



42801NE8577 63.4501 PENHORWOOD

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CREE LAKE PROPERTY

1984

EXPLORATION

CREE LAKE PROPERTY  
EXPLORATION SUMMARY REPORT  
QUINTERRA RESOURCES INC.  
JANUARY 1985.

INTRODUCTION.

Reconnaissance geological mapping and prospecting was carried out on the Cree Lake Property of Quinterra Resources during September and October, 1984.

Approximately 10 miles of line cutting (Base line, north and south tie lines and brushing out the old Sultan Road) was used together with air photographs for control. Mapping was done by L. Hallé and B. Raine and was at a scale of 1"= $\frac{1}{4}$  mile over the property. Specific mineralized areas were partially stripped, chip sampled for assay and cobra drilled. The total property was flown by Terraquest and mag and V.L.F. surveys done.

PROPERTY LOCATION AND ACCESS.

The Cree Lake property consists of 100 contiguous mining claims in Swayze and Cunningham Townships in the district of Sudbury, Procupine Mining Division of northeastern Ontario (47°-46'N latitude; 82°-40'W longitude), approximately 140 km southwest of Timmins, Ontario.

The property can be accessed via a bush road south approximately 50 km from provincial highway 101 to the Kenty property in northeastern Swayze township. From here the old Sultan Road has been bulldozed and brushed out southward a distance of 4.5 km giving access to the claims. Float equipped aircraft can land on Cree Lake providing easy access to the area.

SWAYZE TOWNSHIP (88 claims)

P740046 - P740050 inclusive	5
P740054 - P740063 inclusive	10
P740068 - P740077 inclusive	10
P740080 - P740095 inclusive	16
P740097 - P740100 inclusive	4
P779956 - P779990 inclusive	35
P799001 - P799004 inclusive	4
P799006 - P799009 inclusive	4

CUNNINGHAM TOWNSHIP (12 claims)

P740051 - P740053 inclusive	3
P740064 - P740667 inclusive	4
P740078 & P740079 inclusive	2
P799010 - P799012 inclusive	3

## EXPLORATION HISTORY.

Interest in the Swayze region was originally due to the discovery of iron formation shortly after 1900. In the late 1920's exploration was carried out for base metals in Cunningham township. Exploration in the 1930's and early 1940's was directed to gold, with the development of the Jerome Gold mine 30 km to the east and the Kenty Mine 50 km to the north.

From old trenches found on the Cree Lake property it is probable that this property was at one time prospected for gold, (1930's?). At the Kenty property in northeastern Swayze township, 2 shafts were sunk with development on 3 levels. Mineralization is gold in quartz veins and it is reported that 359,000 tons of ore were outlined. (Gordon, 1979).

Flint Rock Mines Limited in 1961-1963 re-activated the Buffalo Canadian Gold Mines Limited property at the north-east end of Cree Lake. The original work was done in 1933-1934 and in 1961-1963 the old trenches were cleaned out and re-sampled. Here gold mineralization occurs as a stockwork of quartz-carbonate veins from 15 cm to 60 cm wide containing minor sulphide mineralization. The 1963 drilling intersected values up to 20.7 oz gold per ton across widths up to 45cm. (Gordon, 1979).

The Cree Lake property was covered by various airborne surveys flown during the 1960's and 1970's in the search for base metals but there is no evidence of any concentrated exploration effort having taken place in the area of the property prior to the acquisition of the ground by Quinterra Resources Inc. in 1982.

## EXPLORATION HISTORY (cont'd).

Quinterra Resources flew the property with a combined magnetic and VLF survey in October of 1984 and at the same time the property was geologically mapped on a reconnaissance basis.

The area was geologically mapped by Furse (1932), Rickaby (1934), Meen (1942) and more recently by Donovan (1965) and Siragusa (1980) of the Ontario Department of Mines. The area was covered by an airborne INPUT electromagnetic survey and a magnetometer survey carried out by the Ontario Ministry of Natural Resources in late 1980 and early 1981.

## REGIONAL GEOLOGY.

The Cree Lake property is located in the south central part of the Swayze greenstone belt which extends from Kukatush, southwest of Timmins, southwest to Tooms township with a southern arm extending east and east-southeast to Gogama. All the bedrock formations in the area are of Early Precambrian-Archean age. Through the southern part of the belt the formations face north, being the southern limb of a major synclinalorium outlined by the greenstone belt with the nose of the fold to the west in Halcrow township. Rocks of granitoid composition surround the greenstone belt.

The dominant rock types include metamorphosed komatiitic flows, their intrusive equivalents and pillowed to massive mafic flows. Locally, thin layers of intermediate to acidic tuffs are interbedded with the flows. All units have been metamorphosed to greenschist rank.

REGIONAL GEOLOGY (Cont'd):

Cycles of clastic and chemical sedimentation occurred during the development of the volcanic pile and resulted in the deposition of exhalative units and lean pyritic and magnetitic chert iron formation. Spatially, associated with the main chert units are relatively small bodies of feldspar porphyry which may be sub-volcanic felsic intrusives.

Metasediments which appear to be more extensive in the eastern and western parts of the belt, consist of polymictic conglomerate, and minor arkosic sandstone and slate.

Mafic intrusives (mainly gabbro) occur in the central part of the belt associated with the mafic metavolcanics. Some small plutons of granitoid composition intrude the greenstones and lamprophyre dikes have also been mapped.

The metamorphic foliation in the area trends west-northwest to east-west and dips vertically to sub-vertically. The most apparent direction of faulting is north-northwest as indicated by observed offsets, displacement of units and air-photo lineaments. Some east-northeast and east-west zones of shearing are also reported.

During the Pleistocene epoch the area was covered with a thin layer of glacial till which in turn was covered, in much of the area, by extensive glacio-lacustrine deposits as the glaciers retreated.

## PROPERTY GEOLOGY.

The Cree Lake property is underlain by an east-west striking and steeply dipping sequence of Archean metavolcanics and associated chemical sediments. The property is extensively covered by a thin layer of overburden.

An antiformal fold axis is postulated along the Swayze-Cunninghama township boundary, so that the property mainly covers the northern limb of this structure. Reconnaissance geological work has indicated that the main rock types present on the property are mafic to intermediate metavolcanic flows and fragmentals which are generally fine grained chloritized and show an east-west foliation. Pillow lavas which are locally present indicate the formations face north. In the northwest corner of the claims along the south shore of Cree Lake thinly laminated mafic tuffs are exposed. Similar rocks are exposed along the Swayze-Cunningham township line in the south-central part of the property and in the western end of the most southerly band of felsic tuffs.

Three felsic metavolcanic horizons have been mapped in the central part of the claim group. The northern and southern units are considered to be felsic tuffs while the middle unit may be a felsic flow.

A sulphide-rich iron formation horizon occurs associated with the middle felsic unit and 2.5 km to the west a trench has exposed an iron formation in intermediate metavolcanics which may be correlative with the horizon to the east. Associated with the southern felsic tuff unit is a second sulphide-rich



PROPERTY GEOLOGY (Cont'd):

iron formation member which has been traced for approximately 1 km along strike.

Mafic sill-like intrusives which are gabbroic to dioritic in composition occur throughout the central part of the property. A small stock grading from gabbro to syenite in composition occurs in the south-central section of the claims.

A major east-west fault, the Cree Lake Fault passes through Cree Lake and across the northern part of the property. North-northwest faulting at the east end of the claim group appears to offset all units and structures. The dominant foliation trends east-west and is vertical to sub-vertical and is approximately parallel to the axial plane of the interpreted antiform in the southern part of the property.

Associated with the southern felsic tuff and iron formation is a zone of green carbonate alteration which lies north of the iron formation and appears to affect mafic, intermediate and felsic metavolcanics.

Gold mineralization is associated with the stratigraphic interval containing the southern felsic tuff and sulphide-rich iron formation unit. Within this zone the gold is associated with two units; a sulphide facies iron formation and a silicified quartz, sericite schist. The sulphide facies iron formation consists of quartz-rich and pyrite-rich layers containing considerable carbonate. Small quartz-carbonate stringers are present and probably represent recrystallized

PROPERTY GEOLOGY (Cont'd):

chert or quartz. The quartz-sericite schist which lies north of the iron formation member, is well foliated, silicified, mineralized with pyrite and is interpreted to be a felsic tuff. These units are contained within the broad zone of green carbonate alteration. The reconnaissance geological work has traced this favourable zone for 2500 m and the airborne geophysics suggests a potential strike length of 4500 m for the unit.

GEOPHYSICS:

The Swayze area was flown by Questor Surveys Limited for the Ontario Geological Survey in late 1980 and early 1981 (OGS, 1982). This survey produced a band of airborne EM anomalies parallel to the volcanic stratigraphy stretching across the Cree Lake property. A number of anomalies are 4 to 6 channel anomalies and are considered to represent conductive chemical sediment zones within the volcanic pile.

Terraquest Limited carried out a combined airborne magnetic and VLF-EM survey over the Cree Lake property in late October 1984 along north-south flight lines 100 m apart. These surveys indicated a number of magnetic zones within the volcanic pile and some correspond to known iron formation horizons. The cause of others is probably intrusive gabbro sills. A number of VLF conductors were identified, generally within the same zone as outlined by the Questor INPUT survey. One VLF conductor through Cree Lake probably corresponds to the Cree Lake fault. The interpretation from the airborne surveys recognized a number of north-northwest trending faults and diabase dikes.

## ECONOMIC POTENTIAL.

The Cree Lake property has many of the features associated with known gold environments. This environment is dominated by mafic to intermediate metavolcanics, interflow, felsic metavolcanic units (present at 3 stratigraphic intervals) and sulphide-rich exhalite bodies. As well a broad zone of possible exhalite units is indicated by the airborne geophysical surveys. Sediments of the Ridout Group occur to the south in northern Cunningham township as part of an 80 km long belt of clastic sediments. The Cree Lake fault is a major zone of east-west deformation.

During the reconnaissance geological survey carried out by Quinterra Resources Inc on the Cree Lake property in the fall of 1984, a number of samples were collected for analysis. In the central part of the property a chip sample across the sulphide facies iron formation was taken and this yielded an assay of 0.878 oz gold per ton. A second sample taken 75 m to the east assayed 0.503 oz gold per ton. Two samples taken from the pyritic, quartz sericite schist to the north assayed 0.137 and 0.027 oz gold per ton. Other samples collected from this horizon assayed up to 195 ppb gold. Approximately 400 m to the north a sample of a felsic metavolcanic gave 333 ppb gold.

The Cree Lake property contains a very favourable geological environment for economically significant gold mineralization. Preliminary work has identified a zone of felsic metavolcanics, sulphide-rich iron formation, carbonate alteration and gold mineralization across the central part of the property

ECONOMIC POTENTIAL (cont'd):

with a potential strike length of 4500m. Anomalous gold values to the north of this horizon and coincident with the broad zone of INPUT anomalies suggest a second important stratigraphic interval to be evaluated for gold mineralization.

## REFERENCES

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2. Donovan, J.F. (1968)  
Swayze and Dore Townships, Ontario. Dept. of Mines, Geol. Report 33, 22 p.
3. Gordon, J.B. et al (1979)  
Gold Deposits of Ontario, Part 2, Ontario Geological Survey, Mineral Deposits Circular 18.
4. Hodgson, C.J. and MacGeehan, P.J. (1982)  
Geological Characteristics of Gold Deposits in the Superior Province of the Canadian Shield, in Geology of Canadian Gold Deposits, Can. Inst. Min. & Met., Special Vol. 24, p. 211-232.
5. Furse, G.D. (1932)  
Geology of the Swayze Area, Ont. Dept. Mines, Vol. 41 pt. 3, 18p.
6. Meen, V.B. (1942)  
Geology of the Cunningham-Garnet Area, Ont. Dept. Mines, Vol. 51, pt. 7, 26 p.
7. OGS (1982)  
Airborne Electromagnetic and Total Intensity Magnetic Survey, Swayze Area, Cree Lake Sheet, District of Sudbury by Questor Surveys Limited for the Ont. Geol. Surv. Map 80541
8. Quinterra Resources Inc. Unpublished reports and maps of work performed on the Cree Lake Property, 1984.
9. Rickaby, H.C. (1934)  
Geology of the Swayze Gold Area, Ont. Dept. of Mines, Vol. XLIII, pt. 3, p. 1-36.
10. Siragusa, G.M. (1980)  
Cunningham Township, Sudbury District, Ontario, Ont. Geol. Surv. Map P-2339.



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## REPORT ON THE CREE LAKE PROPERTY

OCTOBER 1984.

### 1. Introduction.

During the period of the 25th to the 28th of October, prospecting work on the Cree Lake was carried out by L. Hallé and Bruce Raine. It was planned that some trenching and sampling should be done around a showing situated on line 0+00, 7+00S. This showing was reported in one previous sample to have a value of 0.878 ounces of gold per ton. It was also planned that more geological information should be added to the previous map made earlier this year, during a reconnaissance survey.

Following this work, we are now able to say that the showing on line 0+00, 7+00S consisted of several boulders, probably blasted, by previous workers during the 1930's. The bedrock was not located close to this boulder.

The work also located another outcrop where the iron formation is exposed. On this outcrop, the iron formation appears to be more rich in sulphides than the previous outcrop found on the road.

### 2. Work done.

#### 2.1. B. Raine work.

B. Raine drilled two outcrops for blasting. The location of these outcrops are shown on the L. Hallé map at the end of this report.

No blasting was done because the plane which was supposed to bring the caps couldn't fly due to bad weather conditions. The rest of his work consisted of prospecting and digging around the "gold" boulder pit. One of the trenches possibly hit the bedrock.

## 2.2 L. Hallé work.

The major part of the work done by L. Hallé consisted of prospecting for the origin of the boulder found in the pit. One day was also spent mapping at 1"=20' the outcrops surrounding the pit and the iron formation.

A total of 17 samples were collected as follows:

Old pit on line 00+00S

- 6 samples from pit for Au ppb (051453-58)
- 1 sample from a boulder 50' south of the pit for Au ppb (051459)
- 1 sample from a boulder 30' south of the pit for Au ppb (051460)

Boulder on the road

- 1 sample for Au ppb (051461)

Others:

- 7 samples of surrounding rock for Au ppb (051462-69)

Location shown on the map.

## 2.3 Resume of work.

	Prospecting.	Drilling.	Mapping.
B. RAine	1.0 days	1.5 days	0.0 days.
L. Hallé	1.5 days	0 days	1.0 days.

## 3. Conclusion and Recommendations.

The work done during this period did not locate the bedrock in the pit area nor the source of the boulder laying in the pit. The blasting done by previous trenching probably during the 1930's changed the size and the shape of these boulders and made it difficult to locate the source. However, it is suspected that these boulders came from the iron formation located about 300 to 500 feet north, although the rock there appears to be more cherty than the boulder. It's also possible that these boulders are part of a cross cutting quartz veins system in the iron formation.

These two hypothesis are based on the occurrence of iron formation boulders, the "gold" boulder and of some occurrences of small cross cutting quartz veins in the iron formation.

Our recommendation for further work are:

- 1- Strip the area of shallow overburden in the iron formation area.
- 2- Dig the pit where the "gold" boulder was found to see the bedrock.
- 3- Trench and sample the iron formation and the surrounding outcrops.
- 4- Do some more prospecting work to find more mineralized boulders.

Laurent Hallé  
Geologist

Bruce Raine  
Assistnat geologist.





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642 3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 57650

Date: May 16, 1984

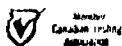
Received May 11, 1984 2 Samples of ore

Submitted by Quinterra Resources Incorporated, North Bay, Ontario Att: R. Lashbrook

SAMPLE NO.	GOLD PPB	COPPER PPM
4001	40	377 <i>Solder Lake</i>
4002	520	-- <i>cree Lake</i>

Per *G. Lebel*  
G. Lebel, Manager

ESTABLISHED 1928





# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B1126-84

DATE: October 5, 1984

SAMPLE(S) OF: Rock (40)

RECEIVED: October, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

<u>Sample No.</u>	<u>Gold ppb</u>	<u>Gold oz.</u>	<u>Sample No.</u>	<u>Gold ppb</u>	<u>Gold oz.</u>
G38531	8		G051151	11	
<i>Sylvia</i> { 2	11		<i>Sylvia</i> { 2	34	
G38535	77		<i>et.</i> { G052901	7	
G051101	45		2	40	
2		0.048	3	2	
3	4		4	7	
4	20		5	4	
5		0.028	6	78	
6	617		7	195	
7		0.086	<i>Green Lake</i> { 8	48	
8		0.026	9	3	
9		0.076	G052910	45	
G051110		7.24 **	1		0.878**
1		0.080	2	88	
2	537		3	333	
3	16		4	166	
4	7		5	147	
5	37		6	11	
6	4		7	149	
7	3		8	22	

\*\* Checked

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

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PER 



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TEL: 672-3107

## Certificate of Analysis

NO. B1309-84

DATE: November 9, 1984

SAMPLE(S) OF: Rock (26)

RECEIVED: November, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

	Sample No.	Gold ppb	Gold oz.	
Sylv. ck.	G51018	8		
	9	4		
	G51020	10		
	1	7		
Pichette Prop.	G51158	265		
	9		0.026	
	G51160		0.055**	
	1		0.584**	
	2	37		
Cree Lake	G51453	275		
	4	403		RE-ASSAY 296
	5	203		374
	6	373		207
	7	254		377
	8	378		250
	9	20		378
	G51460		0.026	
	1	77		
	2	171		
	3		0.137**	.008(?)
	4		0.027	.021
	5	71		
	6	19		
7	152			
8	8			
9	29			

\*\* Checked

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER:



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B1336-84

DATE: November 16, 1984

SAMPLE(S) OF: Rock "Repeats" (8)

RECEIVED: November, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

*see label repeats of repeats.*

<u>Sample No.</u>	<u>Gold ppb</u>	<u>Gold oz.</u>
G51453	296	
4	374	
5	207	
6	377	
7	250	
8	378	
G51463		0.008
4		0.021

N.B.: No Charge for the above assays

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

*[Signature]*  
PER: \_\_\_\_\_



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REPORT ON AN  
AIRBORNE MAGNETIC AND VLF-EM SURVEY  
SWAYZE AND CUNNINGHAM TOWNSHIPS  
PORCUPINE MINING DIVISION, ONTARIO

for

QUINTERRA RESOURCES INCORPORATED

by

TERRAQUEST LTD.  
Toronto,

February 6, 1985



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Appendix A - Instrument Specifications

Appendix B - List of Claim Numbers

Figure 1 - Location Map

Figure 2 - Claim Map

Figure 3 - Sample of Analogue Data

Maps in Jacket:

407.1-1 Total Magnetic Field

407.1-2 Vertical Magnetic Gradient

407.1-3 VLF Contours and Profiles

407.1-4 Interpretation

## 1. INTRODUCTION

A combined airborne magnetic and VLF-EM survey was carried out on a block of 100 claims located in Swayze and Cunningham Townships, in the Porcupine Mining Division, Ontario. The claim holder is Quintera Resources Inc., 321 Algonquin Avenue, North Bay, Ontario. The work was carried out by Terraquest Ltd., 111 Richmond Street West, Toronto, during the period October 20, 1984 to February 6, 1985.

The survey area was covered by a grid of parallel flight lines spaced 100 metres apart and aligned north-south.

The purpose of the survey was to assist in mapping geology, and to explore for shear zones, faults, and other structures potentially favourable to gold or base metal mineralization.

## 2. THE PROPERTY

The property is composed of 100 contiguous claims lying in Swayze and Cunningham Townships, Porcupine Mining Division, Ontario. Cree Lake lies on the western part of the north boundary of the property. Ground access is by winter trail from the village of Sultan, 19 km to the south which, itself is on the CPR Railway and Highway 667. The town of Chapleau lies 55 km to the west and Gogama is 70 km to the east. An all-weather road, originating from Sultan, comes to within 8 km of the eastern edge of the property at Garnet Lake.

Latitude and longitude are 47°46' and 82°40' respectively and the NTS reference is 41 0/15.

A list of claim numbers is given in Appendix B.





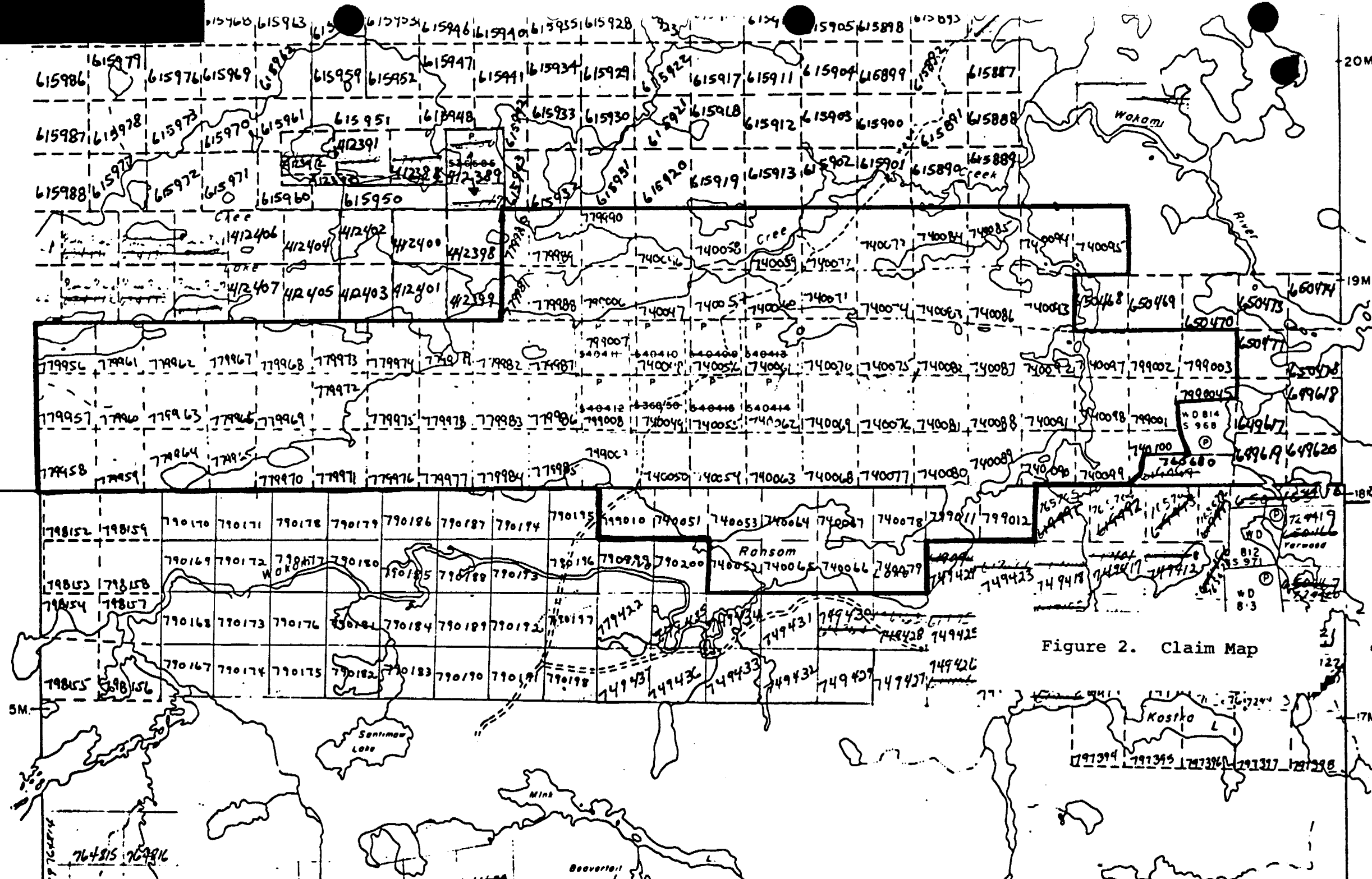


Figure 2. Claim Map

### 3. GEOLOGY

#### Map References

1. Map 2070, Swayze and Dore Twps., O.D.M., 1963, 1" =  $\frac{1}{2}$  mile.
2. Map 436 Swayze Gold Area, O.D.M., 1934.

The claim group is mainly underlain by a suite of intermediate to basic volcanic rocks with some interbedded acid volcanic rocks which are older. Two exposures of a granite intrusion have been mapped and a few short exposures of diabase dykes are shown on map 2070.

The intermediate to basic volcanic rocks are divided into a number of subformations of which chlorite schist, a massive andisite, and a grey massive andisite would appear to be the most common. Banded iron formation lies in places within the basic volcanics.

A gold and silver occurrence lies about 300 metres north of the north boundary in the massive andisite.

#### 4. SURVEY SPECIFICATIONS

##### 4.1 Instruments

The present survey was carried out using airborne instruments with the sensor elements mounted in the wing tips of a Cessna 182 aircraft. The magnetic field was measured with a proton precession magnetometer model GSM-8BA, manufactured by GEM Systems, Toronto. The VLF-EM field was measured with a three component total field strength instrument, model TOTEM-2A, manufactured by Herz Industries Ltd., Toronto. Terrain clearance is measured by a King KRA-10A Radar Altimeter. Data from these three instruments are processed by a UDAS-100 data processor, manufactured by Urtec Ltd. and then recorded onto a ninetrack tape recorder, and printed as profiles on a thermal printer in real time on the aircraft (Fig. 3). A Geocam video tape system is used to follow the flight path, and fiducial numbers generated by the UDAS-100 are recorded onto the video images.

Full specifications of the instruments are given in Appendix A.



#### 4.2 Lines and Data

- a) Line spacing                    100 metres
- b) Line direction                0 degrees, (astr.) (north/south)
- c) Flying height                 100 metres
- d) Flying speed                 156 km/hr
- e) Data point interval:
  - magnetic            42 metres
  - VLF EM             21 metres
- f) Tie Line interval 2 kilometres
- g) VLF transmitter Ch. #1 (Line) - Cutler, Maine 24.0 kHz.
- h) VLF transmitter Ch. #2 (Orthogonal) - Annapolis, Maryland  
21.4 kHz.
- i) Line kilometres within the claim boundaries - 161
- j) Line kilometres over total survey area - 190

#### 4.3 Tolerances

- a) Line spacing: Any gaps longer than one kilometre and wider than twice the line spacing were re flown.
- b) Flying height: Portions of line longer than one km which were above 125 metres were re flown if safety considerations were acceptable.
- c) Magnetic diurnal: Less than twenty gammas (nanotesla) deviation from a smooth background over a period of two minutes or less as seen on base station analogue record.
- d) Manoeuvre noise: approximately  $\pm 5$  gammas.

#### 4.4 Photo mosaics

For navigating the aircraft and recovering the flight path, photo mosaics were made at final map scale from existing air photos. In order to provide a semi-controlled base the airphotos were laid down on a topographic map which had been photographically adjusted to match the photo scale. The laydown was then photographed and printed at 1:10,000 scale for navigating and flight path recovery.

#### 5.0 Data processing

Flight path recovery was carried out in the field using a video tape viewer to observe the flight path as recorded by the Geocam video camera system. The flight path recovery was completed daily to enable reflights to be selected where needed for the following day.

The remaining data processing was carried out in the offices of Dataplotting Services Inc. in Toronto.

Magnetic levelling was computed in the standard manner by tying survey lines to the tie lines. The VLF-EM data was corrected by applying the following formula.

(A) Total Field Strength

$$V = \frac{SM + 100}{K} \quad \text{where} \quad K = \frac{S(A - 2R) + 100}{100}$$

V = final corrected value in %

M = raw data value from the magnetic tape

S = scale factor

A = average of all M on a given line.

R = standard deviation of A

(B) Quadrature

$$Q = \frac{SN}{K} \quad \text{where} \quad K = \frac{SB + 100}{100}$$

N = raw data

B = average of all N

The vertical magnetic gradient is computed from the total field data using a widely accepted method of transforming the data set into the frequency domain, applying a transfer function to calculate the gradient, and then transforming back to the spatial domain. The method is described by a number of authors including Grant, 1972, and Spector, 1968.

Grant, F. S., Review of data processing and interpretation methods in gravity and magnetics, Geophysics, August 1972.

Spector, A., 1968, Spectral analysis of aeromagnetic maps: unpub. University of Toronto thesis.

These calculations, and all other corrections and map contouring were carried out by Dataplotting Services Inc. of Toronto.

#### 6.0 INTERPRETATION

The contour pattern shows a number of linear magnetic anomalies which are roughly parallel and are trending in an east-west direction. Some of these coincide with outcrops of the chlorite schist and are interpreted as such. Others are within the general region shown as intermediate to basic volcanic rocks and are labelled 4m on the interpretation map to indicate magnetic units within the volcanics. Some lateral displacements of these linear units have been interpreted as faults.

Two very obvious linear magnetic anomalies striking approximately N23°W are believed to be diabase dykes and are marked as such. An outcrop of granite lies in a roughly oval-shaped anomaly which has a different texture and character from the units marked as 4m, and it is believed that this could indicate the granite intrusion that is mapped in that location.

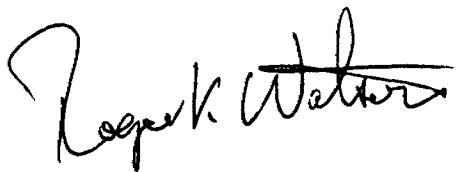


The VLF conductor axes conform to the geology and the magnetic pattern in most places. The unit interpreted as chlorite schist is conductive, which is normal for this rock type. Other of the magnetic units appear not to be conductive and in fact some are quite resistive which would be more common for silicified iron formation that is outcropping or has very thin overburden.

7. SUMMARY

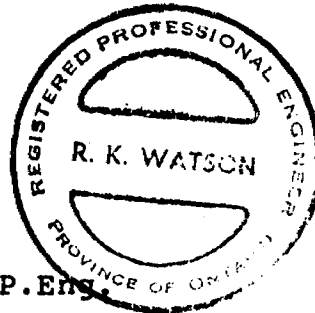
An airborne magnetic and VLF-EM survey has been carried out over the claim block at a density of approximately 1 mile per mineral claim. The information from the survey has been interpreted to modify and update the existing geology.

TERRAQUEST LIMITED



Roger K. Watson, B.A.Sc., P.Eng.

Geophysicist



**APPENDIX A**

GSM - 8 BA AIRBORNE PROTON MAGNETOMETER

SPECIFICATIONS

**Resolution:** 0.5 gamma

**Accuracy:**  $\pm 1$  gamma over operating range

**Range:** 20,000-100,000 gamma in 23 overlapping steps

**Gradient Tolerance:** Up to 5,000 gamma/meter

**Output:** VISUAL: 5 digit 1 cm (0.4") high Liquid Crystal Display, visible in any ambient light  
DIGITAL: Multiplied precession frequency and gating pulse  
ANALOGUE: 0-99 gamma (optional)

**External Trigger:** Externally triggered cycling with period of 1.00 sec.

**Power Requirements:** 28V DC, 8Ws per reading

**Operating Temperature:** -40 to +55C

**Dimensions:** Console: 15x8x15 cm (6x3 $\frac{1}{2}$ x6")  
Sensor: 14x7 cm dia (5  $\frac{3}{4}$ x2  $\frac{3}{4}$ " dia)  
Staff: 175 cm (70") extended, 53 cm (21") collapsed or sectional 45 cm (18") each section

**Weight:** 2.7 kg (6 lb) complete, 2.3 kg (5 lb) in back-pack mode

**Manufacturer:** Gem Systems Inc.  
105 Scarsdale Rd.  
Don Mills, Ontario M3B 2R5

# Totem 2A

Multi channel

VLF Electromagnetic  
airborne survey instrument

Specifications

## Introduction.

The Totem-2A measures basically the same parameters and shares the same package configuration as the well established Totem-1A.

This new generation instrument, however, measures multiple parameters on two channels simultaneously, with less noise and greater accuracy. These advancements have been achieved while maintaining the simple installation and operating procedures of the 1A model.

The Totem-2A employs state of art digital and linear integrated circuits to implement the functions of crystal controlled phase locked loop frequency synthesizers, dual frequency heterodyne conversion and proprietary time domain sampling vector computation techniques.

## Features.

The principal parameters measured are the change in total field and the vertical quadrature field. Parameters also available are the total field gradient (from sensors in two locations) and the horizontal quadrature field. The quadrature polarity is defined by the direction of flight relative to the field. The total and quadrature magnitudes are insensitive to sensor orientation in pitch, roll and yaw.

One obvious advantage of dual frequency operation is that primary sources can be selected to ensure good coupling with conductors of any orientation. Potential uses of the gradient mode are enhanced interline contouring and delineation of multiple conductors with horizontal and vertical gradient respectively.

Specifications subject to change.

**Primary source:** Magnetic field component radiated from VLF radio transmitters (one or two simultaneously).

**Parameters measured:** Total field, vertical quadrature, horizontal quadrature, gradient.

**Frequency range:** 15kHz to 250kHz front panel selectable for each channel in 100Hz steps.

**Sensitivity range:** 130uV/m to 100mV/m at 20kHz, 3dB down at 14kHz and 24kHz.

**VLF signal bandpass:** -3dB at  $\pm 80$ Hz,  $\pm 4\%$  variation at  $\pm 50$ Hz.

**Adjacent channel rejection:** 300 to 800Hz = 20 to 32dB, 800 to 1500Hz = 32 to 40dB,  $> 1500$ Hz  $> 40$ dB (for  $\pm 2\%$  noise envelope).

**Out of band rejection:** 10kHz to 2.5kHz =  $5 \times 10^{-4}$  A/m to  $5 \times 10^{-1}$  A/m  $\pm 2.5$ kHz rising at 12dB/octave  
30kHz to 60kHz =  $5 \times 10^{-4}$  A/m to  $8 \times 10^{-3}$  A/m  $> 60$ kHz rising at 6dB/octave (for no overload condition).

**Output span:**  $\pm 100\% = \pm 1.0$ V

**Output filter:** Time constant 1sec for 0 to 50% or 10% to 90%, noise bandwidth 0.3Hz (second order LP).

**Internal noise:** 1.3uV/m rms (ambient noise will exceed this).

**Sferics filter:** Reduces noise contribution of impulse interference.

**Electric field rejection:**  $< 0.5\%$  error for 20m tow cable.

**Controls:** Power switch, frequency selector switches (line & ortho) level controls (line & ortho), meter switch (total/quad) sferics filter switch.

**Displays:** Meters (line & ortho), sferics light, overload light.

**Inputs:** Power, 23 to 32 Vdc fused 0.5Amp.  
Signal, Sensor upper, Sensor lower.

**Outputs:** Total, quad, gradient, multiplexed (line & ortho).  
Audio monitor, stereo line & ortho.

**Dimensions & weight:** Console 19" rack mounted, 4.5cm high x 34cm deep, 3.8kg. Sensor and pre-amplifier assembly 15cm dia. and 46cm long, 1.5kg.

## SPECIFICATIONS: UNIVERSAL DATA ACQUISITION SYSTEM URTEC MODEL — UDAS-100

### BASIC UDAS

#### MICROPROCESSOR AND MEMORY:

- Texas Instruments TMS 9900 - 16 BIT with built in multiply and divide hardware.
- Total memory expandable to 32k words.
- Basic system contains:
  - 16k - 16 bit word RAM
  - Up to 8k - 16 bit word EPROM
  - Cartridge program loading
  - 12k - Bytes of non volatile RAM program storage (optional)

#### INPUTS AND OUTPUTS

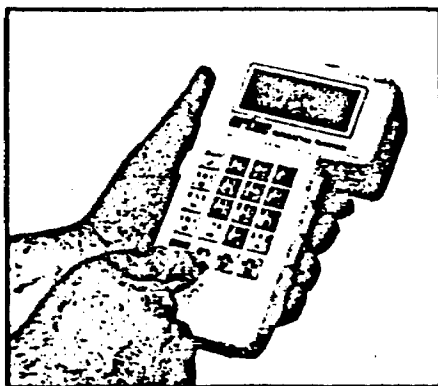
- Analog input: 16 differential input channels with 12 bit resolution at  $\pm 5V$  full scale
- Analog output - up to 16 channels (optional)
- 30 addressable ports for multiple byte transfer
- 56 input/output lines for BCD and binary data information (transferred in multiples of 8 bit bytes)
- 3 pulse accumulator inputs for frequency and pulse information. (eg. — Doppler navigation and radar altimeter).
- 2 digital spectrometer inputs. (eg. upward and downward detectors selectable at 256 or 512 channels)
- 1 RS 232 serial port for interactive keyboard and display
- 1 RS 232 serial port for addition of CRT floppy disks and other terminals.
- 1 same protocol as RS 232 with TTL level
- 1 operator controlled fiducial input (switch or keyboard activated)
- Y output for graphic display on oscilloscope
- High speed data transfer-lines GPIB — IEEE-488 compatible

#### INTERFACES:

- Magnetometer control and signal input for proton or cesium magnetometers
- Error condition indicator level for remote monitoring of diagnostic tests.
- Controller and outputs for two 9 track 1/2 inch magnetic tape units.
- Printer/Recorder controller.
- Digital interface to navigation camera (8 digits of fiducial and coding information).
- Controller for magnetic tape cartridge (program loader)
- Disk storage interfaced via RS-232 or GPIB — IEEE-488 BUS

#### CONTROLS:

- System power on/off switch
- Keyboard with 24 character alphanumeric display. Keyboard/display can be operated on main console or remotely
- Manual start and load of Julian clock and fiducial numbers.
- All control functions interrogate with YES or NO answer.



Hand Held Interactive Terminal

#### SOFTWARE:

The basic system is supplied with the necessary programs (on magnetic cartridge) to execute routine operational functions and standard survey requirements. Additional dedicated programs are also included to provide:

- Spectrometer Calibration
- Automatic resolution check
- Full spectra printout on recorder/printer
- Continuous monitoring of system gain using natural "K" photopack
- Automatic window adjustments
- Fast total count sampling (0.1 sec) for point sources resolution.
- Selective graphic display options.
- Read after write data verification.
- Selective data tape dump
- Magnetic tape copy (optional)
- Data processing and plotting program (optional)
- Diagnostic test programs
- A variety of additional special functions programs are available on request.

### PRINTER/RECORDER

#### CONTROLS

- Power on/off switch
- Automatic paper feed
- Print contrast control
- On/off print head control
- Automatic take-up spool

#### FORMATS

- Alphanumeric, complete ASCII character set. Thermal 5 x 7 dot matrix
- Graphics 70 x 70 dots per inch resolution
- Software programmable under UDAS control
- Records up to 16 analog traces each with variable O and F.S. setting. Traces can be stacked or overlapping. Software controlled. Trace position and amplitude can be adjusted via interactive keyboard.
- Overflow is automatic by digital stepping.
- Complete alphanumeric annotations can be printed on recording chart (eg. name of project and survey area details, fiducial numbers, time, recording scales and parameters etc.)

#### PAPER

- Thermosensitive paper 222mm (8.75 in.) wide, 30 meter (100 ft.) long
- Thermal print head is board mounted and easy to replace

#### POWER

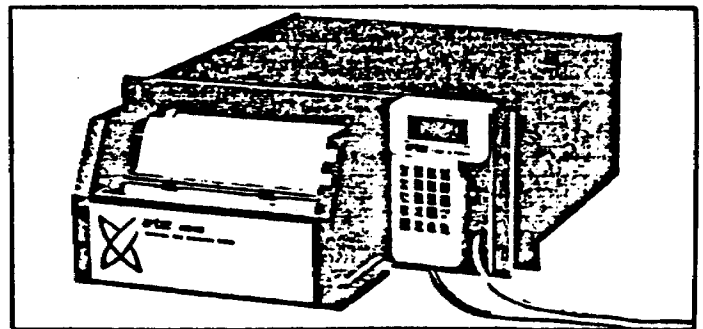
- 24 - 28VDC 3.0 A average

#### WEIGHT

- 15.6 kg. 35 lbs.

#### DIMENSIONS

- 48.2 cm (19 in.) wide, 17.8 cm (7.0 in.) high, 40.6 cm (16 in.) deep (standard rack mount).



UDAS-100 Console with Printer/Recorder Extended

FOR FURTHER INFORMATION CONTACT

**urtec**

INSTRUMENTS SALES LIMITED

APPENDIX B

SWAYZE & CUNNINGHAM TOWNSHIP.

MINING CLAIM NUMBER

PREFIX P

P	740046	
	740047	
	740048	
	740049	
	740050	
	740051	
	740052	
	740053	
	740054	
	740055	
	740056	
	740057	
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	740065	
	740066	
	740067	
	740068	

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	740088	
	740089	
	740090	
	740091	

740092	779971	779982
740093	779972	779983
740094	779973	779984
740095	779974	779985
740097	779975	779986
740098	779976	779987
740099	779977	779988
740100	779978	779989
779956	779979	779990
779957	779980	799001
779958	779981	799002
779959		799003
779960		799004
779961		799006
779962		799007
779963		799008
779964		799009
779965		799010
779966		799011
779967		799012
779968		
779969		
779970		



42B01NE8577 63.4501 PENHORWOOD

040

NAT RIVER PROPERTY

1984

EXPLORATION



QUINTERRA RESOURCES INC.

INTERNAL REPORT

GEOLOGY OF  
NAT RIVER PROPERTY

by

Laurent Halle

September 20, 1984

### 1. Introduction

The Nat River property is held jointly by Quintera Resources Inc. (50% interest) and by Highland Crow Ltd. The property consisted of 17 contiguous claims in the north-east quadrant of Penhorwood Township., 50 miles west of Timmins.

During the period of September 5th to September 9th, L. Hallé carried out a geological survey over the property at the scale of 1"=200'. The location of outcrop was put according to a 400' by 100' cut grid. The survey was done to provide a basic geological map for further work.

### 2. Location, Access and Physiography

The Nat River property is located 50 miles south-west of Timmins in Penhorwood Township. The access from Timmins is via highway 101 west, then south about 7 miles on the Kenogaming Lumber Company haulage road, which cuts across the middle of the claim group.

Most of the property has been recently logged and is covered by clay, sand and gravel. One small river and few creeks cross the property. The bedrock is then poorly exposed over the whole group.

### 3. Previous Work

Not much work has been done on this property. During the 1950's , the Kukatush Mining Corp had investigated the group for iron potential in the iron formation. Some old trenches near mineralized quartz boulders are the only evidence for gold prospecting in the past. Recently, Quintera Resources has done a magnetometer survey, trenching and stripping program.

#### 4. General Geology.

The Nat River Property is located in the Abitibi-Swayze River Gold Belt. The property is underlain by mafic volcanics, some felsic prophyry intrusions and iron formation. The general strike is northeast and dips fairly steep north west.

#### 5. Local Geology.

##### 5.1. Volcanic Rocks.

Most of the mafic volcanic rocks appear in the northern part of the property. They are basaltic to andesitic. One flow unit has been identified as a pillow breccia. It is composed of a brecciated pillow border in a fairly brecciated horizon. The pillows are generally hard to recognize in the field, but in one outcrop the author has been able to recognize the texture (L.4+240, 800N).

The other volcanic rocks found elsewhere on the property are highly chloritized mafic rocks, except for three outcrops (20+00W, 740S) which might be mafic agglomerate or lapilli tuff.

##### 5.2 Tuff.

###### 5.2.1. Mafic Tuff.

One large outcrop in the south center of the property appears to be a well laminated mafic tuff. These rocks are again hard to identify due to the intense alteration, but the lamination are preserved and are defined by small beds of carbonate and sericitic material. Some pyrite crystals have been found in the tuff.

### 5.2.2 Acid Tuff

The acid tuff has been found close to the iron formation. They are well laminated and have in some part a spherulitic texture. These spherulitic beds are 5 to 15 inches wide and seem to have no lateral continuity. The tuffs are also well mineralized in pyrite along some of these beds.

## 6. Intrusive rocks

### 6.1 Porphyritic Intrusion

A quartz porphyry rock is exposed in the west part of the property. This rock contains over 30% quartz phenocrysts of 1mm to 5mm diameter. The feldspar ground mass is probably plagioclase rich. In some outcrops the quartz phenocrysts are not visible due to the proximity of the contact with volcanic rocks or the numerous veinlets of quartz, which are probably remobilized quartz from the intrusion (L45+20E, 1800S). Several other small dykes over the whole property must be the apophysis of this intrusion.

### 6.2

Northeast trending diabase gabbro dykes intrude all the rocks and are the last intrusive event in the area. They cut the intrusive felsic rocks in some places (L52+120W, 550N). They are magnetic and have a medium grain size.

## 7. Structure

### 7.1 Folds

There are at least two phases of deformation and maybe three. The first has a well developed schistosity, while the second phase folds the

schistosity of the first. The  $P_2$  fold axis seems to be folded by a third phase. The  $P_2$  fold axis has a spread out orientation and this means that there could be a third phase of deformation.

## 7.2 Faulting

No major faults was found during this survey, but the presence of several minor faults with a northwest trend could be helpful to interpret a major structure. The magnetometer survey also indicated a displacement of the iron formation in the southeast part of the group.

## 8. Conclusion

Geologically, the Nat River Property is well located for gold mineralization. The iron formation which crosses the property could be a good chemical trap for gold precipitation where it is intersected by an indicated major fault.

## 9. Recommendations

1. The southeast part of the claim group should be further investigated to check if there is a major structure. This area could be a good target for gold trapped in a fault or the nose of a fold.
2. More work should be done in structure interpretation.



42B01NE8577 63.4501 PENHORWOOD

050

QUINTERRA RESOURCES INC.

GEOLOGY OF  
NAT RIVER PROPERTY  
PENHORWOOD TOWNSHIP

by

Laurent Hallé

Raymond Lashbrook

November 21, 1984.

## 1. Introduction.

The Nat River property is held jointly by Quintera Resources Inc. (50% interest) and by Highland Crow Ltd. The property consists of 17 contiguous claims in the northeast quadrant of Penhorwood Township.

During the period of September 5th to September 9th, L. Hallé carried out a geological survey on these three claims at the scale of 1"=400'. The survey was carried out along a 400' by 100' cut grid.

The survey was done to provide a basic geological map for further work, but the lack of outcrop provided only minor geological information for this part of the group.

## 2. Location, Access and Physiography.

The Nat River property is located 50 miles southwest of Timmins in Penhorwood Township. The access from Timmins is via highway 101 west, then south about 7 miles on the Kenogaming Lumber Company haulage road, which cuts across the middle of the claim group.

Most of the property has been recently logged and is covered by clay, sand and gravel. In the uncut area, mostly in the west part, the main types of trees are spruce, balsam, pine and birch. One small river and a few creeks cross the property. The bedrock is then poorly exposed over the whole group.

## 3. Previous Work.

Not much work has been done on this property. During the 1950's the Kukatush Mining Corp, as part of a larger group, investigated for iron formation. Some old trenches near mineralized quartz boulders are the only evidence for gold prospecting in the past.

## 4. General Geology.

The Nat River property lies in the Abitibi-Swayze River Gold Belt. The area is underlain by mafic volcanics, felsic volcanics, felsic porphyry intrusions and iron formation. The general strike is northeast and dips fairly steep northwest.

## 5. Local Geology.

Only one outcrop was exposed on the three claims. It was a mafic volcanic, possibly andesite, and was cut by a small quartz vein. Minor disseminated pyrite was also noted.

The rest of the claims are covered by gravel, glacial till and sand.

A previous magnetic survey over these claims has one magnetic anomaly (to 61,400 gammas) crossing the 3 lines between 4N and 9N. It's shape is slightly arcuate and fairly symmetrical about a high central core probably indicating a near vertical, dyke-like intrusion.

The one outcrop is located on the south side of a weak magnetic expression increasing to the north.

Due to lack of outcrop and any correlation with the magnetics no other clues as to the nature of the underlying geology can be got at this time.

## 6. Conclusion.

Although there is a lack of outcrop on these three claims, the potential for gold mineralization remains. The strong carbonate alteration zone and porphyry intrusion to the east could have a lateral extension under the glacial material and constitute a setting for gold mineralization.



CERTIFICATION

I, Laurent Hallé of 8 Chemin de Fabre, Ville-Marie, Quebec  
do hereby affirm that

- 1) I am a graduate of the University of Quebec of Montreal  
and am enrolled in a Masters degree at McGill University.
- 2) I have been practising my profession in Canada since 1982.
- 3) I have no direct interest in these claims.
- 4) The accompanying report is based on observations obtained  
while mapping the property.

  
.....  
Laurent Hallé.

