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GEOPHYSICAL REPORT

KENA GOLD AND KENA SOUTH PROSPECTS

NELSON MINING DIVISION

LAT. 49° 26', LONG. 117° 16'
NTS 82F/6W

FOR

NORAMCO MINING CORPORATION AND GOLDEN LAKE RESOURCES LTD.

BY

DELTA GEOSCIENCE LTD.

NOVEMBER 25, 1991.

GRANT A. HENDRICKSON, P.GEO.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

Date 2012
21,917

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INTRODUCTION

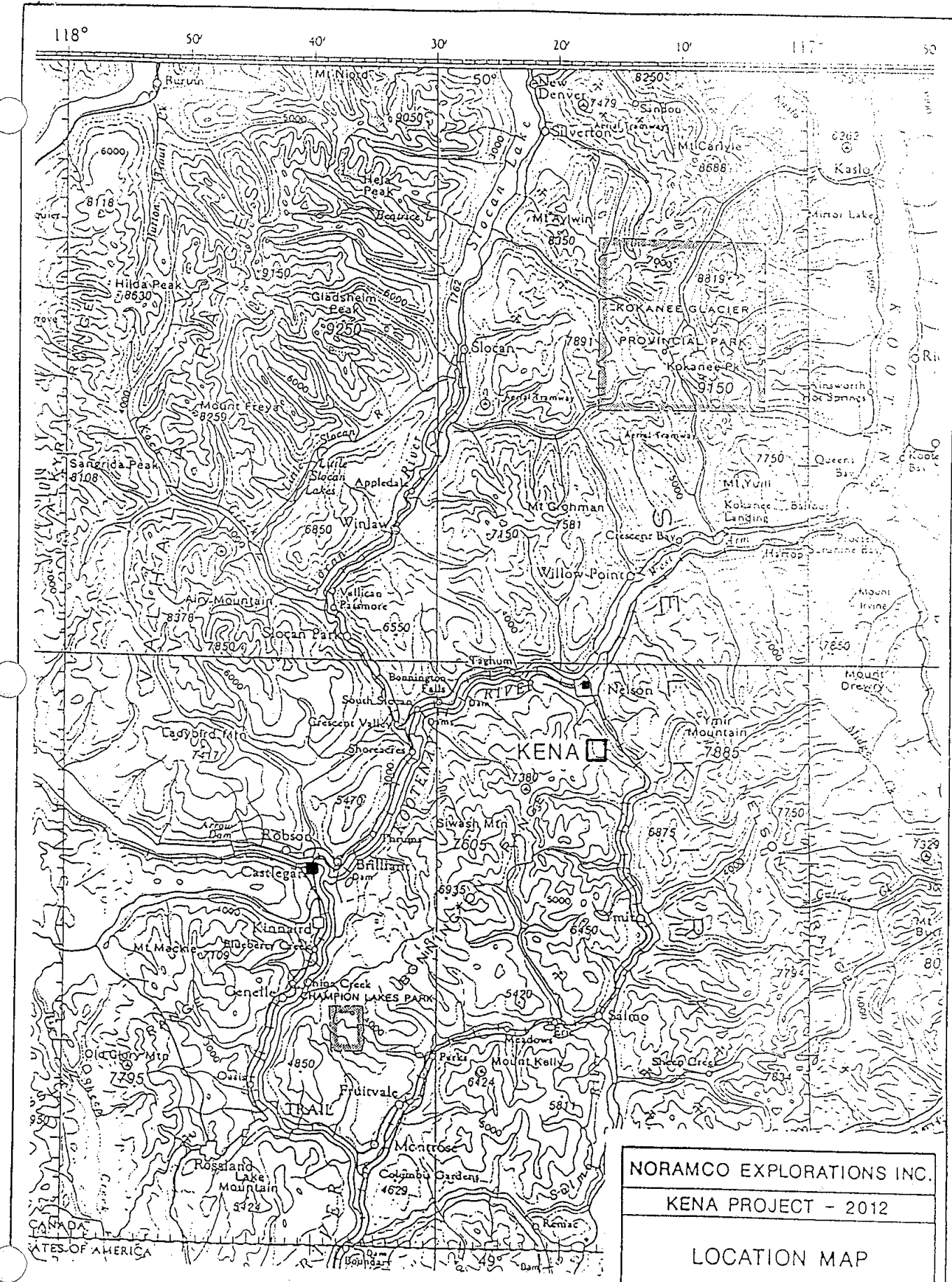
At the request of Noramco Mining Corporation Ltd., Delta Geoscience conducted various ground geophysical surveys on the Kena Gold and Kena South Grids. These surveys took place during the period July 3 to August 1, 1991.

The Kena project is located in the Nelson Mining District, approximately 8 kms south of the town of Nelson, B.C.

The exploration target is mainly disseminated copper and gold mineralization hosted in Jurassic age volcanic and intrusive rocks of the Rossland Group. There is also some potential for massive sulphide mineralization. The geology of the survey area is described in more detail within the Noramco exploration reports referenced at the back of this report.

The geophysical survey techniques employed on the project included Induced Polarization/Resistivity, VLF-EM, Magnetics, Borehole EM and Protem EM 37. Details of the geophysical equipment are described within this report.

Steep topography and dense forest characterize the survey area. Overburden thickness is minimal (less than 10 meters), with numerous areas of outcrop. Fortunately a good network of logging roads provides access to most of the grid for four wheel drive vehicles.



NORAMCO EXPLORATIONS INC.
 KENA PROJECT - 2012
 LOCATION MAP
 FIG. 1
 NORAMCO MINING CORP.

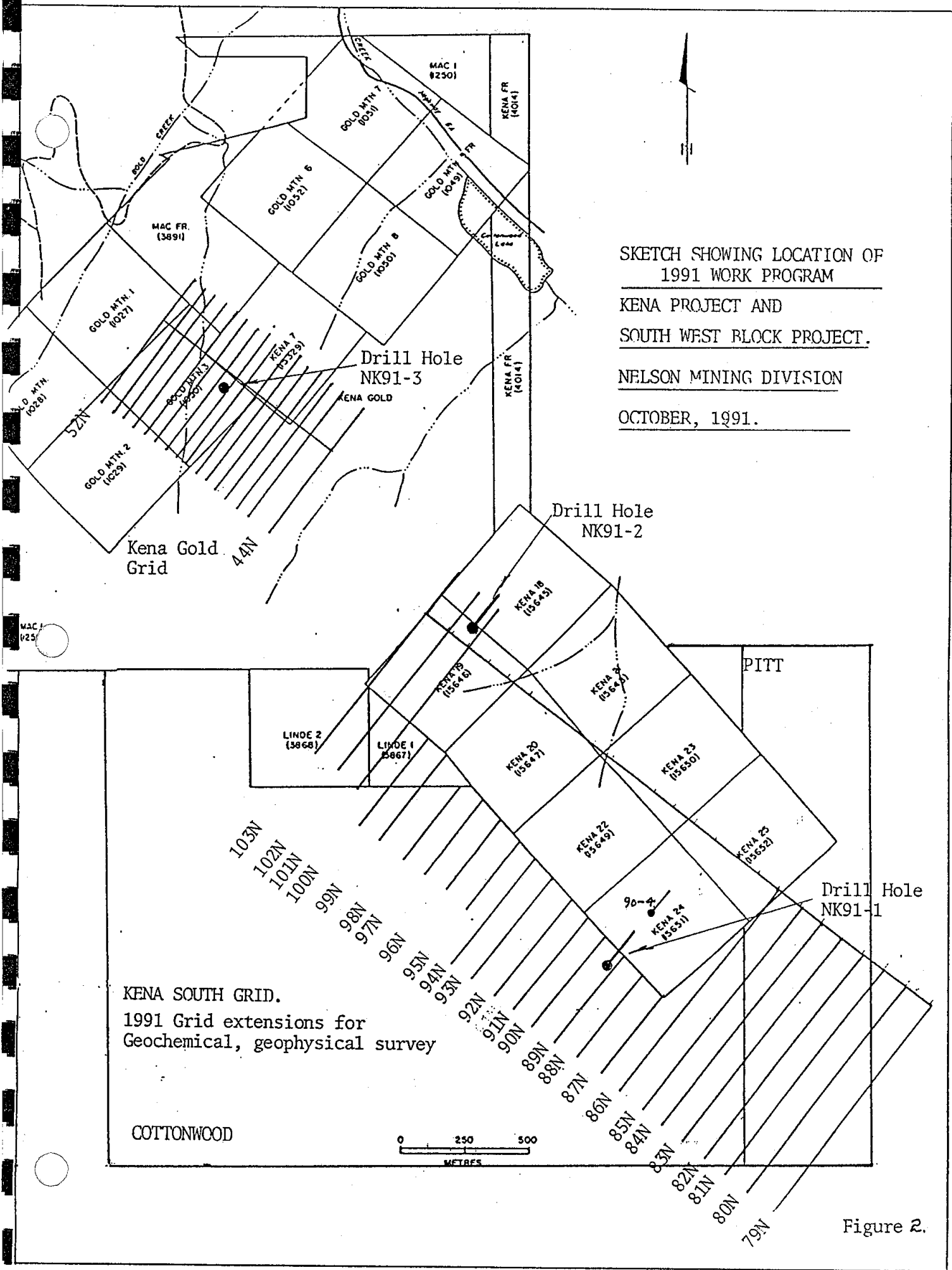


Figure 2.

PERSONNEL

Craig Raynes - Geophysicist/Field Crew Chief.
Barry Knight - Geologist.
Grant Hendrickson - Senior Geophysicist/Supervisor.
Daniel Mayes - University Student.
2 local helpers - provided by Noramco when needed.

EQUIPMENT

2 - EDA Omni Plus VLF-EM/MAG Receivers.
1 - EDA Omni-IV Base Station Magnetometer.
2 - BRGM IP-6 Induced Polarization Receivers (Time Domain).
2 - Hunttec 2.5kva Induced Polarization Transmitters (Time Domain).
1 - BRGM Melis Receiver: two channel frequency EM receiver (frequency range 0.12Hz to 8000Hz), connected to the downhole and surface sensors.
1 - BRGM TX1000 Transmitter: frequency EM transmitter, 0.11Hz to 7500Hz, powered by a 220 volt, 60Hz, 3.5kva Honda Motor Generator.
1 - Surface Loop: 2400m #10 wire with a resistance of 5 ohms/km.
1 - Remi Borehole Probe: downhole CMS magnetic sensor, frequency range is 2Hz to 8Hz, with a sensitivity of 50mV/Ø.
1 - Godek Winch Downhole System, with a 4 conductor armoured shield cable (620m).
2 - Sheave wheel assembly for depth in-hole measurement, attaches to hole collar.
1 - Geonics Protem Receiver.
1 - Geonics EM 37 Transmitter.
1 - Geonics Receiver Coil and Stand.
5 - Motorola VHF Radios.
1 - Toshiba 3100SX Field Computer.
1 - Fujitsu DL2600 Printer/Plotter.
2 - Toyota 4x4 Trucks.

DESCRIPTION OF EQUIPMENT

REMI-MELIS SYSTEM:

The Remi-Melis electromagnetic system developed by the Bureau de Recherches Geologiques et Minieres (B.R.G.M) of France was used for this program.

The Remi-Melis system is a hole-to-surface frequency domain EM method that aims at detecting conductive targets located around a drill hole. Basically, the system consists of transmitting an alternating current into a loop positioned on the surface of the ground and encircling the borehole, and in measuring the component of the magnetic field along the borehole axis (see Fig. #3).

The main application of the Remi-Melis electromagnetic system is in mineral exploration, where massive to semi-massive sulphide bodies (conductors) missed by drill holes can be detected up to 150m from the hole. In some cases, one can also determine the direction to the conductive body.

Secondary currents induced by the primary field of the loop into any nearby conductive bodies will produce secondary magnetic fields which, in addition to the primary field, are measured by the down-hole Remi probe. The in-phase and out-of-phase components of the total axial (borehole) field with respect to the primary field, are with reference to a magnetic sensor coil located on the surface adjacent to the drill hole.

PROTEM 37 SYSTEM:

The EM 37 is a ground transient EM device manufactured by Geonics Ltd. of Mississauga, Ontario, Canada. The field layout is shown in Fig. #4. Traverses with a receiving coil were made perpendicular to the long edge of the loop and extended on either side of and through the loop. Two components of the time derivative of the magnetic field were measured sequentially with an air-cored coil, H_z and H_x .

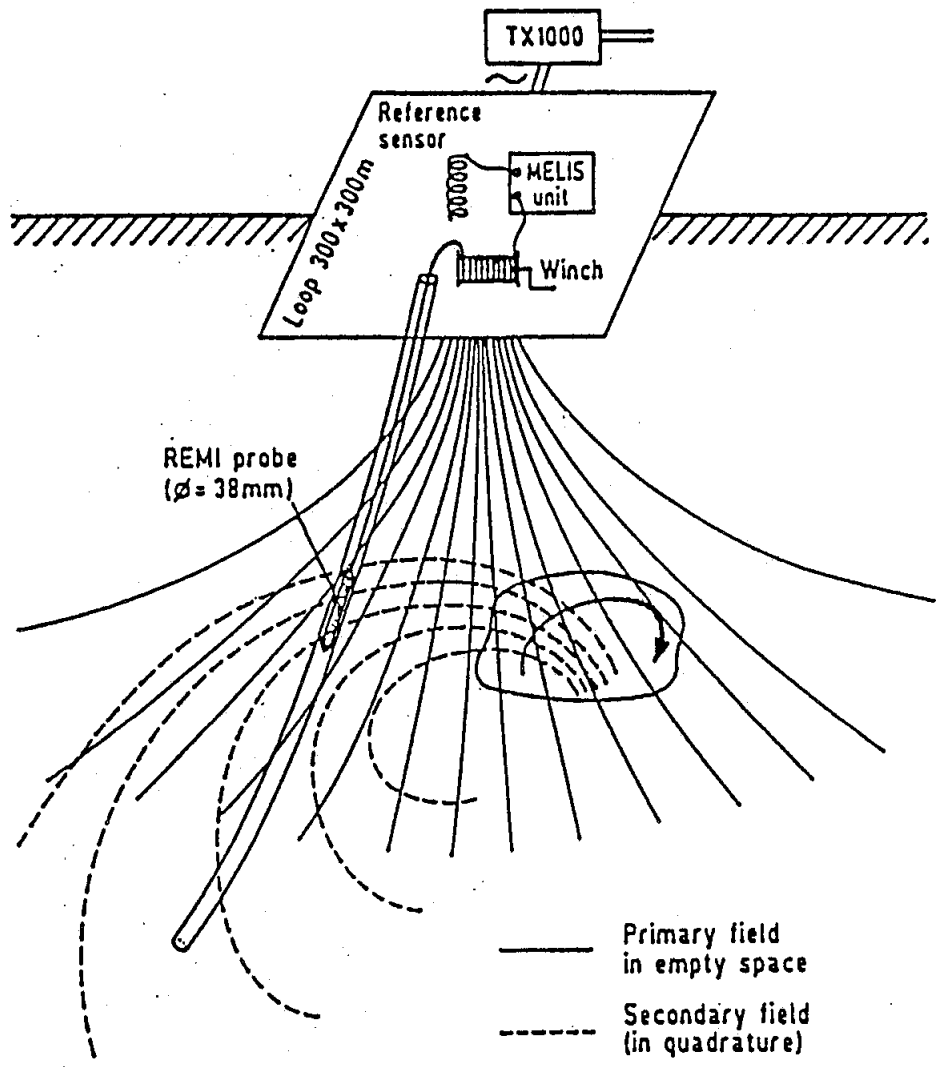


Figure 3. Sketch of the REMI system, a surface-to-borehole one-axis frequency EM system.

The current waveform in the transmitter consists of alternating bipolar current pulses with a slow exponential turn-on and a rapid linear shut-off. The base frequency of operation was set at 30Hz, which corresponds to a maximum window time of 8 ms. At the receiver, the transient response is measured in 20 logarithmically spaced channels. The induced voltage in the coil is measured in millivolts. Using the effective area of the coil and the gain of the receiver, these measurements are converted to the time derivative of the magnetic field in nanovolts/meter.

Although the size of the EM37 transmitting loop can be varied, a single loop 300m x 800m was chosen for this investigation. The output current of 10 amps was determined by the overall inductance and resistance of the loop. These parameters depend on the circumference of the loop and the type of wire used.

The time it takes to shut off the current is called turn-off time. For the EM37, with a loop size of 300m x 800m, turn-off time was 0.31 ms.

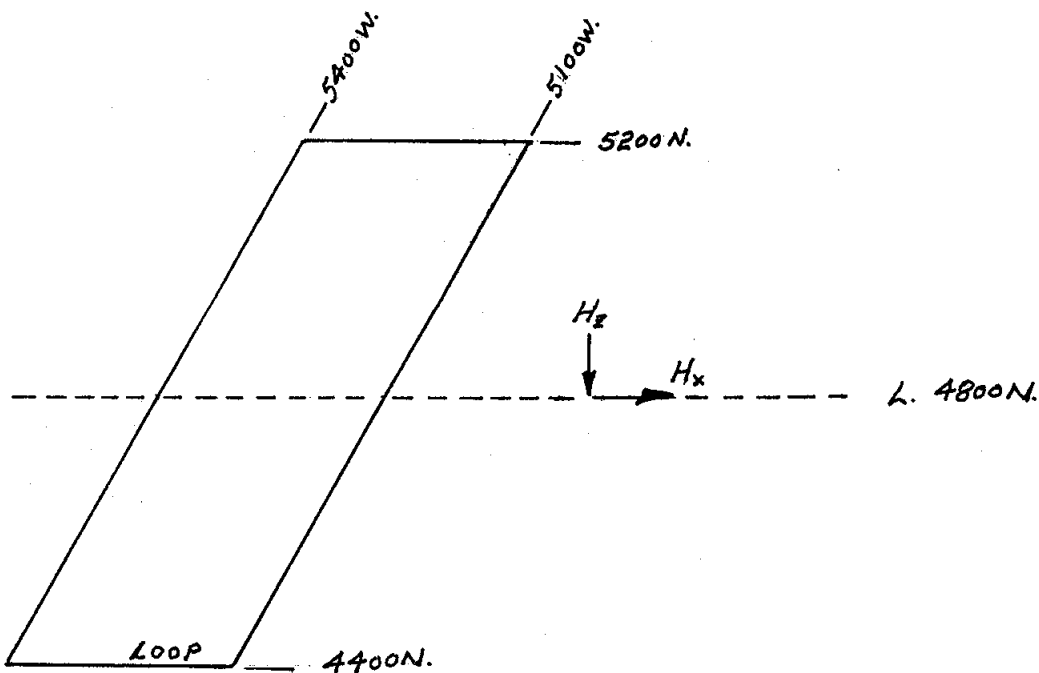


Fig. #4.

DATA PRESENTATION

Plan maps of the Gradient array Induced Polarization/Resistivity, VLF-EM and Magnetic data are presented as stacked profile plans and as contour plans, at a scale of 1:5000 for the Kena South Grid and 1:2500 for the smaller Kena Gold Grid.

In addition, the Induced Polarization Pole Dipole data is presented in the standard pseudo-section format at 1:5000 scale. Metal factor on these sections is defined as Chargeability divided by Resistivity times 1000.

The Protem 37 results from the Kena Gold grid are presented as profiles of the H_z and H_x components for each line.

A nine point Hanning filter was applied to the grid files prior to producing the contour plans.

Colour contour plots of the Resistivity and Chargeability data were produced in the field to facilitate the viewing of the data.

The VLF-EM data was Fraser filtered to produce a contour plan of the conductor axis. The VLF-EM data was recorded using the Annapolis, Maryland, transmitter, NSS, which transmits at 21.4 khz.

Profile plans aid in interpretation, since the profile shape (the wavelength) is directly related to the depth, attitude and width of an anomalous area. Profile data is presented increasing to the north (top) from a base level (value at the line position).

Stacked profile plans give an overall view of the data prior to the introduction of any contouring bias, whereas contour plans give a good spatial view of the data's intensity and continuity.

Borehole data is presented in profile format. Four profiles per frequency are presented, as follows:

- a) in-phase/reference.
- b) out-of-phase/reference.
- c) amplitude/reference.

NOTE: $AMPLITUDE/R = \sqrt{\left(\frac{I.P}{R}\right)^2 + \left(\frac{Q}{R}\right)^2}$

- d) phase angle.
NOTE: Phase Angle $\phi = \arctan (Q/I.P)$ is in degrees.

$\phi = \frac{\text{Phase Axial Field (Z)}}{\text{Axial Field (Z=0)}}$

Scales are presented on the profiles as the normalized electromagnetic response, versus depth in meters. The computer selects the scale automatically to suit the dynamic range of the data.

