85-314-14308

# GEOLOGICAL AND GEOPHYSICAL REPORT
# ON THE
# QUARTZ REEF PROPERTY
# VERNON MINING DIVISION
# BRITISH COLUMBIA
# (LAT. 50°13' N, LONG. 119°28'30"W)
# N.T.S. 82L/3W

02/86

**OWNERS**

REEF DEVELOPMENT LTD.
#1410-650 West Georgia Street
Vancouver, B.C., V6C 4N8

**OPERATORS**

REEF DEVELOPMENT LTD.
#1410-650 West Georgia Street
Vancouver, B.C., V6C 4N8

**CONTRACTORS**

MOHAWK OIL CO LTD.
Mining Division
Pleasant Valley Road
Box 610, Vernon, B.C.
V1T 6M6

AND

F. MARSHALL SMITH CONSULTING
6580 Mayflower Drive
Richmond, B.C., V7C 3X6

**WRITTEN BY**

DAVID M. NELLES, B.SC.

AND

F. MARSHALL SMITH, P.ENG.

JANUARY, 1985

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JANUARY, 1985

## TABLE OF CONTENTS



## ILLUSTRATIONS

# INTRODUCTION

The Quartz Reef property, near Vernon, B.C. is underlain by quartz monzonite intruded by porphyritic dykes. A north trending fault and fracture system hosting epithermal veins mineralized with fluorite, gold, silver and minor pyrite is known to run through the claims. This mineralization indicates that the present surface is likely above the precious metal horizon known to occur in epithermal gold-silver deposits. Thus the potential for the development of a near-surface precious metal deposit appears good.

The property was examined on July 21, 1984 by F. Marshall Smith, P.Eng. whose opinions form part of this report.

## i) Location, Access and Physiography

The Quartz Reef property is in the Vernon Mining Division of British Columbia, 15 km west-southwest of Vernon. The claims are located in the Okanagan region, on N.T.S. Sheet 82L/3W and centered near 50° 13' N and 119° 28' 30" W.

The property is easily accessible by automobile from Vernon. Road access is approximately 40 km via Highway 97, Lakeshore Road and Bouleau Main Road (a gravel road). Vernon (population 20,000) is a major supply centre, affording all facilities and serviced by major airlines and railways.

The claims occupy the summit and steep east flank of a prominent hill just west of Okanagan Lake. Elevations range from 425 m to 870 m within the claims. The low ground east of the hill is characterized by north trending swales and gullies that are probably fault bounded. The property is drained to the south by Frisbee


FIGURE 1

| |
|---|
| REEF DEVELOPMENT LTD. |
| QUARTZ REEF PROPERTY<br>VERNON MINING DIVISION, B.C. |
| LOCATION MAP |
| F. M. SMITH CONSULTING |
| SCALE: 1:8,000,000 — DATE: Jan. 1985 |

Creek and to the east by Whiteman Creek. Vegetation on the property is characteristic of the semi arid climate experienced in the area, and consists of mixed pine.

ii) Property and Ownership

The Quartz Reef property consists of six adjoining full size two post claims, Reef 1 - 6 and one twenty-unit mineral claim, the Quartz Reef all located in the Vernon Mining Division of British Columbia.

The list below describes the claims as they are recorded at the Vernon Mining Recorder's office. The legal claim posts were observed in the field, and it appears that the claims have been staked in accordance with the mining laws of British Columbia.

The Reef 1 - 6 and Quartz Reef are recorded in the ownership of Reef Developments Limited.

| Claim Name | Record No. | Record Date | Expiry Date |
|---|---|---|---|
| Reef 1 | 1542 | 8 July, 1983 | 8 July, 1985 |
| Reef 2 | 1543 | 8 July, 1983 | 8 July, 1985 |
| Reef 3 | 1544 | 8 July, 1983 | 8 July, 1985 |
| Reef 4 | 1545 | 8 July, 1983 | 8 July, 1985 |
| Reef 5 | 1546 | 8 July, 1983 | 8 July, 1985 |
| Reef 6 | 1547 | 8 July, 1983 | 8 July, 1985 |
| Quartz Reef | 1691 | 20 Feb., 1984 | 20 Feb., 1985 |

The above claims have a total area of about 460 hectares or 1,137 acres.

iii) Work Summary

The 1984 work program on the Quartz Reef property consisted of preliminary geological mapping, geochemical sampling and an in-

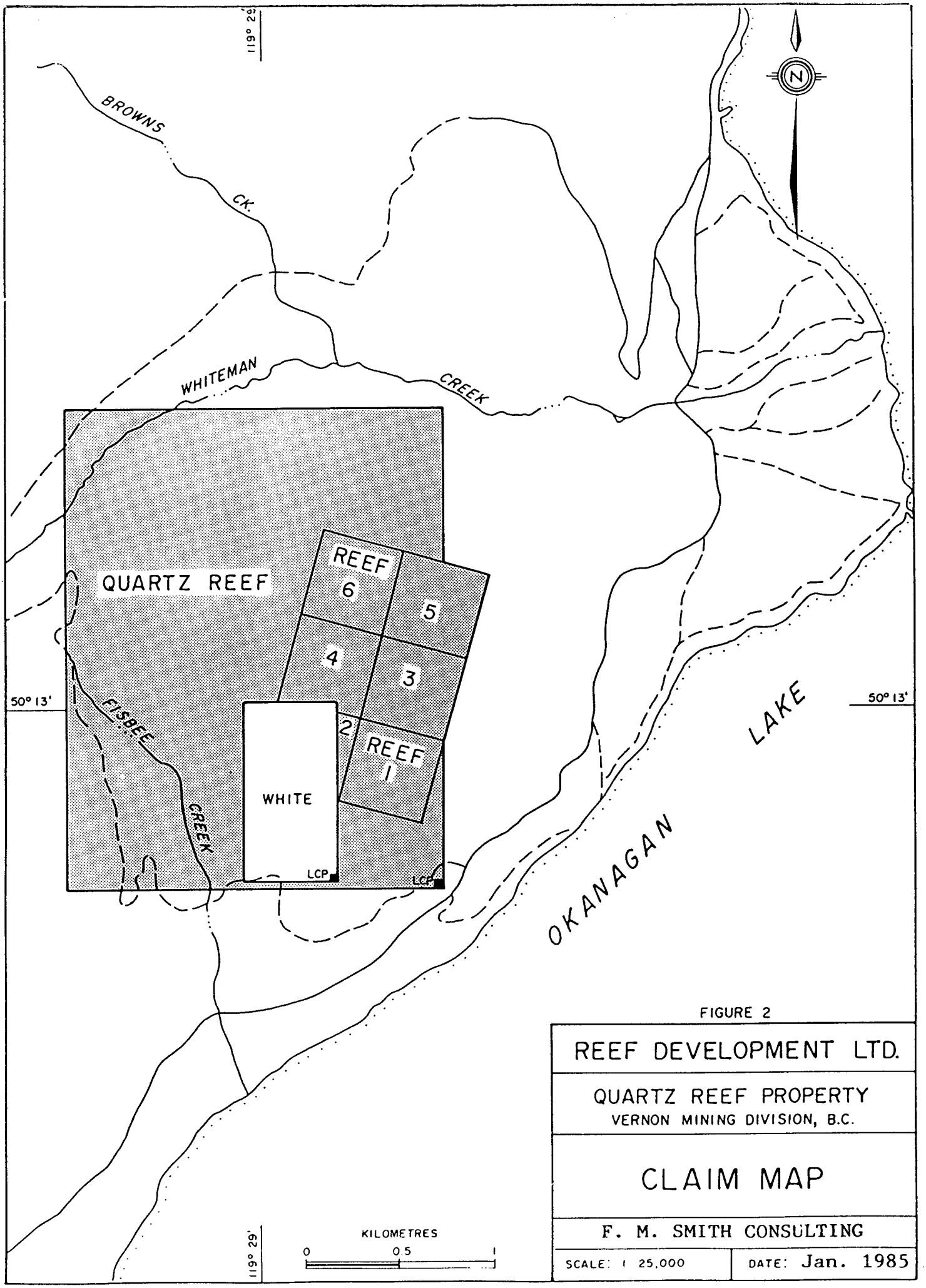



FIGURE 2

| |
|---|
| REEF DEVELOPMENT LTD. |
| QUARTZ REEF PROPERTY<br>VERNON MINING DIVISION, B.C. |
| CLAIM MAP |
| F. M. SMITH CONSULTING |
| SCALE: 1 25,000 — DATE: Jan. 1985 |

duced polarization-resistivity survey. A total of 1.5 $km^2$ of mapping, 5.6 line km of I.P. and 15 channel samples were completed between July and October, 1984. The I.P. survey was conducted on the Reef 1 - 4 and Quartz Reef claims while the mapping and sampling covered the hill top area on the Quartz Reef claim.

## GEOCHEMISTRY

In the course of geological mapping, a total of 15 channel samples were taken from exposed outcrop. Samples were collected using a sledge hammer, chisel and 12" X 20" pvc bags. All sample locations were marked with the sample numbers.

Once extracted, the rocks were sent to Kamloops Research and Assay Laborator Ltd. in Kamloops, B.C. for analysis. After being crushed to -100 mesh, samples were fire assayed for both gold and silver. In this process, 0.5 assay ton subsamples were fused in litharge, carbonate and siliceous fluxes. The lead button containing the precious metals was then cupelled in a muffle furnace. The combined Ag and Au was then weighed on a microbalance, parted, annealed and again weighed as Au, the difference in the two weighings being the Ag. Both Au and Ag values are reported in oz/ton with a 0.003 oz/ton and 0.01 oz/ton detection limit respectively.

## REGIONAL GEOLOGY

In the vicinity of the Quartz Reef Property the Mississipian-Triassic Thompson Assemblage is intruded by Jurassic plutonic rocks and, locally, capped by Tertiary basalts of the Kamloops Group.

The Thompson Assemblage was formerly part of the Cache Creek Group and, in places, part of the Anarchist Group. It is primarily composed of volcanic arenite, tuff, greenstone, argillite and phyllite, with minor schist, limestone, basaltic and andesitic flows, amphibolite, conglomerate and breccia.

The intrusive bodies in the area are provisionally mapped as part of the Valhalla Intrusives. They are predominantly granite and granodiorite with lesser amounts of diorite, gabbro and quartz diorite.

The Kamloops Group is composed of basalt, andesite, dacite, trachyte flows and dikes, breccia and tuff.

## PROPERTY GEOLOGY

The Quartz Reef claims are on the edge of a distinctive hill formed by a 1.5 km diameter Laramide-age stock of quartz monzonite. In outcrop the hill is seen to be a medium grained pinkish to grey rock. Thin sections reveal the composition to be oligoclase, andesine, orthoclase, microcline, quartz, biotite, and hornblende with minor sphene, magnetite and apatite.