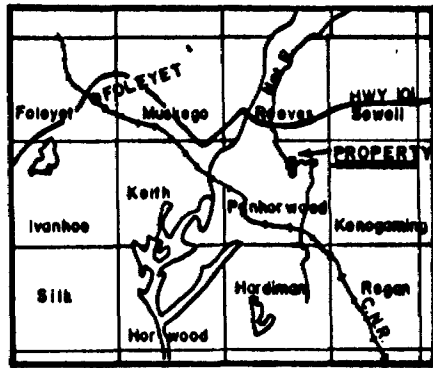
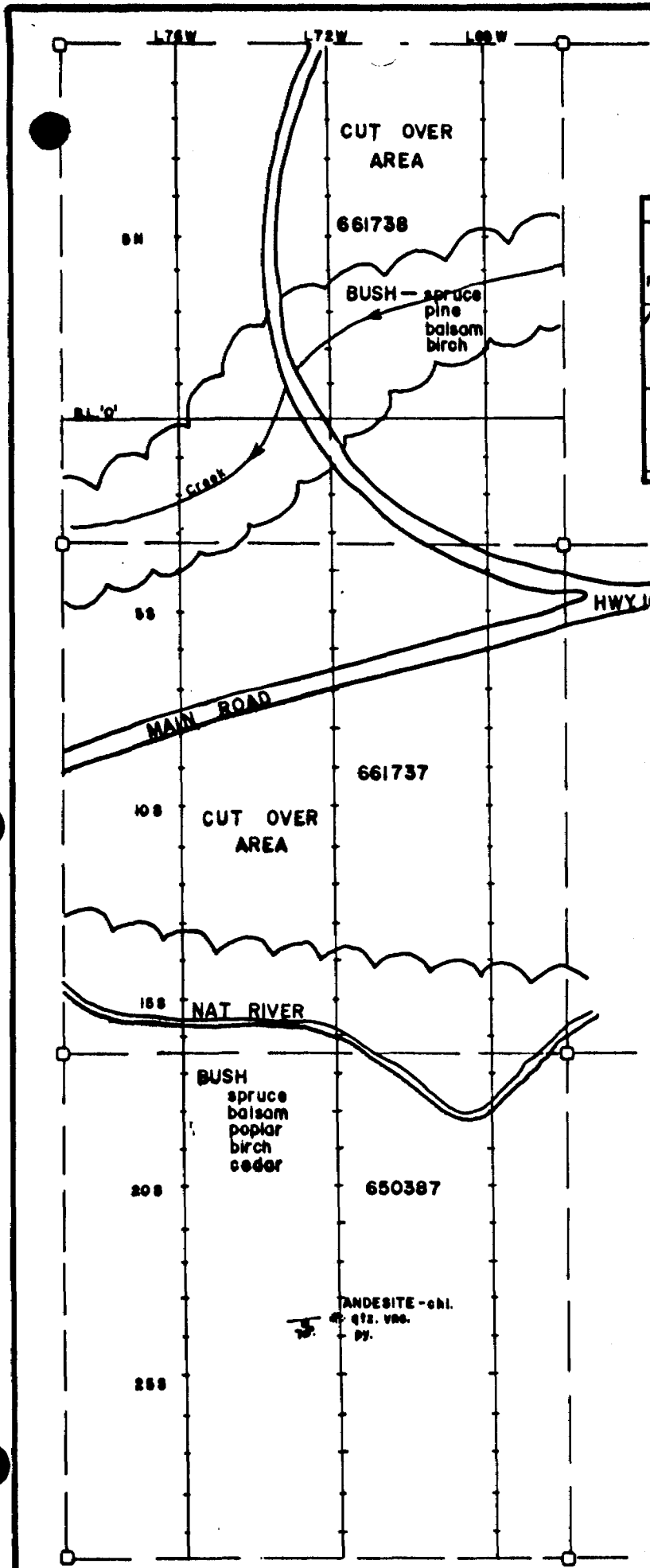
CERTIFICATION

I, Raymond Lashbrook of 979 Tackaberry Drive, North Bay, Ontario, do hereby affirm that

- 1) I am a graduate of Haileybury School of Mines a a Mining Technician in 1969.
- 2) I have been practicing my profession in Canada since 1969.
- 3) I have no direct interest in these claims.
- 4) The accompanying report is based on observations obtained during visits to the property.





*Raymond Lashbrook*

Raymond Lashbrook.



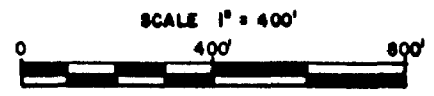
LOCATION MAP  
1" = 16mi.

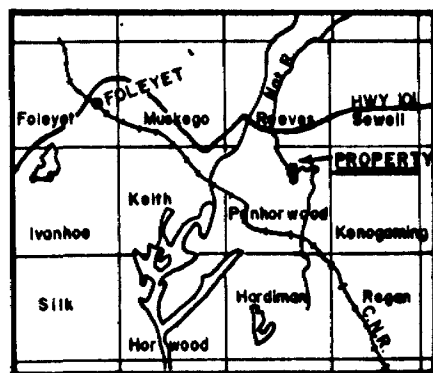
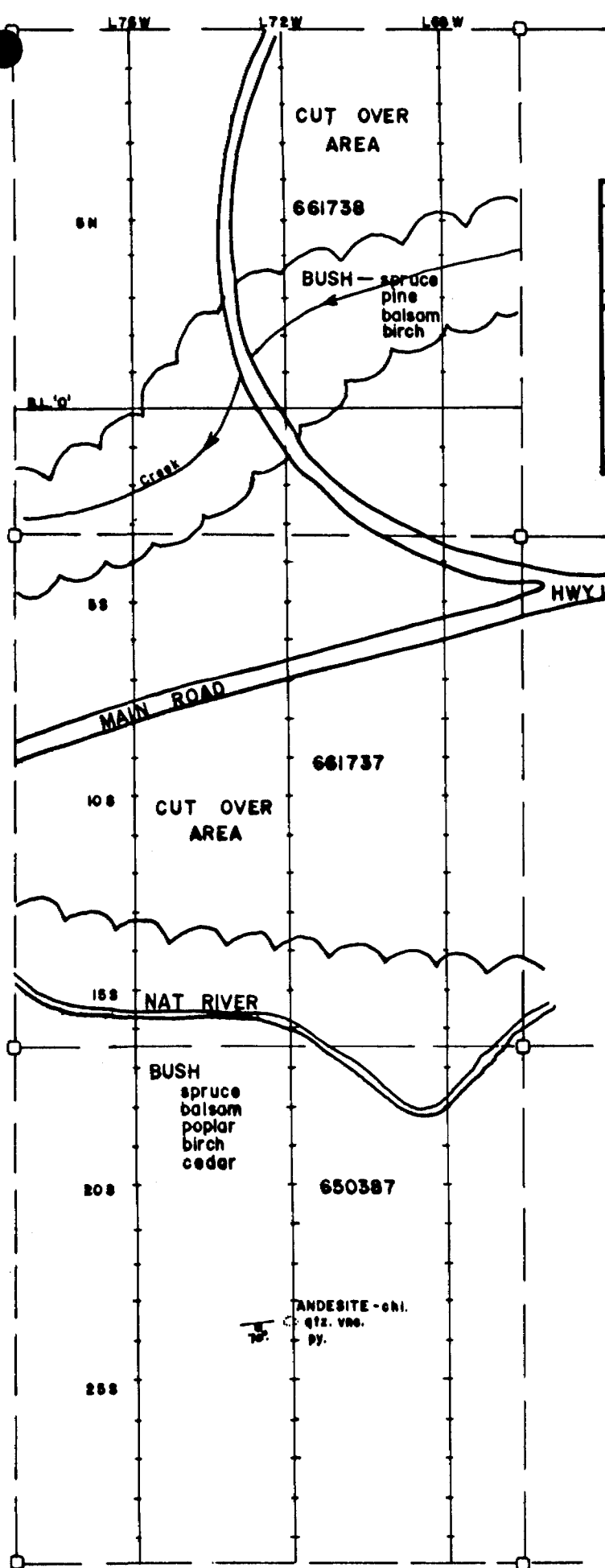
**LEGEND**

-  APPROXIMATE CUT LIMIT
-  CLAIM POST
-  OUTCROP
-  JOINT WITH DIP

QUINTERRA RESOURCES INC.  
 NAT RIVER PROPERTY  
 PENHORWOOD TWP., ONT.

**GEOLOGY**



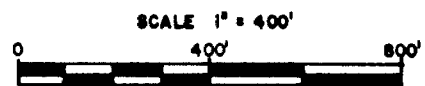


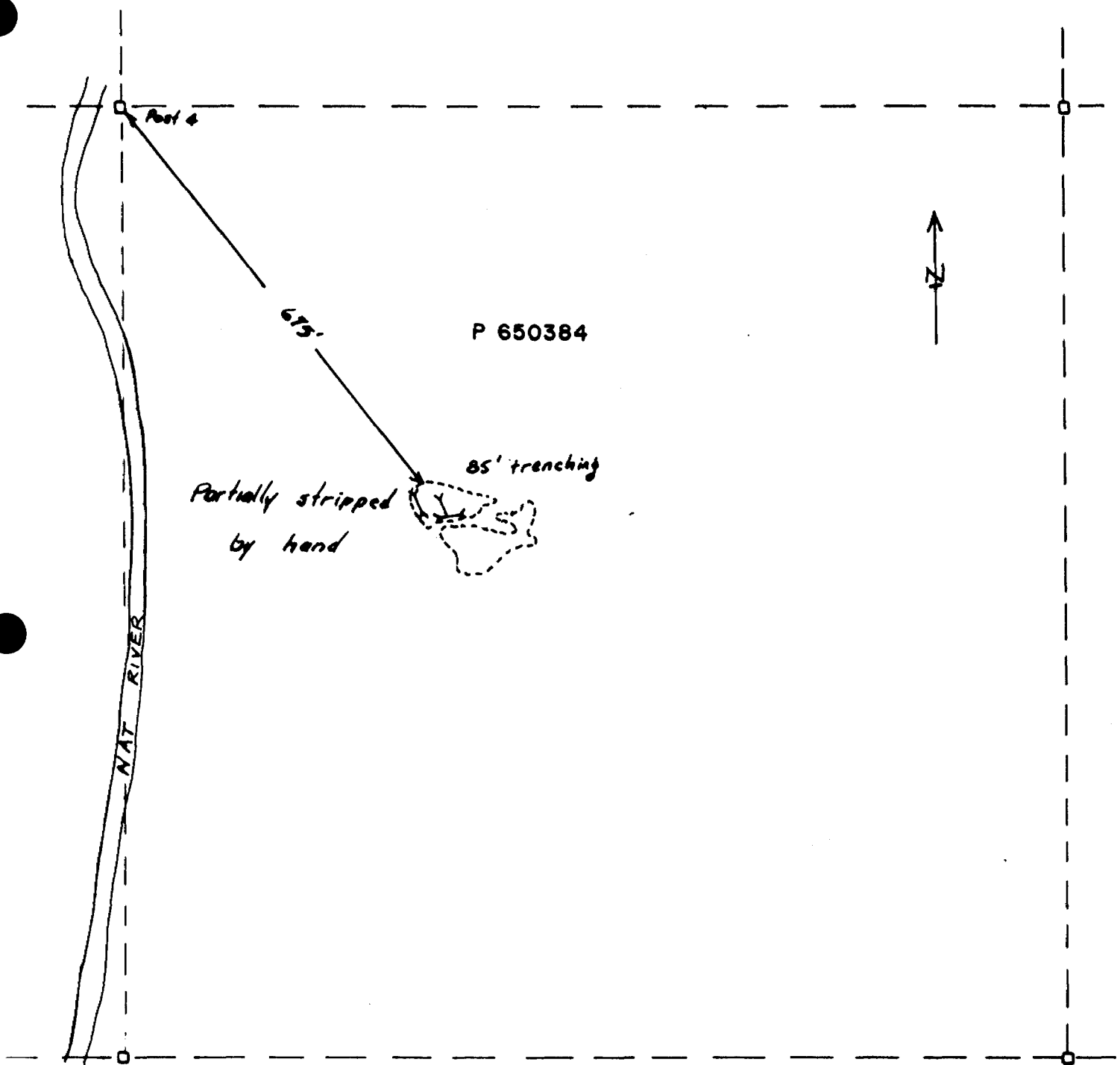
LOCATION MAP  
1" = 16mi.

**LEGEND**

- APPROXIMATE CUT LIMIT
- CLAIM POST
- OUTCROP
- JOINT with DIP

QUINTERRA RESOURCES INC.  
**NAT RIVER PROPERTY**  
 PENHORWOOD TWP., ONT.  
**GEOLOGY**





1" = 200'  
Ray Lashbrook  
Jan 1985

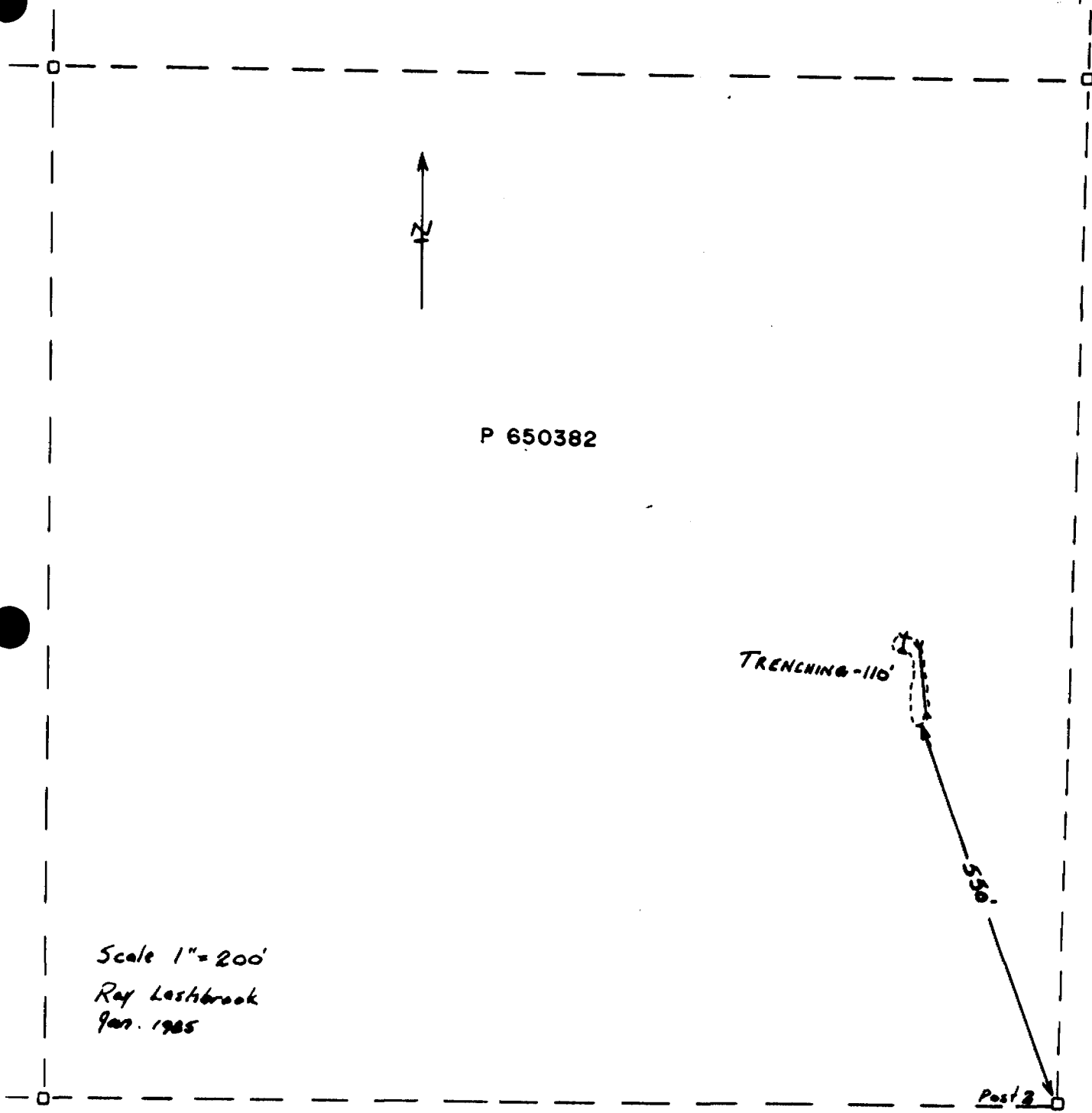
P 650382

TRENCHING - 110'

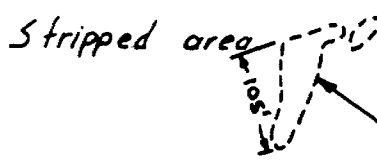
550'

Post 2

Scale 1" = 200'  
Ray Leshbrook  
Jan. 1985



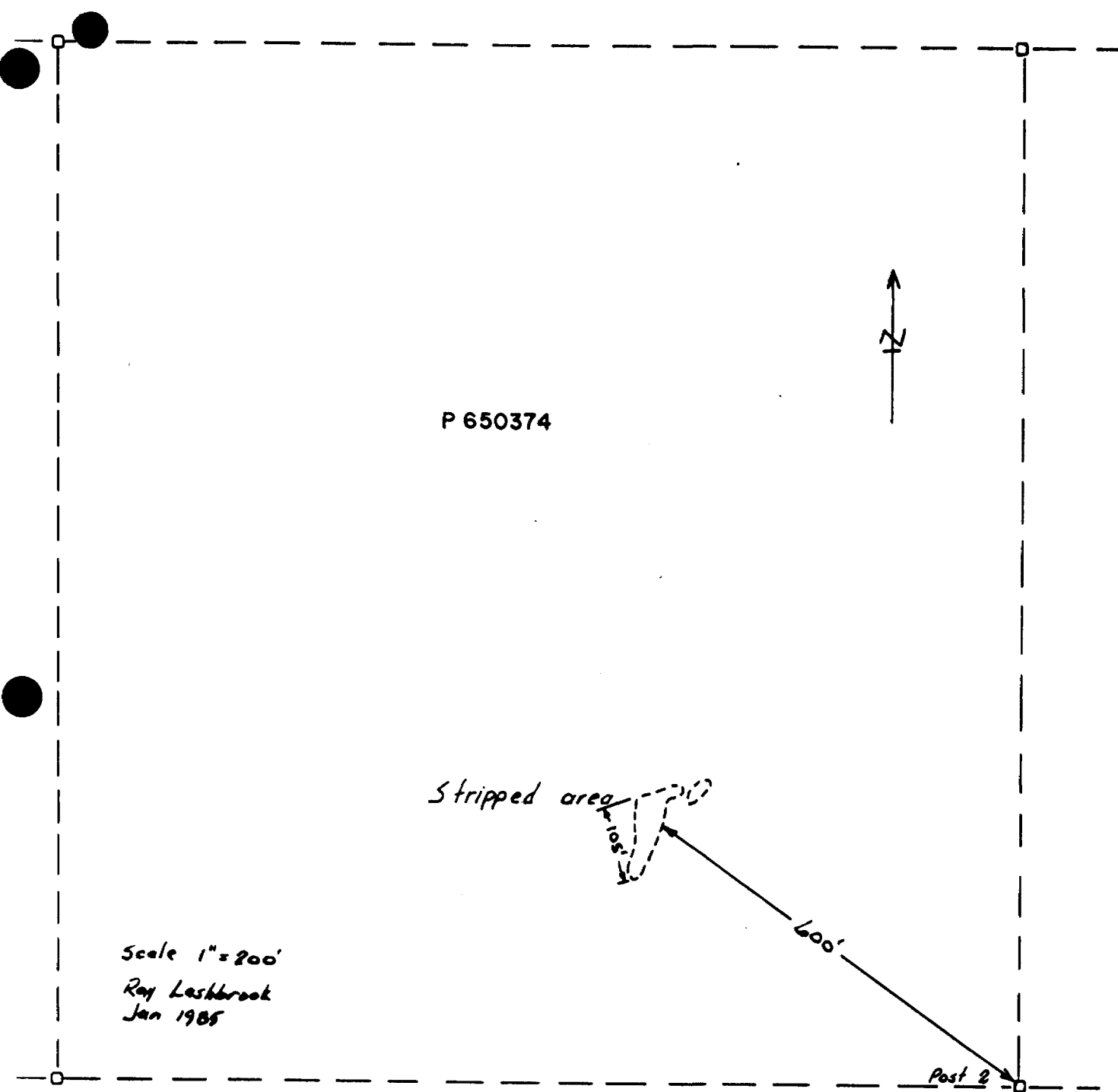
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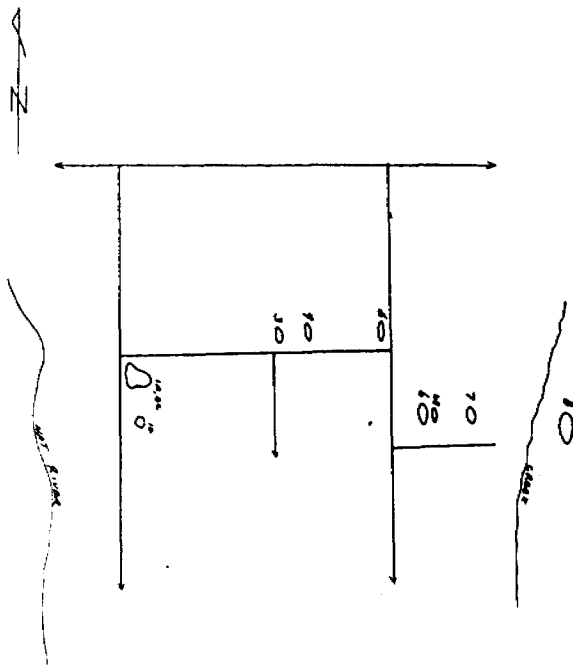
600'

Scale 1" = 200'  
Ray Lashbrook  
Jan 1985

Post 2



NAT RIVER TRUCK LOCATION MAP



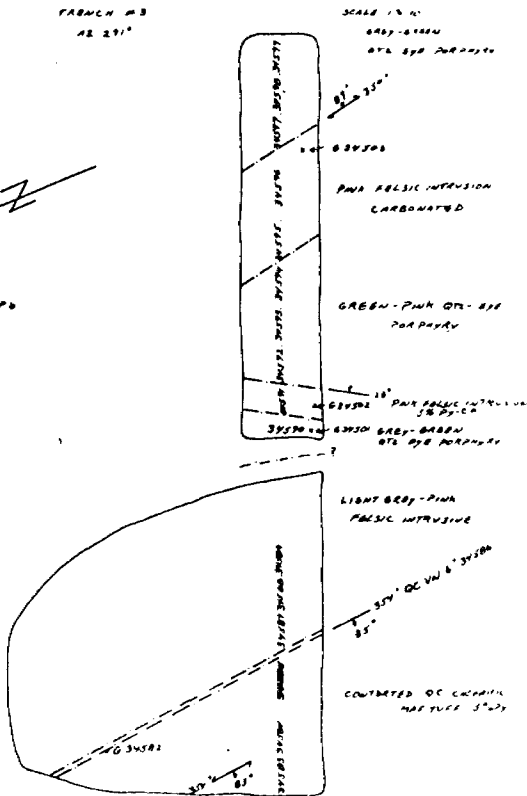




HAY RIVER  
FARMCH #3  
AZ 271°



SAMPLE	DEPTH
34501	37
34502	18
34503	8
34504	49
34505	19
34506	19
34507	109
34508	18
34509	18
34510	21
34511	8
34512	8
34513	8
34514	27
34515	7
34516	18
34517	3
34518	16
34519	5



SCALE 1/4"  
34501-34504  
34505-34506

34507

34508

PINK FELSIC INTRUSION  
CARBONATED

GREEN-PINK QZ-EPH  
PORPHYRY

34509-34510  
34511-34512  
34513-34514  
34515-34516  
34517-34518  
34519

LIGHT GRAY-PINK  
FELSIC INTRUSIVE

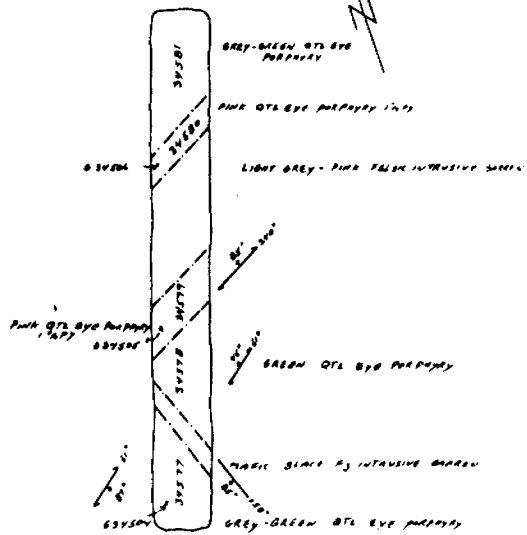
34515-34516  
34517-34518  
34519

CONTACTED BY CRYSTALLINE  
MATERIAL 34519

NAT RIVER  
TRENCH BY  
AL 10'

SCALE 1"=10'

SAMPLE #	DEPTH
63464	16
63465	15
63466	13
34577	8
34578	5
34579	2
34580	20
34581	7



Geological cross-section of the Nat River Trench by AL 10'

Scale 1"=10'

Grey-green Qtz eye porphyry

Pink Qtz eye porphyry

Light grey - pink felsic intrusive diorite

Diabase

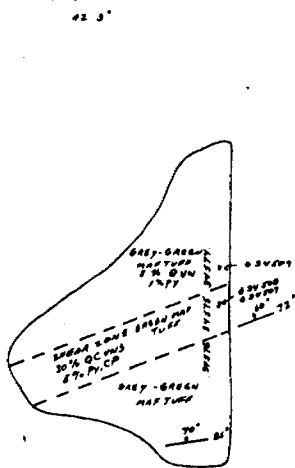
Green Qtz eye porphyry

Marble slice F3 intrusive gneiss

Grey-green Qtz eye porphyry

Fault Qtz eye porphyry

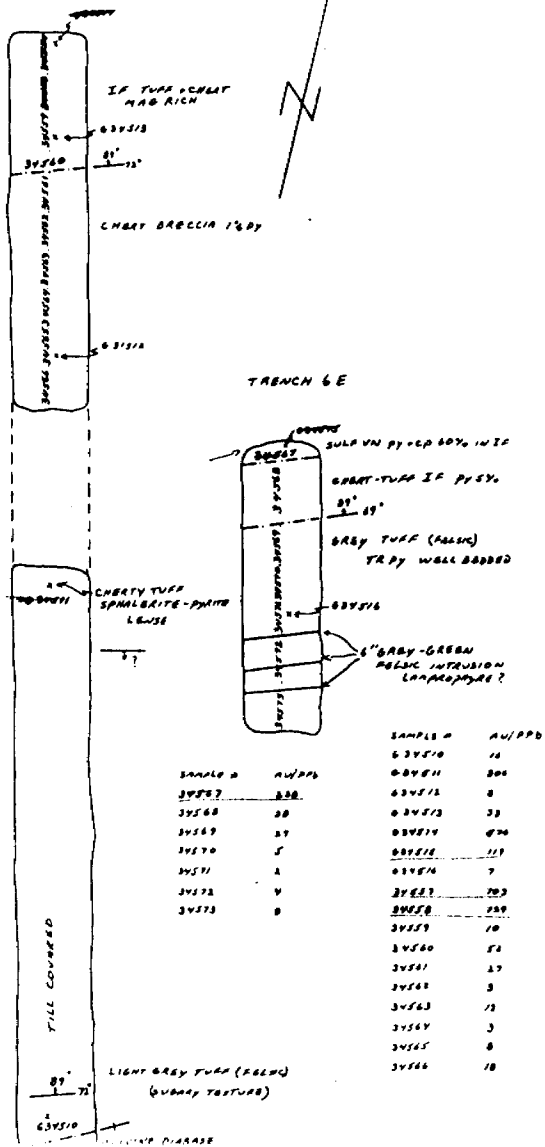
HAT RIVER  
TRENCH # 8  
42.3'

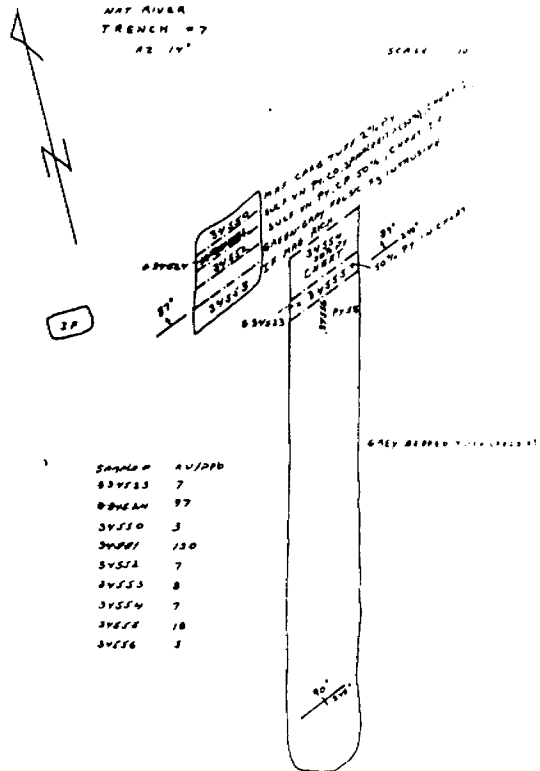


SAMPLE #	DEPTH
63457	0.31
63458	0.53
63459	1
63460	1.47
63461	2.90
63462	7

NAT RIVER  
TRENCH #6  
AZ 186°

SCALE 1"=10'

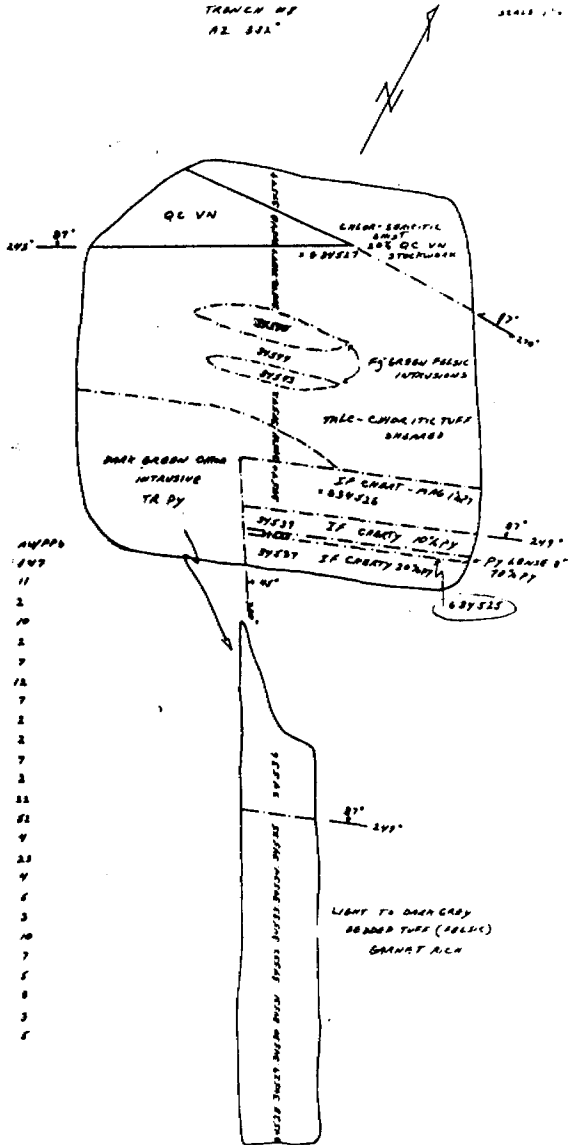




SAMPLE #	AU/PPB
3V553	7
3V554	97
3V555	3
3V556	130
3V557	7
3V558	8
3V559	7
3V560	18
3V561	3

NAT RIVER  
TRANCH #2  
AZ 321

SCALE 1" = 10'



SAMPLE #	DEPTH
63V525	11
63V526	11
63V527	2
63V528	10
63V529	2
63V530	7
63V531	12
63V532	7
63V533	2
63V534	2
63V535	7
63V536	2
63V537	12
63V538	12
63V539	9
63V540	12
63V541	9
63V542	6
63V543	3
63V544	10
63V545	7
63V546	6
63V547	8
63V548	3
63V549	6

HAT RIVER  
TRAVEL 10  
AL 26°

SCALE 1"=10'



SAMPLE #	WUPD
63V517	321
63V518	450
34600	155



○ 45% Py in Hat River + 80 Stockwater



LARGE 80% Py  
80 Stockwater in Hat River  
2-5% Py, 80% Hat River





# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B681-84

Page 2 of 2

DATE: July 17, 1984

SAMPLE(S) OF: Rock (124)

RECEIVED: July, 1984

SAMPLE(S) FROM: W. O. Karvinen & Associates Limited

PN 073 NAT RIVER

<u>Sample No.</u>	<u>Gold/ppb</u>	<u>Sample No.</u>	<u>Gold/ppb</u>
G34563	12	G34596	18
4	3	7	3
5	8	8	16
6	18	9	5
7	238	G34600	175
8	38	1	7
9	29	2	11
G34570	5	3	2
1	2	4	14
2	4	5	30
3	8	6	5
4	147	7	8
5	298	8	415**
6	7	9	8
7	3	G34610	3
8	3	1	3
9	2	2	5
G34580	20	3	4
1	7	4	3
2	49	5	3
3	14	6	3
4	19	7	4
5	107	8	22
6	18	9	3
7	18	G34620	3
8	21	1	4
9	8	2	5
G34590	8	3	23
1	2	4	11
2	8	5	4
3	4	6	2
4	29		
5	7		

\*\* Checked

RECEIVED  
Aug 7/84  
RECEIVED

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IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.



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## Certificate of Analysis

NO. B681-84

Page 1 of 2

DATE: July 17, 1984

SAMPLE(S) OF: Rock (124)

RECEIVED: July, 1984

SAMPLE(S) FROM: W. O. Karvinen & Associates Limited

PN 073 Nat River

<u>Sample No.</u>	<u>Gold/ppb</u>	<u>Sample No.</u>	<u>Gold/ppb</u>
G34501	37	G34532	7
2	18	3	2
3	8	4	2
4	16	5	7
5	15	6	2
6	43	7	22
7	631**	8	52
8	253**	9	4
9	3	G34540	23
G34510	16	1	4
1	306	2	5
2	8	3	3
3	33	4	10
4	576**	5	7
5	119	6	5
6	7	7	8
7	321	8	3
8	650**	9	5
9	21	G34550	3
G34520	4	1	130
1	4	2	7
2	8	3	8
3	7	4	7
4	97	5	18
5	147	6	5
6	11	7	103
7	2	8	129
8	10	9	10
9	2	G34560	52
G34530	7	1	27
1	12	2	3

\*\* Checked

RECEIVED  
Aug 7/84  
RECEIVED

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TEL: 672-3107

## Certificate of Analysis

NO. B500-84

DATE: June 20, 1984

SAMPLE(S) OF: Rock (5)

RECEIVED: June, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

*Penhousod*

<u>Sample No.</u>	<u>Ag/ppm</u>	<u>Cu/ppm</u>	<u>Pb/ppm</u>	<u>Zn/ppm</u>	<u>% Zn</u>	<u>Mo/ppm</u>
G38501	0.4	54	32	94		
G38505	11.2	1250			5.0	
G38506	2.6	96			0.50	
G38508						N.D.
G38515				9800		

N.B.: N.D. denotes "Not Detected"

ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER 



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B459-84

DATE: June 14, 1984

SAMPLE(S) OF: Rock (7)

RECEIVED: June, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

Sample No.      Gold/ppb

G38510

5

1

196

2

96

3

33

4

47

5

10

6

19

SILV. CK. 074

Nat River  
073800

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE, GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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# BELL-WHITE ANALYTICAL LABORATORIES LTD.

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HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B434-84

DATE: June 7, 1984

SAMPLE(S) OF: Rock (5)

RECEIVED: June, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quniterra Resources Inc.

*Lashbrook*

<u>Sample No.</u>	<u>Gold/ppb</u>
G38505	92
6	49
7	142
8	4
9	27

*C. S. K.*  
*B. K.*

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

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HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. 16815

DATE: June 5, 1984

SAMPLE(S) OF: Soil (1)  
Rock (10)

RECEIVED: May, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quniterra Resources Inc.

<u>Sample No.</u>	<u>Gold/ppb</u>	<u>Gold/oz.</u>	
G45001		0.167** <i>Golden Rose</i>	
G38501	293	} <i>Pentwood</i>	
2	5		
3	107		
4	74		
G45002	27		
3		0.062**	
4	92	} <i>Golden Rose</i>	
5			8.38 **
6			2.89 **
7		0.095**	

\*\* Checked

*C. D. K.*  
*B. K.*  
*D. I.*

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER. 



# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO P0K 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 57737

Date: May 29, 1984

Received May 22, 1984 20 Samples of ore

Submitted by Quinterra Resources Limited, North Bay, Ontario Att: R. Lashbrook

SAMPLE NO.	GOLD PPB	COPPER PPM	NICKEL PPM	ZINC PPM	LEAD PPM	SILVER PPM
✓ 4003	Nil	298	116	-	-	-
✓ 4004	80					
✓ 4005	Nil					
✓ 4006	30					
✓ 4007	30					
✓ 4008	10					
✓ 4009	900					
✓ 4010	10	2200	-	2100	-	-
✓ 4011	Nil					
✓ 4012	10					
✓ 4013	10					
✓ 4014	110					
✓ 4015	10	62	-	17000	5900	0.9
✓ 4016	90					
✓ 4017	Nil					
✓ 4018	Nil					
✓ 4019	60	280	-	58000	578	14.2 = 0.42 g/t.
✓ 4020	60			5.8%	.056%	
✓ 4021	50					
✓ 4022	90					

*River Claims  
in Horwood Twp.*

Per G. Lebel  
G. Lebel, Manager

ESTABLISHED 1928





# SWASTIKA LABORATORIES LIMITED

P.O. BOX 10, SWASTIKA, ONTARIO POK 1T0

TELEPHONE: (705) 642-3244

ANALYTICAL CHEMISTS • ASSAYERS • CONSULTANTS

## Certificate of Analysis

Certificate No. 57737

Date: May 29, 1984

Received May 22, 1984 20 Samples of ore

Submitted by Quinterra Resources Limited, North Bay, Ontario Att: R. Lashbrook

Penhorwood Twp.

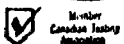
SAMPLE NO.	GOLD PPB	COPPER PPM	NICKEL PPM	ZINC PPM	LEAD PPM	SILVER PPM
<i>Loat</i> 4003	Ni1	298	116	-	-	-
" 4004	80					
" 4005	Ni1					
<i>o/c</i> 4006	30					
<i>c</i> 4007	30					
<i>Float</i> 4008	10					
<i>o/c</i> 4009	900					
<i>Float</i> 4010	10	2200	-	2100	-	-
<i>c</i> 4011	Ni1					
<i>o/c</i> 4012	10					
<i>Float</i> 4013	10					
" 4014	110					
" 4015	10	62	-	17000	5900	0.9
" 4016	90					
" 4017	Ni1					
<i>o/c</i> 4018	Ni1					
<i>float</i> 4019	60	280	-	58000	578	14.2
<i>o/c</i> 4020	60					
<i>o/c</i> 4021	50					
<i>Float</i> 4022	90					

5.8%

Copy DI  
BK  
GK

Per G. Lebel  
G. Lebel, Manager

ESTABLISHED 1928







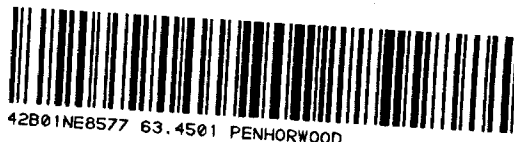
42801NE8577 63.4501 PENHORWOOD

060

Halcrow Patents

Reconnaissance Summary  
Quinterra Resources Inc.,  
October 2, 1984

By: Roger Poulin  
Quinterra Resources Inc.



060C

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3. Previous Work.	1-2
4. General Geology.	2
5. Local Geology.	2-3
6. Structural Geology.	3
7. Economic Geology.	3-4
8. Conclusion and Recommendations.	4-5

## APPENDIX

1. Samples, rock types.	1-2
2. Map figure 1 north trench area	3
3. Map figure 2 swamp area	4
4. Map figure 3 south trench area	5
5. Map general geology.	6

1. INTRODUCTION:

Field work was done by the author R.Y. Poulin and Mr. D. Lashbrook, during the period of September 18th to September 25th, 1984.

Mapping was done to determine the geological setting and to identify any areas of economic significance. General prospecting was also done to find old trenches and new veins. A 6,700 foot baseline was cut at  $315^{\circ}$  through the property for control and random traverses were done for mapping. The geology was plotted at 1"=400 feet and sampled trench and vein areas were mapped at 1"=10 feet and 1"=200 feet (fig 1,2,3,).

During this investigation, quartz veins mineralized with chalcopyrite were discovered. Native gold was also found in an old trench area in the south western corner of the property.

The claim groups investigated consists of mining patents numbers S22187, S22186, S22155, S22185, S22178, S22147, S22179, S22169 and S22176.

2. LOCATION, ACCESS AND PHYSIOGRAPHY.

The property is situated approximately 25 miles east of Chapleau, Ontario in west central Halcrow Township, west of Shunsby Lake. The property was formerly known as Halcrow-Swayze Mines Limited and is now owned, 1965, by Belcher Mining Corporation Limited.

Access is by light aircraft or snowmobile. All previous roads into the property are all grown in and the nearest usable road is approximately 3 miles south on Sawbill Lake in Tooms Township.

3. PREVIOUS WORK:

Prospecting, trenching and mining on the property was done by Halcrow-Swayze Mines Limited in 1932 and 1933. A 371 foot shaft was sunk south of the property boundary for ore reserve evaluation of a mineralized shear zone. Ore reserve estimates are 35,000 tons with an average grade of 0.171 ounces of gold per ton from surface to the 354 foot level. (1) Trenches and a diamond drill

Page 2 continued.....

hole was found in the north part near the shaft in the south west corner of the property. 2,000 feet of diamond drilling was done in the mine area as well as 1,200 feet of underground drifting.

J.F. DONOVAN:

- (1) Geology of the Halcrow-Ridout Lakes Area, O.D.M., GR63, 1968, Pages 38,39.

The property is now owned 1965, by Belcher Mining Corporation Limited. Recent mapping and sampling was done by Regal Petroleum Limited to the north, east and south of the claim group.

4. GENERAL GEOLOGY:

The rocks on the property are mostly volcanic extrusives and are mafic to intermediate in composition. They are intruded to the west by a large granite intrusive. These rocks represent the western edge of the Swayze "GREENSTONE" belt.

5. LOCAL GEOLOGY:

The volcanic rocks are represented by basalts, andesites, rhyolites, mafic tuffs and felsic tuffs. Generally the rock units dip steeply to the north-east with local variations in direction and dip probably due to folding and faulting. The average dips are from  $90^{\circ}$  to  $70^{\circ}$  and the average strike of the units are north-south to north-west.

Metamorphism of the rocks is of the chlorite-amphibolite facies. Alteration is strongest near fault systems and intrusive contacts and is represented by chloritization, carbonatization, sericitization, silicification and saussuritization. Some of the basalts have amphibole alteration as well as biotite.

The basalts, andesites and rhyolites appear to be in flows of 20 to 30 feet in width, however, not many contacts were seen because of humus cover. The tuffs are in units of possibly greater than 500 feet.

Page 3 continued.....

Stratigraphy is impossible to determine at this time. The volcanism appears to have been bimodal.

Very few volcanic textures were preserved due to foliation on the property. Pillows were observed in the mafic basalts, however, tops could not be determined. The basalt, andesite and rhyolite all had massive and porphyritic phases.

The intrusive rocks consist of granite, granodiorite, quartz diorite as well as a feldspar porphyry (DACITE?). The granite represents a large intrusive body to the west of the property. It has a very fine grained contact zone with the volcanics. The other intrusives appear to be dike like and are probably less than 100 feet in width. The granodiorite and quartz diorite were found only in the south western area near the mine.

#### 6. STRUCTURAL GEOLOGY:

Faulting in the area trends two directions; north-west and at nearly right angles north easterly. All the quartz veins found were in or near these faults and at fault intersections.

Foliation on the property dips and trends with the bedding of the rock units except near the faults where the dips are considerably shallower, 30°.

The rocks become so sheared near the faults that identification is difficult.

Drag folding and kink banding were observed in a felsic tuff unit in the south east part of the property near Shunsby Lake.

#### 7. ECONOMIC GEOLOGY:

Trace amount of pyrite were found in some mafic tuff units and in some of the sheared chloritic mafic basalts. Granodiorite found in the south western portion of the property near the mine was mineralized with chalcopyrite.

The "North Trench Area" (fig 1) consists of quartz-carbonate vein pieces in till of sericitic carbonated tuff. It lies on the western edge of a north-west fault. Two pits have been dug into the till and a diamond drill hole was also drilled.

Page 4 continued....

The quartz pieces were from 4" to 1 foot in width and some of them were mineralized with up to 5% chalcopyrite and up to 5% arsenopyrite crystals.

The "Swamp Area" (fig 2) consists of two sets of quartz veins filling fractures from a north-west fault and a northeast fault. The veins are 4" to 1 foot in width and contain 1% to 5% chalcopyrite. The veins are in mafic basalt flows.

The "South Trench Area" (fig 3) consists of a 4" quartz vein near a granodiorite contact with sheared porphyritic rhyolite. The vein contains 5% chalcopyrite. Visible gold in fine flakes with altaite and possibly calaverite was found in quartz vein pieces in the dump near this trench. A 20 foot deep pit was sunk on this vein. The vein is parallel to the shear zone of the Belcher mine which is about 60 feet to the south. Another 1 foot wide quartz vein was found 400 feet to the east of the south trench. It contained about 20% specular hematite. This vein represents cross fracture fillings from the Belcher mine shear zone.

Visible gold with 5% chalcopyrite was found in a 4 foot wide quartz vein on the Belcher mine property about 250 feet south east of the shaft north of the main shear zone. This could be the same vein found 400 feet east of the south trench on our ground along the south claim line.

#### 8. CONCLUSION - RECOMMENDATION:

On the claim group, many more veins could be found by prospecting in and along the fault valleys. Most of the outcrop exposed is only covered with moss. The mineralized north trench area could have continuity in the fault where it is present. The central swamp area could be easily stripped and prospected for more veins. The south trench area could be stripped for the continuity of its gold bearing vein.

The possibility of a large tonnage ore body is low on the property, however there is a good possibility for a high grade low tonnage ore body.

Page 5 continued....

The Belcher mine south of the claim group could have a potential for open pit mining if enough vein concentrations could be uncovered.

Because the mineralization is fault bound and does not appear at this time to be dependent on rock type, the potential is good to find an orebody like the Belcher ore zone to the north on the claim group.

Mapping, prospecting, stripping, blasting and sampling is recommended for future work on this property.

Respectfully submitted

.....

Roger Y. Poulin.

## APPENDIX

### ROCK SAMPLES SHUNSBY LAKE.

- S1 - (Typical 1A) Chlorite-sericite-feldspar-quartz tuff, - sheared and layered 1mm to 1" beds, northwest end of property, some grade into fine grained graywacke.
- S2 - Felsic tuff - sericitic and carbonated, found in old trench in north west part of property.
- S3 - Quartz-ankerite vein with arsenopyrite and pyrite to 5% from northwest trench. Sample #051102.
- S4 - Felsic tuff-drag folded, highly sheared, disseminated pyrite fine grained, on 127+50 on tie line near Lake (Shunsby).
- S5 - Rhyolite-porphyrific, drag folded plus highly sheared disseminated pyrite quartz-feldspar grains to 2mm on 129 to 131W on tie line near Shunsby Lake.
- S6 - Felsic tuff - fine grained, kink banding to 4", drag folded, 100 feet east of 0+00 baseline on new survey line to Shunsby Lake.
- S7 - Andesite-carbonated, sheared, contact zone between basalt, at 13+00 on baseline (Typical 3).
- S8 - (Typical 4A) Basalt-chloritic, some massive, some sheared and easily confused with tuff, hackly fracture pattern on surface on baseline at 23+00 to 25+00.
- S9 - Chloritic basalt-plus biotite plus pyrite, extremely sheared more chloritic than usual on baseline at 12+50 to 13+00.
- S10- (Typical 4B) Basalt-chloritic, pillowed, highly sheared, can't tell tops, maybe east, dip  $85^{\circ}$ , Az.  $285^{\circ}$ , on baseline at 29+00 to 29+50NW.
- S11- Chloritic pillowed basalt-slightly carbonated, baseline at 31+00 to 34+00.
- S12- Amphibolitic textured basalt-chloritic sheared west of pond.
- S13- Same as S12 with disseminated pyrite, some shearing, sample #051103, north of pond.
- S14- (Typical 2) Chloritic rhyolite - disseminated pyrite north of small lake.
- S15- Quartz vein with 5% calcopyrite plus visible gold from 44" vein possibly #2 vein south of shaft.
- S16- Feldspar porphyry-sericite, quartz-feldspar to 3mm 150' west of baseline at 27+60NW (Typical 6).



Page 2 continued....

- S17- Granodiorite-typical (5) almost always sheared pink feldspar, from south trench area.
- S18- (Typical 2) Quartz, Porphyry, Rhyolite-sheared and silicified in area of south trench, weathers snow white.
- S19- Quartz vein plus calcopyrite 5% typical of vein in south trench.
- S20- Feldspar Porphyry (Dacite?), -south end of north swamp. Mildly sheared and strongly sheared.
- S21- Porphyritic Pyroxene basalt flow, -east end of point in north swamp.
- S22- Fragmental chloritic basalt-sheared south end middle island in north swamp.
- S23- Amphibolitic Chloritic basalt-east side of south end of north swamp.
- S24- Mafic Chloritic Tuff, -northeast of Bain Lake (Typical 16).
- S25- Porphyritic Rhyolite, -centre of group (Typical 2).
- S26- Andesite-massive, northeast Bain Lake (Typical 3).

