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REPORT ON

GEOPHYSICAL SURVEYS

ON THE

DEER LAKE AND HAIDA GRIDS

KAMLOOPS MINING DIVISION

LITTLE FORT, BRITISH COLUMBIA

FOR

VITAL PACIFIC RESOURCES LTD.

BY

INTERPRETEX RESOURCES LTD.

Vancouver, B.C.
June, 1988

Project #88608
E.R. Rockel

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1. SUMMARY

1.1 Deer Lake Grid

Gold bearing sulphide mineralization seems to be related to magnetic anomalies probably caused by the presence of pyrrhotite as well as other metallic sulphides. Electromagnetic methods appear to be of limited use in delineating mineralization because of the mainly disseminated nature of the sulphides. Most induced polarization anomalies seemed to correlate with mineralized magnetic zones. The detailed I.P. survey at two electrode separations proved to be useful in determining the presence, location, and to some degree, the depth extent of disseminated sulphide bodies. Although the narrow spacing data suggests possibly four small mineralized zones, the larger separation data seems to blend them into two trends. The main trend, at about 5060N on all lines, is shown to be shallower while the second trend, to the south, appears deeper and seems to strike more towards north-south.

Generally, the area seems to contain a number of disseminated chargeable sulphide bodies of limited lateral and depth extent. These bodies seem to deepen towards the east and may continue off area.

The relative low apparent resistivity of chargeable bodies may mean that little or no silicification is present.

An unexplained Magnetic and I.P. anomaly at the south ends of Lines 5000E and 5050E should be checked to determine if it is a gold target.

Recommended drill hole locations are: line 4950E - 5000N
line 4900E - 5080N
line 5000E - 4970N
line 5050E - 4970N

The present grid should be enlarged for additional I.P. survey to explore mineralization believed to continue off area.

1.2 Haida Grid

Re-survey of a portion of lines 1300W, 1500W and 1700W over a secondary anomalous trend containing deep large chargeability values at a larger electrode separation (75 meters), has shown that the deep large values have been averaged down due to the larger separation. This indicates that the secondary zone high values were localized and do not extend to depth.

Another strong value observed on dipole 6 at about 1775S on line 1300W, is believed to be related to the main chargeable zone on the northern ends of present lines and may be a deeper continuation of the strong main zone anomaly.

Tie-line "A" substantiates the existence of the secondary zone and shows its decrease in strength from line 1700W to 1300W. The tie-line does not pick up the deep strong value believed to be related to the main zone, possibly because the body is lenticular and/or did not continue in the direction of the tie-line.

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An isolated chargeability anomaly on the tie-line in the vicinty of 750E is probably another pod or lense of chargeable material which was not discovered by the previous survey because of its limited lateral and depth extent and because it is between previous survey lines.

Deep, narrow unexplained large apparent chargeability anomalies found in the 1987 survey do not warrant additional work due to their limited size.

Depending on the importance of the main chargeable zone a deep drill hole may be warranted to test a strong deep response at line 1300W - 1725S.

2. INTRODUCTION

2.1 General

A geophysical survey program was carried out over two small separate grids approoximately 15 km. northwest of Littlefort, B.C. during May, 1988.

2.1.1 Deer Lake Grid

A combined electromagnetic, magnetic, induced polarization and resistivity survey program was carried out on a small detail grid near Deer Lake. The grid was surveyed and cut by the geophysical survey crew immediately prior to survey. The grid was oriented to follow a "projected trend of gold zone" outlined by Dr. C.J. Westerman in an August, 1987 report for Vital Pacific Resources Ltd.

2.1.2 Haida Grid

Additional induced polarization and resistivity survey at a larger electrode spacing was carried out on a portion of the Haida Grid surveyed in June and July, 1987 by Interpretex Resources Ltd. over the Nuf 1, Tun 1 and Vit 1 claims northeast of Little Fort, British Columbia. The survey was carried out on the same grid lines as the previous survey but with a larger electrode spacing in order to test deep, narrow unexplained large apparent chargeability anomalies found by the 1987 survey. An additional line, Tie-Line "A", was surveyed across the original grid lines in an attempt to follow along the strike of the unexplained anomalies.

2.2 Objectives

2.2.1 Deer Lake Grid

- to test various electromagnetic methods at small station intervals in order to determine their effectiveness in following the projected trend of gold zone or establishing new unrecognized conductive trends.
- to establish a correlation between magnetic minerals and mineralized trends.

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- to determine the value of the induced polarization method for following the projected trend of gold zone or locating new mineralized zones.
- to outline areas of interest for further exploration by trenching or drilling.

2.2.2 Haida Grid
- to obtain deeper induced polarization and resistivity penetration in order to test the depth extent and lateral extent of deep, narrow unexplained large apparent chargeability anomalies found by the 1987 survey.

2.3 Method

2.3.1 Deer Lake Grid
VLF and vertical loop electromagnetic surveys were conducted over all or

portions of the detailed Deer Lake Grid. Induced polarization and resistivity survey was carried out on four lines within the detailed Deer Lake Grid using the pole-dipole array and "a" spacings of 10 meters and 30 meters.

2.3.2 Haida Grid
A deep induced polarization-resistivity survey using the pole-dipole array and an "a" spacing of 75 meters was undertaken to fulfill the objective.

2.4 Location

- north of Highway 24 and Long Island Lake
- Kamloops Mining Division
- Deer Lake Grid - Fort 9 claim
- Haida Gold Grid - Tun 1 claim
- NTS 92 P/9W
- Deer Lake Grid - Lat. 51 deg. 32 min. North
  - Long. 120 deg. 23 min. West
- Haida Grid - Lat. 51 deg. 30 min. North
  - Long. 120 deg. 25 min. West.

2.5 Access

Access to the Deer lake Grid was via truck from Little Fort on the Deer Lake road which runs through the northeast corner of the grid. Access to the Haida property was via truck from Little Fort to the Deer Lake road and then left on the Carol Lake road which runs through the survey grid.

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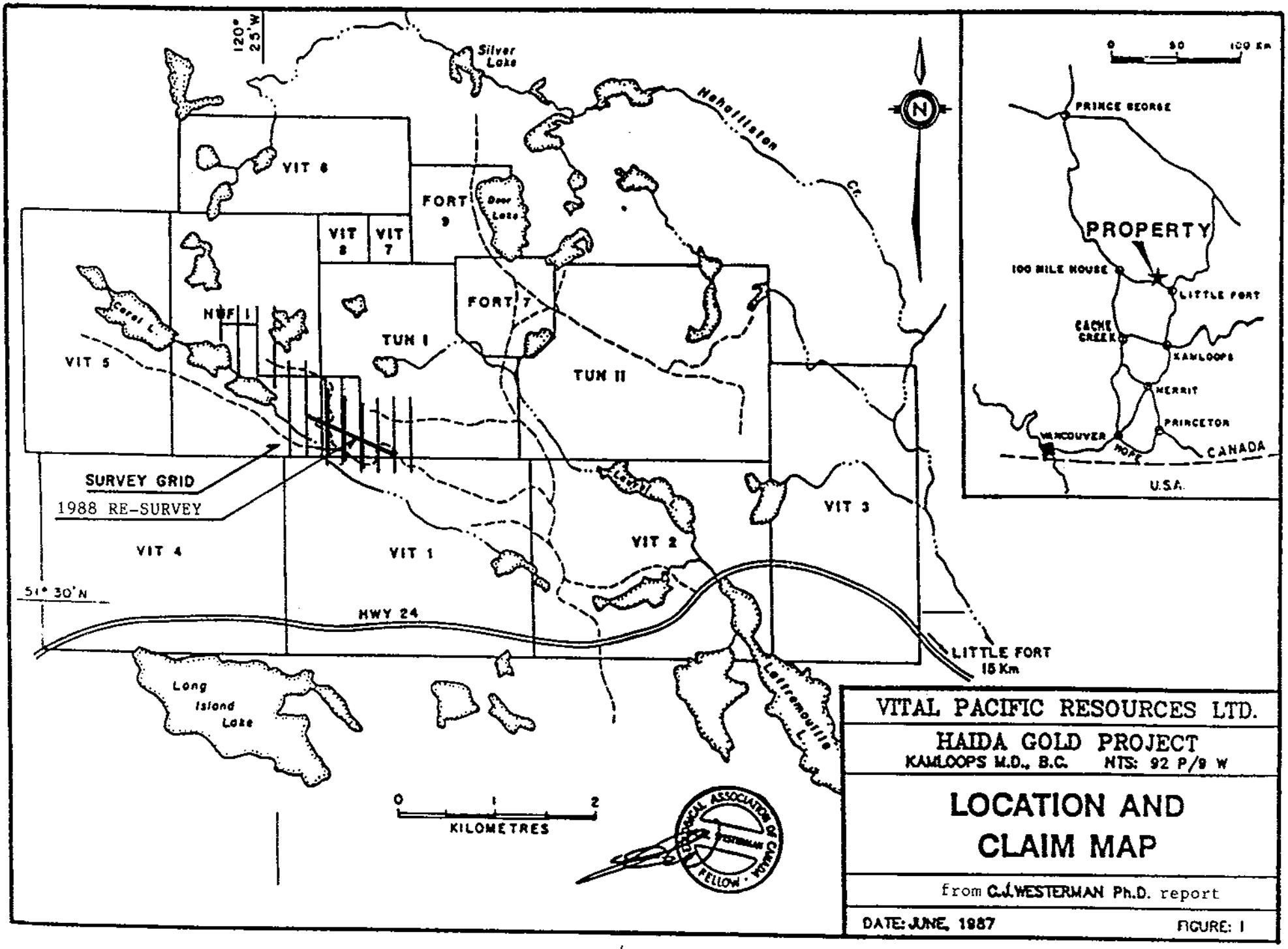
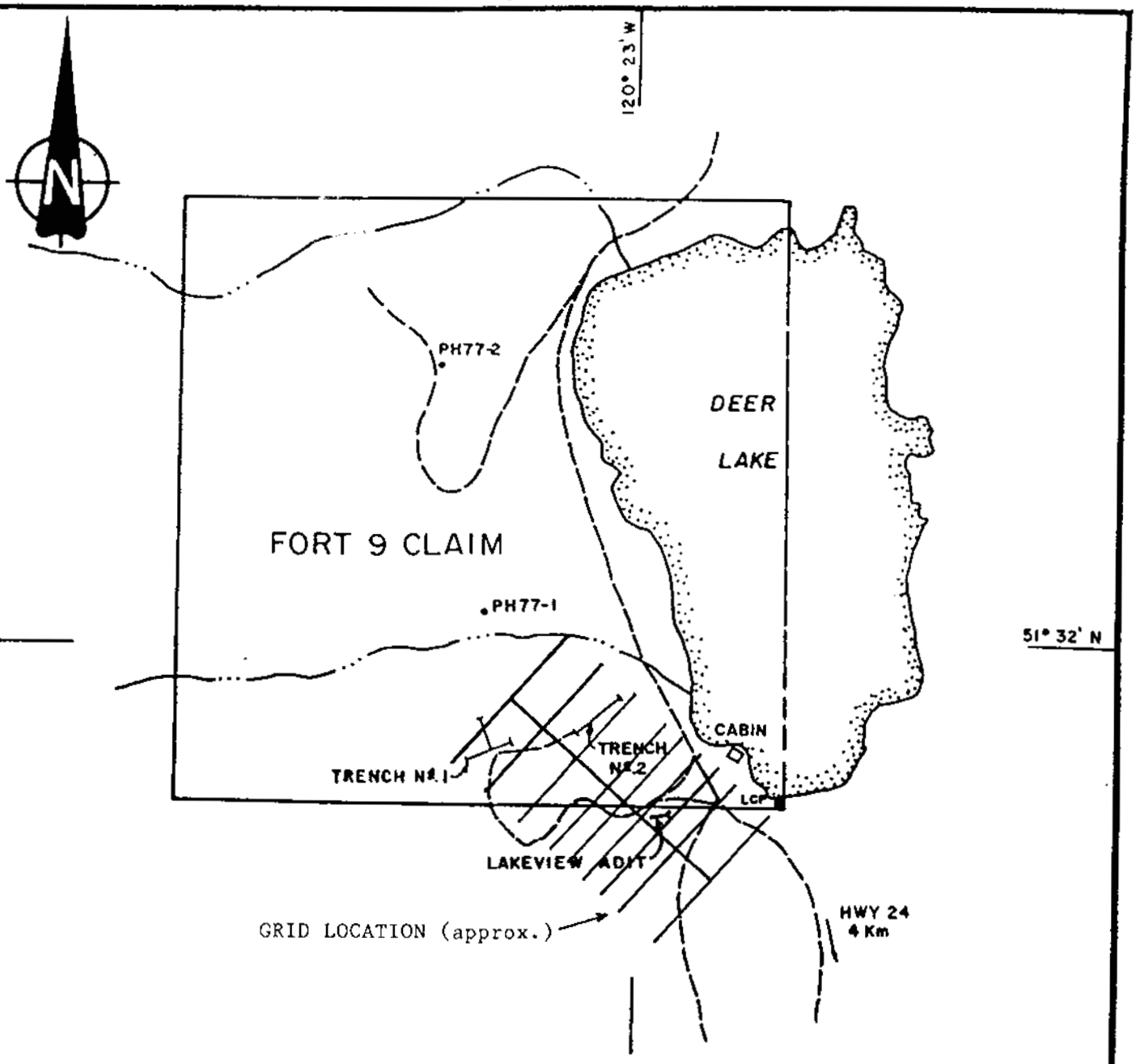

120° 25'W
Silver Lake
Nahgiliston Cr.
VIT 6
FORT 9
Deer Lake
VIT 8
VIT 7
FORT 7
Carol L.
NWF 1
TUN I
TUN II
VIT 5
SURVEY GRID
1988 RE-SURVEY
VIT 4
VIT 1
VIT 2
VIT 3
Lost L.
51° 30'N
HWY 24
LITTLE FORT 15 Km
Long Island Lake
Lafferty Lake
0 1 2
KILOMETRES
N
0 50 100 Km
PRINCE GEORGE
PROPERTY
100 MILE HOUSE
LITTLE FORT
CACHE CREEK
KAMLOOPS
MERRIT
PRINCETON
VANCOUVER
HOPE
CANADA
U.S.A.
VITAL PACIFIC RESOURCES LTD.
HAIDA GOLD PROJECT
KAMLOOPS M.D., B.C. NTS: 92 P/9 W
LOCATION AND CLAIM MAP
from C.J. WESTERMAN Ph.D. report
DATE: JUNE, 1987
FIGURE: 1



VITAL PACIFIC RESOURCES LTD.
DEER LAKE GRID KAMLOOPS M.D., B.C. NTS: 92 P/9 W
LOCATION MAP
from C.J.WESTERMAN Ph.D. report
DATE: JUNE, 1987 FIGURE: 2

2.6 Operations and Communications

- personnel and equipment were mobilized from Vancouver, B.C., Penticton, B.C. and Saskatoon, Sask. by truck and car to Barrier, B.C.
- accommodation for all personnel was at the Y-5 Motel in Barrier, B.C.
- food was obtained in Barrier, B.C.
- communications were by land line telephone from Barrier. Field communications were by Motorola VHF base station and walkie talkie radios
- a four wheel drive truck and a two wheel drive van were used to carry personnel and equipment into the grid areas and for transportation within the survey grids.

2.7 Physiography (Both Grids)

Vegetation ranged from spruce and pine forest to brush on clear cut (logged off) areas. Topography in the survey areas was moderate with a few steep slopes.

2.8 Previous Work

2.8.1 Deer Lake Grid

The writer is not aware of any significant and methodical detail geophysical surveys carried out over the projected trend of gold zone.

2.8.2 Haida Grid

As reported by the writer in 1987 (ref. 2.), VLF EM and magnetic surveys were carried out over a larger grid area, referred to as the "older" grid, and compiled by Ager, Berretta & Associates Inc. of Vancouver, B.C. in January, 1981.

3. SURVEY SPECIFICATIONS

3.1 Survey Parameters

3.1.1 Deer Lake Grid

- survey line separation - 50 meters for I.P. survey
  - 50 and 25 meters for VLF-EM and magnetic survey
- survey station spacing - 10 meters for I.P. survey
  - 10 meters for VLF-EM and magnetic survey
- horizontal control - lines were surveyed by compass and hip chain with estimated slope corrections
  - stations were located using felt pen markings and flagging tied to vegetation

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- grid baseline parallel to the "projected trend of gold zone"
- baseline direction - Azimuth 110 degrees
- survey lines were perpendicular to the baseline
- I.P. survey was carried out on lines 4900E, 4950E, 5000E & 5050E
- I.P. survey total 2.72 km. including 10 m. and 30 m. spacings
- VLF-EM survey total 1.8 km. at 10 m. spacing
- magnetic survey total 1.8 km. at 10 m. spacing

3.1.2 Haida Grid

- survey line separation - 200 meters
- station spacing - 25 meters
- horizontal control - lines were surveyed by compass and hip chain with estimated slope corrections
  - stations were located using felt pen markings and flagging tied to vegetation
- baseline direction - east-west
- survey lines were perpendicular to the baseline
- IP survey was carried out on lines 1300W, 1500W, 1700W & Tie-line "A"
- survey total 3.075 kilometers including Tie-line "A"

3.2 Equipment Parameters

3.2.1 Deer Lake Grid

- Induced Polarization Survey
  - Huntec Mk II 7.5 kilowatt transmitter
  - Huntec Mk IV time domain receiver
  - apparent chargeability measured in milliseconds
  - potential electrode voltage measured in millivolts
  - time delay - 120 mSec., window width - 158 mSec.
  - apparent resistivity calculated in ohm-meters
  - dipole spacing "a" = 10 and 30 meters, n = 1 to 6
  - pole-dipole method with pole northerly and dipole southerly

- VLF-EM Survey
  - Geonics EM-16 VLF-EM receiver
  - In-phase (dip angle) and Quadrature (out-of-phase) measured in percent at each station
  - transmitting station used - Cutler, Maine
  - direction faced - southeast

- Total Field Magnetic Survey
  - Geometrics G-816 magnetometer and G-856 magnetic base station
  - earth's total magnetic field measured in gammas (nanoteslas)
  - magnetic variations controlled by automatic magnetic base station recording every 10 seconds
  - instrument accuracy +/- 1 gamma
  - station repeatability better than +/- 3 gammas in low gradients

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- Vertical Loop EM Test Survey
    - McPhar V.H.E.M. low frequency EM system
    - dip angle measured in degrees at 2400 Hz.
    - transmitter distance 50 meters or more from receiver

3.2.2 Haida Grid

- Induced Polarization Survey
    - Huntec Mk II 7.5 kilowatt transmitter
    - Huntec Mk IV time domain receiver
    - apparent chargeability measured in milliseconds
    - potential electrode voltage measured in millivolts
    - time delay - 120 mSec., window width - 158 mSec.
    - apparent resistivity calculated in ohm-meters
    - dipole spacing "a" = 75 meters, n = 1 to 6
    - pole-dipole method
        - with pole southerly and dipole northerly on grid lines
        - with pole easterly and dipole westerly on tie-line

3.3 Equipment Specifications - see Appendix III

4. DATA

4.1 Calculations

Apparent resistivity values were calculated using the formula;

$$Pa = 2n(n + 1)PI*a*(V/i)$$

where: n = "n" value of 1 to 6
PI = 3.14
a = electrode separation (meters)
V = observed voltage (millivolts)
i = observed curent (amps)
* = "multiplied by"

Total Field Magnetic Survey

Total field magnetic readings were individually corrected for variations in the earth's magnetic field using magnetic base station values. The effects of changes in magnetic content of operator's clothing or different batteries used in the magnetometer were controlled by re-occupying operator field base station locations at the beginning and end of each day during the survey. An "Operator Adjust" correction was then applied if and where applicable.

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The formula used for magnetic corrections was;

CTFR = TFR + (DBL - BSR) + OA

where: CTFR = Corrected Total Field Reading
TFR = Total Field Reading
DBL = Datum Base Level
BSR = Base Station Reading
OA = Operator Adjust

4.2 Presentation

4.2.1 Deer Lake Grid

- Apparent chargeability values for n = 1 to 6 were Fraser Filtered and presented as contours on Figures # 3 & 5 at a scale of 1:1000
- Apparent resistivity values for n = 1 to 6 were Fraser Filtered and presented as contours on Figures # 4 & 6 at a scale of 1:1000
- Magnetic data were contoured at 25 gamma intervals and presented on Figure # 7 at a scale of 1:1000
- VLF-EM in-phase and out-of-phase readings are presented in profile form on Figure # 8 at a scale of 1:1000
- IP data are presented as contoured pseudosections on Figure # 9 at a scale of 1:500 for "a" = 10 meters and at a scale of 1:1500 for "a" = 30 meters
- Pseudosections were plotted "eastward looking" (north on the left hand side) for easy comparison with theoretical pseudosection plots computed with the pole to the left and dipole to the right
- IP anomalies are presented on the IP pseudosections and on the chargeability Fraser Filter contour maps, Figures # 3 & 5, as rectangles
- Field readings and calculated values are listed in Appendix IV.

4.2.2 Haida Grid

- Pseudosections were plotted "westward looking" (south on the left hand side) for easy comparison with theoretical pseudosection plots computed with the pole to the left and dipole to the right
- Pseudosections are presented on Figure # 11
- Field readings and calculated values are listed in Appendix IV.
- IP anomalies are presented on the IP pseudosections as rectangles.

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5. INTERPRETATION

5.1 Discussion of Results

5.1.1 Deer Lake Grid

Data in this area were noise free and stable. Apparent chargeability values were generally high throughout the survey area, ranging from less than 10 to over 100 milliseconds. Apparent resistivity values ranged from between 100 and 200 ohm meters to greater than 2000.