The quartz monzonite has been intruded by various dykes. The largest (15 - 60 m wide) and most numerous are feldspar porphyries. The feldspar porphyry dykes are the youngest of those intruding the quartz monzonite. They are grey to greenish or pinkish, generally fresh and locally fractured. The phenocrysts are oligoclase-andesine, 4 mm to 10 mm long, and altered elongate hornblende crystals. The groundmass is fine grained, consisting of mostly quartz and plagioclase. The feldspar porphyry dykes trend 355° to 65° and cross-cut small dykes of amygdaloidal andesine and biotite andesine.

The Reef property is cut by north-trending, normal faulting and fracturing. These fractures strike from 335° to 60°, and dip vertically or steeply east. They are closely spaced on the west half of the property where the steep bluffs are formed by fracture surfaces.

The most significant mineralization on the property is fluorite which occurs as lenses and irregular masses in milky quartz veins, as thin veins by itself and as films on fracture planes. Some fractures are incompletely filled, with vugs and drusy faces in which small quartz crystals are found. The flourite is coarsely crystalline, usually pale green and occasionally white to yel-

low and sometimes purple. Some samples of fluorite contained up to 10 ppm (0.3 oz/ton) silver.

In the more intensely fractured zones (in particular in Zone A), the country rock is moderately argilised and kaolinised, and heavily iron stained. Black manganese dioxide staining is usually present with the quartz and fluorite. Silicification is widespread in the said zones. Locally coarse calcite occurs as fracture fillings. Very fine grained pyrite (2-3% occurs along thin fractures and in the feldspar porphyry (Zone A).

## LOCAL GEOLOGY

A preliminary surface evaluation of the hill top area within the Quartz Reef mineral claim, was carried out in July, 1984. The survey required eight field days to complete.

The survey area falls within the hill top area and the steep eastern hill side, an area of about 1.5 square kilometers, with a relief of 260 meters. The hill top area is defined as the area above the 700 m (2,300 ft) contour.

Six traverses were carried out for an adequate coverage of all the exposure areas. The feldspar porphyry dykes were surveyed and are indicated, as well as the sample locations, on the accompanying map at the scale of 1:5,000. All the showings were examined.

Twenty samples were collected of which fifteen were fire-assayed for gold and silver by Kamloops Research and Assay Laboratory, Ltd. (KRAL).

The results of this survey are as follows:

1. The fifteen samples show no significant values in gold or silver. However, these assay results by KRAL appear spurious on the grounds that a check sample (1015), taken in the mineralized and sheared C zone, previously returned .02 oz Au/t and .3 oz Ag/t, whereas KRAL gives less than .001 oz Au/t and .01 oz Ag/t, and the fact that the mineralized vein quartz (samples 1010-11-13) is similar to quartz in the A zone, known to contain anomalous amounts of gold (.01 oz/t).

2. The dozen scattered indications of fluorite in the hill top area, as marked on the property map (1971) by Cerro

Mining Company of Canada Ltd., are trivial.

An exception to this is a showing, named the 'hilltop showing', where fluorite and silica occur in greater concentrations. The hilltop showing is situated 300 meters southeast from the pond at the end of the road. The showing has been exposed by blasting and stripping over an area 20 m by 15 m. The mineralized zone appeared to be 4 m in width and is exposed on a strike length of 20 m. The strike is 20 degrees and the dip 50 degrees easterly. The granodiorite host rock is strongly altered and brecciated. An intrusion of feldspar porphyry, either a large dyke or a plug, lies about 100 m east of the showing. According to the KRAL assaying, the showing samples (1005-08-09) show no precious metal values at all (less than .001 oz Au/t), whereas samples 1006, a slightly altered granite, 150 m southwest of the hilltop showing, returned .01 oz Au/t.

3. Numerous large and small northerly-trending and steeply dipping dykes of feldspar porphyry, presumed to be feeders of the Early Tertiary flow blanket, are found throughout the survey area. These dykes followed fracture and fault planes. All the northerly faults are of the block type, such as are presumed to have been formed from vertical strains.

Mineralization on the property is not necessarily related genetically to the feldspar porphyry dykes as suspected previously. Many such dykes are slickensided with later fluorite-silica deposition. The mineralization on the property appears to be of late Eocene or younger age, which is the mineralization age at Wenatchee and Republic, WA.

4. The rock exposures in the hill top area are clearly deficient in vein quartz and metalization. The granodiorite or quartz monzonite is virtually unaltered in contrast to many localities within the A, B, C and F zones at the lower levels.

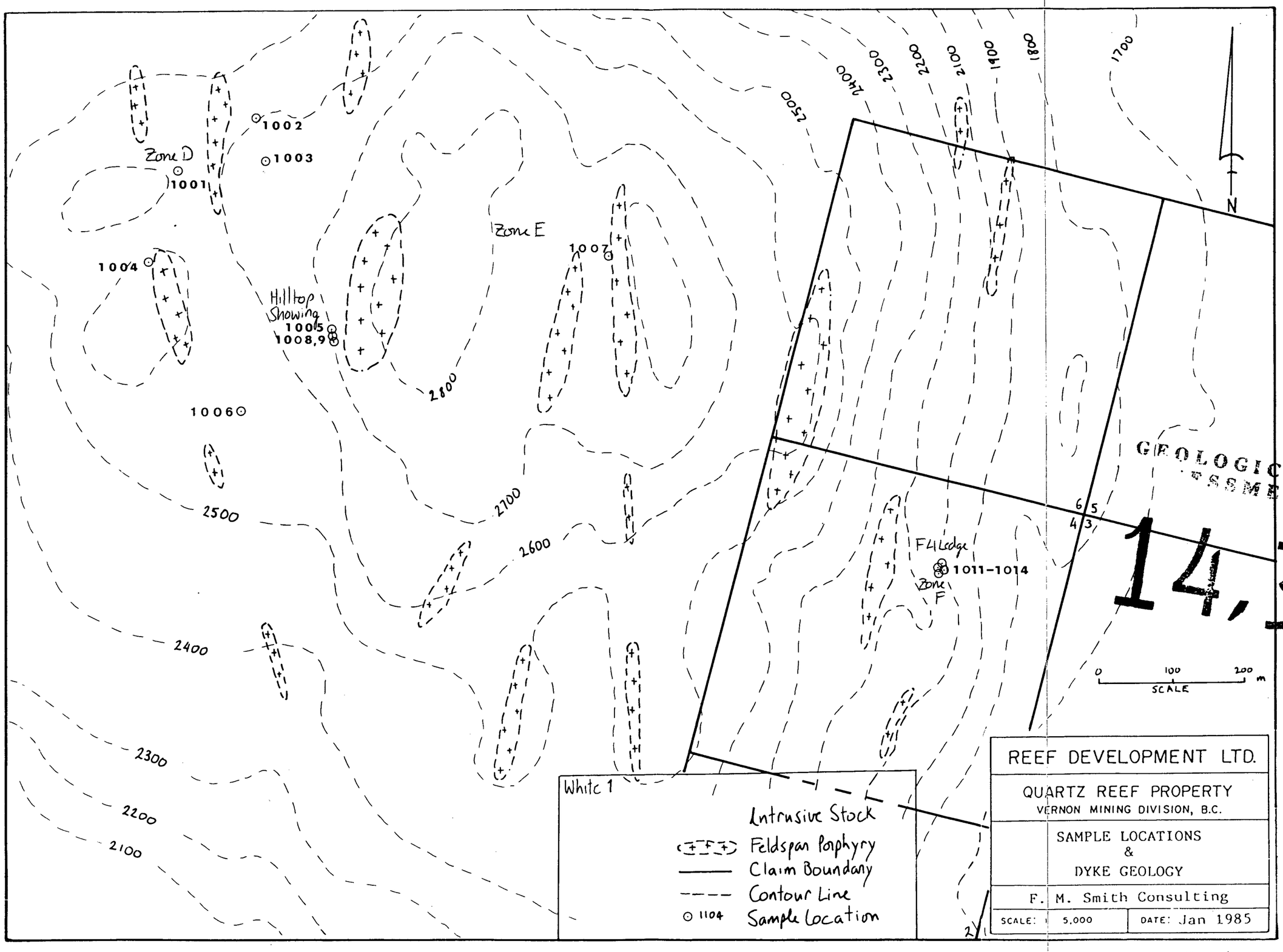





Fig. 4

5. An interesting fault vein, believed to contain anomalous values in gold, crops out on a steep slope in the F. zone, on the Reef 4 claim. This new discovery is named the 'F 4 ledge'; there is no evidence of any workings or prospecting in the F zone. The F4 ledge is more or less on strike with the vein or veins of the A zone.The A-F zones appear to constitute a structure of silicification and mineralization, dipping easterly and having a strike length of 500 meters. These epithermal veins of barren appearance, may be the upward manifestations of larger and richer reefs in depth.

The F4 ledge is a one-meter wide quartz vein with a fault breccia consisting of altered granite and porphyritic micromonzonite(?) (a compact siliceous mass) accompanied by bands of quartz, and calcite replacement (20%) in the outside wallrock. The ledge strikes 20 degrees and dips 60 degrees easterly. It appears to be 3 to 4 meters in true width. the ledge can be traced for about 100 meters to the top of the slope, where the vein pinches out(?) on the south. The northern extension of the ledge is covered by scree.

The quartz has a dull chalcedonic appearance and often contains colloidal silica fragments. Fine grained pyrite (1%) is not conspicuous in the quartz; a few specks of chalcopyrite can be seen; iron and manganese stains are common in the vein matter. The barren appearance of the F 4 vein is not unlike productive epithermal veins (averaging one meter in width) of the Republic gold mining district, WA.

Despite the favourable geologic and mineralogic features of the F 4 ledge, the samples 1010-11-13 have no more gold or silver content than any barren granitic rock on the property, according to KRAL fire assays.

## GEOPHYSICAL SURVEY

### i) Instrumentation

The transmitter used for this induced polarization-resistivity survey was a Scintrex Model IPC7 (2.5 Kw) powered by a Briggs and Stratton motor generator. An IPR8 receiver, also manufactured by Scintrex, was also used. Measurements in this survey were taken in the "time-domain" at 50 m spacings.

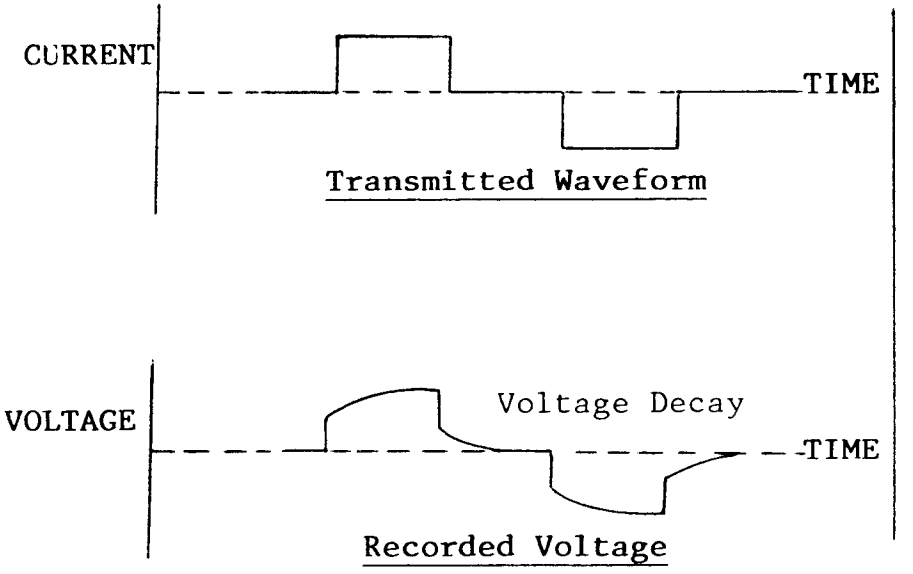
### ii) Theory - Induced Polarization

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

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

duced polarization effects even in the absence of metallic-type conductors.