APPENDIX II

OCTOBER 17th TO OCTOBER 24th, 1984

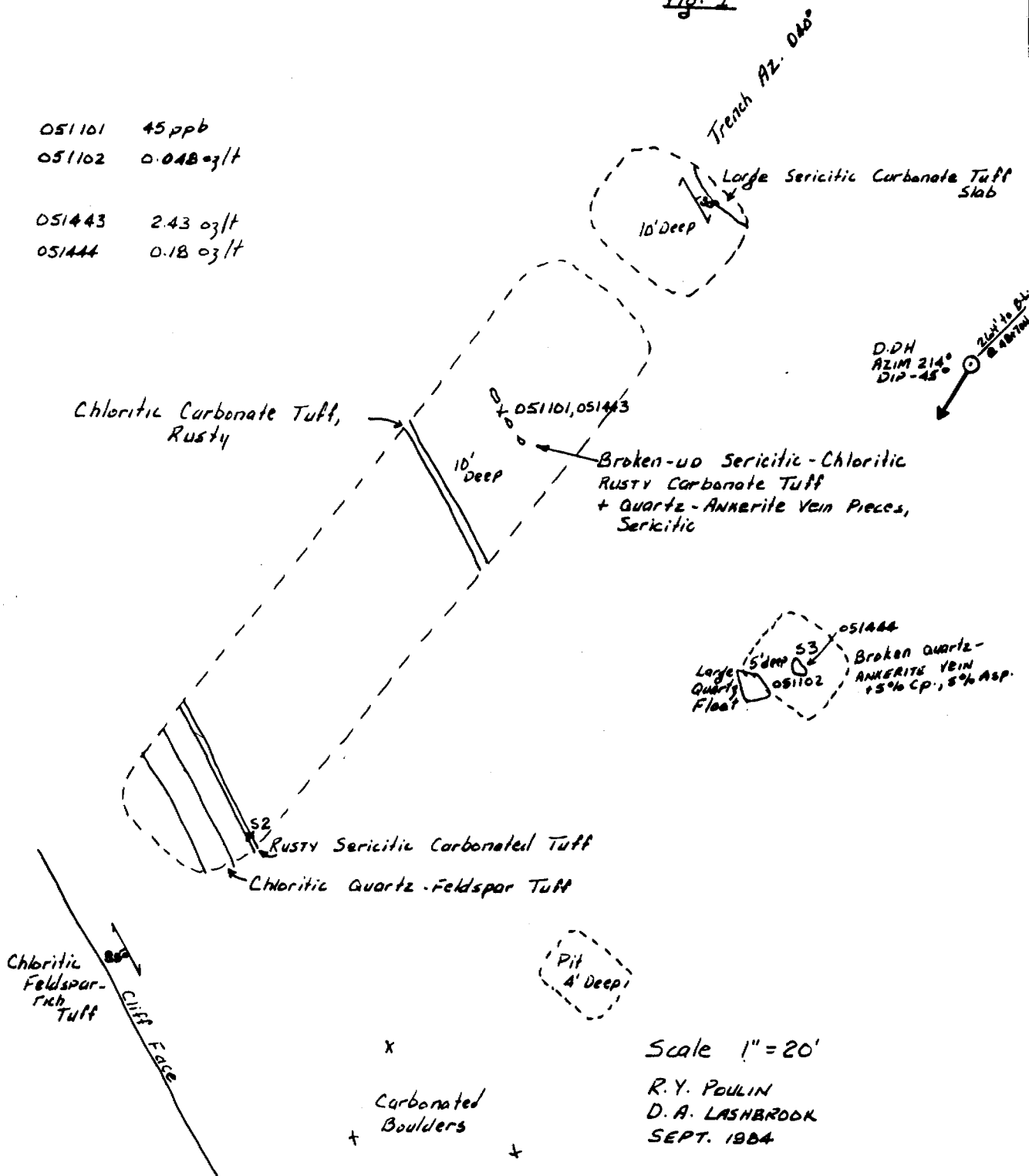
REFERENCE SAMPLES

- S27 - Basalt with a radial amphibolitic pattern (komatiitic flows?) Hornblende chlorite schist.
- S28 - Diabase.
- S29 - Sheared basalt, chlorite amphibole rich. One plane parallel to shearing looks like mafic tuff; cross-plane to shearing, basaltic texture.
- S30 - Mafic to intermediate tuff.
- S31 - Intermediate to mafic tuff.
- S32 - Sheared basalt (porphyritic chloritic rhyolite?).
- S33 - Garnet biotite schist (felsic tuff) metamorphosed by granite batholith.
- S34 - Porphyritic rhyolite.
- S35 - Fresh unsheared granodiorite.
- S36 - Massive andesite.
- S37 - Porphyritic rhyolite.
- S38 - Sheared chloritic rhyolite.
- S39 - Sheared and carbonated (basalt?). Float North trench zone in fault.
- S40 - Sheared and carbonated (basalt?). Fault below and west of central swamp.
- S41 - Carbonated andesite (?), creek fault, float.

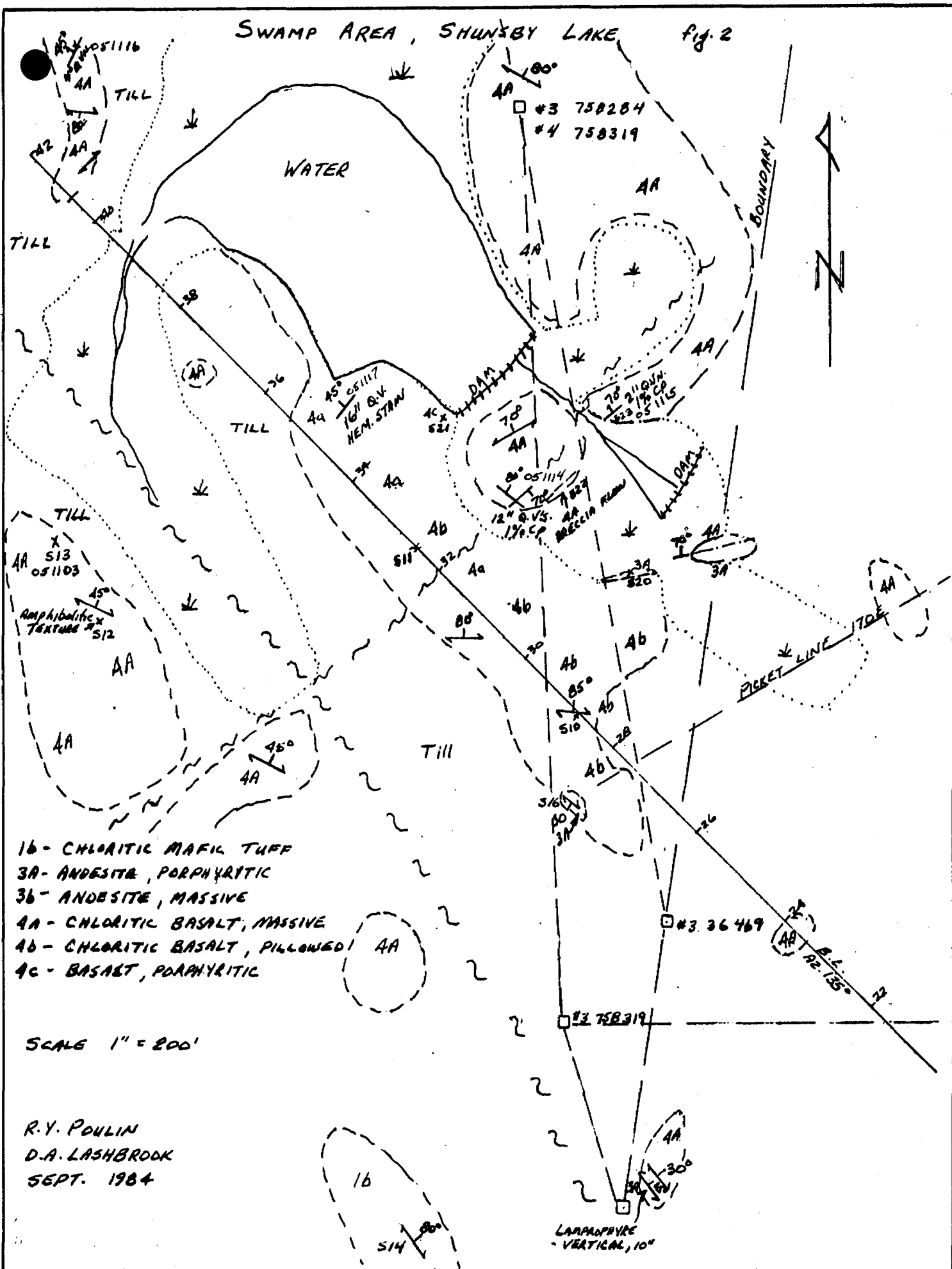
# NORTH TRENCH

Fig. 1

051101	45 ppb
051102	0.048 oz/t
051443	2.43 oz/t
051444	0.18 oz/t



SWAMP AREA, SHUNSBY LAKE Fig. 2



- 1b - CHLORITIC MAFIC TUFF
- 3a - ANDESITE, PORPHYRITIC
- 3b - ANDESITE, MASSIVE
- 4a - CHLORITIC BASALT, MASSIVE
- 4b - CHLORITIC BASALT, PILLOWED
- 4c - BASALT, PORPHYRITIC

SCALE 1" = 200'

R.Y. POULIN  
D.A. LASHBROOK  
SEPT. 1984

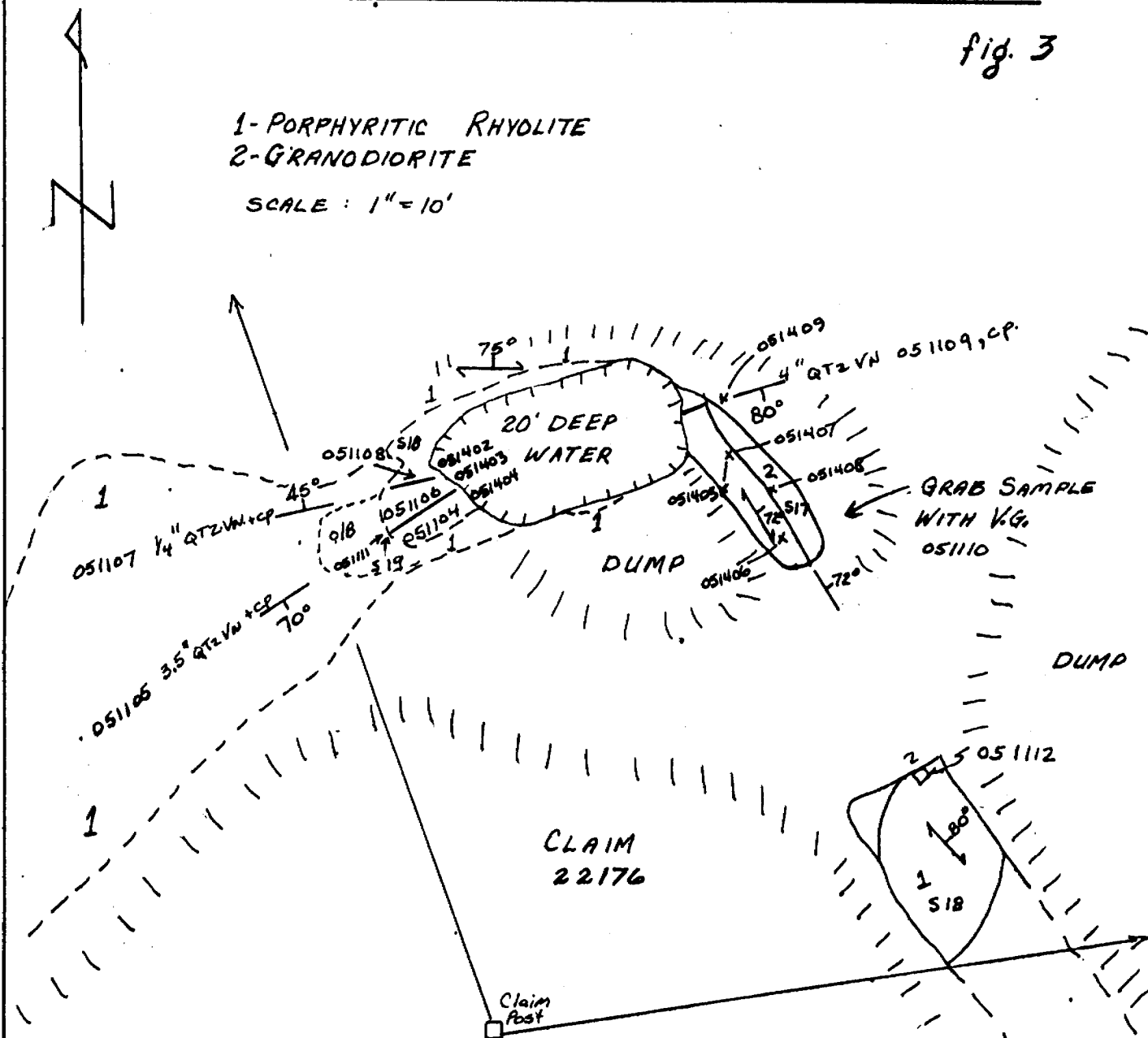
LAMPROPHIRE  
- VERTICAL, 10°

# SOUTH TRENCH - SHUNSBY LAKE AREA

fig. 3

1-PORPHYRITIC RHYOLITE  
2-GRANODIORITE

SCALE : 1" = 10'



051104	20 ppb
051105	0.028 oz/t
051106	617 ppb
051107	0.086 oz/t
051108	0.026 oz/t
051109	0.076 oz/t
051110	7.24 oz/t
051111	0.08 oz/t
051112	537 ppb

MINE DUMP

051402	720 ppb
051403	0.079 oz/t
051404	41 ppb
051405	347 ppb
051406	376 ppb
051407	0.078 oz/t
051408	78 ppb
051409	0.037 oz/t.

R. Y. POULIN  
D. LASHBROOK  
SEPT. 1984



# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B1126-84

DATE: October 5, 1984

SAMPLE(S) OF: Rock (40)

RECEIVED: October, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

<u>Sample No.</u>	<u>Gold ppb</u>	<u>Gold oz.</u>
G38531	8	
<i>Sylva</i> { 2	11	
G38535	77	
G051101	45	
2		0.048
3	4	
4	20	
5		0.028
6	617	
7		0.086
8		0.026
9		0.076
G051110		7.24 **
1		0.080
2	537	
3	16	
4	7	
5	37	
6	4	
7	3	

*Hale Row Patents*

\*\* Checked

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B1280-84

DATE: November 5, 1984

SAMPLE(S) OF: Rock (52)

RECEIVED: October, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

*P.N. 74 - Halosaw Patents*

<u>Sample No.</u>	<u>Au ppb</u>	<u>Au oz.</u>	<u>Sample No.</u>	<u>Au ppb</u>	<u>Au oz.</u>
G51401	891**		G51427	4	
2	720**		8	82	
3		0.079**	9	16	
4	41		G51430	3	
5	347		1	8	
6	376		2	11	
7		0.078**	3	18	
8	78		4	4	
9		0.037**	5	3	
G51410	36		6	2	
1	11		7	5	
2	7		8	26	
3	18		9	23	
4	40		G51440	301	
5	14		1	3	
6	167		2	4	
7	8		3		2.43 **
8	4		4		0.180**
9	11		5	153	
G51420	15		6	30	
1	14		7	16	
2	15		8	16	
3	12		9	11	
4	18		G51450	15	
5	4		1	10	
6	16		2	8	

\*\* Checked

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER *[Signature]*



42801NE8577 63.4501 PENHORWOOD

070

REPORT ON THE INDUCED POLARIZATION SURVEY

Carried Out

on the

QUINTERRA RESOURCES INC.  
Sylvanite Creek Property

in

Tooms and Greenlaw Townships  
District of Sudbury

by

R. Middleton, P.Eng.

B. Durham, B.Sc.

---

Robert S. Middleton Exploration Services Inc.  
P.O. Box 1637 Timmins, Ontario  
January 8, 1985

P4N 7W8





42B01NE8577 63.4501 PENHORWOOD

070C

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## INTRODUCTION

Approximately 15 miles of time domain Induced Polarization surveying was carried out during October and November, 1984 by personnel of Robert S. Middleton Exploration Inc. of Timmins, Ontario as part of an ongoing evaluation of Quinterra Resources, Sylvanite Creek property. The property has recently been the subject of an intense integrated exploration effort by Quinterra Resources. This detailed IP surveying was carried out to test for sulfide mineralization and trace stratigraphy in relatively unexplored sections of the property and also to provide more detail in some areas covered by a 1983 IP survey. The survey was successful in both objectives.

### Property, Location, and Access

The property consists of 266 unpatented mineral claims and 9 patented claims located in Tooms, Greenlaw and Halcrow Townships, 25 air-miles east-southeast of Chapleau, Ontario. Access to the property is via a network of all weather logging roads, constructed by E.B. Eddy Forest Products, that leave Highway 144 approximately 20 miles south of Gogama. The area covered by this survey is located in the east-central and east parts of the property.

### Topography and Vegetation

Higher areas of the property typically consist of sandy overburden, forested with jackpine and lesser spruce and poplar. Low lying swampy areas and creek beds are forested

with a mixture of black spruce, cedar and alders.

#### Previous Work

No integrated exploration program had been undertaken to search for gold mineralization until the aquisition of the property by Quinterra Resources, Ltd.

Since acquiring the property, Quinterra have actively (and successfully) explored the property for gold mineralization. This active, integrated program has included; ground magnetometer and VLF surveys, airborne magnetometer and VLF surveys, reconnaissance IP surveying, overburden sampling using a backhoe, overburden sampling using a drill system and 23 diamond drill holes.

#### GENERAL GEOLOGY

Ontario Department of Mines Geological report 63 (Donavan, J.F., 1968) indicates that the majority of the property is underlain by a suite of intermediate to mafic metavolcanic rocks with minor amounts of iron formation and conglomerate near the common boundary with the Hotstone Minerals Ltd. property.

Work by Quinterra has shown that highly altered ultramafic rocks and syenite intrusives are also present on the property.

SURVEY PROCEDURE, STATISTICS, AND INSTRUMENTATION

The Induced Polarization survey was carried out using a Scintrex IPR-8 receiver and a Phoenix IPT-1 2KVA transmitter. An "a" spacing of 100 feet was selected for this survey. Three dipoles (n=1,2,3) were read on all lines at 100 foot stations. A pole-dipole array was used giving a theoretical penetration of up to 175 feet with three dipoles.

A 2 second "on", 2 second off, square wave pulse was transmitted into the ground via steel stake electrodes and the voltage readings were obtained via porous bottomed pots filled with copper sulphate solution. The time window over which the voltage was recorded was 650 milliseconds to 1170 milliseconds after the shut off of the pulse. This mean of the M32 time "window" is 910 milliseconds after the shut off of the pulse.

Specifications for the IPR-8 receiver and the Phoenix IPT-1 transmitter are included in the appendix of this report.

Lines which were to be covered by the survey were selected by Quinterra Resources Ltd.

The survey which was conducted between October 15 and November 9, 1984 and was carried out by J. Scott, R.Marvin, R.Lavoy and R.Boyce.

A total of 1959 readings were taken at 679 stations in

the course of survey.

#### INTERPRETATION

Four main anomalous zones were outlined in the areas surveyed during this program. Two of these areas was covered by the previous survey. Although the two IP surveys were carried out by different people using different equipment in a different array, the results are comparable.

Some of the anomalies defined by the earlier survey were not covered by this program and therefore no comment is made as to their cause. Chargeability and resistivity value increases were noted in similar locations to some of those areas indicated to be anomalies in the earlier survey, although most are not considered to be due to the presence of sulfides (and/or graphite). Anomalies B, D, G and H from the earlier survey were verified and in the case of D and G, covered in more detail.

Anomaly I (D from the previous survey) is well defined on all lines and appears to be covered by less than 50' of overburden. The axis of the anomaly is estimated to be 2200N on line 54E, 1925N on line 58E, 1800N on line 62E and 1700N on line 66E. On line 62E the zone may consist of two or more parallel zones between 1650N and 2200N. The maximum chargeability values appear to range between three and five times background on all lines.

Anomaly II was trace over a strike length of 1200' from

line 3800E to 5000E just south of tie line 4000N. The estimated axis of the anomaly on each line is as follows: line 38E, 4000N; line 42E, 3900N; line 46E, 3850N; line 50E, 3700N. The source of this anomaly, as in the case of anomaly I, is estimated to be covered by less than 50 feet of overburden. This anomaly is typified by chargeability values of 2-3 times background and resistivity values somewhat lower than the surrounding rocks, particularly those to the north which are generally in the range of 10,000 ohm-meters.

Anomaly III, which corresponds to anomaly G of the initial survey was defined over a strike length of 1000 feet between line 28E and line 38E. As in the case of the initial survey, the anomaly is somewhat hard to decipher due to the high background chargeability and resistivity values associated with an area of shallow overburden immediately south of the anomaly. The anomaly axis is estimated to be at 3100N on line 28E, 3100N on line 30E, 3250 on line 34E (anomaly is broad and ill defined), and 3300N on line 38E. The zone has a weak to moderate corresponding resistivity low on all lines.

The broad zone of high resistivity and chargeability values which extend from line 10E to line 38E, south of anomaly III, appears to reflect the presence of a particular rock unit or a style of alteration rather than the presence of significant sulfide mineralization. Overburden along the

zone is thought to be quite shallow.

Anomaly IV was detected under shallow overburden on all three lines which were covered near the southeast boundary of the property. Chargeability and resistivity values indicate a near surface zone up to 100 feet in width containing heavy accumulations of pyrite, graphite, magnetite or some such material.

Resistivity values indicate that the zone is likely a conductor. The axis of the anomaly is located at 3300S on line 183E; 3250S on line 187E and 3150S on line 191E.

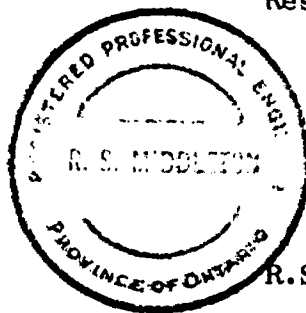
The data from line 40E is difficult to decipher although it is apparent that a contact occurs near 100N and also near 100S. It may be that there is a near surface accumulation of sulfide or graphite mineralization somewhere between 0 and 150N although rock type contrast may account for the increase in chargeability values.

The line 92E profile shows anomalous chargeability values in 3 locations; one area with an axis at approximately 750N (which corresponds to anomaly B of the earlier survey), a second near 1400N and the third area at the north end of the part of the line covered (near 19N). While the most southerly is probably due to sulfide and/graphite mineralization in bedrock it is questionable if the other two are.

CONCLUSIONS AND RECOMMENDATIONS

The Induced Polarization survey which is the topic of this report corroborated the data obtained in the first IP survey and provided more detail about some of the anomalous zones. The survey was also successful in outlining anomalies in areas not covered in the initial survey. Results of the survey indicate that overburden cover in the entire area is quite shallow and therefore continued use of an integrated exploration program is recommended.

Respectfully Submitted,



*R. S. Middleton*

R.S. Middleton, P.Eng.

*R. Bruce Durham*

R. Bruce Durham, B.Sc.



REFERENCES

- Donovan, J.F.  
1968 Geology of Halcrow - Ridout Lakes Area  
(GR-63).
- 1984 Quinterra Resources Annual Report.
- Map 2241 - Chapleau Foleyet Geological  
Compilation Series, 1" to 4 miles.

CERTIFICATION

I, Robert S. Middleton, P.Eng., of 136 Cedar Avenue South, in the City of Timmins, Province of Ontario, certify as follows concerning my report on the property of Quinterra Resources Inc., dated January 8, 1985.

- 1) I am a member in good standing of:
  - a) Geological Association of Canada (FGAC)
  - b) The Association of Professional Engineers of Ontario
  - c) European Association of Exploration Geophysicists
  - d) Society of Exploration Geophysicists
  - e) Canadian Institute of Mining and Metallurgy
  
- 2) I am a graduate of the Michigan Technological University, Houghton, Michigan, U.S.A. with a B.S. degree in Applied Geophysics obtained in 1968, and an M.S. degree in Geophysics in 1969.
  
- 3) I have been practising my profession in Canada, occasionally in the United States, Central America, Europe and South Africa for the past 16 years.

Dated this January 8, 1985  
TIMMINS, Ontario



A handwritten signature in cursive script that reads "R. Middleton".

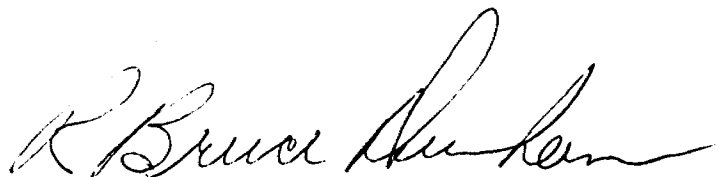
Robert S. Middleton, P.Eng.

CERTIFICATION

I, R. Bruce Durham of Timmins, Ontario certify that:

1. I am a graduate of the University of Western Ontario having obtained a Bachelor of Science degree in Geology in 1976.
2. I have been practising my profession primarily in Canada since 1976.
3. I have no direct or indirect interest in the properties, leases, or securities of Quinterra Resources Inc., nor do I expect to receive any.

Dated this January 8, 1985,  
at Timmins, Ontario.

A handwritten signature in cursive script that reads "R. Bruce Durham". The signature is written in black ink and is positioned below the date and location text.

R. Bruce Durham, B.Sc.

A P P E N D I X

# IPR-8

## Induced Polarization Time Domain Receiver

The basic equipment required for an Induced Polarization survey consists of a transmitter, a receiver, wire and electrodes.

Most time domain induced polarization transmitters transmit square waves with equal "on" and "off" times. Polarity is automatically changed between the pulses. The waveform shown in Figure 1 indicates how the current is usually transmitted. The pulse times usually range from T = 1 to 8 seconds.

The transmitter is powered by batteries (portable type units) or a motor driven generator. Scintrex manufactures various time domain induced polarization transmitters ranging in power from 250 watts to 15 kw. The choice of a transmitter depends on various factors such as: the electrode spacings to be employed, contact resistance and the resistivity of the sub-surface. The IPR-8 receiver is designed for use with any time domain induced polarization transmitter.

The IPR-8 time domain induced polarization receiver is packaged in a rugged and portable manner. Using integration and automatic normalization, it measures the characteristics of an induced polarization decay curve set up by overvoltage and other effects occurring in rocks. When induced polarization effects (such as due to metallic-nonmetallic interfaces in rocks) occur, the waveform received at the receiver is not the same square wave as transmitted by the transmitter. The waveform shown in Figure 2 indicates the sort of wave distortion which is caused by the induced polarization phenomena.

### 2. Specifications

The IPR-8 has the following specifications:

Input Impedance	3 megohms
Primary Voltage (Vp) Range	300 microvolts full scale to 40 volts full scale in 10 ranges
Accuracy of Vp Measurement	±3% of full scale
Vs/Vp Ranges	20 and 100 mV/V full scale
Vs/Vp Accuracy	±3% of full scale
Primary SP Buckout Range	±1 volt
Accuracy of SP Measurement	±3%, ±5 mV
Automatic SP Tracking Range	6 x Vp, maximum ±1 volt
Continuity Meter Reading	0 - 500 k ohms
50 or 60 Hz Powerline Rejection	-50 db (300x)*
Low Pass Filter	6 db/octave with fc = 20 Hz and 12 db/octave with fc = 36 Hz
Required Stability of Transmitter Timing	Need only exceed measuring program selected (1 or 2 seconds)
Operating Temperature Range	-30°C to +60°C
Dimensions	320 mm x 135 mm x 160 mm
Weight, Complete with Lid and Batteries	3.6 kg
Power Supply	4 D cells - Eveready No. 1050 or equivalent; estimated battery life 2 months intermittent duty at 25°C. 1 alkaline cell Eveready No. E91 or equivalent; estimated life 1 year

# IPT-1

## Variable Frequency, Time Domain and Phase IP Transmitter

**Reliable:** Backed by twenty years experience in the design and worldwide operation of induced polarization and resistivity equipment

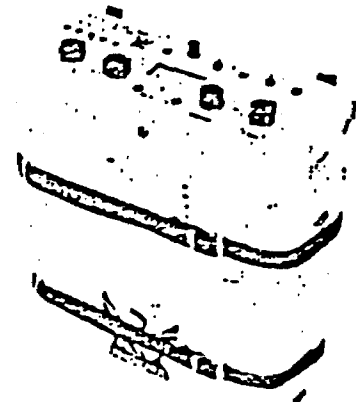
**Versatile:** Can be used for resistivity, variable frequency IP, time domain IP or phase angle IP measurements

**Stable:** Excellent current regulation

**Lightweight, portable**

**Wide selection of power sources**

**Low cost**



### Specifications

<b>Power Sources</b>	: Internal DC power module containing 8 45V dry cell batteries, or internal AC power module with external 1 KVA, 2 KVA or 3 KVA motor generator.	<b>DC POWER MODULE (BPS-1)</b>	
<b>Current Meter Ranges</b>	: 30 mA, 100 mA, 300 mA, 1A, 3A and 10A full scale.	<b>Output Voltage</b>	: 8 x 45V dry cell batteries (Eveready 482, Mallory 202 or equivalent) are switched in series or parallel to provide output voltages of 90V, 180V, and 360V.
<b>Current Display</b>	: A meter function switch selects the display of current level, regulation status, input frequency, output voltage, control battery voltage or line voltage.	<b>Output Power</b>	: Recommended maximum output power is 30 watts. Absolute maximum output power is 100 watts.
<b>Current Regulation</b>	: The change in output current is less than 0.2% for a 10% change in input voltage or electrode impedance.	<b>Battery Life</b>	: Normal field operation, with low output power results in an average battery life expectancy of one month. Operation with the absolute maximum output power results in much shorter battery life.
<b>Output Waveform</b>	: Either DC, single frequency, two frequencies simultaneously, or time domain (50% duty cycle). Frequencies of 0.078, 0.156, 0.313, 1.25, 2.5, and 5.0 Hz are standard, whereas 0.062, 0.125, 0.25, 1.0, 2.0, and 4.0 Hz are optionally available. The simultaneous transmission mode has 0.313 and 5.0 Hz as standard, whereas 0.156 and 2.5 Hz are optional.	<b>Control Supply</b>	: 4 x 6V lantern batteries (Eveready 409, Mallory 906 or equivalent) connected in series/parallel are used to provide the 40 to 70 mA required for the control circuitry. Average battery life expectancy is six months.
<b>Frequency Stability</b>	: $\pm 1\%$ from $-40^{\circ}$ to $+60^{\circ}$ C is standard. A precision time base is optionally available for coherent detection and phase IP measurements.	<b>Operating Temperature</b>	: $0^{\circ}$ C to $+60^{\circ}$ C.
<b>Overcurrent Protection</b>	: Current is turned off automatically if it exceeds 150% full scale or is less than 5% full scale.	<b>AC POWER MODULE (AC-3)</b>	
<b>Case</b>	: Non-conductive, high impact resistant plastic.	<b>Output Voltage</b>	: 0V, 75V, 150V, 300V, 600V and 1200V.
<b>Dimensions</b>	: 20 x 40 x 55 cm (9 x 16 x 22 inches).	<b>Output Power</b>	: Maximum continuous output power is 3 kW. This requires the 3KVA motor generator.
<b>Weight</b>	: 14 kg (31 lb) with DC power module, 16 kg (35 lb) with AC power module.	<b>Input Power</b>	: 350 to 1000 Hz, 60V (45V to 78V) 3 phase is standard. 120V (90V to 156V) and/or single phase may be selected inside the module.
<b>Standard Accessories</b>	: Pack frame, manual. At least one of the two possible power modules is required. The AC power module in turn requires one of the external 1KVA, 2KVA or 3KVA motor generators and a connecting cable.	<b>Current Regulation</b>	: Achieved by feedback to the alternator of the motor generator unit.
		<b>Operating Temperature</b>	: $-40^{\circ}$ C to $+60^{\circ}$ C.
		<b>Thermal Protection</b>	: Thermostat turns off at $65^{\circ}$ C and turns back on at $55^{\circ}$ C internal temperature.



PHOENIX GEOPHYSICS LIMITED

Geophysical Consulting and Contracting, Instrument Manufacture, Sale and Lease.

CONTOURED, PROFILED DATA IN PSEUDOSECTION FORM

L 2E	2200N - 3700N
L 6E	2200N - 3700N
L 8E	2200N - 3700N
L 10E	0 - 3700N
L 12E	0 - 3700N
L 14E	0 - 3500N
L 16E	0 - 3300N
L 18E	0 - 3300N
L 20E	0 - 2900N
L 22E	0 - 3900N
L 24E	1900N - 3900N
L 26E	1800N - 3900N
L 28E	2100N - 3300N
L 30E	1600N - 3900N
L 34E	1400N - 3900N
L 38E	1400N - 4200N
L 40E	600S - 600N
L 42E	2100N - 4300N
L 46E	2200N - 4200N
L 50E	2300N - 3900N
L 54E	1400N - 3100N
L 58E	1400N - 2700N
L 62E	1400N - 2200N
L 66E	1400N - 3800N
L 70E	2000N - 3900N
L 74E	2000N - 3100N
L 84E	500N - 1900N
L 88E	400N - 1900N
L 92E	400N - 1900N
L183E	2000S - 4400S
L187E	2000S - 3900S
L191E	2000S - 3800S

\*\*\*\*\* (\*\*\*\*\*  
 ROBERT W. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

LINE 2 E

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 10/21/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

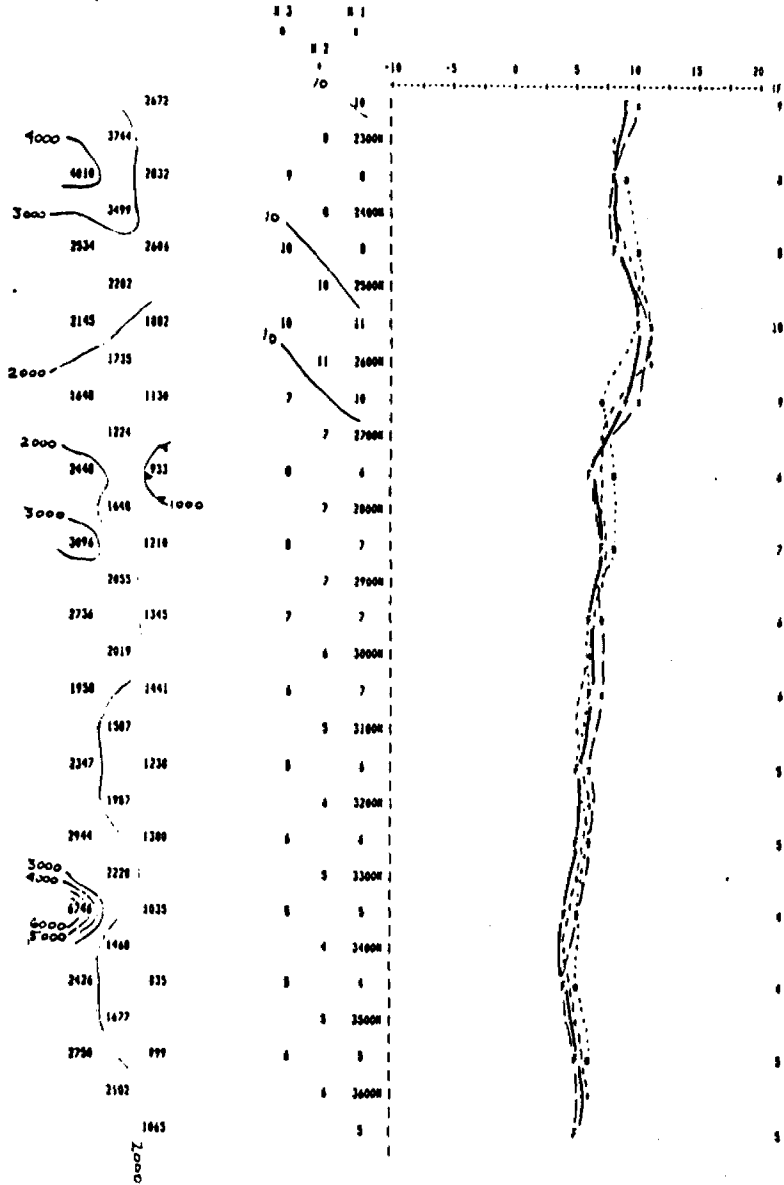


RESISTIVITY  
 (ohm - metres)

CHARABABILITY  
 (microseconds)

CHARABABILITY PROFILE

F F  
 L L  
 T T  
 C C  
 R R





LINE 6 E

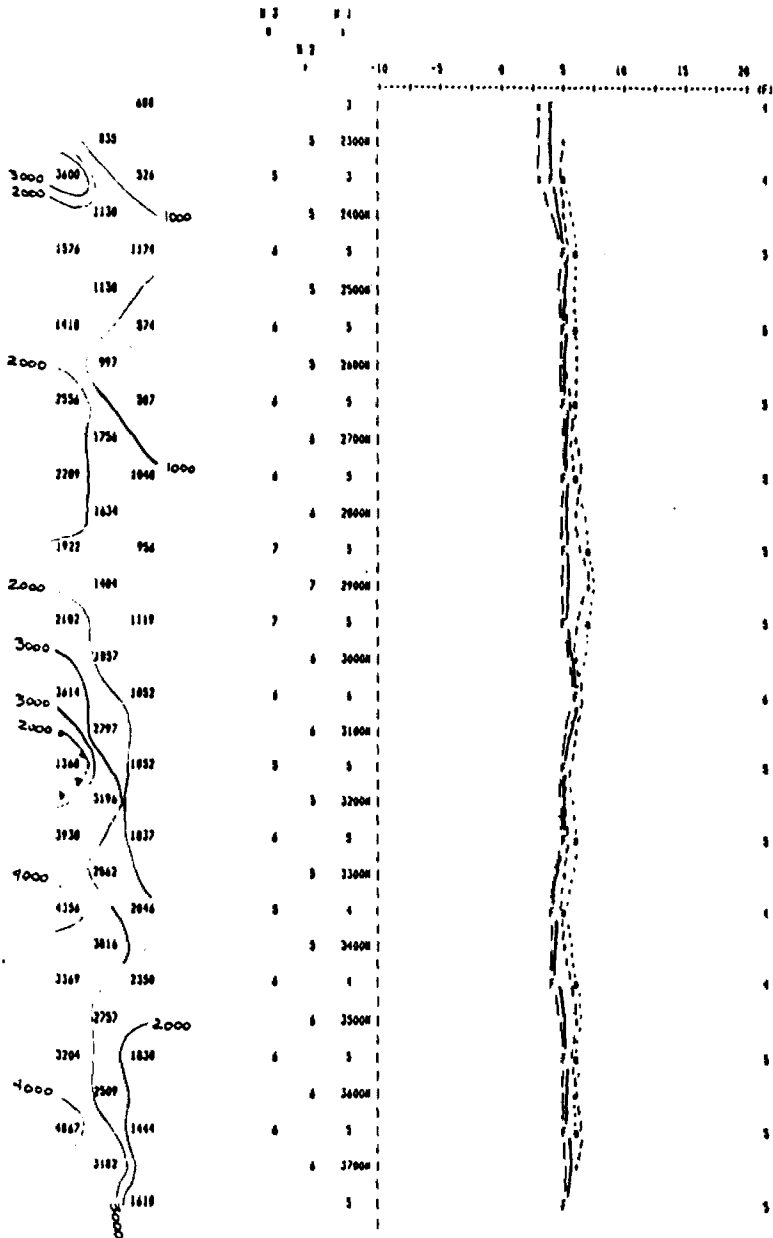
Property : SYLVANITE CREEK  
 Agent : QUINTERRA  
 Date of Survey : 10/20/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacing Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 480 ms



RESISTIVITY  
(ohm - meters)

CHARGEABILITY  
(mS/meters)

CHARGEABILITY PROFILE



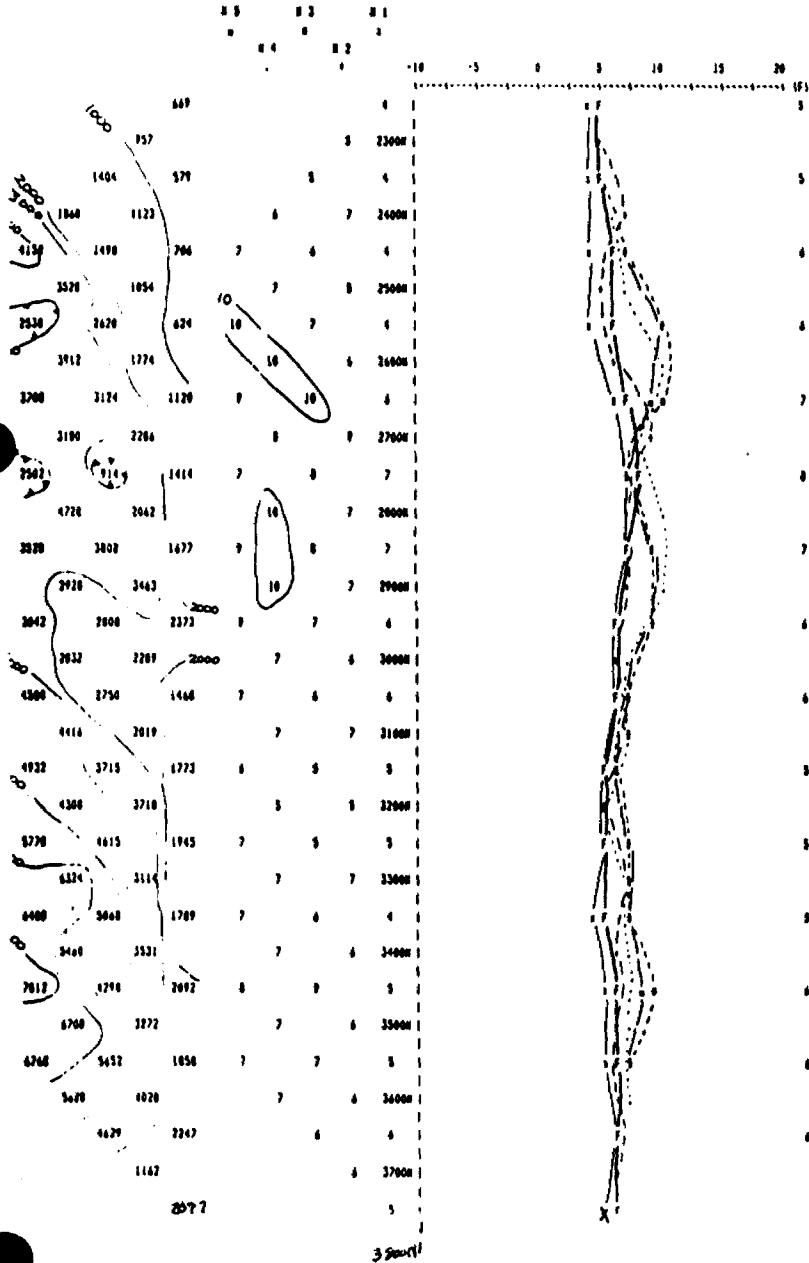
LINE 0 R

Property : SYLVANITE CREEK  
 Client : QUINTERRA  
 Date of Survey : 10/20/04  
 Operator : RM  
 Receiver : Scintrex IPR-B  
 Transmitter : Phoenix IPT-1 3.0 KVA  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 8  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



F F  
 B I  
 A L  
 S T  
 C E  
 R R

RESISTIVITY (ohm-meters)      CHARGEABILITY (microseconds)  
 CHARGEABILITY PROFILE



\*\*\*\*\*  
 ROBERT S. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

LINE 10 E

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 10/19/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 Spacing : 100 F  
 Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

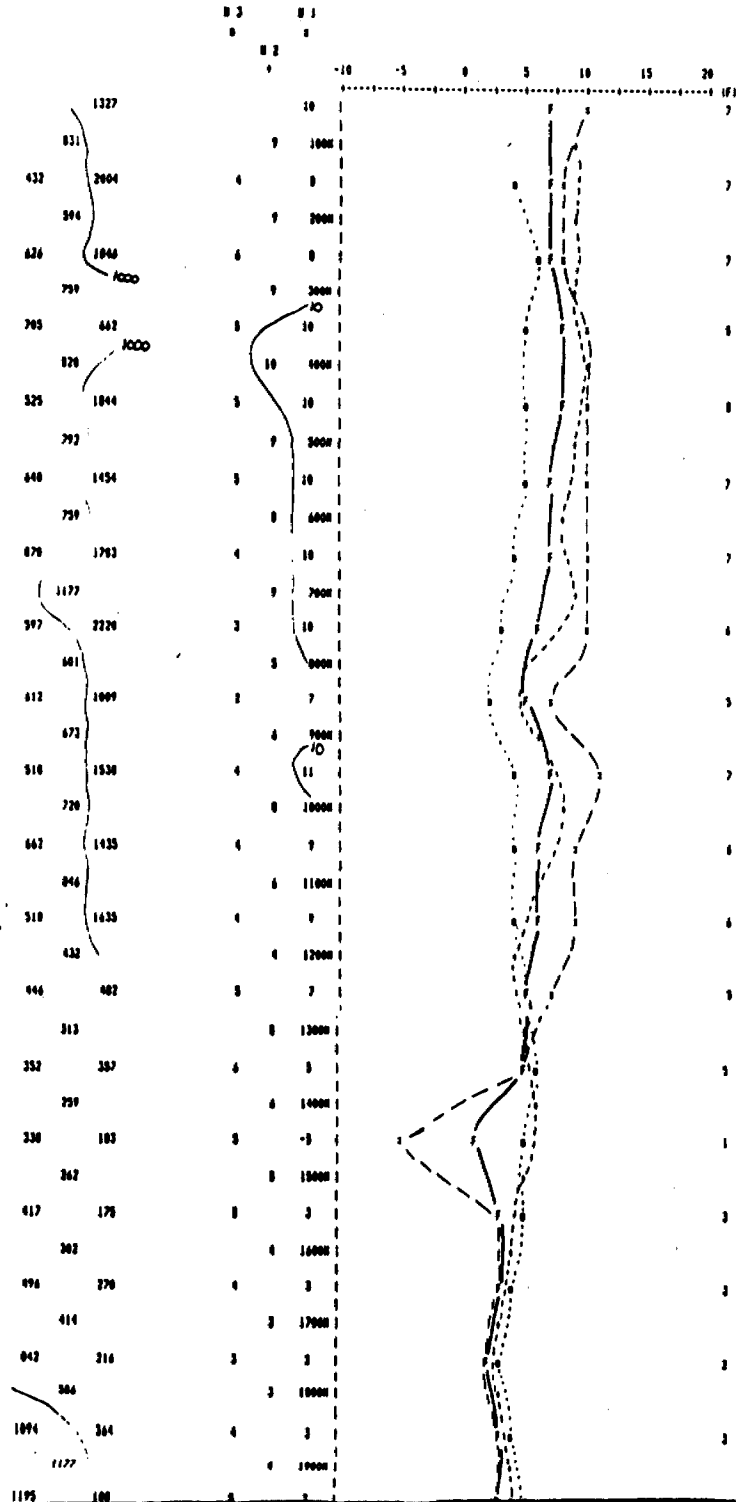


RESISTIVITY  
 (ohm - meters)

CHARGEABILITY  
 (microseconds)

CHARGEABILITY PROFILE

F F  
 0 1  
 0 1  
 0 1  
 0 1  
 0 1





\*\*\*\*\*  
 ROBERT M. MIDDLETON  
 EXPLOSION RESEARCH INC.  
 \*\*\*\*\*

LINE 12 E

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 10/21/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 Spacing : 100 F  
 Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

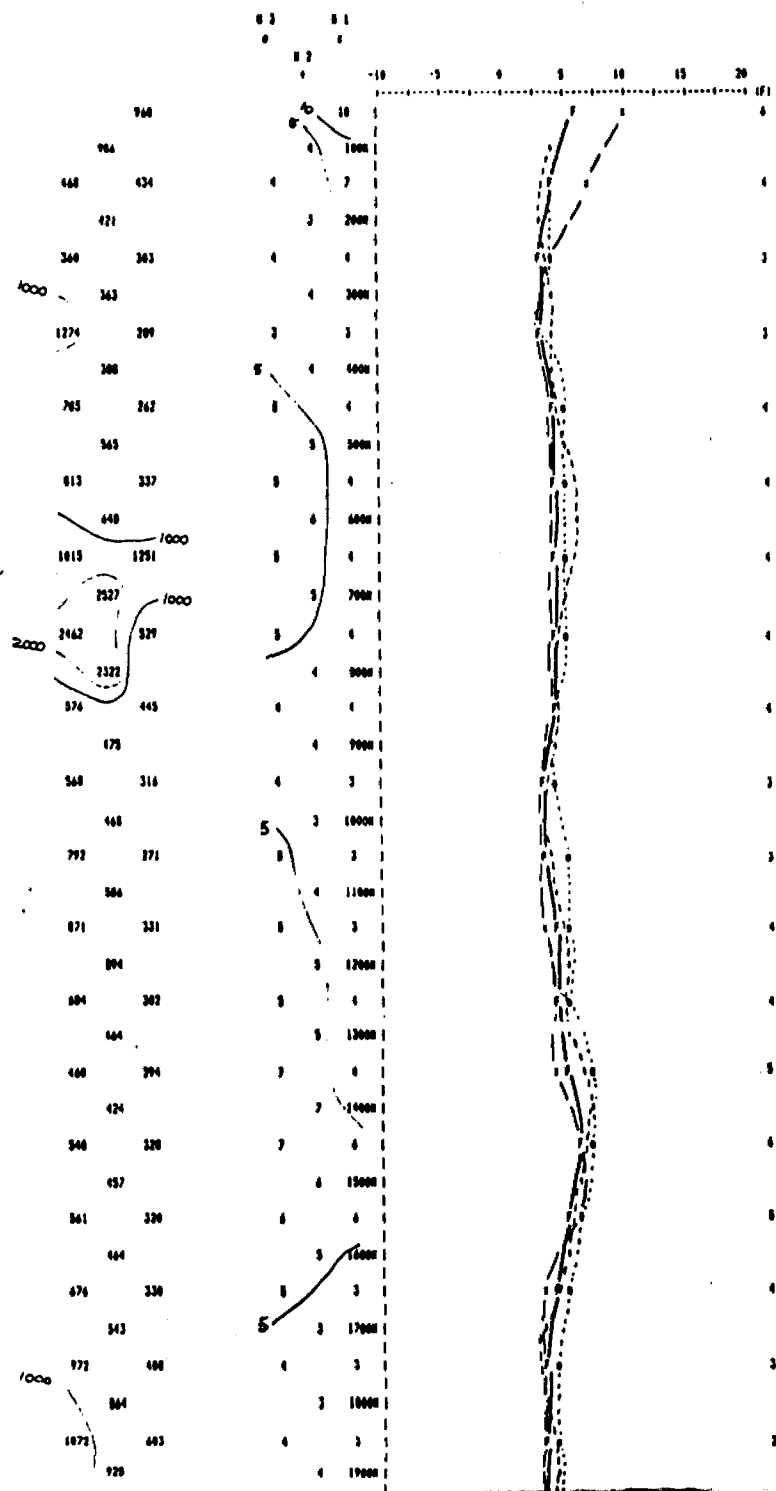


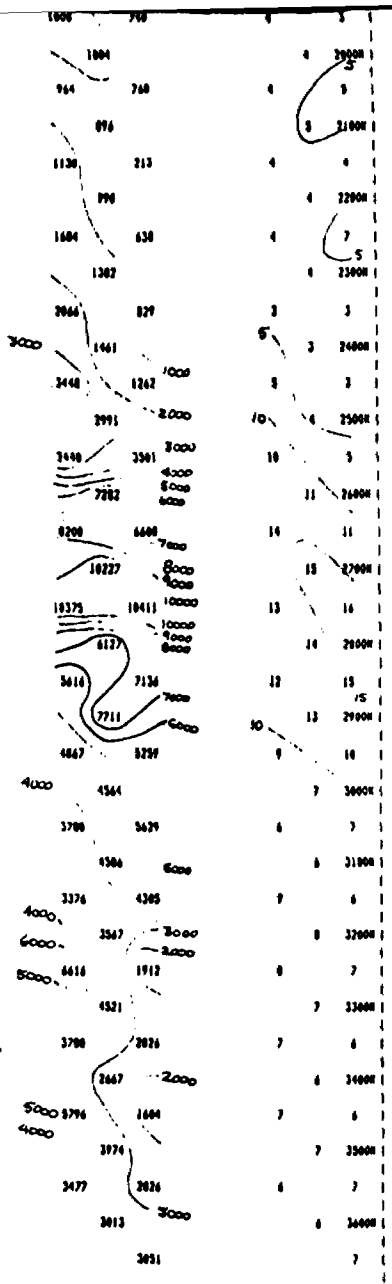
RESISTIVITY  
 (ohm - meters)

