and three two-post claims for an effective area of 450 hectares. Particulars are as follows:

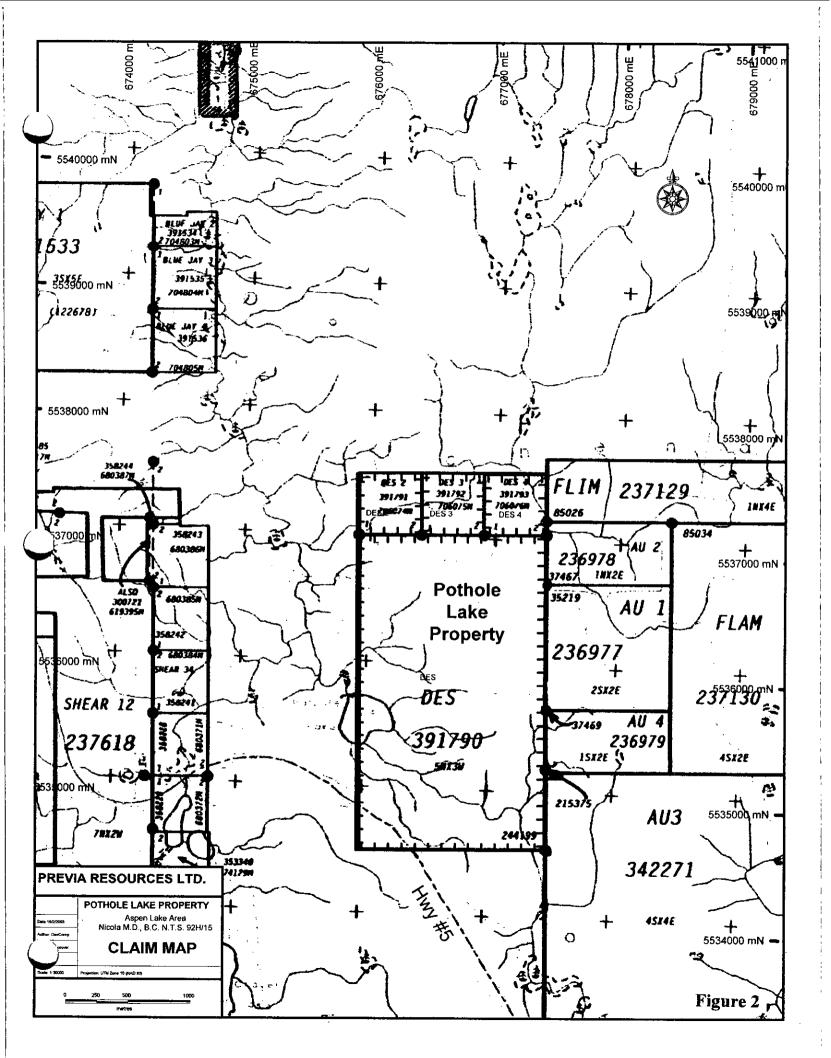
Claim Name	Tenure No.	Expiry Date
DES (15 units)	391790	February 10, 2006
DES 2	391791	February 10, 2006
DES 3	391792	February 10, 2006
DES 4	391793	February 10, 2006

The property is located within NTS M092H098 of the Nicola Mining Division, approximately 25 kilometres southeast of Merritt and eight kilometers east of Aspen Grove, the historical Aspen Grove Mining Camp in southwestern British Columbia, Canada. The LCP of the DES mineral claim, in accordance with the UTM system, is at 5534628N, 677545E.

Accessibility, Climate, Local Resources, Infrastructure and Physiography

Access is from south from Merritt via the paved all-weather Highway #5 for approximately 25 kilometers to the Kentucky Lake-Alleyne Lake road. At approximately eight kilometers east along this graveled secondary road, one kilometer past the Kentucky Lake provincial campsite, the Crater Lake poor secondary dirt road junctions off to the north. At approximately eight kilometers, the road intersects the northwest corner of the property. This poor secondary road is maintained by, and its use subject to the permission from, the Douglas Lake Cattle Company.

The region is situated within the dry belt of British Columbia with rainfall between 25 and 30 cm per year. Temperatures during the summer months could reach a high of 35° and average 25°C with the winter temperatures reaching a low of -10° and averaging 8°. On the property, the permanent snow on the ground would be from December to April and would not hamper a year-round exploration program.



Accessibility, Climate, Local Resources, Infrastructure and Physiography (cont'd)

Sufficient water for all phases of the exploration program could be available from the many lakes and creeks, which are located within the confines of the property. Electrical power may be available from a high voltage transmission line that is within 15 kilometers west of the property. A natural gas and an oil pipeline are within 22 kilometres west of the property.

The property is situated at the western edge of the Douglas Plateau, which is within the physiographic area designated as the Interior Plateau of British Columbia. Pothole Lake, along the west-central boundary is at an elevation of 3,100 metres. Gentle to moderate slopes prevail with relief in the order of some 500 meters.

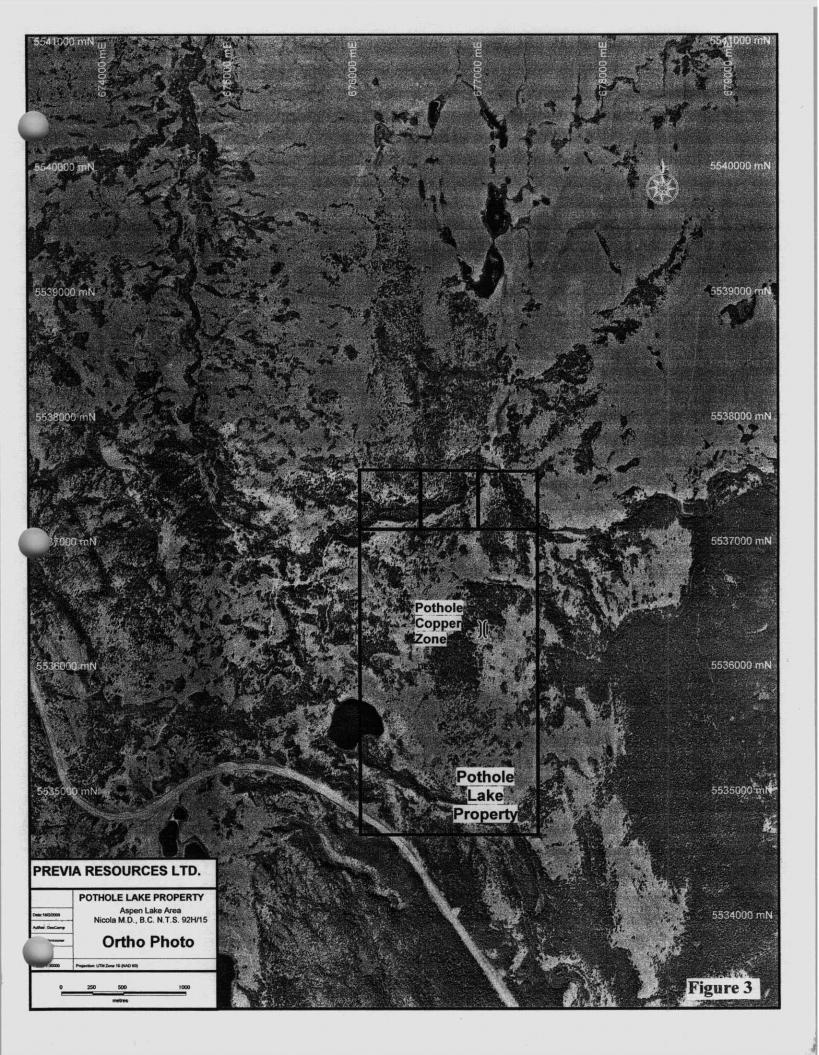
Merritt, or Kamloops an historic mining centre 76 km north of the property, could be a source of experienced and reliable exploration and mining personnel and a supply for most mining related equipment. Kamloops is serviced daily by commercial airline and is a hub for road and rail transportation. Vancouver, a port city on the southwest corner of, and the largest city in the Province of British Columbia, is four hours distant by road and less than one hour by air from Kamloops.

History

During the late 1800's and early 1900's, the Aspen Grove copper camp was outlined by the numerous discoveries of mineral occurrences, some of which were explored more extensively than others. One of the more significant occurrences covered by the Snowflake claims is located at Aspen Grove and was explored by many "major" mining companies including Cominco who carried out much of their work in the area during the late 1970's and 1980's. The Snowflake claims extended from Highway #5 in the west to Pothole Lake in the west; however, the exploration was concentrated in the western portion. Some of the eastern claims were allowed to expire and were subsequently staked as the Pot claims. Some of the original Snowflake claims still exist which may manifest the significance of the mineral potential.

During the late 1800's and early 1900's, the Aspen Grove copper camp was outlined by the numerous discoveries of mineral occurrences, some of which were explored more extensively than others. One of the more significant occurrences covered by the Snowflake claims is located at Aspen Grove and was explored by many "major" mining companies including Cominco who carried out much of their work in the area during the late 1970's and 1980's. The Snowflake claims extended from Highway #5 in the west to Pothole Lake in the west; however, the exploration was concentrated in the western portion. Some of the eastern claims were allowed to expire and were subsequently staked as the Pot claims. Some of the original Snowflake claims still exist which may manifest the significance of the mineral potential.

In 1985, Laramide Resources Ltd. conducted exploration work on, and adjacent to, the ground presently covered by the DES claims (AR 13,714). In the results of the exploration on ground covered by the Pothole Lake property Watson (1985) reported rock sample assay results with significant silver and gold values in a zone designated as the Pothole Copper Zone and also background silver and gold values in two locations; east of, and south of, Pothole Lake.



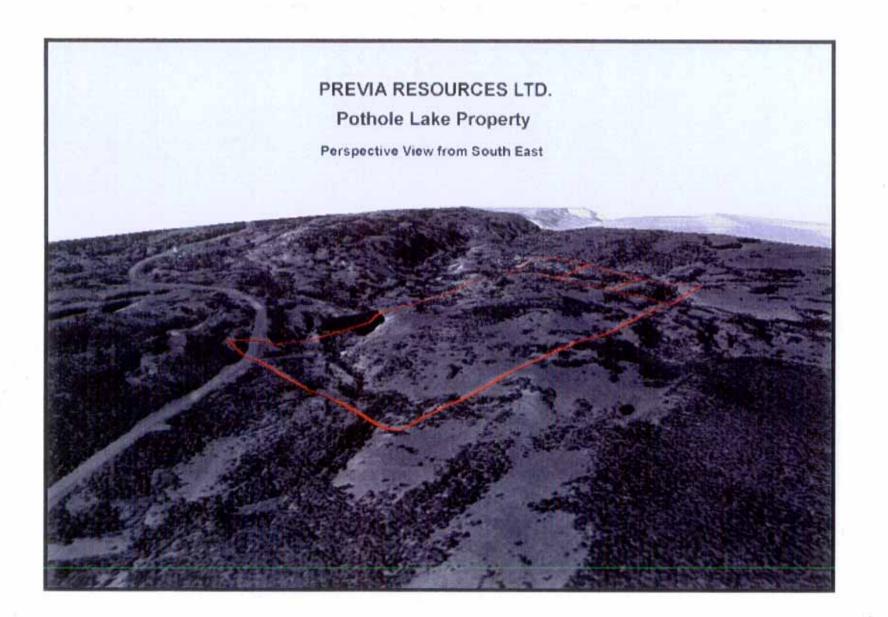


Figure 4

History (cont'd)

In addition, Watson reports that the results of a magnetometer survey completed to the northwest of the Pothole Lake property revealed a relatively smooth, north trending high that suggests a partially concealed dioritic intrusion thinly overlain by andesitic volcanics.

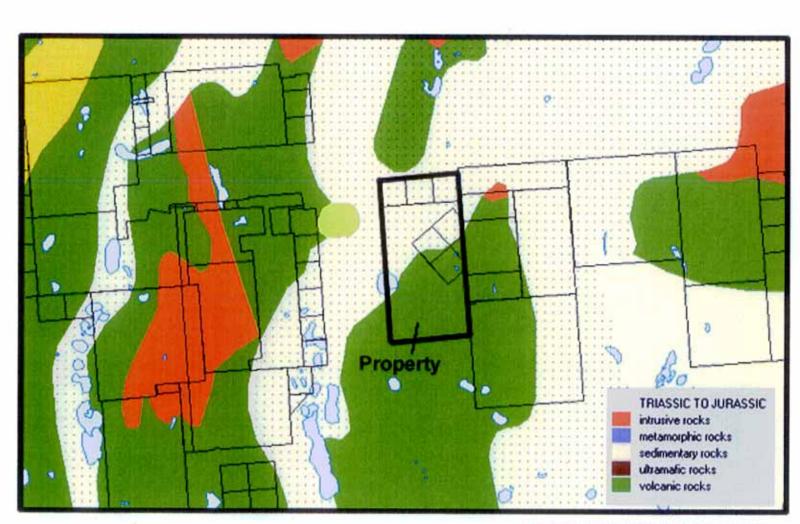
On the adjacent property to the east, referred to as the Au Group (Pothole Lake), considerable exploration work has been carried out since the mid 1970's. In 2002, Lateegra Resources Ltd. completed six holes for 500 metres on the AU property. There is no available information on the results from the diamond drilling (Cathro, 2003).

Geological Setting

The general geological setting of the region is described by Preto as a Nicola Belt of some 40 kilometres wide that extends from near the International Boundary in the south, 180 kilometres northward to Kamloops Lake. Mainly Upper Triassic volcanic, sedimentary, and intrusive rocks of the Nicola Group, which are noted for their copper deposits, underlie this region.

Besides the Nicola rocks, which are the oldest in the map-area, rock units include volcanic, sedimentary, and intrusive rocks that range in age from Late Triassic to Pleistocene and Recent. The Copper Mountain porphyry deposit, 70 kilometres to the south of the Pothole Lake property and near Princeton, is a fairly typical diorite model deposit and was the first porphyry copper deposit mined in British Columbia. A complex zoned diorite-monzonite-syenite pluton intrudes the Nicola Group, with intrusions found in and near ore are quartz poor, porphyritic syenite in composition, and albitized (Hollister, 1978). At the Afton deposit, 73 kilometres to the north of the Pothole Lake property and near Kamloops, the ore occurred at the west side of the nepheline normative Iron Mask batholith. This is a zoned pluton with diorite, monzonite, and syenite stages, with ore occurring near a syenite outcrop (Hollister, 1978).

The dominating geological elements in the Aspen Grove map-area are two northerly trending high-angle fault systems that divide the Nicola rocks into three sub-parallel belts. The Western Belt consists mainly of an east facing sequence of calc-alkaline flows which grade upward into pyroclastic rocks, epiclastic sediments, and abundant limestone. This succession is separated near Aspen Grove by the Allison fault, and in the northern part of the area by an unnamed fault, from the Central Belt assemblage, which is dominated by alkaline, and calc-alkaline and intrusive rocks and lesser-associated sedimentary units. The Summers Creek-Alleyne fault system separates rocks of the Central Belt from those of the Eastern Belt. The latter assemblage consists of a westerly facing sequence of volcanic siltstone and sandstone, laharic deposits, conglomerate and tuff, and some distinctly alkaline flows, which occur near small stocks of micromonzonite porphyry.



PREVIA RESOURCES LTD. Pothole Lake Property Regional Geology

Figure 5

Geological Setting (cont'd)

On the Grove (Snowflake) property the geology is described by Osatenko (1979) as Nicola basaltic rocks comprise the oldest rocks in the area and consist of fine-grained red and green basalt flows, augite porphyry flows and tuffs. Augite porphyries typically contain 15% medium grained augite phenocrysts in a fine-grained green matrix. Pyrite is abundant (up to 8%) in these rocks, especially along the north and east sides of the diorite-monzonite complex. Rocks of unit 2 consist of fine-grained diorite and are altered in part to chlorite, epidote, albite, calcite and secondary K-feldspar, principally near copper mineralization. Monzonites are fine to medium grained and porphyritic. Pyrite is abundant in both the diorite and monzonite, mainly along fractures but some as disseminations.

The **Pothole Lake property** is situated within the Eastern Belt assemblage. In this location, this assemblage mainly consists of alkaline volcanic flows and well-bedded submarine volcaniclastic rocks, ranging from tuffaceous volcanic siltstones characteristic of the lower part, to coarse volcanic conglomerate and laharic breccias in the upper part. The assemblage is characterized by a paucity of intrusive rocks in comparison to the main Aspen Grove copper camp in the Central Belt a few kilometres to the west, separated by the Kentucky-Alleyne fault system.