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




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

iii) Resistivity

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

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

$$\frac{Ro}{Rw} = 0^{-2}$$

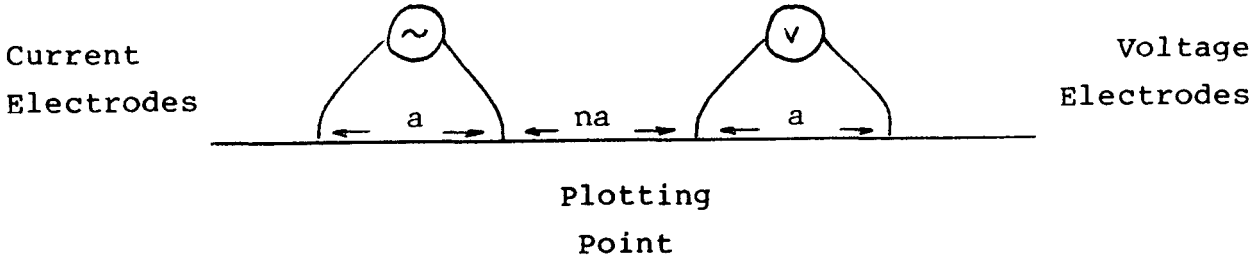
Where: Ro is formation resistivity
Rw is pore water resistivity
0 is porosity

## SURVEY PROCEDURE

The IP and resistivity measurements were taken in the time-domain mode using an 8-second square wave charge cycle (2-seconds positive charge, 2-seconds off, 2-seconds negative charge, 2-seconds off). The delay time used after the charge shuts off was 450 milliseconds and the integration time used was 600 milli-seconds divided into 10 windows.

The configuration used in the field was the dipole-dipole array shown as follows:

Dipole-Dipole Array




The electrode spacing (or dipole length) is denoted at 'a' and was chosen as 50 m. The 'n' value varied from 1 to 12 so that the dipole separation ('na') varied from 50 to 600 m.

The dipole-dipole array was chosen because of its symmetry. Non symmetrical arrays such as pole-dipole present interpretational difficulties.

Stainless steel stakes were used for current electrodes. The potential electrodes were comprised of metallic copper in copper sulphate solution, in non-polarizing, unglazed, porcelain pots.

All survey measurementd were carried out along previously cut and/or flagged lines.

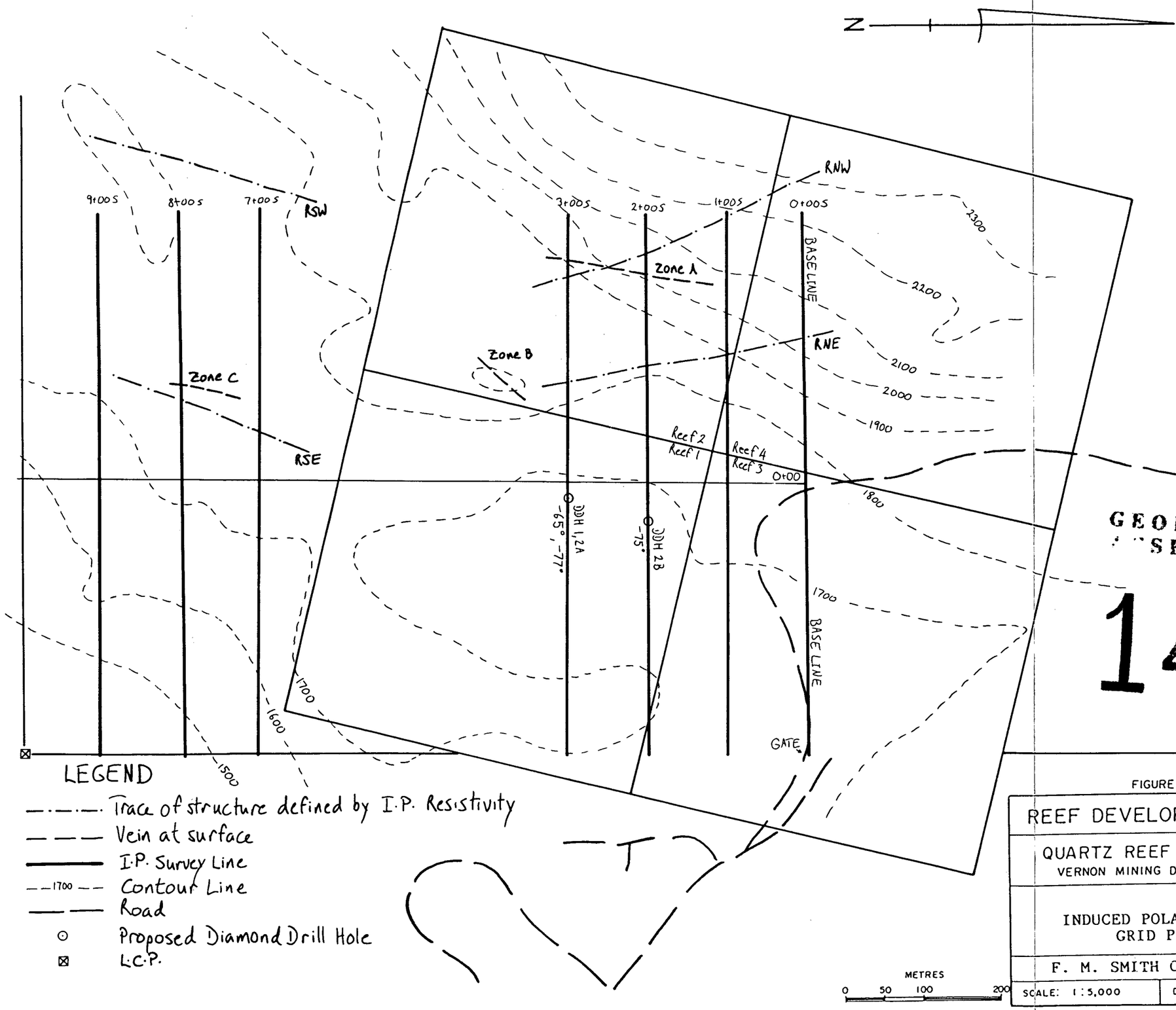



FIGURE 3

| REEF DEVELOPMENT LTD. | |
|---|---|
| QUARTZ REEF PROPERTY<br>VERNON MINING DIVISION, B.C. | |
| INDUCED POLARIZATION<br>GRID PLAN | |
| F. M. SMITH CONSULTING | |
| SCALE: 1:5,000 | DATE: Jan 1985 |

Fig. 3

## COMPILATION OF DATA

The chargeability values are read directly from the instrument and no data processing is therefore required prior to plotting. The resistivity values are derived from current and voltage readings taken in the field. These values are combined with the geometrical factor appropriate for the dipole-dipole array, to compute the apparent resistivities. This was done in the field with an HP-45C memory calculator as the survey was progressing.

The resistivity data was plotted in pseudosection form along the seven plotted topographical profiles at a scale of 1:2500. They were plotted at a 45° angle from the location of the current dipole and the potential dipole and in such as way as to minimize topographical effects. The resistivity data was contoured at selected contour interals. A survey plan at a scale of 1:2500 was drawn to show the line locations.

The chargeability data was plotted on the same topographical profiles as those for the resistivity data.

## INTERPRETATIONS

Based on an examination of the data by Mr. David G. Mark of Geotronics Surveys and my own experience with IP-resistivity over "epithermal gold mineralization", the results of the work program on the claims show at least two distinct drill targets worthy of initial testing for grade and thickness.

To date geophysical mapping has been successful in locating several quartz veins at surface on the western portion of the claims. All of these veins have narrow epithermal alteration zones and weak but geochemically significant gold and silver values.

The IP-resistivity program was recommended by the writer to evaluate the down dip extent of these quartz veins in an effort to locate a zone of deposition of significant gold and/or silver within the vein shoot.

On the sections from the Reef property there is one clear deposition point on a fault which outcrops to the west of till cover at about 3+00W on lines 0+00S through 3+00S. This vein, called Reef Northwest (RNW), dips between 70° and 50°E. The best zones in terms of mineralization potential are located near the bottom of the sections in the areas of minimum resistivity and shallowest fault dip (see fig. 3 and I.P. sections). These low resistivity areas are interpreted as being a result of alteration by gases related to precious metal deposition within the fault, and thus offer good drill targets. Therefore, the RNW vein appears to show good potential for better grade mineralization at depth.

The Reef Northeast (RNE), Reef Southwest (RSW) and Reef Southeast (RSE) are all future targets for work if the drilling proposed to test the grade and thickness of RNW is successful in delineating economically significant mineralization.

## DETAILED COST STATEMENT

Geological Survey:

| | |
|---|---|
| Wages, 8 man days at $125 | $ 1,000.00 |
| Travel | 351.90 |
| Assaying | 198.75 |
| Expendables | 20.43 |

Geophysical Survey:

| | |
|---|---|
| Linecutting and grid establishment - 12 man days at $150/day | 1,800.00 |
| 3 days vehicle rental (4X4 Crewcab) at $75/day | 225.00 |
| Consumable supplies (flagging, tags, etc) | 50.00 |
| 6.5 days I.P. Survey at $1,100.day - all inclusive | 7,150.00 |
| Map preparation and data plotting - 3 days at $150/day | 450.00 |
| Engineering and supervision | 2,000.00 |
| Report and drafting | 700.00 |
| | $ 13,946.08 |

## CERTIFICATE OF QUALIFICATIONS

I, David Nelles, do hereby certify that:

1. I am a Geologist with business offices at 403 - 750 West Pender Street, Vancouver, B.C., V6C 2T7, and am employed by Golden Porphyrite Ltd.

2. I am a graduate of the University of B.C. with a Bachelor of Science degree in Geology.

3. This report is based on information supplied to me by Mohawk Oil Co. Ltd. and John DeLatre pertaining to the 1984 work program on the Quartz Reef property.

5. I have no interest in the Reef 1 - 6 and the Quartz Reef claims or in Reef Developments Ltd. nor do I expect to receive any.

Dated this 25th day of January, 1985 at Vancouver, British Columbia.

David M. Nelles

David M. Nelles, B.Sc.

