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

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by

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10 December 1993

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,284

SUMMARY

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

The ABE property comprises twelve contiguous mineral claims totalling 140 units in the Aiken Lake area of the Omineca Mining Division. The property is situated approximately 225 kilometers northwest of Fort St James, B.C., and is accessible by helicopter.

The claims lie in the regionally extensive Mesozoic Quesnel Belt where alkalic plutons commonly host porphyry copper-gold deposits. In the Aiken Lake district, Triassic Takla volcanic rocks are intruded by Triassic-Jurassic alkaline stocks and Cretaceous calk-alkaline stocks of the Hogem Batholith.

The claims are underlain by Triassic-Jurassic Takla volcanics which are intruded by pyroxenite, diorite, monzonite and quartz monzonite of the Triassic-Jurassic Hogem batholith.

Previous work consisted of regional airborne magnetic, soil, and silt sampling surveys, and one short drill hole. Four magnetic highs and one 550 by 1550 meter molybdenum anomaly were defined.

In 1991, Swannell contracted a silt sampling, rock sampling, and reconnaissance mapping program. Copper and gold mineralization was encountered in two areas and found to consist of:

a) flat-lying quartz veins carrying sporadic pyrite-chalcopyrite-galena-hematite,
b) fracture-controlled malachite-chalcopyrite-magnetite, and
c) disseminated chalcopyrite-pyrite associated with strong carbonate-chlorite alteration.

In 1992, follow-up work in the area of previously identified mineralization included geological mapping, line surveying, line cutting, and rock and soil sampling. Vein style, fracture controlled and disseminated copper/gold mineralization was identified in an area underlain by Takla volcanics, diorite, hybrid rocks, and pyroxenite. Mineralization was partially coincident with an open-ended 400 x 600 meter copper soil anomaly with anomalous gold results forming a peripheral pattern.

In 1993, follow-up work consisted of line surveying, rock and soil sampling, and magnetic and IP surveys. Three target areas were outlined.

The first target, called the East Zone, is characterized by gold mineralization in andesite volcanic rocks and is overlain by a 600 x 1500 meter gold soil anomaly. Chargeability values range from 10 to 20 msec.

The second target, called the Central Zone, is underlain by diorite and hybrid rocks, and is characterized by a large, irregularly shaped copper soil anomaly coincident with chargeability responses greater than 20 msec.

The third target, called the West Zone, is underlain by diorite and hybrid rocks. High grade copper and gold mineralization is found in quartz veins and shear zones. Medium to high chargeability responses are coincident with high resistivity values.

Further work, consisting of 5000 feet of diamond drilling, geological mapping, soil sampling, and 15 km of magnetic and IP surveying, is recommended to test targets at depth and to extend the areas of the known targets. Estimated cost is $305,000.

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ABE Property

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B: STATISTICAL ANALYSIS

C: LOGISTICAL REPORT ON IP AND MAGNETIC SURVEYS

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 on the ABE 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 by earlier exploration programs and evaluating the potential of the property to host porphyry copper/gold deposits.

Field work was carried out from September 3 to 16, 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

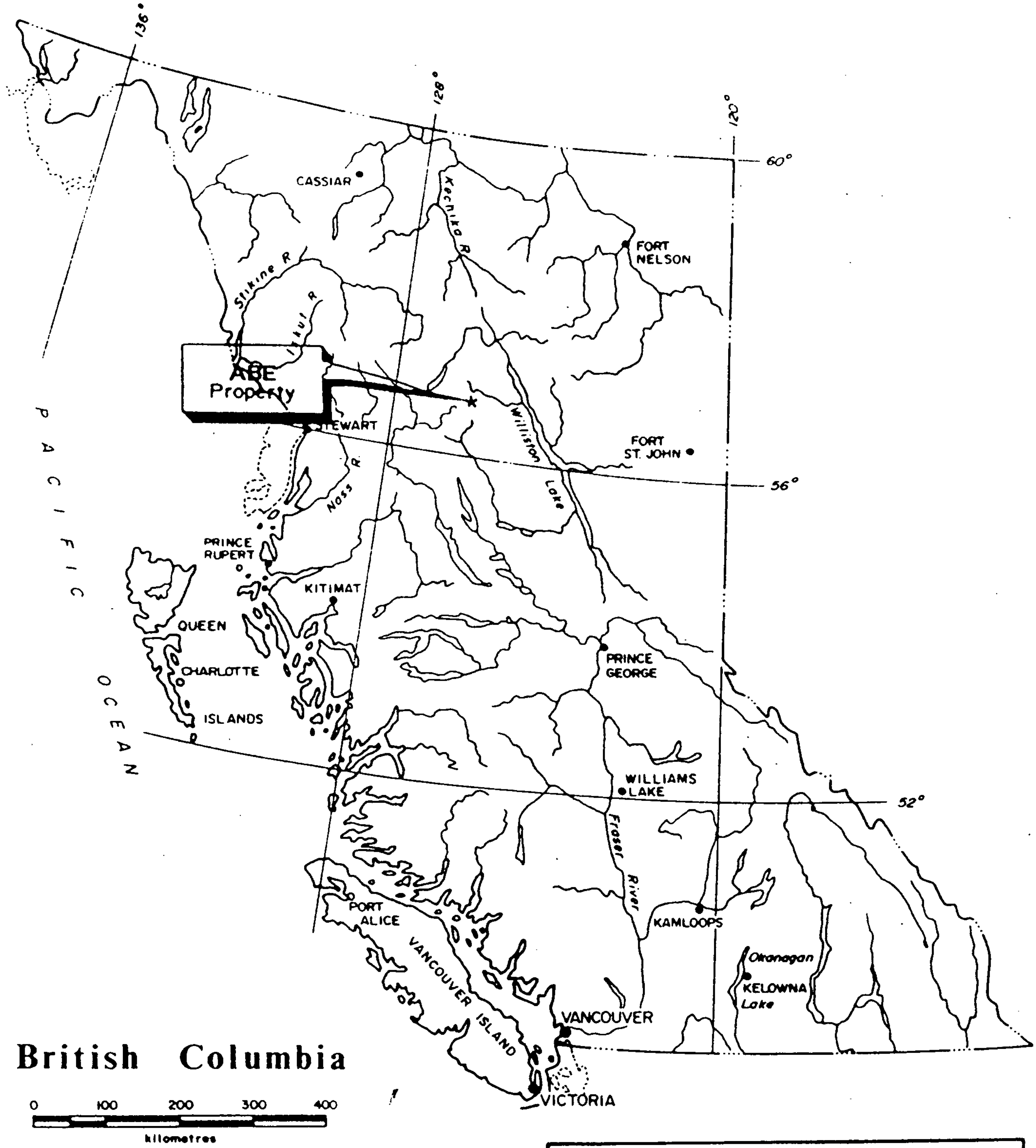
The ABE property is situated in the Omineca Mining Division in the Aiken Lake area, approximately 210 kilometers northwest of Mackenzie (Figures 1 and 2).

The claims are located on Map Sheet NTS 94C/5 at latitude 56°21' North, longitude 125°48' West, and between UTM 6251000 m and 6245500 m North, and UTM 325000 m and 333000 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 moderate to steep slopes rising from approximately 1320 meters to 2000 meters. The area is sparsely forested with spruce and pine. Scrub fir and alpine vegetation occur above tree-line which is ± 1600 meters.

Recommended work season is mid-June to early October.



SWANNELL MINERALS CORPORATION		
ABE PROPERTY		
General Location Map		
Scale noted above	N.T.S.	Drawn by
Date JAN. 93	Geologist	Figure 1
RELIANCE GEOLOGICAL SERVICES INC.		

3. PROPERTY STATUS (Figure 2)

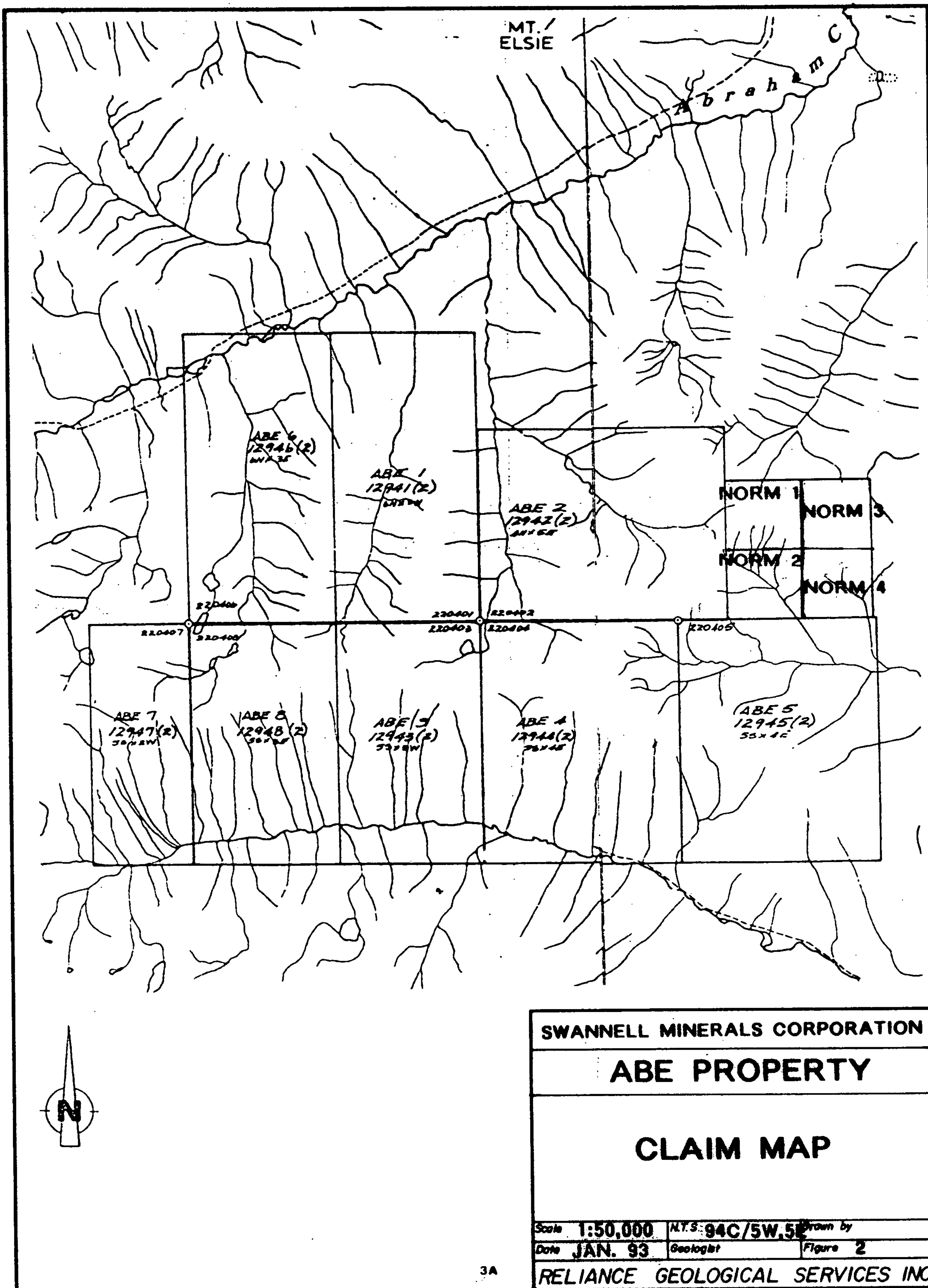
The property consists of twelve contiguous mineral claims in the Omineca Mining Division. The claims are registered in the name of Major General Resources Ltd (136 units) and Harvey Keck (4 units), and a 60% interest has been optioned to Swannell Minerals Corporation.

Details of the claims are as follows:

Claim	Record Number	Units	Record Date	Expiry Date
Abe 1	243091	18	9 Feb 1991	9 Feb 1995
Abe 2	243092	20	9 Feb 1991	9 Feb 1995
Abe 3	243093	15	10 Feb 1991	10 Feb 1995
Abe 4	243094	20	10 Feb 1991	10 Feb 1995
Abe 5	243095	20	9 Feb 1991	9 Feb 1995
Abe 6	243096	18	9 Feb 1991	9 Feb 1995
Abe 7	243097	10	10 Feb 1991	10 Feb 1995
Abe 8	243098	15	10 Feb 1991	10 Feb 1995
Norm 1	312957	1	22 Aug 1992	22 Aug 1995
Norm 2	312958	1	22 Aug 1992	22 Aug 1995
Norm 3	312959	1	22 Aug 1992	22 Aug 1995
Norm 4	312960	1	22 Aug 1992	22 Aug 1995
Total		140 units		

The total area covered by the claims is 3500 hectares, or 8645 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 ABE property.


MT. ELSIE
Abraham C
ABE 6
12946(2)
ABE 1
12941(2)
ABE 2
12942(2)
NORM 1
NORM 2
NORM 3
NORM 4
220406
220401
220402
220407
220408
220403
220404
220405
ABE 7
12947(2)
ABE 8
12948(2)
ABE 3
12943(2)
ABE 4
12944(2)
ABE 5
12945(2)
N
SWANNELL MINERALS CORPORATION
ABE PROPERTY
CLAIM MAP
Scale 1:50,000
N.T.S. 94C/5W,5E
Drawn by
Date JAN. 93
Geologist
Figure 2
RELIANCE GEOLOGICAL SERVICES INC.

4. REGIONAL GEOLOGY

(from Rebagliati, 1991)

"The ABE 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.

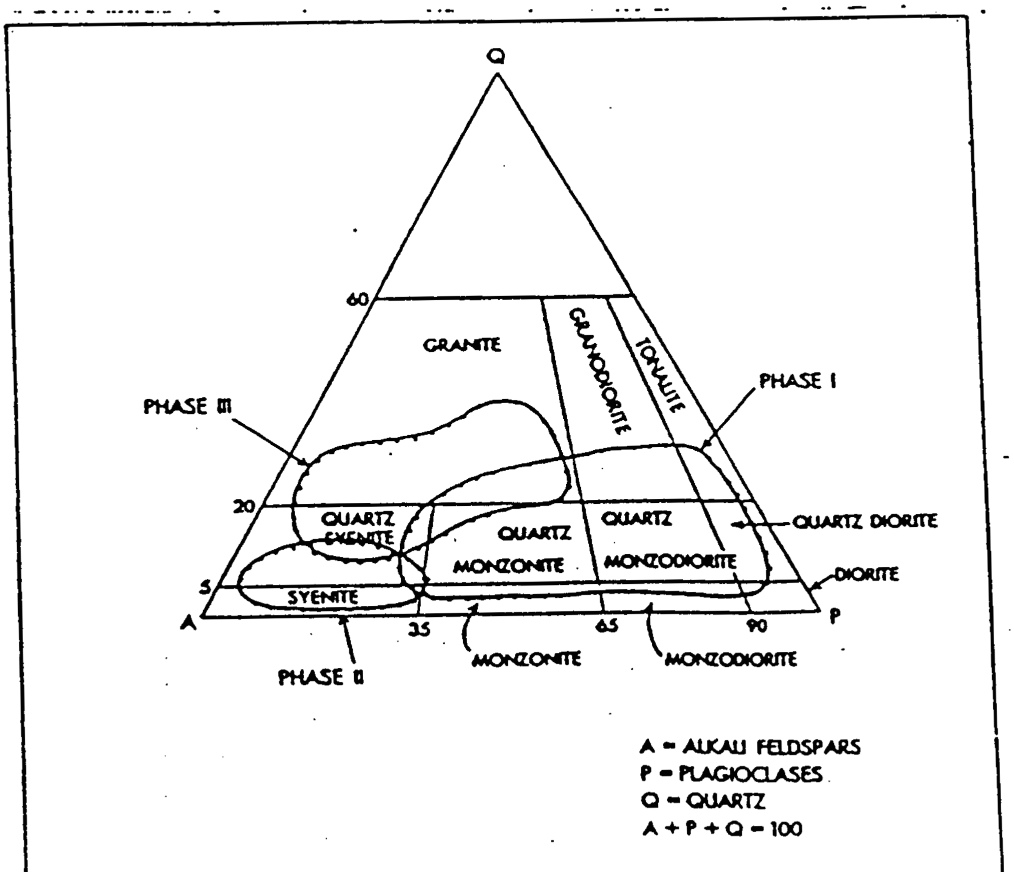
The alkalic plutons of the Quesnel Belt commonly host porphyry copper deposits, which are increasingly being recognized as an important source of gold. It has also been recently recognized that related failed porphyry systems (those that did not form copper deposits) also have the potential to generate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

The volcanic strata on all of the ABE 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."

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).

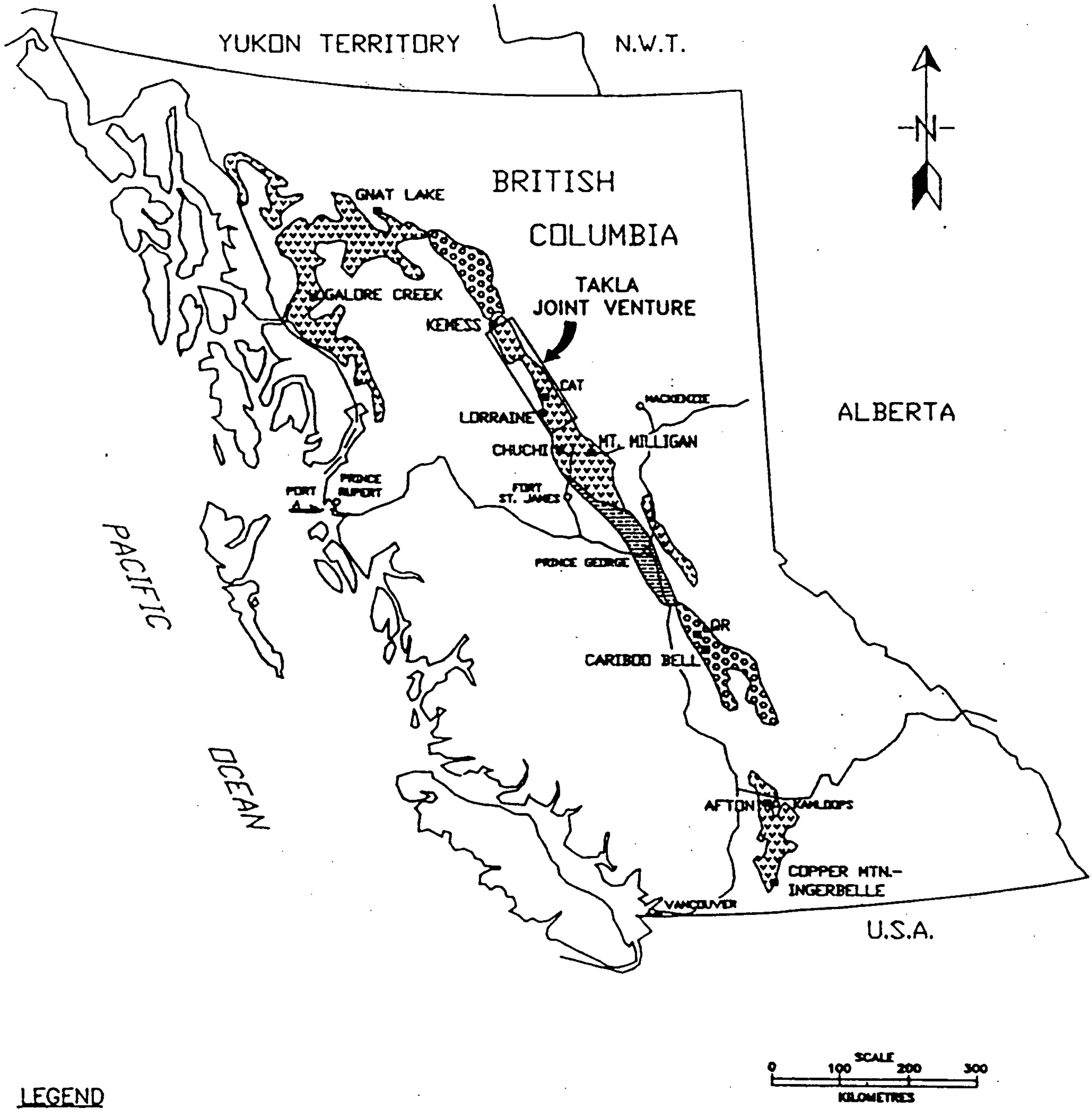
Many auriferous porphyry copper prospects are under active exploration within the Quesnel Belt, and the following deposits have been identified:

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 180 km southwest of the ABE 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 90 km northwest of the ABE 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

ABE PROPERTY

QUESNEL BELT
UPPER TRIASSIC & LOWER JURASSIC VOLCANIC ROCKS, SIGNIFICANT GOLD AND / OR COPPER DEPOSITS, ASSOCIATED WITH ALKALIC PLUTONS

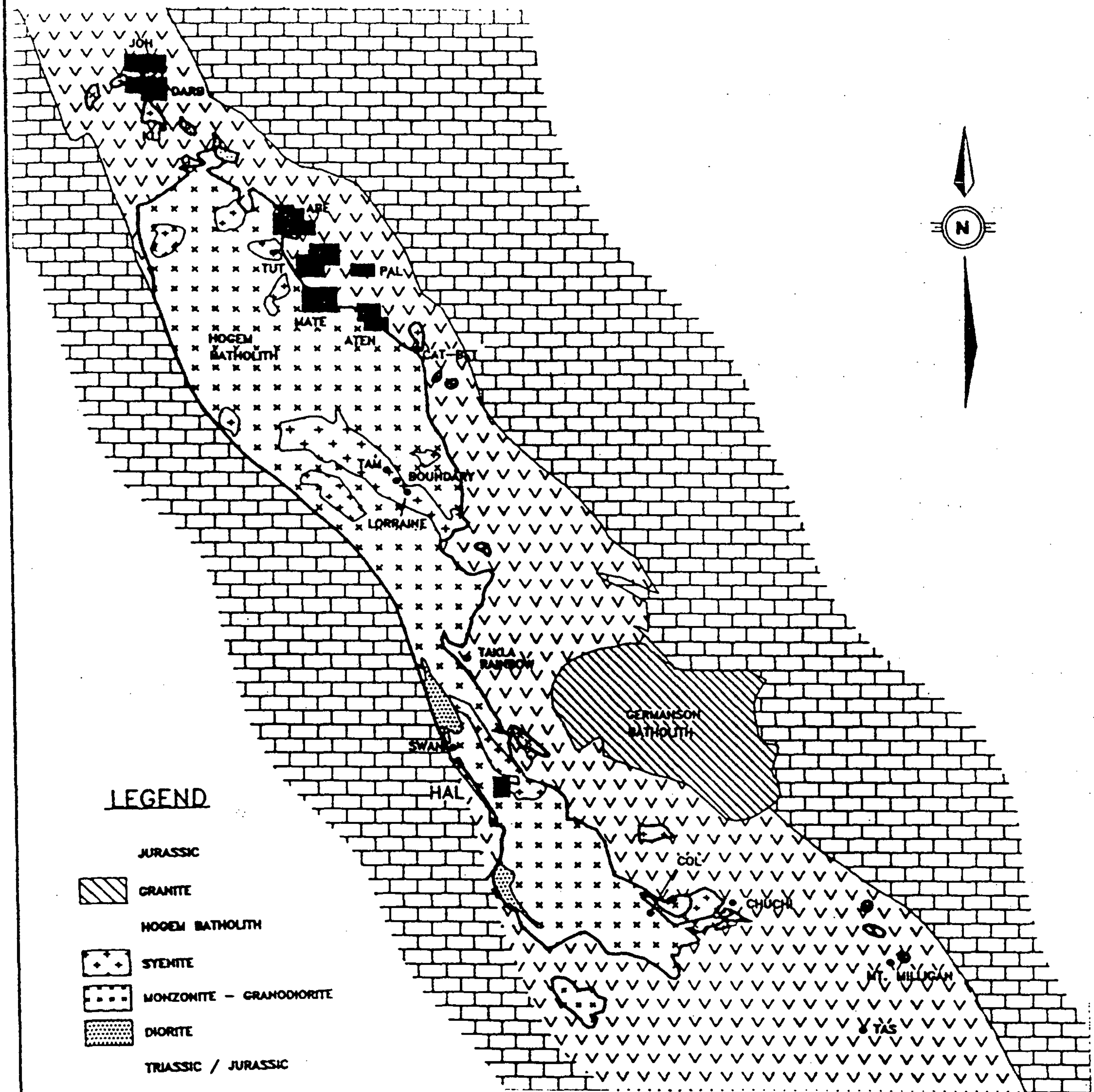
Scale AS SHOWN	N.T.S.	Drawn by
Date JAN. 93	Geologist	Figure 3

RELIANCE GEOLOGICAL SERVICES INC.

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

ABE PROPERTY

REGIONAL GEOLOGY

Scale as shown	N.T.S.	Drawn by
Date JAN. 93	Geologist	Figure 4

RELIANCE GEOLOGICAL SERVICES INC.