CHARSEALITY  
 (ohmsec/cm)

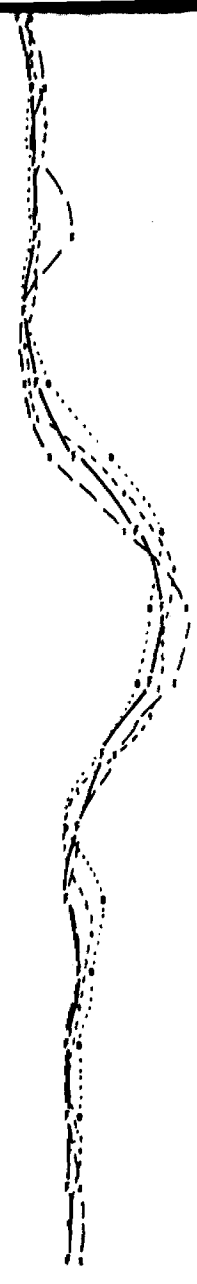
CHARSEALITY PROFILE

F F  
 E E  
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 E E  
 E E





4	29000
4	3
3	21000
4	4
4	22000
4	7
4	23000
3	3
3	24000
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10	25000
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\*\*\*\*\*  
 ROBERT M. BIRDLEY  
 EXP. LABORATORY, SERVICIOS HZC.  
 \*\*\*\*\*

LINE 14 R

Property: SYLVANITE  
 Tent 1

Date of Survey: 10/22/84  
 Operator: RM  
 Receiver: Scintrex IPR-B  
 Transmitter: Phoenix IPT-1 2.0 KVA  
 Spacing: 100 F  
 Spacing Read: 1 TO 3  
 Electrode Array: Pole - Dipole  
 Mode: Time Domain  
 Pulse Time: 2 Sec on 2 Sec off  
 Delay Time: 900 ms  
 Integration Time: 450 ms

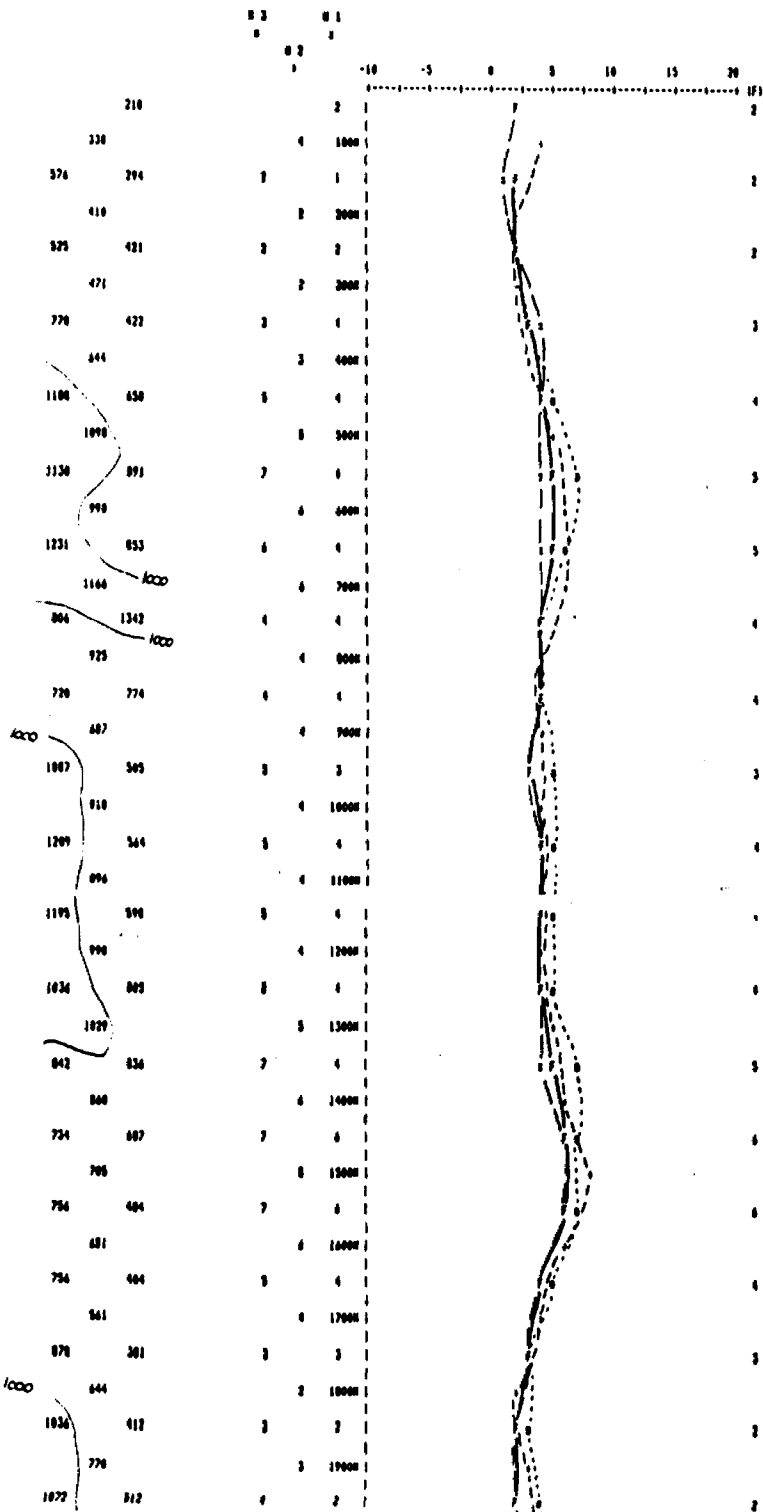


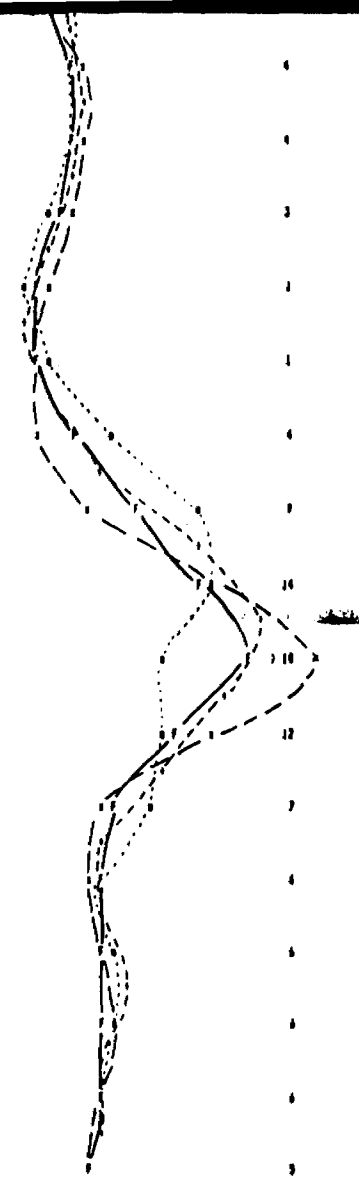
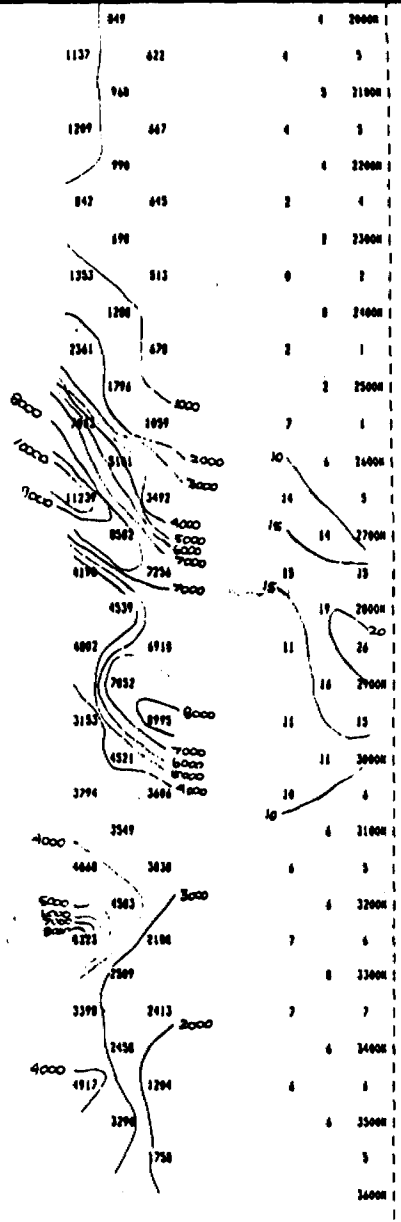
RESISTIVITY  
 (ohm-meters)

CHARGEABILITY  
 (microseconds)

CHARGEABILITY PROFILE

F F  
 B L  
 B L  
 B L  
 B L  
 B L





4	20000
4	5
3	21000
4	5
4	22000
2	4
1	23000
0	2
0	24000
2	1
2	25000
7	1
10	6
14	5
16	14
18	13
19	20000
11	26
16	29000
21	13
21	30000
20	4
10	4
6	5
6	32000
7	6
8	33000
7	7
6	34000
6	8
6	35000
5	36000

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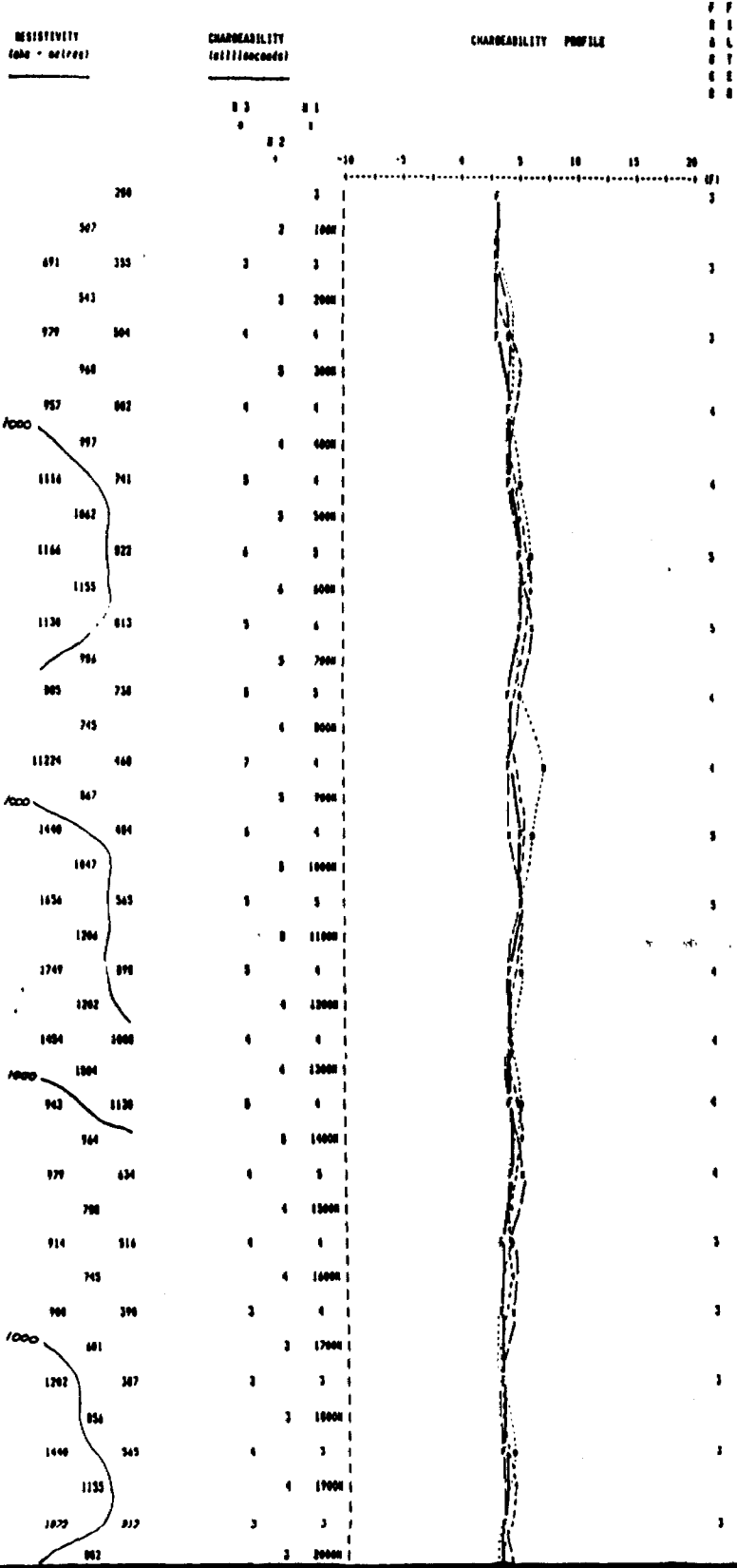


\*\*\*\*\*  
 R X B L O R B E R T W . M A R C H O L M E N  
 \*\*\*\*\*

L W N R 1 6 R

Property : SYLVANITE CREEK  
 Tent : SUINTERRA

Date of Survey : 10/22/04  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 Spacing : 100 F  
 Spacing Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Play Time : 900 ms  
 Integration Time : 480 ms



F F  
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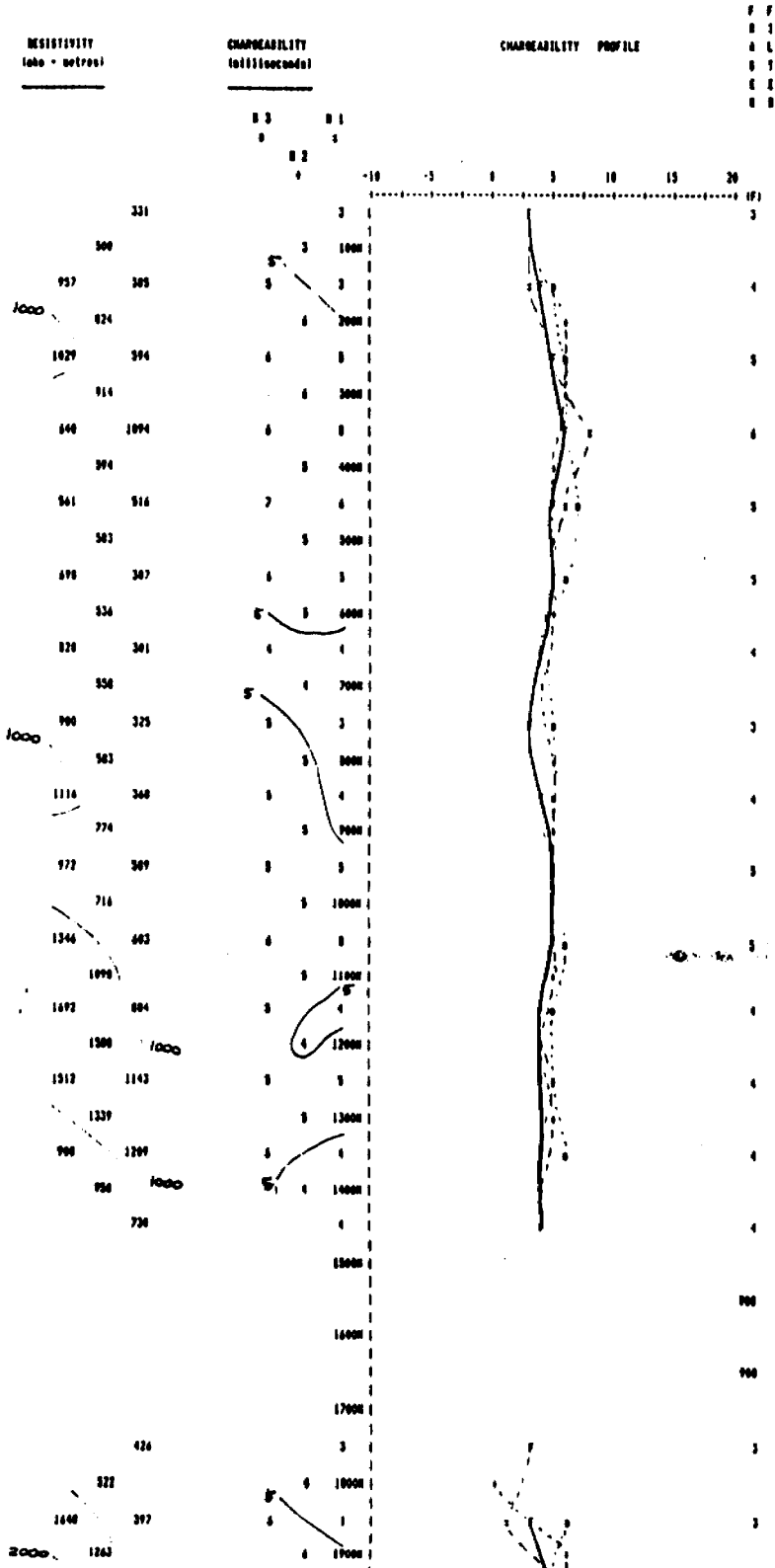


\*\*\*\*\*  
 ROBERT M. MIDDLETON  
 EXPLOREATION SERVICES INC.  
 \*\*\*\*\*

LINE 10 E

Property : SYLVANITE CREEK  
 Locality : GUINTERRA

Date of Survey : 10/23/84  
 Operator : RM  
 Receiver : Scintrex IPR-B  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 Spacing : 100 F  
 Spacing Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



1634		6	20000
1496	1301	8	8
1000	1866	5	21000
784	3320	8	7
	1134	7	22000
3304	1437	7	7
4820		6	23000
	3000		
4768	3141	9	8
4021		10	7
11007	3121	13	7
10000			
8287		10	12
7000	6357	6	12
	11401		
	6541	11	16000
7143	7175	14	19
	8093		
1317	7132	13	23
1864		15	27
1353	1918	18	20
		19	11
1540		16	11
1144	1498	9	6
	1231	7	30000
2786	646	7	4
	1760	6	31000
3700	919	8	5
	2217	4	32000
	3441	5	5



Property : SYLVANITE CREEK  
 Client : QUINTERRA

LINE ZOE

Date of Survey : 10/24/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacing Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

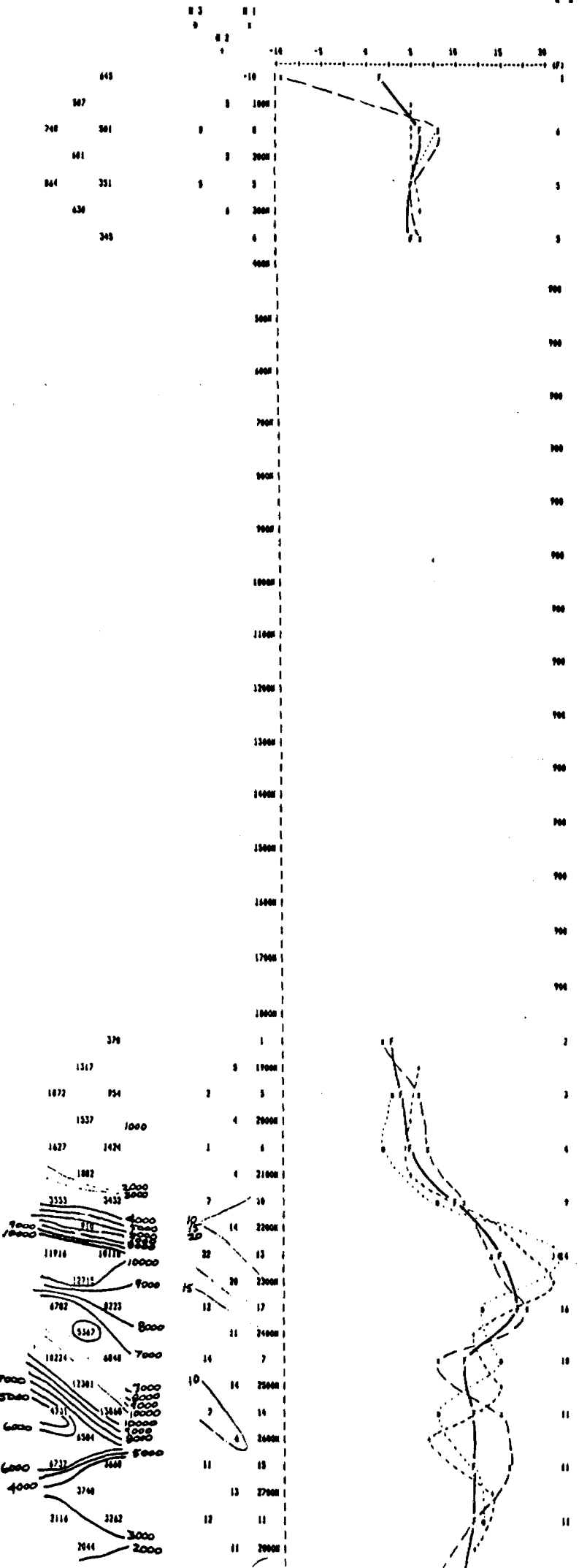


RESISTIVITY  
 (ohm - meters)

CHARGEABILITY  
 (microseconds)

CHARGEABILITY PROFILE

F F  
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 A A  
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 E E  
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\*\*\*\*\*  
 ROBERT S. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

LINE 22 E

Property : SYLVANITE CREEK  
 Client : SUINTERA

Date of Survey : 10/24/84  
 Operator : RM  
 Receiver : Scintrex IPR-B  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

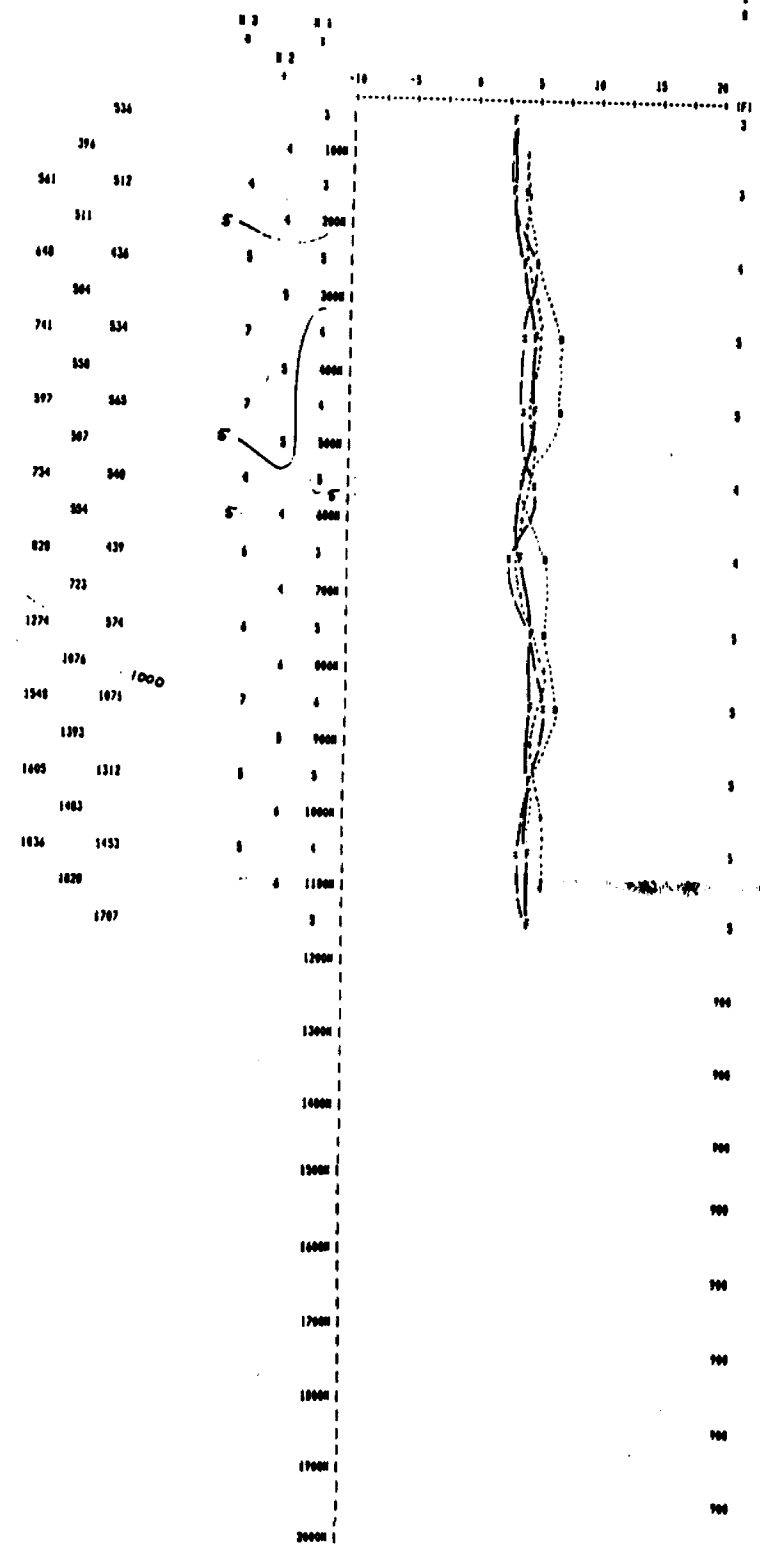


RESISTIVITY  
 (ohm - meters)

CHARGEABILITY  
 (microseconds)

CHARGEABILITY PROFILE

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 6000 5046 2472  
 7000 4935 3000  
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 9000 8344 4000  
 10000 2489 4422  
 11000 6981 4000  
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\*\*\*\*\*  
 ROBERT S. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

LINE 24 R

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 10/24/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 Spacing : 100 F  
 Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 480 ms

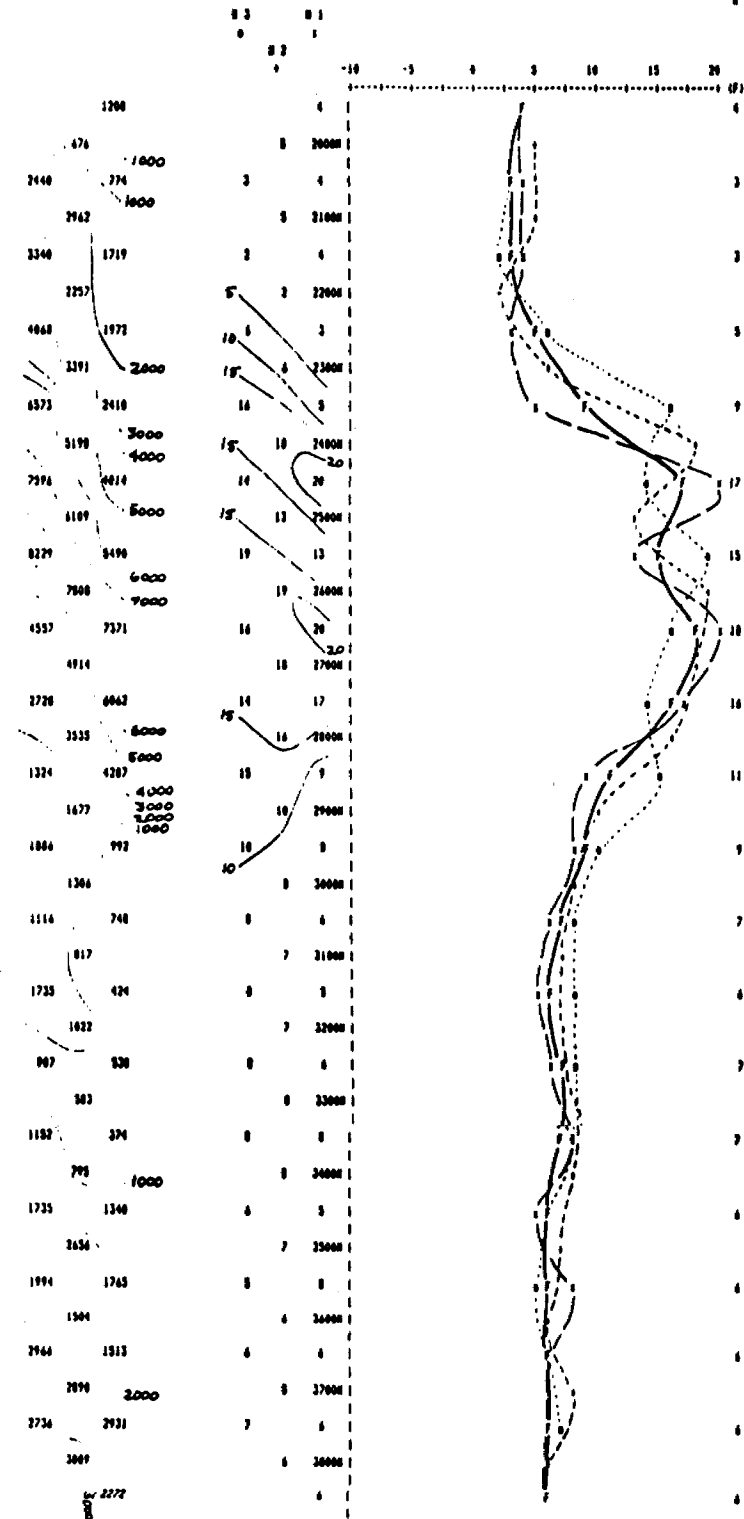


RESISTIVITY  
 (ohm - m/foot)

CHARGEABILITY  
 (microseconds)

CHARGEABILITY PROFILE

0 0  
 1 1  
 2 2  
 3 3  
 4 4  
 5 5  
 6 6  
 7 7  
 8 8



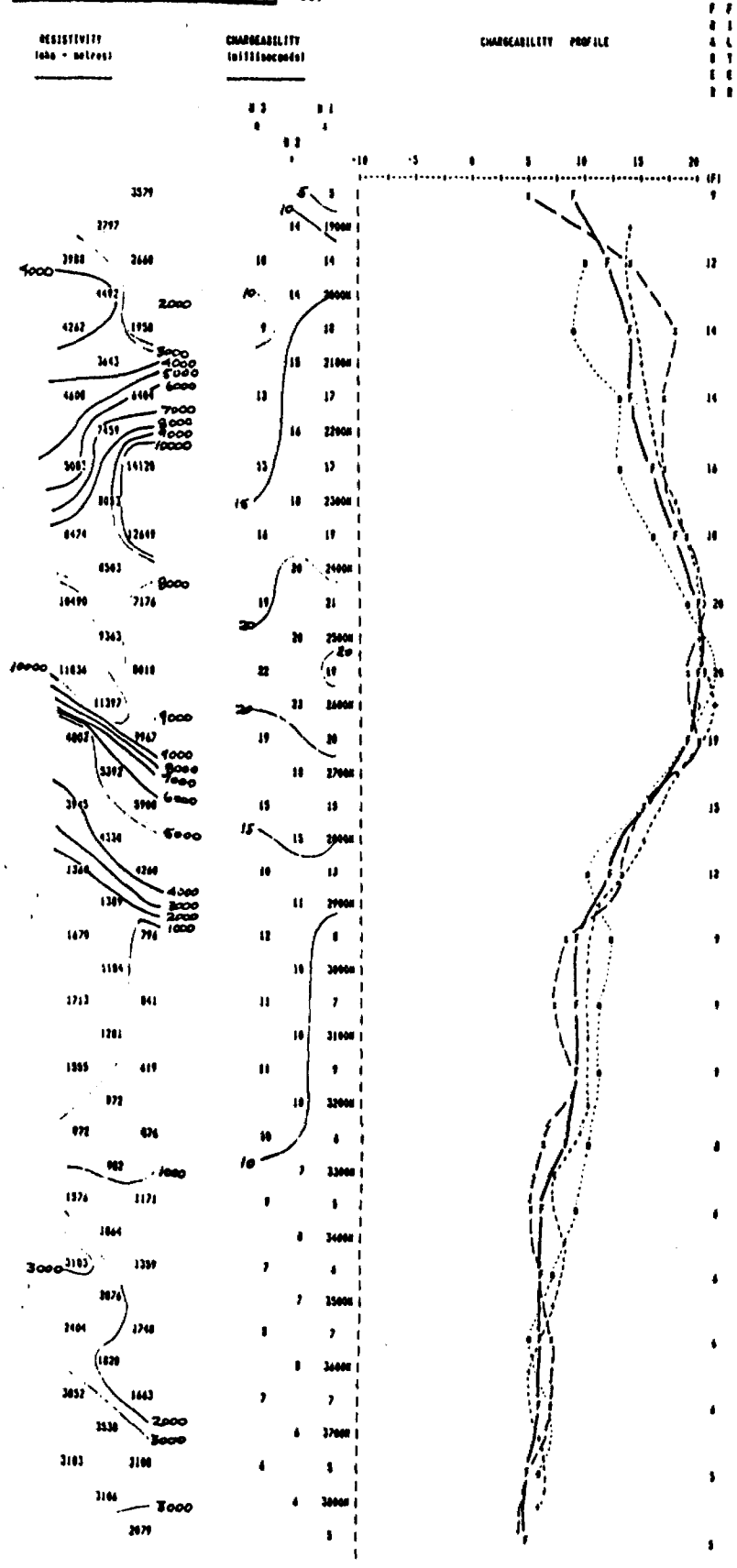


\*\*\*\*\*  
 ROBERT S. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

LINE 24 E

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 4/25/84  
 Operator : RM  
 Receiver : Scintrex IPR-B  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 480 ms

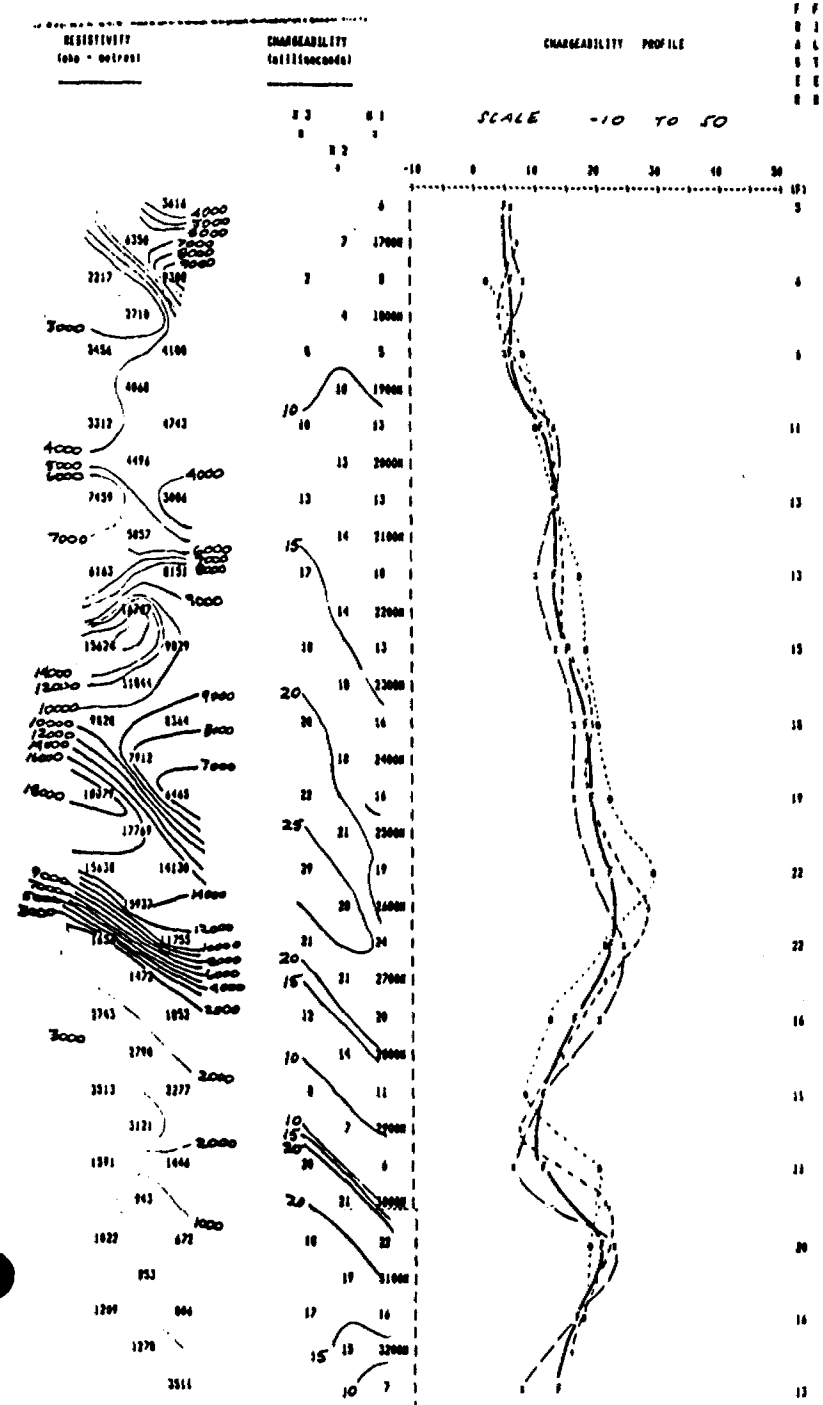


\*\*\*\*\*  
 ROBERT S. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

LINE NO 8

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 4/28/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



\*\*\*\*\*  
 ROBERT S. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

LINE 30 E

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 4/25/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



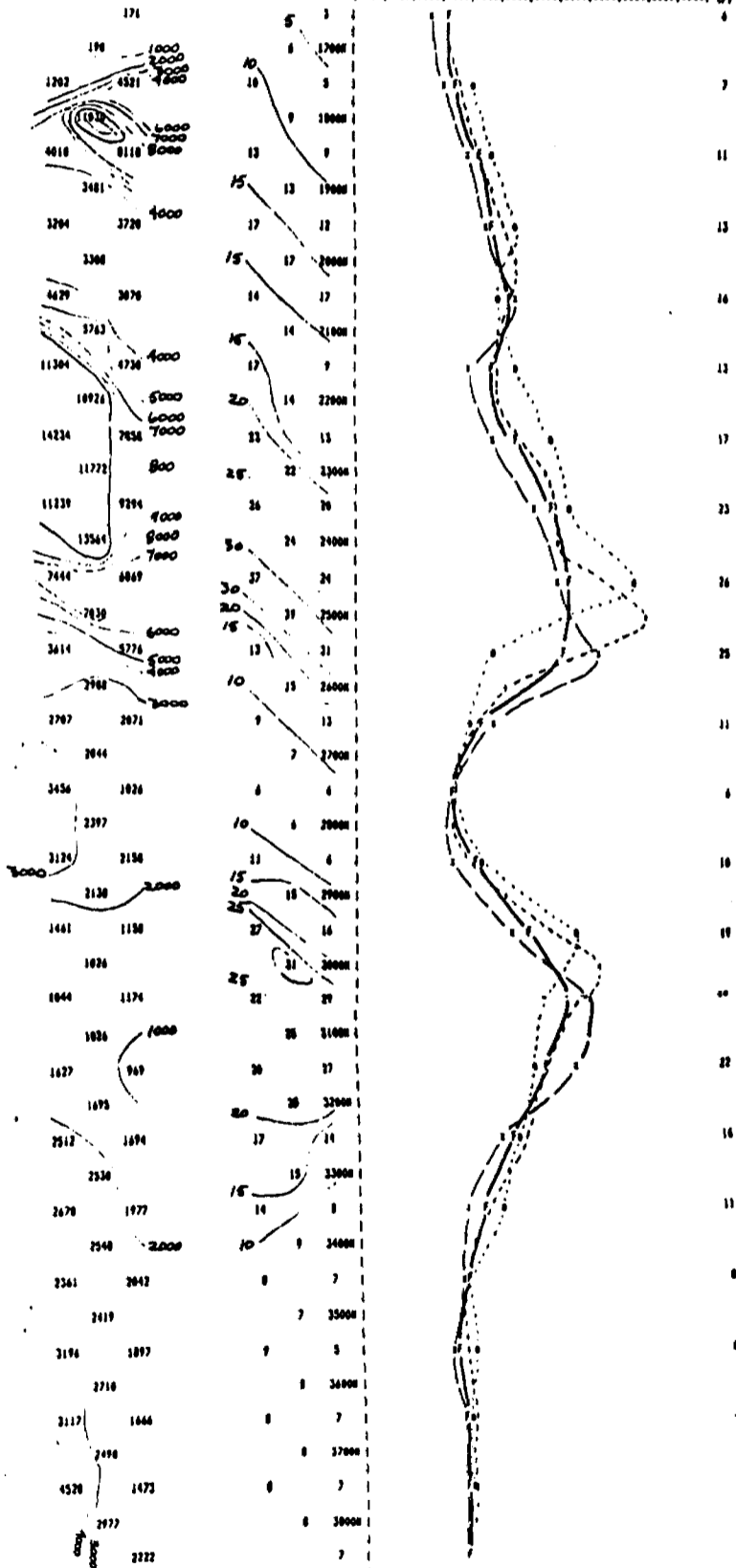
RESISTIVITY  
 (ohm-feet)

CHARGEABILITY  
 (microseconds)

CHARGEABILITY PROFILE

F F  
 E E  
 S S  
 E E  
 S S

SCALE : -10 TO 50



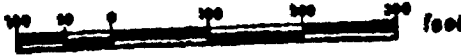




LINE 40 E

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 11/20/84  
 Operator : RM  
 Receiver : Scintrex IPR-B  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

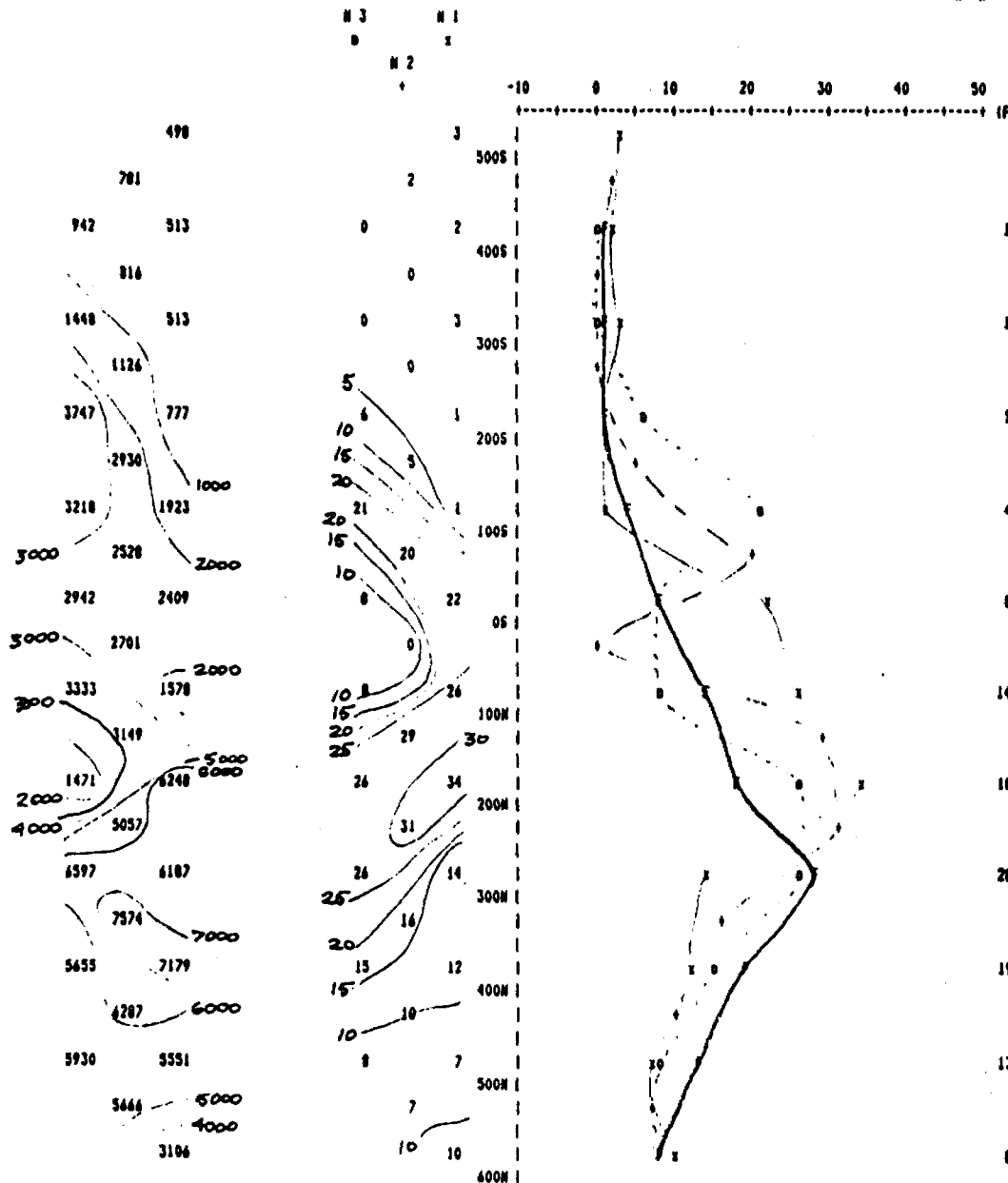


RESISTIVITY  
 (ohm - metres)

CHARGEABILITY  
 (milliseconds)

CHARGEABILITY PROFILE

F F  
 R I  
 A L  
 S T  
 E E  
 R R



\*\*\*\*\*  
 ROBERT S. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

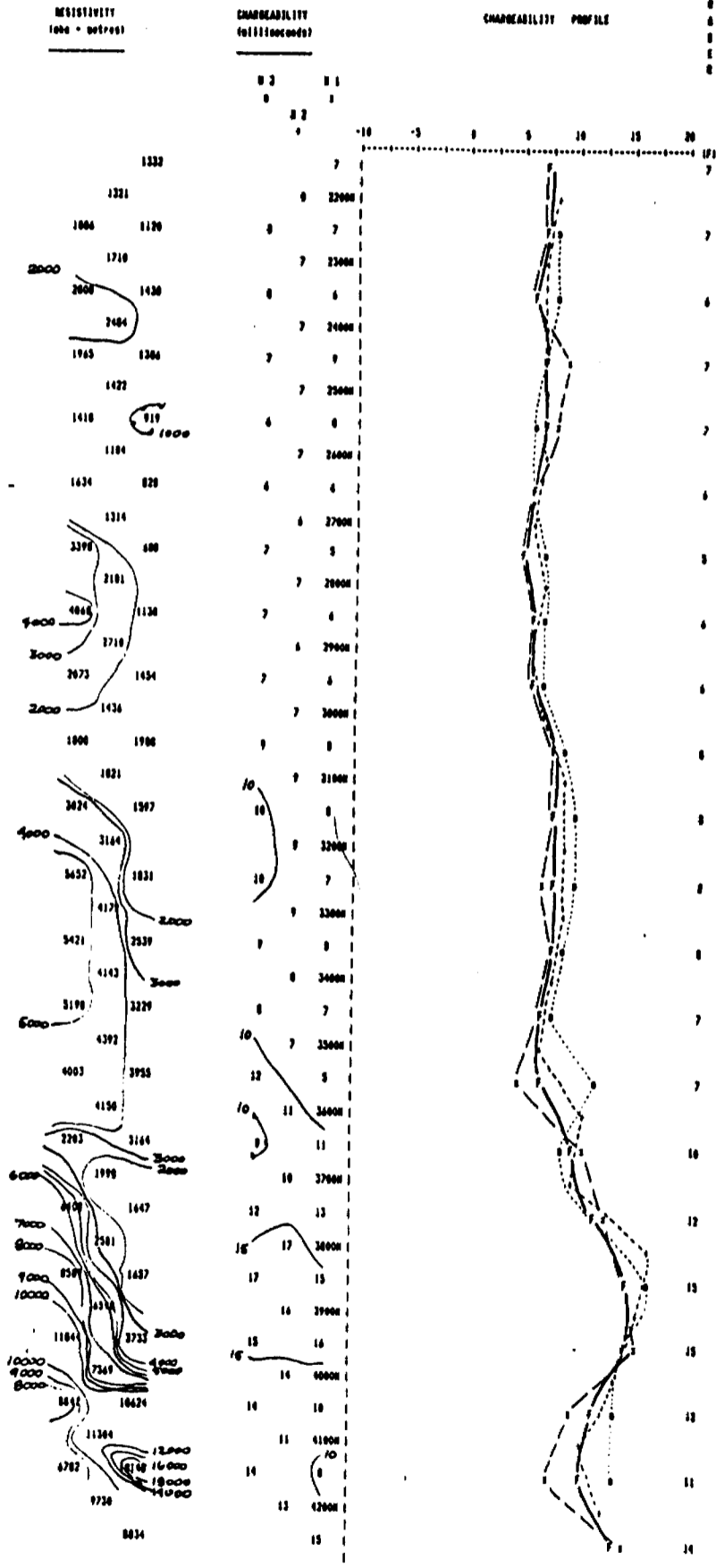
LINE AN E

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 10/29/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