## CERTIFICATE OF QUALIFICATIONS

I, F. Marshall Smith, do hereby certify that:

1. I am a consulting geologist and geochemist with offices at Mayflower Drive, Richmond, British Columbia.

2. I am a graduate at the University of Toronto with a degree of B.Sc., Honours Geology.

3. I am a member in good standing of the Association of Professional Engineers of the Province of British Columbia.

4. I have practiced my profession continuously since 1967 primarily in the Cordillera of North America.

5. I have read the report by D.M. Nelles, B.Sc., and concur with all aspects of it. Mr. Nelles has worked with the undersigned since May 1983 and has consistently demonstrated his competence as a geologist and his maturity of judgement.

6. I have no interest direct or indirect in the property herein described nor in the property or shares of Reef Deveopment Ltd., nor do I expect to receive any such interest.

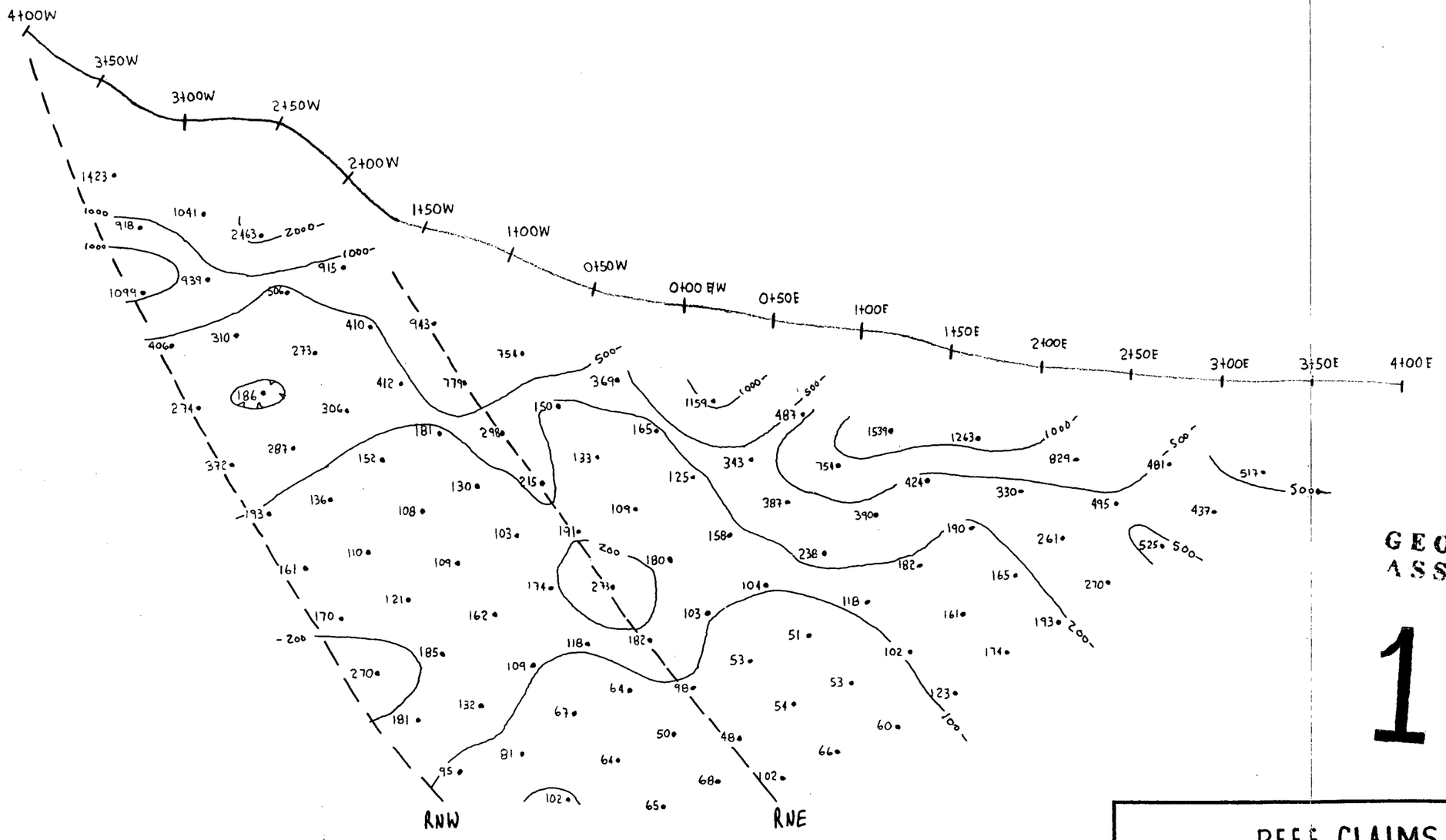
PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA F. MARSHALL SMITH

F. Marshall Smith, P.Eng.

Dated at Vancouver, British Columbia, this 25 day of January, 1985.

# A P P E N D I X  A

## GEOPHYSICAL PROFILES



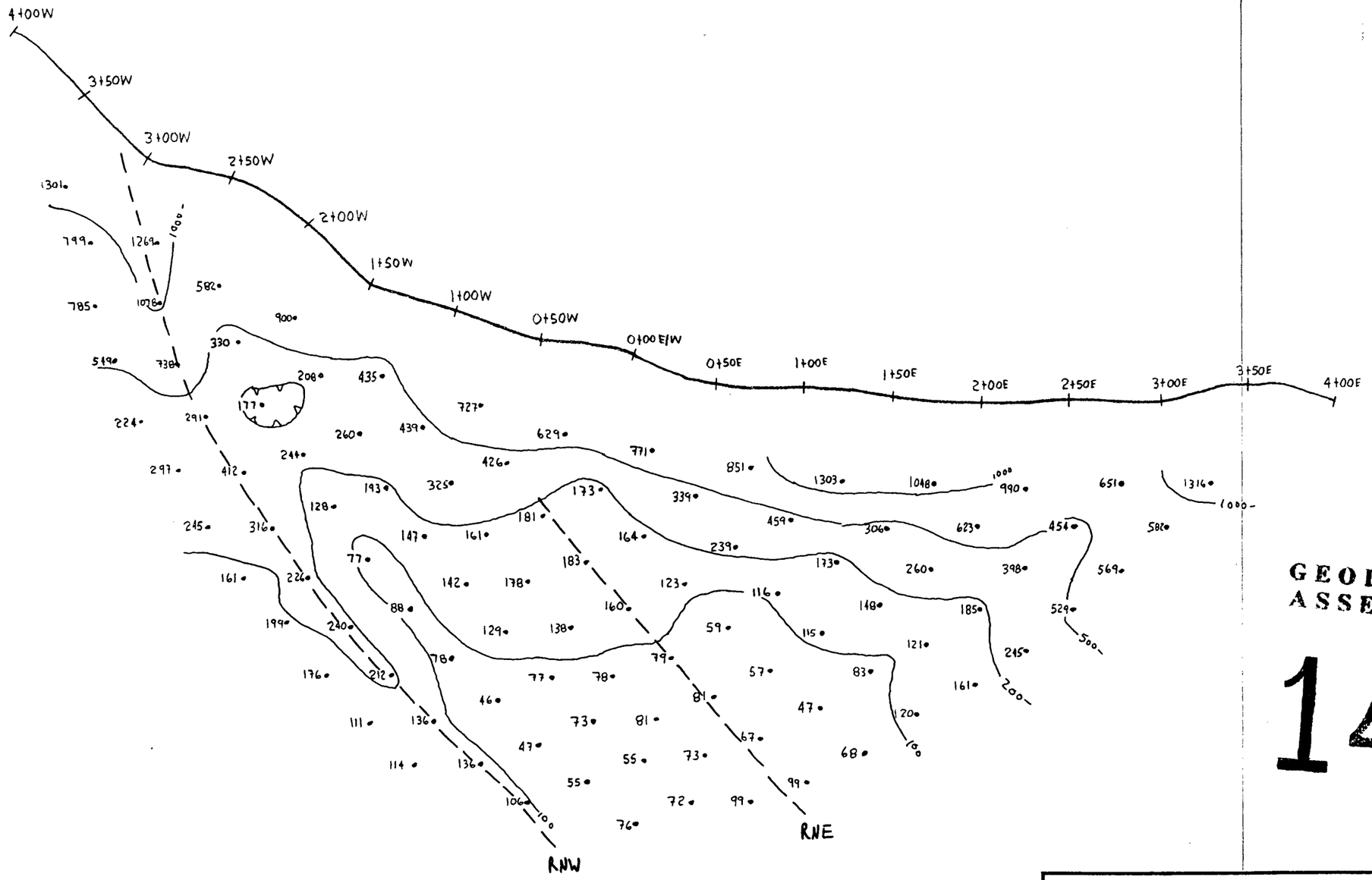

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,308

C. East of P.

| | | |
|---|---|---|
| REEF CLAIMS I.P. SURVEY | | |
| SCALE: 1 : 2500 | [redacted] | DRAWN BY K L. |
| DATE: OCT. 6 1984 | | REVISED |
| RESISTIVITY (Ohm/meters) PROFILE Dipole-Dipole Array | | |
| LINE 0+00S | | DRAWING NUMBER |

11X17 PRINTED ON NO. 1000H CLEARPRINT




GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,308

C. East of P.

| REEF CLAIMS I.P. SURVEY | | |
|---|---|---|
| SCALE: 1 : 2500 | APPROVED BY: | DRAWN BY K.L. |
| DATE: OCT 6 1984 | | REVISED |
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| LINE 1+00S | | DRAWING NUMBER |