5.1.2 Haida Grid

I.P. data values in the Haida grid were similar to those observed during the 1987 I.P. survey. Anomaly shapes were also similar although less detailed due to larger electrode spacing.

5.2 Conclusions

5.2.1 Deer Lake Grid

Geophysical results indicate that the trend direction of the "projected trend of gold zone" is accurate. VLF-EM and total field magnetic data show trends roughly parallel to the Deer Lake detail grid baseline.

The two gold showings between lines 5000E and 5050E at baseline 5000N, which comprise the projected trend of gold zone, are not conductive, indicating that sulphides in these showings are disseminated rather than massive. The mineralization in these showings is, however, related to a strong magnetic feature interpreted as a near surface body of limited depth extent, possibly containing pyrrhotite as well as magnetite.

Sulphides with gold mineralization in a trench on line 4900E at 5045N coincide with a VLF-EM conductive trend and also a magnetic high. In this case sulphides are slightly conductive and also magnetic. A vertical loop electromagnetic test survey conducted over the VLF-EM anomaly showed an "off end response" indicating low conductance. This means that the sulphides were massive enough, or perhaps weathered and damp enough, to be slightly conductive and cause a VLF-EM response at high frequencies but not at lower frequencies used by other methods such as vertical loop EM. The large magnetic high associated with the sulphides suggests that significant amounts of pyrrhotite may be present. The magnetic anomaly shape on this line indicates a probable larger depth extent than that between lines 5000E and 5050E discussed above. The VLF-EM conductor on line 4900E is believed to trend westward to line 4850E, where it is still associated with a magnetic body, although less intense and probably of smaller depth extent. At this point a vertical loop EM test indicated a weak conductor at 5035N. This probably represents an increase in the amount of massive sulphides in the mineralized body. Toward the west the trend seems to split into two weaker nonmagnetic conductors, or widen into one wide nonmagnetic conductor, on line 4800E. An apparently unexplored magnetic zone on the south ends of lines 5025E and 5050E may also be conductive, although insufficient data were available to prove conductivity and a relationship to magnetism.

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Another gold showing, in a trench at roughly the coordinates 4840E, 4950N, seems to be associated with a strong magnetic feature. This feature is not conductive and appears to be localized with limited depth extent.

Obviously magnetism is a significant tool for use in exploration for gold within sulphide mineralization in this area. Electromagnetic surveys seem to be of limited use due to the mainly disseminated nature of sulphide mineralization. A limited detailed induced polarization survey at two electrode spacings (10 and 30 meters) has shown that most apparent chargeability anomalies are related to magnetic zones. Examples are; line 4900E at 5045N magnetic sulphides containing gold, and the apparently unexplored magnetic and possibly conductive zone at the south ends of lines 5000E and 5050E. Examination of both 10 meter and 30 meter separation pseudosections for lines 5000E and 5050E in the vicinity of 5020N and 5000N respectively, shows that a slightly buried (of the order of 5 meters) chargeability high may be associated with the near surface magnetism at the above positions. It is therefore probable that the gold and sulphide showing at location 4840E, 4950N is also chargeable and would respond to an induced polarization survey. The presence of disseminated pyrrhotite, as well as other sulphides, is believed to be the cause.

Although the I.P. survey coverage was somewhat limited in extent, the present data suggest the existence of a number of chargeable bodies. The 10 meter separation pseudosections indicate that there may be as many as four small chargeable trends. These trends are shown by four anomalies on the 10 meter pseudosection of line 4900E at approximately 5075N, 5045N, 5015N and 4970N. All zones seem to deepen towards the east. The 30 meter spacing coverage tends to blend the closely spaced bodies into two more substantial trends and gives some idea of depth extent. An example is the second chargeable zone at the east ends of lines 5000E and 5050E on the 30 meter pseudosections. These anomalies appear to connect with a deeper anomaly on line 4950E at about 5000N and then with a shallow anomaly on line 4900E at roughly 5010N, forming a trend which seems to strike differently (more towards north-south) from the trends parallel to the baseline. This more north-south trend is evident on the "A" = 30 M. Chargeability Contour Map, Figure # 5 of Fraser Filter contours. On lines 4900E and 4950E the 30 meter data also reveals the relatively shallow depth extent of the main trend (at about 5060N on all lines) and a deepening of chargeability from line 5000E to 5050E.

Generally, the area seems to contain a number of disseminated chargeable sulphide bodies at various depths below surface and of limited lateral and depth extent. These sulphide bodies seem to deepen towards the east. Data indicates that mineralization probably continues off area to the south, west and east.

Apparent resistivity data indicate that the significant chargeable bodies are associated with resistivity lows. The conclusion is that the disseminated metallic (chargeable) particles have decreased the resistivity of the host rock and that silicification is probably absent or not widespread.

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5.2.2 Haida Grid

Apparent chargeability readings and pseudosection anomaly shapes found during the present I.P. survey were similar to those observed in the previous survey. Both surveys show a main chargeable zone, which was very strong, plus a secondary anomalous trend a short distance to the south. Lines 1500W and 1700W, re-surveyed at 75 meter electrode separation, adequately show the secondary anomalous trend, which contained the deep high values in the earlier data. However, in this case the high values have been averaged down due to the larger electrode separation. Present survey results, therefore, indicate that the deep, narrow unexplained large apparent chargeability anomalies, seen on these lines in the 1987 results, were localized and do not extend to depth. Line 1300W seems to be different, such that the secondary anomalous trend is weaker and seems to blend together with the main chargeable zone due to the larger electrode separation. Also there appears to exist another strong value at about 1775S, once again at the last dipole (deepest reading). This strong value is believed to be related to the main chargeable zone on the northern ends of present lines (also shown by the previous survey) and may be a deeper continuation of the strong main zone anomaly. Tie-line "A" was surveyed in an attempt to tie the anomalies together and gain information along a suspected strike of the secondary zone. The tie-line substantiates the existence of the secondary zone and shows its decrease in strength from line 1700W to 1300W. The tie-line does not pick up the deep strong value believed to be related to the main zone, possibly due to the geometry of the body. If the deep main zone strong response, at 1775S, was lenticular and/or did not continue in the direction of the tie-line, then the high chargeability response would be significantly averaged out in the direction of the tie-line.

An isolated chargeability anomaly can be seen on the tie-line in the vicinty of 750E. This is probably another pod or lense of chargeable material which was not discovered by the previous survey because of its limited lateral and depth extent and because it is between previous survey lines.

As in the previous survey, the present relationship between chargeability and resistivity is typical of anomalies which are caused by chargeable mineralization disseminated within a low resistivity bedrock.

6. RECOMMENDATIONS

6.1 Deer Lake Grid

The unexplained combined magnetic and induced polarization anomalous zone at the south ends of lines 5000E and 5050E should be checked on the ground for evidence of sulphides. Soil and/or rock samples should be analysed in order to determine if the zone represents another gold exploration target.

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Apparent chargeability zones which are shown by pseudosections to be below surface and possibly unexplored should be investigated by drilling to determine if gold mineralization exists with sulphides. Drill hole depths of 100 meters should adequately explore to the maximum depth penetration of the I.P. survey at the 30 meter electrode separation. These zones are listed below in order of decreasing geophysical priority:

- line 4950E station 5000N
- line 4900E station 5080N
- line 5000E station 4970N
- line 5050E station 4970N

Assuming a positive relationship between apparent chargeability and economic mineralization, the present survey grid should be enlarged for additional I.P. survey to investigate mineralization which is believed to continue off area. Judging from the present I.P. data at electrode spacings of 10 and 30 meters, an acceptable compromise would be 25 meters. This spacing should provide a reasonable depth of penetration while still being capable of resolving the small targets in this area.

6.2 Haida Grid

On the basis of present geophysical results the deep, narrow unexplained large apparent chargeability anomalies found by the 1987 survey have been shown to be of limited extent and do not warrant additional work unless other encouragement exists.

If the main chargeable zone is considered to be important then a deep drill hole may be considered to test for economic mineralization associated with the deep high value at 1725S on line 1300W. The depth of the drill hole should be of the order of 225 to 250 meters to investigate this feature.

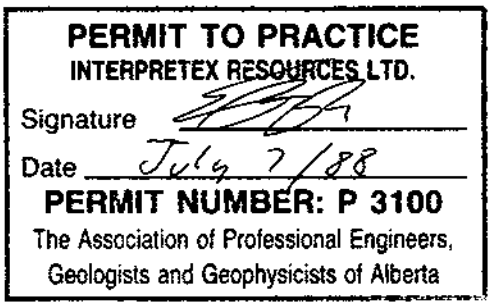
Respectfully Submitted

INTERPRETEX RESOURCES LTD.

Vancouver, British Columbia

E.R. ROCKEL

Consulting Geophysicist



CERTIFICATE

I, Edwin Ross Rockel, Geophysicist of Vancouver, British Columbia, Canada, hereby certify that:

1. I received a B.Sc. degree in Geophysics from the University of British Columbia in 1966.

2. I am a Consulting Geophysicist and owner of Interpretex Resources Ltd. of Box 48239, Bentall P.O., in the City of Vancouver, in the Province of British Columbia.

3. I currently reside at 6571 Cooney Rd., in the City of Richmond, in the Province of British Columbia.

4. I have been practising my profession since graduation.

5. I am a Professional Geophysicist registered in the Province of Alberta.

6. I am a Professional Engineer registered in the Province of Saskatchewan.

7. I am a Certified Professional Geological Scientist registered in the United States of America.

8. This report may be used for the development of the property, provided that no portion will be used out of context in such a manner as to convey meanings different from that set out in the whole.

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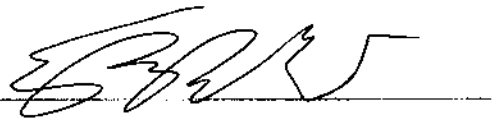
Date: July 7/88 Signed: 

Vancouver,
British Columbia

Edwin Ross Rockel
B.Sc., P.Geoph., P. Eng.

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2. Rockel, E.R., 1987. Report on Induced Polarization and Resisitivity Survey, Assessment Report for Vital Pacific Resources Ltd., Vancouver, B.C.

APPENDIX I

Present Survey Expenditures

Present Survey Expenditures

MOBILIZATION/DEMOBILIZATION

- contractural flat rate -	$ 2,500.00

CONTRACTURAL FIELD WORK
(during the period from May 11 to 20, 1988 including mob-demob)

- included all survey equipment, one 4x4 and one two wheel drive truck, ancillary equipment, office supplies, computer and printer, field supplies and all food and fuel
- field work included induced polarization survey, VLF-EM survey, magnetic survey, vertical loop EM survey, supervision and preliminary data interpretation

$11,340.00

INTERPRETATION AND REPORT

- included final data interpretation, report writing, computer processing, plotting and reproduction for seven copies of final report

$ 1,500.00

TOTAL SURVEY PROGRAM EXPENDITURE	$15,340.00

APPENDIX II

Personnel

PERSONNEL

The following personnel worked on the property and/or were engaged in supervision for all or part of the days noted (includes mobilization and demobilization):

Name	Position	Dates
E.R. Rockel Richmond, B.C.	Consulting Geophysicist	May 11 - 17, 1988
D.C. Bingham Saskatoon, Sask.	Geophysicist	May 11 - 20, 1988
R.K. Nishimura Calgary, Alta.	Geophysicist	May 11 - 20, 1988
J.A. Martin Vancouver, B.C.	Geophysical Technician	May 11 - 20, 1988
T.A. Iannone Penticton, B.C.	Geophysical Assistant	May 11 - 20, 1988
B. Foster Penticton, B.C.	Geophysical Assistant	May 11 - 20, 1988

The following personnel were involved in data preparation or reporting of the project for part or all of the days noted:

Name	Position	Dates
E.R. Rockel Richmond, B.C.	Consulting Geophysicist	May 25 - 30, June 10, 13 - 15, 27 - 30, July 4 - 6, 1988.

APPENDIX III

Equipment Specifications

M-4 SERIES

M-4 Induced Polarization Receiver

DESCRIPTION

The Huntec M-4 is a microprocessor based receiver for time and frequency domain IP and complex resistivity measurement. It is:

Easy to operate. One switch starts a measurement, of up to 33 quantities simultaneously. The optional Cassette DataLogger records them all in seconds. Calibration, gain setting and SP buckout are all automatic.

Reliable. Using advanced digital signal processing techniques, the M-4 delivers consistently accurate data even in noisy, highly conductive areas. For mechanical reliability it is packaged in a rugged aluminum case for backpack or hand carrying.

Versatile. The operator may adjust delay and integration times, operating frequency and other measurement parameters to adapt to a wide range of survey conditions and requirements. An independent reference channel facilitates drillhole and underground work, and guarantees transmitter-receiver synchronization in high-noise conditions.

Highly accurate. With a frequency bandwidth of 100 Hz and noise-cancelling digital signal stacking, the M-4 delivers very precise results. The details are summarized in a table overleaf.

Sensitive. The same features that make the M-4 accurate allow detection of very weak signals. The Huntec receiver requires lower transmitter power than any other, for a given set of operating conditions. Automatic correction for drifts in self-potential and gain allow long stacking times for significant signal-to-noise improvements.

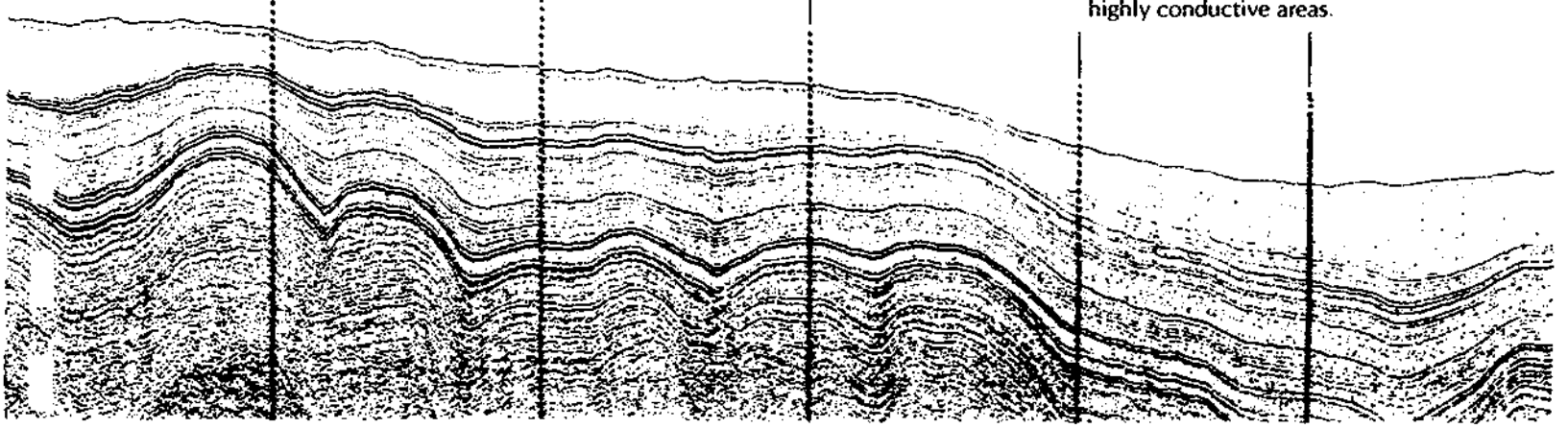
Intelligent. Under the control of a powerful 16-bit microprocessor, the M-4 calibrates and tests itself between measurements. Coded error messages, flashed onto the display, inform the operator of any malfunction.

The M-4 Receiver is complemented by Huntec's new M-4 transmitters, which offer precisely timed constant-current output and both time and frequency domain waveforms, compatible with the receiver's accuracy and multi-mode measurement capabilities. The RL-2 Reference Isolator connects any IP transmitter to the receiver's reference channel.

Contact Huntec for more information on the benefits offered by the M-4 product line.

FEATURES

- Time and Frequency domain IP and Complex Resistivity operation.
- Simultaneous Time domain and Complex Resistivity measurement.
- Automatic calibration
  - gain setting
  - SP cancellation
  - fault diagnosis
  - filter tuning.
- Independent reference channel for drillhole and underground work.
- 42 quantities, displayable on large 3½ digit low-temperature liquid-crystal readout.
- Analogue meter for source resistance measurement.
- 10^9 ohms differential input resistance
- 8 hours continuous operation with replaceable, rechargeable nickel-cadmium battery pack (2 supplied).
- Optional Cassette DataLogger fits inside case, has read-after-write error checking. Up to 350 stations per tape.
- Conveniently packaged for backpacking or hand carrying.
- 100 Hz bandwidth, fine time-resolution.
- Advanced digital signal stacking.
- Delivers reliable, accurate data in noisy, highly conductive areas.



SPECIFICATIONS

INPUTS

Signal Channel

Range:	5 x 10^{-5} to 10 volts. Automatic ranging. Overload indication
Resistance:	Greater than 10^9 ohms differential
Bandwidth:	100 Hz
SP Cancellation:	−5 to +5 volts (automatic)
Protection:	Low-leakage diode clamps, gas discharge surge arrestors, replaceable fuses.

Reference Channel

Level:	500 mV minimum, 10 volts peak maximum, overload indication
Resistance:	2 x 10^5 ohms differential

CONTROLS AND FUNCTIONS

Operating Controls

Keypad:	16 keys, calculator format, function associated with each key.
Reference Registers:	Keypad may be used to store up to ten 3½ digit numeric values with floating decimal point to represent station number, line number, operator, time, date, weather, transmitter current, etc. for recording on cassette.

Programming Controls

Sub-panel:	All programming controls are on a covered sub-panel.
Thumbwheel Switches:	Select delay time t_D in milliseconds chargeability window t_p in milliseconds; operating frequency; PFE frequency ratio.

Displayable Quantities

Time domain:	Primary voltage; self-potential; chargeability (total or each of 10 windows of equal width); phases of odd harmonics 3 to 15; amplitudes of odd harmonics 1 to 15; cycle count; repeating display of polarization potential and total chargeability.
Freq. domain:	Primary amplitude; Percent Frequency Effect; self-potential; cycle count.
Complex Resistivity:	Phases of odd harmonics 3 to 15; amplitudes of odd harmonics 1 to 15; fundamental phase (with ref. input); cycle count.
Any mode:	Battery voltage, Frequency error.

OUTPUTS

Displays

Digital Display:	3½ digit, low-temperature liquid crystal display. Indicates measurement results and diagnostic error messages.
Analogue Meter:	Ohms scale for source resistance; also gives qualitative indication of signal-to-noise ratio.

CASSETTE DATALOGGER (OPTIONAL)

Description:	Accommodated within M-4 chassis. If not acquired with receiver, may be retrofitted by user at any time. Two recording modes:
Partial:	All sub-panel settings, measurement results, and contents of reference registers are recorded (2 seconds recording time).
Full:	As in partial mode, but also recorded is one cycle of averaged signal waveform (28 seconds recording time). If external reference is used, one cycle of reference waveform is also recorded (60 seconds recording time). Extra memory and soft-ware available to average and store the reference waveform for advanced offline resistivity computation.
Format:	ANSI/ECMA/ISO standard for saturation recording: 80 bytes/record, all data recorded in ASCII code.
Verification:	Read-after-write data verification (automatic).

MECHANICAL

M-4 Receiver with battery pack:	45 cm x 33 cm x 14 cm, 10.0 kg.
M-4 Receiver with battery pack and Cassette DataLogger:	Dimensions as above, 11.0 kg.
Replaceable Battery pack:	33 cm x 11 cm x 4.5 cm, 3 kg.

ENVIRONMENTAL

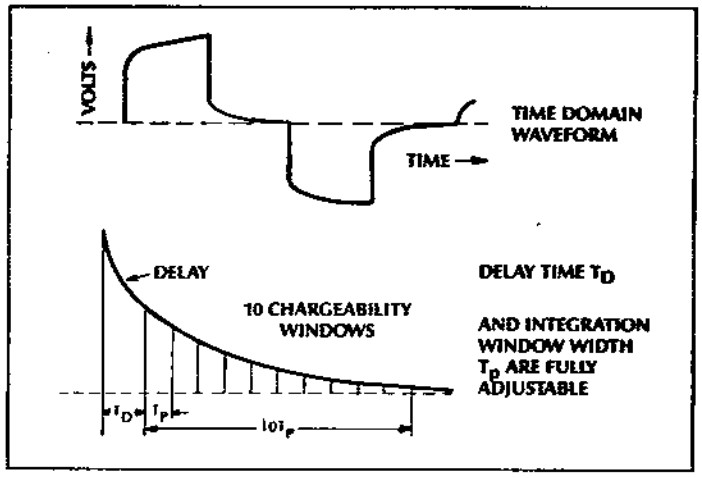
Temperature:	Operation: −20°C to +55°C. Storage: −40°C to +70°C.
Humidity:	Moisture-proof, operable in light drizzle.
Altitude:	−1,525 m to +4,775 m.
Shock, Vibration:	Suitable for transport in bush vehicles.

OUTPUT ACCURACY AND SENSITIVITY

	PHASES	AMPLI-TUDES	Vp	SP	CHARGE-ABILITY	PFE
UNITS	millradians	volts	volts	volts	seconds	%
ACCURACY	2milli-radians(1)	1% to 40Hz 2% to 80Hz	±1%	±1%	0.1%(2)	0.1%(3) full scale
SENSITIVITY	0.01 milliradians	10^{-6} volts	10^{-3} volts	10^{-3} volts	10^{-6} seconds	0.001% full scale

(1) Frequency domain mode: at harmonic frequencies up to 15 Hz, increases to not more than 5 milliradians at 80 Hz.
Time domain mode: at harmonic frequencies up to 7.5 Hz, increases to not more than 5 milliradians at 30 Hz.
(2) of total OFF time
(3) Full scale defined as 100% PFE.
Cassette Data: recorded in ASCII, 9 digits with decimal point fixed for four decimal digits.
Display Data: 3½ digits, floating decimal point.
Resolution of averaged waveform limited by A/D converter to one part in 4096 x (square root of cycle count).
Resolution of reference waveform (not averaged) limited by available memory to one part in 256. Additional memory and averaging software available as option.