SURVEY PROCEDURE

Noramco had established grids on the Kena Gold and Kena South prospects, prior to the arrival of the Delta Geoscience crew. Line spacing was 100 meters with the station spacing set at 25 meters.

VLF-EM and magnetic readings were taken at 12.5 meter intervals along the grid lines. The VLF station NSS was chosen for this survey since it is approximately on strike with the expected strike of the geological features of interest. Note that for optimum electromagnetic coupling, the conductive features (mineralized shear zones?) should strike directly towards the VLF transmitter.

Three components of the VLF-EM electromagnetic field were measured: the horizontal field strength, vertical in-phase and vertical quadrature. All of the vertical in-phase data was subsequently filtered using the Fraser filtering technique. This filtering technique helps in understanding the spatial position of the conductive zones. Filtering also minimizes topographical effects in the data, an important consideration for this survey area.

Technical details of the filtering procedures are referenced at the end of this report.

Skin depth is an important parameter of VLF surveying which should be considered. It is a useful term for describing the depth of penetration of electromagnetic waves. A good conductor buried at one skin depth will yield a signal at the surface with an amplitude equal to approximately 10% of the incident signal. Detection of this weak a signal is difficult in the presence of any noise. Skin depth decreases with an increase in frequency, or a decrease in the resistivity of the bedrock and/or overburden. Skin depth for this relatively high resistivity survey area is estimated to be approximately 150 meters.

Magnetic field measurements were corrected for any diurnal variation and to a common datum, through the use of the OMNI-IV base station magnetometer, which sampled the field every minute for the duration of the magnetic survey. The earth's magnetic field was relatively quiet for the survey period.

BOREHOLE EM:

A surface loop 300m x 400m was laid out to encompass drill hole 90-4. The loop was designed to ensure that the horizontal projection of the drill hole was well within the loop. The advantages of logging within the loop are (a) the field does not change sign (no reversal) and (b) there generally is good E.M. coupling with conductive bodies located beneath the loop.

Drill holes outside the loop can also be logged, however there is a geometric effect due to the reversal of the primary vertical field outside the loop. The effect of this reversal is an increase in the phase response of 180 degrees. This increase is abrupt and at shallow depth for boreholes close to the edge of the loop, however it is more gradual and at greater depths for more distant boreholes.

Logging outside the loop has some real advantages if one suspects a conductive body exists between the loop location and the drill hole. With detailed geologic knowledge of a deposit, one can optimize the loop location.

The reference sensor was set up approximately 10m from each drill hole. This reference was fixed for the duration of the logging of each hole - it's critical this sensor is not disturbed once logging starts.

Prior to logging, a dummy probe was run up and down the hole to ensure the hole was open prior to committing the expensive Remi probe. This precaution was necessary since the hole had not been lined with PVC pipe.

Hole 90-4 was logged from the bottom to the top, in increments of 5 to 10 meters, depending on the detail desired. At each depth increment, four frequencies were transmitted in sequence (70Hz, 450Hz, 1798Hz, 3623Hz). At each frequency the Melis receiver measured the in-phase (I.P) and out-of-phase (Q) components of the borehole axial field in amps/meter and the amplitude of the reference (R) also in amps/meter. The data is normalized through the use of the reference signal. Logging at several frequencies is important for conductance analysis and to ensure no conductors are missed due to a response attenuation that could occur at one frequency in certain geometric situations.

Note: A full choice of frequencies from .1Hz to 7500Hz with 10 frequencies per decade is available to the operator. This large frequency range allows the geophysicist to design the survey to suit the range of conductivities expected for the mineralization and host rock, an important consideration in any EM survey.

At the end of each day, the Melis receiver transferred the data to the Toshiba 3100SX computer, where the data was edited and plotted. This final step could easily be done at the drill site if results were urgently needed.

INDUCED POLARIZATION:

For the Induced Polarization work, two arrays were used, the gradient and pole-dipole arrays. Both grids were completely covered with the gradient array. The good depth of investigation and excellent horizontal spatial resolution, plus the relative operational ease of the gradient array, were important factors to consider when surveying in mountainous terrain. The pole-dipole array provides detailed near surface I.P. depth information, however at the expense of horizontal resolution and productivity. The pole-dipole array involves numerous moves of the current electrodes in comparison to the gradient array.

For the gradient array, the current electrode separation "AB" was set at 1200m for the Kena Gold grid and 1800m for the Kena South grid. The potential electrode separation "MN" was 50m for both grids. Overlap on each reading was 50%, i.e. 25m between reading points. This array size gave good horizontal resolution of anomalies, with the prime depth of investigation focused at the 120m depth range for the Kena Gold grid and 160m for the Kena South grid.

For all the pole-dipole array work, the dipole size was 50m.

These geophysical surveys have been designed to help solve four main exploration problems:

- a) spatial position and size of any disseminated and massive sulphide mineralization.
- b) spatial position of structures.

- c) respond to the different lithologies to assist in geological mapping.
- d) cost effective surveying in rough terrain.

The Induced Polarization (chargeability) was expected to respond primarily to disseminated sulphide zones and only moderately to changes in lithology.

The Resistivity survey was expected to respond primarily to the lithology and moderately to structures (linear resistivity lows). Areas where there is a correlation of high chargeability with resistivity lows are significant exploration targets. Generally, disseminated sulphide mineralization has to be quite concentrated (>10%) in order to substantially reduce the bulk resistivity of the rock.

The VLF-EM survey was expected to respond primarily to weakly conductive shear zones and concentrated sulphide mineralization of appreciable strike length..

The magnetic survey was expected to respond primarily to any near surface pyrrhotite/magnetite mineralization and moderately to lithology, due to slight changes in the magnetic susceptibility of the underlying bedrock. Mafic volcanic rocks or intrusives normally have a higher magnetic response than felsic volcanics or intrusives. Felsic intrusives are generally magnetic lows, however the response of intrusives depends largely on the amount of disseminated magnetite mineralization present - something which varies considerably between intrusives.

Intensive hydrothermal alteration of mafic volcanics and intrusives can destroy magnetite mineralization, thus these rock types can display a very "local" magnetic low in areas of interest.

The Protem 37 survey was expected to detect any large deeply buried zones of massive sulphide mineralization within the Kena Gold grid. Depth of investigation is in excess of 200 meters.

The Remi/Melis EM survey of DDH 90-4 was expected to detect any large zones of massive to semi-massive sulphide mineralization (conductors) within 100 meters of the hole.

DISCUSSION OF THE DATA

INDUCED POLARIZATION/RESISTIVITY - KENA GOLD GRID:

The I.P. survey has accurately outlined the areas of sulphide concentration within the grid. There is an apparent 320° trend to the lenticular I.P. anomalies which probably indicates the main shear direction. Sulphide mineralization occurs en echelon along this trend and appears concentrated along three main axis listed below:

- 1) Horizon 1, centered at 51+30W - a thin moderately steep west dipping zone that essentially crosses the whole grid, although appears strongest on line 4500N. This moderate strength chargeable horizon has a modest directly correlating resistivity low. All of the drilling to date has been east of this horizon, thus it remains untested.
- 2) Horizon 2, centered at 49+70W - a moderately strong west dipping (60°) broad zone that strikes across the grid, but is cut off to the north possibly by a magnetite rich intrusive. This horizon has been extensively drilled, although generally at shallow depth. There is a directly correlating zone of relatively low resistivity. The pole dipole result on line 4500N suggests horizon 2 attenuates quickly with depth. Horizon 2 is possibly a faulted slice of horizon 3 discussed below.
- 3) Horizon 3, centered at 48+60W - a strong, narrow west dipping (≈60°) zone that often appears to merge with horizon 2, particularly to the south. Horizon 3 is strongest on line 4750N, where it has been partially drill tested, although many of the holes may not have been deep enough to completely test this horizon. Again, there is a directly correlating zone of low resistivity. Horizon 3 displays much better depth extent than horizon 2.

High resistivity areas within the grid probably outline the younger intrusive rocks. The rock types within the grid will all have high resistivity, which lessens the ability of the resistivity data to clearly differentiate the geology.

VLF-EM - KENA GOLD GRID:

In general, there is a good correlation of the stronger Fraser filtered VLF-EM anomalies with the areas of low resistivity and high chargeability. The general 320° trend is often broken up by a 290° trend that appears superimposed and probably represents a younger series of faults that have caused some minor offsetting. The orientation of the Annapolis VLF transmitter station relative to the grid would tend to enhance the 290° trend over the 320° trend.

PROTEM 37 - KENA GOLD GRID:

The results of surveying lines 4500N thru to 5100N are negative in that no deep seated conductors were detected. The sign reversal that occurs on lines 4900N at 5200W, line 5000N at 5400W and line 5100N at 5275W is peculiar, however is not related to massive sulphide mineralization. This apparent field reversal is probably due to the influence of topography. The north edge of the loop was substantially lower in elevation than the survey lines. The plane of the loop relative to the receiving coil is approximately 20° to 30°, thus there would be appreciable mixing of the H_z and H_x components. This type of rapid change in the H_z component originates from a very near surface feature. The other geophysical techniques employed on this grid did not detect any significant responses in the area of these reversals.

It's normal for the H_z component to increase slightly inside the loop, even in resistive ground, particularly for the early times. The H_x component normally crosses over in the centre of the loop, although this may not be as noticeable in the late times.

The line crossing position of the loop wire generally shows up as a short wavelength spike in the data (for survey lines that pass through the loop).

MAGNETICS - KENA GOLD GRID:

There appears to be a series of thin magnetic horizons partially intercalated and laying stratigraphically beneath the strong I.P. anomalies that occur along the east side of the grid. These magnetic horizons appear to dip steeply grid west.

The attenuation of the main I.P. response to the north may be due to a large magnetic intrusive body starting to be outlined by the magnetic survey at 4950W, 5200N.

The large strong magnetic responses along the west side of the grid are probably due to a series of younger intrusive rocks containing disseminated magnetite.

The small isolated magnetic responses occurring throughout the centre of this grid probably are mafic dikes or outliers related to the younger intrusive rocks of the areas.

INDUCED POLARIZATION/RESISTIVITY - KENA SOUTH GRID:

Two subparallel steep west dipping chargeability zones trending approx. 330° and 320° exist on this grid. The eastern most zone (horizon 3) is centered around station 9700N, 100E, however is completely open to the north. This strong chargeability anomaly appears to pinch out or attenuate at approx. 8800N. Immediately to the west of horizon 3 another strong chargeability horizon occurs - horizon 2. This horizon crosses the whole grid, however appears to attenuate or pinch out at the extreme south end of the grid. Horizon 2 appears to have two centres, one at 350W, 8900N and one at 75W, 10150N, where horizon 2 appears to merge with horizon 3.

A major oblique strike slip fault trending approx. 300° appears to have offset horizon 2 approx. 200 meters at 9500N into an overlap position.

Note - These horizons have been called 2 and 3 to be in keeping with the probable correlating chargeability anomalies within the Kena Gold grid, which lies approx. 800 meters north of this grid.

Chargeability horizon 3 has a significant resistivity low directly associated with it. This resistivity low is very likely caused by a relatively high average sulphide content (5 to 10%) within the rocks of this area.

Chargeability horizon 2 also has several resistivity lows associated with it, however they tend to be smaller and broken up, possibly by dikes related to nearby mafic intrusions.

The pole-dipole results for L.8900N suggests that horizon 2 is a near surface feature dipping moderately (55°) to the west. This pole-dipole data also indicates horizon 3 is a broad deep seated feature (≈ 60 meter deep), that may be plunging off to the south. Drill hole 90-4 likely intersected this anomaly.

The pole-dipole results for L.10100N shows both horizon 3 and 2 to be near surface features, although horizon 3 is much stronger and has good depth extent. The eastern limit of horizon 3 is not yet defined - it lies off the eastern edge of the present survey grid.

VLF-EM - KENA SOUTH GRID:

The stronger Fraser filtered conductor axis correlate very well with the areas of low resistivity, particularly horizon 3. The proposed oblique strike slip fault offsetting horizon 2 mentioned in the section on IP/Resistivity, is partially supported by the VLF-EM data. There are minor offsets to many of the 330° trending VLF-EM conductors. These offsets may be due to a younger series of 300° trending faults.

BOREHOLE EM - DDH 90-4 - KENA SOUTH GRID:

Loop Co-ordinates 8800N/B.L.00, 9100N/400W.

DDH 90-4:

- No offhole conductors indicative of a large massive sulphide zone were detected in the logging of this hole.

- A series of weak narrow in-hole conductors occur from the 145m depth to the 195m depth. These conductors are likely related to minor sulphide stringer mineralization.
- Another series of weak narrow in-hole conductors occur from the 335m depth to the 380m depth. These conductors are also probably related to minor sulphide stringer mineralization.
- The above in-hole anomalies are from individual conductive zones of very limited dimensions, although collectively they may be represent areas of significant disseminated mineralization.

General Comments Regarding Borehole Surveys:

The conventions adopted by the instrument manufacturer are as follows: In-hole conductor responses are indicated by positive (right) deflections of the out-of-phase and phase profiles. If the conductor has good conductivity, these deflections will normally be accompanied by negative (left) deflections on the in-phase and amplitude profiles.

Off-hole responses are indicated by negative deflections on the out-of-phase and phase profiles. If the conductor has good conductivity, these deflections will be accompanied by positive deflections on the in-phase and amplitude profiles.

At relatively high frequency, >1800Hz, an interesting effect occasionally occurs. If an in-hole conductor improves greatly in conductance near the hole, the in-phase and amplitude profiles will swing positive instead of negative. This effect can be explained by the fact that the in-phase signal is sensitive primarily to excellent conductivity, thus we start to see the better off-hole conductivity. The significance of this effect is that the in-phase measurement can differentiate conductivity variations around the borehole and thus provide a better overall evaluation of conductive zones intersected by the hole. At frequencies lower than approx. 1800Hz, the in-hole phase response will change to off-hole completely as current migration to the better conductivity takes place.

Often the slight shift in the depth that peak responses occur (with the different frequencies), is diagnostic of where the conductivity is improving, i.e. downdip or updip. If the peak response shifts deeper in the hole with lower frequency, then it is probable that the conductor is better downdip. This effect is not as noticeable in conductors intersected at right angles by the hole. The asymmetry of a response often gives further information on whether a conductor is updip or downdip of the hole. In some instances, the direction to a conductive body can be determined by moving the transmitter loop to change the electromagnetic coupling. Unfortunately, moving the loop increases the survey cost significantly. Under ideal conditions, a conductive body can be detected up to 150m from the drill hole.

The accompanying theoretical responses (pages 17 & 18) help illustrate the in-hole and off-hole phase angle responses for moderate (10S. conductance) and poor (1S. conductance) conductors, with various borehole orientations to the conductor. The three degree phase response for the conductor (10S. conductance) off-hole 50 meters, although modest, is still 30 times larger than the resolution ability of the Remi system.

Note: An apparent in-hole conductor response obtained from a barren drill hole indicates a conductive body is very near to the hole.

The Melis receiver continuously monitors the electromagnetic noise in the hole and gives the operator two measurements of this noise: (a) standard deviation in %, and (b) quality factor in %. The quality coefficient depends on the noise observed at frequencies close to the analysis frequency; the standard deviation parameters depend on the noise observed at the frequency of the signal itself.

During the course of this survey, the geophysicist was able to keep the standard deviation below 5% and the quality factor over 97%, by continuously monitoring the noise at a frequency close to the measurement frequency. Occasionally, a longer stack was required to reduce the noise level. Resolution of the phase angle response is generally excellent (.1 degree).

TX LOOP \approx 300 \times 200 m

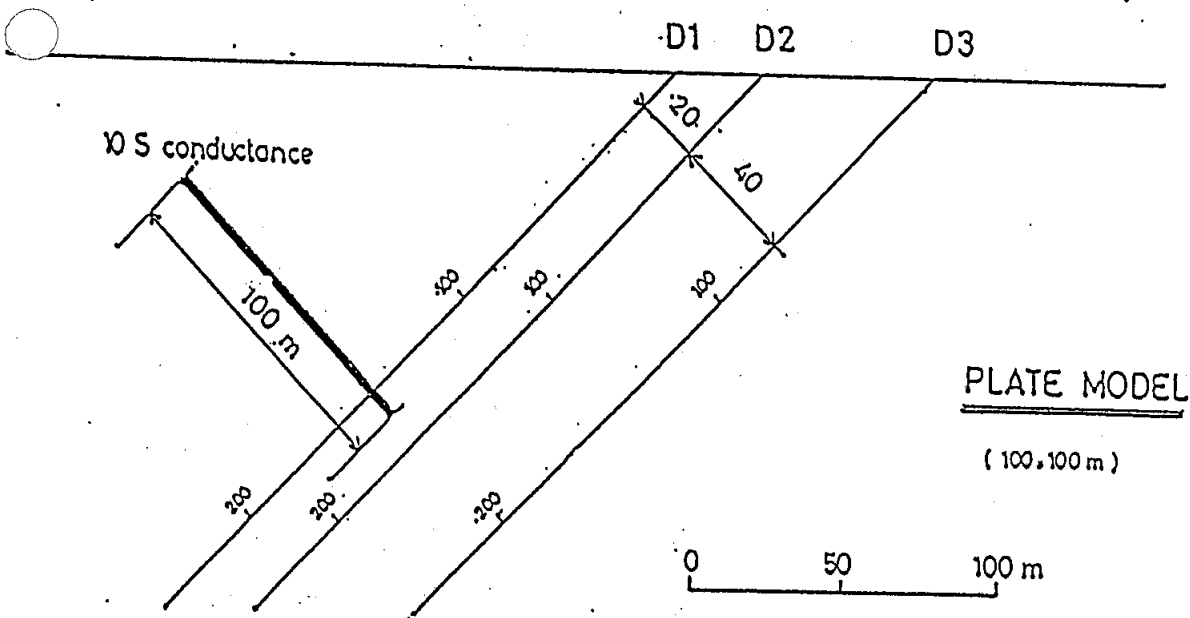
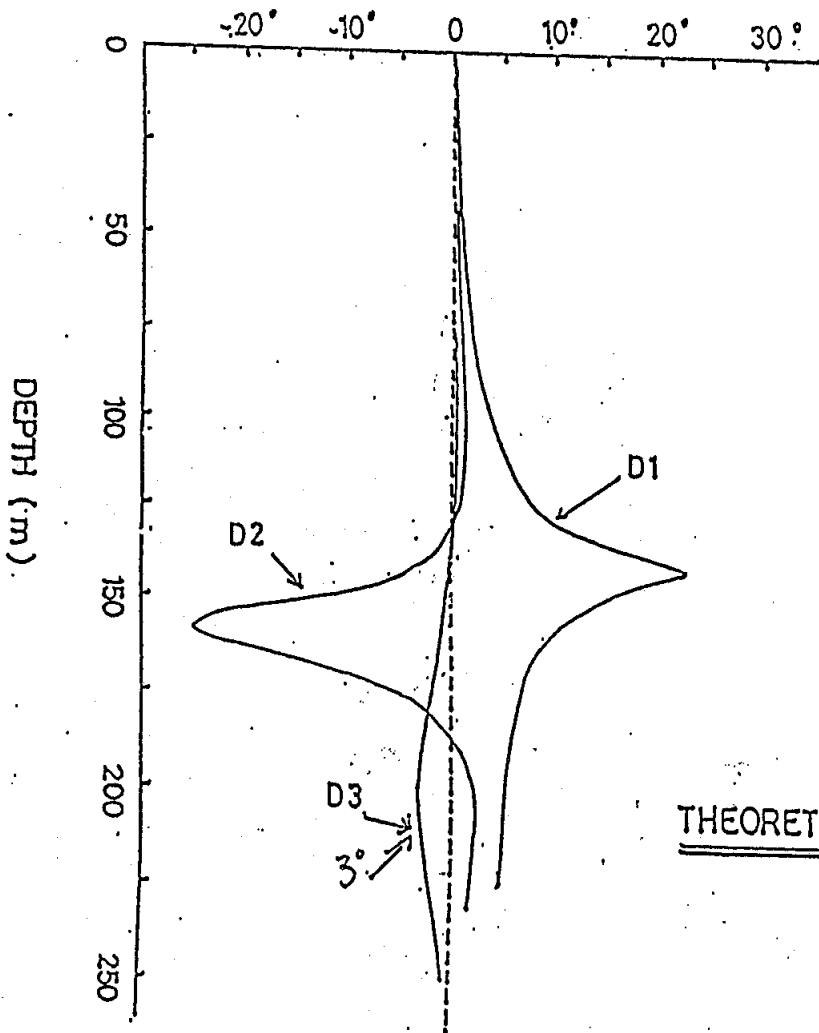


PLATE MODEL

(100, 100 m)