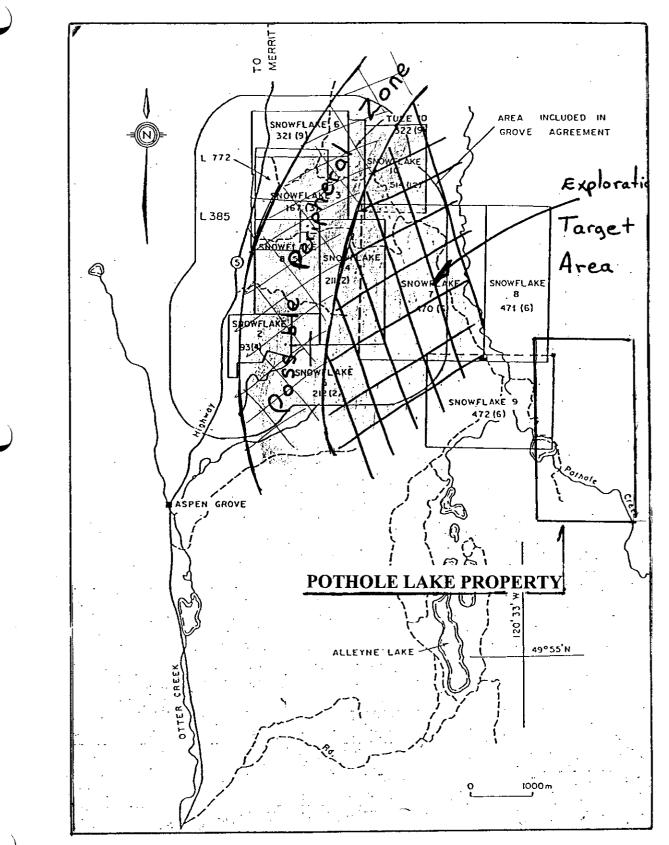
The area of the Pothole Copper Zone (Figure 3) occurrence (Minfile 92HNE204) is underlain by purple to grey-green augite plagioclase porphyritic andesite to basalt (or trachyandesite and trachybasalt). Minor volcanic siltstone, wacke and tuff may be present. Northeast striking dikes of granodiorite to quartz monzonite intrude these rocks. The volcanic rocks at the showing are highly fractured and altered with epidote, quartz-carbonate veins, and minor hematite.

The Au occurrence (Figure 3), 1.8 kilometres east-northeast of Pothole Lake and adjacent to the east of the Pothole Lake property, consists of gold-silver-copper mineralization. The main part of this zone is a gold showing, a small stripped, drilled and trenched area just off a gravel road south of Quilchena Creek. This and most of the surrounding area is underlain by andesitic to dacitic tuff, black argillite, and volcanic sandstone and siltstone. The rocks are strongly fractured in a variety of orientations (Quin, 1983). Bedding in the tuff generally strikes 060° and dips variably to the northwest.

Mineralization

Osatenko (1979) reports that the Grove property (Snowflake group) was optioned by Cominco after it became apparent that many features characteristic of the Afton deposit were present on the property.

Osatenko (1979), in a report on the results of a percussion drilling program on the Snowflake claims for Cominco, reports that: the mineralization in old trenches consists of native copper, chalcocite, chalcopyrite, bornite and malachite; the lack of iron oxides and clay in these outcrops suggests that the native copper and chalcocite are not of supergene origin, are primary, and probably formed in a sulfide deficient environment, much like Afton; copper grades range from 0.06 to 1.6% with the best mineralization of 0.29% copper in boulders over 45m ... and up to 1.65% copper over 3m.



Map showing the location of the Pothole Lake property relative to the "possible peripheral zone" on the adjacent property (Cominco 1979 map)

Mineralization (cont'd)

On the percussion drilling results, Osatenko (1979) reports that low grade copper mineralization was encountered at the bottom of two holes (110' of 0.07% and 50' of 0.07%) in an area where Craigmont drilling showed increasing copper grades with depth (60' of 0.26% and 80' of 0.12% copper at the bottom of 320 and 250 foot holes respectively).

Mineralization at the **Pothole Copper Zone** is reported as being comprised of erratically disseminated chalcopyrite, malachite, azurite and pyrite. The copper minerals occur in narrow zones striking southwest, transverse to the regional strike but parallel to a fault one kilometre to the northwest. It is further reported that individual rock samples from the showing were analysed at up to 0.95 grams gold per tonne and 4.8 grams silver per tonne. A composite chip sample across the showing was reportedly analyzed at 2.55 grams gold per tonne and 1.9 grams silver per tonne over 130 metres (Watson, 1985). Gold and silver values appear to be proportional to the degree of alteration and copper mineralization (AR 13,714).

On the AU occurrence, mineralization consists of pyrite, pyrrhotite, chalcopyrite, and arsenopyrite disseminated sporadically in the tuffaceous rocks and argillite, up to about one %, and also occurs in fractures. Native gold is associated with the sulphides in narrow, quartz-filled fractures in these rocks. Minor malachite occurs in volcanics. The overall extent of the mineralization has not been determined, although diamond drilling has demonstrated that minor pyrite, pyrrhotite and chalcopyrite, disseminated or associated with quartz or calcite fracture veinlets, does persist below the surface (AR 11,241; 16,008).

Gold values in the area have been obtained from trench sampling and drill core at the main showing. Significant gold assays in chip samples reportedly range from 6.8 grams per tonne over 5.1 metres to 10.8 grams per tonne over 4.9 metres. Grab and select samples reportedly assayed between 14.4 and 91 grams per tonne gold. The best drill core intersection assayed 4.97 grams per tonne gold over 1.5 metres (AR 16,008). Copper is associated with the gold mineralization; one rock sample from the main trench yielded 0.29% copper. Another sample yielded 26 grams per tonne silver and 0.14 % lead (AR 7,293).

The Kit showing is exposed on the north bank of Quilchena Creek, 2.0 kilometres eastnortheast of the creek's confluence with Pothole Creek. A small body of granodiorite of Late Triassic to early Jurassic age intrudes volcanics of the Upper Triassic Nicola Group. The granodiorite is cut by narrow, steeply-dipping shears striking north and northeast, near the faulted contact with slightly pyritic Nicola Group greenstone to the northwest. Some of the fractures contain quartz with minor chalcopyrite, malachite and molybdenite.

In the exploration by Laramide Resources in the immediate area east and south of Pothole Lake, assays of rock samples as reported by Watson (1985) are background values of up to 0.3 grams silver per tonne and 0.005 grams gold per tonne. At the Pothole Copper Zone (Figure 3.), a reported composite chip sample across the showing was analysed at 2.55 grams per tonne gold and 1.9 grams per tonne silver over 130 metres. Gold and silver values appear to be proportional to the degree of alteration and copper mineralization (AR 13,714).

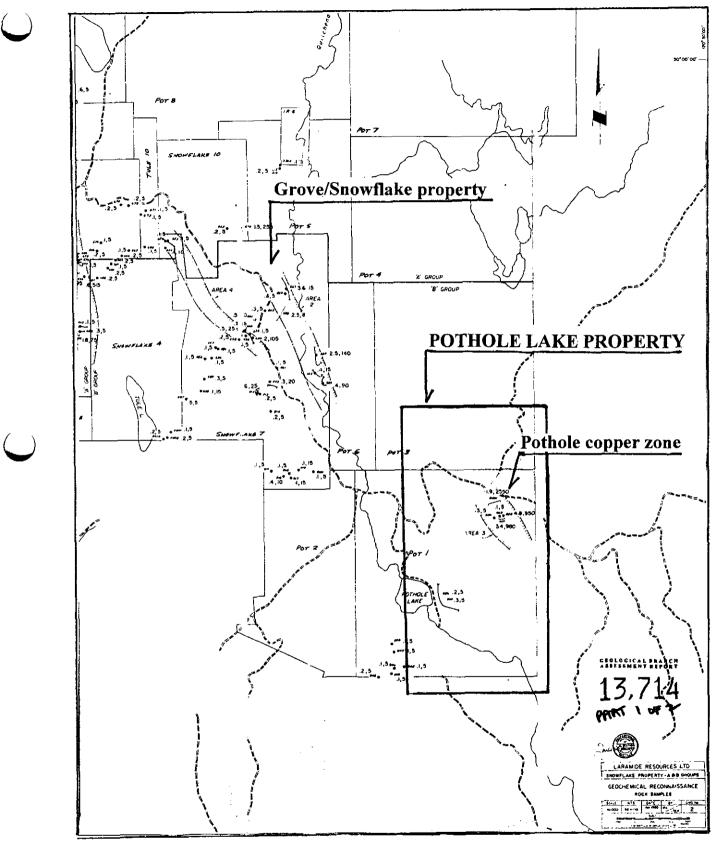


Figure 7 Map showing the location of the Pothole Copper Zone relative to the Pothole Lake property of Previa Resources Ltd. (Laramide Resources 1985 base map. AR 13,714)

Exploration Program 2003

During January 2003, Previa Resources Ltd. completed an exploration program of geological and geophysical surveys on the Pothole Lake property. Particulars are as follows.

Geological Mapping

Pro Group Geological of Vancouver carried out a geological survey of the property in January 2003. The geological mapping was performed utilizing the grid of the VLF-EM survey. Due to snow cover at the time of exploration and the indicated sparse outcrop on the property, limited outcrop was observed. The Pothole Copper showing was not located to map and/or sample. In the coverage of the property, three areas of outcrop were located. In the vicinity of the Pothole Copper zone located at 1900N 450W, outcrops of Nicola andesites and Tertiary granites were located. The fractured, propylitized andesite exhibited northwesterly, southwesterly, and easterly trending fractures with occasional carbonate and/or limonite and no indication of mineralization. The hypidiomorphic textured medium grained, unaltered granite indicated the same fracture trend with minor limonite on occasional fracture surfaces.

Outcrop adjacent to the east of Pothole Lake are of heavily fractured and fissile volcanic siltstone. With patchy surficial limonite and occasional disseminated pyrite. No samples were taken, however, reported samples taken by Watson (1985) returned background values in silver and gold.

Outcrop adjacent to the Merritt-Kelowna Highway, 700 metres south of Pothole Lake, are of chert/siltstone with the typical fracture direction of the area which is exhibited topographically in the Pothole Creek drainage system. The outcrops are void of alteration and/or mineralization.

Former exploration work conducted on the ground covered by the Pothole Lake Property is reported on in the History section of this report.

VLF & Magnetometer Surveys

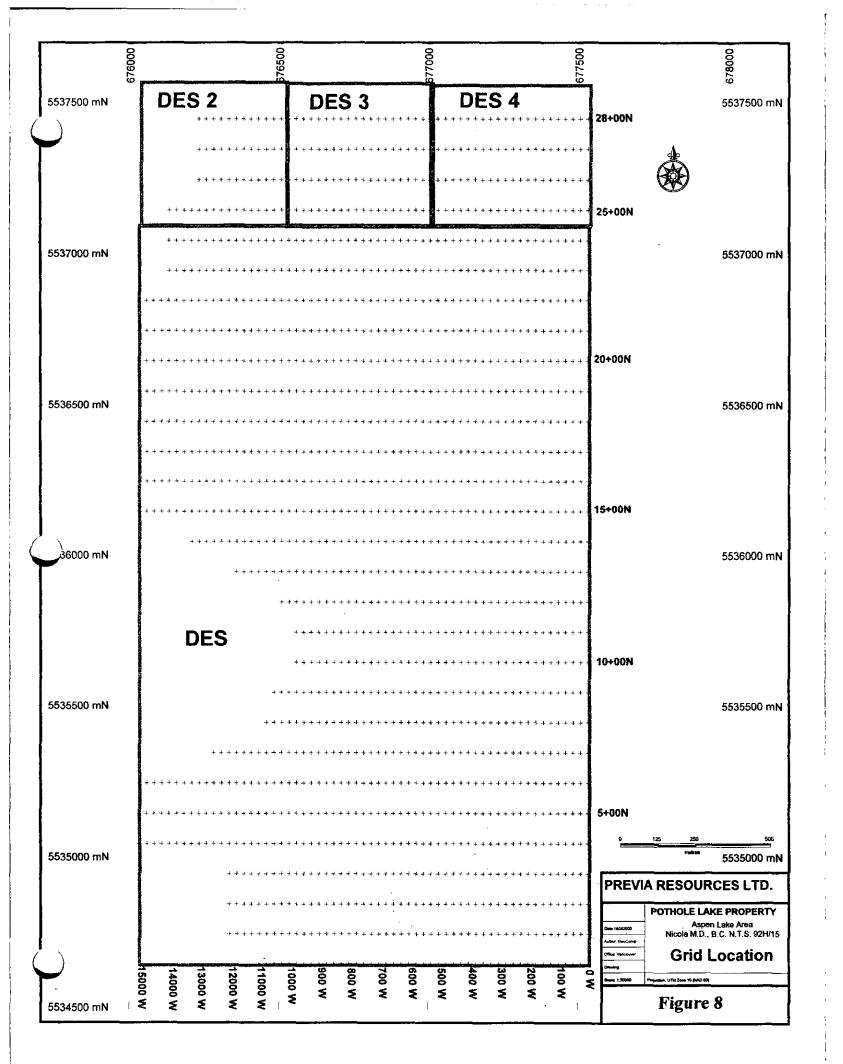
Dave Mark, P.Geo. reports on the results of the surveys in a report appended herein as Appendix 1

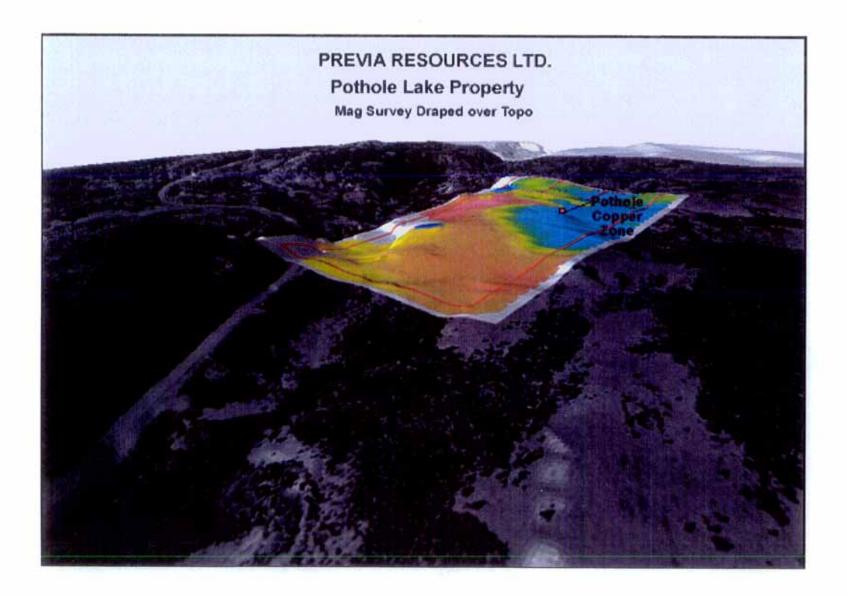
In summary, the main feature of the survey is a broad magnetic high in the western part of the property, which may be reflecting a magnetic intrusive underlying the Nicola volcanics. In addition, the Pothole copper zone occurs near the juncture of two magnetic lineation, that could reflect geological structures.

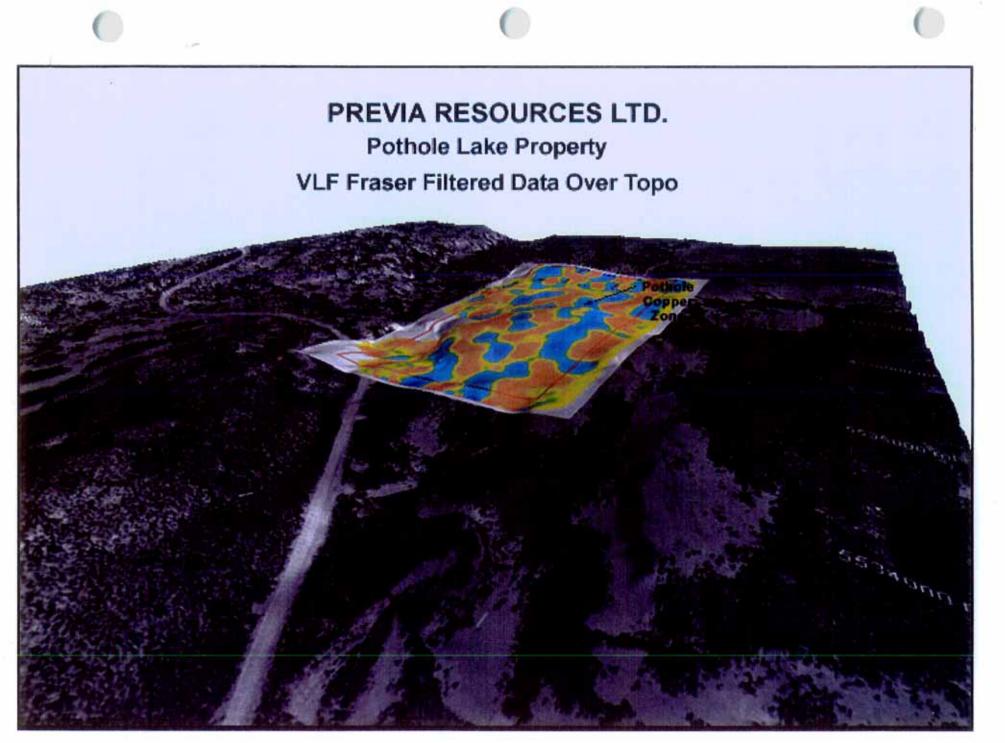
The VLF-EM survey results were inconclusive.