FF

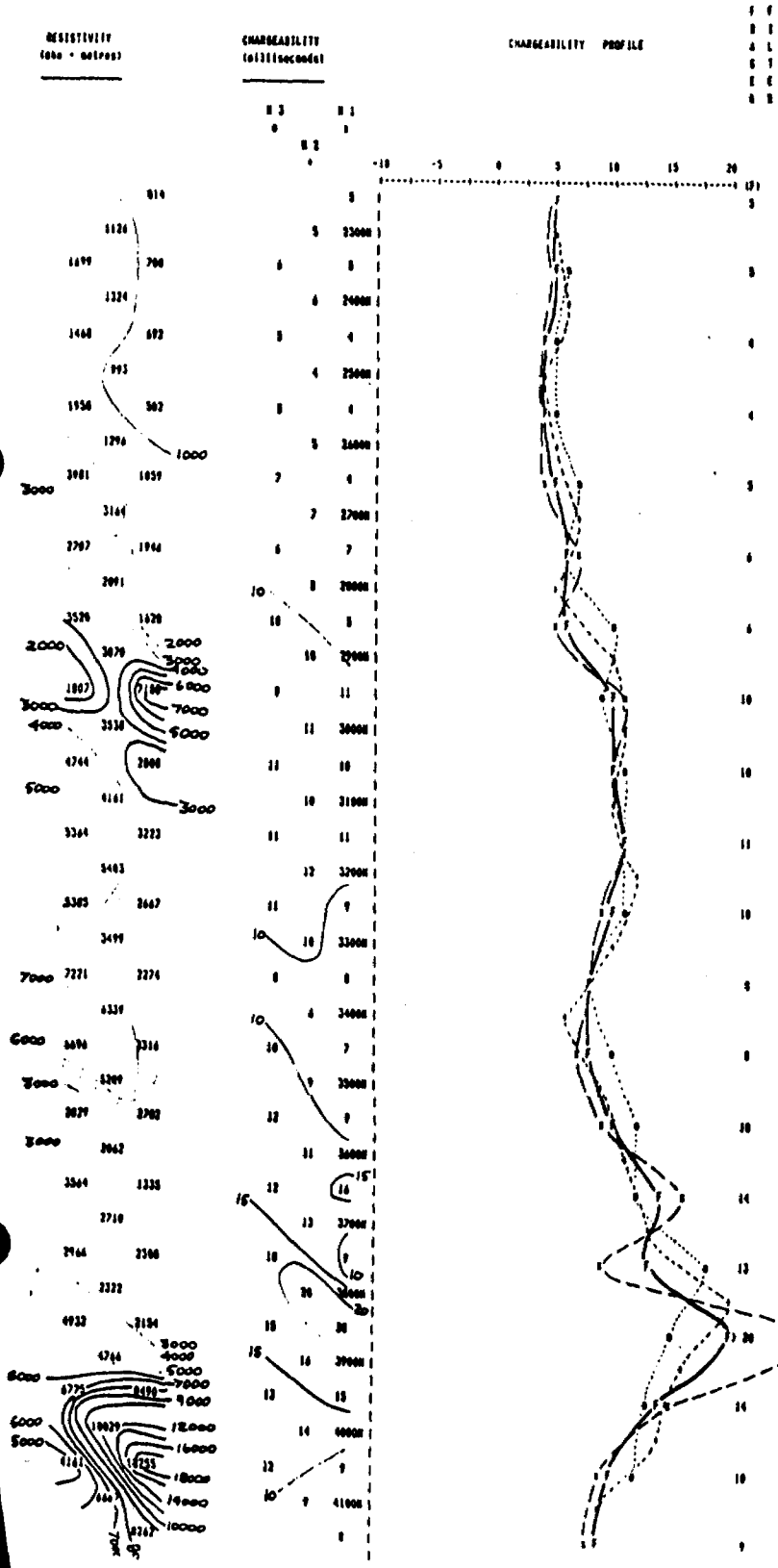


\*\*\*\*\*  
 ROBERT S. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

LINE 46 E

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 10/29/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 Spacing : 100 F  
 Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



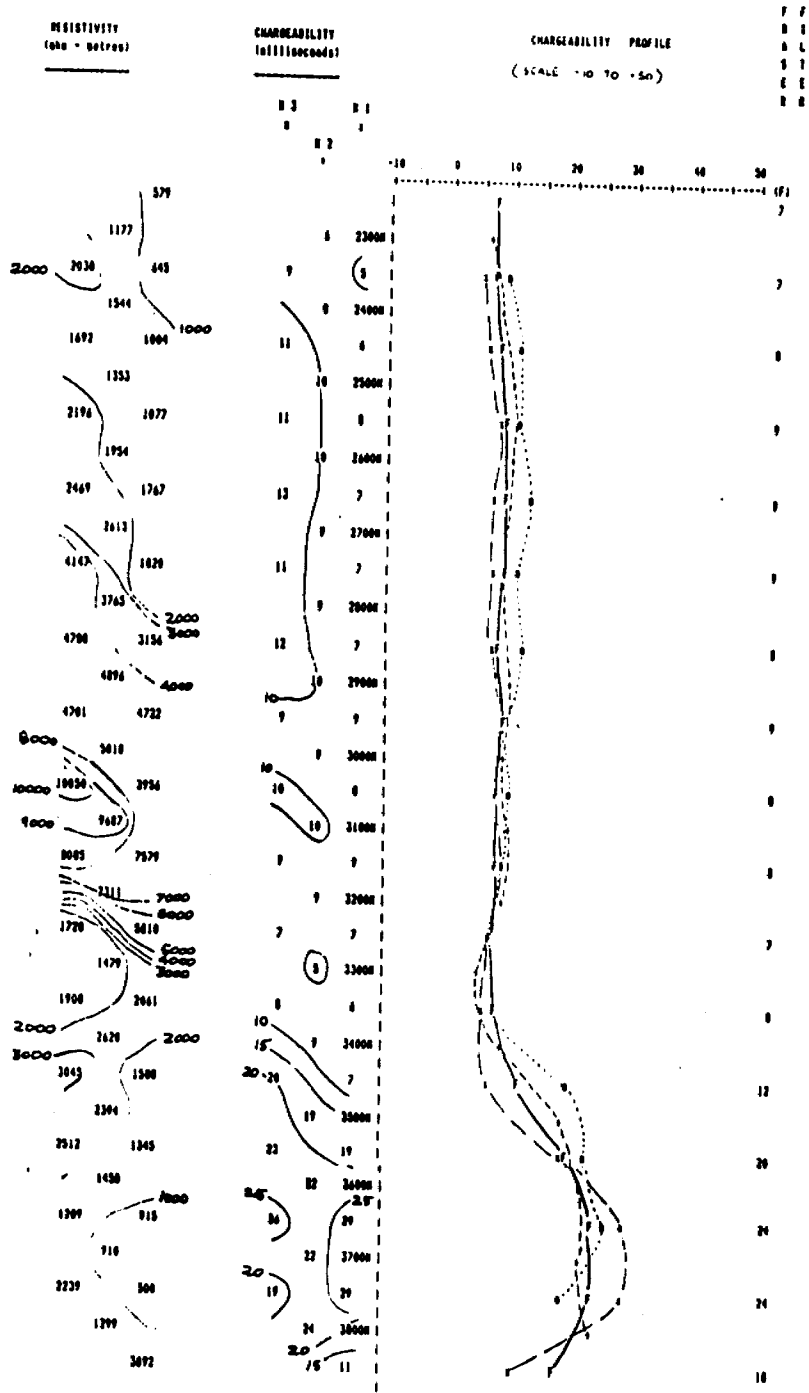


\*\*\*\*\*  
 EXPLORATION. SERVICIOS MZC.  
 \*\*\*\*\*

LINE 00 E

Property : SYLVANITE CREEK  
 Client : SUINTERRA

Date of Survey : 10/29/84  
 Operator : RM  
 Receiver : Scintrex IPR-B  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacing Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 10/29/84  
 Operator : RM  
 Receiver : Scintrex IPR-9  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

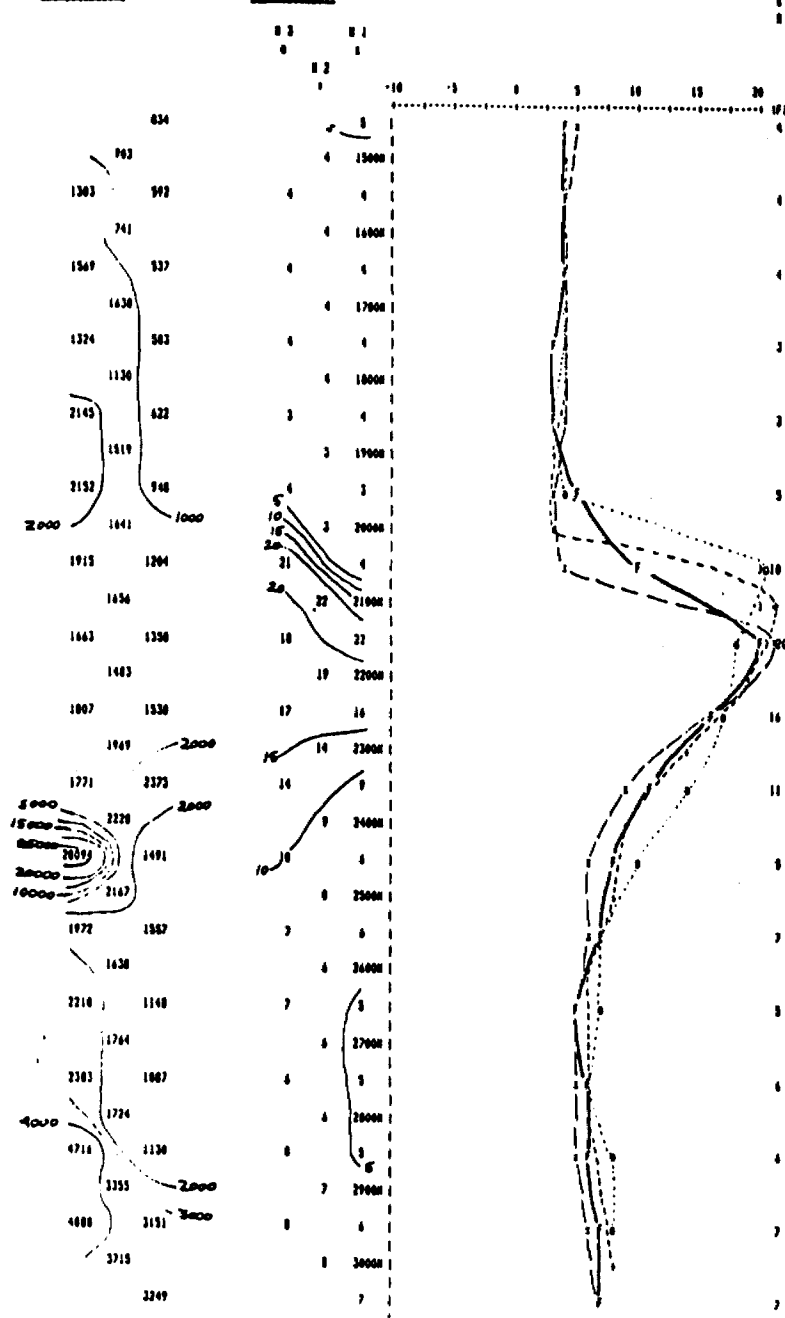


RESISTIVITY  
 (ohm - meters)

CHARGEABILITY  
 (microseconds)

CHARGEABILITY PROFILE

F F  
 0 1  
 0 1  
 0 1  
 0 1  
 0 1



LINE 00 E

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 10/29/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

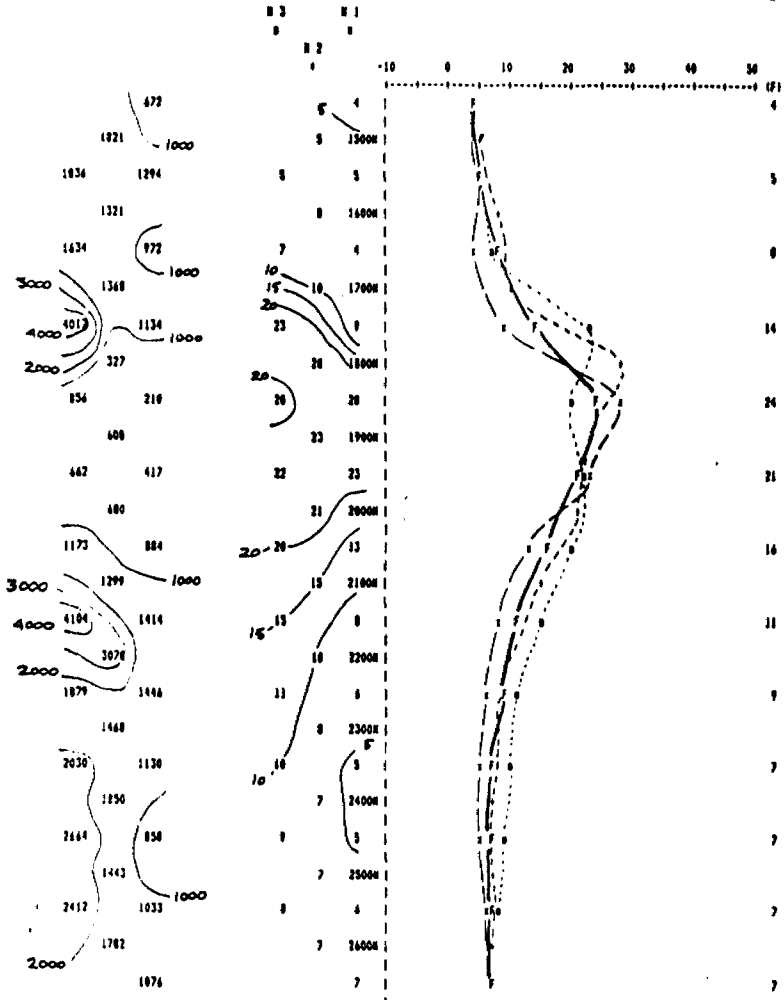


RESISTIVITY  
 (ohm - m/ps)

CHARGEABILITY  
 (10<sup>11</sup>seconds)

CHARGEABILITY PROFILE  
 (SCALE -10 TO +20)

27  
 21  
 11  
 17  
 11  
 22



\*\*\*\*\*  
 ROBERT S. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

L 7 2 8    6 2 8

Property : SYLVANITE CREEK  
 Client : GUINTERRA

Date of Survey : 10/29/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

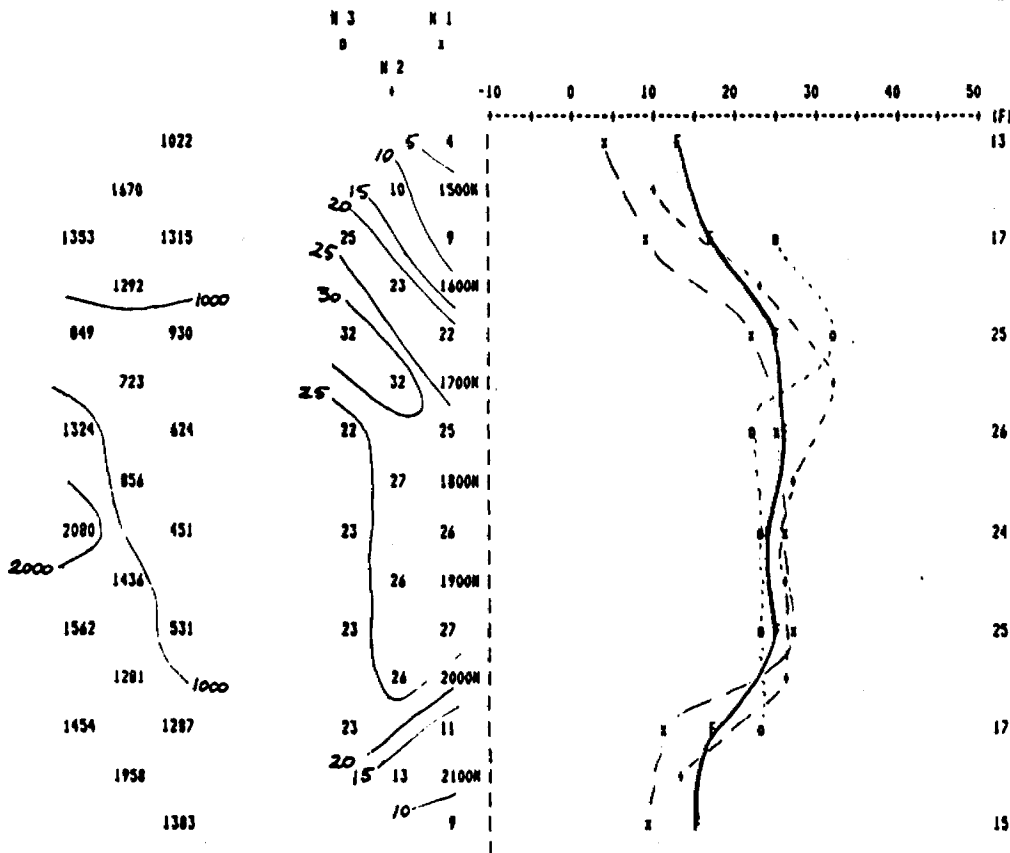


F F  
 R I  
 A L  
 S T  
 E E  
 R R

RESISTIVITY  
 (ohm - metres)

CHARGEABILITY  
 (milliseconds)

CHARGEABILITY PROFILE

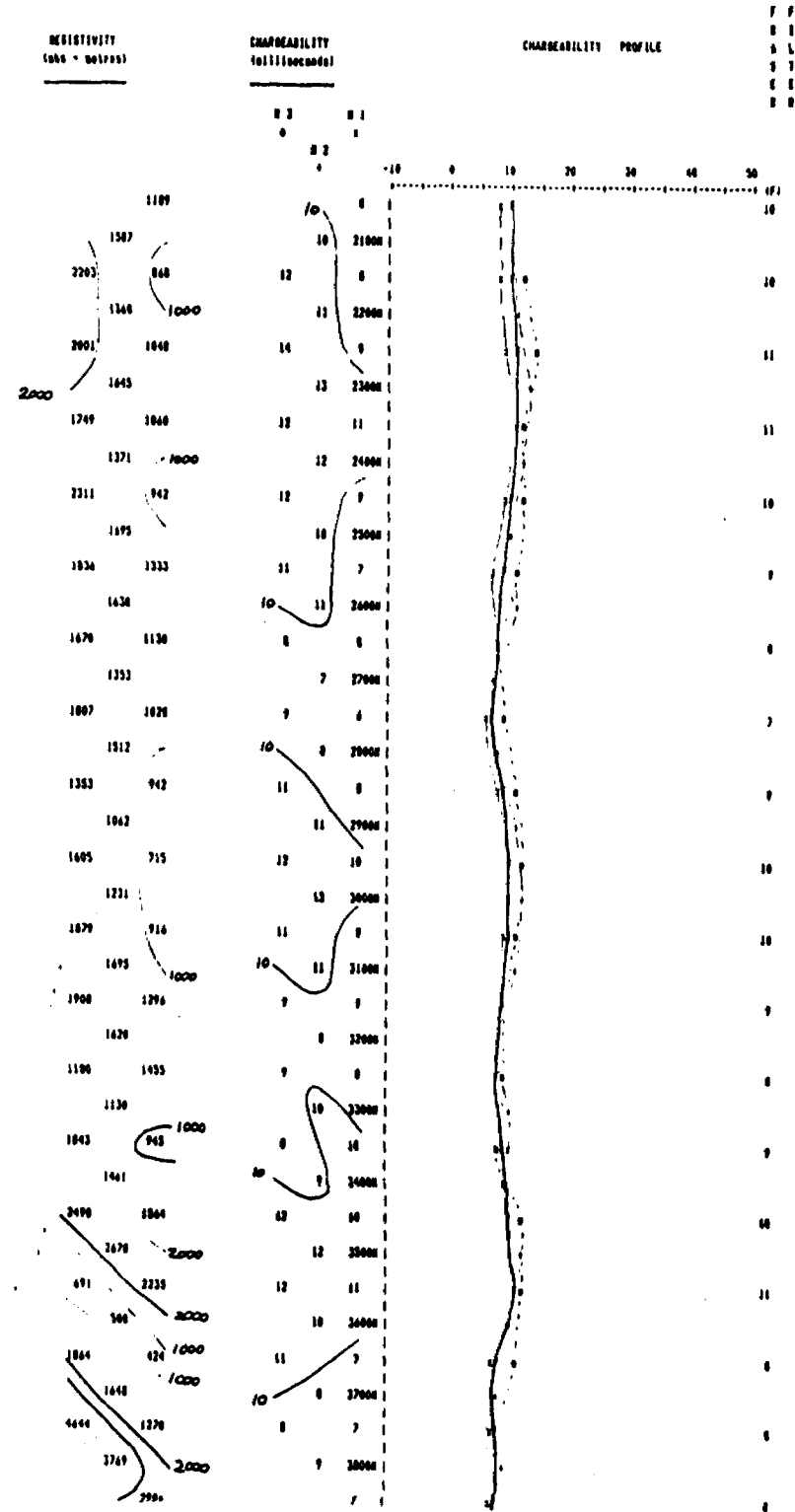


\*\*\*\*\*  
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 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

LINE 70 E

Property : SYLVANITE CREEK  
 Client : QUINTERRA

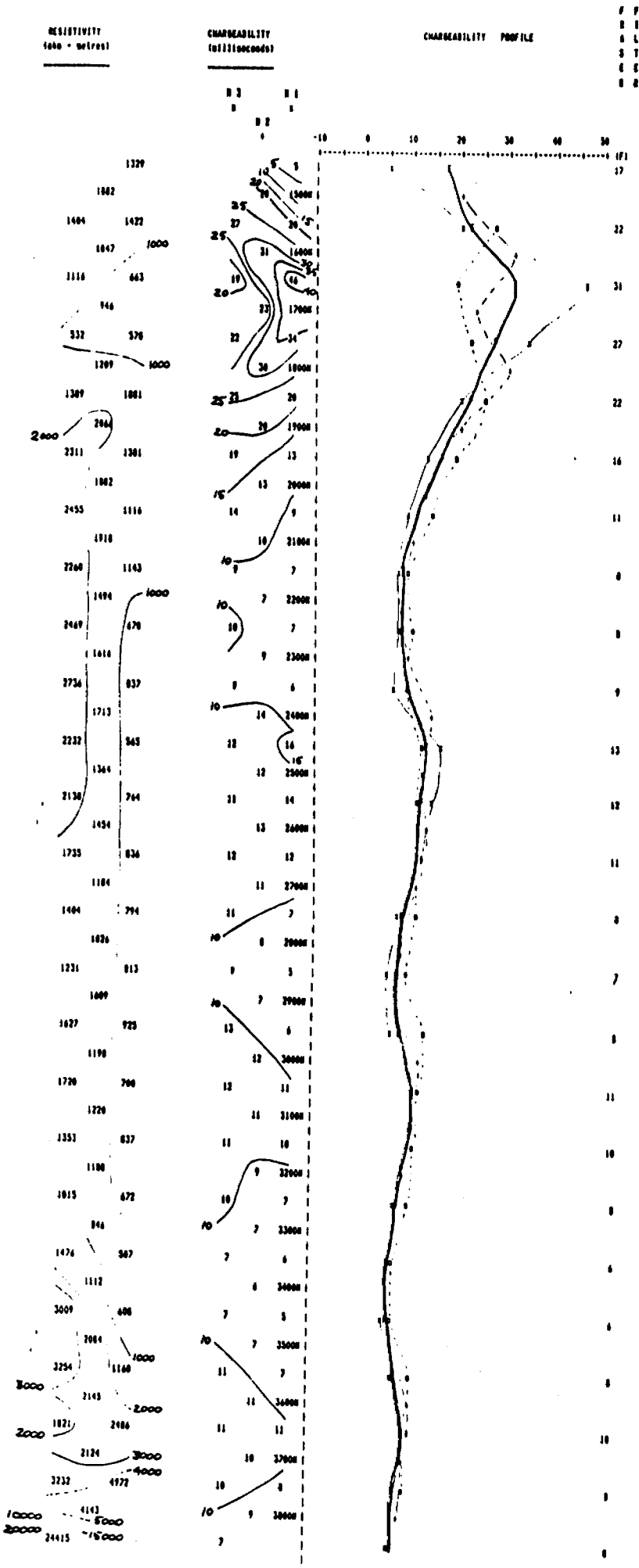
Date of Survey : 10/29/04  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacing Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



LINE 44 E

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 10/29/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacing : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



\*\*\*\*\*  
 ROBERT S. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

LINE 74 R

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 10/29/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

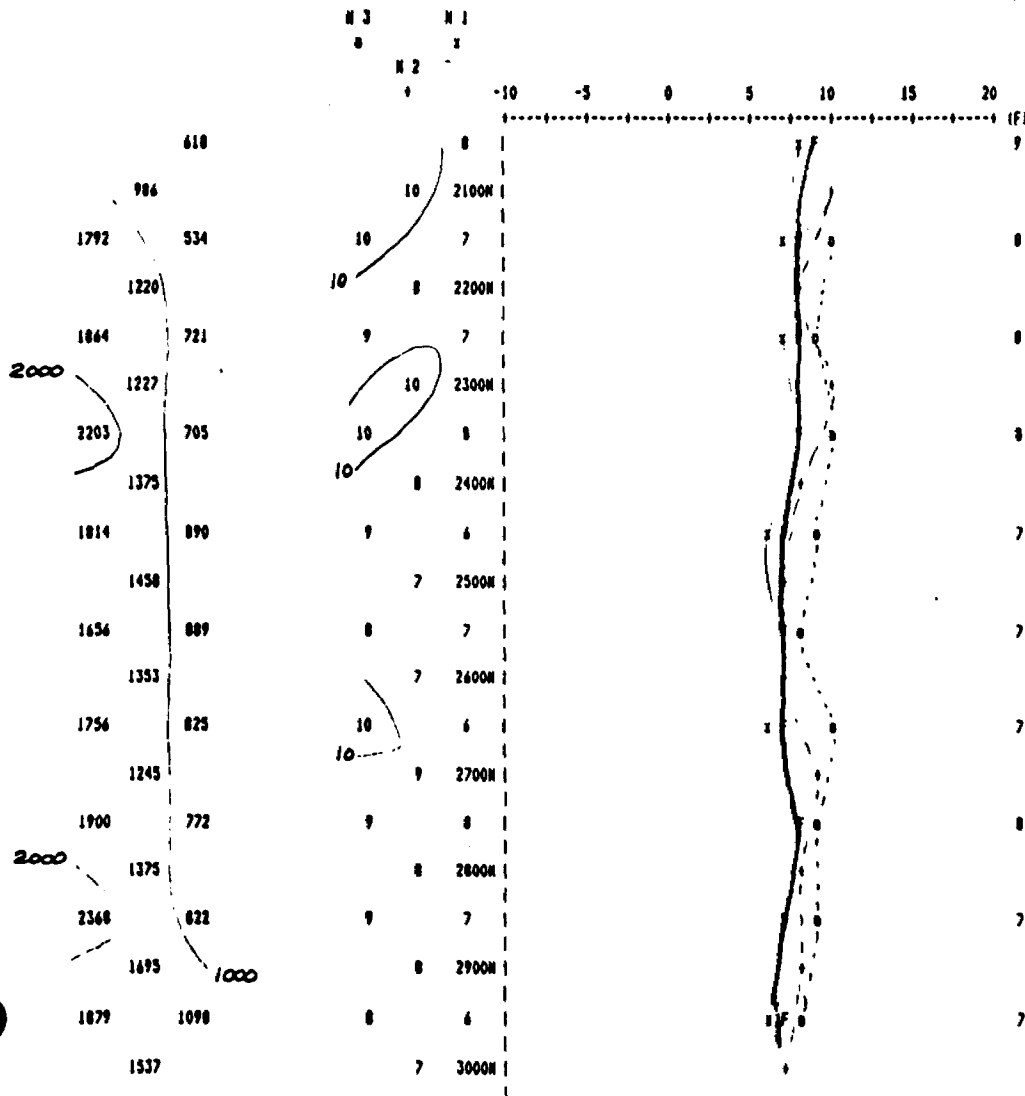


F F  
 R I  
 A L  
 S T  
 E E  
 R R

RESISTIVITY  
 (ohm - metres)

CHARGEABILITY  
 (milliseconds)

CHARGEABILITY PROFILE

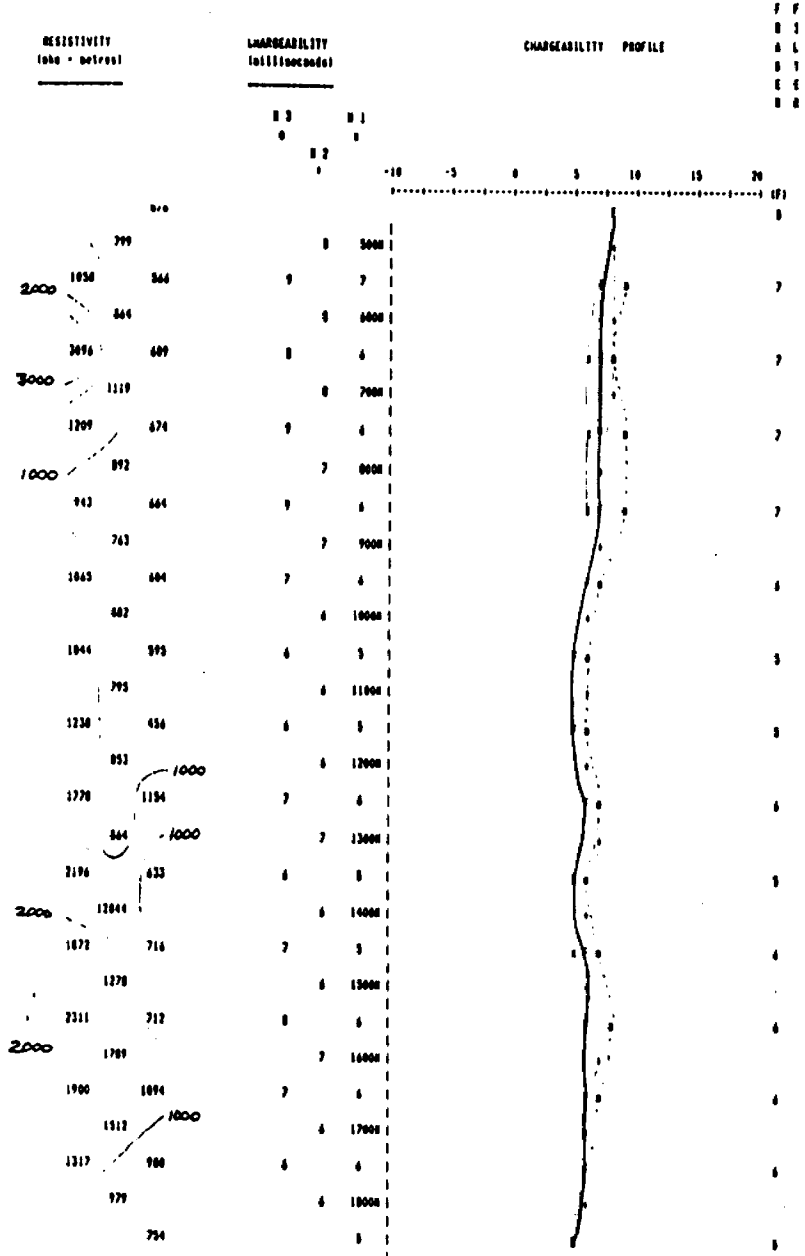


\*\*\*\*\*  
 ROBERT S. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

LINE 04 R

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 10/29/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacing Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



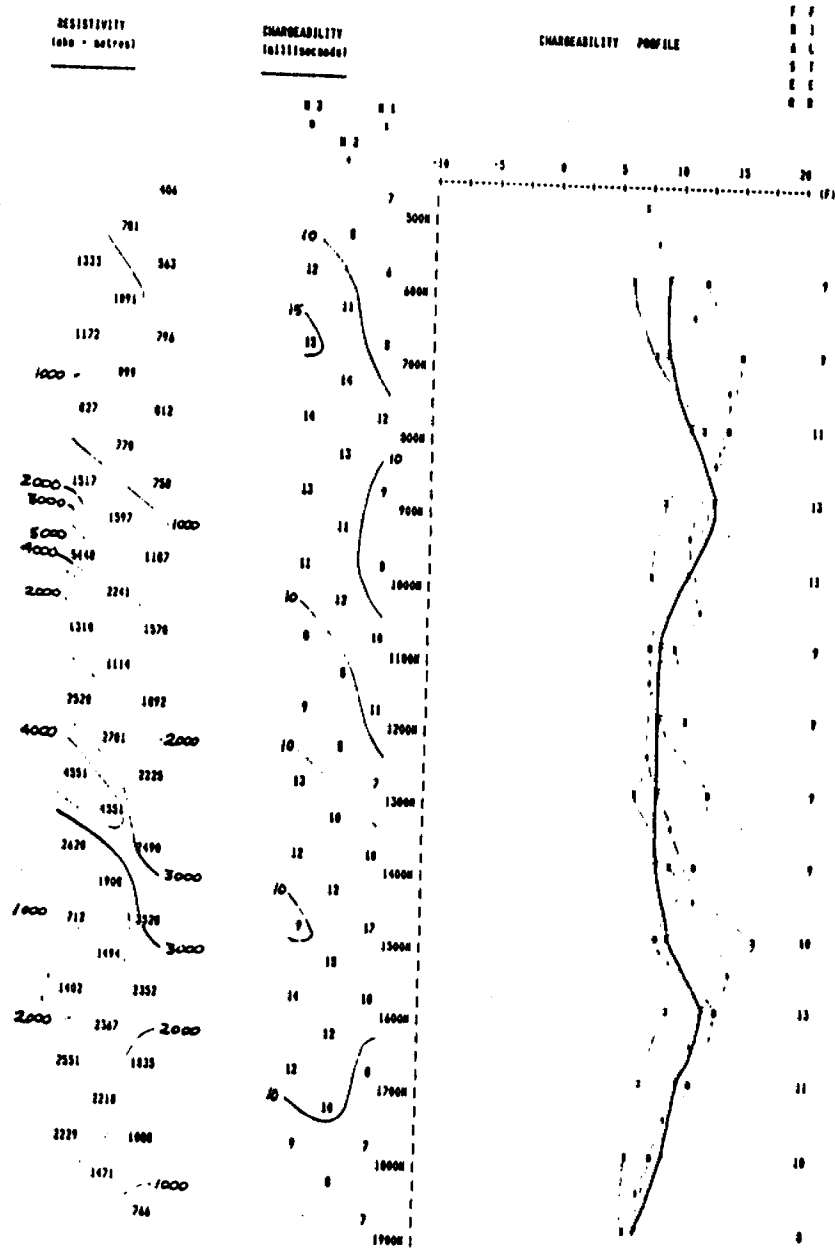


\*\*\*\*\*  
 ROBERT S. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

LINE 00 E

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 11/20/04  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



\*\*\*\*\*  
 EXPLOREZ. S. 33RD ST. H20.  
 \*\*\*\*\*

L N E W N E

Property : SYLVANITE CREEK  
 Client : GUINTERRA

Date of Survey : 11/20/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 N Spacings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

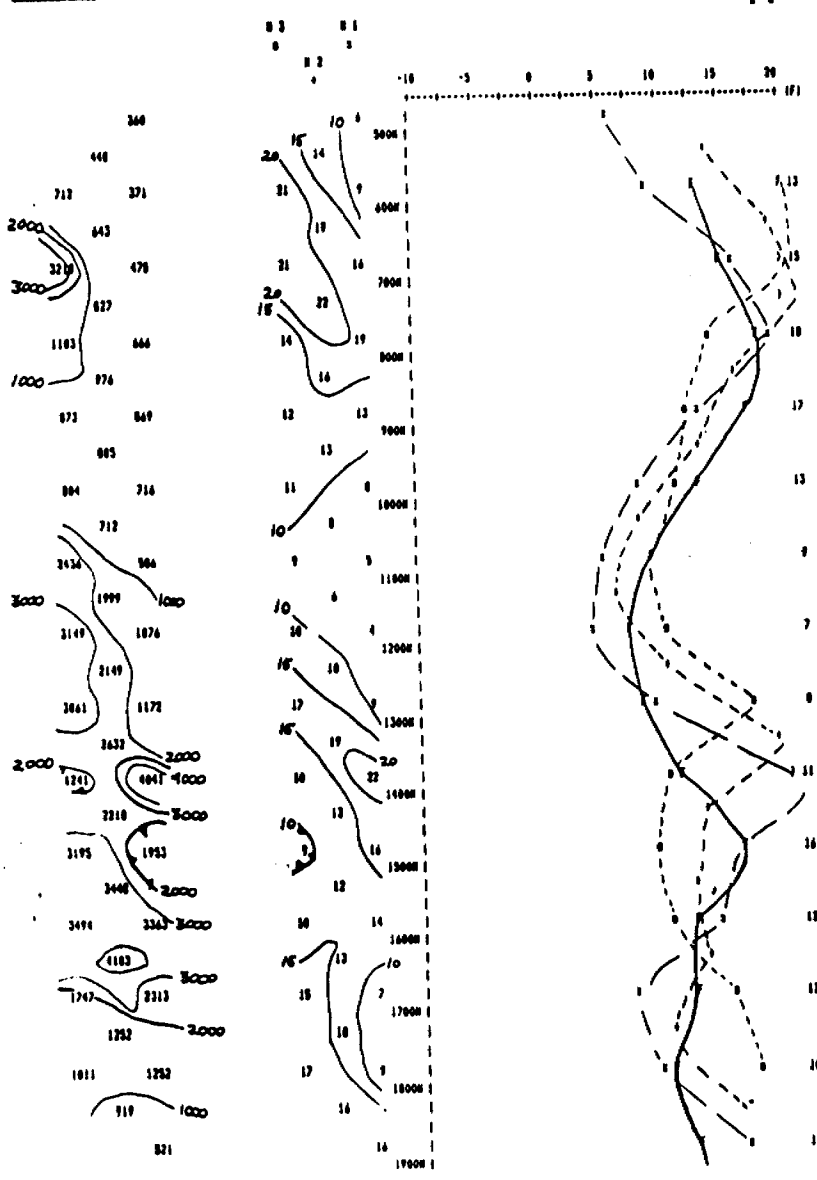


RESISTIVITY  
 (ohm - metres)

CHARGEABILITY  
 (in seconds)

CHARGEABILITY PROFILE

F F  
 0 1  
 0 1  
 0 1  
 0 1  
 0 1

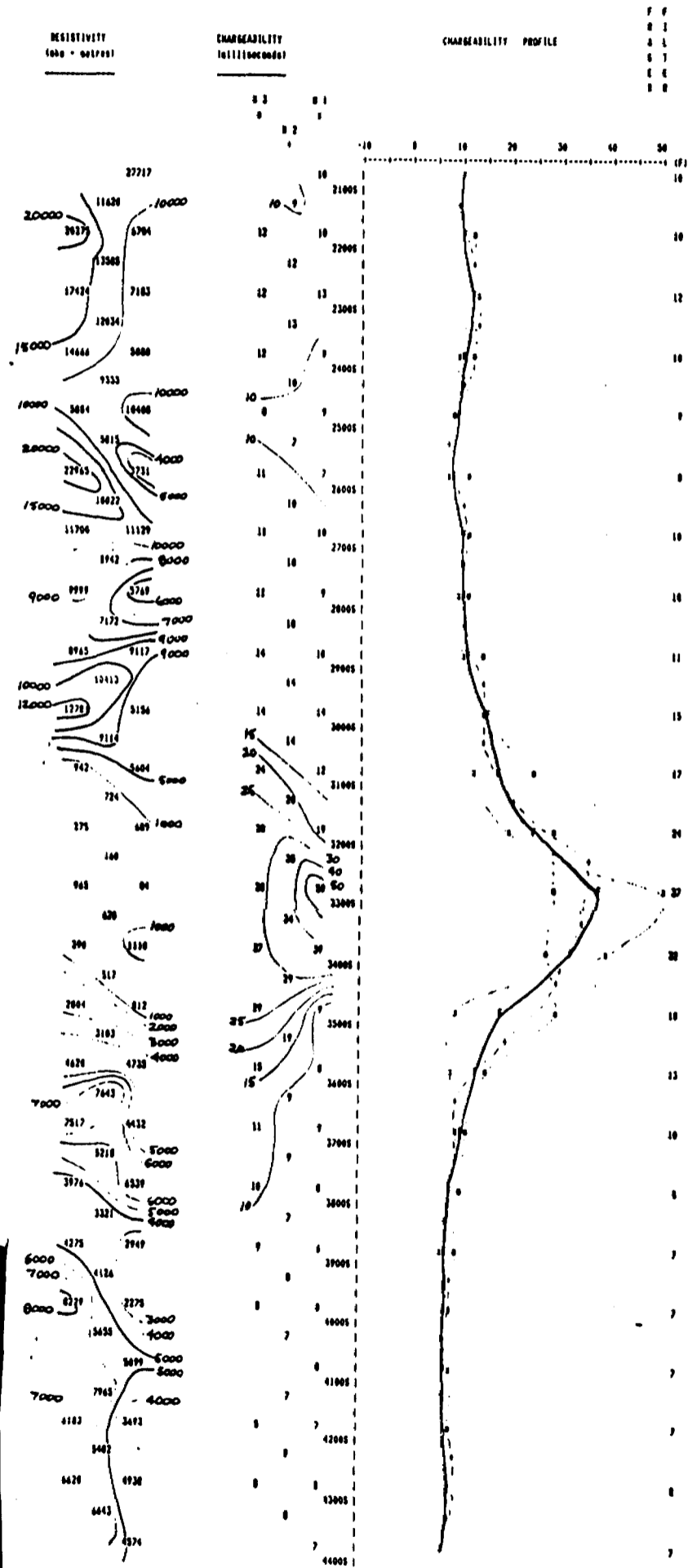


\*\*\*\*\*  
 ROBERT S. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

LINE 103 E

Property : SYLVANITE CREEK  
 Client : QUINTERRA

Date of Survey : 11/20/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 Spacing : 100 F  
 Electrode Array : 1 TO 3  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

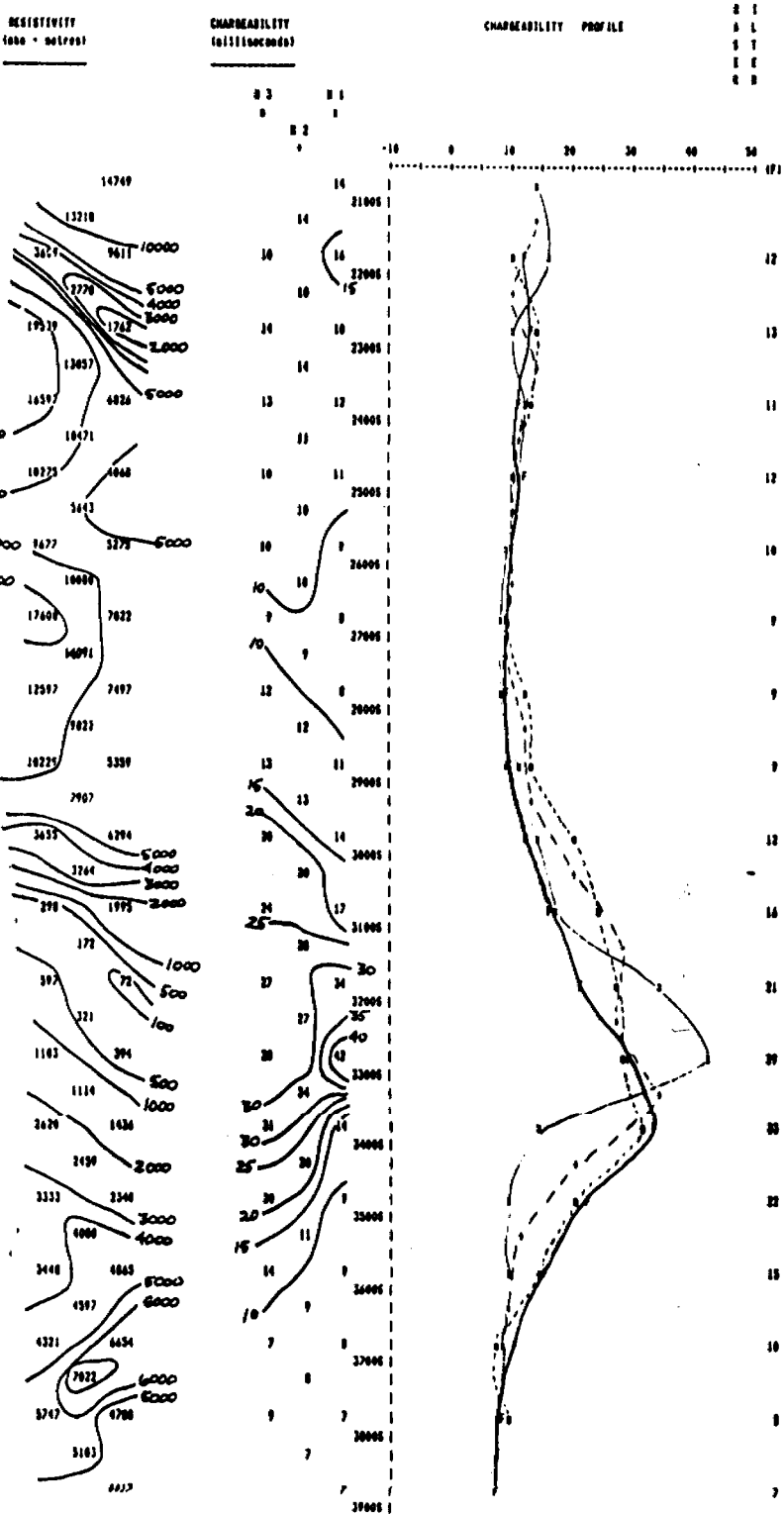


\*\*\*\*\*  
 ROBERT S. MIDDLETON  
 EXPLORATION SERVICES INC.  
 \*\*\*\*\*

LINE 107 E

Property : SYLVANITE CREEK  
 Locality : QUINTERRA

Date of Survey : 11/20/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 Spacing : 100 F  
 Spacing Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms



Client : QUINTERRA

# LINE 191 E

Date of Survey : 11/20/84  
 Operator : RM  
 Receiver : Scintrex IPR-8  
 Transmitter : Phoenix IPT-1 2.0 KVA  
 A Spacing : 100 F  
 Manings Read : 1 TO 3  
 Electrode Array : Pole - Dipole  
 Mode : Time Domain  
 Pulse Time : 2 Sec on 2 Sec off  
 Delay Time : 900 ms  
 Integration Time : 450 ms

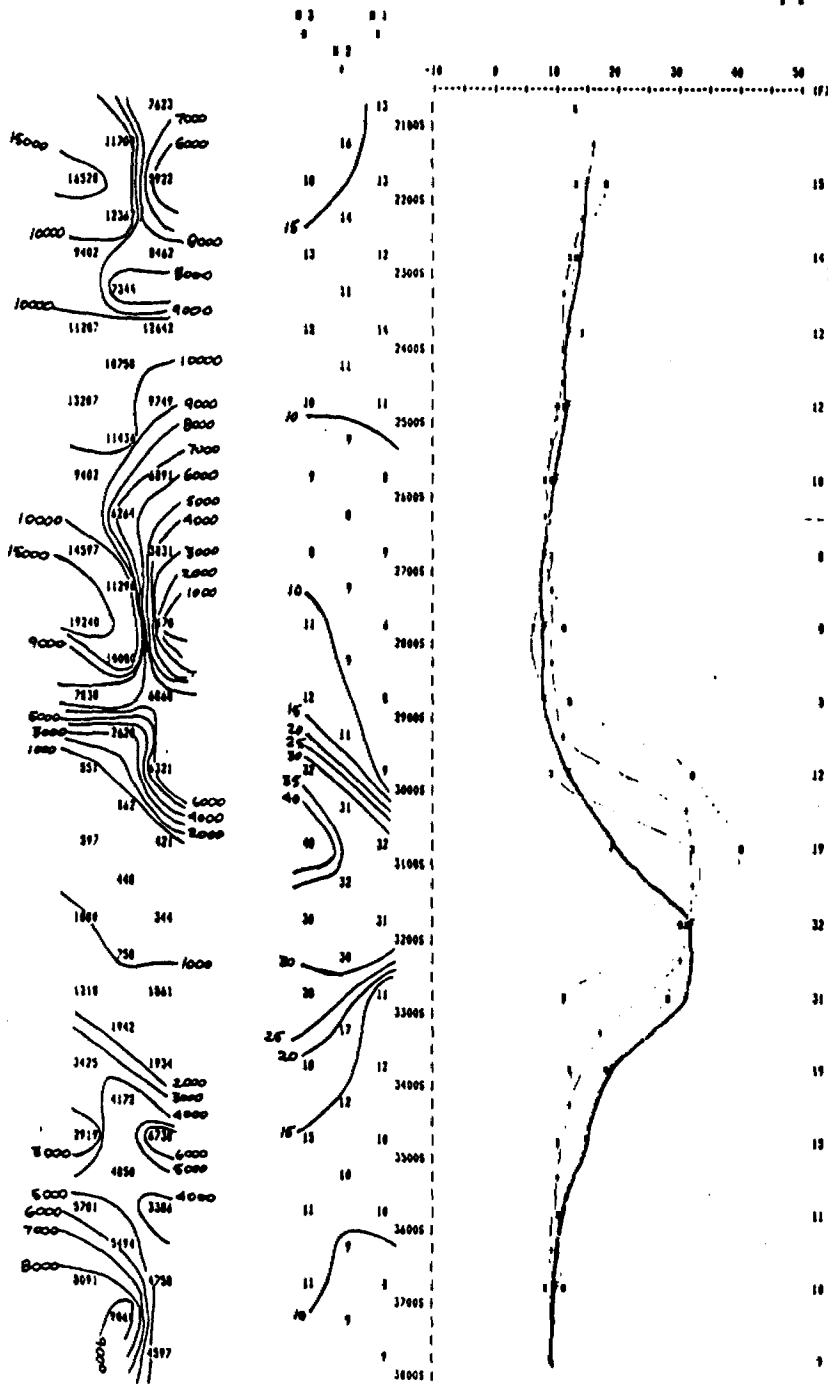


RESISTIVITY  
 (ohm - metres)

CHARGEABILITY  
 (microseconds)

CHARGEABILITY PROFILE

F F  
 S L  
 S L  
 S L  
 S L  
 S L



2



42B01NE8577 63.4501 PENHORWOOD

080

1984 ASSAY RESULTS



# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B31-85

DATE: January 11, 1985

SAMPLE(S) OF: Core (3)

RECEIVED: December, 1985

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

PN - 074

<u>Sample No.</u>	<u>Copper ppm</u>	<u>Zinc ppm</u>
051359	380	3150
051360	610	1900
05161	1040	

} SC-84-2

RECEIVED  
JAN 14 1985

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER 



BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

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JAN 14 1985

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CUSTOM, UNLESS IT IS SPECIFICALLY STATED  
GOLD AND SILVER VALUES REPORTED ON  
'S HAVE NOT BEEN ADJUSTED TO COMPEN-  
SES AND GAINS INHERENT IN THE FIRE  
ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PCR-1





# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B25-85

Page 1 of 2

DATE: January 9, 1985

SAMPLE(S) OF: Core (129)

RECEIVED: January, 1985

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

### SYLVANITE CK.

Sample No.	Gold ppb	Gold oz.	Sample No.	Gold ppb	Gold oz.	
G51036	291	SC-84-1	G51328	402	↑	
7	407	SC-84-1	9	255		
8	77		G51330	96		
9	85	SC-84-5	1	16		
G51040	271	SC-84-5	2	156		
			3	417		
G51301	803**	↑	4	714		.021
2	232		5	29		
3	245		6	60		
4	266		7	595		
5	20		8	97		
6	36		9	410		
7	289		G51340		0.023**	
8	439		1	117		
9	388		2	38	SC-1-84	
G51310	602		SC-84-1	3	56	
1	437	0.041**	4	550		
2			5	20		
3	487		6	182		
4	80		7	233		
5	659**		8	196		
6	477		9	160		
7	284		G51350	100		
8	559		1	480**		
9	657	.022	2		0.031**	
G51320	639	.019	3	720**	.021	
1	378		4	117	↓	
2	762	.022	5	82		
3	429		6	115		
4	388		7	180		
5	555		8	18		
6	27		9	5		
7	26		G51360	14		SC-2-84

\*\* Checked

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER:



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B25-85

Page 2 of 2

DATE: January 9, 1985

SAMPLE(S) OF: Core (129)

RECEIVED: January, 1985

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

### SYLVANITE CK.

Sample No.	Gold ppb	Sample No.	Gold ppb
G51361	11	G51394	118
2	15	5	206
3	7	6	27
4	10	7	51
5	11	8	71
6	30	9	33
7	84	G51400	53
8	3		
9	488**	G63501	130
G51370	926**	2	73
1	274**	3	74
2	287	4	138
3	104	5	656**
4	111	6	51
5	100	7	237
6	32	8	169
7	33	9	30
8	163	G63510	259
9	215	1	70
G51380	274	2	58
1	130	3	11
2	126	4	86
3	346**	5	37
4	163	6	7
5	75	7	18
G51387	52	8	21
8	22	9	27
9	221	G63520	85
G51390	37	1	29
1	223	2	34
2	243	3	55
3	48	4	33
		5	23

\*\* Checked

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B1443-84

DATE: December 11, 1984

SAMPLE(S) OF: Rock (14)

RECEIVED: Dec. 5, 1984

SAMPLE(S) FROM: Mr. D. G. Innes  
D. G. Innes and Associates Ltd.

