ARIS SUMMARY SHEET

District Geologist, Prince George   Off Confidential: 94.02.13

ASSESSMENT REPORT 23281   MINING DIVISION: Omineca

PROPERTY: Pal
LOCATION: LAT 56 16 00 LONG 125 30 00
UTM 10 6238355 345168
NTS 094C05E 094C06W
CLAIM(S): Pal 1-4
OPERATOR(S): Swannell Min.
AUTHOR(S): Leriche, P.D.
REPORT YEAR: 1993, 70 Pages
COMMODITIES
SEARCHED FOR: Copper,Gold
KEYWORDS: Triassic-Jurassic,Takla Group,Hogem Batholith,Andesites,Diorites
Chalcopyrite,Malachite
WORK
DONE: Geochemical,Geophysical,Physical
IPOL 28.6 km
Map(s) - 6; Scale(s) - 1:5000
LINE 10.6 km
MAGG 26.5 km
Map(s) - 2; Scale(s) - 1:5000
SOIL 152 sample(s) ;ME
Map(s) - 3; Scale(s) - 1:10 000
RELATED
REPORTS: 21783,22589

NTS 94C/5E,6W
Lat 56°16'N
Long 126°31'W

GEOPHYSICAL and GEOCHEMICAL REPORT
on the
PAL PROPERTY
Aiken Lake area
Omineca Mining District
British Columbia

for

SWANNELL MINERALS CORPORATION
#602 - 510 West Hastings Street
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by

Peter Leriche, P.Geo.

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9 December 1993

SUMMARY

At the request of Swannell Minerals Corporation, Reliance Geological Services carried out an exploration program consisting of soil sampling, and magnetic and induced polarization surveys on the PAL property during September 1993.

The PAL property comprises four contiguous mineral claims totalling 80 units in the Aiken Lake area of the Omineca Mining Division. The property is situated approximately 225 kilometers north northwest of Fort St James, B.C., and is accessible by helicopter.

The claims lie in the regionally extensive Mesozoic Quesnel Belt. In the Aiken Lake district, Triassic Takla volcanic rocks are intruded by Triassic-Jurassic alkaline stocks and Cretaceous Hogem Batholith. Alkalic plutons of the Quesnel Belt commonly host porphyry copper-gold deposits. The claims are underlain by light grey aphanitic Takla andesite intruded by diorite.

Previous work consisted of regional airborne magnetic surveys, silt sampling and limited soil sampling. A 300 x 400 meter open ended copper anomaly in soils paralleling a magnetic high was defined.

In 1991, Swannell contracted a soil survey which further outlined and expanded the copper anomaly (above 100 ppm) to 400 by 600 meters, open to the southwest. Weakly anomalous (over 14 ppb) gold results formed a pattern peripheral to the copper anomaly.

In 1992, followup work in the area of the previously identified anomaly included surveying 34.3 kilometers of line, taking 23 rock and 288 soil samples, and cutting 24 kilometers of line to prepare for an IP survey. The previously defined copper/gold geochemical anomaly was expanded to 600 x 1200 meters.

In 1993, followup work consisted of surveying 8.6 kilometers of line, collecting 152 soil samples, and geophysical magnetic (26.5 km) and IP (28.6 km) surveys. Three target areas were outlined.

The first target, called the central anomaly, is characterized by medium to high chargeability values over an area of approximately 500 x 2100 meters. The southern portion of the zone is coincident with the 600 x 1200 meter soil anomaly.

The second target, the west anomaly, is characterized by medium to very high chargeability values coincident with high resistivity values along the western portion of the grid. The target is interpreted as a zone with high sulphide content combined with silicic alteration.

The third target is an area of high magnetic response combined with low chargeability.

Further work, consisting of 5000 feet of diamond drilling and 10 line kilometers of magnetic and IP surveys is recommended to test the targets at depth and to extend the area of the known targets. Estimated cost is $266,000.

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PAL Property

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APPENDICES

1. INTRODUCTION

This report was prepared at the request of Swannell Minerals Corporation to describe and evaluate the results of the 1993 geophysical and geochemical program carried out by Reliance Geological Services Inc on the PAL claim group in the Aiken Lake area of the Omineca Mining District, British Columbia.

The field work was undertaken for the purpose of following up on anomalous rock and soil geochemistry identified in earlier exploration programs and evaluating the potential of the property to host a porphyry copper/gold deposit.

Field work was carried out from September 16 to 29, 1993 by John Fleishman (prospector), Nigel Hulme (geologist), Brian Doubt (geotechnician) and a Scott Geophysics IP crew. All work was carried out under the supervision of Peter Leriche, P.Geo.

This report is based on published and unpublished information and the maps, reports and notes of the field crew.

2. LOCATION, ACCESS and PHYSIOGRAPHY

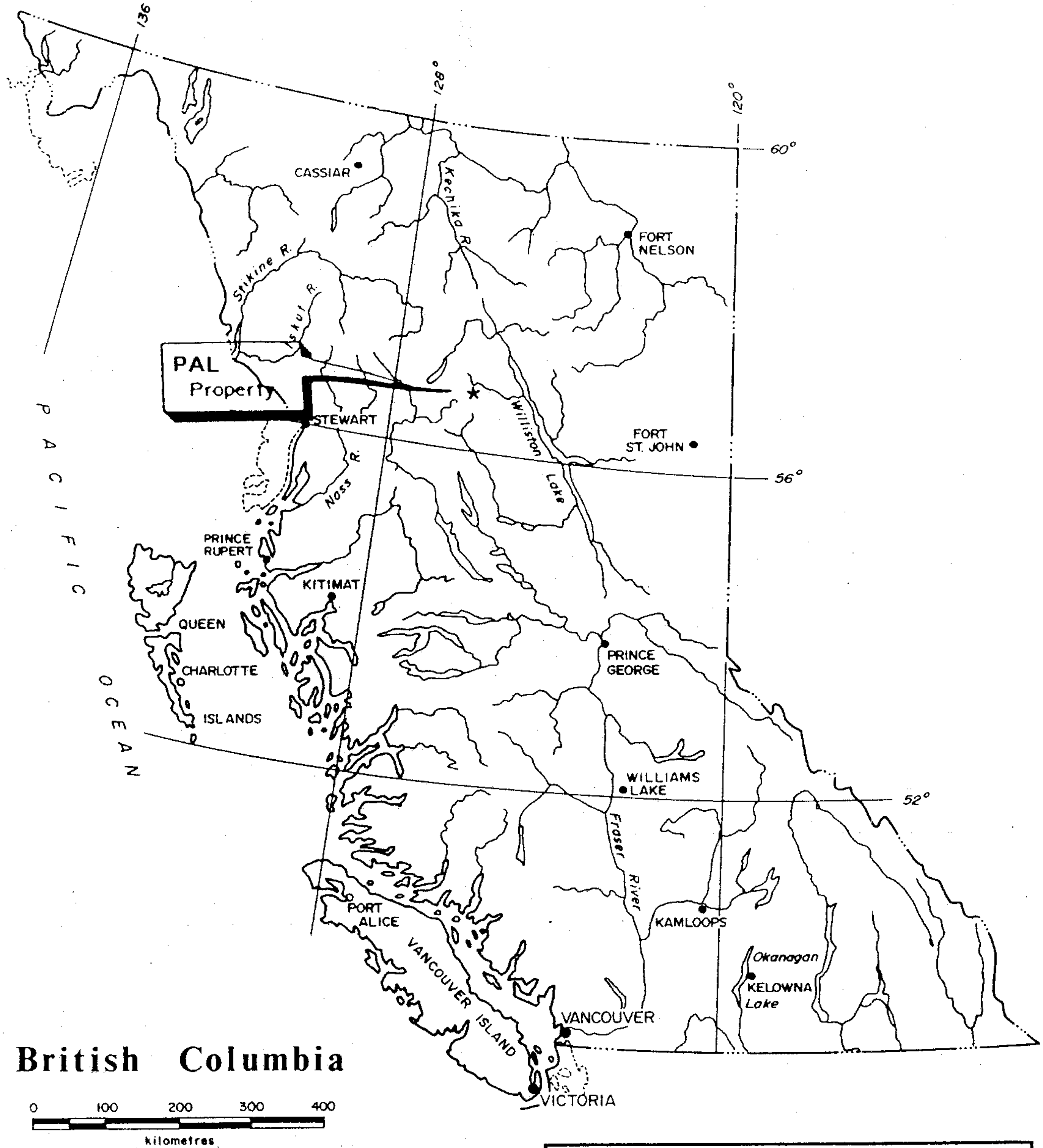
The PAL property is situated in the Omineca Mining Division in the Aiken Lake area, approximately 190 kilometers northwest of Mackenzie (Figures 1 and 2).

The claims are located on Map Sheets NTS 94C/5 and 94C/6, at latitude 56° 16′ North, longitude 126° 31′ West, and between UTM 6236000 m and 6240000 m North, and UTM 341000 m and 346000 m East.

Road access is via the Finlay Forest Service Road from Windy Point on Highway 97, northwest to the Osilinka Logging Camp (approximately 225 km). The claims are then accessed by helicopter from the Osilinka air strip.

The property is on mountainous terrain with gentle to moderate slopes rising from about 1060 meters to 1600 meters. The area is covered by spruce and pine forests below tree-line, and alpine vegetation above tree-line which is approximately 1600 meters.

Recommended work season is mid-June to early October.



SWANNELL MINERALS CORPORATION		
PAL PROPERTY		
OMINECA M.D.		
General Location Map		
Scale as shown	N.T.S.	Drawn by
Date oct.92	Geologist	Figure 1
RELIANCE GEOLOGICAL SERVICES INC.		

3. PROPERTY STATUS

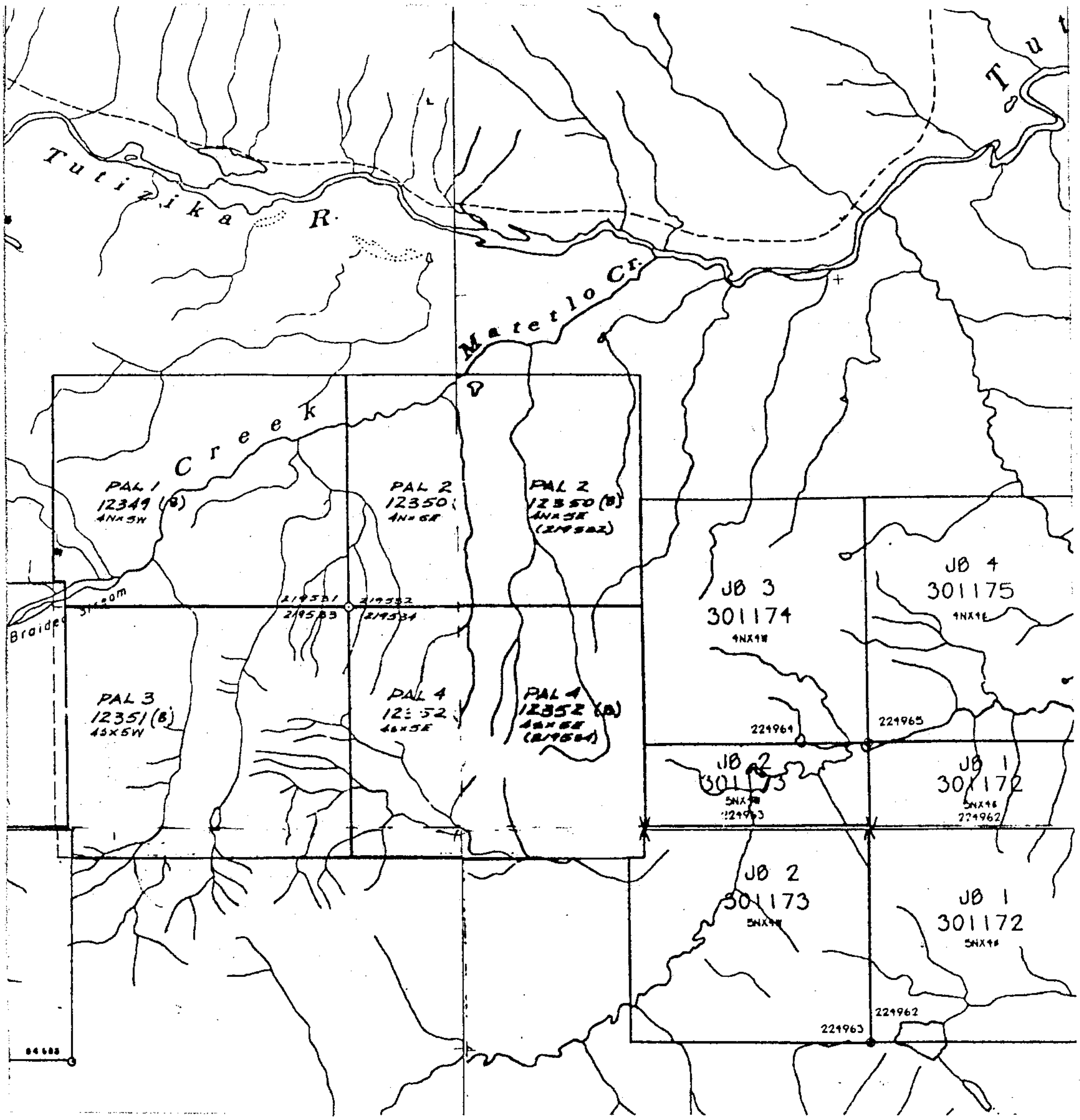
The property consists of four contiguous claims (Figure 2) in the Omineca Mining Division. The claims are registered in the name of Major General Resources Ltd and a 60% interest has been optioned to Swannell Minerals Corporation.

Details of the claims are as follows:

Claim	Record Number	Units	Record Date	Expiry Date
Pal 1	12349	20	1 Aug 1990	1 Aug 1995
Pal 2	12350	20	1 Aug 1990	1 Aug 1995
Pal 3	12351	20	2 Aug 1990	2 Aug 1995
Pal 4	12352	20	2 Aug 1990	2 Aug 1995
Total		80	units	

The total area covered by the claims is 2,000 hectares, or 6,050 acres, allowing for overlap.

The writer is not aware of any particular environmental, political or regulatory problems that would adversely affect mineral exploration and development on the PAL property.



3a

SWANNELL MINERALS CORPORATION

PAL PROPERTY

OMINECA M.D.

CLAIM MAP

Scale 1:50,000	N.T.S. 94C/5E,6W,4E,3W	
Date Oct.92	Geologist	Figure 2

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4. REGIONAL GEOLOGY

(from Rebagliati, 1991)

"The PAL property lies within the regionally extensive early Mesozoic Quesnel Belt. This 35 km wide belt extends northwesterly for 1200 km and includes equivalent rocks of the Upper Triassic-Lower Jurassic Takla, Nicola, and Stuhini Groups (Mortimer, 1986) (Figures 3 and 4). To the west, deformed and uplifted Permian Cache Creek Group rocks are separated from the Quesnel Belt by the Pinchi Fault Zone. To the east, the Manson Fault Zone separates this belt from the uplifted Proterozoic/ early Palaeozoic Wolverine Metamorphic Complex, and the Mississippian-Permian Slide Mountain and Cache Creek Groups (Garnet, 1978).

In the Mt. Milligan - Johanson Lake district, the Takla Group volcanics are dominated by subaqueous alkalic to subalkalic dark green tuffs and volcanic breccias of andesitic and basaltic composition, interbedded with pyroxene porphyritic flow rocks of similar composition. Intercalated bedded tuffs and argillites are subordinate. Black argillites interfinger with volcanic rocks to the east and west of the central volcanic core. Locally, thick successions of maroon coloured lahars suggest the presence of emergent subaerial volcanic centres.

The volcanic-sedimentary strata of the Quesnel Belt are locally intruded by alkaline syenite, monzonite, and diorite batholiths, stocks and dykes. In the Quesnel Belt, most intrusions are considered coeval and comagmatic with late Triassic-early Jurassic volcanism. Many of the stocks lie along linear trends which are interpreted to reflect fault zones which have localized volcanism and associated stock emplacement.

The Hogem Batholith of Early Jurassic to Cretaceous age is the largest body of intrusive rock within the Omineca Mountains (Armstrong and Garnett 1973) (Figure 4). Takla Group volcanic and sedimentary strata are intruded by the north-south elongate batholith which is, in part, truncated along its western margin by the Pinchi Fault. Numerous satellitic plutons flank the eastern margins of the batholith.

The complexity of the Hogem Batholith is characterized by rock units ranging in composition from diorite to granite. Lithologic changes are rapid to gradational at all scales of mapping.

Garnett, who used the I.U.G.S. classification of 1973 as shown in Table 1 on the following page, described three phases within the Hogem Batholith.

The earliest, Phase I, contains the more basic phases, including pyroxenite, gabbro, diorite, monzodiorite, monzonite, and the "Hogem Granodiorite", and accounts for two-thirds of all rock types mapped. The Hogem Granodiorite is a distinctive leucocratic felsic division, predominantly quartz diorite in composition, but also comprising quartz monzodiorite, quartz monzonite and, more rarely, quartz diorite, tonalite and granite.

The Phase II syenites, such as the Duckling Creek complex, (with migmatitic, compositionally banded, and intrusive varieties) and the leucocratic Chuchi (quartz) syenite, are reported to be intrusive into Phase I rocks.

Phase III rocks include leucocratic varieties (including aplites, pegmatite, varieties of granite, quartz syenite and alaskite). These rocks may be represented by leucocratic late-stage dykes cutting units of Phases I and II.

Numerous porphyry copper prospects occur throughout the Hogem Batholith.

The alkalic plutons of the Quesnel Belt commonly host porphyry copper deposits, which are increasingly being recognized as an important source of gold. It has also been recently recognized that related failed porphyry systems (those that did not form copper deposits) also have the potential to generate disseminated gold deposits (eg: QR and the 66 Zone at Mt Milligan).

The volcanic strata on all of the PAL property claims are intruded by alkalic plutons. Some of these plutons are reported to display some of the geological characteristics which are related to the formation of gold-rich porphyry copper deposits in the Quesnel Belt."

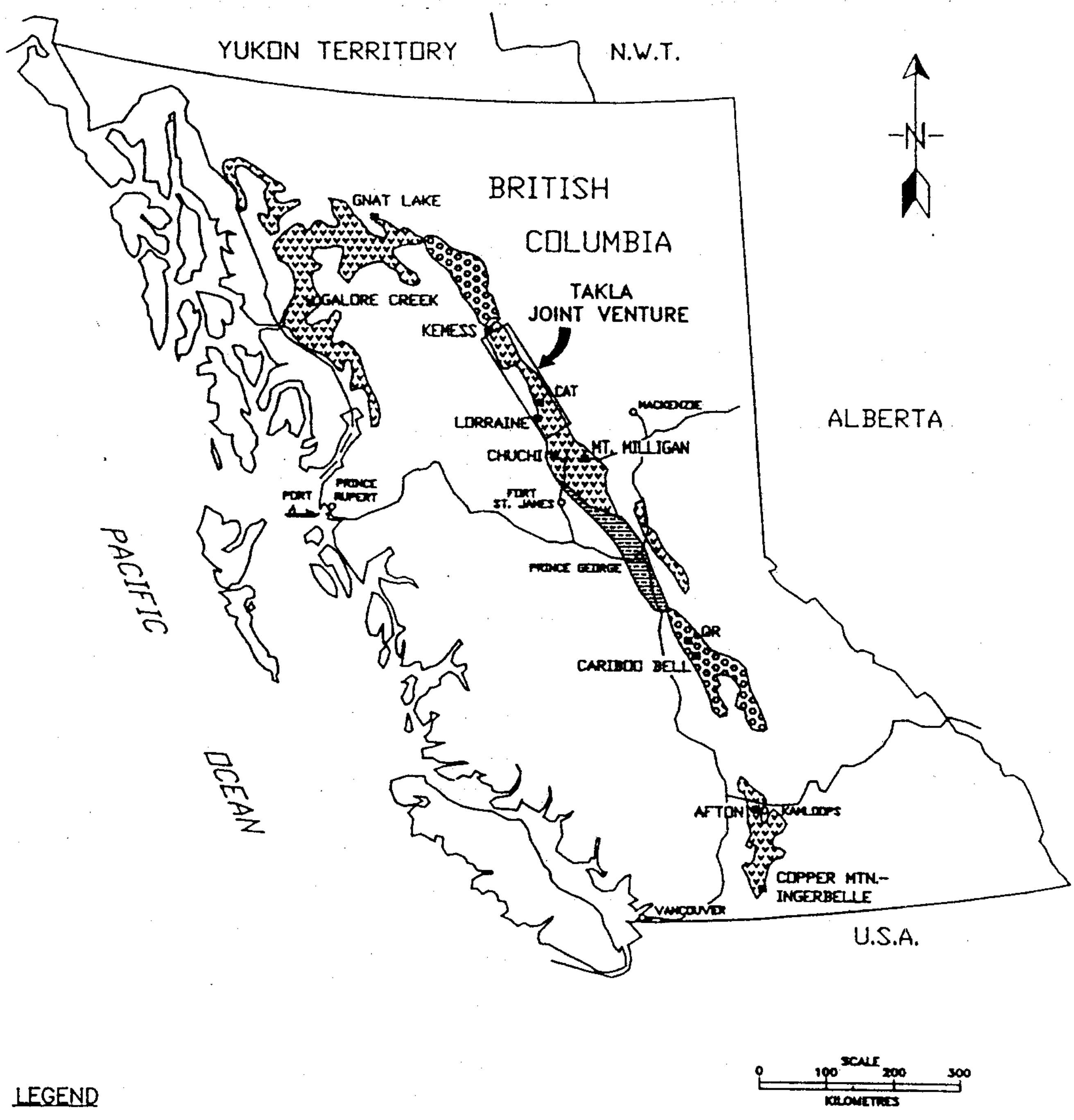
Many auriferous porphyry copper prospects are under active exploration within the Quesnel Belt, and the following deposits have been identified:

Gold-Copper Porphyry Deposits
Quesnel Belt
British Columbia

Property	Number of Deposits	Reserves / Mineral Inventory Copper ($x10^6$ lbs)	Gold ($x10^6$ oz)
<u>In Production:</u>			
Copper Mountain (Princeton)	5	1,600	0.910
Afton (Teck)	2	680	0.970
<u>Exploration/Development Stage</u>			
Mt Polley (Imperial Metals)	2	875	2.000
Galore Creek (Hudsons Bay et al)	8	3,000	1.750
Red Chris (Noranda)	2	550	0.450
QR (QPX)	4	0	0.200
Lorraine (Kennco)	2	150	0.100
Mt Milligan (Placer Dome)	2	1,680	6.376
South Kemess (El Condor)	1	988	3.969
North Kemess (El Condor)	1	622	1.900

The Mount Milligan property, located 170 km southwest of the PAL property, is hosted by Takla group volcanic strata intruded by several alkaline plutons. Two bulk tonnage deposits have been outlined which contain extensive disseminated and stockwork porphyry-type copper-gold mineralization.

The Kemess property, located 100 km northwest of the PAL property, is underlain by Triassic Takla group volcanic rocks intruded by Cretaceous/Tertiary quartz monzonite porphyries. A disseminated sulphide system measuring at least six by nine kilometers contains both the North and South Kemess deposits.



LEGEND

- ALKALINE VOLCANIC ROCKS
- SUBALKALINE VOLCANIC ROCKS
- MAINLY SEDIMENTARY ROCKS
- • GOLD AND / OR COPPER DEPOSIT

After Fox et. al. 1976

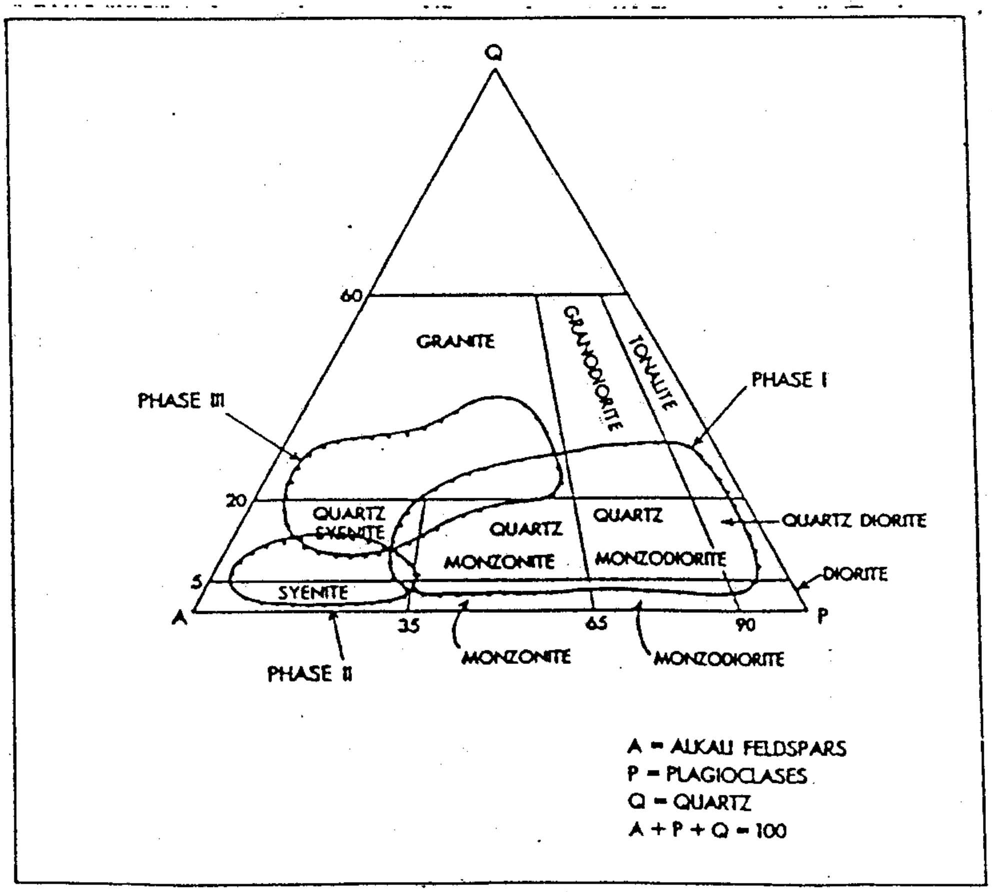
6A

SWANNELL MINERALS CORPORATION		
PAL PROPERTY		
QUESNEL BELT UPPER TRIASSIC & LOWER JURASSIC VOLCANIC ROCKS, SIGNIFICANT GOLD AND / OR COPPER DEPOSITS, ASSOCIATED WITH ALKALIC PLUTONS		
Scale AS SHOWN	N.T.S.	Drawn by
Date Oct.92	Geologist	Figure 3
RELIANCE GEOLOGICAL SERVICES INC.		

