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COMINCO LTD

EXPLORATION
NTS: 94E/2

WESTERN CANADA
February 20, 1991

ASSESSMENT REPORT

ON ROAD BUILDING, GEOPHYSICS AND PERCUSSION DRILLING

ON THE

PINETREE PROPERTY

OMINECA MINING DISTRICT, BRITISH COLUMBIA

LATITUDE: 57⁰14'

LONGITUDE: 126⁰41'

REPORT BY

S.W. SMITH

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

SUB-RECORDER RECEIVED
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M.R. # \$..... VANCOUVER, B.C.

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TABLE OF CONTENTS

	<u>Page</u>
SUMMARY.....	1
INTRODUCTION.....	1
LOCATION AND ACCESS.....	1
PHYSIOGRAPHY.....	2
PROPERTY AND OWNERSHIP.....	2
HISTORY AND PREVIOUS WORK.....	2
GEOLOGY.....	2
(a) Regional.....	2
(b) Rock Types.....	4
(c) Alteration.....	5
(d) Mineralization of Property.....	5
GEOPHYSICS.....	6
(a) Survey Techniques and Presentation of Data.....	6
(b) Interpretation of Data.....	6
ROAD BUILDING.....	7
PERCUSSION DRILLING.....	7
CONCLUSIONS.....	9
RECOMMENDATIONS.....	9

PLATES AND FIGURES

Figure 1 - Index Map	Scale: 1:2,000,000
Figure 2 - Claim Location	1:50,000
Plate 1 - Access Road	1:50,000
2 - Geology and Percussion Drill Hole Location	1:5,000

Plate 811-46-01/02- Induced Polarization/Resistivity Pseudosections, Lines 2000SW to 200SW and 000 to 2200NE respectively, scale 1:5,000, contour interval 1 cm = 5 msec. and 250 ohmmetres.

811-46-03 Magnetometer Profiles on a scale of 1:5,000 and 1 cm = 500 (nT (positive to the left) with a base level of 58,000 nT.

811-46-04/05 Chargeability and Resistivity Contours for separation $n=2$ on a scale of 1:5,000 and contour intervals of 2.5 msec. and 250 ohmmetres.

811-46-06/07 Same as above but for 21-point Triangular Filter

811-46-08 Magnetic Contours on a scale of 1:5,000 and 100 nT contour interval with a base level of 57,000 nT removed.

811-46-09 Geophysical Interpretation on a scale of 1:5,000

APPENDIX

- I- Statement of Expenditures
- II- Analytical Methods
- III- Drill Logs and Assay Results
- IV- References
- V- Statement of Qualifications

COMINCO LTD

EXPLORATION
NTS: 94E/2

WESTERN DISTRICT
February, 1991

ASSESSMENT REPORT-PINETREE PROPERTY

SUMMARY

Previous work on the property had delineated a large, porphyry style, alteration zone with two distinct types of disseminated mineralization, copper-gold and copper-molybdenum. IP and Mag surveys complemented previous work. All this provided sufficient documentation to complete drill testing. To allow drilling, access roads and drill sites were constructed. Percussion drilling tested the two types of mineralization. The drilling found concentrations of sub-economic copper-gold and copper-molybdenum mineralization (best grade, 0.14% Cu over 250'). Potential remains west and southeast of the area, where the alteration trends but is under cover.

INTRODUCTION

The Pinetree property is a porphyry copper prospect located in the Finlay River area of British Columbia (Figure 1). Cominco optioned the property from Electrum Resources in May, 1990. During June and July 1990, Cominco's field work consisted of geochemical sampling, prospecting and mapping. This work complemented work by previous owners. All this provided sufficiently complete documentation of the porphyry-style alteration on the property to complete geophysical and drill testing.

From July 14 to August 10, ground magnetometer (40.1 km) and induced polarization surveys (37.8 km) were performed by Lloyd Geophysics Inc. of Vancouver. The section on the results of these surveys was written by Jan Klein, Chief Geophysicist, Cominco Ltd. The surveys were on claims: Fin 3, 11, 12, 14, 16, 18 and 19 (Figure 2).

From August 2 to September 3 Jempland Construction Ltd. of Prince George completed 24.5 km of access road and 23 drill sites. The claims worked on were Fin 11, 12, 14 and 16. From October 4 to November 6 percussion drilling at approximately 200 m centres totalling 1,460 m by Tonto Drilling of Kamloops was supervised by Cominco personnel; A.M. Pauwels, geologist and S.W. Smith geologist. The claims drilled on were Fin 11 and 12.

LOCATION AND ACCESS

The claims of the Pinetree property are located in the Omineca Mining Division approximately 20 km northeast of the northern end of Thutade Lake along the Finlay River. The claims are centred on Latitude 57°14' N and Longitude 126°41' W.

Lon. 127°

Hegraph
reer

Iskut



Chert Mine



PINE
PROPERTY

Lat. 57°

ALASKA

Stewart

37

Granisle

Smithers

Terrace



Drawn by:		Traced by: J.T.	
Revised by	Date	Revised by	Date

INDEX MAP

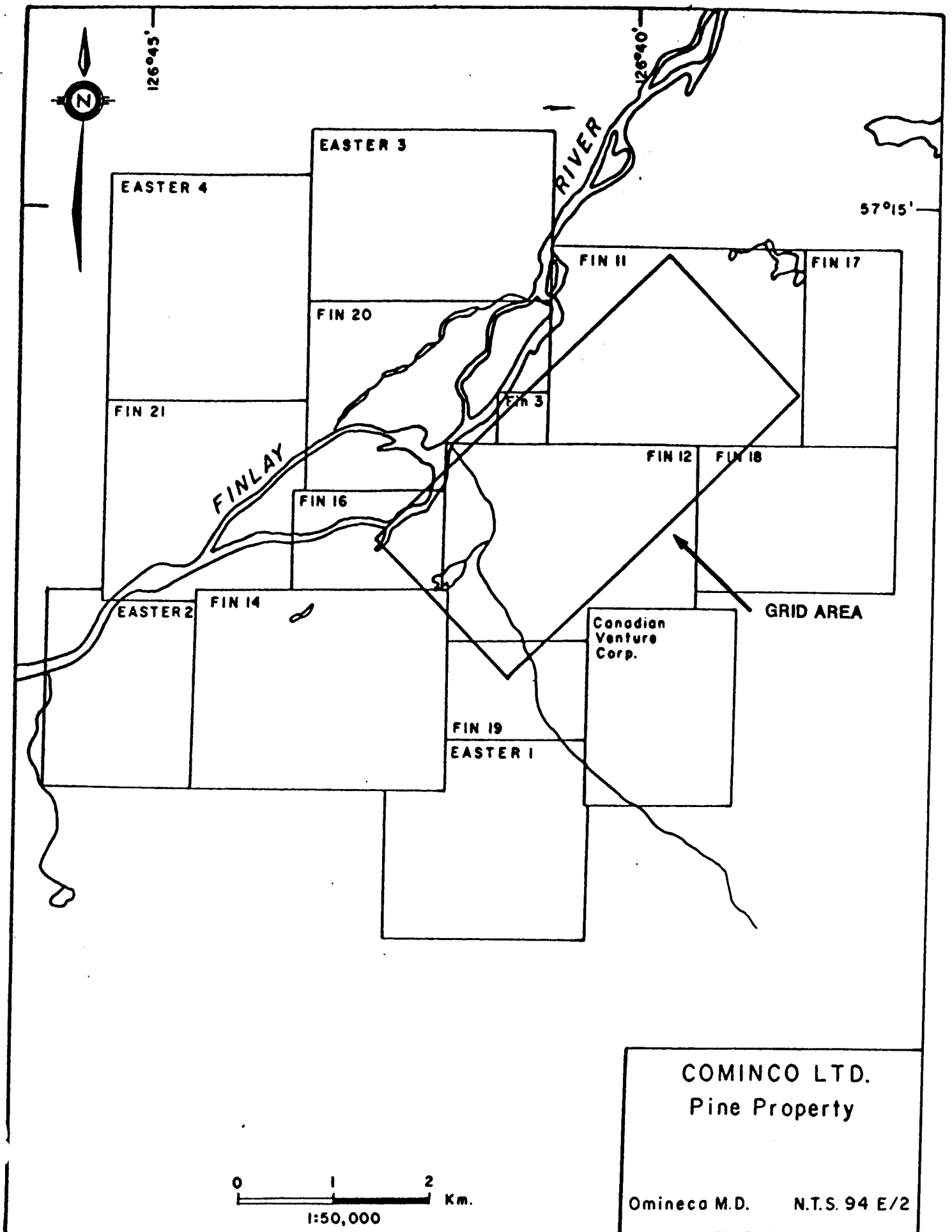
0 50KM 100KM



Scale: 1 2,000,000

Date: Sept. 14 / 1990

Figure 1



COMINCO LTD.
 Pine Property
 Omineca M.D. N.T.S. 94 E/2

Figure 2

2.

Access to the property by road is from Mackenzie, B.C., 180 km north of Prince George. This route is approximately 500 km long using good grade logging roads and part of Cheni Gold's Lawyers Mine access road. At kilometer 52 of the Cheni Mine access road an existing branch road is used for 3 km where Cominco's access road (1990) then branches off and continues for 16.5 km before reaching the property. Access by air is from Smithers, B.C. where scheduled fixed-wing aircraft are available to Sturdee Valley airstrip (kilometre 76 on the Cheni Mine Access road) approximately 27 km west of the property. Mobilization to the property before the access road was completed (September) was by helicopter from the Sturdee Valley airstrip.

PHYSIOGRAPHY

The property is situated along the Finlay River which at this point flows northeast along a broad (5 km wide) valley through the Swannel Ranges. The valley is covered predominantly by lodgepole pine and some spruce with minor swampy ground to the northeast. Elevations range from 1,000 m to 1,300 m above sea level.

PROPERTY AND OWNERSHIP

The claims owned by Cominco, were optioned from Electrum Resources in May, 1990. All qualified work has been submitted for assessment. Current due dates are listed below. These dates are subject to acceptance of all assessment work submitted.

TABLE 1

CLAIM STATUS

<u>Claim Name</u>		<u>Record Number</u>	<u>Due Dates</u>
Fin 3	(1 unit)	3064	July 31, 1999
Fin 11	(20 units)	9663	August 11, 1999
Fin 12	(20 units)	9664	August 11, 1999
Fin 14	(20 units)	9665	August 11, 1999
Fin 16	(6 units)	9666	August 11, 1999
Fin 17	(8 units)	9667	August 11, 1999
Fin 18	(12 units)	9668	August 11, 1999
Fin 19	(6 units)	9669	August 11, 1999
Fin 20	(20 units)	11441	February 13, 1999
Fin 21	(16 units)	11442	February 13, 1999
Easter 1	(16 units)	11765	April 16, 1999
Easter 2	(12 units)	11766	April 16, 1999
Easter 3	(20 units)	11767	April 16, 1999
Easter 4	(20 units)	11768	April 17, 1999

3.

HISTORY AND PREVIOUS WORK

The Pinetree property covers an area that was worked by Kennco Exploration (Western) Ltd. during the period June, 1968 to April, 1973. Kennco's work included soil and silt sample surveys, ground and airborne magnetic surveys, reconnaissance IP, geological mapping and one diamond drill hole. Details of this work is documented in B.C. Mines assessment reports 1846, 1986, 1983, 2035, 2326, 2380, 3031, 3120, 3266 and 4396. In 1978 Bradford D. Pearson staked and optioned the ground to Riocanex. Work by Riocanex in 1979 included line cutting, geological mapping and soil and silt sampling. This was followed in late 1979 with 377 m of diamond drilling in 2 holes. In 1980 Riocanex drilled an additional 10 DDH's totalling 977 m in addition to a ground magnetometer survey of 50.7 km. The drilling was confined to the southwestern and central parts of the property. A 1982 mapping program for Brinco Mining Ltd. was confined to the northeastern and central parts of the property.

All this work found copper mineralization in at least four locations on the property. Soil sampling outlined zones of anomalous copper, molybdenum and gold. The most prominent copper anomaly covers a 1 by 2 km area where most values exceed 80 ppm Cu. Large patches of this anomaly exceed 400 ppm Cu, with many peak values over 1,000 ppm. Kennco drilled a short hole in the centre of this anomaly. This hole graded 0.24% Cu over 96', the total length of the hole. Two gold-copper anomalies occur peripheral to and west of the main copper anomaly. These two anomalies cover 0.5 to 1 sq. km each. In 1979-80 one of these gold-copper anomalies was drilled by Riocanex. Best results were in DDH 79-1 which graded 0.27% Cu, 0.7 g/t Au over the top 51 m.

GEOLOGY

(a) Regional

The Pinetree property is near the southeast margin of the Toodoggone precious metal camp; it is about 40 km southeast of Cheni Gold's Lawyers Mine. The Toodoggone area lies in the eastern part of the Intermontaine Belt. The geological map (open file map 306) by H. Gabrielse et al. assigns the volcanic strata along the southeast part of the property to the Hazelton Group. Within and adjacent to the wide Finlay River valley northeast of the property are some basic volcanic rocks that are mapped as the Takla Group. The Hazelton Group are Lower Jurassic and the Takla Group are Upper Triassic.

East of the property and to the east of the Finlay River, these strata are intruded by the Omineca intrusions of Jurassic and Cretaceous ages. These intrusions are probably the source of the boulder erratics of quartz monzonite (Woodcock and Gore, 1982). However, the syenomonzonite bodies and feldspar porphyry dykes may be of a later age. T.G. Schroeter (1980, 1981) suggests that such intrusions may be feeders to the Toodoggone volcanic rocks which unconformably overlie the Takla Group. The Toodoggone volcanics are probably Early to Middle Jurassic.

4.

(b) Rock Types

Some 95% of the property is covered by overburden including bog, swamp material and unconsolidated glacial debris. Geology of the property is on Plate 2 in pocket. Previous mapping by Kennco, RioCanex and Brinco has divided the property into two main regions of predominantly plutonic and volcanic origin. Dyke swarms intrude both the volcanic and plutonic suites, these dykes are characterized by their red colouration due to hematite dusting in some of the feldspars. Associated dykes are generally found adjacent to or in close proximity to dykes of the red suite.

Only rocks from the southwest side of the property have been classified as volcanic rocks. These are largely crystal tuffs and other pyroclastics. Composition varies from light coloured felsic to dark coloured andesite. Woodcock and Gorc (1982) reported that in some of the specimens graded bedding occurs, indicating a tuffaceous origin in spite of the almost uniform crystal-like nature of the fragments. Thin section examinations by Woodcock done on volcanic rocks near the plutonic region show secondary biotite indicating hornfelsing. No thin sections were done for the volcanic rocks in the southwest part of the area and so the extent of this biotite alteration is unknown. The volcanic rocks are probably of the Hazelton Group (Lower Jurassic).

The plutonic suite includes the biotite granodiorite, the hornblende granodiorite, and some smaller areas of finer grained quartz monzonite porphyry. The biotite granodiorite is more leucocratic with large quartz crystals and is fresher in appearance than the hornblende granodiorite which has fracture controlled alteration, especially epidote. Woodcock divided the granodiorites on the basis of thin section examination. In places, it is very difficult to differentiate between the two rock types on the basis of hand specimens and also in places there is confusion between the altered hornblende granodiorite and the quartz monzonite porphyry.

The quartz monzonite porphyry is characterized by its porphyritic texture which is noted on smooth or sawed slabs, but this texture is not always apparent on fractured or weathered surfaces. From the field mapping it is difficult to determine whether this quartz monzonite porphyry occurs as dykes within the granodiorite, whether parts of it form separate stocks, or whether some is a contact phase of the granodiorite. The plutonic suite seems to be part of the Omineca Intrusions (Mesozoic).

The suite of red dykes is characterized by the widespread hematite dusting in feldspars, some of which seems to extend into the intruded granodiorite. The dykes lack abundant epidote and they are almost devoid of pyrite. Three completely different rock types occur and in many places these different rock types occur within the same dyke without obvious sharp contacts. The rock types include a medium-grained syenite, a trachyte porphyry which is reddish with abundant pink feldspar phenocrysts and a unique type mapped by Woodcock as the "brick red dyke". This dyke is composed of a porphyry, with aphanitic matrix,

5.

some phenocrysts of feldspar and a few phenocrysts of quartz. The composition, as determined by Woodcock through thin section examination, indicates that this is a quartz latite porphyry.

Several types of unusual dykes are associated with the red dyke suite. These dykes occur adjacent to the red dykes or near them, but can diverge somewhat in strike. In the field these have been mapped as the brown and dark green dykes. Both types are generally characterized by abundant plagioclase laths as phenocrysts. From thin section examination Woodcock used the term dolerite for these dykes. The dyke swarms appear to be all post-mineral.

(c) Alteration

Adjacent to some of the red dykes, the intruded rocks are altered in varying degrees to reddish orange colours, by hematite dusting of the feldspars. The most conspicuous of this is the hornblende granodiorite adjacent to the syenite dykes. The volcanic rocks are also altered to a deep red colour adjacent to some of the dykes. Much of the core from the Riocanex drilling appears to be a reddish altered volcanic rock, accompanied by abundant magnetite.

Epidote is also widespread. The most conspicuous are the replacements and coatings along fractures. The epidote alteration is not as abundant in rocks of the red dyke suite as it is in rocks from the plutonic suite and some of the volcanics.

Magnetite accompanies the hematite alteration in some of the altered volcanics where it forms dark replacements. In the case of the Riocanex drilling, the best gold values were obtained in such rock.

Clay-sericite alteration occurs in many of the tuffaceous rocks along with minor pyrite. Volcanic rocks with abundant pyrite have been bleached white with quartz-sericite alteration. It is not accompanied by quartz veinlets. Quartz-sericite alteration along with sulfides (py, mo, cpy) are found in granodiorites in the central area of the property.

(d) Mineralization of Property

Abundant pyrite occurs only in the volcanic rock and in most places this appears to be structurally controlled. This pyritization is associated with sericitization and bleaching. The best example is the bleached volcanic rock near Riocanex hole 80-9.

In the pluton, pyrite abundance is low to trace. Locally within the hornblende granodiorite are areas with moderate pyrite (up to 3%) and in some locations this has associated chalcopyrite.

The copper mineralization of the property can be divided into two types. The most widespread is the copper associated with molybdenite and occurring as disseminated, fracture coatings and in quartz veins. This is generally confined to the granodiorite. The best examples are at the Kennco diamond drill hole

6.

which graded 0.24% copper over 96 ft (the total length of the hole) and this year's percussion drill hole PH-12 which graded 0.14% Cu over 250 ft (the total length of the hole). The rock around these holes are a hornblende granodiorite with intense sericite alteration.

A second type of copper mineralization occurs in the volcanics. This type has associated gold and is generally accompanied by replacement magnetite forming streaks within the rock. Examples of this are found on the southwest part of the property in 1990 percussion drill holes PH 3,4,5, and 7 and diamond drill holes by RioCanex in 1979 and 1980. This type of mineralization is not accompanied by molybdenite.

The most abundant molybdenite occurs along fractures and in quartz veins accompanying the copper in the granodiorite. It is reflected in the combination of molybdenum and copper geochemistry. Molybdenite also occurs as scattered rosettes in relatively fresh biotite granodiorite. An example of this is the high isolated value from 1990 percussion drill hole PH-16, interval 110-120' (213 ppm).

GEOPHYSICS

(a) Survey Techniques and Presentation of Data

A combined Induced Polarization/Resistivity (I.P./Res.) and Magnetic survey was conducted over the Pinetree property during the period July 14 to August 10, 1990, under contract by Lloyd Geophysics Inc., Vancouver.

The I.P./Res. survey employed a Huntec MK-11 7.5 KW transmitter and EDA IP-16 receiver. A pole-dipole array with current to the south and a spacing of $a=50$ m and separations of $n=1$ to 6 were used in the time domain mode of 2 secs. ON/OFF.

The Mag portion of the survey used an EDA OMNI-Plus field magnetometer combined with an EDA OMNI-IV base station.

Survey lines were oriented approx. NW-SE at a nominal interval of 200 m, starting at 2000SW to 1400NE with 400 m gaps between the latter line and 1800NE and 2200NE. Station interval for the I.P./Res. was 50 m and 25 m for the Magnetics.

A total of 37.8 km of I.P./Res. and 40.1 km of Magnetic data was collected.

(b) Interpretation of Data

The quality of the I.P./Res. and Mag. data appears high. The I.P./Res. values change smoothly in non-anomalous regions, but more rapidly from dipole to dipole in anomalous areas, e.g., Line 600SW from 200N to 1000N.

The experience is, when trying to map a porphyry system in its totality, these rapid variations should be suppressed. This can best be done by averaging the I.P. values with emphasis on the deeper values (reducing overburden effects). For the present survey, a 21-point triangular filter was used. The results are shown in contour form on Plate 811-46-06.

7.

Plate 811-46-09 shows the interpretation of the geophysical results which is strongly based on the I.P. data.

Post-mineral fault zones and associated red dykes show strong offsets in the I.P. and Res. contours, suggesting both lateral and vertical movements.

This interpretation of vertical movements is supported by the different rock units present: volcanics in the west and the deeper plutonic rocks exposed in the east.

Four of these structures are shown and labelled A, B, C and D. West and east of Zone B, different units are mapped/drilled. The anomalous I.P. values are strongest west of this major structure reflecting the higher pyrite in the volcanics (e.g., Zone E, Holes PH-1, 2 and 3). Lower chargeability is associated with the plutonic rocks (Holes PH-10 to 13) indicating the lower percentage of pyrite in these holes (Zone F). The resistivity values show the reverse with lower values correlating with the highest I.P. values. This may reflect, in part, intensity of hydrothermal alteration. High resistivities (5,000 ohm) correlate with plutonic rocks showing low I.P. values (less than 15 msec) suggesting less alteration.

The magnetic values are lowest between Structures B and C. This could reflect the level of hydrothermal alteration (increased sulphidization). It also relates to the different rock types: plutonic versus volcanics. The lowest magnetic values are seen over the latter, and correlate with highest I.P. values reflecting pyrite (PH 1,2 and 3).

The overall I.P. (Res/Mag) picture isn't a simple one. A somewhat arcuate I.P. high, broken up by post-mineralizing structures, is mapped. It is open to the west of Line 1200W (Stations 0 to 800) and possibly to the northwest (Lines 2000W to 00). The other side is open to the southeast between Lines 400E and 1200E. A large area of low I.P. and Res. values in the northeastern part of the grid is most likely reflecting thick overburden.

It is possible that structure B is not only a post-mineralized one but the rejuvenated original structure along which the porphyry system was emplaced.

ROAD BUILDING

Using a D5 Cat, Jemland Construction completed 16.5 km of access road to reach the property boundary. The access road joined an existing branch road 3 km from kilometer 52 on the Cheni Gold Mine road. On the property 23 drill sites were levelled along with 8 km of drill site and camp access roads. Roads were constructed 3 m wide and drill sites 10 m wide to allow access by a drill mounted tracked vehicle. Location of access road is on Plate 1 in pocket.

DRILLING

Drilling was done to test the copper mineralization indicated by IP survey, outcrop and soil geochemical results. Holes were spotted to test the source area of soil geochemical anomalies within the IP chargeability high. Areas of extensive post mineral dyking as projected from outcrops and IP surveys were avoided.

8.

Drilling was carried out by Tonto Drilling of Kamloops, B.C. using an Atlas Copco percussion air drill mounted on a Nodwell. Tonto ran one shift which varied from 10 to 14 hours. Ground conditions for drilling were generally good with some fractured ground. The deepest overburden encountered was 35'. Due to mechanical failures, an inexperienced driller and adverse winter conditions, progress was slow and drilling inefficient. Drill holes were spaced with roughly 200 m centres depending on ground conditions, i.e. swampy or steep rocky areas, using the new grid for control. The drill program was terminated due to a combination of winter conditions and mechanical failures.