Sylv. Ck

<u>Sample No.</u>	<u>Gold ppb</u>
G51022	373**
3	85
4	73
5	115
6	62
7	33
8	5
9	15
G51030	103
1	8
2	48
3	51
4	223
5	58

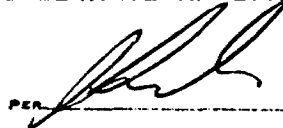
Grabs from Trenches

L 48E  
36N

\*\* Checked

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER 



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B1374-84

DATE: November 23, 1984

SAMPLE(S) OF: Rock (7)

RECEIVED: November, 1984

SAMPLE(S) FROM: Quinterra Resources Inc.

	<u>Sample No.</u>	<u>Gold ppb</u>
Sylv. Ck. PN 074	G51163	2
	4	77
	5	3

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER 



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B1309-84

DATE: November 9, 1984

SAMPLE(S) OF: Rock (26)

RECEIVED: November, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

	<u>Sample No.</u>	<u>Gold ppb</u>	<u>Gold oz.</u>
<i>Sybasite creek</i>	G51018	8	
	9	4	
	G51020	10	
	1	7	



# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B1280-84

DATE: November 5, 1984

SAMPLE(S) OF: Rock (52)

RECEIVED: October, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

*PN 074 - HALCROW PATENTS*

<u>Sample No.</u>	<u>Au ppb</u>	<u>Au oz.</u>	<u>Sample No.</u>	<u>Au ppb</u>	<u>Au oz.</u>
G51401	891**		G51427	4	
2	720**		8	82	
3		0.079**	9	16	
4	41		G51430	3	
5	347		1	8	
6	376		2	11	
7		0.078**	3	18	
8	78		4	4	
9		0.037**	5	3	
G51410	36		6	2	
1	11		7	5	
2	7		8	26	
3	18		9	23	
4	40		G51440	301	
5	14		1	3	
6	167		2	4	
7	8		3		2.43 **
8	4		4		0.180**
9	11		5	153	
G51420	15		6	30	
1	14		7	16	
2	15		8	16	
3	12		9	11	
4	18		G51450	15	
5	4		1	10	
6	16		2	8	

\*\* Checked

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER 



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. 42885

DATE: November 5, 1984

SAMPLE(S) OF: Rock (4)

RECEIVED: October, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

*PV 074 - Towns, Grenada*

<u>Sample No.</u>	<u>% Copper</u>	<u>% Zinc</u>
G51011	0.04	0.18
2	0.03	0.34
3	0.05	0.26
4	0.04	0.12

*074*

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER 



# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B1259-84

DATE: November 1, 1984

SAMPLE(S) OF: Rock (18)

RECEIVED: October 23, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

074

<u>Sample No.</u>	<u>Gold ppb</u>	<u>Gold oz.</u>
1	10	} 074 DL. Tr. So. end Batty Lake.
2	19	
3	8	
4	14	
5	4	
6	2	
7	10	
8	56	
G051011	14	} 074
2	7	
3	15	
4	59	
5	11	
6	15	
7	8	





# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B1144-84

DATE: October 12, 1984

SAMPLE(S) OF: Rock (12)

RECEIVED: October, 1984

SAMPLE(S) FROM: Quinterra Resources Inc.

Sample No.                      Gold ppb

G051001

5

2

3

3

7

4

3

5

5

6

7

7

11

8

5

9

4

G051010

8

G051153

12

4

15

074

074

RECEIVED  
OCT 16 1984  
RECEIVED

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER 



# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B1126-84

DATE: October 5, 1984

SAMPLE(S) OF: Rock (40)

RECEIVED: October, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

<u>Sample No.</u>	<u>Gold ppb</u>	<u>Gold oz.</u>	<u>Sample No.</u>	<u>Gold ppb</u>	<u>Gold oz.</u>
<i>Sylv</i> { G38531	8		<i>Sylv</i> { G051151	11	
2	11		2	34	
G38535	77				
<hr/>					
G051101	45				
2		0.048			
3	4				
4	20				
5		0.028			
6	617				
7		0.086			
8		0.026			
9		0.076			
G051110		7.24 **			
1		0.080			
2	537				
3	16				
4	7				
5	37				
6	4				
7	3				

\*\* Checked

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.



# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B1054-84

DATE: September 20, 1984

SAMPLE(S) OF: Rock (7)

RECEIVED: September, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

*Pr. 074*

<u>Sample No.</u>	<u>Gold/ppb</u>	<u>Gold/oz.</u>
G38526	3	} <i>0.14</i>
7	12	
8	8	
9	5	
G38530	4	
G38533		<i>0.062**</i>
4		<i>644 - Float - Low Sulfide #7 Tr. Sylv. Ck.</i>

*Float - sm.s  
Tr #7 - Sylv. Ck*

\*\* Checked

*Received Sept 21/84*

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER 



# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B971-84

DATE: September 4, 1984

SAMPLE(S) OF: Rock (6)

RECEIVED: August, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

<u>Sample No.</u>	<u>Gold/ppb</u>
G38523	3
G38524	2
G38525	2
G38648	2
G38649	2
G38650	2

} 074

ACCORDANCE WITH LONG-ESTABLISHED NORTH  
CAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED  
WISE GOLD AND SILVER VALUES REPORTED ON  
SHEETS HAVE NOT BEEN ADJUSTED TO COMPEN-  
FOR LOSSES AND GAINS INHERENT IN THE FIRE  
ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER





# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B950-84

DATE: August 28, 1984

SAMPLE(S) OF: Rock (6)

RECEIVED: August, 1984

SAMPLE(S) FROM: Mr. R. Lashbrook  
Quinterra Resources Inc., North Bay, Ont.

<u>Sample No.</u>	<u>Gold/ppb</u>
G38521	51
2	30
G38644	34
5	79
6	16
7	62

RECEIVED  
*Aug 30/84*  
RECEIVED

ACCORDANCE WITH LONG-ESTABLISHED NORTH  
CAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED  
WISE GOLD AND SILVER VALUES REPORTED ON  
SHEETS HAVE NOT BEEN ADJUSTED TO COMPEN-  
FOR LOSSES AND GAINS INHERENT IN THE FIRE  
ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.





# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B927-84

DATE: August 24, 1984

SAMPLE(S) OF: Rock(24)

RECEIVED: August, 1984

SAMPLE(S) FROM: Mr. R. Lashbrook, Quinterra Resources Inc.

*P. # 074*

PROJECT # 074800

<u>Sample No.</u>	<u>Gold ppb</u>	<u>Oz. Gold</u>
G38622		0.054*
3	424	
4		0.064* <i>Tr. 7 "K"</i>
5	97	
6	4	
7	121	
8	49	
9	69	<i>Tr # 4</i>
G38630	140	
1	114	
2	37	
3	123	
4	145	
5	210	
6	107	
7	108	<i>Tr # 6</i>
8	733*	
9	78	
G38640	31	
1	60	} <i>074</i>
2	199	
3	19	
G38699	4	
G38700	808*	<i>- 7 "I"</i>

\* Checked.

*D.K.  
O.I.  
B.K.*

RECEIVED  
*Aug 27/84*  
RECEIVED

ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B899-84

DATE: August 20, 1984

SAMPLE(S) OF: Rock (15)

RECEIVED: August, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

*project 074*

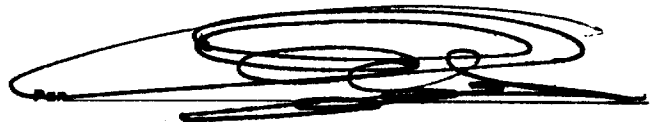
	<u>Sample No.</u>	<u>Gold/ppb</u>	<u>Gold/oz.</u>
	G38684	208	
	5		0.036**
<i>7" C"</i>	6	85	
	7	193	
	8	953	
	9	440	
	G38690	543	
<i>7" D"</i>	1	11	
	2	186	
	3	66	
	4	22	
	5	99	
<i>074</i>	6	21	
	7	4	
	8	2	

\*\* Checked

*c. c. B. K.  
D. I.  
B. K.*

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

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# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B886-84

DATE: August 16, 1984

SAMPLE(S) OF: Rock (26)

RECEIVED: August, 1984

SAMPLE(S) FROM: Mr. R. Lashbrook  
Quinterra Resources Inc.

*project 074*

Sample No.	Gold/ppb	Gold/oz.	Copper/ppm	Zinc/ppm	Silver/ppm
G38658	32	Graphitic Tuff 8% py	410	1400	1.0
9	22	" " 25% py	720	2675	1.6
G38660	34	30% py			
1	58	a-c. Vb. 5% py			
2	36	8% py			
3	86	carb Tuff			
4	253	carb Tuffs 2% py - 6'			
5		" " 0.038** - 5% py			
6	376	" " 3% py - 5'			
7	110	shd. carb Tuffs + ch. 3% py Tr. #7 west Tr.			
8	426	" " 3% py			
9	514**	py-ch IF 20% py, 0.7'			
G38670	97	carb Tuffs 2% py, 5.3'			
1	232	Fel. Tuff 6% py, 2'			
2	284	carb Tuffs 5', 3% py			
3	609	carb Tuffs + 25% py-ch IF. 5'			
4	903**	ch-py chl. IF 15% py			
5	12	- mass carb. Rock, 3% py			
6	132	carb Tuffs 3% py 3.5'			
7	141	Fel. Tuff 5% py 4.5'			
8	317	" " " 4'			
9	53	" " " 3'			
G38680	424	av + carb Tuff + 6" ch-py 2'			
1	260	Fel. Tuff 5% py 3 1/2'			
2	259	carb Tuff 2% py 4'			
3	511	carb Tuff 1% py 3'			

20' East of Above

↑

East from west end

↓

\*\* Checked

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

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# BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B851-84

DATE: August 9, 1984

SAMPLE(S) OF: Rock (10)

RECEIVED: August, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

074

Sample No.

Gold/ppb

G38651

838\*\* Ch-Py Beads L160E 10N

2

728\*\* " " " "

3

7

4

10

5

21

6

520\*\* alt. felsic Porph. L180E 7160s

7

10

G38598

5

9

8

G38600

25

*Sylv. Ck*

\*\* Checked

*c. b. v.  
c. D. L.  
B. K.*

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.



# BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B779-84

DATE: July 30, 1984

SAMPLE(S) OF: Rock (53)

RECEIVED: July, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

*P.N. 074*

Sample No.	Gold/ppb	Gold/oz.	Sample No.	Gold/ppb
G38566	2		G38592	33
7	3		66	Ch-carb. - 10% Pt + chl. s. sh.
8	56	E. end Buldozed area 20% Pt (Pt-chl-ch. SF.)	43	ch. Pt + carb. + a. ruff - 10%
9	3		11	
G38570	244	<i>BILLS</i> **BULLDOG AREA <sup>6</sup> - sil ser Tuff r. 2" bed impulf.	6	34 - Carb. Rock (man. Tuff)
1	3		7	5
2	85	3' - 10% Pt chl Tuff	G38601	4
3	15		2	2
4	3		3	7
5	4		4	7
6	2		5	4
7	86	Flint. Fel. Porph.	6	33
8	19		7	4
9	4		8	3
G38580	2		9	4
1	0.034	<i>NARANDA - CRABBED TR. - 4% Pt</i> **	G38610	3
2	125	2nd Mass West. Tr. 1/2% Pt	1	27
3	137	** Gilt. Fel. Porph. 1/2% Pt.	2	5
4	174	ch. - Pt IF. 6% Pt.	3	4
5	11		4	4
6	4		5	5
7	4		6	2
8	2		7	2
9	7		8	22
G38590	4		9	5
1	97	Carb. T. 10% Pt 2% Pt.	G38620	67
			1	5

*Sylv. East.*

\*\* Checked

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.





BELL-WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B666-84

DATE: July 16, 1984

SAMPLE(S) OF: Rock (5)

RECEIVED: July, 1984

SAMPLE(S) FROM: Ray Lashbrook  
Quinterra Resources Inc.

Project #074800

Tc 7

G38565

160 sylv Cr

S. D. K.  
D. I.  
W. K.

ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.



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P.O. BOX 187,

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B564-84

DATE: June 29, 1984

SAMPLE(S) OF: Rock (14)

RECEIVED: June, 1984

SAMPLE(S) FROM: Mr. Ray Lashbrook  
Quinterra Resources Inc.

*074800 - Sylvanite Creek*

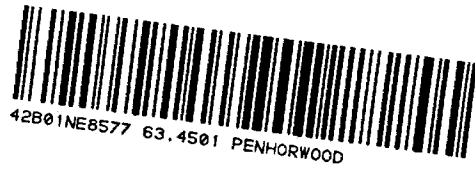
<u>Sample No.</u>	<u>Gold/ppb</u>	
G38551	8	} - Nor - I.R.  } Sylv. East
2	5	
3	3	
4	22	
5	10	
6	7	
7	11	
8	4	
9	4	
G38560	2	
1	15	
2	7	
3	925**	
4	4	} L 60E/10N } 074

\*\* Checked

ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE, GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

PER



090

1984 DIAMOND DRILLING



Ministry of  
Natural  
Resources

Diamond  
Drilling  
Log

Fill in on  
every page

Hole No.  
SC-84-1 Page No.  
1

Drilling Company <b>NOREX DRILLING LIMITED</b>		Collar Elevation	Bearing of hole from true North 195°	Total Footage 446	Dip of Hole at Center -45°	Location of hole in relation to a fixed point on the claim.  631340	Map Reference No.	Claim No. 631340		
Date Hole Started DECEMBER 9, 1984	Date Completed DECEMBER 10, 1984	Date Logged DEC 10/84	Logged by LAURENT HALLE		446 ft -54°		250'S, 250'W. of P-1 631340 TOOMS TOWNSHIP. L90E, 16, 50N.	Location (Twp., Lot, Con. or Lat. and Long.)		
Exploration Co., Owner or Optionee <b>QUINTERRA RESOURCES INC.</b>		Date Submitted	Submitted by (Signature)					Property Name SYLVANITE CREEK.		

Footage		Rock Type	Description Colour, grain size, texture, mineralogical alteration, etc.	Planar Foliation Angle °	Core Section Footage †	Year Sample No.	Sample Footage		Sample Length	AU PPB	Assays ‡
From	To						From	To			
0	24.9	Casing	Overburden.								
24.9	37.8	Mafic Crystal Tuff.	-dk green crystal tuff with approx. 30% to 40% feldspar phenos. 0.1mm in size, trace py.								
			24.9 - 32.2 - dk mafic tuff, Qtz phenos., several thin QC veins 45° to C.A. and parallel to C.A.								
			28.7 - 29.6 - QV, 1-2mm, 70° to C.A.								
			31.7 - py vein 1mm thick.								
			32.2 - 36.3 - lt green, carbonated, silicified, 30% narrow randomly oriented quartz veins.								
			33.8 - 34.5 - highly silicified with 2-3cm QV.								
			35.0 - QV 2" wide with fuchsite.								
			36.2 - 36.4 - QV 80° to C.A. with fuchsite.								
			36.3 - 37.8 - contact 45° to C.A. lg green mafic tuff, mod. silicified, 0.5% diss. py, QC veins at 45° to 90° to C.A.			051301	36.7	37.8	1.1'	803	
			36.8 - 37.1 - QV with fuchsite, py cube 0.5cm.								
37.8	46.0	Felsic Porphyry.	-30% to 40% feldspar phenos to 1mm, 3% to 5% diss. py and graphite; highly silicified with gray-white colour, several thin cross- cutting carb veins. Upper contact 70° to 75° to C.A.			051302	37.8	42.8	5.0'	232	
						051303	42.8	46.0	3.2'	245	
46.0	54.7	Crystal Tuff.	-upper contact at 45° to C.A. lt green with well developed foliation 45° to C.A. carbonate alt'n. 46.0 - 46.7 - silicified and carbonatized; brown carbonate, py ≈ 5%.			051304	46.0	46.7	0.7'	266	



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Drilling Company <b>NOREX DRILLING LIMITED</b>		Collar Elevation	Bearing of hole from true North 195°	Total Footage 446	Dip of Hole at Collar 45°	Location of hole in relation to a fixed point on the claim.  631340	Map Reference No.	Claim No. 631340
Date Hole Started DECEMBER 9, 1984	Date Completed DECEMBER 10, 1984	Date Logged DEC 10/84	Logged by <b>LAURENT HALLE</b>		446 ft - 54°		Location (Twp., Lot, Con. or Lat. and Long.) 250'S, 250'W. of P-1 631340 TOOMS TOWNSHIP.	Property Name SYLVANITE CREEK.
Exploration Co., Owner or Options <b>QUINTERRA RESOURCES INC.</b>		Date Submitted	Submitted by (Signature)		ft			
					ft			

Footage		Rock Type	Description <small>Colour, grain size, texture, minerals, alteration, etc.</small>	Placer Footage Angle	Core Specimen Footage	Your Sample No.	Sample Footage		Sample Length	AU PPB	Assays
From	To						From	To			
			46.7 - 48.6 - crystal tuff with feldspar and well developed foliation, some QC veins at 70° to C.A. (5%).								
			48.6 - 49.3 - silicified, QV's 90° to C.A. 1% to 2% py.			051305	48.6	49.3	0.7'	20	
			49.3 - 50.7 - light green.								
			50.7 - 53.5 - mafic tuff, dk green, fg, slightly contorted.								
			51.5 - 53.5 - quartz vein zone - 45° and parallel to C.A. trace cubic py.			051306	51.5	53.5	2.0'	36	
			53.5 - 54.7 - crystal tuff, light green with 30% feldspar phenos.								
54.7	59.2	Mafic Tuff.	-highly contorted, folded, dk green, quartz-carb veins, brown carbonate alteration.								
59.2	60.8	Crystal Tuff.	-coarse grained.								
60.8	61.4	Carbonate Alt.	-brown.								
61.4	64.8	Mafic Crystal Tuff.	-30% to 35% feldspar phenos. 63.4 - 63.8 - QC vein parallel and 90° to C.A. trace diss. py.								
64.8	66.2	Mafic Tuff.	-fg, dk green.								
66.2	68.1	Mafic Crystal Tuff.	-carb altered.								
68.1	68.5	Mafic Tuff.	-fine grain.								
68.5	72.9	Crystal Tuff.	-carbonated, well developed foliation at 70° to C.A. some diss. py.								



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Drilling Company <b>NOREX DRILLING LIMITED</b>		Collar Elevation	Heading of hole from true North 195°	Total Footage 446	Dip of Hole at Collar -45°	Location of hole in relation to a fixed point on the claim.  631340	Map Reference No.	Claim No. 631340
Date Hole Started DECEMBER 9, 1984	Date Completed DECEMBER 10, 1984	Date Logged DEC 10/84	Logged by <b>LAURENT HALLÉ</b>		446 ft - 54°		Location (Twp., Lot, Con. or Lat. and Long.) 250'S, 250'W. of P-1 631340 TOOMS TOWNSHIP.	Property Name SYLVANITE CREEK.
Exploration Co., Owner or Optionee <b>QUINTERRA RESOURCES INC.</b>		Date Submitted	Submitted by (Signature)		P.			
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Footage		Rock Type	Description <small>Colour, grain size, texture, minerals, alteration, etc.</small>	Placer Footage Angle	Core Specimen Footage †	Year Sample No.	Sample Footage		Sample Length	AU PPB	Assays ‡
From	To						From	To			
			70.6 - 71.0 - brown carb zone.								
			71.4 - 71.8 - contorted carb zone.								
72.9	83.2	Mafic Tuff.	-dk green, fg, highly carb and silicified, contact at 70° to C.A.								
			73.0 - QV 1/2".								
			73.2 - QV 1/2".								
			73.7 - 75.0 - carb zone with pale green alt'n., contorted texture, trace py.			051307	73	75	2.0'	289	
			78.8 - 79.1 - QV with green carb alt'n.								
			82.5 - 83.2 - high green carb alt'n., silicified, trace py.			051308	82.5	83.2	0.7'	439	
83.2	86.0	Mafic Crystal Tuff.	-Quartz veins, diss. py to 1%.			051309	84.8	86.0	1.2'	388	
86.0	87.0	Mafic Tuff.	-fine grain.								
87.0	88.3	Crystal Tuff.	-at 87.9 QV 1" wide.			051310	87.7	88.2	0.5'	602	
88.3	92.2	Altered Zone.	-high brown carbonate alt'n with several QV's. -30° to C.A., 1% py. -some contorted zones.			051311	88.3	92.2	3.9'	437	
92.2	93.2	Mafic Crystal Tuff.	-some contorted zones.								
93.2	100.8	Mafic Tuff.	-fg, carbonated, QV's to 1"-2" wide.								
			93.2 - QV 90° to C.A.								
			93.5 - QV 90° to C.A.								
			95.9 - QV 45° to C.A. 1" wide.								
100.8	101.7	Altered Zone.	-brown carbonate and quartz zone. 2-3% py.			511312	100.8	101.7	0.9'	0.041 oz/ton	





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Drilling Company <b>NOREX DRILLING LIMITED</b>		Collar Elevation	Heading of hole from true North 195°	Total Footage 446	Dip of Hole at Collar -45°	Location of hole in relation to a fixed point on the claim.  631340	Map Reference No.	Claim No. 631340
Date Hole Started DECEMBER 9, 1984	Date Completed DECEMBER 10, 1984	Date Logged DEC 10/84	Logged by LAURENT HALLE		446 ft - 54°		Location (Twp., Lot, Con. or Lat. and Long.) 250'S, 250'W. of P-1 631340 TOOMS TOWNSHIP.	Property Name SYLVANITE CREEK.
Exploration Co., Owner or Optionee QUINTERRA RESOURCES INC.		Date Submitted	Submitted by (Signature)					

Footage		Rock Type	Description <small>Colour, grain size, texture, minerals, alteration, etc.</small>	Planar Foliation Angle °	Core Specimen Footage f	Your Sample No.	Sample Footage		Sample Length	AU PPB	Assays f
From	To						From	To			
101.7	105.4	Crystal Tuff.	-coarse gr, carbonated, QC vein 102' - 103' 4" wide with trace py.			051313	101.9	103.2	2.3'	487	
105.4	110.3	Mafic Tuff.	-fg, narrow QCV's at 80° to C.A. 108.9 - 110.3 - siliceous alt'n with QC veins, 3-5% py.			051314	106.0	106.8	0.8'	80	
110.3	115.6	Mafic Tuff.	-med gr, green-gray, carb alt. 115.5 - QV with trace py.			051315	108.9	110.3	1.4'	659	
						051316	114.1	115.6	1.5'	477	
115.6	120.8	Crystal Tuff.	-coarse gr, carbonated, diss. py.			051036	115.6	117.5	1.9'	291	
120.8	124.1	Altered Zone.	-highly silicified with up to 50% QV's, trace py and fuchsite. 120.8 - 122.7 - quartz + green carb alt., trace py. 122.7 - 124.1 - quartz veins with fuchsite, 2% py.			051317	120.8	122.7	1.9'	284	
						051318	122.7	124.1	1.4'	559	
124.1	126.8	Ultramafic Tuff.	-contorted, pale green, siliceous alt'n, trace fuchsite, 0.5% py.			051319	124.1	126.8	2.7'	657	
126.8	135.0	Mafic Tuff.	126.8 - 128.4 - contact 45° to C.A., highly carb and siliceous alteration zone, 1% py and fuchsite. 128.4 - 135 - fine grained, some narrow QV's. Foliation at 45° to C.A. 132.2 - 133.0 - QC alt zone, 2-2" QV's with trace py. 134.0 - 135.0 - QC alt zone, 1" QV, trace py cubes to 0.5cm.			051320	126.8	128.4	1.6'	639	
						051321	132.2	133.0	0.8'	378	
						051322	134.0	135.0	1.0	762	
135.0	140.2	Ultramafic Tuff.	-contact 45° to C.A. contorted, diss. py, QC alteration.			051323	135.0	140.2	5.2'	429	
140.2	141.0	Quartz Veins.	-fuchsite, pyrite.			051324	140.2	141.0	0.8'	388	
141.0	149.6	Mafic Tuff.	-coarse gr, lt gray-green, carbonated and silicified. 146.8 - 147.6 - high brown carb alteration.			051325	146.8	147.6	0.8'	555	

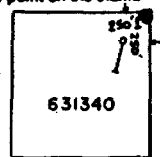


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Hole No. SC-84-1	Page No. 5
Claim No. 631340	
Location (Twp., Lot, Con. or Lat. and Long.) 250'S, 250'W. of P-1 631340 TOOMS TOWNSHIP.	
Property Name SYLVANITE CREEK.	

Drilling Company NOREX DRILLING LIMITED	Collar Elevation	Bearing of hole from true North 195°	Total Footage 446	Dip of Hole at Collar -45°	Location of hole in relation to a fixed point on the claim. 	Map Reference No.
Date Hole Started DECEMBER 9, 1984	Date Completed DECEMBER 10, 1984	Date Logged Dec 10/84	Logged by LAURENT HALLE	446 ft. - 54°		Claim No. 631340
Exploration Co., Owner or Optionee QUINTERRA RESOURCES INC.		Date Submitted	Submitted by (Signature)	ft.   °		Location (Twp., Lot, Con. or Lat. and Long.) 250'S, 250'W. of P-1 631340 TOOMS TOWNSHIP.

Footage		Rock Type	Description Colour, grain size, texture, minerals, alteration, etc.	Placer Footage Angle	Core Specimen Footage	Year Sample No.	Sample Footage		Sample Length	Assays †	
From	To						From	To			
149.6	152.2	Crystal Tuff.	-med gr. trace diss. py.								
152.2	155.4	Mafic Crystal Tuff.	-coarse gr., lt grey-pink colour, carb and sil. alt.								
155.4	158.0	Altered Zone.	-highly brown carbonated and siliceous alt zone, foliation 70° to C.A.			051326	155.4	158.0	2.6'	27	
158.0	158.6	Mafic Tuff.	-chlorite and carb alt., 10-15% coarse cubic py to 0.5cm.			051327	158.0	158.6	0.6'	26	
158.6	160.4	Crystal Tuff.	-carbonated and silicified; @159' 1" QV90° to C.A.								
160.4	164.6	Mafic Crystal Tuff.	-grey-green, fg. QCV 90° to C.A.								
164.6	166.7	Altered Zone.	-highly siliceous and carbonated, 1-2% py.			051328	164.8	166.7	1.9'	402	
166.7	169.5	Mafic Crystal Tuff.	-QV 90° to C.A., 1-2% py with fuchsite.			051329	167.7	168.4	0.7'	255	
169.5	171.0	Mafic Tuff.	-highly contorted, lt green.			051330	168.4	169.5	1.1'	96	
169.5	171.0	Mafic Tuff.	-highly contorted, lt green.			051331	169.5	171.0	1.5'	16	
171.0	173.1	Altered Zone.	-highly brown carb and siliceous altered zone with some fuchsite and pyrite, QCV at 70° to C.A.			051332	171.0	173.1	2.1'	156	
173.1	177.9	Mafic Crystal Tuff.	-upper contact 70° to C.A., brown carb alt, fuchsite, some QV's at 90° to C.A. & several narrow lmm QV's at 70° to C.A.								
177.9	178.5	Mafic Crystal Tuff.	-coarse grain.								
178.5	179.7	Mafic Crystal Tuff.	-carbonated, 30% to 40% QCV's at 70° to C.A., diss. py 0.5%.			051333	178.5	179.7	1.2'	417	
179.7	182.4	Mafic Crystal Tuff.	179.7 - 180.3 - coarse grain. 180.3 - 182.2 - carbonated, with 50% to 60% QCV's at 70° to C.A. diss. py.			051334	180.3	182.4	2.1'	714	





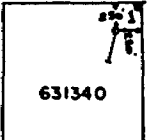
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Drilling Company <b>NOREX DRILLING LIMITED</b>		Collar Elevation	Bearing of hole from true North 195°	Total Footage 446	Dip of Hole at Center -45°	Location of hole in relation to a fixed point on the claim. 	Map Reference No.	Claim No. 631340
Date Hole Started DECEMBER 9, 1984	Date Completed DECEMBER 10, 1984	Date Logged DEC 10/84	Logged by LAURENT HALLE		446 ft - 54°		Location (Twp., Lot, Con. or Lat. and Long.) 250'S, 250'W. of P-1 631340 TOOMS TOWNSHIP.	Property Name SYLVANITE CREEK.
Exploration Co., Owner or Optionee <b>QUINTERRA RESOURCES INC.</b>		Date Submitted	Submitted by (Signature)					

Footage		Rock Type	Description Colour, grain size, texture, minerals, alteration, etc.	Planar Feature Angle	Core Specimen Footage	Your Sample No.	Sample Footage		Sample Length	AU PPB	Assays †
From	To						From	To			
206.3	209.9	Mafic Crystal Tuff.	-brownish carb. alt., QV's mostly at 80-90° to C.A., some of the veins cut the laminations which are 70° to C.A.								
209.9	215.3	Mafic Tuff.	-dk green, siliceous alteration, semi-massive, py. cubes, some folded textures.			051340	209.9	215.3	5.4'	0.023	oz/ton.
215.3	218.8	Mafic Tuff.	-dg green, highly siliceous with bands of semi-massive py. and diss. py. -some QV's 1" wide with py.			051341	215.3	218.8	2.5'	117	
218.8	255.7	Mafic Crystal Tuff.	-lt grey-green, carbonated mafic tuff with feldspar phenos, QCV's mostly at 80° to 90° to C.A. some diss. py. 218.8 - 220.5 - carb. alt and discontinuous narrow QCV's. 220.5 - 221.3 - contact 70° to C.A. lg mafic tuff with carb. alt vein. 221.3 - 222.3 - well laminated crystal tuff 80° to C.A. 30% py. diss. or semi-massive along the beds, cubes to 2mm. 222.3 - 230.9 - some QV's 70° to C.A. to 1" wide. 230.9 - 231.3 - highly carb. and silicified zone with fuchsite and 0.5% py. some cubes to 0.5cm.								
			231.3 - 248.0 - lt grey-green with laminations at 45° to C.A. 233.7 - 234.0 - QV with green carb. fuchsite and trace py. Several narrow QCV's 90° to C.A. 239.5 & 239.9 - QV's 1" wide with py. 240.6 - QV 3/4" wide. 242.3 - 242.7 - QV @45° and 90° to C.A. trace py. 245.1 - QV 1" wide @45° to C.A. trace py. 247.0 - QV 1" wide, trace py.								
			248.0 - 249.1 - mafic tuff - dg green, chloritic, 10%-15% cubic pyrite to 0.7cm in size; laminated 45° to C.A.			051344	246.6	249.1	2.5'	550	









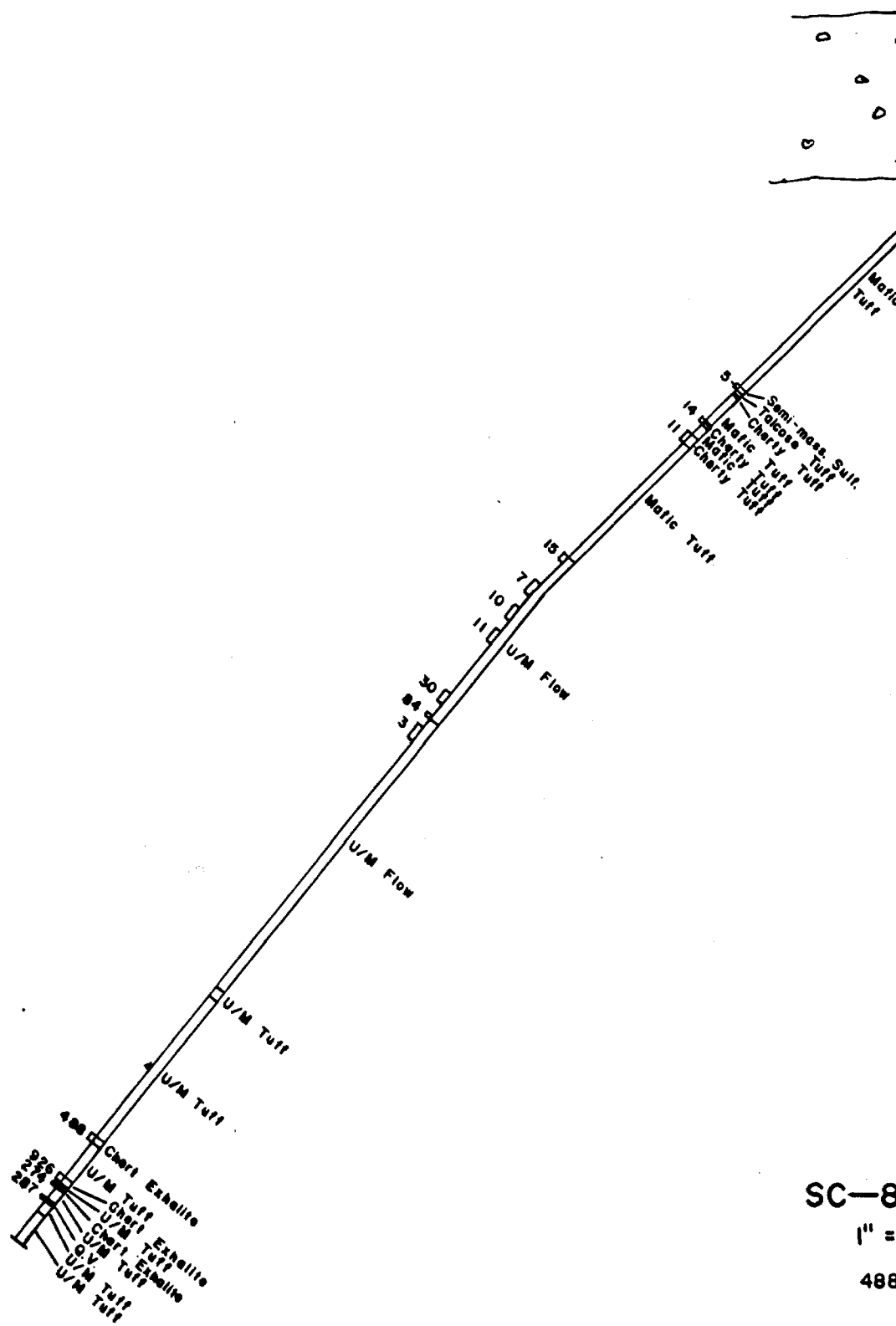








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1" = 50'

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Drilling Company <b>NOREX DRILLING LIMITED</b>		Collar Elevation	Bearing of hole from true North 205°	Total Footage 446	Dip of Hole at Center -45°	Location of hole in relation to a fixed point on the claim. 	Map Reference No. Claim No. 648670
Date Hole Started DECEMBER 14, 1984	Date Completed DECEMBER 15, 1984	Date Logged DEC 15/84	Logged by LAURENT HALLE		446 ft - 444°		Location (Twp., Lot, Con. or Lat. and Long.) 80°E, 620°N of P-3 648670 TOOMS TOWNSHIP. 165+00E, 19+50N.
Exploration Co., Owner or Optionee QUINTERRA RESOURCES INC.		Date Submitted	Submitted by (Signature)		PL		
					PL		
					PL	Property Name SYLVANITE CREEK.	

Footage		Rock Type	Description Colour, grain size, texture, minerals, alteration, etc.	Placer Footage Angle	Core Specimen Footage	Year Sample No.	Sample Footage		Sample Length	Assays †	
From	To						From	To		Au-pph	
0	13'	Casing.	Overburden.								
13	20.6	Mafic Tuff.	-dk green, trace py. 16.8 - 2" vein or felsic fragmental, rich in silica, some py.								
20.6	21.6	Dark Tuff	-5% - 10% py.								
21.6	27.0	Silicified Mafic Tuff.	-diss. py., some QV's. 25.1 - QV 1" wide with py., 75° - 80° to C.A.								
27.0	28.4	Silicified Mafic Tuff.	-coarse gr., 40% py. cubes 3mm - 5mm wide.			051373	27.0	28.4	1.4'	104	
28.4	54.8	Mafic Crystal Tuff.	-py. fg to 1cm in size, chloritic and siliceous alteration, narrow QV's 45° to 90° to CA., some folded textures. 46.3 - 46.5 - brown carb. alt. 52.3 - 52.4 - " " " " " " "								
54.8	60.2	Cherty Iron Formation.	-banded reddish chert and magnetite 75° to C.A., 10% - 20% py.			051374	54.8	60.8	6.0'	111	
60.2	85.3	Crystal Tuff.	-lt grey with white feldspar crystals. 76.8 - brown carb. alt. 79.0 - 79.4 - QV. trace py.								
85.3	94.9	Dark Tuff.	-dk green, 5% py - po. stringer texture highly magnetic trace cpy.			051375	85.3	90.3	5.0'	100	
94.9	100.1	Crystal Tuff.	-lt green mafic to ultramafic tuff.			051376	90.3	94.9	4.6'	32	
100.1	103.5	Dark Mafic Tuff.	-dk, up to 30% cubic py. to 0.8cm in size, some narrow QV's.			051377	101.0	103.5	2.5	33	



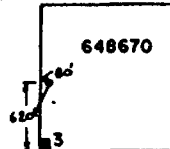
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Drilling Company <b>NOREX DRILLING LIMITED</b>		Collar Elevation	Heading of hole from true North 205°	Total Footage 446	Dip of Hole at Collar -45°	Location of hole in relation to a fixed point on the claim. 	Map Reference No.	Claim No. 648670
Date Hole Started DECEMBER 14, 1984	Date Completed DECEMBER 15, 1984	Date Logged DEC 15/84	Logged by LAURENT HALLE		446 N -443°		Location (Twp., Lot, Con. or Lat. and Long.) 80'E, 620'N of P-3 648670	
Exploration Co., Owner or Optionee QUINTERRA RESOURCES INC.		Date Submitted	Submitted by (Signature)		N		TOOMS TOWNSHIP. Property Name SYLVANITE CREEK.	

Footage		Rock Type	Description <small>Colour, grain size, texture, minerals, alteration, etc.</small>	Planar Footage Angle	Core Specimen Footage †	Your Sample No.	Sample Footage		Sample Length	Assays ‡	
From	To						From	To		Au-nph	
103.5	128.0	Grey Crystal Tuff.	-lt grey, no sharp contact; must be ultramafic tuff, diss.-trace py. 111.0 - 111.6 -siliceous.								
128.0	138.1	Cherty Iron Formation.	-dk green, 50% py.-py., trace cpv., stringer texture, some QV's. 137.4 - 137.9 -QCV zone with py., some parts are well bedded 40° to 45° to C.A., some fold textures.			051378	128.0	133.0	5.0	163	
						051379	133.0	138.1	5.1'	215	
138.1	149.4	Crystal Tuff.	-lt grey, white feldspar; green carb. @147'.								
149.4	152.8	Silicified Mafic Tuff.	-gradual contact, 40% - 50% py., several small 3cm wide QC vein, fold texture and minor faulting. 152.6 - 153.0 -QV, 16cm wide with py., lineation or bedding at 45° to C.A., some green carb. alt.			051380	149.4	152.8	3.4'	274	
152.8	169.1	Mafic Crystal Tuff.	-green carb. altered crystal tuff with trace py., QCV's of 0.5cm with py., QCV's at 70° and 45° to C.A. 158.2 - 163.2 -grey mafic tuff (u/m?). 163.2 - 167.0 -green carb. alt. crystal tuff. 167.0 - 169.1 -grey mafic tuff.								
169.1	181.9	Dark Green Mafic Tuff.	-30% - 40% py., wide quartz veins, lineation 70° to C.A. -some cherty beds 1mm thick. 170.6 - QV 5cm wide with 30% py., trace cpv. 175.5 - 176.1 -QV with 30% py., trace cpv. 176.9 - 178.1 -QV zone, 30% py., trace cpv. 181.0 - 181.9 -QV zone, 30% - 35% py., trace cpv.			051381	169.1	174.1	5.0'	130	
						051382	174.1	179.1	5.0'	126	
						051383	179.1	181.9	2.8'	346	
181.9	186.3	Crystal Tuff.	-lt green-grey, white feldspars.								
186.3	188.3	Mafic Tuff.	-dk green, 5% - 10% py., lineation 65° to C.A., some cubic py. 0.7cm wide.			051384	186.3	188.3	2.0'	163	

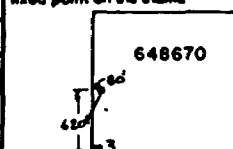


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Drilling Company <b>NOREX DRILLING LIMITED</b>		Collar Elevation	Bearing of hole from true North 205°	Total Footage 446	Dip of Hole at Center -45°	Location of hole in relation to a fixed point on the claim. 	Map Reference No.	Claim No. 648670			
Date Hole Started DECEMBER 14, 1984	Date Completed DECEMBER 15, 1984	Date Logged DEC 15/84	Logged by <b>LAURENT HALLE</b>		446 ft - 445°		Location (Twp., Lot, Con. or Lot and Long.) 80°E, 620'N of P-3 648670 TOOMS TOWNSHIP. Property Name SYLVANITE CREEK.				
Exploration Co., Owner or Options <b>QUINTERRA RESOURCES INC.</b>		Date Submitted	Submitted by (Signature)		ft						
					ft						
Footage		Rock Type	Description <small>Colour, grain size, texture, minerals, alteration, etc.</small>	Planar Featuring Angle °	Core Specimen Footage †	Year Sample No.	Sample Footage		Sample Length	Assays ‡	
From	To						From	To		Au-pph	
188.3	191.8	Crystal Tuff.	-lt grey.								
191.8	192.6	Cherty Tuff.	-15% - 20% py., some zones of talc-chlorite alt. -bedding at 70° to C.A.			051385	191.8	192.6	0.8'	75	
192.6	194.5	Crystal Tuff.	-lt grey.								
194.5	198.5	Cherty Tuff.	-contact 50° to C.A., 15% - 20% py., fine bedding to 1mm of cherty mat'l., may be some fragments.			051387	194.5	198.5	4.0'	52	
198.5	199.3	Dark Mafic Tuff.	-as before.								
199.3	201.3	Dark Green Tuff.	-5-10% py., stringery texture, some po.			051388	199.5	201.3	1.8'	22	
201.3	224.5	Crystal Tuff.	-green carb. alt., <1% py diss., 212.0 - high green carb. alt. 218.3 - 224.5 - coarse crystal ruff.								
224.5	225.0	Siliceous Rock.	-5% - 10% fine py.								
225.0	230.5	Green Mafic Crystal Tuff.	-green, mafic, 10-15cm QV with 5% coarse py, 0.8 1cm wide.			051389	225.0	227.0	2.0'	221	
						051390	228.3	230.5	2.2'	37	
230.5	234.3	Mafic Tuff.	-3-5cm wide QV's with 5% - 10% coarse py. 231.8 - 232.4 - Iron Formation with chert, py. and magnetite banding at 45° to C.A.			051391	230.5	234.3	3.8'	223	
234.3	234.6	Cherty Tuff.	-well laminated, pyritic.			051392	234.3	236.3	2.0'	243	
234.6	236.3	Mafic Tuff.	-10-15cm QV with coarse py. cubes.								

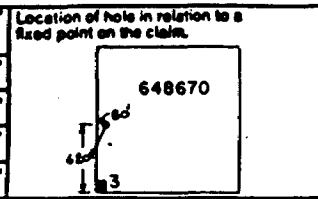


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Page No. 4

Footage		Rock Type	Description Colour, grain size, texture, minerals, alteration, etc.	Planar Footing Angle	Core Specimen Footage	Year Sample No.	Sample Footage		Sample Length	Assays †	
From	To						From	To		Au-pph	
236.3	246.9	Dark Green Mafic Tuff.	-dk green, 3-10% py., 10% po. as small blebs. 242.8 - 243.2 -QV stringers of po. and py., trace cpy.			051393 051394	236.3 241.3	241.3 246.9	5.0' 5.6'	48 118	
246.9	255.2	Cherty Tuff.	-chert bedding 1mm thick 90° to C.A., some folding texture, brown carb. alt. -50% cubic py. up to 0.5cm wide. 246.9 - QV 5cm wide with py. 247.5 - 248.1 -QV's 60%-70% cubic py. 249.2 - 249.3 -QV. 250.4 - 251.0 -QV's with py.			051395 051396	246.9 253.9	253.9 255.2	7.0' 1.3'	206 27	
255.2	258.6	Sulfidic Iron Formation.	-in part well bedded and in part folded texture, highly magnetic, sulfide stringers 30-40% po., 5-10% py., 1-2% cpy. 256.7 - 257.8 -highly folded. 257.8 - 258.6 -semi-massive sulfides - po.			051397	255.2	258.6	3.4'	51	
258.6	264.2	Dark Green Tuff.	-dk green, silicified, po., py., trace cpy. -approx. 20-25% po. with stringery texture, 10-20% py. 261.0 - QV 6cm wide, 30% py. 263.4 - 264.4 -QV, 10-40% cubic py. to 1cm wide.			051398	258.6	264.2	5.6'	71	
264.2	269.3	Silicified Mafic Tuff.	-high siliceous and carb alt'n., 5-6% py. some as cubes to 0.5cm in size.			051399	264.2	269.3	5.1'	33	
269.3	277.9	Dark Mafic Tuff or Iron Formation.	-dk green, tuffaceous, 50% po., trace cpy., bedding is poorly developed, po. as stringers.			051400 063501	269.3 274.2	274.2 277.9	4.9' 3.7'	53 130	
277.9	287.0	Silicified Mafic Tuff.	-highly silicified, 40-45% py. as stringers and small veinlets, some py. as cubes to 0.8cm wide, carb. altered. 281.4 - QV with pink carb. 283.0 - 283.6 -QV with pyrite. 284.0 - QV.			063502 063503	277.9 282.9	282.9 287.0	5.0' 4.1'	73 74	



Map Reference No. Claim No. 648670  
Location (Twp., Lot, Con. or Lat. and Long.)  
80°E, 620°N of P-3 648670  
TOOMS TOWNSHIP.  
Property Name  
SYLVANITE CREEK.