TABLE 1

SOUTHERN HOGEM BATHOLITH: INTRUSIVE ROCK DIVISIONS

INTRUSIVE PHASES	PHASE DIVISIONS	UNIT	ROCK VARIETIES
PHASE III LOWER CRETACEOUS	-	9	LEUCOCRATIC GRANITE, Alaskite
PHASE II MIDDLE JURASSIC TO LOWER JURASSIC	CHUCHI SYENITE	8	LEUCOCRATIC SYENITE, Quartz Syenite
	DUCKLING CREEK SYENITE COMPLEX	7	LEUCOCRATIC SYENITE
		6	FOLIATED SYENITE
PHASE I LOWER JURASSIC TO UPPER TRIASSIC	HOGEM GRANODIORITE	5	GRANODIORITE, QUARTZ MONZONITE, minor Tonalite, Quartz Diorite, Quartz Monzonite, Granite
	HOGEM BASIC SUITE	4	MONZONITE to Quartz Monzonite
		3	MONZODIORITE to Quartz Monzodiorite
		2	NATION LAKES PLAGIOCLASE PORPHYRY (a) Monzonite (b) Monzodiorite
		1	DIORITE, minor Gabbro, Pyroxenite, Hornblendite

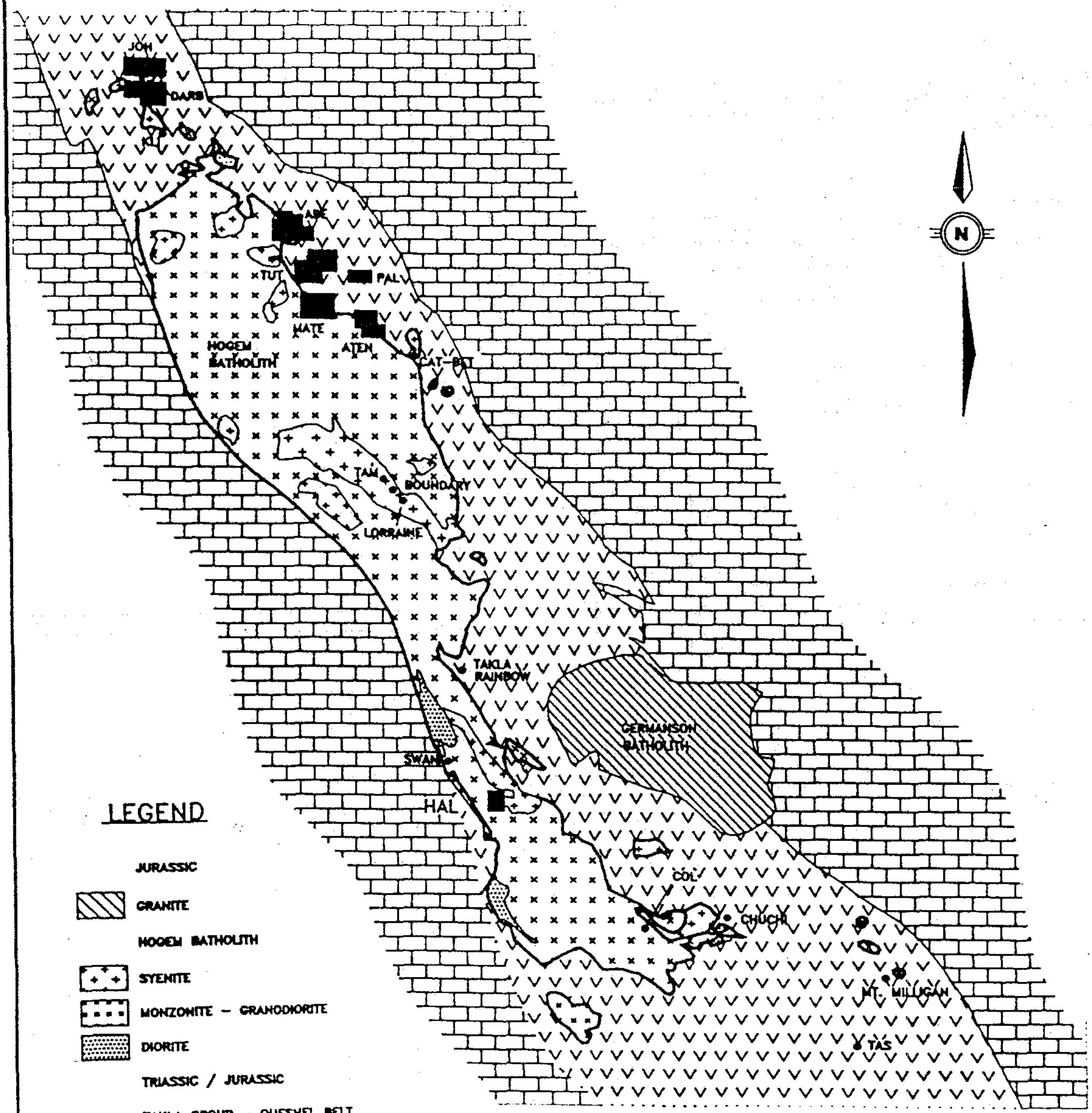


Hogem batholith intrusive phases in relation to general plutonic rock classification (after I.U.G.S., 1973).

The South Kemess deposit occurs in a flat-lying, near-surface quartz monzodiorite intrusion which hosts porphyry-style mineralization consisting of copper, gold, and lesser silver and molybdenum.

An upper supergene zone, comprising 20% of the mineral inventory, contains native copper, chalcocite, and fine-grained gold. A lower hypogene zone, comprising 80% of the mineral inventory, contains pyrite, chalcopyrite, bornite, and minor molybdenite. A mineable reserve of 220 million tons grading 0.224% Cu and 0.018 oz/ton Au was calculated by IMC of Tucson, Arizona.

In July 1993, a pre-feasibility study on a 40,000 tonne per day operation at South Kemess was completed by Kilborn Engineering Pacific Ltd.



LEGEND

JURASSIC

GRANITE

HOGEM BATHOLITH

SYENITE

MONZONITE – GRANODIORITE

DIORITE

TRIASSIC / JURASSIC

TAKLA GROUP – QUESNEL BELT

BASALT – ANDESITE

PERMIAN

LIMESTONE – SHALE

TAKLA JOINT VENTURE PROPERTY

• PORPHYRY DEPOSITS

SCALE

0 25 50

KILOMETRES

7A

SWANNELL MINERALS CORPORATION

PAL PROPERTY

REGIONAL GEOLOGY

Scale as shown	N.T.S.	Drawn by
Date Oct.92	Geologist	Figure 4

RELIANCE GEOLOGICAL SERVICES INC.

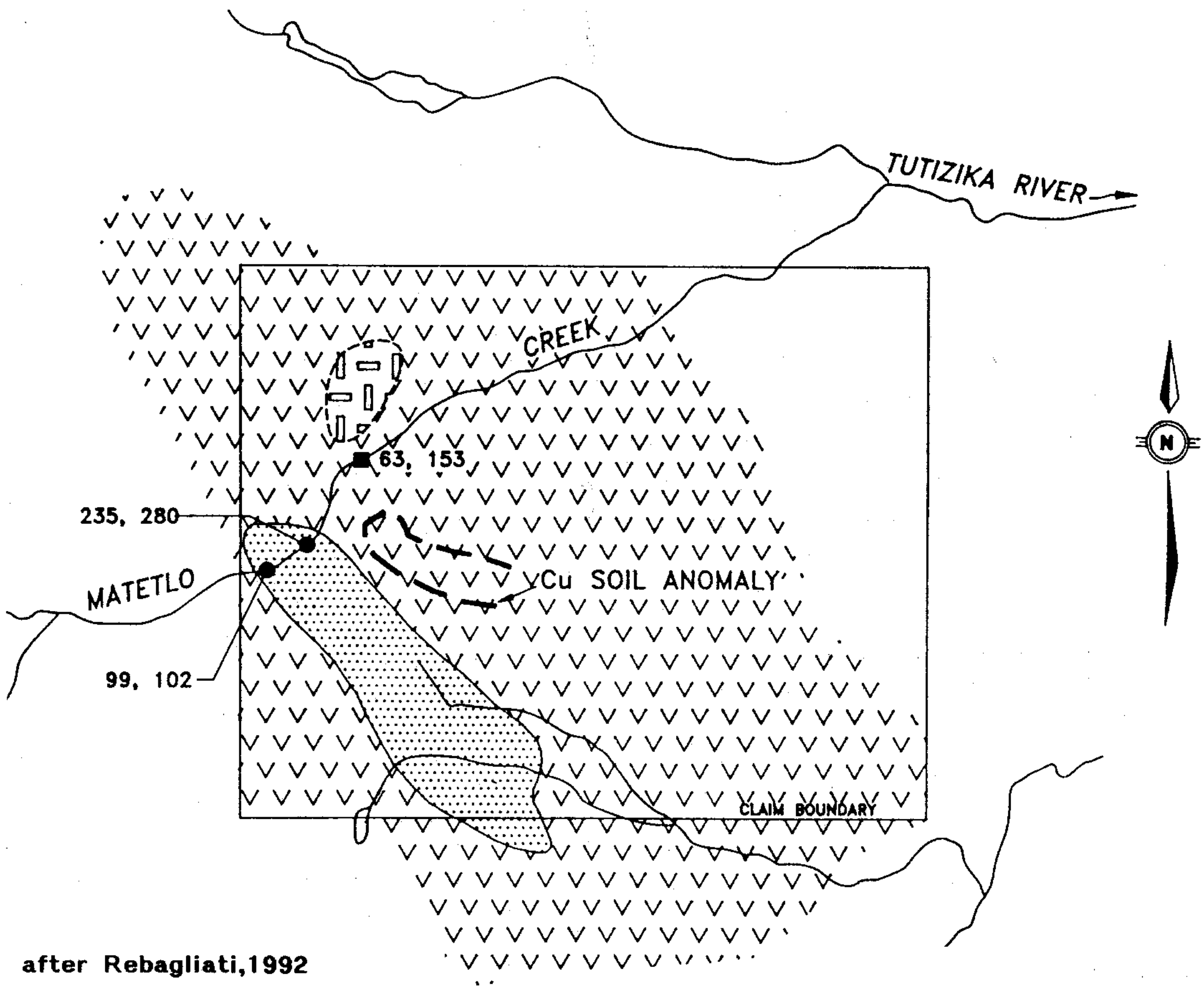
5. **PREVIOUS WORK** (Figure 5)

Work undertaken by the UMEX-Wenner Gren Joint Venture in 1970-71 located scattered occurrences of copper mineralization in the volcanics adjacent to the stock, and partially defined a 300 meter by 400 meter open-ended copper soil geochemical anomaly trending parallel to the long axis of a magnetic anomaly which was identified through an extensive regional airborne magnetic survey. A 500 meter by 300 meter low-contrast magnetic anomaly was identified approximately 800 meters south of a small dioritic stock which intruded Takla Group volcanics and limy sediments (Figure 5). No samples were analyzed for gold or silver during the 1970-71 exploration program.

In 1990, Chow and Kahlert reported that results of a ground survey using a hand-held AEM pocket magnetometer corresponded well with the airborne survey.

In 1991, Swannell carried out a program of soil sampling, heavy mineral sampling, silt sampling, rock sampling and 1:10,000 reconnaissance geological mapping over approximately 10% of the property. The 1991 surveys confirmed the possible presence of a buried mineralized copper and/or gold occurrence. Soil sampling identified a 400 by 600 meter open ended copper anomaly which corresponded roughly with the anomaly identified in 1971. The copper anomaly, in combination with the magnetic high area, was considered a favorable target area.

In 1992, Swannell contracted Reliance Geological Services to carry out a program of soil sampling, rock sampling and 1:10,000 geological mapping. An open-ended, 600 by 1200 meter copper/gold soil anomaly was identified. Chalcopyrite, malachite, and molybdenite were observed in altered volcanics and dykes along Matetlo Creek. The results of the geologic mapping program are discussed in Section 6.0.



after Rebagliati,1992

SCALE
0 1 2 Km
1 : 50,000

LEGEND

- DIORITE
- MONZONITE
- MAFIC INTRUSION
- HOGEM BATHOLITH (UNDIFF.)
- TAKLA VOLCANICS
- AEROMAGNETIC ANOMOLY
- ● SILT ANOMALY ppm Cu, ppb Au
- ■ HEAVY MINERAL ANOMALY ppm Cu, ppb Au
- XCu COPPER OCCURRENCE, SAMPLE NO.

8A

SWANNELL MINERALS CORPORATION

PAL PROPERTY

COMPOSITE PLAN
AEROMAGNETICS, GEOLOGY AND
SOIL GEOCHEMICAL ANOMALIES

Scale 1 : 50,000	N.T.S.	Drawn by
Date Oct.92	Geologist	Figure 5

RELIANCE GEOLOGICAL SERVICES INC.

6.0 **PROPERTY GEOLOGY** (Figure 6)

6.1 Lithologies

The PAL grid area is underlain by Triassic - Jurassic Takla volcanics and later intrusive dykes. Ten percent of this grid area is exposed rock between lines 82+00N and 88+00N and along Matetlo Creek. Volcanics consist of andesite porphyry (1a), andesite tuff (1b), pyroxenite(?) (1c), diorite(?) and andesite flows (1d) which are intruded by feldspar porphyry (6) dykes.

Takla Group

Unit 1a, andesite porphyry consists of 30 percent pyroxene phenocrysts to 5 mm in length with plagioclase feldspars making up the remaining 70 percent. Porphyry, which comprises 60 percent of the exposed rock, is centered along the base line and in Matetlo Creek.

Unit 1b is dark green to grey-green andesite tuff composed of 40 to 60 percent fine to medium-grained pyroxenes and 40 to 60 percent plagioclase feldspars. Unit 1a is approximately 25 percent of the exposed rock and appears peripheral to the porphyry in the east and southwest areas of the grid. A fine-grained, bedded, greenish grey tuff/mudstone(?) is found in Matetlo Creek just west of the base line and north of line 100+00N.

Unit 1c is a coarse-grained, dark green pyroxenite(?). Pyroxene crystals as long as 5 cm comprise 70+ percent of the rock and are contained in a finer-grained plagioclase-rich matrix. Comprising 10 percent of the exposed rock, the pyroxenite occurs in the core of the outcrops and within the andesite porphyry (1a).

Unit 1d, light colored diorite to andesite flows, is fine to medium-grained consisting of 80 - 85 percent plagioclase feldspars and 15 - 20 percent pyroxene laths. Pyroxenes are up to 2 mm in length and are oriented subparallel to each other. Unit 1d is interfingered with pyroxenite and comprises 5 percent of the exposed rock.

Intrusives

Unit 6, a feldspar porphyry, is approximately Jurassic - Cretaceous in age and consists of 25 percent coarse feldspar phenocrysts in a light colored, fine-grained matrix. A small outcrop of feldspar porphyry occurs on line 84+00N at 95+05E. An altered feldspar porphyry dyke was located in Matetlo Creek at approximately 101+50N and 107+20E.

A previously mapped diorite stock north of Matetlo Creek was not identified in outcrop, although numerous pieces of diorite float were found.

6.2 Alteration

All volcanic rocks show weak propylitic alteration. Epidote is common in fractures. Quartz and quartz/carbonate was locally observed as stringers (<2 mm) and stockworks (<2 mm).

Along Matetlo Creek, 10 meter by 10 meter irregular patches of alteration have been noted. Alteration is ankeritic and is associated with quartz-carbonate veining, stockworks, and rare mariposite in narrow <0.5 m shears.

An albitized feldspar porphyry dyke was identified in Matetlo Creek at 101+50N, 107+20E. Argillically altered plagioclase crystals are set in a hard, creamy white, fine-grained matrix.

6.3 Structure

A major linear/shear(?) structure, oriented at 131°/78° NE was found on line 82+00N at 101+11E. Fracturing occurs in three general directions, with attitudes of 180°/20° to 45°E, 110°/60° to 90°NE-SW, and 040°/40° to 70°NE-SW. Structural orientations were difficult to measure due to locally high magnetite content.

6.4 Mineralization

Magnetite, up to 10%, is the most pervasive metallic mineral. It is found in all volcanic rocks as discrete disseminated grains, clots, or streaks up to 10 cm in length. Pyrite, up to 2%, is the second most abundant metallic mineral, occurring as individual crystals, smears, and clots, especially along fracture planes.

Chalcopyrite (<1%) occurs as small blebs in fractures, as small clots within the volcanics, in narrow calcite-epidote stringers, in a narrow <0.2 m potassium feldspar dyke, and in a 5 cm wide quartz vein. It has been identified in fractures on line 94+00N, 98+71E, in a stringer on line 84+00N, 104+00E, and in the general area bounded by lines 83+00N to 85+00N and stations 98+50E to 101+00E. Malachite was found with the chalcopyrite blebs in a potassium feldspar dyke in Matetlo Creek at approximately 99+80N and 99+00E. Minor molybdenite was observed with chalcopyrite in a quartz vein at 100+27N, 100+00E. Pyrrhotite occurs with chalcopyrite on fracture surfaces at 84+00N, 100+25E, and with pyrite at 84+00N, 95+75E.

7. 1993 WORK PROGRAM

Done under B.C.M.E.M.P.R. Approval Number **PRG-1300196-45749**

7.1 Methods and Procedures

Geochemical, magnetic and induced polarization (IP) surveys were carried out on the claims to follow up on anomalous rock and soil geochemistry identified in previous exploration programs.

7.1.1 Geochemistry

The 1992 survey grid in the western area of the property was extended to the north, west, and east. Baselines and tie-lines were surveyed using compass, hipchain, and flagging. Cross-lines were put in at 200 meter line spacings using compass, hipchain, flagging, pickets, and metal tags. Stations on baselines and cross-lines were marked at 50 meter intervals using flagging and embossed metal tags. Total line surveyed was 8.6 kilometers. Two line kilometers were cut (Lines 90+00N to 96+00N).

The current grid was soil sampled at 100 meter station spacings. Using a grub hoe, 152 samples were taken from the B horizon (approximate depth 30 cm), placed into marked Kraft paper bags, and sent to International Plasma Laboratory for analysis. See Appendix A for analytical results and techniques.

The statistical analysis (Appendix B) and sample plans (Figures 7 and 8) include 463 samples collected in 1991, 1992 and 1993.

The analytical results for two elements (Cu, Au) were computer-plotted on 1:10,000 scale maps (Figures 7 and 8).

To evaluate any existing geochemical anomalies, frequency distribution histograms based on laboratory data were prepared for each of the aforementioned elements (Appendix B). Anomalous values were chosen using natural breaks in each histogram.

For interpretation purposes, correlation coefficients were calculated (Appendix B) and anomalous ranges for each element were plotted using symbol maps (Figures 7 and 8). All statistical and plotting work was performed by Tony Clark, Ph.D.

7.1.2 **Geophysics** (Figures 9 to 16)

Two Scintrex MP-3 magnetometers were used on the magnetic survey, one as the field survey unit and the other as a base station. Readings were taken at 25 meter intervals along the grid lines and were corrected for diurnal drift. A total of 26.5 line kilometers of magnetometer survey was completed on the PAL property.

Magnetic profiles are presented in Figure 9 and a magnetic contour plan is given in Figure 10.

A Scintrex IPR12 receiver and IPC7 2.5 kilowatt transmitter were used on the IP survey. The pole-dipole array configuration was used, with a 75 meter "a" spacing and "n" separations of 1 to 4. Readings were taken in the time domain using a 2 second current pulse. At total of 28.6 line kilometers of IP survey was completed on the PAL property.

Resistivity and chargeability contour plans are shown in Figures 11 and 12. Pseudosections are presented in Figures 13, 14, and 15. Figure 16 is a compilation of soil geochemistry, magnetic and IP survey results.

7.2 Results and Interpretation

7.2.1 Soil Geochemistry

Summary Statistics:

	Copper	Gold
Range	12.0 - 4308.0 ppm	1.0 - 294.0 ppb
Mean	107.1 ppm	9.5 ppb
Standard Deviation	235.00	18.65
Background	<100 ppm	<15 ppb
Low Anomalous	≥100 and <250 ppm	≥15 and <25 ppb
Medium Anomalous	≥250 and <400 ppm	≥25 and <50 ppb
High Anomalous	≥400 ppm	≥50 ppb

The correlation coefficient chart (Appendix B) shows a weak correlation between copper and molybdenum. Correlations between copper/gold and other elements were not significant.

The 1991/92 sampling outlined a coincident copper (>100 ppm) and gold (>15 ppb) anomaly, measuring approximately 600 by 1200 meters, extending from Line 88+00N to 98+00N.

Results in copper and gold from 152 samples collected in 1993 consist of several single point copper and gold anomalies. The samples were collected primarily along and north of Matetlo Creek. The field crew reported thick layers of alluvium along Matetlo Creek and glacial features (eskers and moraines) north of Matetlo Creek.

7.2.2 **Magnetic Survey** (Figures 9 and 10)

Magnetic values range from 56,800 to 58,400 nT for a total magnetic relief of 1,600 nT. Background values are in the 56,800 to 57,000 nT range.

A centrally-located magnetic high (>57,000 nT) extends from Line 88+00N to Line 106+00N, 1,800 meters in length (Figure 10). The anomaly is open to the north. The southern part of the anomaly is approximately 700 meters wide and the northern part is 300 meters wide.

7.2.3 **Chargeability and Resistivity** (Figures 11 to 15)

Resistivity values on the "n=2" contour plan (Figure 11) range from 248 to 3476 ohm-meters.

The following ranges were used for interpretation of resistivity values:

very high values	> 1500 Ωm
high values	>750 to ≤1500 Ωm
medium values	>500 to ≤750 Ωm
low values	≤500 Ωm

A wide band of medium to high values runs from 96+00E to 114+00E on the southern edge of the grid, narrowing towards the northern edge of the grid where it lies between 105+00E and 109+00E. A 400 meter wide band of low to medium values runs along the eastern flank of this band, from 110+00E, 100+00N to 114+00E, 94+00N.

A zone of high to very high values exists in the southwest area of the grid, between 88+00E and 97+00E and between lines 90+00N and 102+00N. The zone is open to the north, south, and west.

Chargeability values in the "n=2" contour plan (Figure 12) range from 0.7 to 34.5 milliseconds.

The following ranges were used for interpretation of chargeability values:

very high values	> 20 msec
high values	>12 to ≤20 msec
medium values	>6 to ≤12 msec
low values	≤6 msec

The central anomaly consists of medium to high values in a 500 meter wide, north-south trending zone extending from 85+00 N to 10+600 N. The northern part of the anomaly, bounded by grid coordinates 101+00 E to 105+00 E and 99+00 N to 10+600 N, is characterized by a 400 x 700 meter zone of chargeability values up to 22.9 msec, classified as high. The southern part of the anomaly is characterized by medium chargeability values which grade into low-medium values at line 84+00 N at the southern end of the survey area. The central anomaly is open to the north.

The west anomaly consists of medium to very high values (up to 34.5 msec) in the western area of the grid. A 500 meter band of very high values is located along the western edge of the grid between lines 90+000N and 96+000N and between 87+000E and 91+000E. The west anomaly is open to the north, south, and west.

A chargeability low (below 5.0 msec) approximately 500 meters wide is located between the central and west anomalies.

7.2.4 Geophysical Interpretation

The magnetic high is coincident with low chargeability values and low to medium resistivity values, indicating a rock unit (volcanic or intrusive?) with a high magnetite content and low sulphide content. High magnetite, up to 10%, was observed as disseminations, clots, and veinlets in volcanic rocks between lines 78+00N and 86+00N.

The central chargeability anomaly correlates with medium to high resistivity values. The anomaly is strong to the north and is weaker and more diffuse to the south, indicating that the source could be deep at the south end of the survey area. A combined copper/gold geochemical anomaly correlates with the southern portion of the central chargeability anomaly.

The west chargeability anomaly is characterized by very high chargeability values which correlate with high to very high resistivity values. The anomaly could represent an area with high sulphide content (4 to 7%) with associated silicification.

8. DISCUSSION

The target on the PAL property is a porphyry copper/gold deposit similar to the recently discovered Mt Milligan/Southern Star and North/South Kemess deposits.

Geochemical results to date on the PAL property have outlined inconsistent but coincident copper and gold anomalies in an area measuring approximately 600 by 1200 meters. Relatively thick layers of alluvium along Matetlo Creek and glacial features (eskers and moraines) north of Matetlo Creek suggest that the geochemistry of underlying rocks and soil is being masked by alluvium and till.

The same inconsistent results were obtained at the Mt Milligan and Southern Star deposits, now proven to be overlain by accumulations of alluvium and till which mask the geochemical signature of underlying mineralization. As a result, those deposits are not specifically defined by high copper and gold values in soils.

Similarly, the eastern portion of the South Kemess project is underlain by a coincident gold/copper/molybdenum soil anomaly, but metal concentrations over the western portion of the deposit are comparatively low due to a wedge of younger cover rocks overlying the mineralized intrusion.

The IP response over the Mt Milligan/Southern Star deposits varies from 10 to over 40 msec and does not specifically define the deposits. Similarly, IP response over the Kemess deposit varies from medium to high chargeability in the eastern section to low in the western section where there is a younger barren rock cover and sulphide minerals have been oxidized to hematite in a supergene zone.

The geochemical and geophysical surveys conducted on the PAL property have outlined three target areas for follow-up diamond drilling.

First is the central anomaly defined by a north-south trending, 500 x 1200 meter chargeability anomaly. The northern area of the central anomaly includes a 400 x 700 meter zone of values up to 22.9 msec, while the southern portion is coincident with a 600 x 1200 meter copper/gold soil anomaly.