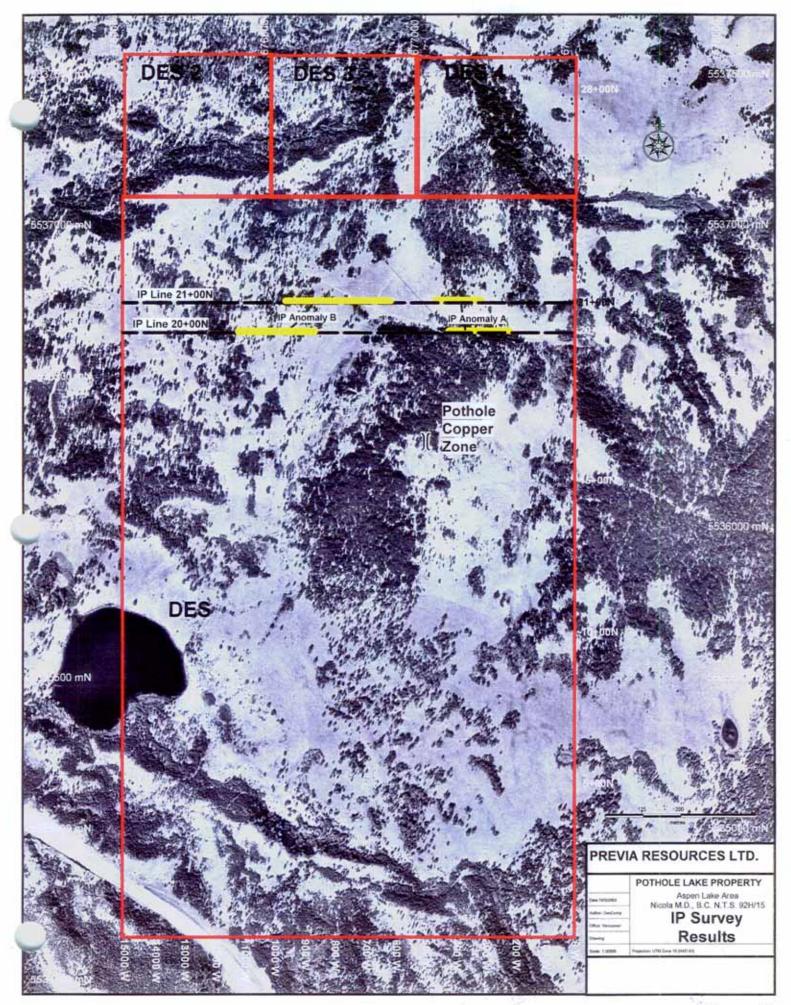
IP Survey

Mark reports that IP anomaly, "A' is indicated as the northeastern extension of the Pothole Lake copper zone. The anomaly is also correlative with magnetic lineations that could reflect intersecting fault structures and thus potential mineral controlling structures near the Pothole Copper Zone. IP anomaly B, which occurs to the immediate north of the magnetic high, may reflect sulphides that are associated with faulting.









Conclusions

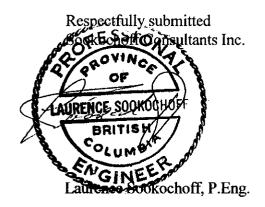
Geologically, the property is favorably located as to regional and local structure, to the localization of mineral zones.

The geophysical results indicate the Pothole Copper zone may be underlain by an intrusive which can either provide a structural localization to, or host, potentially economic mineral zones which mineralization is expressed surficially in the Pothole Copper Zone.

As a result of extensive exploration by Laramide Resources in 1985 in the immediate area, and on ground covered by the Pothole Lake property, it was indicated that precious metal and copper mineralization appear to be related to intensity of fracturing and alteration arising from adjacent dioritic intrusions. The sporadic and ubiquitous mineralization in the area may indicate surficial seepage of controlled sub surface mineralization that may be hosted by mineral controlling structures within the dioritic intrusives and/or within the Nicola rocks adjacent to the diorites.

The current exploration was successful in delineating a potentially economic zone of structurally controlled mineralization associated with an intrusive underlying the Nicola volcanics.

The indicated mineral controlling cross structure correlating with an IP anomaly may be a prime target for diamond drill testing as the target is also indicated as the northeast extension of the Pothole copper zone



Vancouver, BC March 11, 2003

Pothole Lake Property Statement of Costs

The fieldwork on the Iron Mask Property was carried out between January 8, 2003 and February 7, 2003 to the value as follows:

0.100.00
VLF-EM/ magnetometer survey 8,100.00
IP survey 12,325.00
Rentals and field supplies 625.00
Room & board: 10 days @ \$150. 1,500.00
Results, maps compilation & drafting 2,500.00
Report, xcrox, & printing1,000.00

\$ 30,550.00

References

Carr, J.M. et al - Afton: A Supergene Copper Deposit. Porphyry Copper Deposits of the Alkalic Suite - Paper 38

Cathro, M. - Personal communication

- Cockfield, W.E. Geology and Mineral Deposits of Nicola Map-Area, British Columbia. Geological Survey of Canada. Memoir 249. 1961.
- Hollister, V.F. Geology of the Porphyry Copper Deposits of the Western Hemisphere. The American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc. New York, New York 1978.
- Mark, D.G. Addendum Geophysical Report on Magnetic, VLF-EM, IP and Resistivity Surveys on the Pothole Lake Property for Previa Resources Ltd. February 7, 2003.
- Kenwood, S. Addendum Geological Report on the Pothole Lake Property for Previa Resources Ltd. February 8, 2003.
- Minfile Number 092HNE204 Pothole Copper Zone.
- Osatenko, M.J. Assessment Report of Percussion Drilling on the Snowflake 6 Mineral Claim, Aspen Grove Area for Cominco Ltd., August 28, 1978. AR 6,837.
- **Osatenko, M.J.** Progress Report to April 30th, 1978 Percussion Drilling on the Grove Property' Aspen Grove Area for Cominco Ltd. May 10, 1978.
- Osatenko, M.J. Assessment Report of Percussion Drilling on the Grove Property for Cominco Ltd. January 10, 1979. AR 7,122.
- Preto, V.A. Geology of the Aspen Grove Area. Mines and Petroleum Resources of British Columbia. Map 15 sheet 4. 1974.

Geology of the Nicola Group between Merritt and Princeton, Ministry of Energy, Mines and Petroleum Resources. Bulletin 69. 1979.

- Quin,S.P. Drilling Report on the Au Group for Imperial Metals Corporation. May 30, 1983
- von Rosen, G.E. Diamond Drilling Report on the Au Group, Pothole Lake. December 9, 1975
- White, G.E. Geophysical Survey on the Au Group of Mineral Claims for Algo Resources Ltd. November, 1986.
- Yorke-Hardy, R.W. Geochemical Report covering the Snowflake Claim, Aspen Grove Area for Fred Gingel. June 10, 1976. AR 5,875

Certificate I, Laurence Sookochoff, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geologist and principal of Sookochoff Consultants Inc. with offices at 604-1176 Burnaby Street Vancouver, BC V6E 1P1.

I, Laurence Sookochoff, further certify that:

- 1) I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology.
- 2) I have been practicing my profession for the past thirty-seven years.
- 3) I am registered and in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.
- 4) The information for this report is based on information as itemized in the Selected Reference section of this report, from exploration work the writer has completed within the Aspen Grove copper camp in the 1980's, and from the supervision and management of the work program as reported on herein



Vancouver, BC March 11, 2003

Appendix I

GEOPHYSICAL REPORT - D.G.MARK, P.Geo.

 \bigcirc

ADDENDUM

GEOPHYSICAL REPORT

ON

MAGNETIC, VLF-EM, IP AND RESISTIVITY SURVEYS

ON THE

POTHOLE LAKE PROPERTY

ASPEN GROVE AREA, KETTLE RIVER VALLEY

NICOLA MINING DIVISION, BRITISH COLUMBIA

WRITTEN FOR:

.

WRITTEN BY:

DATED:

PREVIA RESOURCES LTD. #401 – 850 West Hastings Vancouver, BC V6E 1C1

David G. Mark, P.Geo. GEOTRONICS SURVEYS LTD. 6204 – 125th Street Surrey, British Columbia V3X 2E1

February 7, 2003



TABLE OF CONTENTS

SUM	MARYi	
CONCLUSIONSii		
INTR	ODUCTION and GENERAL REMARKS 1	
MAG	NETIC SURVEY	
a)	Instrumentation	
(b)	Theory2	
(c)	Survey Procedure	
(d)	Data Reduction2	
	EM SURVEYS	
(a)	Instrumentation	
(b)	Theory	
(c)	Survey Procedure	
	Compilation of Data4	
INDU	CED POLARIZATION AND RESISTIVITY SURVEYS 4	
(a)	Instrumentation	
(b)	Theory4	
(c)	Survey Procedure	
(d)	Compilation of Data7	
DISCU	USSION OF RESULTS7	
GEOPHYSICIST'S CERTIFICATE10		

LIST OF ILLUSTRATIONS

MAPS	Scale	<u> Map #</u>
Ground Magnetic Survey Contour Plan	1:5,000	GP-1
Ground VLF-EM Survey Fraser-filtered Contour Plan	1: 5,000	GP-2
IP & Resistivity Pseudosections Line 20+00N	1: 5,000	GP-3
IP & Resistivity Pseudosections Line 21+00N	1: 5,000	GP-4

SUMMARY

Magnetic, very low frequency electromagnetic (VLF-EM), induced polarization (IP), and resistivity surveys were carried out during January 2003 over the Pothole Lake Property located within the Aspen Grove area of the Nicola Mining Division of B.C.

The main purpose of the geophysical surveys was to locate sulphide mineralization within the Nicola volcanics, especially a larger zone, say, in the order of a few hundred meters. The type of mineralization being sought is copper sulphides with associated gold and silver values.

The magnetic and VLF-EM surveys were carried out taking readings at 25-meter stations on 100-meter separated lines. The magnetic survey was carried out with a Geometrics G816 proton precession magnetometer and the results were computer-plotted and contoured. The VLF-EM survey was carried out with a Sabre model 27 reading the Jim Creek transmitter at a direction of about south-southwest. The results were Fraser-filtered, plotted and contoured, all this work being done by computer.

The resistivity and IP surveys were carried out using a BRGM Elrec-6 multi-channel receiver operating in the time-domain mode. The transmitter used was a BRGM VIP 4000 powered by a 6.5-kilowatt motor generator. The dipole length and reading interval chosen was 50 meters read to 6 levels. The survey consisted of two lines for a total survey length of 3,200 meters. The results were plotted in pseudosection form and contoured.

i

CONCLUSIONS

- 1. The magnetic survey revealed a broad magnetic high trending northwesterly through the south and western part of the property. It is concluded to probably be reflecting a magnetic intrusive that is underlying the Nicola rock-types at a shallow depth.
- 2. East of the high is a northwesterly-trending magnetic low. It is at the northwest end of this low that the Pothole copper zone occurs and thus the low is of exploration interest.
- 3. Magnetic lineations have been mapped throughout the property. It is near the intersection of two of these lineations that the Pothole copper zone occurs. IP anomaly A, which reflects sulphides, occurs at a second intersection.
- 4. The IP survey revealed two anomalies reflecting sulphides that have been labeled A and B, respectively. Anomaly A reflects mineralization that is either the northeastern extension of the Pothole copper zone, or it reflects mineralization that is associated with this zone.

- 5. Anomaly B occurs at the northern end of the main magnetic high correlating with an east-southeast magnetic lineation. This suggests the sulphide mineralization is associated with faulting.
- 6. The resistivity survey showed both sulphide zones as reflected by the IP anomalies to occur within trachyandesite/trachybasalt porphyry flows. It also showed the eastern part of the property to be underlain by volcanic sandstones and siltstones.
- 7. The VLF-EM survey results were relatively flat giving little information of exploration interest.

ADDENDUM GEOPHYSICAL REPORT

ON

MAGNETIC, VLF-EM, IP AND RESISTIVITY SURVEYS

ON THE

POTHOLE LAKE PROPERTY

ASPEN GROVE AREA

NICOLA MINING DIVISION, BRITISH COLUMBIA

INTRODUCTION AND GENERAL REMARKS

This report discusses survey procedure, compilation of data, interpretation methods, and the results of magnetic, very low frequency electromagnetic (VLF-EM), resistivity and induced polarization (IP) surveys carried out within the Pothole Lake Property belonging to Previa Resources Ltd. The property is located within the Nicola Mining Division on the east side of Pothole Lake within the Aspen Grove area of British Columbia.

The magnetic and VLF-EM surveys were carried out by a 2-man crew of Pro Group Geological Ltd. from January 8th to 10th and January 16th to 20th, 2003. The amount of magnetic and VLF-EM surveys totaled 38,150 meters. The magnetic and VLF-EM data were then brought to the writer for processing and mapping.

The IP and resistivity surveys were carried out by a Geotronics crew of five men, one of which was the writer, from January 10th to 13th, 2003. The amount of IP and resistivity surveying totaled 3,200 meters.

The main purpose of the geophysical surveys was to locate sulphide mineralization. Sulphide mineralization with associated gold and silver values is found throughout the area within the Nicola volcanics, which is the main rock-type underlying the property. The



specific purpose of the magnetic survey was to map lithology as well as structure. That of the VLF-EM survey was to map structure as well as, possibly, sulphides directly. That of the IP survey was to locate any possible sulphide mineralization, some of which hopefully would consist of base metal sulphides as well as associated gold mineralization. Larger zones of mineralization, say, in the order of a few hundred meters, were being explored for and thus a larger dipole spacing of 50 meters was used. That of the resistivity survey was to map associated alteration zones, geological structure, and lithology.

MAGNETIC SURVEY

a) Instrumentation

The magnetic survey was carried out with a model G-816 proton precession magnetometer, manufactured by Geometrics Inc. of Sunnyvale, California. This instrument reads out directly in gammas to an accuracy of ± 1 gammas, over a range of 20,000 - 100,000 gammas. The operating temperature range is -40° to +50° C, and its gradient tolerance is up to 3,000 gammas per meter.

(b) Theory

Only two commonly occurring minerals are strongly magnetic, magnetite and pyrrhotite; magnetic surveys are therefore used to detect the presence of these minerals in varying concentrations. Magnetics is also useful as a reconnaissance tool for mapping geologic lithology and structure since different rock types have different background amounts of magnetite and/or pyrrhotite.

(c) Survey Procedure

Readings of the earth's total magnetic field were taken at 25 m stations along east-west lines, 100 meters apart, with the base line running due north along the east side of the property. The number of meters surveyed was 38,150.

No flagging marking the stations was put up at the request of the Douglas Lake Ranch who holds the surface rights. However, the grid was measured in with a GPS (global positioning system).

The diurnal variation of the magnetic field was not monitored.

(d) Data Reduction

The data was first input into a computer. Then using Geosoft software, it was plotted with 57,000 nT subtracted from each posted value onto a base map, GP-1, with a scale of 1:5,000. It was then contoured at an interval of 100 nT.

<u>VLF-EM SURVEYS</u>

(a) Instrumentation

The VLF-EM survey was carried out with a VLF-EM receiver, Model 27, manufactured by Sabre Electronics Ltd. of Burnaby, British Columbia. This instrument is designed to measure the electromagnetic component of the very low frequency field (VLF-EM), which for this survey is transmitted at 24.8 kHz from Jim Creek, Washington, which is east of Arlington.

(b) Theory

In all electromagnetic prospecting, a transmitter induces an alternating magnetic field (called the primary field) by having a strong alternating current move through a coil of wire. This primary field travels through any medium and if a conductive mass such as a sulphide body is present, the primary field induces a secondary alternating current in the conductor, and this current in turn induces a secondary magnetic field. The receiver picks up the primary field and, if a conductor is present, the secondary field distorts the primary field. The fields are expressed as a vector, which has two components, the "in-phase" (or real) component and the "out-of-phase" (or quadrature) component. For the VLF-EM receiver, the tilt angle in degrees of the distorted electromagnetic field with a conductor is measured from that which it would have been if the field was not distorted with a conductor.