A total of 23 two inch drill holes were completed for a total of 1,460 m drilled (Plate 2 in pocket). Nine drill holes reached target depth of 91.50 m (300'), other holes were stopped short due to squeezing, loss of circulation or broken rods. Five drill sites had 2 holes collared on them, as first attempts did not reach adequate depths. Drill logs and assays for holes PH-1 to PH-21 are in appendix III (PH-22 and PH-23 were not logged as they did not penetrate through overburden).

Samples were made up of at least 1/8 of all cuttings from each 10 foot interval. Recovery appeared adequate except where circulation was lost in a hole. Every second interval was assayed unless the hole appeared to carry significant sulphides, then all intervals were assayed. Cominco Exploration and Research Laboratory in Vancouver analyzed the samples for Cu, Au and Mo. As a rough check 30 samples were analyzed for Ag. Analytical methods are given in Appendix II.

The highest copper values are from the drill holes that were close to the Kennco drill hole. They form an east-west trend with holes PH-12 and PH-13 being the highest in the centre. The holes, their coordinates and their assays for the length of the hole follow:

PH-8,	163SW 185NW,	grades .056% Cu from 10 to 300'	(total length of hole)
PH-9,	002SW 232NW,	grades .089% Cu from 20 to 300'	"
PH-12,	013NE 009NW,	grades .145% Cu from 10 to 250'	"
PH-13,	176NE 004NW,	grades .12% Cu from 10 to 220'	"
PH-14,	200NE 116NW,	grades .083% Cu from 10 to 300'	"

Molybdenum had only slightly elevated values. The best hole being PH-12 which averaged 51.5 ppm Mo over its entire length. The values roughly follow the east-west trend of the higher copper bearing holes. The highest value, 213 ppm, was found isolated in PH-16 between 110 and 120 feet. This can be explained as a scattered rosette of molybdenum within the granodiorite. Only weakly elevated molybdenum (most samples <10 ppm Mo) is found with elevated gold.

9.

Elevated gold values along with slightly elevated copper values were found on the southwest side of the area of drilling. The best results came from the bottom 70' of PH-4 from 230-300' which graded 0.09% Cu and 0.274 g/t Au.

The results from the holes containing elevated copper-gold and their coordinates are as follows:

PH-3, 610SW 412NW grades 0.07% Cu, 0.149 g/t Au from 30-280' (total length of	
PH-4, 725SW 210NW grades 0.04% Cu, 0.148 g/t Au from 70-300'	Hole)
PH-5, 602SW 001SE grades 0.03% Cu, 0.091 g/t Au from 50-300'	"
PH-7, 602SW 197SE grades 0.01% Cu, 0.048 g/t Au from 150-300'	"

CONCLUSIONS

Field work in 1990 together with data from previous owners indicated a large porphyry-style alteration zone with anomalous copper on the Pinetree property. Two distinct types of disseminated mineralization were indicated. A copper-gold mineralization within the volcanic rocks and a copper-molybdenum mineralization within the pluton rocks.

The experience with those type of porphyries is that the best Cu-Au values aren't associated with the strongest I.P., but rather occur on the flanks or inside arcuate or doughnut-shaped I.P. anomalies. The somewhat arcuate I.P. high, broken up by post-mineralizing structures is open to the west of Line 1200W. The other side is open to the southeast between Lines 400E and 1200E.

Percussion drilling of copper-molybdenum mineralization near old Kennco diamond drill hole returned assays of sub-economic grade. Roughly outlined was a zone 200 m by 300 m of >0.12% Cu. This zone is closed off to the west by a post-mineral dyke (+/- 50 m) which separates the 2 types of mineralization.

The zone of copper-gold mineralization outlined by percussion drilling is also clearly of sub-economic grade, it is open to the southwest where testing is not complete.

RECOMMENDATIONS

Recommendations that would more fully test the economic potential of the Pinetree property are listed below:

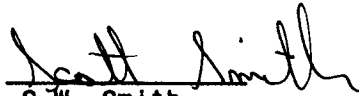
Drilling of the Pinetree property to further test the two types of mineralization encountered:

1. Copper-gold mineralization found in volcanic rocks has not been tested to the west and southwest of 6+00SW and 4+00NW. Six drill holes totalling 1800' (300' each) could more fully test this zone.

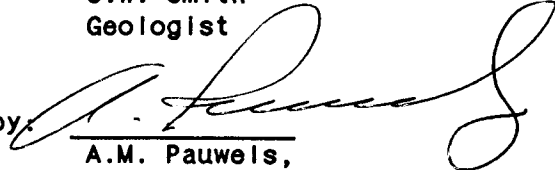
10.

2. Copper-molybdenum mineralization found in plutonic rocks has not been fully tested to the east and southeast of 0+00SW/NE and 0+00NW/SE. Four drill holes using existing drill sites totalling 1200' (300' each) could more fully test this zone.

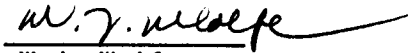
Report by:


S.W. Smith
Geologist

Endorsed by:


A.M. Pauwels,
Senior Geologist

Approved for
Release by:


W.J. Wolfe,
Manager, Exploration-
Western Canada

SWS/pm
Distribution
Mining Recorder
Western Canada

APPENDIX I

STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES

GEOPHYSICAL WORK ON PINETREE PROPERTY

(JULY 14 to AUGUST 10, 1990)

Planning, Supervision: A.M. Pauwels, Sr. Geologist	\$ 2,811.20
Geophysical Survey (Lloyd Geophysics Inc - Vancouver)	44,821.90
Expediting (Jaycox Industries of Smithers)	881.00
Helicopter (Northern Mountain Helicopters and Highland Helicopters)	10,820.60
Fixed Wing (Central Mountain Air)	7,503.00
Camp Costs	6,082.30
Report Writing - Jan Klein, Chief Geophysicist	<u>2,100.00</u>
Total Expenditures:	<u>\$ 75,020.00</u>

EXPENDITURES FROM ROAD BUILDING AND PERCUSSION DRILLING ON PINETREE PROPERTY

(August 20 to September 3 and October 4 to November 6, 1990)

Planning, Supervision, Report: A.M. Pauwels (27 days @ \$401.60)	\$10,843.20
Salaries: A.M. Pauwels (Sr. Geologist) 20 days @ \$401.60/day	8,032.00
S.W. Smith (Geologist) 34 days @ \$216.80/day	7,371.20
J. Chadillon (cook) 15 days @ \$152.87/day	2,292.99
A. Knight (cook) 15 days @ \$125.00/day	2,250.00
W. Kendrick (sampler) 31 days @ \$100.00/day	3,100.00
Transportation/Mobilization:	
Airfares/Travel Expenses	6,078.80
Fixed Wing (Central Mountain Air)	5,112.00
Truck Rental	1,943.74
Freight/Equipment Transport	3,680.70
Percussion Drilling:	
1460 m percussion drilling (Tonto Drilling)	71,931.64
Fuel/fuel transport	10,641.94
Road Building:	
Drill site preparation (23 in total)(Jempland Construction)	6,493.31
Access road (8 km on property) Jempland Construction	12,400.00
Expediting (Jaycox Industries)	1,201.30
Camp costs	8,294.00
Analytical costs: 344 percussion chip samples for Cu, Au and Mo	6,345.10
Drafting and report writing (S.W. Smith)	<u>3,040.00</u>
TOTAL EXPENDITURES	\$171,051.92

APPENDIX II
ANALYTICAL METHODS

All analyses were carried out at the Cominco Exploration and Research Laboratory in Vancouver.

Au: Aqua regia decomposition followed by solvent extraction and AAS.

Ag: Digestion in 20% HNO₃ followed by AAS.

Cu: Digestion in 20% HNO₃ followed by AAS.

Mo: Digestion in 20% HNO₃ followed by HClO₄ decomposition and AAS.

APPENDIX III

DRILL LOGS AND ASSAY RESULTS

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 12	Coordinates: 427 SW / 398 NW	HOLE: PH-2
Dates: October 8-13, 1990	Length: 91.5 m	Logged by: SWS
Contractor: Tonto Drilling Ltd.	Azimuth/Dip: -90 deg.	Date: October 16, 1990
	Size: Percussion 2"	
	Elevation: 1110 m	

Objective: Testing 1990 IP anomaly.

Summary:

From	To (m)	Description
3.05		Casing
3.05 - 6.10		Greater than 85% weathered chips, max size 5 mm White chips with minor sericite, occasional py as individual chips
6.10 - 9.15		50% weathered chips-max 5 mm White translucent quartz chips contain clots grey/green sericite and py, locally disseminated py and magnetite Lesser amount finer grained chalky white feldspar chips Fine grained, individual py grains with minor magnetite
9.15 - 12.20		20% weathered chips, max 3 mm Translucent quartz chips contain more sericite, py and magnetite White feldspar chips contain minor py Total sulfides 3-5%, trace opy with individual grains of py
12.20 - 15.25		10-15% weathered chips, max 3 mm Over all finer grained than previously but similar composition
15.25 - 18.30		Same as above with lots of drill mud (they started to lose circulation)
18.30 - 21.35		Trace of weathered chips Fine grained quartz and feldspar chips with clots grey/green sericite Disseminated py and mag, with quartz containing more than feldspar Sulfides also in individual grains of py, mag and minor opy
21.35 - 24.40		Same as above
24.40 - 27.45		No return
27.45 - 30.50		(circulation returned after adding casing) 10-15% weathered chips, max 4 mm, majority fine grained chips Translucent white quartz chips contains diss py and clots of grey/green sericite with py, magnetite and minor opy White feldspar chips contain diss py Total sulfides 2-3%, 60% as individual grains
30.50 - 33.55		Trace of weathered chips, (hard to wash drill mud off) Very fine grained again, less feldspar chips, contains more magnetite as individual grains
33.55 - 36.60		Similar composition as above with introduction of a few brown chips with white phenocrysts 1-2 mm Increase in opy as individual grains to ~10% of total sulfides
36.60 - 39.65		No brown chips as seen above, otherwise the same
39.65 - 42.70		3-5% weathered chips Fine grained, most sulfides as individual grains Sericoite in quartz is green, may be some chlorite
42.70 - 45.75		Same as above

45.75 - 48.80 Chips still very fine grained, 2-3 times more quartz than feldspar
Decrease in amount of sericite, magnetite and opy
Small amount pale green chips (chlorite?)

48.80 - 51.85 Same as above, with trace opy

51.85 - 54.90 Minor amount black, non-magnetic chips
Decrease in sulfides, 1-2%

54.90 - 57.95 Very fine grained, black chips may be hornblende (striations seen on flat surface)

57.95 - 61.00 Trace sericite with quartz chips, majority of py as individual grains
Trace very fine grained opy (but may be tarnished py)

61.00 - 64.05 Same as above

64.05 - 67.10 Increase in chip size, amount of grey/green sericite in translucent white quartz increasing

67.10 - 70.15 Minor chips show salmon color (K-feldspar), associated with grey/green sericite

70.15 - 73.20 Same as above

73.20 - 76.25 Fine grained chips, max size 1mm
Translucent quartz chips most common, with white feldspar, both show minor association with sericite, py and magnetite but most sulfides occur as individual grains, total sulfides 2-3 %
Minor chips salmon color K-feldspar

76.25 - 85.40 Same as above

85.40 - 88.45 Increase in salmon color chips to 5-10 %
Increase in magnetite and py but no increase in sericite
Total sulfides 3-5% (80%-py,20%-mag), majority of sulfides occur as individual grains

88.45 - 91.50 Same as above

91.50 End of hole

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
3.05	6.10	25	20	<10	
9.15	12.20	111	10	<10	
15.25	18.30	102	5	<10	
21.35	24.40	127	15	<10	
27.45	30.50	427	14	<10	
33.55	36.60	152	12	<10	
39.65	42.70	86	8	<10	
45.75	48.80	119	14	<10	

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
51.85	54.90	151	7	<10	
57.95	61.00	169	17	<10	
64.05	67.10	85	7	<10	
70.15	73.20	247	8	<10	
76.25	79.30	324	8	<10	
82.35	85.40	229	8	<10	
88.45	90.50	174	10	<10	

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 12	Coordinates: 810 SW / 412 NW	HOLE: PH-3
Dates: October 13-16, 1990	Length: 85.40 m	Logged by: SWS
Contractor: Tonto Drilling Ltd.	Azimuth/Dip: -90 deg.	Date: October 16, 1990
	Size: Percussion 2"	
	Elevation: 1110 m	

Objective: Testing 1990 IP anomaly

Summary:

From	To (m)	Description
6.10		Casing
3.05 - 6.10		Overburden boulders ?, no weathered chips, max. size 9 mm, Larger chips are well rounded Dark chips (may be volcanics) contain minor py White/black chips with visible hornblende crystals Epidote bearing chips Whitish green (chlorite) chips with py
6.10 - 9.15		Very thick mud coating Greenish white chips contain minor py Reddish orange chips (K-feldspar bearing), in larger chips (>1 mm) K-feldspar and magnetite are seen together Whitish yellow chips (may be weak epidote) Low sulfide content
9.15 - 12.20		Same as above, drill mud does not wash off chips easily
12.20 - 15.25		Reddish orange chips, dark green white chips, in larger chips (>1 mm) see both kinds together with py, magnetite and minor sericite Fine grained whit translucent chips Total sulfides < 2%, minor individual grains py, magnetite
15.25 - 18.30		Same as above with minor pale white pink chips locally containing py, they fall apart with touch of scratcher
18.30 - 21.35		Chips variable in size, max. 2 mm Greenish white (chlorite bearing) and reddish orange (K-feldspar bearing) chips, contain diss. py and clots of magnetite with trace opy Trace lime/yellow (weak epidote) chips, and soft white chips Total sulfides 1-2%, (py-65%, mt-30%, opy-5%)
21.35 - 24.40		Same as above
24.40 - 27.45		Finer grained, more K-feldspar bearing chips, less chlorite trace opy
27.45 - 30.50		Same as above
30.50 - 33.55		Slight increase of py, opy seen with magnetite and sericite in greenish white chips and as individual grains Total sulfides 3-4% (py-65%, mt-25%, opy-10%)
33.55 - 36.60		Same as above with very thick drill mud covering chips
36.60 - 39.65		Fine grained chips Reddish orange chips are mostly quite pale but some dark, Greenish white chips locally contain diss. py, sericite, magnetite and trace opy, translucent white quartz chips, minor chalky white chips containing diss. py Majority of sulfides as individual grains
39.65 - 42.70		Coarser grained, max. size 4 mm, average 1mm Cpy increased to 1%

42.70 - 45.75	Same as above
45.70 - 48.80	Minor lime green epidote chips, containing diss. opy
48.80 - 51.85	Same as above
51.85 - 54.90	Cpy decreasing, py increasing, majority of sulfides as individual grains
54.90 - 57.95	Same as above
57.95 - 61.00	No sample
61.00 - 64.05	Thick drill mud covering chips Composition same as above
64.05 - 67.10	Increasing amount of magnetite in grey/green chips, Fine grained translucent quartz chips common
67.10 - 70.15	Very fine grained, only trace opy
70.15 - 73.20	Same as above
73.20 - 76.25	Decrease in K-feldspar chips, increasing white translucent quartz chips which contain diss py, minor chlorite, sericite and magnetite with trace opy Total sulfides 3-4% (py-75%, mt-20%, opy-<5%)
76.25 - 79.30	Same as above
79.30 - 82.35	Only minor K-feldspar chips, majority of chips are translucent quartz, white chips (may be feldspar), diss. py in chips but majority as individual grains, minor magnetite, no visible opy
82.35 - 85.40	Same as above
85.40	End of hole (stopped hole because torque became too high)

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05				
3.05	6.10	35	<2	<10	
6.10	9.15	71	<2	32	
9.15	12.20	259	5	122	
12.20	15.25	371	<2	74	
15.25	18.30	993	3	104	
18.30	21.35	410	<2	104	
21.35	24.40	411	5	122	
24.40	27.45	378	5	102	
27.45	30.50	514	5	92	
30.50	33.55	562	<2	104	
33.55	36.60	464	6	100	1.3
36.60	39.65	457	3	140	
39.65	42.70	380	3	94	
42.70	45.75	489	<2	100	
45.75	48.80	605	7	260	

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
48.80	51.85	532	<2	202	1.2
51.85	54.90	653	8	120	
54.90	57.95	924	7	160	
57.95	61.00				
61.00	64.05	1060	4	140	
64.05	67.10	962	8	180	
67.10	70.15	1390	8	182	
70.15	73.20	951	7	156	
73.20	76.25	852	9	256	
76.25	79.30	995	10	280	
79.30	82.35	972	10	214	
82.35	85.40	636	12	174	

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 12	Coordinates: 602 SW / 197 SE	HOLE PH-4
Dates: October 17-18, 1990	Length: 91.5 m	Logged by: AMP
Contractor: Tonto Drilling Ltd.	Azimuth/Dip: -90 deg.	Date: October 18, 1990
	Size: Percussion 2"	
	Elevation: 1120 m	

Objective:

Summary:

From	To (m)	Description
0	3.57	Overburden
6.10	9.15	Chips up to 3 mm, few weathered chips. Multicolored chips, translucent quartz chips, pink K-spar chips, pale green epidote chips. Rock chips are feldspar with chloritized hornblende. Fine grained aggregates of magnetite, trace of sulfides, mostly pyrite.
9.15	12.20	Chips up to 3 mm, multicolored as above. More weathered chips (30%) No sulphides, 2 % magnetite.
12.20	15.25	Brown, limonitic chips. Most are pink K-spar fragments, finely disseminated magnetite, rare epidote chips and rare quartz fragments, no sulphides, 1% magnetite
15.25	18.30	As above, trace pyrite
18.30	21.35	Chips up to 2 mm, 20 % weathered, 80% fresh chips. Overall color is grey, quartz chips, white feldspar chips, rare epidote and K-spar chips. Finely disseminated pyrite - 3%, trace magnetite
21.35	24.40	As above - trace cpy.
24.40	27.45	Weathered chips are less than 5 %. Most chips are grey white up to 2 mm. Light colored quartz and light colored feldspar chips. Disseminated magnetite 1%, pyrite 2%, trace cpy.
27.45	30.50	As above. Larger portion of pale green sericite chips.
30.50	33.55	Large chips up to 4 mm. Pink K-spar chips with fine grained sericite, chlorite/disseminated magnetite. Pyrite 1%, chalcopyrite 0.5%, magnetite 2%.
33.55	36.60	Chips up to 5 mm. Mostly grey chips, 10% are pink K-spar chips, slightly weathered. Most chips are quartz and feldspar chips, trace of epidote chips. Disseminated fine grained pyrite-2%, disseminated magnetite-1%. Small patches of sericite.
36.60	39.65	As above. More chips with flecks of sericite, trace of cpy.
39.65	42.70	This interval has much limonite and weathered chips, possibly contamination from around the casing. The great majority are K-spar chips, some epidote, 2% pyrite.
42.70	45.75	As above 1% magnetite, trace of chalcopyrite
45.75	48.80	Limonitic, chips to 2 mm. Mostly pink K-spar chips, also white to pale green Feldspar chips, chips with quartz-sericite-disseminated magnetite. 1% py, 2% magnetite, trace of cpy.
48.80	51.85	As above
51.85	54.90	As above

54.90 - 57.95	As above
57.95 - 61.00	As above
61.00 - 64.05	Chips up to 2 mm. Eighty percent are pink K-spar chips, others are epidote chips and white feldspar chips. Rare quartz chips, some of these have sericite and disseminated magnetite. 1% magnetite, 1% pyrite, trace of chalcopyrite.
64.05 - 67.10	As above Except 20% chips flecked with sericite.
67.10 - 70.15	Chips up to 1 mm. Mostly sericite-quartz chips (60%) with disseminated pyrite and/or magnetite- 2% magnetite, 2% py, tr opy. Other chips are pink K-spar (15%), white translucent quartz chips, rare epidote.
70.15 - 73.20	Muddy, grey, very fine grained chips. Most are quartz also quartz-sericite, some with disseminated magnetite (2%), pyrite 2%, tr opy. Rare epidote and K-spar chips.
73.20 - 76.25	As above
76.25 - 79.30	As above
79.30 - 82.35	Fine grained, muddy chips up to 1.5 mm. Most abundant are quartz-feldspar-sericite chips with disseminated magnetite and/or pyrite and trace of opy. Others are K-spar (5%), quartz (10%), epidote
82.35 - 85.40	As above
85.40 - 88.45	As above
88.45 - 91.5	As above
91.5	End of Hole

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05				
3.05	6.10	32	2	<10	
6.10	9.15	37	<2	<10	
9.15	12.20	29	<2	<10	
12.20	15.25	16	<2	<10	
15.25	18.30	18	3	<10	
18.30	21.35	62	3	178	
21.35	24.40	127	11	260	0.8
24.40	27.45	101	13	156	0.4
27.45	30.50	72	5	94	
30.50	33.55	98	8	98	
33.55	36.60	71	5	84	
36.60	39.65	50	<2	60	
39.65	42.70	42	4	22	
42.70	45.75	26	<2	34	
45.75	48.80	98	5	38	

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
48.80	51.85	162	<2	80	
51.85	54.90	73	4	40	
54.90	57.95	53	<2	82	
57.95	61.00	62	2	80	
61.00	64.05	38	<2	52	
64.05	67.10	104	<2	82	
67.10	70.15	500	<2	216	
70.15	73.20	840	6	456	
73.20	76.25	780	<2	340	
76.25	79.30	931	7	216	
79.30	82.35	820	3	156	
82.35	85.40	1190	4	354	
85.40	88.45	959	3	212	2.1
88.45	90.50	858	4	186	

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 12	Coordinates: 602 SW / 001 SE	HOLE PH-5
Dates: October 18-19, 1990	Length: 91.5 m	Logged by: SWS
Contractor: Tonto Drilling Ltd.	Azimuth/Dip: -90 deg.	Date: October 20, 1990
	Size: Percussion 2"	
	Elevation: 1130 m	

Objective: Testing 1990 IP anomaly

Summary:

From	To (m)	Description
0	3.05	Overburden
3.05	6.10	40-50 % weathered chips, maximum size 5 mm Larger chips show hornblende bearing granodiorite, some with biotite, epidote, chlorite and magnetite bearing chips, finer chips are as individual grains Finer chips show translucent white quartz, orange red K-feldspar chips 1-2 % magnetite, majority as individual grains, little pyrite
6.10	9.15	Chips up to 3 mm, trace weathered chips Majority of larger chips are greenish white, chlorite and magnetite bearing, finer chips show translucent white quartz, chalky white (soft to scratcher), green chlorite and individual magnetite chips, minor pyrite disseminated and as individual grains, trace chalcopyrite
9.15	12.20	Same as above
12.20	15.25	Increasing pyrite content (2-3%), decreasing magnetite (<1%)
15.25	18.30	Decreasing chlorite content
18.30	21.35	Minor weakly colored K-feldspar chips
21.35	24.40	Same as above
24.40	27.45	Chips up to 3 mm, and not as many fine grained chips as previously Grey white chips (fine grained are translucent) are most common, contain disseminated pyrite and minor chlorite and magnetite Chalky white chips, containing disseminated pyrite are soft to scratcher Minor K-feldspar colored chips Total pyrite disseminated in chips and as individual grains 2-3 %
27.45	30.50	Same as above
30.50	33.55	Increase in K-feldspar colored chips as well as chlorite, magnetite and minor chalcopyrite Minor pale green epidote bearing
33.55	36.60	Same as above
36.60	39.65	Same as above
39.65	42.70	Same as above
42.70	45.75	Fine grained chips, reddish orange K-feldspar rich chips, contains weak clots of grey/green sericite with disseminated magnetite, pyrite and minor chalcopyrite White translucent chips contain disseminated pyrite and trace chalcopyrite Greenish white chips, chlorite bearing, contain strong magnetite and minor chalcopyrite

Total sulfides 3-4 % (py-30%,mt-50%,cpy-20%)

45.75 - 48.80	Same as above
48.80 - 51.85	Same as above
51.85 - 54.90	Decreasing chalcopyrite, increasing magnetite
54.90 - 57.95	Trace light green epidote bearing chips, also seen occurring with K-feldspar
57.95 - 61.00	Still fine grained, magnetite 3-4 %, as individual grains and as clots in chips Equal amounts of pyrite and chalcopyrite disseminated and as individual grains 1%
61.00 - 64.05	Same as above with thick drill mud covering
64.05 - 67.10	Decreasing chalcopyrite to trace and still thick drill mud covering
67.10 - 70.15	Very fine grained, composition same as above
70.15 - 73.20	Same as above
73.20 - 76.25	Same as above
76.25 - 79.30	Very fine grained chips, equal amounts white translucent, light reddish orange and darker green white chips, minor chalky white soft chips, trace light green epidote chips Magnetite 2-3 % in chips and disseminated, minor pyrite with trace chalcopyrite
79.30 - 82.35	Increase pyrite to 2 %, trace chalcopyrite
82.35 - 85.40	Same as above
85.40 - 88.45	Same as above
88.45 - 91.5	Very thick drill mud coating chips, slight increase in pyrite content to 2-3 %, magnetite 2 %
91.5	End of Hole

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05				
3.05	6.10	71	3	<10	
6.10	9.15	54	<2	42	1.0
9.15	12.20	42	<2	20	
12.20	15.25	43	<2	76	
15.25	18.30	113	8	82	
18.30	21.35	147	7	82	
21.35	24.40	169	12	116	
24.40	27.45	131	2	152	
27.45	30.50	215	6	72	
30.50	33.55	230	<2	82	
33.55	36.60	187	6	76	
36.60	39.65	308	5	80	
39.65	42.70	224	8	28	
42.70	45.75	398	9	92	
45.75	48.80	415	21	100	

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
48.80	51.85	281	34	76	
51.85	54.90	239	14	66	0.6
54.90	57.95	316	6	102	
57.95	61.00	277	9	92	
61.00	64.05	330	7	98	
64.05	67.10	329	7	100	
67.10	70.15	425	9	120	0.5
70.15	73.20	532	16	106	
73.20	76.25	585	12	106	
76.25	79.30	562	20	110	
79.30	82.35	415	7	98	
82.35	85.40	349	6	76	
85.40	88.45	327	4	82	
88.45	90.50	325	4	82	

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 12
 Dates: October 19, 1990

Coordinates: 400 SW / 202 NW
 Length: 91.5 m
 Azimuth/Dip: -90 deg.
 Size: Percussion 2.5"
 Elevation: 1120 m

HOLE PH-6
 Logged by: AMP
 Date: October 20, 1990

Contractor: Tonto Drilling
 Ltd.