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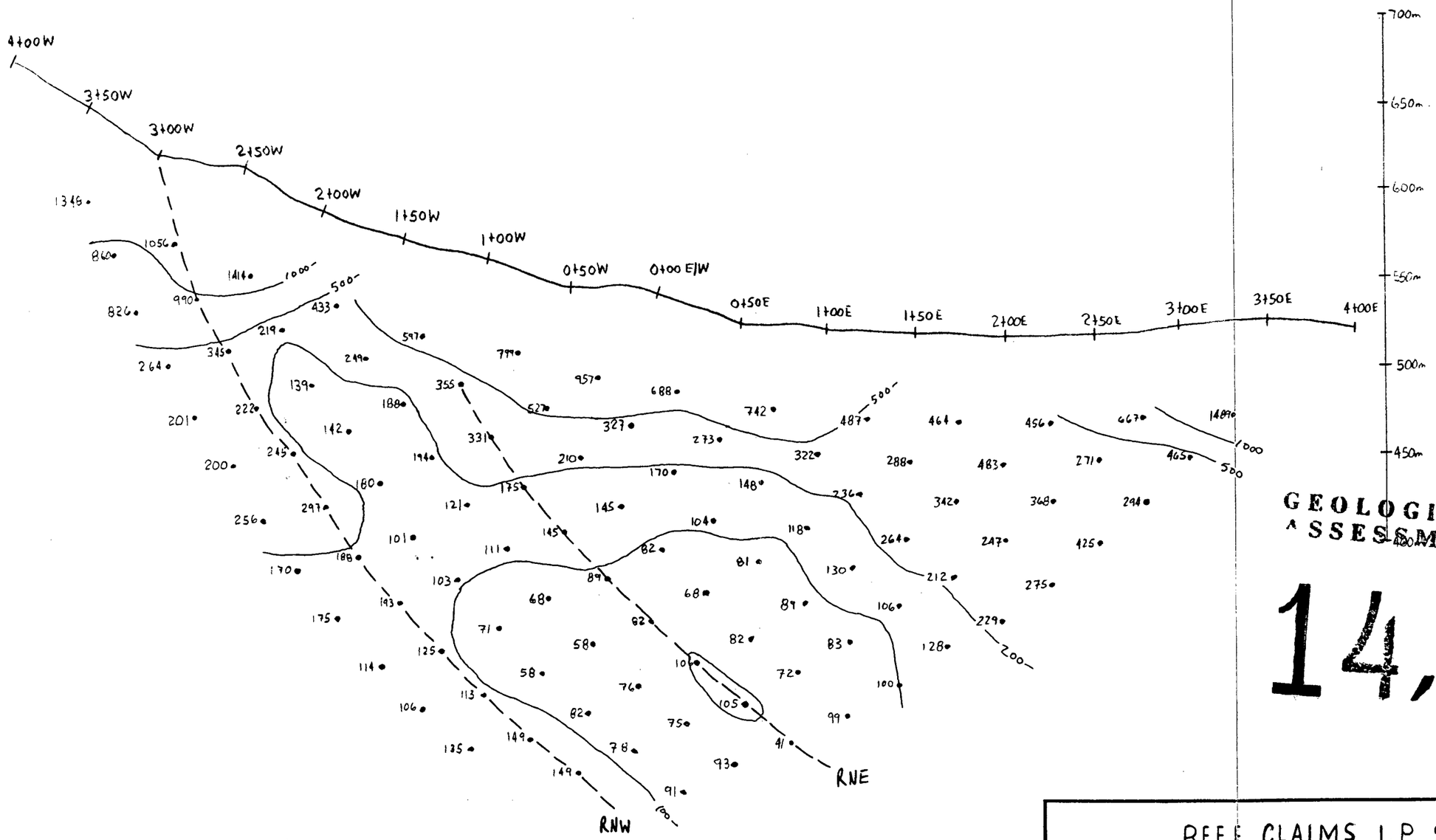


C. East of P.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,308

REEF CLAIMS I.P. SURVEY

| | | |
|---|---|---|
| SCALE: 1 : 2500 | APPROVED BY: | DRAWN BY KL |
| DATE: OCT 6 1984 | | REVISED |

RESISTIVITY (Ohm/meters) PROFILE Dipole-Dipole Array

LINE 2+00S | DRAWING NUMBER

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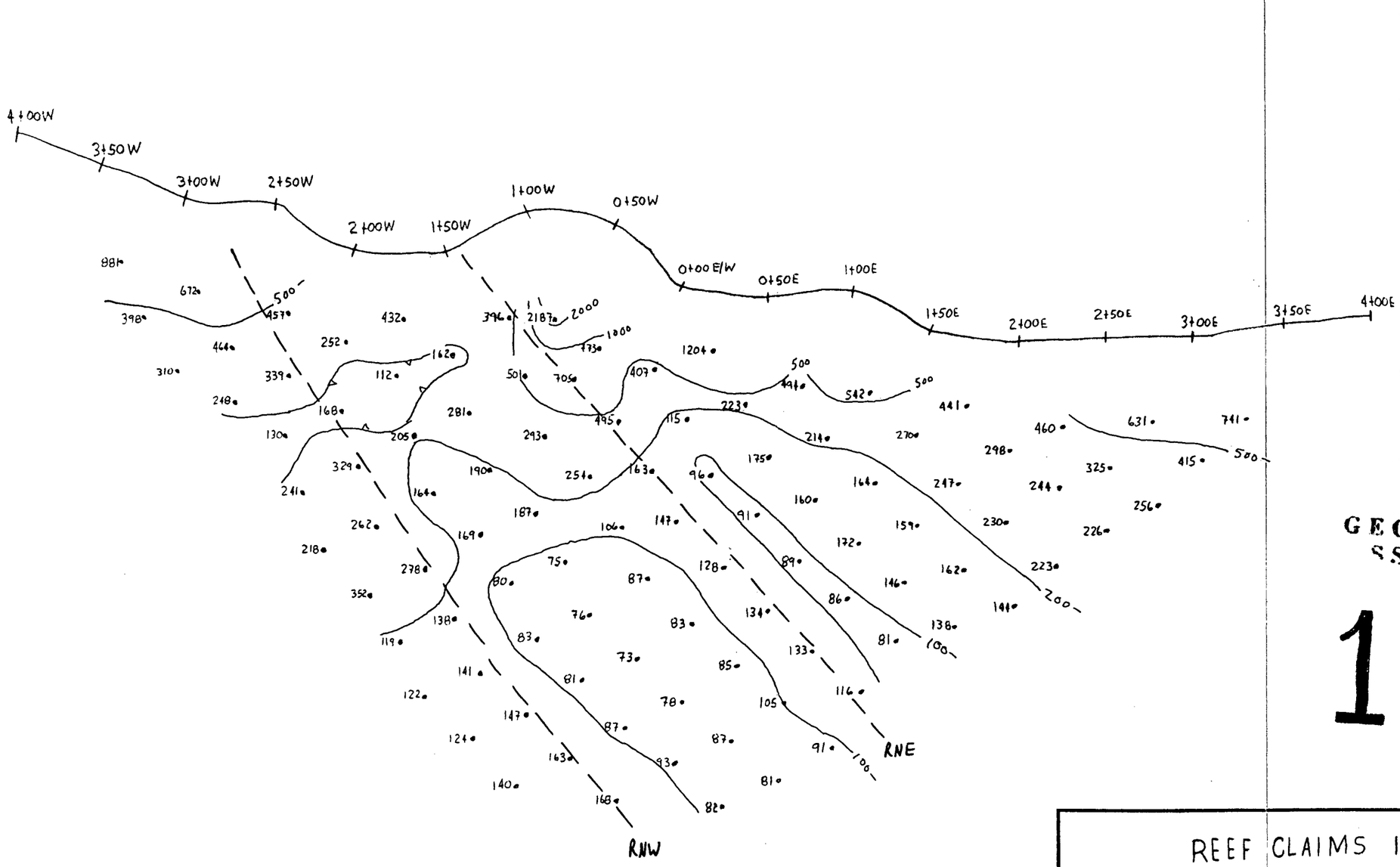


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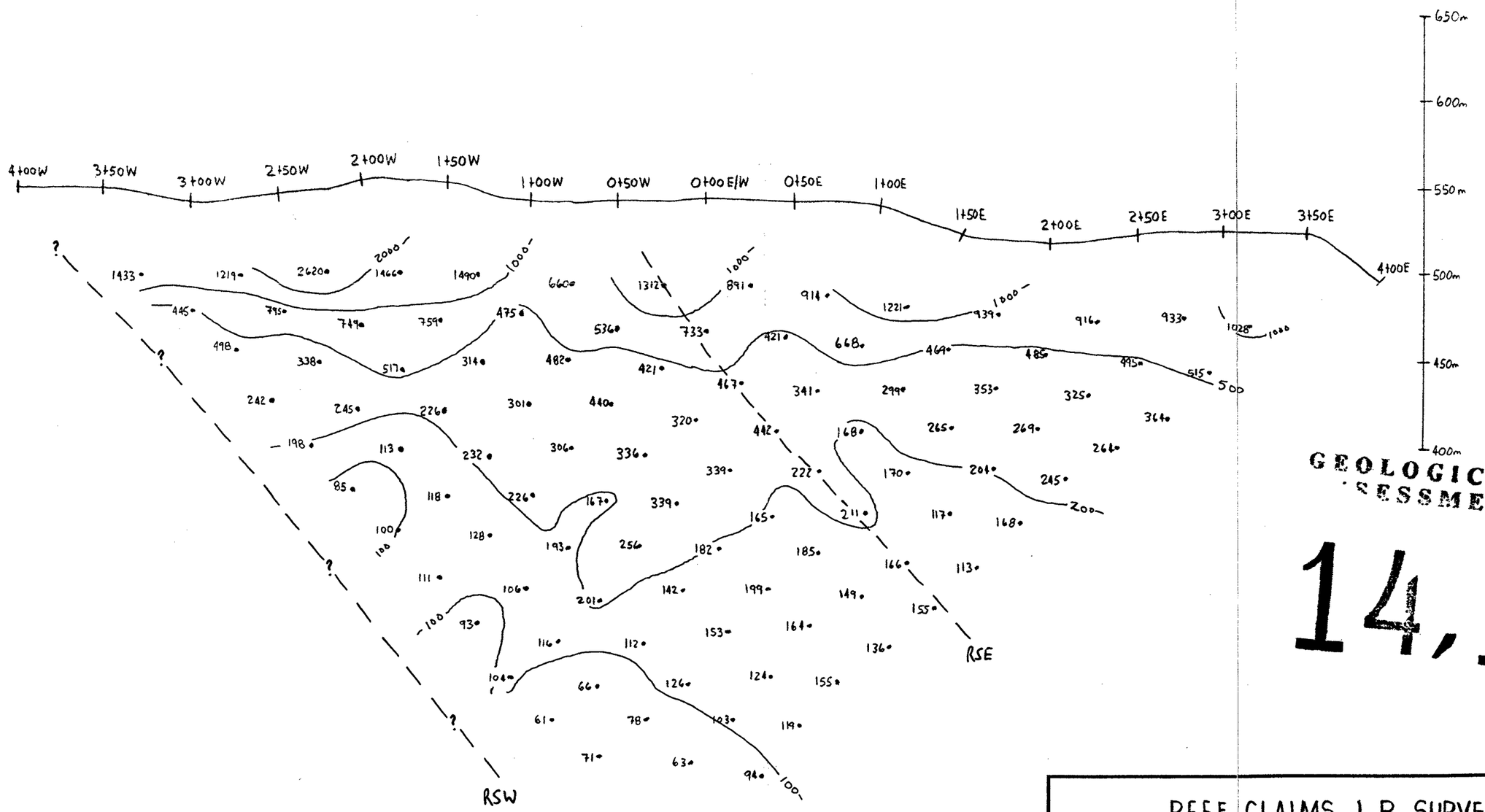
| REEF CLAIMS I.P. SURVEY | | |
|---|---|---|
| SCALE: 1 : 2500 | APPROVED BY: | DRAWN BY KL |
| DATE: OCT 6 1984 | | REVISED |
| RESISTIVITY (Ohm/meters) PROFILE Dipole-Dipole Array | | |
| LINE 3+00S | | DRAWING NUMBER |