Since the fields lose strength proportionally with the distance they travel, a distant conductor has less of an effect than a close conductor. Also, the lower the frequency of the primary field, the further the field can travel and therefore the greater the depth penetration.

The VLF-EM uses a frequency range from 13 to 30 kHz, whereas most EM instruments use frequencies ranging from a few hundred to a few thousand Hz. Because of its relatively high frequency, the VLF-EM can pick up bodies of a much lower conductivity and therefore is more susceptible to clay beds, electrolyte-filled fault or shear zones and porous horizons, graphite, carbonaceous sediments, lithological contacts as well as sulphide bodies of too low a conductivity for other EM methods to pick up. Consequently, the VLF-EM has additional uses in mapping structure and in picking up sulphide bodies of too low a conductivity for conventional EM methods and too small for induced polarization. (In places it can be used instead of IP). However, its susceptibility to lower conductive bodies results in a number of anomalies, many of them difficult to explain and, thus, VLF-EM preferably should not be interpreted without a good geological knowledge of the property and/or other geophysical and geochemical surveys.

(c) Survey Procedure

The VLF-EM readings were taken along with the magnetic survey using the same grid and therefore the amount surveyed was the same, 38,150 meters

Tilt angle readings of the electromagnetic field from the transmitter station, Seattle (Jim Creek) at 24.8 kHz, were taken at the 25 m stations on the 100-meter separated lines with the operator facing towards the transmitter, which is at a direction of 205°E (S25°W).

(d) Compilation of Data

The VLF-EM tilt angle data were input into a computer and subsequently 4-point Fraser-filtered. The filtered data were then plotted and contoured onto a base map, GP-2, at a scale of 1:5,000. The contour interval used was 2°.

INDUCED POLARIZATION AND RESISTIVITY SURVEYS

(a) Instrumentation

The transmitter used was a BRGM model VIP 4000. It was powered by a Honda 6.5 kW motor generator. The receiver used was a six-channel BRGM model Elrec-6. This is state-of -the-art equipment, with software-controlled functions, programmable through a keyboard located on the front of the instrument. It can measure up to 10 chargeability windows and store up to 2,500 measurements within the internal memory.

(b) Theory

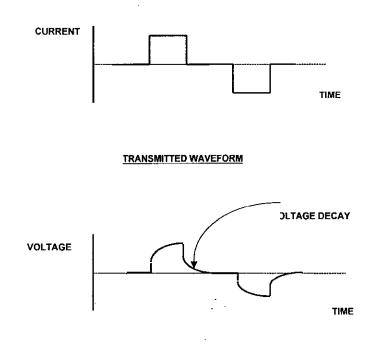
When a voltage is applied to the ground, electrical current flows, mainly in the electrolyte-filled capillaries within the rock. If the capillaries also contain certain mineral particles that transport current by electrons (mostly sulphides, some oxides and graphite), then the ionic charges build up at the particle-electrolyte interface, positive ones where the current enters the particle and negative ones where it leaves. This accumulation of charge creates a voltage that tends to oppose the current flow across the interface. When the current is switched off, the created voltage slowly decreases as the accumulated ions diffuse back into the electrolyte. This type of induced polarization phenomena is known as electrode polarization.

A similar effect occurs if clay particles are present in the conducting medium. Charged clay particles attract oppositely-charged ions from the surrounding electrolyte; when the current stops, the ions slowly diffuse back to their equilibrium state. This process is known as membrane polarization and gives rise to induced polarization effects even in the absence of metallic-type conductors.

Most IP surveys are carried out by taking measurements in the "time-domain" or the "frequency-domain".

Time-domain measurements involve sampling the waveform at intervals after the current is switched off, to derive a dimensionless parameter, the chargeability "M", which is a measure of the strength of the induced polarization effect. Measurements in the frequency domain are based on the fact that the resistance produced at the electrolyte-charged particle interface decreases with increasing frequency. The difference between apparent resistivity readings at a high and low frequency is expressed as the percentage frequency effect, or "PFE".

The quantity, apparent resistivity, ρ_a , computed from electrical survey results is only the true earth resistivity in a homogenous sub-surface. When vertical (and lateral) variations in electrical properties occur, as they almost always will, the apparent resistivity will be influenced by the various layers, depending on their depth relative to the electrode spacing. A single reading, therefore, cannot be attributed to a particular depth.



RECORDED VOLTAGE

The ability of the ground to transmit electricity is, in the absence of metallic-type conductors, almost completely dependent on the volume, nature and content of the pore space. Empirical relationships can be derived linking the formation resistivity to the pore water resistivity, as a function of porosity. Such a formula is Archie's Law, which states (assuming complete saturation) in clean formations:

 $R_o = O^{-2} R_w$

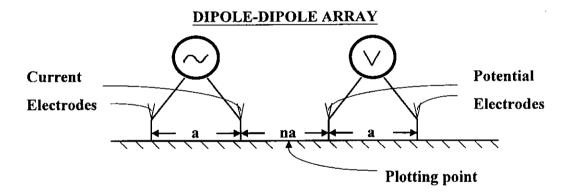
Where: R_o is formation resistivity R_w is pore water resistivity O is porosity

(c) Survey Procedure

Each of the two lines was compassed in as the survey was being carried out. The survey direction was 270°E, or due west.

The IP and resistivity measurements were taken in the time-domain mode using an 8second square wave charge cycle (2-seconds positive charge, 2-seconds off, 2-seconds negative charge, 2-seconds off). The delay time used after the charge shuts off was 80 milliseconds and the integration time used was 1,760 milliseconds divided into 10 windows.

The array chosen was the dipole-dipole, shown as follows:



The electrode separation, or 'a' spacing, and reading interval was chosen to be 50 meters read to 6 separations, or 'na'. This gives a theoretical depth penetration of up to 190 meters, or 625 feet. Stainless steel stakes were used for current electrodes as well as for the potential electrodes.

The surveying was done on the following lines and to the following lengths.

LINE NUMBER	SURVEY LENGTH	MAP NUMBER
20+00N	1600 m	GP-3
21+00N	1600 m	GP-4

The total amount of IP and resistivity surveying carried out was 3,200 meters.

(d) Compilation of Data

All the data were reduced by a computer software program developed by Geosoft Inc. of Toronto, Ontario. Parts of this program have been modified by Geotronics Surveys Inc. for its own applications. The computerized data reduction included the resistivity calculations, pseudosection plotting, survey plan plotting and contouring.

The chargeability (IP) values are read directly from the instrument and no data processing is therefore required prior to plotting. The resistivity values are derived from current and voltage readings taken in the field. These values are combined with the geometrical factor appropriate for the dipole-dipole array to compute the apparent resistivities.

All the data have been plotted in pseudosection form at a scale of 1:5000. One map has been plotted for each of the two lines, as shown on the above table and in the Table of Contents. The pseudosection is formed by each value being plotted at a point formed from the intersection of a line drawn from the mid-point of each of the two dipoles. The result of this method of plotting is that the farther the dipoles are separated, the decper the reading is plotted. The resistivity pseudosection is plotted on the upper part of the map for each of the lines, and the chargeability pseudosection is plotted on the lower part.

All pseudosections were contoured at an interval of two milliseconds for the chargeability results, and at a logarithmic interval to the base 10 for the resistivity results.

The self-potential (SP) data from the IP and resistivity surveys were plotted and profiled above the two pseudosections for each line at a scale of 1 cm =75 millivolts with a base of zero millivolts. It is not expected that the SP data will be important in the exploration of the property, especially with the dipole length used, but considering that the data was taken, it was plotted and profiled for its possible usefulness.

DISCUSSION OF RESULTS

The main feature of the <u>magnetic survey</u> is a broad magnetic high, which is trending northwesterly through the southern and western part of the property. Much of the high has a strength of about 57,000 to 57,750 nT, whereas the northwestern part has a higher strength of above 57,750 nT. This suggests the possibility that the high is caused by two different sources.

According to one government geological map of the area (V. A. Preto, 1979) the property is almost entirely, if not entirely, underlain by the eastern belt of the Nicola volcanics. (The property is broadly covered with overburden with little outcrop and thus other rock-types could occur.) This would include volcanic sandstone and siltstone, minor tuff as well as

massive to crudely layered lahar deposits. To the immediate east of Pothole Lake, which centers at about line 1000N, 1400W, Preto's map shows these rock-types to directly underlay the magnetic high. These rock-types are not usually magnetic and thus it is quite possible that the high is reflecting a magnetic intrusive that is just below the surface and just below the Nicola volcanics. Intrusives occur throughout the area. The northwestern part of the high, which is much more magnetic, could be reflecting a more magnetic phase of the intrusive. An alternate interpretation is that the northwestern part is reflecting Tertiary valley basalts.

A broad, northwesterly-trending magnetic low underlies the central eastern part of the property. This is of economic interest since the Pothole copper zone occurs at the northwestern end of this low. At this point, the low could be faulted to the east by about 1000 meters where it continues trending to the northwest.

Magnetic lineations can be seen throughout the magnetic survey and thus the writer has drawn these in with a solid line on the magnetic survey plan (GP-1). These lineations could reflect geological structure such as faults. As alluded to in the above paragraph, an east-southeast-trending lineation/fault appears to have faulted off the northwesterly-trending magnetic low. It is near this juncture of the two lineations that the Pothole copper zone occurs indicating that the mineralization occurs near the intersection of two faults. Therefore, other lineation intersections become of exploration interest, such as the one 1000 meters to the east-southeast. In fact, it is at this intersection that IP anomaly A occurs.

It is interesting to note that the Pothole copper zone occurs within trachyandesite and trachybasalt porphyry flows which would be expected to be magnetic. However, these rocks have a low magnetic field. This correlates with the writer's experience in interpreting magnetic surveys throughout other areas of the Nicola volcanics.

As opposed to the magnetic survey, the <u>VLF-EM survey</u> has added little to the geological knowledge of the property, and therefore little to the exploration potential. The property is covered with northerly-trending EM conductors with none standing out as particularly strong. However, the writer has noted some that are trending in a northwesterly direction, as indicated by the lineations on map no. GP-2. These trends correlate with the known geology as well as the magnetic survey results. As exploration continues on the property, the VLF-EM survey results may then become useful.

The <u>IP survey</u> has revealed two anomalies that have been labeled by the upper case letters, A and B. Both of these anomalies occur on each of the two IP survey lines, 20+00N and 21+00N. The Pothole copper zone occurs at about 1900N, 500W.

Anomaly A is about 200 meters wide and centers at 300W on line 20+00N and 350W on line 21+00N. It is a low amplitude anomaly reaching a high of 9.1 msec. The Pothole copper zone trends in a northeasterly direction and thus anomaly A could well be the northeastern



extension of this mineralization. However, anomaly A on line 21+00N occurs more in a northerly direction and thus it is possible that the anomaly is not reflecting the extension of the Pothole copper zone but sulphide mineralization that is associated with it. It is also possible that anomaly A on line 21+00N is reflecting the Pothole mineralization to its southeast rather than directly beneath it. Further IP surveying to the north would need to be done in order to clarify this.

As mentioned above within the discussion of the magnetic survey, anomaly A occurs at the intersection of two magnetic lineations. This indicates that the underlying rock has been structurally prepared by faulting, as reflected by the magnetic lineations, for the emplacement of sulphide mineralization, as reflected by IP anomaly A.

Anomaly B centers at about 650 meters to the west on line 20+00N and about 500 meters to the west on line 21+00N. It is also a low amplitude anomaly that contains sporadic highs. (However, the writer suggests these sporadic highs should be ignored since they could be the result of icing problems with connections between potential electrodes and the cabling that is connected to the IP receiver.) Like anomaly A, anomaly B is stronger on line 20+00N and weaker on line 21+00N. It occurs to the immediate north of the magnetic high alone the east-southeast-trending magnetic lineation. That is, this anomaly reflects sulphides that are probably associated with faulting.

The <u>resistivity survey</u> shows both anomalies to occur within a resistivity high. This high is probably a reflection of the trachyandesite/trachybasalt porphyry flows that are known to underlie anomaly A and therefore probably underlie anomaly B as well.

The resistivity low at the east end of each of the two IP/resistivity survey lines is probably a reflection of volcanic sandstone and siltstone as has been mapped by Preto to the east.

Respectfully submitted, GEOTRONICS SURVEYS LTD.

FESSIO PROVINCE D.G. MARK BAITISH David G. Mark, P.Geo. COLUMBI Geophysicist OSCIEN

February 7, 2003.



GEOPHYSICIST'S CERTIFICATE

I, DAVID G. MARK, of the City of Vancouver, in the Province of British Columbia, do hereby certify that:

I am registered as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

I am a Consulting Geophysicist of Geotronics Surveys Ltd., with offices at 6204 – 125th Street, Surrey, British Columbia

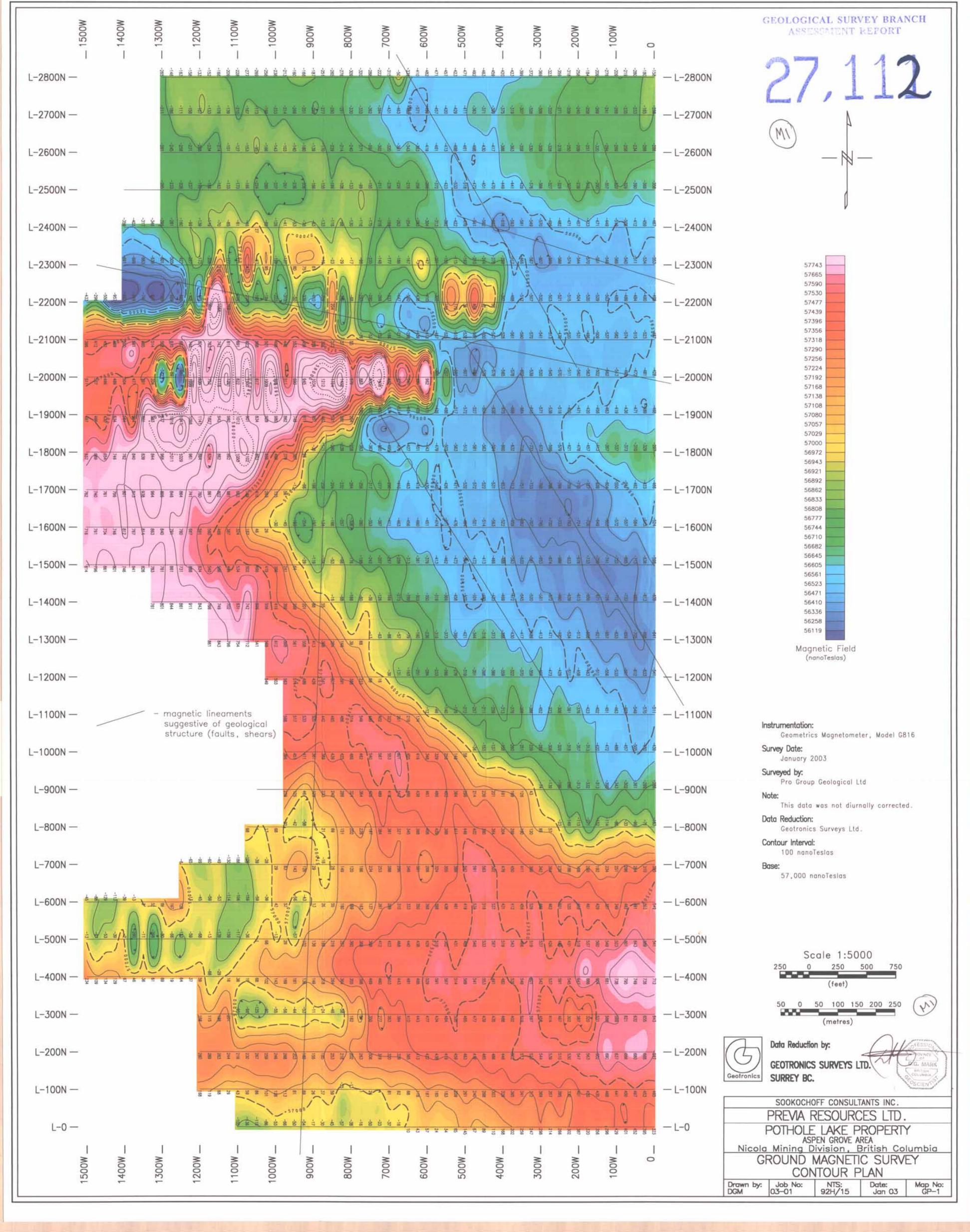
I further certify that:

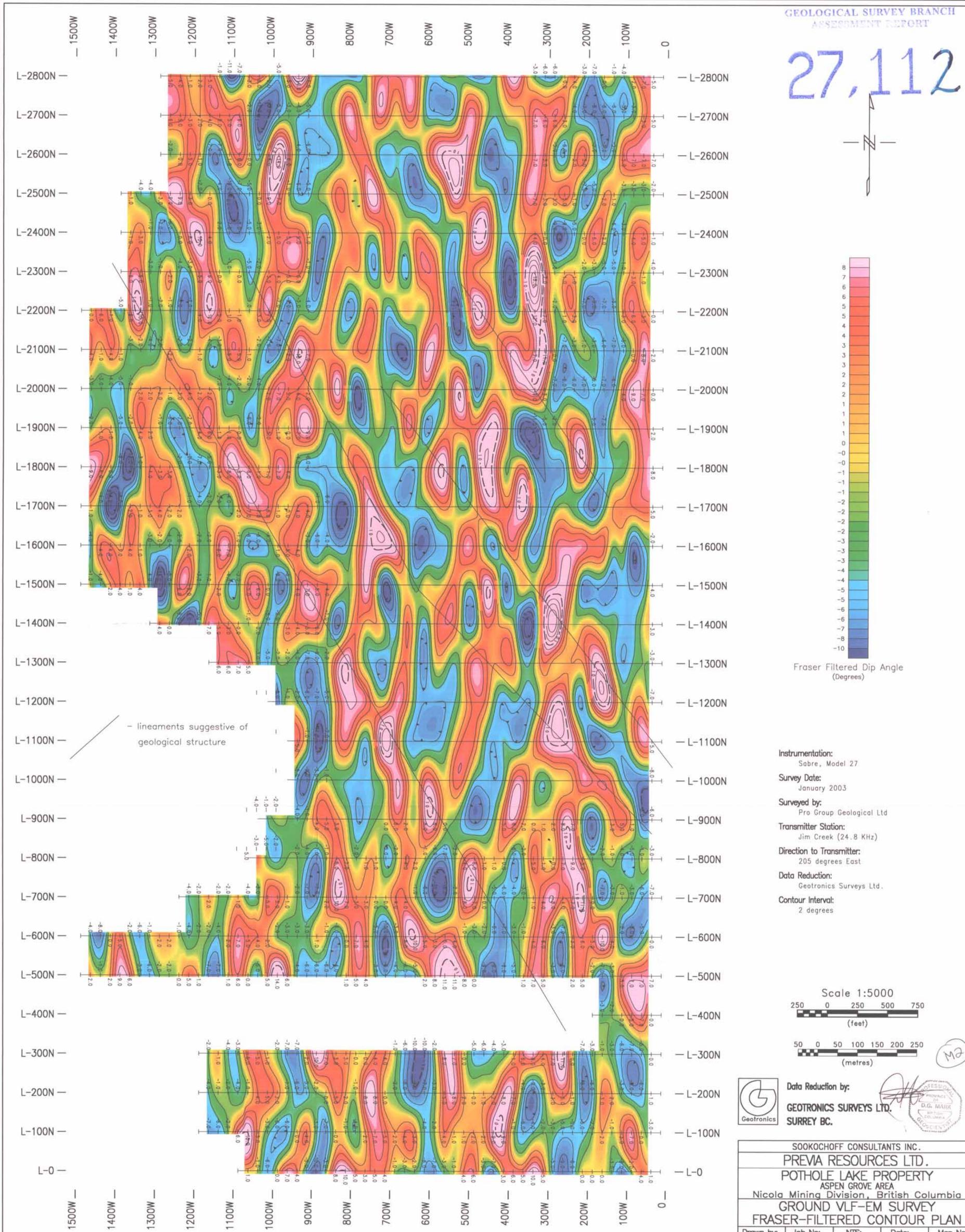
- 1. I am a graduate of the University of British Columbia (1968) and hold a B.Sc. degree in Geophysics.
- 2. I have been practicing my profession for the past 35 years, and have been active in the mining industry for the past 38 years.
- 3. This report is compiled from data obtained from magnetic and VLF-EM surveys carried out by a 2-man crew of Pro Group Geological Ltd. headed by Steve Kenwood over the entire Pothole Lake Property from January 8th to 10th, and from January 16th to 20th, 2003. It is also compiled from data obtained from an IP and resistivity survey carried out by a 5-man crew of Geotronics Surveys headed by me over the northern part of the Pothole Lake Property from January 10th to 13th, 2003.
- 4. I do not hold any interest in Previa Resources Ltd., nor in the property discussed in this report, nor in any other property held by Previa Resources, nor do I-expect to receive any interest as a result of writing this report.

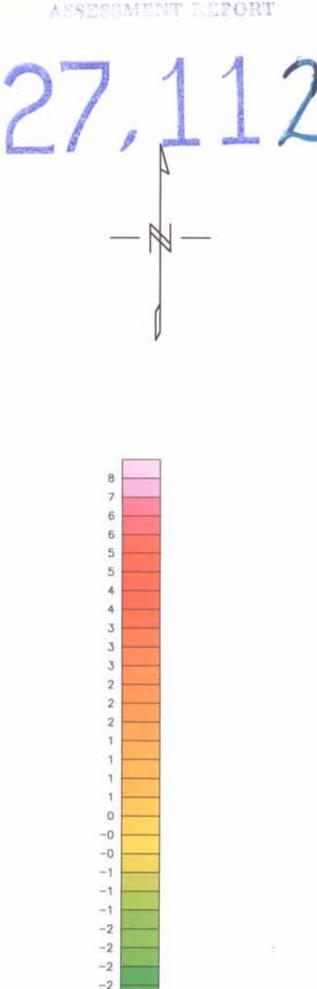
D.G. MARK BBUTISH COLUMBIA SCIEN David G. Mark, P.Geo.

Geophysicist

February 7, 2003







(feet)

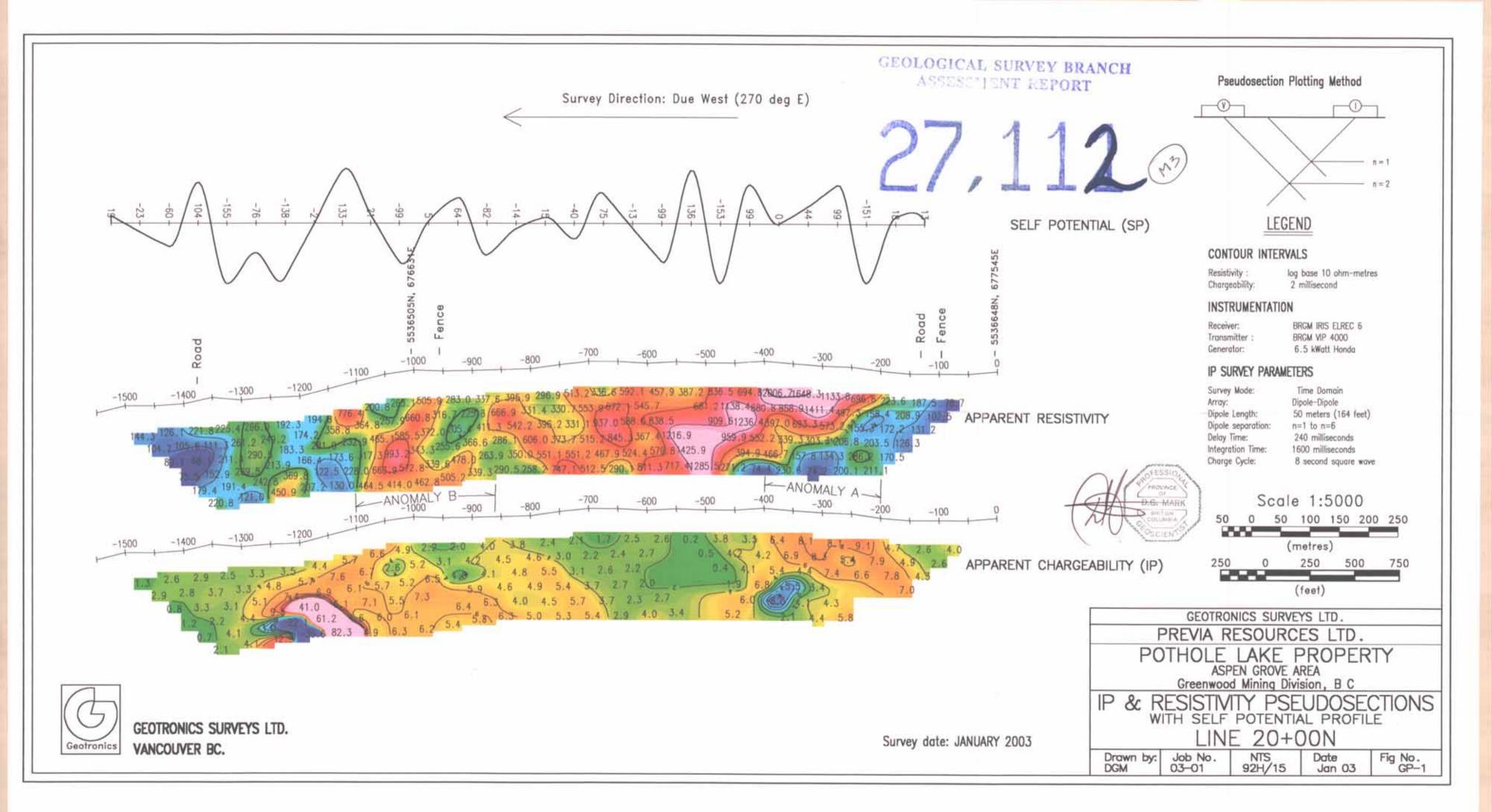
(metres)

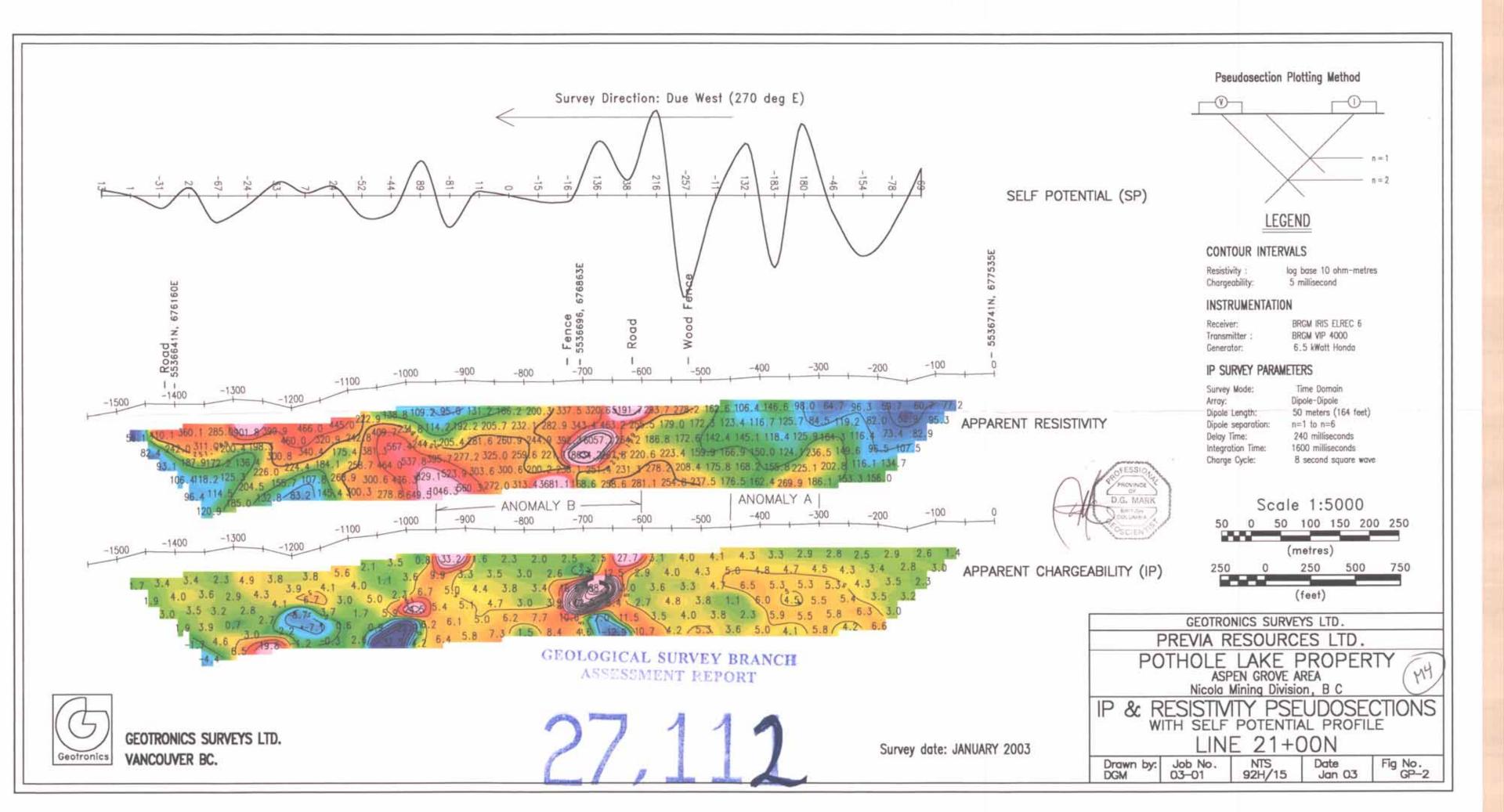
500 750

MA

D.G. MARK







Appendix II

GEOLOGICAL REPORT - S. KENWOOD, P.Geo.

ADDENDUM REPORT

 \bigcirc

on the

POTHOLE LAKE PROPERTY

Nicola Mining Division British Columbia

N.T.S. 092H098 Latitude 49° 55' N, Longitude 120° 33' W

For

PREVIA RESOURCES LTD.

By

Stephen Kenwood, P. Geo. White Rock, B.C.

February 8, 2003

Introduction	2
Location and Property Description	2
Regional Geology	3
Regional Mineralization	3
Property Mineralization	4
Property Geology	5
Conclusions and Recommendations	6
References	7
Certificate	8

List of Figures

- 1 Location Map
- 2 Claim Map
- 3 Regional Geology
- 4 Property Geology
- 5 Regional Aeromagnetic Survey

Introduction

This Addendum Report was written at the request of Sookochoff Consultants Ltd. and is intended to accompany a report written by Mr. Laurence Sookochoff for Previa Resources Ltd. that is to be submitted to the appropriate securities regulators in order to gain technical approval.

This report summarizes work performed on the Pothole Lake property in January and February of 2003 that included reconnaissance mapping of the property and a thorough evaluation of the mineral potential of the Pothole Lake property as well as a compilation of regional mineralization. The author has also provided recommendations for future exploration.

A light cover of snow at the time of the work program hampered a thorough examination of the property and limited mapping to areas along an established geophysical grid and on resistant hill tops and some road cuts. Sources of information included all available government and industry reports on the property and on the area and from all other reports that were available to the author.

Property Description and Location

The Pothole Lake property is located about seven kilometres east-northeast of Aspen Grove, B.C. along Highway 97C between Merritt and Kelowna and is in the Nicola Mining Division (Figure 1). The geographical coordinates for the approximate centre of the property are at 49° 55' north latitude and 120° 33' west longitude

The property is described by one four post claim and three two post claims that cover an area of about 450 hectares (Figure 2). The claims are owned 100% by Previa Resources Ltd., any legal aspect of claim ownership is beyond the scope of this report.

The following table outlines pertinent claim information:

Claim name	Tenure No.	Expiry Date
Des	391790	Feb.10, 2006
Des 2	391791	Feb.10, 2006
Des 3	391792	Feb.10, 2006
Des 4	391793	Feb.10, 2006

Regional Geology

The area is underlain by Upper Triassic Nicola Group, which consists of alkalic and calcalkalic volcanics and intrusions of island arc origin, and which is the principal

component of the Quesnel Terrane (Figure 3). This belt is well known for its potential for porphyry copper-gold mineralization.

The property lies in the northern assemblage of the Eastern belt of the Nicola Group (after Preto, Bulletin 69). This assemblage mainly consists of alkalic volcanic flows and well bedded submarine volcaniclastic rocks, ranging from tuffaceous volcanic siltstones characteristic of the lower part, to coarse volcanic conglomerate and laharic breccias in the upper part. This region is separated from the main Aspen Grove copper camp by the Kentucky-Alleyne fault system which lies two to three kilometres to the west of the property area (Bulletin 69).

Regional Mineralization

Numerous mineral showings are reported in the area of the Pothole Lake claims. The three most notable types of mineral deposits are volcanic red-bed copper, porphyry copper and intrusive related gold. The most notable examples of red-bed copper mineralization are found at the Copper Star and Porcupine deposits located six and nine kilometres northwest of the Pothole Lake claims respectively and at the Paycinci prospect that lies approximately five kilometres to the southwest of the Pothole Lake claims.

The Copper Star occurrence is hosted in the Upper Triassic Nicola Group, consisting of alkalic and calcalkalic volcanics and intrusions of island arc origin. This assemblage is of major economic importance because of its potential for porphyry copper-gold mineralization.