CHARGEABILITY WINDOWS



HUNTEC
1750 Brimley Road, Scarborough
Ontario, Canada M1P 4X7
Phone: (416) 299-4100 Telex: 06-963640

HUNTEC (70) LIMITED
1750 BRIMLEY ROAD
SCARBOROUGH, ONTARIO
M1P 4X7

7.5 Kw INDUCED POLARIZATION TRANSMITTER

SPECIFICATIONS

Output:	100 to 3250 volts in 10 steps. 16 amps maximum.
Input:	3 phase 400 Hz. 120/208 volts.
Cycling Rates:	2 sec. ON, 2 sec. OFF, or to suit customer requirements. SCR current on/off switching.
Temperature Range:	$-34^{\circ}C$ to $+50^{\circ}C$
Current Output Meter:	2 ranges; 0 to 10 amp and 0 to 20 amp.
Ground Resistance Meter:	2 ranges; 0 to 10k ohms and 0 to 100k ohms.
Input Voltmeter:	0 to 150 volts A.C.
Dummy Load:	2 level; 2Kw and 6Kw. Switched in during OFF time to smooth generator load.
Over/Under Voltage Protection:	Automatic shutdown for excessive input voltage changes.
Construction:	Welded aluminum frame. All solid state circuits on removable printed circuit boards.
Size:	53.0 x 43.0 x 43.0 centimeters.
Weight:	34 kilograms.

INTERPRETEX RESOURCES LTD.
BOX 48239 BENTALL P.O.
VANCOUVER, B.C.
V7X 1A1

HELICOPTER PORTABLE 7.5 KILOWATT ENGINE DRIVEN ALTERNATOR

SPECIFICATIONS

Output:	120 volts A.C. 400Hz. 3 phase 18KVA maximum.
Engine:	20 H.P. air cooled two cylinder Onan gasoline engine series CCKB mounted on a steel frame.
Fuel:	regular grade leaded or non-leaded gasoline, tank capacity 25 liters (outboard motor tank) provides up to four hours continuous operation depending on load.
Alternator:	Bendix Aviation AC Generator Type 28E01 belt driven, forced air cooled. External voltage regulator.
Construction:	engine and alternator mounted on a steel frame suitable for helicopter sling transport.
Speed Regulation:	internal mechanical engine governor.
Size:	approx. .75 meter x 1 meter x .50 meters

GEONICS LIMITED
VLF EM 16

Source of Primary Field:	VLF transmitting stations
Transmitting Stations Used:	Any desired station frequency can be supplied with the instrument in the form of plug-in tuning units. Two tuning units can be plugged in at one time. A switch selects either station.
Operating Frequency Range:	About 15-25 Hz
Parameters Measured:	(1) The vertical in-phase component (tangent of the tilt angle of the polarization ellipsoid). (2) The vertical out-of-phase (quadrature) component (the short axis of the polarization ellipsoid compared to the long axis).
Method of Reading:	In-phase from a mechanical inclinometer and quadrature from a calibrated dial. Nulling by audio tone.
Scale Range:	In-phase ±150%; quadrature ±40%
Readability:	±1%
Reading Time:	10-40 seconds depending on signal strength
Operating Temperature Range:	-40 to 50° C.
Operating controls:	ON-OFF switch, battery testing push button, station selector, switch, volume control, quadrature, dial ±40%, inclinometer dial ±150%
Power Supply:	6 size AA (penlight) alkaline cells. Life about 200 hours
Dimensions:	42 x 14 x 9 cm (16 x 5.5 x 3.5 in)
Weight:	1.6 kg (3.5 lbs)
Instrument Supplied With:	Monotonic speaker, carrying case, manual of operation, 3 station selector plug-in tuning units (additional frequencies are optional), set of batteries
Shipping Weight:	4.5 kg (10 lbs.)
Name and Address of Manufacturer:	Geonics Limited 1745 Meyerside Drive/Unit 8 Mississauga, Ontario L5T 1C5

PROTON MAGNETOMETER

MODEL G-826A

Sensitivity:	±1 gamma throughout tuning range
Tuning Range:	20,000 to 100,000 gammas
Sampling Rate:	Base Station Mode: Automatic every 4, 10, 30 sec. Portable Mode: Pushbutton reading every 5 sec.
Outputs:	Visual (Base station and portable): 5 digit readout directly in gammas Analog (Base Station): Potentiometric and Galvanometric Digital (Base Station): 5-BCD characters (1, 2, 4, 8 code)
Power Requirements:	Base Station Mode: 24 V DC or 115/220 V, 50/60 Hz AC Portable Mode: "D" cell batteries (12 each)
Temperature Range:	Consoles and sensors: -40°C to +85°C (-40°F to +185°F)
Accuracy:	±1 gamma through 0°C to +50°C (+32°F to +122°F)
Size:	Base Station Cabinet: 9-1/4" x 16-1/4" x 15-3/4" (23.5 x 41.3 x 40 cm) Portable Console: 3-1/2" x 7" x 11" (9 x 18 x 28 cm)
Weight:	54.5 lbs. (25.0 kg) complete system

EG&G Exploranium
Geometrics Services (Canada) Ltd.
436 Limestone Crescent
Downsview, Ontario
M3J 2S4

MODEL G-856

PROTON PRECESSION MEMORY MAGNETOMETER

Display	Six digit display of magnetic field to resolution of 0.1 gamma or time to nearest second. Additional three-digit display of station or day of year.
Resolution	Typically 0.1 gamma in average conditions. May degrade to lower resolution in weak fields, noisy conditions or high gradients.
Accuracy	One gamma, limited by remnant magnetism in sensor and crystal oscillator accuracy.
Clock	Julian clock with stability of 5 seconds per month at room temperature and 5 seconds per day over the temperature range of -20 to +50 degrees Celsius.
Tuning	Push button tuning from keyboard with current value displayed on request. Tuning range 20 to 90 kilogammas.
Gradient Tolerance	Tolerates gradients to 5000 gammas/meter. When high gradients truncate count interval, maintains partial reading to an accuracy consistent with data.
Cycle Time	Complete field measurement in three seconds in normal operation. Internal switch selection for faster cycle (1.5 seconds) at reduced resolution or longer cycles.
Manual Read	Takes reading on command. Will store data in memory on command at operator's discretion.
Self-Cycle	Internal switch will cause the instrument to self-cycle, storing automatically, for time dependent measurements. Available intervals are 5, 10 and 30 seconds, 1,2,5, and 10 minutes depending on switch position.
Memory	Stores 1,000 readings in portable mode, keeping track of time and station number. In base station operation, records last four digits of field at discrete intervals, allowing storage of over 2,500 readings.
Output	Plays data out in standard RS-232 format at selectable baud rates. Also outputs data in byte parallel, character serial BCD for use with digital recorders.
Inputs	Will accept an external sample command.
Special Functions	An internal switch allows adjustment of polarization time and count time to improve performance in marginal area or improve resolutuon or to speed operation.

cont'd

Physical	Instrument console: 7 x 10½ x 3½ inches (18 x 27 x 9 cm) 6 lbs (2.7 kg) Sensor: 3½ x 5 inches (9 x 13 cm) 4 lbs (1.8 kg) Staff: 1 inch x 8 feet (3 cm x 2.5 m) 2 lbs (1 kg)
Environmental	Meets specifications from 0 to 40 degrees Celsius. Operates satisfactorily from -20 to 50 degrees Celsius. Weatherproof.
Power	Operates from 8 D-cell flashlight batteries (or 12 volts external power). May be operated at 18 volts external power to improve resolution. Power failure or replacement of batteries will not cause loss of data stored in memory.
Standard Accessories	Sensor Staff Chest Harnes Two sets of batteries Operating Manual Applications Manual for Portable Magnetometers
Optional Accessories	RS-232 Interface Cable Rechargeable Battery Pack (mounts inside case in place of normal batteries) and Charger Cold weather battery belt Digital Tape Recorder with Interface Cables

EG & G Canada
Exploranium/Geometrics Division
Unit #1
640 Hardwick Road
Bolton, Ontario LOP 1AO

McPhar VHEM

Vertical Loop - Horizontal Loop Electromagnetic Unit

(1) Vertical Loop Mode

Frequencies:	600 Hz and 2400 Hz
Measurements:	Dip angle in degrees read on a clinometer at a signal null in earphones
Transmitter Orientation:	By sound or by orientation plate on tripod. Levelling by bubble level.

(2) Horizontal Loop Mode

Frequencies:	600 Hz and 2400 Hz
Measurements:	In-phase and out-of-phase measurements made by nulling signal in earphones using potentiometer controls. In-phase and out-of-phase readings are in percentage of the total field at the receiver.
Orientation:	Both receiver and transmitter are held in the horizontal plane.

Headphones:	LT-700 50K ohm tuned crystal
Power Requirements:	45 volts supplied by 30 D size dry cells in a back pack
Size:	Receiver - 52 cm x 15 cm x 6 cm Transmitter - 52 cm x 15 cm x 6 cm Wire Reels - 23 cm x 23 cm x 20 cm Battery Pack - 57 cm x 37 cm x 6 cm
Weight:	Receiver - 3.5 kg Transmitter - 4.5 kg Wire Reels (200 ft) - 5.0 kg (300 ft) - 6.5 kg Battery Pack - 5.0 kg

APPENDIX IV

IP Survey Data and Calculation Worksheets

INTERPRETEX RESOURCES LTD. INDUCED POLARIZATION & RESISTIVITY SURVEY
POLE-DIPOLE ARRAY - pole is north (Pole Dir'n Code E or N = 1, W or S = -1
ELECTRODE PARAMETERS - a = 10 meters, N = 1, 2, 3, 4, 5, & 6

GRID : DEER LAKE (meters = 1, feet = -1) Grid Units Code = 1
LINE : 4900 E (1 = incr, -1 = decr), Pole Dir'n Code = 1
FILE NAME : DL4901 incr/decr P1 Loc. Code = -1 & "a" = 10

(+ = north, - = south) P1 Loc.	Plot Pt.	N	Vp (mV)	I (amps)	Ma (mSec.)	Pa (ohm-m.)	MF	SP
5090	5092.5	1	2760	0.60	54.5	578	94	
5090	5087.5	2	621	0.62	77.9	378	206	
5090	5082.5	3	232	0.64	89.4	273	327	
5090	5077.5	4	147	0.68	100.0	272	368	
5090	5072.5	5	73	0.69	63.9	199	320	
5090	5067.5	6	23	0.69	105.2	88	1196	
5080	5082.5	1	2750	0.58	56.8	596	95	
5080	5077.5	2	448	0.58	90.5	291	311	
5080	5072.5	3	231	0.60	101.9	290	351	
5080	5067.5	4	92	0.60	68.1	193	353	
5080	5062.5	5	26	0.60	105.9	82	1297	
5080	5057.5	6	97	0.60	54.9	427	129	
5070	5072.5	1	2160	0.46	58.2	590	99	
5070	5067.5	2	586	0.48	88.0	460	191	
5070	5062.5	3	128	0.50	77.7	193	403	
5070	5057.5	4	29	0.50	109.4	73	1501	
5070	5052.5	5	105	0.52	56.2	381	148	
5070	5047.5	6	123	0.52	33.5	624	54	
5060	5062.5	1	4720	0.75	54.1	791	68	
5060	5057.5	2	430	0.79	84.2	205	410	
5060	5052.5	3	56	0.81	114.1	52	2189	
5060	5047.5	4	189	0.83	61.5	286	215	
5060	5042.5	5	219	0.85	36.4	486	75	
5060	5037.5	6	315	0.85	50.6	978	52	
5050	5052.5	1	1179	0.42	76.1	353	216	
5050	5047.5	2	45	0.46	125.6	37	3406	
5050	5042.5	3	124	0.48	68.2	195	350	
5050	5037.5	4	140	0.50	41.0	352	117	
5050	5032.5	5	199	0.50	54.3	750	72	
5050	5027.5	6	139	0.50	63.4	734	86	
5040	5042.5	1	93	0.65	143.0	18	7953	
5040	5037.5	2	209	0.68	79.2	116	684	
5040	5032.5	3	234	0.70	48.9	252	194	
5040	5027.5	4	322	0.70	58.7	578	102	
5040	5022.5	5	217	0.70	66.1	584	113	
5040	5017.5	6	159	0.72	65.4	583	112	
5030	5032.5	1	569	0.41	98.5	174	565	
5030	5027.5	2	264	0.41	45.2	243	186	
5030	5022.5	3	323	0.41	54.1	594	91	
5030	5017.5	4	177	0.41	65.5	542	121	
5030	5012.5	5	118	0.43	66.6	517	129	
5030	5007.5	6	82	0.43	64.4	503	128	
5020	5022.5	1	851	0.60	64.5	178	362	
5020	5017.5	2	726	0.60	61.3	456	134	
5020	5012.5	3	338	0.63	70.5	405	174	

5020	5007.5	4	221	0.68	61.8	408	151
5020	5002.5	5	148	0.70	68.1	399	171
5020	4997.5	6	170	0.70	58.1	641	91
5010	5012.5	1	2400	0.51	35.1	591	59
5010	5007.5	2	626	0.51	56.4	463	122
5010	5002.5	3	283	0.53	63.4	403	157
5010	4997.5	4	168	0.53	64.3	398	161
5010	4992.5	5	171	0.53	57.3	608	94
5010	4987.5	6	132	0.53	54.8	657	83
5000	5002.5	1	2480	0.58	37.3	537	69
5000	4997.5	2	671	0.60	53.5	422	127
5000	4992.5	3	325	0.60	56.7	408	139
5000	4987.5	4	294	0.60	52.4	616	85
5000	4982.5	5	213	0.60	50.4	669	75
5000	4977.5	6	83	0.60	56.9	365	156
4990	4992.5	1	2990	0.55	38.7	683	57
4990	4987.5	2	1006	0.57	45.1	665	68
4990	4982.5	3	707	0.59	46.7	904	52
4990	4977.5	4	437	0.60	46.5	915	51
4990	4972.5	5	156	0.60	53.3	490	109
4990	4967.5	6	96	0.60	49.8	422	118
4980	4982.5	1	4270	0.70	41.2	767	54
4980	4977.5	2	2260	0.70	43.1	1217	35
4980	4972.5	3	1220	0.72	43.0	1278	34
4980	4967.5	4	402	0.74	51.3	683	75
4980	4962.5	5	221	0.76	50.0	548	91
4980	4957.5	6	67	0.78	44.6	227	197
4970	4972.5	1	4620	0.50	30.4	1161	26
4970	4967.5	2	1904	0.50	33.1	1436	23
4970	4962.5	3	568	0.50	42.7	857	50
4970	4957.5	4	278	0.52	45.3	672	67
4970	4952.5	5	74	0.52	39.7	268	148
4970	4947.5	6	111	0.52	40.9	563	73
4960	4962.5	1	7140	0.62	22.2	1447	15
4960	4957.5	2	1675	0.64	33.0	987	33
4960	4952.5	3	671	0.66	38.3	767	50
4960	4947.5	4	157	0.68	33.5	290	115
4960	4942.5	5	196	0.70	40.0	528	76
4960	4937.5	6	120	0.70	37.2	452	82
4950	4952.5	1	6300	0.60	21.3	1319	16
4950	4947.5	2	1699	0.60	26.5	1068	25
4950	4942.5	3	320	0.62	23.3	389	60
4950	4937.5	4	323	0.62	27.0	655	41
4950	4932.5	5	193	0.64	28.5	568	50
4940	4942.5	1	6380	0.70	24.0	1145	21
4940	4937.5	2	801	0.72	19.8	419	47
4940	4932.5	3	666	0.74	23.4	679	34
4940	4927.5	4	552	0.76	19.5	913	21
4930	4932.5	1	1616	0.60	10.9	338	32
4930	4927.5	2	875	0.60	19.6	550	36
4930	4922.5	3	610	0.60	18.4	767	24

4920	4922.5	1	2800	0.50	11.9	704	17
4920	4917.5	2	972	0.50	15.2	733	21
4910	4912.5	1	2320	0.52	11	561	20

INTERPRETEX RESOURCES LTD. INDUCED POLARIZATION & RESISTIVITY SURVEY
POLE-DIPOLE ARRAY - pole is north (Pole Dir'n Code E or N = 1, W or S = -1) ELECTRODE PARAMETERS - a = 10 meters, N = 1, 2, 3, 4, 5, & 6

GRID : DEER LAKE
LINE : 4950 E
FILE NAME : DL4951

USER CODES
(meters = 1, feet = -1) Grid Units Code = 1
(1 = incr, -1 = decr), Pole Dir'n Code = 1
incr/decr P1 Loc. Code = -1 & "a" = 10

(+ = north, - = south) P1 Loc.	Plot Pt.	N	Vp (mV)	I (amps)	Ma (mSec.)	Pa (ohm-m.)	MF	SP
5090	5092.5	1	3620	0.72	32.4	632	51	
5090	5087.5	2	1325	0.74	41.3	675	61	
5090	5082.5	3	1111	0.76	38.9	1102	35	
5090	5077.5	4	611	0.78	43.8	984	44	
5090	5072.5	5	302	0.78	78.8	730	108	
5090	5067.5	6	249	0.80	71.4	821	87	
5080	5082.5	1	3220	0.70	42.1	578	73	
5080	5077.5	2	2040	0.70	39.9	1099	36	
5080	5072.5	3	972	0.70	43.7	1047	42	
5080	5067.5	4	413	0.72	78.6	721	109	
5080	5062.5	5	318	0.72	74.3	833	89	
5080	5057.5	6	200	0.72	56.4	733	77	
5070	5072.5	1	5640	0.79	34.3	897	38	
5070	5067.5	2	1896	0.79	34.1	905	38	
5070	5062.5	3	694	0.80	68.8	654	105	
5070	5057.5	4	496	0.80	60.1	779	77	
5070	5052.5	5	293	0.82	52.1	674	77	
5070	5047.5	6	148	0.82	49.9	476	105	
5060	5062.5	1	6110	0.53	31.2	1449	22	
5060	5057.5	2	996	0.55	68.5	683	100	
5060	5052.5	3	549	0.57	69.5	726	96	
5060	5047.5	4	282	0.59	55.1	601	92	
5060	5042.5	5	128	0.59	53.5	409	131	
5060	5037.5	6	165	0.59	52.0	738	70	
5050	5052.5	1	3190	0.53	57.1	756	75	
5050	5047.5	2	1192	0.60	64.1	749	86	
5050	5042.5	3	510	0.60	51.0	641	80	
5050	5037.5	4	180	0.61	60.6	371	163	
5050	5032.5	5	227	0.61	54.6	701	78	
5050	5027.5	6	143	0.62	57.5	609	94	
5040	5042.5	1	5590	0.60	39.2	1171	33	
5040	5037.5	2	1302	0.62	42.0	792	53	
5040	5032.5	3	384	0.64	46.6	452	103	
5040	5027.5	4	337	0.66	52.6	642	82	
5040	5022.5	5	188	0.68	57.8	521	111	
5040	5017.5	6	199	0.68	54.4	772	70	
5030	5032.5	1	5690	0.52	22.9	1375	17	
5030	5027.5	2	1051	0.54	29.6	734	40	
5030	5022.5	3	658	0.56	38.7	886	44	
5030	5017.5	4	284	0.58	48.1	615	78	
5030	5012.5	5	263	0.60	46.6	826	56	
5030	5007.5	6	210	0.60	48.5	924	53	
5020	5022.5	1	6000	0.72	19.4	1047	19	
5020	5017.5	2	1956	0.76	32.9	970	34	
5020	5012.5	3	696	0.79	43.2	664	65	

5020	5007.5	4	584	0.81	43.4	906	48
5020	5002.5	5	448	0.83	43.1	1017	42
5020	4997.5	6	238	0.83	45.5	757	60
5010	5012.5	1	2310	0.32	23.3	907	26
5010	5007.5	2	531	0.34	36.1	589	61
5010	5002.5	3	388	0.36	38.0	813	47
5010	4997.5	4	278	0.38	38.1	919	41
5010	4992.5	5	140	0.38	41.0	694	59
5010	4987.5	6	174	0.38	43.3	1208	36
5000	5002.5	1	1277	0.36	23.7	446	53
5000	4997.5	2	652	0.38	30.1	647	47
5000	4992.5	3	427	0.40	32.1	805	40
5000	4987.5	4	219	0.40	35.2	688	51
5000	4982.5	5	276	0.40	37.8	1301	29
5000	4977.5	6	124	0.40	39.9	818	49
4990	4992.5	1	3610	0.60	16.5	756	22
4990	4987.5	2	1388	0.62	23.8	844	28
4990	4982.5	3	630	0.64	27.9	742	38
4990	4977.5	4	750	0.66	31.0	1428	22
4990	4972.5	5	317	0.68	33.6	879	38
4990	4967.5	6	194	0.68	43.2	753	57
4980	4982.5	1	2900	0.42	14.7	868	17
4980	4977.5	2	931	0.46	20.6	763	27
4980	4972.5	3	1014	0.48	23.7	1593	15
4980	4967.5	4	393	0.50	29.0	988	29
4980	4962.5	5	218	0.50	40.3	822	49
4980	4957.5	6	153	0.50	38.2	808	47
4970	4972.5	1	3650	0.51	11.2	899	12
4970	4967.5	2	2890	0.53	15.6	2056	8
4970	4962.5	3	938	0.55	21.5	1286	17
4970	4957.5	4	442	0.57	35.7	974	37
4970	4952.5	5	285	0.59	34.5	911	38
4970	4947.5	6	204	0.59	41.3	912	45
4960	4962.5	1	6960	0.49	11.5	1785	6
4960	4957.5	2	1641	0.50	16.5	1237	13
4960	4952.5	3	632	0.50	32.6	953	34
4960	4947.5	4	366	0.50	33.0	920	36
4960	4942.5	5	248	0.50	39.2	935	42
4960	4937.5	6	231	0.50	42.2	1219	35
4950	4952.5	1	2800	0.39	12.2	902	14
4950	4947.5	2	799	0.39	30.1	772	39
4950	4942.5	3	406	0.39	31.3	785	40
4950	4937.5	4	262	0.40	36.4	823	44
4950	4932.5	5	234	0.40	40.9	1103	37
4940	4942.5	1	1990	0.38	24.9	658	38
4940	4937.5	2	740	0.38	28.1	734	38
4940	4932.5	3	422	0.38	35.9	837	43
4940	4927.5	4	349	0.40	39.4	1096	36
4930	4932.5	1	2840	0.50	17.4	714	24
4930	4927.5	2	1067	0.50	27.6	804	34
4930	4922.5	3	764	0.50	32.9	1152	29