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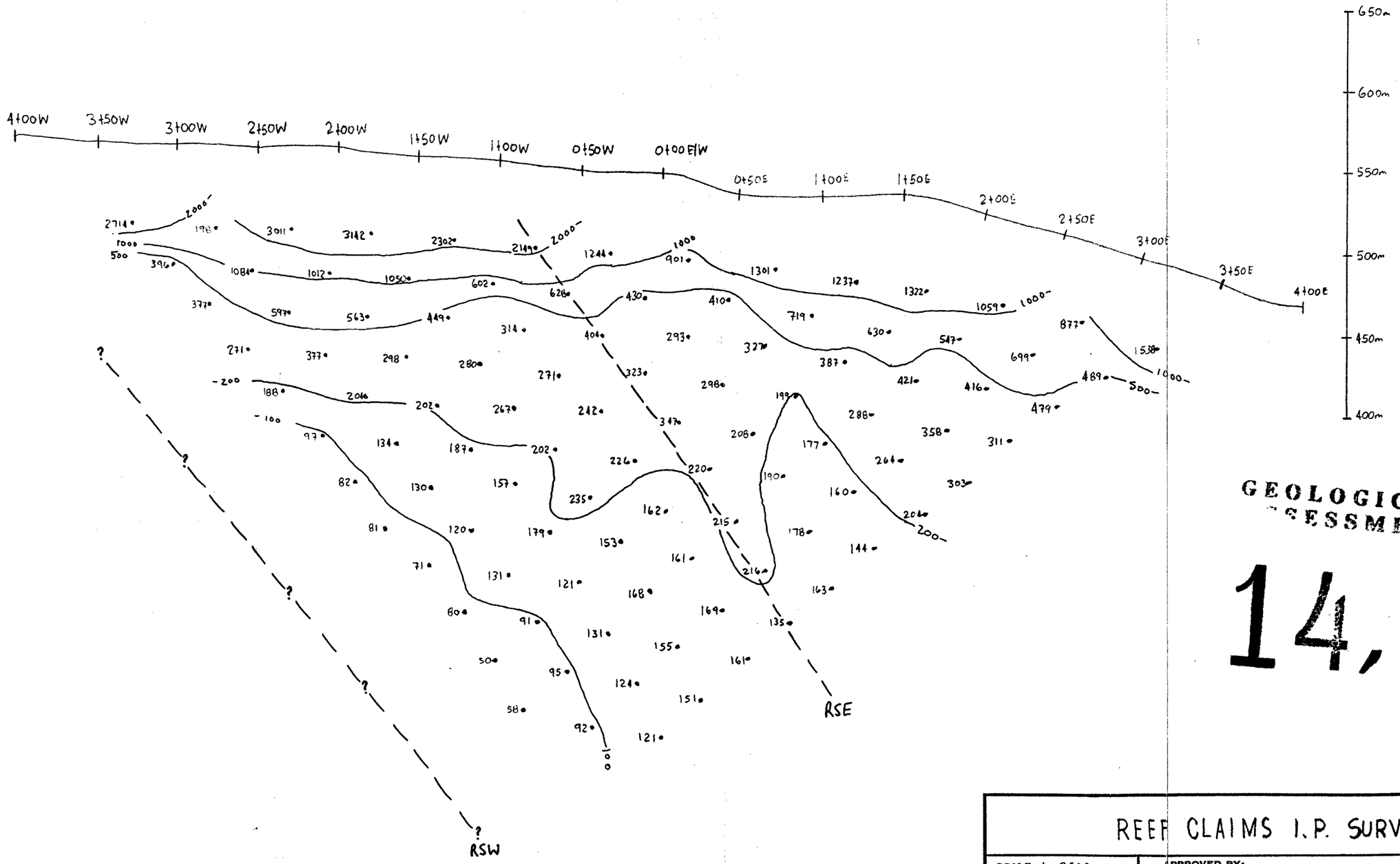
| SCALE: 1:2500 | APPROVED BY: | DRAWN BY K.L |
| DATE: OCT 6 1984 | | REVISED |
| RESISTIVITY (Ohm/meters) PROFILE Dipole-Dipole Array | | |
| LINE 7+00S | | DRAWING NUMBER |

11X17 PRINTED ON NO. 1000H CLEARPRINT



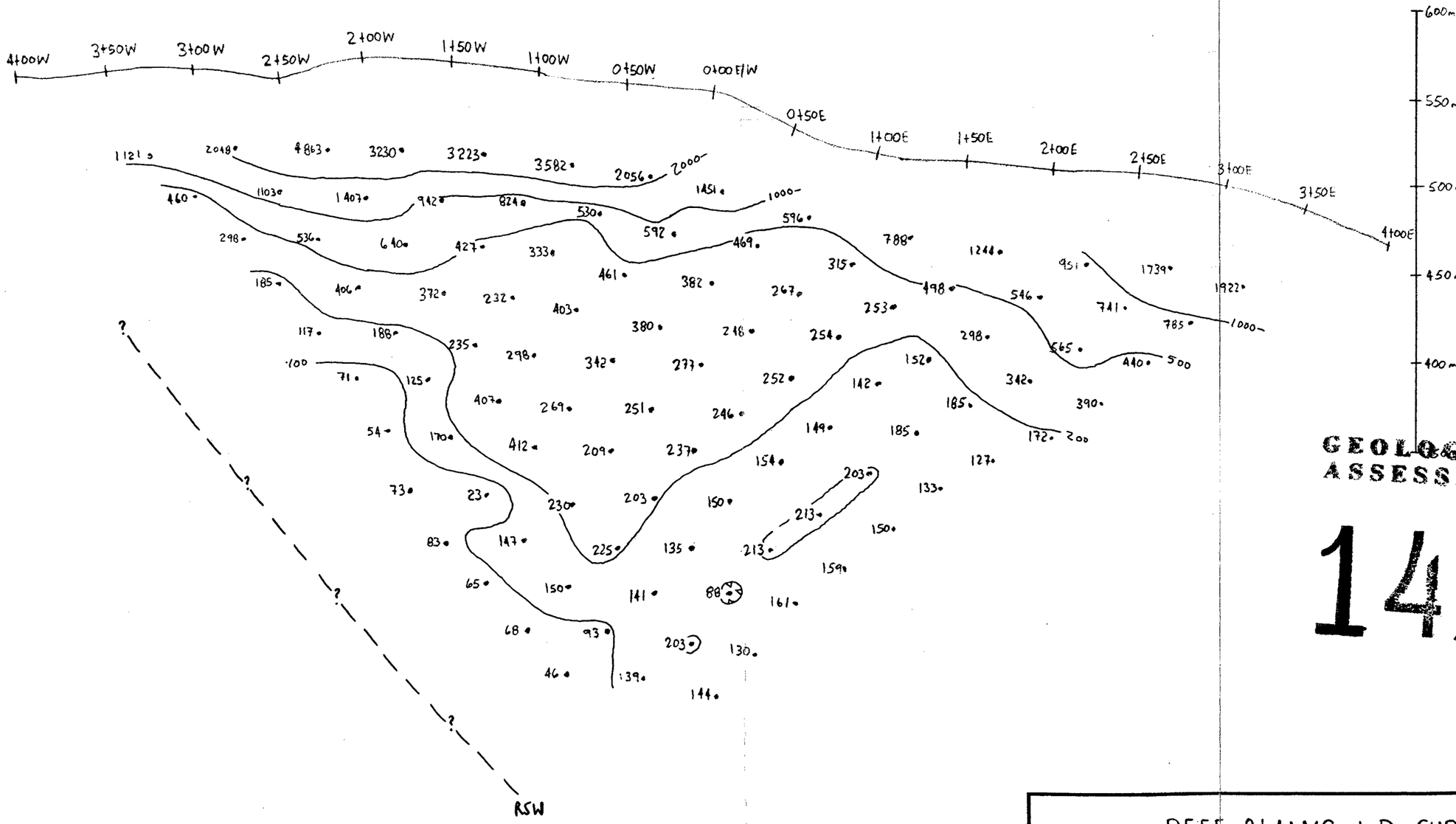

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,308

C. East of P.

| | | |
|---|---|---|
| REEF CLAIMS I.P. SURVEY | | |
| SCALE: 1 : 2500 | APPROVED BY: | DRAWN BY K.L. |
| DATE: OCT. 6, 1984 | | REVISED |
| RESISTIVITY (Ohm/meters) PROFILE Dipole-Dipole Array | | |
| LINE 8+00S | | DRAWING NUMBER |

11X17 PRINTED ON NO. 1000H CLEARPRINT



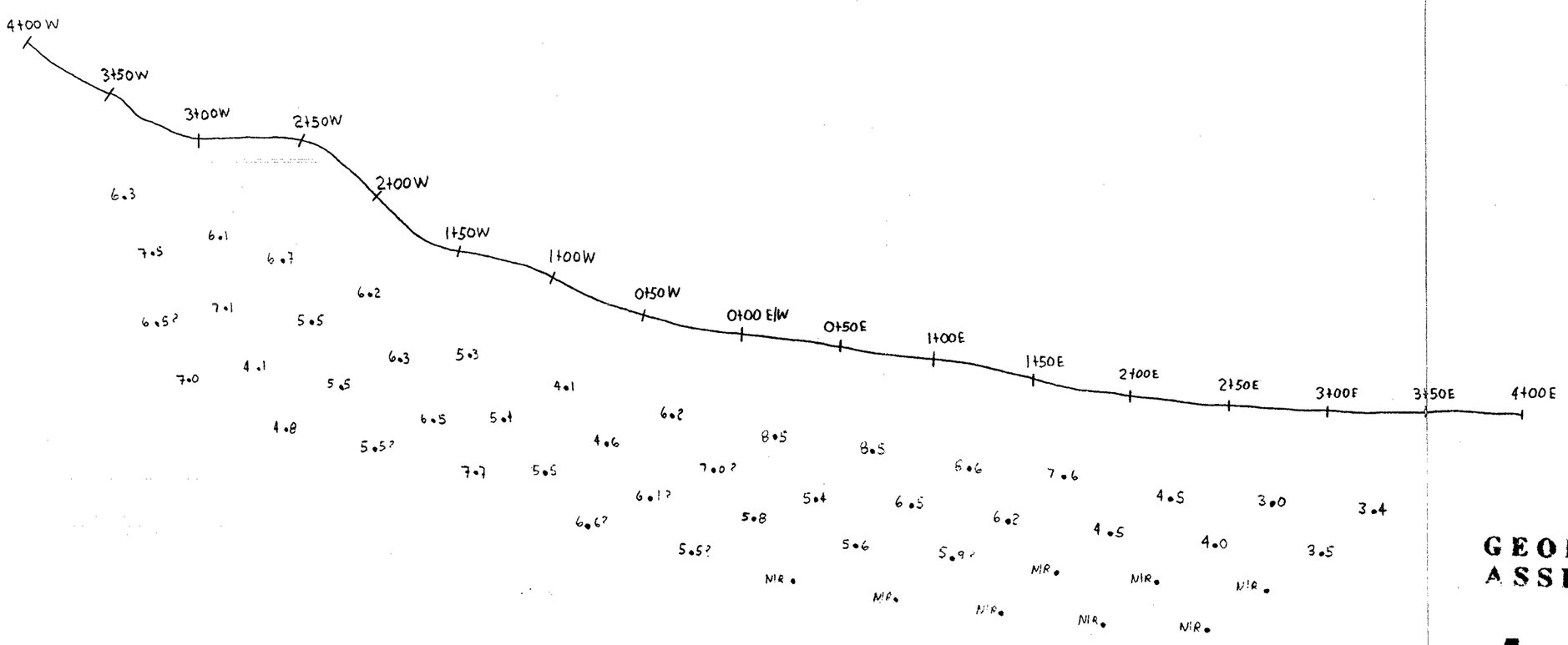

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,308

C East of P

| | | |
|---|---|---|
| REEF CLAIMS I.P. SURVEY | | |
| SCALE: 1 : 2500 | APPROVED BY: | DRAWN BY KL |
| DATE: OCT.6, 1984 | | REVISED |
| RESISTIVITY (Ohm meters) PROFILE Dipole-Dipole Array | | |
| LINE 9+00S | | DRAWING NUMBER |