Objective:

Summary:

From To (m)	Description
0 - 3.05	Overburden
3.05 - 6.10	Less weathered bedrock reached at 5 m , casing to 6.1 m
6.10 - 9.15	Weathered, brown, limonitic. Chips up to 2 mm, pink K-spar fragments predominate, some flecked with light green mica (muscovite). Sulphides 1%, mostly pyrite, trace of chalcopyrite. Trace of magnetite.
9.15 - 12.20	As above, less weathered, a few epidote chips.
12.20 - 15.25	Chips up to 2 mm. Pink K-spar fragments predominate, some pale green mica, mica is associated with feldspars or as individual flakes, small admixture of opaque white carbonate fragments. rare epidote chips, a few whiter feldspar fragments. Pyrite is disseminate with the K-spar-mica fragments, 1% py, trace cpy, trace magnetite.
15.25 - 18.30	As above
18.30 - 21.35	As above, but 1% magnetite
21.35 - 24.40	As above
24.40 - 27.45	Still very much the same. Mostly K-spar fragments, associated with green mica fragments - 10% mica overall. A few epidote fragments. Carbonate as minor admixture in feldspar chips and as individual grains. Sulphides are very fine grained, mostly pyrite with trace of chalcopyrite.
27.45 - 30.50	As above
30.50 - 33.55	As above
33.55 - 36.60	As above
36.60 - 39.65	As above
39.65 - 42.70	As above
42.70 - 45.75	As above
45.75 - 48.80	As above
48.80 - 51.85	As above
51.85 - 54.90	Transition to below
54.90 - 57.95	Transition to below
57.95 - 61.00	. Very fine grained, grey and muddy. Twenty percent of the chips are pink K-spar, 5% are green mica flakes. Most common are white feldspar flakes. Pyrite 0.5%, trace of chalcopyrite, 1% magnetite.
61.00 - 64.05	Slightly coarser chips up to 1 mm. Half the chips are pink K-

spar chips some with mica and with disseminated pyrite. Rare epidote, carbonate and white feldspar flakes. Pyrite 1%, very fine grained, trace of chalcopyrite.

64.05 - 67.10 All pale grey, coagulated fines.

67.10 - 70.15 Mostly fines, except 2% sulphides-pyrite and trace of chalcopyrite.

70.15 - 73.20 As above, slightly more chalcopyrite

73.20 - 76.25 As above

76.25 - 79.30 As above

79.30 - 82.35 Very fine grained chips, up to 0.5 mm. Pink feldspar chips (80%), some white mica. Pyrite 1%, trace of chalcopyrite.

82.35 - 85.40 very fine grained as above.

85.40 - 88.45 As above

88.45 - 91.5 As 79.30-82.35 m

91.5 End of Hole

From (m)	To	Cu ppm	Mo ppm	Au ppb	Ag ppm	From (m)	To	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05					48.80	51.85				
3.05	6.10	126	<2	<10		51.85	54.90	84	3	<10	
6.10	9.15					54.90	57.95				
9.15	12.20	39	<2	<10		57.95	61.00	50	7	<10	
12.20	15.25					61.00	64.05				
15.25	18.30	35	<2	<10		64.05	67.10	30	8	<10	
18.30	21.35					67.10	70.15				
21.35	24.40	38	<2	<10		70.15	73.20	65	7	<10	
24.40	27.45					73.20	76.25				
27.45	30.50	25	<2	<10		76.25	79.30	65	8	<10	
30.50	33.55					79.30	82.35				
33.55	36.60	53	<2	<10		82.35	85.40	68	4	<10	
36.60	39.65					85.40	88.45				
39.65	42.70	38	<2	<10		88.45	90.50	59	<2	<10	
42.70	45.75										
45.75	48.80	46	<2	<10							

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 12	Coordinates: 602 SW / 197 SE	HOLE PH-7
Dates: October 20, 1990	Length: 91.5 m	Logged by: SWS
Contractor: Tonto Drilling Ltd.	Azimuth/Dip: -90 deg.	Date: October 21, 1990
	Size: Percussion 2"	
	Elevation: 1150 m	

Objective: Testing 1990 I.P. anomaly

Summary:

From To (m)	Description
0 - 3.05	Overburden
0 - 8.85	Casing
3.05 - 6.10	85 % weathered chips, thick drill mud covering chips White quartz chips seen containing biotite flakes, disseminated pyrite
6.10 - 9.15	Maximum size 5 mm, still thick drill mud covering chips, 85 % weathered chips, green/orange, green/purple and white black, Fine chips of translucent quartz and lime green epidote
9.15 - 12.20	Chips up to 6 mm, 10 -20 % weathered chips, weathered out biotite crystals up to 3 mm common Majority of chips K-feldspar colored, larger chips show K-feldspar crystals occurring with dark clots of magnetite and chlorite with weak green sericite and pyrite, larger chips also contain lime green epidote crystals Small number white chips with disseminated pyrite
12.20 - 15.25	Increasing white and translucent white chips, containing disseminated pyrite, also more pyrite as individual grains, 2 - 3 % total pyrite
15.25 - 18.30	Same as above but finer grained
18.30 - 21.35	Increase in K-feldspar colored chips as in 9.15 - 12.20 m
21.35 - 24.40	Same as above with more individual grains of biotite
24.40 - 27.45	Same as 18.30 - 21.35 m, majority fine grained with a few coarser chips of K-feldspar color (may be contaminated)
27.45 - 30.50	Thick drill mud coating, white grey chips with disseminated pyrite and greenish white chips with chlorite and magnetite and minor disseminated pyrite Minor chips of K-feldspar color which are larger than rest and may be contaminant
30.50 - 33.55	Same as above but finer grained
33.55 - 36.60	Thick drill mud covering chips, White translucent and green/off white chips with disseminated pyrite and minor magnetite Minor K-feldspar colored chips, total pyrite 1-2 % disseminated and as individual grains
36.60 - 39.65	Same as above
39.65 - 42.70	Increase in green/off white chips with chlorite, magnetite and trace chalcopyrite
42.70 - 45.75	Slight increase in K-feldspar colored chips
45.75 - 48.80	Thick drill mud coating chips, majority of chips are now K-

feldspar colored, locally with chlorite, magnetite, pyrite and trace chalcopyrite, minor biotite crystals (up to 2 mm), and soft white chips

48.80 - 51.85	Minor light green epidote chips
51.85 - 54.90	Same as above
54.90 - 57.95	Same as above, with more green/grey biotite flakes and crystals
57.95 - 61.00	Same as above
61.00 - 64.05	Less pyrite, down to 1 % total, few as individual grains
64.05 - 67.10	Decrease in K-feldspar color chips, increase in green/off white chips with chlorite and magnetite
67.10 - 70.15	Same as above, but finer grained
70.15 - 73.20	Same as above
73.20 - 76.25	Same as above, with very thick drill mud coating chips
76.25 - 79.30	Same as above
79.30 - 82.35	Same as above
82.35 - 85.40	Very fine grained, increase in amount of K-feldspar color chips, trace green epidote chips and trace chalcopyrite
85.40 - 88.45	Majority of chips are now K-feldspar color, still some green/off white chips and epidote chips, minor disseminated pyrite and as individual grains up to 1 %
88.45 - 91.5	Same as above
91.5	End of Hole

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05				
3.05	6.10	37	<2	<10	
6.10	9.15	105	<2	<10	
9.15	12.20	72	<2	<10	
12.20	15.25	53	<2	<10	
15.25	18.30	70	<2	<10	
18.30	21.35	165	<2	28	
21.35	24.40	72	<2	<10	
24.40	27.45	49	<2	116	
27.45	30.50	33	<2	24	
30.50	33.55	24	17	38	
33.55	36.60	26	<2	<10	
36.60	39.65	65	3	56	
39.65	42.70	60	<2	30	
42.70	45.75	111	<2	104	0.8
45.75	48.80	181	<2	106	

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
48.80	51.85	70	<2	100	
51.85	54.90	68	<2	32	
54.90	57.95	49	<2	20	
57.95	61.00	282	<2	56	
61.00	64.05	115	<2	34	
64.05	67.10	95	<2	28	
67.10	70.15	83	<2	28	
70.15	73.20	56	<2	28	
73.20	76.25	91	<2	56	
76.25	79.30	116	<2	72	
79.30	82.35	56	<2	22	
82.35	85.40	65	<2	34	
85.40	88.45	94	<2	32	
88.45	90.50	61	<2	22	

PERCUSSION DRILL HOLE RECORD

PINETREEK BC.

page-1

Claim: Fin 12	Coordinates: 163 SW / 185 NW	HOLE PH-8
Dates: October 20-21 1990	Length: 91.5 m	Logged by: AMP
Contractor: Tonto Drilling Ltd.	Azimuth/Dip: -90 deg.	Date: October 22, 1990
	Size: Percussion 2"	
	Elevation: 1120 m	

Objective: Test combined IP/geochemical anomaly

Summary:

From	To (m)	Description
0	3.05	Overburden
3.05	6.10	Very weathered, casing to 6.10
6.10	9.15	Large light grey chips up to 8 mm. Quartz-feldspar chips with a few flecks of greenish sericite, finely disseminated pyrite, trace of chalcopyrite.
9.15	12.20	White grey chips, quartz-feldspar with sericite flakes, a few epidote chips and finely disseminated chalcopyrite, pyrite, molybdenite and rare bornite, possibly 0.4% Cu.
12.20	15.25	Overall color is pale grey-green. White feldspar chips, quartz. A few pink feldspar chips. Sulphides mostly in quartz and very fine grained, many individual sulphide grains to small for identification. Total sulphides 1.5%, both pyrite and chalcopyrite, rare molybdenite and bornite.
15.25	18.30	As above
18.30	21.35	As above
21.35	24.40	Light grey to white chips, quartz and feldspar, a few pink K-spar and epidote chips. Finely disseminated chalcopyrite and pyrite, molybdenite.
24.40	27.45	As above
27.45	30.50	Overall color is more greenish, chips up to 2 mm. Feldspar-quartz chips flecked with sericite, with disseminated pyrite, rare chalcopyrite and molybdenite.
30.50	33.55	As above
33.55	36.60	Darker green color. Forty percent of the chips are dark green, very fine grained, up to 5 mm, finely disseminated sulphides (py>cpy), probably all chlorite. Other chips are quartz, K-spar, white feldspar with finely disseminated pyrite and chalcopyrite, rare epidote chips, 3% sulphides (0.4% Cu estimated).
36.60	39.65	Lighter green than above (approximately 20 % dark green chips). Otherwise the same as above.
39.65	42.70	Grey-white chips, K-spar, white feldspar, quartz, sericite flecks and dark green secondary biotite, very fine grained disseminated pyrite and chalcopyrite, trace of molybdenite, 3% sulphides.
42.70	45.75	Light green color overall. K-spar chips and dark green (sec. biotite) chips (very fine grained) with finely disseminated pyrite, chalcopyrite, trace of molybdenite.
45.75	48.80	Eighty percent dark chips, up to 3 mm, mixtures of K-spar and secondary biotite.
48.80	51.85	Mostly light grey chips (<1 mm). K-spar, quartz, disseminated pyrite and chalcopyrite, all very fine grained. Twenty percent

finer pink to white feldspar chips with very finely disseminated py, opy.

51.85 - 54.90	Large pink and white chips up to 3 mm, finely disseminated py, opy, mo. A few large green, very fine grained chips as above.
54.90 - 57.95	Large, light colored feldspar and quartz chips with occasional green mica flakes, finely disseminates pyrite and a little; chalcopyrite, chalcopyrite is much finer grained than pyrite, trace of molybdenite.
57.95 - 61.00	Thirty % dark green chips, very fine grained, otherwise as above. To much flocculant to clearly see the grains.
61.00 - 64.05	As above but only 15% dark green grains.
64.05 - 67.10	Green mottled chlorite-feldspar grains, finely disseminated pyrite, a little chalcopyrite, magnetite. A few grains of K-spar and white feldspar.
67.10 - 70.15	As above
70.15 - 73.20	As above
73.20 - 76.25	Coarse chips (1-2 mm), white to pink, and 10% dark green chips. Most abundant are pink K-spar chips, then white spar chips and then quartz chips, disseminated opy, py, rare molybdenite (0.4% Cu).
76.25 - 79.30	Finer chips (<1 mm), otherwise as above.
79.30 - 82.35	As above but less chalcopyrite.
82.35 - 85.40	As above
85.40 - 88.45	Coarser chips, light grey, up to 1 mm, pink K-spar chips, quartz chips, dark green chips, disseminated pyrite, trace of chalcopyrite.
88.45 - 91.5	As above
91.5	End of hole

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05				
3.05	6.10	693	9	<10	
6.10	9.15	1180	12	<10	
9.15	12.20	1110	6	<10	
12.20	15.25	1140	20	<10	
15.25	18.30	1670	<2	<10	
18.30	21.35	1890	27	<10	3.5
21.35	24.40	1440	31	<10	
24.40	27.45	873	48	<10	
27.45	30.50	805	44	<10	
30.50	33.55	758	45	<10	
33.55	36.60	824	21	<10	
36.60	39.65	2350	35	<10	3.3
39.65	42.70	635	7	<10	
42.70	45.75	316	6	<10	
45.75	48.80	255	<2	<10	

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
48.80	51.85	664	29	<10	
51.85	54.90	448	27	<10	
54.90	57.95	645	32	<10	
57.95	61.00	620	12	<10	
61.00	64.05	768	9	<10	
64.05	67.10	342	9	<10	
67.10	70.15	228	8	<10	
70.15	73.20	495	7	<10	
73.20	76.25	616	15	<10	
76.25	79.30	732	7	<10	1.8
79.30	82.35	445	7	<10	
82.35	85.40	454	7	<10	
85.40	88.45	393	7	<10	
88.45	90.50	526	6	<10	

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 12	Coordinates: 002 SW / 232 NW	HOLE PH-9
Dates: October 21-23, 1990	Length: 91.8 m	Logged by: AMP
Contractor: Tonto Drilling Ltd.	Azimuth/Dip: -90 deg.	Date: October 24, 1990
	Size: Percussion 2"	
	Elevation: 1130 m	

Objective:

Summary:

From	To (m)	Description
0	7.3	Overburden
6.10	9.15	Very weathered, limonitic.
9.15	12.20	Very muddy and fine grained
12.20	15.25	Grey chips up to 5 mm, muddy. White quartz chips, white feldspar chips with occasional flecks of sericite, Very fine grained sulphides - 3 % sulphides, 1/3 is chalcopyrite, pyrite rare molybdenite. Estimated 0.3% Cu.
15.25	18.30	As above but slightly more chalcopyrite, estimated at 0.4% Cu.
18.30	21.35	Coarse chips up to 3 mm. White flakes and pink K-spar fragments. Very fine grained, disseminated sulphides, mostly pyrite some chalcopyrite - 0.3% Cu.
21.35	24.40	Coarse chips up to 4 mm. Pink K-spar chips, white feldspar chips, quartz chips, some with associated pale green sericite, disseminated pyrite, chalcopyrite, trace of molybdenite. Estimated at 0.1% Cu.
24.40	27.45	As above
27.45	30.50	Coarse chips up to 3 mm. Overall color is pale green (epidote color) to 84.05. Mottled greenish (sericite and chlorite) quartz-feldspar-epidote chips with disseminated pyrite > chalcopyrite, trace of molybdenite, all sulphides very fine grained.. Overall 3% sulphides, estimated at 0.2% Cu.
30.50	33.55	Chips are coarse to very coarse - up to 8 mm. Much like above, greenish mottled, quartz-chlorite-epidote-sericite. Disseminated pyrite. The sample is loaded with coagulant, difficult to see the amount of sulphides, probably 2% pyrite, trace chalcopyrite.
33.55	36.60	As above, but a few coarse pink K-spar chips
36.60	39.65	Much finer chips, otherwise as above, 30 % epidote.
39.65	42.70	As above
42.70	45.75	As above
45.75	48.80	Fine grained chips, quartz, quartz-chlorite-epidote, disseminated pyrite and chalcopyrite - estimated at 0.1% Cu.. Rare K-spar chips.
48.80	51.85	Very fine grained chips, otherwise as above. 2% sulphides estimated at 0.2% Cu.
51.85	54.90	As above
54.90	57.95	As above
57.95	61.00	As above, but only trace of chalcopyrite

61.00 - 64.05	Pale grey-green, fine chips (0.5 mm), quartz-chlorite-disseminated pyrite, 5 % epidote chips, 10% pink K-spar fragments. Trace of chalcopyrite
64.05 - 67.10	Abrupt color change to brownish-pink. Chips are predominantly fine, pink K-spar chips (90%), a few chips of varieties found in above intervals, very fine grained pyrite, trace of chalcopyrite. Probably post mineral dyke.
67.10 - 70.15	As above, only trace of sulphides.
70.15 - 73.20	As above
73.20 - 76.25	Color changes to pale grey with abundant sulphides. Very fine grained chips, mostly quartz, some white feldspar, 30% pink feldspar, finely disseminated sulphides (some with secondary biotite coating. 2% pyrite, estimated at 0.1% Cu.
76.25 - 79.30	Very fine grained chips as above, very fine grained and abundant sulphides (3% sulphides). Most are too fine for identification. Abundant chalcopyrite
79.30 - 82.35	As above
82.35 - 85.40	Coarse chips, pink K-spar-chlorite predominate, also abundant quartz chips with fine grained disseminated chalcocite and pyrite, estimated at 0.3% Cu.
85.40 - 88.45	As above
88.45 - 91.5	Not seen
91.5	End of Hole

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05				
3.05	6.10	164	4	<10	
6.10	9.15	728	20	<10	
9.15	12.20	2070	42	48	6.8
12.20	15.25	1940	54	<10	4.2
15.25	18.30	1870	99	28	
18.30	21.35	1840	63	<10	4.8
21.35	24.40	1580	36	<10	3.2
24.40	27.45	1620	20	<10	3.5
27.45	30.50	700	16	<10	
30.50	33.55	602	18	<10	
33.55	36.60	396	14	<10	
36.60	39.65	253	11	<10	
39.65	42.70	350	11	<10	
42.70	45.75	434	15	<10	
45.75	48.80	189	5	<10	

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
48.80	51.85	443	14	<10	
51.85	54.90	249	11	<10	
54.90	57.95	261	15	<10	
57.95	61.00	233	12	<10	
61.00	64.05	474	14	<10	
64.05	67.10	327	10	<10	
67.10	70.15	195	8	<10	
70.15	73.20	335	9	<10	
73.20	76.25	1440	26	<10	3.8
76.25	79.30	2930	25	20	6.0
79.30	82.35	1240	17	<10	
82.35	85.40	850	13	<10	
85.40	88.45	706	15	<10	
88.45	90.50	802	12	<10	

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 12 Coordinates: 160 SW / 008 SE HOLE PH-11
 Dates: October 24, 1990 Length: 64.05 m Logged by: SWS
 Contractor: Tonto Drilling Azimuth/Dip: -90 deg. Date: October 25, 1990
 Ltd. Size: Percussion 2"
 Elevation:

Objective:
 Summary:

From To (m)	Description
0 - 2.62	Overburden
3.05 - 6.10	Very thick drill mud, chips up to 4 mm, 25- 30 % weathered, limonitic chips, Reddish orange K-feldspar colored chips and dark green/white chips dominate Epidote, magnetite and disseminated pyrite common, minor chalcopyrite
6.10 - 9.15	As above with grey white colored chips with disseminated py, mag and minor green chlorite or sericite clots
9.15 - 12.20	Trace weathered chips, majority of chips are light to medium K-feldspar color or off white color, both having abundant mag Lesser amount green/white chips and green epidote chips High magnetite 4 - 5 % as clots in chips and as individual grains, opy < 1 %
12.20 - 15.25	Thick drill mud, majority of chips are medium to dark K-feldspar colored chips with abundant clots of mag with green sericite or chlorite, Lesser amounts dark green/white and off white chips with disseminated py and minor opy Minor epidote chips
15.25 - 18.30	90 % medium to dark K-feldspar colored chips with clots of mag in green sericite or chlorite Magnetite 3 - 4 %, minor py
18.30 - 21.35	Same as above
21.35 - 24.40	As above with trace py
24.40 - 27.45	Same as above
27.45 - 30.50	Same as above
30.50 - 33.55	As above, with K-feldspar color chips containing dark green clots of chlorite with mag and minor epidote, Locally trace disseminated py and opy in K-feldspar color chips
33.55 - 36.60	Same as above
36.60 - 39.65	As above with increasing py and opy, still less than 1 %
39.65 - 42.70	Thick drill mud, K-feldspar colored chips are lighter in color Increase in green/white and grey white colored chips Less mag (1 - 2 %) and increased py and opy disseminated in chips and as individual grains, totalling 1 - 2 %, approximately 0.1 % Cu
42.70 - 45.75	Decrease in K-feldspar colored chips, increase in py, opy and green epidote Total py 2 - 3 %, approximately 0.2 % Cu
45.75 - 48.80	Same as above