4920	4922.5	1	2730	0.51	16.6	673	25
4920	4917.5	2	1551	0.51	23.6	1146	21
4910	4912.5	1	4910	0.50	14.3	1234	12

INTERPRETEX RESOURCES LTD. INDUCED POLARIZATION & RESISTIVITY SURVEY
POLE-DIPOLE ARRAY - pole is north (Pole Dir'n Code E or N = 1, W or S = -1
ELECTRODE PARAMETERS - a = 10 meters, N = 1, 2, 3, 4, 5, & 6

GRID : DEER LAKE (meters = 1, feet = -1) Grid Units Code = 1
LINE : 5000 E (1 = incr, -1 = decr), Pole Dir'n Code = 1
FILE NAME : DL5001 incr/decr P1 Loc. Code = -1 & "a" = 10

(+ = north, - = south) P1 Loc.	Plot Pt.	N	Vp (mV)	I (amps)	Ma (mSec.)	Pa (ohm-m.)	MF	SP
5090	5092.5	1	5490	1.00	9.3	690	13	
5090	5087.5	2	3380	1.00	23.2	1274	18	
5090	5082.5	3	1725	1.00	27.5	1301	21	
5090	5077.5	4	653	1.00	32.1	821	39	
5090	5072.5	5	480	1.00	35.5	905	39	
5090	5067.5	6	450	1.00	33.7	1188	28	
5080	5082.5	1	4320	0.48	18.3	1131	16	
5080	5077.5	2	1677	0.48	24.6	1317	19	
5080	5072.5	3	541	0.48	29.7	850	35	
5080	5067.5	4	373	0.48	43.5	977	45	
5080	5062.5	5	334	0.48	32.3	1312	25	
5080	5057.5	6	197	0.48	40.9	1083	38	
5070	5072.5	1	4820	0.73	22.1	830	27	
5070	5067.5	2	1309	0.73	27.9	676	41	
5070	5062.5	3	876	0.73	32.1	905	35	
5070	5057.5	4	764	0.73	31.1	1315	24	
5070	5052.5	5	432	0.73	40.1	1115	36	
5070	5047.5	6	100	0.73	69.4	361	192	
5060	5062.5	1	4070	0.63	14.2	812	17	
5060	5057.5	2	1616	0.66	22.5	923	24	
5060	5052.5	3	1178	0.69	25.7	1287	20	
5060	5047.5	4	622	0.70	36.2	1117	32	
5060	5042.5	5	137	0.70	67.1	369	182	
5060	5037.5	6	104	0.70	60.3	392	154	
5050	5052.5	1	5460	0.62	12.8	1107	12	
5050	5047.5	2	2580	0.65	16.9	1496	11	
5050	5042.5	3	1118	0.68	27.5	1240	22	
5050	5037.5	4	216	0.69	58.9	393	150	
5050	5032.5	5	154	0.69	50.5	421	120	
5050	5027.5	6	400	0.70	43.0	1508	29	
5040	5042.5	1	6900	0.50	11.5	1734	7	
5040	5037.5	2	1719	0.50	22.2	1296	17	
5040	5032.5	3	275	0.50	52.9	415	128	
5040	5027.5	4	175	0.50	46.8	440	106	
5040	5022.5	5	411	0.50	36.9	1549	24	
5040	5017.5	6	229	0.50	38.1	1209	32	
5030	5032.5	1	4400	0.36	21.6	1536	14	
5030	5027.5	2	482	0.38	48.6	478	102	
5030	5022.5	3	271	0.38	40.2	538	75	
5030	5017.5	4	538	0.40	31.0	1690	18	
5030	5012.5	5	281	0.40	31.8	1324	24	
5030	5007.5	6	288	0.40	35.6	1900	19	
5020	5022.5	1	2990	0.60	39.6	626	63	
5020	5017.5	2	1274	0.60	27.7	800	35	
5020	5012.5	3	1910	0.62	20.5	2323	9	

5020	5007.5	4	909	0.62	20.3	1842	11
5020	5002.5	5	802	0.64	25.1	2362	11
5020	4997.5	6	234	0.66	25.7	936	27
5010	5012.5	1	1826	0.39	33.7	588	57
5010	5007.5	2	2250	0.40	23.0	2121	11
5010	5002.5	3	985	0.40	20.3	1857	11
5010	4997.5	4	778	0.40	23.9	2444	10
5010	4992.5	5	216	0.40	24.3	1018	24
5010	4987.5	6	124	0.40	25.0	818	31
5000	5002.5	1	2530	0.30	32.0	1060	30
5000	4997.5	2	961	0.30	23.7	1208	20
5000	4992.5	3	692	0.32	26.0	1630	16
5000	4987.5	4	187	0.32	25.5	734	35
5000	4982.5	5	105	0.32	25.8	619	42
5000	4977.5	6	79	0.32	27.1	651	42
4990	4992.5	1	2090	0.55	30.6	478	64
4990	4987.5	2	1427	0.55	30.1	978	31
4990	4982.5	3	376	0.56	29.4	506	58
4990	4977.5	4	206	0.58	29.6	446	66
4990	4972.5	5	151	0.58	30.0	491	61
4990	4967.5	6	96	0.58	30.7	437	70
4980	4982.5	1	2580	0.32	20.6	1013	20
4980	4977.5	2	550	0.38	24.4	546	45
4980	4972.5	3	272	0.40	25.9	513	51
4980	4967.5	4	186	0.40	27.6	584	47
4980	4962.5	5	115	0.40	27.8	542	51
4980	4957.5	6	118	0.42	26.3	741	35
4970	4972.5	1	1924	0.48	16.6	504	33
4970	4967.5	2	683	0.50	22.1	515	43
4970	4962.5	3	407	0.52	24.4	590	41
4970	4957.5	4	214	0.54	21.5	498	43
4970	4952.5	5	237	0.58	19.6	770	25
4970	4947.5	6	149	0.60	28.9	655	44
4960	4962.5	1	2500	0.60	11.6	524	22
4960	4957.5	2	1020	0.60	17.3	641	27
4960	4952.5	3	507	0.60	20.0	637	31
4960	4947.5	4	438	0.60	19.5	917	21
4960	4942.5	5	259	0.60	24.9	814	31
4960	4937.5	6	312	0.60	37.6	1372	27
4950	4952.5	1	1272	0.49	11.6	326	36
4950	4947.5	2	577	0.49	16.0	444	36
4950	4942.5	3	455	0.49	16.4	700	23
4950	4937.5	4	257	0.49	21.6	659	33
4950	4932.5	5	303	0.49	35.0	1166	30
4940	4942.5	1	1038	0.45	10.1	290	35
4940	4937.5	2	652	0.47	12.5	523	24
4940	4932.5	3	335	0.49	17.8	515	35
4940	4927.5	4	381	0.49	30.8	977	32
4930	4932.5	1	1595	0.52	6.3	385	16
4930	4927.5	2	663	0.54	11.4	463	25
4930	4922.5	3	702	0.56	25.0	945	26

4920	4922.5	1	1094	0.50	6.6	275	24
4920	4917.5	2	1131	0.54	19.3	790	24
4910	4912.5	1	2120	0.48	11.6	555	21

INTERPRETEX RESOURCES LTD. INDUCED POLARIZATION & RESISTIVITY SURVEY
POLE-DIPOLE ARRAY - pole is north (Pole Dir'n Code E or N = 1, W or S = -1
ELECTRODE PARAMETERS - a = 10 meters, N = 1, 2, 3, 4, 5, & 6

GRID : DEER LAKE
LINE : 5050 E
FILE NAME : DL5051

USER CODES
(meters = 1, feet = -1) Grid Units Code = 1
(1 = incr, -1 = decr), Pole Dir'n Code = 1
incr/decr P1 Loc. Code = -1 & "a" = 10

(+ = north, - = south) P1 Loc.	Plot Pt.	N	Vp (mV)	I (amps)	Ma (mSec.)	Pa (ohm-m.)	MF	SP
5090	5092.5	1	1403	0.45	26.1	392	67	
5090	5087.5	2	567	0.45	28.7	475	60	
5090	5082.5	3	430	0.45	39.4	720	55	
5090	5077.5	4	105	0.45	30.6	293	104	
5090	5072.5	5	82	0.45	35.5	343	103	
5090	5067.5	6	112	0.45	33.5	657	51	
5080	5082.5	1	3320	0.45	18.1	927	20	
5080	5077.5	2	1663	0.47	31.0	1334	23	
5080	5072.5	3	258	0.49	28.4	397	72	
5080	5067.5	4	170	0.49	33.5	436	77	
5080	5062.5	5	209	0.49	32.6	804	41	
5080	5057.5	6	191	0.49	30.8	1029	30	
5070	5072.5	1	8570	0.58	20.0	1857	11	
5070	5067.5	2	792	0.58	22.9	515	44	
5070	5062.5	3	440	0.60	27.3	553	49	
5070	5057.5	4	478	0.60	27.8	1001	28	
5070	5052.5	5	402	0.62	26.8	1222	22	
5070	5047.5	6	210	0.62	28.9	894	32	
5060	5062.5	1	2020	0.50	22.7	508	45	
5060	5057.5	2	795	0.50	26.7	599	45	
5060	5052.5	3	700	0.50	27.2	1056	26	
5060	5047.5	4	528	0.50	25.4	1327	19	
5060	5042.5	5	287	0.50	24.2	1082	22	
5060	5037.5	6	212	0.50	28.3	1119	25	
5050	5052.5	1	2920	0.50	24.3	734	33	
5050	5047.5	2	1661	0.50	21.9	1252	17	
5050	5042.5	3	1044	0.50	28.0	1574	18	
5050	5037.5	4	518	0.50	25.6	1302	20	
5050	5032.5	5	370	0.50	29.1	1395	21	
5050	5027.5	6	237	0.50	15.9	1251	13	
5040	5042.5	1	3630	0.50	22.2	912	24	
5040	5037.5	2	1718	0.52	23.7	1246	19	
5040	5032.5	3	786	0.54	22.4	1097	20	
5040	5027.5	4	459	0.56	26.1	1030	25	
5040	5022.5	5	356	0.58	48.2	1157	42	
5040	5017.5	6	245	0.60	39.5	1078	37	
5030	5032.5	1	2800	0.50	21.1	704	30	
5030	5027.5	2	975	0.50	20.8	735	28	
5030	5022.5	3	636	0.50	24.4	959	25	
5030	5017.5	4	381	0.50	46.8	958	49	
5030	5012.5	5	247	0.50	38.7	931	42	
5030	5007.5	6	220	0.50	29.7	1161	26	
5020	5022.5	1	2120	0.38	10.3	701	15	
5020	5017.5	2	1039	0.38	14.7	1031	14	
5020	5012.5	3	554	0.38	38.1	1099	35	

5020	5007.5	4	320	0.40	34.7	1005	35
5020	5002.5	5	273	0.40	24.7	1286	19
5020	4997.5	6	102	0.40	23.2	673	34
5010	5012.5	1	4260	0.48	7.1	1115	6
5010	5007.5	2	1552	0.48	28.4	1219	23
5010	5002.5	3	725	0.50	31.0	1093	28
5010	4997.5	4	534	0.50	22.0	1342	16
5010	4992.5	5	193	0.50	20.0	728	27
5010	4987.5	6	181	0.50	21.0	955	22
5000	5002.5	1	3660	0.52	21.6	884	24
5000	4997.5	2	1348	0.52	29.1	977	30
5000	4992.5	3	805	0.52	21.5	1167	18
5000	4987.5	4	280	0.52	18.4	677	27
5000	4982.5	5	258	0.52	19.9	935	21
5000	4977.5	6	163	0.52	21.6	827	26
4990	4992.5	1	1737	0.32	25.1	682	37
4990	4987.5	2	760	0.32	22.0	895	25
4990	4982.5	3	247	0.34	18.3	548	33
4990	4977.5	4	222	0.34	20.0	821	24
4990	4972.5	5	138	0.34	20.8	765	27
4990	4967.5	6	117	0.34	21.4	908	24
4980	4982.5	1	2960	0.70	22.0	531	41
4980	4977.5	2	735	0.70	19.7	396	50
4980	4972.5	3	625	0.72	21.8	654	33
4980	4967.5	4	376	0.74	23.1	639	36
4980	4962.5	5	215	0.76	23.8	533	45
4980	4957.5	6	249	0.78	24.7	842	29
4970	4972.5	1	1152	0.50	10.1	290	35
4970	4967.5	2	673	0.50	15.4	507	30
4970	4962.5	3	367	0.50	18.4	553	33
4970	4957.5	4	286	0.50	19.4	719	27
4970	4952.5	5	212	0.50	21.4	799	27
4970	4947.5	6	128	0.50	28.4	676	42
4960	4962.5	1	1404	0.55	9.0	321	28
4960	4957.5	2	653	0.55	13.0	448	29
4960	4952.5	3	470	0.55	14.6	644	23
4960	4947.5	4	323	0.55	17.3	738	23
4960	4942.5	5	187	0.55	24.5	641	38
4960	4937.5	6	125	0.55	45.1	600	75
4950	4952.5	1	1228	0.60	8.7	257	34
4950	4947.5	2	749	0.60	10.9	471	23
4950	4942.5	3	469	0.60	13.9	589	24
4950	4937.5	4	253	0.60	21.5	530	41
4950	4932.5	5	165	0.60	42.3	518	82
4940	4942.5	1	1395	0.50	5.9	351	17
4940	4937.5	2	668	0.50	9.1	504	18
4940	4932.5	3	313	0.50	17.1	472	36
4940	4927.5	4	195	0.52	38.1	471	81
4930	4932.5	1	1110	0.42	5.5	332	17
4930	4927.5	2	386	0.42	12.3	346	36
4930	4922.5	3	223	0.42	23.3	400	58

4920	4922.5	1	859	0.50	5.9	216	27
4920	4917.5	2	414	0.50	25.7	312	82
4910	4912.5	1	910	0.32	17.2	357	48

INTERPRETEX RESOURCES LTD. INDUCED POLARIZATION & RESISTIVITY SURVEY
POLE-DIPOLE ARRAY - pole is north (Pole Dir'n Code E or N = 1, W or S = -1
ELECTRODE PARAMETERS - a = 30 meters, N = 1, 2, 3, 4, 5, & 6

GRID : DEER LAKE (meters = 1, feet = -1) Grid Units Code = 1
LINE : 4900 E (1 = incr, -1 = decr), Pole Dir'n Code = 1
FILE NAME : DL4903 incr/decr P1 Loc. Code = -1 & "a" = 30

(+ = north, - = south) P1 Loc.	Plot Pt.	N	Vp (mV)	I (amps)	Ma (mSec.)	Pa (ohm-m.)	MF	SP
5120	5127.5	1	1431	0.62	42.1	870	48	
5120	5112.5	2	393	0.64	61.6	694	89	
5120	5097.5	3	66	0.66	87.0	226	385	
5120	5082.5	4	177	0.68	43.5	981	44	
5120	5067.5	5	193	0.68	55.6	1605	35	
5120	5052.5	6	134	0.68	45.2	1560	29	
5090	5097.5	1	844	0.62	56.3	513	110	
5090	5082.5	2	106	0.64	83.7	187	447	
5090	5067.5	3	249	0.66	41.6	853	49	
5090	5052.5	4	254	0.68	54.4	1408	39	
5090	5037.5	5	172	0.68	45.1	1430	32	
5090	5022.5	6	48	0.69	45.3	551	82	
5060	5067.5	1	279	0.60	92.9	175	530	
5060	5052.5	2	387	0.60	44.3	729	61	
5060	5037.5	3	329	0.62	57.6	1200	48	
5060	5022.5	4	212	0.62	47.4	1289	37	
5060	5007.5	5	57	0.64	46.9	504	93	
5060	4992.5	6	61	0.66	43.4	732	59	
5030	5037.5	1	495	0.50	55.4	373	148	
5030	5022.5	2	338	0.50	63.5	765	83	
5030	5007.5	3	207	0.52	52.3	900	58	
5030	4992.5	4	55	0.52	50.5	399	127	
5030	4977.5	5	58	0.54	46.7	607	77	
5030	4962.5	6	32	0.54	48.7	469	104	
5000	5007.5	1	649	0.60	69.1	408	169	
5000	4992.5	2	330	0.65	57.2	574	100	
5000	4977.5	3	81	0.69	53.9	266	203	
5000	4962.5	4	83	0.70	48.5	447	109	
5000	4947.5	5	45	0.70	51.2	364	141	
4970	4977.5	1	1256	0.55	46.9	861	54	
4970	4962.5	2	169	0.58	48.1	330	146	
4970	4947.5	3	135	0.60	42.7	509	84	
4970	4932.5	4	65	0.60	45.2	408	111	
4940	4947.5	1	707	0.50	36.9	533	69	
4940	4932.5	2	323	0.50	37.2	731	51	
4940	4917.5	3	124	0.52	41.9	539	78	
4910	4917.5	1	1082	0.50	21.7	816	27	
4910	4902.5	2	281	0.51	30.6	623	49	

4880	4887.5	1	694	0.50	27.2	523	52

INTERPRETEX RESOURCES LTD. INDUCED POLARIZATION & RESISTIVITY SURVEY
POLE-DIPOLE ARRAY - pole is north (Pole Dir'n Code E or N = 1, W or S = -1
ELECTRODE PARAMETERS - a = 30 meters, N = 1, 2, 3, 4, 5, & 6

GRID : DEER LAKE (meters = 1, feet = -1) Grid Units Code = 1
LINE : 4950 E (1 = incr, -1 = decr), Pole Dir'n Code = 1
FILE NAME : DL4953 incr/decr P1 Loc. Code = -1 & "a" = 30

USER CODES

(+ = north, - = south) P1 Loc.	Plot Pt.	N	Vp (mV)	I (amps)	Ma (mSec.)	Pa (ohm-m.)	MF	SP
5120	5127.5	1	1242	0.42	31.3	1115	28	
5120	5112.5	2	394	0.44	35.2	1013	35	
5120	5097.5	3	178	0.44	65.4	915	71	
5120	5082.5	4	112	0.46	46.5	918	51	
5120	5067.5	5	114	0.48	44.9	1343	33	
5120	5052.5	6	63	0.48	48.9	1039	47	
5090	5097.5	1	1168	0.60	31.7	734	43	
5090	5082.5	2	448	0.62	61.5	817	75	
5090	5067.5	3	235	0.66	47.3	805	59	
5090	5052.5	4	226	0.68	45.6	1253	36	
5090	5037.5	5	124	0.70	49.4	1002	49	
5090	5022.5	6	42	0.70	59.4	475	125	
5060	5067.5	1	1488	0.62	57.6	905	64	
5060	5052.5	2	419	0.66	52.8	718	74	
5060	5037.5	3	326	0.68	50.2	1084	46	
5060	5022.5	4	175	0.70	53.5	942	57	
5060	5007.5	5	58	0.70	65.6	469	140	
5060	4992.5	6	49	0.70	59.4	554	107	
5030	5037.5	1	931	0.60	54.3	585	93	
5030	5022.5	2	430	0.62	54.9	784	70	
5030	5007.5	3	223	0.64	58.8	788	75	
5030	4992.5	4	73	0.66	71.3	417	171	
5030	4977.5	5	58	0.68	64.2	482	133	
5030	4962.5	6	45	0.68	44.1	524	84	
5000	5007.5	1	1625	0.78	43.2	785	55	
5000	4992.5	2	662	0.80	47.8	936	51	
5000	4977.5	3	204	0.82	58.2	563	103	
5000	4962.5	4	134	0.84	59.6	601	99	
5000	4947.5	5	82	0.86	43.4	539	80	
4970	4977.5	1	1677	0.62	30.3	1020	30	
4970	4962.5	2	417	0.65	42.9	726	59	
4970	4947.5	3	229	0.69	49.1	751	65	
4970	4932.5	4	113	0.70	35.0	609	58	
4940	4947.5	1	1124	0.48	36.4	883	41	
4940	4932.5	2	481	0.50	42.5	1088	39	
4940	4917.5	3	190	0.50	30.1	860	35	
4910	4917.5	1	1863	0.71	34.3	989	35	
4910	4902.5	2	495	0.73	25.1	767	33	