11X17 PRINTED ON NO. 1000H CLEARPRINT




C. East of P.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,308

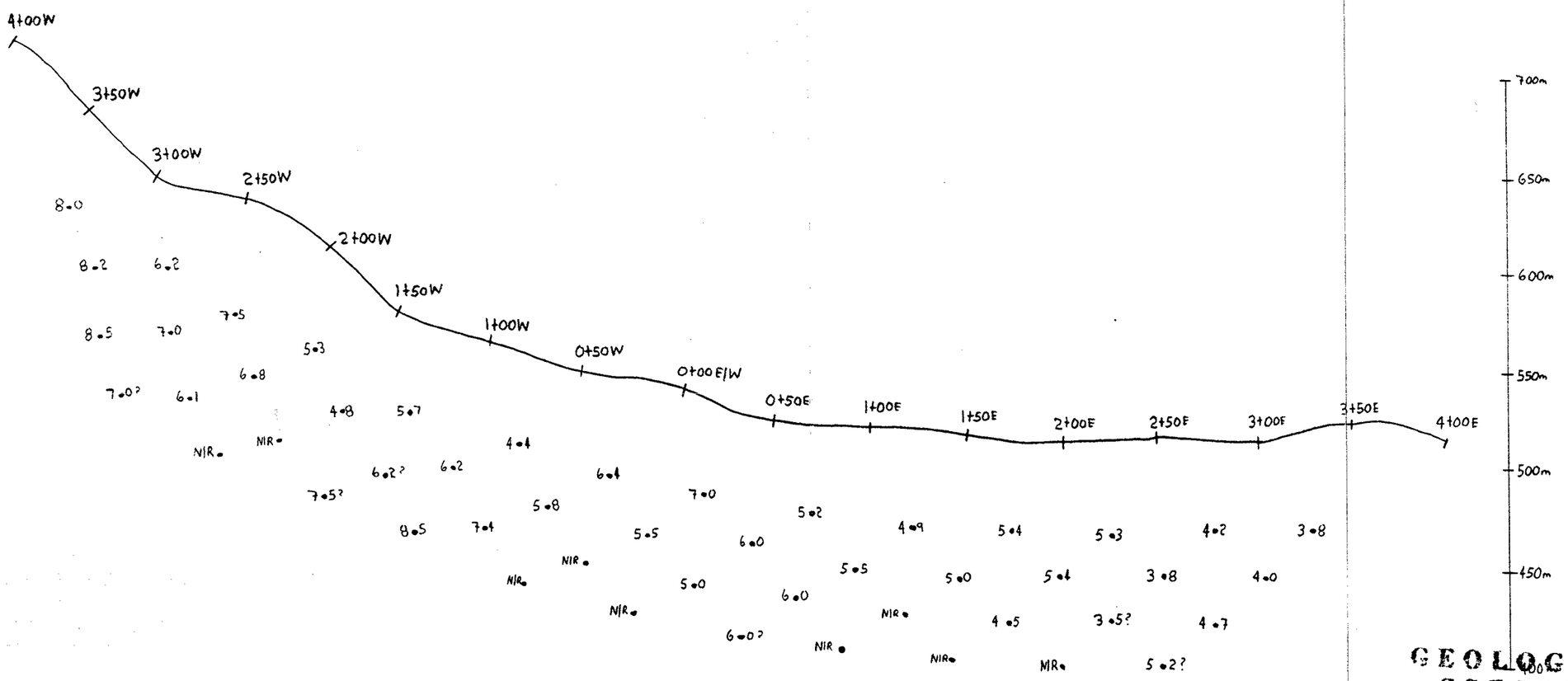
REEF CLAIMS I.P. SURVEY

| | | |
|---|---|---|
| SCALE: 1" = 250' | APPROVED BY: | DRAWN BY KL |
| DATE: Oct 6, 1984 | | REVISED |

CHARGEABILITY (milliseconds) PROFILE Dipole-Dipole Array

LINE 0+00S — DRAWING NUMBER

11X17 PRINTED ON NO. 1000H CLEARPRINT





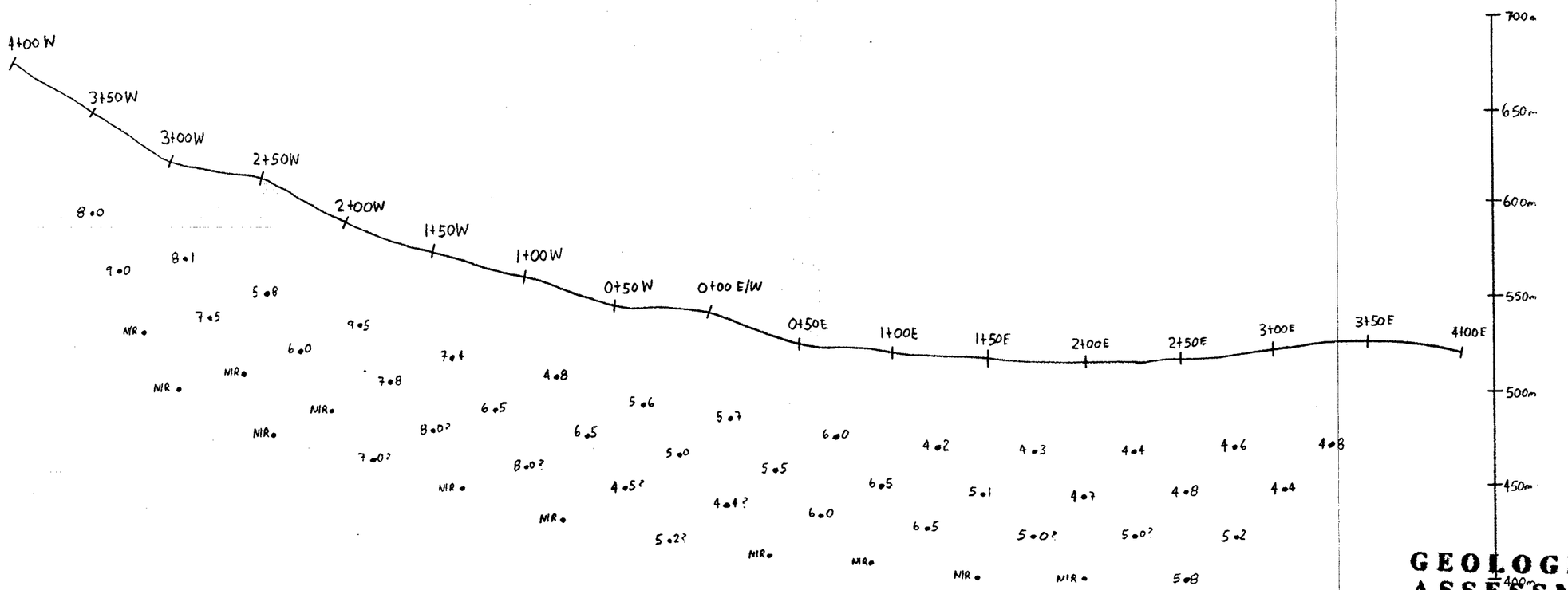

C. East of P.

REEF CLAIMS I.P. SURVEY

| | | |
|---|---|---|
| SCALE: 1 : 2500 | APPROVED BY: | DRAWN BY K.L |
| DATE: OCT 6 1984 | | REVISED |

CHARGEABILITY (milliseconds) PROFILE Dipole-Dipole Array

LINE 1+00S — DRAWING NUMBER




C. East of P.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,308

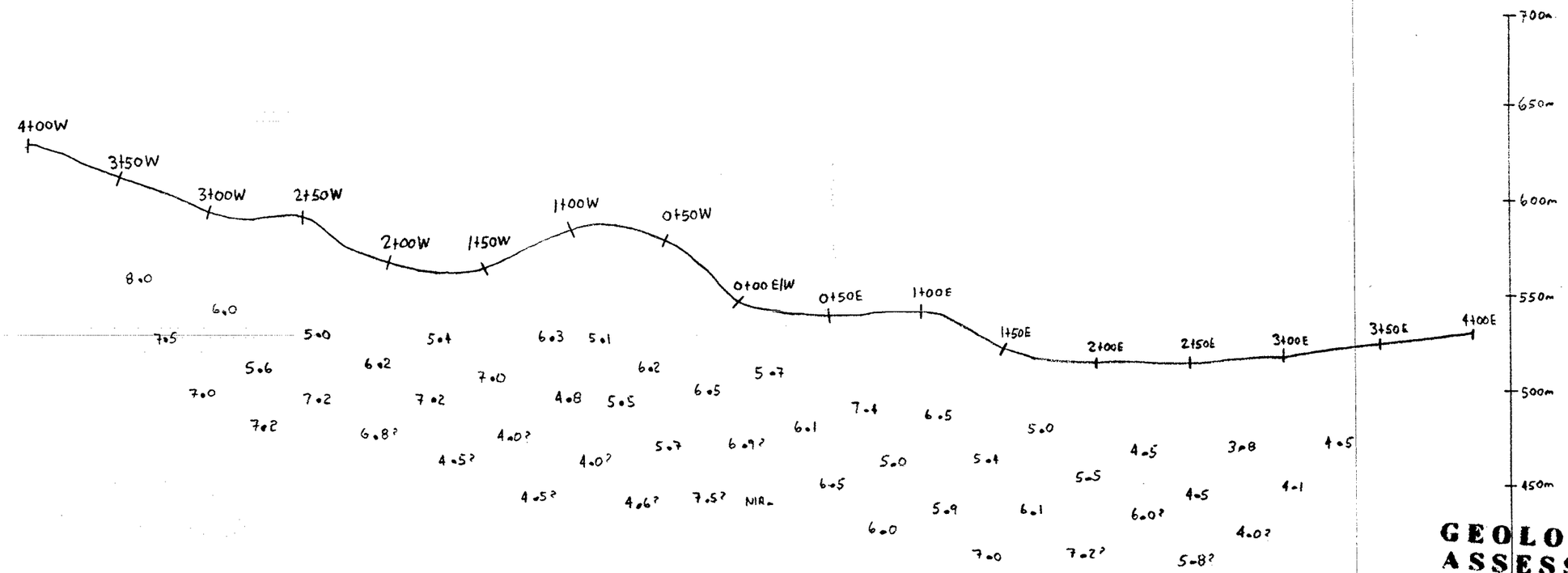
REEF CLAIMS I.P. SURVEY

| | | |
|---|---|---|
| SCALE: 1: 2500 | APPROVED BY: | DRAWN BY K.L. |
| DATE: OCT 6 1984 | | REVISED |

CHARGEABILITY (milliseconds) PROFILE Dipole-Dipole Array

LINE 2+00S — DRAWING NUMBER

11X17 PRINTED ON NO. 1000H CLEARPRINT




GEOLOGICAL BRANCH
ASSESSMENT REPORT

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C East of P.