48.80 - 51.85 Fine grained, white and grey white chips, with less light K-feldspar color and light green epidote chips
Minor dark green chips with abundant magnetite
Py and opy disseminated in chips but majority as individual grains, total py 2 - 3 %, and approximately 0.2 % Cu

51.85 - 54.90 Same as above

54.90 - 57.95 As above with increased opy, may be 0.4 % Cu

57.95 - 61.00 Very fine grained, trace bornite and molybdenite, estimated 0.5 % Cu

61.00 - 64.05 As above with more mo seen

64.05 End of hole (rods binding)

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05				
3.05	6.10	137	19	54	
6.10	9.15	201	33	40	
9.15	12.20	135	35	74	
12.20	15.25	44	5	<10	
15.25	18.30	31	3	<10	
18.30	21.35	33	3	<10	
21.35	24.40	33	<2	<10	
24.40	27.45	31	<2	<10	
27.45	30.50	29	<2	<10	
30.50	33.55	29	4	<10	
33.55	36.60	32	5	<10	
36.60	39.65	41	<2	<10	
39.65	42.70	49	7	36	
42.70	45.75	121	11	60	
45.75	48.80	195	17	280	3.3

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
48.80	51.85	89	9	60	
51.85	54.90	128	7	46	
54.90	57.95	82	23	44	
57.95	61.00	42	57	48	
61.00	64.05	30	36	40	

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 12	Coordinates: 013 NE / 009 NW	HOLE PH-12
Dates: October 24-25, 1990	Length: 79.60 m	Logged by: SWS
Contractor: Tonto Drilling Ltd.	Azimuth/Dip: -90 deg.	Date: October 26, 1990
	Size: Percussion 2"	
	Elevation:	

Objective:

Summary:

From	To (m)	Description
0	4.92	Overburden
3.05	6.10	Chips up to 6 mm, 75 % weathered, limonitic chips Minor white chips with clots of green sericite and disseminated chalcopyrite and bornite
6.10	9.15	Chips up to 4 mm, trace weathered chips Chips are a mix of white quartz/feldspar, pale K-feldspar and dark green with epidote Lesser amounts dark K-feldspar color and purple/white chips Clots of sericite, magnetite and disseminated py, opy and minor bn, estimated 0.3 % Cu
9.15	12.20	Majority of chips are white quartz, lesser amounts dark green/white, light green epidote and pale K-feldspar chips Quartz contains clots of green sericite and disseminated opy, minor bn and py, estimated 0.6 % Cu
12.20	15.25	As above with trace molybdenite
15.25	18.30	As above with more mo, estimated 0.03 % Mo
18.30	21.35	Increase in pale green epidote chips
21.35	24.40	Increase in pale K-feldspar colored chips Disseminated in chips and as individual grains opy and bn, trace py and mag, estimated 0.7 % Cu
24.40	27.45	Same as above
27.45	30.50	Chips up to 3 mm, increased bn to 1.0 %, 1 - 2 % opy, mo in flakes up to 1 mm, estimated 1.0 % Cu, 0.06 % Mo
30.50	33.55	As above with thick drill mud
33.55	36.60	Increase in K-feldspar colored chips to 40 %, decrease in bn and opy, estimated 0.8 % Cu
36.60	39.65	Trace limonitic weathered chips (contamination ?) Equal amounts of white, grey/white, green/white and pale K-feldspar colored chips Abundant clots of sericite, with disseminated and vein like opy and minor bn, estimated 0.7 % Cu
39.65	42.70	As above with very thick drill mud
42.70	45.75	Still thick drill mud, appears to be less K-feldspar colored chips, majority of chips white and green/white in color Minor green epidote colored chips
45.75	48.80	Same as above
48.80	51.85	Majority of chips white quartz and feldspar, with clots of green sericite, fine grained disseminated opy and minor bn, Minor amount pale K-feldspar colored chips Estimated 0.5 % Cu

51.85 - 54.90 Same as above

54.90 - 57.95 As above with very thick drill mud

57.95 - 61.00 Very fine grained, increase in light green epidote colored chips, decrease in opy, only trace bn, estimated 0.3 % Cu

61.00 - 64.05 Same as above

64.05 - 67.10 Increased amount of sericite, opy and minor bn, estimated 0.5 % Cu

67.10 - 70.15 Still very fine grained, majority of chips white quartz, with lesser amounts darker green (chlorite and sericite) and light green epidote colored chips, minor pale K-feldspar colored chips Cpy and minor bn disseminated and as individual fine grains, estimated 0.5 % Cu

70.15 - 73.20 Same as above

73.20 - 76.25 Same as above

76.25 - 79.30 Same as above

79.30 End of hole (rods binding)

From (m)	To	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05				
3.05	6.10	1270	33	40	
6.10	9.15	2170	18	<10	3.4
9.15	12.20	1700	40	20	
12.20	15.25	1340	194	24	
15.25	18.30	1850	87	24	
18.30	21.35				
21.35	24.40	2090	54	<10	
24.40	27.45	1970	92	<10	
27.45	30.50	1600	57	<10	
30.50	33.55	1510	48	<10	
33.55	36.60	1650	60	<10	
36.60	39.65	1740	50	<10	
39.65	42.70	2060	42	24	4.1
42.70	45.75	1140	51	<10	
45.75	48.80	1540	46	22	

From (m)	To	Cu ppm	Mo ppm	Au ppb	Ag ppm
48.80	51.85	1350	32	<10	
51.85	54.90	1330	46	<10	
54.90	57.95	857	32	<10	
57.95	61.00	1310	64	20	
61.00	64.05	1410	35	<10	3.3
64.05	67.10	981	41	<10	
67.10	70.15	942	44	<10	
70.15	73.20	888	38	<10	
73.20	76.25	731	22	<10	
76.25	79.30	460	10	<10	

PERCUSSION DRILL HOLE RECORD

PINKTREEK BC.

page-1

Claim: Fin 12	Coordinates: 176 NE / 004 NW	HOLE PH-13
Dates: October 26-27, 1990	Length: 70.15 m	Logged by: SWS
Contractor: Tonto Drilling Ltd.	Azimuth/Dip: -90 deg.	Date: October 27, 1990
	Size: Percussion 2"	
	Elevation:	

Objective:
Summary:

From	To (m)	Description
0	7.62	Overburden
3.05	6.10	95 % weathered chips, up to 5 mm
6.10	9.15	50 % weathered chips Abundant rounded quartz chips, lesser amounts grey white and green white (chlorite), with minor green epidote Minor disseminated pyrite, chalcopyrite and trace bornite
9.15	12.20	10 - 15 % weathered chips, finer grained Abundant white translucent quartz chips, with greenish white and grey white chips, minor amounts light green epidote chips Clots of sericite with minor disseminated opy, py and bn, minor amounts individual grains of opy and bn, (1 grain of bn 2 mm wide), estimated 0.4 % Cu
12.20	15.25	Trace weathered chips, increase in light epidote chips, minor light K-feldspar colored chips Increase in green sericite, opy and bn finely disseminated in chips, estimated 0.8 % Cu
15.25	18.30	As above with increase in light K-feldspar colored chips
18.30	21.35	As above with thick drill mud
21.35	24.40	Same as above
24.40	27.45	Slight decrease in amount of bn and opy, estimated 0.6 % Cu
27.45	30.50	As above with very thick drill mud
30.50	33.55	Same as above
33.55	36.60	Fine grained and less Cu, estimated 0.4 % Cu
36.60	39.65	Same as above
39.65	42.70	Fine grained, white translucent quartz, dark green chlorite rich and light green/yellow epidote chips are most common, Minor pale K-feldspar colored chips Abundant green sericite, fine grained disseminated opy, bn, minor py, and trace mo and mag, estimated 0.6 % Cu
42.70	45.75	As above with very thick drill mud
45.75	48.80	Very fine grained, majority of chips white translucent quartz, lesser amounts light green/yellow epidote, dark green chloritic and white feldspar chips, trace light K-feldspar colored chips Minor sericite, finely disseminated in chips and as individual grains opy and bn, minor py (<1%), estimated 0.4 % Cu
48.80	51.85	As above but coarser grained
51.85	54.90	As above but finer grained
54.90	57.95	As above with less opy and only minor bn, estimated 0.2 % Cu

57.95

End of hole (rods binding)

From (m)	To	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05				
3.05	6.10	622	56	<10	
6.10	9.15				
9.15	12.20	1630	28	<10	
12.20	15.25				
15.25	18.30	2260	38	<10	3.4
18.30	21.35				
21.35	24.40	1770	47	<10	
24.40	27.45				
27.45	30.50	1310	12	<10	
30.50	33.55				
33.55	36.60	1620	14	<10	3.8
36.60	39.65				
39.65	42.70	881	51	<10	
42.70	45.75				
45.75	48.80				

From (m)	To	Cu ppm	Mo ppm	Au ppb	Ag ppm
48.80	51.85				
51.85	54.90	446	8	<10	
54.90	57.95				
57.95	61.00	802	16	20	
61.00	64.05				
64.05	67.10	680	14	24	
67.10	70.15				
70.15	73.20				
73.20	76.25				
76.25	79.30				
79.30	82.35				
82.35	85.40				
85.40	88.45				
88.45	90.50				

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 12	Coordinates: 200 NE / 116 NW	HOLE PH-14
Dates: October 27-28, 1990	Length: 91.8 m	Logged by: SWS
Contractor: Tonto Drilling Ltd.	Azimuth/Dip: -90 deg.	Date: October 28, 1990
	Size: Percussion 2"	
	Elevation:	

Objective:

Summary:

From	To (m)	Description
0	4.88	Overburden
3.05	6.10	75 % weathered chips, chips up to 5 mm Abundant green/white chips with quartz, chlorite and epidote, Minor clots of sericite and pyrite
6.10	9.15	10 % weathered chips Most chips are dark green/grey (chlorite bearing) with abundant light green epidote, Lesser amounts of medium K-feldspar colored and grey/white quartz-feldspar chips which also contain epidote Minor dark chips, non-magnetic with weak iridescent luster, fine chips weakly translucent Minor sericite and py
9.15	12.20	30 - 40 % light green epidote, minor py and chalcopyrite disseminated in chips and as individual grains Estimated 0.1 % Cu
12.20	15.25	Minor K-feldspar chips are lighter in color
15.25	18.30	Same as above
18.30	21.35	As above with trace bornite, estimated 0.2 % Cu
21.35	24.40	Sharp increase in sericite and sulfides, py 1 - 2 %, cpy and minor bn, estimated 0.4 % Cu Minor black, non-magnetic chips with slight metallic luster
24.40	27.45	Further increase in cpy and minor bn, estimated 0.6 % Cu (may be large vein of sulfides, driller said return was black for 0.6 m)
27.45	30.50	As above with increase in medium to dark K-feldspar colored chips
30.50	33.55	Fine grained chips, sharp decrease in sericite, py (1%) and cpy (<1%) only trace bn, estimated 0.2 % Cu Majority of chips white translucent quartz, with lesser amounts greenish chlorite bearing, light green epidote, pale K-feldspar color and steel grey chips Minor chalky white feldspar chips
33.55	36.60	Same as above
36.60	39.65	As above and very fine grained
39.65	42.70	Steel grey colored chips, increased to 5 - 10 %, under high magnification they are made up of very fine grained sulfides, break easily under scratcher
42.70	45.75	Same as above
45.75	48.80	As above with decrease in steel grey colored chips
48.80	51.85	Same as above

51.85 - 54.90 As above with only trace steel grey chips

54.90 - 57.95 As above with very thick drill mud

57.95 - 61.00 Very fine grained and covered in thick drill mud which appears to be same composition as above

61.00 - 64.05 Same as above

64.05 - 67.10 Same as above

67.10 - 70.15 Increase of steel grey colored chips to 5 - 10 %

70.15 - 73.20 Very fine grained, 25 - 30 % steel grey colored chips which contain some quartz, majority of chips are white translucent quartz, lesser amounts green chlorite bearing, pale green/yellow epidote and pale K-feldspar colored chips
Trace opy and py, estimated 0.08 % Cu

73.20 - 76.25 Same as above

76.25 - 79.30 As above with very thick drill mud

79.30 - 82.35 Decrease in amount of quartz chips

82.35 - 85.40 Same as above

85.40 - 88.45 Majority of chips are again quartz

88.45 - 91.5 Same as above

91.5 End of Hole

From (m)	To	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05				
3.05	6.10	221	9	<10	
6.10	9.15				
9.15	12.20	108	<2	<10	
12.20	15.25				
15.25	18.30	39	<2	<10	
18.30	21.35				
21.35	24.40	1530	17	60	
24.40	27.45				
27.45	30.50	1530	11	24	3.7
30.50	33.55				
33.55	36.60	1280	18	<10	
36.60	39.65				
39.65	42.70	957	11	<10	
42.70	45.75				
45.75	48.80	828	17	<10	

From (m)	To	Cu ppm	Mo ppm	Au ppb	Ag ppm
48.80	51.85				
51.85	54.90	993	18	<10	
54.90	57.95				
57.95	61.00	1070	15	<10	
61.00	64.05				
64.05	67.10	932	13	<10	
67.10	70.15				
70.15	73.20	537	8	<10	
73.20	76.25				
76.25	79.30	445	16	<10	
79.30	82.35				
82.35	85.40	631	6	<10	
85.40	88.45				
88.45	90.50	971	7	<10	

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 11	Coordinates: 396 NE / 199 NW	HOLE PH-15
Dates: October 28-30, 1990	Length: 91.8 m	Logged by: SWS
Contractor: Tonto Drilling Ltd.	Azimuth/Dip: -90 deg.	Date: October 30, 1990
	Size: Percussion 2"	
	Elevation:	

Objective:
Summary:

From	To (m)	Description
0	2.75	Overburden
3.05	6.10	Chips up to 6 mm, 30 - 40 % weathered chips Most larger chips show a mix of white quartz-feldspar and K-feldspar with epidote, chlorite and clots of sericite with magnetite in decreasing order of abundance, only minor pyrite
6.10	9.15	Chips up to 6 mm, 10 % weathered chips, 1 - 2 % mag, minor py
9.15	12.20	Finer grained, chips up to 3 mm, trace weathered chips Most chips are white quartz or feldspar, medium to dark K-feldspar colored or light green epidote, Abundant altered biotite flakes (sericitized), Lesser clots of sericite with 1 % mag, minor disseminated py and trace chalcopyrite
12.20	15.25	As above with less K-feldspar colored chips
15.25	18.30	Same as 9.15 - 12.20
18.30	21.35	As above with no weathered chips
21.35	24.40	As above with more mag, 1 - 2 %
24.40	27.45	Increase in opy, weakly disseminated among the mag and a few larger individual grains, estimated 0.3 % Cu
27.45	30.50	As above with more green sericite and dark green chlorite
30.50	33.55	More opy as individual grains, estimated 0.4 % Cu
33.55	36.60	Fine grained, majority white quartz, feldspar and pale K-feldspar colored chips, lesser amounts pale green epidote and dark green chlorite chips, Clots of sericite common but decrease in mag from above to < 1 %, opy disseminated in chips but more commonly as individual grains, minor py, estimated 0.5 % Cu
36.60	39.65	Decrease in opy, estimated 0.3 % Cu
39.65	42.70	As above with trace opy, minor py
42.70	45.75	Same as above
45.75	48.80	Very fine grained, most chips translucent quartz, lesser amounts white feldspar, light green epidote and dark green chlorite, minor pale K-feldspar colored chips Sericite clots contain minor mag, py and opy, minor py and cpy as individual grains, estimated 0.2 % Cu
48.80	51.85	As above with sericitized biotite flakes common
51.85	54.90	Increase in py, 1 - 2 %, decrease in opy, estimated < 0.1 % Cu
54.90	57.95	Same as above

57.95 - 61.00	Same as above
61.00 - 64.05	More individual grains of opy, decrease in py, Estimated 0.3 % Cu
64.05 - 67.10	Same as above
67.10 - 70.15	Further increase in opy, only minor py, estimated 0.5 % Cu
70.15 - 73.20	Same as above
73.20 - 76.25	Same as above
76.25 - 79.30	Very fine grained and slight decrease in opy, Estimated 0.3 % Cu
79.30 - 82.35	Further decrease in opy, estimated 0.1 % Cu
82.35 - 85.40	Same as above
85.40 - 88.45	Same as above
88.45 - 91.5	Fine grained, most chips white quartz or feldspar, lesser amounts light to medium K-feldspar colored, light green epidote and dark green chloritic chips Minor disseminated py, opy and trace mag, few clots of sericite, estimated 0.1 % Cu
91.5	End of Hole

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05				
3.05	6.10	327	39	<10	
6.10	9.15				
9.15	12.20	84	15	<10	
12.20	15.25				
15.25	18.30	568	27	<10	
18.30	21.35				
21.35	24.40	104	8	<10	
24.40	27.45				
27.45	30.50	67	9	<10	
30.50	33.55				
33.55	36.60	78	3	<10	
36.60	39.65				
39.65	42.70	52	<2	<10	
42.70	45.75				
45.75	48.80	77	5	<10	

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
48.80	51.85				
51.85	54.90	83	<2	<10	
54.90	57.95				
57.95	61.00	60	4	<10	
61.00	64.05				
64.05	67.10	73	2	<10	
67.10	70.15				
70.15	73.20	239	5	<10	
73.20	76.25				
76.25	79.30	342	7	<10	
79.30	82.35				
82.35	85.40	128	8	<10	
85.40	88.45				
88.45	90.50	130	7	<10	

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 11	Coordinates: 527 NE / 195 NW	HOLE PH-16
Date: October 30-31, 1990	Length: 79.30 m	Logged by: SWS
Contractor: Tonto Drilling Ltd.	Azimuth/Dip: -90 deg.	Date: October 31, 1990
	Size: Percussion 2"	
	Elevation:	

Objective:

Summary:

From To (m)	Description
0 - 5.49	Overburden
3.05 - 6.10	Chips up to 8 mm, 40 - 50 % weathered chips Most chips are made up of white quartz and feldspar with abundant light green epidote and dark green chlorite Lesser amounts K-feldspar and sericite Minor pyrite and magnetite
6.10 - 9.15	As above with only 10 - 20 % weathered chips
9.15 - 12.20	Chips up to 5 mm, trace weathered chips Most chips are white quartz, pale to medium K-feldspar colored or dark green chlorite and sericite bearing Lesser amounts pale green epidote chips, abundant sericitized biotite flakes Minor pyrite and chalcopyrite, disseminated and as individual grains, trace magnetite, Estimated 0.1 % Cu
12.20 - 15.25	Same as above
15.25 - 18.30	As above with minor mag
18.30 - 21.35	As above only trace py and opy
21.35 - 24.40	Fine grained, slight increase in light green epidote
24.40 - 27.45	Fine grained, majority of chips are white quartz or feldspar, Lesser amounts light green epidote and dark green chloritic chips, minor pale K-feldspar colored chips Few individual grains of opy
27.45 - 30.50	As above with sericitized biotite flakes, minor mag, py and opy
30.50 - 33.55	Same as above
33.55 - 36.60	Increase in dark green chloritic chips and clots of sericite, Cpy disseminated and as individual grains, minor py, Estimated 0.4 % Cu
36.60 - 39.65	As above with only trace opy
39.65 - 42.70	Most chips pale or medium K-feldspar color, white quartz or feldspar, or grey white containing dark green chlorite, minor light green epidote and clots of sericite Mag disseminated and as individual grains to 1 %, trace py
42.70 - 45.75	Same as above
45.75 - 48.80	As above with a few grains of opy
48.80 - 51.85	Same as above
51.85 - 54.90	Same as above
54.90 - 57.95	Increase in finely disseminated opy, estimated 0.2 % Cu

57.95 - 61.00 Same as above

61.00 - 64.05 Very fine grained, 80 % white quartz and feldspar, minor green chlorite, light green epidote, pale K-feldspar and sericite
Individual fine grains of minor opy and trace molybdenite
Estimated 0.1 % Cu

64.05 - 67.10 Same as above

67.10 - 70.15 As above with more individual fine grains of opy and trace mo
Estimated 0.3 % Cu

70.15 - 73.20 Same as above

73.20 - 76.25 Slight increase in opy, estimated 0.4 or 0.5 % Cu

76.25 - 79.30 Same as above

79.30 End of hole (lost circulation)

From (m)	To	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05				
3.05	6.10	111	4	<10	
6.10	9.15				
9.15	12.20	74	17	<10	
12.20	15.25				
15.25	18.30	111	9	<10	
18.30	21.35				
21.35	24.40	172	3	<10	
24.40	27.45				
27.45	30.50	98	5	<10	
30.50	33.55				
33.55	36.60	415	213	20	4.4
36.60	39.65				
39.65	42.70	103	9	<10	
42.70	45.75				
45.75	48.80	84	18	<10	

From (m)	To	Cu ppm	Mo ppm	Au ppb	Ag ppm
48.80	51.85				
51.85	54.90	201	27	<10	
54.90	57.95				
57.95	61.00	390	53	<10	
61.00	64.05				
64.05	67.10	167	41	<10	
67.10	70.15				
70.15	73.20				
73.20	76.25				
76.25	79.30	146	50	<10	

PERCUSSION DRILL HOLE RECORD

PINETREEK BC.

page-1

Claim: Fin 12 Coordinates: 373 NE / 008 SE HOLE PH-17
 Dates: Oct. 31 - Nov. 1, 1990 Length: 79.3 m Logged by: SWS
 Contractor: Tonto Drilling Azimuth/Dip: -90 deg. Date: November 2, 1990
 Ltd. Size: Percussion 2"
 Elevation:

Objective:

Summary:

From	To (m)	Description
0	4.88	Overburden
3.05	6.10	Chips up to 5 mm, 20 - 30 % weathered chips, made up of white quartz chips, commonly limonitic, white feldspar and medium to dark K-feldspar colored chips. These chips contain varying amounts of dark green chlorite and sericite and light green epidote, magnetite disseminated up to 1 % Minor dark black chips
6.10	9.15	As above with 5 - 10 % weathered chips and thick drill mud
9.15	12.20	As above with trace weathered chips
12.20	15.25	Fine grained, few chips up to 4 mm. Majority of chips are pale to medium K-feldspar colored, lesser amounts white quartz / feldspar chips, all of which contain dark green chlorite and sericite. Abundant sericitized biotite flakes, minor light green epidote. Mag disseminated in chips and as individual grains up to 1 %, trace fine grained disseminated py.
15.25	18.30	Increase in white quartz and also py to 1 - 2 %, decrease in mag to less than 1 %
18.30	21.35	As above with trace opy and one molybdenite flake.
21.35	24.40	Same as above
24.40	27.45	Same as above
27.45	30.50	Same as above
30.50	33.55	As above, fine grained with only trace py
33.55	36.60	Majority of chips are pale to medium K-feldspar colored, lesser amounts white quartz and feldspar. Minor light green epidote and dark green sericite chips. Minor mag and trace py, mostly as individual grains
36.60	39.65	Same as above
39.65	42.70	Same as above
42.70	45.75	Same as above
45.75	48.80	As above with slight increase in light green epidote
48.80	51.85	Same as above
51.85	54.90	Very fine grained, slight decrease in K-feldspar colored chips.
54.90	57.95	Same as 48.80 - 51.85.
57.95	61.00	As above with mag up to 1 %.
61.00	64.05	Same as above

64.05 - 67.10 Very fine grained, most chips pale to medium K-feldspar colored, lesser amounts white quartz. Minor white feldspar chips, clots of sericite and sericitized biotite flakes. Disseminated mag in chips and as individual grains, 1 - 2 %, trace disseminated py in trace light green epidote chips.