Second is the west anomaly consisting of a band of medium to very high chargeability values combined with high resistivity values along the western edge of the grid. This zone is open to the south, north, and west. The west anomaly has no coincidence with anomalous geochemical results, and is interpreted as a zone of high sulphide content combined with silicic alteration.

The third, located between the central and west anomalous zones, is an area of high magnetic response combined with low chargeability values. There is a possibility that this response is associated with a low sulphide mineralized supergene zone. Alternatively, the high magnetic response could represent a volcanic or intrusive unit with high primary magnetite content.

As seen at Mt Milligan and Kemess, blind mineralized bodies are characterized by varying geochemical and geophysical responses. The variable geochemical and geophysical signatures outlining the three target areas on the PAL property could represent hypogene or supergene porphyry-style mineralization. Diamond drilling will be required to test the significance of target areas defined to date. This exploration drilling will be a guide for possible follow-up delineation drilling and ground surveys. See Figure 16 for proposed drill hole locations.

9. CONCLUSIONS

The PAL property has potential to host a porphyry style copper/gold deposit because:

- it lies within the Mesozoic Quesnel Belt which hosts several porphyry copper/gold deposits;
- the geological environment, diorite stock(s) intruding Takla Group volcanic rocks, is favorable; and
- results of work to date show geological, geochemical, and geophysical similarities to the nearby proven Mt Milligan and Kemess deposits
- geophysical and geochemical surveys have defined target areas for followup drilling.

10. RECOMMENDATIONS

a) Using a widely spaced pattern as illustrated in Figure 16, drill a number of holes ranging in depth from 300 to 600 feet. Total footage is proposed to be 5000 feet.

Five holes are proposed on a fence pattern along line 94+00N to test the central anomaly, magnetic high, and west anomaly.

Two holes are proposed on line 90+00N to test the southern area of the west anomaly.

Three holes are proposed along line 10200N to test the northern area of the central and west anomalies.

b) Perform approximately ten line kilometers of induced polarization and magnetic geophysics to extend the known target areas.

Total budget for the above is estimated at $266,000.

Geophysics (10 line km)	$	16,000
Drilling (5000 feet)	$	250,000

<u>**CERTIFICATE**</u>

I, **PETER D. LERICHE**, of 3125 West 12th Avenue, Vancouver, B.C., V6K 2R6, do hereby state that:

1. I am a graduate of McMaster University, Hamilton, Ontario, with a Bachelor of Science Degree in Geology, 1980.

2. I am registered as a member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.

3. I am a Fellow in good standing with the Geological Association of Canada.

4. I have actively pursued my career as a geologist for thirteen years in British Columbia, Ontario, Saskatchewan, the Yukon and Northwest Territories, Montana, Oregon, Alaska, Arizona, Nevada and California.

5. The information, opinions, and recommendations in this report are based on fieldwork carried out under my direction, and on published and unpublished literature. I visited the Pal property during July 1992.

6. I have no interest, direct or indirect, in the subject claims or the securities of Swannell Minerals Corporation or Major General Resources Ltd, nor do I expect to receive any.

7. I consent to the use of this report, only in its entirety, in a Prospectus or Statement of Material Facts for the purpose of private or public financing.

RELIANCE GEOLOGICAL SERVICES INC.

Peter D. Leriche, B.Sc., P.Geo.

Dated at North Vancouver, B.C., this 9th day of December 1993.

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RELIANCE GEOLOGICAL SERVICES INC.

241 EAST 1ST STREET
NORTH VANCOUVER, B.C.
V7L 1B4

TEL: (604) 984-3663
FAX: (604) 988-4653

ITEMIZED COST STATEMENT

Re: PAL Project 1993, J790

Project Preparation			$ 750
Mobilization & demobilization:			$ 4,230
Consulting			$ 2,000
Field Crew:			
Supervision		$ 400	
Project Geologist	$ 345/day x 4 days	$ 1,380	
(N. Hulme: Sep 16 - 19, 1993)			
Field Geologist	$ 285/day x 4 days	$ 1,140	
(J. Fleishman: Sep 16 - 19, 1993)			
Geotechnician	$ 220/day x 4 days	$ 880	$ 3,800
(B. Doubt: Sep 16 - 19, 1993)			
Field Costs:			
Helicopter		$ 5,569	
Food & Accomm	$ 75/day x 12 days	$ 900	
Communications	$ 50/day x 4 days	$ 200	
Supplies	$ 18/day x 12 days	$ 216	
Expediting	$ 50/day x 4 days	$ 200	
Freight		$ 100	
Vehicle: use	$ 110/day x 2 days		
Vehicle: standby	$ 30/day x 2 days	$ 280	$ 7,465
Assays & Analysis:			
152 soil samples @ $14.50/sample		$ 2,204	
(Au by FA/AA and 30 element ICP)			$ 2,204
Geophysics	$1600/km x 28.6 kms	$ 45,760	$ 45,760
Report:			
Drafting and map preparation		$ 2,000	
Report writing and editing		$ 1,600	
Word processing, copying, binding		$ 300	$ 3,900
Administration, incl Overheads & Profit			$ 8,225
Sub-total			$ 78,334
plus 7% G.S.T.			$ 5,484
TOTAL			$ 83,818

APPENDIX A

ANALYTICAL REPORTS

INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS
iPL 93J0106

2036 Columbia Street
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Reliance Geological Services Ltd 161 Samples 0= Rock 77= Soil 0= Core 0=RC Ct 0= Pulp 84=Other [054114:13:28:39100693]
Out: Oct 06, 1993 Project: Pal 790 Raw Storage: -- 00Mon/Dis -- -- -- 03Mon/Dis Mon=Month Dis=Discard
In : Oct 01, 1993 Shipper: Peter Leriche Pulp Storage: -- 12Mon/Dis -- -- -- 12Mon/Dis Rtn=Return Arc=Archive
PO#: Shipment: ID=C026901
Msg: Au(FA/AAS 20g) ICP(AqR)
Msg:

Document Distribution

1 Reliance Geological Services Ltd
241 East 1st Street
North Vancouver
BC V7P 2S3

ATT: Peter Leriche

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DL	3D	5D	BT	BL
0	0	0	1	0

Ph:604/984-3663
Fx:604/988-4653

Analytical Summary

##	Code	Method	Title	Limit Low	Limit High	Units	Description	Element	##
01	312P	FAAA	Au	5	9999	ppb	Au Fire Assay/AAS finish	Gold	01
02	721P	ICP	Ag	0.1	100	ppm	Ag ICP	Silver	02
03	711P	ICP	Cu	1	20000	ppm	Cu ICP	Copper	03
04	714P	ICP	Pb	2	20000	ppm	Pb ICP	Lead	04
05	730P	ICP	Zn	1	20000	ppm	Zn ICP	Zinc	05
06	703P	ICP	As	5	9999	ppm	As ICP 5 ppm	Arsenic	06
07	702P	ICP	Sb	5	9999	ppm	Sb ICP	Antimony	07
08	732P	ICP	Hg	3	9999	ppm	Hg ICP	Mercury	08
09	717P	ICP	Mo	1	9999	ppm	Mo ICP	Molydenum	09
10	747P	ICP	Tl	10	999	ppm	Tl ICP 10 ppm	Thallium	10
11	705P	ICP	Bi	2	999	ppm	Bi ICP	Bismuth	11
12	707P	ICP	Cd	0.1	100	ppm	Cd ICP	Cadmium	12
13	710P	ICP	Co	1	999	ppm	Co ICP	Cobalt	13
14	718P	ICP	Ni	1	999	ppm	Ni ICP	Nickel	14
15	704P	ICP	Ba	2	9999	ppm	Ba ICP	Barium	15
16	727P	ICP	W	5	999	ppm	W ICP	Tungsten	16
17	709P	ICP	Cr	1	9999	ppm	Cr ICP	Chromium	17
18	729P	ICP	V	2	999	ppm	V ICP	Vanadium	18
19	716P	ICP	Mn	1	9999	ppm	Mn ICP	Manganese	19
20	713P	ICP	La	2	9999	ppm	La ICP	Lanthanum	20
21	723P	ICP	Sr	1	9999	ppm	Sr ICP	Strontium	21
22	731P	ICP	Zr	1	999	ppm	Zr ICP	Zirconium	22
23	736P	ICP	Sc	1	99	ppm	Sc ICP	Scandium	23
24	726P	ICP	Ti	0.01	1.00	%	Ti ICP	Titanium	24
25	701P	ICP	Al	0.01	9.99	%	Al ICP	Aluminum	25
26	708P	ICP	Ca	0.01	9.99	%	Ca ICP	Calcium	26
27	712P	ICP	Fe	0.01	9.99	%	Fe ICP	Iron	27
28	715P	ICP	Mg	0.01	9.99	%	Mg ICP	Magnesium	28
29	720P	ICP	K	0.01	9.99	%	K ICP	Potassium	29
30	722P	ICP	Na	0.01	5.00	%	Na ICP	Sodium	30
31	719P	ICP	P	0.01	5.00	%	P ICP	Phosphorus	31

EN=Envelope # RT=Report Style CC=Copies IN=Invoices FX=Fax(1=Yes 0=No)
DL=DownLoad 3D=3-1/2 Disk 5D=5-1/4 Disk BT=BBS Type BL=BBS(1=Yes 0=No) Totals: 2=Copy 2=Invoice 0=3-1/2 Disk 0=5-1/4 Disk

INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS
iPL 93J0106

2036 Columbia Street
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Client: Reliance Geological Services Ltd   iPL: 93J0106   Out: Oct 06, 1993   Section 1 of 2
Project: Pal 790   161 Soil   In: Oct 01, 1993   Certified BC Assayer: David Chiu

Sample Name		Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %
Pal-92 86+00N 111+00E	S	<	<	52	20	81	8	<	<	4	<	<	<	17	25	71	<	53	166	438	2	21	3	6	0.09	3.54	0.39	5.78	1.23	0.04
Pal-92 86+00N 112+00E	S	<	<	69	13	138	8	<	<	2	<	<	1.6	32	22	156	<	34	72	2218	3	86	1	4	0.03	2.22	2.81	2.74	0.38	0.04
Pal-92 86+00N 113+00E	S	<	0.8	190	12	122	25	<	<	3	<	<	1.5	17	30	142	<	68	128	893	4	65	1	11	0.05	2.19	2.09	4.00	1.03	0.03
Pal-92 86+00N 114+00E	S	<	<	42	18	68	5	<	<	3	<	<	<	18	30	64	<	61	206	310	2	26	2	6	0.07	3.28	0.35	5.58	1.05	0.03
Pal-92 86+00N 115+00E	S	<	<	43	11	46	9	<	<	2	<	<	<	13	20	95	<	36	137	300	<	26	<	4	0.07	2.21	0.43	4.03	0.79	0.03
Pal-92 88+00N 111+00E	S	<	<	190	17	146	23	<	<	3	<	<	<	26	36	178	<	85	110	1542	8	53	1	16	0.07	2.49	1.31	4.26	1.03	0.04
Pal-92 88+00N 112+00E	S	<	<	285	2	54	7	<	<	2	<	<	1.1	5	11	138	<	38	19	1035	5	132	1	3	0.01	0.76	5.09	0.73	0.32	<
Pal-92 88+00N 113+00E	S	22	<	321	12	81	18	<	<	2	<	<	<	22	32	74	<	64	156	891	6	69	1	15	0.05	2.22	1.54	4.98	1.03	0.04
Pal-92 88+00N 114+00E	S	<	<	140	4	63	<	<	<	1	<	<	0.8	3	5	61	<	19	17	286	<	116	2	3	<	0.23	4.78	0.30	0.24	0.02
Pal-92 88+00N 115+00E	S	10	<	283	4	41	9	<	<	2	<	<	0.7	5	6	53	<	18	24	1435	5	112	2	4	<	1.27	5.30	0.69	0.20	0.01
Pal-92 90+00N 111+00E	S	6	<	27	8	68	5	<	<	2	<	<	<	14	17	72	<	34	173	376	<	27	1	3	0.07	2.11	0.35	4.89	0.75	0.03
Pal-92 90+00N 112+00E	S	9	<	25	12	77	6	<	<	2	<	<	<	12	15	77	<	31	155	310	<	41	1	3	0.08	1.97	0.46	4.04	0.80	0.02
Pal-92 90+00N 113+00E	S	19	<	19	11	36	5	<	<	2	<	2	<	9	14	48	5	30	146	246	<	40	1	3	0.12	1.44	0.35	3.05	0.64	0.03
Pal-92 90+00N 114+00E	S	<	<	30	8	76	<	<	<	2	<	<	<	14	18	70	<	32	151	330	3	44	1	3	0.09	1.85	0.65	4.07	0.87	0.04
Pal-92 90+00N 115+00E	S	<	<	35	16	107	<	<	<	3	<	2	<	28	67	49	<	84	166	422	2	41	13	9	0.28	3.98	2.02	5.73	2.46	0.02
Pal-92 92+00N 111+00E	S	5	<	101	6	42	<	<	<	3	<	<	1.2	3	5	102	<	9	12	331	2	120	3	1	0.01	0.30	5.11	0.37	0.24	0.03
Pal-92 92+00N 112+00E	S	14	<	13	12	43	<	<	<	2	<	3	0.1	8	9	90	<	24	155	242	3	25	1	2	0.10	1.09	0.27	3.08	0.25	0.03
Pal-92 92+00N 113+00E	S	<	<	24	9	49	<	<	<	3	<	<	0.2	11	13	82	<	26	72	607	<	48	1	3	0.07	1.49	1.04	1.99	0.71	0.02
Pal-92 92+00N 114+00E	AS	<	<	16	12	51	<	<	<	3	<	<	<	14	19	61	<	41	227	222	2	20	2	3	0.27	2.10	0.30	4.70	0.92	0.05
Pal-92 92+00N 115+00E	S	6	<	64	11	71	7	<	<	2	<	<	0.5	14	22	54	<	37	99	533	2	67	2	3	0.07	1.69	2.04	3.09	0.93	0.04
Pal-92 94+00N 111+00E	S	<	<	101	2	50	<	<	<	3	<	<	1.1	1	4	83	<	7	15	322	<	120	1	1	<	0.17	5.10	0.17	0.14	0.01
Pal-92 94+00N 112+00E	S	<	<	126	3	43	22	<	3	8	<	<	1.2	51	11	482	<	12	48	1.0%	<	117	2	1	<	0.35	4.55	2.14	0.18	0.02
Pal-92 94+00N 113+00E	S	7	<	46	11	74	9	<	<	3	<	<	<	16	22	65	<	44	152	355	<	27	2	4	0.12	2.36	0.34	4.67	0.75	0.02
Pal-92 94+00N 114+00E	S	5	<	21	18	162	5	<	<	4	<	<	<	14	19	57	<	41	192	345	2	25	2	4	0.15	2.76	0.34	5.51	0.76	0.02
Pal-92 94+00N 115+00E	S	<	<	162	11	353	22	<	<	8	<	<	0.9	34	21	333	5	38	120	9754	5	81	<	11	0.04	1.99	2.35	5.01	0.72	0.04
Pal-92 98+00N 90+00E	S	ins	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pal-92 98+00N 91+00E	S	ins	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pal-92 98+00N 92+00E	S	6	<	149	21	988	46	<	<	6	<	<	2.7	28	37	163	8	56	108	1900	3	33	1	5	0.09	2.59	0.92	4.99	0.84	0.04
Pal-92 98+00N 93+00E	S	7	<	62	14	70	9	<	<	5	<	<	<	15	25	127	<	38	154	361	<	35	1	4	0.05	3.06	0.41	4.74	1.04	0.04
Pal-92 98+00N 94+00E	S	12	<	129	14	97	7	<	<	4	<	<	<	24	36	113	<	54	146	812	2	54	2	5	0.09	3.00	0.87	4.58	1.45	0.07
Pal-92 98+00N 95+00E	S	<	<	25	14	117	<	<	<	3	<	<	<	17	19	68	<	46	115	430	3	26	3	3	0.09	3.36	0.24	4.36	0.71	0.03
Pal-92 98+00N 96+00E	S	<	<	35	12	85	<	<	<	5	<	<	<	17	17	127	<	30	175	295	3	26	2	4	0.02	3.40	0.29	5.27	0.76	0.04
Pal-92 98+00N 97+00E	S	<	<	57	23	93	8	<	<	4	<	<	<	19	24	74	<	45	179	459	3	29	3	5	0.08	4.83	0.41	5.47	0.90	0.04
Pal-92 100+00N 90+00E	S	<	<	45	15	311	6	<	<	3	<	<	<	26	30	170	<	46	149	1101	<	49	1	4	0.09	2.63	0.70	4.71	1.10	0.07
Pal-92 100+00N 91+00E	S	37	<	38	15	131	<	<	<	3	<	<	<	15	24	85	<	40	162	430	3	38	1	4	0.09	2.71	0.44	4.57	0.88	0.05
Pal-92 100+00N 92+00E	S	5	<	36	12	97	5	<	<	2	<	<	<	14	21	70	<	44	142	278	3	34	2	4	0.11	2.64	0.40	4.29	0.75	0.05
Pal-92 100+00N 93+00E	S	7	<	66	20	91	10	<	<	3	<	<	<	22	33	128	<	48	120	369	4	49	3	5	0.13	3.44	0.44	4.15	1.11	0.05
Pal-92 100+00N 94+00E	S	<	<	33	12	111	<	<	<	2	<	2	<	14	19	80	<	39	116	671	3	24	1	4	0.02	2.85	0.24	4.21	0.61	0.05
Pal-92 100+00N 95+00E	S	<	<	39	16	69	<	<	<	2	<	<	<	12	16	67	<	36	139	283	2	24	2	4	0.06	3.33	0.29	4.21	0.82	0.04
Min Limit		5	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01
Max Reported*		9999	99.9	20000	20000	20000	9999	9999	9999	9999	999	999	99.9	999	999	9999	999	9999	999	9999	9999	9999	999	99	1.00	9.99	9.99	9.99	9.99	9.99
Method		FAAA	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

---=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

CERTIFICATE OF ANALYSIS
iPL 93J0106

INTERNATIONAL PLASMA LABORATORY LTD.
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Client: Reliance Geological Services Ltd iPL: 93J0106 Out: Oct 06, 1993 Section 2 of 2
Project: Pal 790 161 Soil In: Oct 01, 1993 Certified BC Assayer: David Chiu

Sample Name		Na %	P %
Pal-92 86+00N 111+00E	S	0.03	0.06
Pal-92 86+00N 112+00E	S	0.02	0.07
Pal-92 86+00N 113+00E	S	0.02	0.07
Pal-92 86+00N 114+00E	S	0.02	0.04
Pal-92 86+00N 115+00E	S	0.02	0.08
Pal-92 88+00N 111+00E	S	0.03	0.05
Pal-92 88+00N 112+00E	S	0.02	0.13
Pal-92 88+00N 113+00E	S	0.04	0.05
Pal-92 88+00N 114+00E	S	0.02	0.10
Pal-92 88+00N 115+00E	S	0.02	0.20
Pal-92 90+00N 111+00E	S	0.02	0.04
Pal-92 90+00N 112+00E	S	0.02	0.04
Pal-92 90+00N 113+00E	S	0.02	0.06
Pal-92 90+00N 114+00E	S	0.02	0.04
Pal-92 90+00N 115+00E	S	0.02	0.03
Pal-92 92+00N 111+00E	S	0.02	0.11
Pal-92 92+00N 112+00E	S	0.02	0.03
Pal-92 92+00N 113+00E	S	0.03	0.01
Pal-92 92+00N 114+00E	AS	0.02	0.02
Pal-92 92+00N 115+00E	S	0.03	0.03
Pal-92 94+00N 111+00E	S	0.02	0.08
Pal-92 94+00N 112+00E	S	0.02	0.13
Pal-92 94+00N 113+00E	S	0.02	0.05
Pal-92 94+00N 114+00E	S	0.02	0.06
Pal-92 94+00N 115+00E	S	0.02	0.09
Pal-92 98+00N 90+00E	S	--	--
Pal-92 98+00N 91+00E	S	--	--
Pal-92 98+00N 92+00E	S	0.02	0.08
Pal-92 98+00N 93+00E	S	0.02	0.08
Pal-92 98+00N 94+00E	S	0.03	0.07
Pal-92 98+00N 95+00E	S	0.02	0.28
Pal-92 98+00N 96+00E	S	0.02	0.06
Pal-92 98+00N 97+00E	S	0.03	0.25
Pal-92 100+00N 90+00E	S	0.03	0.05
Pal-92 100+00N 91+00E	S	0.03	0.09
Pal-92 100+00N 92+00E	S	0.03	0.11
Pal-92 100+00N 93+00E	S	0.03	0.07
Pal-92 100+00N 94+00E	S	0.02	0.14
Pal-92 100+00N 95+00E	S	0.02	0.12
Min Limit		0.01	0.01
Max Reported*		5.00	5.00
Method		ICP	ICP

--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

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iPL 93J0106

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Client: Reliance Geological Services Ltd   iPL: 93J0106   Out: Oct 06, 1993   Section 1 of 2
Project: Pal 790   161 Soil   In: Oct 01, 1993   Certified BC Assayer: David Chiu

Sample Name		Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %
Pal-92 100+00N 96+00E	S	6	<	30	15	71	<	<	<	2	<	<	<	12	17	57	<	36	164	287	2	26	2	3	0.08	3.08	0.27	4.79	0.69	0.03
Pal-92 100+00N 97+00E	S	<	2.0	42	12	131	10	<	<	3	<	<	<	18	23	80	<	42	142	502	2	36	1	4	0.11	2.56	0.35	4.77	0.94	0.03
Pal-92 100+00N 98+00E	S	<	<	67	25	156	13	<	<	3	<	<	<	17	23	176	<	40	157	459	3	25	1	4	0.05	4.30	0.26	5.92	0.83	0.05
Pal-92 102+00N 90+00E	S	9	<	54	17	86	17	<	<	3	<	<	<	21	30	78	<	47	129	367	3	54	2	5	0.13	3.30	0.46	4.38	1.00	0.06
Pal-92 102+00N 91+00E	S	11	<	73	28	149	15	<	<	4	<	<	<	18	26	81	<	45	179	518	2	40	3	5	0.11	3.81	0.41	6.08	1.00	0.05
Pal-92 102+00N 92+00E	S	16	1.7	477	21	143	13	<	4	9	<	<	0.4	19	33	263	<	54	101	1062	21	78	5	10	0.03	4.25	1.80	3.61	1.05	0.07
Pal-92 102+00N 93+00E	S	6	<	50	11	204	<	<	<	3	<	<	0.7	20	18	158	<	32	102	706	3	67	2	4	0.08	1.87	1.29	3.22	0.91	0.05
Pal-92 102+00N 94+00E	S	10	<	359	18	108	7	<	<	4	<	<	0.2	22	34	258	<	52	100	1315	11	95	2	7	0.05	3.09	1.84	3.70	1.28	0.08
Pal-92 102+00N 95+00E	S	ins	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pal-92 102+00N 96+00E	S	<	<	448	7	67	5	<	<	3	<	<	0.7	16	7	224	<	15	34	1073	11	133	1	2	0.01	1.28	3.58	1.60	0.30	0.03
Pal-92 102+00N 97+00E	S	20	<	61	15	113	5	<	<	4	<	<	<	23	63	64	6	114	137	443	2	31	2	5	0.12	3.80	0.32	4.91	1.72	0.04
Pal-92 102+00N 98+00E	S	6	<	79	13	81	9	<	<	5	<	<	<	20	43	74	<	70	161	367	2	35	2	3	0.15	2.30	0.45	4.96	1.26	0.04
Pal-92 102+00N 99+00E	S	37	<	249	18	80	17	<	<	10	<	<	<	24	21	67	<	42	229	264	2	28	3	5	0.15	2.98	0.40	6.28	0.77	0.03
Pal-92 102+00N 100+00E	S	5	<	82	12	149	5	<	<	5	<	<	<	15	18	78	<	35	140	301	3	31	1	3	0.14	2.22	0.38	4.52	0.77	0.04
Pal-92 102+00N 101+00E	S	ins	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pal-92 102+00N 102+00E	S	ins	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pal-92 102+00N 103+00E	S	8	<	198	14	104	37	<	<	4	<	<	<	28	44	74	<	70	126	1279	5	46	2	12	0.10	2.52	0.69	4.05	1.12	0.06
Pal-92 102+00N 104+00E	S	11	<	284	21	69	19	9	<	15	<	<	<	24	33	73	<	61	381	430	9	45	8	10	0.12	2.72	0.66	5.75	1.09	0.05
Pal-92 102+00N 105+00E	S	6	<	34	13	80	7	<	<	3	<	<	<	16	23	60	<	50	138	258	2	23	4	3	0.10	3.28	0.31	4.89	0.78	0.04
Pal-92 102+00N 106+00E	S	<	<	24	14	106	5	<	<	3	<	<	<	16	18	47	<	38	126	528	2	21	1	3	0.08	3.14	0.31	4.18	0.64	0.03
Pal-92 102+00N 107+00E	S	8	<	88	9	61	10	<	<	3	<	<	<	17	22	57	<	42	92	373	3	42	1	5	0.08	1.34	0.59	3.15	0.84	0.04
Pal-92 102+00N 108+00E	S	6	<	89	16	159	15	<	<	3	<	<	<	23	31	117	5	57	124	544	3	87	1	5	0.08	2.09	0.62	4.20	1.23	0.06
Pal-92 102+00N 109+00E	S	7	<	72	16	178	14	<	<	3	<	<	<	22	33	55	<	62	140	513	3	58	2	5	0.11	1.94	0.73	4.53	1.33	0.05
Pal-92 102+00N 110+00E	S	28	<	85	18	222	20	<	<	2	<	<	<	29	35	84	<	61	137	750	3	69	2	6	0.12	2.28	0.81	4.56	1.47	0.04
Pal-92 104+00N 90+00E	S	36	<	59	11	99	<	<	<	3	<	<	<	15	18	80	<	28	145	474	4	60	1	4	0.10	2.42	0.50	4.09	1.11	0.06
Pal-92 104+00N 91+00E	S	10	<	57	14	112	<	<	<	3	<	<	<	18	19	102	<	29	139	567	3	51	<	4	0.08	2.70	0.43	4.47	1.16	0.04
Pal-92 104+00N 92+00E	S	<	<	81	16	126	5	<	<	6	<	<	0.1	16	22	125	<	34	115	725	4	57	1	4	0.07	2.81	1.02	3.85	0.97	0.04
Pal-92 104+00N 93+00E	S	5	<	43	14	86	<	<	<	3	<	<	<	11	16	121	<	32	104	450	3	62	1	2	0.07	1.88	1.06	3.26	0.69	0.05
Pal-92 104+00N 94+00E	S	24	<	64	14	67	<	<	<	2	<	<	<	18	24	100	<	39	115	467	2	41	2	5	0.10	3.34	0.45	3.81	1.14	0.04
Pal-92 104+00N 95+00E	S	10	<	52	13	114	9	<	<	2	<	<	<	20	25	118	5	39	126	867	3	38	1	5	0.09	2.98	0.45	4.12	1.10	0.04
Pal-92 104+00N 96+00E	S	7	<	36	14	99	<	<	<	3	<	<	<	17	23	75	<	37	143	555	2	46	1	4	0.11	2.36	0.60	4.10	1.18	0.05
Pal-92 104+00N 97+00E	S	<	<	64	19	130	<	<	<	4	<	<	<	21	40	72	<	80	196	337	3	29	2	4	0.10	4.44	0.34	6.61	1.13	0.05
Pal-92 104+00N 98+00E	S	<	<	46	15	105	<	<	<	2	<	<	<	16	24	185	<	35	101	425	4	62	1	5	0.08	2.83	0.77	3.24	1.12	0.07
Pal-92 104+00N 99+00E	S	33	<	44	21	155	<	<	<	3	<	<	<	17	24	54	<	47	199	353	3	28	2	4	0.11	3.89	0.37	6.19	0.82	0.04
Pal-92 104+00N 100+00E	S	6	<	22	18	128	<	<	<	3	<	<	<	15	20	68	<	44	168	360	3	33	3	4	0.11	2.85	0.47	4.74	0.75	0.04
Pal-92 104+00N 101+00E	S	22	<	66	16	118	13	<	<	4	<	<	<	23	30	70	<	48	170	675	<	44	2	5	0.11	4.74	0.72	5.11	1.16	0.04
Pal-92 104+00N 102+00E	S	5	<	71	12	89	<	<	<	3	<	<	<	22	35	63	<	66	182	416	2	53	3	7	0.13	3.70	0.54	5.34	1.19	0.04
Pal-92 104+00N 103+00E	S	<	<	65	19	95	<	<	<	5	<	<	<	18	23	94	<	41	210	327	2	28	2	4	0.12	3.03	0.44	5.86	0.89	0.04
Pal-92 104+00N 104+00E	S	<	<	38	14	158	5	<	<	4	<	<	<	17	20	87	<	35	139	350	3	33	2	4	0.10	2.90	0.37	4.59	0.82	0.03
Min Limit		5	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01
Max Reported*		9999	99.9	20000	20000	20000	9999	9999	9999	9999	999	999	99.9	999	999	9999	999	9999	999	9999	9999	9999	999	99	1.00	9.99	9.99	9.99	9.99	9.99
Method		FAAA	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