5. PREVIOUS WORK

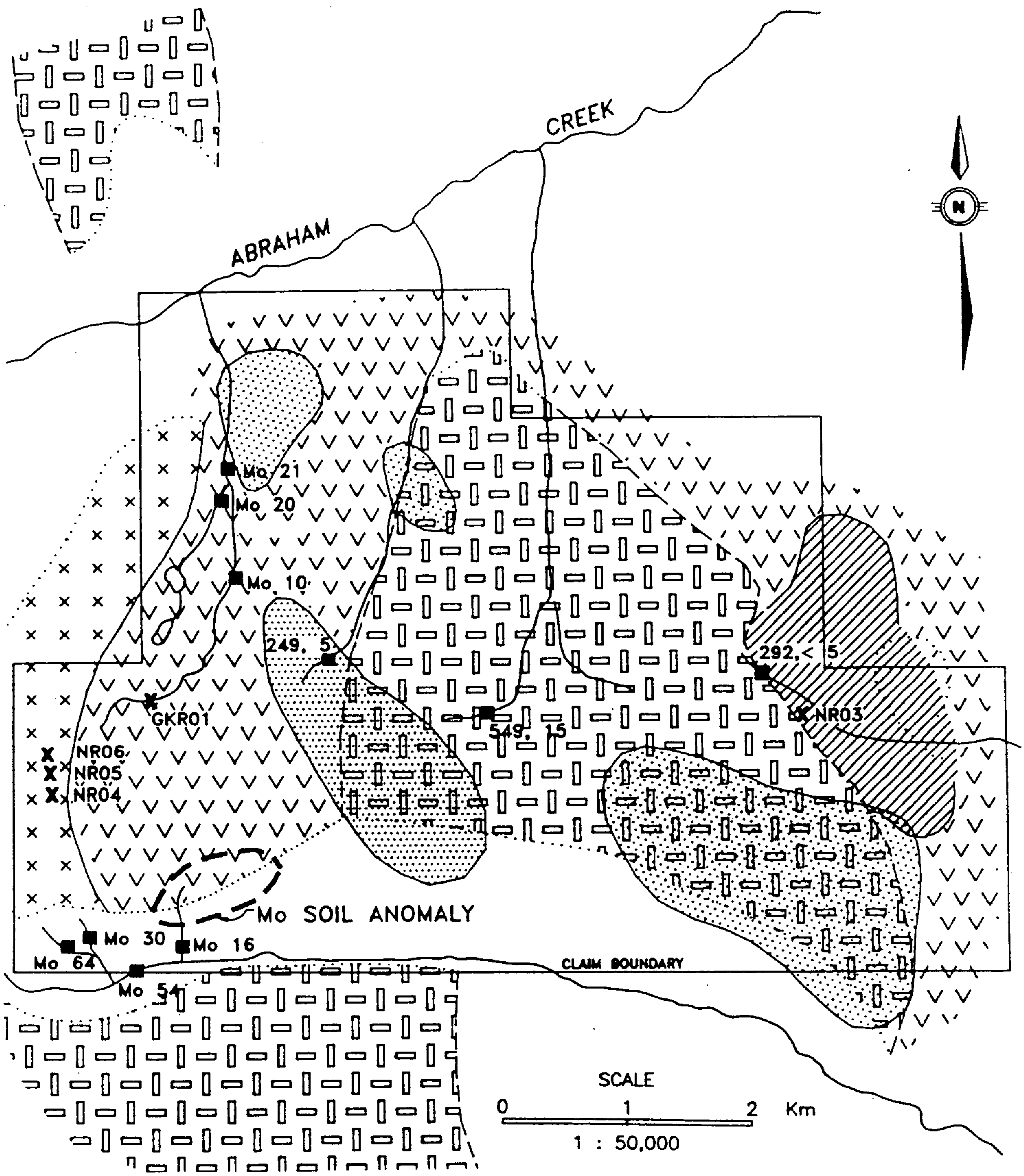
Early work included one short hole diamond drilled on the ABE 4 to test a narrow quartz vein mineralized with pyrite, galena, chalcopyrite, and tetrahedrite. This vein had been first sampled during the 1950's by the Geological Survey of Canada during regional geologic mapping.

During the 1970's, the ABE claim area was explored by the UMEX-Wenner Gren Joint Venture. The property was covered by a regional airborne magnetic survey, and soil and stream sampling surveys. Four magnetic anomalies were defined (Figure 5): three on the margin of a diorite stock, and one in Takla volcanics near a contact with the Hogem Batholith. Soil sampling outlined a 550 by 1550 meter molybdenum anomaly on the ABE 7 and 8 claims. Copper-molybdenum silt anomalies were discovered on three of the streams that drain the property. No samples were analyzed for gold.

In 1991, Swannell carried out a program of silt sampling, rock sampling, and 1:10,000 reconnaissance geological mapping. Copper mineralization with values up to 1.28% was found in two areas, one of which had anomalous gold values up to 0.365 oz/t. Anomalous copper and gold values were identified in silts from two streams.

In 1992, Swannell carried out a program of soil sampling, rock sampling and 1:10,000 geological mapping. Porphyry-style copper mineralization was identified in outcrop, and an open-ended, 600 by 1500 meter copper/gold soil anomaly was outlined.

The results of the geologic mapping program are discussed in Section 6.0.



after Rebagliati 1992

LEGEND

- DIORITE
- MONZONITE
- MAFIC INTRUSION
- HOGEM BATHOLITH (UNDIFF.)
- TAKLA VOLCANICS
- AEROMAGNETIC ANOMOLY
- ● SILT ANOMALY ppm Cu, ppb Au, ppm Mo
- ■ HEAVY MINERAL ANOMALY ppm Cu, ppb Au
- X Cu/Mo COPPER / MOLYBDENUM OCCURRENCE

SWANNELL MINERALS CORPORATION

ABE PROPERTY

COMPOSITE PLAN
AEROMAGNETICS GEOLOGY AND
ANOMALOUS STREAM SITES

Scale 1 : 50,000	N.T.S. 94C/5	Drawn by
Date JAN. 93	Geologist	Figure 5

RELIANCE GEOLOGICAL SERVICES INC.

6.0 PROPERTY GEOLOGY (Figure 6)

6.1 Lithologies

The ABE grid area is underlain by Triassic - Jurassic Takla volcanics which are intruded by pyroxenite, diorite, monzonite, and quartz monzonite of the Triassic - Jurassic Hogem batholith.

Approximately 40% of the claim area has been mapped, with exposed rock along ridges and steeper slopes accounting for approximately 50% of the surface area.

Takla Group

Unit 1A is an andesite augite porphyry which is exposed on the ridge east of the ABE grid. Augite porphyry commonly weathers a dark brown and, locally where cut by ankeritic dykes, a bright orangy brown. Mineral constituents include 20% (range 10% to 40%) subhedral to euhedral dark green augite phenocrysts in a fine-grained matrix of plagioclase and biotite.

Unit 1B consists of fine grained, light grey to dark green andesitic tuffs found in the west central part of the property adjacent to Unit 4B. Tuffs weather to a dark green to rusty brown color. Ankeritic zones with disseminated 1% pyrite are common.

Intrusive Rocks (Hogem Batholith)

Units 2A, 2B, 2C, and 2D are moderately to strongly magnetic green-brown pyroxenites occurring throughout the southern area of the grid.

Unit 2 is variable in texture and has been classified into four local subdivisions:

Unit 2A: fine to medium-grained dark green massive pyroxenite.

Unit 2B: sheared, dark black, fine-grained chlorite rich phase.

Unit 2C: local coarse gabbroic phase with plagioclase and pyroxene crystals up to 10 cm in length.

Unit 2D: weathers light grey and contains numerous carbonate veins with minor talc and chrysotile.

Unit 3A is a brown-grey, fine to medium grained diorite which is exposed in isolated outcrops on the grid. Minor chlorite and epidote give the rock a light green color. Diorite occurs both as massive outcrop and as dyke-like bodies.

Unit 3B is a hybrid zone located near the periphery of the pyroxenite. It consists of 10% to 90% subangular to angular xenoliths of pyroxenite set in a felsic matrix. The matrix varies from a very fine grained felsite to diorite in composition and weathers to a white chalky color. This zone is distinctive but possibly correlates with Unit 3A.

Unit 3C is a feldspar porphyry which occurs as sub-vertical dyke-like bodies up to 30 meters wide crosscutting pyroxenite. Due to high silica content, Unit 3C forms prominent ridges and pinnacles. Dykes consist of white, subhedral to euhedral, medium grained plagioclase phenocrysts set in a light grey, fine grained silicic matrix containing minor black amphiboles and biotite.

Unit 4A (monzonite) and Unit 4B (quartz monzonite) are found in the western area of the claim. Unit 4 is a massive, coarsely jointed unit. It weathers to a pinkish-brown color, and consists of both medium-grained potassium and plagioclase feldspar phenocrysts set in a biotite-rich interstitial matrix.

6.2 Alteration

Pyroxenite units exhibit local alteration consisting of carbonate-talc veinlets, chloritization and minor serpentine development. Rusty brown weathering quartz-ankerite intrusion-type and replacement-type veins are common within shear zones.

Diorite Unit 3A contains minor epidote-chlorite and exhibits weak pervasive propylitic alteration.

A small outcrop of Takla volcanics in a stream cut north of line 108+00N shows strong chlorite-carbonate alteration.

6.3 Structure

Prominent, generally flat-lying sequences of quartz veins cut all local stratigraphy within the pyroxenite units. Quartz crystals within the veins are commonly in a comblike intergrowth indicating static emplacement.

Numerous dykes and shear zones are located in the northern part of the ABE grid. A fault in the northeastern corner of the grid places andesite tuff stratigraphy adjacent to intrusive rocks.

6.4 Mineralization

Three types of mineralization have been found on the property:

Mineralization (cont)

a) Vein-type:

Relatively flat lying quartz veins up to 1 meter thick carry sporadic pyrite-chalcopyrite-galena-hematite. Small local quartz veins and lenses within the pyroxenite unit carry pyrite-chalcopyrite.

b) Fracture controlled:

Malachite-chalcopyrite-magnetite occurs along fracture planes within the pyroxenite, diorite dykes, hybrid zone (in ultramafic xenoliths), and in quartz-feldspathic lenses of the feldspar porphyry.

c) Disseminated:

Chalcopyrite-pyrite, associated with strong carbonate-chlorite alteration, occurs as disseminations within Takla volcanics and in carbonate veinlets.

7. 1993 WORK PROGRAM

Done under B.C.M.E.M.P.R. Approval Number **PRG-1300199-44752**

7.1 Methods and Procedures

Geochemical, magnetic and induced polarization (IP) surveys were carried out on the Abe 2, 4, and 5 claims to follow up on anomalous rock and soil geochemistry identified in previous exploration programs.

7.1.1 Geochemistry

The survey grid in the eastern area of the property was extended to the north. Baselines and tielines were surveyed and cross-lines were put in at 200 meter line spacings using compass, hipchain, and flagging. Stations on baselines and cross-lines were marked at 50 meter intervals using flagging and marked double flagging. Total line surveyed was 8.35 kilometers.

Two rock samples were collected and analyzed for gold (FA/AA) and multi-element ICP by International Plasma Laboratory Ltd of Vancouver, B.C. See Appendix A for analytical reports and techniques.

The current grid was soil sampled at 100 meter station spacings. Using a grub hoe, 126 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 reports and techniques.

A statistical analysis was performed by Tony Clark, Ph.D. (See Appendix B). Sample plans (Figures 7 and 8) include 284 soil samples collected in 1992 and 1993.

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

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 13.1 line kilometers of magnetometer survey was completed on the ABE 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 22.5 line kilometers of IP survey was completed on the ABE 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 Rock Geochemistry (Figure 6)

Eleven rock samples collected in 1992 returned significant assay results in copper (>1000 ppm) or gold (>300 ppb). Results ranged up to 2.7% copper and 14,000 ppb gold (0.408 oz/t). Descriptions and assay results from 1992 rock sampling are included in Appendix A.

In 1993, two rock samples were collected from the eastern portion of the Abe 2 claim. Descriptions were:

12107: Chip sample across 2 meters in altered pyritic volcanics. Minor malachite stain. Results - 174 ppm Cu, 100 ppb Au.

12108: Chip sample across 2 meters of massive sulphide (pyrite) in volcanics. 20% quartz. Results - 379 ppm Cu, 903 ppb Au.

7.2.2 Soil Geochemistry (Figure 7 and 8)

Copper (Figure 7)

Copper shows a strong correlation with cobalt, a moderate correlation with molybdenum and nickel, and a weak corrlation with silver.

Copper results over 250 ppm form a large irregularly shaped anomaly in the central area of the grid, bounded by lines 98+00N, 11+200N, and stations 10+700E and 12+700E. Two areas of medium to high anomalous values are centered at 10+600N, 11+500E and 9+900N, 11+900E. The anomaly is open to the northwest, but is cut off abruptly to the southwest at the contact zone, probably a fault, between volcanics and intrusive pyroxenite and hybrid rocks.

Gold (Figure 8)

The correlation coefficient chart (Appendix B) shows a moderate correlation between gold and silver and a low correlation between gold and arsenic, cadmium, and manganese. There is no significant correlation between copper and gold.

The relatively low number of samples (284) in the data set used 0 to 100 ppb gold as the background value. The writer re-interpreted the statistics by drawing a contour around all values greater than 50 ppb. It was determined that values greater than 50 ppb form sharply defined patterns surrounding values greater than 100 ppb. Therefore, gold results higher than 50 ppb have been considered anomalous in this report.

Gold results over 50 ppb form a 600 x 1500 meter anomaly along the eastern portion of the grid. A cluster of seventeen medium to high anomalous results occupy an area of approximately 300 x 900 meters between lines 10+200N and 11+000N. The eastern lobe of the copper soil anomaly (>250 ppm) is partly coincident with the gold anomaly.

Summary Statistics from T. Clark report:

	Copper	Gold
Range	2.0 - 1824.0 ppm	2.5 - 1670.0 ppb
Mean	243.1 ppm	60.7 ppb
Standard Deviation	310.00 ppm	166.54 ppb
Background	< 250 ppm	< 100 ppb
Low Anomalous	≥250 to <550 ppm	≤100 to <200 ppb
Medium Anomalous	≥550 to <1100 ppm	≥200 to <600 ppb
High Anomalous	> 1100 ppm	> 600 ppb

7.2.3 Magnetic Survey (Figures 9 and 10)

Magnetic values range from 57,084 to 67,534 nT for a total magnetic relief of 10,450 nT. Background values are in the 57,000 to 59,000 range.

The northern half of the grid from line 10+600N to 11+600N contains background values only.

Three magnetic highs with values greater than 60,000 nT are found in the southern half of the grid.

The first is centered at line 10+400N, 12+150E. Outcrop has been mapped as a diorite (Unit 3).

The second occupies athe southwest area of the grid and is open to the west. The sharp change in magnetic values around 11+750E coincides with a contact between moderately magnetic volcanics and highly magnetic pyroxenites.

The third is centered at line 9+600N, 12+150E and is open to the south. No outcrop is exposed in this area.

7.2.4 Resistivity and Chargeability (Figures 11 to 15)

Resistivity values in the "n=2" contour plan (Figure 11) range from 230 to 3288 ohm-meters (Ω).

Resistivity values are variable throughout the survey area and do not form any distinctive patterns indicating areas of alteration or mineralization. Generaly, values below 1000Ω are found in areas underlain by volcanics. Values over 1000Ω are found in areas underlain by diorite or pyroxenite.

A zone with resistivity values above 1500Ω is found at the eastern edge of the survey area. It is underlain by diorite (3a) and the hybrid unit (3b). Quartz veins hosting chalcopyrite-tetrahedrite mineralization with associated ankeritic alteration has been mapped in the area.

Chargeability vlaues in the "n=2" contour plan (Figure 12) range from 2.3 to 46.3 milliseconds.

The following ranges were used for interpretation of chargeability values:

very high	> 30 msec
high	> 20 to ≤ 30 msec
medium	> 10 to ≤ 20 msec
low	≤ 10 msec

Most of the grid area south of line 11+000N is characterized by high chargeability values (>20 msec).

A 500 to 700 meter wide zone with very high values (>30 msec) trends north-south from line 10+400N to 9+400N and off the grid to the south. No outcrop was mapped in the area.

The gold soil anomaly in the eastern part of the grid corresponds with an area of medium chargeability values (10 to 20 msec).

7.3 Interpretation of Results (Figure 16)

Results to date have outlined four distinctly different zones:

a) East Zone

Ridge areas in the eastern area of the grid are underlain by augite porphyry flows and andesite lapilli tuffs. Types of alteration include propylitic, ankeritic, and siliceous. Mineralization includes disseminated and semi-massive pyrite and malachite staining. Approximately 10% of the area is covered by outcrop.

Rock samples have returned values up to 1.2% copper and 1440 ppb gold.

The area is overlain by a gold anomaly (>50 ppb) in soils measuring 600 x 1500 meters. A copper soil anomaly (>250 ppm) is partially coincident.

IP response over the western half of the gold anomaly is characterized by values in the 10 to 20 msec range, which is considered medium.

Geochemical results indicate that the East Zone is a gold-only area. The IP response is lower than other areas of the grid, but medium values indicate that low to moderate (1%?) sulphides are associated with mineralization.

b) Central Zone

Outcrop (approximately 10%) along ridges consists of diorite, hybrid zones, and feldspar porphyry dykes. Mineralization consists of malachite staining.

The area is overlain by a large, irregularly shaped copper soil anomaly measuring approximately 1000 x 1500 meters. No anomalous gold values are associated.

IP response is consistently greater than 20 msec with a 500 x 800 meter area measuring greater than 30 msec, classified as very high. The zone is open to the south.

The Central Zone appears to be a copper area with high (>5%) sulphides. It may represent a porphyry system or a semi-massive sulphide zone.

c) West Zone

Outcrop, constituting approximately 20% of the surface area, consists of the hybrid unit (breccia associated with a contact zone) and diorite. Mineralization consists of pyrite, chalcopyrite, and tetrahedrite in flat-lying quartz veins and shear zones.

Rock samples have returned values up to 2.7% copper and 14,000 ppb gold. Soil sampling over part of the area did not return any significant results.

Geophysical surveys over a portion of this area show medium to hgih chargeability values. Resistivity values are high, indicating zones of silicification (quartz).

Structurally controlled, shear related and quartz vein mineralization indicate that the West Zone could be peripheral to or above a copper/gold porphyry system similar to the Esker veins at Mt Milligan.

d) Southwest Zone

Outcrop, approximately 30%, consists mainly of pyroxenite. Local mineralization consists of malachite, pyrite, and galena in narrow quartz veins.

Copper values from rock samples are significant when sampled from quartz veins (veinlets). A high result of 2.4% copper was obtained from a $2m^2$ panel sample collected from malachite stained pyroxenite near a diorite contact. Geochemical results from soil sampling were not significant.

Geophysical surveys covered the eastern edge of the Southwest zone. Magnetic responses were high due to primary magnetite in the pyroxenite. IP did not cover enough of the zone to allow any conclusions to be reached.

Mineralization is sparse and soil sampling did not return any significant results, so the Southwest Zone is a lower priority for follow-up work.

8. DISCUSSION

The target on the ABE property is a porphyry copper/gold deposit similar to the recently discovered Mt Milligan/Southern Star and North/South Kemess deposits. Three target areas which may represent porphyry style mineralization have been defined on the ABE property.

The East Zone is characterized by gold mineralization in andesite volcanic rocks, and is overlain by a large gold soil anomaly. Medium chargeability responses indicate low to moderate sulphide content.

The Central Zone is underlain by diorite and hybrid rocks. There is a large copper soil anomaly, and chargeability responses greater than 20 msec indicate an area of high sulphide content.

The West Zone is underlain by the hybrid unit and diorite, with high grade copper and gold mineralization hosted in quartz veins and shear zones. Medium to high chargeability responses and high resistivity values indicate moderate sulphide content combined with silicic alteration.

As seen at the Mt Milligan and Kemess deposits, the blind mineralized bodies are characterized by varying geochemical and geophysical responses. Exploration diamond drilling will be required on the ABE property to test the significance of each of the target areas. See Figure 16 for proposed drill hole locations.

9. CONCLUSIONS

The ABE 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) Diamond drilling:
Approximately 5,000 feet to test the East, Central, and West Zones at depth.
Fourteen holes averaging 300 feet are recommended: seven in the Central Zone, five in the East Zone, and two in the West Zones. The remaining 800 feet should be allotted to extend selected holes to greater than 300 foot depth.

b) Perform a total of approximately 15 line kilometers of induced polarization and magnetic geophysics to extend the known target areas.

c) Collect 150 soil samples along the new grid.

d) Geologically map the grid and surrounding areas in detail.

Total budget for the above is estimated at $305,000.

Drilling (5000 feet)
Geophysics (15 line km)
Soil Sampling (150)
Geological mapping

CERTIFICATE

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 twelve 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 subject 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 10th day of December 1993.

REFERENCES

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RELIANCE GEOLOGICAL SERVICES INC.

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V7L 1B4

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

ITEMIZED COST STATEMENT

Re: ABE Project 1993, J791

Project Preparation			$ 750
Mobilization & demobilization:			$ 4,230
Consulting			$ 2,000
Field Crew:			
Supervision		$ 500	
Project Geologist	$ 345/day x 5 days	$ 1,725	
(N. Hulme: Sep 3 - 7, 1993)			
Field Geologist	$ 285/day x 5 days	$ 1,425	
(J. Fleishman: Sep 3 - 7, 1993)			
Geotechnicians	$ 220/day x 5 days	$ 1,100	$ 4,750
(B. Doubt: Sep 3 - 7, 1993)			
Field Costs:			
Helicopter		$ 3,496	
Food & Accomm	$ 75/day x 5 days	$ 1,125	
Communications	$ 50/day x 5 days	$ 250	
Supplies	$ 18/day x 15 days	$ 270	
Expediting	$ 50/day x 5 days	$ 250	
Freight		$ 100	
Vehicle: use	$ 110/day x 2 days		
Vehicle: standby	$ 30/day x 3 days	$ 310	$ 5,801
Assays & Analysis:			
126 soil samples @ $14.50/sample		$ 1,827	
2 rock samples @ $17.50/sample		$ 35	$ 1,862
(Au by FA/AA and 30 element ICP)			
Geophysics	$1600/km x 22.5 kms	$ 36,000	$ 36,000
Report:			
Drafting and map preparation		$ 2,000	
Report writing and editing		$ 1,500	
Word processing, copying, binding		$ 300	$ 3,800
Administration, incl Overheads & Profit			$ 6,722
Sub-total			$ 65,915
plus 7% G.S.T.			$ 4,614
TOTAL			$ 70,529

APPENDIX A

ANALYTICAL REPORTS

CERTIFICATE OF ANALYSIS
iPL 93J0107

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

Reliance Geological Services Ltd   2 Samples   2= Rock   0= Soil   0= Core   0=RC Ct   0= Pulp   0=Other   [054213:08:41:39100693]

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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

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203[redacted]mbia[redacted]
Vancouver, B.C.
Canada V5Y 3E1
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Fax (604) 879-7898