4880	4887.5	1	1346	0.60	15.3	846	18

INTERPRETEX RESOURCES LTD. INDUCED POLARIZATION & RESISTIVITY SURVEY
POLE-DIPOLE ARRAY - pole is north (Pole Dir'n Code E or N = 1, W or S = -1
ELECTRODE PARAMETERS - a = 30 meters, N = 1, 2, 3, 4, 5, & 6

GRID : DEER LAKE (meters = 1, feet = -1) Grid Units Code = 1
LINE : 5000 E (1 = incr, -1 = decr), Pole Dir'n Code = 1
FILE NAME : DL5003 incr/decr P1 Loc. Code = -1 & "a" = 30

(+ = north, - = south) P1 Loc.	Plot Pt.	N	Vp (mV)	I (amps)	Ma (mSec.)	Pa (ohm-m.)	MF	SP
5120	5127.5	1	674	0.82	26.8	310	86	
5120	5112.5	2	216	0.82	36.4	298	122	
5120	5097.5	3	201	0.82	37.3	554	67	
5120	5082.5	4	78	0.82	47.5	359	132	
5120	5067.5	5	104	0.82	50.2	717	70	
5120	5052.5	6	31	0.82	41.3	299	138	
5090	5097.5	1	2080	0.65	29.1	1206	24	
5090	5082.5	2	552	0.70	39.1	892	44	
5090	5067.5	3	179	0.74	50.0	547	91	
5090	5052.5	4	214	0.77	54.1	1048	52	
5090	5037.5	5	62	0.79	49.2	444	111	
5090	5022.5	6	36	0.79	44.6	361	124	
5060	5067.5	1	1723	0.61	31.4	1065	29	
5060	5052.5	2	393	0.61	46.5	729	64	
5060	5037.5	3	362	0.63	52.4	1300	40	
5060	5022.5	4	94	0.63	47.5	562	84	
5060	5007.5	5	51	0.63	42.7	458	93	
5060	4992.5	6	40	0.63	66.7	503	133	
5030	5037.5	1	1502	0.70	32.9	809	41	
5030	5022.5	2	891	0.70	47.6	1440	33	
5030	5007.5	3	200	0.72	44.1	628	70	
5030	4992.5	4	105	0.74	40.4	535	76	
5030	4977.5	5	78	0.74	65.2	596	109	
5030	4962.5	6	17	0.74	60.3	182	332	
5000	5007.5	1	3040	0.52	24.9	2204	11	
5000	4992.5	2	404	0.54	26.9	846	32	
5000	4977.5	3	175	0.56	29.2	707	41	
5000	4962.5	4	122	0.58	54.4	793	69	
5000	4947.5	5	21	0.60	59.6	198	301	
4970	4977.5	1	914	0.70	29.7	492	60	
4970	4962.5	2	344	0.70	30.5	556	55	
4970	4947.5	3	224	0.70	55.0	724	76	
4970	4932.5	4	35	0.70	59.2	188	314	
4940	4947.5	1	888	0.45	20.9	744	28	
4940	4932.5	2	431	0.45	45.6	1083	42	
4940	4917.5	3	47	0.45	60.2	236	255	
4910	4917.5	1	1153	0.50	33.8	869	39	
4910	4902.5	2	89	0.50	62.4	201	310	

4880	4887.5	1	217	0.53	69.1	154	448

INTERPRETEX RESOURCES LTD. INDUCED POLARIZATION & RESISTIVITY SURVEY
POLE-DIPOLE ARRAY - pole is north (Pole Dir'n Code E or N = 1, W or S = -1
ELECTRODE PARAMETERS - a = 30 meters, N = 1, 2, 3, 4, 5, & 6

GRID : DEER LAKE (meters = 1, feet = -1) Grid Units Code = 1
LINE : 5050 E (1 = incr, -1 = decr), Pole Dir'n Code = 1
FILE NAME : DL5053 incr/decr P1 Loc. Code = -1 & "a" = 30

USER CODES

(+ = north, - = south) P1 Loc.	Plot Pt.	N	Vp (mV)	I (amps)	Ma (mSec.)	Pa (ohm-m.)	MF	SP
5120	5127.5	1	927	0.55	36.8	635	58	
5120	5112.5	2	495	0.60	36.9	933	40	
5120	5097.5	3	140	0.60	34.0	528	64	
5120	5082.5	4	146	0.62	36.0	888	41	
5120	5067.5	5	71	0.62	47.7	648	74	
5120	5052.5	6	53	0.64	60.2	656	92	
5090	5097.5	1	1259	0.70	33.8	678	50	
5090	5082.5	2	277	0.70	32.2	448	72	
5090	5067.5	3	257	0.70	33.1	830	40	
5090	5052.5	4	116	0.70	45.5	625	73	
5090	5037.5	5	48	0.70	34.5	388	89	
5090	5022.5	6	44	0.70	40.3	498	81	
5060	5067.5	1	785	0.65	33.0	455	72	
5060	5052.5	2	496	0.67	31.3	837	37	
5060	5037.5	3	215	0.67	45.8	726	63	
5060	5022.5	4	77	0.67	34.8	433	80	
5060	5007.5	5	54	0.67	40.4	456	89	
5060	4992.5	6	28	0.69	66.6	321	207	
5030	5037.5	1	1932	0.50	27.2	1457	19	
5030	5022.5	2	594	0.50	43.2	1344	32	
5030	5007.5	3	166	0.52	32.3	722	45	
5030	4992.5	4	102	0.52	36.5	739	49	
5030	4977.5	5	46	0.52	66.8	500	134	
5030	4962.5	6	21	0.54	48.4	308	157	
5000	5007.5	1	1960	0.62	34.3	1192	29	
5000	4992.5	2	420	0.62	24.6	766	32	
5000	4977.5	3	231	0.62	30.1	843	36	
5000	4962.5	4	92	0.62	62.0	559	111	
5000	4947.5	5	38	0.62	46.8	347	135	
4970	4977.5	1	971	0.58	19.7	631	31	
4970	4962.5	2	464	0.60	23.8	875	27	
4970	4947.5	3	162	0.60	56.6	611	93	
4970	4932.5	4	63	0.62	42.6	383	111	
4940	4947.5	1	1369	0.79	17.2	653	26	
4940	4932.5	2	371	0.80	53.5	524	102	
4940	4917.5	3	127	0.80	41.4	359	115	
4910	4917.5	1	751	0.80	44.1	354	125	
4910	4902.5	2	192	0.80	39.5	271	146	

4880	4887.5	1	352	0.90	44.5	147	302

INTERPRETEX RESOURCES LTD. INDUCED POLARIZATION & RESISTIVITY SURVEY
POLE-DIPOLE ARRAY - pole is south (Pole Dir'n Code E or N = 1, W or S = -1
ELECTRODE PARAMETERS - a = 75 meters, N = 1, 2, 3, 4, 5, & 6

GRID : HAIDA (meters = 1, feet = -1) Grid Units Code = 1
LINE : 1300 W (1 = incr, -1 = decr), Pole Dir'n Code = -1
FILE NAME : H13w75 incr/decr P1 Loc. Code = 1 & "a" = 75

(+ = north, - = south) P1 Loc.	Plot Pt.	N	Vp (mV)	I (amps)	Ma (mSec.)	Pa (ohm-m.)	MF	SP
-2075	-2093.75	1	1159	1.15	27.4	950	29	
-2075	-2056.25	2	340	1.15	27.0	836	32	
-2075	-2018.75	3	288	1.15	16.9	1416	12	
-2075	-1981.25	4	118	1.15	20.9	967	22	
-2075	-1943.75	5	102	1.15	7.6	1254	6	
-2075	-1906.25	6	68	1.15	31.3	1170	27	
-2000	-2018.75	1	394	0.80	47.3	464	102	
-2000	-1981.25	2	271	0.82	31.7	934	34	
-2000	-1943.75	3	102	0.82	29.4	703	42	
-2000	-1906.25	4	77	0.82	15.4	885	17	
-2000	-1868.75	5	53	0.84	36.5	892	41	
-2000	-1831.25	6	21	0.84	47.5	495	96	
-1925	-1943.75	1	803	0.64	32.6	1183	28	
-1925	-1906.25	2	202	0.64	27.6	892	31	
-1925	-1868.75	3	102	0.66	26.1	874	30	
-1925	-1831.25	4	64	0.68	43.0	887	48	
-1925	-1793.75	5	25	0.68	56.9	520	109	
-1925	-1756.25	6	11	0.68	108.6	320	339	
-1850	-1868.75	1	352	0.48	32.1	691	46	
-1850	-1831.25	2	119	0.50	30.2	673	45	
-1850	-1793.75	3	69	0.50	46.9	780	60	
-1850	-1756.25	4	25	0.50	56.0	471	119	
-1850	-1718.75	5	12	0.52	75.8	326	232	
-1850	-1681.25	6	8.4	0.78	83.0	213	389	
-1775	-1793.75	1	468	0.90	34.2	490	70	
-1775	-1756.25	2	247	0.97	49.3	720	68	
-1775	-1718.75	3	84	1.00	58.5	475	123	
-1775	-1681.25	4	35	1.00	78.3	330	237	
-1775	-1643.75	5	16	1.03	82.1	220	374	
-1775	-1606.25	6	23	1.03	70.9	442	160	
-1700	-1718.75	1	582	0.82	53.9	669	81	
-1700	-1681.25	2	142	0.92	65.4	436	150	
-1700	-1643.75	3	56	0.99	81.2	320	254	
-1700	-1606.25	4	23	1.00	87.9	217	405	
-1700	-1568.75	5	31	1.00	75.0	438	171	
-1625	-1643.75	1	379	0.68	54.1	525	103	
-1625	-1606.25	2	101	0.76	69.3	376	184	
-1625	-1568.75	3	34	0.76	75.7	253	299	
-1625	-1531.25	4	40	0.76	60.8	496	123	
-1550	-1568.75	1	333	0.82	78.7	383	206	
-1550	-1531.25	2	90	0.86	82.7	296	279	
-1550	-1493.75	3	92	0.90	71.2	578	123	

-1475	-1493.75	1	219	0.72	84.1	287	293
-1475	-1456.25	2	165	0.76	69.8	614	114
-1400	-1418.75	1	357	0.50	76.8	673	114

INTERPRETEX RESOURCES LTD. INDUCED POLARIZATION & RESISTIVITY SURVEY
POLE-DIPOLE ARRAY - pole is south (Pole Dir'n Code E or N = 1, W or S = -1
ELECTRODE PARAMETERS - a = 75 meters, N = 1, 2, 3, 4, 5, & 6

GRID : HAIDA
LINE : 1500 W
FILE NAME : H15W75

USER CODES
(meters = 1, feet = -1) Grid Units Code = 1
(1 = incr, -1 = decr), Pole Dir'n Code = -1
incr/decr P1 Loc. Code = 1 & "a" = 75

(+ = north, - = south) P1 Loc.	Plot Pt.	N	Vp (mV)	I (amps)	Ma (mSec.)	Pa (ohm-m.)	MF	SP
-2000	-2018.75	1	577	1.05	28.5	518	55	
-2000	-1981.25	2	263	1.05	25.0	708	35	
-2000	-1943.75	3	152	1.07	27.6	803	34	
-2000	-1906.25	4	115	1.07	15.2	1013	15	
-2000	-1868.75	5	48	1.07	34.3	634	54	
-2000	-1831.25	6	27	1.07	61.2	499	123	
-1925	-1943.75	1	639	0.90	40.8	669	61	
-1925	-1906.25	2	259	0.94	16.6	779	21	
-1925	-1868.75	3	166	0.98	22.3	958	23	
-1925	-1831.25	4	64	1.02	40.0	591	68	
-1925	-1793.75	5	35	1.04	62.9	476	132	
-1925	-1756.25	6	13	1.05	62.4	245	255	
-1850	-1868.75	1	618	0.85	23.6	685	34	
-1850	-1831.25	2	331	0.95	28.2	985	29	
-1850	-1793.75	3	106	1.00	43.7	599	73	
-1850	-1756.25	4	54	1.04	67.3	489	138	
-1850	-1718.75	5	19	1.06	65.2	253	257	
-1850	-1681.25	6	15	1.07	78.2	277	282	
-1775	-1793.75	1	305	0.40	35.4	719	49	
-1775	-1756.25	2	78	0.42	48.1	525	92	
-1775	-1718.75	3	34	0.42	72.2	458	158	
-1775	-1681.25	4	16	0.69	68.9	219	315	
-1775	-1643.75	5	13	0.70	81.7	263	311	
-1775	-1606.25	6	10	0.71	84.9	279	305	
-1700	-1718.75	1	1186	1.00	44.5	1118	40	
-1700	-1681.25	2	308	1.00	74.8	871	86	
-1700	-1643.75	3	70	1.02	68.9	388	178	
-1700	-1606.25	4	42	1.02	78.3	388	202	
-1700	-1568.75	5	27	1.02	84.3	374	225	
-1700	-1531.25	6	24	1.04	70.5	457	154	
-1625	-1643.75	1	562	0.70	77.8	757	103	
-1625	-1606.25	2	105	0.72	72.5	412	176	
-1625	-1568.75	3	54	0.72	78.1	424	184	
-1625	-1531.25	4	31	0.74	86.6	395	219	
-1625	-1493.75	5	27	0.76	72.9	502	145	
-1550	-1568.75	1	163	0.62	76.6	248	309	
-1550	-1531.25	2	64	0.64	77.4	283	274	
-1550	-1493.75	3	36	0.64	83.3	318	262	
-1550	-1456.25	4	29	0.66	69.6	414	168	
-1475	-1493.75	1	130	0.73	85.8	168	511	
-1475	-1456.25	2	57	0.73	90.6	221	410	
-1475	-1418.75	3	46	0.75	77.3	347	223	

-1400	-1418.75	1	147	0.86	99.9	161	620
-1400	-1381.25	2	101	0.94	84.7	304	279
-1325	-1343.75	1	210	0.64	83.8	309	271

INTERPRETEX RESOURCES LTD. INDUCED POLARIZATION & RESISTIVITY SURVEY
POLE-DIPOLE ARRAY - pole is south (Pole Dir'n Code E or N = 1, W or S = -1
ELECTRODE PARAMETERS - a = 75 meters, N = 1, 2, 3, 4, 5, & 6

GRID : HAIDA
LINE : 1700 W
FILE NAME : H17w75

USER CODES
(meters = 1, feet = -1) Grid Units Code = 1
(1 = incr, -1 = decr), Pole Dir'n Code = -1
incr/decr P1 Loc. Code = 1 & "a" = 75

(+ = north, - = south) P1 Loc.	Plot Pt.	N	Vp (mV)	I (amps)	Ma (mSec.)	Pa (ohm-m.)	MF	SP
-1925	-1943.75	1	389	1.03	34.5	356	97	
-1925	-1906.25	2	199	1.06	36.5	531	69	
-1925	-1868.75	3	166	1.06	28.2	886	32	
-1925	-1831.25	4	103	1.07	29.5	907	33	
-1925	-1793.75	5	77	1.07	22.7	1017	22	
-1925	-1756.25	6	65	1.07	15.6	1202	13	
-1850	-1868.75	1	409	1.04	32.2	371	87	
-1850	-1831.25	2	281	1.04	23.1	764	30	
-1850	-1793.75	3	142	1.04	27.0	772	35	
-1850	-1756.25	4	100	1.04	18.8	906	21	
-1850	-1718.75	5	19	1.04	62.0	258	240	
-1850	-1681.25	6	24	1.04	52.2	457	114	
-1775	-1793.75	1	971	0.75	31.5	1220	26	
-1775	-1756.25	2	264	0.77	44.3	969	46	
-1775	-1718.75	3	150	0.79	28.6	1074	27	
-1775	-1681.25	4	26	0.80	69.4	306	227	
-1775	-1643.75	5	29	0.80	56.6	512	110	
-1775	-1606.25	6	8	0.81	65.9	195	337	
-1700	-1718.75	1	857	0.70	46.7	1154	40	
-1700	-1681.25	2	315	0.70	34.4	1272	27	
-1700	-1643.75	3	48	0.72	73.7	377	195	
-1700	-1606.25	4	48	0.74	61.1	611	100	
-1700	-1568.75	5	12	0.76	65.1	223	292	
-1700	-1531.25	6	15	0.78	77.5	381	204	
-1625	-1643.75	1	1191	0.80	42.2	1403	30	
-1625	-1606.25	2	132	0.84	79.6	444	179	
-1625	-1568.75	3	109	0.86	64.5	717	90	
-1625	-1531.25	4	24	0.88	65.1	257	253	
-1625	-1493.75	5	27	0.90	74.7	424	176	
-1625	-1456.25	6	11	0.90	55.9	242	231	
-1550	-1568.75	1	485	1.00	88.9	457	194	
-1550	-1531.25	2	269	1.00	72.6	761	95	
-1550	-1493.75	3	50	1.00	70.3	283	249	
-1550	-1456.25	4	52	1.00	81.7	490	167	
-1550	-1418.75	5	20	1.00	63.1	283	223	
-1475	-1493.75	1	339	0.62	80.3	515	156	
-1475	-1456.25	2	50	0.64	71.7	221	325	
-1475	-1418.75	3	49	0.66	84.6	420	202	
-1475	-1381.25	4	18	0.68	66.1	249	265	
-1400	-1418.75	1	726	0.72	81.3	950	86	
-1400	-1381.25	2	64	0.72	89.8	251	357	
-1400	-1343.75	3	23	0.72	70.0	181	388	

-1325	-1343.75	1	90	0.52	101.5	163	622
-1325	-1306.25	2	24	0.56	81.4	121	672
-1250	-1268.75	1	241	0.65	63.5	349	182

INTERPRETEX RESOURCES LTD. INDUCED POLARIZATION & RESISTIVITY SURVEY
POLE-DIPOLE ARRAY - pole is east (Pole Dir'n Code E or N = 1, W or S = -1)
ELECTRODE PARAMETERS - a = 75 meters, N = 1, 2, 3, 4, 5, & 6

GRID : HAIDA (meters = 1, feet = -1) Grid Units Code = 1
LINE : 9999 N (1 = incr, -1 = decr), Pole Dir'n Code = 1
FILE NAME : H-TL-A incr/decr P1 Loc. Code = -1 & "a" = 75

USER CODES

(+ = east, - = west) P1 Loc.	Plot Pt.	N	Vp (mV)	I (amps)	Ma (mSec.)	Pa (ohm-m.)	MF	SP
1050	1068.75	1	275	0.68	34.2	381	90	
1050	1031.25	2	169	0.72	32.1	664	48	
1050	993.75	3	76	0.74	29.5	581	51	
1050	956.25	4	44	0.75	26.5	553	48	
1050	918.75	5	28	0.77	31.6	514	61	
1050	881.25	6	17	0.77	33.2	437	76	
975	993.75	1	761	0.99	35.5	724	49	
975	956.25	2	205	0.99	33.8	585	58	
975	918.75	3	99	0.99	29.2	565	52	
975	881.25	4	56	0.99	33.5	533	63	
975	843.75	5	30	1.00	25.9	424	61	
975	806.25	6	28	0.90	34.0	616	55	
900	918.75	1	505	1.00	40.3	476	85	
900	881.25	2	245	1.03	39.6	673	59	
900	843.75	3	121	1.05	40.2	652	62	
900	806.25	4	52	1.05	42.4	467	91	
900	768.75	5	53	1.06	28.3	707	40	
900	731.25	6	39	1.08	19.5	715	27	
825	843.75	1	482	0.68	37.7	668	56	
825	806.25	2	168	0.70	45.1	679	66	
825	768.75	3	55	0.72	46.9	432	109	
825	731.25	4	50	0.72	34.3	654	52	
825	693.75	5	35	0.72	24.4	687	36	
825	656.25	6	17	0.72	46.5	467	100	
750	768.75	1	595	0.62	36.1	904	40	
750	731.25	2	99	0.64	75.9	437	174	
750	693.75	3	78	0.68	38.3	649	59	
750	656.25	4	51	0.68	29.0	707	41	
750	618.75	5	22	0.69	50.4	451	112	
750	581.25	6	19	0.70	56.2	537	105	
675	693.75	1	377	0.62	33.3	573	58	
675	656.25	2	146	0.66	45.0	625	72	
675	618.75	3	82	0.68	35.9	682	53	
675	581.25	4	34	0.70	55.5	458	121	
675	543.75	5	27	0.72	60.6	530	114	
675	506.25	6	9.4	0.74	77.1	251	307	
600	618.75	1	414	0.70	44.3	557	79	
600	581.25	2	150	0.72	42.1	589	71	
600	543.75	3	54	0.78	61.4	391	157	
600	506.25	4	42	0.80	65.5	495	132	
600	468.75	5	14	0.81	82.0	244	336	
600	431.25	6	14	0.82	81.3	338	241	
525	543.75	1	383	0.58	40.1	622	64	
525	506.25	2	93	0.59	58.7	446	132	
525	468.75	3	63	0.60	63.4	594	107	

525	431.25	4	18	0.62	78.7	274	288
525	393.75	5	17	0.62	71.9	388	185
525	356.25	6	13	0.64	56.7	402	141
450	468.75	1	507	0.66	63.7	724	88
450	431.25	2	237	0.68	67.0	985	68
450	393.75	3	58	0.72	78.5	456	172
450	356.25	4	48	0.74	59.4	611	97
450	318.75	5	29	0.76	54.4	539	101
450	281.25	6	21	0.78	40.7	533	76
375	393.75	1	916	0.87	60.2	992	61
375	356.25	2	185	0.90	73.3	581	126
375	318.75	3	129	0.92	52.3	793	66
375	281.25	4	66	0.92	52.3	676	77
375	243.75	5	43	0.92	39.5	661	60
375	206.25	6	50	0.92	31.2	1076	29
300	318.75	1	306	0.50	80.8	577	140
300	281.25	2	150	0.52	59.2	816	73
300	243.75	3	63	0.54	60.5	660	92
300	206.25	4	37	0.56	45.5	623	73
300	168.75	5	41	0.56	36.6	1035	35
225	243.75	1	306	0.40	71.9	721	100
225	206.25	2	93	0.40	71.9	657	109
225	168.75	3	46	0.40	57.2	650	88
225	131.25	4	50	0.40	45.9	1178	39
150	168.75	1	267	0.68	83.9	370	227
150	131.25	2	110	0.71	66.6	438	152
150	93.75	3	111	0.73	54.4	860	63
75	93.75	1	605	0.99	49.4	576	86
75	56.25	2	262	0.99	51.8	748	69
0	18.75	1	521	0.69	40.2	712	56

APPENDIX V

VLF-EM, Magnetic and Vertical Loop EM Data List

INTERPRETEX RESOURCES LTD. Data listing (Line & Station + = Northings and Eastings, Current File Name: DLDATLST.WR1
Area: LITTLE FORT, B.C. - = Southings and Westings) From File: DL-M-VLF.XYZ
Grid: DEER LAKE
Date: June 13, 1988

DATA TYPE(S):
1. Total Field Magnetic Value
2. VLF-EM In-Phase (Dip Angle) Value
3. VLF-EM Quadrature (Out-of-Phase) Value
4. Vetical Loop EM Dip Angle Value
5.
6.
7.
8.
9.
10.