The Porcupine occurrence is hosted in a northeast trending fault bounded belt of Lower Cretaceous Kingsville Group consisting of intermediate to felsic continental volcanic rocks with associated sedimentary and intrusive rocks, which unconformably overlie the Nicola Group in this area.

The mineralization in both the Copper Star and Porcupine occurrences display strong correlations to shear zones and structures related to the two major fault zones that converge in the vicinity.

The Paycinci prospect is a volcanic red-bed occurrence that is underlain by red and green laharic breccias, augite andesite porphyry and minor sediments of the Nicola Group. Copper mineralization occurs in green laharic breccia, near the contact with red laharic breccia to the east. This mineralization consists primarily of disseminated and fracture controlled chalcocite and native copper. The property has been the subject of several drill programs that have resulted in the calculation of drill indicated reserves are 54,000 tonnes grading 0.876 per cent copper (Minfile).

The AU occurrence consists of gold-silver-copper mineralization just east of the historical Aspen Grove copper camp, about 1.8 kilometres east-northeast of Pothole Lake, approximately 500 metres from the eastern boundary of the Pothole Lake property...

The main part of this zone is a gold showing, a small stripped, drilled and trenched area just off a gravel road south of Quilchena Creek (Freeze, J.C., 1986). This and most of the surrounding area is underlain by andesitic to dacitic tuff, cherty tuff, black argillite, and volcanic sandstone and siltstone. The rocks are strongly fractured in a variety of orientations. Bedding in the tuff generally strikes 060 degrees and dips variably to the northwest.

Gold values in the area have been obtained from trench sampling and drill core at the main showing. Significant gold assays in chip samples range from 6.8 grams per tonne over 5.1 metres to 10.8 grams per tonne over 4.9 metres (Freeze, J.C., 1986). Grab and select samples assayed between 14.4 and 91 grams per tonne gold (Freeze, J.C., 1986). The best drill core intersection assayed 4.97 grams per tonne gold over 1.5 metres (Freeze, J.C., 1986).

The Brenda porphyry copper mine located approximately 36 kilometres east of the Des Claims is hosted in Early Jurassic quartz diorites and granodiorites which have in turn been cut by dikes of several ages and compositions. Mineralization is primarily confined to veins related to several stages of deformation. Most veins within the deposit include conjugate veins and are believed to have been formed as a result of generally east-west compressive forces. The veins exhibit northeast and northwest strikes and are generally steeply dipping.

The Siwash gold deposit, located approximately 18 kilometres southwest of the Pothole Lake Claims, is an intrusion related gold deposit. Fairfield Minerals Ltd. has identified a resource of 121,350 tonnes (133,728 tons) grading 25.4 grams per tonne gold (0.74 ounces per ton) and 35.3 grams per tonne silver (1.03 ounces per ton) (Minfile 092HNE096). Gold is hosted in pyritic quartz veins and stringers in altered granitic rocks of the Middle Jurassic Osprey Lake batholith and less frequently volcanic rocks of the Upper Triassic Nicola Group. The mineralized zone trends east-northeast with southerly dips and appears related to minor shearing associated with major northeast trending fault structures. Crosscutting relationships indicate the veins to be Tertiary in age and may be related to the Tertiary Otter intrusive event.

Property Mineralization

The Pothole Copper Zone showing exhibits gold-silver-copper mineralization and is located in the east-central part of the Pothole Lake claims. The showing is hosted in grey-green augite plagioclase porphyritic andesite to basalt. Minor volcanic siltstone, wacke and tuff may be present (Watson, I.M., 1985). These rocks are intruded by northwest-striking dikes of granodiorite to quartz monzonite. The volcanic rocks at the showing are highly fractured and altered with epidote, quartz-carbonate veins, and minor hematite (Watson, I.M., 1985).

Mineralization comprises disseminated chalcopyrite, malachite, azurite and pyrite (Watson, I.M., 1985). The copper minerals occur in narrow zones striking southwest

which is transverse to the regional strike; the southwest trend is sub-parallel to a major fault that is located one kilometre to the northwest.

Individual rock samples from the showing were analysed at up to 0.95 gram per tonne gold and 4.8 grams per tonne silver (Watson, I.M., 1985). A composite chip sample across the showing returned 2.55 grams per tonne gold and 1.9 grams per tonne silver over 130 metres (Watson, I.M., 1985).

The Kit showing is an intrusive hosted shear zone that is located in the northeast corner of the Des claims. A small body of granodiorite of Late Triassic to Early Jurassic age intrudes volcanics of the Upper Triassic Nicola Group. The granodiorite is cut by narrow, steeply-dipping shears striking north and northeast, near the faulted contact with slightly pyritic Nicola Group greenstone to the northwest. Some of the fractures contain quartz with minor chalcopyrite, malachite and molybdenite.

Property Geology

Limited outcrop on the property make definitive geology on the Pothole Lake claims difficult to ascertain, however reports of previous work combined with field inspections, topographic and airphoto interpretations provide a basic understanding of the geology and related structures (Figure 4). The Pothole Lake claims are underlain by volcanic rocks of the Upper Triassic Nicola Group and sediments belonging to the Lower Cretaceous Kingsville Group. Locally, these units are intruded by northwest-striking Tertiary-aged dikes of granodiorite to quartz monzonite composition.

The Kingsville Group underlies the northwestern two thirds of the Pothole Lake Claims in a general northeast trend with the Nicola Group underlying the southeast third of the claims. In general the Kingsville Group consists of intermediate to felsic continental volcanic rocks with associated sedimentary and intrusive rocks. On the Pothole Lake Claims siliceous siltstones and cherts were mapped in the extreme southwest corner of the claims along a road cut.

The predominant orientation of the geology is a north-northwest trend that also is the general orientation of regional structures that host most of the copper mineralization in the Aspen Grove area. This north-northwest orientation has been noted in the granitic dykes that are found at the Pothole Copper Zone (Watson, I.M., 1985).

A local structural trend controlling gold mineralization appears to be a series of subparallel structures trending southwest to northeast. The Pothole Copper Zone on the Pothole Lake claims and the AU showing immediately east of the Pothole Lake claims are controlled by southwest trending structures that parallel a major fault that lies approximately one kilometre to the northwest of these showings. A trench that is reported to be oriented north-south across the structure produced a 130 metre composite chip sample grading 2.55 grams per tonne gold and 1.9 grams per tonne silver has not been followed up by drilling and has since been reclaimed at the request of the Douglas Lake Ranch (Watson, I.M., 1985). This zone is the intersection of the regional northwest trending granitic dykes and the local southwest fault structures.

There is not much outcrop on the Pothole Lake property; this made mapping difficult, especially with a light covering of snow in January and early February of this year. Regardless, outcrop was identified in three locations at that time. Using a geophysical grid for reference, outcrop was located at or near the Pothole Copper Zone along Line 1900N, Station 450W. This zone is not readily identifiable, as the large trench was reclaimed after the 1985 program by Laramide Resources, at the request of the Douglas Lake Ranch. The outcrop consisted of highly fractured and propylitized andesites of the Nicola Group with minor weakly altered granodiorite. The orientation of fracturing of the altered volcanic rocks was highly variable with predominant northwest and northeast directions.

An outcrop along the eastern edge of Pothole Lake consisted of densely fractured Nicola Group volcaniclastic siltstones. These rocks were virtually unaltered with spotty disseminated pyrite.

Along Highway 97C in the southwest corner of the property, cherts and siltstones of the Kingsville Group are present as resistant hill formers. These rocks are unaltered and lack any mineralization. Fracturing was in a north-northwestern direction.

A review of the regional Aeromagnetic survey (Figure 5) indicates a general westsouthwest contact between a broad magnetic high on the north side of the property and a broad magnetic low on the south side of the property. The lineation cuts through the centre of the property, generally on trend with the Pot 1 mineral occurrence. This type of magnetic signature is a regional exploration clue used throughout this area (Cathro, M., personal communication).

Conclusions and Recommendations

The Pothole Lake property is in a region that is well known for base metal, and to a lesser extent, precious metal mineralization. Previous exploration of the property has been limited to the known showings as well as a number of grass roots evaluations. Although copper has been the main focus of exploration programs in the past, the presence of significant precious metal mineralization on this property and on the adjacent property to the east provide the basis for continued precious metal exploration on this property. The relatively recent discovery of a high grade precious metal resource at Fairfield Minerals Ltd.'s Siwash property should provide the impetus for increased precious metal exploration in this region given the current increase in precious metal prices.

Previous work on the Pot 1 showing include the continuous chip sample that assayed 2.55 grams per tonne gold and 1.9 grams per tonne silver over a length of 130 metres. Exploration on the AU showing, not more than 500 metres from eastern boundary of the

I.

Pothole Lake property included a shallow drill intersection of 4.97 grams per tonne over 1.5 metres.

There is no data in the public record that indicate that the trench result at the Pot 1 mineral occurrence has been followed up by more advanced exploration programs. Any future work on the Pothole Lake property should include re-opening the trench to confirm and expand on results previously reported. Given that the orientation of this structure is sub-parallel with the structure at the AU showing and with a major fault structure one kilometre to the northwest, future exploration should focus on identifying these southwest-northeast trending structures that appear to be more likely to host precious metal mineralization relative to the regional trend of copper-rich mineralization.

Bibliography

Cathro, M. (2002): personal communication.

- Cockfield, W.E. (1948): Geology and Mineral Deposits of the Nicola Map-Area, British Columbia. GSC Memoir 249.
- Dawson, G.L. and Ray, G.E. (1988): Geology of the Pennask Mountain Area. BCEMPR Open File Map 1988-7.
- Fairfield Minerals Ltd. (2000): Annual Information Form dated 21 June 2000. Filed via SEDAR.
- Freeze, J. C. (1986): Geological and Geophysical Report on the AU Claims, Aspen Grove Area, for Algo Resources Ltd. BC Assessment Report 16008

MINFILE: 092HNE204 - Pot 1

MINFILE: 092HNE096 - Elk

- Moore, J.M., Pettipas, A., Meyers, R.E. and Hubner, T.B. (1990): Nicola Lake Region Geology and Mineral Deposits. BCEMPR Open File 1990-29.
- Preto, V. A. (1973): Preliminary Report No. 15 Geology of the Aspen Grove Area, British Columbia Mines and Petroleum Resources
- Preto, V. A. (1979): Geology of the Nicola Group between Merritt and Princeton, Bulletin No. 69, British Columbia Mines, Energy, and Petroleum Resources.

Quinn, S. P. (1983): Drilling Report on the Au Group.

Watson, I.M. (1985): Reconnaissance Geology and Geochemical Survey and Magnetometer Survey, Snowflake A & B Groups, BC Assessment Report 13714

Stephen Kenwood, P. Geo. 13629 Marine Drive White Rock, BC Phone: (604)535-8146 E-mail: skenwood@shaw.ca

CERTIFICATE OF AUTHOR

I, Stephen P, Kenwood, P.Geo, am a Professional Geoscientist of 13629 Marine Drive, White Rock, in the Province of British Columbia.

I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (Registration Number 20447).

I graduated from the University of British Columbia with a Bachelor of Science degree in geology in 1987, and I have practiced my profession continuously since 1987.

Since 1987 I have been involved primarily in mineral exploration for gold, copper, silver, lead, and zinc in Canada, the United States, Panama, Peru, and Chile.

As a result of my experience and qualification I am a Qualified Person as defined in N.P. 43-101.

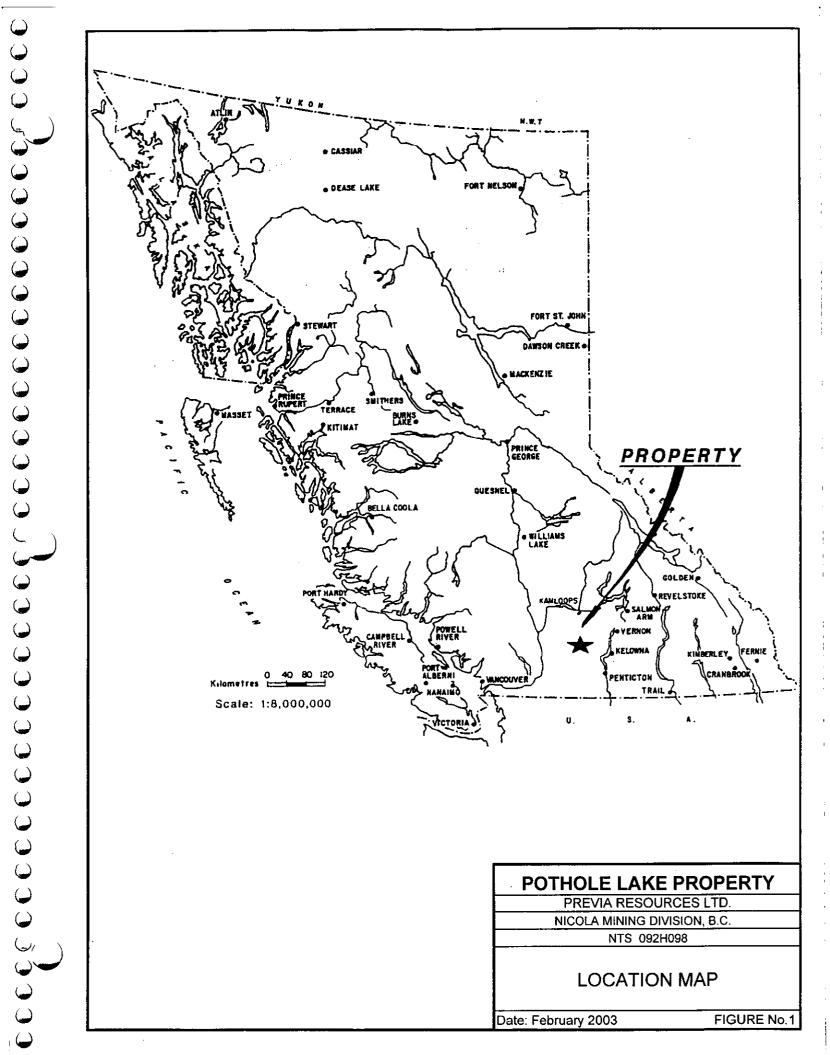
I am presently a Consulting Geologist and have been so since August 1991.

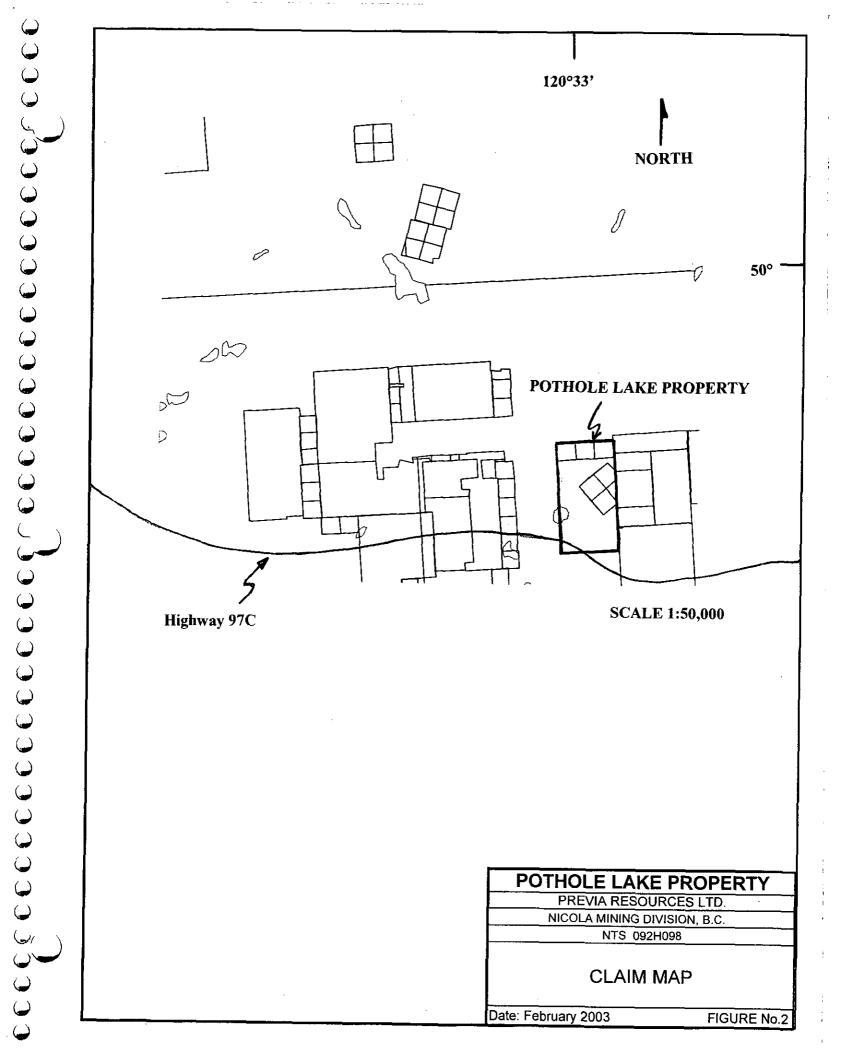
The information contained in this report is based on a review of previous reports and of a limited amount of available data and background information on the area.