67.10 - 70.15 Very fine grained as above with a few larger chips of white quartz with disseminated py (vein ?)

70.15 - 73.20 Same as above

73.20 - 76.25 Same as above

76.25 - 79.30 As above with increased altered biotite flakes.

79.30 End of hole (rods binding)

From (m)	To	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05				
3.05	6.10	78	8	<10	
6.10	9.15				
9.15	12.20	249	18	<10	
12.20	15.25				
15.25	18.30	298	31	<10	
18.30	21.35				
21.35	24.40	139	8	<10	
24.40	27.45				
27.45	30.50	68	9	<10	
30.50	33.55				
33.55	36.60	41	3	<10	
36.60	39.65				
39.65	42.70	39	3	<10	
42.70	45.75				
45.75	48.80	42	3	<10	

From (m)	To	Cu ppm	Mo ppm	Au ppb	Ag ppm
48.80	51.85				
51.85	54.90	59	7	<10	
54.90	57.95				
57.95	61.00	225	7	<10	
61.00	64.05				
64.05	67.10				
67.10	70.15				
70.15	73.20	73	7	<10	
73.20	76.25				
76.25	79.30	38	5	<10	

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 12
 Dates: November 2, 1990
 Contractor: Tonto Drilling Ltd.

Coordinates: 203 NE / 204 SE
 Length: 15.25 m
 Azimuth/Dip: -90 deg.
 Size: Percussion 2"
 Elevation:

HOLE PH-18
 Logged by: SWS
 Date: November 4, 1990

Objective:
 Summary:

From	To (m)	Description
0	2.44	Overburden
3.05	6.10	Chips up to 6 mm, 50 - 60 % weathered chips. Most other chips are white quartz or feldspar with varying amounts of dark green chlorite, grey green sericite and light green epidote. Minor disseminated pyrite, magnetite and trace chalcopyrite
6.10	9.15	Few chips up to 5 mm, most fine grained, trace weathered chips. Most chips contain white quartz, white feldspar and lesser amounts pale K-feldspar colored, which all contain minor grey green sericite, light green epidote and trace dark green chlorite. Minor disseminated py, most sulfides as individual grains, 1 % py, trace mag and cpy.
9.15	12.20	Same as above
12.20	15.25	As above with 10 - 15 % weathered chips (contamination ?)
15.25		End of hole (lost circulation)

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm
0	3.05	403	6	<10	
3.05	6.10	308	12	<10	
6.10	9.15	220	<2	34	1.8
9.15	12.20	366	<2	<10	
12.20	15.25	467	6	<10	

From (m)	To (m)	Cu ppm	Mo ppm	Au ppb	Ag ppm

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 12 Coordinates: 203 NE / 206 SE HOLE PH-19
 Dates: November 2-3, 1990 Length: 48.80 m Logged by: SWS
 Contractor: Tonto Drilling Azimuth/Dip: -90 deg. Date: November 4, 1990
 Ltd. Size: Percussion 2"
 Elevation:

Objective:

Summary:

From To (m)	Description
0 - 2.44	Overburden
3.05 - 6.10	Chips up to 6 mm, 50 - 60 % weathered chips. Most other chips are white quartz or feldspar with varying amounts of dark green chlorite, grey green sericite and light green epidote. Minor disseminated pyrite, magnetite and trace chalcopyrite
6.10 - 9.15	Few chips up to 5 mm, most fine grained, trace weathered chips. Most chips contain white quartz, white feldspar and lesser amounts pale K-feldspar colored, which all contain minor grey green sericite, light green epidote and trace dark green chlorite. Minor disseminated py, most sulfides as individual grains, 1 % py, trace mag and opy.
9.15 - 12.20	Same as above
12.20 - 15.25	Increase in chlorite and clots of sericite, py disseminated in chips and as individual grains 1 - 2 %, minor opy, estimated 0.2 % Cu
15.25 - 18.30	Same as above
18.30 - 21.35	Increase in pale to medium colored K-feldspar and light green epidote, abundant clots of grey green sericite. Minor disseminated opy and mag, estimated 0.3 % Cu
21.35 - 24.40	Increase in opy and trace bornite, associated with grey green sericite clots, Estimated 0.4 % Cu
24.40 - 27.45	As above with less Cu, estimated 0.2 % Cu
27.45 - 30.50	Same as above
30.50 - 33.55	Very fine grained, majority of chips are white translucent quartz, lesser amounts white feldspar, chalky white (soft to scratcher), light green epidote and dark green chloritic chips. Abundant clots of grey green sericite, trace pale K-feldspar colored chips. Equal amounts opy and py totalling 1 - 2 %, disseminated in chips and as individual grains, trace mag. Estimated 0.3 % Cu
33.55 - 36.60	As above with more chlorite and K-feldspar colored chips
36.60 - 39.65	Pale to medium K-feldspar colored chips make up 20 - 30 % of sample
39.65 - 42.70	Same as above
42.70 - 45.75	Same as 30.50 - 33.55, with 1 % py and minor opy. Estimated 0.2 % Cu
45.75 - 48.80	Same as above
48.80	End of hole (broke rod, lost 10' of rod and a bit)

PERCUSSION DRILL HOLE RECORD

PINKTREE BC.

page-1

Claim: Fin 12
 Dates: November 4, 1990
 Contractor: Tonto Drilling Ltd.

Coordinates: 195 NE / 340 SE
 Length: 18.30 m
 Azimuth/Dip: -90 deg.
 Size: Percussion 2"
 Elevation:

HOLE PH-20
 Logged by: SWS
 Date: November 4, 1990

Objective:
 Summary:

From	To (m)	Description
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0 - 4.57	Overburden
3.05 - 6.10	Chips up to 6 mm, 20 - 30 % weathered chips. Well mixed chips of white translucent quartz, white feldspar, pink orange K-feldspar and green chloritic chips. All containing varying amounts of light green epidote and minor grey green sericite, trace altered biotite flakes. Minor disseminated magnetite and trace pyrite
6.10 - 9.15	As above with thick drill mud
9.15 - 12.20	As above with 1 - 2 % mag and minor py
12.20 - 15.25	Higher amounts of K-feldspar colored chips and very thick drill mud
15.25 - 18.30	As above with 5 - 10 % weathered chips (contamination ?)
18.30	End of Hole

From	To	Cu	Mo	Au	Ag
m	m	ppm	ppm	ppb	ppm

From	To	Cu	Mo	Au	Ag
m	m	ppm	ppm	ppb	ppm

PERCUSSION DRILL HOLE RECORD

PINETREE BC.

page-1

Claim: Fin 12
 Dates: November 4, 1990
 Contractor: Tonto Drilling Ltd.

Coordinates: 193 NE / 337 SE
 Length: 30.50 m
 Azimuth/Dip: -90 deg.
 Size: Percussion 2"
 Elevation:

HOLE PH-21
 Logged by: SWS
 Date: November 4, 1990

Objective:
 Summary:

From	To (m)	Description
0	4.57	Overburden
3.05	6.10	Chips up to 6 mm, 20 - 30 % weathered chips. Well mixed chips of white translucent quartz, green chloritic, pink orange K-feldspar and white feldspar chips. All containing varying amounts of light green epidote and minor grey green sericite, minor altered biotite flakes. Minor disseminated magnetite and trace pyrite.
6.10	9.15	Less quartz chips and more K-feldspar and green chloritic chips, trace weathered chips.
9.15	12.20	As above with minor black chips.
12.20	15.25	Same as above
15.25	18.30	Increase in mag and py, to 1 %.
18.30	21.35	Fine grained, equal amounts of white translucent quartz, white feldspar, pale to medium colored K-feldspar and green chloritic chips, lesser amounts light green epidote and dark black chips, minor altered biotite flakes. Minor mag and py disseminated in chips and as individual grains
21.35	24.40	As above with increase in fine black chips
24.40	27.45	As above and very fine grained
27.45	30.50	As above very fine grained and only minor mag and py
30.50		End of hole

From	To	Cu	Mo	Au	Ag
m	m	ppm	ppm	ppb	ppm

From	To	Cu	Mo	Au	Ag
m	m	ppm	ppm	ppb	ppm

APPENDIX IV

REFERENCES

Campbell, C. and Haynes, L., January 1981:
Pearson Option (Fin claims) Diamond Drilling, Geophysics;
for Rio Tinto Canadian Exploration Ltd.

Haynes, L. and Knight, D., February, 1980:
Fin Claims (Pearson Option) Geology and Geochemistry;
for Rio Tinto Canadian Exploration Ltd.

Schroeter, T.G., 1980:
Toodoggone River; in Geol. Field Work,
Ministry of Energy, Mines and Mineral Resources,
Paper 81-1, pp. 124-131.

Schroeter, T.G., 1981:
Toodoggone River; in Geol. Field Work,
Ministry of Energy, Mines and Mineral Resources,
Paper 82-1, pp. 122-133.

Woodcock, J.R. and Gorc, D., 1982:
Geology and Geochemistry on Fin Claims;
for Brinco Mining Ltd., Assessment Report No. 11,032.

APPENDIX V

STATEMENT OF QUALIFICATIONS

I, SCOTT W. SMITH, of 209 - 1555 East 6th Street, Vancouver, British Columbia, Canada, declare:

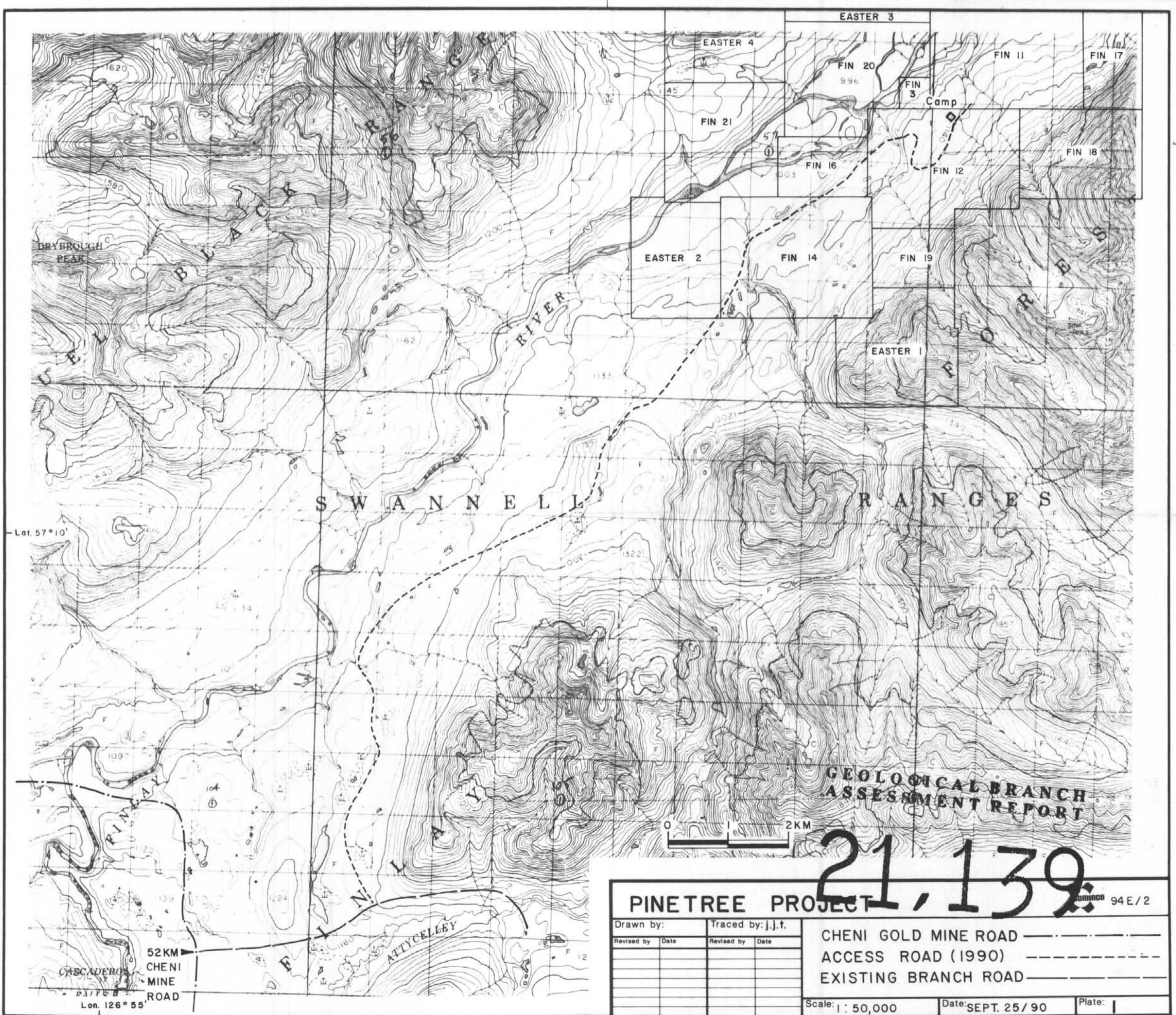
1. I am a Geologist, residing at the above address.
2. I am a member in training of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
3. I graduated from the University of Alberta with a Bachelor of Science (Geology) degree in 1988.
4. This report is based on my personal field examination of the property.

Dated at Vancouver, British Columbia,

this 27 day of February 1991.



Scott W. Smith,
Geologist



GEOLOGICAL BRANCH
ASSESSMENT REPORT

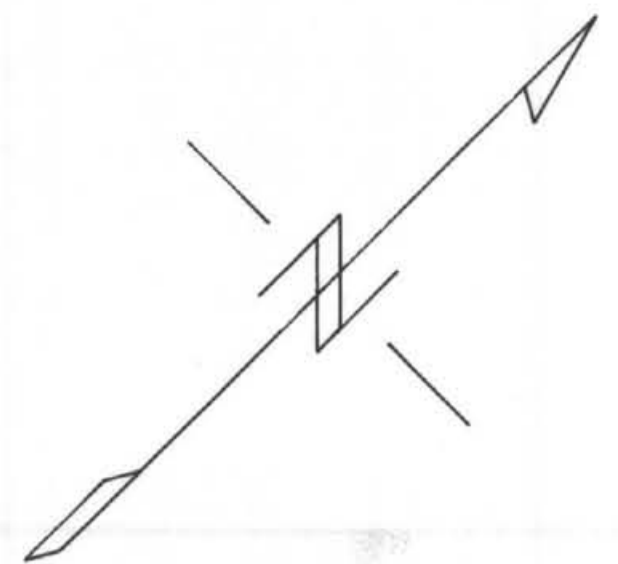
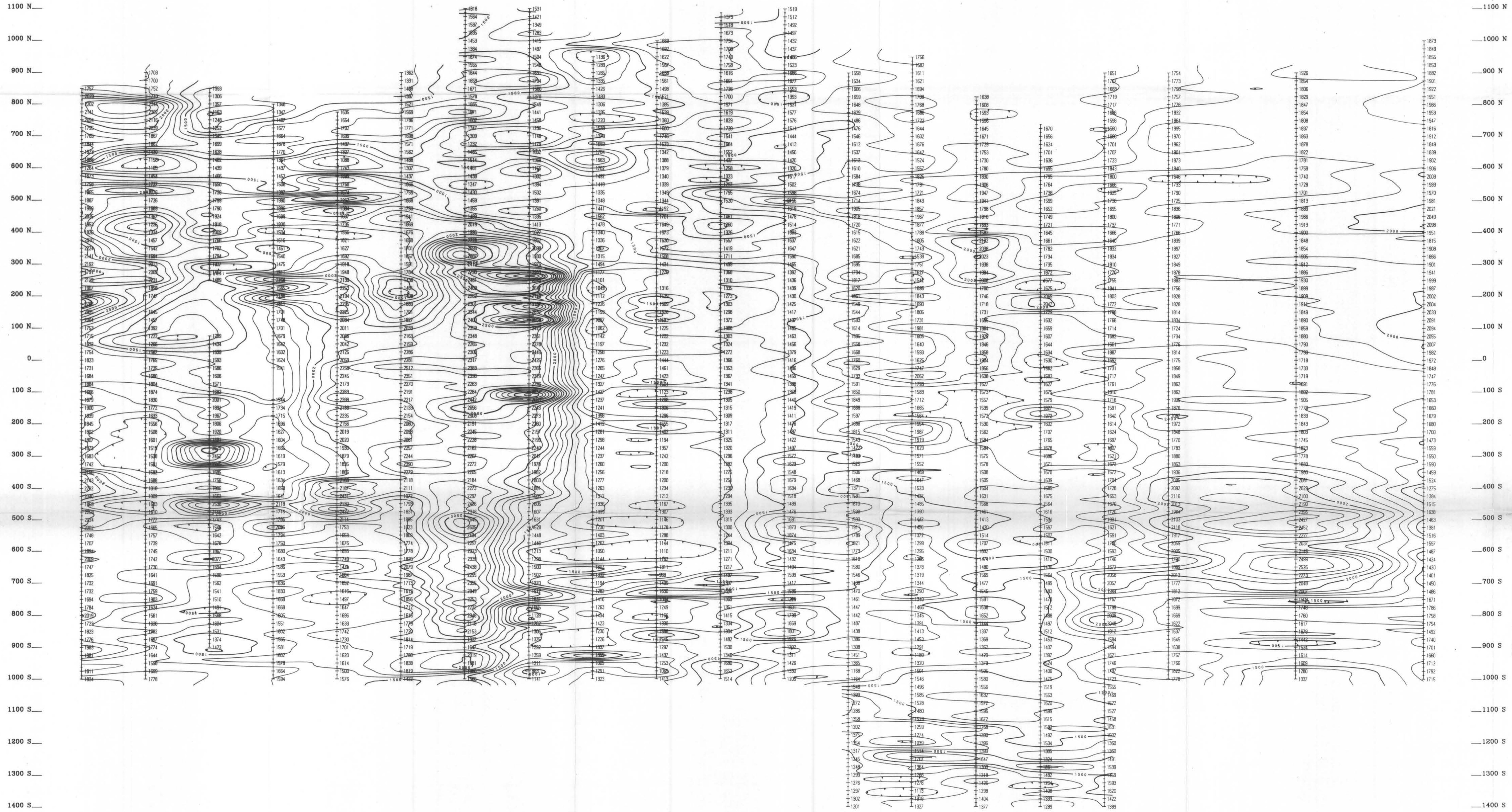
21,139

<p>PINETREE PROJECT</p>				<p>94 E / 2</p>	
<p>Drawn by:</p>		<p>Traced by: j.j.t.</p>		<p>CHENI GOLD MINE ROAD</p>	
<p>Revised by</p>		<p>Revised by</p>		<p>ACCESS ROAD (1990)</p>	
<p>Date</p>		<p>Date</p>		<p>EXISTING BRANCH ROAD</p>	
<p> </p>		<p> </p>		<p>Scale: 1 : 50,000</p>	
<p> </p>		<p> </p>		<p>Date: SEPT. 25 / 90</p>	
<p> </p>		<p> </p>		<p>Plate: </p>	

52KM
CHENI
MINE
ROAD

Lon. 126° 55'

L2000 W L1800 W L1600 W L1400 W L1200 W L1000 W L800 W L600 W L400 W L200 W L0 L200 E L400 E L600 E L800 E L1000 E L1200 E L1400 E L1800 E L2200 E



LEGEND

- CONTOUR INTERVALS**
- 100 nT
 - 500 nT
 - 2500 nT

BASE LEVEL OF 57000 nT REMOVED FROM ALL POSTINGS

- INSTRUMENT**
- EDA OMNI PLUS
 - EDA OMNI IV BASESTATION

GEOLOGICAL BRANCH
ASSESSMENT REPORT
M.Sc., P. Eng.
September 1990

21,139

Scale 1:5000
100 0 100 200 300 400
(metres)

COMINCO EXPLORATION LTD.

PINETREE PROPERTY
Omineca Mining Division

TOTAL FIELD MAGNETIC CONTOURS

NTS 94 E/2
Map Scale 1 : 5000 Drawing : 90307-26
Map No : 811-46-08

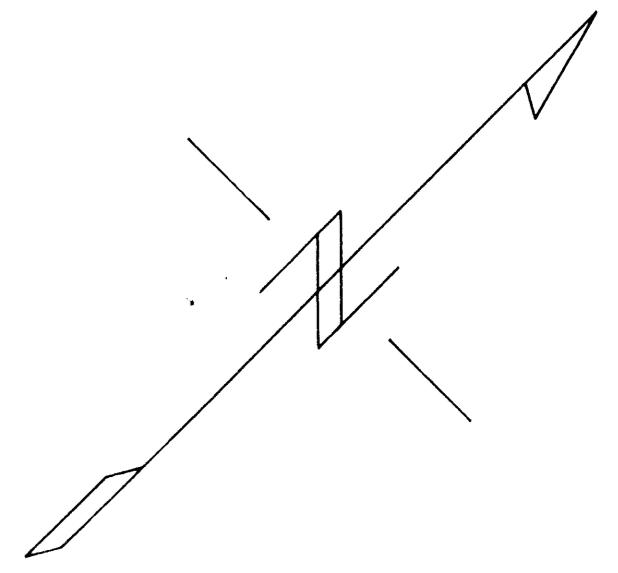
LLOYD GEOPHYSICS INC.

L2000 W L1800 W L1600 W L1400 W L1200 W L1000 W L800 W L600 W L400 W L200 W L0 L200 E L400 E L600 E L800 E L1000 E L1200 E L1400 E L1800 E L2200 E

L2000 W L1800 W L1600 W L1400 W L1200 W L1000 W L800 W L600 W L400 W L200 W L0 L200 E L400 E L600 E L800 E L1000 E L1200 E L1400 E L1800 E L2200 E

1100 N
1000 N
900 N
800 N
700 N
600 N
500 N
400 N
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100 N
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600 S
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1200 S
1300 S
1400 S

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600 S
700 S
800 S
900 S
1000 S
1100 S
1200 S
1300 S
1400 S



LEGEND

INDUCED POLARIZATION SURVEY
POLE-DIPOLE ARRAY
DIPOLE SEPARATION : 50 METRES
CURRENT ELECTRODE SOUTH OF POTENTIAL DIPOLE

CONTOUR INTERVALS

- 250 OHM-M
- 1000 OHM-M
- 4000 OHM-M

INTERPRETATION

SURFACE PROJECTION OF ANOMALOUS
CHARGEABILITY ZONES AS DERIVED
FROM PSEUDOSECTIONS N = 1 TO 6

- DEFINITE
- PROBABLE
- POSSIBLE
- AT DEPTH

GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,139
To accompany a Report by
JOHN LLOYD M.Sc., P. Eng.

September 1990

Scale 1:5000
100 0 100 200 300 400
(metres)

COMINCO EXPLORATION LTD.