Client: Reliance Geological Services Ltd iPL: 93J0107 Out: Oct 06, 1993 Section 1 of 1
Project: Abe 791 2 Rock 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 %	Na %	P %
12107	R	100	<	174	8	7	<	<	<	8	<	<	<	11	9	97	<	58	178	126	<	11	5	5	0.22	0.68	0.07	8.15	0.83	0.23	0.03	0.12
12108	R	903	2.7	379	12	42	23	<	<	19	<	14	<	32	58	16	<	257	182	700	<	4	5	12	0.07	2.57	0.08	15%	2.77	0.25	0.02	0.07
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	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	5.00	5.00
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	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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Reliance Geological Services Ltd 126 Samples 0= Rock 126= Soil 0= Core 0=RC Ct 0= Pulp 0=Other [049209:32:40:39092793]
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Client: Reliance Geological Services Ltd. iPL: 93I2001 Out: Sep 27, 1993 Section 1 of 2
Project: ABE 126 Soil In: Sep 20, 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 %
Abe-92 98+00N 124+00E	S	56	<	77	14	52	<	<	<	6	<	<	<	20	52	62	<	193	194	347	<	44	1	3	0.16	1.77	0.47	6.28	1.49	0.05
Abe-92 98+00N 125+00E	S	61	<	201	18	71	<	<	<	7	<	<	<	32	76	72	<	227	246	1490	<	41	1	8	0.24	3.06	0.34	7.65	2.76	0.14
Abe-92 100+00N 124+00E	S	54	<	49	15	106	5	10	<	4	<	<	<	39	122	167	5	326	207	2205	2	33	<	4	0.13	3.29	0.43	6.99	3.70	0.49
Abe-92 100+00N 125+00E	S	146	<	151	18	100	5	9	<	7	<	<	<	47	121	131	<	276	238	1239	<	24	1	18	0.20	3.94	0.36	7.69	4.66	0.71
Abe-92 100+00N 126+00E	S	71	<	198	17	94	<	5	<	5	<	<	<	57	138	138	<	276	221	1767	2	29	2	11	0.24	3.89	0.31	7.56	4.13	0.58
Abe-92 102+00N 124+00E	S	105	0.1	199	21	172	<	<	<	6	<	2	<	52	237	237	<	451	331	1564	<	22	1	31	0.28	5.10	0.59	8.62	7.33	1.53
Abe-92 102+00N 125+00E	S	1670	0.9	423	20	175	11	<	<	11	<	<	<	84	121	272	<	225	331	1122	3	53	2	26	0.21	3.60	0.28	14.04	2.57	0.66
Abe-92 102+00N 126+00E	S	95	0.1	295	17	99	7	8	<	5	<	<	<	85	195	260	<	419	227	3682	<	19	1	9	0.13	3.75	0.08	7.83	3.94	0.22
Abe-92 102+00N 127+00E	S	263	<	119	15	74	<	<	<	4	<	<	<	33	69	66	<	187	170	631	2	50	1	2	0.06	2.97	0.20	7.02	1.86	0.05
Abe-92 102+00N 128+00E	S	36	<	118	19	148	11	<	<	7	<	<	<	73	167	151	<	302	248	2168	<	14	1	17	0.08	4.82	0.14	8.45	4.12	0.05
Abe-92 104+00N 124+00E	S	151	<	59	17	91	<	7	<	5	<	<	<	34	116	82	<	303	263	1232	2	21	<	16	0.19	3.80	0.37	6.98	4.73	0.24
Abe-92 104+00N 125+00E	S	256	0.7	587	70	138	88	<	<	6	<	2	<	215	179	42	10	248	239	2971	2	21	<	20	0.10	4.28	0.36	9.96	4.76	0.06
Abe-92 104+00N 126+00E	S	210	0.2	263	24	116	11	<	<	4	<	<	<	58	120	60	<	295	242	1867	2	20	1	12	0.12	4.30	0.25	8.33	4.27	0.08
Abe-92 104+00N 127+00E	S	781	3.1	435	72	512	112	<	<	6	<	4	2.4	96	178	104	<	325	229	8664	3	15	<	15	0.06	3.73	0.23	10.48	3.24	0.06
Abe-92 104+00N 128+00E	S	175	0.5	314	19	108	16	7	<	5	<	<	<	38	85	74	<	179	171	1210	2	19	1	8	0.03	4.12	0.10	6.80	3.17	0.07
Abe-92 106+00N 124+00E	S	715	1.3	446	39	168	13	<	<	6	<	<	<	91	127	248	<	152	144	8242	4	21	2	29	0.01	2.54	0.85	10.67	2.43	0.15
Abe-92 106+00N 125+00E	S	255	0.7	319	37	155	12	<	<	7	<	<	<	53	110	215	<	246	181	2567	3	31	1	18	0.06	3.22	0.53	8.75	3.43	0.13
Abe-92 106+00N 126+00E	S	265	0.6	418	32	116	24	<	<	5	<	<	<	98	194	173	<	341	230	3096	<	19	<	7	0.07	3.30	0.40	9.49	3.72	0.08
Abe-92 106+00N 127+00E	S	132	0.6	91	18	94	5	6	<	3	<	<	<	28	87	85	<	215	155	881	<	32	1	3	0.05	3.01	0.26	5.31	2.84	0.06
Abe-92 106+00N 128+00E	S	169	0.2	78	15	71	<	<	<	3	<	<	<	31	90	67	<	226	169	1503	2	22	<	3	0.07	2.64	0.24	6.04	2.41	0.06
Abe-92 108+00N 108+00E	S	11	<	569	25	53	<	<	<	6	<	<	0.1	39	43	30	<	63	105	647	<	52	<	3	0.08	1.09	0.54	3.90	0.90	0.05
Abe-92 108+00N 109+00E	S	13	0.1	388	21	49	<	<	<	11	<	<	<	33	72	91	<	157	198	422	<	31	<	3	0.03	2.90	0.24	7.16	1.09	0.08
Abe-92 108+00N 110+00E	S	42	<	582	12	33	5	8	<	13	<	<	<	23	119	79	<	281	130	193	<	35	<	1	0.14	2.69	0.16	4.30	1.78	0.07
Abe-92 108+00N 111+00E	S	60	<	1443	20	55	9	5	<	9	<	3	<	169	117	80	<	85	107	1919	5	80	1	2	0.04	3.51	0.36	4.92	1.25	0.06
Abe-92 108+00N 112+00E	S	39	<	1824	11	39	<	5	<	11	<	<	<	83	100	58	<	139	138	862	3	141	1	9	0.16	2.20	0.79	5.39	1.88	0.06
Abe-92 108+00N 113+00E	S	16	<	745	13	47	5	6	<	16	<	<	<	60	104	64	<	168	151	863	2	82	1	6	0.16	2.34	0.72	6.01	2.07	0.16
Abe-92 108+00N 114+00E	S	13	<	530	8	44	<	10	<	7	<	<	<	38	100	78	<	269	109	502	<	41	1	9	0.16	2.04	0.74	4.37	2.88	0.33
Abe-92 108+00N 115+00E	S	40	0.1	880	17	49	<	6	<	34	<	<	<	57	104	109	<	181	179	645	<	127	1	6	0.18	2.50	0.86	6.54	2.54	0.40
Abe-92 108+00N 116+00E	S	27	<	1329	17	91	8	12	<	19	<	<	<	42	141	57	5	276	189	791	<	103	1	8	0.22	3.39	1.00	6.20	3.78	0.24
Abe-92 108+00N 117+00E	S	32	<	570	13	65	<	7	<	9	<	<	<	41	183	96	<	383	135	564	<	74	<	3	0.14	3.45	0.50	5.70	3.67	0.53
Abe-92 108+00N 118+00E	S	41	<	774	15	59	<	8	<	6	<	<	<	124	151	110	<	297	173	1029	<	177	<	4	0.18	3.61	0.90	7.17	3.15	0.46
Abe-92 108+00N 119+00E	S	86	<	330	14	50	<	7	<	6	<	<	<	33	97	79	<	246	155	546	<	74	1	3	0.18	2.94	0.56	5.69	2.40	0.19
Abe-92 108+00N 120+00E	S	40	0.2	887	21	114	<	<	<	13	<	<	<	54	159	128	<	206	233	1158	<	150	1	8	0.24	4.09	1.23	6.76	3.88	0.64
Abe-92 108+00N 121+00E	S	56	<	176	18	82	<	5	<	5	<	<	<	38	98	76	<	264	213	1126	3	45	1	7	0.16	3.76	0.36	7.17	3.13	0.07
Abe-92 108+00N 122+00E	S	749	0.2	606	19	48	<	<	<	10	<	<	<	109	122	62	<	205	271	1735	<	68	1	14	0.20	3.66	0.43	10.00	4.20	0.25
Abe-92 108+00N 123+00E	S	78	<	115	75	110	<	10	<	5	<	<	<	43	177	78	<	411	228	1602	<	26	1	7	0.15	3.54	0.43	6.83	4.32	0.06
Abe-92 108+00N 124+00E	S	396	2.0	296	113	117	8	<	<	6	<	<	<	69	137	167	<	226	226	2028	2	20	1	20	0.05	4.03	0.65	8.62	4.71	0.04
Abe-92 108+00N 125+00E	S	184	<	89	17	87	7	5	<	5	<	<	<	44	184	67	<	419	252	2296	2	7	1	17	0.02	5.55	0.14	8.17	6.12	0.03
Abe-92 108+00N 126+00E	S	137	<	181	21	59	<	<	<	4	<	<	<	60	132	47	<	230	283	2019	2	21	1	17	0.05	4.70	0.27	8.18	4.95	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	99.99	99.99	99.99	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

iPL
INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS
iPL 93I2001

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~~Client: Reliance Geological Services Ltd.~~ ~~iPL: 93I2001~~ ~~Out: Sep 27, 1993~~
Project: ABE 126 Soil In: Sep 20, 1993 Certified BC Assayer: David Chiu

Sample Name		Na %	P %
Abe-92 98+00N 124+00E	S	0.02	0.09
Abe-92 98+00N 125+00E	S	0.02	0.12
Abe-92 100+00N 124+00E	S	0.02	0.14
Abe-92 100+00N 125+00E	S	0.02	0.11
Abe-92 100+00N 126+00E	S	0.02	0.13
Abe-92 102+00N 124+00E	S	0.01	0.10
Abe-92 102+00N 125+00E	S	0.03	0.22
Abe-92 102+00N 126+00E	S	0.02	0.11
Abe-92 102+00N 127+00E	S	0.02	0.11
Abe-92 102+00N 128+00E	S	0.01	0.08
Abe-92 104+00N 124+00E	S	0.01	0.09
Abe-92 104+00N 125+00E	S	0.01	0.12
Abe-92 104+00N 126+00E	S	0.02	0.12
Abe-92 104+00N 127+00E	S	0.01	0.17
Abe-92 104+00N 128+00E	S	0.01	0.12
Abe-92 106+00N 124+00E	S	0.01	0.12
Abe-92 106+00N 125+00E	S	0.02	0.13
Abe-92 106+00N 126+00E	S	0.01	0.15
Abe-92 106+00N 127+00E	S	0.02	0.12
Abe-92 106+00N 128+00E	S	0.02	0.08
Abe-92 108+00N 108+00E	S	0.02	0.08
Abe-92 108+00N 109+00E	S	0.02	0.14
Abe-92 108+00N 110+00E	S	0.02	0.09
Abe-92 108+00N 111+00E	S	0.02	0.27
Abe-92 108+00N 112+00E	S	0.02	0.14
Abe-92 108+00N 113+00E	S	0.03	0.19
Abe-92 108+00N 114+00E	S	0.03	0.05
Abe-92 108+00N 115+00E	S	0.02	0.18
Abe-92 108+00N 116+00E	S	0.02	0.12
Abe-92 108+00N 117+00E	S	0.02	0.08
Abe-92 108+00N 118+00E	S	0.02	0.11
Abe-92 108+00N 119+00E	S	0.03	0.12
Abe-92 108+00N 120+00E	S	0.02	0.24
Abe-92 108+00N 121+00E	S	0.02	0.08
Abe-92 108+00N 122+00E	S	0.02	0.13
Abe-92 108+00N 123+00E	S	0.02	0.15
Abe-92 108+00N 124+00E	S	0.01	0.12
Abe-92 108+00N 125+00E	S	0.01	0.15
Abe-92 108+00N 126+00E	S	0.01	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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INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS
iPL 93I2001

Client: Reliance Geological Services Ltd. iPL: 93I2001 Out: Sep 27, 1993
Project: ABE 126 Soil In: Sep 20, 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 %
Abe-92 108+00N 127+00E	S	45	0.6	106	52	439	15	5	<	4	<	<	<	34	64	236	<	100	130	1757	7	100	3	11	0.09	4.02	0.84	5.73	2.53	0.08
Abe-92 108+00N 128+00E	S	48	<	78	27	153	5	<	<	5	<	<	<	27	42	343	<	90	188	2518	3	156	1	3	0.14	4.45	0.63	6.04	1.74	0.06
Abe-93 102+00N 100+00E	S	<	<	25	13	40	6	<	<	2	<	<	<	17	17	89	<	49	87	690	3	77	<	2	0.09	1.85	0.56	3.07	1.52	0.06
Abe-93 102+00N 101+00E	S	17	<	24	13	27	<	<	<	3	<	<	<	11	13	79	<	54	156	250	3	75	1	2	0.15	1.90	0.34	3.78	0.74	0.05
Abe-93 102+00N 102+00E	S	26	<	12	16	22	<	<	<	1	<	<	<	7	6	201	<	23	57	158	3	101	1	1	0.09	2.86	1.21	1.80	0.39	0.11
Abe-93 102+00N 103+00E	S	<	<	64	18	49	<	<	<	4	<	<	<	19	30	82	<	79	137	373	4	91	1	4	0.14	2.52	0.38	3.95	1.46	0.06
Abe-93 102+00N 104+00E	S	<	0.1	32	10	38	<	<	<	2	<	<	<	17	29	90	<	57	114	587	2	76	1	3	0.12	2.15	0.48	3.48	1.49	0.08
Abe-93 102+00N 105+00E	S	<	<	240	68	78	<	8	<	9	<	<	<	36	68	78	<	216	114	530	<	34	1	5	0.12	1.41	0.69	4.44	2.55	0.29
Abe-93 102+00N 106+00E	S	24	0.2	27	47	52	<	7	<	5	<	<	<	23	37	65	<	273	169	489	<	27	1	5	0.23	1.40	0.25	4.93	1.48	0.04
Abe-93 102+00N 107+00E	S	20	0.1	9	30	61	<	11	<	6	<	<	<	24	57	48	<	395	91	538	<	32	1	6	0.15	1.83	0.64	4.15	3.07	0.05
Abe-93 102+00N 119+25E	S	10	<	189	10	59	<	5	<	4	<	<	<	21	59	58	<	132	112	413	6	48	1	4	0.13	2.15	0.40	4.63	1.45	0.14
Abe-93 104+00N 118+50E	S	22	0.8	1070	34	111	5	10	<	16	<	<	<	49	128	148	<	196	220	595	2	163	1	6	0.29	4.03	0.63	6.54	3.13	1.01
Abe-93 106+00N 106+00E	S	5	<	17	48	38	<	12	<	3	<	<	<	22	57	24	<	404	109	373	<	19	<	3	0.13	1.19	0.33	4.23	1.97	0.05
Abe-93 106+00N 107+00E	S	<	1.2	54	99	77	<	7	<	12	<	<	<	29	74	106	<	303	126	678	2	40	1	9	0.08	2.56	0.93	4.82	2.88	0.14
Abe-93 108+00N 102+00E	S	16	<	176	15	53	<	<	<	20	<	<	<	17	27	196	<	83	86	1657	5	84	2	3	0.02	2.13	1.69	3.21	1.12	0.07
Abe-93 108+00N 103+00E	S	<	<	58	71	47	<	7	<	31	<	<	<	34	68	41	<	295	112	544	<	26	<	6	0.10	1.48	0.68	4.35	2.38	0.05
Abe-93 108+00N 104+00E	S	<	<	66	75	52	<	9	<	12	<	<	<	37	69	44	<	296	125	516	<	31	1	5	0.11	1.48	0.79	4.95	2.26	0.06
Abe-93 108+00N 105+00E	S	<	<	50	72	51	<	5	<	10	<	<	<	33	67	57	<	265	102	522	<	28	1	5	0.08	1.38	0.99	4.19	2.21	0.08
Abe-93 108+00N 106+00E	S	5	<	47	35	35	<	8	<	21	<	<	<	36	64	24	<	269	83	455	<	26	<	5	0.08	1.26	0.74	3.98	1.94	0.04
Abe-93 108+00N 107+00E	S	56	0.8	1451	45	49	<	<	<	62	<	<	<	158	197	125	<	289	84	2413	19	57	11	16	0.04	5.28	0.95	4.64	2.84	0.12
Abe-93 110+00N 112+00E	S	41	<	880	14	44	5	6	<	5	<	<	<	60	97	106	<	181	127	1108	<	45	<	4	0.11	1.97	0.94	4.49	2.25	0.21
Abe-93 110+00N 113+00E	S	25	<	496	35	51	<	7	<	18	<	<	<	41	100	73	<	254	163	802	<	68	1	9	0.22	3.10	0.70	5.59	3.22	0.14
Abe-93 110+00N 114+00E	S	19	0.2	59	13	39	<	<	<	4	<	<	<	25	50	101	<	82	148	375	2	46	<	3	0.16	2.66	0.43	3.88	2.11	0.26
Abe-93 110+00N 115+00E	S	6	<	72	16	36	<	<	<	6	<	<	<	19	44	60	<	115	133	405	<	53	<	3	0.16	2.13	0.41	4.08	1.44	0.04
Abe-93 110+00N 116+00E	S	13	0.5	353	11	55	<	<	<	18	<	<	<	32	71	81	<	149	151	645	<	178	<	4	0.14	2.35	0.79	4.63	2.12	0.18
Abe-93 110+00N 117+00E	S	25	0.3	970	12	61	<	<	<	30	<	<	<	44	85	59	<	134	143	583	<	160	1	6	0.16	2.55	1.14	5.29	2.40	0.28
Abe-93 110+00N 118+00E	S	54	0.2	53	13	54	<	5	<	5	<	<	<	18	44	55	5	139	169	704	3	36	<	4	0.15	2.29	0.22	4.85	1.68	0.07
Abe-93 110+00N 119+00E	S	128	0.9	1791	27	65	<	<	<	15	<	<	<	160	183	44	<	301	187	1613	<	45	2	15	0.15	3.17	0.62	9.00	4.26	0.08
Abe-93 110+00N 120+00E	S	26	0.1	111	13	61	<	<	<	3	<	<	<	24	59	111	<	139	114	552	4	43	<	2	0.07	2.66	0.38	4.93	1.86	0.09
Abe-93 110+00N 121+00E	S	61	0.1	48	12	51	<	<	<	4	<	<	<	20	38	59	<	134	167	788	2	40	<	2	0.11	2.32	0.22	4.91	0.98	0.05
Abe-93 110+00N 122+00E	S	41	0.2	101	13	60	<	<	<	3	<	<	<	16	32	99	<	102	131	693	5	31	<	1	0.03	2.05	0.22	3.86	1.15	0.07
Abe-93 110+00N 123+00E	S	93	0.3	84	21	105	<	9	<	5	<	<	<	23	123	190	<	257	163	675	4	36	1	6	0.03	3.20	0.90	5.68	2.67	0.07
Abe-93 110+00N 124+00E	S	525	0.7	162	16	55	7	<	<	5	<	2	<	31	51	301	<	89	145	1830	4	14	1	19	<	2.20	0.50	6.42	1.40	0.09
Abe-93 110+00N 125+00E	S	814	1.8	258	36	84	5	<	<	8	<	<	<	56	104	337	<	161	146	1948	6	25	1	18	0.03	2.48	0.39	7.50	2.41	0.08
Abe-93 110+00N 126+00E	S	11	0.1	54	15	94	<	<	<	3	<	<	<	16	24	444	<	44	98	1643	6	93	1	1	0.02	3.05	0.74	3.72	0.96	0.04
Abe-93 110+00N 127+00E	S	6	0.2	86	21	176	<	5	<	3	<	<	<	29	38	343	5	60	138	1660	5	186	4	11	0.18	4.43	1.23	5.13	2.30	0.07
Abe-93 112+00N 112+00E	S	57	<	645	7	41	<	<	<	5	<	<	<	41	67	39	<	115	138	779	<	57	1	7	0.11	2.10	0.69	5.03	2.25	0.06
Abe-93 112+00N 113+00E	S	130	0.4	278	12	48	<	<	<	7	<	<	<	32	69	76	<	160	146	703	3	39	<	3	0.06	2.50	0.86	4.92	2.07	0.07
Abe-93 112+00N 114+00E	S	140	0.2	70	10	17	<	<	<	4	<	<	<	21	31	27	5	108	151	150	<	32	<	2	0.15	1.11	0.23	3.66	0.67	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	99.99	99.99	99.99	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

iPL
INTERNATIONAL PLASMA LABORATORY LTD.

CERTIFICATE OF ANALYSIS
iPL 93I2001

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Project: ABE 126 Soil In: Sep 20, 1993 Certified BC Assayer: David Chiu

Sample Name		Na %	P %
Abe-92 108+00N 127+00E	S	0.02	0.10
Abe-92 108+00N 128+00E	S	0.04	0.12
Abe-93 102+00N 100+00E	S	0.02	0.11
Abe-93 102+00N 101+00E	S	0.02	0.06
Abe-93 102+00N 102+00E	S	0.05	0.04
Abe-93 102+00N 103+00E	S	0.02	0.07
Abe-93 102+00N 104+00E	S	0.03	0.09
Abe-93 102+00N 105+00E	S	0.03	0.04
Abe-93 102+00N 106+00E	S	0.03	0.02
Abe-93 102+00N 107+00E	S	0.03	0.02
Abe-93 102+00N 119+25E	S	0.02	0.12
Abe-93 104+00N 118+50E	S	0.04	0.21
Abe-93 106+00N 106+00E	S	0.04	0.04
Abe-93 106+00N 107+00E	S	0.03	0.08
Abe-93 108+00N 102+00E	S	0.02	0.38
Abe-93 108+00N 103+00E	S	0.03	0.03
Abe-93 108+00N 104+00E	S	0.04	0.04
Abe-93 108+00N 105+00E	S	0.03	0.04
Abe-93 108+00N 106+00E	S	0.03	0.02
Abe-93 108+00N 107+00E	S	0.04	0.25
Abe-93 110+00N 112+00E	S	0.02	0.16
Abe-93 110+00N 113+00E	S	0.03	0.07
Abe-93 110+00N 114+00E	S	0.02	0.05
Abe-93 110+00N 115+00E	S	0.03	0.10
Abe-93 110+00N 116+00E	S	0.03	0.18
Abe-93 110+00N 117+00E	S	0.02	0.17
Abe-93 110+00N 118+00E	S	0.02	0.10
Abe-93 110+00N 119+00E	S	0.02	0.08
Abe-93 110+00N 120+00E	S	0.02	0.09
Abe-93 110+00N 121+00E	S	0.02	0.11
Abe-93 110+00N 122+00E	S	0.02	0.13
Abe-93 110+00N 123+00E	S	0.02	0.28
Abe-93 110+00N 124+00E	S	0.01	0.14
Abe-93 110+00N 125+00E	S	0.02	0.12
Abe-93 110+00N 126+00E	S	0.03	0.29
Abe-93 110+00N 127+00E	S	0.03	0.11
Abe-93 112+00N 112+00E	S	0.02	0.14
Abe-93 112+00N 113+00E	S	0.02	0.11
Abe-93 112+00N 114+00E	S	0.02	0.07
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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Project: ABE 126 Soil In: Sep 20, 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 %
Abe-93 112+00N 115+00E	S	37	0.1	70	10	31	<	<	<	4	<	<	<	16	26	58	<	101	157	337	3	40	<	2	0.11	1.45	0.21	4.06	0.58	0.04
Abe-93 112+00N 116+00E	S	7	0.2	368	8	33	<	<	<	8	<	<	<	21	51	34	<	88	83	287	<	114	1	3	0.11	1.51	1.01	2.88	1.43	0.20
Abe-93 112+00N 117+00E	S	121	0.1	309	6	51	<	<	<	9	<	<	<	55	90	118	<	147	131	844	<	90	1	4	0.08	2.08	0.85	5.30	2.19	0.20
Abe-93 112+00N 118+00E	S	1160	0.3	119	16	39	<	5	<	5	<	<	<	30	64	77	<	209	213	403	2	53	1	3	0.13	2.24	0.59	6.69	1.65	0.05
Abe-93 112+00N 119+00E	S	121	0.5	156	16	92	5	6	<	5	<	<	<	26	66	95	<	155	147	688	<	35	<	5	0.08	3.53	0.20	5.96	2.34	0.04
Abe-93 112+00N 120+00E	S	311	0.6	433	19	173	<	<	<	7	<	<	<	63	139	134	<	270	212	2429	6	16	2	27	0.05	3.66	0.38	8.13	4.56	0.08
Abe-93 112+00N 121+00E	S	162	0.1	171	18	100	<	5	<	5	<	<	<	39	79	159	<	149	148	1105	4	83	2	11	0.08	3.41	0.80	6.20	2.58	0.05
Abe-93 112+00N 122+00E	S	83	0.6	350	21	70	<	5	<	5	<	<	<	68	110	154	<	230	200	1529	3	39	1	14	0.03	3.32	0.40	7.73	3.04	0.06
Abe-93 112+00N 123+00E	S	17	0.1	291	18	83	11	<	<	5	<	<	<	49	75	238	<	137	160	1544	4	71	1	12	0.02	2.98	0.80	6.45	1.84	0.07
Abe-93 114+00N 110+00E	S	33	<	606	11	34	<	<	<	6	<	<	<	44	89	66	5	140	137	763	<	148	1	7	0.12	2.57	0.99	5.28	2.26	0.14
Abe-93 114+00N 111+00E	S	10	0.1	87	13	32	<	<	<	3	<	<	<	19	42	76	<	158	100	243	2	62	1	2	0.06	2.28	0.35	3.56	1.37	0.04
Abe-93 114+00N 112+00E	S	22	<	43	20	20	<	<	<	3	<	<	<	11	24	42	<	122	87	142	2	41	1	2	0.09	1.00	0.28	2.42	0.67	0.05
Abe-93 114+00N 113+00E	S	97	<	137	12	60	<	<	<	7	<	<	<	29	64	56	<	181	142	539	3	38	<	4	0.09	1.91	0.60	4.98	1.64	0.06
Abe-93 114+00N 114+00E	S	124	0.1	323	23	93	<	6	<	9	<	<	<	46	93	88	<	224	154	935	2	83	1	8	0.11	2.61	0.60	5.96	2.77	0.08
Abe-93 114+00N 115+00E	S	<	0.2	63	15	75	<	<	<	3	<	<	<	12	22	111	<	27	76	521	<	33	1	3	0.01	4.24	0.12	3.69	1.21	0.07
Abe-93 114+00N 116+00E	S	5	<	33	18	97	<	<	<	3	<	<	<	11	25	239	<	53	116	671	4	58	1	3	0.05	3.64	0.32	3.79	1.05	0.05
Abe-93 114+00N 117+00E	S	6	0.1	38	15	88	<	<	<	3	<	<	<	21	66	243	<	96	128	2068	<	127	1	3	0.12	3.85	0.74	4.23	1.99	0.05
Abe-93 114+00N 118+00E	S	13	<	42	19	100	21	<	<	2	<	<	0.2	20	18	477	<	36	61	1.3%	4	57	<	1	0.03	1.87	0.69	2.70	0.42	0.08
Abe-93 114+00N 119+00E	S	26	0.3	113	25	176	15	5	<	4	<	<	<	32	53	410	<	92	121	2458	4	159	2	7	0.05	3.33	1.27	5.55	1.63	0.21
Abe-93 114+00N 120+00E	S	7	0.2	80	22	233	13	<	<	5	<	<	<	30	46	284	5	69	127	1528	3	503	3	7	0.12	4.85	1.62	5.15	1.80	0.06
Abe-93 114+00N 121+00E	S	14	0.4	89	17	133	<	<	<	4	<	<	<	18	46	201	6	92	116	957	4	49	1	2	0.04	4.12	0.40	5.37	1.23	0.04
Abe-93 114+00N 122+00E	S	12	0.1	59	16	115	9	<	<	3	<	<	<	14	30	267	<	50	105	740	3	87	<	1	0.06	3.67	0.48	4.43	1.23	0.08
Abe-93 114+00N 123+00E	S	10	<	65	19	127	<	<	<	4	<	<	<	18	37	340	<	57	105	1108	6	107	2	2	0.05	3.90	0.47	4.78	1.36	0.07
Abe-93 116+00N 106+00E	S	25	<	97	15	29	<	<	<	3	<	<	<	16	35	86	5	111	132	218	3	66	1	4	0.09	1.92	0.39	3.55	0.91	0.04
Abe-93 116+00N 107+00E	S	13	0.1	14	12	14	<	<	<	3	<	<	<	7	12	84	<	94	79	154	3	97	1	2	0.11	0.93	0.36	1.83	0.32	0.03
Abe-93 116+00N 108+00E	S	20	<	12	18	24	<	6	<	2	<	<	<	11	23	40	<	147	77	165	2	45	1	3	0.12	1.23	0.43	1.99	1.02	0.03
Abe-93 116+00N 109+00E	S	<	<	2	8	36	<	<	<	2	<	<	<	28	34	31	<	45	198	231	<	32	1	4	0.34	1.58	0.68	5.27	1.59	0.05
Abe-93 116+00N 110+00E	S	285	<	45	12	21	<	<	<	1	<	<	<	12	20	67	<	131	85	83	3	64	<	1	0.07	0.82	0.33	2.23	0.25	0.04
Abe-93 116+00N 111+00E	S	56	0.2	617	16	54	<	<	<	8	<	<	<	57	105	44	<	212	169	608	<	61	1	6	0.14	2.73	1.15	6.15	2.56	0.07
Abe-93 116+00N 112+00E	S	39	0.1	43	11	38	<	<	<	3	<	<	<	17	36	76	<	139	154	236	3	56	<	2	0.11	1.73	0.26	4.47	0.89	0.05
Abe-93 116+00N 113+00E	S	8	0.1	41	18	104	7	<	<	4	<	3	<	19	38	249	<	66	176	1391	2	90	1	5	0.16	3.27	0.36	5.26	1.34	0.05
Abe-93 116+00N 114+00E	S	<	<	26	20	71	<	5	<	4	<	<	<	15	17	766	6	25	129	567	3	347	2	4	0.17	5.68	1.36	4.73	0.79	0.13
Abe-93 116+00N 115+00E	S	5	0.2	54	23	103	<	<	<	4	<	<	<	17	49	579	5	79	148	539	3	296	2	5	0.18	4.86	0.74	5.79	1.24	0.11
Abe-93 116+00N 116+00E	S	<	0.1	67	31	128	<	<	<	4	<	<	<	21	29	282	<	45	160	834	4	85	2	8	0.14	5.75	0.64	5.78	1.56	0.09
Abe-93 116+00N 117+00E	S	5	0.3	76	28	112	<	<	<	3	<	<	<	24	39	290	<	63	153	937	6	102	6	10	0.17	6.08	0.72	5.32	1.79	0.09
Abe-93 116+00N 118+00E	S	6	0.2	72	28	131	<	<	<	4	<	<	<	22	40	263	<	72	131	1169	8	76	3	8	0.12	4.92	0.87	4.57	1.81	0.09
Abe-93 116+00N 119+00E	S	<	0.3	36	20	136	<	<	<	2	<	<	<	24	50	431	<	82	147	1343	3	97	2	5	0.16	4.86	0.99	5.26	1.93	0.05
Abe-93 116+00N 120+00E	S	7	<	29	13	46	<	<	<	3	<	<	<	6	13	227	<	34	58	504	3	60	<	1	0.02	2.33	0.24	2.14	0.40	0.05
Abe-93 118+00N 111+00E	S	7	<	31	12	70	<	<	<	3	<	<	<	17	23	123	<	77	136	340	3	80	1	3	0.23	1.60	0.50	3.79	0.96	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	99.99	99.99	99.99	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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Client: Reliance Geological Services Ltd. iPL: 93I2001 Out: Sep 27, 1993
Project: ABE 126 Soil In: Sep 20, 1993 Certified BC Assayer: David Chiu