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iPL 93J0106

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Client: Reliance Geological Services Ltd   iPL: 93J0106   Out: Oct 06, 1993
Project: Pal 790   161 Soil   In: Oct 01, 1993

Certified BC Assayer: David Chiu

Sample Name		Na %	P %
Pal-92 100+00N 96+00E	S	0.02	0.12
Pal-92 100+00N 97+00E	S	0.03	0.14
Pal-92 100+00N 98+00E	S	0.02	0.19
Pal-92 102+00N 90+00E	S	0.03	0.05
Pal-92 102+00N 91+00E	S	0.02	0.20
Pal-92 102+00N 92+00E	S	0.03	0.27
Pal-92 102+00N 93+00E	S	0.03	0.03
Pal-92 102+00N 94+00E	S	0.03	0.13
Pal-92 102+00N 95+00E	S	--	--
Pal-92 102+00N 96+00E	S	0.02	0.12
Pal-92 102+00N 97+00E	S	0.03	0.11
Pal-92 102+00N 98+00E	S	0.03	0.04
Pal-92 102+00N 99+00E	S	0.02	0.04
Pal-92 102+00N 100+00E	S	0.02	0.05
Pal-92 102+00N 101+00E	S	--	--
Pal-92 102+00N 102+00E	S	--	--
Pal-92 102+00N 103+00E	S	0.04	0.12
Pal-92 102+00N 104+00E	S	0.03	0.12
Pal-92 102+00N 105+00E	S	0.02	0.17
Pal-92 102+00N 106+00E	S	0.02	0.21
Pal-92 102+00N 107+00E	S	0.03	0.07
Pal-92 102+00N 108+00E	S	0.03	0.07
Pal-92 102+00N 109+00E	S	0.03	0.08
Pal-92 102+00N 110+00E	S	0.04	0.08
Pal-92 104+00N 90+00E	S	0.03	0.05
Pal-92 104+00N 91+00E	S	0.03	0.05
Pal-92 104+00N 92+00E	S	0.03	0.07
Pal-92 104+00N 93+00E	S	0.03	0.06
Pal-92 104+00N 94+00E	S	0.03	0.11
Pal-92 104+00N 95+00E	S	0.03	0.07
Pal-92 104+00N 96+00E	S	0.03	0.03
Pal-92 104+00N 97+00E	S	0.03	0.21
Pal-92 104+00N 98+00E	S	0.03	0.04
Pal-92 104+00N 99+00E	S	0.03	0.24
Pal-92 104+00N 100+00E	S	0.03	0.11
Pal-92 104+00N 101+00E	S	0.04	0.15
Pal-92 104+00N 102+00E	S	0.03	0.05
Pal-92 104+00N 103+00E	S	0.03	0.06
Pal-92 104+00N 104+00E	S	0.03	0.05
Min Limit		0.01	0.01
Max Reported*		5.00	5.00
Method		ICP	ICP

--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

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Client: Reliance Geological Services Ltd iPL: 93J0106 Out: Oct 06, 1993 Section 1 of 2
Project: Pal 790 161 Soil In: Oct 01, 1993 Certified BC Assayer: David Chiu

Sample Name		Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %
Pal-92 104+00N 105+00E	S	7	<	124	15	95	10	<	<	3	<	<	<	20	25	112	<	39	103	769	11	56	1	7	0.07	3.00	1.02	3.42	1.13	0.04
Pal-92 104+00N 106+00E	S	<	<	84	15	106	5	<	<	3	<	<	<	21	28	88	<	44	123	687	3	36	1	4	0.09	2.43	0.54	4.17	1.03	0.05
Pal-92 104+00N 107+00E	S	6	<	55	17	171	8	<	<	3	<	<	<	20	29	78	5	52	161	382	2	35	3	4	0.15	3.33	0.54	5.32	1.09	0.05
Pal-92 104+00N 108+00E	S	12	<	42	11	130	<	<	<	3	<	<	<	17	22	60	<	41	163	349	2	36	1	3	0.11	2.58	0.44	4.92	0.82	0.04
Pal-92 104+00N 109+00E	S	<	<	48	17	154	6	<	<	3	<	<	<	21	26	64	<	50	129	437	3	28	3	5	0.11	4.53	0.34	4.60	0.92	0.04
Pal-92 104+00N 110+00E	S	<	<	62	20	168	8	<	<	3	<	<	<	27	33	59	<	56	183	507	2	34	4	5	0.11	4.21	0.44	5.57	1.01	0.04
Pal-93 90+00N 88+00E	S	5	<	35	16	98	7	<	<	2	<	<	<	16	24	106	<	49	162	804	3	37	1	5	0.15	2.81	0.33	4.68	0.92	0.05
Pal-93 90+00N 89+00E	S	13	1.7	22	17	63	<	<	<	3	<	<	<	21	14	41	<	28	174	1036	<	29	8	5	0.29	5.72	0.69	6.89	0.90	0.02
Pal-93 92+00N 88+00E	S	<	<	172	17	142	7	<	<	3	<	<	<	25	43	116	<	62	127	720	5	52	1	5	0.10	3.06	1.03	4.60	1.36	0.04
Pal-93 92+00N 89+00E	S	<	<	43	20	95	<	<	<	3	<	<	<	15	28	133	<	53	137	389	2	48	2	5	0.11	3.68	0.30	5.72	1.11	0.05
Pal-93 92+00N 114+00E	BS	6	<	63	17	116	<	<	<	2	<	<	<	17	32	202	<	50	75	319	4	45	4	7	0.09	2.83	0.97	2.49	1.17	0.03
Pal-93 94+00N 87+00E	S	8	<	104	23	94	6	<	<	3	<	<	<	15	25	209	<	41	148	633	4	173	2	6	0.10	3.82	0.61	5.54	1.04	0.05
Pal-93 94+00N 88+00E	S	5	<	63	21	123	<	<	<	5	<	<	<	13	16	125	<	32	198	377	3	54	3	4	0.17	3.46	0.33	6.13	0.62	0.03
Pal-93 94+00N 89+00E	S	14	<	69	20	158	<	<	<	5	<	<	<	16	18	107	<	36	173	468	4	45	5	5	0.22	3.64	0.67	5.68	1.12	0.06
Pal-93 96+00N 87+00E	S	<	<	83	10	212	20	<	<	4	<	<	<	17	26	76	<	62	193	381	2	41	1	4	0.13	2.18	0.50	4.85	1.03	0.04
Pal-93 96+00N 88+00E	S	14	<	37	16	79	8	<	<	2	<	<	<	14	18	52	<	46	172	303	3	32	2	3	0.13	2.36	0.34	5.26	0.80	0.05
Pal-93 96+00N 89+00E	S	7	<	64	14	106	5	<	<	2	<	<	<	17	27	52	<	53	102	477	2	32	2	4	0.10	3.36	0.41	3.81	1.11	0.05
Pal-93 96+00N 111+00E	S	9	<	50	15	73	8	<	<	4	<	<	<	18	24	83	<	60	161	342	2	49	3	6	0.12	4.29	1.34	5.02	0.86	0.03
Pal-93 96+00N 112+00E	S	14	<	45	17	112	9	<	<	3	<	<	<	19	24	70	<	51	186	482	<	30	2	4	0.11	3.57	0.41	5.57	0.89	0.03
Pal-93 96+00N 113+20E	S	11	<	70	16	79	<	<	<	2	<	<	<	30	45	57	<	67	165	461	2	32	11	7	0.20	4.21	0.42	5.43	1.76	0.04
Pal-93 96+00N 114+00E	S	<	<	40	19	91	<	<	<	3	<	<	<	28	56	40	<	75	183	566	4	26	5	6	0.20	3.77	0.46	6.02	1.69	0.05
Pal-93 96+00N 115+00E	S	<	<	92	21	114	<	<	<	4	<	<	<	44	71	42	<	87	226	756	2	23	14	14	0.29	6.09	2.59	7.16	2.88	0.03
Pal-93 98+00N 111+00E	S	6	<	32	12	72	<	<	<	3	<	<	<	15	21	88	<	37	149	311	<	44	1	4	0.09	1.94	1.18	4.08	0.86	0.03
Pal-93 98+00N 112+00E	S	10	<	38	12	128	9	<	<	3	<	2	<	16	24	61	<	49	154	426	3	31	2	4	0.11	2.91	0.45	4.85	0.94	0.05
Pal-93 98+00N 113+00E	S	10	<	16	11	51	7	<	<	4	<	<	<	12	15	61	<	40	214	198	2	36	2	3	0.16	1.64	0.50	5.18	0.51	0.02
Pal-93 98+00N 115+00E	S	7	<	35	22	67	<	<	<	8	<	<	<	18	24	54	<	59	227	264	2	27	3	4	0.17	3.17	0.32	6.27	0.88	0.03
Pal-93 100+00N 111+00E	S	10	<	46	10	72	6	<	<	2	<	<	<	20	27	50	<	49	154	377	2	39	3	4	0.09	2.13	0.46	4.50	0.95	0.03
Pal-93 100+00N 112+00E	S	12	<	108	12	51	8	<	<	3	<	<	0.1	15	21	57	<	41	105	508	3	57	1	7	0.07	1.92	1.03	3.07	0.80	0.03
Pal-93 100+00N 113+00E	S	15	<	37	11	48	<	<	<	1	<	<	<	14	24	61	<	47	112	323	2	44	1	4	0.10	2.02	0.41	3.35	0.95	0.03
Pal-93 100+00N 114+00E	S	6	<	42	12	88	<	<	<	3	<	<	<	20	34	70	7	58	126	370	2	33	3	5	0.11	2.94	0.50	4.22	1.14	0.03
Pal-93 100+00N 115+00E	S	10	<	35	16	108	<	<	<	3	<	<	<	33	62	37	<	112	185	496	2	16	9	10	0.23	4.36	0.82	5.50	2.38	0.02
Pal-93 102+00N 111+00E	S	7	<	79	21	162	19	<	<	3	<	<	<	23	33	58	<	58	127	553	2	68	1	5	0.10	1.98	0.83	4.34	1.37	0.04
Pal-93 102+00N 112+00E	S	10	<	77	16	168	12	<	<	2	<	<	<	26	33	57	<	60	125	586	3	57	2	5	0.10	1.72	0.85	4.19	1.26	0.07
Pal-93 104+00N 111+00E	S	11	<	36	14	104	5	<	<	3	<	<	<	16	23	61	<	43	122	472	2	29	1	4	0.09	2.80	0.42	3.77	0.89	0.03
Pal-93 104+00N 112+00E	S	15	<	51	19	123	<	<	<	4	<	<	<	23	29	53	5	54	148	412	2	29	4	4	0.11	4.44	0.31	5.49	0.96	0.03
Pal-93 104+00N 113+00E	S	<	<	36	22	133	<	<	<	3	<	<	<	20	27	58	<	52	154	401	3	26	4	4	0.12	4.44	0.33	5.53	0.91	0.04
Pal-93 104+00N 114+00E	S	<	<	32	11	92	5	<	<	3	<	<	<	18	24	65	<	59	157	276	2	25	3	3	0.17	2.42	0.33	5.10	0.88	0.04
Pal-93 106+00N 91+00E	S	<	<	31	17	73	5	<	<	3	<	<	0.2	14	16	80	<	30	140	623	2	39	1	3	0.11	1.58	0.37	3.72	0.61	0.05
Pal-93 106+00N 92+00E	S	<	<	28	14	103	<	<	<	3	<	<	<	15	21	69	<	37	146	342	4	30	2	3	0.09	2.72	0.33	4.45	0.84	0.05
Min Limit		5	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01
Max Reported*		9999	99.9	20000	20000	20000	9999	9999	9999	9999	999	999	99.9	999	999	9999	999	9999	999	9999	9999	9999	999	99	1.00	9.99	9.99	9.99	9.99	9.99
Method		FAAA	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

---=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS
iPL 93J0106

2036 Columbia Street
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Client: Reliance Geological Services Ltd   iPL: 93J0106   Out: Oct 06, 1993
Project: Pal 790   161 Soil   In: Oct 01, 1993

Certified BC Assayer: David Chiu

Sample Name		Na %	P %
Pal-92 104+00N 105+00E	S	0.04	0.08
Pal-92 104+00N 106+00E	S	0.03	0.08
Pal-92 104+00N 107+00E	S	0.03	0.06
Pal-92 104+00N 108+00E	S	0.03	0.10
Pal-92 104+00N 109+00E	S	0.03	0.27
Pal-92 104+00N 110+00E	S	0.03	0.20
Pal-93 90+00N 88+00E	S	0.03	0.10
Pal-93 90+00N 89+00E	S	0.07	0.27
Pal-93 92+00N 88+00E	S	0.03	0.05
Pal-93 92+00N 89+00E	S	0.02	0.07
Pal-93 92+00N 114+00E	BS	0.03	0.03
Pal-93 94+00N 87+00E	S	0.04	0.06
Pal-93 94+00N 88+00E	S	0.03	0.08
Pal-93 94+00N 89+00E	S	0.05	0.07
Pal-93 96+00N 87+00E	S	0.03	0.04
Pal-93 96+00N 88+00E	S	0.02	0.14
Pal-93 96+00N 89+00E	S	0.03	0.23
Pal-93 96+00N 111+00E	S	0.04	0.04
Pal-93 96+00N 112+00E	S	0.03	0.14
Pal-93 96+00N 113+20E	S	0.03	0.06
Pal-93 96+00N 114+00E	S	0.02	0.12
Pal-93 96+00N 115+00E	S	0.02	0.13
Pal-93 98+00N 111+00E	S	0.03	0.04
Pal-93 98+00N 112+00E	S	0.03	0.15
Pal-93 98+00N 113+00E	S	0.02	0.02
Pal-93 98+00N 115+00E	S	0.03	0.03
Pal-93 100+00N 111+00E	S	0.03	0.09
Pal-93 100+00N 112+00E	S	0.03	0.03
Pal-93 100+00N 113+00E	S	0.03	0.08
Pal-93 100+00N 114+00E	S	0.03	0.09
Pal-93 100+00N 115+00E	S	0.02	0.09
Pal-93 102+00N 111+00E	S	0.03	0.09
Pal-93 102+00N 112+00E	S	0.03	0.08
Pal-93 104+00N 111+00E	S	0.03	0.11
Pal-93 104+00N 112+00E	S	0.02	0.28
Pal-93 104+00N 113+00E	S	0.03	0.19
Pal-93 104+00N 114+00E	S	0.03	0.05
Pal-93 106+00N 91+00E	S	0.03	0.05
Pal-93 106+00N 92+00E	S	0.02	0.12
Min Limit		0.01	0.01
Max Reported*		5.00	5.00
Method		ICP	ICP

---=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

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CERTIFICATE OF ANALYSIS

iPL 93J0106

Client: Reliance Geological Services Ltd iPL: 93J0106 Out: Oct 06, 1993 Section 1 of 2
Project: Pal 790 161 Soil In: Oct 01, 1993 Certified BC Assayer: David Chiu

Sample Name		Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %
Pal-93 106+00N 93+00E	S	<	<	34	11	67	<	<	<	3	<	<	<	15	25	79	<	44	153	464	2	33	1	4	0.13	2.40	0.38	4.40	1.26	0.04
Pal-93 106+00N 94+00E	S	6	<	81	15	112	<	<	<	2	<	<	<	23	30	144	<	45	132	851	2	36	3	5	0.11	3.74	0.44	4.47	1.39	0.06
Pal-93 106+00N 95+00E	S	<	<	51	13	79	<	<	<	2	<	<	<	18	26	129	<	38	136	665	2	41	2	5	0.10	3.06	0.47	4.47	1.25	0.05
Pal-93 106+00N 96+00E	S	5	<	107	15	91	7	<	<	8	<	<	<	21	28	166	<	39	149	465	2	42	4	5	0.13	3.38	0.70	4.93	1.14	0.05
Pal-93 106+00N 97+00E	S	<	<	33	17	92	<	<	<	3	<	<	<	16	21	88	<	39	222	364	2	33	2	4	0.18	2.65	0.42	5.73	0.86	0.07
Pal-93 106+00N 98+00E	S	12	<	52	16	90	6	<	<	3	<	<	<	20	24	78	<	37	114	498	2	46	2	5	0.10	3.21	0.48	3.95	0.95	0.04
Pal-93 106+00N 99+00E	S	5	<	72	17	146	5	<	<	3	<	<	<	24	30	94	<	40	143	488	2	37	2	6	0.12	3.66	0.50	5.00	1.14	0.05
Pal-93 106+00N 100+00E	S	<	<	28	13	135	7	<	<	3	<	<	<	14	15	103	<	27	164	381	3	25	1	4	0.05	2.77	0.33	4.95	0.71	0.04
Pal-93 106+00N 101+00E	S	<	<	74	16	167	11	<	<	8	<	<	<	20	21	123	<	35	171	399	2	37	2	4	0.05	2.28	0.64	5.94	0.76	0.05
Pal-93 106+00N 102+00E	S	5	<	39	16	81	<	<	<	3	<	<	<	16	35	75	<	92	183	311	2	36	3	5	0.15	2.91	0.47	5.83	1.13	0.05
Pal-93 106+00N 103+00E	S	6	0.3	29	10	38	<	<	<	4	<	<	<	12	16	58	<	33	134	209	3	28	2	4	0.12	2.50	0.33	3.67	0.54	0.03
Pal-93 106+00N 104+00E	S	<	<	59	16	56	15	<	<	4	<	<	<	15	24	72	<	41	158	327	<	38	5	5	0.14	3.24	0.58	4.92	0.87	0.02
Pal-93 106+00N 105+00E	S	<	<	78	10	66	60	11	<	5	<	<	<	18	18	46	<	20	164	910	<	11	1	11	0.04	1.43	0.22	7.37	0.28	0.03
Pal-93 106+00N 106+00E	S	<	<	52	12	84	<	<	<	2	<	<	<	15	20	57	<	34	110	395	4	52	1	4	0.09	2.42	0.83	3.19	0.96	0.03
Pal-93 106+00N 107+00E	S	14	<	36	17	103	6	<	<	3	<	<	<	20	31	55	<	61	174	447	2	32	2	4	0.12	3.88	0.42	5.39	1.07	0.05
Pal-93 106+00N 108+00E	S	<	<	53	16	114	<	<	<	3	<	<	<	20	37	79	<	70	190	491	2	33	4	5	0.18	2.77	0.50	5.78	1.41	0.08
Pal-93 106+00N 109+00E	S	ins	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pal-93 108+00N 90+00E	S	ins	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pal-93 108+00N 91+00E	S	<	<	39	13	84	<	<	<	3	<	<	<	16	25	120	<	43	150	587	2	44	1	4	0.09	2.42	0.53	4.66	1.24	0.06
Pal-93 108+00N 92+00E	S	<	<	47	12	92	10	<	<	4	<	<	<	17	36	75	7	54	145	526	<	40	1	4	0.13	2.58	0.63	4.20	1.49	0.08
Pal-93 108+00N 93+00E	S	<	<	58	22	83	<	<	<	4	<	<	<	17	24	156	<	38	173	559	2	42	1	5	0.09	3.75	0.42	5.87	1.40	0.06
Pal-93 108+00N 94+00E	S	<	<	23	13	100	<	<	<	3	<	<	<	13	17	54	<	35	143	354	3	30	1	4	0.12	2.17	0.37	4.48	0.82	0.04
Pal-93 108+00N 95+00E	S	<	<	29	23	99	7	<	<	5	<	<	<	17	24	71	5	46	230	429	2	42	3	4	0.16	2.70	0.54	5.68	1.08	0.04
Pal-93 108+00N 96+00E	S	5	<	50	20	85	<	<	<	6	<	<	<	17	33	72	<	57	186	249	2	31	3	4	0.13	2.93	0.44	5.79	0.84	0.04
Pal-93 108+00N 97+00E	S	<	<	16	12	58	5	<	<	3	<	<	<	12	15	42	5	32	163	254	2	32	1	3	0.16	1.84	0.37	4.06	0.64	0.03
Pal-93 108+00N 98+00E	S	<	<	42	16	122	5	<	<	3	<	<	<	18	26	83	<	47	179	525	2	43	2	5	0.17	2.83	0.48	5.62	1.20	0.04
Pal-93 108+00N 99+00E	S	6	<	35	19	249	8	<	<	4	<	<	<	21	27	100	<	46	208	513	2	40	2	4	0.12	2.30	0.71	5.67	0.99	0.05
Pal-93 108+00N 100+00E	S	<	<	68	14	155	<	<	<	5	<	<	<	21	26	76	<	43	182	633	3	46	2	5	0.10	2.59	0.79	4.99	1.19	0.05
Pal-93 108+00N 101+00E	S	ins	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pal-93 108+00N 102+00E	S	<	<	34	12	57	<	<	<	4	<	<	<	19	23	61	<	37	111	371	2	40	3	4	0.11	2.27	0.73	3.27	0.93	0.03
Pal-93 108+00N 103+00E	S	10	<	60	25	140	<	<	<	3	<	<	<	25	32	43	<	57	176	373	<	35	6	6	0.15	5.50	0.44	5.52	0.99	0.04
Pal-93 108+00N 104+00E	S	<	<	42	16	49	10	<	<	3	<	<	<	20	45	99	<	66	105	334	2	51	3	4	0.11	2.48	1.06	3.39	1.24	0.05
Pal-93 108+00N 105+00E	S	7	<	22	18	77	<	<	<	3	<	<	<	18	24	62	<	49	214	266	3	24	1	3	0.15	2.66	0.31	5.71	0.72	0.04
Pal-93 110+00N 91+00E	S	11	<	56	13	50	6	<	<	4	<	<	<	15	23	108	<	37	176	325	4	58	1	4	0.09	2.08	1.10	4.17	0.72	0.06
Pal-93 110+00N 92+00E	S	ins	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pal-93 110+00N 93+00E	S	9	<	101	19	146	<	<	<	5	<	<	<	23	29	135	<	47	145	677	4	55	3	6	0.12	2.73	1.24	4.54	1.13	0.06
Pal-93 110+00N 94+00E	S	7	<	61	14	104	<	<	<	3	<	<	<	17	22	82	<	38	173	552	<	35	2	5	0.14	3.12	0.53	4.93	1.05	0.04
Pal-93 110+00N 95+00E	S	14	<	60	35	171	5	<	<	3	<	<	<	23	39	60	<	63	164	408	2	35	4	5	0.13	4.16	0.46	5.32	1.17	0.05
Pal-93 110+00N 96+00E	S	8	<	12	12	53	<	<	<	5	<	<	<	13	15	62	<	28	173	258	2	41	1	3	0.17	1.72	0.54	3.35	0.82	0.03
Min Limit		5	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01
Max Reported*		9999	99.9	20000	20000	20000	9999	9999	9999	9999	999	999	99.9	999	999	9999	999	9999	999	9999	9999	9999	999	99	1.00	9.99	9.99	9.99	9.99	9.99
Method		FAAA	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

—=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

CERTIFICATE OF ANALYSIS
iPL 93J0106

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Client: Reliance Geological Services Ltd   iPL: 93J0106   Out: Oct 06, 1993
Project: Pal 790   161 Soil   In: Oct 01, 1993   Certified BC Assayer: David Chiu