0 50 100 m

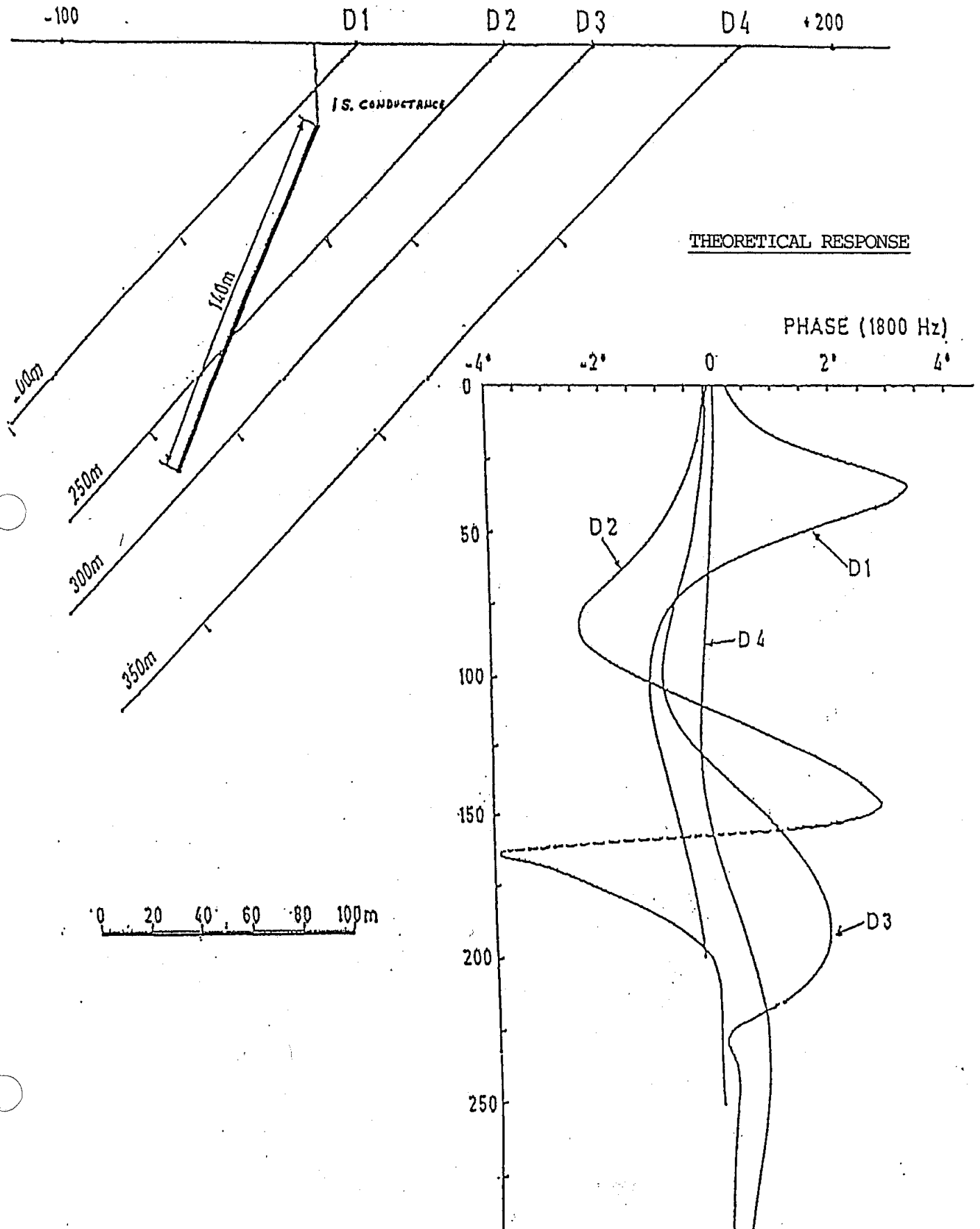
PHASE (1800 Hz)



THEORETICAL RESPONSE

TX LOOP = 300 x 300

PLATE MODEL IN FREE-AIR



In general, our experience in the correlation of in-hole and off-hole conductors to geologic logs, suggests the stronger responses are more often due to massive sulphide mineralization.

MAGNETICS - KENA SOUTH GRID:

The strong magnetic responses that dominate the west side of the grid are likely caused by disseminated magnetite zones within a mixed sequence of intrusive and volcanic rocks. The absence of any chargeability response suggests very little pyrrhotite mineralization is present, thus the magnetic responses can be attributed to magnetite. The resistivity data may help in distinguishing the geology of these magnetic zones, since there are abrupt changes in resistivity along the magnetic horizons.

Chargeability horizons 2 and 3 appear to be intercalated or stratigraphically underlain by moderate strength magnetic anomalies, possibly representative of a more felsic intrusive. The abrupt swing to the east or apparent attenuation of this magnetic horizon at 10,000N, 250E, is interesting since this coincides with the strongest and largest I.P. response. Intense hydrothermal alteration often destroys magnetite mineralization and reduces the bulk resistivity of the rock.

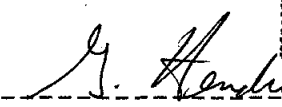
Minor magnetic anomalies within the centre of the grid are likely caused by mafic dikes associated with the intrusive rocks of the area.


CONCLUSIONS AND RECOMMENDATIONS

The geophysical surveys have been effective at outlining the basic geology and mineralized areas within the two grids and have shown there is little chance for a near surface massive sulphide zone at the Kena Gold grid.

The strong chargeability horizons defined by the I.P. surveys remain interesting exploration leads, despite the discouraging drill tests to date. The size and magnitude of these I.P. responses indicate the survey grids are within an area of major hydrothermal alteration, therefore it's possible that the present surveys have not discovered the centre.

In particular, the strength of the I.P. anomalies in the northeast corner of the Kena South grid, when considered in conjunction with the interesting, but sub-economic drilling results from this area, are quite significant. The present Kena South grid should be extended to the northeast to connect with the Kena Gold grid. In this extension, the survey lines should be taken further to the east to ensure complete coverage of the I.P. anomaly.


Grant A. Hendrickson, P. Geo.



The seal is an octagonal stamp with a double border. The outer border contains the text 'PROFESSIONAL' at the top, 'PROVINCE OF' in the middle, and 'BRITISH COLUMBIA' at the bottom. The inner border contains the text 'G. A. HENDRICKSON' in the middle and 'GEOLOGIST' at the bottom.

REFERENCES


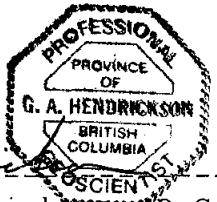
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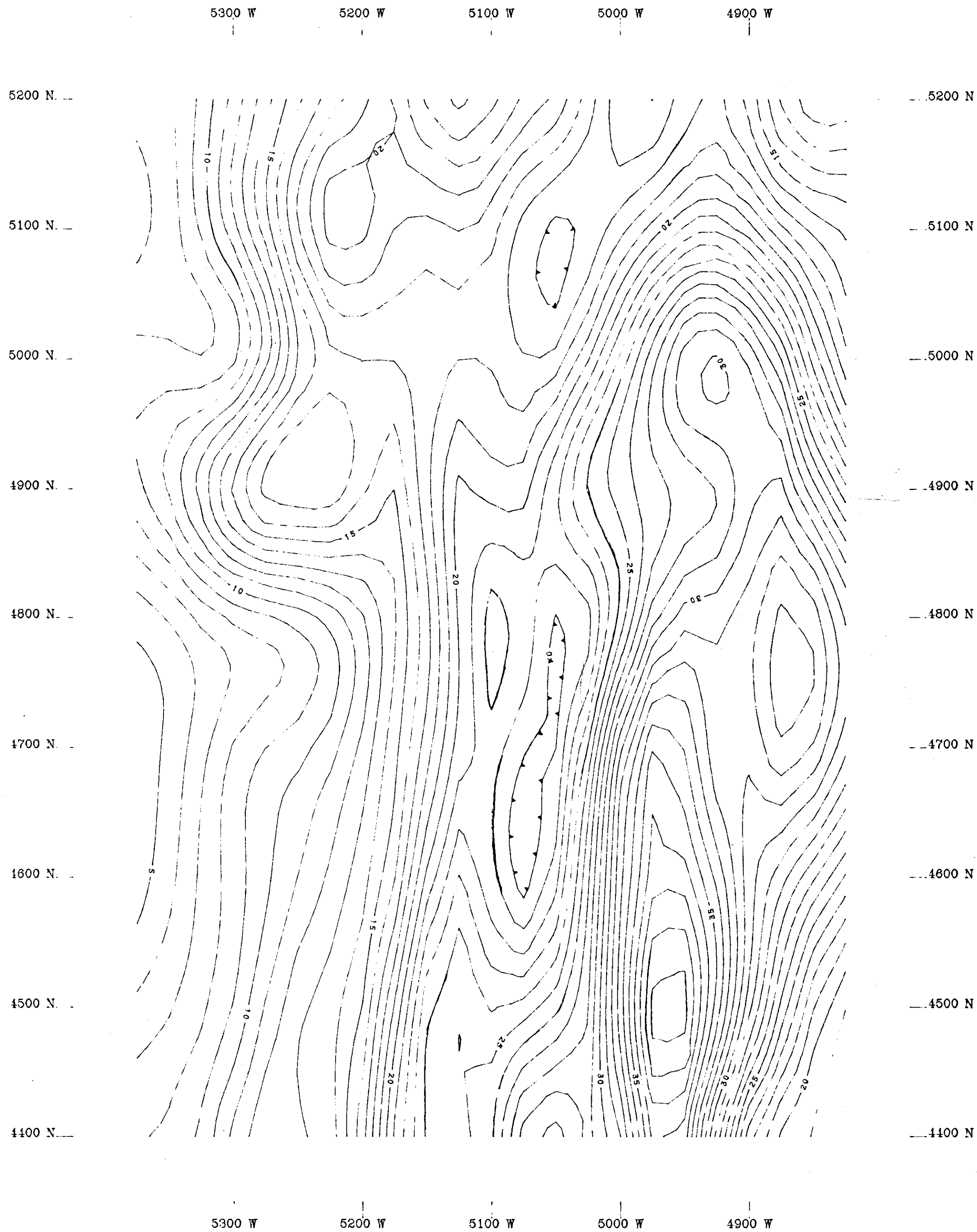
STATEMENT OF QUALIFICATIONS

Grant A. Hendrickson

- B.Science, University of British Columbia, Canada, 1971, Geophysics option.
- For the past 20 years, I have been actively involved in mineral exploration projects throughout Canada, the United States, Europe and Central and South America.
- Registered as a Professional Geoscientist with the Association of Professional Engineers and Geoscientists of the Province of British Columbia, Canada.
- Registered as a Professional Geophysicist with the Association of Professional Engineers, Geologists and Geophysicists of Alberta, Canada.
- Active member of the Society of Exploration Geophysicists, European Association of Exploration Geophysicists and the British Columbia Geophysical Society.

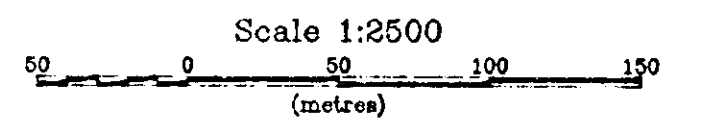
Dated at Delta, British Columbia, Canada, this 25 day of Nov., 1991.



Grant A. Hendrickson, P. Geo.

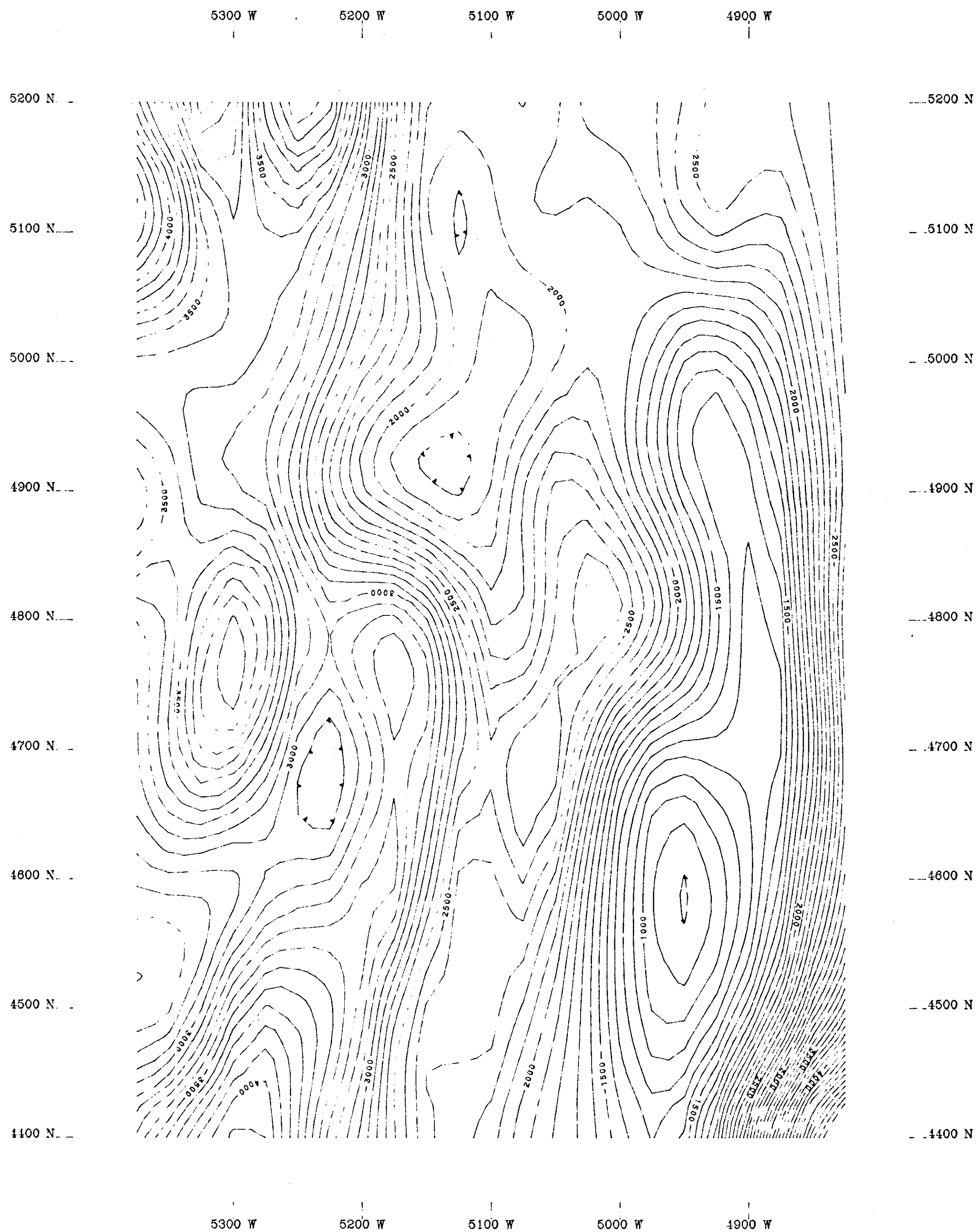


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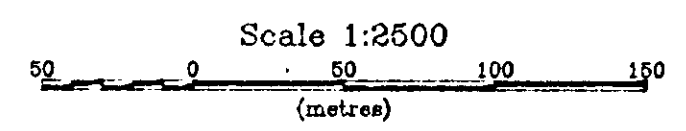
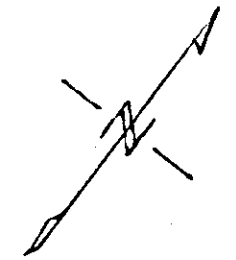


NORAMCO MINING CORPORATION
INDUCED POLARIZATION SURVEY, KENA GOLD PROJECT CHARGEABILITY PLAN
Gradient Array, AB = 1200m, MN = 50m. Contour interval 2 mV/V August, 1991 survey
Delta Geoscience Limited Fig. 5