Sample Name		Na %	P %
Abe-93 112+00N 115+00E	S	0.02	0.10
Abe-93 112+00N 116+00E	S	0.03	0.13
Abe-93 112+00N 117+00E	S	0.02	0.12
Abe-93 112+00N 118+00E	S	0.02	0.07
Abe-93 112+00N 119+00E	S	0.02	0.08
Abe-93 112+00N 120+00E	S	0.02	0.13
Abe-93 112+00N 121+00E	S	0.03	0.10
Abe-93 112+00N 122+00E	S	0.02	0.13
Abe-93 112+00N 123+00E	S	0.02	0.22
Abe-93 114+00N 110+00E	S	0.02	0.14
Abe-93 114+00N 111+00E	S	0.03	0.06
Abe-93 114+00N 112+00E	S	0.02	0.04
Abe-93 114+00N 113+00E	S	0.02	0.11
Abe-93 114+00N 114+00E	S	0.02	0.12
Abe-93 114+00N 115+00E	S	0.02	0.06
Abe-93 114+00N 116+00E	S	0.02	0.07
Abe-93 114+00N 117+00E	S	0.04	0.08
Abe-93 114+00N 118+00E	S	0.02	0.19
Abe-93 114+00N 119+00E	S	0.02	0.20
Abe-93 114+00N 120+00E	S	0.08	0.10
Abe-93 114+00N 121+00E	S	0.03	0.14
Abe-93 114+00N 122+00E	S	0.02	0.17
Abe-93 114+00N 123+00E	S	0.04	0.13
Abe-93 116+00N 106+00E	S	0.02	0.04
Abe-93 116+00N 107+00E	S	0.02	0.04
Abe-93 116+00N 108+00E	S	0.03	0.03
Abe-93 116+00N 109+00E	S	0.05	0.03
Abe-93 116+00N 110+00E	S	0.02	0.04
Abe-93 116+00N 111+00E	S	0.02	0.09
Abe-93 116+00N 112+00E	S	0.02	0.08
Abe-93 116+00N 113+00E	S	0.03	0.08
Abe-93 116+00N 114+00E	S	0.09	0.08
Abe-93 116+00N 115+00E	S	0.04	0.12
Abe-93 116+00N 116+00E	S	0.03	0.09
Abe-93 116+00N 117+00E	S	0.03	0.11
Abe-93 116+00N 118+00E	S	0.03	0.20
Abe-93 116+00N 119+00E	S	0.07	0.08
Abe-93 116+00N 120+00E	S	0.03	0.12
Abe-93 118+00N 111+00E	S	0.04	0.04
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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Project: ABE 126 Soil In: Sep 20, 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 %
Abe-93 118+00N 112+00E	S	5	<	45	23	100	<	<	<	5	<	<	<	24	36	244	<	63	175	3211	3	66	2	6	0.22	3.19	0.37	5.94	1.50	0.07
Abe-93 118+00N 113+00E	S	8	<	27	22	118	10	<	<	4	<	<	<	23	20	465	6	40	140	3241	<	265	<	4	0.09	3.52	0.63	4.76	1.61	0.07
Abe-93 118+00N 114+00E	S	13	<	98	26	160	15	8	<	4	<	<	<	29	69	296	<	121	151	1694	2	109	<	7	0.06	5.01	0.48	6.12	2.48	0.09
Abe-93 118+00N 115+00E	S	25	<	88	27	179	<	<	<	3	<	3	<	28	33	217	<	50	155	1784	3	146	1	7	0.16	4.76	0.73	5.78	2.06	0.08
Abe-93 118+00N 116+00E	S	47	<	89	20	225	<	<	<	2	<	<	<	19	27	210	<	44	97	945	3	112	1	3	0.08	4.47	0.47	4.42	1.42	0.06
Abe-93 118+00N 117+00E	S	13	<	62	19	171	<	<	<	4	<	<	<	28	45	276	<	93	123	3288	4	98	<	6	0.11	3.78	0.63	4.87	2.04	0.07
Abe-93 118+00N 118+00E	S	17	0.7	162	34	898	<	<	<	5	<	<	<	40	56	347	5	147	154	3052	6	104	2	15	0.08	5.41	0.70	6.33	3.04	0.07
Abe-93 118+00N 119+00E	S	21	<	90	22	102	<	<	<	3	<	<	<	27	25	427	<	41	141	1254	3	149	5	8	0.12	5.67	0.77	4.92	1.47	0.09
Abe-93 118+00N 120+00E	S	20	0.1	97	30	200	<	<	<	4	<	<	<	30	23	220	<	33	136	1914	3	119	2	5	0.07	5.15	0.82	5.23	1.54	0.12
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	99.99	99.99	99.99	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 93I2001

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

Project: ABE 126 Soil In: Sep 20, 1993 Certified BC Assayer: David Chiu

Sample Name		Na %	P %
Abe-93 118+00N 112+00E	S	0.03	0.14
Abe-93 118+00N 113+00E	S	0.03	0.13
Abe-93 118+00N 114+00E	S	0.03	0.07
Abe-93 118+00N 115+00E	S	0.02	0.08
Abe-93 118+00N 116+00E	S	0.03	0.09
Abe-93 118+00N 117+00E	S	0.02	0.13
Abe-93 118+00N 118+00E	S	0.02	0.09
Abe-93 118+00N 119+00E	S	0.04	0.10
Abe-93 118+00N 120+00E	S	0.02	0.11

	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

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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.

1992 Rock Samples-Significant Results

Sample	Type	Width (m)	Cu (ppm)	Au (ppb)	Description
12357	Select	-	2.3%	14000	Diorite subcrop with pyrite blebs and 2% chalcopyrite. 47.5 ppm Ag.
12358	Chip	0.3	2231	7	Hybrid unit with malachite stain.
12360	Select	-	2.7%	4070	Hybrid unit hosting flat-lying quartz veins mineralized with chalcopyrite and tetrahedrite. 79 ppm Ag.
12367	Chip	3.0	3261	< 5	Shear zone in malachite stain pyroxenite.
12477	Select	-	665	366	Pyroxenite with quartz veinlets.
12023	Chip	1.0	1440	202	Rusty andesite with trace chalcopyrite.
12025	Chip	2.0	11961	1100	Andesite porphyry with pyrite blebs and malachite/ azurite stain.
12201	Chip	0.5	272	398	Lapilli tuff with moderate ankerite alteration and disseminated pyrite/ pyrrhotite up to 10%
12203	Panel	$2m^2$	2.4%	99	Pyroxenite with strong malachite and limonite stain.
12205	Chip	2.0	1925	< 5	Quartz-feldspar dyke with moderate malachite/ azurite stain.
12206	Chip	1.0	1744	82	
12206	(reassayed)		2202	117	

APPENDIX B

STATISTICAL ANALYSIS

SOIL SAMPLE GEOCHEMISTRY
ON THE ABE PROPERTY
British Columbia

By

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

6 October 1993

INTRODUCTION

An investigation of the distribution of gold and copper in soil samples from the Abe Property was carried out between 4 October and 6 October 1993.

This report is part of a larger report on the Abe Property and is based on an evaluation of the geochemical analyses only, the author has not visited the property.

A total of 158 samples from one grid on the property were analysed in 1992, and were reported previously (Clark, 28 September 1992) as part of a larger report on the project. An additional 111 samples were analysed in 1993.

DISCUSSION

Following discussions with the analytical laboratory staff (International Plasma Laboratories, Vancouver) and a review of the overall statistics of the 1992 and 1993 sample results, it has been determined that the variation between the 1992 analyses and the 1993 analyses is primarily due to sample variation, not analytical procedure. The two sets of samples have therefore been evaluated as a single set of samples.

Summary statistics and correlation coefficients have been calculated for the main elements of interest, and histograms plotted for gold and copper (see Appendix).

Gold:

Gold values are show many high values, ranging up to 1670 ppb Au (see Summary Statistics Tables). Gold shows a moderate correlation with silver, and a low correlation with arsenic. There is no correlation between gold and copper (see Correlation Coefficient Tables).

The detailed histogram of gold shows an irregular distribution that may be a log-normal Gaussian distribution incompletely defined due to an insufficient data set. This irregular data distribution ends at about 600 ppb, with isolated higher values of gold up to 1670 ppb (see histograms).

The 'breakpoints' for the symbol sizes used on the symbol maps were determined by inspection of the detailed histogram. All 'breakpoint' values are high compared to the usual soil values in British Columbia. The following are the 'breakpoints' chosen as showing the most useful pattern of values on the maps:

Gold:	Low values	>=100 and <200 ppb Au
	Medium values	>=200 and <600 ppb Au
	Higher values	>=600 ppb Au.

The higher values are located mainly in the east of the grid and extending from there to the northwest in the newly sampled area. This strongly confirms and extends the very weak anomalous area located in 1992.

Copper:

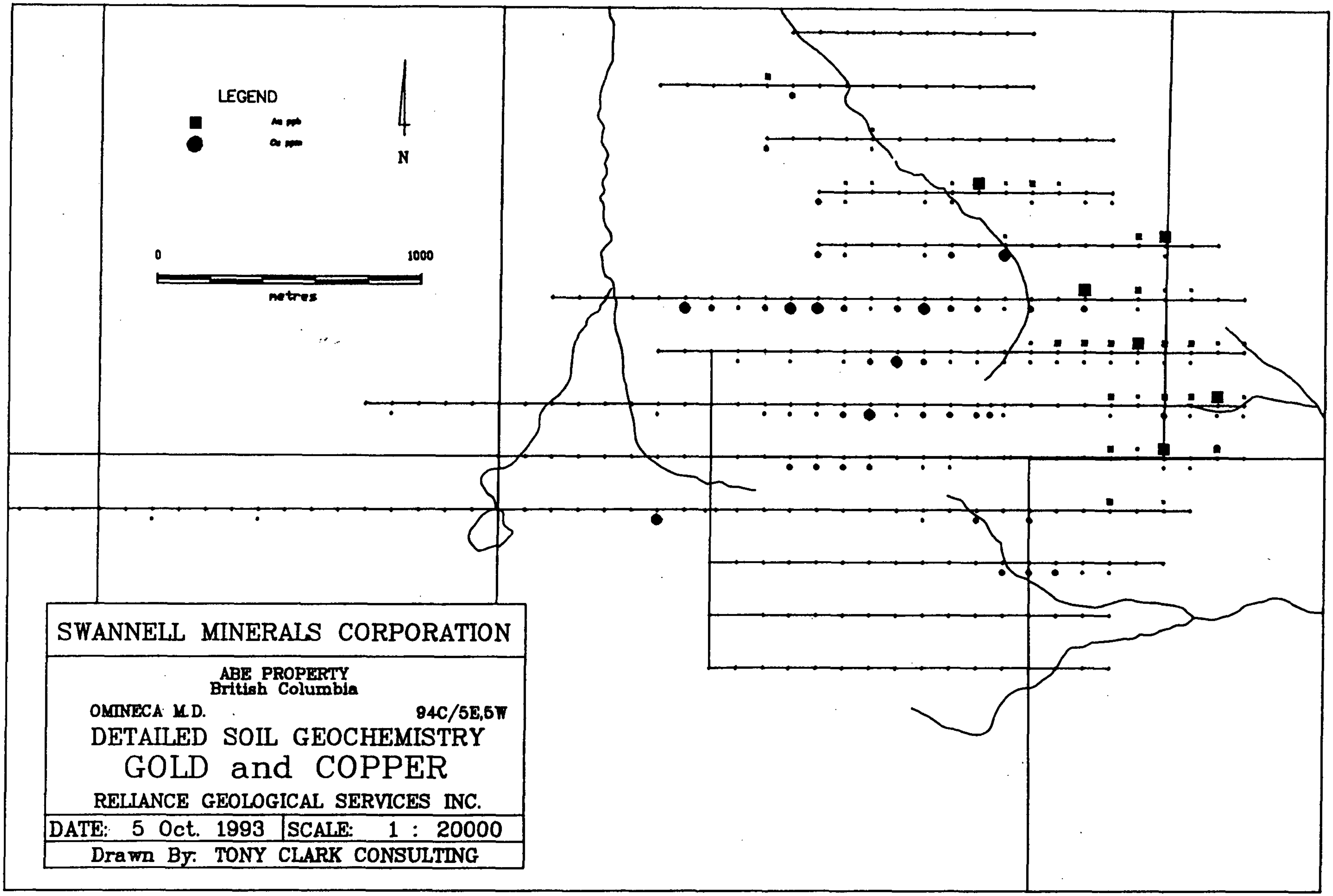
Copper shows a strong correlation with cobalt, a moderate correlation with molybdenum and nickel, and a very weak correlation with silver. Copper shows medium to high background values (above 100 ppm Cu, see Statistics Tables and histograms) and an irregular log-normal distribution ending at about 700 ppm, with a possible overlapping second population from 550 ppm to about 1100 ppm. Copper high values are distributed in the central part of the grid, and are not spatially associated with the high gold values. The following are the 'breakpoints' chosen as showing the most useful pattern of values on the maps:

Copper:	Low values	>=250 and <550 ppm Cu
	Medium values	>=550 and <1100 ppm Cu
	Higher values	>=1100 ppm Cu.

CONCLUSION

There is a significant area of higher gold results in the east part of the grid, trending northwest. This gold zone should be further investigated by sampling to the east and southeast. In addition, there is a zone of higher copper values, with little or no gold associated, in the central part of the grid and trending northwest. This copper zone appears to flank the gold zone on the west side of the gold zone, and requires further sampling to the northwest to locate the extension of the copper zone.

Although gold and copper are not correlated statistically, they could be genetically related, with the copper zone being the deeper, more mesothermal, part, and the gold zone being a shallower, part of a single mineralising system.


LEGEND
N
0
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metres
SWANNELL MINERALS CORPORATION
ABE PROPERTY
British Columbia
OMINECA M.D.
94C/5E,5W
DETAILED SOIL GEOCHEMISTRY
GOLD and COPPER
RELIANCE GEOLOGICAL SERVICES INC.
DATE: 5 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,
6th October 1993

5

APPENDICES

ABE Project, 1992 + 1993 Summary Statistics:

Summary Statistics

	Ag_ppm	As_ppm	Au_ppb	Ba_ppm	Bi_ppm	Cd_ppm	Co_ppm
Number	284	284	284	284	284	284	284
Mean	0.2046	4.206	60.651	128.489	1.067	0.0634	38.194
Std Dev	0.3331	8.649	166.539	125.794	0.345	0.1425	25.505
Maximum	3.10	112.0	1670.0	996.0	4.0	2.40	215.0
Minimum	0.05	2.5	2.5	6.0	1.0	0.05	6.0
Range	3.05	109.5	1667.5	990.0	3.0	2.35	209.0
Coef Var	162.8198	205.6249	274.5841	97.9023	32.3581	224.7842	66.7787
Std Err	0.0198	0.5132	9.8823	7.4645	0.0205	0.0085	1.5135
Median	0.050	2.50	6.50	86.00	1.00	0.050	32.00
Mode	0.05	2.5	2.5	44.0	1.0	0.05	17.0
Std Dev	0.3331	8.649	166.539	125.794	0.345	0.1425	25.505
Variance	0.1110	74.798	27735.279	15824.159	0.119	0.0203	650.517
Skewness	4.4702	10.1360	5.6037	2.8581	6.1740	15.6057	2.9314
Kurtosis	27.2019	113.2091	39.8138	11.4926	42.3090	251.9192	12.9513

	Cr_ppm	Cu_ppm	Hg_ppm	La_ppm	Mn_ppm	Mo_ppm
Number	284	284	284	284	284	284
Mean	218.958	243.137	1.729	2.060	1029.317	6.940
Std Dev	142.637	310.014	0.629	1.781	1181.755	7.265
Maximum	731.0	1824.0	5.0	19.0	13206.0	62.0
Minimum	23.0	2.0	1.5	1.0	83.0	1.0
Range	708.0	1822.0	3.5	18.0	13123.0	61.0
Coef Var	65.1437	127.5057	36.4075	86.4775	114.8096	104.6850
Std Err	8.4640	18.3959	0.0374	0.1057	70.1242	0.4311
Median	187.50	112.00	1.50	1.00	692.00	5.00
Mode	92.0	27.0	1.5	1.0	365.0	3.0
Std Dev	142.637	310.014	0.629	1.781	1181.755	7.265
Variance	20345.383	96108.698	0.396	3.173	1396544.104	52.784
Skewness	0.9938	2.3285	2.6948	3.9058	5.8422	3.2758
Kurtosis	0.7637	6.1213	6.4774	28.1944	48.2567	15.2456

ABE Project, 1992 + 1993 Summary Statistics, (continued):

Summary Statistics

	Ni_ppm	Pb_ppm	Sb_ppm	Sc_ppm	Sr_ppm	Tl_ppm	V_ppm
Number	284	284	284	284	284	284	284
Mean	76.940	25.648	5.437	5.863	67.130	5.000	128.553
Std Dev	42.144	38.806	3.483	4.856	82.842	0.000	55.918
Maximum	237.0	311.0	19.0	31.0	543.0	5.0	331.0
Minimum	6.0	1.0	2.5	1.0	2.0	5.0	33.0
Range	231.0	310.0	16.5	30.0	541.0	0.0	298.0
Coef Var	54.7754	151.3010	64.0628	82.8309	123.4042	0.0000	43.4977
Std Err	2.5008	2.3027	0.2067	0.2882	4.9157	0.0000	3.3181
Median	71.50	15.00	5.00	5.00	39.00	5.00	120.50
Mode	64.0	1.0	2.5	3.0	11.0	5.0	71.0
Std Dev	42.144	38.806	3.483	4.856	82.842		55.918
Variance	1776.141	1505.869	12.130	23.582	6862.729	0.000	3126.771
Skewness	0.7920	3.6357	1.1214	2.2505	2.9584		0.8965
Kurtosis	0.6170	17.1368	0.7374	6.1951	10.4855		0.7182

	W_ppm	Zn_ppm	Zr_ppm
Number	284	284	284
Mean	3.206	72.169	1.181
Std Dev	8.954	71.485	0.889
Maximum	153.0	898.0	11.0
Minimum	2.5	14.0	0.5
Range	150.5	884.0	10.5
Coef Var	279.2865	99.0519	75.2116
Std Err	0.5313	4.2418	0.0527
Median	2.50	55.00	1.00
Mode	2.5	47.0	1.0
Std Dev	8.954	71.485	0.8890
Variance	80.172	5110.077	0.789
Skewness	16.4885	6.8960	6.1138
Kurtosis	272.8134	67.6215	55.6700

Pearson Correlation Coefficients

	Ag_ppm	As_ppm	Au_ppb	Ba_ppm	Bi_ppm	Cd_ppm	Co_ppm
Ag_ppm	1.	0.5013	0.4751	0.1402	0.2816	0.5084	0.3926
As_ppm	0.5013	1.	0.3078	0.0417	0.5025	0.7273	0.3963
Au_ppb	0.4751	0.3078	1.	0.0769	0.1584	0.2399	0.3242
Ba_ppm	0.1402	0.0417	0.0769	1.	0.2562	0.0344	-0.0871
Bi_ppm	0.2816	0.5025	0.1584	0.2562	1.	0.5529	0.1960
Cd_ppm	0.5084	0.7273	0.2399	0.0344	0.5529	1.	0.1199
Co_ppm	0.3926	0.3963	0.3242	-0.0871	0.1960	0.1199	1.
Cr_ppm	0.0237	-0.0008	-0.0069	-0.3488	-0.0647	0.0553	0.2237
Cu_ppm	0.2755	0.0896	0.0912	-0.1361	0.0466	0.0217	0.6289
Hg_ppm	-0.0509	-0.0637	-0.0806	-0.0260	-0.0707	-0.0037	0.0343
La_ppm	0.2494	0.0636	0.1268	0.4703	0.1544	0.0365	0.0974
Mn_ppm	0.3932	0.5118	0.3304	0.3806	0.4047	0.4160	0.3267
Mo_ppm	0.2386	-0.0247	0.0185	-0.0602	-0.0533	-0.0190	0.3824
Ni_ppm	0.3328	0.2340	0.2536	-0.1964	0.0564	0.1248	0.7168
Pb_ppm	0.2307	0.0839	-0.0130	0.1426	0.2101	0.1360	0.1326
Sb_ppm	-0.0918	-0.1087	-0.1791	-0.2518	-0.1081	-0.0348	0.0462
Sc_ppm	0.4312	0.2576	0.5348	0.0992	0.1320	0.0943	0.5468
Sr_ppm	0.0238	-0.0178	-0.0506	0.5183	-0.0396	-0.0547	-0.0566
Tl_ppm	undef.	undef.	undef.	undef.	undef.	undef.	undef.
V_ppm	0.2910	0.2195	0.4591	0.0141	0.1127	0.0630	0.3776
W_ppm	-0.0164	0.0891	-0.0210	0.0319	0.0001	-0.0074	0.0291
Zn_ppm	0.3895	0.3946	0.2066	0.3039	0.2384	0.3614	0.1698
Zr_ppm	0.1766	-0.0481	0.0643	0.3276	-0.0339	-0.0409	0.2429