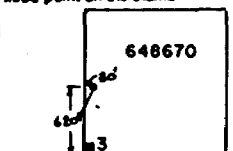


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Hole No.  
SC-84-3  
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Claim No.  
648670

Drilling Company <b>NOREX DRILLING LIMITED</b>		Collar Elevation	Heading of hole from true North 205°	Total Footage 446	Dip of Hole at Collar 45°	Location of hole in relation to a fixed point on the claim. 	Map Reference No.
Date Hole Started DECEMBER 14, 1984	Date Completed DECEMBER 15, 1984	Date Logged DEC 15/84	Logged by LAURENT HALLÉ		446 m 444°		Location (Twp., Lot, Con. or Lat. and Long.) 80°E, 620'N of P-3 648670
Exploration Co., Owner or Options QUINTERRA RESOURCES INC.		Date Submitted	Submitted by (Signature)		m		TOOMS TOWNSHIP.
					m		Property Name SYLVANITE CREEK.

Footage		Rock Type	Description Colour, grain size, texture, minerals, alteration, etc.	Placer Footage Angle	Core Specimen Footage 1	Year Sample No.	Sample Footage		Sample Length	Assays †	
From	To						From	To		Au-pph	
287.0	311.3	Mafic Tuff.	-green, feld. crystals, carb. altered. 288.9 - 289.0 -QV. 293.0 - 294.0 -green carb. 293.3 & 293.7 -QV's with py. 295.3 - QV. 307.7 - QV with py. cubes to 0.6cm. 308.3 - 308.6 -QCV with py.			063504	293.0	295.4	2.4'	138	
311.3	313.4	Mafic Tuff.	-highly folded mafic tuff, kink folded.								
313.4	313.7	Felsic Dyke.	-5% coarse feldspars, contact 45° to C.A.								
313.7	317.0	Mafic Tuff.	-several QCV's with 10-15% py. 315.7 - QV 8-9cm wide. 316.8 - QV 5cm wide with py.			063505	313.7	317.0	3.3'	656	
317.0	321.8	Mafic Tuff.	-15% py. stringers, some QV's with py.			063506	317.0	321.8	4.8'	51	
321.8	337.9	Mafic Tuff.	-lt grey-green, green carb. alt. in places, some QV's. 321.8 - 325.1 -coarse grained crystal tuff, trace py. 325.1 - 328.6 -lt grey, coarse tuff with sil. alt. some small QV's foliation 75° to C.A. 328.6 - 330.7 -greenish as above with siliceous and feldspar alt'n 330.7 - 332.1 -patchy tuff with sil. alt'n. 332.1 - 333.4 -kink folds in tuff. 333.4 - 337.9 -mafic crystal tuff.								
337.9	345.5	Silicified Rock.	-high siliceous alt'n., lt grey cherty rock, some QV's., 60-70% py. some as cubes to 1cm., some folded textures.			063507	337.9	342.9	5.0'	237	











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Hole No.  
SC-84-4

Page No.  
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Drilling Company <b>NOREX DRILLING LIMITED</b>		Collar Elevation	Bearing of hole from true North 190°	Total Footage 427'	Dip of Hole at Collar 45°	Location of hole in relation to a fixed point on the claim.  630745	Map Reference No.	Claim No. 630745
Date Hole Started DECEMBER 17, 1984	Date Completed DECEMBER 18, 1984	Date Logged DEC 18/84	Logged by LAURENT HALLE		427 m - 50 1/2°		Location (Twp., Lot, Con. or Lat. and Long.) 280°E, 50°N of P-3 630745 TOOMS TOWNSHIP.	Property Name SYLVANITE CREEK.
Exploration Co., Owner or Optionee QUINTERRA RESOURCES INC.		Date Submitted	Submitted by (Signature)		m			
					m			
					m			

Footage		Rock Type	Description <small>Colour, grain size, texture, minerals, alteration, etc.</small>	Placer Footage Angle	Core Specimen Footage 1	Your Sample No.	Sample Footage		Sample Length	Assays †	
From	To						From	To		g/t	ppm
147.2	150.2	Mafic Tuff.	-chloritic, fine grained, some hairline carbonate veinlets.								
150.2	154.2	Mafic Tuff.	-medium grained, green. 52.4 - quartz vein 3cm wide.								
154.2	159.2	Mafic Tuff.	-coarse, lt green, foliation 70° to C.A.								
159.2	162.8	Mafic Tuff.	-medium grain, narrow carb. veinlets. 162.2 - 162.7 - 70% carb. veins.								
162.8	163.6	Mafic Tuff.	-coarse grain, narrow carb. veinlets.								
163.6	170.2	Mafic Tuff.	-medium grain, green, QCV's with some pinkish alt. 167.0 - QCV 1cm wide 70° to C.A. 168.5 - 3 carb. veins, 2mm - 1cm wide, 45° to C.A.								
170.2	175.7	Mafic Tuff.	-medium grain, green with hairline carb. veinlets.								
175.7	177.7	Mafic Tuff.	-coarse grain. 176.1 - 2cm QV 90° to C.A.								
177.7	180.3	Mafic Tuff.	-fine grain.								
180.3	181.5	Mafic Tuff.	-coarse grain becoming more siliceous.								
181.5	198	Silicified Rock.	-silicified, 1-2% diss. py. with some cubes to 0.8cm. 183.7 - QV 80° to C.A. 185.3 - QV, 4-5cm, 70° to C.A. 185.7 - QV, 2cm, 90° to C.A. 188.0 - 188.3 - QV's with 10% coarse cubic py.			063520	181.5	185.5	4.0'	85	
						063521	185.5	190.5	5.0'	29	
						063522	190.5	195.5	5.0'	34	
						063523	195.5	198.0	2.5'	55	

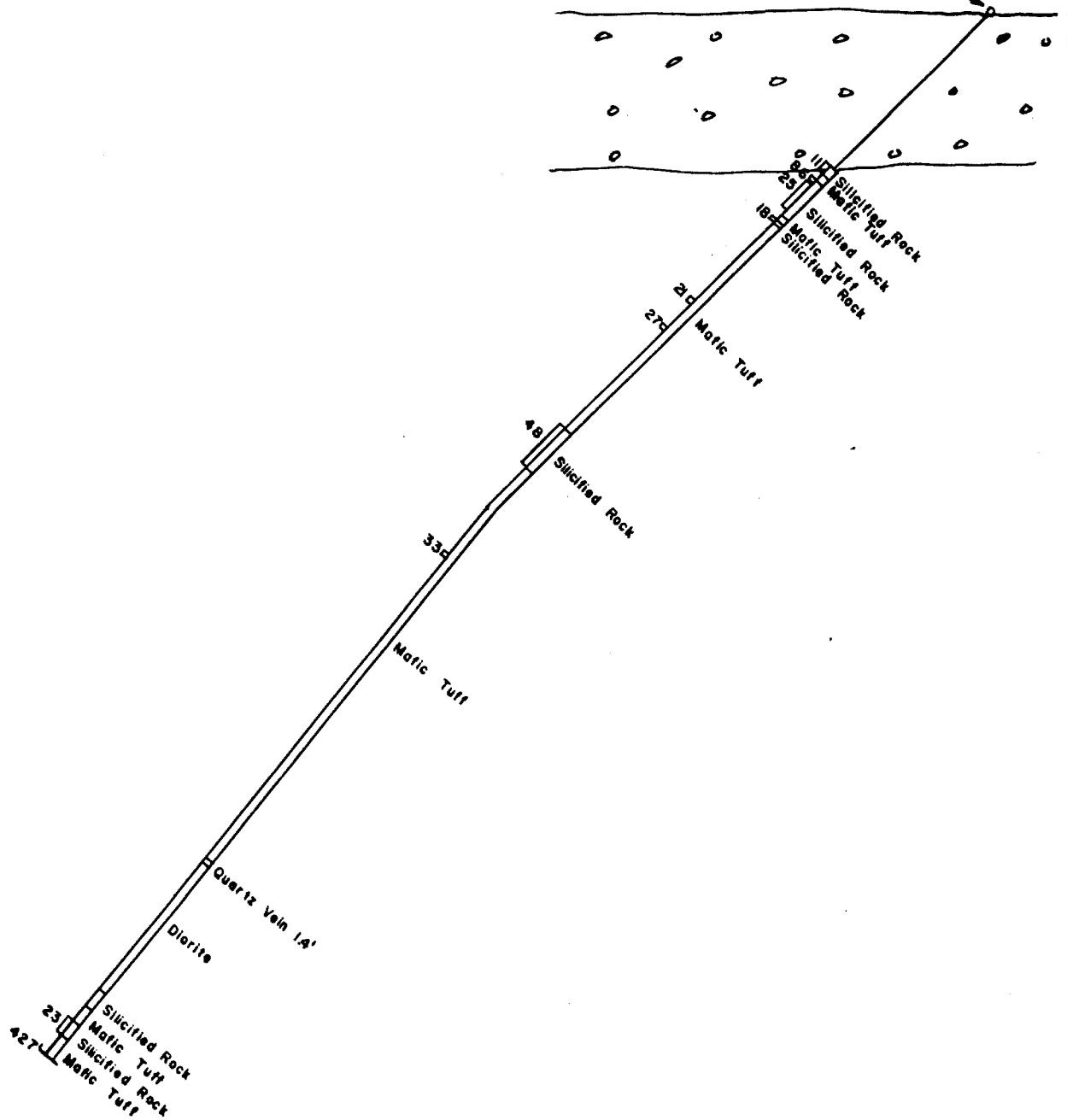






L 14E, 5N

AZ. 190°



SC-84-4

1" = 50'

SECTION LOOKING W10°N



42B01NE8577 63.4501 PENHORWOOD

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1984  
FINAL REPORT  
OF THE  
SYLVANITE CREEK PROPERTY  
TOOMS TOWNSHIP

BY: RAY LASHBROOK.



42B01NE8577 63.4501 PENHORWOOD

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INTRODUCTION

The Sylvanite Creek Property was subject to a variety of exploration programs during the 1984 field season. Commencing in June with reconnaissance prospecting and linecutting it culminated on December 20th with the end of a 2000' diamond drill program.

This formalized report is composed of a summarized timetable and the detailed results of the various programs.

SUMMARY OF EVENTS 1984 FIELD SEASON

- JUNE - reconnaissance prospecting - Ray Lashbrook.  
Jeff Butler.
- starting of linecutting on Sylvanite East Block.
  - humus sampling on Sylvanite East Block.
- JULY - set up and modify existing camp.
- continuation of linecutting on Sylvanite East Block.
  - prospecting and mapping on Sylvanite East Block.
  - mag and VLF started on Sylvanite "East" Block.
  - trenching - Trench Area #7, #4, "Core" claims.
  - overburden drilling - "Core" claims.
- AUGUST - linecutting finished on Sylvanite East Block.
- continuation of prospecting on Sylvanite East Block.
  - continuation of mapping on Sylvanite East Block.
  - mag and VLF finished - Sylvanite East Block.
  - mapping and prospecting - "Core" claims Tooms Township.
  - finish overburden drilling - "Core" claims Tooms Township.
  - humus sampling - Tooms Township.
- SEPTEMBER - Laurent Hallé hired for mapping.
- prospecting - Sylvanite East Block.
  - mapping - Sylvanite East Block.
  - trenching - L116E, 40S - Sylvanite East Block.
  - prospecting and mapping - "Core" claims.
  - prospecting and mapping - Halcrow Patents.
  - Staking of 3 claims within Sylvanite Creek property ✓  
formally held by Granges.

- OCTOBER - linecutting - Tooms Township.
- start of I.P. survey - Tooms and Greenlaw Township.
  - staking of 4 claims east end - Greenlaw Township. ✓
  - start mag - VLF survey Tooms Township.
  - prospecting and mapping - Sylvanite East Block.
  - prospecting and mapping - Tooms Township.
  - Airborne mag - VLF survey.
  - trenching and sampling - Halcrow Patents.
  - trenching and sampling - South shore Betty Lake.
- NOVEMBER - linecutting finished.
- mag - VLF finished.
  - prospecting and mapping finished.
- DECEMBER - diamond drilling.

LINECUTTING

Linecutting was carried out in two phases, both contracted out to Norman McBride of Notre-Dame-du-Nord, Québec.

The first portion was started in June and continued until early August. This covered the claims in Greenlaw Township known as the Sylvanite East Block. It consisted of re-cutting the baseline and establishing at 400' centres north-south lines. Tie-lines were at 20N, 20S and 40S. The total cutting was 42.87 miles at a cost of \$12,216.68.

The second phase starting in October was the westward continuation of the first phase of lines into Tooms Township. It consisted of the continuation northward of the original lines cut in 1982 and new lines at 400' spacings to the south. This phase totalled 55.6 miles at a cost of \$15,198.00.

### HUMUS SAMPLING

Two small humus sampling programs were done in two different areas. They were designed as orientation programs to see if a full humus survey could be justified.

The first program was located at the east end of the Sylvania East Block next to the Noranda-International Rhodes boundary. It was to test whether narrow auriferous zones on the Noranda ground and suspected to continue onto Quintera ground could be picked up by humus sampling.

The survey consisted of taking composite humus samples every 100' along lines 172E, 176E and 180E. A total of 43 samples were taken (see diagram).

In general most samples were easy to collect although the humus was not always easy to find. The humus was mostly thin and brown to black. The overburden in this area is mostly glacial till. Grabs were taken in a 25' diameter around the hundred foot pickets to fill a small envelope. The samples were dried and sent to Bondar-Clegg for analysis.

From the analysis it appears that the background level is less than 5 ppb Au. Eleven samples were above 5 ppb. One 3 to 4 times background anomaly stretches across 2 lines. The other 3 anomalous readings occur as single highs.

The one anomaly lies just to the south of a massive carbonate rock. This rock weathers a deep brown and is cut by numerous quartz veins. This anomaly may be the extension of the Noranda zone to the east. Further work such as trying to strip across the anomaly should be considered in 1985.



The second survey was conducted on lines 26E, 32E and 38E from 22N to a point where the lines hit Betty Lake or Big Chris Lake. A total of 96 samples were taken.

Background samples are again interpreted to be less than 5 ppb with 85% being equal to or less than 3 ppb. Only 5 samples were 10 ppb or above or 3 to 5 times background. The overburden in this area is mostly sand.

From the map it can be seen that 2 low, narrow humus anomalies exist in the north part of lines 26E and 32E. Due to the fact that they are parallel and in an area where the airborne survey shows a mag high - VLF conductor along the same north-westerly trend may lend credence to an anomalous bedrock source. Further sampling in this area on the new cut lines should be considered for the 1985 program.

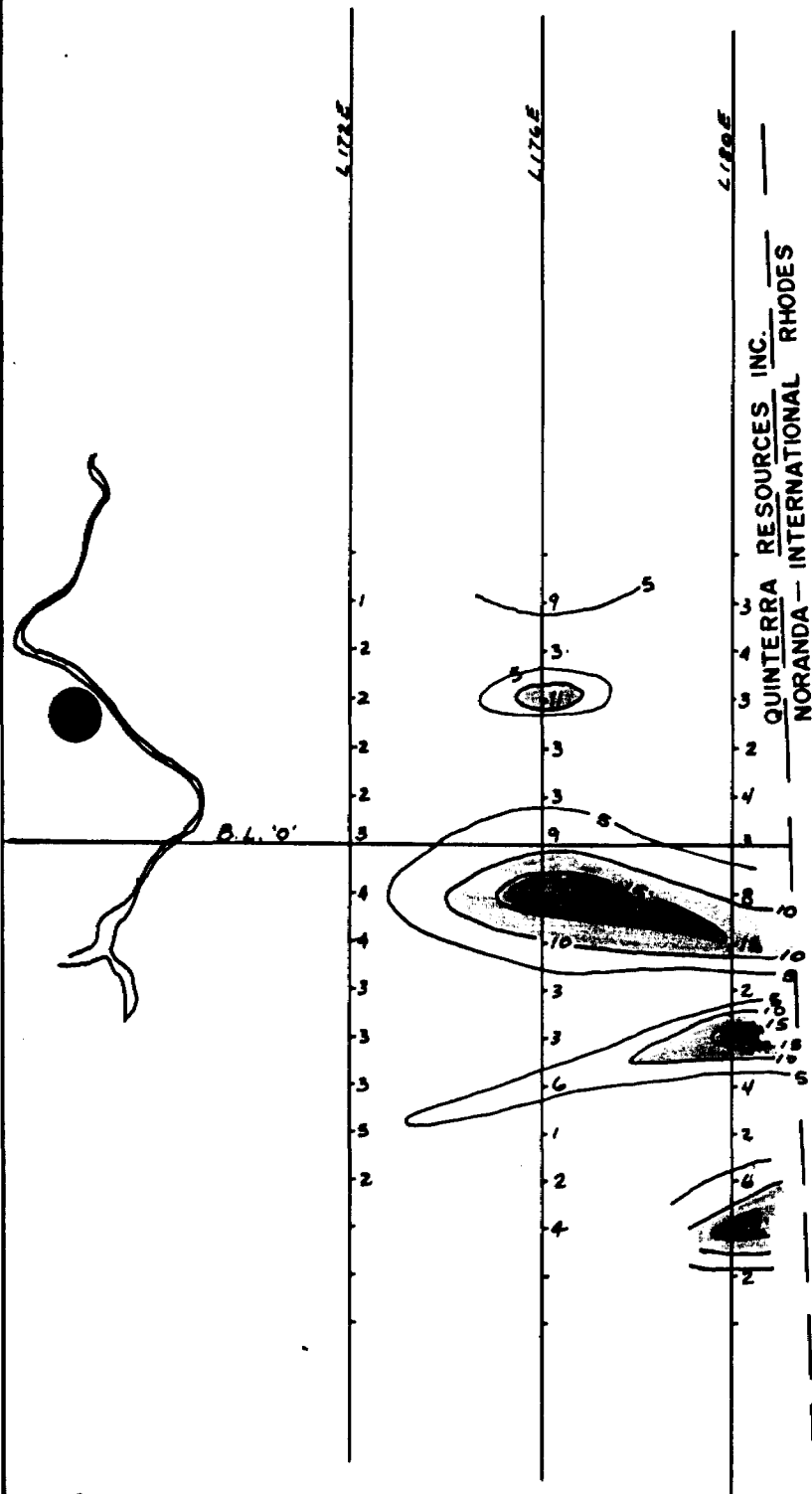
# HUMUS SAMPLES

SCALE 1" = 400'

Drawn By : RLL

Feb. 1985

Assay Values in ppb.



QUINTERRA RESOURCES INC.  
INTERNATIONAL RHODES  
NORANDA



BETTY LAKE

# HUMUS SAMPLES

ASSAY VALUES IN PPB

SCALE: 1" = 400'

Drawn By - RLL

Feb. 1985

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BIG CHRIS LAKE

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648673

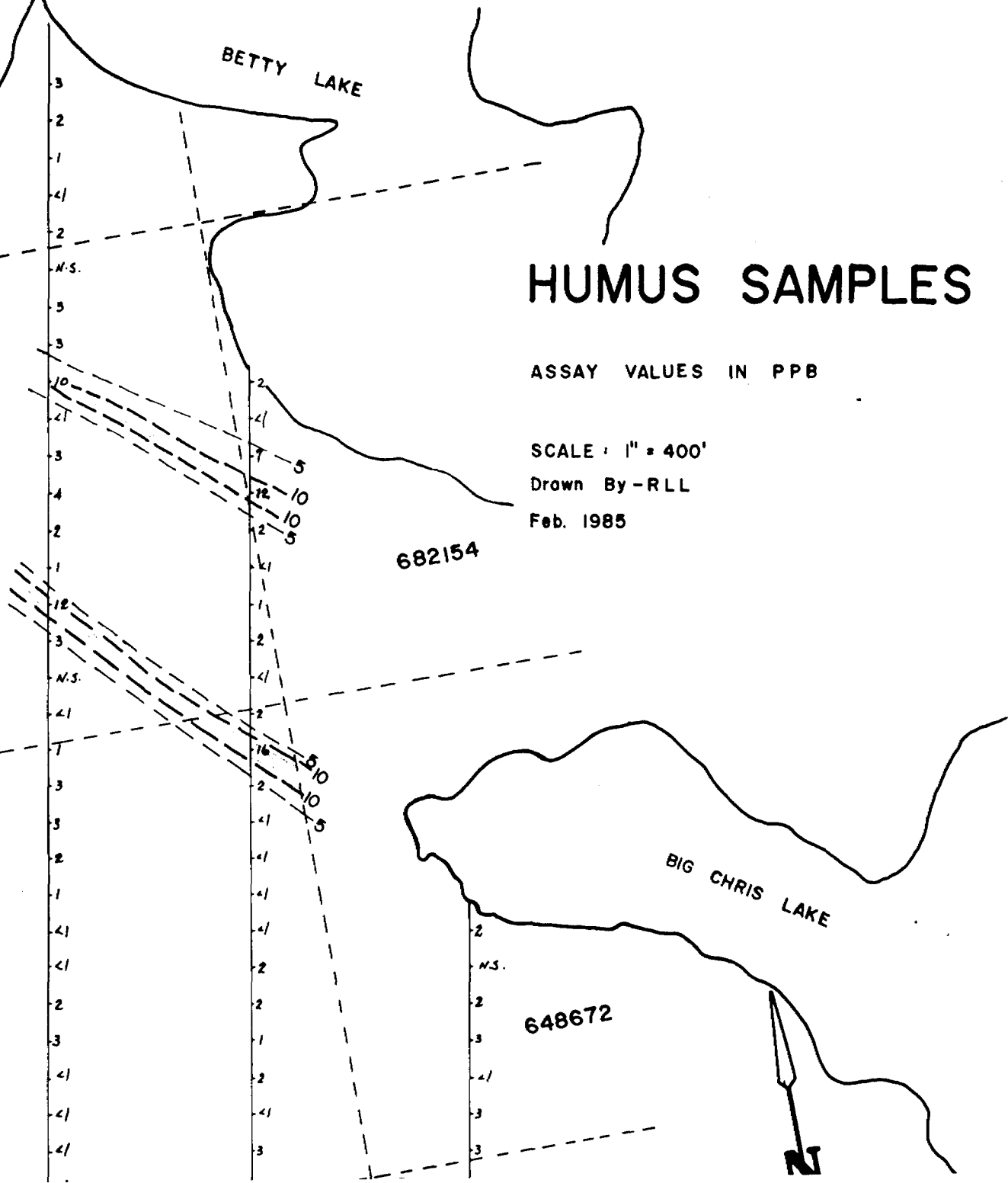
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Bondar-Clegg & Company Ltd.  
764 Belfast Road  
Ottawa, Ontario  
Canada K1H 1J1  
Phone: (613) 735-1110  
Telex: 053-4455



**BONDAR-CLEGG**

**Geochemical  
Lab Report**

REPORT: 014-2296

FROM: QUINTERRA RESOURCES INC.  
DATE: 06-SEP-84 PROJECT: 074

SUBMITTED BY: RAY LASHBROOK

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
01	AU	1 PPB	AQUA REGIA	FireAssay/CarbonKod	-10	MUNDUS	SIEVE -10

REPORT COPIES TO: ATTN: R. LASHBROOK

INVOICE TO: ATTN: R. LASHBROOK

REMARKS: < MEANS LESS THAN

DETECTION LIMITS FOR GOLD  
10 GRAM SAMPLE: 2 PPB.  
5 GRAM SAMPLE: 4 PPB.  
1 GRAM SAMPLE: 20 PPB.

SAMPLE WT. 10 G. UNLESS OTHERWISE STATED.

NOTE:  
CHECK CONCENTRATION/SAMPLE WEIGHT RATIO  
FOR EFFECTIVE DETECTION LEVEL.



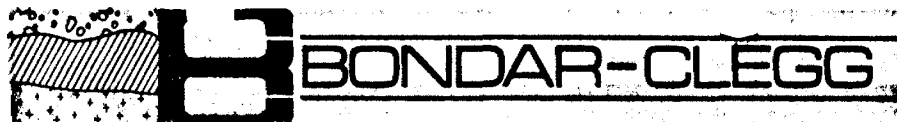
REPORT: 014-2296

PROJECT: 074

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	AU PFB	WT/AU gm	NOTE	SAMPLE NUMBER	ELEMENT UNITS	AU PFB	WT/AU gm	NO
2601		<1			2641		2		
2602		<1			2642		3		
2603		2			3201		1		
2604		6			3202		1		
2605		1			3203		3		
2606		1			3204		<1		
2607		2			3205		2		
2608		<1			3206		2		
2609		1			3207		<1		
2610		2			3208		1		
2611		2			3209		2		
2612		<1			3210		<1		
2613		<1			3211		<1		
2614		<1			3212		2		
2615		<1			3213		2		
2616		<1			3214		<1		
2617		<1			3215		2		
2618		3			3216		3		
2619		2			3217		<1		
2620		<1			3218		2		
2621		<1			3219		1		
2622		1			3220		2		
2623		2			3221		2		
2624		3			3222		<1		
2625		3			3223		<1		
2626		1			3224		<1		
2627		<1			3225		<1		
2628		3			3226		2		
2629		12			3227		16		
2630		1			3228		2		
2631		2			3229		<1		
2632		4			3230		2		
2633		3			3231		1		
2634		<1			3232		<1		
2635		10			3233		2		
2636		3			3234		12		
2637		3			3235		7		
2638		2			3236		<1		
2639		<1			3237		2		
2640		1			3801		2		

Bondar-Clegg & Company Ltd.  
764 Belfast Road  
Ottawa, Ontario  
Canada K1H 1S5  
Phone: (613) 731-110  
Telex: 053-4455



Geochemical  
Lab Report

REPORT: 014-2296

PROJECT: 074

PAGE 2

SAMPLE NUMBER	ELEMENT UNITS	AU PPB	WT/AU gM	NOTES
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3802		2		
3803		3		
3804		<1		
3805		3		
3806		3		

3807		3		
3808		12		
3809		<1		
3810		<1		
3811		3		

3812		<1		
3813		5		
3814		1		
3815		5		
3816		4		

3817		5		
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Bondar-Clegg & Company Ltd.  
764 Belfast Road  
Ottawa, Ontario  
Canada K1H 1S5  
Phone: (613) 77-3110  
Telex: 053-4455



**BONDAR-CLEGG**

**Geochemical  
Lab Report**

REPORT: 014-1867

FROM: QUINTEIRA RESOURCES INC.

SUBMITTED BY: R. LASHBROOK

DATE: 08-AUG-84 PROJECT:

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
01	AU	1 PPB	AQUA REGIA	FireAssay/CarbonRod	-10	HUMUS	SEIVE -10

REPORT COPIES TO: ATTN: R. LASHBROOK

INVOICE TO: ATTN: R. LASHBROOK

REMARKS: SAMPLES ANALYZED--CARBON ROD AS PER R. CALOW.

DETECTION LIMITS FOR GOLD  
10 GRAM SAMPLE: 2 PPB.  
5 GRAM SAMPLE: 4 PPB.  
1 GRAM SAMPLE: 20 PPB.

SAMPLE WT. 10 G. UNLESS OTHERWISE STATED.

NOTE:  
CHECK CONCENTRATION/SAMPLE WEIGHT RATIO  
FOR EFFECTIVE DETECTION LEVEL.



REPORT: 014-1867

PROJECT:

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	AU PPB	WT/AU GN	NOTE	SAMPLE NUMBER	ELEMENT UNITS	AU PPB	WT/AU GN	NOTE
001		9		L176 SN	041		2		
002		3		↓	042		1		L172E - SN
003		11			043		4		L172 240S
004		3							
005		3							
006		9		SL					
007		19							
008		10							
009		3							
010		3							
011		6							
012		1							
013		2							
014		4		L176E-8S					
015		2		L180E 9S					
016		17							
017		6							
018		2							
019		4							
020		19							
021		2							
022		15							
023		8							
024		3							
025		4							
026		2							
027		3							
028		4							
029		3		L180-SN					
030		2		L172-7S					
031		5							
032		3							
033		3							
034		3							
035		4							
036		4							
037		3							
038		2							
039		2							
040		2							



TRENCHING

From July to October trenching was carried out at (a) No. 7 Trench Area (b) No. 4 Trench Area (c) south shore of Betty Lake and (d) L116E, 46S. Also during the course of the summer and fall several old trenches were located and sampled along with the sampling of trench area 6.

(A) TRENCH AREA 7

Several trenches were put down in this area which had been bulldozed, partially cleaned and partly trenched during the 1983 program. A total of 163' in 8 trenches were done in 1984. All trenches returned anomalous Au assay's through to a high of 0.064 oz/ton Au / 3' or 0.04 oz/ton Au / 10' (Tr. #7 "K"). These samples were in an area that in 1983 ran 0.10 oz/ton Au / 7' (Tr. #7L).

SUMMARY

TRENCH	LENGTH	AVE. AU (ppb)	HIGHEST
7A	42'	427	0.038 oz/ton/5'
7B	8'	568	903 ppb/5'
7C	21'	545	0.036 oz/ton/4'
7D	21'	281	543 ppb/5'
7F	28'	249	511 ppb/3'
7I	5'	808	808 ppb/5'
7K	16'	886	0.064 oz/ton/3'

A break down by rock types gave the following results:

- (a) Porphyry - 187 ppb, 7 samples.
- (b) Massive Carbonated Rock - 12 ppb, 1 sample.
- (c) Cherty - Pyritic Beds - 735 ppb, 3 samples.
- (d) Carbonated Mafic and Ultramafic Tuffs - 555 ppb, 24 samples.

Also in this area several float samples of pyritic cherty tuff to massive pyrite gave an average grade of 0.07 oz/ton Au. The cherty pyritic tuff exposed in Trench 7B over a 5' width only ran 903 ppb. The float was different in that it contained more pyrite and had a higher tuffaceous and a lower cherty component.

(B) TRENCH AREA 4

This area had been bulldozed the previous year, but not trenched. Four trenches totalling 38' in length were blasted in July 1984. The highest value was 140 ppb while the average of all 8 samples was 72 ppb.

(C) SOUTH SHORE BETTY LAKE.

An old east-west trending trench was located on the south shore of Betty Lake during the mapping of the shoreline. It was put down on an east-west trending quartz-carbonate vein up to 3' wide with a highly carbonated zone to 4' wide on the south and up to 6' wide to the north. The north contact of the carbonate altered rock was concealed by overburden and/or Betty Lake. Minor disseminated pyrite and splotches of chalcopyrite were seen in the vein. The sharp south contact of carbonate alteration with mafic volcanics probably represents a rock contact between an ultramafic rock and the mafic tuffs and flow breccias. Minor quartz-carbonate veins trend parallel to the main vein and up to 20' south.

Assays were low with the highest being 56 ppb while the average of 8 samples was 15 ppb.

(D) L116E, 46S

A 13' x 2' x 18" trench was blasted across a VLF conductor at this location. The cause of the conductor was a 2' band of 30% pyrite in a 8½' schistose sericitic zone. The average of 4 samples was 5 ppb while the highest was 12 ppb from a quartz blob within the sericitic zone.

OTHER TRENCHES

TRENCH AREA 6

This area was bulldozed, trenched and sampled in 1983. Trench 6 "C" gave a high value of 0.16 oz/ton Au over 4'. The 1984 sampling was confined to Trench 6 "A". One sample was taken of numerous quartz-carbonate veins containing pyrite and tourmaline and carbonate altered margins. This sample assayed 145 ppb. The rest of the sampling was from the north half of 6A. The highest assay was 733 ppb Au/4' while the average was 228 ppb Au for 23'.

LINE 48E, 36N

During the magnetometer survey in November several (20?) old pits and trenches were located in this area by Bruce Raine. Several grab samples and some bedrock samples were taken, but due to the time of year and limited time available none of the pits and trenches could be cleaned properly. The exposed rock in the trench bottoms consisted of carbonated sericite schists with up to 30% pyrite in places, carbonated talcy tuff with minor pyrite, siliceous cherty tuff and carbonated porphyry. Quartz veins with green carbonate haloes containing pyrite cut these rocks. Some of the carbonated rocks are also silicified. The highest assay result was 373 ppb Au and the average of 14 samples was 89 ppb.

LINE 51E, 36 + 50N

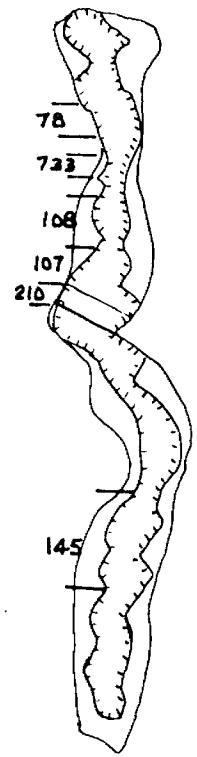
Several old trenches were located during a reconnaissance traverse just west of Big Chris Lake. They had been put down on a pyritic iron formation and cherty pyritic tuffs. Several samples were taken and assayed for Au and 2 were assayed for Cu, Zn and Ag. Chalcopyrite and sphalerite specks were noted in pyritic graphitic tuffaceous beds. The highest Au assay was 86 ppb while the average for 5 samples was 42 ppb Au. The 2 other samples averaged 565 ppm Cu, 2038 ppm Zn and 1.3 ppm Ag.

The last 2 trench areas found are probably on the same horizon being separated by a low swamp area. The more westerly trenches are in a zone of altered rocks. The combination of the alteration and the sulfidic cherty iron formation should be a good area to search for a gold rich zone. With the overburden being shallow a backhoe could be utilized very effectively.

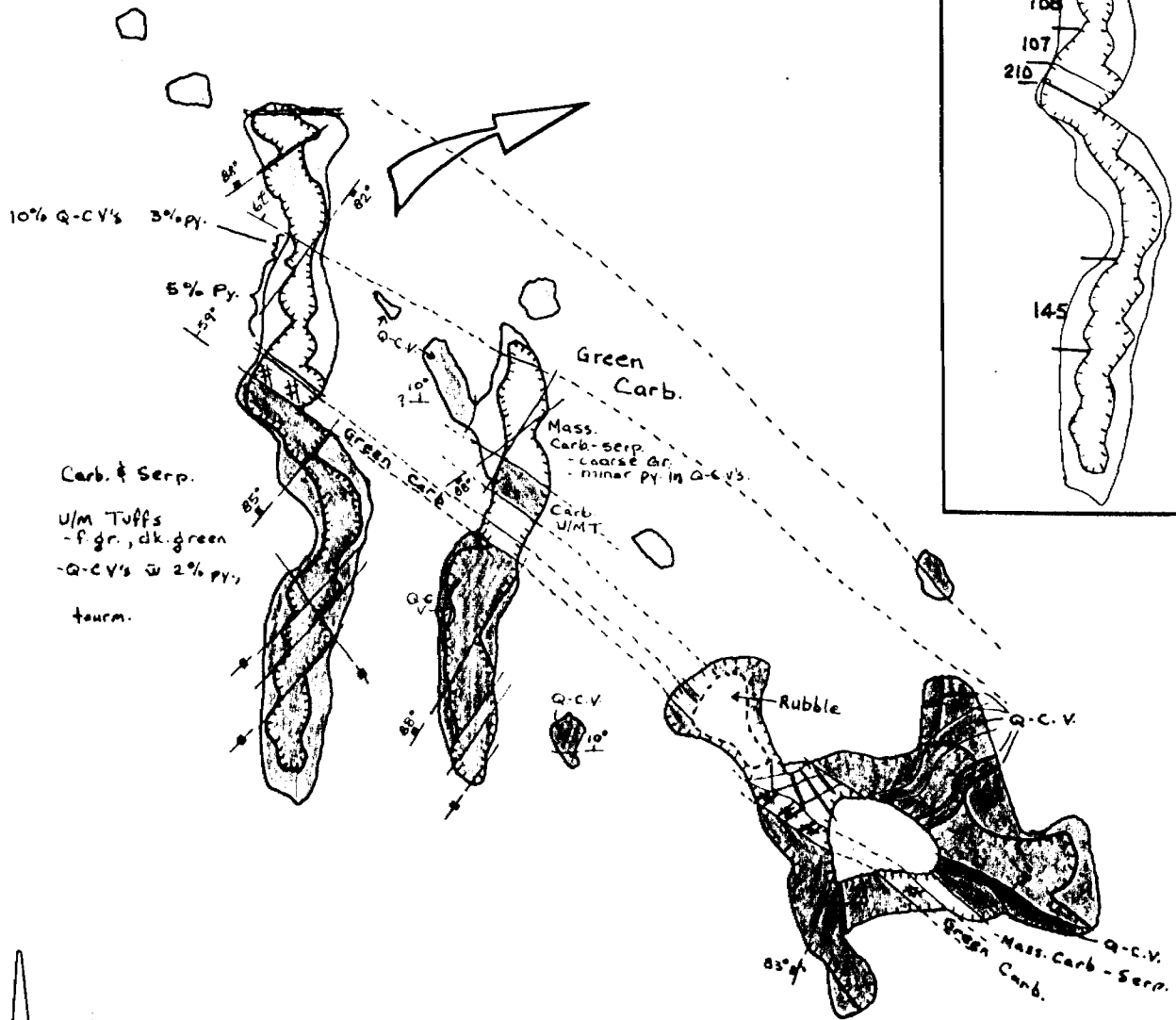
The IP results gave a 1200' anomaly from L38E, 40N to L50E, 37N over this area.



ASSAYS -ppb



GEOLOGY



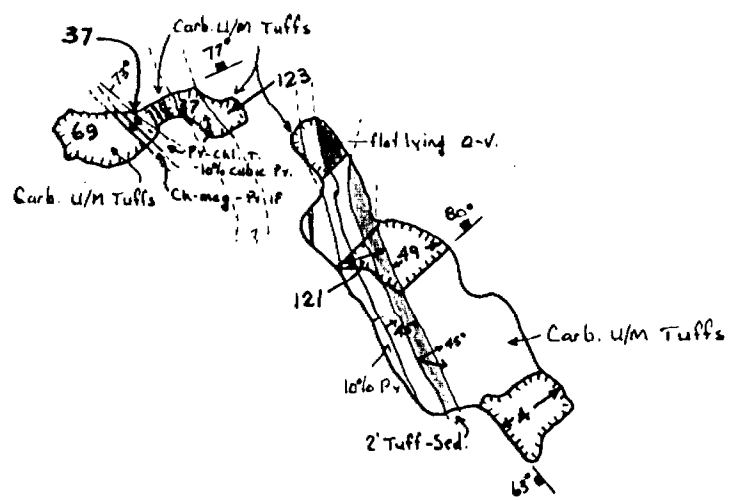
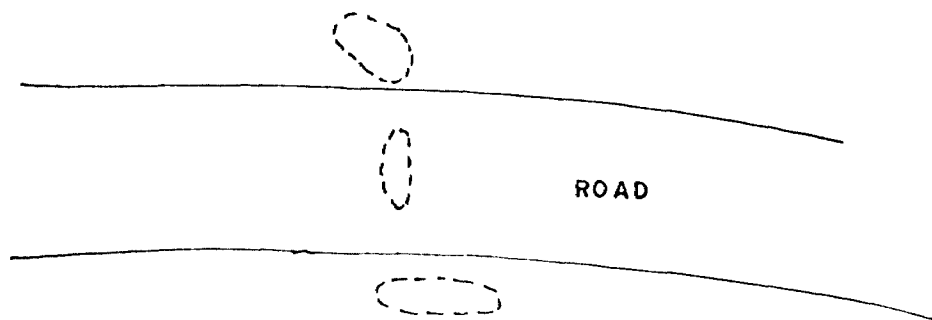
TRENCH AREA NO. 6

1" = 20'



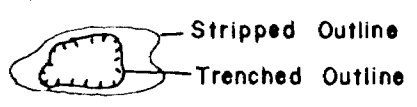
210 — ppb Au

Drawn By - R.L.L. , Feb. 1985



# TRENCH AREA NO. 4

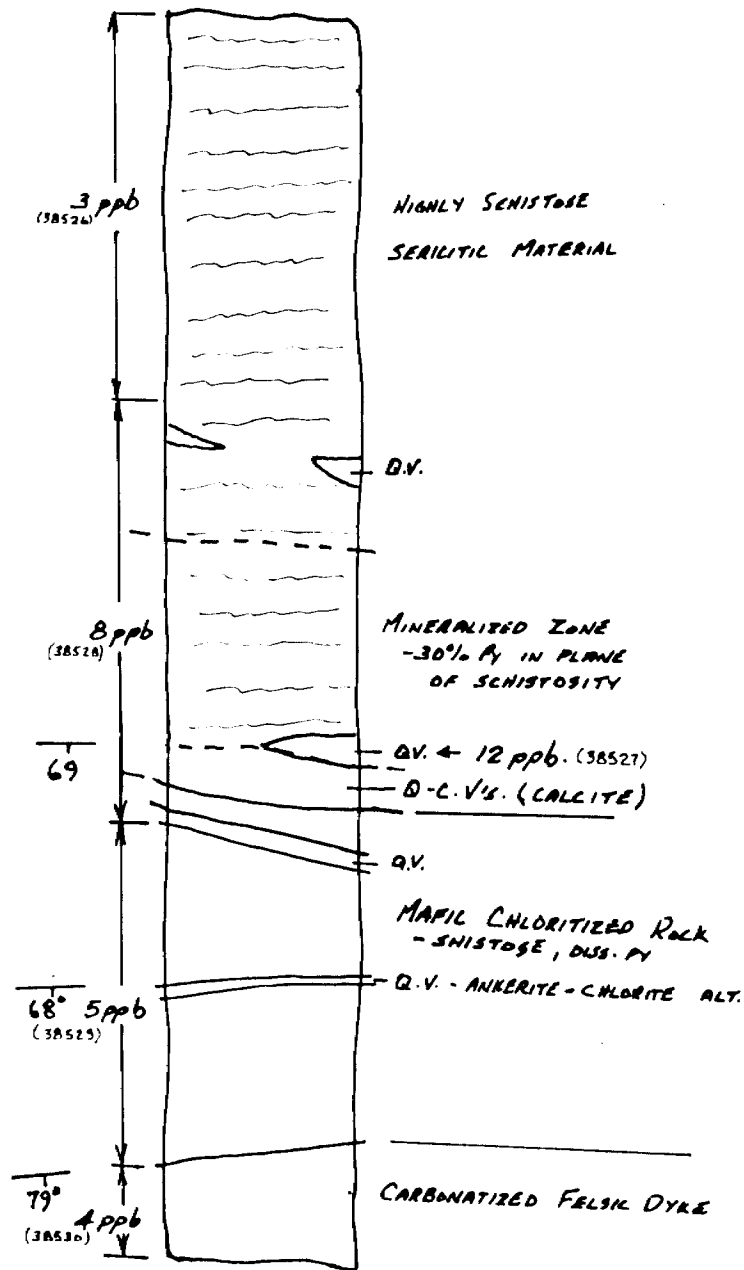
1" = 20'



121 — ppb Au

Drawn By - R.L.L. , Feb. 1985

L 116E, 465



SCALE 1" = 2'  
 DRAWN - RLL FEB 1985  
 SAMPLED - B.R., DL, LH,



### OVERBURDEN DRILLING

The overburden drilling program was a continuation of a program started in March and April 1984 of testing I.P. anomalies. A total of 20 samples were collected and analysed for gold.

Sampling is done by a flow through bit located at the end of a string of rods which are driven into the ground by the percussion mode of a "cobra" drill. The bit has a tooth arrangement at the end which is driven into the bedrock about  $\frac{1}{4}$ ". Both a bedrock button and a till sample immediately above the bedrock-till interface is recovered. Samples are occasionally lost mostly due to too much water at the sample point.

Sample sites and descriptions are appended.

### DISCUSSION

Anomaly "G" was the only anomaly tested during the 1984 field season. The anomaly is not covered by a good till being sandy at numerous sample sites which is reflected by the low assay results.

If 30 ppb Au is considered anomalous (W.O. KARVINEN, April 1984) then only one anomalous sample was taken. This is located at the north contact of the I.P. conductor on L38E, 23N and gave a value of 74 ppb. The sample site contains pyrite in both the till and the bedrock.

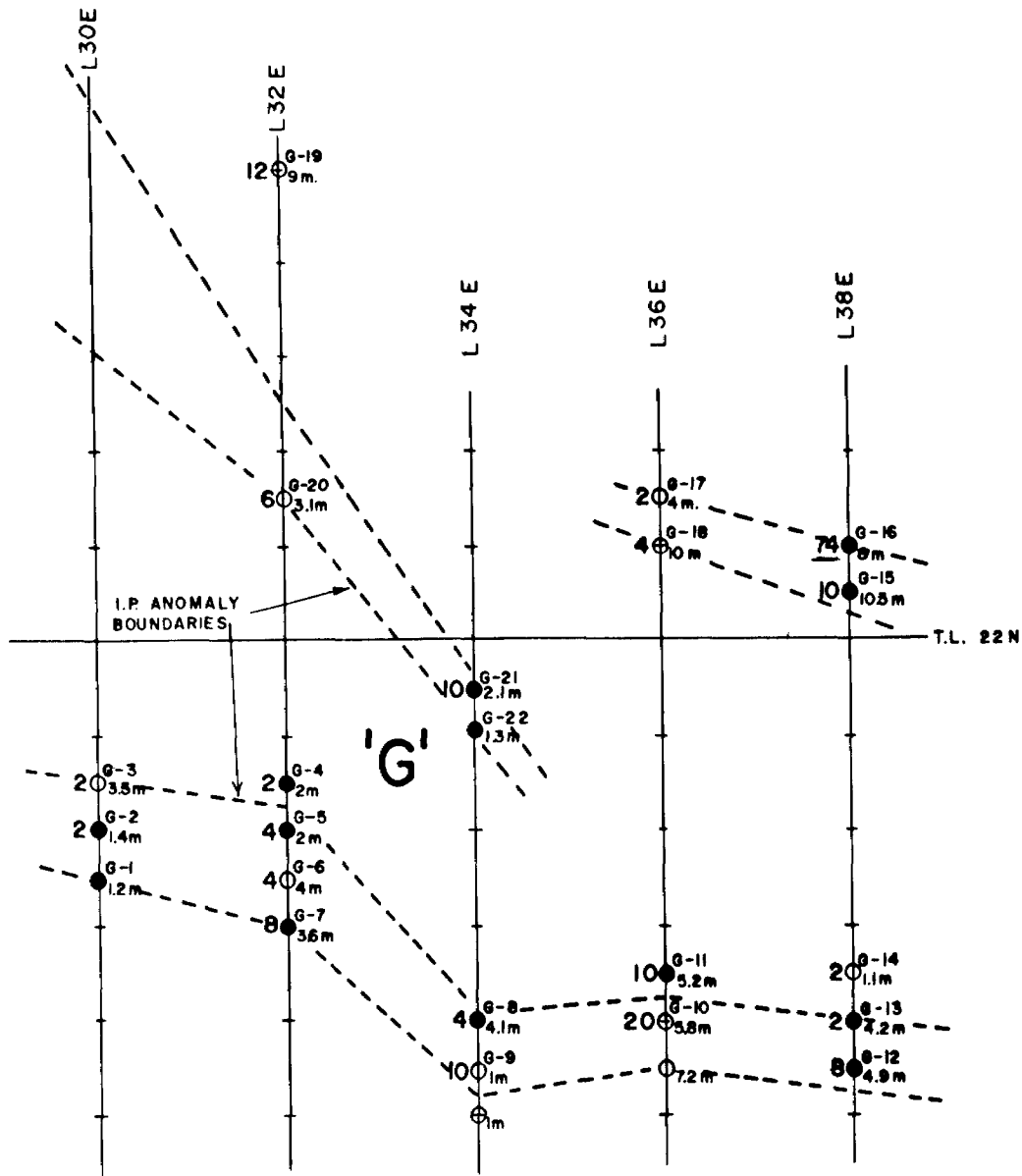
### CONCLUSION

Due to the nature of the till in the area of anomaly "G" overburden sampling is not a good choice of evaluating this anomaly.

## ANOMALY "G"

SAMPLE NO	LOCATION	DEPTH	ASSAY PPB.	DESCRIPTION
G-1	L30E, 19+50N	1.2m	-	-Sandy overburden, no till, no sample retained -button - hard, grey.
G-2	L30E, 20N	1.4m	2	-moist compact till -button - hard, green.
G-3	L30E, 20+50N	3.5m	2	-moist, grey washed till. -no button.
G-4	L32E, 20+50N	2.0m	2	-moist sandy till, some pyrite. -button - hard, green.
G-5	L32E, 20N	2.0m	4	-moist grey, sandy till- good till. -button - hard, green.
G-6	L32E, 19+50N	4.0m	4	-hard green till with angular green rock chips, some pyrite-good till. -no button.
G-7	L32E, 19N	3.6m	8	-compact, grey to grey green silty till, some angular green rock chips. -button - dark green.
G-8	L34E, 18N	4.1m	4	-moist, compact, green till. -button - hard, green.
G-9	L34E, 17+50N	1.0m	10	-poor till, washed, sandy -no button, green bedrock.
	L34E, 17N	1.0m	-	-sandy till, no sample retained. -no button.
	L36E, 17+50N	7.2m	-	-wet till - lost samples.
G-10	L36E, 17+50N	5,8m	20	-compact green till, very pyritic, green angular rock chips -no button.
G-11	L36E, 18+50N	5.2m	10	-excellent compact, green, pyritic till -button - mafic volcanic, pyritic.