Sample Name		Na %	P %
Pal-93 106+00N 93+00E	S	0.03	0.08
Pal-93 106+00N 94+00E	S	0.03	0.11
Pal-93 106+00N 95+00E	S	0.03	0.10
Pal-93 106+00N 96+00E	S	0.03	0.05
Pal-93 106+00N 97+00E	S	0.03	0.05
Pal-93 106+00N 98+00E	S	0.03	0.12
Pal-93 106+00N 99+00E	S	0.03	0.06
Pal-93 106+00N 100+00E	S	0.03	0.10
Pal-93 106+00N 101+00E	S	0.02	0.05
Pal-93 106+00N 102+00E	S	0.03	0.06
Pal-93 106+00N 103+00E	S	0.03	0.05
Pal-93 106+00N 104+00E	S	0.03	0.04
Pal-93 106+00N 105+00E	S	0.02	0.12
Pal-93 106+00N 106+00E	S	0.03	0.04
Pal-93 106+00N 107+00E	S	0.03	0.20
Pal-93 106+00N 108+00E	S	0.03	0.08
Pal-93 106+00N 109+00E	S	—	—
Pal-93 108+00N 90+00E	S	—	—
Pal-93 108+00N 91+00E	S	0.03	0.10
Pal-93 108+00N 92+00E	S	0.03	0.04
Pal-93 108+00N 93+00E	S	0.03	0.10
Pal-93 108+00N 94+00E	S	0.03	0.07
Pal-93 108+00N 95+00E	S	0.03	0.05
Pal-93 108+00N 96+00E	S	0.02	0.03
Pal-93 108+00N 97+00E	S	0.03	0.05
Pal-93 108+00N 98+00E	S	0.03	0.06
Pal-93 108+00N 99+00E	S	0.02	0.04
Pal-93 108+00N 100+00E	S	0.03	0.03
Pal-93 108+00N 101+00E	S	—	—
Pal-93 108+00N 102+00E	S	0.03	0.02
Pal-93 108+00N 103+00E	S	0.03	0.07
Pal-93 108+00N 104+00E	S	0.03	0.02
Pal-93 108+00N 105+00E	S	0.02	0.08
Pal-93 110+00N 91+00E	S	0.03	0.03
Pal-93 110+00N 92+00E	S	—	—
Pal-93 110+00N 93+00E	S	0.03	0.04
Pal-93 110+00N 94+00E	S	0.03	0.08
Pal-93 110+00N 95+00E	S	0.03	0.06
Pal-93 110+00N 96+00E	S	0.03	0.01
Min Limit		0.01	0.01
Max Reported*		5.00	5.00
Method		ICP	ICP

--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS

iPL 93J0106

2036 Columbia Street
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Client: Reliance Geological Services Ltd iPL: 93J0106 Out: Oct 06, 1993
Project: Pal 790 161 Soil In: Oct 01, 1993

Certified BC Assayer: David Chiu

Sample Name		Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	Hg ppm	Mo ppm	Tl ppm	Bi ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	W ppm	Cr ppm	V ppm	Mn ppm	La ppm	Sr ppm	Zr ppm	Sc ppm	Ti %	Al %	Ca %	Fe %	Mg %	K %
Pal-93 110+00N 97+00E	S	12	<	42	15	130	<	<	<	2	<	<	<	19	32	57	<	55	145	394	2	49	3	4	0.10	3.01	0.49	4.49	1.10	0.04
Pal-93 110+00N 98+00E	S	16	<	44	18	80	6	<	<	3	<	<	<	17	21	45	<	37	178	442	2	36	2	4	0.16	2.18	0.53	4.51	1.00	0.03
Pal-93 110+00N 99+00E	S	12	<	26	14	77	<	<	<	4	<	<	<	15	19	73	<	34	171	339	2	31	2	3	0.13	2.47	0.44	5.04	0.65	0.04
Pal-93 110+00N 100+00E	S	21	<	57	13	76	<	<	<	8	<	<	0.1	23	22	124	<	36	146	1156	3	58	1	4	0.09	2.12	1.22	3.88	0.95	0.04
Pal-93 110+00N 101+00E	S	7	<	27	12	97	13	<	<	3	<	2	<	19	24	67	5	44	173	383	2	34	1	4	0.12	3.04	0.50	5.01	0.74	0.03
Min Limit		5	0.1	1	2	1	5	5	3	1	10	2	0.1	1	1	2	5	1	2	1	2	1	1	1	0.01	0.01	0.01	0.01	0.01	0.01
Max Reported*		9999	99.9	20000	20000	20000	9999	9999	9999	9999	999	999	99.9	999	999	9999	999	9999	999	9999	9999	9999	999	99	1.00	9.99	9.99	9.99	9.99	9.99
Method		FAAA	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP

---=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS
iPL 93J0106

2036 Columbia Street
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

Client: Reliance Geological Services Ltd iPL: 93J0106 Out: Oct 06, 1993 Section 2 of 2
Project: Pal 790 161 Soil In: Oct 01, 1993 Certified BC Assayer: David Chiu

Sample Name		Na %	P %
Pal-93 110+00N 97+00E	S	0.03	0.08
Pal-93 110+00N 98+00E	S	0.03	0.04
Pal-93 110+00N 99+00E	S	0.03	0.10
Pal-93 110+00N 100+00E	S	0.02	0.03
Pal-93 110+00N 101+00E	S	0.03	0.12

	Na	P
Min Limit	0.01	0.01
Max Reported*	5.00	5.00
Method	ICP	ICP

—=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

INTERNATIONAL PLASMA LABORATORY LTD

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Method of Gold analysis by Fire Assay / AAS

(a) 20.0 to 30.0 grams of sample is mixed with a combination of fluxes in a fusion pot. The sample is then fused at high temperature to form a lead "button".

(b) The precious metals are extracted by cupellation. Any Silver is dissolved by nitric acid and decanted. The gold bead is then dissolved in boiling concentrated aqua regia solution heated by a hot water bath.

(c) The gold in solution is determined with an Atomic Absorption Spectrometer. The gold value, in parts per billion, is calculated by comparision with a set of known gold standards.

QUALITY CONTROL

Every fusion of 24 pots contains 22 samples, one internal standard or blank, and a random reweigh of one of the samples. Samples with anomalous gold values greater than 500 ppb are automatically checked by Fire Assay/AA methods. Samples with gold values greater than 10000 ppb are automatically checked by Fire Assay/Gravimetric methods.

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Method of ICP Multi-element Analyses

(a) 0.50 grams of sample is digested with diluted aqua regia solution by heating in a hot water bath for 90 minutes, then cooled, bulked up to a fixed volume with demineralized water, and thoroughly mixed.

(b) The specific elements are determined using an Inductively Coupled Argon Plasma spectrophotometer. All elements are corrected for inter-element interference. All data are subsequently stored onto computer diskette.

* Aqua regia leaching is partial for Al, Ba, Ca, Cr, Fe, K, Mg, Mn, Na, P, Sn, Sr and W.

QUALITY CONTROL

The machine is calibrated using six known standards and a blank. Another blank, which was digested with the samples, and a standard are tested before any samples to confirm the calibration. A maximum of 20 samples are analysed, and then a standard, also digested with the samples, is run. A known standard with characteristics best matching the samples is chosen and tested. Another 20 samples are analysed, with the last one being a random reweigh of one of the samples. The standard used at the beginning is rerun. This procedure is repeated for all of the samples.

APPENDIX B

STATISTICAL ANALYSIS

SOIL SAMPLE GEOCHEMISTRY
ON THE PAL PROPERTY
British Columbia

By

A.M.S.Clark, Ph.D., P.Geo.(B.C.)
SEGURO CONSULTING INC.

8 October 1993

INTRODUCTION

An investigation of the distribution of gold and copper in soil samples from the Pal Property was carried out between 8 August and 13 August 1993.

This report is based on an evaluation of the geochemical analyses only, the author has not visited the property.

A total of 463 samples were collected from one grid on the property, that had been sampled in three stages, a small detailed section in the northeast in 1991, an extension of this in less detail over a much larger area in 1992 (reported in 1992), and 152 samples over the balance of the grid in the summer of 1993. Statistics were undertaken on all the samples together as the colletion and analytical procedures used did not change over the period of the samples. Although the detailed grid samples will tend to bias the results slightly, the number of samples in each set is too few to be considered for statistical evaluation separately. Also, the main practical use of the data is the evaluation of the maps, which are least effected by the bias due to denser sample spacing of the 1991 samples.

DISCUSSION

Summary statistics and correlation coefficients have been calculated for the elements and histograms plotted for gold and copper. Gold values are generally low (see Summary Statistics Table and histograms) and show no significant correlation with other elements (see Correlation Coefficient Table). The strongest correlation is only 0.12 (too small to be relevant). Copper shows moderate to high values.

The histogram of gold shows a lognormal Gaussian distribution with some high values above 650 ppb Au. Similarly, copper shows a lognormal distribution but with some high values above 400 ppm Cu.

The 'breakpoints' for the symbol sizes used on the symbol maps were determined by inspection of the histograms. The following are the 'breakpoints' chosen as showing the most useful pattern of values on the maps:

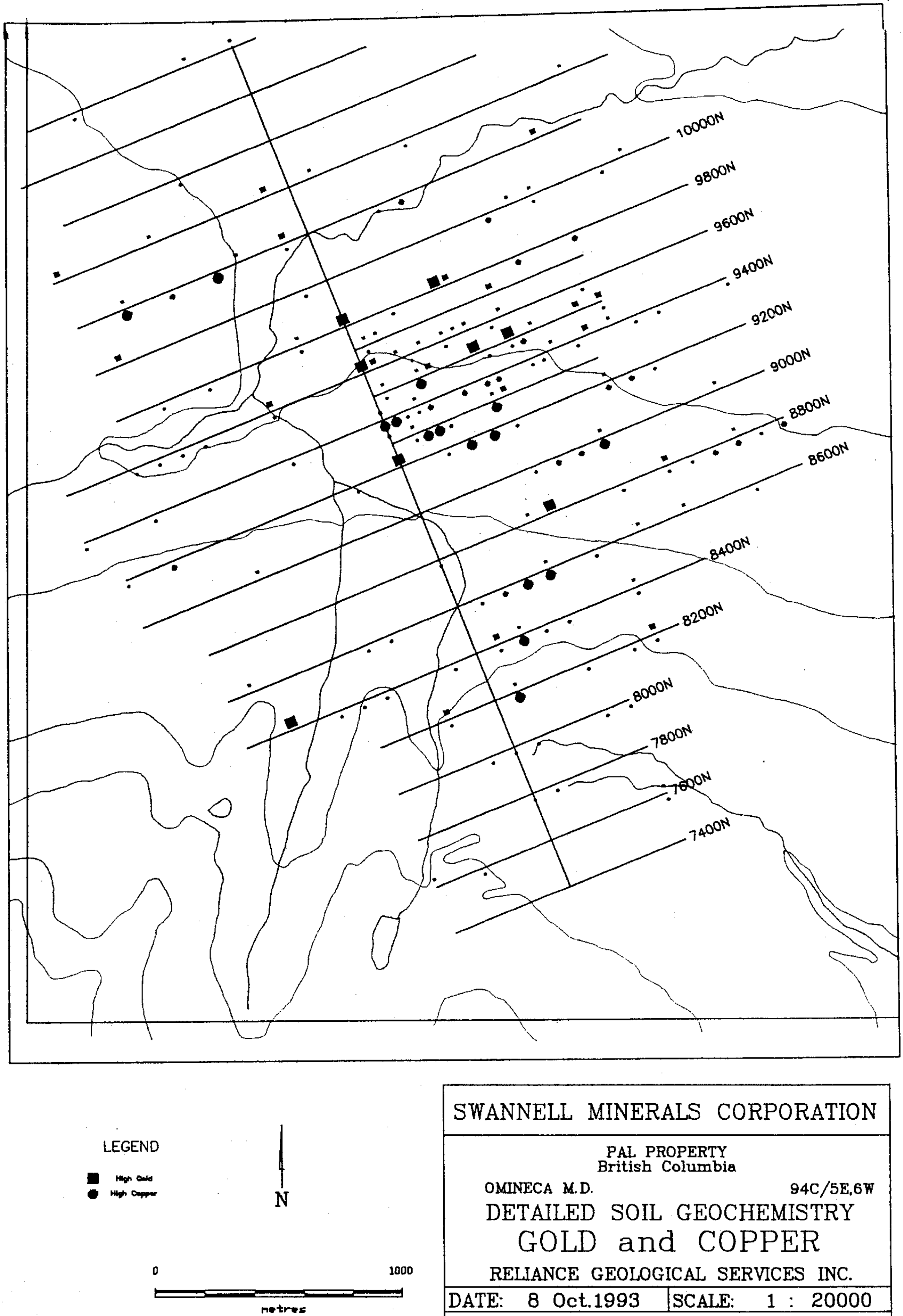
Gold:	Low values	>=15 and <25 ppb Au
	Medium values	>=25 and <50 ppb Au
	High values	>=50 ppb Au.
Copper:	Low values	>=100 and <250 ppm Cu
	Medium values	>=250 and <400 ppm Cu
	High values	>=400 ppm Cu.

The symbol maps of the element values (in back pocket) indicate a weak spatial association of gold and copper in the detailed part of the grid.

CONCLUSION

Gold values in the soils show low to medium background with some high values. Copper shows low background with some higher values spatially associated with the higher gold values on the detailed grid.

Some higher gold and copper values in the southeast of the grid, and to a lesser extent to the northeast and west, should be followed up with further sampling if the geological situation suggests continuity in any of these directions, but the geochemical results alone show only a weak possibility of continuity.



SWANNELL MINERALS CORPORATION

PAL PROPERTY
British Columbia

OMINECA M.D. 94C/5E,6W

DETAILED SOIL GEOCHEMISTRY

GOLD and COPPER

RELIANCE GEOLOGICAL SERVICES INC.

DATE: 8 Oct.1993	SCALE: 1 : 20000

Drawn By: TONY CLARK CONSULTING

CERTIFICATE

I, ANTHONY M.S. CLARK, of 2988 Fleet Street, Coquitlam, B.C., do hereby state that:

1. I am a graduate of the University of Cape Town, Cape Town, South Africa, with a Bachelor of Science Degree in Geology, 1963, and of Memorial University, St. John's, Newfoundland, with a Doctor of Philosophy Degree in Geology, 1974.

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

3. I actively pursued my career as an exploration geologist for twenty-three years from 1963 to 1986, since when I have undertaken consulting in the fields of mineral exploration and computer applications to exploration.

4. The information, opinions, and recommendations in this report are based on information obtained by other personnel who undertook the fieldwork on the property, and on published and unpublished literature. I have not visited the subject property.

5. I have no interest, direct or indirect, in the subject claims or the securities of Swannell Minerals Corporation.

6. I consent to the use of this report in Prospectus or Statement of Material Facts for the purpose of private or public financing.

PROFESSIONAL
PROVINCE OF
A. M. S. CLARK
BRITISH COLUMBIA
GEOSCIENTIST

Anthony M.S. Clark, Ph.D., P.Geo.(B.C.)

Dated at Coquitlam, British Columbia,

13th October 1993

5

APPENDICES

Summary Statistics

	Ag_ppm	As_ppm	Au_ppb	Ba_ppm	Bi_ppm
Number	463	463	463	463	463
Mean	0.2473	17.488	9.509	101.300	2.540
Std Dev	0.2946	19.368	18.652	57.193	2.772
Maximum	2.00	146.0	294.0	533.0	11.0
Minimum	0.05	1.0	1.0	30.0	1.0
Range	1.95	145.0	293.0	503.0	10.0
Coef Var	119.1154	110.7520	196.1536	56.4589	109.1512
Std Err	0.0137	0.9001	0.8668	2.6580	0.1288
Median	0.100	10.00	5.00	84.00	1.00
Mode	0.05	1.0	2.5	61.0	1.0
Variance	0.0868	375.137	347.880	3271.037	7.686
Skewness	2.4774	1.9228	9.4174	3.0158	1.4527
Kurtosis	8.1478	6.0648	123.0116	14.5123	0.4573

Summary Statistics

	Cd_ppm	Co_ppm	Cr_ppm	Cu_ppm	Hg_ppm
Number	463	463	463	463	347
Mean	0.1303	18.721	44.974	107.056	1.718
Std Dev	0.2886	5.843	15.733	235.003	0.622
Maximum	2.70	51.0	150.0	4308.0	5.0
Minimum	0.05	1.0	7.0	12.0	1.5
Range	2.65	50.0	143.0	4296.0	3.5
Coef Var	221.3861	31.2084	34.9815	219.5137	36.2085
Std Err	0.0134	0.2715	0.7312	10.9215	0.0334
Median	0.050	18.00	42.00	62.00	1.50
Mode	0.05	17.0	35.0	57.0	1.5
Variance	0.0833	34.136	247.514	55226.360	0.387
Skewness	5.7263	1.3294	1.4775	13.3272	2.8029
Kurtosis	37.3830	5.7042	5.8963	222.7306	6.9823

Summary Statistics

	La_ppm	Mn_ppm	Mo_ppm	Ni_ppm	Pb_ppm
Number	347	463	463	463	463
Mean	3.032	662.369	2.861	21.950	10.091
Std Dev	2.289	799.964	1.815	11.491	5.758
Maximum	25.0	10347.0	15.0	79.0	46.0
Minimum	1.0	137.0	0.5	1.0	1.0
Range	24.0	10210.0	14.5	78.0	45.0
Coef Var	75.4975	120.7730	63.4323	52.3491	57.0601
Std Err	0.1229	37.1775	0.0843	0.5340	0.2676
Median	3.00	495.00	3.00	22.00	9.00
Mode	2.0	412.0	3.0	24.0	7.0
Variance	5.239	639941.779	3.293	132.039	33.152
Skewness	4.8510	8.6498	2.2279	0.9336	1.0983
Kurtosis	35.6747	91.4089	8.5450	2.4311	3.3946

Summary Statistics

	Sb_ppm	Sc_ppm	Sr_ppm	Tl_ppm	V_ppm
Number	463	347	463	347	463
Mean	2.613	5.036	42.397	5.000	157.795
Std Dev	1.695	3.154	24.271	0.000	46.401
Maximum	13.0	36.0	221.0	5.0	381.0
Minimum	1.0	0.5	11.0	5.0	10.0
Range	12.0	35.5	210.0	0.0	371.0
Coef Var	64.8573	62.6369	57.2468	0.0000	29.4055
Std Err	0.0788	0.1693	1.1280	0.0000	2.1564
Median	2.50	4.00	36.00	5.00	158.00
Mode	2.5	4.0	32.0	5.0	146.0
Variance	2.873	9.950	589.088	0.000	2153.010
Skewness	2.3481	4.8427	2.8678		0.3269
Kurtosis	7.3845	36.8761	11.7611		3.1223

Summary Statistics

	W_ppm	Zn_ppm	Zr_ppm
Number	463	463	347
Mean	3.298	111.801	1.921
Std Dev	1.300	72.934	1.720
Maximum	9.0	988.0	14.0
Minimum	2.0	36.0	0.5
Range	7.0	952.0	13.5
Coef Var	39.4194	65.2357	89.5687
Std Err	0.0604	3.3895	0.0924
Median	2.50	100.00	2.00
Mode	2.5	81.0	2.0
Variance	1.690	5319.419	2.960
Skewness	1.6754	6.9829	3.0433
Kurtosis	2.4847	69.7688	14.1980

Pearson Correlation Coefficients

	Ag_ppm	As_ppm	Au_ppb	Ba_ppm	Bi_ppm	Cd_ppm	Co_ppm
Ag_ppm	1.	-0.0174	0.0492	0.0369	0.3691	0.0540	-0.0346
As_ppm	-0.0174	1.	-0.0398	0.3453	-0.3934	0.0734	0.2062
Au_ppb	0.0492	-0.0398	1.	-0.0524	0.1146	-0.0330	0.0681
Ba_ppm	0.0369	0.3453	-0.0524	1.	-0.2364	0.2265	0.2015
Bi_ppm	0.3691	-0.3934	0.1146	-0.2364	1.	-0.0603	0.0511
Cd_ppm	0.0540	0.0734	-0.0330	0.2265	-0.0603	1.	0.1299
Co_ppm	-0.0346	0.2062	0.0681	0.2015	0.0511	0.1299	1.
Cr_ppm	-0.0794	0.0457	0.0198	-0.1278	0.0006	-0.0336	0.4420
Cu_ppm	0.1997	0.0030	0.0368	0.2351	-0.0171	0.2837	0.1312
Hg_ppm	0.1185	0.3456	0.0969	0.1448	-0.0572	0.0331	0.1489
La_ppm	0.2878	0.0835	0.0372	0.3757	-0.0451	0.2698	0.1507
Mn_ppm	0.0491	0.1679	-0.0102	0.5118	-0.0627	0.4305	0.4791
Mo_ppm	-0.1086	0.2075	-0.0166	0.2953	-0.4817	0.1469	0.2101
Ni_ppm	-0.2262	0.3644	-0.0730	0.1635	-0.5471	0.0051	0.5320
Pb_ppm	-0.0638	-0.1738	-0.0089	-0.1112	-0.0835	-0.0021	0.2702
Sb_ppm	-0.1669	0.5023	-0.0768	0.1472	-0.5195	0.0656	0.1583
Sc_ppm	0.1141	0.1131	0.1262	0.2717	-0.0502	0.1162	0.5235
Sr_ppm	0.0964	0.0612	-0.0459	0.3046	-0.0987	0.4402	0.0142
Tl_ppm	undef.	undef.	undef.	undef.	undef.	undef.	undef.
V_ppm	-0.1467	0.0001	0.0875	-0.2693	0.1488	-0.3441	0.1778
W_ppm	0.0982	-0.0778	0.0619	-0.1578	0.4147	0.0255	0.0819
Zn_ppm	0.0568	0.2078	-0.0163	0.1344	-0.0001	0.3702	0.4420
Zr_ppm	0.0262	-0.0944	-0.0694	-0.0424	0.0202	-0.0879	0.2377

Pearson Correlation Coefficients

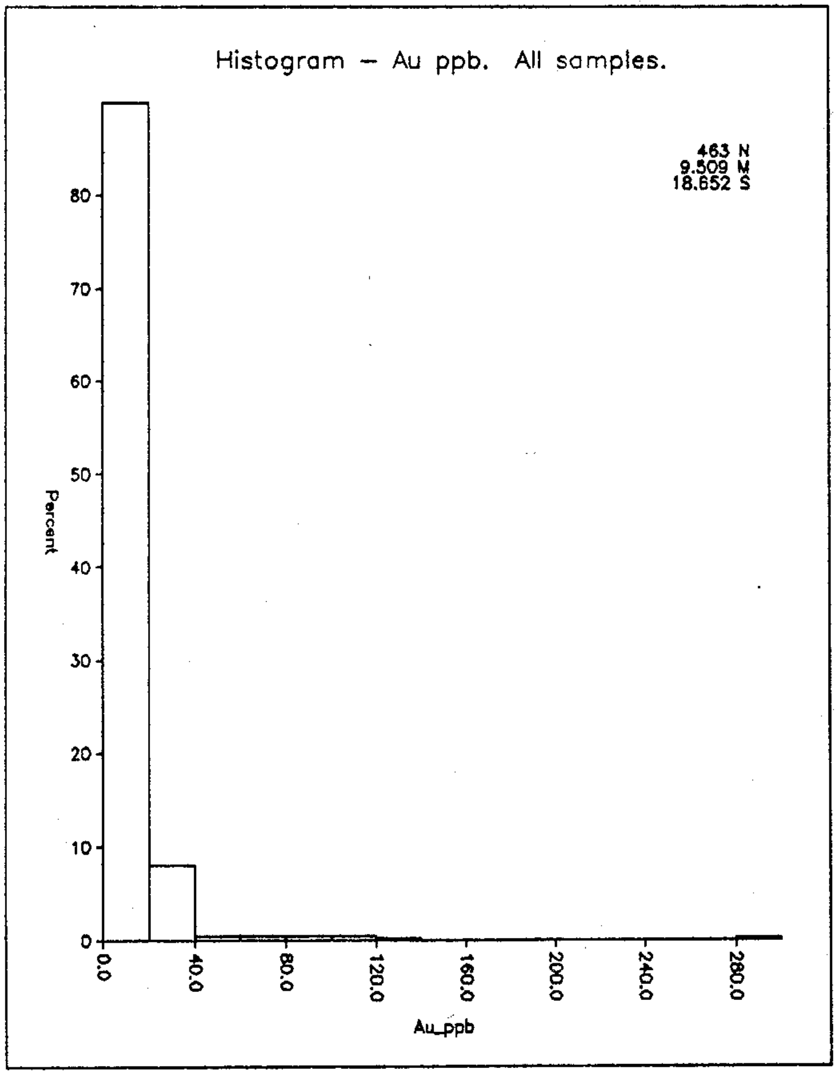
	Cr_ppm	Cu_ppm	Hg_ppm	La_ppm	Mn_ppm	Mo_ppm	Ni_ppm
Ag_ppm	-0.0794	0.1997	0.1185	0.2878	0.0491	-0.1086	-0.2262
As_ppm	0.0457	0.0030	0.3456	0.0835	0.1679	0.2075	0.3644
Au_ppb	0.0198	0.0368	0.0969	0.0372	-0.0102	-0.0166	-0.0730
Ba_ppm	-0.1278	0.2351	0.1448	0.3757	0.5118	0.2953	0.1635
Bi_ppm	0.0006	-0.0171	-0.0572	-0.0451	-0.0627	-0.4817	-0.5471
Cd_ppm	-0.0336	0.2837	0.0331	0.2698	0.4305	0.1469	0.0051
Co_ppm	0.4420	0.1312	0.1489	0.1507	0.4791	0.2101	0.5320
Cr_ppm	1.	0.0313	0.0394	0.0540	-0.0248	-0.0175	0.6026
Cu_ppm	0.0313	1.	0.0338	0.6441	0.4210	0.3291	0.0111
Hg_ppm	0.0394	0.0338	1.	0.1261	0.1185	0.0785	0.0746
La_ppm	0.0540	0.6441	0.1261	1.	0.3469	0.3185	0.0593
Mn_ppm	-0.0248	0.4210	0.1185	0.3469	1.	0.3242	0.0887
Mo_ppm	-0.0175	0.3291	0.0785	0.3185	0.3242	1.	0.2950
Ni_ppm	0.6026	0.0111	0.0746	0.0593	0.0887	0.2950	1.
Pb_ppm	0.1809	-0.0610	-0.1367	-0.0176	0.0162	0.1861	0.2578
Sb_ppm	0.1790	0.0300	0.3873	0.1045	0.0429	0.2724	0.4533
Sc_ppm	0.2982	0.5082	0.0711	0.5014	0.3495	0.2754	0.3844
Sr_ppm	0.0196	0.2879	0.0855	0.3379	0.2756	0.1335	0.0109
Tl_ppm	undef.	undef.	undef.	undef.	undef.	undef.	undef.
V_ppm	0.2013	-0.1697	0.0536	-0.2496	-0.2035	0.0763	-0.0062
W_ppm	0.0944	0.0662	0.0316	-0.0243	0.0277	-0.1574	-0.2239
Zn_ppm	0.1789	0.0698	0.0401	0.1102	0.2567	0.1187	0.2473
Zr_ppm	0.2103	-0.0019	-0.0169	-0.0306	-0.0488	0.1115	0.3555