Pearson Correlation Coefficients

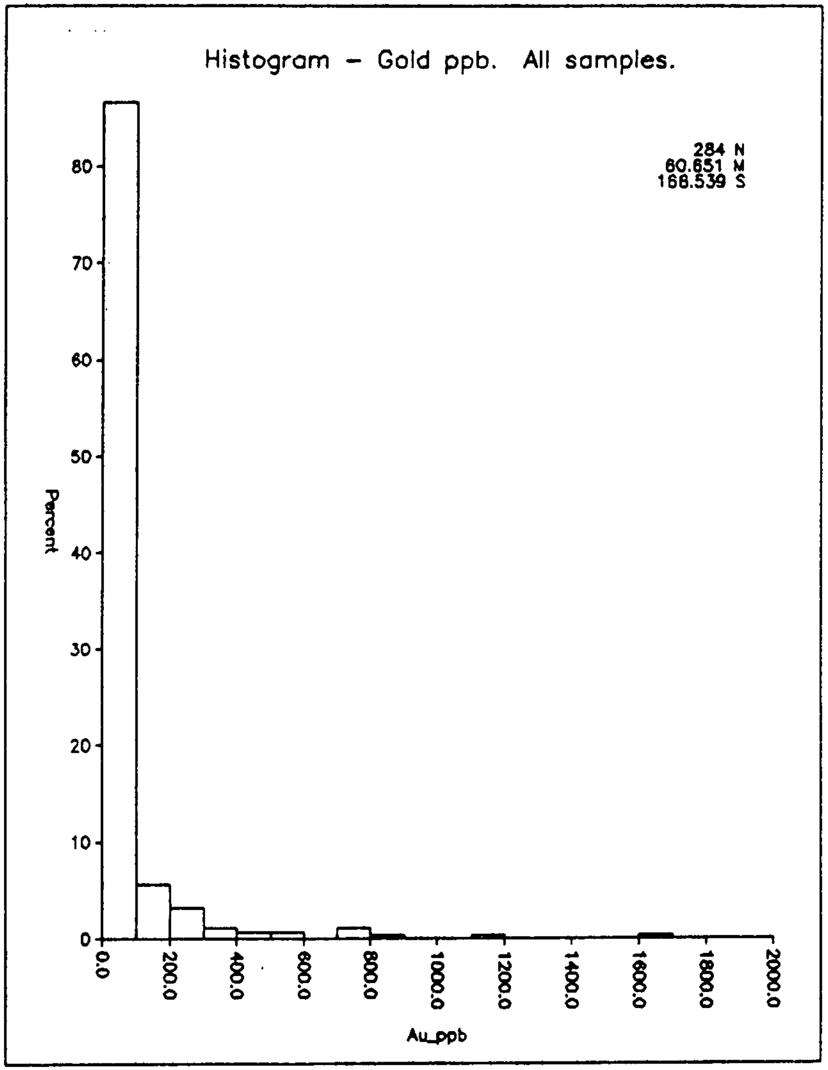
	Cr_ppm	Cu_ppm	Hg_ppm	La_ppm	Mn_ppm	Mo_ppm	Ni_ppm
Ag_ppm	0.0237	0.2755	-0.0509	0.2494	0.3932	0.2386	0.3328
As_ppm	-0.0008	0.0896	-0.0637	0.0636	0.5118	-0.0247	0.2340
Au_ppb	-0.0069	0.0912	-0.0806	0.1268	0.3304	0.0185	0.2536
Ba_ppm	-0.3488	-0.1361	-0.0260	0.4703	0.3806	-0.0602	-0.1964
Bi_ppm	-0.0647	0.0466	-0.0707	0.1544	0.4047	-0.0533	0.0564
Cd_ppm	0.0553	0.0217	-0.0037	0.0365	0.4160	-0.0190	0.1248
Co_ppm	0.2237	0.6289	0.0343	0.0974	0.3267	0.3824	0.7168
Cr_ppm	1.	-0.0766	0.2071	-0.3613	-0.0624	-0.0031	0.6126
Cu_ppm	-0.0766	1.	-0.0780	0.0700	0.0557	0.5802	0.4464
Hg_ppm	0.2071	-0.0780	1.	-0.1131	-0.0255	-0.0723	0.1058
La_ppm	-0.3613	0.0700	-0.1131	1.	0.2789	0.2111	-0.1180
Mn_ppm	-0.0624	0.0557	-0.0255	0.2789	1.	-0.0144	0.2207
Mo_ppm	-0.0031	0.5802	-0.0723	0.2111	-0.0144	1.	0.3396
Ni_ppm	0.6126	0.4464	0.1058	-0.1180	0.2207	0.3396	1.
Pb_ppm	0.3399	-0.1172	0.0603	-0.0121	0.0919	0.0277	0.1779
Sb_ppm	0.8472	-0.1187	0.2077	-0.3445	-0.1728	-0.0402	0.3851
Sc_ppm	0.1775	0.2177	0.0144	0.1607	0.4200	0.1396	0.5505
Sr_ppm	-0.4591	0.0615	0.0717	0.3033	0.0578	0.0887	-0.2037
Tl_ppm	undef.	undef.	undef.	undef.	undef.	undef.	undef.
V_ppm	-0.0628	0.2650	-0.1055	0.0140	0.2805	0.1070	0.4307
W_ppm	-0.0736	-0.0198	-0.0255	0.1018	0.0657	0.0452	-0.0477
Zn_ppm	-0.0662	-0.0134	-0.0523	0.2909	0.4558	-0.0422	0.1407
Zr_ppm	-0.0402	0.1378	-0.0287	0.6272	0.1408	0.3487	0.1099

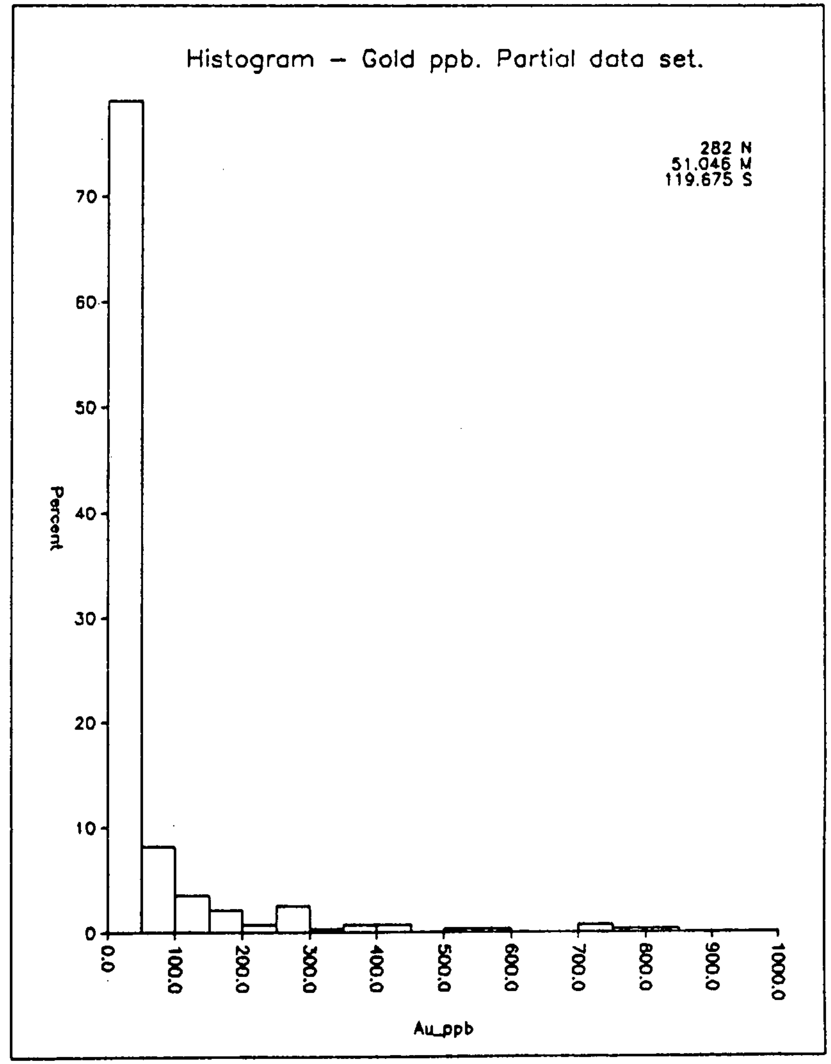
Pearson Correlation Coefficients

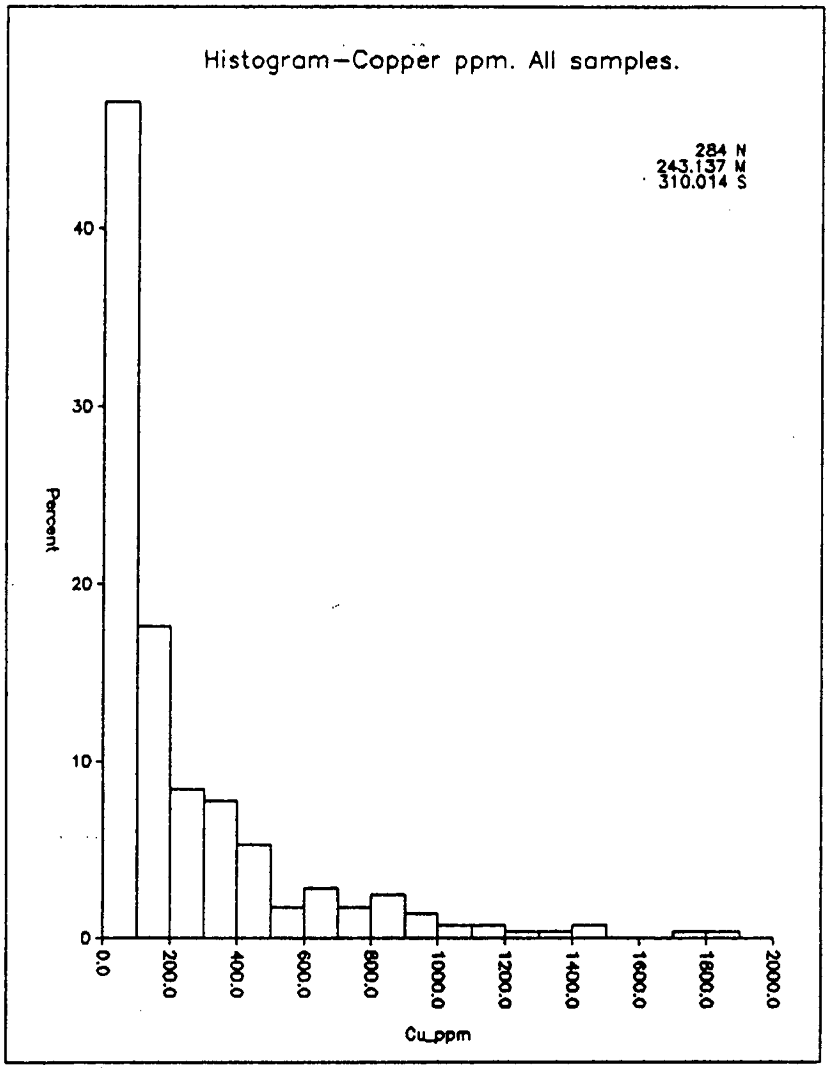
	Pb_ppm	Sb_ppm	Sc_ppm	Sr_ppm	Tl_ppm	V_ppm	W_ppm
Ag_ppm	0.2307	-0.0918	0.4312	0.0238	undef.	0.2910	-0.0164
As_ppm	0.0839	-0.1087	0.2576	-0.0178	undef.	0.2195	0.0891
Au_ppb	-0.0130	-0.1791	0.5348	-0.0506	undef.	0.4591	-0.0210
Ba_ppm	0.1426	-0.2518	0.0992	0.5183	undef.	0.0141	0.0319
Bi_ppm	0.2101	-0.1081	0.1320	-0.0396	undef.	0.1127	0.0001
Cd_ppm	0.1360	-0.0348	0.0943	-0.0547	undef.	0.0630	-0.0074
Co_ppm	0.1326	0.0462	0.5468	-0.0566	undef.	0.3776	0.0291
Cr_ppm	0.3399	0.8472	0.1775	-0.4591	undef.	-0.0628	-0.0736
Cu_ppm	-0.1172	-0.1187	0.2177	0.0615	undef.	0.2650	-0.0198
Hg_ppm	0.0603	0.2077	0.0144	0.0717	undef.	-0.1055	-0.0255
La_ppm	-0.0121	-0.3445	0.1607	0.3033	undef.	0.0140	0.1018
Mn_ppm	0.0919	-0.1728	0.4200	0.0578	undef.	0.2805	0.0657
Mo_ppm	0.0277	-0.0402	0.1396	0.0887	undef.	0.1070	0.0452
Ni_ppm	0.1779	0.3851	0.5505	-0.2037	undef.	0.4307	-0.0477
Pb_ppm	1.	0.3321	0.1284	-0.1676	undef.	-0.0941	-0.0126
Sb_ppm	0.3321	1.	-0.0470	-0.3126	undef.	-0.2732	-0.0585
Sc_ppm	0.1284	-0.0470	1.	-0.1299	undef.	0.5761	-0.0040
Sr_ppm	-0.1676	-0.3126	-0.1299	1.	undef.	-0.0236	0.1408
Tl_ppm	undef.	undef.	undef.	undef.	1.	undef.	undef.
V_ppm	-0.0941	-0.2732	0.5761	-0.0236	undef.	1.	-0.0096
W_ppm	-0.0126	-0.0585	-0.0040	0.1408	undef.	-0.0096	1.
Zn_ppm	0.1335	-0.1225	0.3850	0.1262	undef.	0.3035	0.0462
Zr_ppm	0.0920	-0.0551	0.2941	0.2076	undef.	0.0188	-0.0100

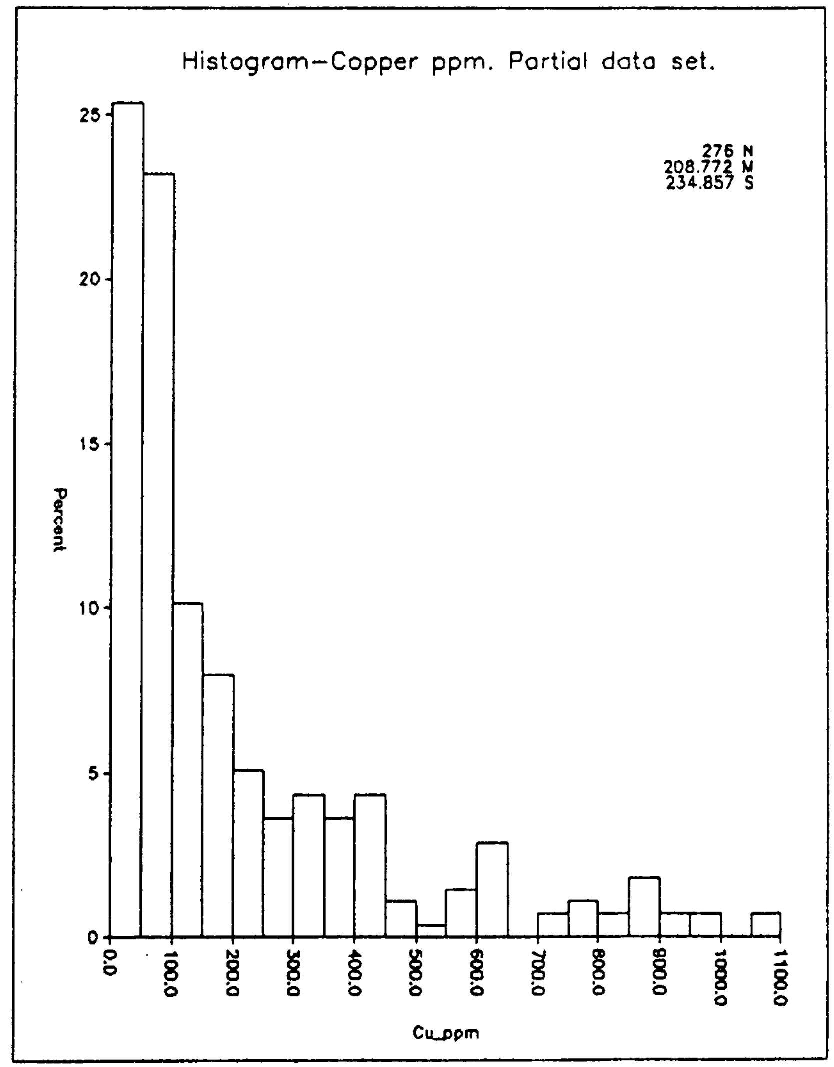
Pearson Correlation Coefficients

	Zn_ppm	Zr_ppm
Ag_ppm	0.3895	0.1766
As_ppm	0.3946	-0.0481
Au_ppb	0.2066	0.0643
Ba_ppm	0.3039	0.3276
Bi_ppm	0.2384	-0.0339
Cd_ppm	0.3614	-0.0409
Co_ppm	0.1698	0.2429
Cr_ppm	-0.0662	-0.0402
Cu_ppm	-0.0134	0.1378
Hg_ppm	-0.0523	-0.0287
La_ppm	0.2909	0.6272
Mn_ppm	0.4558	0.1408
Mo_ppm	-0.0422	0.3487
Ni_ppm	0.1407	0.1099
Pb_ppm	0.1335	0.0920
Sb_ppm	-0.1225	-0.0551
Sc_ppm	0.3850	0.2941
Sr_ppm	0.1262	0.2076
Tl_ppm	undef.	undef.
V_ppm	0.3035	0.0188
W_ppm	0.0462	-0.0100
Zn_ppm	1.	0.1887
Zr_ppm	0.1887	1.


Histogram - Gold ppb. All samples.
284 N
60.651 M
168.539 S
Percent
Au_ppb


Histogram - Gold ppb. Partial data set.
282 N
51.046 M
119.675 S
Percent
Au_ppb


Histogram—Copper ppm. All samples.
284 N
243.137 M
310.014 S
Percent
Cu_ppm


Histogram—Copper ppm. Partial data set.
276 N
208.772 M
234.857 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

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1	Introduction	1
2	Survey coverage	1
3	Personnel	1
4	Instrumentation	2
5	Recommendations	2

Appendix

Statement of Qualifications — rear of report

Contents of map pockets

One floppy disk with all IP and mag data - ABE and PAL	envelope
Chargeability/resistivity pseudosections - ABE (current East)	map pocket 1
Chargeability/resistivity pseudosections - ABE (current West)	map pocket 2
Chargeability/resistivity pseudosections - PAL (current West)	map pocket 3

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

Chargeability/resistivity pseudosections	- ABE (4 sheets)		map roll
Chargeability/resistivity pseudosections	- PAL (3 sheets)		map roll
Chargeability contour plan	(2nd separation - a=75/n=2)	- ABE	map roll
Resistivity contour plan	(2nd separation - a=75/n=2)	- ABE	map roll
Magnetometer contour plan	(500 gamma intervals)	- ABE	map roll
Magnetometer Profiles	(1 cm : 1000 gammas)	- ABE	map roll
Magnetometer Total Field Values	(data postings)	- ABE	map roll
Chargeability contour plan	(2nd separation - a=75/n=2)	- PAL	map roll
Resistivity contour plan	(2nd separation - a=75/n=2)	- PAL	map roll
Magnetometer contour plan	(200 gamma intervals)	- PAL	map roll
Magnetometer Profiles	(1 cm : 500 gammas)	- PAL	map roll
Magnetometer Total Field Values	(data postings)	- PAL	map roll

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.

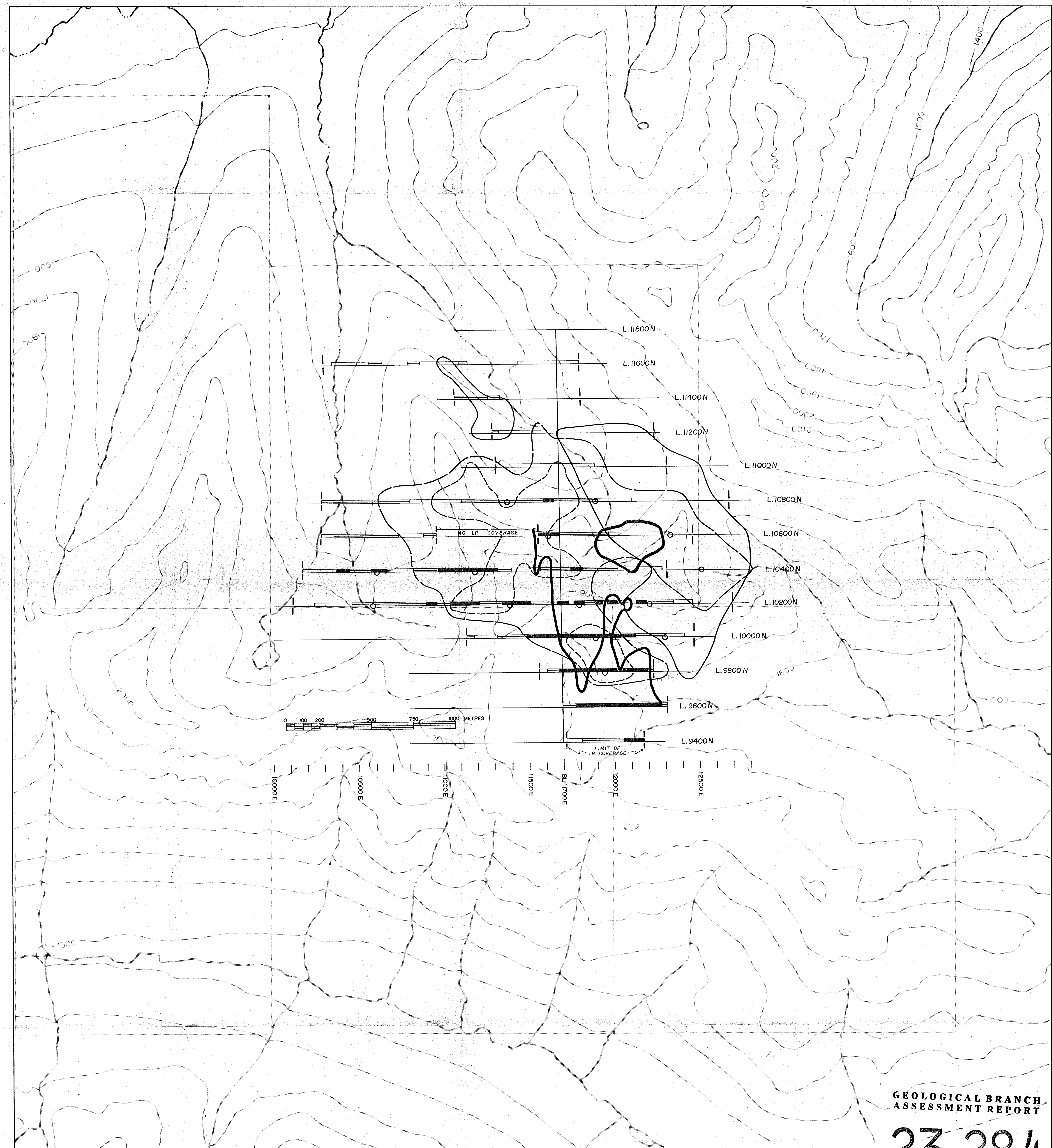
3. I graduated from the University of British Columbia with a Bachelor of Science degree (Geophysics) in 1970, and with a Master of Business Administration degree in 1982.

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



GEOPHYSICS

INDUCED POLARIZATION

- 30 milliseconds
- 20–30
- 10–20

GROUND MAGNETICS

- 60,000 gamma contour

SOIL GEOCHEMISTRY

- 50 ppb Gold
- 550 ppm Copper
- 250 ppm Copper

○ Proposed Drill Hole

0 100 200 500 750 1000 METRES

N

SWANNELL MINERALS CORPORATION

ABE PROPERTY

OMINECA M.D., B.C.