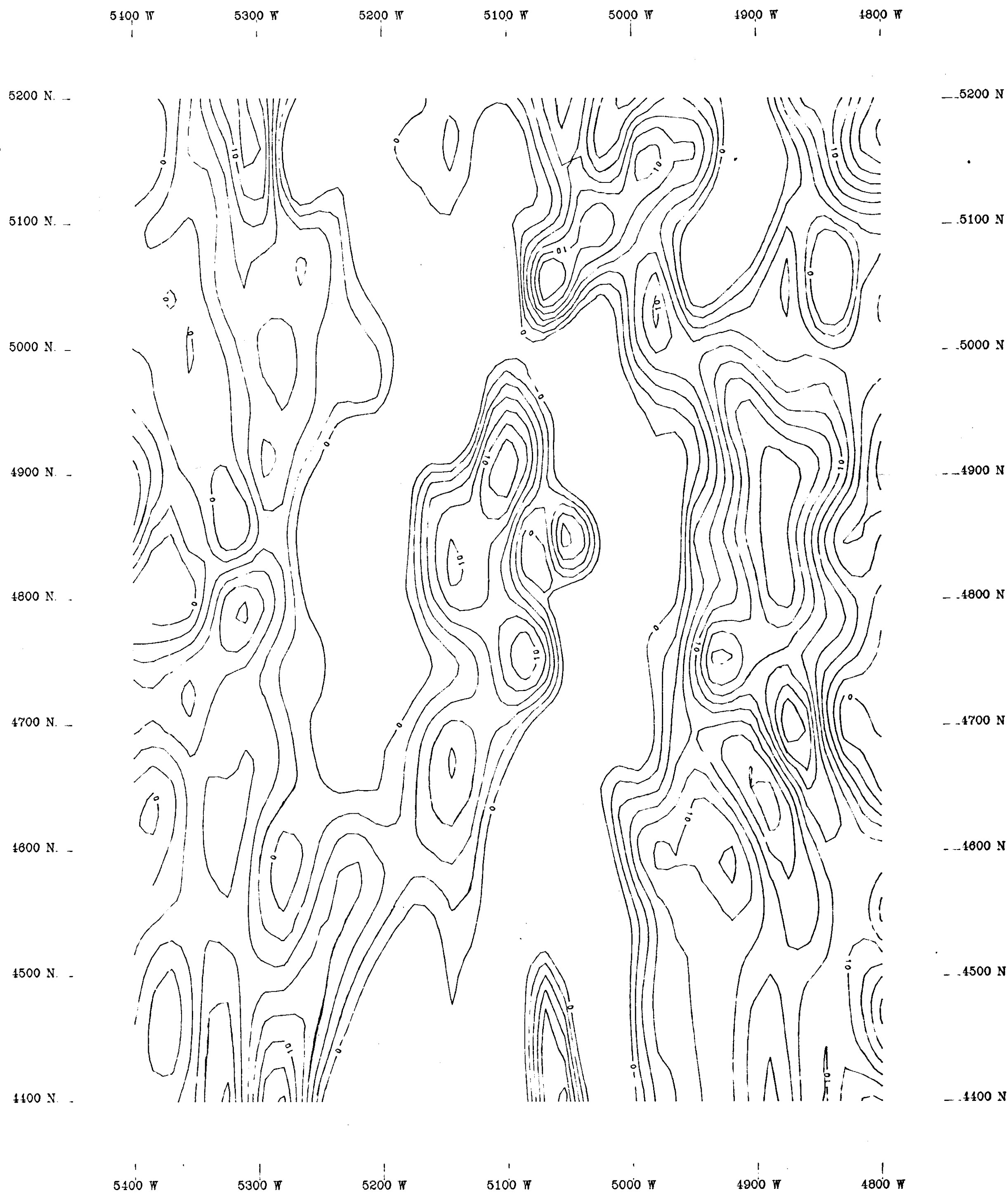


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ASSESSMENT REPORT

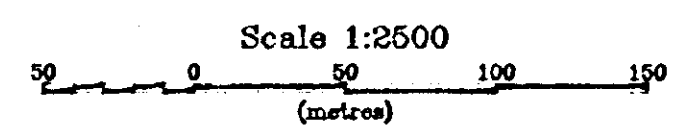
21,917
21,917



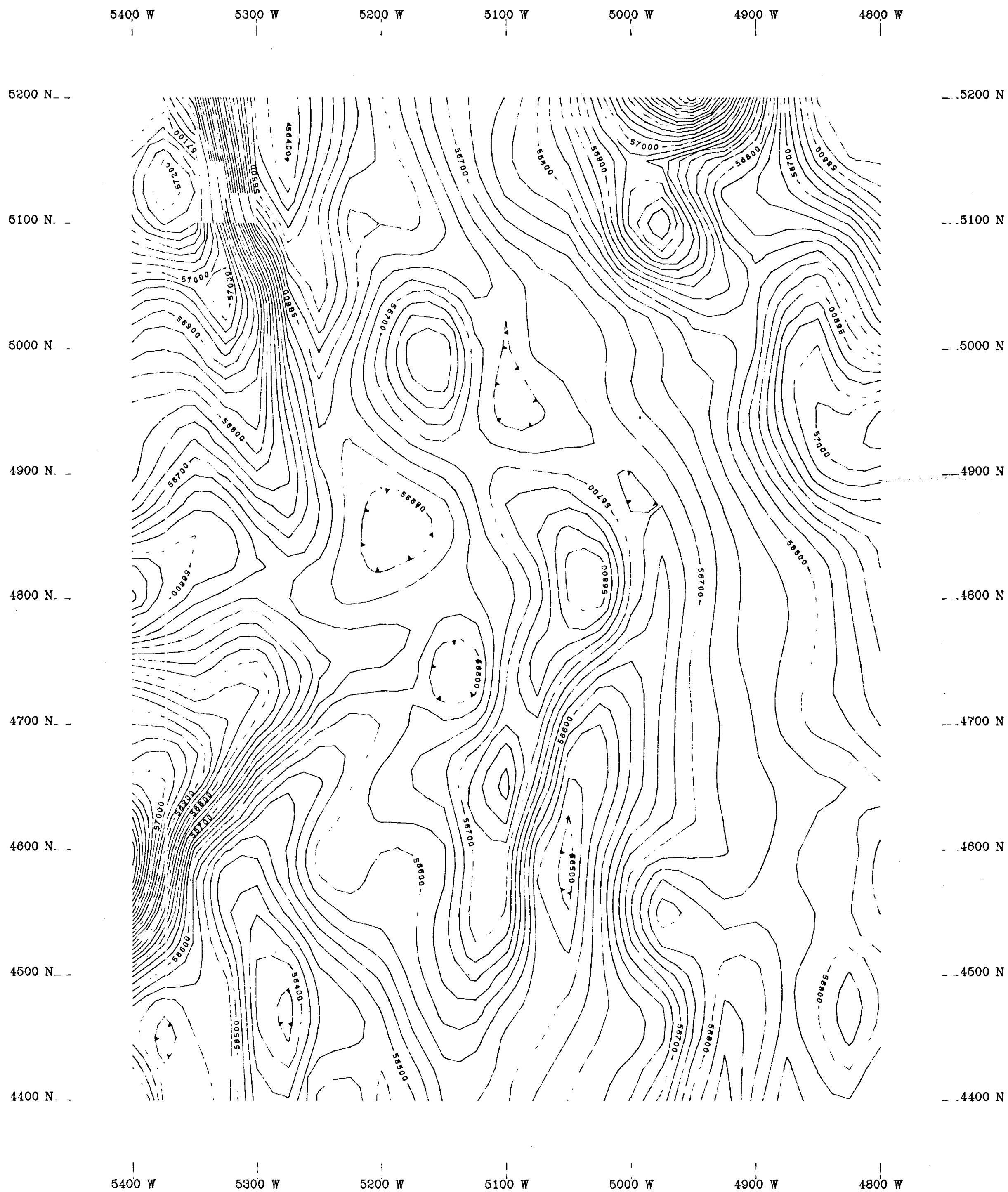
NORAMCO MINING CORPORATION
INDUCED POLARIZATION SURVEY, KENA GOLD PROJECT RESISTIVITY PLAN
Gradient Array, AB = 1200m, MN = 50m. Contour interval 100 ohm-m August, 1991 survey
Delta Geoscience Limited



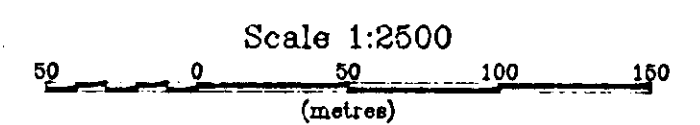
GEOLOGICAL BRANCH
ASSESSMENT REPORT
DATE 2012
21,917



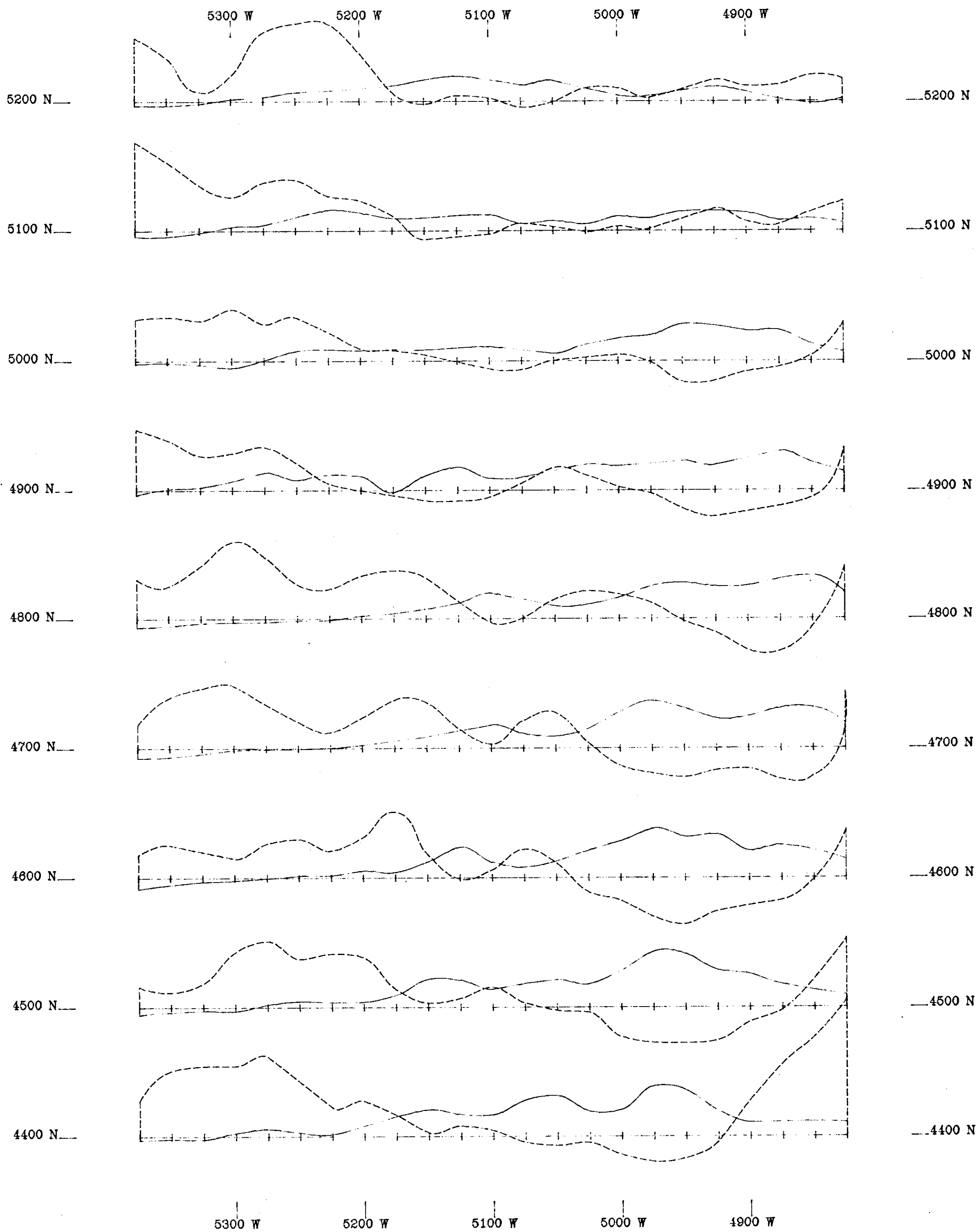
NORAMCO MINING CORPORATION
VLF-EM SURVEY, KENA GOLD PROJECT FILTERED VLF-EM, (Fraser)
Vertical inphase component contour interval 2 % FREQ. 21.4 khz, Annapolis
Delta Geoscience Limited



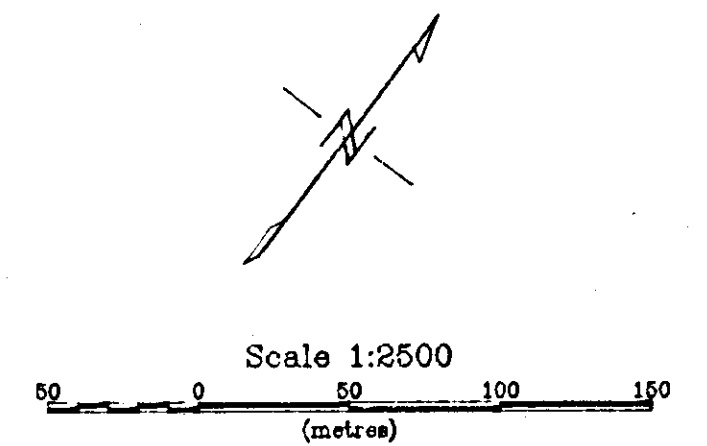
GEOLOGICAL BRANCH
 ASSESSMENT REPORT
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NORAMCO MINING CORPORATION
 MAGNETIC SURVEY, KENA GOLD PROJECT
 TOTAL FIELD MAGNETIC PLAN
 Contour interval 25 nt
 EDA Omni plus systems
 August, 1991 survey
 Delta Geoscience Limited



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 ASSESSMENT REPORT
 Post 2 of 2
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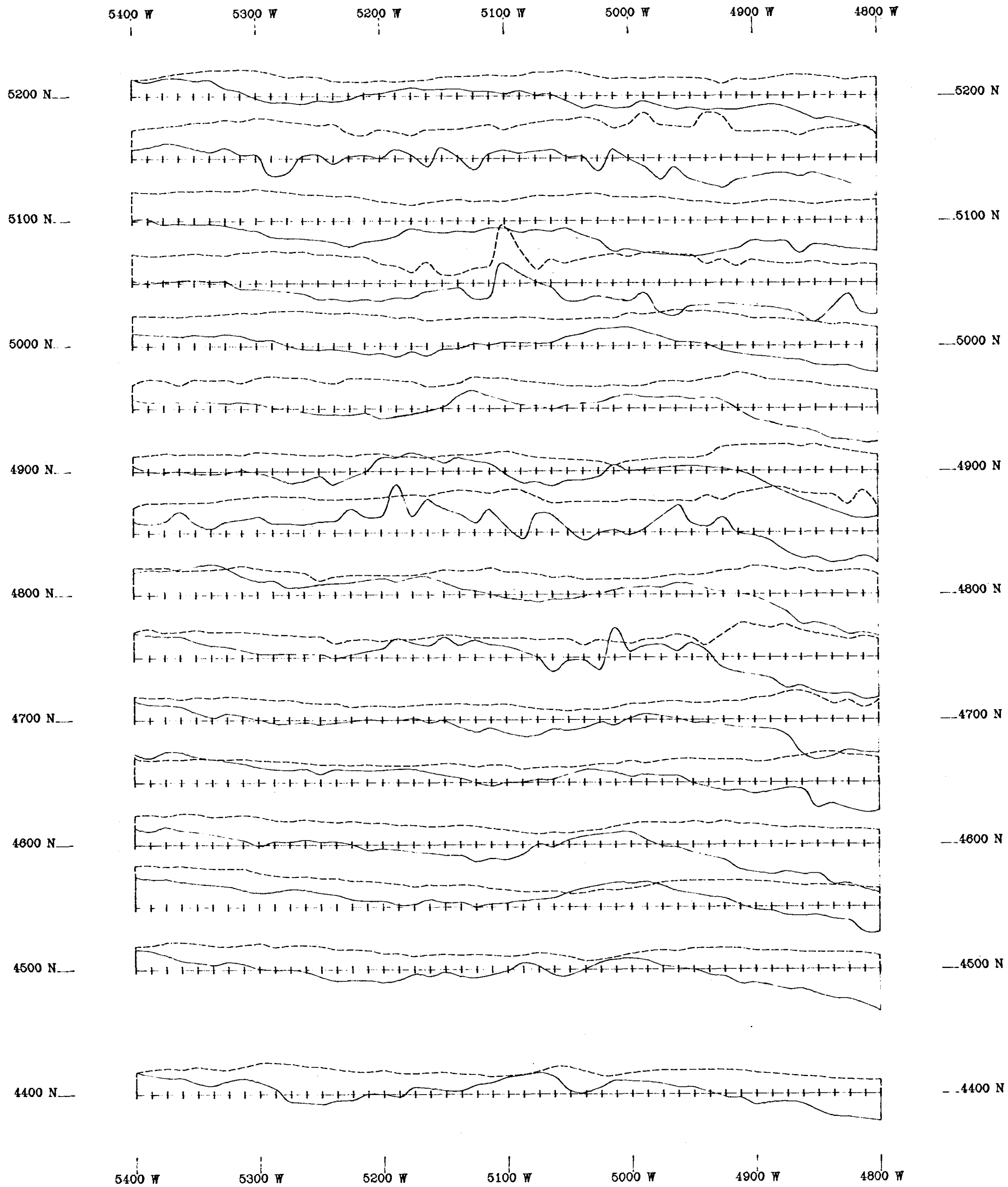


NORAMCO MINING CORPORATION
 INDUCED POLARIZATION SURVEY, KENA GOLD PROJECT
 CHARGEABILITY / RESISTIVITY PROFILES

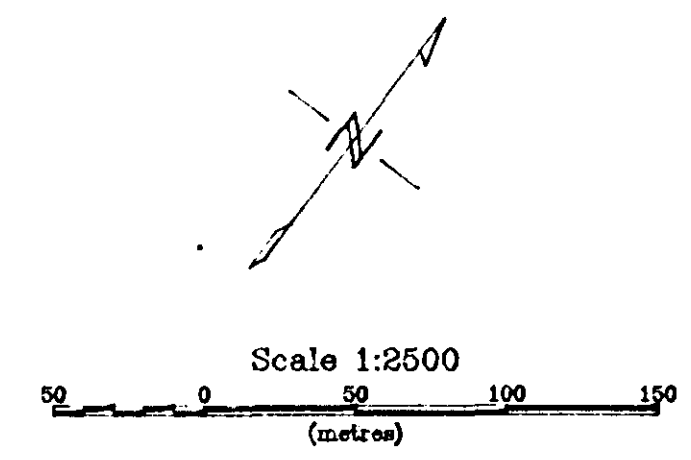
Gradient Array, AB = 1200m, MN = 50m.
 Chargeability solid line @ 1 cm = 20 mV/V, base 10 mV/V
 Resistivity dash line @ 1 cm = 1000 ohm-m, base 2000 ohm-m

Delta Geoscience Limited

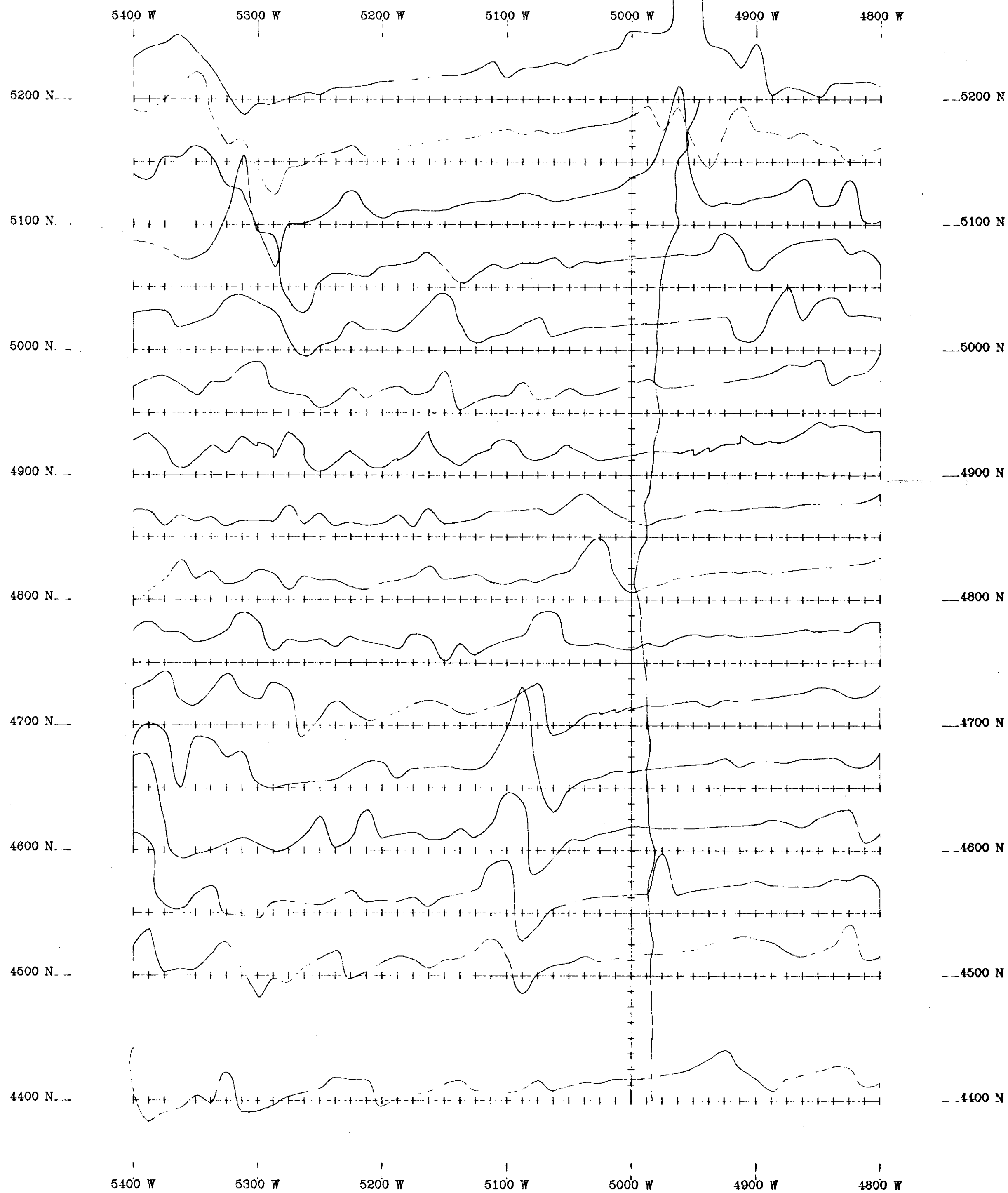
FIG. 9



GEOLOGICAL BRANCH
ASSESSMENT REPORT
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NORAMCO MINING CORPORATION
VLF-EM SURVEY, KENA GOLD PROJECT
VERTICAL INPHASE & HORIZONTAL FIELD PROFILES
Vertical inphase solid line @ 1 cm = 20%, base -15%
Horizontal field dash line @ 1 cm = 5, base 10
FREQ. 21.4 khz, Annapolis
Delta Geoscience Limited



GEOLOGICAL BRANCH
ASSESSMENT REPORT

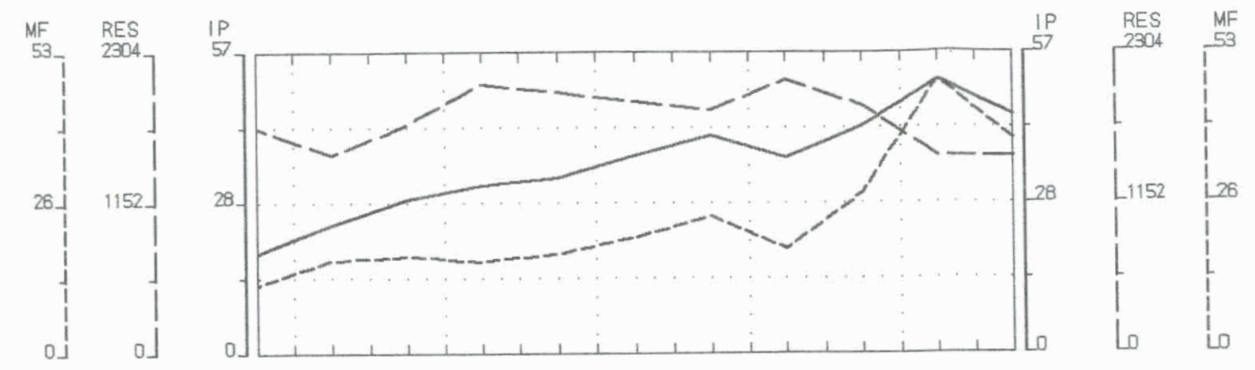
Page 2 of 2
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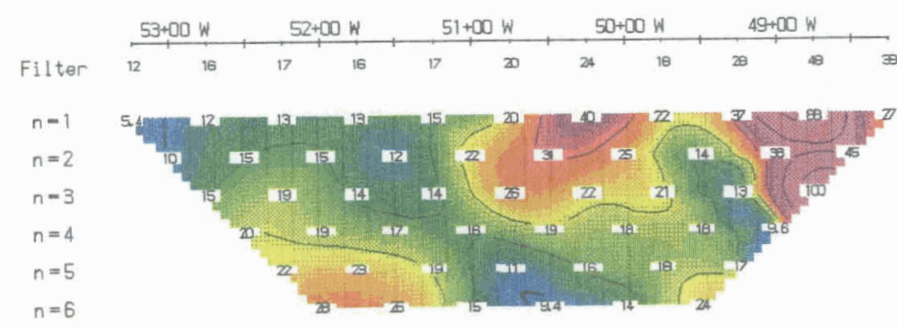
Scale 1:2500
50 0 50 100 150
(metres)