Pearson Correlation Coefficients

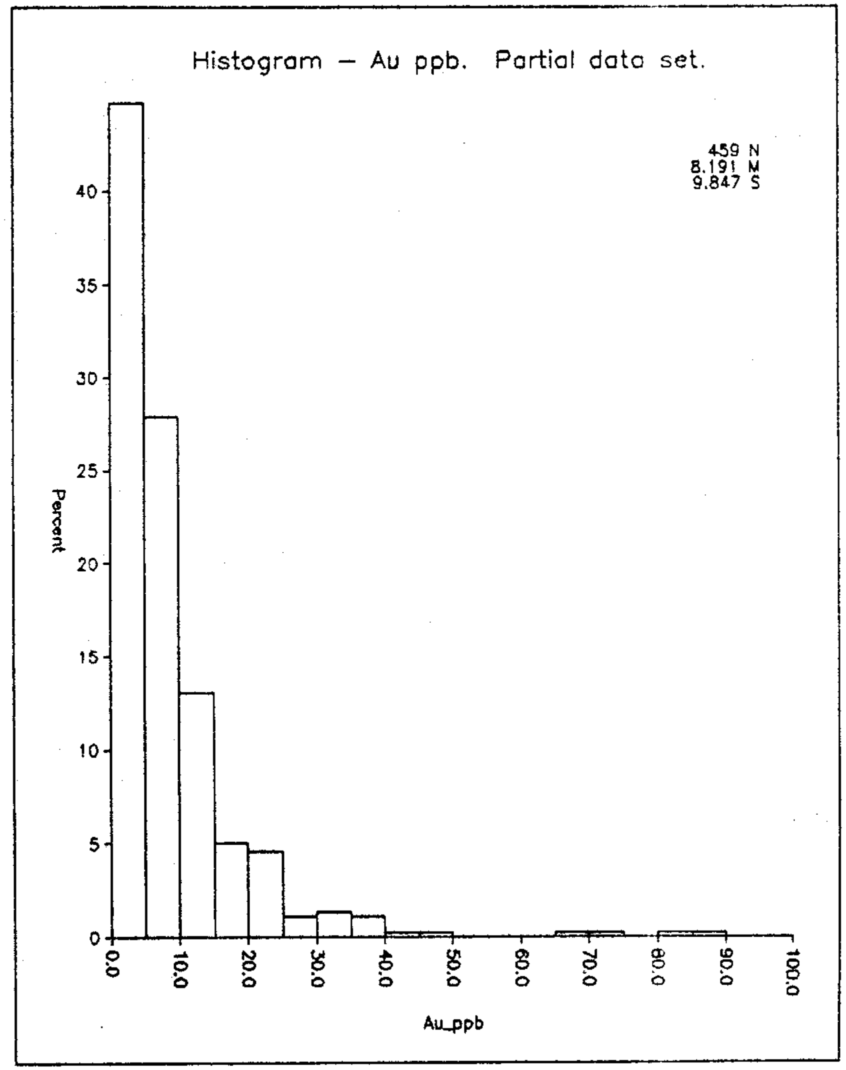
	Pb_ppm	Sb_ppm	Sc_ppm	Sr_ppm	Tl_ppm	V_ppm
Ag_ppm	-0.0638	-0.1669	0.1141	0.0964	undef.	-0.1467
As_ppm	-0.1738	0.5023	0.1131	0.0612	undef.	0.0001
Au_ppb	-0.0089	-0.0768	0.1262	-0.0459	undef.	0.0875
Ba_ppm	-0.1112	0.1472	0.2717	0.3046	undef.	-0.2693
Bi_ppm	-0.0835	-0.5195	-0.0502	-0.0987	undef.	0.1488
Cd_ppm	-0.0021	0.0656	0.1162	0.4402	undef.	-0.3441
Co_ppm	0.2702	0.1583	0.5235	0.0142	undef.	0.1778
Cr_ppm	0.1809	0.1790	0.2982	0.0196	undef.	0.2013
Cu_ppm	-0.0610	0.0300	0.5082	0.2879	undef.	-0.1697
Hg_ppm	-0.1367	0.3873	0.0711	0.0855	undef.	0.0536
La_ppm	-0.0176	0.1045	0.5014	0.3379	undef.	-0.2496
Mn_ppm	0.0162	0.0429	0.3495	0.2756	undef.	-0.2035
Mo_ppm	0.1861	0.2724	0.2754	0.1335	undef.	0.0763
Ni_ppm	0.2578	0.4533	0.3844	0.0109	undef.	-0.0062
Pb_ppm	1.	-0.0471	0.0373	0.0409	undef.	0.0386
Sb_ppm	-0.0471	1.	0.1765	0.1661	undef.	-0.0157
Sc_ppm	0.0373	0.1765	1.	0.0499	undef.	0.1508
Sr_ppm	0.0409	0.1661	0.0499	1.	undef.	-0.5098
Tl_ppm	undef.	undef.	undef.	undef.	1.	undef.
V_ppm	0.0386	-0.0157	0.1508	-0.5098	undef.	1.
W_ppm	-0.1687	-0.1895	0.0159	-0.1491	undef.	0.2398
Zn_ppm	0.3737	0.1332	0.1744	0.0710	undef.	0.0062
Zr_ppm	0.2106	-0.1087	0.2223	-0.0994	undef.	0.0974

Pearson Correlation Coefficients

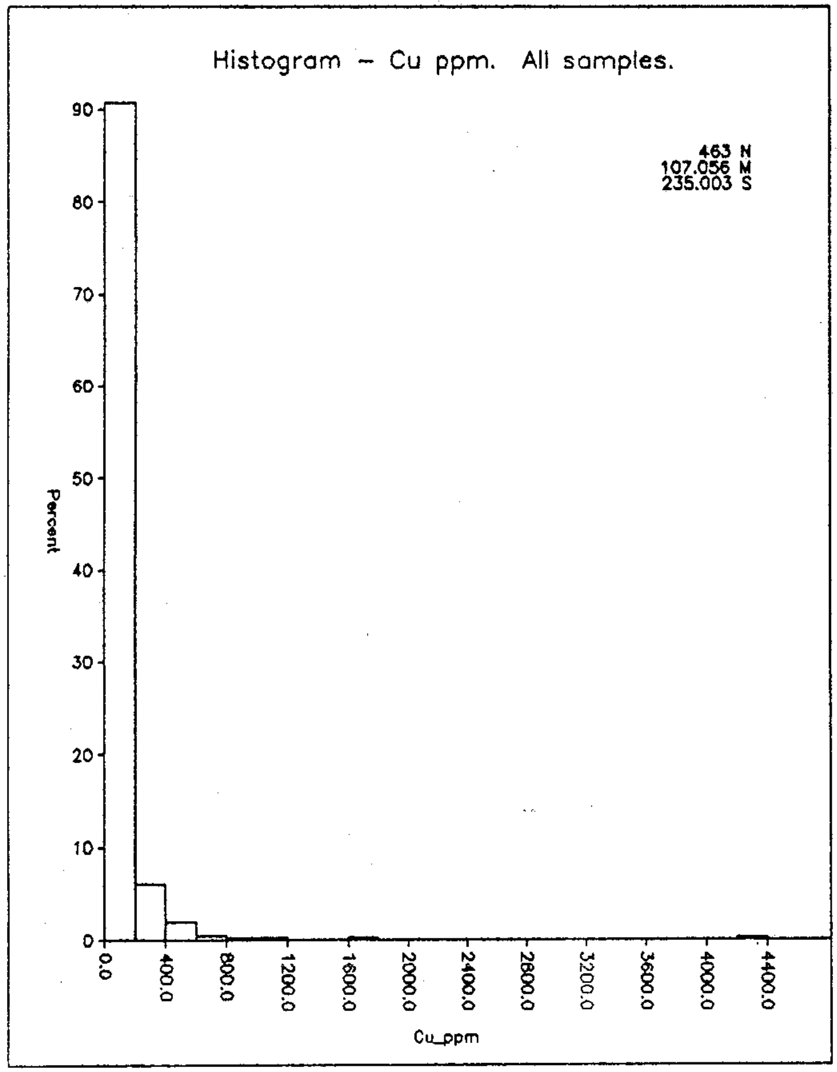
	W_ppm	Zn_ppm	Zr_ppm
Ag_ppm	0.0982	0.0568	0.0262
As_ppm	-0.0778	0.2078	-0.0944
Au_ppb	0.0619	-0.0163	-0.0694
Ba_ppm	-0.1578	0.1344	-0.0424
Bi_ppm	0.4147	-0.0001	0.0202
Cd_ppm	0.0255	0.3702	-0.0879
Co_ppm	0.0819	0.4420	0.2377
Cr_ppm	0.0944	0.1789	0.2103
Cu_ppm	0.0662	0.0698	-0.0019
Hg_ppm	0.0316	0.0401	-0.0169
La_ppm	-0.0243	0.1102	-0.0306
Mn_ppm	0.0277	0.2567	-0.0488
Mo_ppm	-0.1574	0.1187	0.1115
Ni_ppm	-0.2239	0.2473	0.3555
Pb_ppm	-0.1687	0.3737	0.2106
Sb_ppm	-0.1895	0.1332	-0.1087
Sc_ppm	0.0159	0.1744	0.2223
Sr_ppm	-0.1491	0.0710	-0.0994
Tl_ppm	undef.	undef.	undef.
V_ppm	0.2398	0.0062	0.0974
W_ppm	1.	0.0794	-0.0864
Zn_ppm	0.0794	1.	-0.0392
Zr_ppm	-0.0864	-0.0392	1.

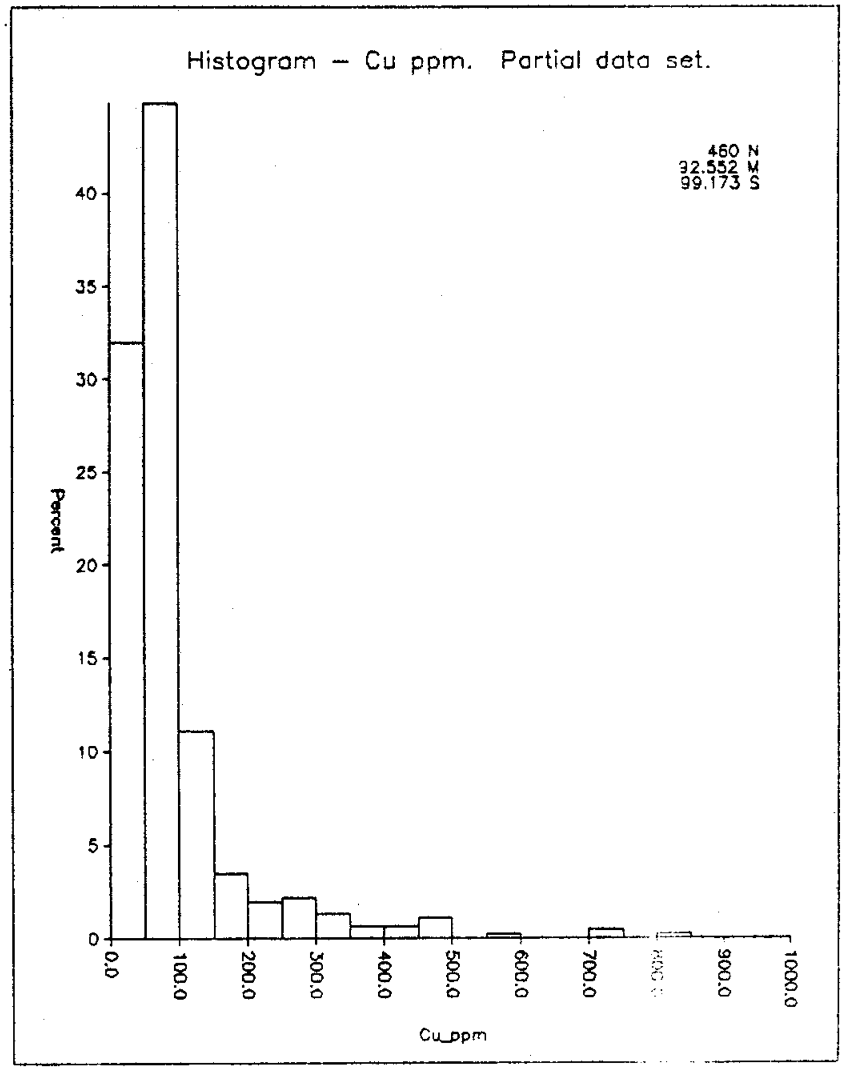


Histogram – Au ppb. All samples.
463 N
9.509 M
18.652 S
Percent
0
10
20
30
40
50
60
70
80
0.0
40.0
80.0
120.0
160.0
200.0
240.0
280.0
Au_ppb



Histogram – Au ppb. Partial data set.
459 N
8.191 M
9.847 S
Percent
0
5
10
15
20
25
30
35
40
0.0
10.0
20.0
30.0
40.0
50.0
60.0
70.0
80.0
90.0
100.0
Au_ppb


Histogram – Cu ppm. All samples.
463 N
107.056 M
235.003 S
Percent
Cu_ppm


Histogram – Cu ppm. Partial data set.
460 N
92.552 M
99.173 S
Percent
Cu_ppm

APPENDIX C

LOGISTICAL REPORT ON IP and MAG SURVEYS

LOGISTICAL REPORT

INDUCED POLARIZATION AND MAGNETOMETER SURVEYS

ABE AND PAL PROPERTIES

OMINECA AREA, B.C.

on behalf of

RELIANCE GEOLOGICAL SEVICES INC.
241 East 1st Street
North Vancouver, B. C., V7L 1B4

Field work completed: September 3 to 30, 1993

by

Alan Scott, Geophysicist
SCOTT GEOPHYSICS LTD.
4013 West 14th Avenue
Vancouver, B.C. V6R 2X3

October 9, 1993

TABLE OF CONTENTS

Appendix

Contents of map pockets

Accompanying maps (1:5000 scale)
(originals, reproducible vellums, three blackline copies)

1. INTRODUCTION

Induced polarization/resistivity surveys (IP surveys) and magentometer surveys were performed on the ABE and PAL Properties, Omineca Area, B.C., in the period September 3 to 30, 1993. The surveys were performed by Scott Geophysics Ltd. on behalf of Reliance Geological Services Inc.

The pole dipole array was used for the IP surveys, with an "a" spacing of 75 metres and "n" separations of 1 to 4.

The magnetometer survey was performed at a reading interval of 25 metres.

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

2. SURVEY COVERAGE

A total of 22.5 line kilometres of IP survey was performed on the ABE property. Lines 9400N to 9800N were surveyed with the current electrode to the west of the receiving electrodes. Lines 11400N and 11600N were surveyed with the current electrode to the east of the receiving electrodes. Lines 10000N to 11200N were surveyed with access from the central area of the survey lines, with the current either east or west, and a few stations overlap.

A total of 13.1 line kilometres of magnetometer survey was completed on the ABE Property. The western portion of lines 100200N to 10800N were not surveyed with magnetometer.

A total of 28.6 line kilometres of IP survey was performed on the PAL property. All lines were IP surveyed with the current electrode to the west of the receiving electrodes on the PAL Property.

A total of 26.5 line kilometres of magnetometer survey were completed on the PAL property.

3. PERSONNEL

Ken Moir, geophysical technician, was the party chief on the survey, on behalf of Scott Geophysics.

Peter Leriche, geologist, was the Reliance representative for the survey.

4. INSTRUMENTATION

A Scintrex IPR12 receiver and IPC7 (2.5 kw) transmitter were used on the IP survey. Readings were taken in the time domain using a 2 second current pulse.

The chargeability plotted on the accompanying pseudosections and plan maps is for the interval 690 to 1050 milliseconds after shutoff (midpoint at 870 milliseconds). This corresponds to the M7 value for the IPR11.

Two Scintrex IGS-MP3 total field magnetometers were used for the magnetometer survey, with one as the field survey unit and the other as a fixed base station. The base station failed towards the end of the PAL survey, and that survey data was drift corrected by looping the field unit to repeats (subbase stations) and/or the base station at hourly intervals.

5. RECOMMENDATIONS

A preliminary evaluation of the results of the IP survey at the ABE and PAL Properties indicates the presence of moderate to strong chargeability highs that merit further investigation. Very strong magnetic highs were detected on the south portion of the ABE grid.

Correlation of these geophysical survey results to geological and geochemical information is required before any specific recommendations could be made.

Respectfully Submitted,

Alan Scott, P. Geos.

Statement of Qualifications

for

Alan Scott, Geophysicist

of

4013 West 14th Avenue
Vancouver, B.C. V6R 2X3

I, Alan Scott, 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.

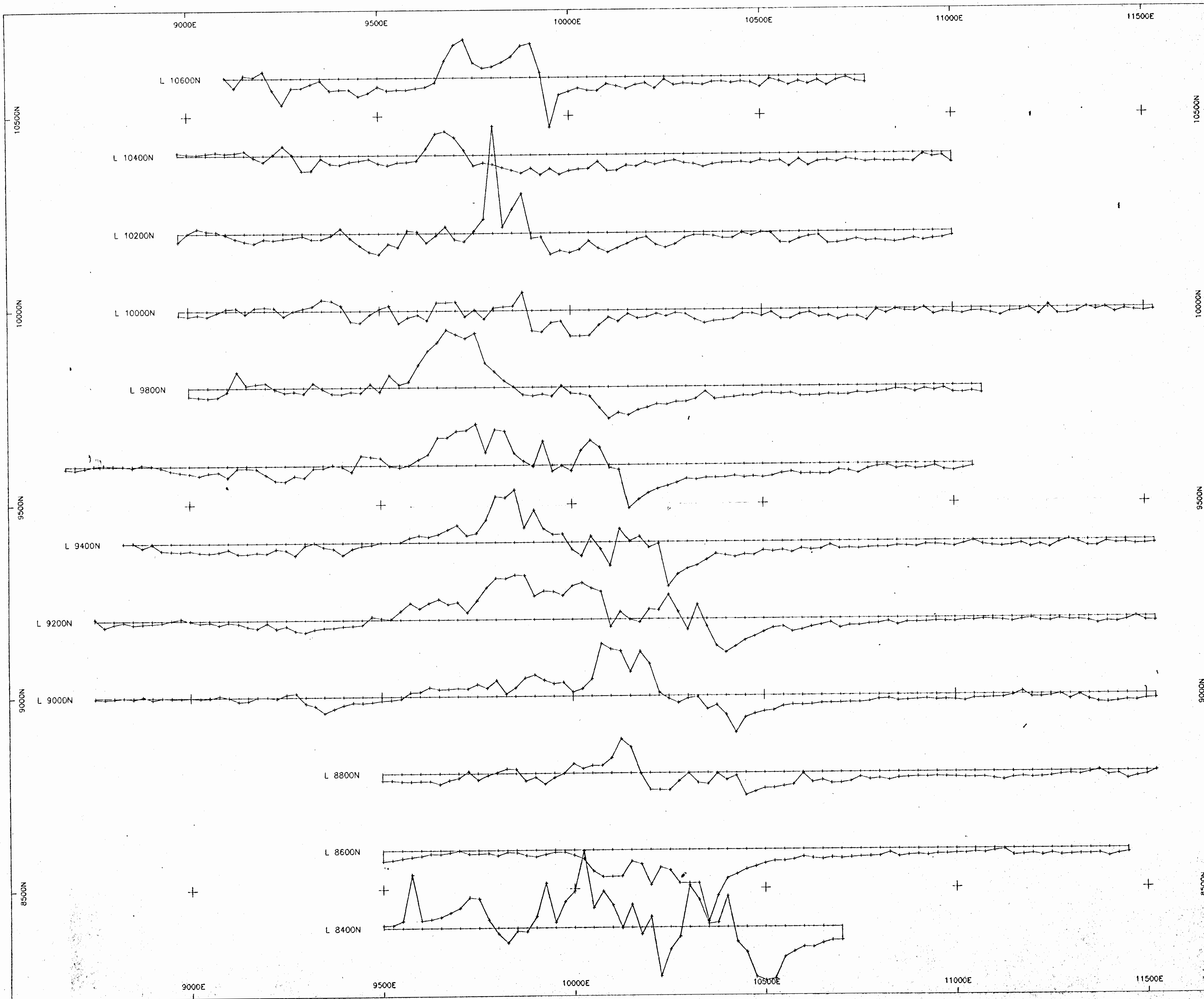
3. I graduated from the University of British Columbia with a Bachelor of Science degree (Geophysics) in 1970, and with a Master of Business Administration degree in 1982.

4. I am a member of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.

5. I have been practicing my profession as a Geophysicist in the field of Mineral Exploration since 1970.

Respectfully submitted,

Alan Scott



SURVEY SPECIFICATIONS

survey magnetometer	Scintrex MP3
base magnetometer	Scintrex MP3
type	proton
measurement	total field
units	gammas
diurnal corrections	base station
profile base	57000 gammas
profile scale	500 gammas/cm
positive values	above line

GEOLOGICAL BRANCH ASSESSMENT REPORT

23,281

0 100 200 300 400

METERS

FIG 9

RELIANCE GEOLOGICAL SERVICES INC.

PAL PROPERTY, OMINECA AREA, B.C.

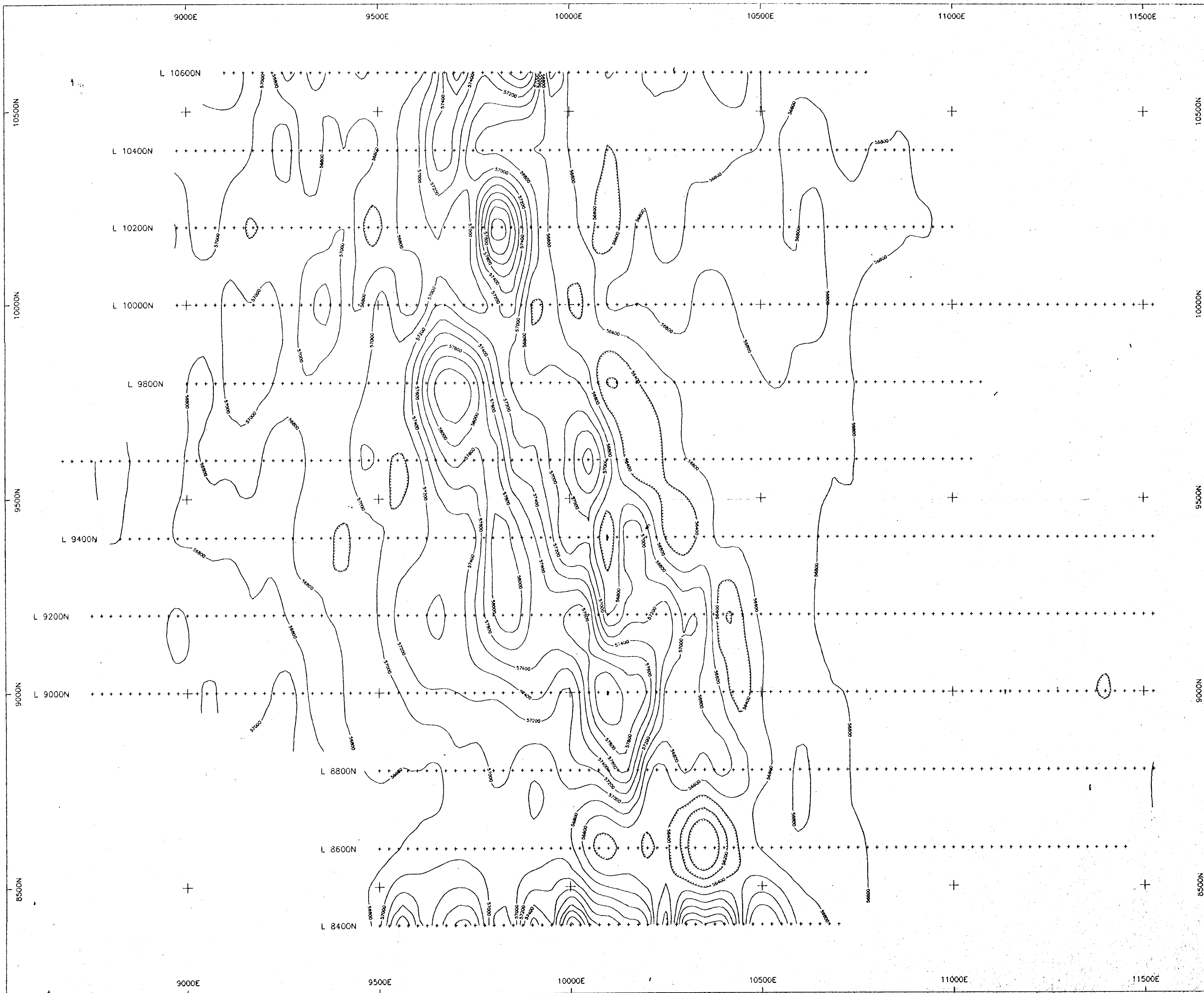
MAGNETOMETER PROFILES

profile scale = 500 gammas/cm

profile base = 57000 gammas

DRAWN BY: ars | DATE: Sept/93

SCOTT GEOPHYSICS LTD.