COMPILATION MAP

Geophysics and Soil Geochemistry

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

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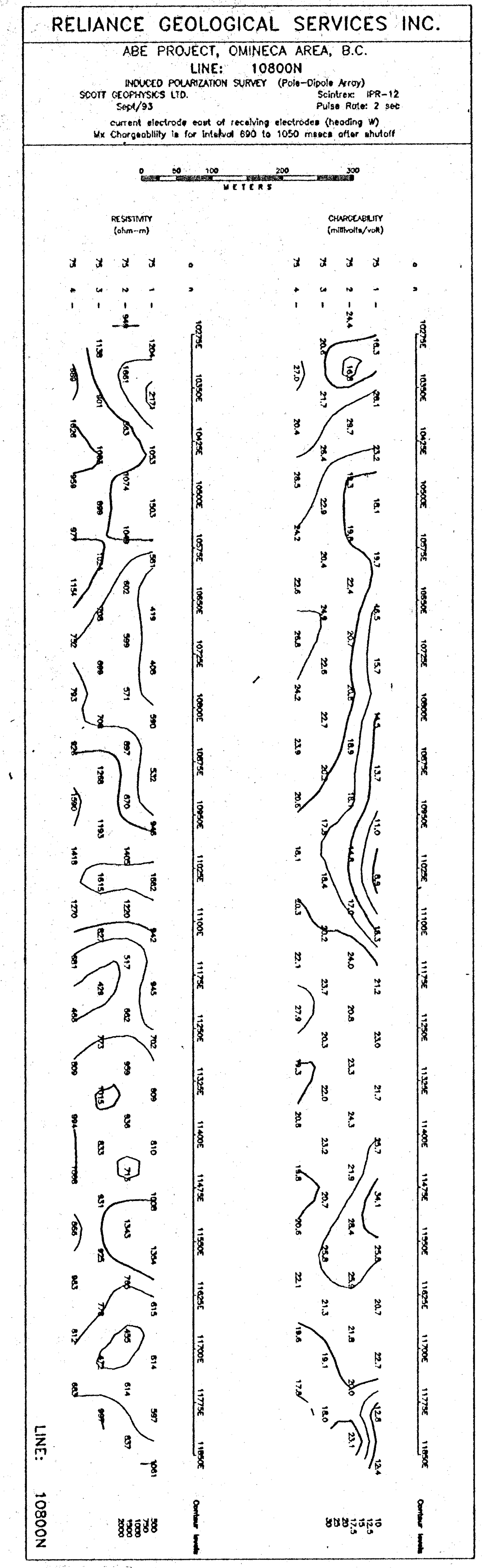
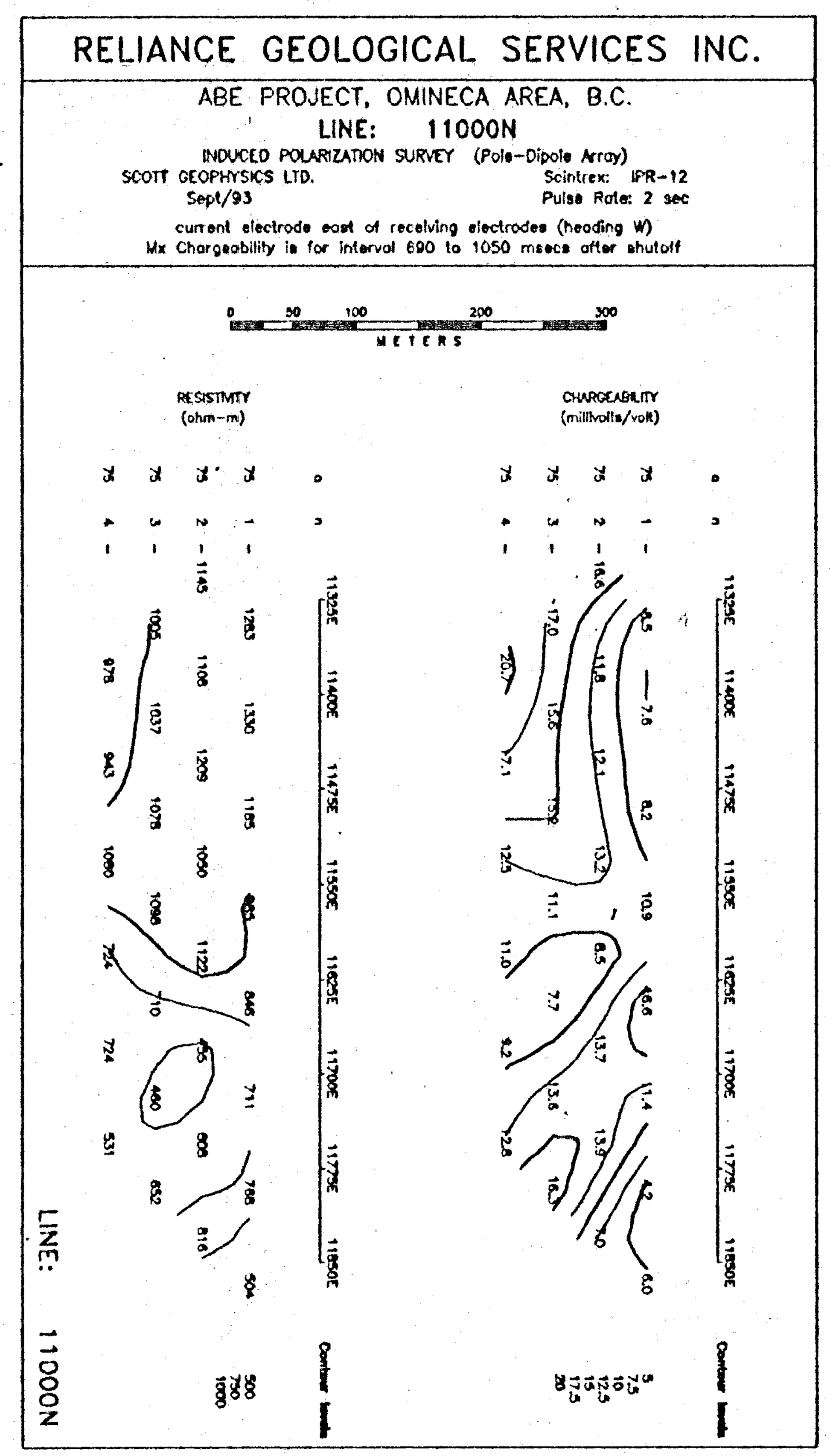
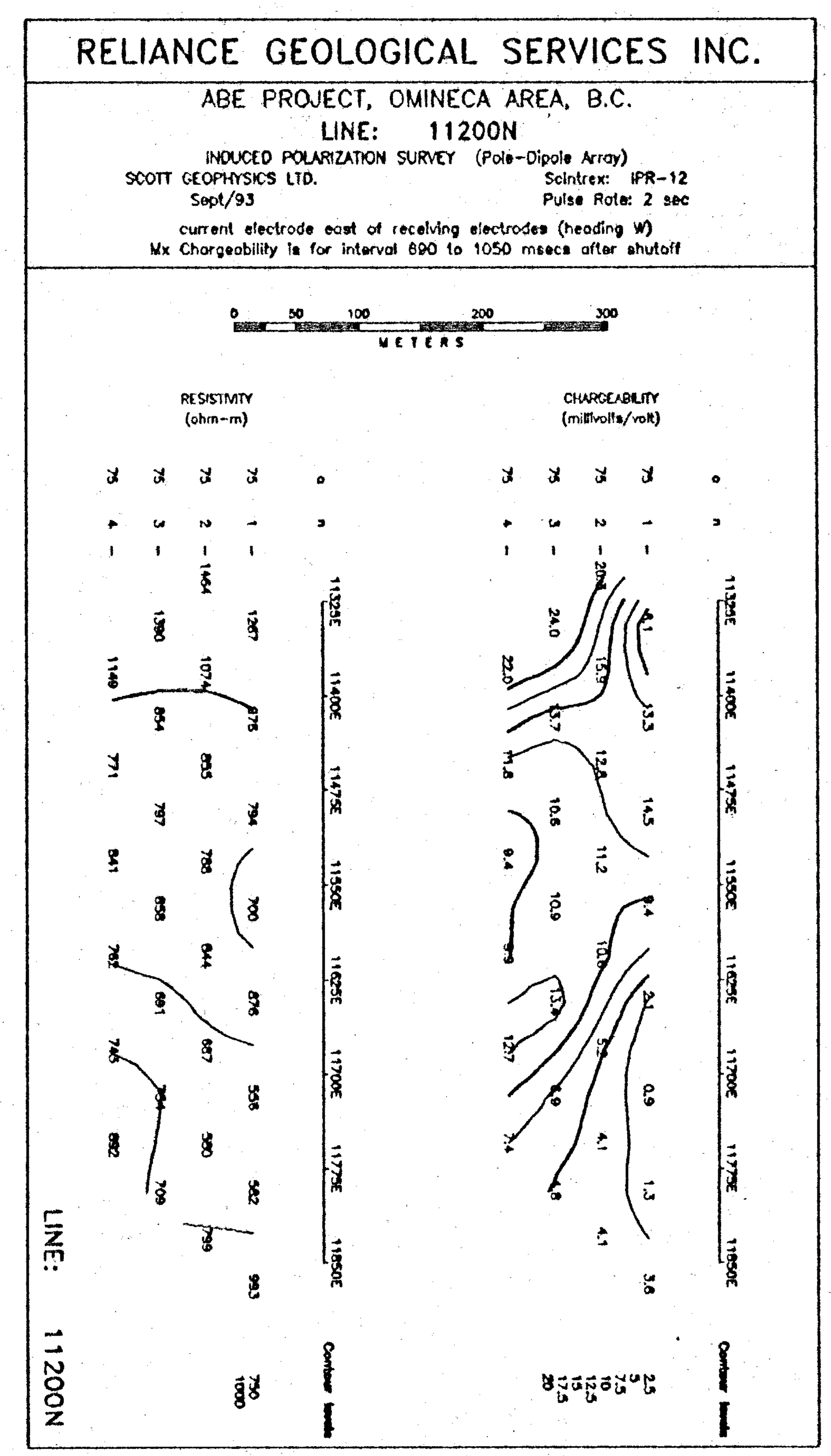
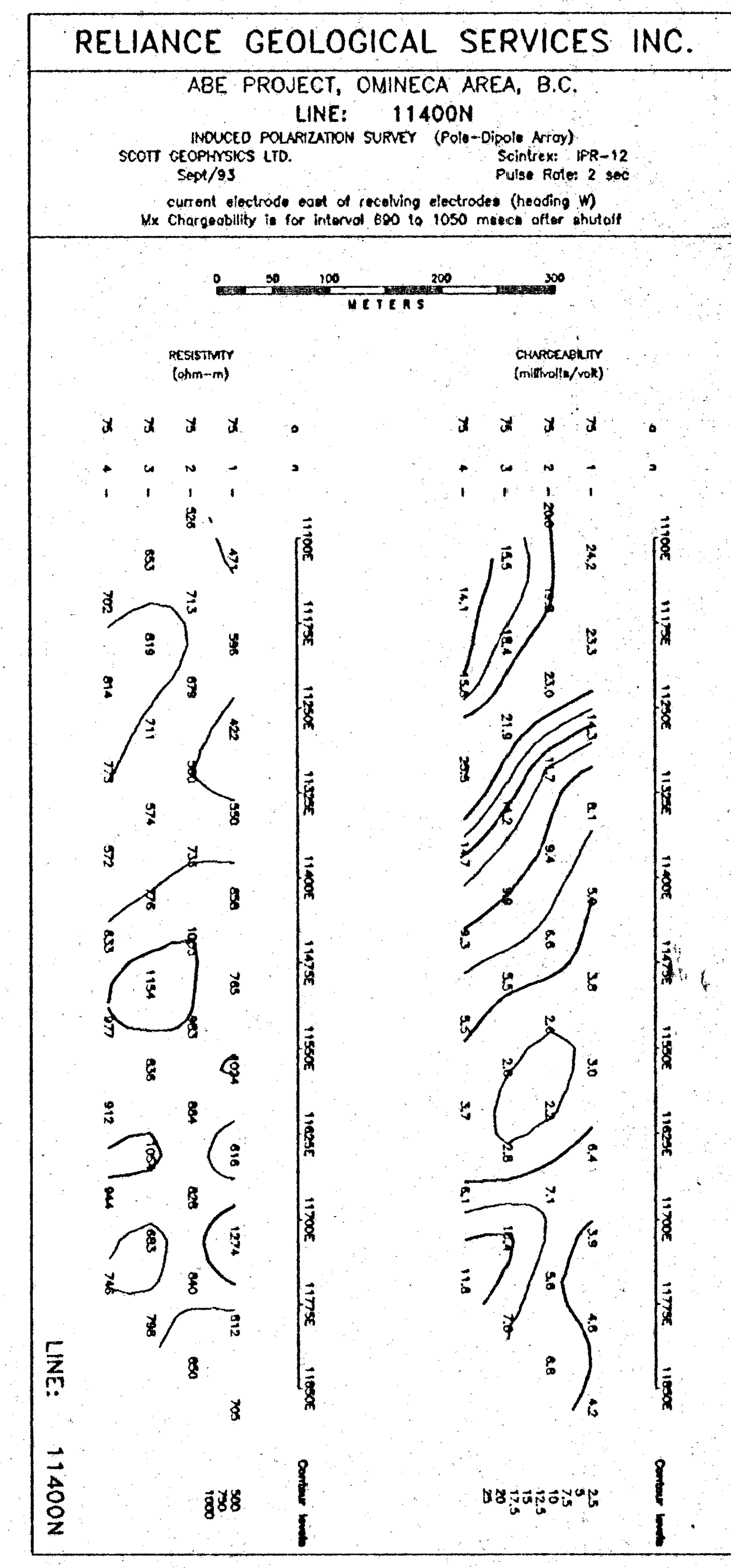








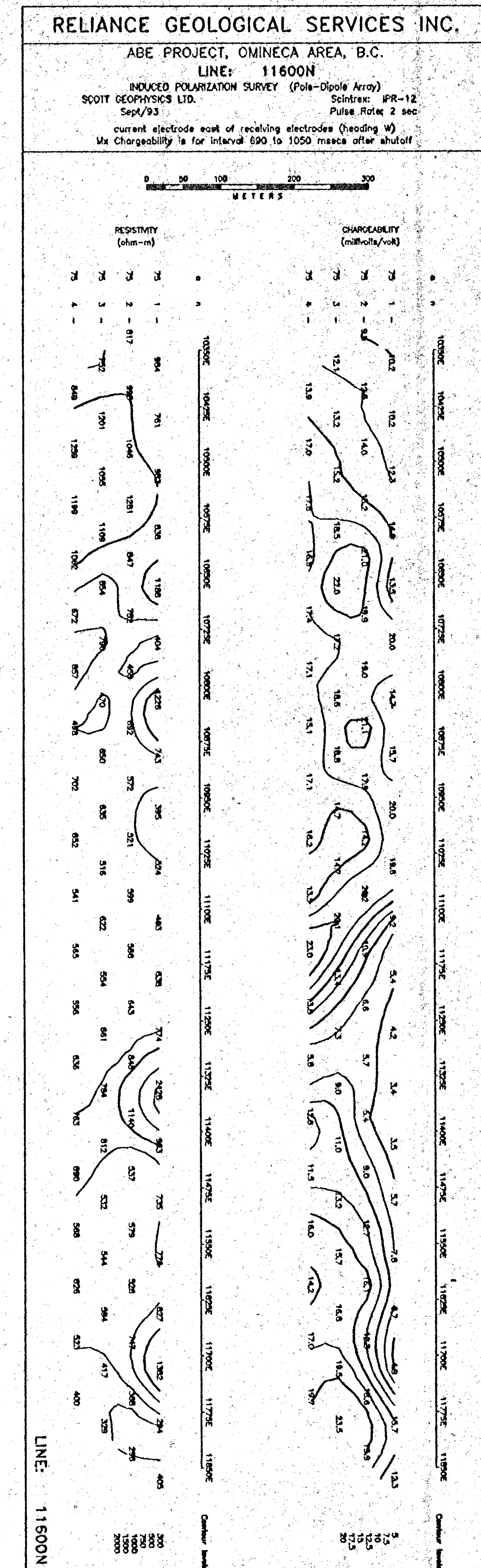
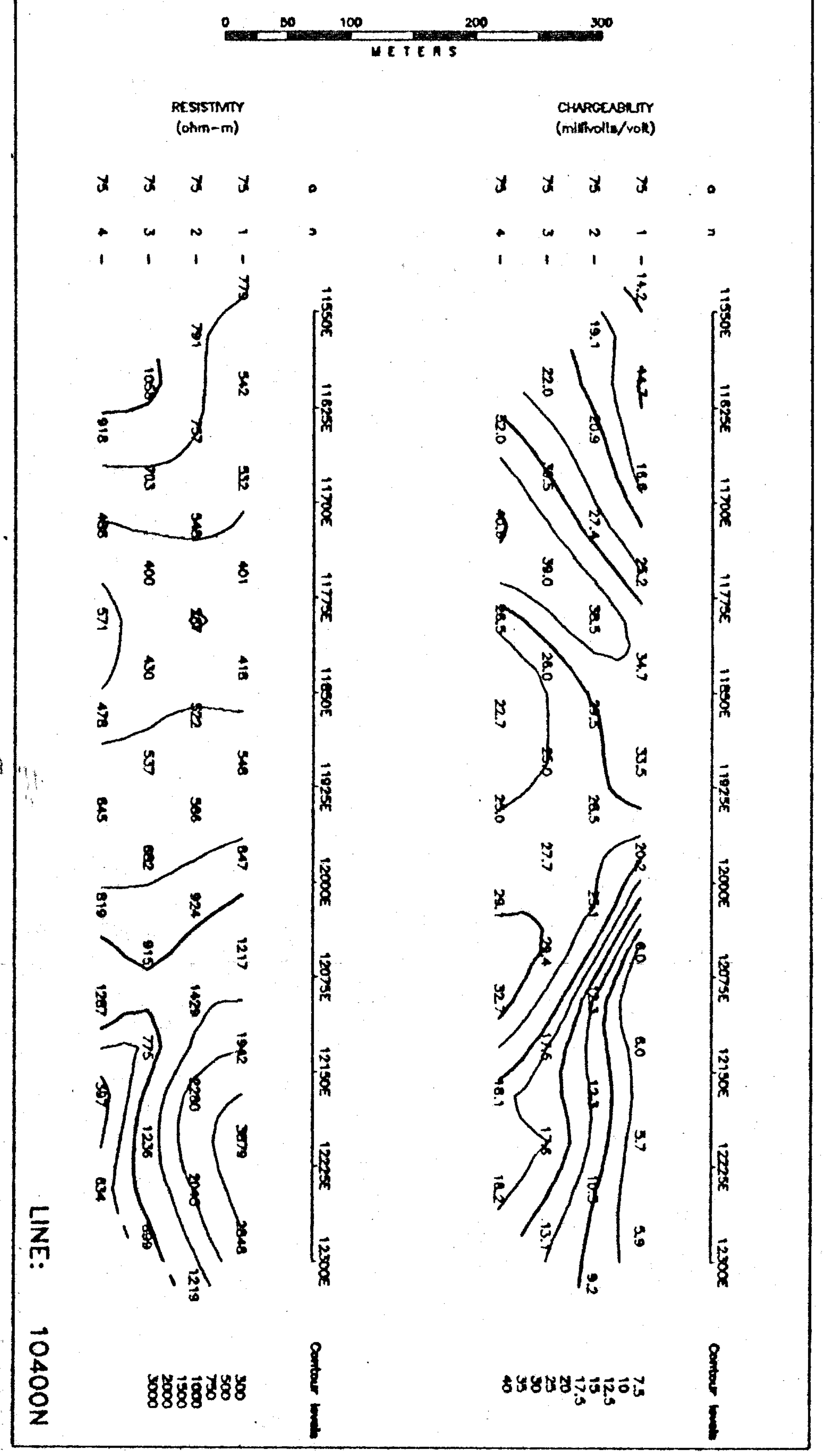


FIG 15

FIG 14

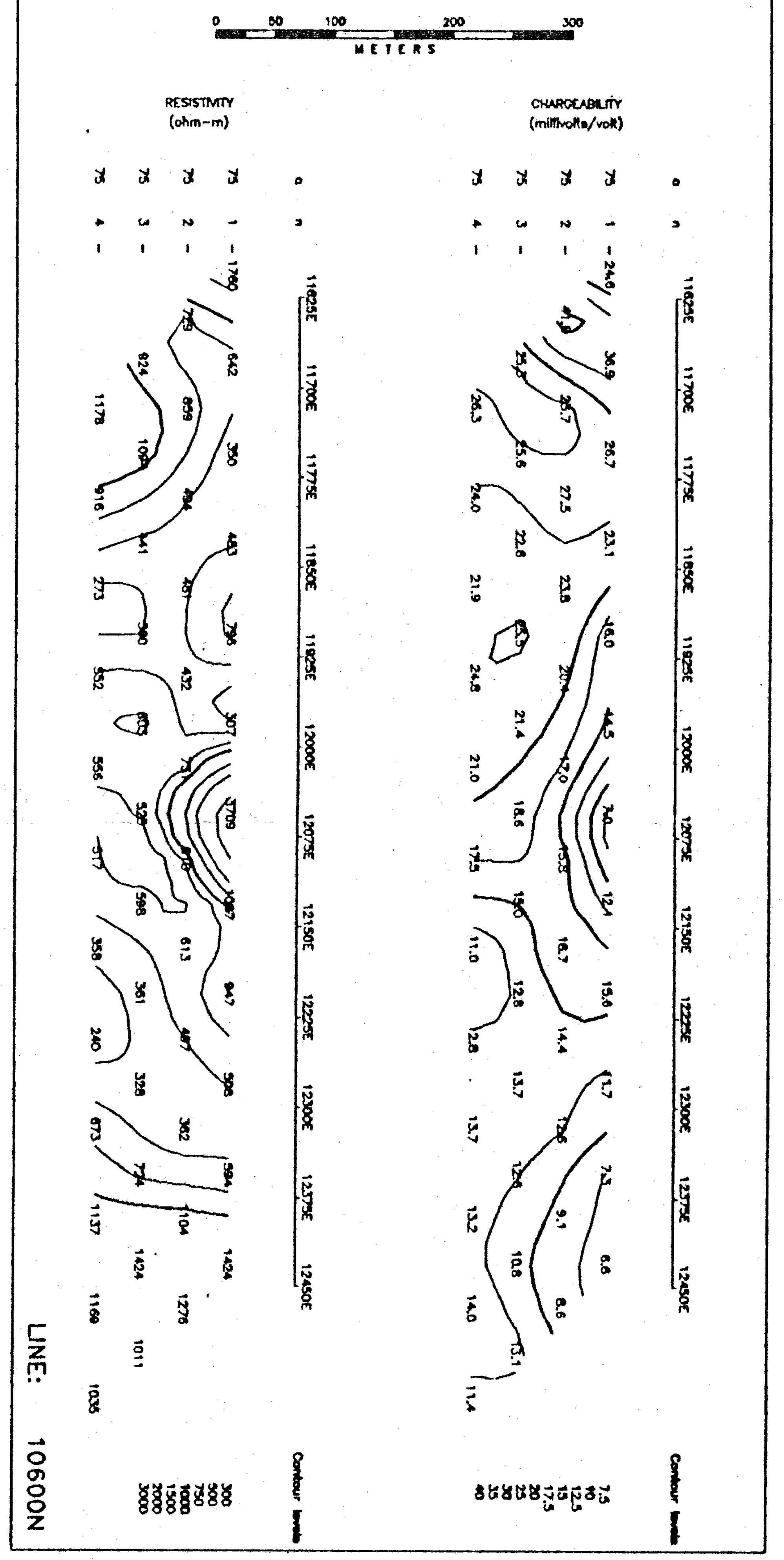
RELIANCE GEOLOGICAL SERVICES INC.

ABE PROJECT, OMINECA AREA, B.C.
LINE: 10400N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex: IPR-12
Sept/93 Pulse Rate: 2 sec
current electrode west of receiving electrodes (heading E)
Mx Chargeability is for interval 690 to 1050 msecs after shutoff



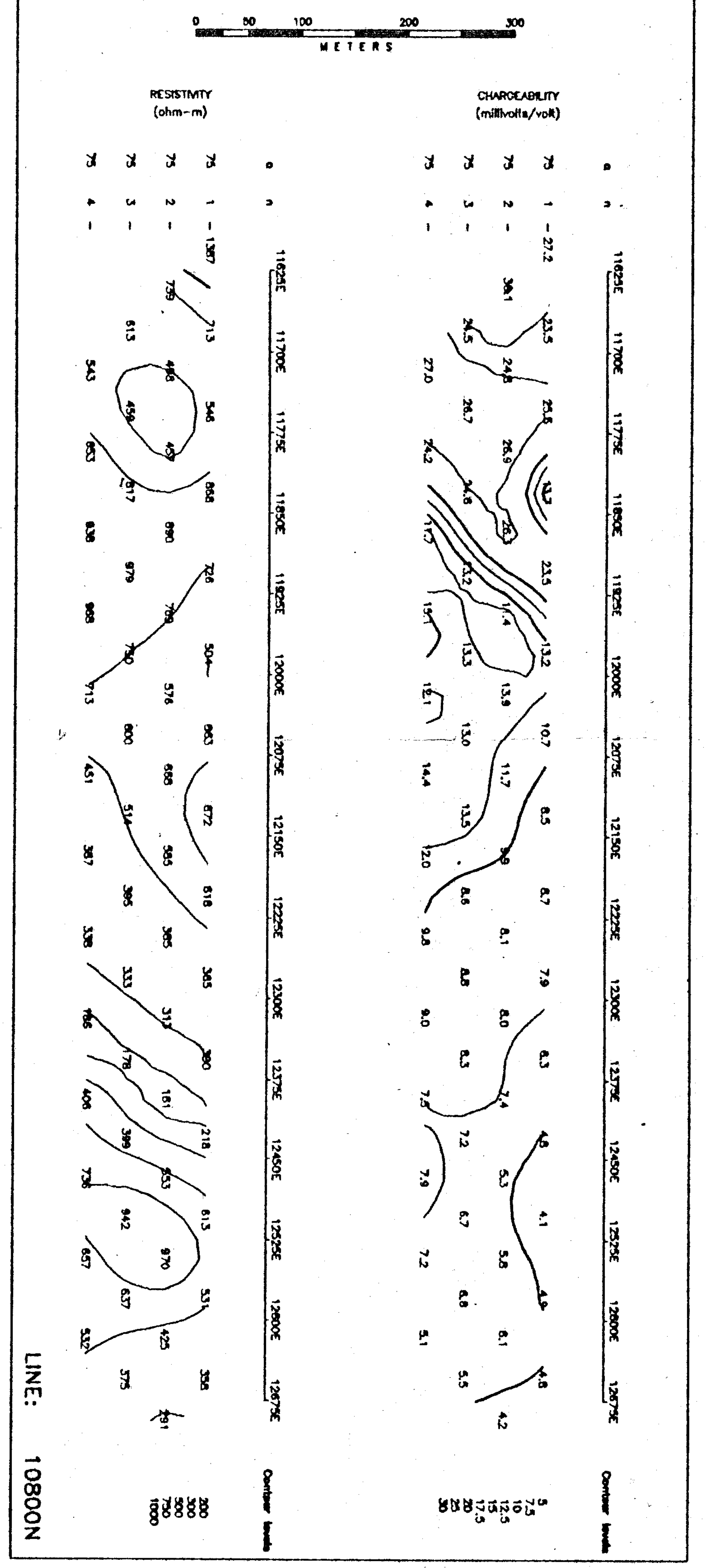
RELIANCE GEOLOGICAL SERVICES INC.