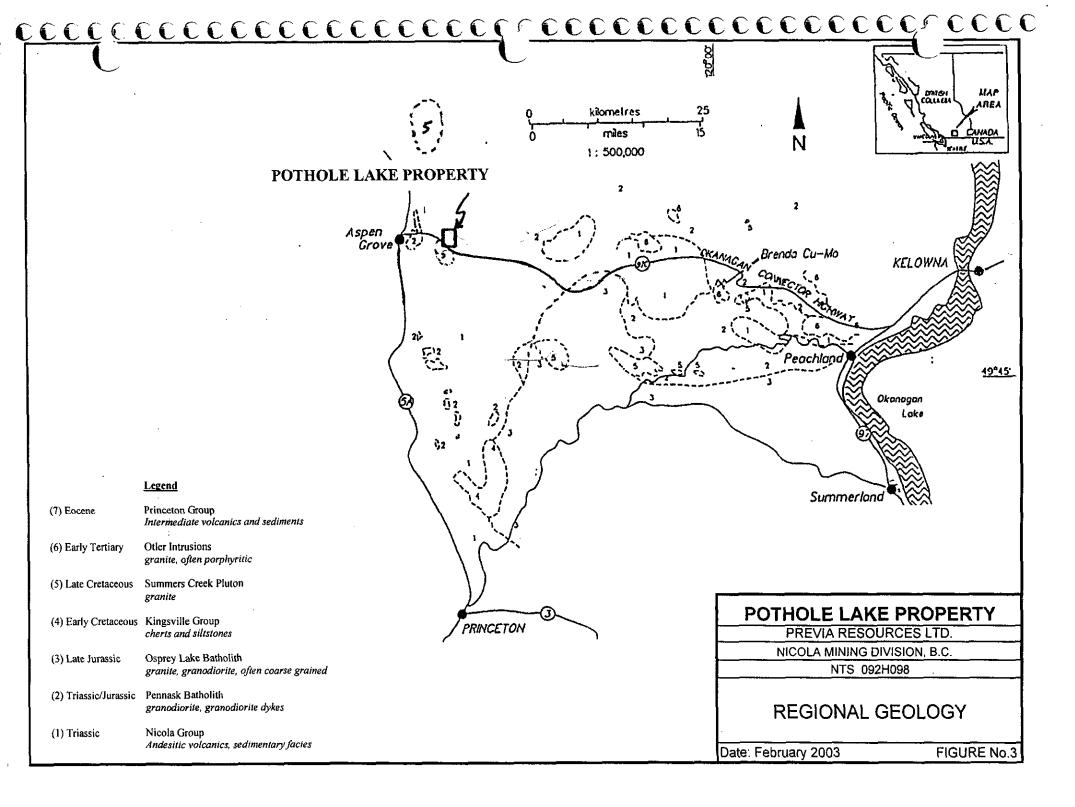
I am not aware of any material fact or material change with respect to the subject matter of this technical report which is not reflected in this report, the omission to disclose which would make this report misleading.

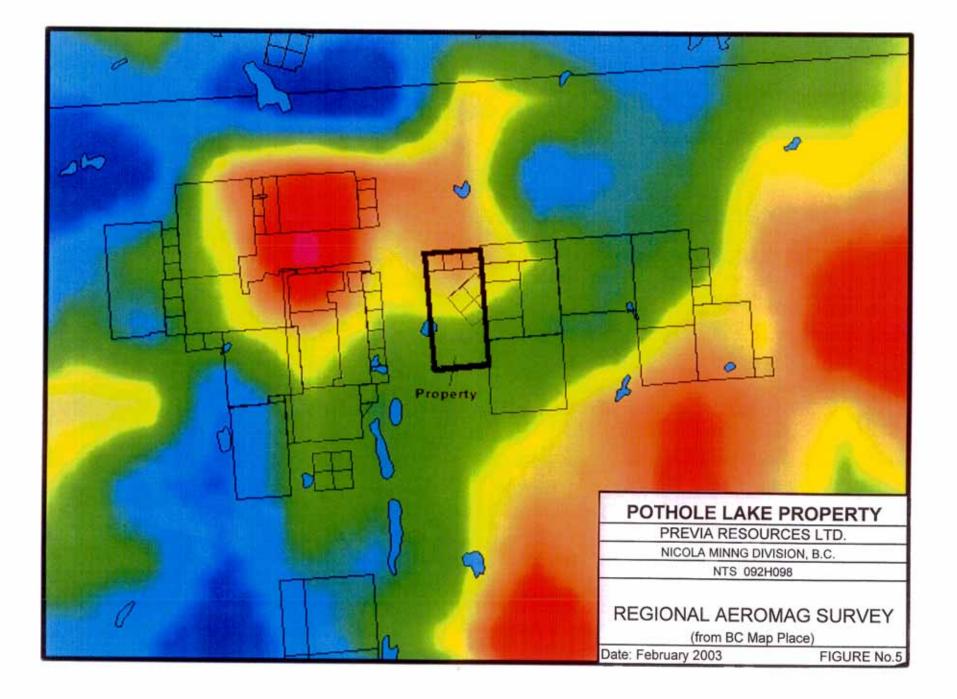
DATED at White Rock, British Columbia, this 8th day of February, 2003

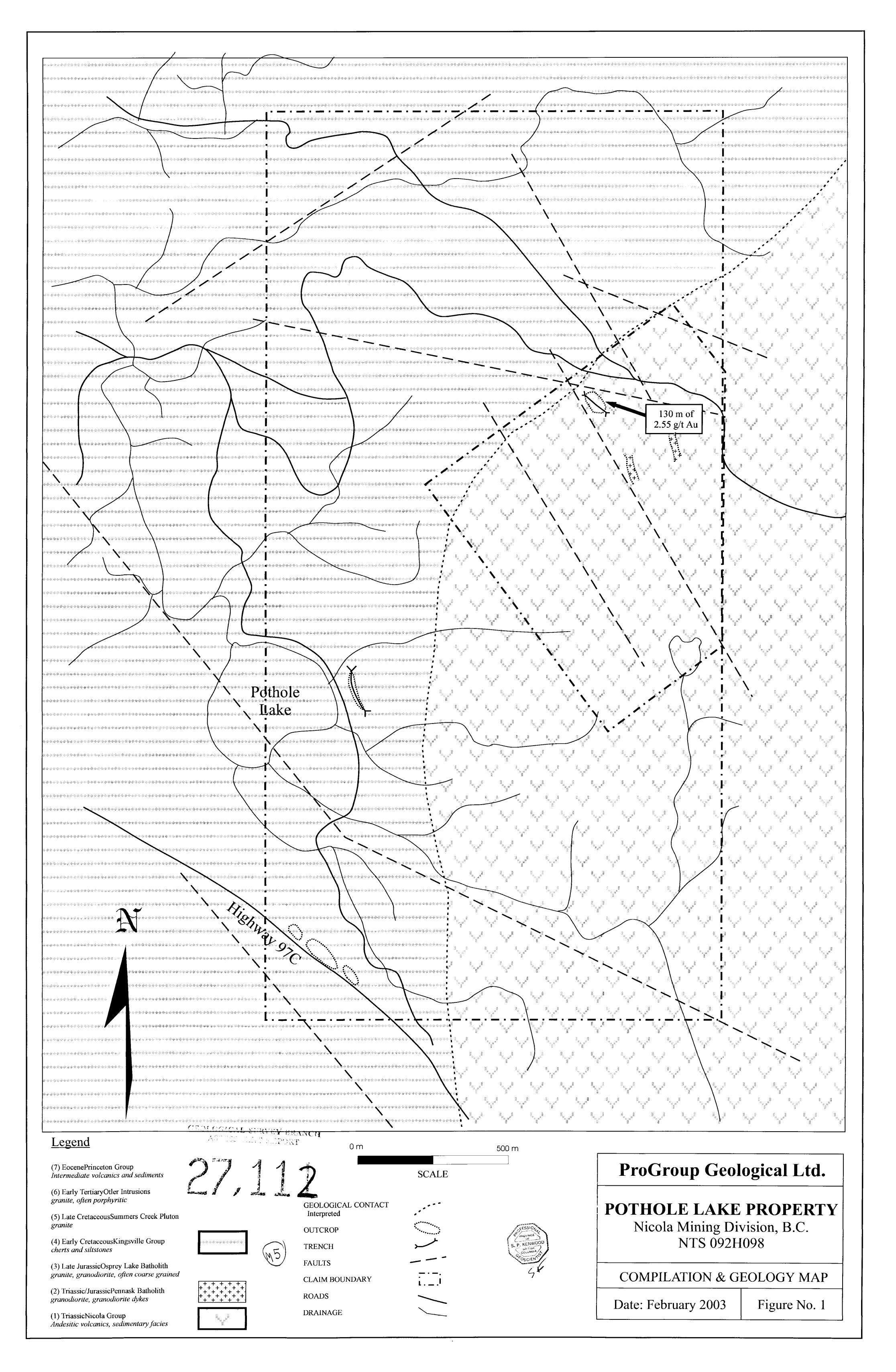
Stephen P. Kenwood, P.Geo.











Appendix III

VLF-EM & MAGNETOMETER RAW DATA

Pothole Lake VLF-Mag VLF: Sabre

Mag: Geometrics Model G 816 - Tuned to 60 Kilogammas

	0+	00N	1+	00N	2+	00N	3+	00N	4+	00N	5+	00N	6+	00N
	VLF	MAG	VLF	MAG	VLF	MAG	VLF	MAG	VLF	MAG	VLF	MAG	VLF	MAG
0+00W	4	57323	2	57465	3	57597	1	57643	4	57712	-3	57541	1	57549
0+25W	2	57395	2	57453	4	57668	6	57655	Ó	57736	2	57589	0	57503
0+50W	3	57452	1	57497	6	57680	3		1	57749	0	57643	2	57491
0+75W	4	57401	0	<u>57450</u>	2	57666	4	57621	3	57795	2	57601	-1	57462
1+00W	5	57429	3	57441	2	57637	0	57599	5	57738	3	57523	-2	57349
1+25W	0	57296	5	57468	0	57690	0	57586	4	57681	6	57549	-5	57387
1+50W	1	57356	1	57435	1	57602	-2	57531	4	57604	4	57560	-4	57429
1+75W	1	57320	6		3	57563	-1	57320	3	57686	2	57537	1	57461
2+00W	0	57387	2	57401	1	57547	-2	57387	2		1	57518	0	57489 57520
2+25W	2	57302 57266	3	57320 57395	-3 -1	57530 57510	-4 -6	57302 57467	0 -1	57545 57591	3 5	57431 57496	2	57520
2+50W 2+75W	-1 -2	57214	0	57357	-1	57539	-0	57407	-2	57537	1	57490	0	57462
2+75VV 3+00W	-2	57298	-2	57369	1	57544	1	57458	-6	57542	<u> </u>	57537		57486
3+25W	-4	57247	-1		1	57526	0	57597	-5		2	57519	2	57526
3+50W		57259	-3		-3	57513	5	57519	0	57549	5	57496	4	57456
3+75W	0	57202			-4	57502	4	57402	-2	57529	5	57543	2	57412
4+00W	2	57168			-2	-	7	57488			3	57519	3	57431
4+25W	5	57110	-2	57303	2	57486	3	57435	-1	57491	2	57597	0	57537
4+50W	0	57089	1	57268	0	57465	5	57439	2	57553	0	57533	-2	57516
4+75W	0	57067	0	57240	2	57416	1	57477	2	57541	-4	57546	-1	57534
5+00W	2	57145	1	57261	1	57463	1	57465	-4	57569	-3	57469	-3	57419
5+25W	4	57065	2		1	57459	0	57505	<u> </u>		-1	57431	-3	57461
5+50W	2	57034	0	57183	4	57419	2	57484			2	57502	-2	57438
5+75W	3	57024		<u>57165</u>	6	57438	6	57434	2		5	57516	0	57398
6+00W	0	57057	2		4	57422	4	57477	0		7	57429		57368
6+25W	-2	57043	0		3	57413	2	57443	3		8		1	57350
6+50W	-1	57010	2	57068	0	57365	-2	57410	3		6	57440	4	57333
6+75W	-3	56984		57062	-2	57329	-2	57384			4	57468		57310
7+00W 7+25W	-3 -2	56963 56977	3	57081 57004	-1 -3	57320 57319	-4	57363 57277	4		4	57423 57412	6 2	57289 57261
7+50W	-2	56950	7	57026		57306	<u> </u>	57350	2			57368	<u> </u>	57201
7+75W	0	56984	7	57001	4	57263	0	57084	2		3	57368	2	57163
8+00W	1	56962	6	56987	1	57202	-2	57162			3	57360	5	57189
8+25W	4	56943			· ·	57218		56942				57267		57160
8+50W	7	56955				57253		56954				57216		57055
8+75W	6	56970				57185		56976				57169	2	
9+00W	2					57155		56989				57136		57013
9+25W	1	56946			-	57169		56947		57136			1	
9+50W	2	56950	5	57081		57203		56956				56943	2	56944
9+75W	5	56934	2	57113	-	57268		56944		57169	-2	57026	0	57053
10+00W		56947				57246		56945		57143	3	56987	0	57043
10+25W	2	56914		57101		57259		56910		57102	5	57068	0	56964
10+50W	2	56890		57086		57267		56875		57068	1		2	
10+75W	4	56864				57230	the second s	56902					2	
11+00W	1	56897	6	57043	2	57216	4	56905	3	57038	4	56883	5	56894

											_	
11+25W	4	57029	1	57244	1	57201	2	57016	5	56841	6	56886
11+50W	4	57068	2	57263	4	57186	1	56971	2	56861	3	56947
11+75W		57119		57289	2	57115	3	56934	0	56987	4	56941
		57168		57260		57168	2	57059	0	56932	3	56955
12+00W		57100		07200	┟────┶┤		4	57037	3	56941	2	56987
12+25W					╞────		5		2	56877	1	57129
12+50W						┼────	4	57019		56934	3	57167
12+75W					 	╂	6			56920		57069
13+00W				┣───	 -	┢────	<u>_</u>		-1	56702		
13+25W		<u> </u>	<u> </u>	L	<u> </u>	<u> </u>	5		— <u> </u>			
13+50W					<u> </u>	<u> </u>	<u> </u>	57036	<u></u>			
13+75W	— <u> </u>						6			56740		
14+00W					T		5		3			
14+25W				[Γ		3	57129	4	56961	3	
14+50W		<u> </u>			<u> </u>		4	57134	1	56947	-1	56871
14+75W		<u>+</u>	<u> </u>	<u> </u>	†	1	1	57109	5	56903	-2	56912
15+00W		<u> </u>	┼──	╋┉───	+	1	3	57234	2	56987	0	56955

	7+	DON	8+	00N	9+	DON	10+	-00N	11-	-00N		00N
	VLF	MAG	VLF	MAG	VLF	MAG	VLF	MAG	VLF	MAG	VLF	MAG
0+00W	3	57355	6	56837	1	56714	5	56561	1	56489	1	56459
0+25W	4	57310	2	56929	3	56701	2	56520	1	56430	1	56367
0+50W	0	57264	2	56901	1	56639	1	56495	2	56451	-5	56388
0+75W	0	57296	3	56967	-3	56698	-2	56543	5	56502	0	56409
1+00W	-2	57251	0	56914	-1	56657	-3	56511	5	56537	1	56467
1+25W	-1	57234	0	56886	0	56602	-5	56528	3	56549	-3	56444
1+50W	-2	57192	-1	56848	1	56687	-4	56580	2	56598	0	56489
1+75W	-4	57260	0	56729	1	56668	-1	56687	0	56577	3	56537
2+00W	-6	57168	-3	56887	-3	56687	-2	56643		56624	6	56542
2+25W	0	57188	-1	56851	-4	56712	3	56682	-3	56639	2	56489
2+50W	1	57239	1	56977	-2	56802	1	56671	-1	56694	1	56571
2+75W		57364	4	57057	2	56861	2	56694	2	56627	5	56527
3+00W	5	57342	3	57069	0	56926	2	56711	5	56548	7	56593
3+25W	4	57369	2	57120	2	57043	0	56761	7	56612		56641
3+50W	7	57411	6	57190	1	57126	0	56749	8		6	56630
3+75W	3	57450	4	57269	1	57169	1	56740	6	56724	4	56678
4+00W	5	57476	2	57304	4	57191	5	56842	4			56641
4+25W	1	57502	2	57364	6	57201	2	56863	4	56741	2	56634
4+50W	1	57563	4	57390	4	57236	1	56847	2	56789		56602
4+75W	1 O	57591	1	57402	3	57214	0	56964	0	56743		56649
5+00W	2	57542	6	57449	0	57296	-2	57056	3	56788		56681
5+25W	6	57368	5	57411	-2	57364	-1	57149	3	56824	5	56724
5+50W	4	57355	6	57368	-1	57403	2	57256	5	56860	2	56734
5+75W	2	57324	3	57429	-3	57486	0	57329	2	56954	2	56767
6+00W	-2	57269			0	57461	1	57348	3 2	56988	-1	
6+25W	-2	57301	2	57368	4	57438	5	57416	-1	57134	-1	56749
6+50W	-4				1	57486	2	57455	5 -1			
6+75W	-1	57296	6 4	57327	2	57542	2 3	57601	-4			56869
7+00W	1-1	57288	3 3	57361	5	57416	8	57553			_	
7+25W		57253	3 0	57384	3	57489	5	57567	7 3			
7+50W	-2	57234	1 _ 2	57197	4	57426	_		_		_	
7+75W	11	57166	3 2	57226	3 2	57364	<u>н з</u>	57462	2 1	57549	2 2	57223