SURVEY SPECIFICATIONS

survey magnetometer	Scintrex MP3
base magnetometer	Scintrex MP3
type	proton
measurement	total field
units	gammas
diurnal corrections	base station

GEOLOGICAL BRANCH ASSESSMENT REPORT

23,281

0 100 200 300 400

METERS

FIG 10

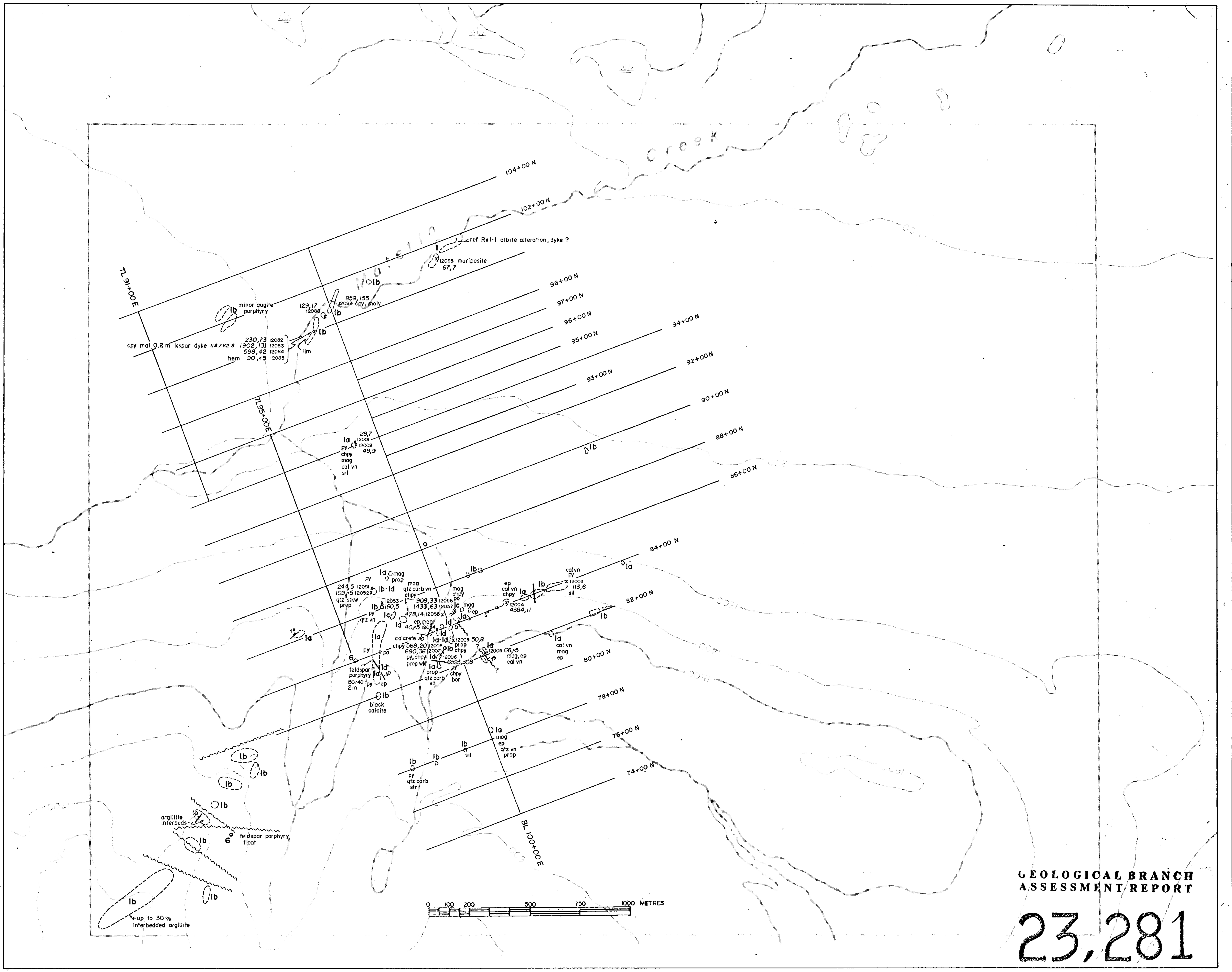
RELIANCE GEOLOGICAL SERVICES INC.

PAL PROPERTY, OMINECA AREA, B.C.

MAGNETOMETER CONTOUR PLAN

contour interval = 200 gammas

DRAWN BY: ars	DATE: Sept/93
SCOTT GEOPHYSICS LTD.	



Volcanics

1 - TAKLA

- 1a - andesite porphyry and fine grained flows
- 1b - andesite tuffs
- 1c - pyroxenite ?
- 1d - diorite flow ?
- 1e - agglomerate

Intrusives

6 - Feldspar Porphyry

- mag - magnetite
- py - pyrite
- ep - epidote
- po - pyrrhotite
- sil - silicification
- qtz - quartz
- carb - carbonate
- str - stringers
- vn - veining/veinlets/stringers
- cal - calcite
- prop - propylitic alteration
- bor - bornite
- mal - malachite
- stkw - stockwork
- wk - weak

- outcrop
- geological contact (gradational)
- possible fault (dip direction from slickensides)
- bedding
- float
- 12002 48,9 x rock sample location and id. Cu (ppm), Au (ppb)

0 100 200 500 750 1000 METRES

N

SWANNELL MINERALS CORPORATION

PAL PROPERTY

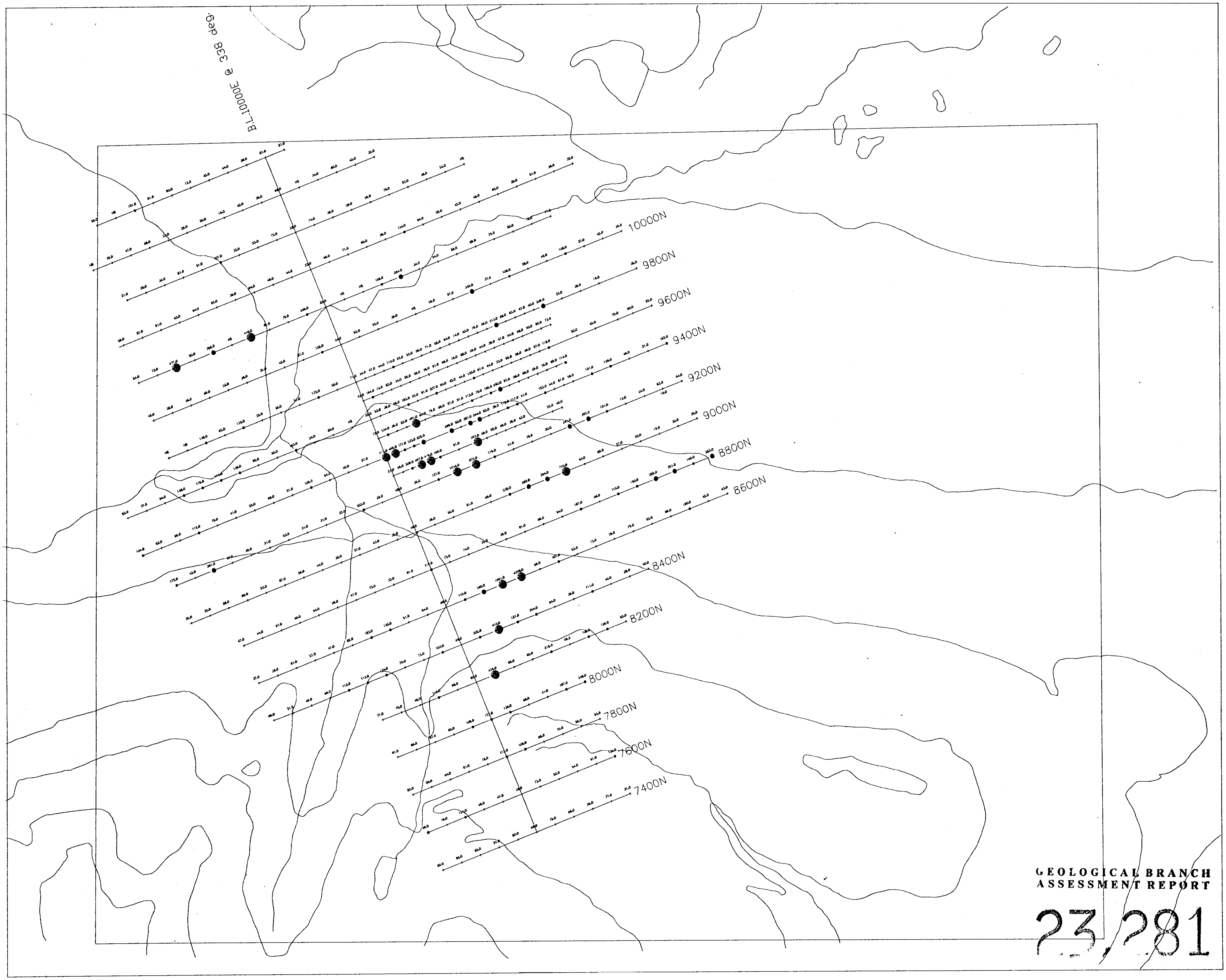
OMINECA M.D., B.C.

GEOLOGY and GEOCHEMISTRY

Scale 1 : 10,000	N.T.S. 94-C/5E,6W	Drawn by g.e.l.
Date August 1992	Geologist	Figure 6

REBAGLIATI GEOLOGICAL CONSULTING LTD.

RELIANCE GEOLOGICAL SERVICES INC.



LEGEND

Cu ppm

>=400 ppm Cu

>=250 and <400 ppm Cu

>=100 and <250 ppm Cu

N

0 1000

metres

SWANNELL MINERALS CORPORATION

PAL PROPERTY
British Columbia

FIG 7

OMINECA M.D. 94C/5E,6W

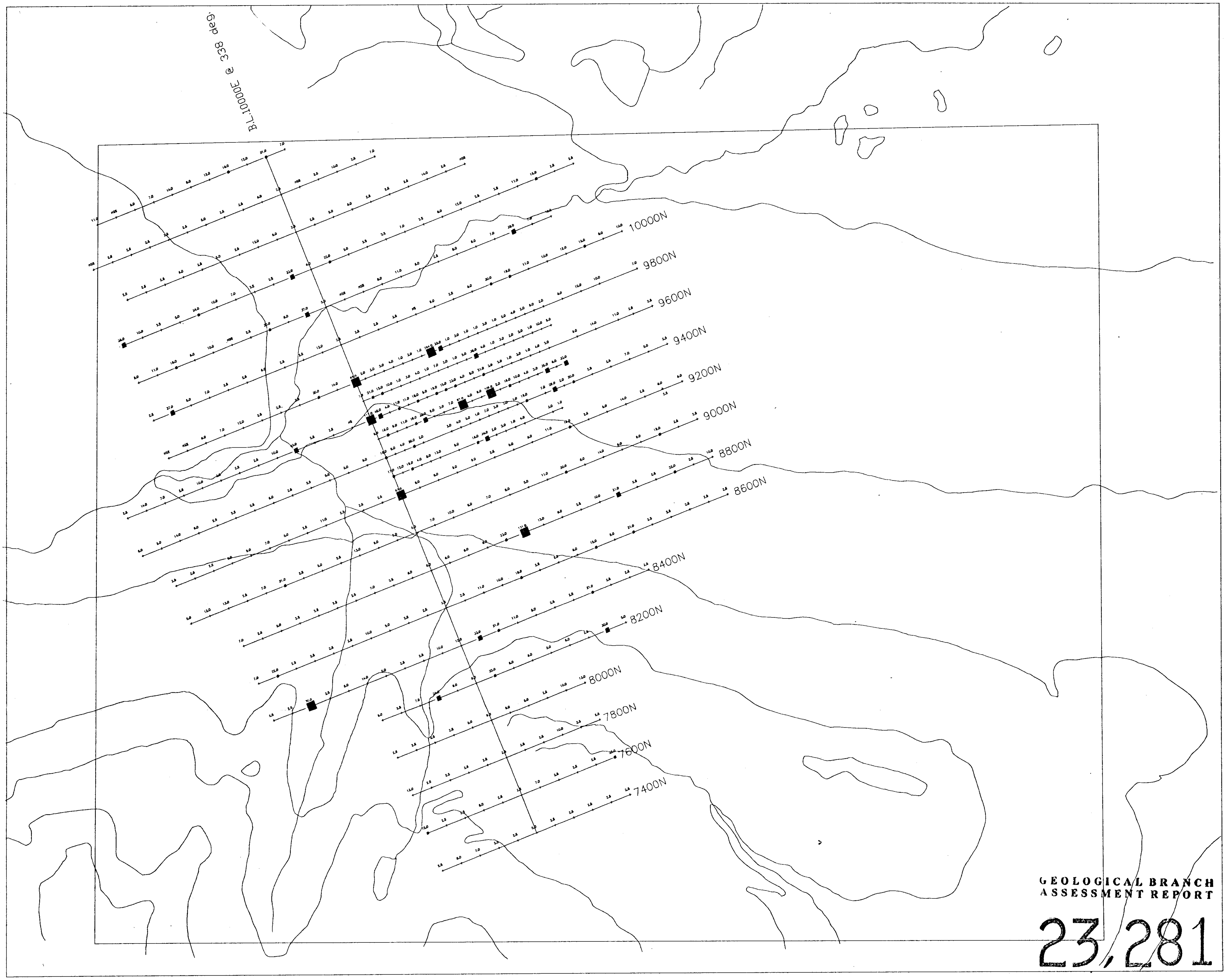
DETAILED SOIL GEOCHEMISTRY

COPPER

RELIANCE GEOLOGICAL SERVICES INC.

DATE: 11 Oct.1993 SCALE: 1 : 10000

Drawn By: TONY CLARK CONSULTING



GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,281

LEGEND

Au ppb

>=50 ppb Au

>=25 and <50 ppb Au

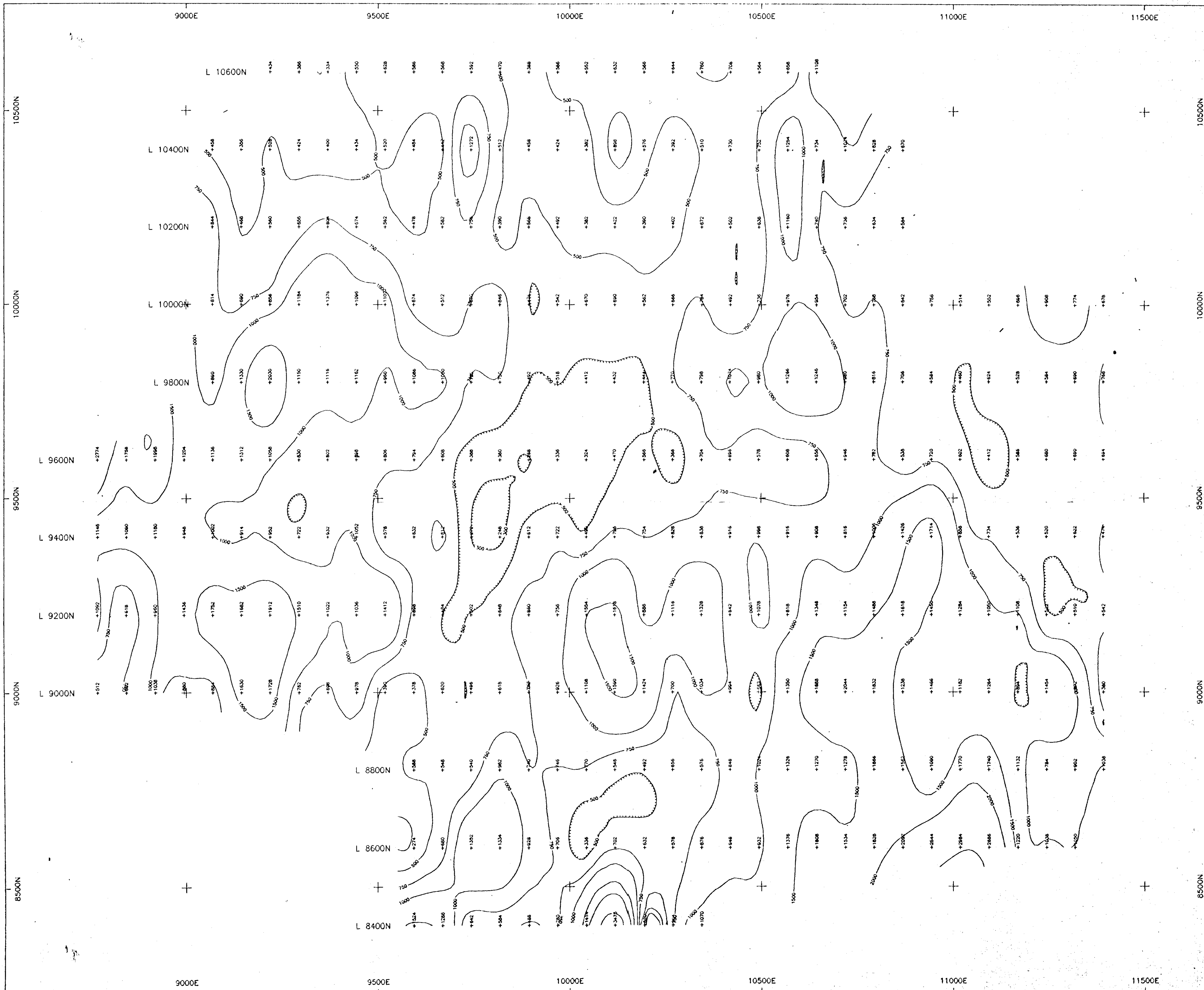
>=15 and <25 ppb Au

N

0 1000

metres

SWANNELL MINERALS CORPORATION	
PAL PROPERTY British Columbia	FIG 8
OMINECA M.D.	94C/5E,6W
DETAILED SOIL GEOCHEMISTRY GOLD	
RELIANCE GEOLOGICAL SERVICES INC.	
DATE: 11 Oct.1993	SCALE: 1 : 10000
Drawn By: TONY CLARK CONSULTING	



SURVEY SPECIFICATIONS

receiver	Scintrex IPR12
transmitter	Scintrex IPC7
pulse time	2 seconds
Mx receive window	690-1050 msecs
mid point	870 msecs
array	pole dipole
a spacing	75 metres
n separations	1, 2, 3, 4

current electrode located west of receiving electrodes

contoured value a=75 m n=2

log contour intervals:
50, 75, 100, 150, 200, 300, 500, 1000
1000, 1500, 2000, 3000, 5000 (ohm-m)

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,281

0 100 200 300 400
METERS

FIG 11

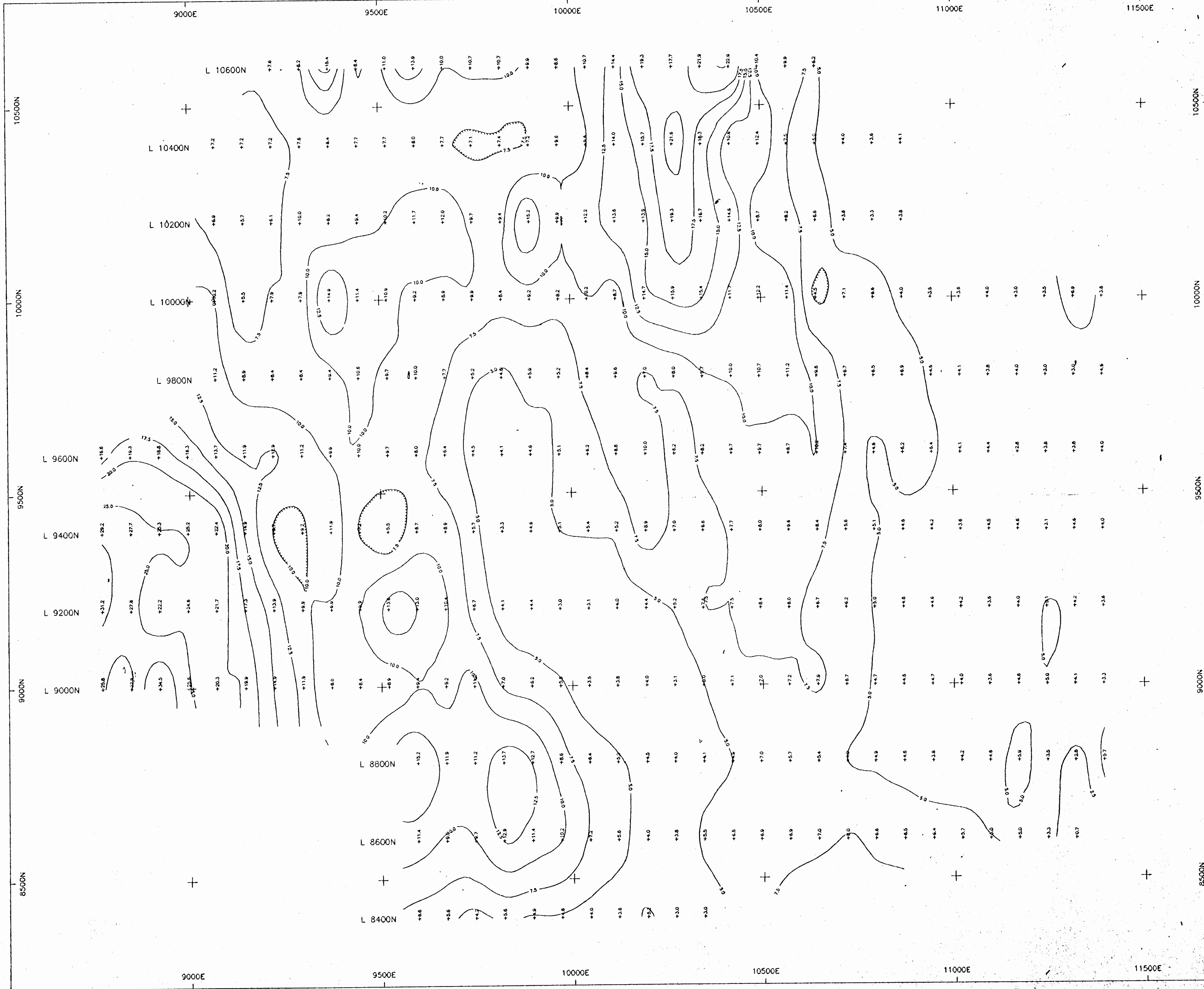
RELIANCE GEOLOGICAL SERVICES INC.

PAL PROPERTY, OMINECA AREA, B.C.

RESISTIVITY CONTOUR PLAN
a spacing = 75 meters
second separation (n=2)

DRAWN BY: ors | DATE: Sept/93

SCOTT GEOPHYSICS LTD.



SURVEY SPECIFICATIONS

receiver	Scintrex IPR12
transmitter	Scintrex IPC7
pulse time	2 seconds
Mx receive window	690-1050 msecs
mid point	870 msecs
array	pole dipole
a spacing	75 metres
n separations	1, 2, 3, 4

current electrode located west of receiving electrodes

contoured value a=75 m n=2

contour intervals:
2.5, 5.0, 7.5, 10.0, 12.5, 15.0, 17.5
20.0, 25.0, 30.0, 35.0, 40.0 (mV/Volt)

GEOLOGICAL BRANCH ASSESSMENT REPORT

23,281

0 100 200 300 400
METERS

FIG. 12

RELIANCE GEOLOGICAL SERVICES INC.

PAL PROPERTY, OMINECA AREA, B.C.

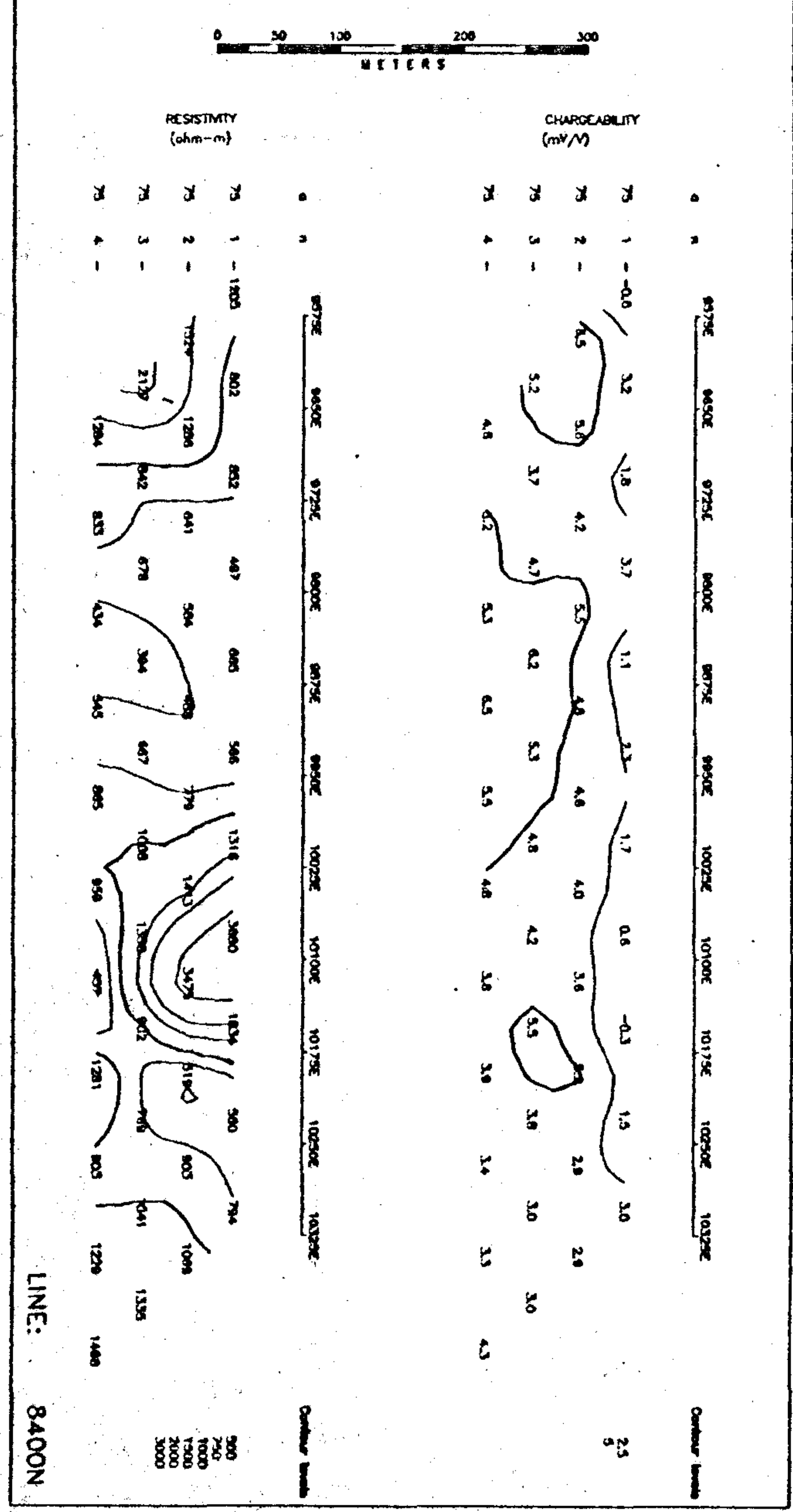
CHARGEABILITY CONTOUR PLAN
a spacing = 75 meters
second separation (n=2)

DRAWN BY: grs | DATE: Sept/93
SCOTT GEOPHYSICS LTD.