| | | |
|---|---|---|
| REEF CLAIMS I.P. SURVEY | | |
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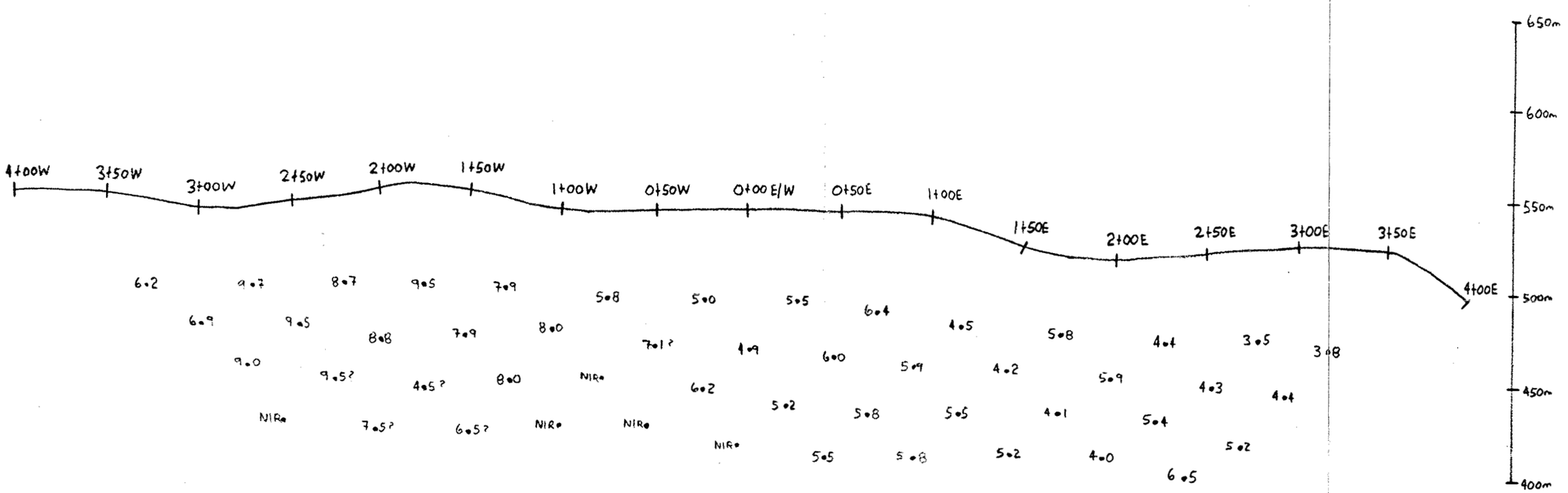
| DATE: OCT 6 1984 | | REVISED |
| CHARGEABILITY (milliseconds) PROFILE Dipole-Dipole Array | | |
| LINE 3+00S | | DRAWING NUMBER |




GEOLOGICAL BRANCH
ASSESSMENT REPORT

14,308

C. East of P.

| REEF CLAIMS I.P. SURVEY | | |
|---|---|---|
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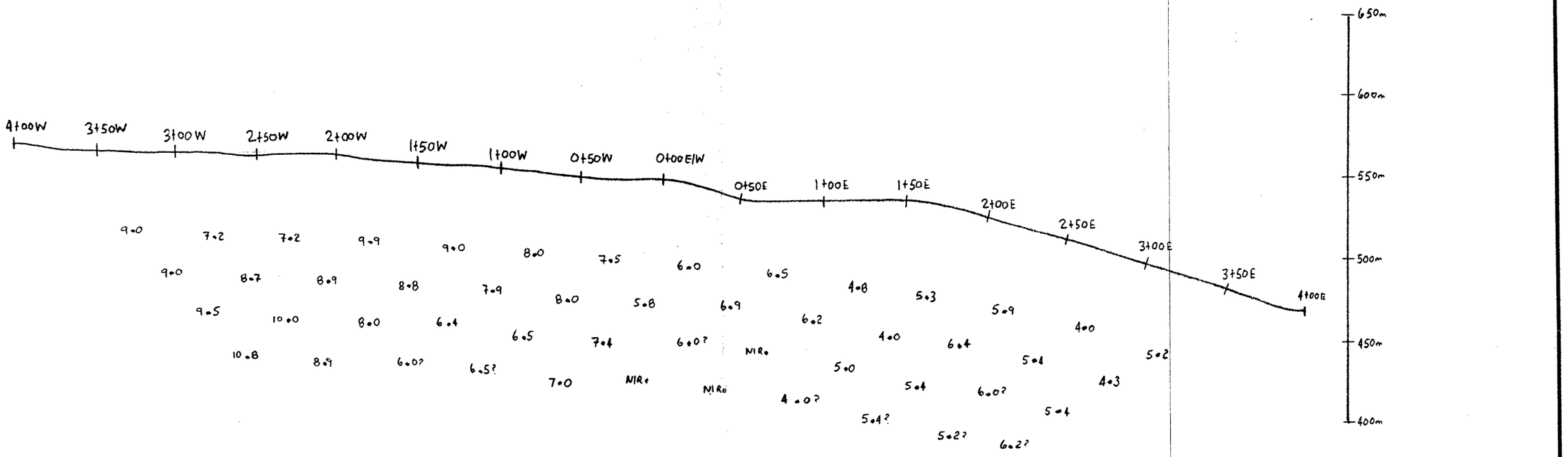
| CHARGEABILITY (milliseconds) PROFILE Dipole-Dipole Array | | |
| LINE 7+00S | | DRAWING NUMBER |




GEOLOGICAL BRANCH
ASSESSMENT REPORT

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C. East of P.

REEF CLAIMS I.P. SURVEY

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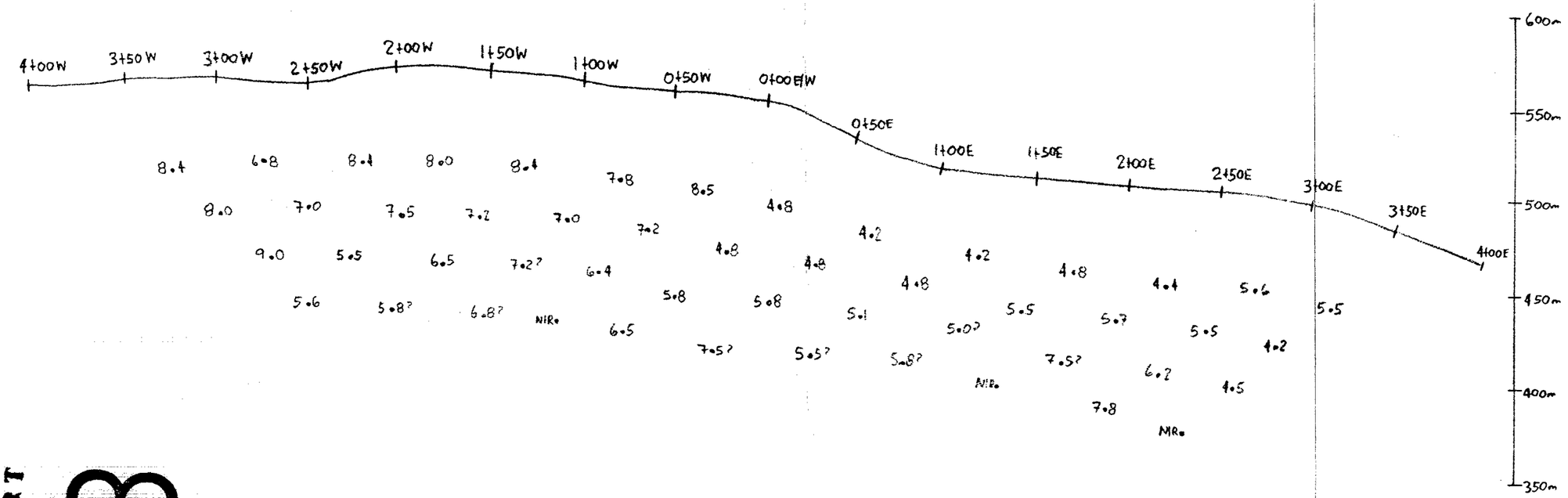
|---|---|---|
| SCALE: 1: 2500 | APPROVED BY: | DRAWN BY K.L |
| DATE: OCT 6, 1984 | | REVISED |

CHARGEABILITY (milliseconds) PROFILE Dipole-Dipole Array

| | |
|---|---|
| LINE 8+00S | DRAWING NUMBER |

11X17 PRINTED ON NO. 1000H CLEARPRINT






C. East of P.

REEF CLAIMS I.P SURVEY

| | | |
|---|---|---|
| SCALE: 1 : 2500 | APPROVED BY: | DRAWN BY KL |
| DATE: OCT 6, 1984 | | REVISED |

CHARGEABILITY (milliseconds) PROFILE Dipole-Dipole Array

| | |
|---|---|
| LINE 9+00S | DRAWING NUMBER |

# A P P E N D I X  B

## GEOCHEMICAL DATA

Member Canadian Testing Association

# KAMLOOPS *RESEARCH & ASSAY* LABORATORY LTD.

912 LAVAL CRESCENT - KAMLOOPS, B.C
V2C 5P5
PHONE: (604) 372-2784 — TELEX: 048-8320

B.C. LICENSED ASSAYERS
GEOCHEMICAL ANALYSTS
METALLURGISTS

## CERTIFICATE OF ASSAY

TO Reef Developments

General Delivery

Vernon, B.C. Attn: John de Latre

Certificate No. K 6490

Date

I hereby certify that the following are the results of assays made by us upon the herein described _____ samples

| Kral No. | Marked | Au | Ag |
|---|---|---|---|
| | | ozs/ton | ozs/ton |
| 1 | 1001 | L.001 | - |
| 2 | 1002 | L.001 | - |
| 3 | 1003 | L.001 | - |
| 4 | 1004 | .004 | - |
| 5 | 1005 | L.001 | L.01 |
| 6 | 1006 | .010 | - |
| 7 | 1007 | L.001 | - |
| 8 | 1008 | L.001 | L.01 |
| 9 | 1009 | .001 | .03 |
| 10 | 1010 | .001 | .03 |
| 11 | 1011 | L.001 | .01 |
| 12 | 1012 | L.001 | L.01 |
| 13 | 1013 | .001 | .03 |
| 14 | 1014 | L.001 | L.01 |
| 15 | 1015 | L.001 | L.01 |

L means "less than"

*NOTE:*
*Rejects retained three weeks.*
*Pulps retained three months unless otherwise arranged.*

*Registered Assayer, Province of British Columbia*