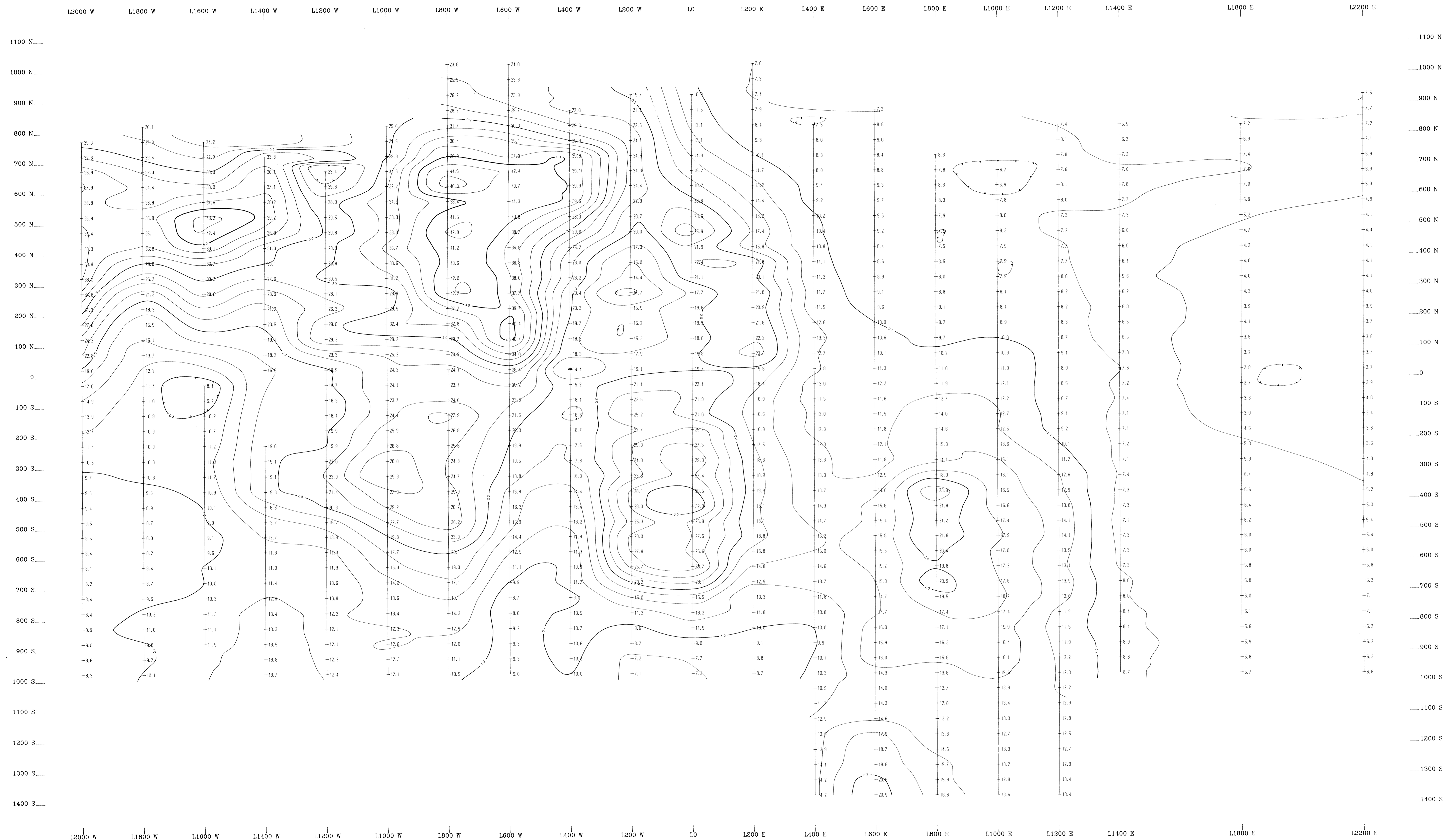
PINETREE PROPERTY
Omineca Mining Division

RESISTIVITY
21 POINT TRIANGULAR FILTER

NTS 94 E/2
Map Scale 1 : 5000 Drawing : 90307-25
Map No : 811-86-07

LLOYD GEOPHYSICS INC.

L2000 W L1800 W L1600 W L1400 W L1200 W L1000 W L800 W L600 W L400 W L200 W L0 L200 E L400 E L600 E L800 E L1000 E L1200 E L1400 E L1800 E L2200 E



LEGEND

INDUCED POLARIZATION SURVEY
 POLE-DIPOLE ARRAY
 DIPOLE SEPARATION : 50 METRES
 CURRENT ELECTRODE SOUTH OF POTENTIAL DIPOLE

CONTOUR INTERVALS

— 2.5 MSEC
 — 10.0 MSEC
 — 40.0 MSEC

INTERPRETATION

SURFACE PROJECTION OF ANOMALOUS
 CHARGEABILITY ZONES AS DERIVED
 FROM PSEUDOSECTIONS N = 1 TO 6

- DEFINITE
- PROBABLE
- POSSIBLE
- AT DEPTH

GEOLOGICAL BRANCH Report by
 ASSESSMENT BRANCH Sc. P. Eng.
 September 1990

21,139

Scale 1:5000
 100 0 100 200 300 400
 (metres)

COMINCO EXPLORATION LTD.

PINETREE PROPERTY
 Omineca Mining Division

CHARGEABILITY
21 POINT TRIANGULAR FILTER

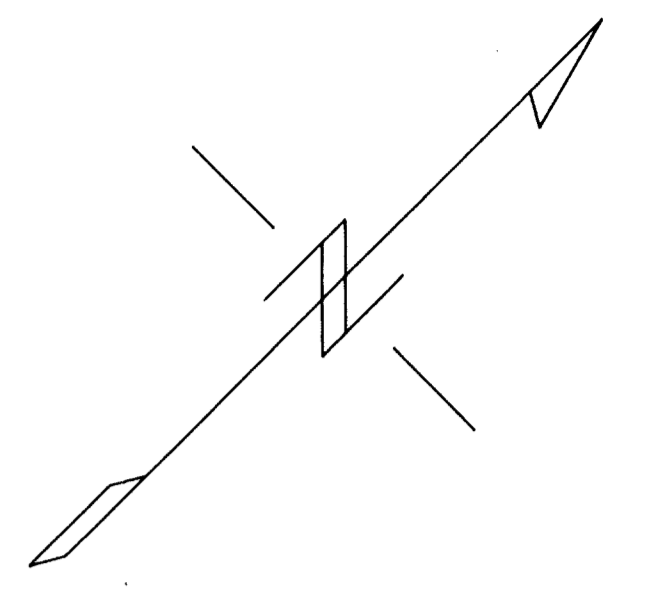
NTS 94 E/2
 Map Scale 1 : 5000 Drawing : 90307-24
 Map No: 811 - 46 - 06

LLOYD GEOPHYSICS INC.

L2000 W L1800 W L1600 W L1400 W L1200 W L1000 W L800 W L600 W L400 W L200 W L0 L200 E L400 E L600 E L800 E L1000 E L1200 E L1400 E L1800 E L2200 E

1100 N
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1100 S
1200 S
1300 S
1400 S



LEGEND

INDUCED POLARIZATION SURVEY
POLE-DIPOLE ARRAY
DIPOLE SEPARATION : 50 METRES
CURRENT ELECTRODE SOUTH OF POTENTIAL DIPOLE

CONTOUR INTERVALS

- 250 OHM-M
- 1000 OHM-M
- 4000 OHM-M

INTERPRETATION

SURFACE PROJECTION OF ANOMALOUS
CHARGEABILITY ZONES AS DERIVED
FROM PSEUDOSECTIONS N = 1 TO 6

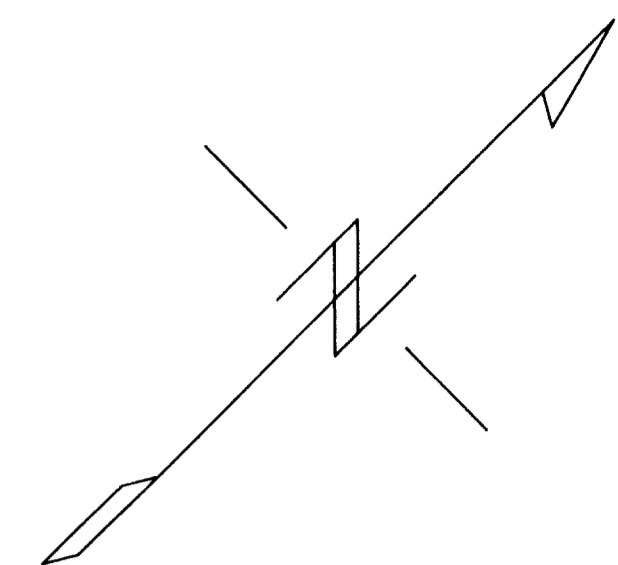
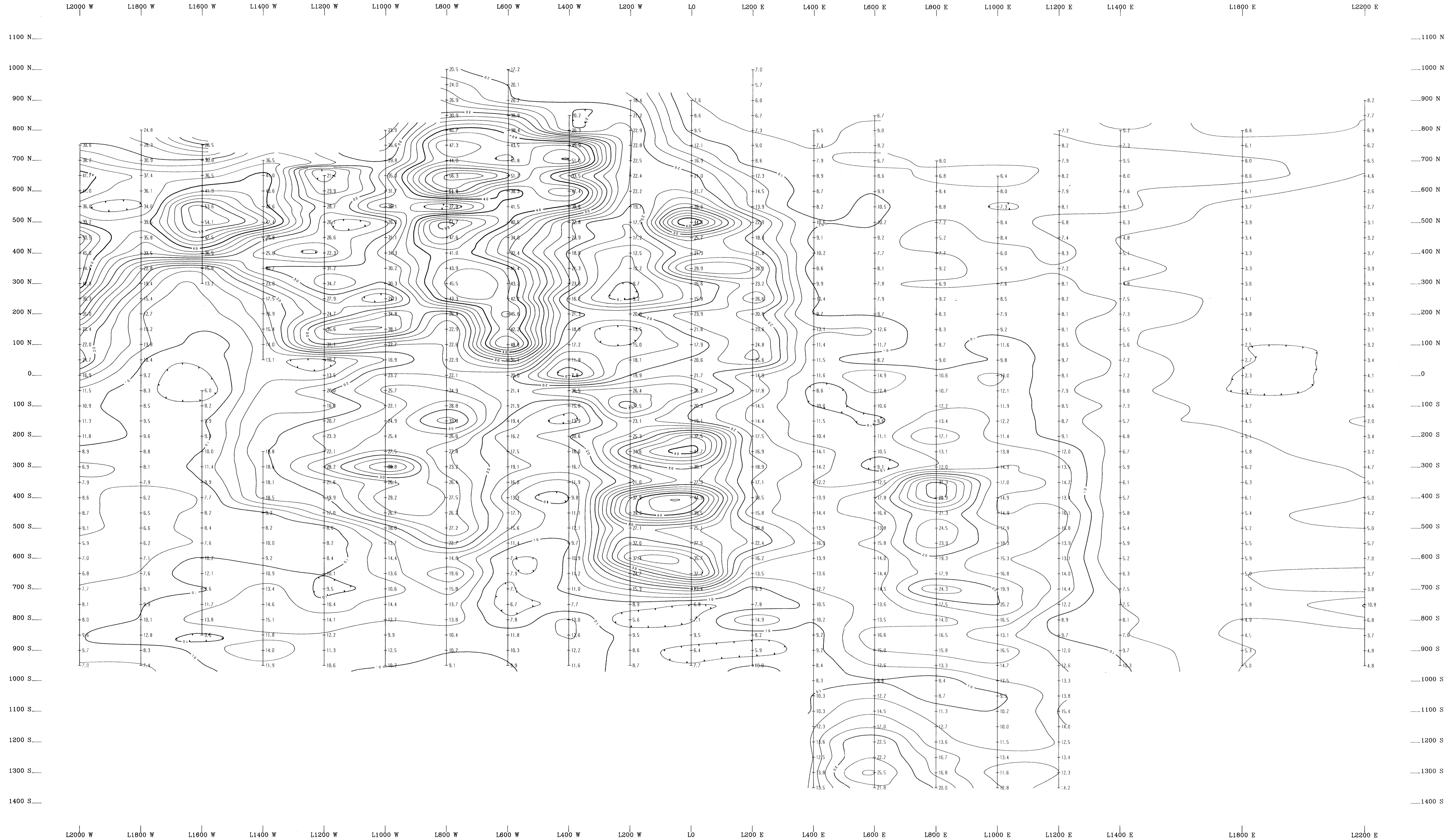
- DEFINITE
- POSSIBLE
- POSSIBLE AT DEPTH

L2000 W L1800 W L1600 W L1400 W L1200 W L1000 W L800 W L600 W L400 W L200 W L0 L200 E L400 E L600 E L800 E L1000 E L1200 E L1400 E L1800 E L2200 E

To Accompany a Report by
GEOLOGICAL ENGINEER LLOYD M.Sc., P. Eng.
ASSESSMENT REPORT
September 1990

21,130
Scale 1:5000
100 0 100 200 300 400
(metres)

COMINCO EXPLORATION LTD.
PINETREE PROPERTY Omineca Mining Division
RESISTIVITY N = 2
NTS 94 E/2
Map Scale 1 : 5000 Drawing : 90307-23 Map No : 811-46-05
LLOYD GEOPHYSICS INC.



LEGEND
 INDUCED POLARIZATION SURVEY
 POLE-DIPOLE ARRAY
 DIPOLE SEPARATION : 50 METRES
 CURRENT ELECTRODE SOUTH OF POTENTIAL DIPOLE

CONTOUR INTERVALS
 ——— 2.5 MSEC
 ——— 10.0 MSEC
 ——— 40.0 MSEC

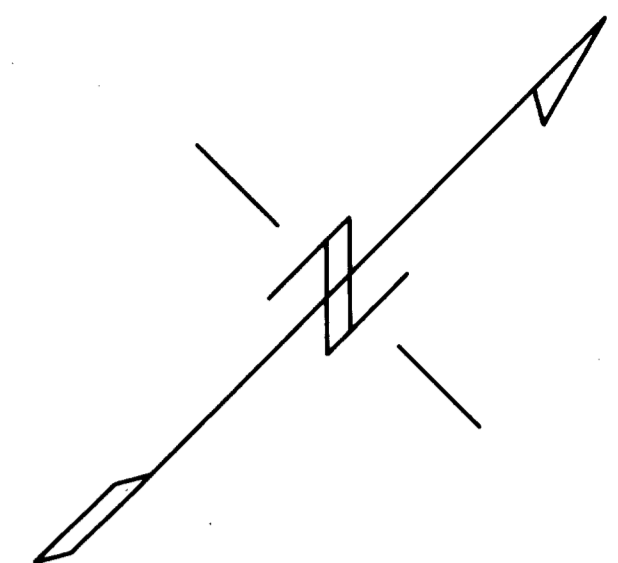
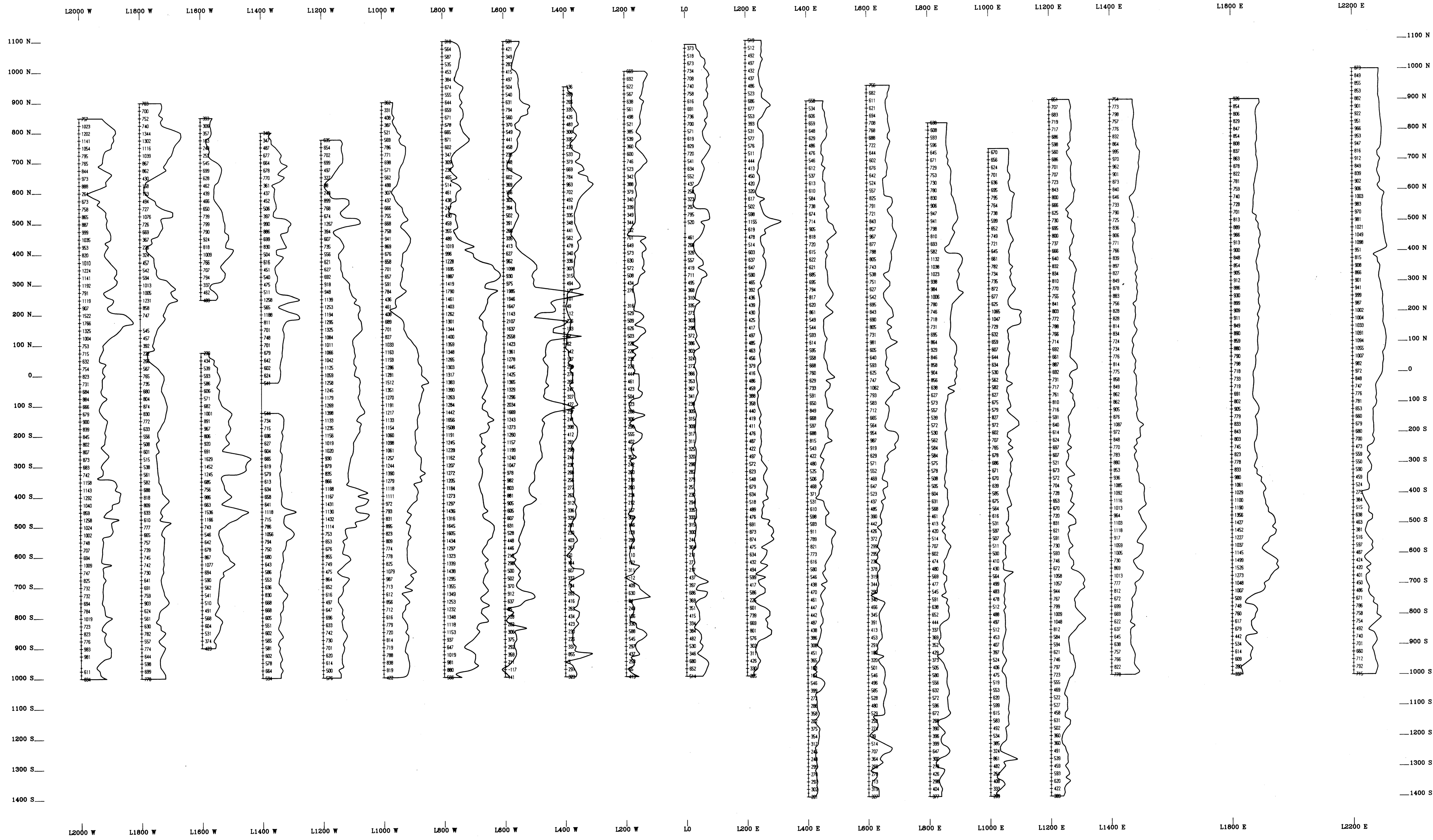
INTERPRETATION
 SURFACE PROJECTION OF ANOMALOUS
 CHARGEABILITY ZONES AS DERIVED
 FROM PSEUDOSECTIONS N = 1 TO 6

DEFINITE
 PROBABLE
 POSSIBLE
 AT DEPTH

To Accompany a Report by
GEOLOGICAL BRANCH
ASSESSMENT REPORT
 M.Sc., P. Eng.
 September 1990

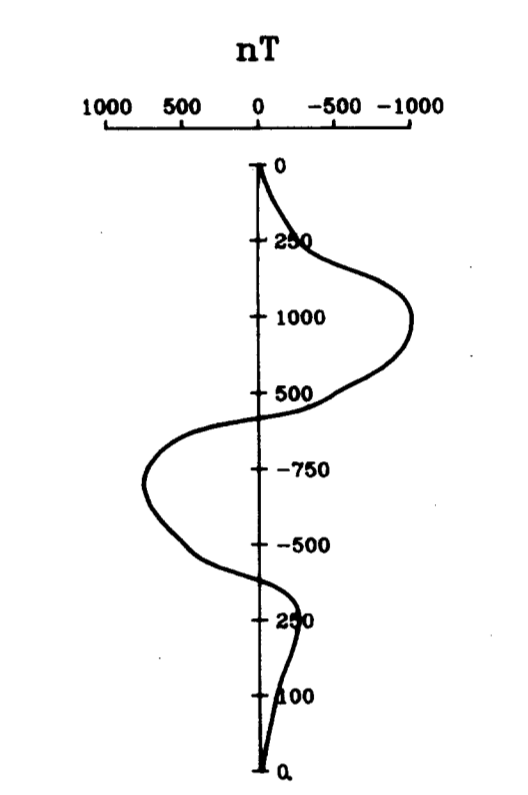
21,130
 Scale 1:5000
 100 0 100 200 300 400
 (metres)

COMINCO EXPLORATION LTD.
 PINETREE PROPERTY
 Omineca Mining Division
 CHARGEABILITY N = 2
 NTS 94 E/2
 Map Scale 1 : 5000 Drawing : 90307-22
 Map No : 811 - 46 - 04
 LLOYD GEOPHYSICS INC.