NORAMCO MINING CORPORATION
MAGNETIC SURVEY, KENA GOLD PROJECT
TOTAL FIELD MAGNETIC PROFILES
1 cm = 400 nt, base 56400 nt
EDA Omni plus systems
August, 1991 survey
Delta Geoscience Limited

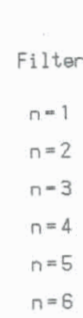
21917
 Part 2 of 2
 GEOLOGICAL BRANCH
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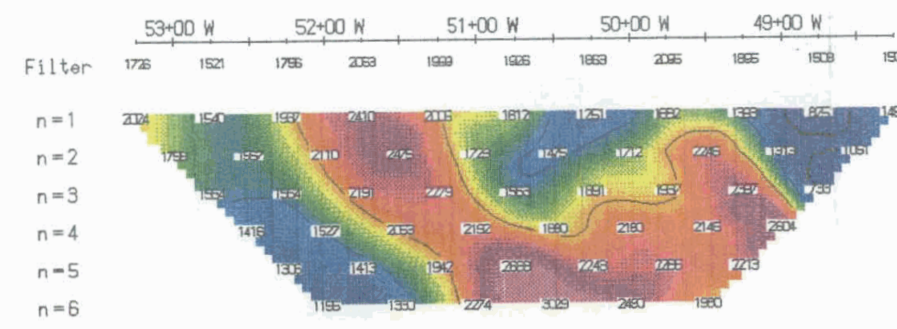
metal factor
(ip/res)*1000



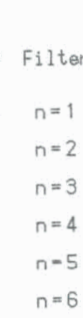
metal factor
(ip/res)*1000



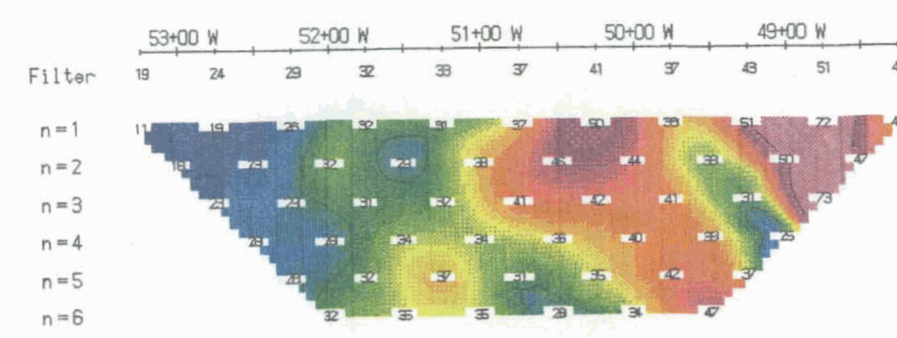
resistivity
ohm-m



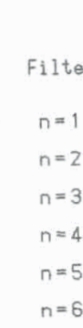
resistivity
ohm-m



chargeability
mV/V

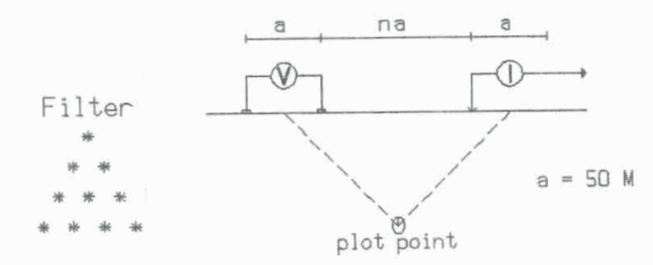


chargeability
mV/V



Line 4500 N

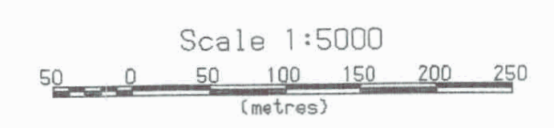
Pole-Dipole Array



Logarithmic Contours 1, 1.5, 2, 3, 5, 7.5, 10, ...

INTERPRETATION

- Strong increase in polarization accompanied by marked decrease in resistivity.
- Well defined increase in polarization without marked resistivity decrease.
- Poorly defined polarization increase with no resistivity signature.
- ▼ Low resistivity feature.



NORAMCO MINING CORPORATION

INDUCED POLARIZATION SURVEY
INDUCED POLARIZATION / RESISTIVITY SURVEY
KENA GOLD GRID

Date: 9/11/12
Interpretation: DELTA

DELTA GEOSCIENCE LTD

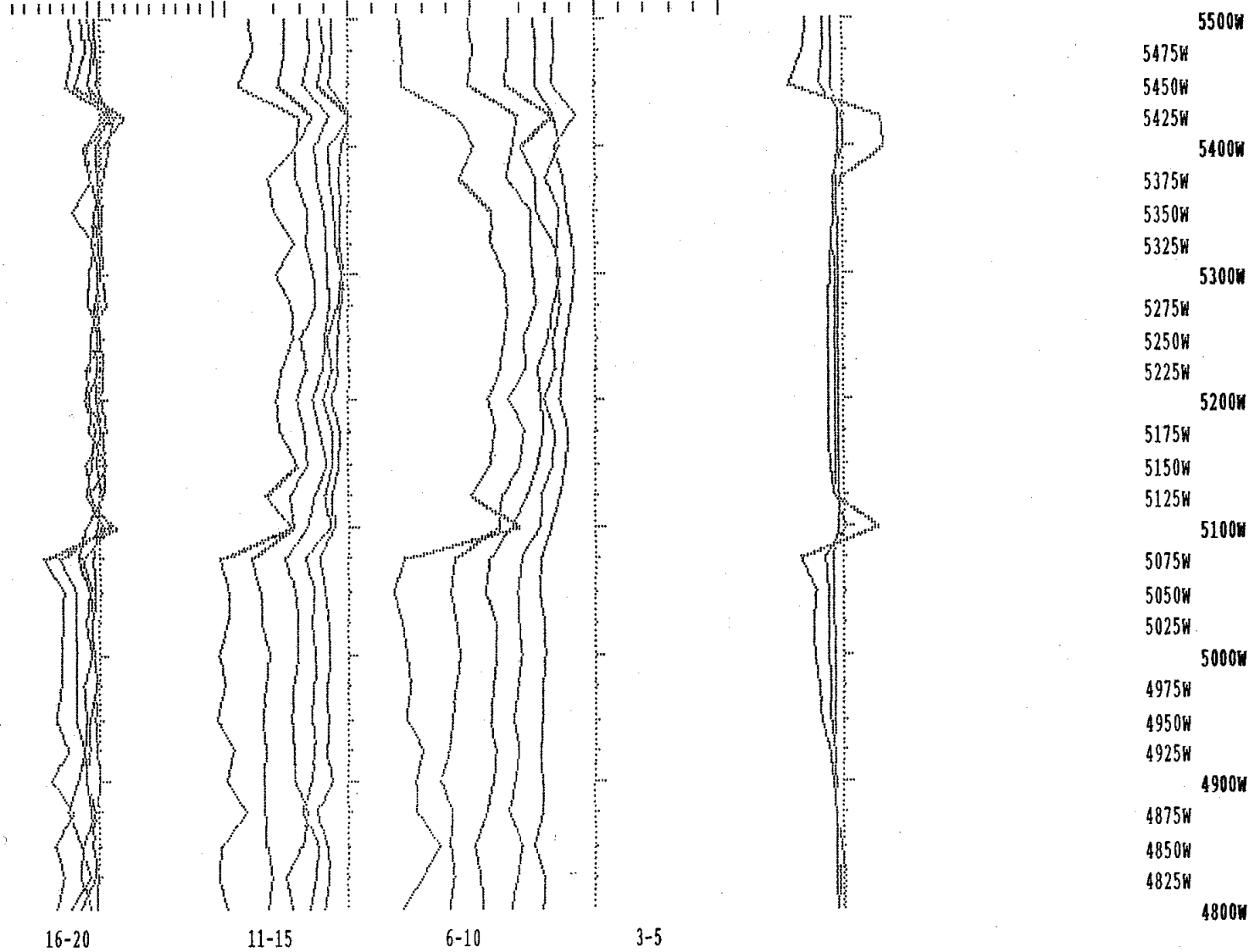
1xDBZ/310us nV/m²; TXC 15

5

15

50

1500



16-20

11-15

6-10

3-5

5500W
5475W
5450W
5425W
5400W
5375W
5350W
5325W
5300W
5275W
5250W
5225W
5200W
5175W
5150W
5125W
5100W
5075W
5050W
5025W
5000W
4975W
4950W
4925W
4900W
4875W
4850W
4825W
4800W

Line 4500

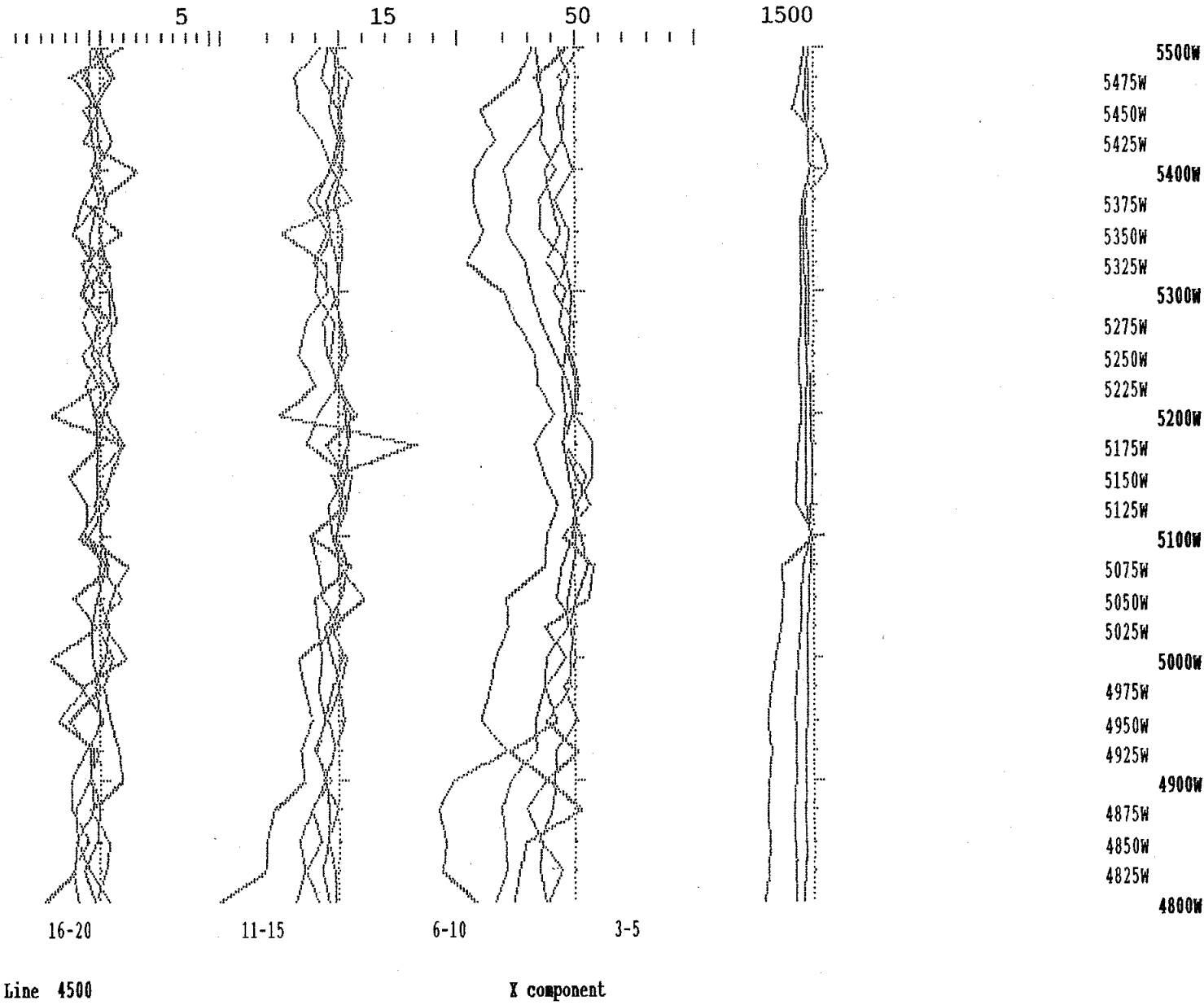
Z component

Geonics EM37 File PRO4500.DAT

21,917
GEOLOGICAL BRANCH
ASSESSMENT REPORT

FIG. 11a

1xDBX/310us nV/m²; TXC 15



Line 4500

Geonics EM37

File PR04500.DAT

X component

5500W
5475W
5450W
5425W
5400W
5375W
5350W
5325W
5300W
5275W
5250W
5225W
5200W
5175W
5150W
5125W
5100W
5075W
5050W
5025W
5000W
4975W
4950W
4925W
4900W
4875W
4850W
4825W
4800W

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GEOLOGICAL BRANCH
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FIG. 116.

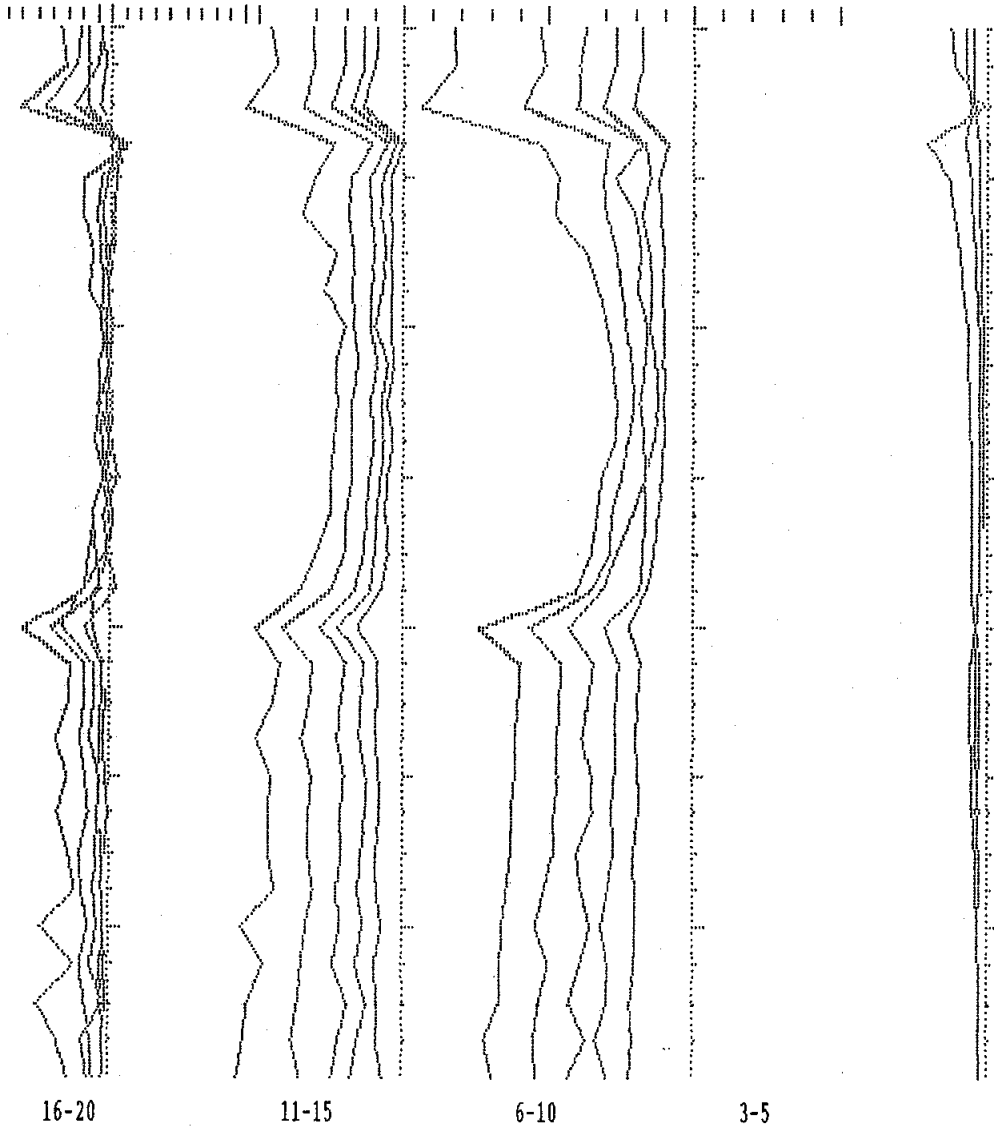
1xDBZ/310us nV/m²; TXC 15

5

15

50

1500



5500W
 5475W
 5450W
 5425W
 5400W
 5375W
 5350W
 5325W
 5300W
 5275W
 5250W
 5225W
 5200W
 5175W
 5150W
 5125W
 5100W
 5075W
 5050W
 5025W
 5000W
 4975W
 4950W
 4925W
 4900W
 4875W
 4850W
 4825W
 4800W

21,917

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ASSESSMENT REPORT

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Line 4600

Z component

Geonics EM37

File PRO4600.DAT

FIG 12a.

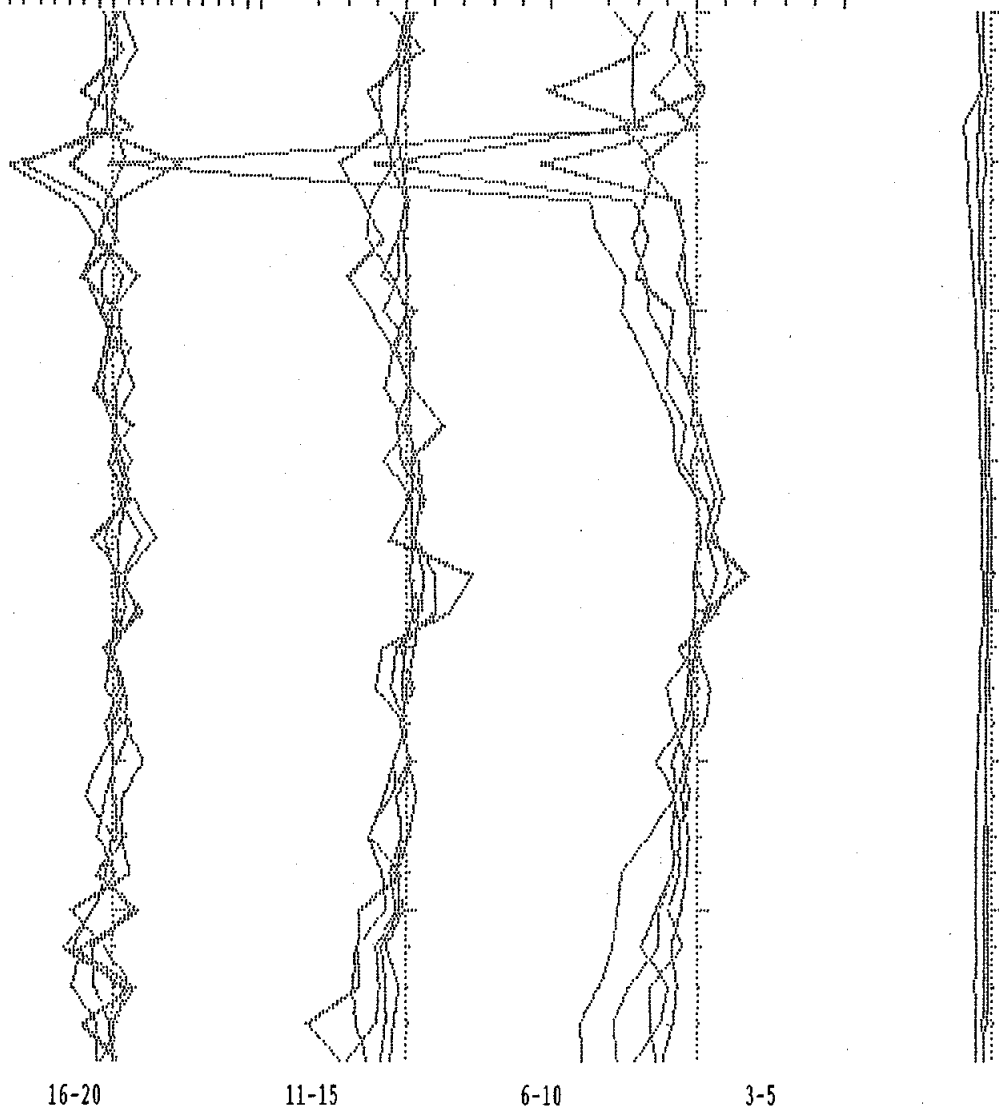
1xDBX/310us nV/m²; TXC 15

5

15

50

1500



5500W
 5475W
 5450W
 5425W
 5400W
 5375W
 5350W
 5325W
 5300W
 5275W
 5250W
 5225W
 5200W
 5175W
 5150W
 5125W
 5100W
 5075W
 5050W
 5025W
 5000W
 4975W
 4950W
 4925W
 4900W
 4875W
 4850W
 4825W
 4800W