INSTRUMENT TYPE:
Geometrics G-826 Magnetometer
Geonics EM-16 VLF EM Receiver
" " " "
McPhar VHEM EM System

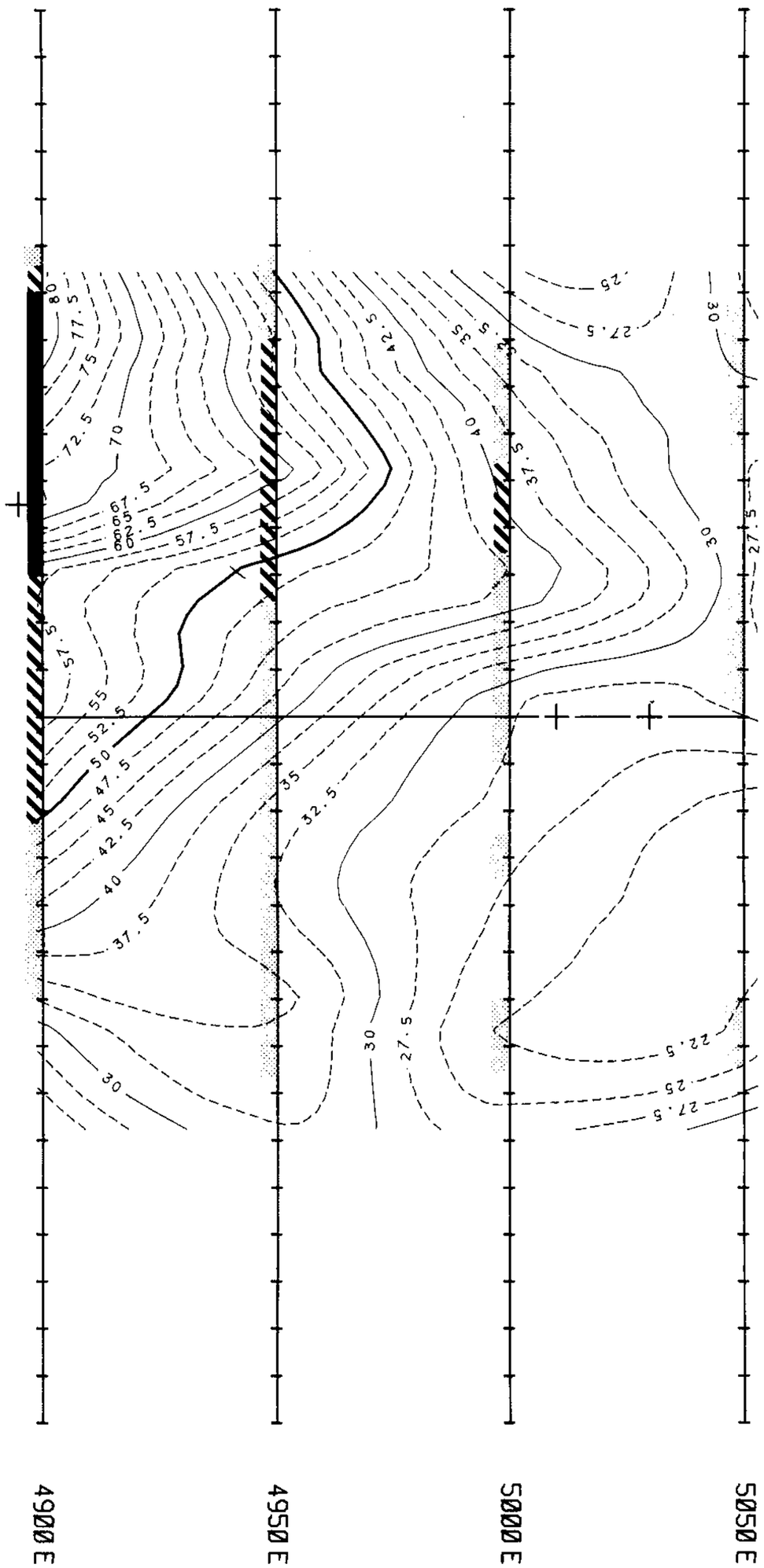
DATA DETAILS:
Corrected Magnetic Total Field
Facing Southeast using Cutler Transmitter
Facing Southeast using Cutler Transmitter

E/W LINE #	N/S STATION	# 1.	# 2.	# 3.	# 4. (N = +) (S = -)	# 5.	# 6.	# 7.
4800								
4800	4900	58399	-5	10				
4800	4910	58242	-5	10				
4800	4920	58034	-2	8				
4800	4930	58412	-10	10				
4800	4940	58221	-11	10				
4800	4950	58371	-9	8				
4800	4960	58386	-11	7				
4800	4970	58195	-11	6				
4800	4980	57856	-17	5	-2			
4800	4990	57559	-16	5	-6			
4800	5000	57547	-18	3	-4			
4800	5010	57573	-11	3	-4			
4800	5020	57571	0	2	-3			
4800	5030	57624	2	2	-2			
4800	5040	57590	6	5	-2			
4800	5050	58045	4	3	-1			
4800	5060	57743	14	3	0			
4800	5070	57849	20	1	0			
4800	5080	58087	22	2				
4800	5090	58075	22	2				
4800	5100	57853	20	0				
4850								
4850	4900	58443	1	8				
4850	4910	58311	-4	6				
4850	4920	58382	-10	4				
4850	4930	59645	-16	0				
4850	4940	62548	-8	0				
4850	4950	56388	-4	3				
4850	4960	56916	-9	3				
4850	4970	56797	-5	2				
4850	4980	56910	-5	4				
4850	4990	57660	-3	5				
4850	5000	58023	-10	4	-2			
4850	5010	58389	-15	4	-3			
4850	5020	58291	-19	2	-4			
4850	5030	59454	-13	1	-4			

4850	5040	58153	8	7	3
4850	5050	55385	36	4	3
4850	5060	56786	40	2	0
4850	5070	57530	32	-3	0
4850	5080	57824	29	-5	1
4850	5090	57877	17	-4	0
4850	5100	57908	18	-5	
4900					
4900	4900	57865	-6	-4	
4900	4910	57802	-6	-5	
4900	4920	57757	-4	-4	
4900	4930	57653	-5	-3	
4900	4940	57536	0	-3	
4900	4950	57515	0	-2	
4900	4960	57512	-1	-5	
4900	4970	57572	-5	-6	
4900	4980	57682	-7	-4	2
4900	4990	57648	-12	-4	2
4900	5000	57761	-13	-1	2
4900	5010	57803	-12	3	1
4900	5020	58478	-16	-3	1
4900	5030	61480	-24	-5	2
4900	5040	60599	-10	3	3
4900	5050	63415	15	8	5
4900	5060	58901	20	4	2
4900	5070	57498	18	2	4
4900	5080	57752	15	1	1
4900	5090	57630	14	0	3
4900	5100	57659	11	0	
4950					
4950	4900	57603	11	-2	
4950	4910	57657	12	-2	
4950	4920	57685	10	-4	
4950	4930	57703	8	-5	
4950	4940	57721	4	-4	
4950	4950	57748	4	-4	
4950	4960	57756	1	-3	
4950	4970	57755	0	-4	
4950	4980	57771	-1	-5	
4950	4990	57791	-2	-4	
4950	5000	57974	-4	-4	
4950	5010	57962	-1	-4	
4950	5020	57789	2	-1	
4950	5030	57813	-1	-1	
4950	5040	57785	0	0	
4950	5050	57748	0	-1	
4950	5060	57782	5	0	
4950	5070	57761	4	0	
4950	5080	57720	5	-1	
4950	5090	57761	3	0	
4950	5100	57806	2	0	
4975					
4975	4900	57432	15	-2	
4975	4910	57563	13	-4	
4975	4920	57655	12	-3	
4975	4930	57691	11	-5	

4975	4940	57714	10	-4
4975	4950	57803	9	-3
4975	4960	57767	9	-2
4975	4970	57763	8	-2
4975	4980	57736	6	-4
4975	4990	57714	4	-3
4975	5000	57692	2	-4
4975	5010	57704	2	-3
4975	5020	57752	0	-3
4975	5030	57790	0	0
4975	5040	57808	-2	-2
4975	5050	57812	1	3
4975	5060	57745	5	1
4975	5070	57839	9	2
4975	5080	57840	8	4
4975	5090	57837	4	-1
4975	5100	57822	0	-2
5000				
5000	4900	55773	17	4
5000	4910	57525	16	0
5000	4920	57808	15	-2
5000	4930	57840	14	-4
5000	4940	57817	10	-4
5000	4950	57839	11	-4
5000	4960	57845	13	-1
5000	4970	57867	13	2
5000	4980	57794	11	0
5000	4990	57741	10	-2
5000	5000	58187	6	-4
5000	5010	52872	10	-2
5000	5020	60316	6	0
5000	5030	58708	5	-1
5000	5040	57711	4	-2
5000	5050	57718	4	-1
5000	5060	57752	3	0
5000	5070	57812	4	0
5000	5080	57867	4	1
5000	5090	57915	0	0
5000	5100	57905	-1	-1
5025				
5025	4900	60819	-8	-5
5025	4910	58853	14	4
5025	4920	58118	15	-2
5025	4930	57945	17	-2
5025	4940	57869	18	-2
5025	4950	57873	21	1
5025	4960	57933	22	3
5025	4970	58082	20	2
5025	4980	58481	20	2
5025	4990	58686	17	1
5025	5000	57978	13	0
5025	5010	57647	10	-1
5025	5020	57242	8	0
5025	5030	57521	8	-1
5025	5040	57603	9	1
5025	5050	57732	7	1

5025	5060	57800	5	0
5025	5070	57815	3	-1
5025	5080	57815	-1	-1
5025	5090	57823	-3	-2
5025	5100	57829	-2	-4
5050				
5050	4900	59056	-11	-6
5050	4910	57875	9	-2
5050	4920	57637	12	-3
5050	4930	57662	14	-4
5050	4940	57762	15	-3
5050	4950	57845	12	-5
5050	4960	57945	14	-3
5050	4970	58086	15	0
5050	4980	58489	19	-1
5050	4990	58633	18	0
5050	5000	56861	14	-4
5050	5010	57315	12	0
5050	5020	57457	8	-2
5050	5030	57595	8	-4
5050	5040	57697	6	-2
5050	5050	57768	5	0
5050	5060	57835	6	2
5050	5070	57846	5	0
5050	5080	57870	-2	-2
5050	5090	57870	-2	-1
5050	5100	57769	-2	-4
5100				
5100	4900	57705	-4	0
5100	4910	57755	2	0
5100	4920	57774	7	1
5100	4930	57791	12	2
5100	4940	57782	14	2
5100	4950	57848	15	-2
5100	4960	57811	13	-4
5100	4970	57813	12	-4
5100	4980	57809	13	-4
5100	4990	57850	15	-2
5100	5000	57859	16	-1
5100	5010	57855	15	1
5100	5020	57824	18	2
5100	5030	57784	20	4
5100	5040	57791	12	3
5100	5050	57724	10	2
5100	5060	57589	8	0
5100	5070	58047	8	4
5100	5080	57856	7	2
5100	5090	57857	7	2
5100	5100	57849	2	2



— 5150 N

— 5100 N

— 5050 N

— 5000 N

— 4950 N

— 4900 N

— 4850 N

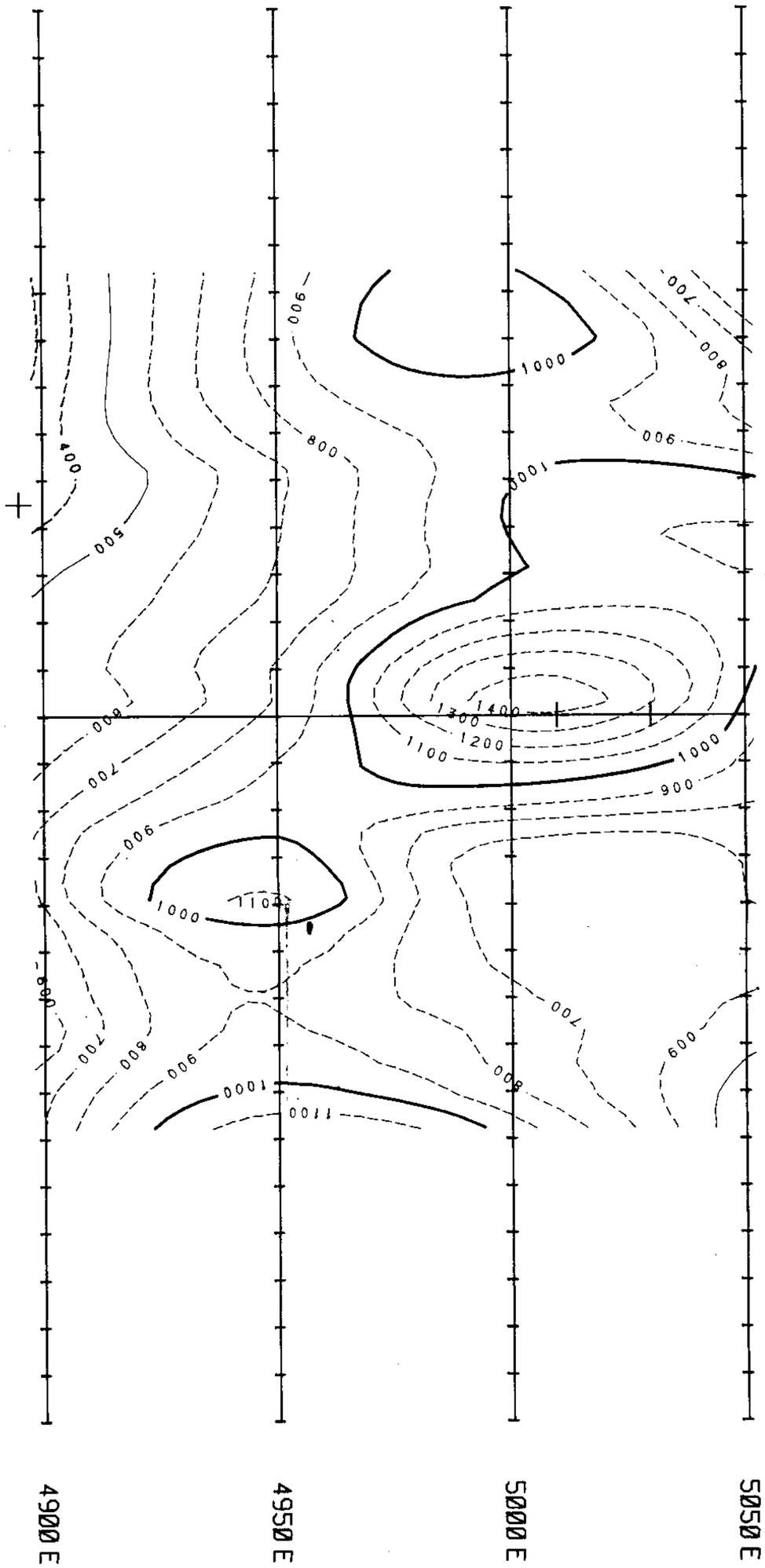
LEGEND

(from Pseudosection Maps)

- Ma GREATER THAN 80.0 mS.
- Ma 55.1 mS. TO 80.0 mS.
- Ma 30.0 mS. TO 55.0 mS.
- Gold Occurence

0 0 20 0 40 0 60 0 METRES

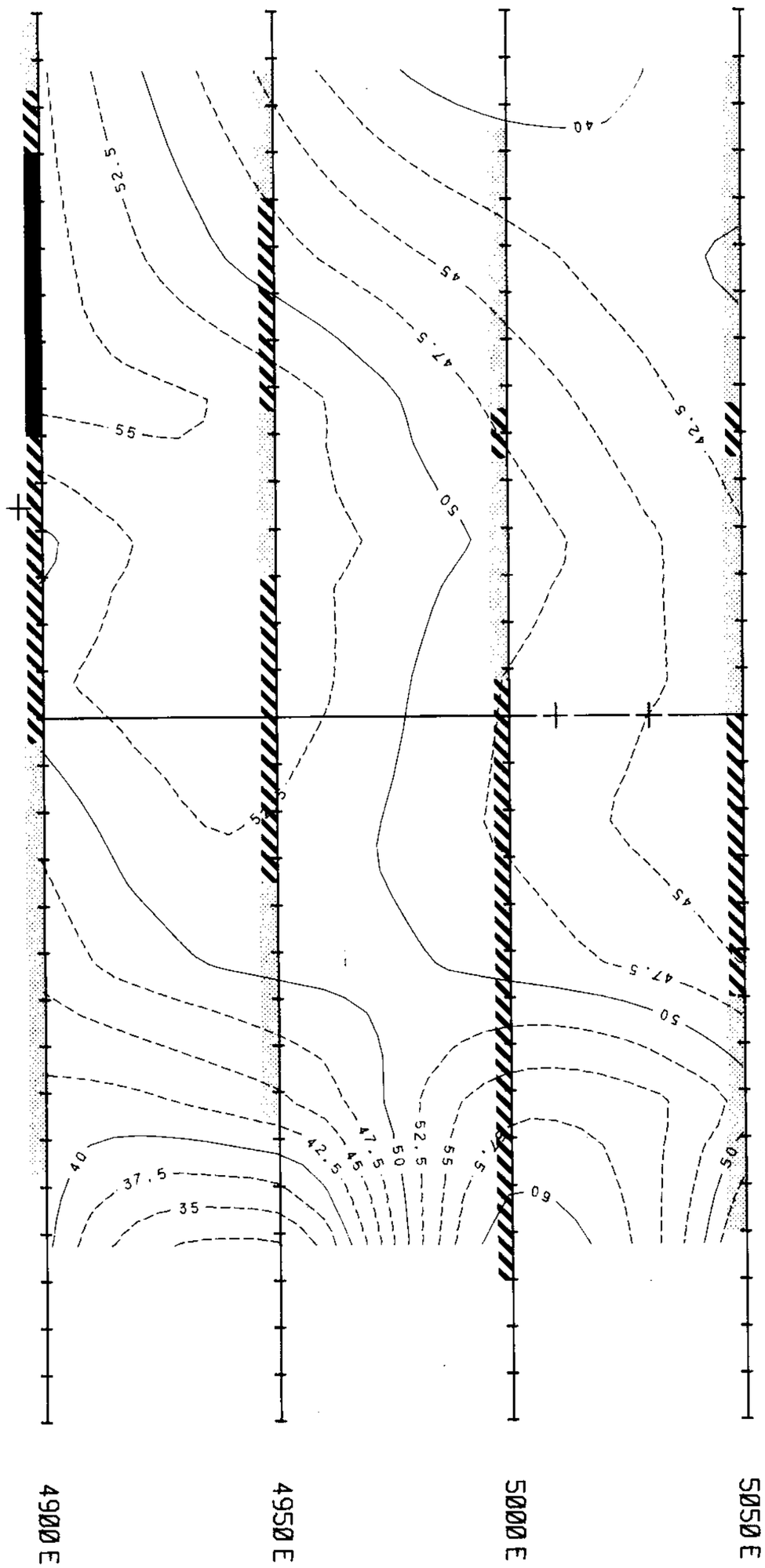
SURVEYED BY: INTERPRETEX RESOURCES LTD.	DRAWN BY: INTERPRETEX	VITAL PACIFIC RESOURCES LTD. VANCOUVER, B.C.	"A" = 10 M. CHARGEABILITY CONTOUR MAP KAMLOOPS MINING DIVISION, LITTLE FORT AREA, BRITISH COLUMBIA DEER LAKE GRID REPORT BY: EDWIN R. ROCKEL INTERPRETEX RESOURCES LTD.	SCALE: METRIC 1:1000
APPARENT CHARGEABILITY FRASER FILTER	DATE: JUNE 14/88			PROJECT NO.: 88608
CONTOURS, INTERVAL = 2.5 MILLISECONDS	FIGURE # 3			N.T.S. NO.: 92 P/9W



GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,733

SURVEYED BY: INTERPRETEX RESOURCES LTD.	DRAWN BY: INTERPRETEX	VITAL PACIFIC RESOURCES LTD. VANCOUVER, B.C.	"A" = 10 M. RESISTIVITY CONTOUR MAP KAMLOOPS MINING DIVISION, LITTLE FORT AREA, BRITISH COLUMBIA DEER LAKE GRID REPORT BY: EDWIN R. ROCKEL INTERPRETEX RESOURCES LTD.	SCALE: METRIC 1:1000
APPARENT RESISTIVITY FRASER FILTER	DATE: JUNE 14/88			PROJECT NO.: 88608
CONTOURS, INTERVAL = 100 OHM-METERS	FIGURE # 4			N.T.S. NO.: 92 P/9W



— 5150N

— 5100N

— 5050N

— 5000N

— 4950N

— 4900N

— 4850N

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,733

LEGEND

(from Pseudosection Maps)

Ma GREATER THAN 80.0 mS.