ABE PROJECT, OMINECA AREA, B.C.
LINE: 10600N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex: IPR-12
Sept/93 Pulse Rate: 2 sec
current electrode west of receiving electrodes (heading E)
Mx Chargeability is for interval 690 to 1050 msecs after shutoff



RELIANCE GEOLOGICAL SERVICES INC.

ABE PROJECT, OMINECA AREA, B.C.
LINE: 10800N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex: IPR-12
Sept/93 Pulse Rate: 2 sec
current electrode west of receiving electrodes (heading E)
Mx Chargeability is for interval 690 to 1050 msecs after shutoff



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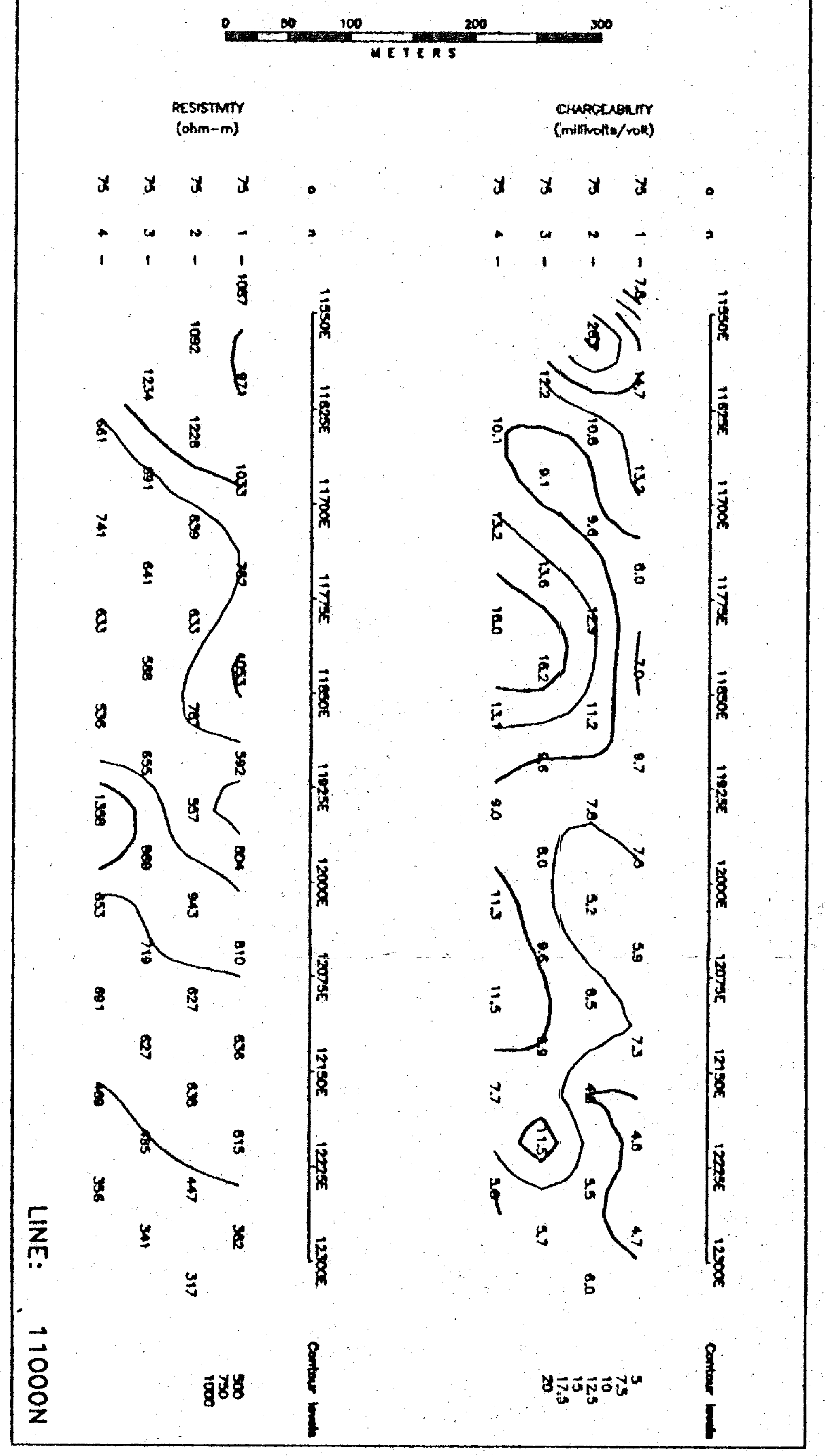
ABE PROJECT, OMINECA AREA, B.C.
LINE: 11000N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex: IPR-12
Sept/93 Pulse Rate: 2 sec
current electrode west of receiving electrodes (heading E)
Mx Chargeability is for interval 690 to 1050 msecs after shutoff



RELIANCE GEOLOGICAL SERVICES INC.

ABE PROJECT, OMINECA AREA, B.C.
LINE: 11200N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex: IPR-12
Sept/93 Pulse Rate: 2 sec
current electrode west of receiving electrodes (heading E)
Mx Chargeability is for interval 690 to 1050 msecs after shutoff

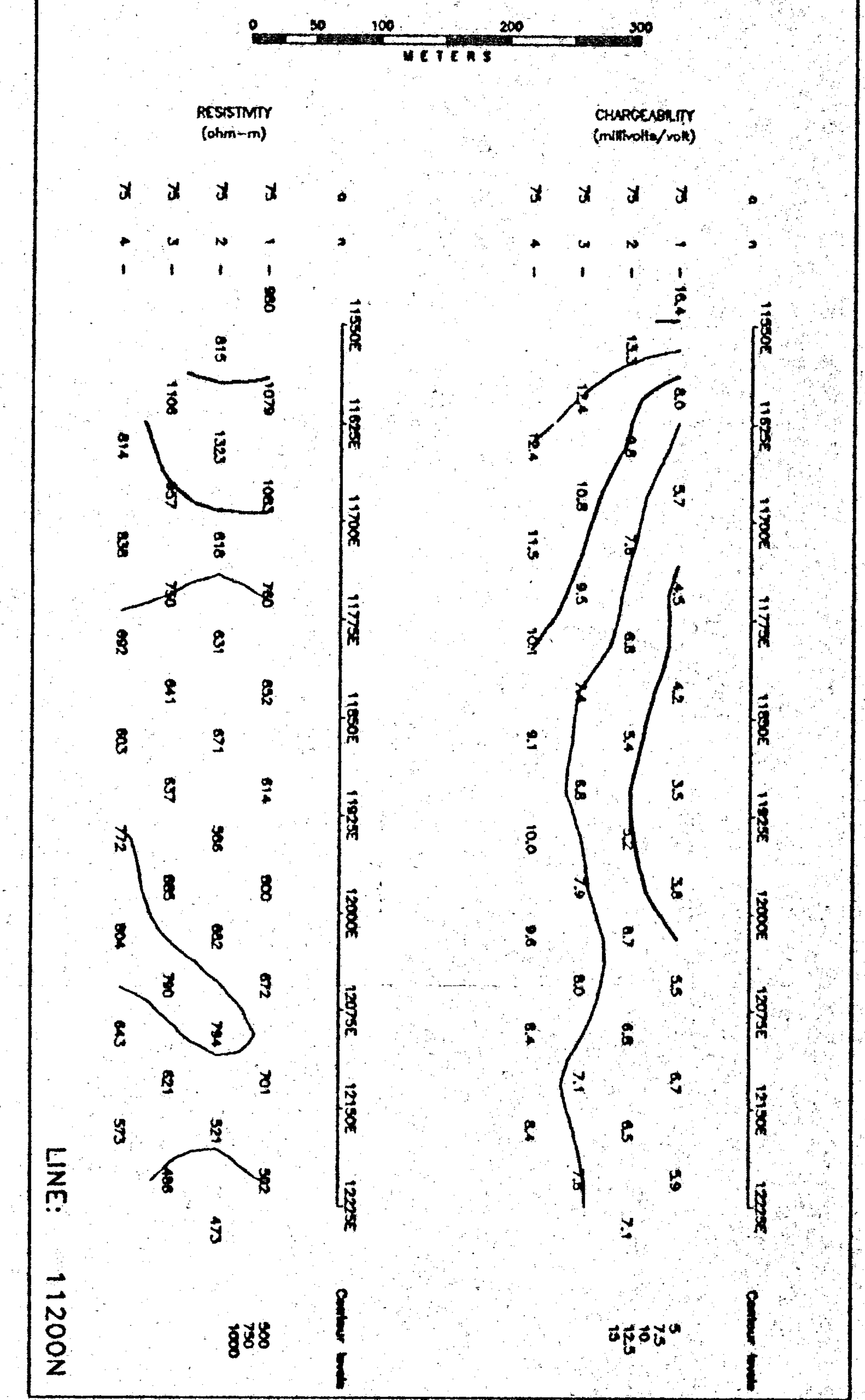
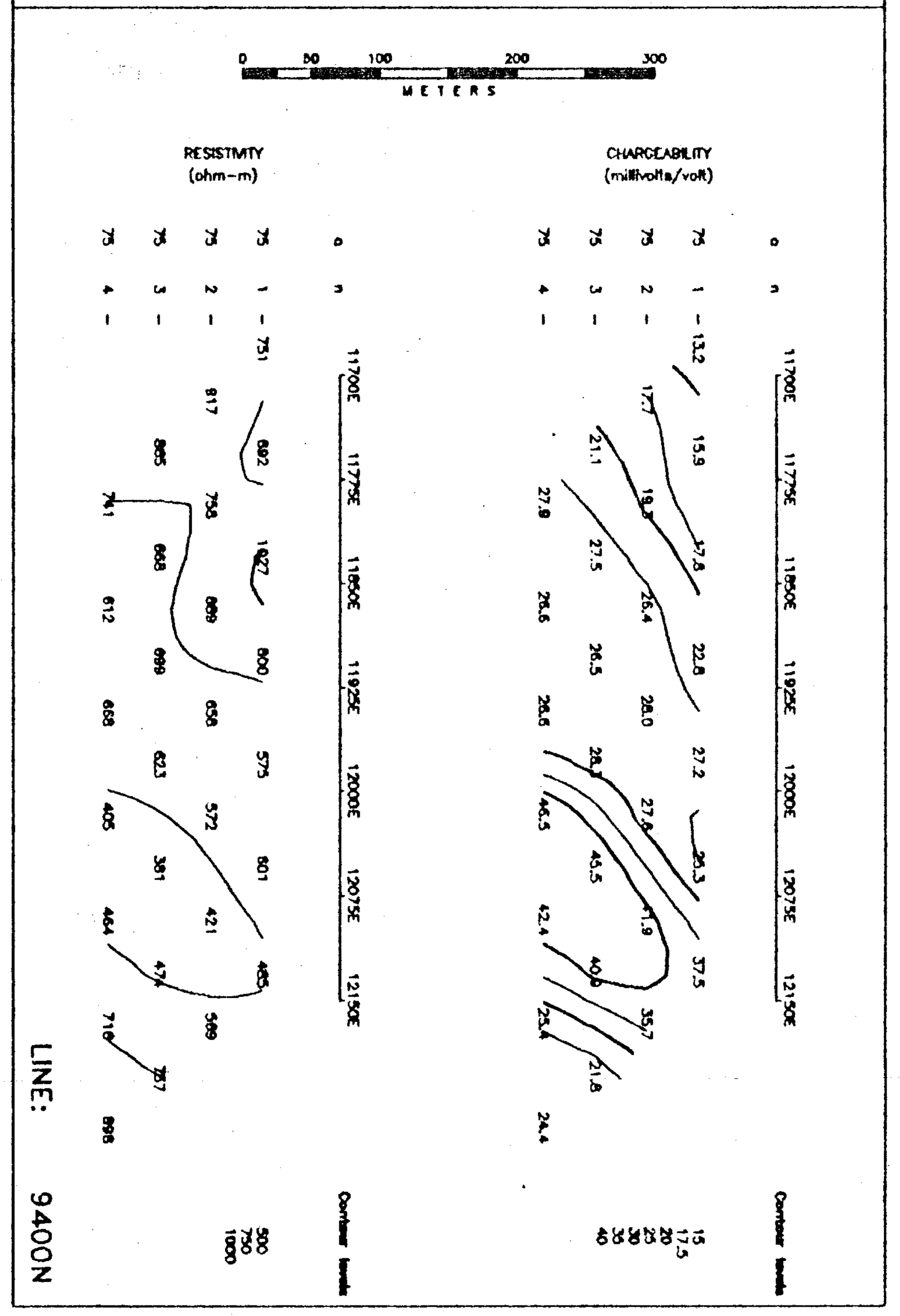


FIG 13

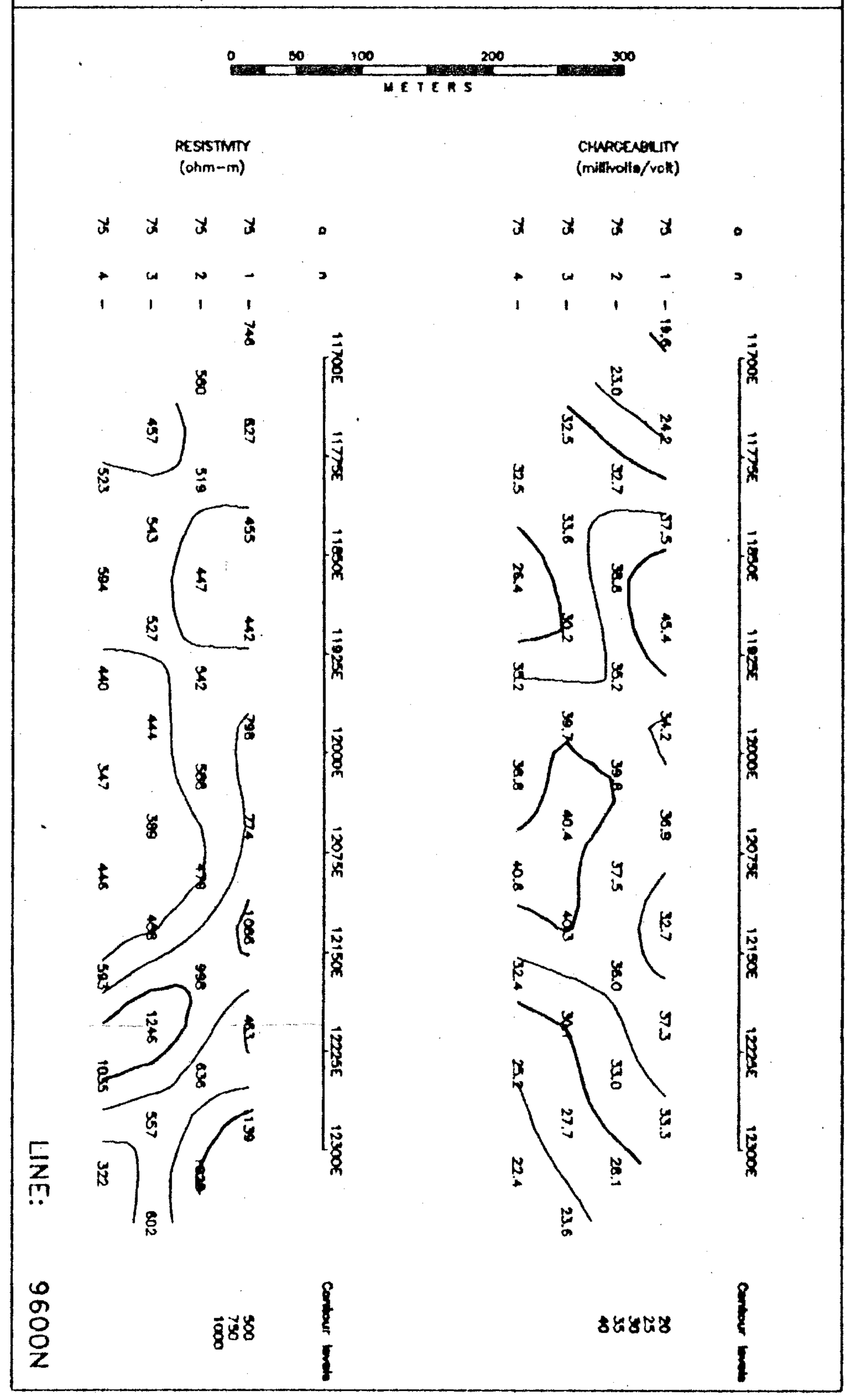
RELIANCE GEOLOGICAL SERVICES INC.

ABE PROJECT, OMINECA AREA, B.C.
LINE: 9400N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex: IPR-12
Sept/93 Pulse Rate: 2 sec
current electrode west of receiving electrodes (heading E)
Mx Chargeability is for interval 690 to 1050 msecs after shutoff



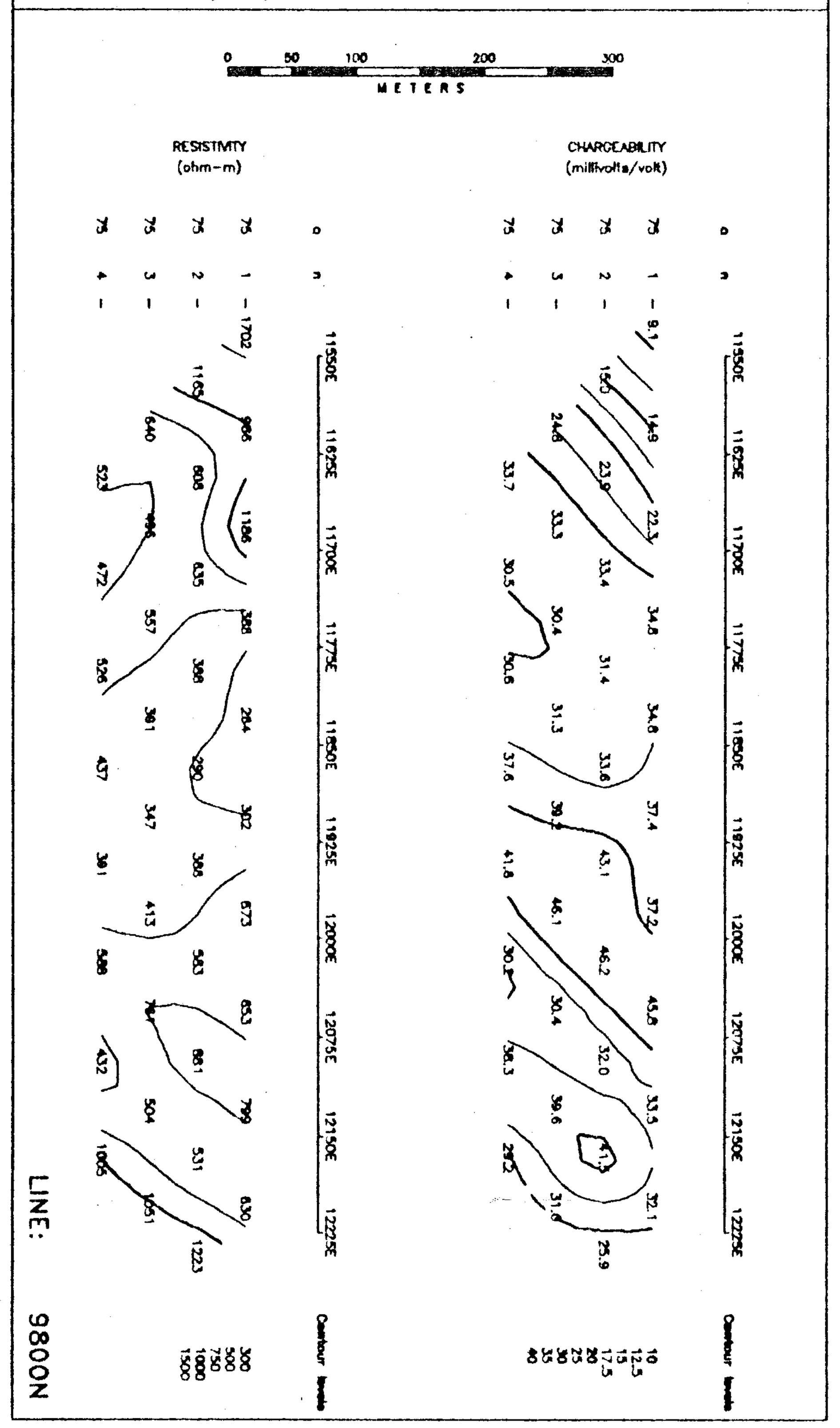
RELIANCE GEOLOGICAL SERVICES INC.

ABE PROJECT, OMINECA AREA, B.C.
LINE: 9600N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex: IPR-12
Sept/93 Pulse Rate: 2 sec
current electrode west of receiving electrodes (heading E)
Mx Chargeability is for interval 690 to 1050 msecs after shutoff



RELIANCE GEOLOGICAL SERVICES INC.

ABE PROJECT, OMINECA AREA, B.C.
LINE: 9800N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex: IPR-12
Sept/93 Pulse Rate: 2 sec
current electrode west of receiving electrodes (heading E)
Mx Chargeability is for interval 690 to 1050 msecs after shutoff