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Line 4600

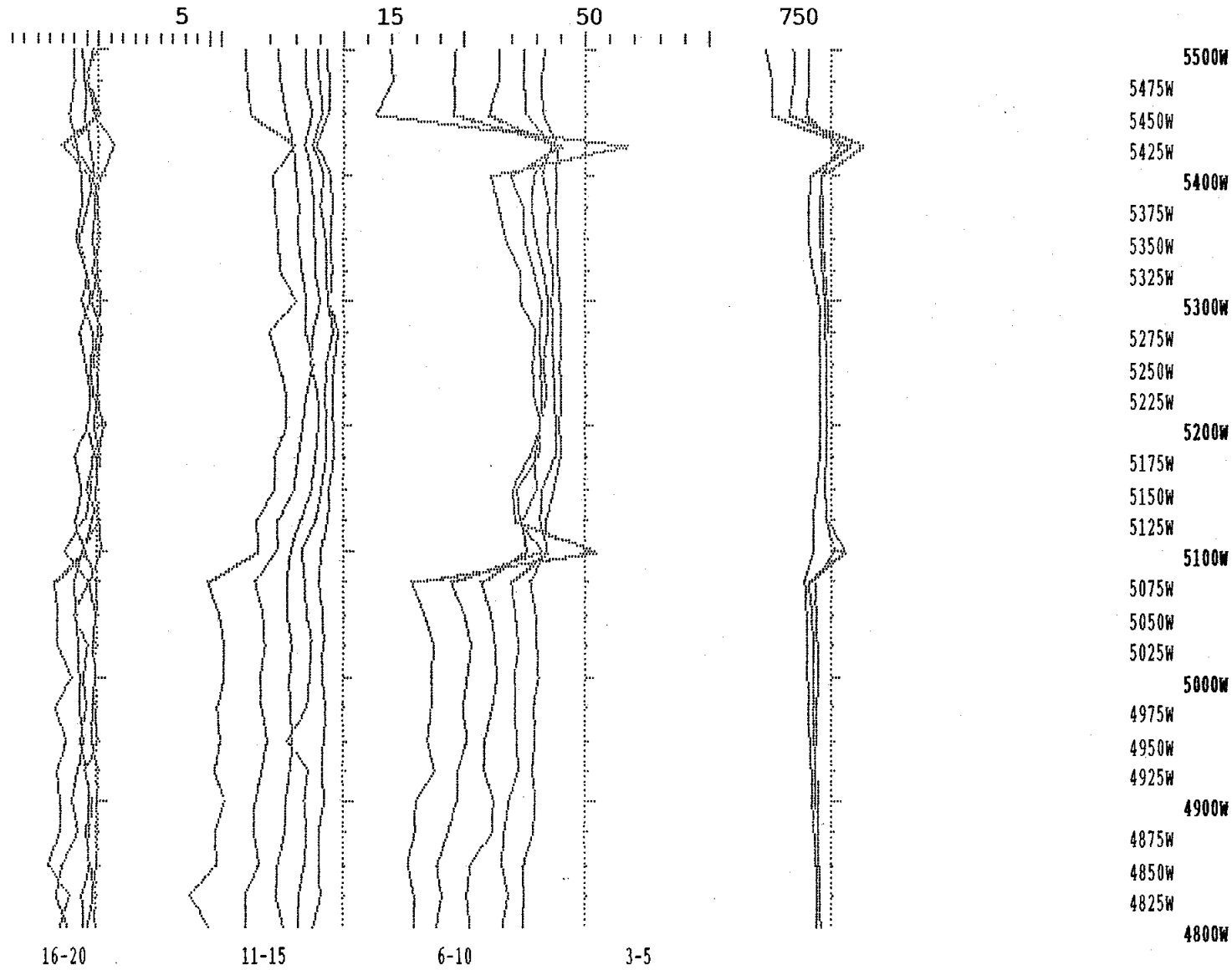
X component

Geonics EM37

File PRO4600.DAT

FIG. 12b

1xDBZ/310us nV/m²; TXC 15



5500W
5475W
5450W
5425W
5400W
5375W
5350W
5325W
5300W
5275W
5250W
5225W
5200W
5175W
5150W
5125W
5100W
5075W
5050W
5025W
5000W
4975W
4950W
4925W
4900W
4875W
4850W
4825W
4800W

21,917
Pass-282

GEOLOGICAL BRANCH
ASSESSMENT REPORT

Line 4700

Z component

Geonics EM37

File PRO4700.DAT

FIG. 13a

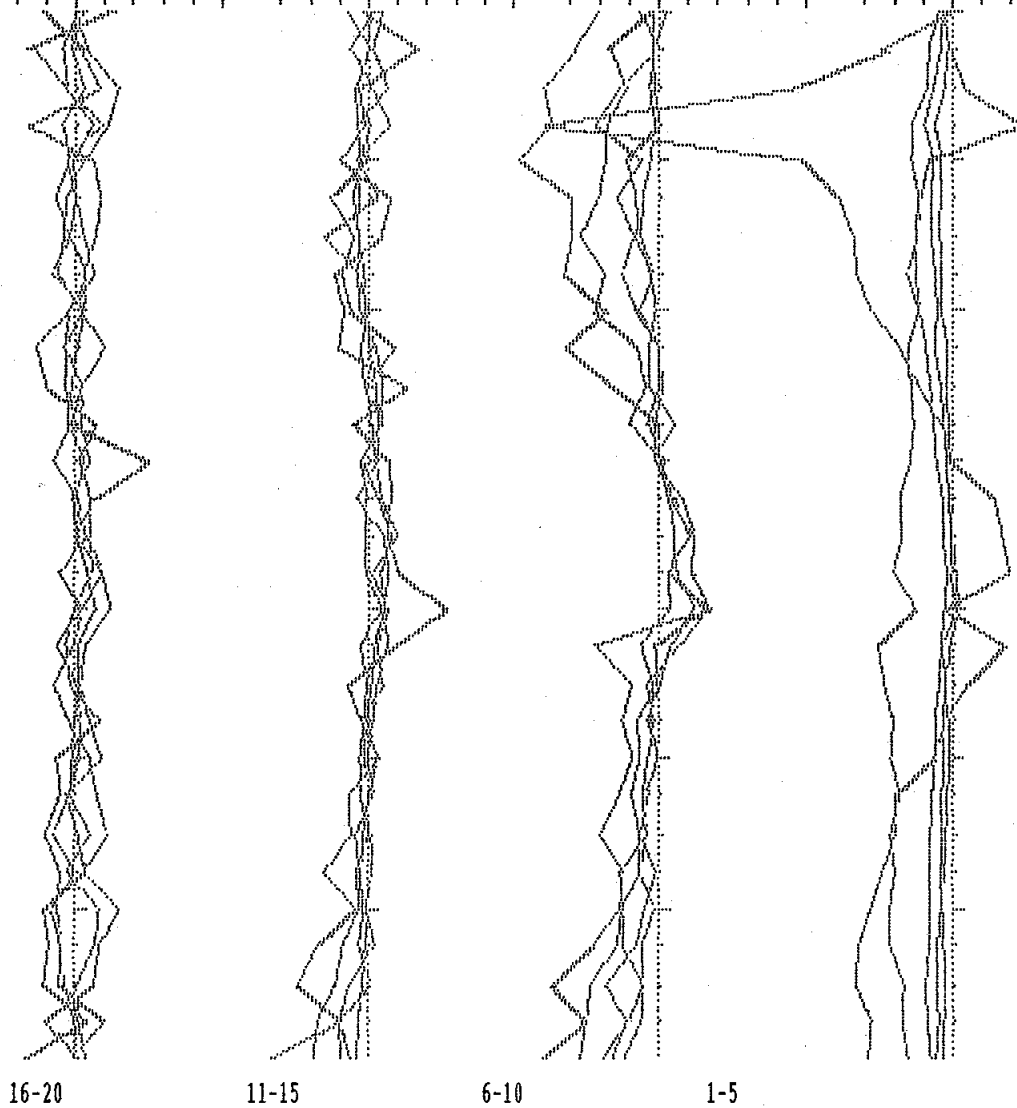
1xDBX/310us nV/m²; TXC 15

5

15

50

750



16-20

11-15

6-10

1-5

Line 4700

X component

Geonics EM37

File PRO4700.DAT

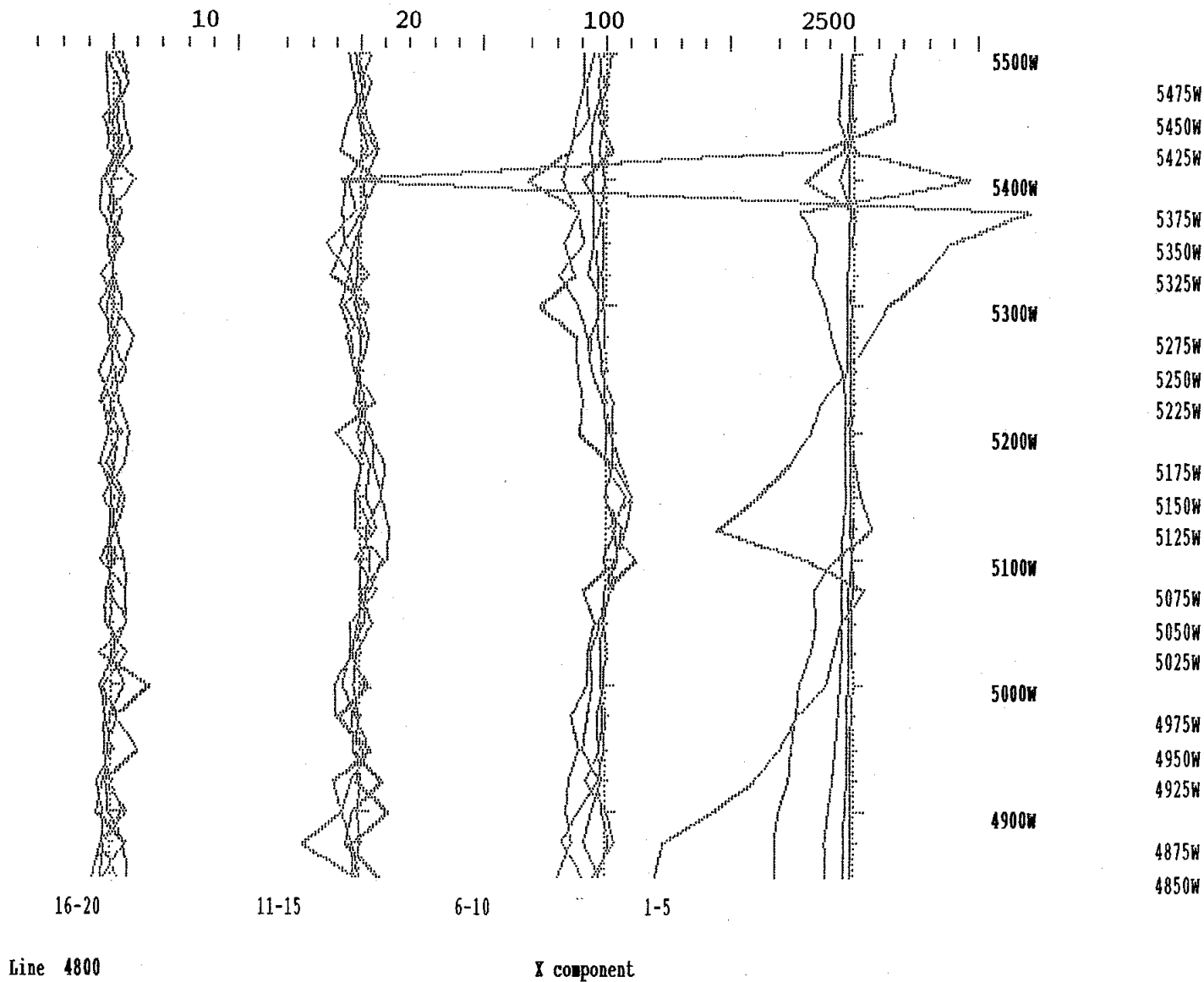
5500W
5475W
5450W
5425W
5400W
5375W
5350W
5325W
5300W
5275W
5250W
5225W
5200W
5175W
5150W
5125W
5100W
5075W
5050W
5025W
5000W
4975W
4950W
4925W
4900W
4875W
4850W
4825W
4800W

21,917
282

GEOLOGICAL BRANCH
INSTRUMENT BRANCH

FIG. 136.

1xDBX/310us nV/m²; TXC 15



Line 4800

Geonics EM37

File PRO4800.DAT

5475W
5450W
5425W
5375W
5350W
5325W
5275W
5250W
5225W
5175W
5150W
5125W
5100W
5075W
5050W
5025W
4975W
4950W
4925W
4875W
4850W

21,917

282
GEOLOGICAL BRANCH
ASSESSMENT REPORT

FIG. 14b

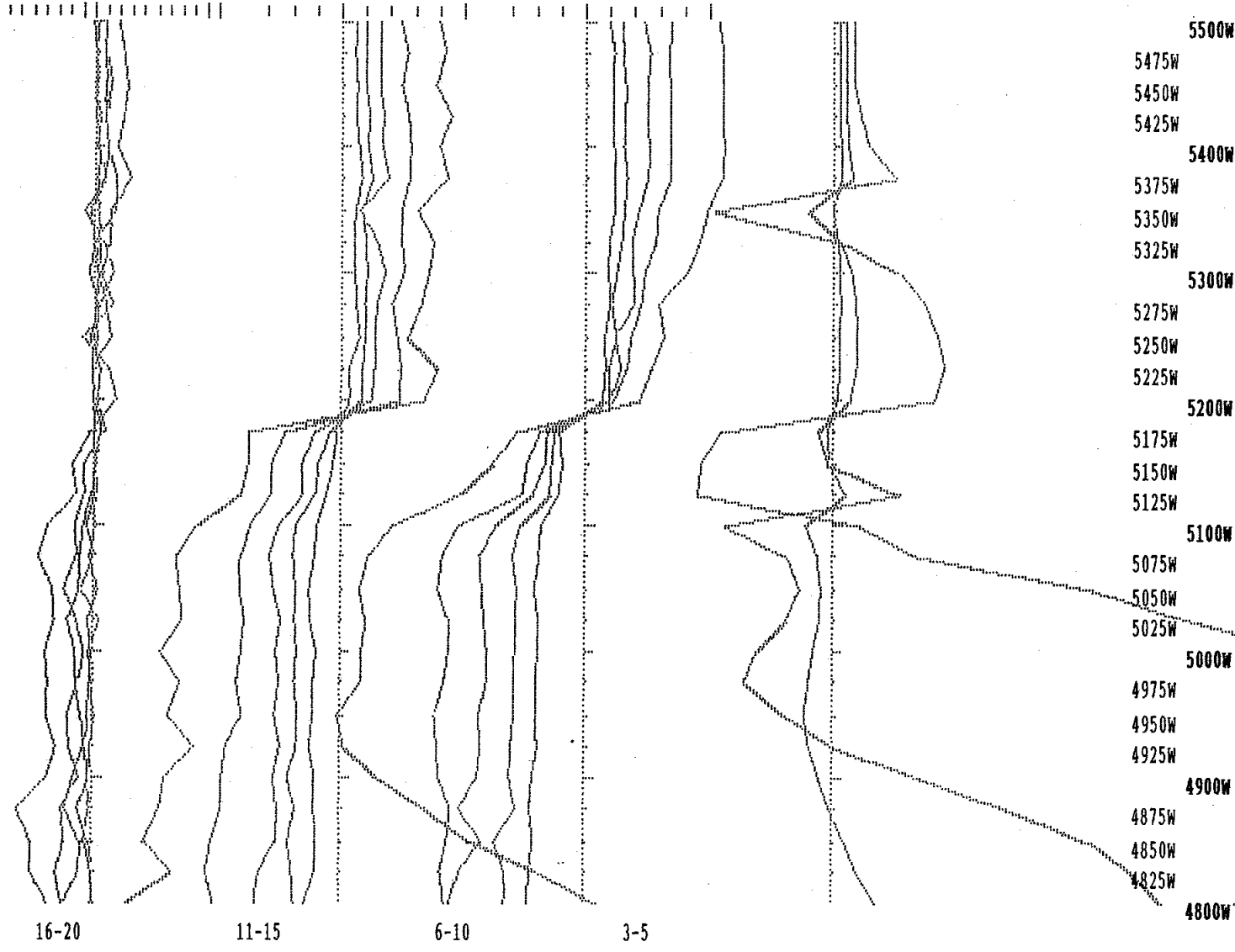
1xDBZ/320us nV/m²; TXC 15

5

15

75

2500



5500W
5475W
5450W
5425W
5400W
5375W
5350W
5325W
5300W
5275W
5250W
5225W
5200W
5175W
5150W
5125W
5100W
5075W
5050W
5025W
5000W
4975W
4950W
4925W
4900W
4875W
4850W
4825W
4800W

21917
DATE 2/8/82

GEOLOGICAL BRANCH
ASSESSMENT REPORT

Line 4900

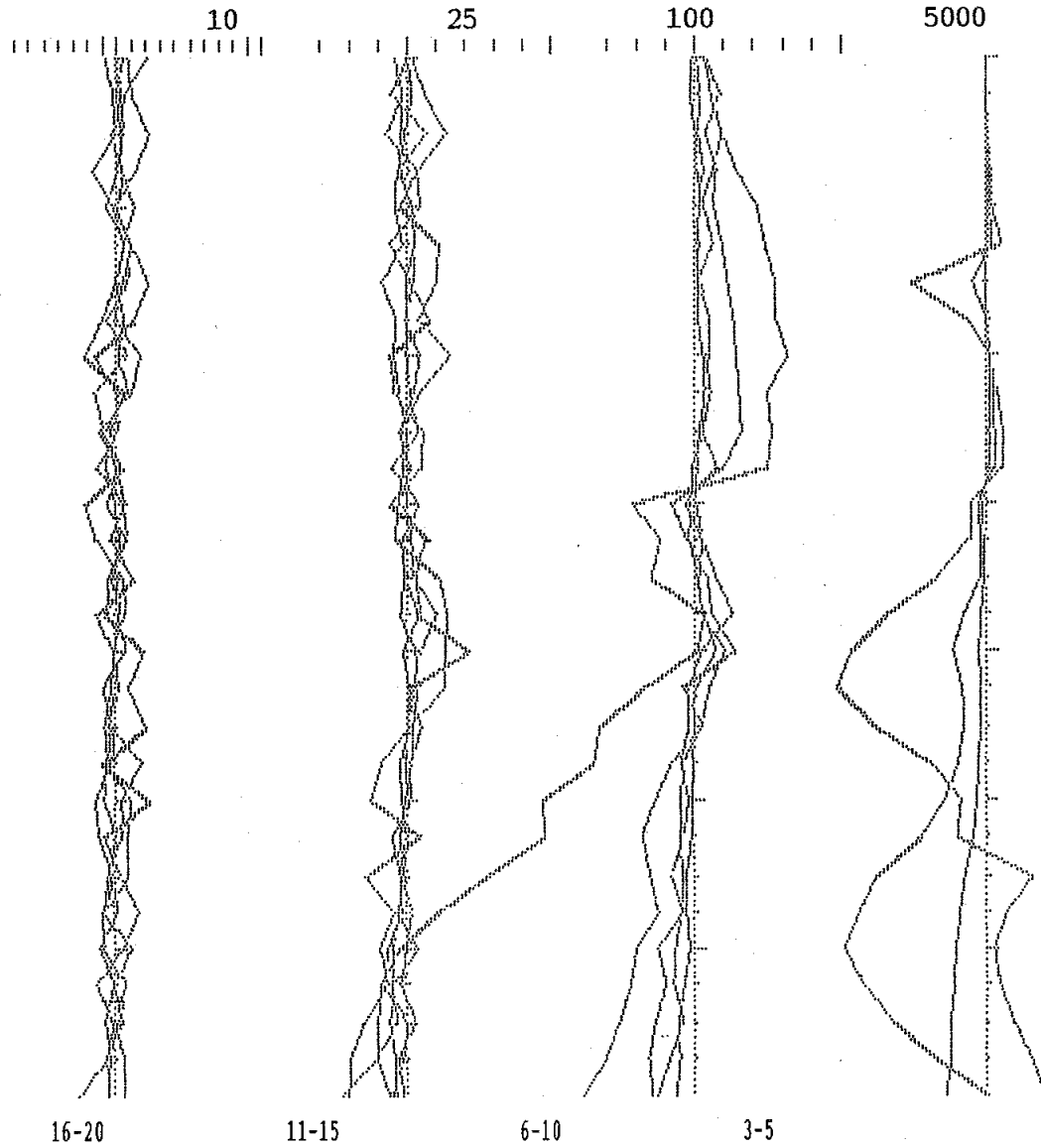
z component

Geonics EM37

File PRO4900.DAT

FIG. 15 a

1xDBX/320us nV/m²; TXC 15



5500W
5475W
5450W
5425W
5400W
5375W
5350W
5325W
5300W
5275W
5250W
5225W
5200W
5175W
5150W
5125W
5100W
5075W
5050W
5025W
5000W
4975W
4950W
4925W
4900W
4875W
4850W
4825W
4800W