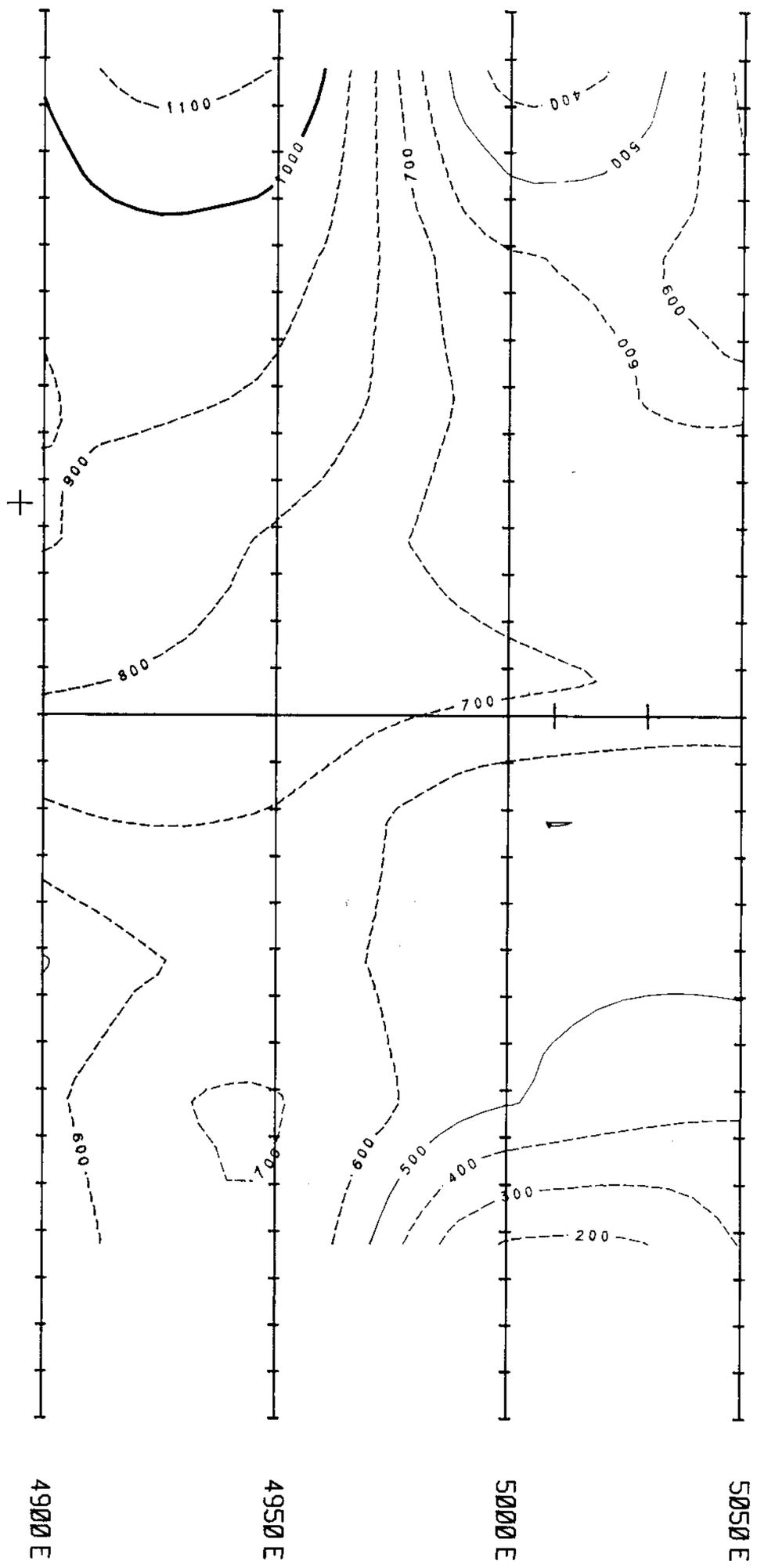
Ma 55.1 mS. TO 80.0 mS.

Ma 30.0 mS. TO 55.0 mS.

Gold Occurence

0.0 20.0 40.0 80.0 METRES

SURVEYED BY: INTERPRETEX RESOURCES LTD.	DRAWN BY: INTERPRETEX	VITAL PACIFIC RESOURCES LTD. VANCOUVER, B.C.	"A" = 30 M. CHARGEABILITY CONTOUR MAP KAMLOOPS MINING DIVISION, LITTLE FORT AREA, BRITISH COLUMBIA DEER LAKE GRID REPORT BY: EDWIN R. ROCKEL INTERPRETEX RESOURCES LTD.	SCALE: METRIC 1:1000
APPARENT CHARGEABILITY FRASER FILTER	DATE: JUNE 14/88			PROJECT NO.: 88608
CONTOURS, INTERVAL = 2.5 MILLISECONDS	FIGURE # 5			N.T.S. NO.: 92 P/9W



— 5150N

— 5100N

— 5050N

— 5000N

— 4950N

— 4900N

— 4850N

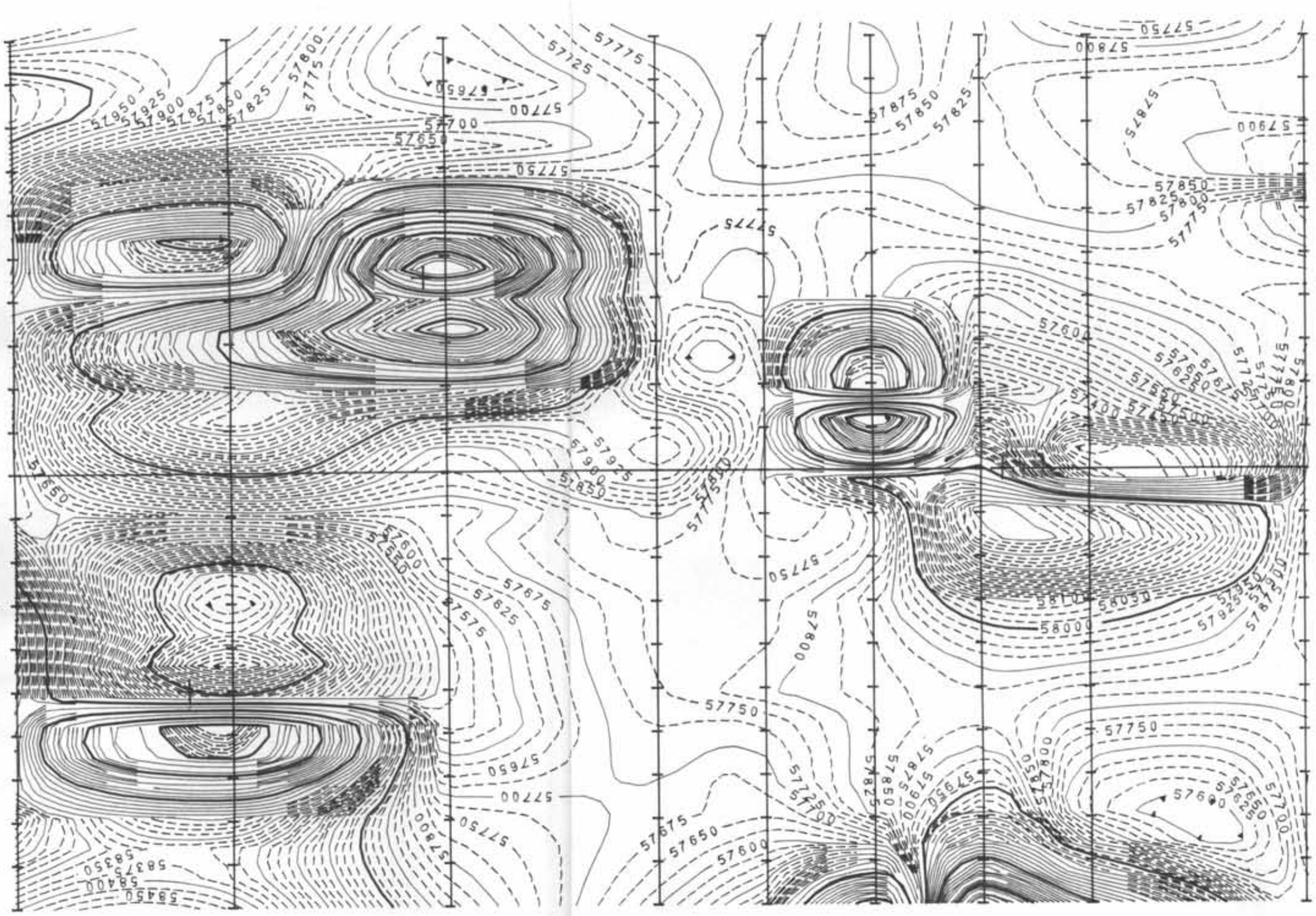
N

0 0 20 0 40 0 80.0 METRES

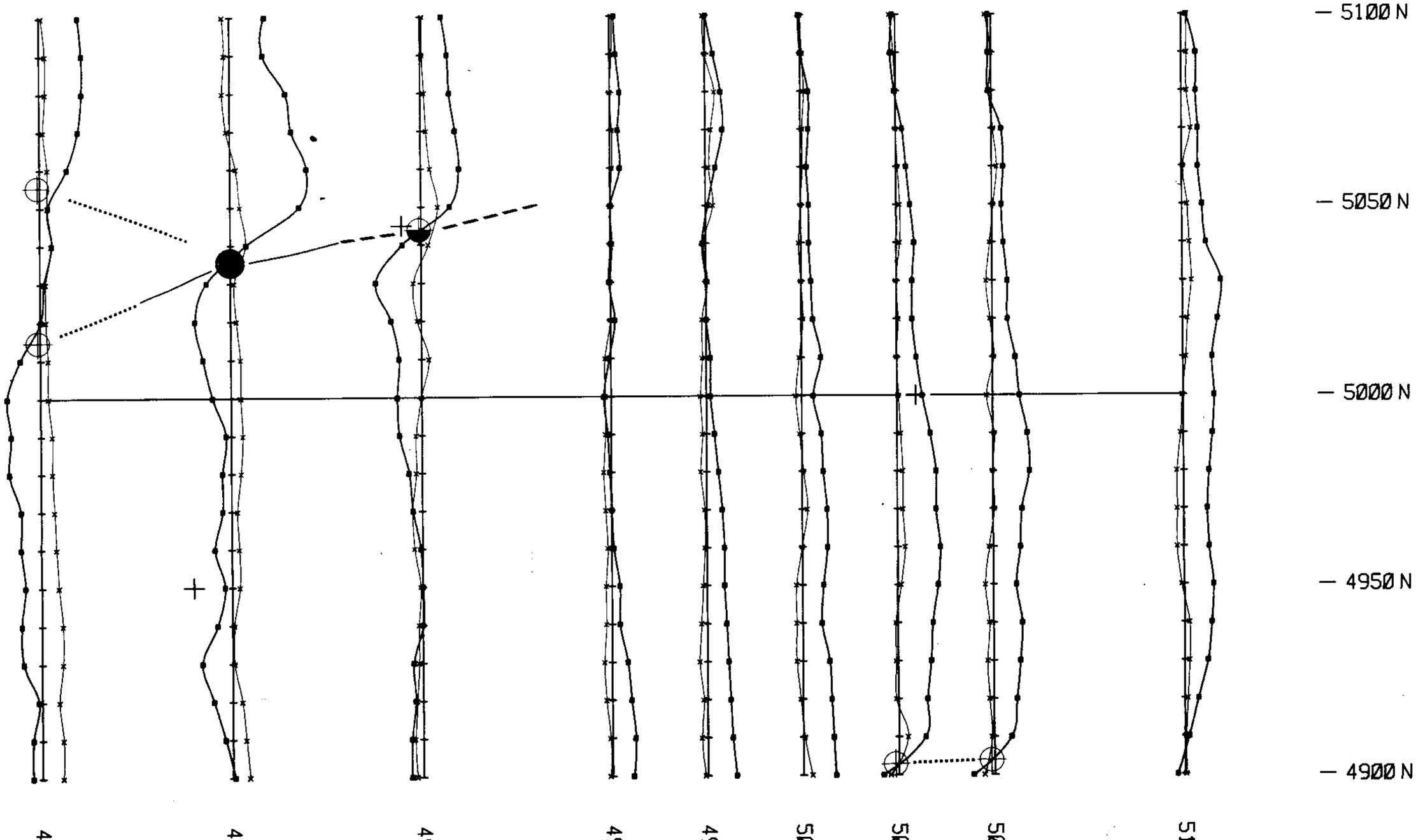
GEOLOGICAL BRANCH ASSESSMENT REPORT

17,733

SURVEYED BY: INTERPRETEX RESOURCES LTD.	DRAWN BY: INTERPRETEX	VITAL PACIFIC RESOURCES LTD. VANCOUVER, B.C.	"A" = 30 M. RESISTIVITY CONTOUR MAP KAMLOOPS MINING DIVISION, LITTLE FORT AREA, BRITISH COLUMBIA DEER LAKE GRID REPORT BY: EDWIN R. ROCKEL INTERPRETEX RESOURCES LTD.
APPARENT RESISTIVITY FRASER FILTER	DATE: JUNE 14/88		SCALE: METRIC 1:1000
CONTOURS, INTERVAL = 100 OHM-METERS	FIGURE # 6		PROJECT NO.: 88608
			N.T.S. NO.: 92 P/SW



SURVEYED BY: INTERPRETEX RESOURCES LTD.	DRAWN BY: INTERPRETEX	VITAL PACIFIC RESOURCES LTD. VANCOUVER, B.C.	MAGNETIC TOTAL FIELD CONTOUR MAP KAMLOOPS MINING DIVISION, LITTLE FORT AREA, BRITISH COLUMBIA DEER LAKE GRID REPORT BY: EDWIN R. ROCKEL INTERPRETEX RESOURCES LTD.
EXPLORANIUM G-826 MAG. & G-858 BASE ST.N	DATE: JUNE 14/88		SCALE: METRIC 1:1000
CONTOUR INTERVAL = 25 GAMMAS	FIGURE # 7		PROJECT NO.: 8808
			N.T.S. NO.: 92 P/SW



20.00 IN-PHASE

20.00 QUADRATURE

LEGEND

VLF-EM CONDUCTOR AXIS (STRONG, MEDIUM, WEAK)

PROBABLE CONDUCTOR AXIS STRIKE (STRONG, MEDIUM, WEAK)

Gold Occurence

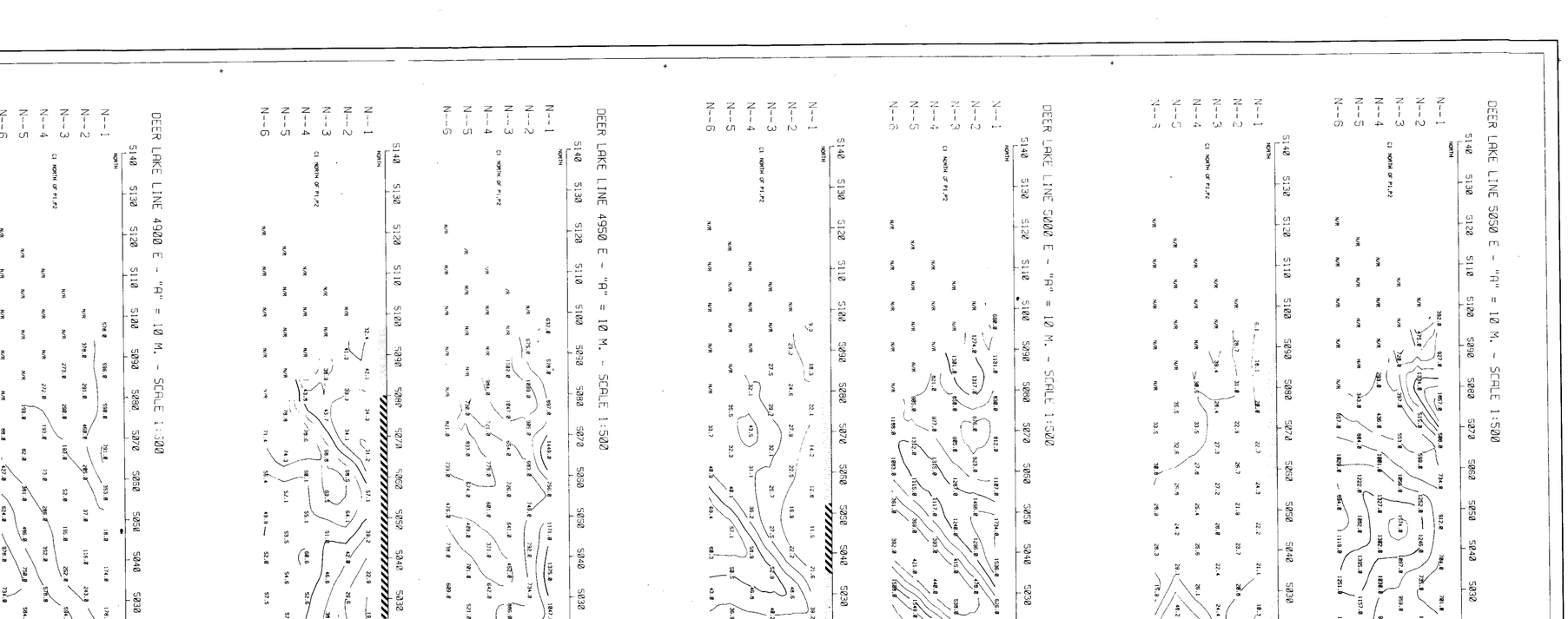
GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,733

0.0 20.0 40.0 METRIC

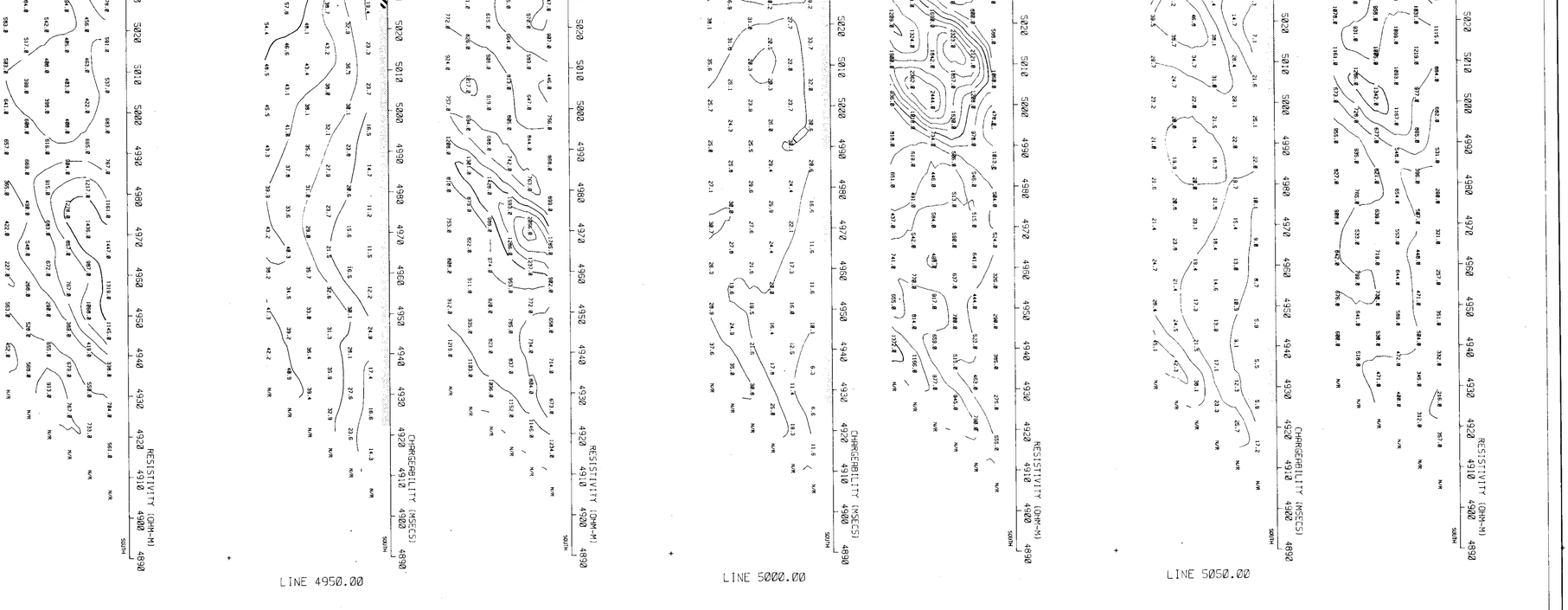
SURVEYED BY: INTERPRETEX RESOURCES LTD.	DRAWN BY: INTERPRETEX	VITAL PACIFIC RESOURCES LTD. VANCOUVER, B.C.	VLF EM IN-PHASE & QUADRATURE PROFILE MAP KAMLOOPS MINING DIVISION, LITTLE FORT AREA, BRITISH COLUMBIA DEER LAKE GRID REPORT BY: EDWIN R. ROCKEL INTERPRETEX RESOURCES LTD.	SCALE: METRIC 1:1000
GEONICS EM-16, USING CUTLER TRANSMITTER,	DATE: JUNE 14/88			PROJECT NO.: 88608
FACING SOUTHEAST, PLOT SCALE 1 CM. = 20%	FIGURE # 8			N.T.S. NO.: 92 P/9W