LEGEND

BASE LEVEL OF 58000 nT REMOVED FROM ALL POSTINGS

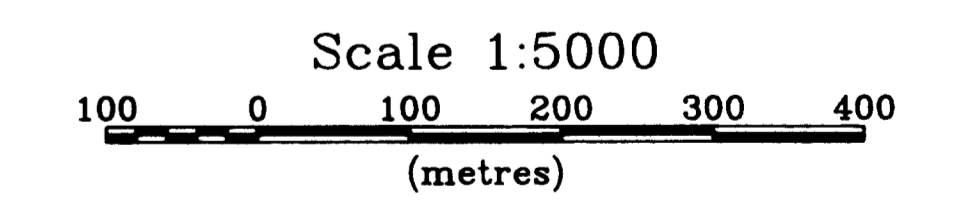


PROFILE SCALE = 500 nT / cm

INSTRUMENT
EDA OMNI PLUS
EDA OMNI IV BASESTATION

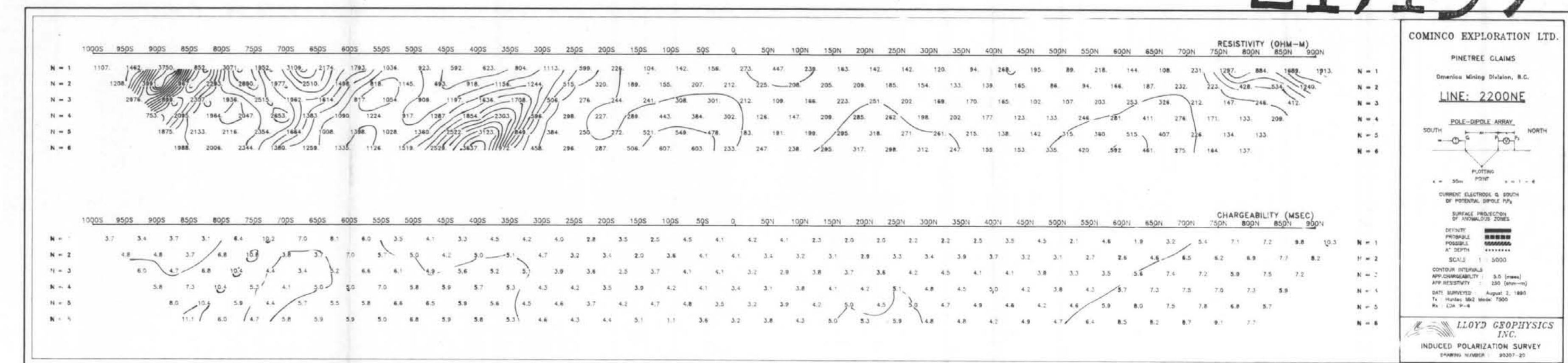
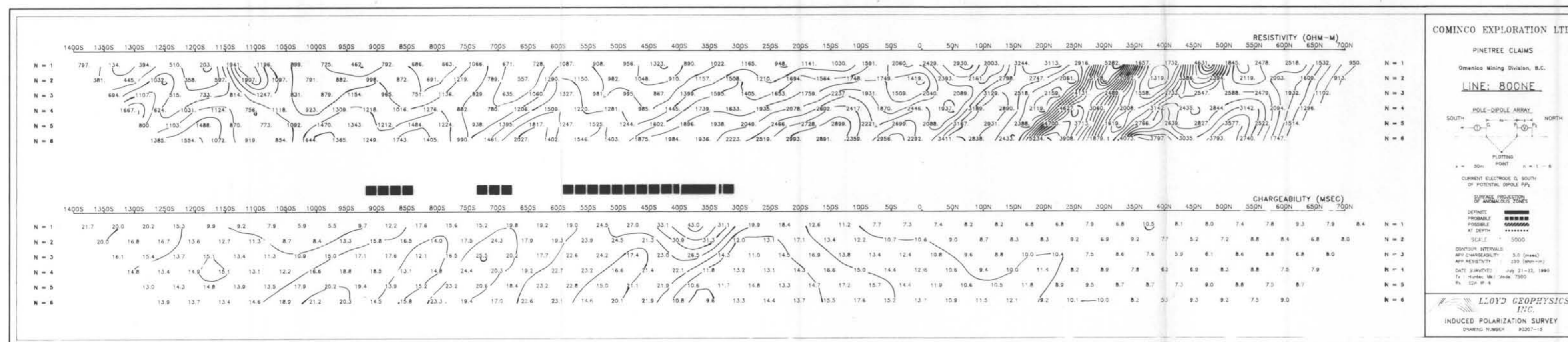
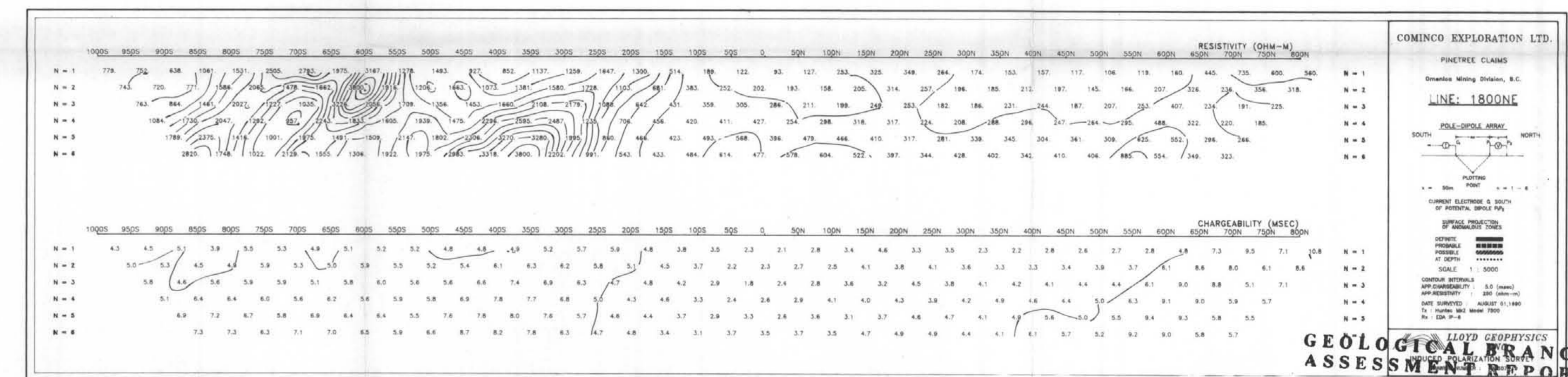
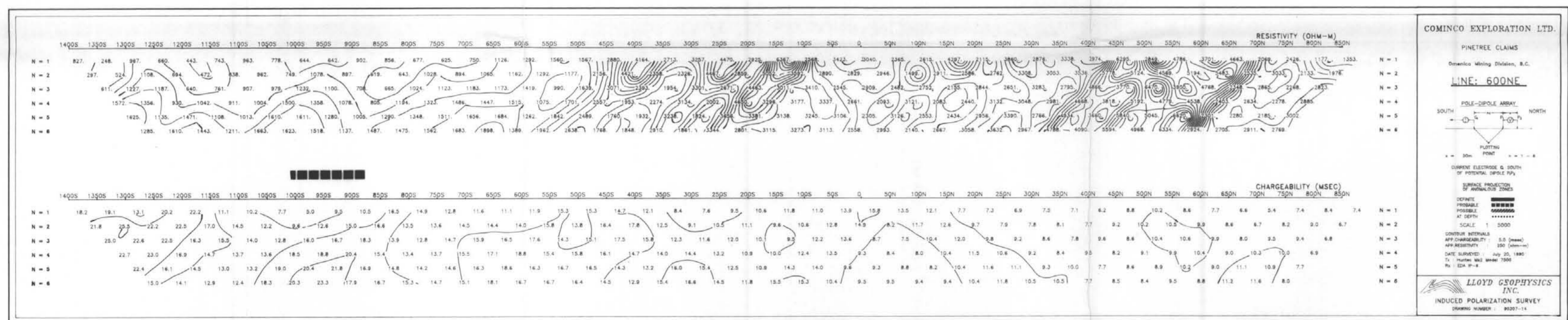
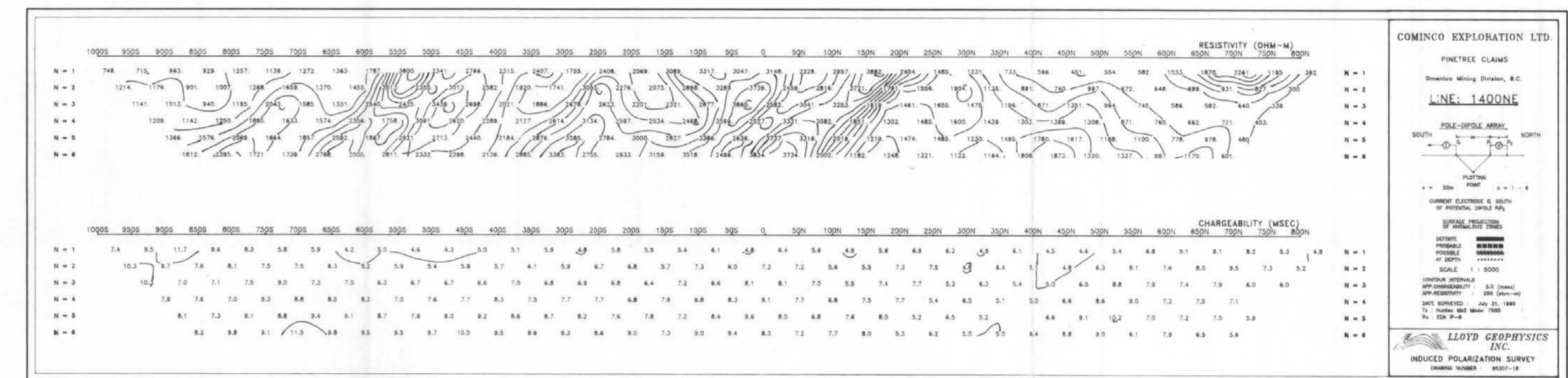
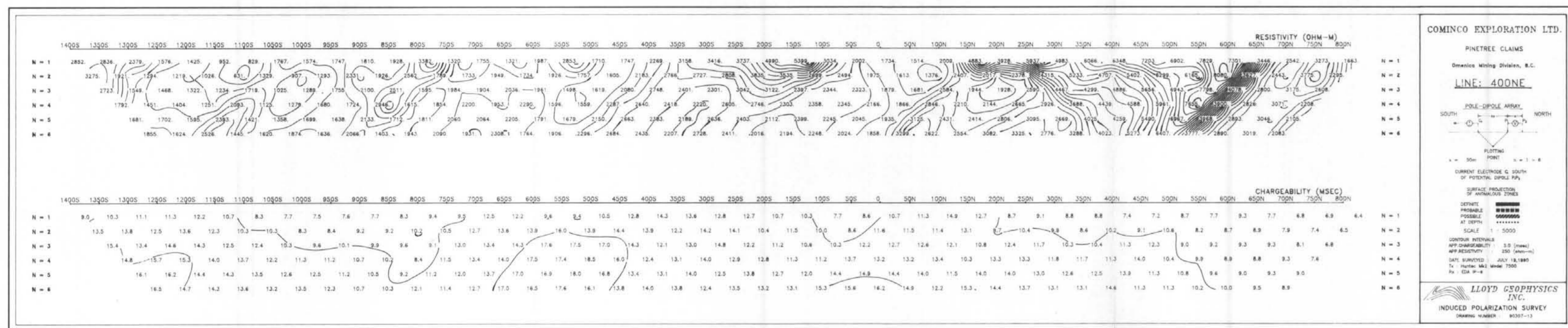
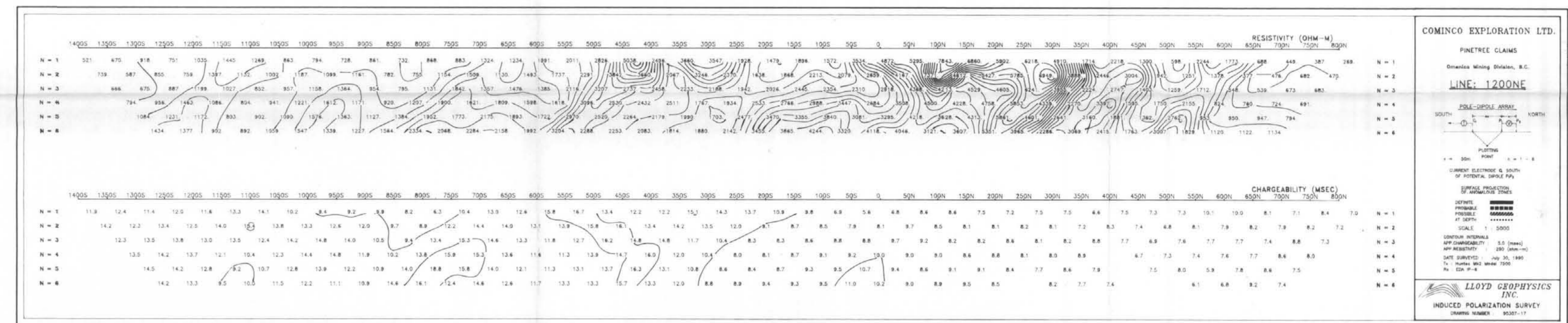
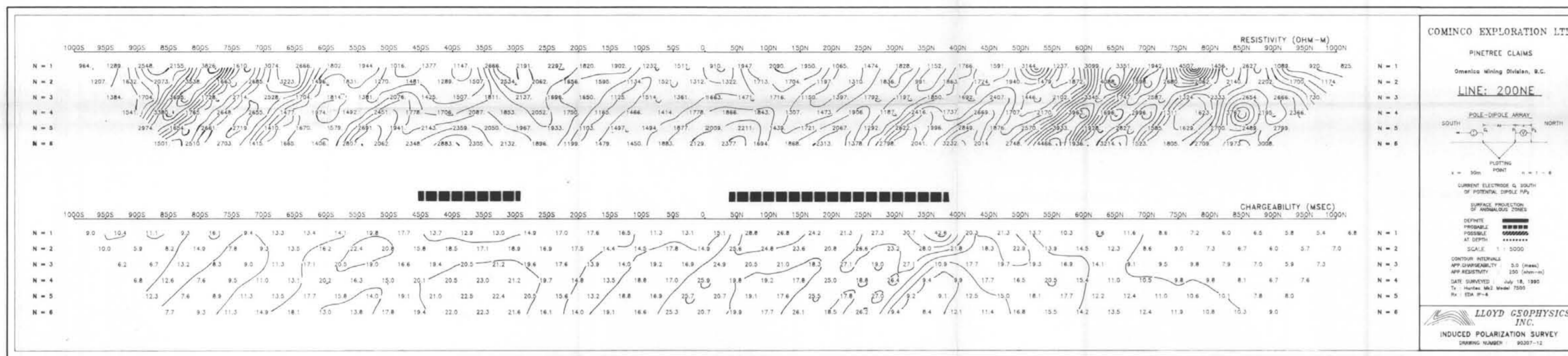
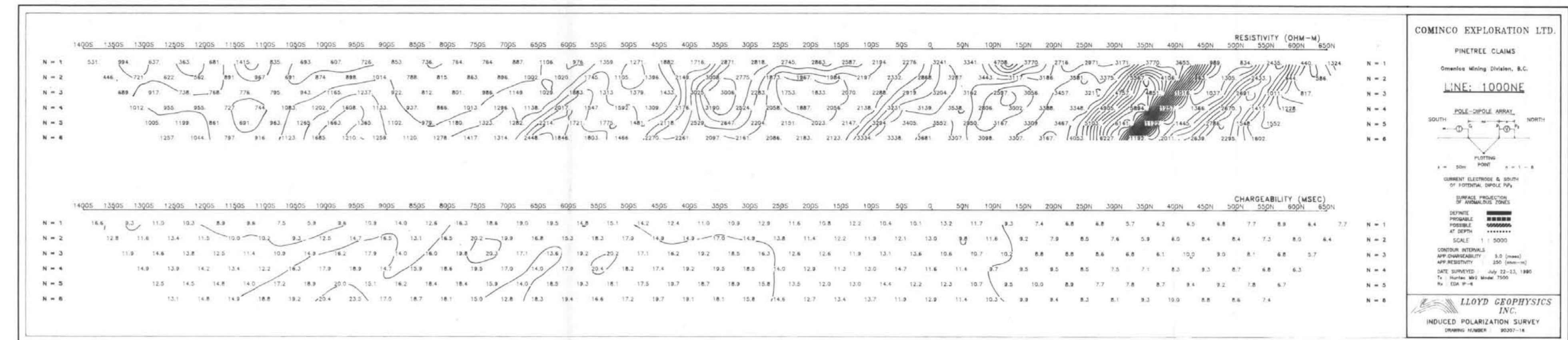
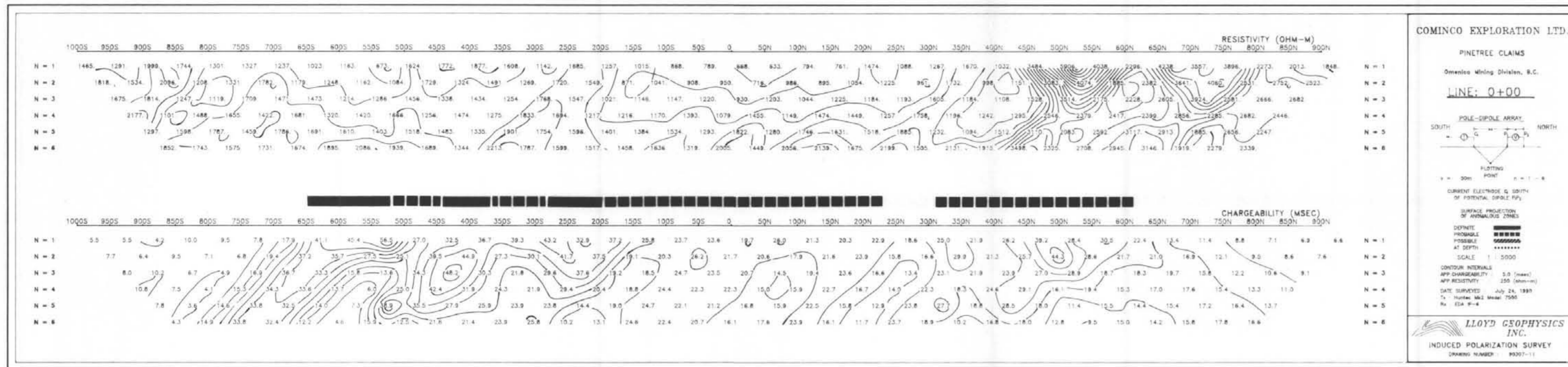
GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,159
To Accompany Report by
JOHN LLOYD M.Sc., P. Eng.
September 1990