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GEOLOGICAL BRANCH
ASSESSMENT REPORT
DATE 2/8/22

Line 4900

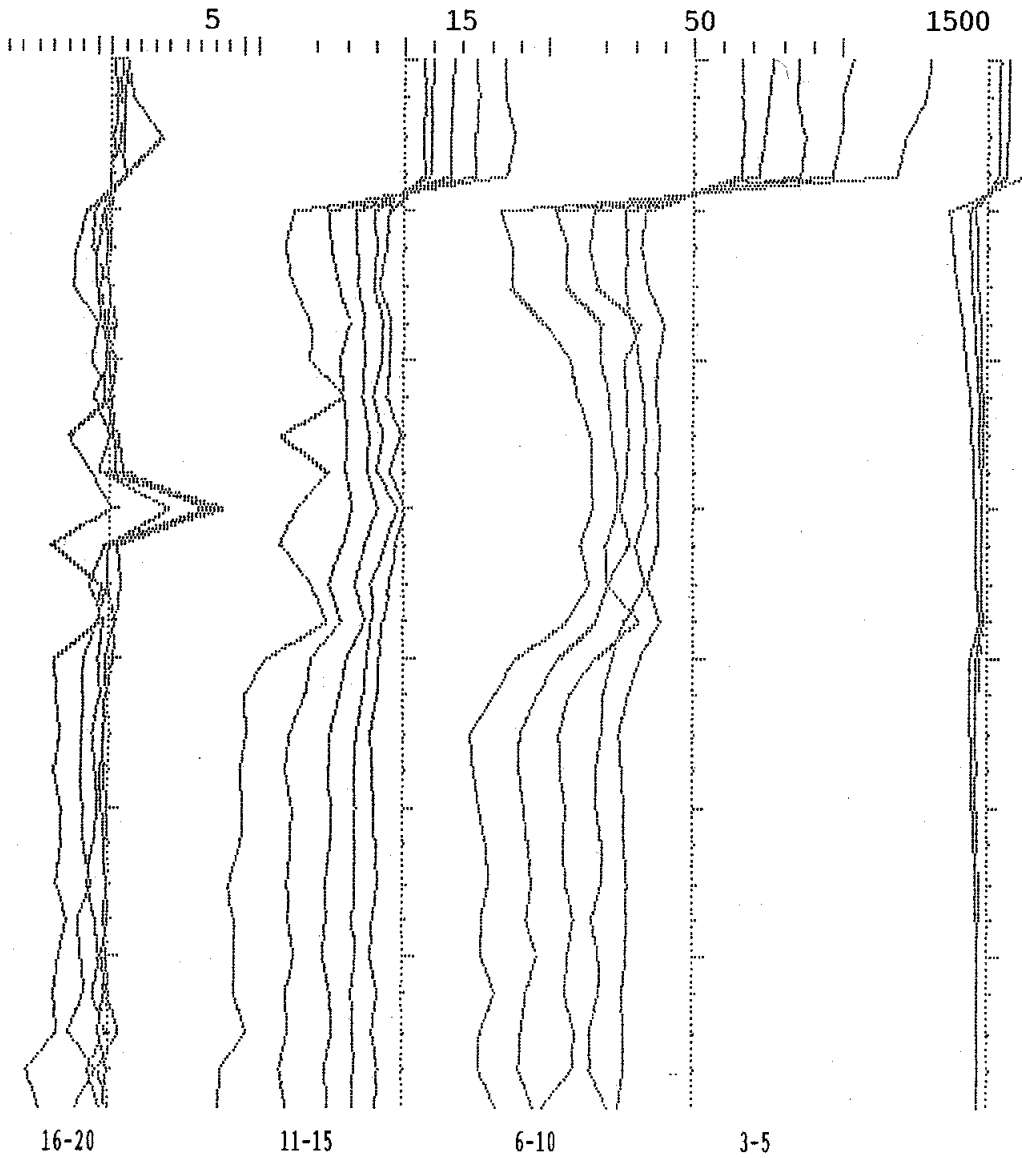
X component

Geonics EM37

File PR04900.DAT

FIG. 156.

1xDBZ/320us nV/m²; TXC 15



5500W
5475W
5450W
5425W
5400W
5375W
5350W
5325W
5300W
5275W
5250W
5225W
5200W
5175W
5150W
5125W
5100W
5075W
5050W
5025W
5000W
4975W
4950W
4925W
4900W
4875W
4850W
4825W
4800W

Line 5000

Z component

Geonics EM37

File PRO5000.DAT

21,917
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GEOLOGICAL BRANCH
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FIG. 16a

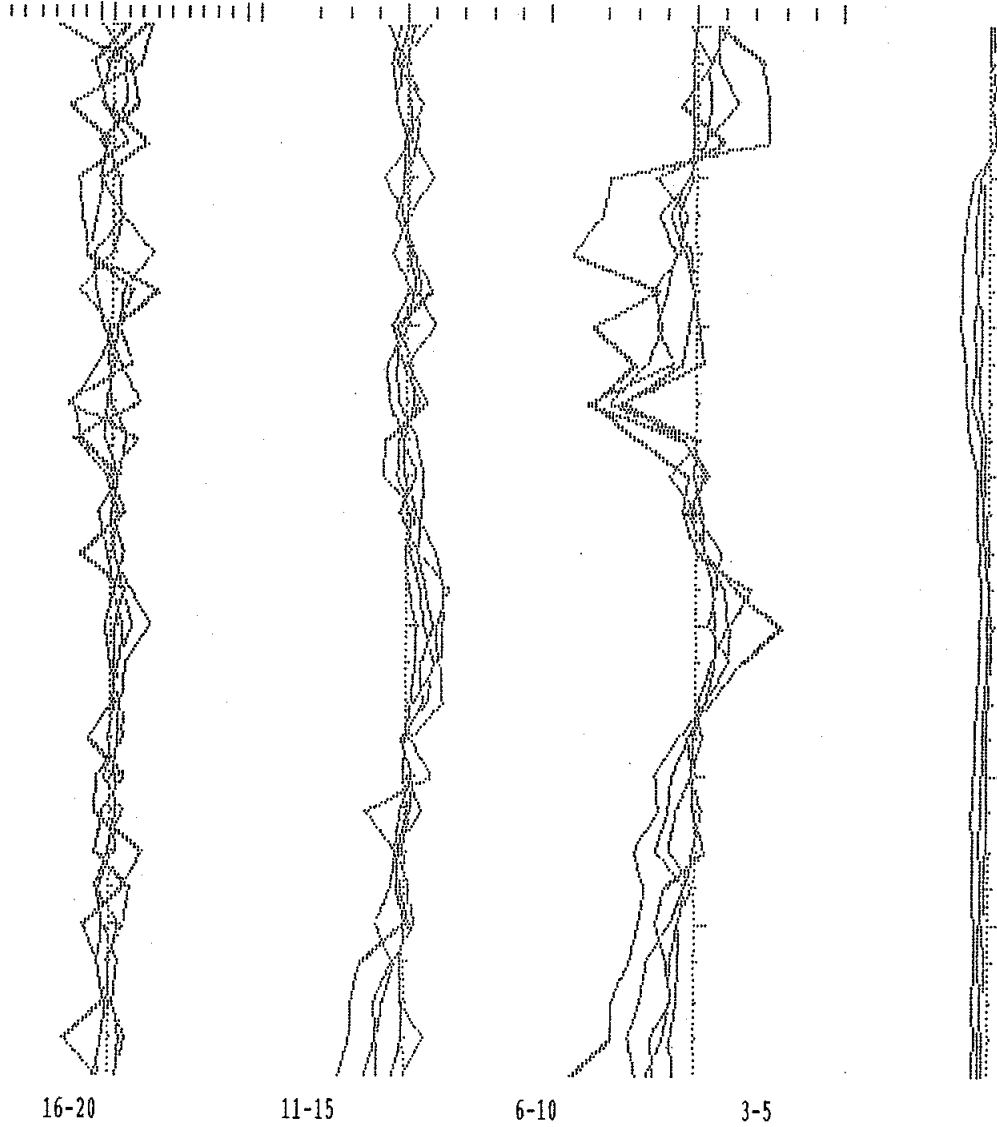
1xDBX/320us nV/m²; TXC 15

5

15

50

1000



16-20

11-15

6-10

3-5

Line 5000

X component

Geonics EM37

File PR05000.DAT

5500W
5475W
5450W
5425W
5400W
5375W
5350W
5325W
5300W
5275W
5250W
5225W
5200W
5175W
5150W
5125W
5100W
5075W
5050W
5025W
5000W
4975W
4950W
4925W
4900W
4875W
4850W
4825W
4800W

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DATE 2/8/92
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FIG. 16b

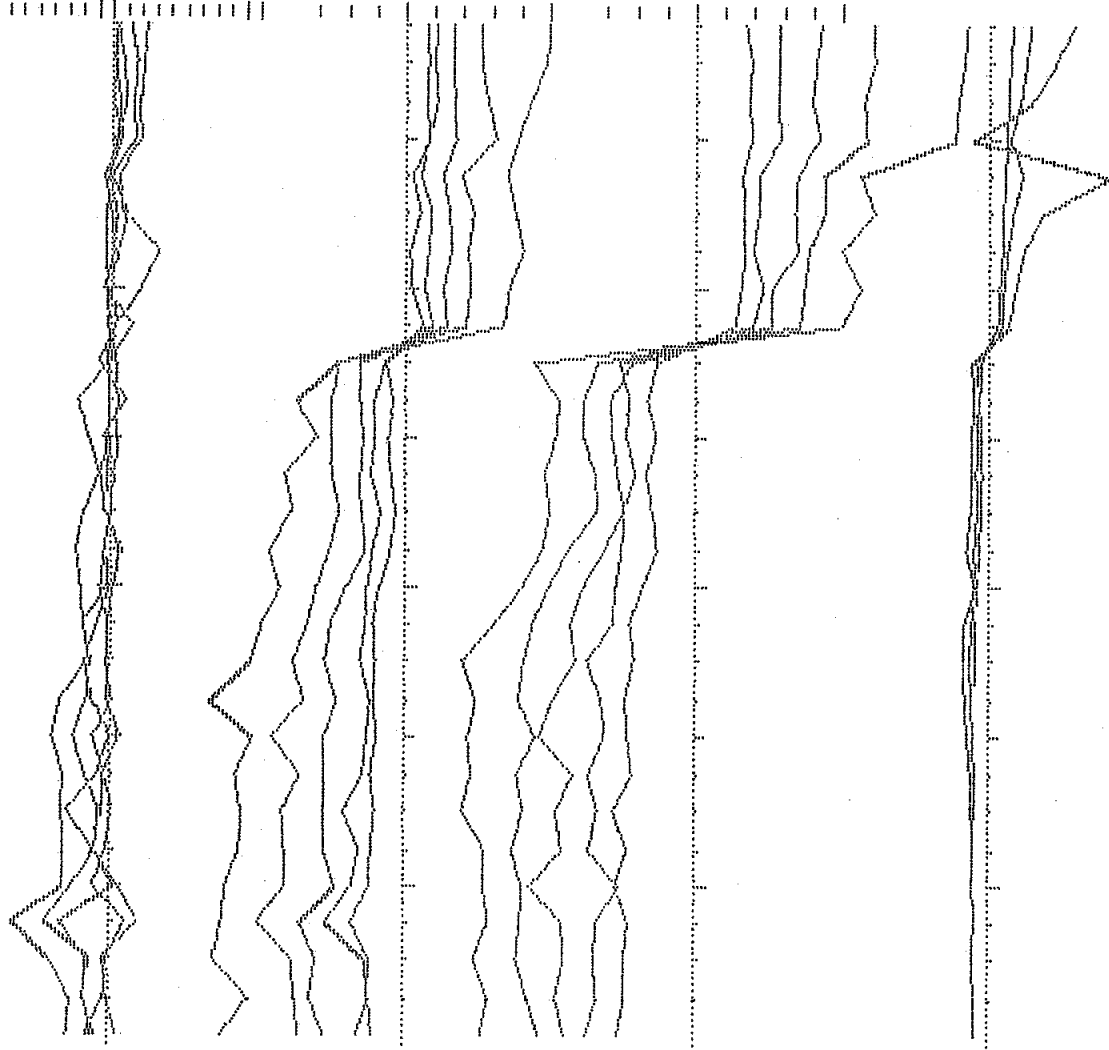
1xDBZ/310us nV/m²; TXC 15

5

15

50

1000



16-20

11-15

6-10

3-5

5475W
5450W
5425W
5400W
5375W
5350W
5325W
5300W
5275W
5250W
5225W
5200W
5175W
5150W
5125W
5100W
5075W
5050W
5025W
5000W
4975W
4950W
4925W
4900W
4875W
4850W
4825W
4800W

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ASSESSMENT REPORT

Line 5100

Z component

Geonics EM37

File PRO5100.DAT

FIG. 17c

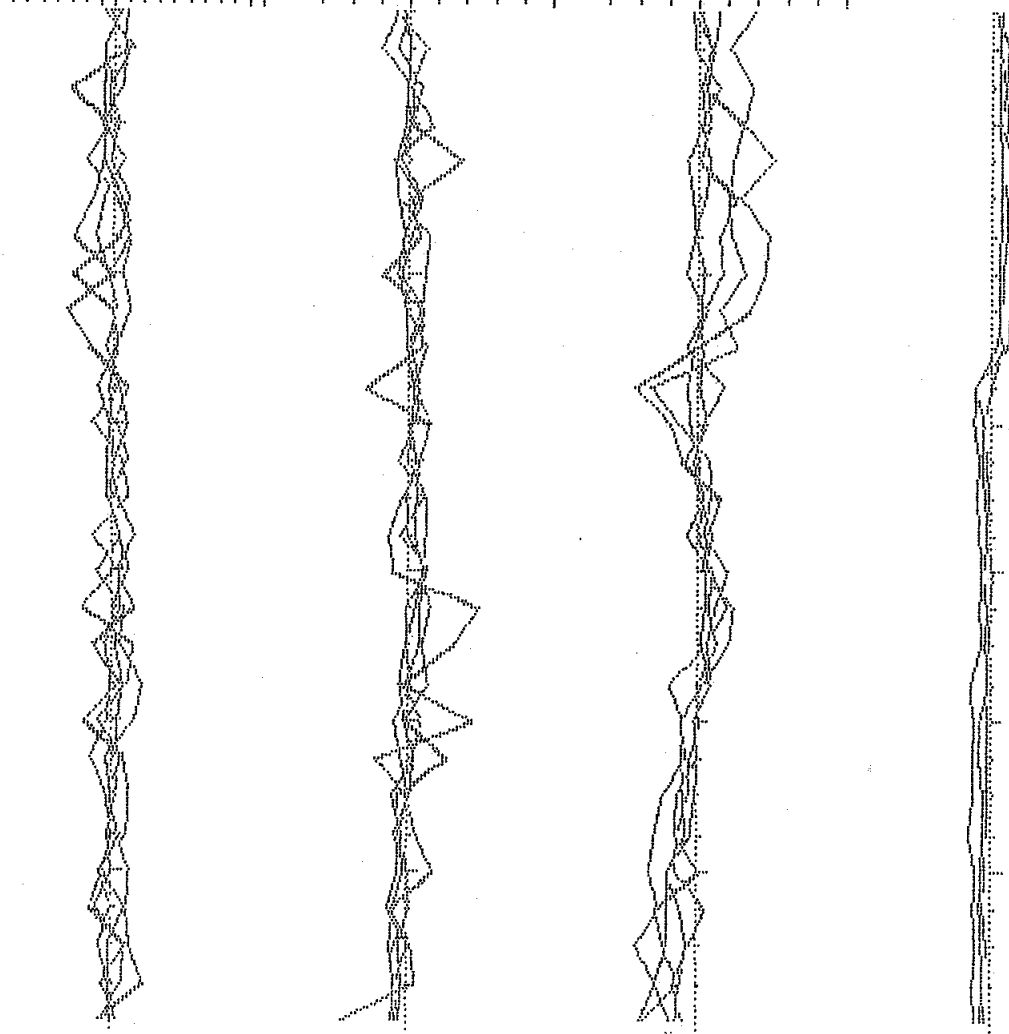
1xDBX/310us nV/m²; TXC 15

10

25

70

1000



16-20

11-15

6-10

3-5

Line 5100

X component

Geonics EM37

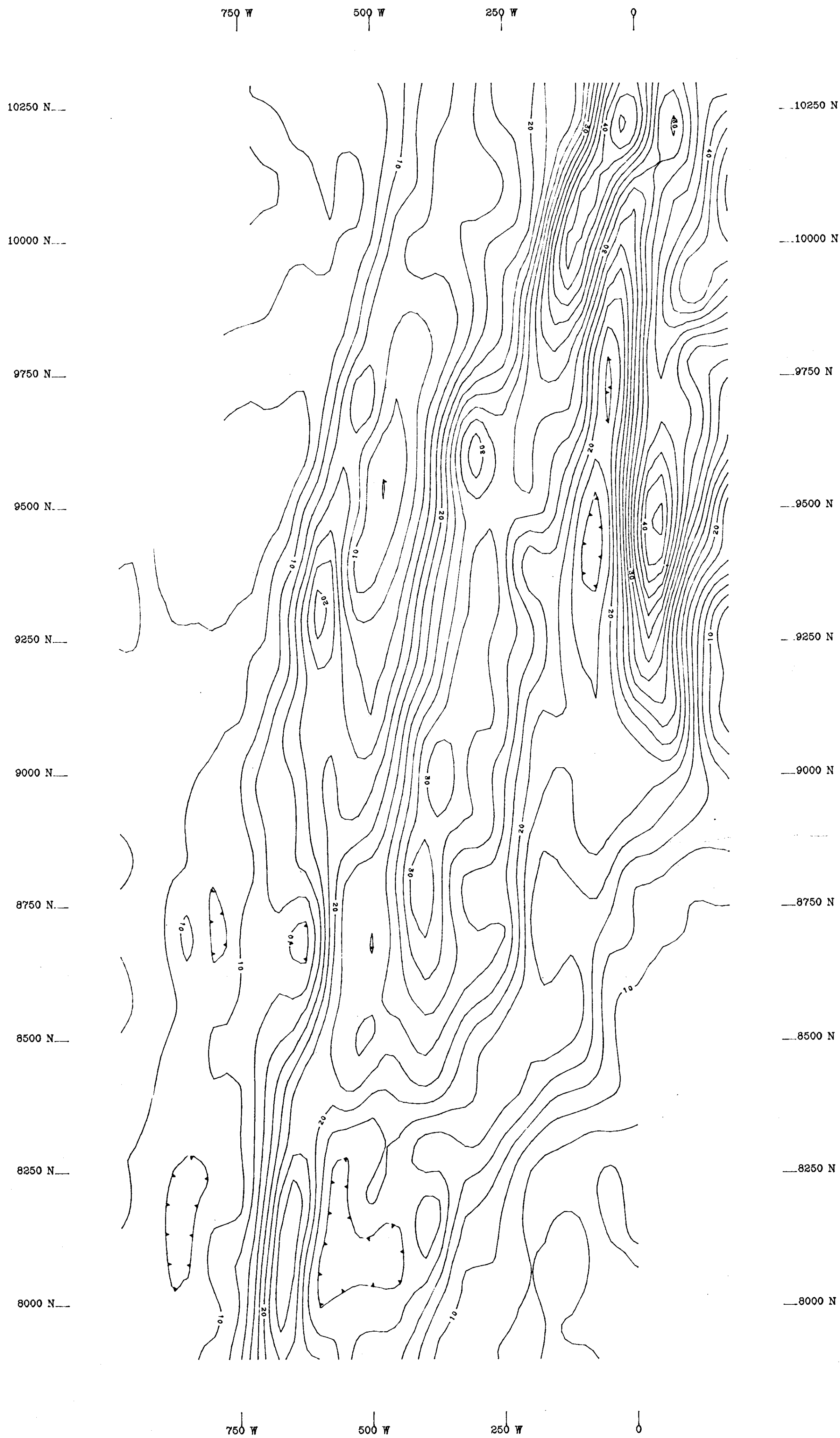
File PRO5100.DAT

5475W
5450W
5425W
5400W
5375W
5350W
5325W
5300W
5275W
5250W
5225W
5200W
5175W
5150W
5125W
5100W
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4950W
4925W
4900W
4875W
4850W
4825W
4800W