FIG 13

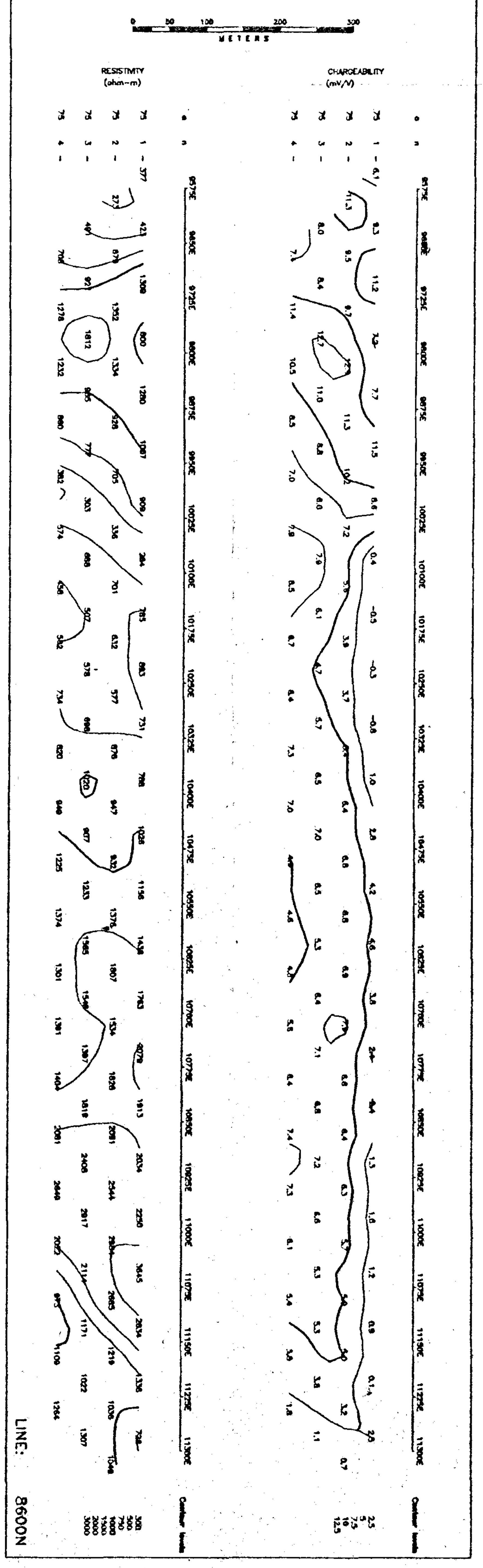
RELIANCE GEOLOGICAL SERVICES INC.

PAL PROJECT, OMINECA AREA, B.C.
LINE: 8400N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR-12
Oct/93 Pulse Rate: 2 sec
Current electrodes west of receiving electrodes (heading E)
Mx chargeability for interval 690-1050 msecs after shutoff



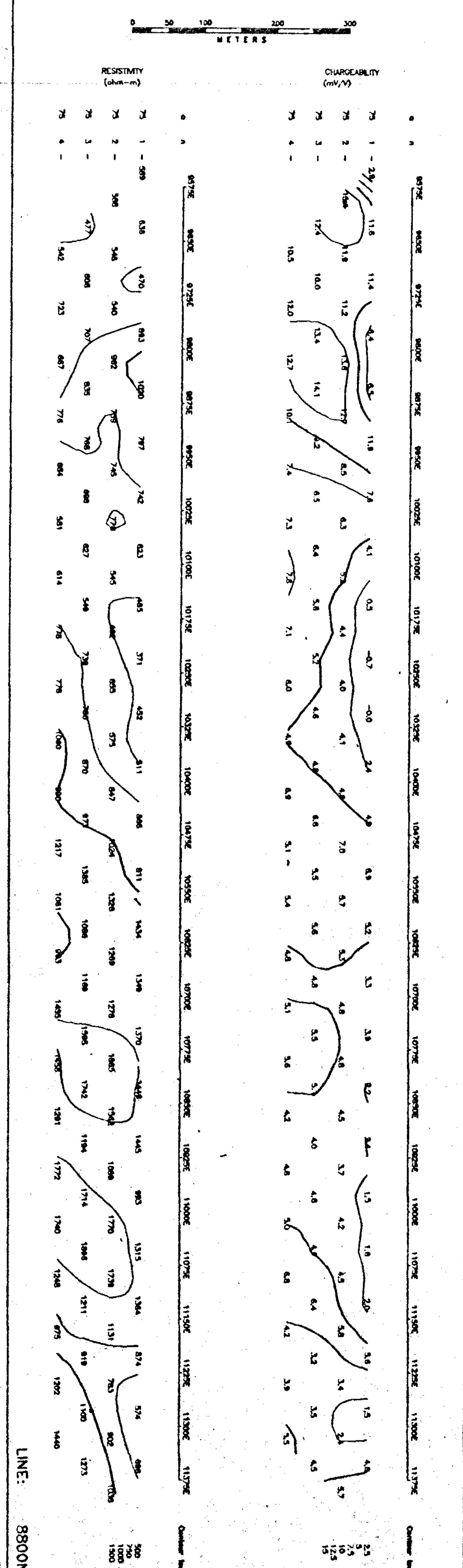
RELIANCE GEOLOGICAL SERVICES INC.

PAL PROJECT, OMINECA AREA, B.C.
LINE: 8600N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR-12
Oct/93 Pulse Rate: 2 sec
Current electrodes west of receiving electrodes (heading E)
Mx chargeability for interval 690-1050 msecs after shutoff



RELIANCE GEOLOGICAL SERVICES INC.

PAL PROJECT, OMINECA AREA, B.C.
LINE: 8800N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR-12
Oct/93 Pulse Rate: 2 sec
Current electrodes west of receiving electrodes (heading E)
Mx chargeability for interval 690-1050 msecs after shutoff



RELIANCE GEOLOGICAL SERVICES INC.

PAL PROJECT, OMINECA AREA, B.C.
LINE: 9000N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR-12
Oct/93 Pulse Rate: 2 sec
Current electrodes west of receiving electrodes (heading E)
Mx chargeability for interval 690-1050 msecs after shutoff

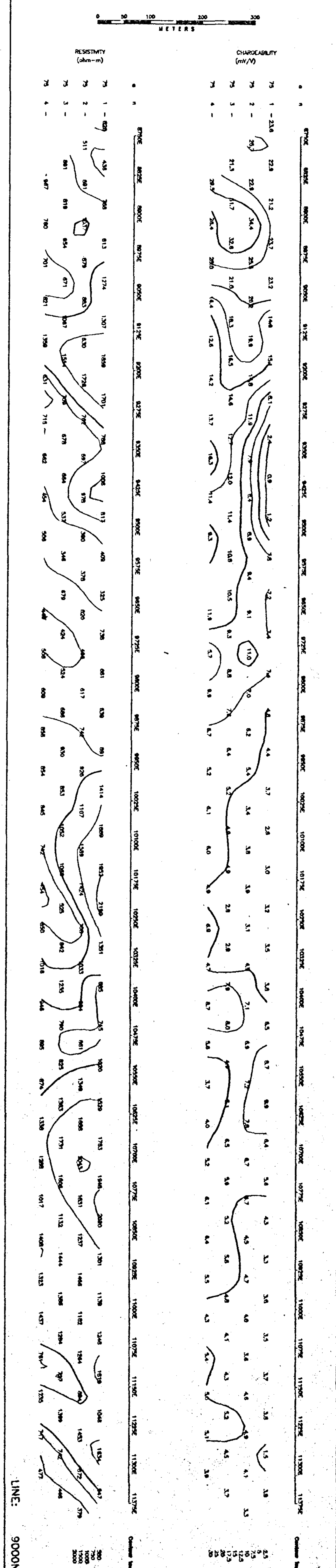
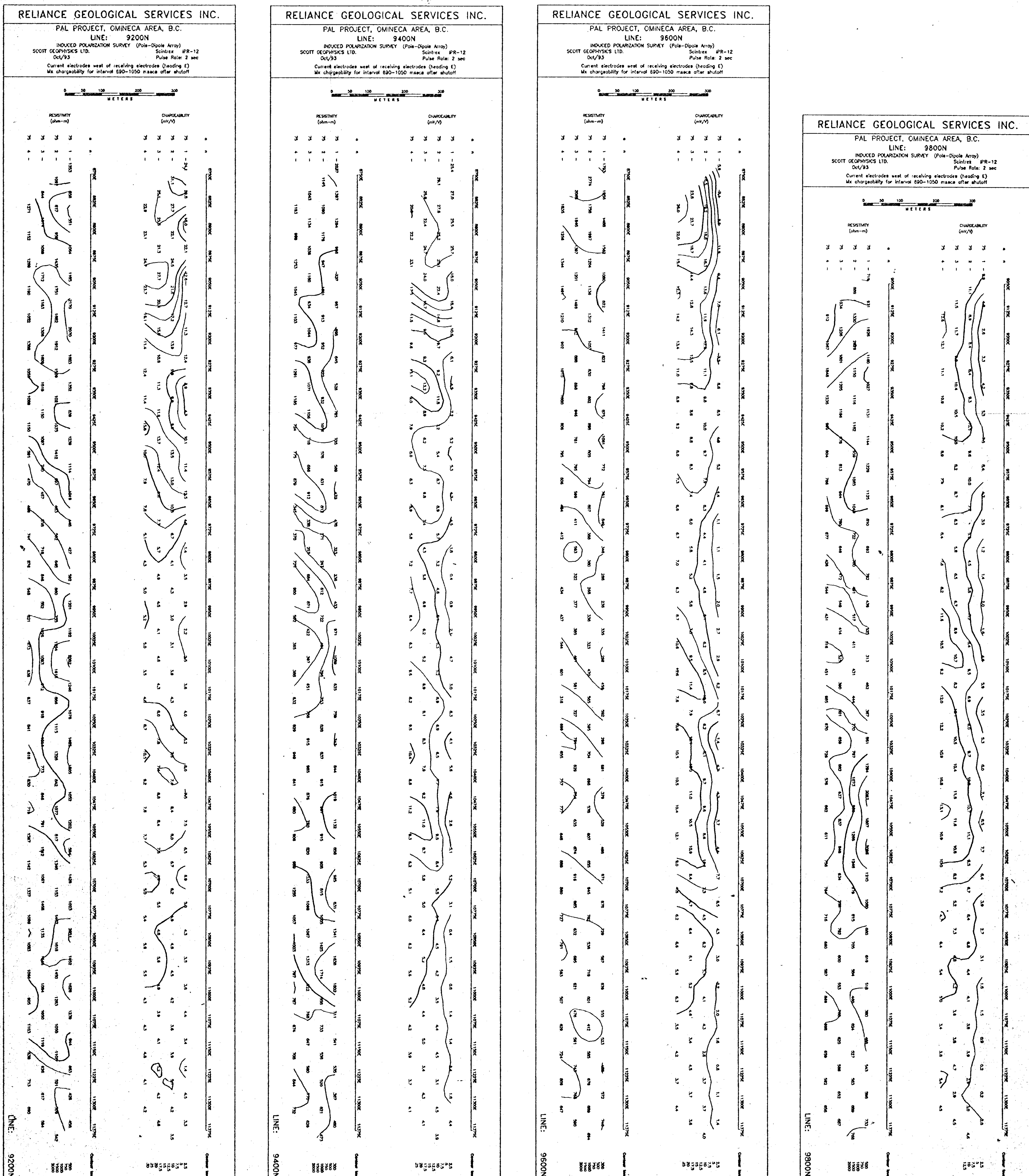
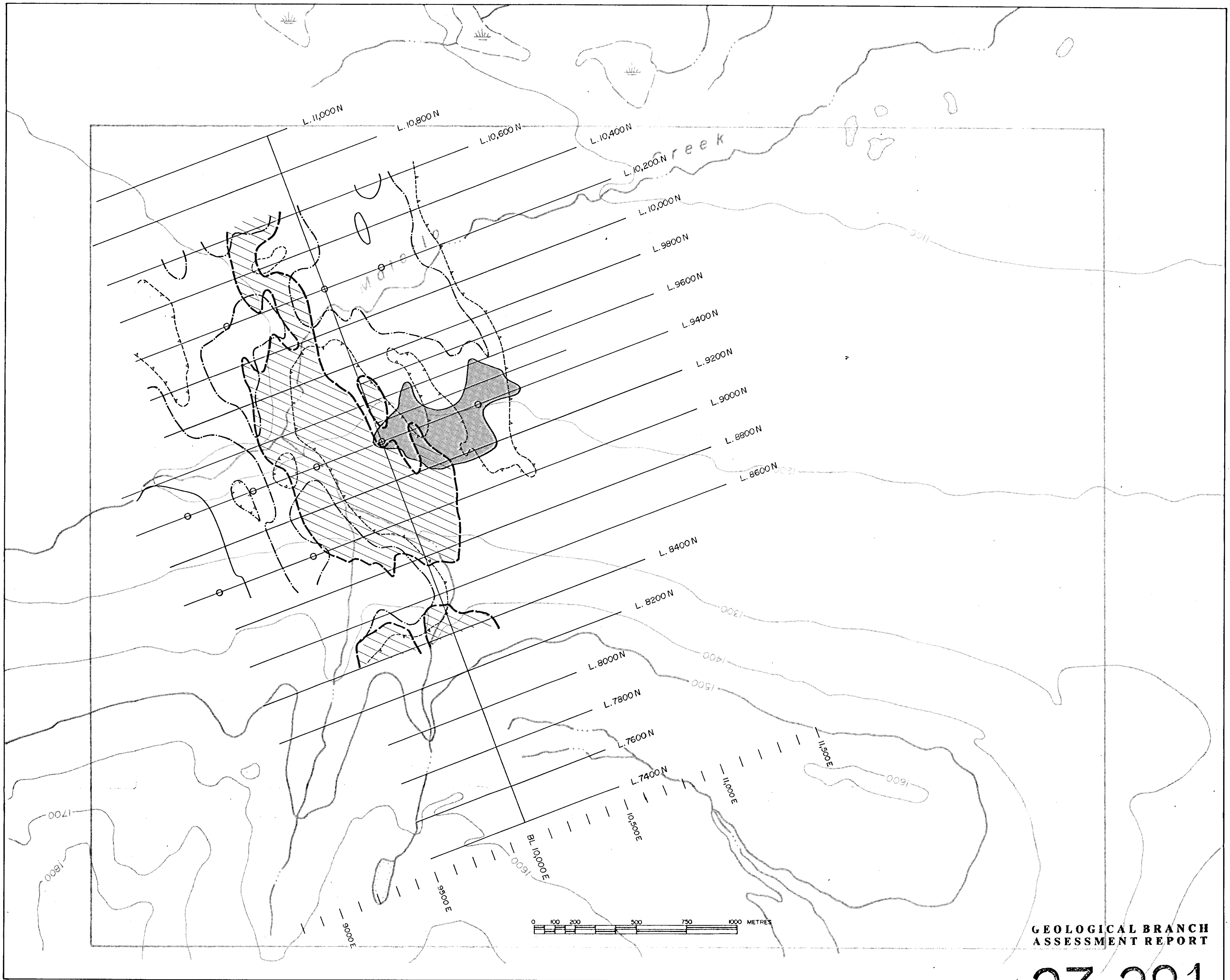


FIG 14


RELIANCE GEOLOGICAL SERVICES INC.
PAL PROJECT, OMINECA AREA, B.C.
LINE: 9200N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR-12
Oct/93 Pulse Rate: 2 sec
Current electrodes west of receiving electrodes (heading E)
Mx chargeability for interval 690-1050 msecs after shutoff
METERS
RESISTIVITY (ohm-m)
CHARGEABILITY (mV/V)
LINE: 9200N
RELIANCE GEOLOGICAL SERVICES INC.
PAL PROJECT, OMINECA AREA, B.C.
LINE: 9400N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR-12
Oct/93 Pulse Rate: 2 sec
Current electrodes west of receiving electrodes (heading E)
Mx chargeability for interval 690-1050 msecs after shutoff
LINE: 9400N
RELIANCE GEOLOGICAL SERVICES INC.
PAL PROJECT, OMINECA AREA, B.C.
LINE: 9600N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR-12
Oct/93 Pulse Rate: 2 sec
Current electrodes west of receiving electrodes (heading E)
Mx chargeability for interval 690-1050 msecs after shutoff
LINE: 9600N
RELIANCE GEOLOGICAL SERVICES INC.
PAL PROJECT, OMINECA AREA, B.C.
LINE: 9800N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex IPR-12
Oct/93 Pulse Rate: 2 sec
Current electrodes west of receiving electrodes (heading E)
Mx chargeability for interval 690-1050 msecs after shutoff
LINE: 9800N



GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,281

0 100 200 500 750 1000 METRES

Anomalous Zone : Au-Cu Soil Geochemistry

O Proposed Drill Hole

Ground Magnetics >57,000 nT

Induced Polarization

20 milliseconds

10 "

7.5 "

N

SWANNELL MINERALS CORPORATION

PAL PROPERTY

OMINECA M.D., B.C.

COMPILATION MAP

Geophysics and Soil Geochemistry

Scale 1: 10,000	N.T.S. 94-C/5E,6W	Drawn by
Date October 1993	Geologist	Figure 16

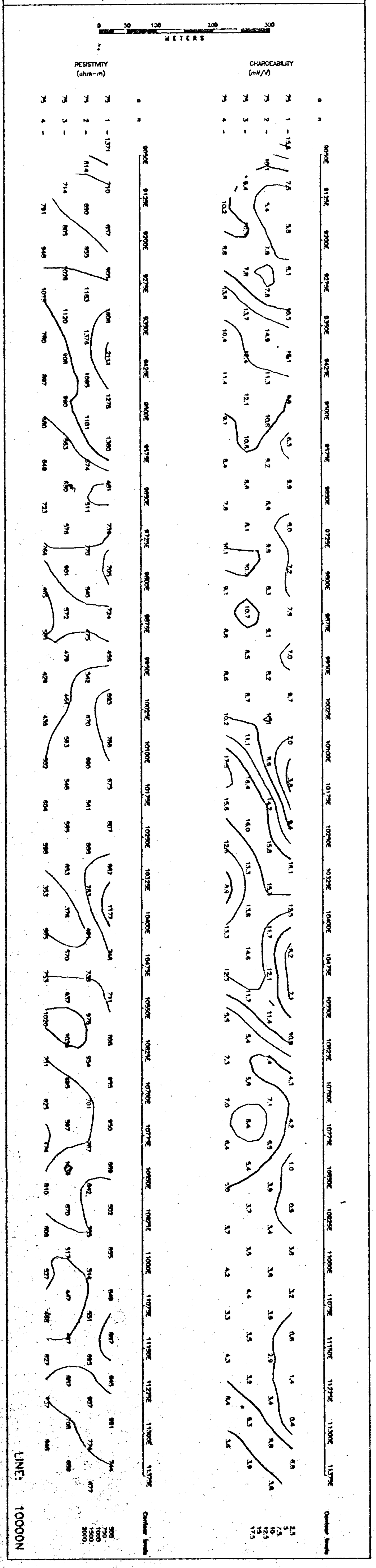
REBAGLIATI GEOLOGICAL CONSULTING LTD.

RELIANCE GEOLOGICAL SERVICES INC.

FIG 15

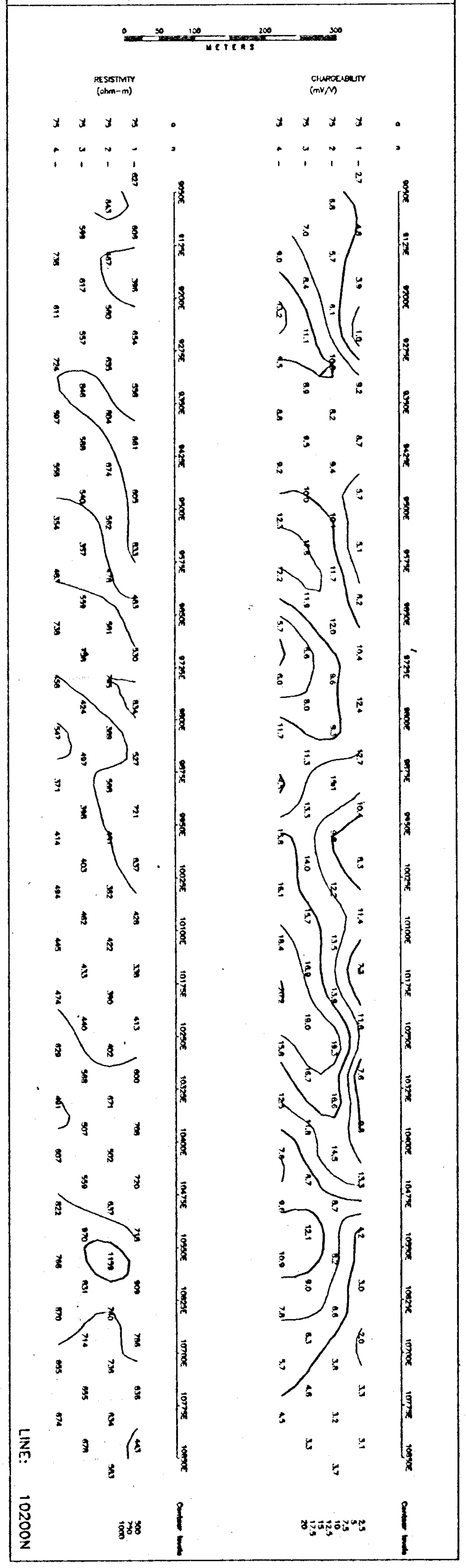
RELIANCE GEOLOGICAL SERVICES INC.

PAL PROJECT, OMINECA AREA, B.C.
LINE: 10000N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSIC'S LTD. Scintrex IPR-12
Oct/93 Pulse Rate: 2 sec
Current electrodes west of receiving electrodes (heading E)
Mx chargeability for interval 690-1050 msecs after shutoff



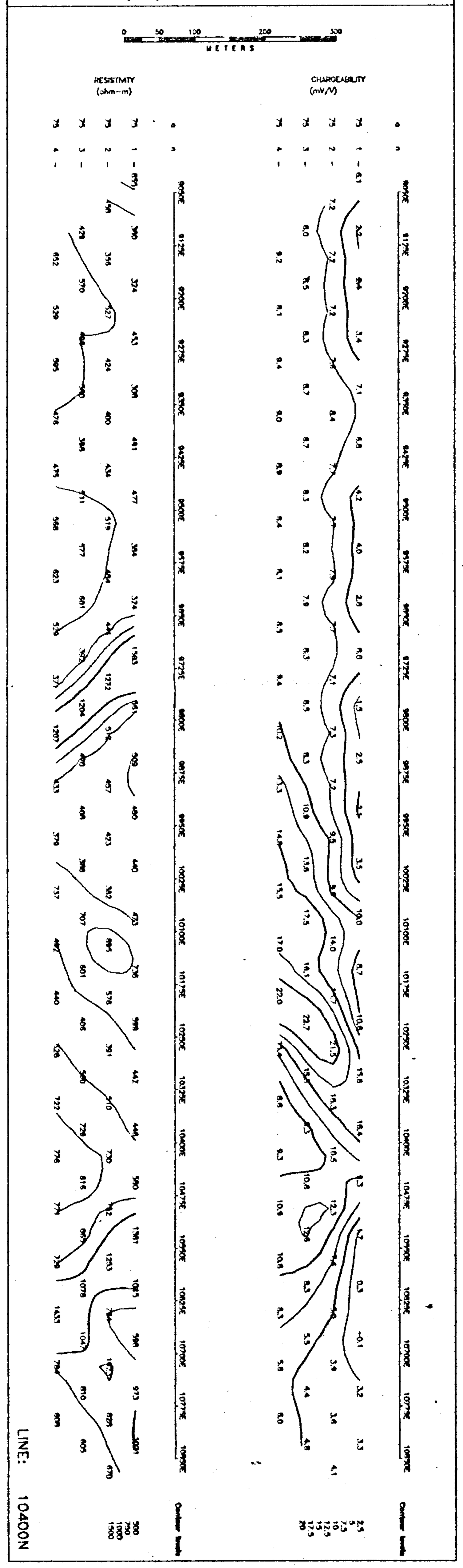
RELIANCE GEOLOGICAL SERVICES INC.

PAL PROJECT, OMINECA AREA, B.C.
LINE: 10200N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSIC'S LTD. Scintrex IPR-12
Oct/93 Pulse Rate: 2 sec
Current electrodes west of receiving electrodes (heading E)
Mx chargeability for interval 690-1050 msecs after shutoff



RELIANCE GEOLOGICAL SERVICES INC.

PAL PROJECT, OMINECA AREA, B.C.
LINE: 10400N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSIC'S LTD. Scintrex IPR-12
Oct/93 Pulse Rate: 2 sec
Current electrodes west of receiving electrodes (heading E)
Mx chargeability for interval 690-1050 msecs after shutoff



RELIANCE GEOLOGICAL SERVICES INC.

PAL PROJECT, OMINECA AREA, B.C.
LINE: 10600N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSIC'S LTD. Scintrex IPR-12
Oct/93 Pulse Rate: 2 sec
Current electrodes west of receiving electrodes (heading E)
Mx chargeability for interval 690-1050 msecs after shutoff