Scale 1:5000

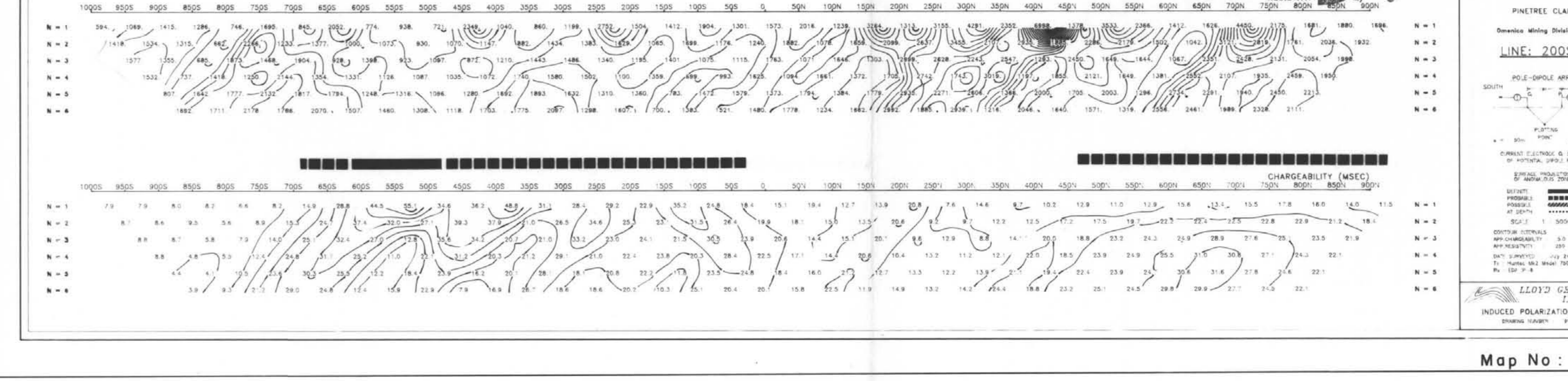
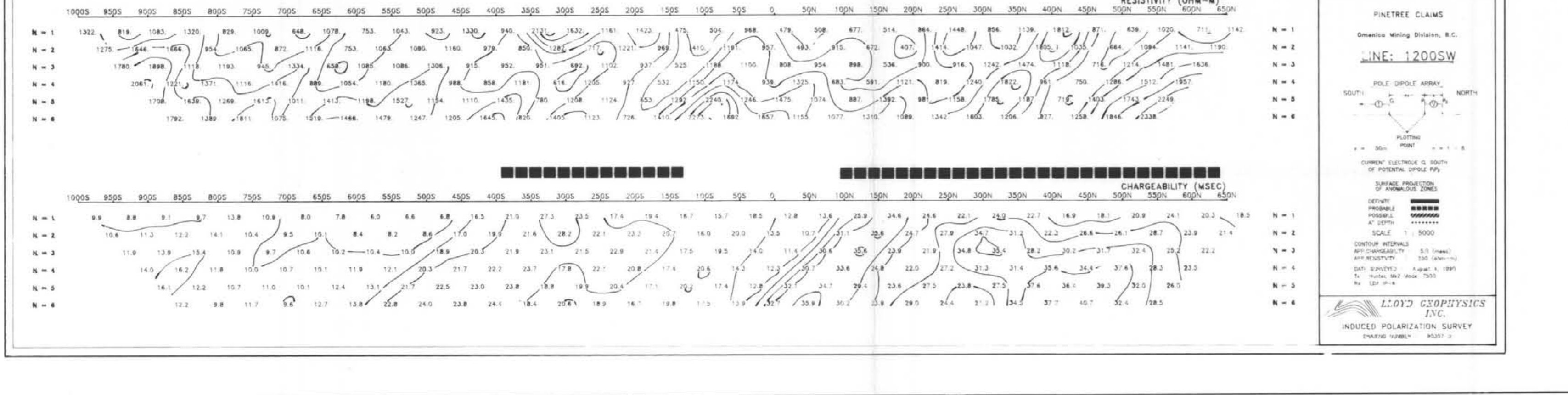
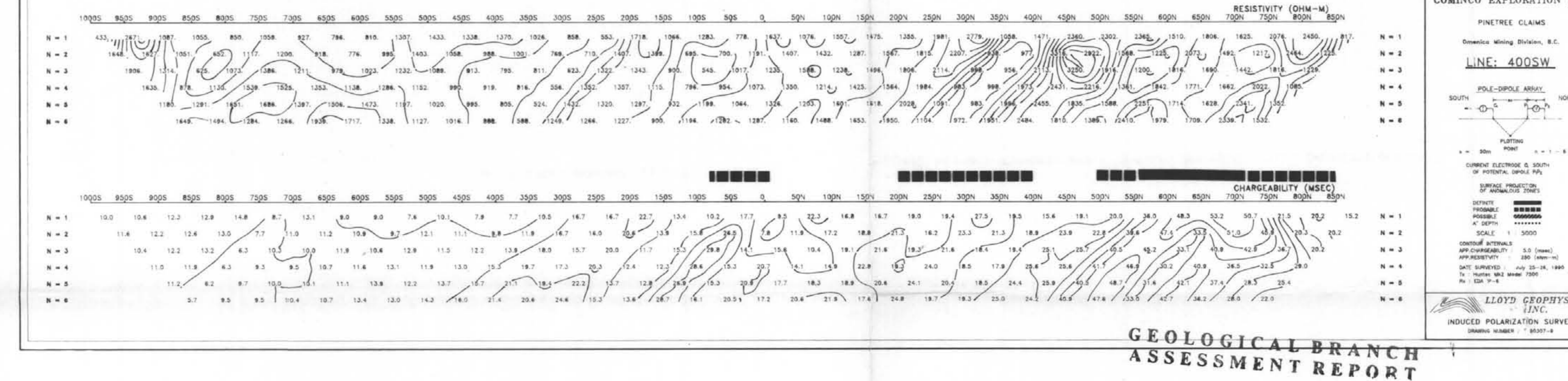
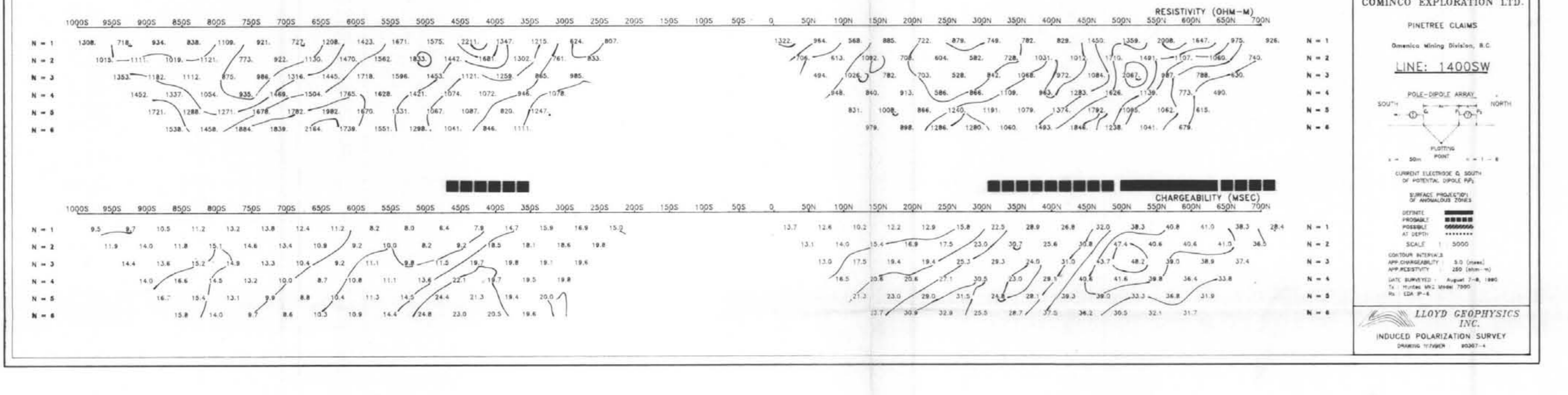
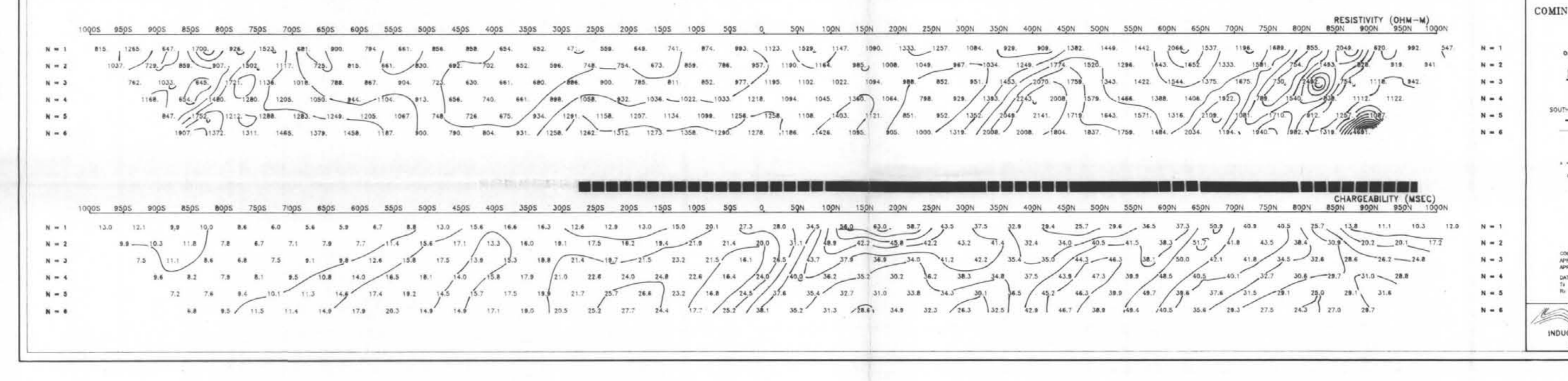
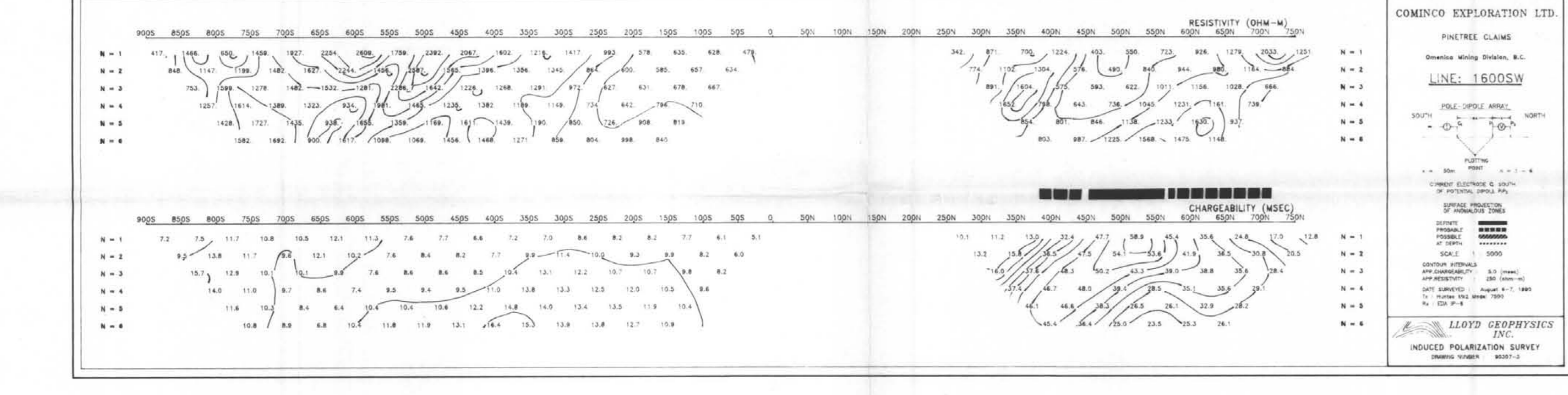
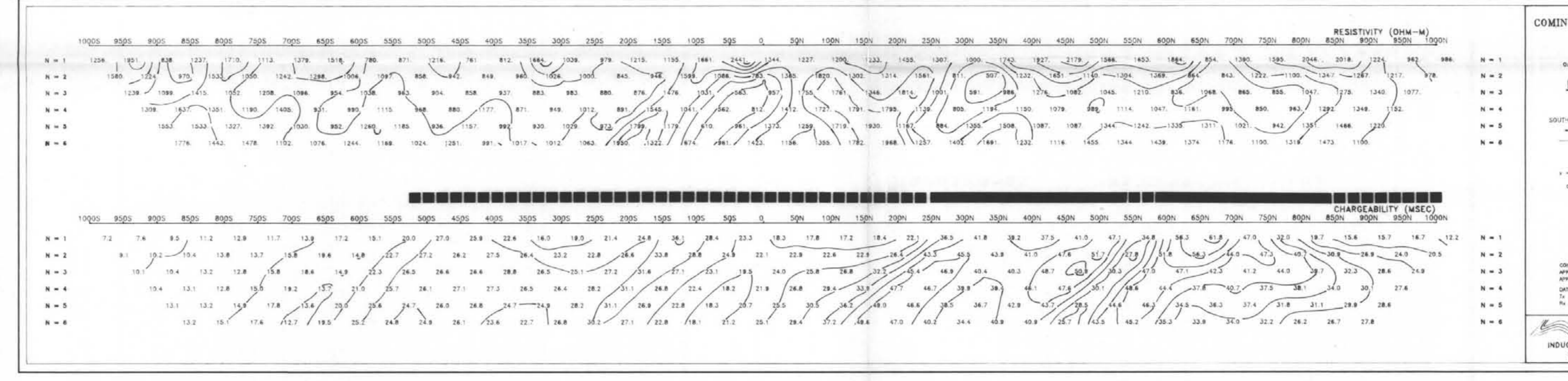
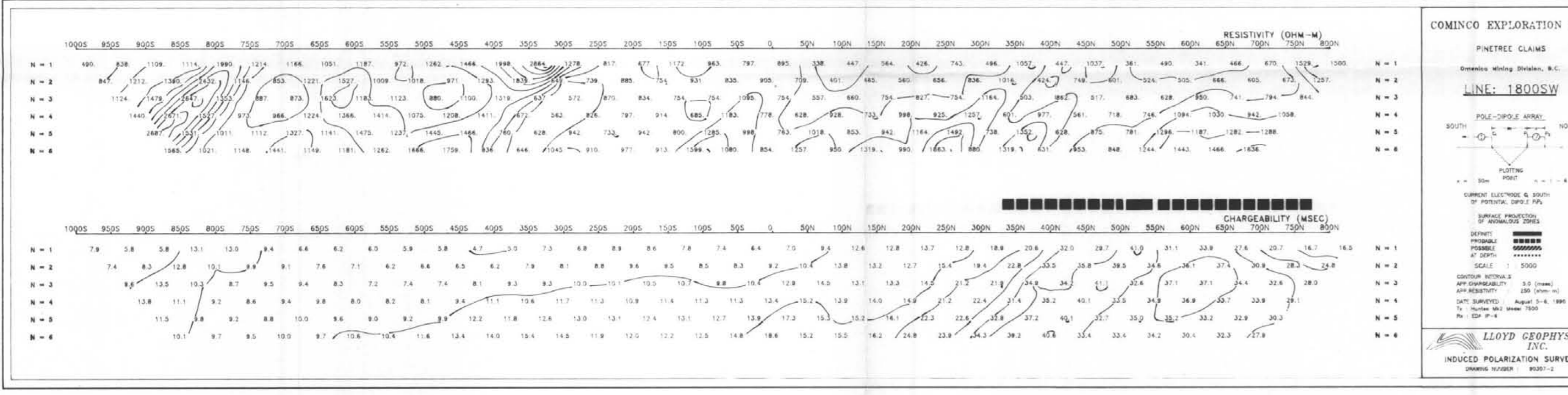
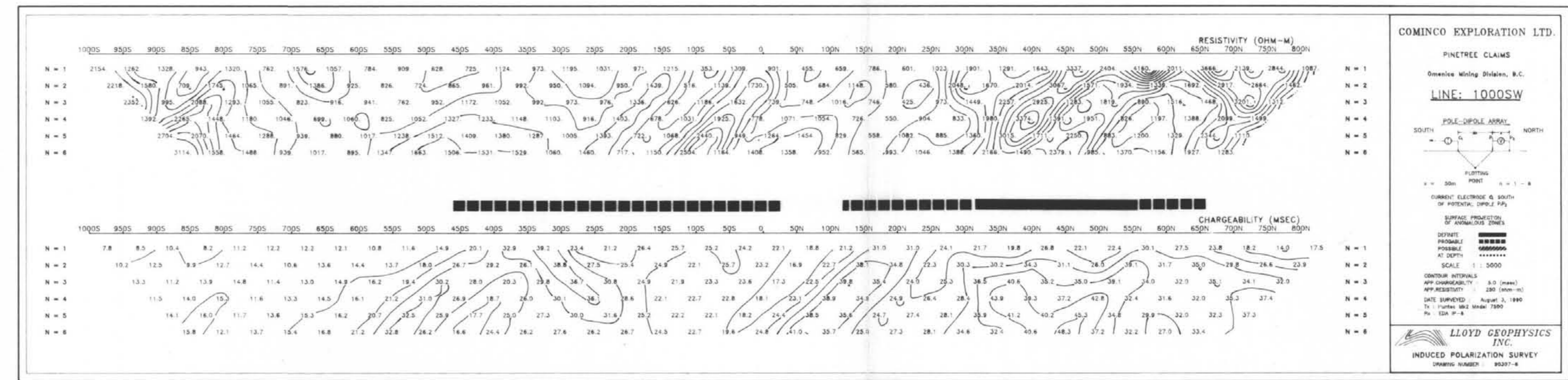
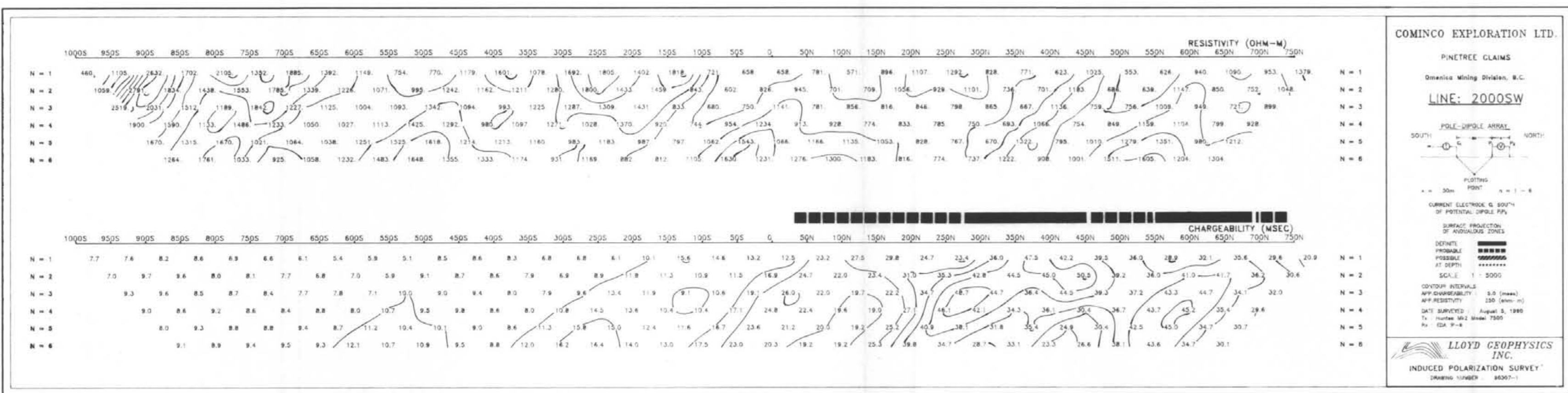
COMINCO EXPLORATION LTD.	
PINETREE PROPERTY Omineca Mining Division	
TOTAL FIELD MAGNETIC PROFILES	
NTS 94 E/2	
Map Scale 1 : 5000	Drawing : 90307-21 Map No : 811 - 46 - 03
LLOYD GEOPHYSICS INC.	



> 40 msec
 20-40 msec

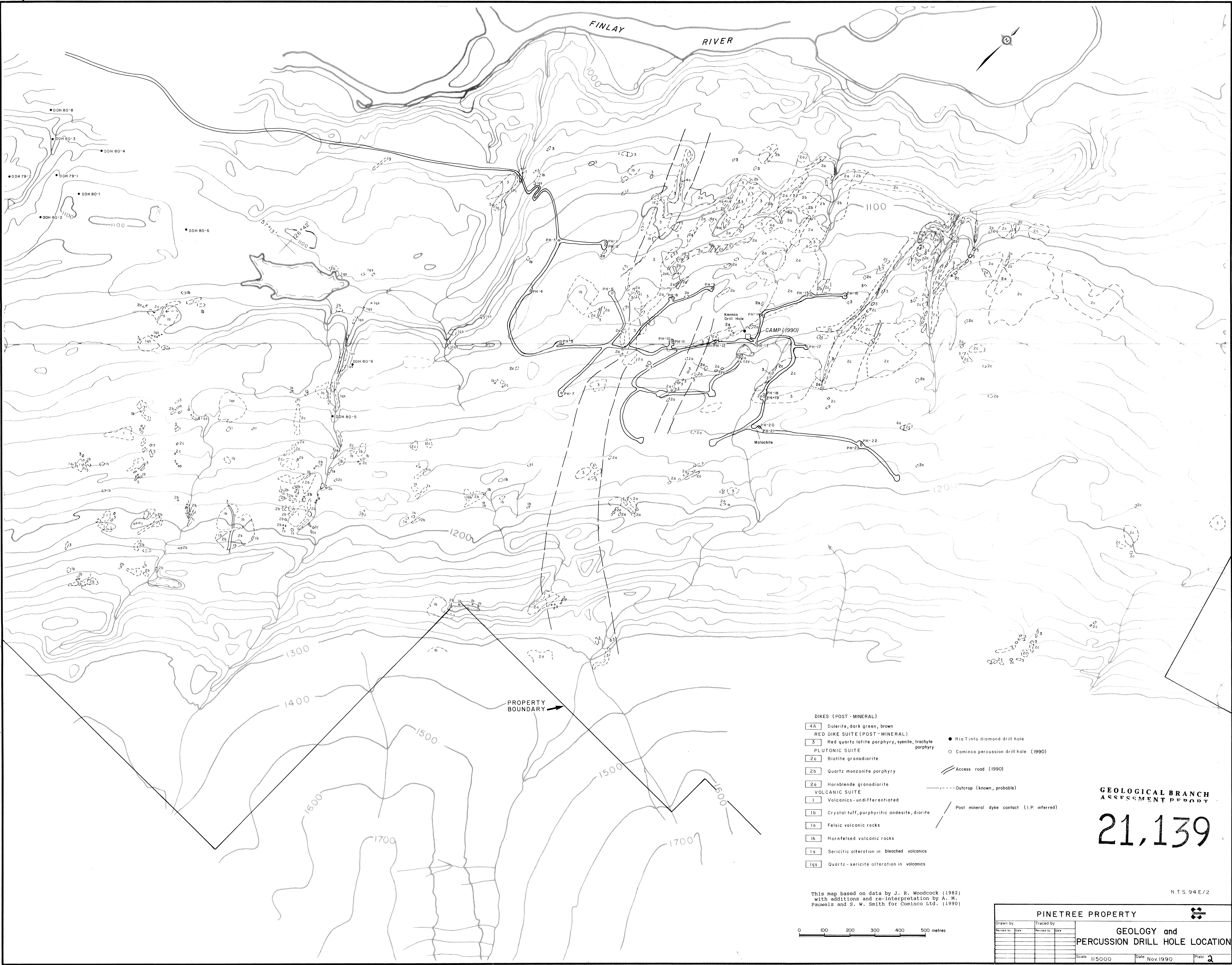
GEOLOGICAL BRANCH ASSESSMENT REPORT

21,139

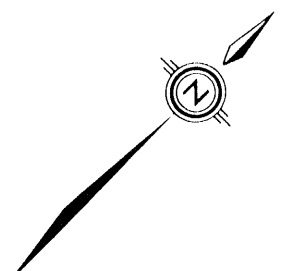


> 40 msec
 20 - 40 msec

GEOLOGICAL BRANCH
ASSESSMENT REPORT
21,139



FINLAY RIVER



PROPERTY BOUNDARY

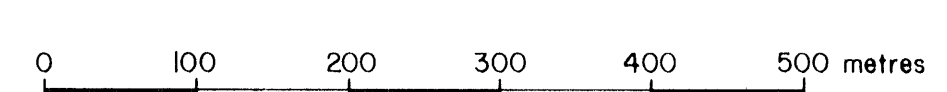
- 4A Dolerite, dark green, brown
 - RED DIKE SUITE (POST-MINERAL)
 - 3 Red quartz latite porphyry, syenite, trachyte porphyry
 - PLUTONIC SUITE
 - 2c Biotite granodiorite
 - 2b Quartz monzonite porphyry
 - 2a Hornblende granodiorite
 - VOLCANIC SUITE
 - 1 Volcanics-undifferentiated
 - 1b Crystal tuff, porphyritic andesite, diorite
 - 1a Felsic volcanic rocks
 - 1h Hornfelsed volcanic rocks
 - 1s Sericitic alteration in bleached volcanics
 - 1qs Quartz-sericite alteration in volcanics
- Rio Tinto diamond drill hole
 - Cominco percussion drill hole (1990)
 - Access road (1990)
 - Outcrop (known, probable)
 - - - Post mineral dyke contact (I.P. inferred)

GEOLOGICAL BRANCH
ASSESSMENT REPORT

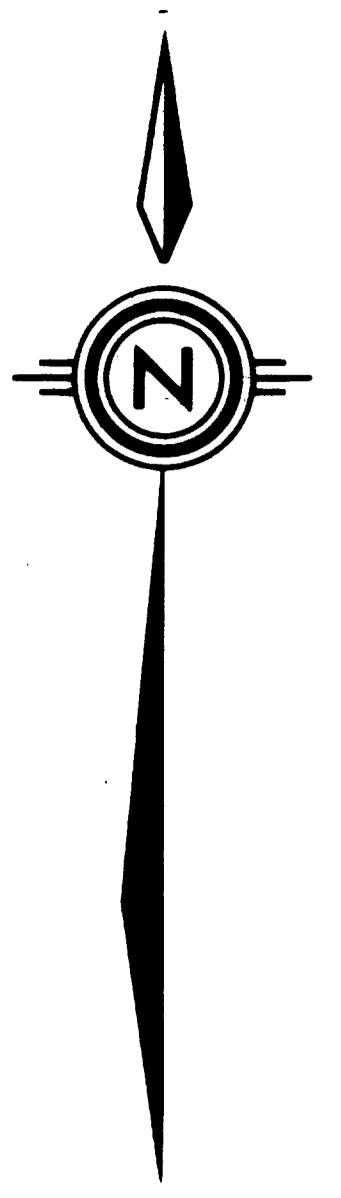
21,139

This map based on data by J. R. Woodcock (1982) with additions and re-interpretation by A. M. Pauwels and S. W. Smith for Cominco Ltd. (1990)

N.T.S. 94 E/2

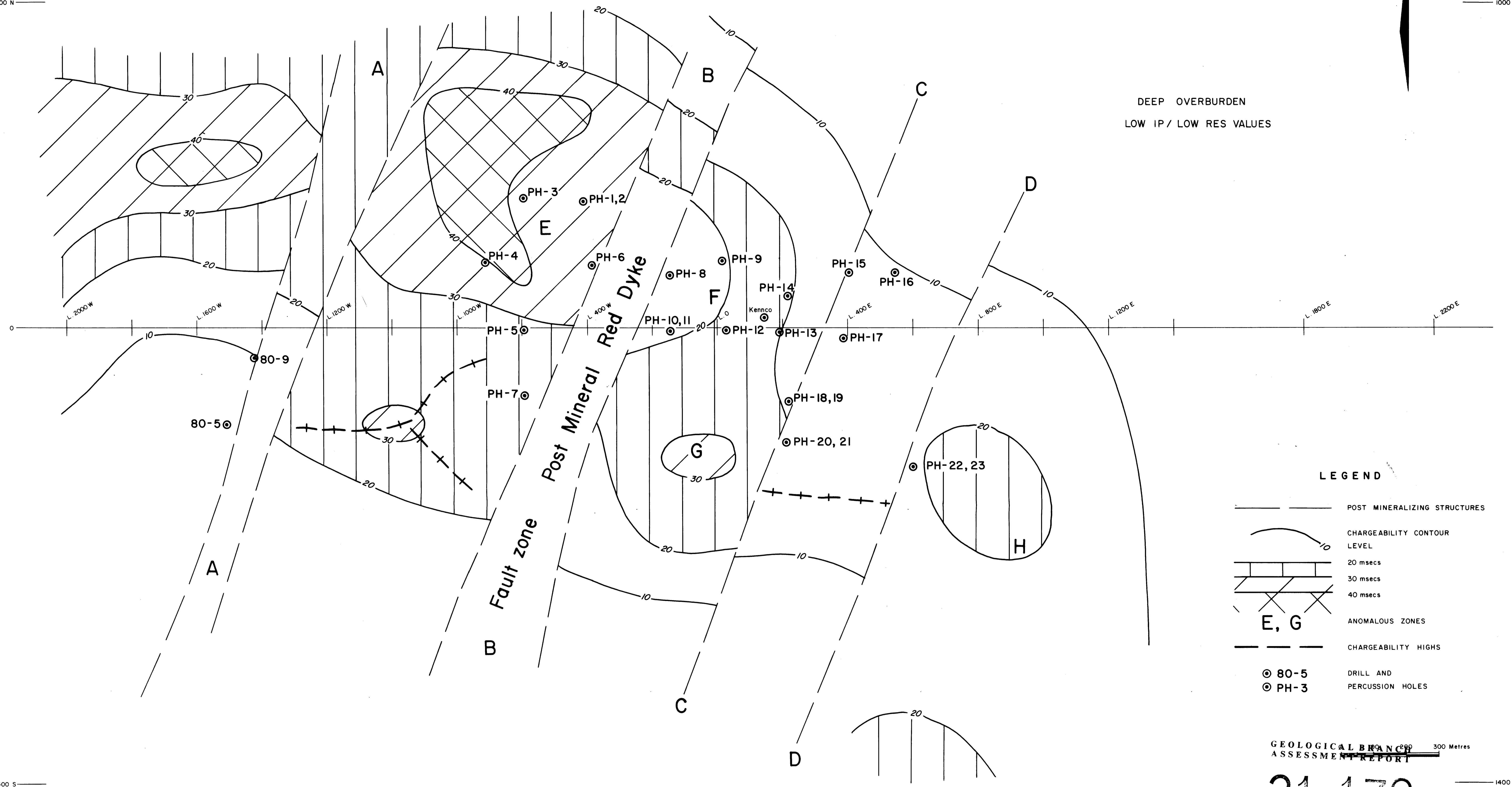


PINETREE PROPERTY			
Drawn by	Traced by		
Revised by	Revised by		
GEOLOGY and PERCUSSION DRILL HOLE LOCATION			
Scale 1:5000	Date Nov. 1990	Plate	2



1000 N

1000 N



DEEP OVERBURDEN
LOW IP / LOW RES VALUES

- LEGEND**
- POST MINERALIZING STRUCTURES
 - CHARGEABILITY CONTOUR LEVEL
 - 20 msec
 - 30 msec
 - 40 msec
 - ANOMALOUS ZONES E, G
 - CHARGEABILITY HIGHS
 - 80-5 DRILL AND
 - PH-3 PERCUSSION HOLES

GEOLOGICAL BRANCH
ASSESSMENT REPORT

21,139

PINETREE PROPERTY

GEOPHYSICAL INTERPRETATION

Drawn by:	Traced by:
Revised by:	Revised by:
Date:	Date:

Scale: 1:5000 Date: FEB 1991 Plate: 811-46-05