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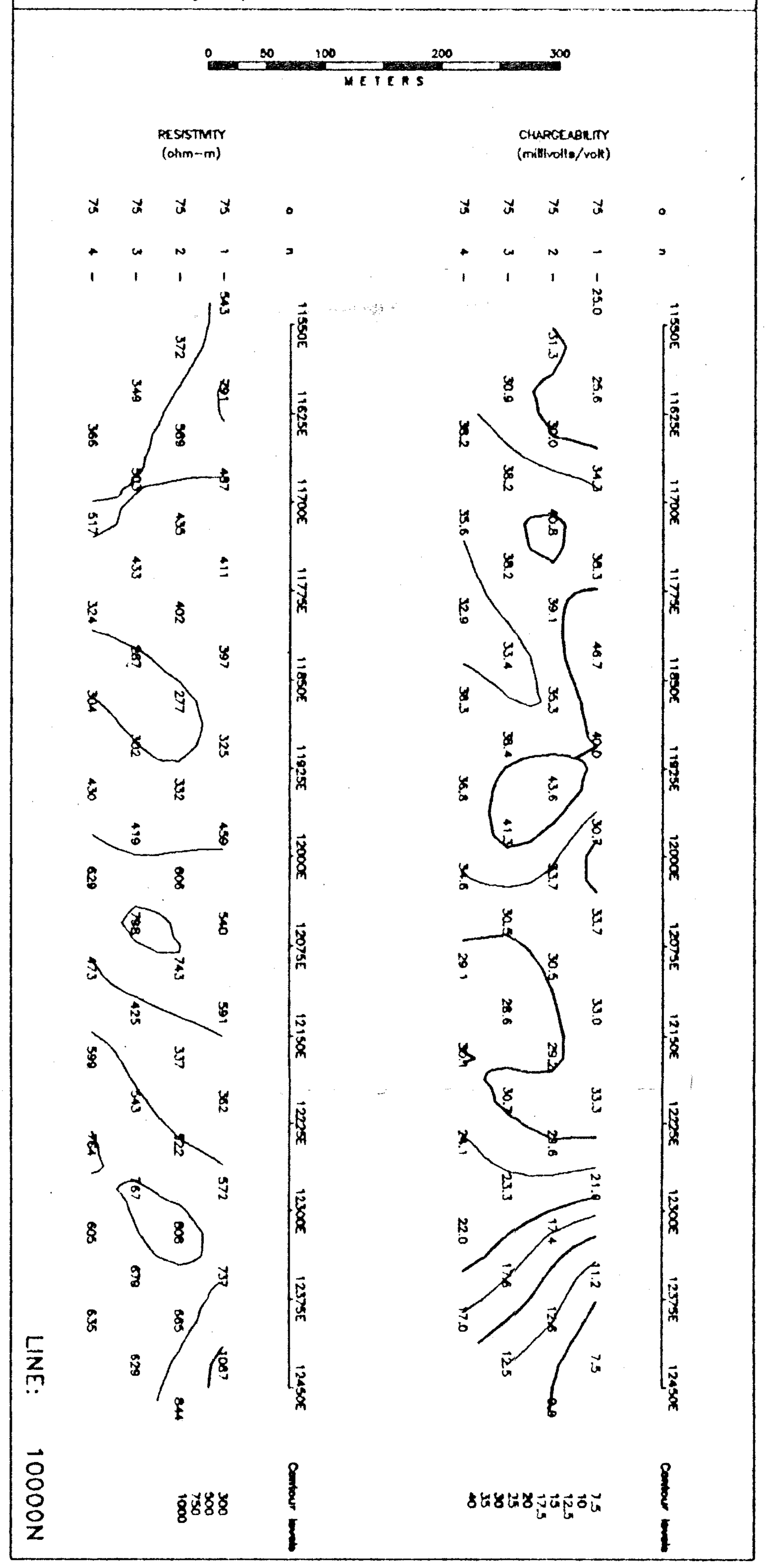
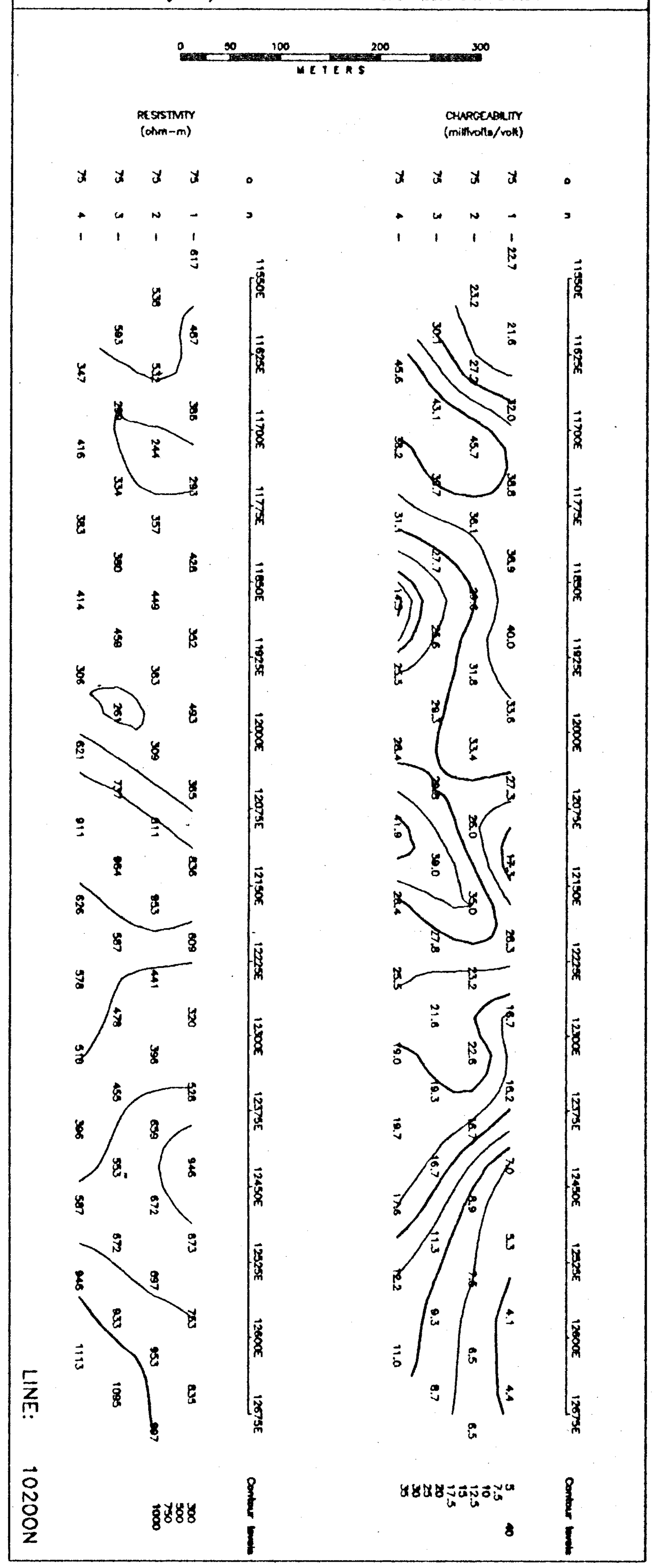
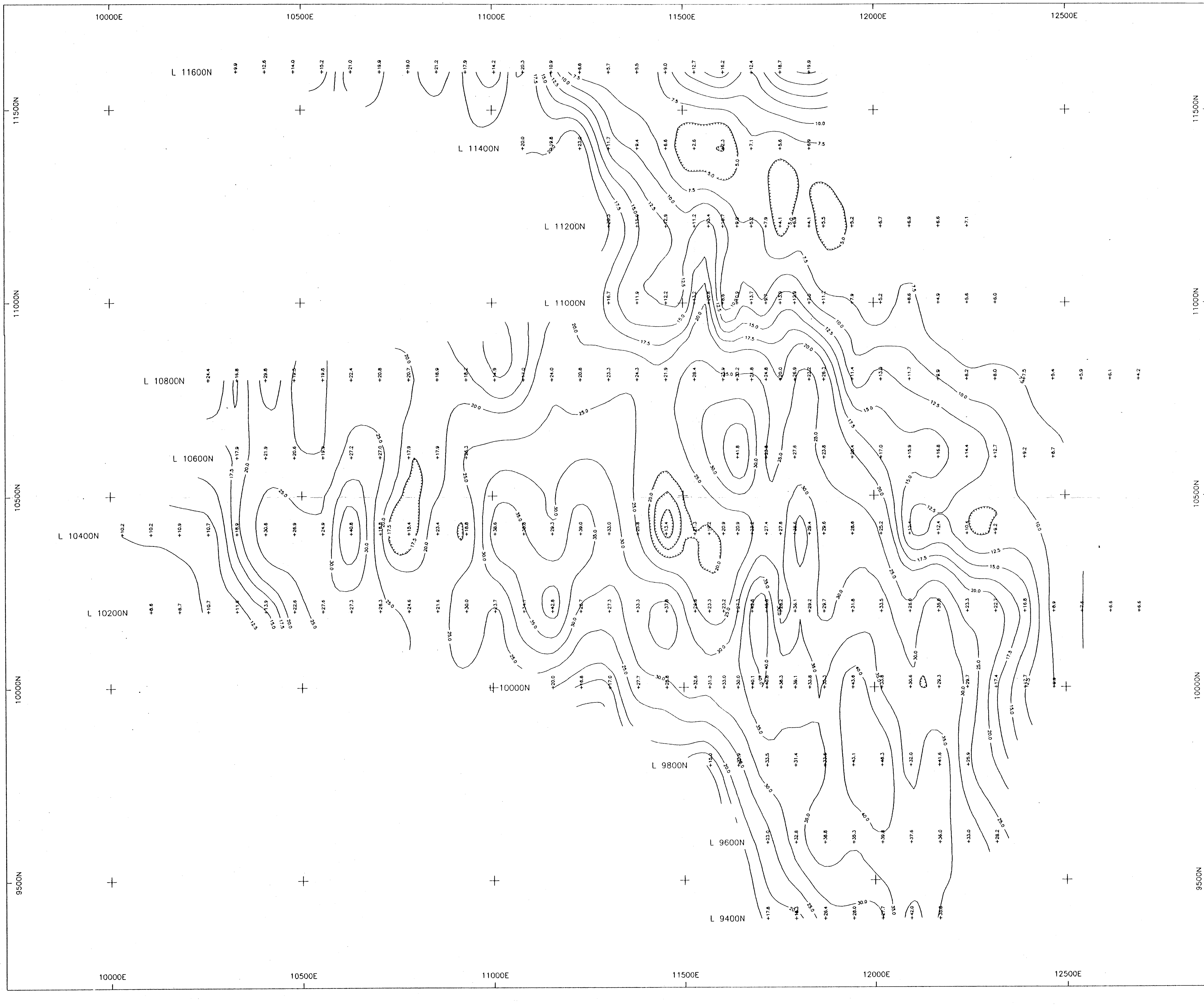
ABE PROJECT, OMINECA AREA, B.C.
LINE: 10000N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex: IPR-12
Sept/93 Pulse Rate: 2 sec
current electrode west of receiving electrodes (heading E)
Mx Chargeability is for interval 690 to 1050 msecs after shutoff



RELIANCE GEOLOGICAL SERVICES INC.

ABE PROJECT, OMINECA AREA, B.C.
LINE: 10200N
INDUCED POLARIZATION SURVEY (Pole-Dipole Array)
SCOTT GEOPHYSICS LTD. Scintrex: IPR-12
Sept/93 Pulse Rate: 2 sec
current electrode west of receiving electrodes (heading E)
Mx Chargeability is for interval 690 to 1050 msecs after shutoff





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

see psuedos for current location

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)

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0 100 200 300 400
METERS

RELIANCE GEOLOGICAL SERVICES INC.

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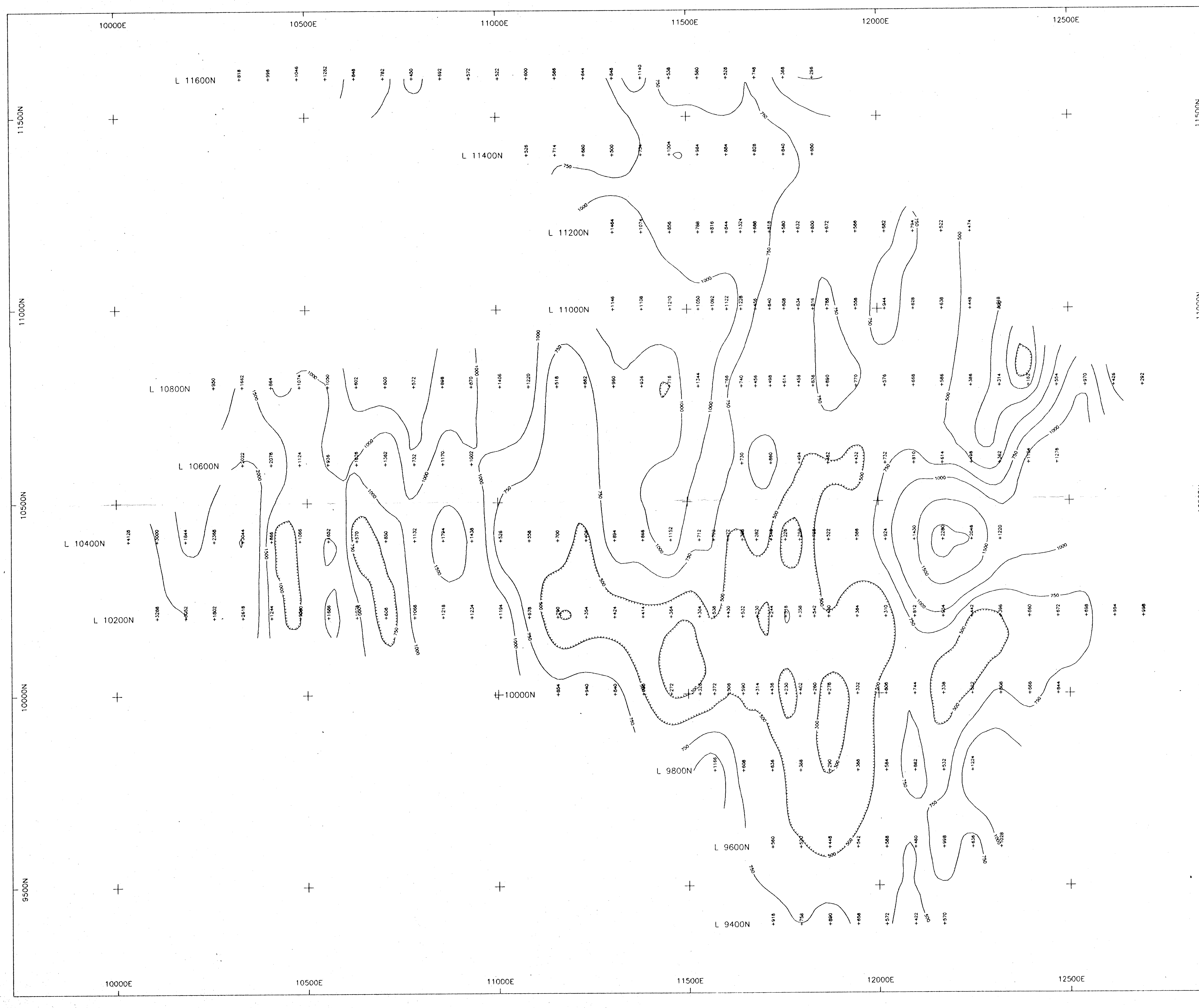
CHARGEABILITY CONTOUR PLAN
a spacing = 75 metres
second separation (n=2)

FIG 12

DRAWN BY: ars | 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

see psuedos for current location

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)

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0 100 200 300 400
METERS

RELIANCE GEOLOGICAL SERVICES INC.

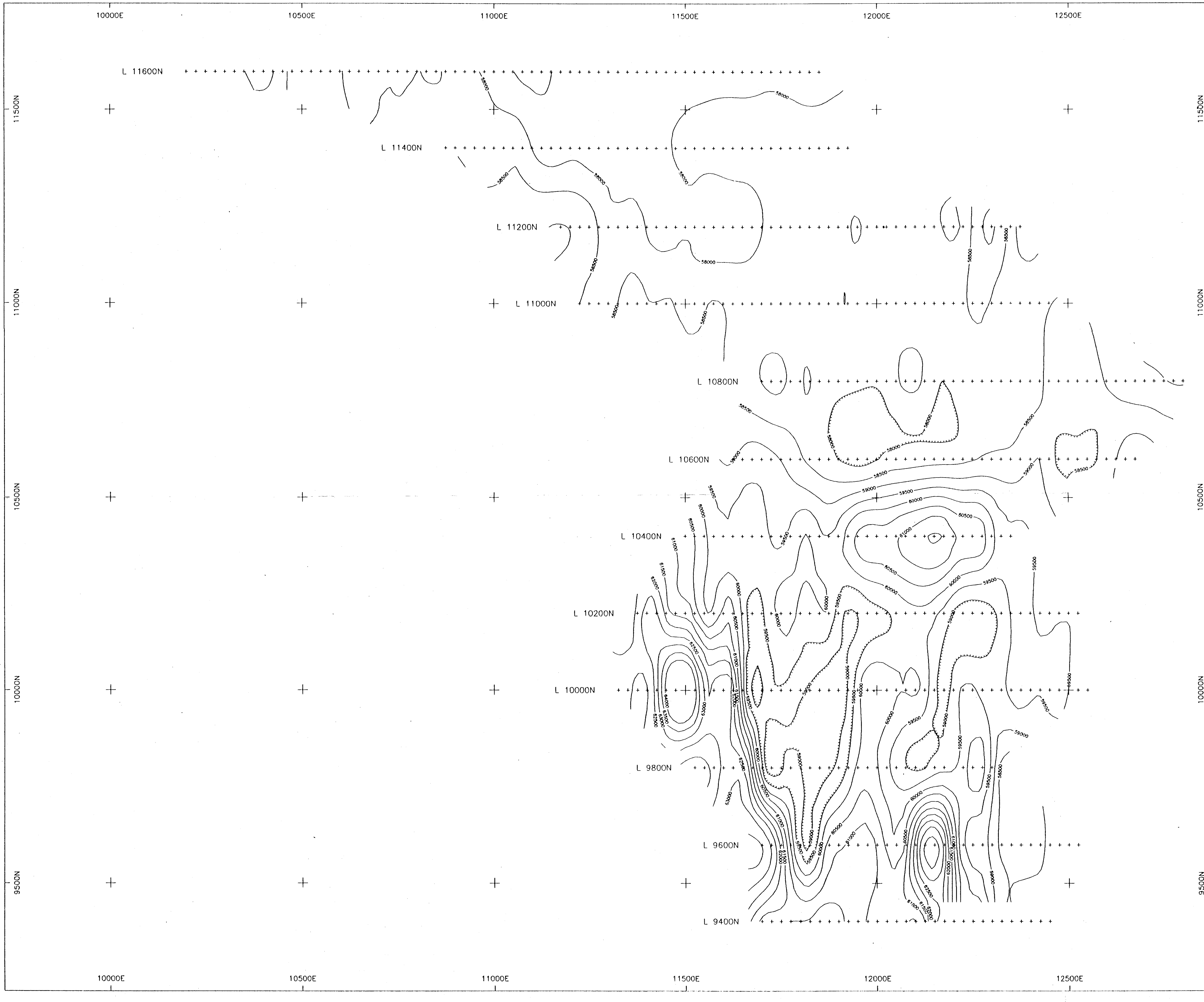
ABE PROPERTY, OMINECA AREA, B.C.

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

FIG 11

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

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0 100 200 300 400
METERS

RELIANCE GEOLOGICAL SERVICES INC.

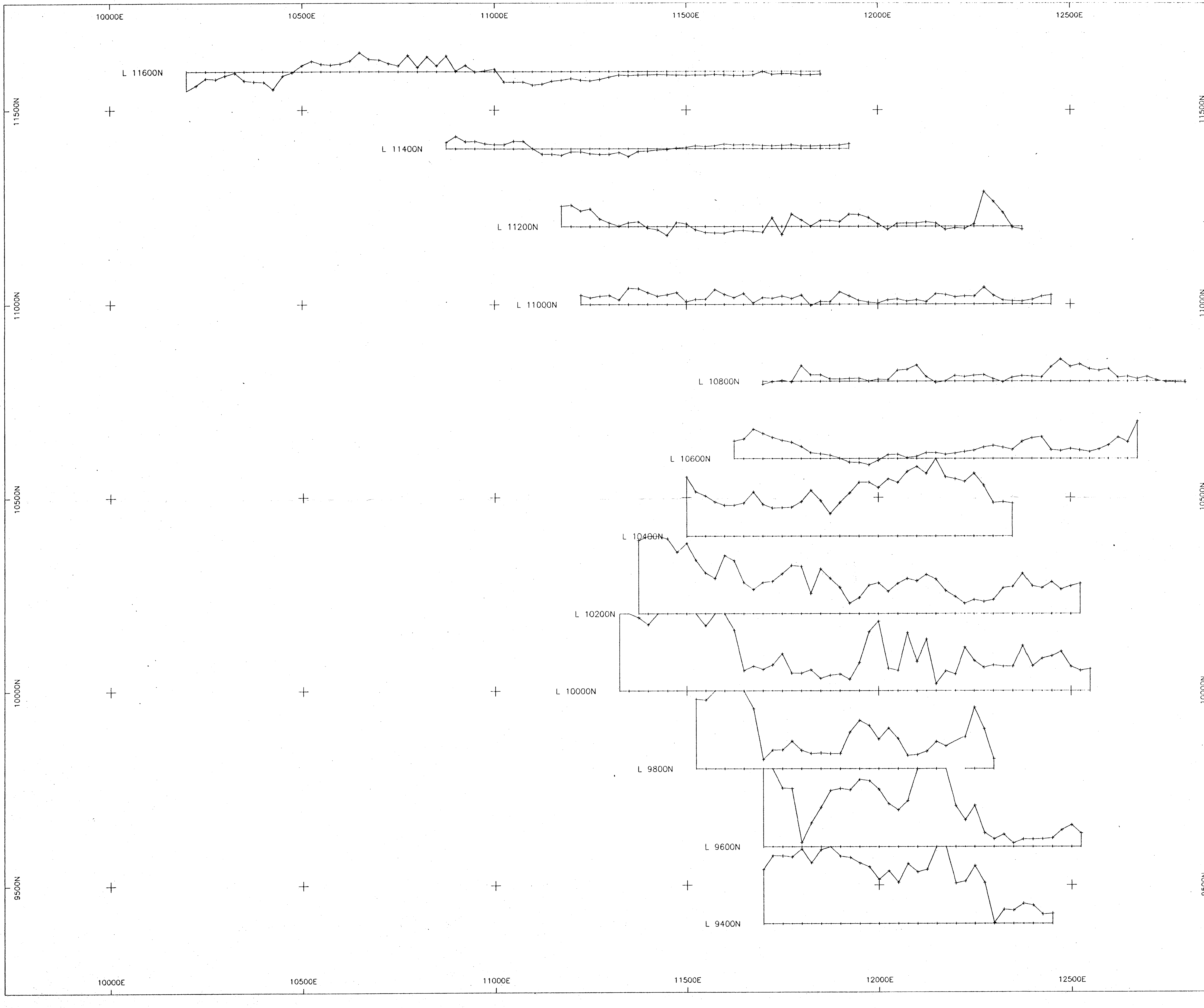
ABE PROPERTY, OMINECA AREA, B.C.

MAGNETOMETER CONTOUR PLAN
contour interval = 500 gammas

FIG 10

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
profile base	58000 gammas
profile scale	1000 gammas/cm
min. value profiled	57000 gammas
max. value profiled	62000 gammas
positive values	above line

GEOLOGICAL BRANCH
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0 100 200 300 400
METERS

RELIANCE GEOLOGICAL SERVICES INC.

ABE PROPERTY, OMINECA AREA, B.C.

MAGNETOMETER PROFILES

profile scale = 1000 gammas/cm
profile base = 58000 gammas

FIG 9

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SCOTT GEOPHYSICS LTD.

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LEGEND

10.0 Au ppb

>=100 and <200ppb Au

>=200 and <600 ppb Au

>=600 ppb Au

N

0 1000

metres

SWANNELL MINERALS CORPORATION

ABE PROPERTY
British Columbia

FIG 8

OMINECA M.D.

94C/5E,5W

DETAILED SOIL GEOCHEMISTRY

GOLD

RELIANCE GEOLOGICAL SERVICES INC.

DATE: 5 Oct. 1993	SCALE: 1 : 10000

Drawn By: TONY CLARK CONSULTING

LEGEND

10.0 Cu ppm

- >=250 and <550 ppm Cu
- >=550 and <1100 ppm Cu
- >=1100 ppm Cu

0 1000

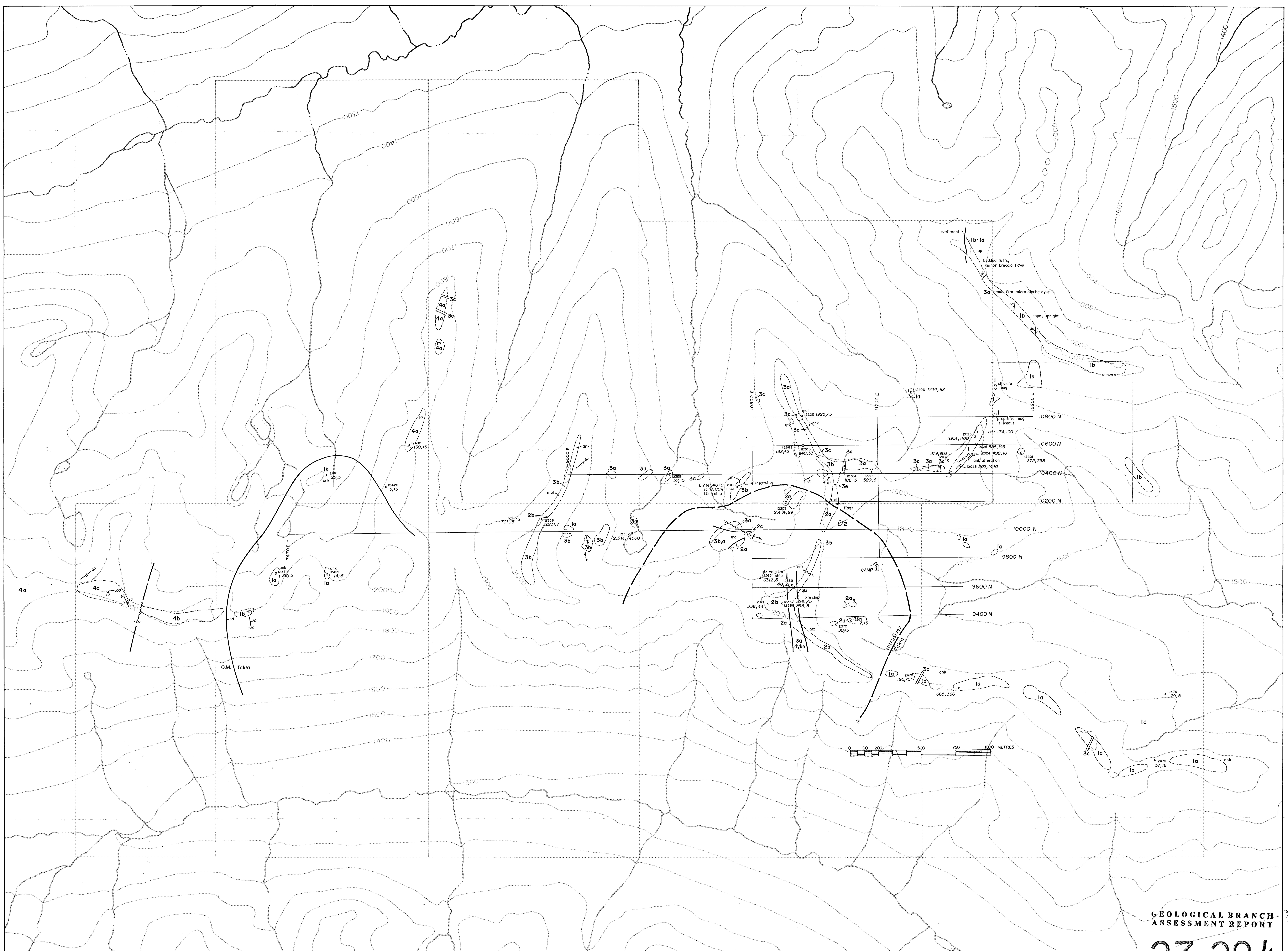
metres

N

GEOLOGICAL BRANCH
ASSESSMENT REPORT

23,284

SWANNELL MINERALS CORPORATION	
ABE PROPERTY British Columbia	FIG 7
OMINECA M.D.	94C/5E,5W
DETAILED SOIL GEOCHEMISTRY COPPER	
RELIANCE GEOLOGICAL SERVICES INC.	
DATE: 5 Oct. 1993	SCALE: 1 : 10000
Drawn By: TONY CLARK CONSULTING	



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Volcanics

1 - TAKLA

1a - andesitic augite porphyry flows and dykes
1b - andesitic tuffs

Intrusives

2a - pyroxenite, massive medium grain dark green
2b - pyroxenite chlorite rich, dark green to black
2c - pyroxenite, gabbro phase medium grain, light green weathering
2d - pyroxenite carbonate talc altered, moderately sheared

3a - light gray-green diorite massive and dyke-like
3b - hybrid zone, variable amounts of angular pyroxenite xenoliths set in a diorite matrix
3c - feldspar porphyry flows and dykes

4a - monzonite massive
4b - quartz monzonite

qtz - quartz
ank - ankerite
hem - hematite
mag - magnetite
mal - malachite
py - pyrite
chpy - chalcopyrite

outcrop
geological contact (defined, assumed)
shearing
bedding
jointing
dyke
rock sample location and i.d. Cu(ppm), Au(ppb)

0 100 200 500 750 1000 METRES

N

Revised December 1993

SWANNELL MINERALS CORPORATION

ABE PROPERTY

OMINECA M.D., B.C.

GEOLOGY and GEOCHEMISTRY

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

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RELIANCE GEOLOGICAL SERVICES INC.