DEER LAKE LINE 5050 E - "A" = 30 M. - SCALE 1:1500



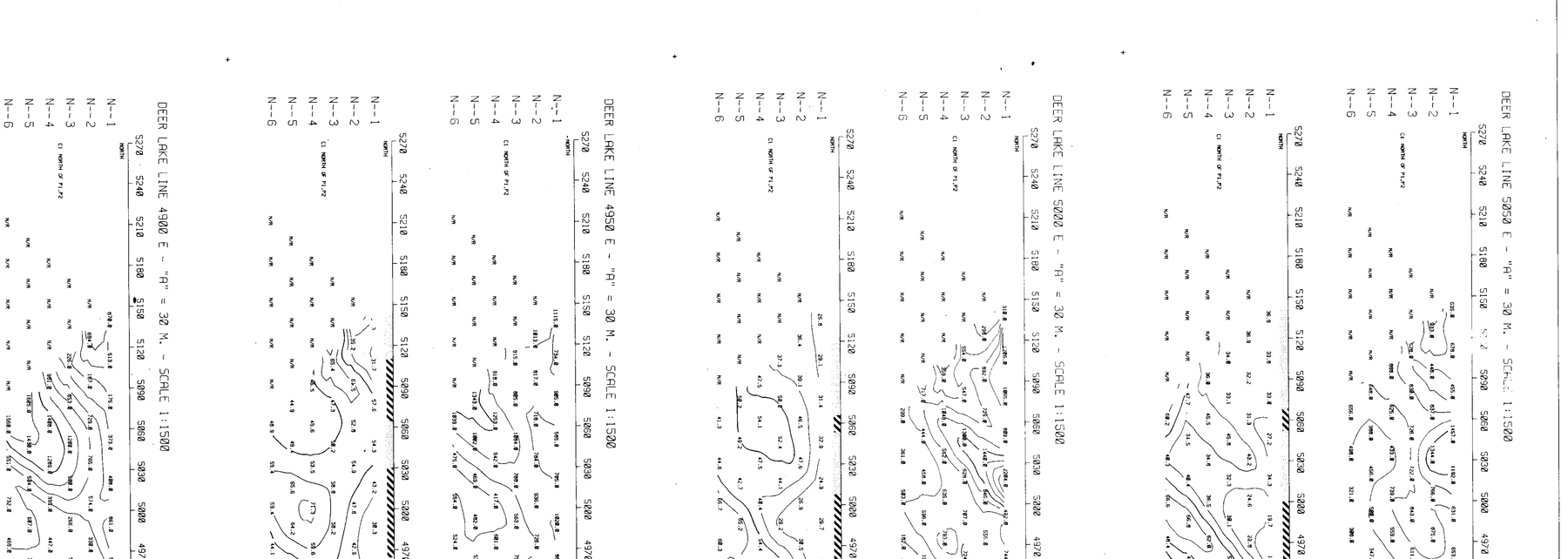
LINE 5050.00

DEER LAKE LINE 5000 E - "A" = 30 M. - SCALE 1:1500



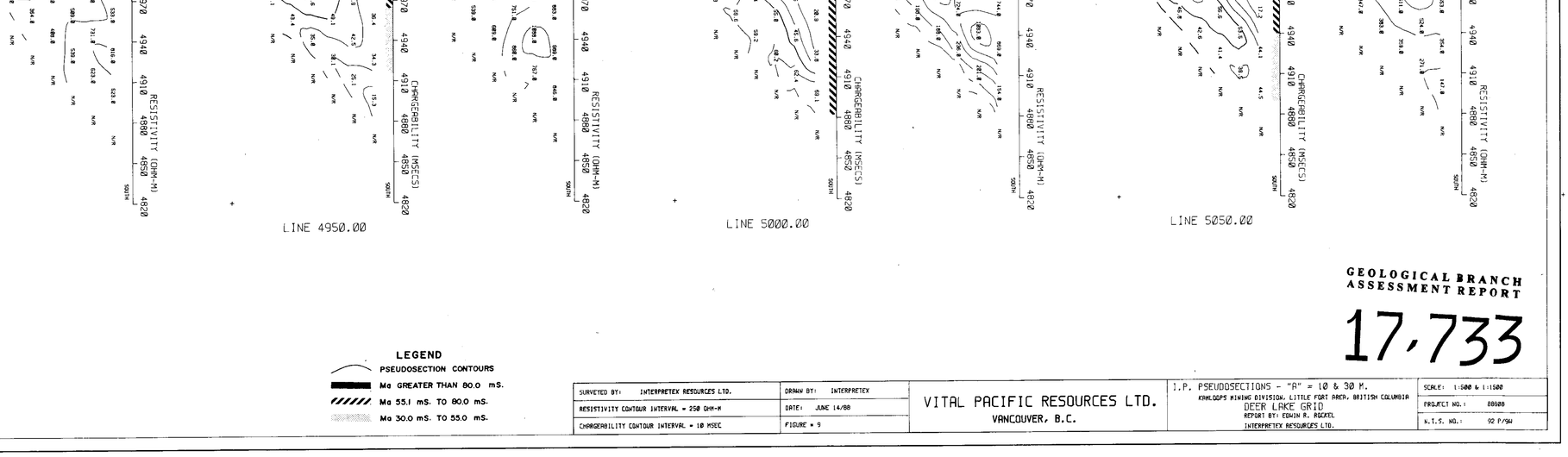
LINE 5000.00

DEER LAKE LINE 4950 E - "A" = 30 M. - SCALE 1:1500



LINE 4950.00

DEER LAKE LINE 4900 E - "A" = 30 M. - SCALE 1:1500



LINE 4900.00

DEER LAKE LINE 5050 E - "A" = 10 M. - SCALE 1:500

LINE 5050.00

DEER LAKE LINE 5000 E - "A" = 10 M. - SCALE 1:500

LINE 5000.00

DEER LAKE LINE 4950 E - "A" = 10 M. - SCALE 1:500

LINE 4950.00

DEER LAKE LINE 4900 E - "A" = 10 M. - SCALE 1:500

LINE 4900.00

DEER LAKE LINE 5050 E - "A" = 30 M. - SCALE 1:1500

LINE 5050.00

DEER LAKE LINE 5000 E - "A" = 30 M. - SCALE 1:1500

LINE 5000.00

DEER LAKE LINE 4950 E - "A" = 30 M. - SCALE 1:1500

LINE 4950.00

DEER LAKE LINE 4900 E - "A" = 30 M. - SCALE 1:1500

LINE 4900.00

LEGEND

PSEUDOSECTION CONTOURS

Ma GREATER THAN 80.0 mS.

Ma 55.1 mS. TO 80.0 mS.

Ma 30.0 mS. TO 55.0 mS.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

17,733

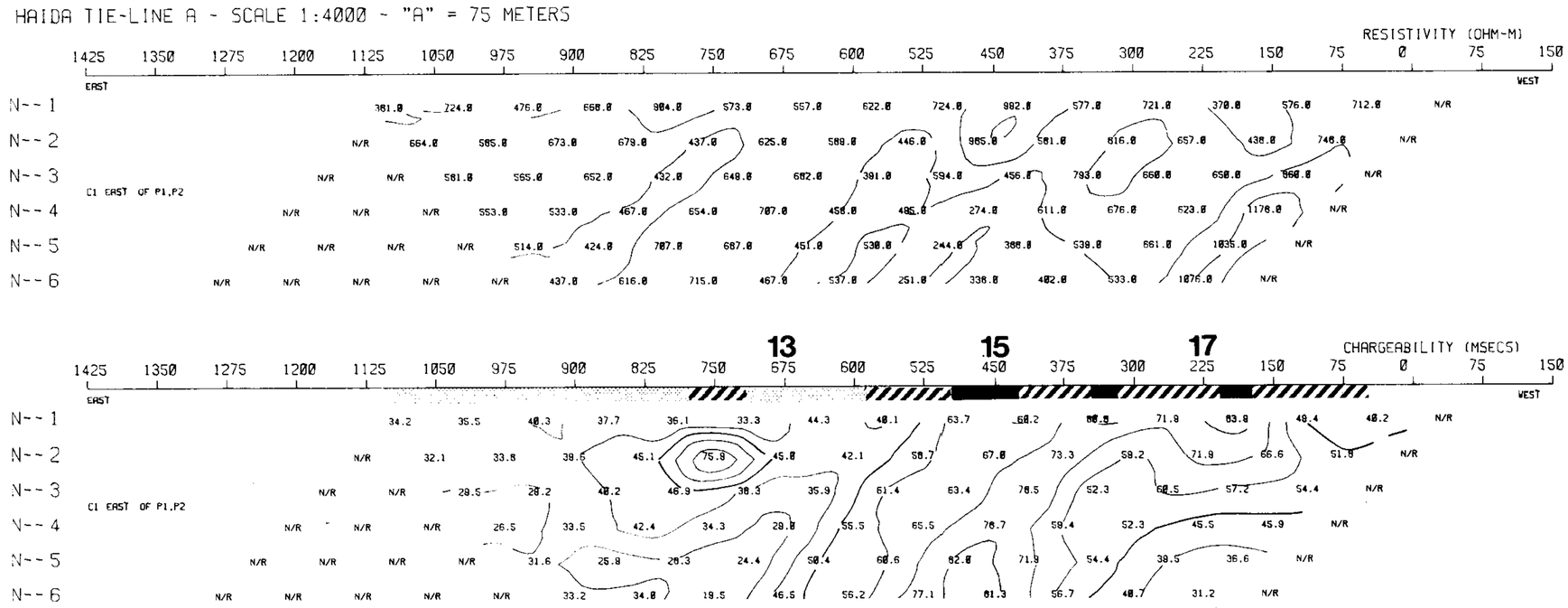
SURVEYED BY: INTERPRETEX RESOURCES LTD.	DRAWN BY: INTERPRETEX
RESISTIVITY CONTOUR INTERVAL = 250 OHM-M	DATE: JUNE 14/88
CHARGEABILITY CONTOUR INTERVAL = 10 MSEC	FIGURE = 9

VITAL PACIFIC RESOURCES LTD.
VANCOUVER, B.C.

I.P. PSEUDOSECTIONS - "A" = 10 & 30 M.
KAMLOOPS MINING DIVISION, LITTLE FORT AREA, BRITISH COLUMBIA
DEER LAKE GRID
REPORT BY: EDWIN R. RUCKEL
INTERPRETEX RESOURCES LTD.

SCALE: 1:500 & 1:1500
PROJECT NO.: 88088
N.T.S. NO.: 92 P/9W

HAIDA TIE-LINE A - SCALE 1:4000 - "A" = 75 METERS

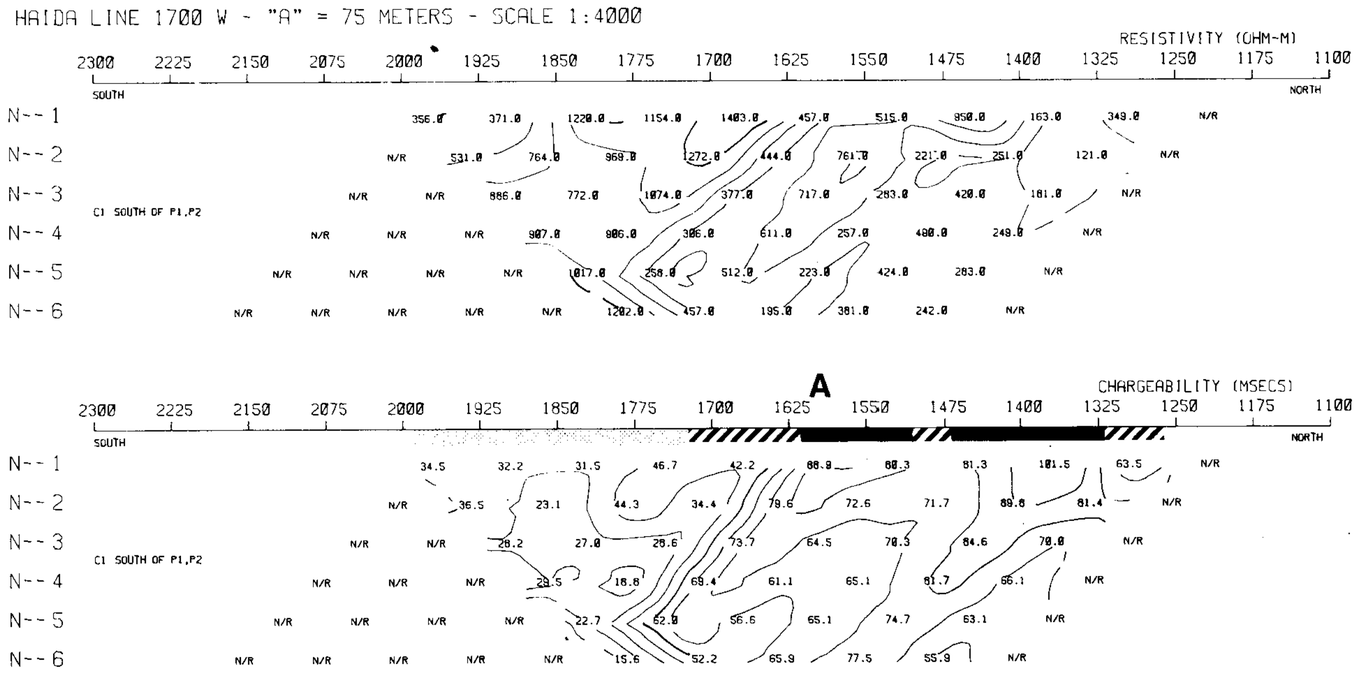


LINE 9999.00

GEOLOGICAL BRANCH
ASSESSMENT REPORT

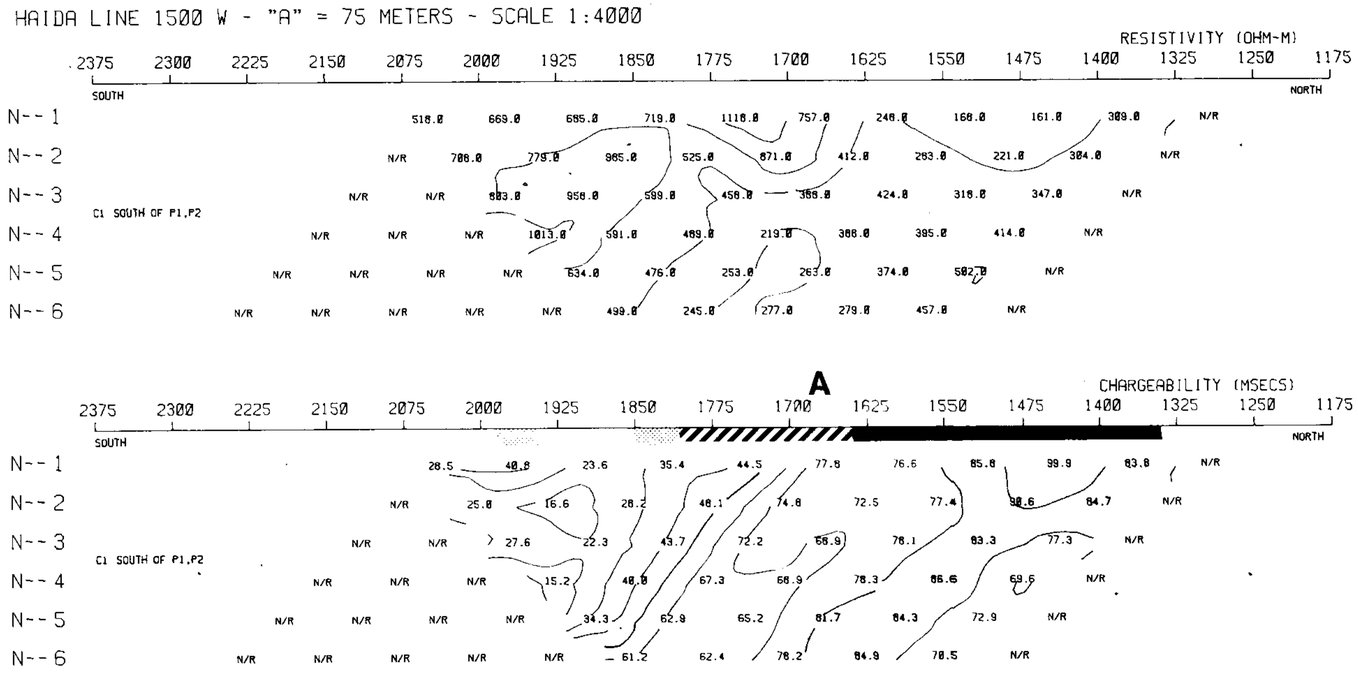
17,733

HAIDA LINE 1700 W - "A" = 75 METERS - SCALE 1:4000



LINE 1700.00

HAIDA LINE 1500 W - "A" = 75 METERS - SCALE 1:4000



LINE 1500.00

LEGEND

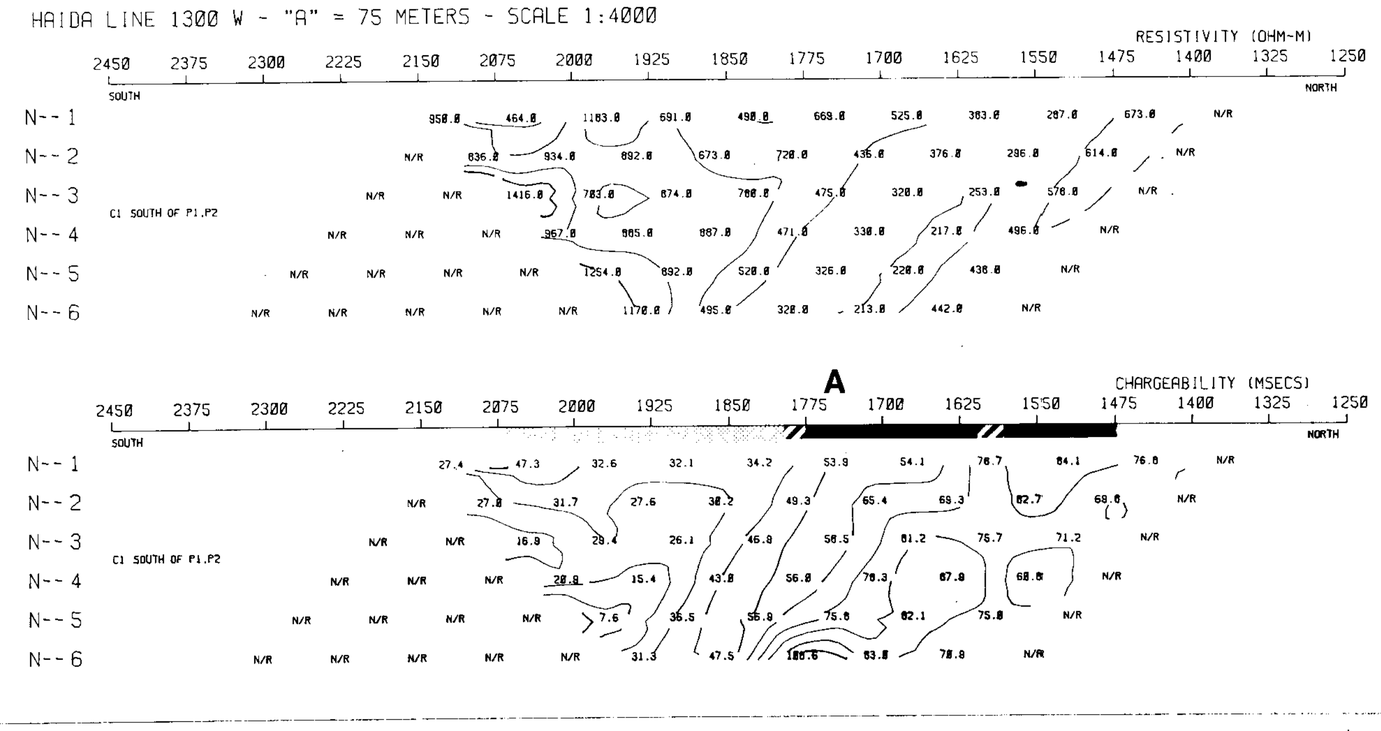
PSEUDOSECTION CONTOURS

Ma GREATER THAN 80.0 mS.

Ma 55.1 mS. TO 80.0 mS.

Ma 30.0 mS. TO 55.0 mS.

HAIDA LINE 1300 W - "A" = 75 METERS - SCALE 1:4000



LINE 1300.00

I.P. PSEUDOSECTIONS - "A" = 75 METERS
KAMLOOPS MINING DIVISION, LITTLE FORT AREA, BRITISH COLUMBIA
DEER LAKE GRID
REPORT BY: EDWIN R. ROCKEL
INTERPRETEX RESOURCES LTD.

SCALE: METRIC 1:4000
PROJECT NO.: 88608
N.T.S. NO.: 92 P/9W

VITAL PACIFIC RESOURCES LTD.
VANCOUVER, B.C.

DRAWN BY: INTERPRETEX
DATE: JUNE 14/88
FIGURE # 10

SURVEYED BY: INTERPRETEX RESOURCES LTD.
RESISTIVITY CONTOUR INTERVAL = 250 OHM-M
CHARGEABILITY CONTOUR INTERVAL = 10 MSEC