G-12	L38E, 17+50N	4.9m	8	-fine silty till with ½" gravel, pyrite cube in till -button - mafic volcanic with quartz vein and pyrite.
G-13	L38E, 18N	4.2m	2	-fine, white clay, well washed sand and gravel -button - sericite schist.
G-14	L38E, 18+50N	1.1m	2	-fine, well washed, sand and silt -no button.
G-15	L38E, 22+50N	10.5m	10	-fine silt on top then coarse sand and gravel with pyrite -button - mafic volcanic with pyrite.
G-16	L38E, 23N	8.0m	74	-coarse sand and gravel with pyrite -button - mafic volcanic, pyritic.
G-17	L36E, 23+50N	4.0m	2	-fine sand and gravel with red clay at bedrock -no button.
G-18	L36E, 23N	10.0m	4	-fine washed till, mostly quartz -no button.
G-19	L32E, 27N	9.0m	12	-bouldery penetration, sandy wet till (poor) -no button.
G-20	L32E, 23+50N	3.1m	6	-fairly dry greenish till with 10% pyrite -no button, bedrock soft, green.
G-21	L34E, 21+50N	2.1m	10	-wet sandy till (poor) -button - green mafic volcanic, pyrite.
G-22	L34E, 21+10N	1.3m	-	-sand - no sample retained -button - hard, green mafic volcanic fine pyrite.



**LEGEND**

- NO BEDROCK BUTTON
- BEDROCK BUTTON
- G-10 ← SAMPLE NUMBER
- 5.8m ← DEPTH TO BEDROCK
- AU ASSAY PPB → 20

SCALE 1" = 200'  
 Drawn By RLL , Feb. 1984

**OVERBURDEN DRILLING  
 ANOMALY 'G'**



BELL - WHITE ANALYTICAL LABORATORIES LTD.

P.O. BOX 187.

HAILEYBURY, ONTARIO

TEL: 672-3107

## Certificate of Analysis

NO. B993-84

DATE: September 6, 1984

SAMPLE(S) OF: Soils(20)

RECEIVED: September, 1984

SAMPLE(S) FROM: Mr. R. Lashbrook, Quinterra Resources Inc.

R.N. 074  
OVERBURDEN DRILLING

<u>Sample No.</u>	<u>Gold ppb</u>
G-2	2
3	2
4	2
5	4
6	4
7	8
8	4
9	10
G-10	20
11	10
12	8
13	2
14	2
15	10
16	74
17	2
18	4
19	12
G-20	6
21	10

IN ACCORDANCE WITH LONG-ESTABLISHED NORTH AMERICAN CUSTOM, UNLESS IT IS SPECIFICALLY STATED OTHERWISE GOLD AND SILVER VALUES REPORTED ON THESE SHEETS HAVE NOT BEEN ADJUSTED TO COMPENSATE FOR LOSSES AND GAINS INHERENT IN THE FIRE ASSAY PROCESS.

BELL-WHITE ANALYTICAL LABORATORIES LTD.

DRILLING SUMMARY

Diamond drilling at the Sylvanite Creek Property was delayed until December 8th, 1984 waiting for the results of the airborne mag - VLF survey performed in October 1984. It was thought that the survey might guide the location of drill targets.

DRILL. HOLE	LOCATION	LENGTH	DIP	AZIMUTH
SC - 84 - 1	1.90E, 16+50N	446'	-45°	195°
SC - 84 - 2	1.94+50E, 21N	516'	-45°	173°
SC - 84 - 3	1.65E, 19+50N	446'	-45°	205°
SC - 84 - 4	1.14E, 5N	427'	-45°	190°

(2) SC-84 -1

This hole was collared just east of Trench Area #7 and directed underneath the area that had assayed 0.10 oz Au/ton over 7' in 1983. This area also yielded a broad I.P. anomaly.

The hole encountered almost wholly an alternating sequence of mafic crystal tuffs with abundant small white feldspar crystals and a mafic tuff which was, for the most part, fine grained and dark green. Only one felsic porphyry was cut for a length of 8.2' which ran 240 ppb Au. This is about the same tenor as was got from surface sampling in Trench Area #7. Green carbonate rock was encountered in the lower half of the core and where assayed gave only low values (18-20ppb). Throughout the hole are many brown carbonate altered zones usually containing quartz veins. In some instances silification and pyritization also occur with the carbonatization.

Gold values were quite anomalous, but no ore grade intersections were found. The highest grade (0.041 oz Au/ton/0.9') occurred in an altered brown carbonate - quartz zone containing 2-3% pyrite. But not

all altered zones were this auriferous (e.g. 155.4 - 158.0' 27 ppb and 182.4 - 183.5 29 ppb).

SC-84-1 confirmed the existence at depth of a wide anomalous zone found in Trench Area #7. From surface work we know that this anomalous zone exists for another 300' west with the most westerly trench, 7A, averaging 427 ppb Au across 42'.

The I.P. anomaly must have been caused by the disseminated 2-5% pyrite that occurs throughout the hole and reinforced by a few narrow 10% to 40% pyritic zones.

SC - 84 - 2

This hole drilled at 94+50E, 21N was to test 2 I.P. conductors picked up by Rayan in 1983. Also it was felt it may be the location of the auriferous float found in Trench Area 7 about 600' southwest that assayed 0.07 oz/ton Au.

The hole passed through 20' of overburden before collaring in mafic tuff. At 166.8 semi-massive sulfides were cut to 167.9. Three narrow cherty tuff beds were intersected with interbedded mafic tuffs to 191.2'. This 24.4' intersection is the cause of the north I.P. conductor. Very low (5-14 ppb) Au values were found along with anomalous Cu-Zn values, the highest being 1040 ppm Cu/3.6' and 3150 ppm Zn/5'.

An intervening series of ultramafic flows and tuffs to 475.2' separate the 2 I.P. anomalies. The second anomaly was caused by 3 narrow chert exhalites to 495.2'. These exhalites gave anomalous values of 2.9' - 488 ppb Au, 1.8' - 926 ppb Au and 0.7' of 274 ppb Au.

The hole re-entered and was stopped in another ultramafic series of rocks.

SC - 84 - 3

This hole was spotted at 65E 19+50N to intersect a 2000' long I.P. anomaly which gave anomalous overburden results. The hole is predominantly mafic tuffs and mafic crystal tuffs interrupted periodically by cherty tuffs and iron formation (54.8 - 60.2, 128.0 - 138.1), cherty tuff (191.8 - 192.6, 194.5 - 198.5, 234.3 - 234.6, 246.9 - 255.2) sulfide iron formation (255.2 - 258.6) and zones of silicified mafic tuffs.

Sulfides are ubiquitous, commonly pyrite, occurring as beds and cubes up to 1.0cm wide and up to 60% in places while pyrrhotite is confined to a zone from 236.3' to 277.9' where it reaches a maximum of 50% (269.3 - 277.9).

Silicified zones do not appear to have an increase in Au content nor the high sulfide areas. The highest Au values occurs in mafic tuffs which have been cut by several quartz-carbonate veins and contain 10-15% pyrite (313.7 - 317.0) - 656 ppb and 30% pyrite (179.1 - 181.9) - 346 ppb. The cherty iron formation averaged 160 ppb, cherty tuffs 148 ppb Au, sulfidic iron formation 51 ppb Au and the silicified zones, where assayed, averaged 177 ppb. Thirty-four percent of the hole was assayed giving an average of 134 ppb Au.

SC - 84 - 4

The hole was spotted 200' east of SC-3 in an attempt to intersect ore grade results found in SC-3 ie 0.246/8.75' (238.23-247.0) and 0.178/2.8' (254.2 - 257.0). These values were obtained from a zone of siliceous iron formation and pyritic chert from 234.6' to 258.0' (23.4').



Hole SC - 84 - 4 was very disappointing. It was almost all mafic tuff with narrow zones of pink altered and silicified rock. No siliceous iron formation or pyritic cherts were intersected. The highest gold value was a mere 86 ppb.

## GEOLOGY

The geology of the Sylvanite Creek Property has been discussed in earlier reports by W.O. Karvinen mainly in what is known as the "Core Claims". The 1984 mapping and prospecting program was concerned mostly with the claims at the east end of the group (Sylvanite East Block) and also with the claims immediately north and south of the Core Group.

North of the Core Group the rocks are mostly massive, medium to coarse grained, mafic volcanics. On L32E at 55+50N a small felsic tuff or sediment outcrop was located. Only minor pyrite was observed. It was later trenched and assayed giving low values. A second area just west of Big Chris Lake between line 48 and 52E and 36 to 36+50N contained a number of old trenches. The more easterly set were put down on pyritic graphitic tuffs, cherty exhalites and felsic tuffs. The pyritic graphitic tuffs contain about 8% pyrite with fine specks of chalcopyrite and sphalerite. The pyritic-cherty exhalite contained beds of 40% pyrite and fine specks of chalcopyrite especially in the joints. These 2 horizons assayed 27 ppb Au, 565 ppm Cu, 2040 ppm Zn and 1.3 ppm Ag. The strike of these beds are southwest with a 45° dip to the southeast. This is completely different from the strikes in the surrounding area. A fault striking southwest is suspected to occur in a small depression separating this set of outcrops from massive medium grained mafic volcanics 100' east. This is substantiated by a fault projected from the airborne survey.

The more westerly set of trenches were sunk on highly altered rock. Due to the late time in the season when they were located, they could not be cleaned and mapped. However, muck from beside the trenches consisted of carbonated sericite schists which in places contain up to 30% pyrite, carbonated talcy tuff with minor pyrite, siliceous cherty tuff and carbonated prophyry. Quartz veins with green carbonate pyritic haloes cut these rock. Some of the rocks are also silicified. The highest assay was 373 ppb Au (0.011 oz/ton).

The style of alteration (silicification, carbonatization, pyritization), the proximity of the faults, the cherty pyritic exhalites and shallow overburden make's this area a target for the 1985 program. The I.P. survey shows a 1200' long anomaly from L38E, 40N to L50E, 37N. This is probably the same horizon that has not yet been exposed.

The "Sylvanite East Block" was systematically mapped along 400' lines. The northwest quarter of this area is covered by a sand plain. Generally, the geology is mostly mafic volcanics (flows and tuffs) with interbedded felsic tuffs and flows, minor cherty pyritic iron formations and exhalites and minor sediments. Intruding into these are felsic porphyry dykes, granitic stocks, gabbro-diorite dykes and sills, diabase dykes and a peridotite. A major east-west fault divides this area approximately in half.

In the north part the rocks strike west to northwest and dip  $35^{\circ}$  to  $80^{\circ}$  to the north and northeast. They are mostly mafic volcanic tuffs and minor massive flows. Interbedded are felsic

tuffs, minor felsic flows and breccias and minor cherty pyritic beds commonly 1' to 2' thick. Massive, deep brown weathering carbonate rock strike's northwest throughout this area.

This rock was not located in the south half below the fault. The carbonate rock is usually riddled with quartz veins, sometimes in ladder type veins. A massive appearing peridotite intrusion is exposed in several outcrops over a strike of 2000' from L116E to L136E along and south of the baseline. A narrow band of the Ridout Sediments is located in the northeast corner of the claims. They strike north west and were mapped again  $1\frac{1}{2}$  miles northwest on the shore of Little Chris Lake.

The south part of the Sylvanite East block is dominated by mafic tuffs and flows with interbedded felsic tuffs and flows, cherty-sulfide rich exhalites, iron formation and argillite. Intruding into these are a granite stock and dykes of quartz-feldspar porphyry, gabbro-diorite dykes and sills and a lamprophyre on L172E at 40S. The rocks strike westerly to south westerly and dip steeply to the south. A strong schistosity is prevalent throughout the area usually parallel to the strike of the rock. Measured bedding in the tuffs may, at times, actually be the schistosity.

An old trench located 50' west of L172E, 36S was put down on a cherty-sulfidic exhalite. Sulfides observed were pyrite, pyrrhotite, chalcopyrite and sphalerite. A long ground and air VLF conductor extends from the east boundary (225E) through this horizon and beyond. A diamond drill hole (Granges SW-23, Mar 15, 1977) located 50' east of L187E, 27S cut this conductor. The log indicates a visual average of 16% pyrite over 23.7' in a silicified dacite

tuff. Another 6' band of 20% pyrite is located further down the hole. No assays were reported from the drill hole. Assays from the trench gave an average of 24 ppb Au, 0.04% Cu and 0.21% Zn for 4 samples.

MINERALIZATION

Results of gold assays for the Sylvanite East Block indicate a difference between the north and south areas.

The south area contains an average sulfide content with concentrations in cherty exhalites, felsic tuffs and narrow iron formations. Samples were taken wherever mineralization was observed along with some quartz veins, but only low assays were returned.

The north area also contains an average sulfide content with concentrations in similar rock units as the south. The area is also more schistose and has been carbonatized to a higher degree than the south. Numerous anomalous assays through to a high of 925 ppb in a cherty-pyritic exhalite were taken. The Noranda-International Rhodes property directly east of the north part was reported verbally by Joe Hinzer to have a narrow 18" to 3' exhalite zone traceable across their large stripped area running as high as 0.18 oz/ton from surface sampling. This unit could continue onto the Quinterra ground and may have been picked up in the humus sampling. Another of Noranda's trenches located at the base of the hill and near the projected E-W fault returned, from a grab of siliceous and carbonated tuff with 5% pyrite, 0.034 oz/ton Au. This zone could also come through onto our property as the airborne survey indicates a VLF conductor along the base of this hill, continuing onto the Quinterra ground where it also has, for a short interval, a quadrature response. A quadrature response usually indicates sulfides as the source of the anomaly.

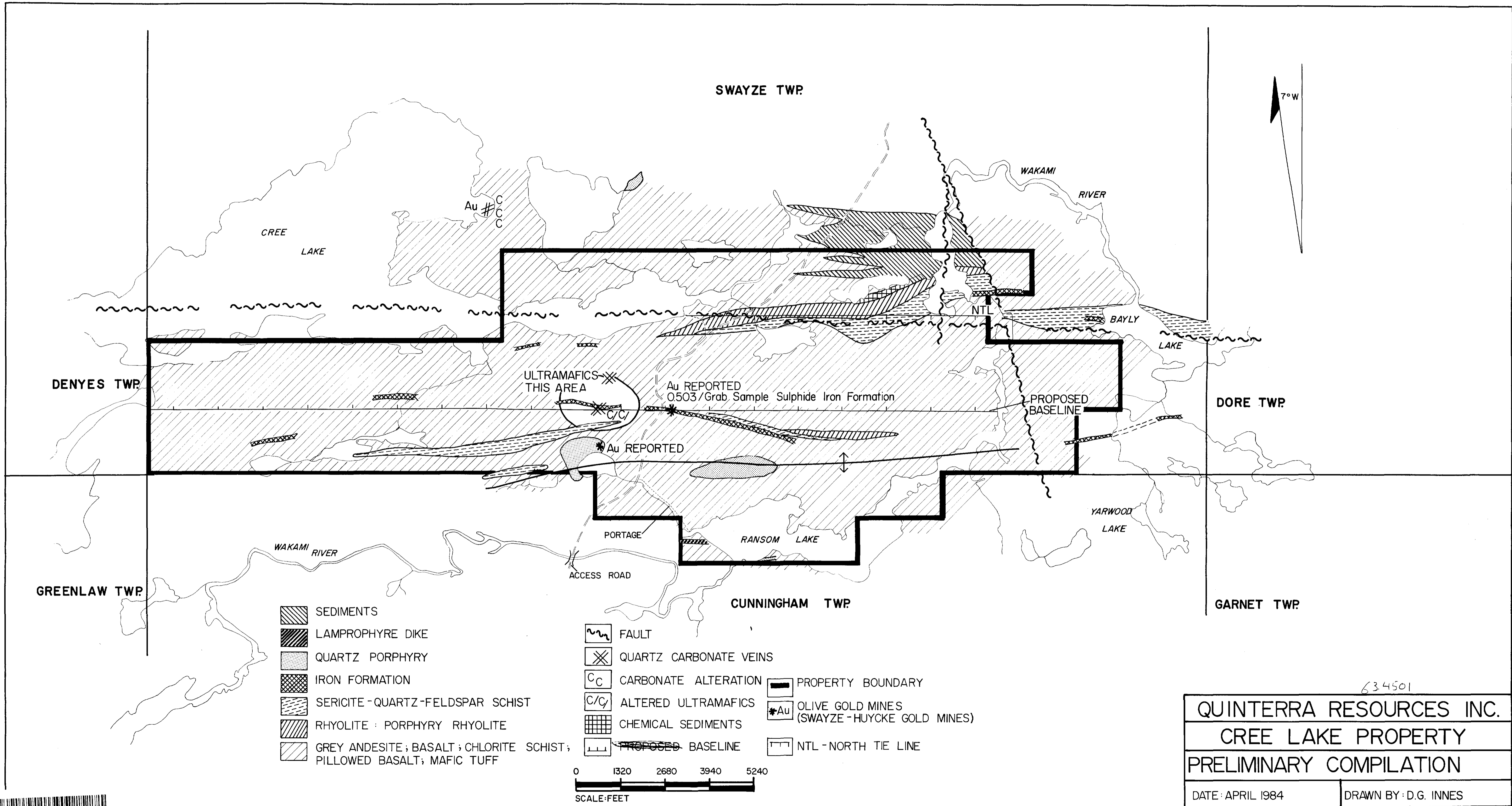
A review of the drilling of the Tooms Nickel Syndicate in the "Nickel Showing" area shows that they got very little in the way of nickel mineralization and intersected only minor peridotite. Most of the logs show mafic tuffs and flows, felsic tuffs and flows, sediments and graphitic slate. Mineralization consists of pyrite, pyrrhotite, chalcopyrite and occasionally sphalerite. Some samples were assayed for gold. In hole #9 two samples returned 1.6' of 0.02 oz/ton Au, 0.10% Cu and 2.8' of 0.06 oz/ton Au, 0.70% Cu. The first sample had "moly" reported visually. Holes 7 and 8 had 0.21% Cu/23.2' and 0.32% Cu/21.6' respectively. No gold assays were taken. They were drilled 100' apart. Considering the gold assays and associated copper values this area should be further checked for a stratabound gold deposit.

In the Trench Area #7 surface sampling and one diamond drill hole has indicated a wide anomalous zone of gold mineralization within a wider I.P. anomaly. Sampling and mapping in the trenches indicates that the gold may not be stratabound, but associated with cross-cutting zones of quartz-carbonate pyrite veinlets and micro-fractures.

Hole 84-2 was located to intersect 2 I.P. anomalies. However, the air-mag maps, received after the drilling shows a narrow anomaly where the drilling took place below a much larger mag high anomaly. The I.P. survey had not gone far enough north in this area. The hole gave anomalous to 0.028 oz/ton Au values in the lower I.P. anomaly. The source of the auriferous float in Trench Area #7 could well have come from this large mag high. A drill hole of Granges (SW-99) 3800' northwest along this anomaly intersected 8' of banded

iron formation containing 15% to 30% magnetite and 5% to 20% sulfides over 2.8'. However, the anomaly is narrower and of lower intensity than north of 84-2. A humus survey located 6200' northwest along the same mag anomaly picked up a narrow 3-4 times background gold anomaly. A more detailed humus program might better define any gold rich horizons within the mag anomaly from the east boundary to Little Chris Lake 3000' northwest.





63.4501

# CREE LAKE PROJECT

## LEGEND

### VOLCANIC ROCKS

- V1 RHYOLITE
- V3 DACITE
- V4 ANDESITE
  - c breccia
  - i pillow
- V6 BASALT
- V8 MAFIC TUFF
- V10 FELSIC TUFF

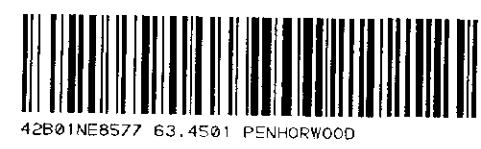
### INTRUSIVE ROCKS

- G1 GRANITE
- G2 SYENITE
- G3 DIORITE GABBRO

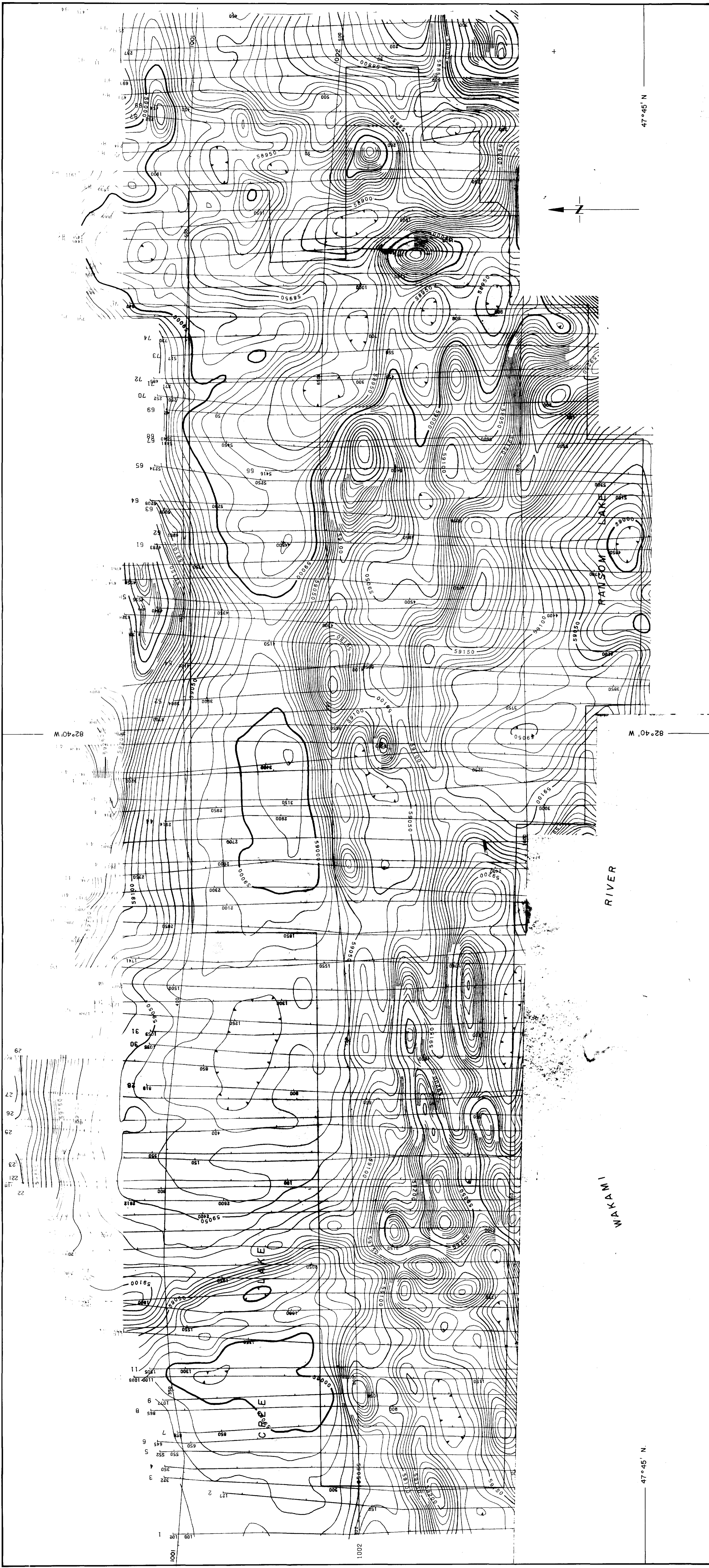
- ↔ SHISTOSITY
- ↻ FOLD
- ⊥ TRENCH
- PIT
- BEDDING



SCALE 1" = 1/4 Mile

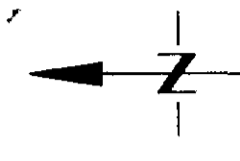






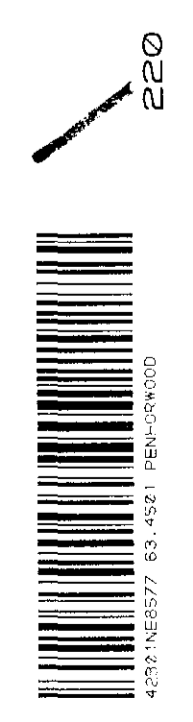
47°45' N

47°45' N



<b>QUINTRRA RESOURCES INC.</b>	
AIRBORNE MAGNETIC SURVEY	
TOTAL MAGNETIC FIELD	
CREE LAKE AREA	
SWAYZE & CUNNINGHAM TOWNSHIPS	
ONTARIO	
N.T.S. NO. 410/15	DRAWING NO. B-407 I-1
SCALE 1:10,000	DATE February, 1985
TERRAQUEST LIMITED	
TORONTO, CANADA	

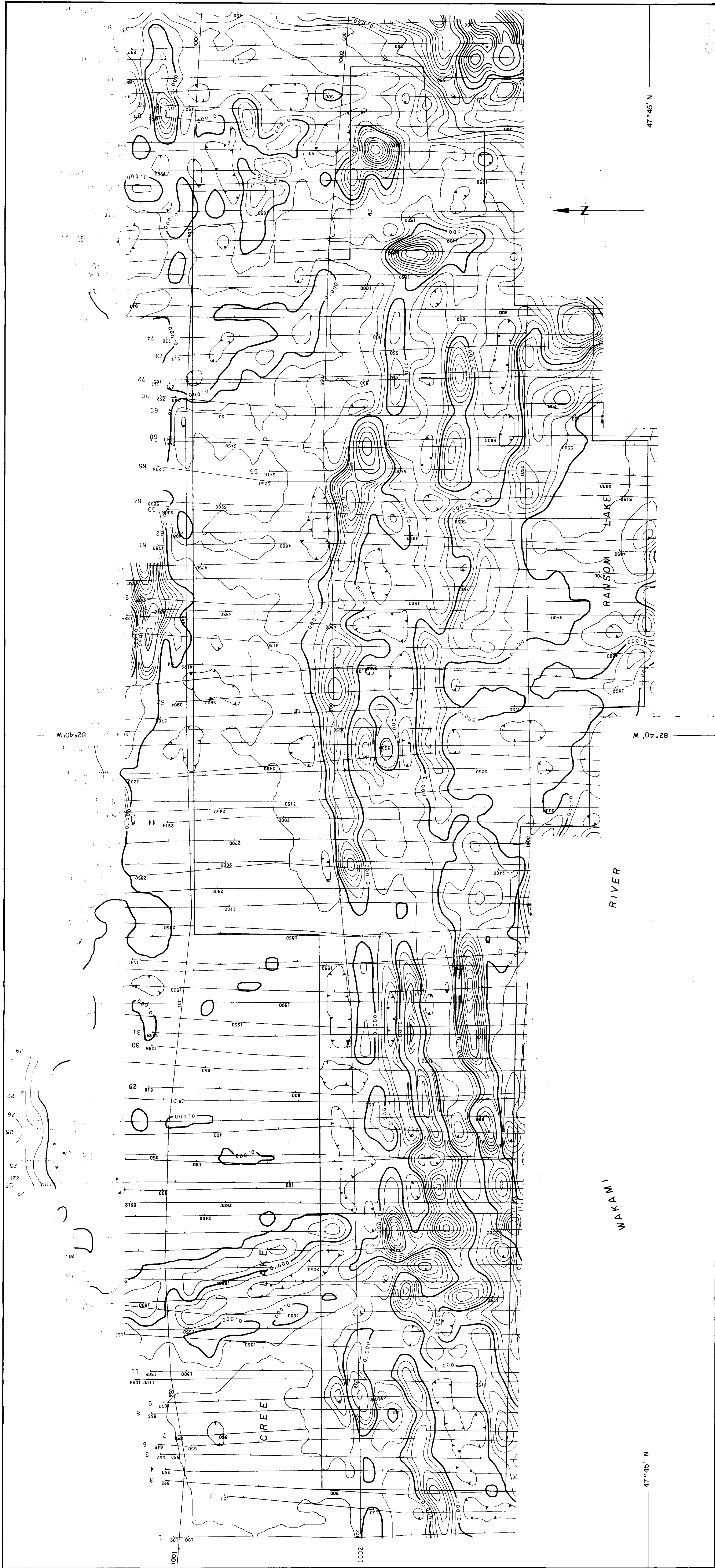
LEGEND  
 TERRAIN CLEARANCE 100 metres  
 LINESPACING 100 metres



220

220



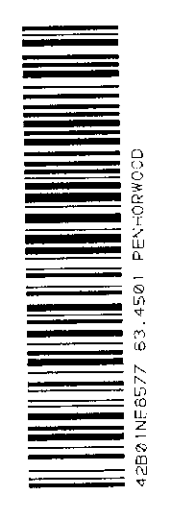


47°45' N

47°45' N

<b>QUINTERRA RESOURCES INC.</b>	
AIRBORNE MAGNETIC SURVEY VERTICAL MAGNETIC GRADIENT Calculated From Total Field	
CREE LAKE AREA SWAYZE & CUNNINGHAM TOWNSHIPS ONTARIO	
N.T.S. NO. 41 07/15	DRAWING NO. B-407.1-2
SCALE 1:10,000	DATE February, 1985
TERRAQUEST LIMITED TORONTO, CANADA	

LEGEND  
 TERRAIN CLEARANCE 100 metres  
 LINE SPACING 100 metres  
 0.00 7/m  
 0.05 7/m  
 0.01 7/m



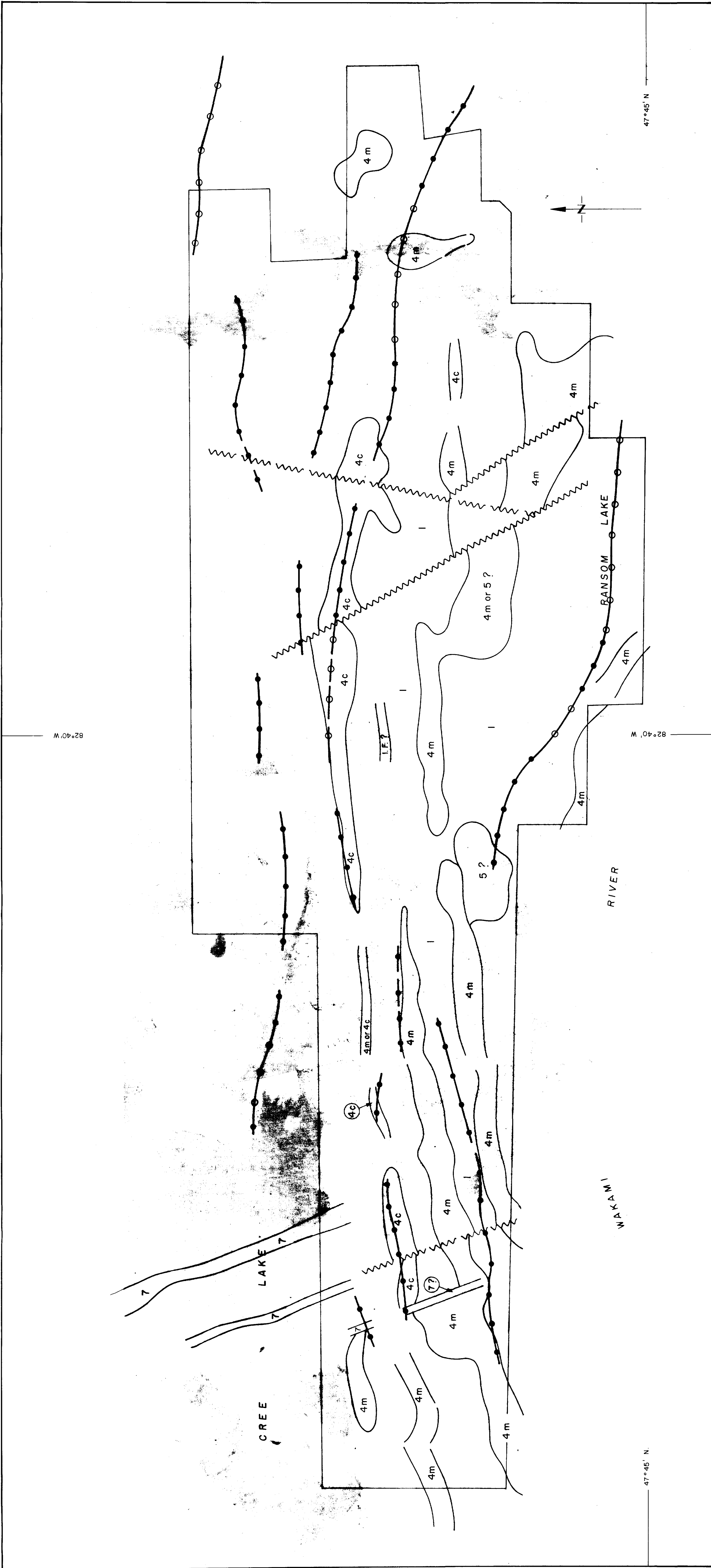
230











**QUINTERRA RESOURCES INC.**

**INTERPRETATION**

**CREE LAKE AREA**  
**SWAYZE & CUNNINGHAM TOWNSHIPS**  
 ONTARIO

N.T.S. NO. 410/15      DRAWING NO. B-407-I-5  
 SCALE 1:10,000      DATE February, 1985

**TERRAQUEST LIMITED**  
 TORONTO, CANADA

**LEGEND**

TERRAIN CLEARANCE      100 metres  
 LINE SPACING      100 metres

**CONTACT**

**FAULT**

7  
 4c  
 4m  
 I.F.?

CHLORITE SCHIST  
 MAGNETIC UNITS WITHIN UNIT 4  
 IRON FORMATION

ACID VOLCANICS  
 V.L.F. CONDUCTOR AXES

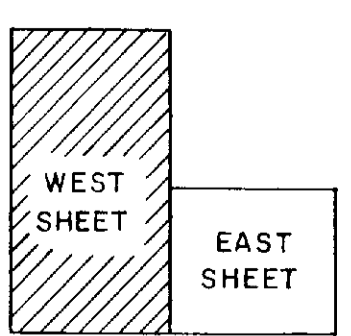
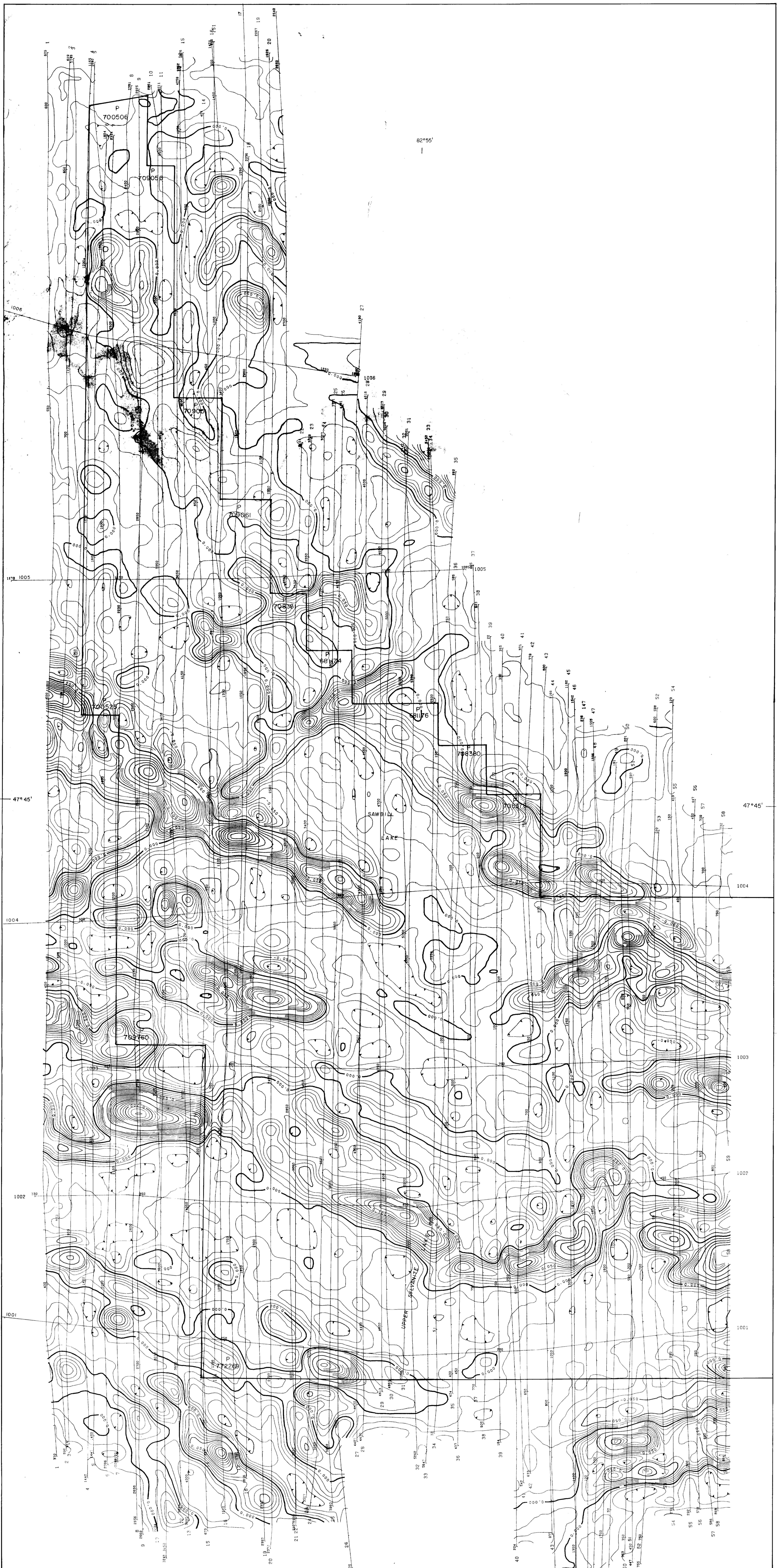
DEFINITE  
 MINOR

INDICATES QUADRATURE RESPONSE

47°45' N

82°40' W





LEGEND  
 TERRAIN CLEARANCE ..... 100 metres  
 LINE SPACING ..... 100 metres  
 O O (quartzite)  
 O O (granite)  
 O O (gneiss)  
 (quartzite per metre)

QUINTRERA RESOURCES INC.

AIRBORNE MAGNETIC SURVEY  
 VERTICAL MAGNETIC GRADIENT  
 Calculated From Total Field

SYLVANITE CREEK  
 SWAZEY AREA, ONTARIO

NTS. NO. 41 0/10 DRAWING NO. B 407 2-2

SCALE 1:10,000 DATE January, 1985

TERRAQUEST LIMITED  
 TORONTO, CANADA

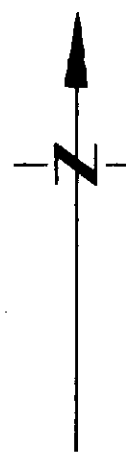




82°50'

47°45'

LEE LAKE



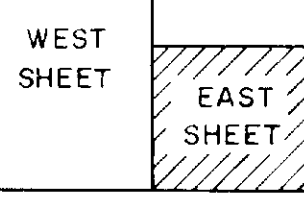
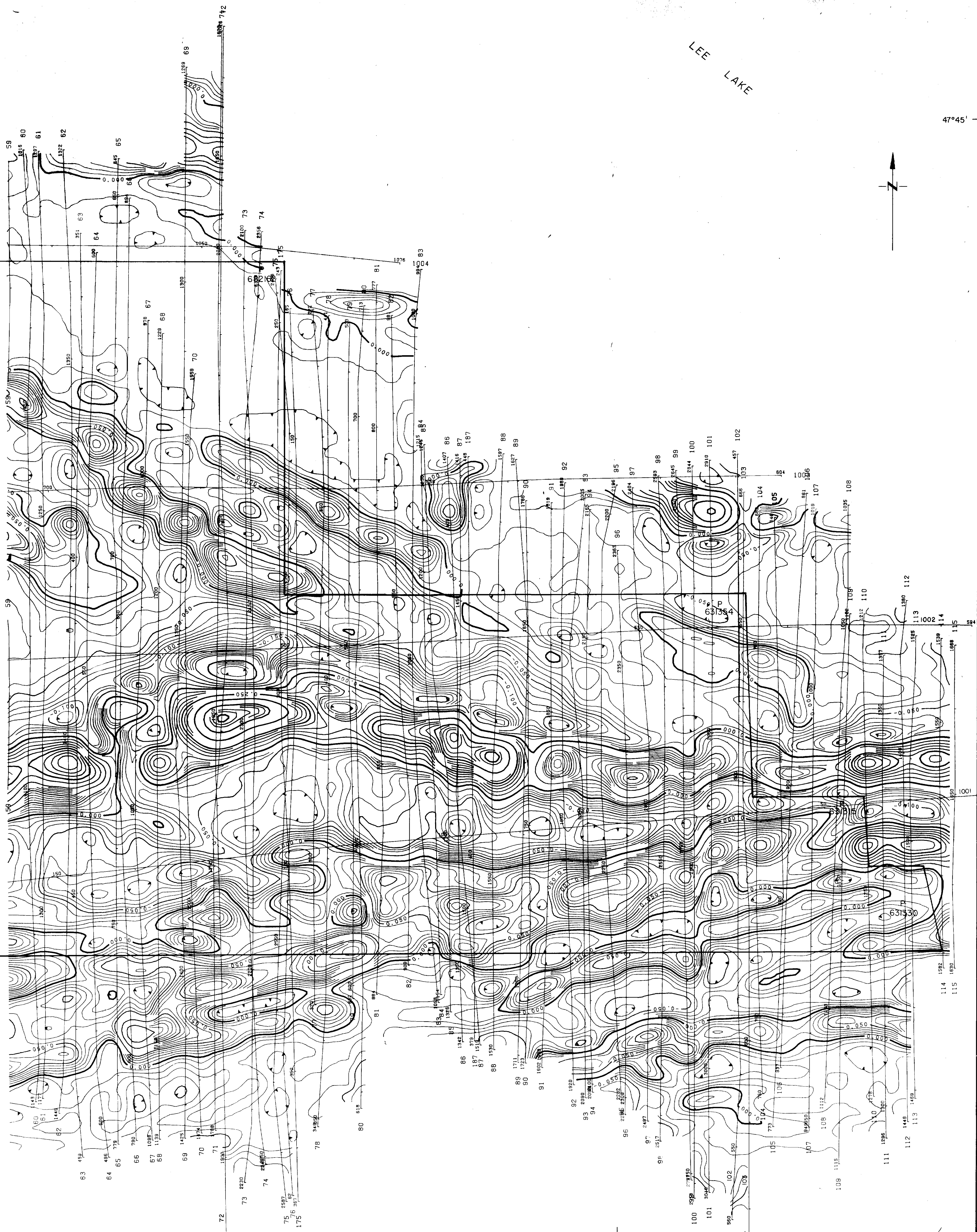
47°45'

1004

1003

1002

1001



LEGEND

FERRISIN CLEARANCE 100 metres

LINE SPACING 100 metres

1:10 contour lines

2:00 contour lines

3:00 contour lines

(gamma per meter)

82°50'

QUINTERRA RESOURCES INC.

AIRBORNE MAGNETIC SURVEY  
VERTICAL MAGNETIC GRADIENT  
Calculated From Total Field

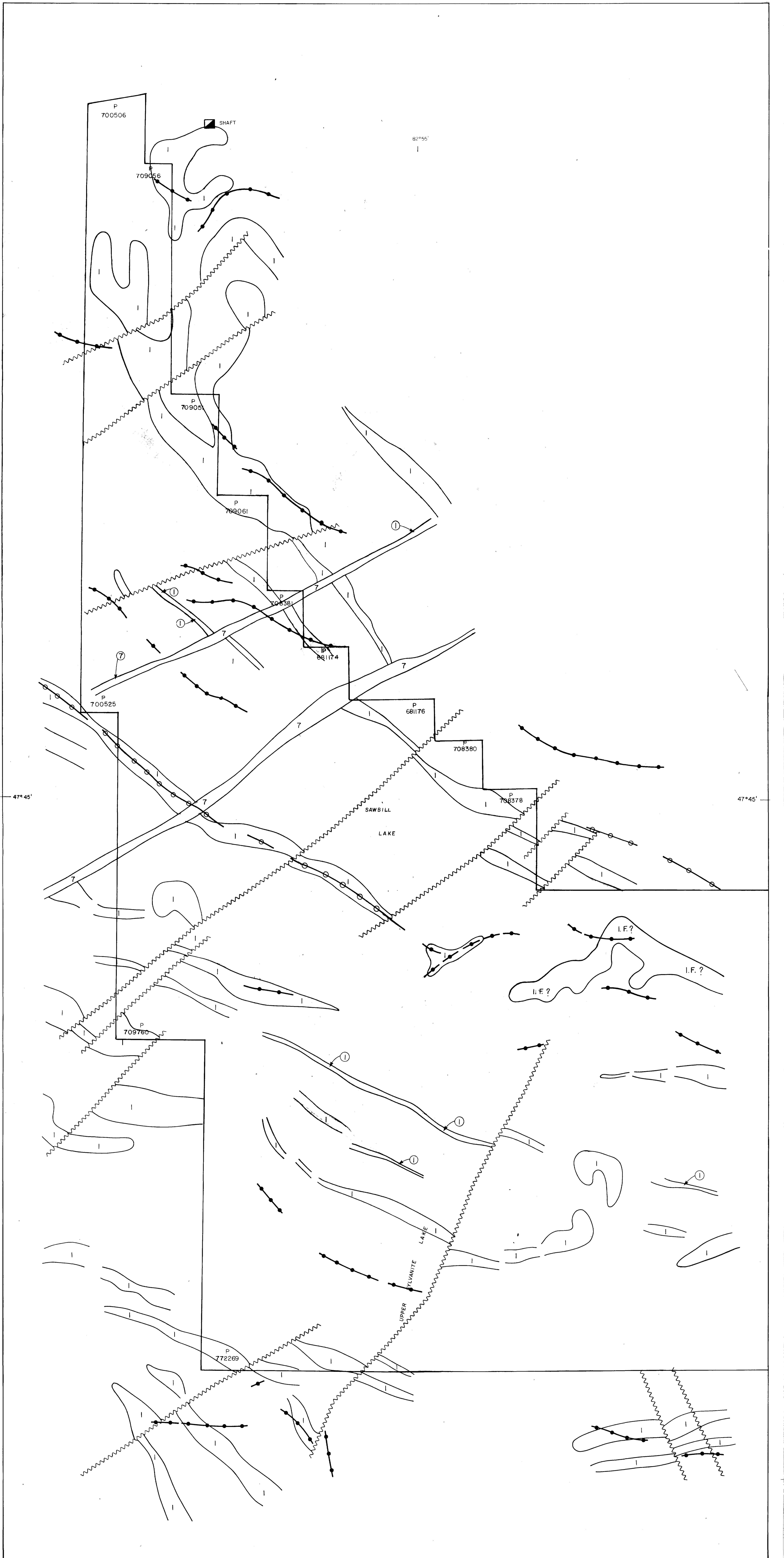
SYLVANITE CREEK  
SWAZEY AREA, ONTARIO

N.T.S. NO.	41 0/10	DRAWING NO.	B 407 2-2
SCALE	1:10,000	DATE	January, 1985

TERRAQUEST LIMITED  
TORONTO, CANADA



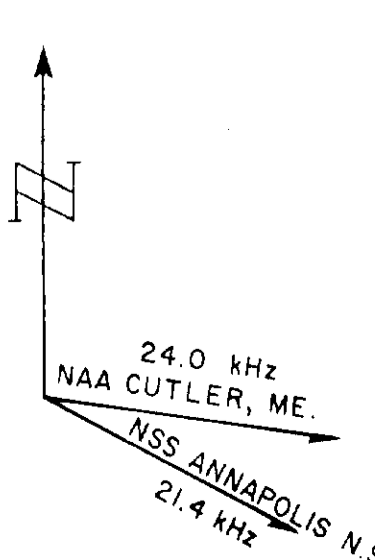




INTERPRETATION OF GEOPHYSICAL DATA

- Contact
- Fault
- Diabase dyke
- Basic units within Intermediate volcanics
- Iron Formation
- Shaft
- VLF Conductor, total field
- VLF Conductor, total field and quadrature

LEGEND  
 TERMINAL LEANANCE 100 metres  
 LINE SPACING 100 metres



QUINTRERA RESOURCES INC.	
INTERPRETATION	
SYLVANITE CREEK SWAZEY AREA, ONTARIO	
N.T.S. NO. 410/10	DRAWING NO. B 407-2-5
SCALE 1:10,000	DATE January, 1985
TERRAQUEST LIMITED TORONTO, CANADA	



HALCROW PATENTS

63,4501

LEGEND

- 1A FELSIC TUFF - FELDSPAR, QUARTZ, CHLORITE, SERICITE
- 1B MAFIC TUFF - CHLORITIC
- 2 RHYOLITE - MASSIVE PORPHYRITIC
- 3 ANDESITE - MASSIVE, PORPHYRITIC
- 4A MAFIC BASALT - CHLORITIC, MASSIVE
- 4B MAFIC BASALT - FILLOLED CHLORITIC
- 5 GRANODIORITE
- 6 FELDSPAR PORPHYRY (DIOCITE?)
- 7 GRANITE
- 8 DIABASE

- TRENCH
- FOLIATION
- BEDDING
- FAULT
- OUTCROP
- SWAMP
- SWAMP OUTLINE
- LAKE OUTLINE
- GEOLOGICAL CONTACT

OSIN# 16 SAMPLE NO. & ASSAY - Ppb