8+00W	0	57120	1	57202	0	57324	4	57486	2	57514	4	57368
8+25W	2	57149	1	57151	0	57286	1	57425	4	57486	6	57391
8+50W	6	57026	4	57069	1	57240	2	57439	5	57465	8	57501
8+75W	6	56984	4	57021	2	57233	0	57389	4	57442	5	57541
9+00W	4	57029	0	56994	4	57129	2	57361	-2	57520	4	57426
9+25W	1	57126	1	56942	3	57046	-3	57411	0	57533	2	57489
9+50W	2	57143	-1	56958	2	57126	-4	57451	1	57517	1	57514
9+75W	1	57083	0	56980	1	57236	-3	57396	2	57568	3	57563
10+00W	3	57029	-2	57068	2						-1	57503
10+25W	5	56972	-4	57013	0						-3	57549
10+50W	4	56961	-1	57001	-1							
10+75W	1	56891	0	57068								
11+00W	4	56814										
11+25W	2	56870							_			
11+50W	1	56951										
11+75W	3	56940										
12+00W	2	56901		<u> </u>				_				
12+25W	0	56935						-				
12+50W	1	56994										
12+75W												
13+00W												
13+25W												
13+50W												
13+75W												
14+00W												
14+25W												

i

1

14+50W 14+75W 15+00W

	13-	HOON	14-	+00N	15	+00N	16-	+00N	17-	+00N	18-	HOON
	VLF	MAG										
0+00W	0	56359	1	56361	3	56402	2	56476	0	56534	1	56703
0+25W	0	56302	0	56387	5	56364	4	56487	-2	56577	0	56671
0+50W	-2	56295	3	56311	8	56287	3	56416	2	56538	5	56690
0+75W	-1	56341	1	56267	4	56305	1	56443	1	56489	4	56627
1+00W	-3	56367	1	56288	3	56277	1	56428	4	56450	7	56663
1+25W	4	56343	-2	56274	2	56259	-6	56397	3	56396	3	56643
1+50W	-6	56379	-1	56329	0	56241	-4	56351	5	56361	5	56587
1+75W	-2	56412	-3	56344	-2	56267	-3	56294	4	56273	1	56543
2+00W	1	56487	-2	56387	-2	56324	-2	56276	0	56287	1	56522
2+25W	0	56466	-1	56361	-6	56377	0	56237	0	56241	4	56579
2+50W	1	56505	-3	56340	-5	56314	2	56267	-2	56234	6	56421
2+75W	2	56529	-1	56428	0	56326	3	56280	-1	56204	3	56401
3+00W	0	56587	4	56439	-2	56347	6	56255	-2	56240	1	56327
3+25W	4	56514	10	56480	4	56419	4	56293	-4	56267	1	56267
3+50W	2	56583	3	56455	-1	56367	2	56318	-6	56249	-5	56284
3+75W	0	56570	1.	56528	2	56437	1	56341	0	56287	0	56368
4+00W	2	56612	0	56531	2	56512	3	56478	1	56347	-1	56340
4+25W	3	56627	2	56567	-4	56534	5	56437	0	56469	-3	56406
4+50W	3	56684	0	56510	0	56587	1	56486	5	56478	0	56437

()	4+75W	4	56656	5	56476	3	56527	1	56479	4	56428	3	56419
	5+00W	7	56579	1	56498	2	56496	2	56506	7	56468	6	56487
	5+25W	7	56601	-1	56542	0	56527	5	56524	3	56529	2	56437
	5+50W	6	56627	2	56634	3	56538	5	56489	5	56574	1	56498
	5+75W	4	56681	2	56681	3	56587	3	56526	4	56460	5	56521
	6+00W	8	56764	5	56650	1	56624	2	56549	7	56570	7	56557
	6+25W	2	56840	2	56697	4	56639	0	56510	3	56581	8	56549
	6+50W	3	56921	0	56701	0	56687	-4	56544	5	56537	6	56573
	6+75W	4	56943	6	56727	2	56741	-3	56537	1	56590	4	56524
	7+00W	5	56914	0	56834	2	56733	-1	56589	1	<u>56704</u>	4	56505
	7+25W	2	56937	1	56874	-3	56793	2	56613	0	56723	2	56580
	7+50W	1	56987	2	56961	-4	56758	5	56647	2	56683	0	56613
	7+75W	0	57068	1	56940	2	56802	7	56720	6	56741	3	56637
	8+00W	0	57039	3		0	56824	8	56694	4	56736	3	56742
	8+25W	4	57146	4	56932	0	56934	6	56743	2	56768	5	56761
	8+50W	6	57264	-2	56984	0	56947	4	56834	-2	56796	2	56740
	8+75W	4	57368	0	57055	2	56896	4	56866	-2	56741	2	56829
	9+00W	4	57413	1		2	56881	2	56810	-4	56834	-1	56964
	9+25W	0	57558	2		5	56971	0	56746	-1	56934	-1	57026
	9+50W	1	57561	4	57268	6		3	56801	-1	56987	-4	57387
	9+75W	-1	57598	3		5		3	56955	0	57056	-2	57378
	10+00W	0	57612	6		0	57366	5	56970	-2	57135	1	57468
	10+25W	-2	57568	-1		3	57419	2	57026	2	<u>572</u> 63	0	57635
	10+50W	-4	57541	5		2	57496	2	57046	2	57416	0	57893
	10+75W	1	57712	0		7	57502	-1	57167	5	57569	2	58102
$\left(\right)$	11+00W	0	57754	3		3	57534	-1	57324	6	57663	4	58055
	11+25W	2	57796	2		3	57464	1	57387	3	57681	6	57892
	11+50W	3	57843	4		3		4	57469	4	57802	8	57862
	11+75W	5	57861	6	_	5		2	57560	3	57861	5	57634
	12+00W			7		0		1	<u>57591</u>	2	57760	4	57864
	12+25W			-2	and the second se	5		3		1	57741	2	57961
	12+50W			-1		5		2	57760	3		1	58029
	12+75W	<u> </u>		-3		6		0		2	57846	3	58011
	13+00W		L	0		-1		1	57840	4	57895	3	57966
	13+25W			0	57761	-1		-1	57863	5	57964	4	57844
	13+50W			ļ			57826		57814		57938		57839
	13+75W			<u> </u>			57841		57767		57813		57840
	14+00W		ļ	ļ			57746		57812		57801		57762
	14+25W		ļ	<u> </u>			57801		57746		57796		57746
	14+50W			 			57861		57734		57761		57654
	14+75W		<u> </u>	 	 		57796		57761		57740		57689
	15+00W		<u> </u>	<u> </u>	L	1	57814	0	57716	0	57762	4	57637
		•											

		19-	+00N	20-	+00N	21-	+00N	22-	100N	23-	+00N	24	+00N
		VLF	MAG										
	0+00W	2	56532	4	56572	5	56513	3	56502	4	56447	2	56533
	0+25W	1	56511	0	56519	0	56477	1	56510	1	56466	0	56541
•	0+50W	1	56529	1	56528	1	56485	2	56516	1	56489	1	56588
	0+75W	4	56564	3	56502	6	56426	2	56501	0	56460	2	56492
$\left(\right)$	1+00W	5	56581	5	56487	3	56418	4	56512	3	56431	4	56481
	1+25W	3	56537	8	56438	4	56463	6	56497	1	56452	3	56551

i.

()	1+50W	6	56544	4	56498	0	56491	3	56471	1	56449	0	56529
	1+75W	2	56580	3	56437	0	56504	1	56480	-2	56430	1	56577
Ţ	2+00W	0	56529	2	56460	-2	56469	1	56496	-1	56456		56543
ſ	2+25W	3	56510	0	56489	-1	56480	-5	56485	-3	56426	3	56529
ľ	2+50W	3	56484	-2	56430	-2	56521	0	56479	-2	56412	2	56518
ľ	2+75W	5	56462	-2	56455	-4	56487	-1	56497	-1	56401	0	56501
F	3+00W	2	56429	-6	56480	-6	56459	-3	56480	-3	56393	-4	56430
ŀ	3+25W	- 4	56387	-5	56461	0	56428	0	56493	-1	56433	-3	56451
	3+50W	-2	56336	0	56398	1	56410	3	56488	4	56534	-1	56419
	3+75W	-3	56302	-2	56422	0	56439	6	56512	10	56483	-2	56407
	4+00W	-7	56327	4	56435	5	56472	2	56618	3	56720	0	56382
	4+25W	-4	56364	-1	56422	4	56453	1	57038	1	56722	-4	56398
	4+50W	-2	56396	2	56471	7	56400	1	57042	0	56756	-3	56438
	4+75W	2	56473	2	56311	3	56438	3	57404	2	56790	-1	56459
	5+00W	1	56428	-4	56393	5	56468	7	57035	0	56808	4	56524
	5+25W	- 4	56483	0	56408	1	56490	8	57179	5	56885	3	56578
	5+50W	3	56512	3	56793	1	56477	1	57158	1	56842	1	56608
	5+75W	- 5	56574	2	56695	0	56533	2	56678	-1	56799	1	56687
	6+00W	- 4	56589	0	57962	2	56581	5	56590	2	56953	0	56696
	6+25W	1	56565	3	57469	6	56591	3	56562	2	56997	0	56717
	6+50W		56506	3	57545	4	56702	4	56450	5	56833	2	56746
	6+75W	6	56486	1	57629	2	56789	3	56553	2	56814	1	56737
	7+00W	2	56426	4	57432	-2	56834	5	56667	0	56823	0	56802
	7+25W	2	56550	0	58408	-2	56867	0	56704	6	56852	4	56781
	7+50W	3	56597	2	57830	-4	56947	3	56710	0	56765	2	56825
()	7+75W	0	56870	2	57883	-1	56984	4	56707	1	56904	2	56884
	8+00W	0	57254	-3	57579	-1	57055	3	56932	2	56983	3	56870
_	8+25W	-1	57361	-4	58438	0	57037	0	56660	1	56971	3	56912
	8+50W	0	57531	2	58194	-2	57212	0	57204	3	56977	5	56884
	8+75W	-3	57463	0	58212	1	57301	2	56671	4	56990	1	56867
	9+00W	-1	57651	0	58034	0	57359	1	56590	-2	57061	0	56937
	9+25W	1	57611	0	57945	2	57459	-2	56661	0	57075	0	56924
	9+50W	4	57749	2	57690	6	57553	1	56950	1	57080	2	56947
	9+75W	3	57862	2	57511	6	57442	-5	56685	2	56863	3	56959
	10+00W	2	57980	5	57935	4		-4	56778	4	56801	4	56874
	10+25W	6	57928	6	58009	1	57501	-2	56816	3	57095	6	56915
	10+50W	4	57834		57617		57568	0	56815	6		3	57027
	10+75W	2	57901	4	58130	1	57622	-3	56791	1	57437	4	56954
	11+00W	2	58012		57822		57691	0	56844	5	56829	0	56939
	11+25W	4	57960	2	58291	5		-2			56823	-1	56915
	11+50W	1	57942	1	58116			0		3	57210		56930
	11+75W		58027		57752			3	57869	2			56881
	12+00W	5	58141	2	57929	4	57801	5	56525	7	56827	2	56861
	12+25W		58096	4							56773	5	56901
	12+50W	3	58047	- 5	56019	1				3		4	
	12+75W	1	58016	4	56931	3	57615	0	56331	3		3	
	13+00W	2	57977	6	56428	2	57568	0	56212	5		0	56701
	13+25W	1	57963	5	57204	0	57514	-3	56153	0	56362	0	56654
	13+50W	4	57861	7	57391	1	57465	2	56259	5	56317	2	56683
	13+75W	3	57364	6	57477	-1	57561	5	56181	5	56301	1	56597
	14+00W	0	57564	5	57504	-1	57500	0	56133	6	56309	2	56641
					- <u></u>								

-

-

	_										 	_
14+2		2	57634	3		2	57469	2	56043			
14+5	wo	2	57430	4	57496	0	57452	4	56450			
14+7	′5W	1	57466	1	57507	2	57412	4	56704			_
15+0	wo	1	57497	3	57511	4	57398	2	56567			_
			+00N		+00N		+00N		+00N			
		VLF	MAG	VLF	MAG	VLF	MAG	VLF	MAG			
0+0	ōW	3	56642	-3	56714	2	56792	3	56842			
0+2	5W	4	56631	-2	56734	5	56835	3	56820			
0+50	oW	3	56610	0	56766	4	56767	4	56720			
0+7	5W	2	56671	2	56742	8	56765	7	56781			
1+0	oW	2	56680	3	56731	4	56734	7	56791			
1+2	5W	0	56643	6	56706	5	56759	6	56724			
1+50	ōW	1	56710	4	56680	2	56731	4	56791			
1+7	5W	2	56684	2	56749	1	56742		56816			
2+00	ōW	1	56761	1	56791	-2	56760	2				
2+2		-3		3	56750	-3	56791	the second s	56682			
2+50		-1	56671	5	56722	-5	56729	4				
2+7		0	56673	1	56672	-4	56680		56677			
3+0		1	56634	1	56691	-1	56691	2				
3+2		1	56624	2	56670	-2	56672	1	56628			
3+5(3	56571	5	56641	3	56693		56601			
3+7		6	56559	5	56637	1	56681		56577			
4+0		4		3	56614	2		4				
4+2		2	56530	2	56583	2	56601		56541			
4+50		0		0	56570	- 2	56629	4				
4+7		2	56528	-4	56502	0	56637	4				
5+00		1	56482	-3	56539	1	56589		56529			
5+2		1	56467	-1	56502	5	56571	1	56577			
5+50	_	6		2	56527	2	56580	-1	56543			
5+7		6		5	56539	1	56543	0	56529			
6+00		4	56704	7	56581	0	56501	-2	56518			
6+2		3	56734		56637	-2	56429	-4	56590			
6+50		0	56781	6	56657	- <u>-</u> -1	56514	-4	56661			
6+7			56771	4			56537		56950			
7+00	_	-1		- 4	56680	- 2						
7+2		-3	·	2	56698	1	56606		56778			
7+50	_	-3	56845	2	56709	5	56638		56712			
7+30			56901	3	56729	2						
8+00	_		56867				56667	5				
8+2	_			3	56760		56670	_2				
8+50		2	56892	5		8			56724			
		5	56814	2	56771	5	_	-1	56735			
8+7		3	56845	2	56830	7	56723	-1				
9+00		4	56834	-1	56861	3	56701	4				
9+2		2	56794	1	56820	4	56749		56834			
9+50		0		4	56860		56734		56840			
9+7		0		-2		2	56786		56787			
10+0		1	56763	3			56767	1	56762			
10+2		6		5	56834	-2	56802	2				
10+5	iow	4	56776	1	56905	-6	56827	4	56731			

.

+

i

1 7

.

i i F

i i

-

10+75W	3	56834	2	56847	-7	56833	5	56723
11+00W	2	56827	4	56873	-3	56790	4	56772
11+25W	-2	56867	5	56849	-4	56861	-2	56791
11+50W	-3	56837	2	56786	-1	56824	0	56834
11+75W	-1	56814	0	56766	-1	56867	1	56848
12+00W	-4	56801	0	56792	0	56893	2	56867
12+25W	-2	56763	3	56769	0	56842	1	56842
12+50W	0	56792	2	56742	2	56889	3	56837
12+75W	3	56767	1	56755	3	56814	4	56854
13+00W	4	56715	2	56719	5	56789	5	56735
13+25W	2							

ī.

• •

.....

13+25W 13+50W 13+75W 14+00W 14+25W 14+50W 14+75W 15+00W

I