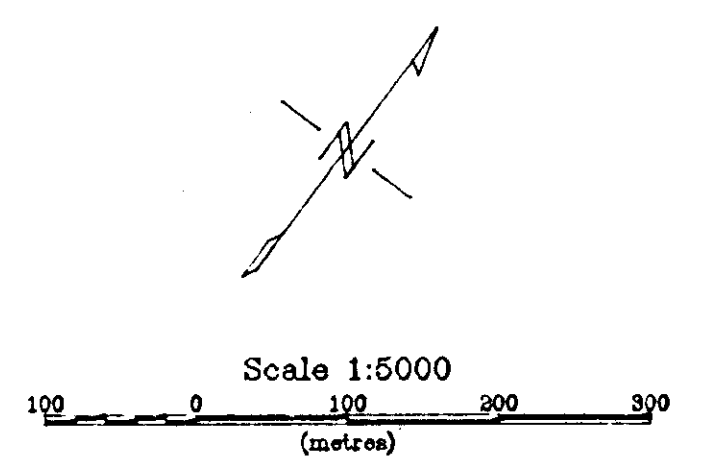
21917
Part 2 of 2

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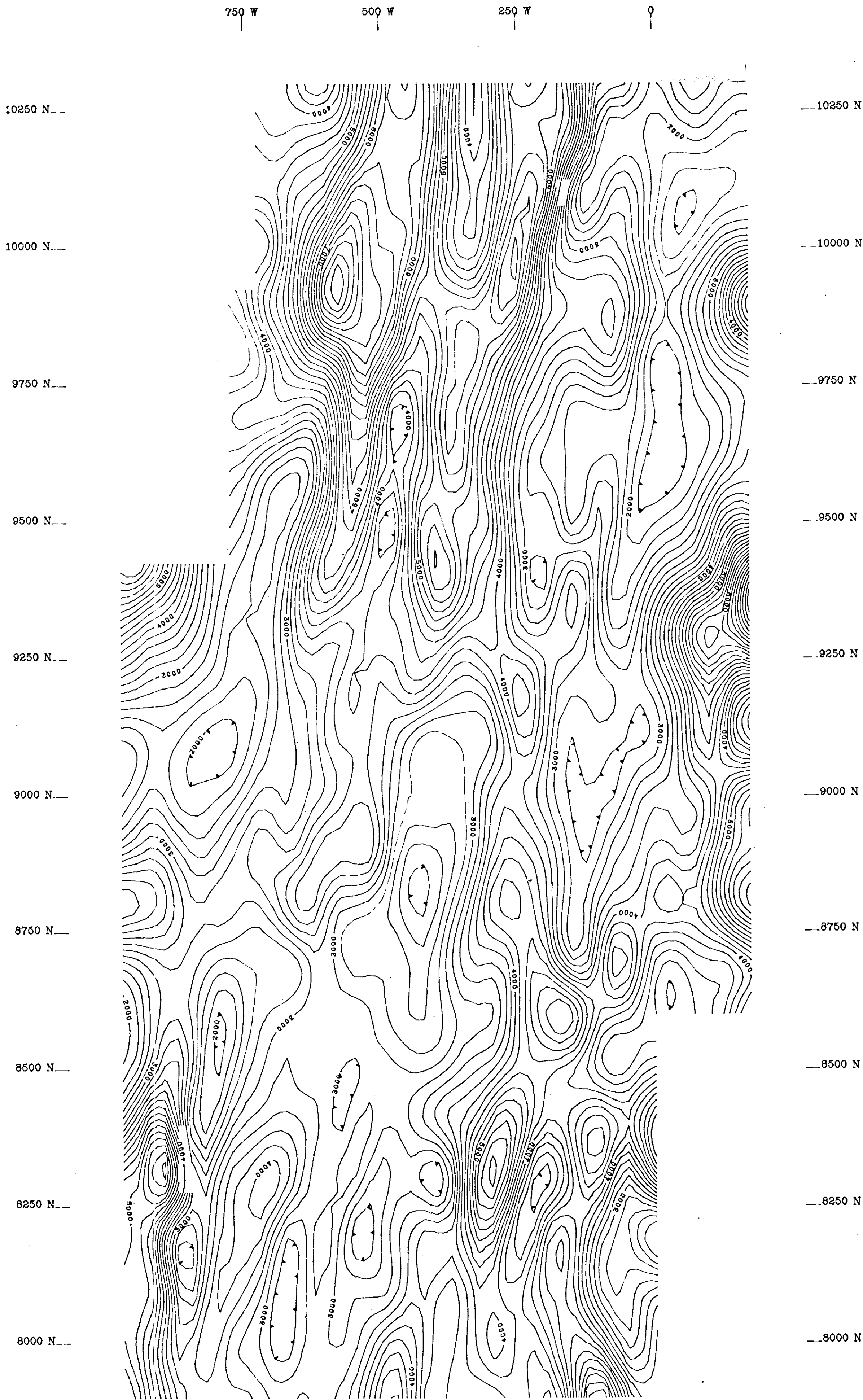
FIG. 17b



GEOLOGICAL BRANCH
ASSESSMENT REPORT
[Handwritten Signature]
21,917

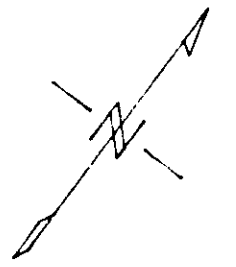


NORAMCO MINING CORPORATION
KENA SOUTH PROJECT INDUCED POLARIZATION / RESISTIVITY SURVEY
CHARGEABILITY PLAN Contour interval 2 mV/V Gradient Array, AB = 1800m, MN = 50m
Delta Geoscience Limited E16.19



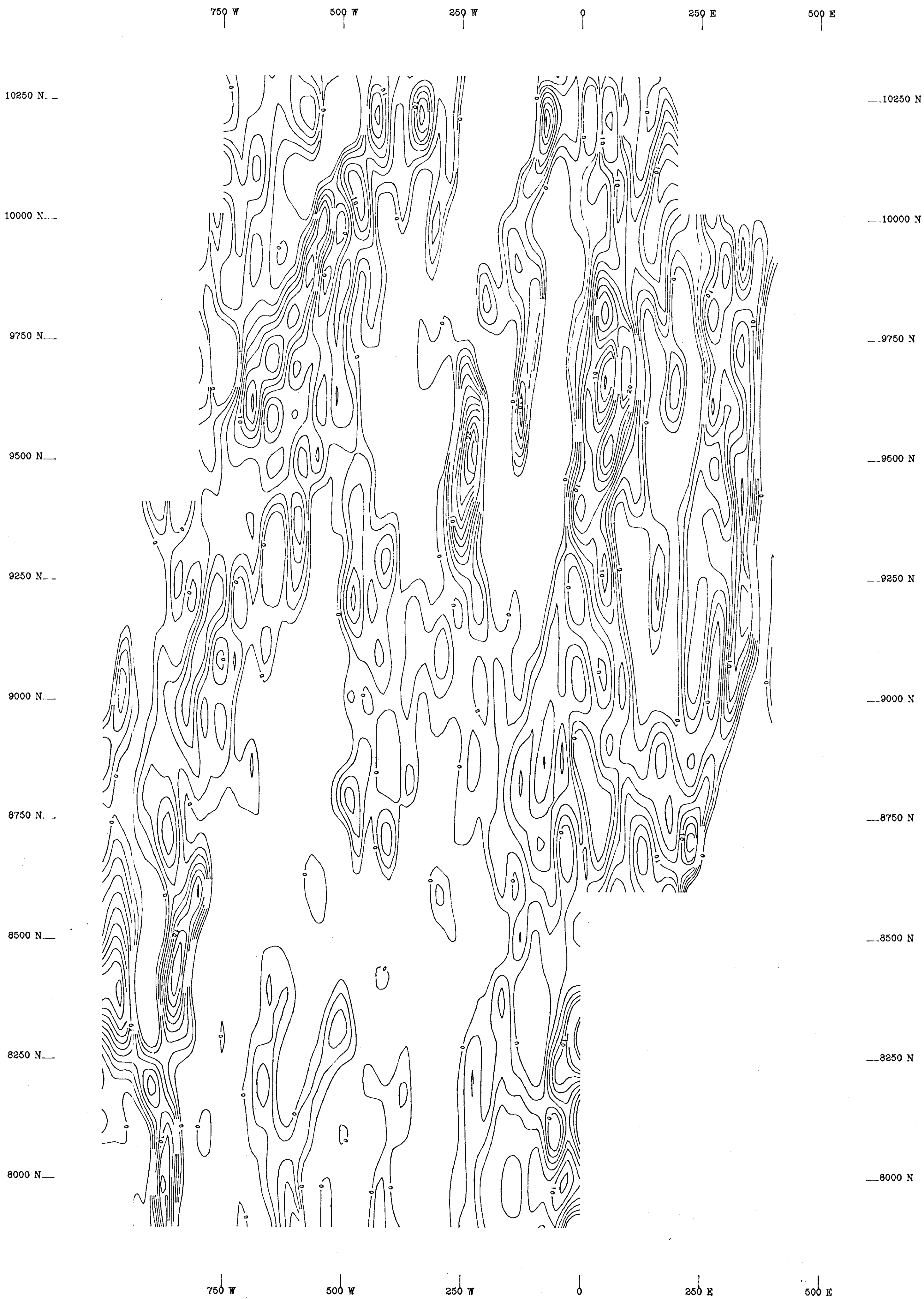
GEOLOGICAL BRANCH
ASSESSMENT REPORT

2012
21,917

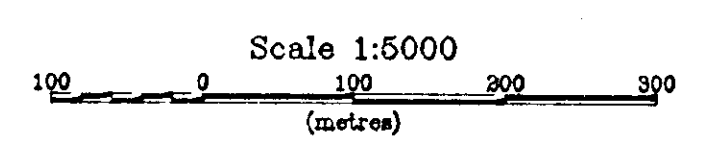


Scale 1:5000
100 0 100 200 300
(metres)

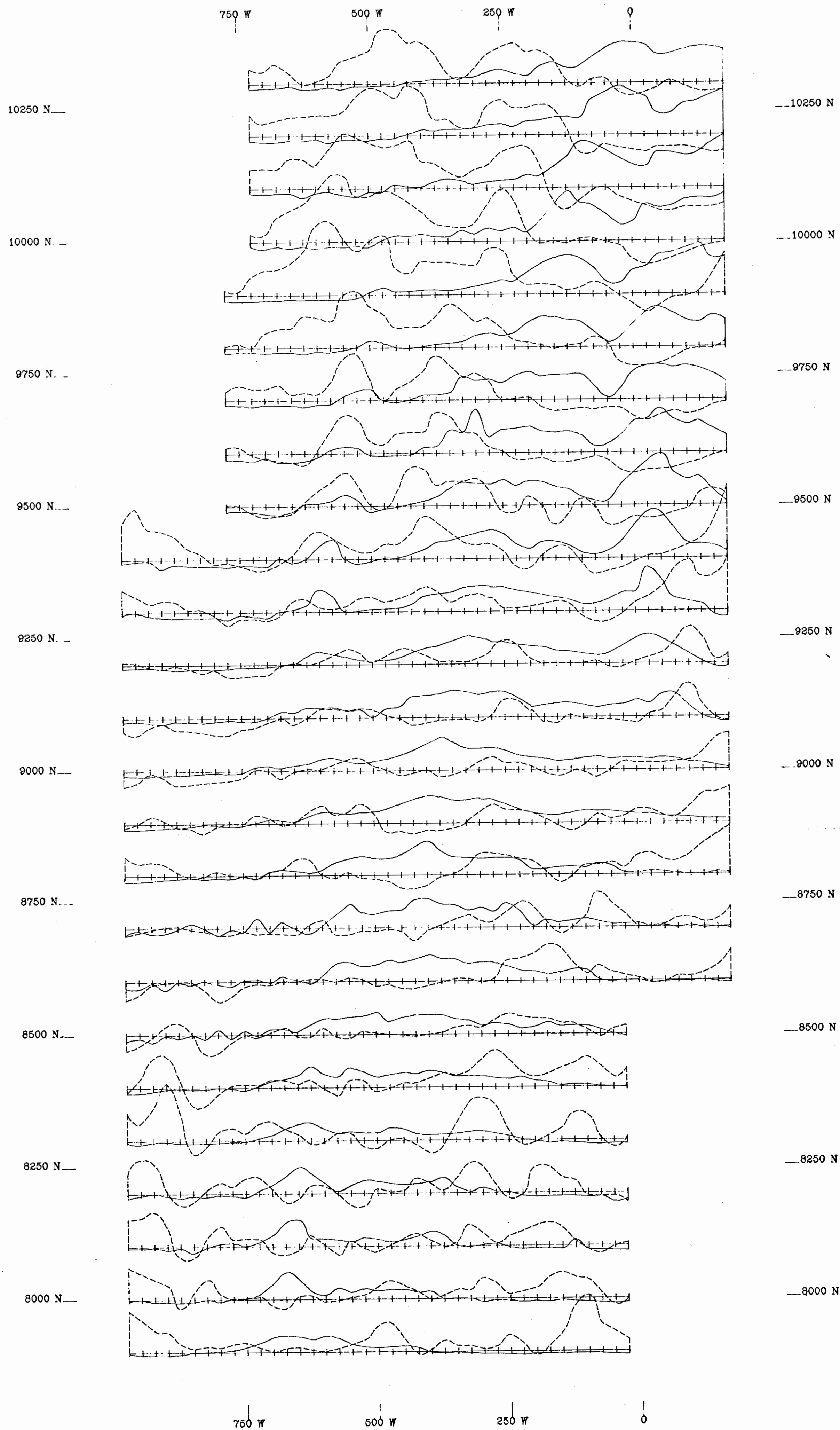
NORAMCO MINING CORPORATION
KENA SOUTH PROJECT INDUCED POLARIZATION / RESISTIVITY SURVEY
RESISTIVITY PLAN Contour interval 200 ohm-m Gradient Array, AB = 1800m, MN = 50m
Delta Geoscience Limited



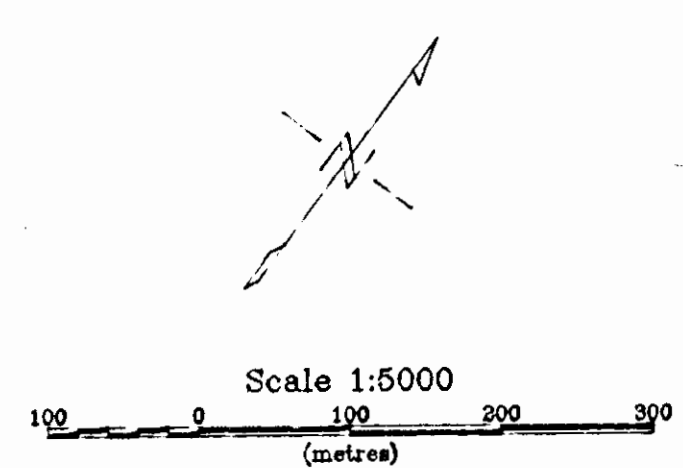
GEOLOGICAL BRANCH
 ASSESSMENT REPORT
 21,917



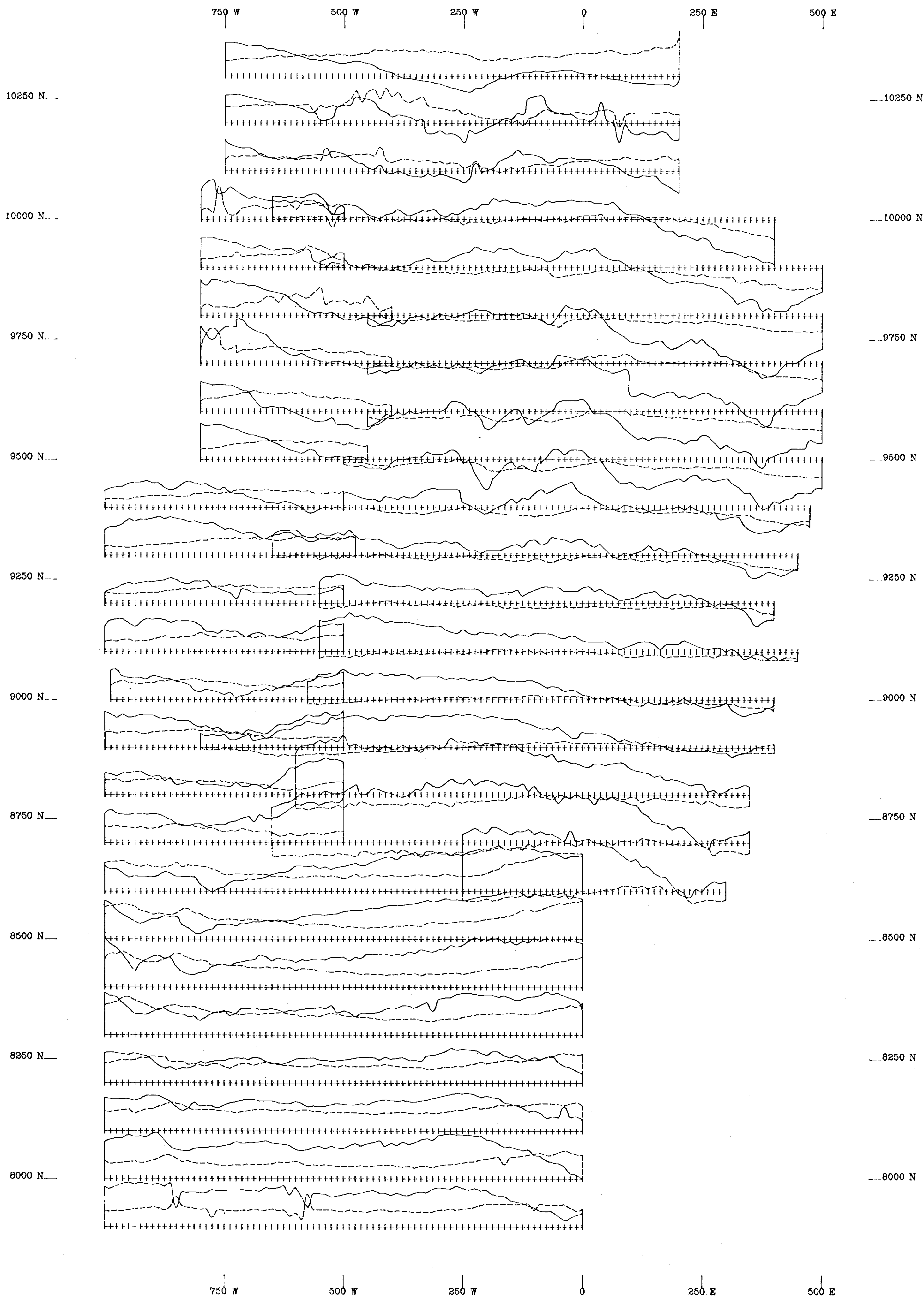
NORAMCO MINING CORPORATION
 KENA SOUTH PROJECT
 FILTERED VLF-EM PLAN, (Fraser)
 Vertical inphase filtered
 contour interval 2%
 August, 1991 Annapolis Tx, 21.4 khz
 Delta Geoscience Limited



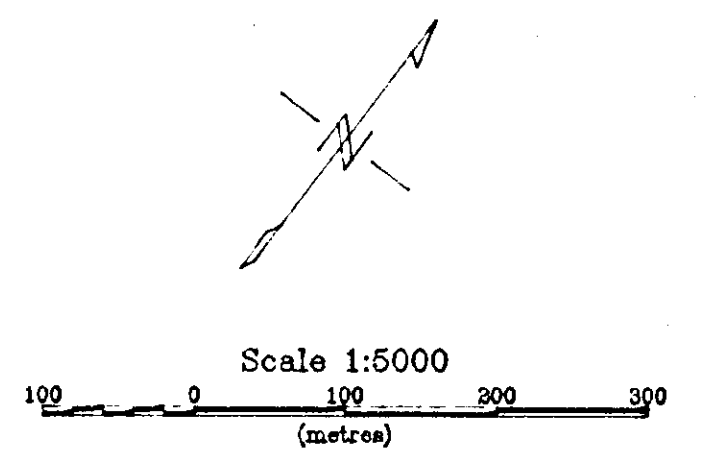
GEOLOGICAL BRANCH
 ASSESSMENT REPORT
 Part 2 of 2
 21,917



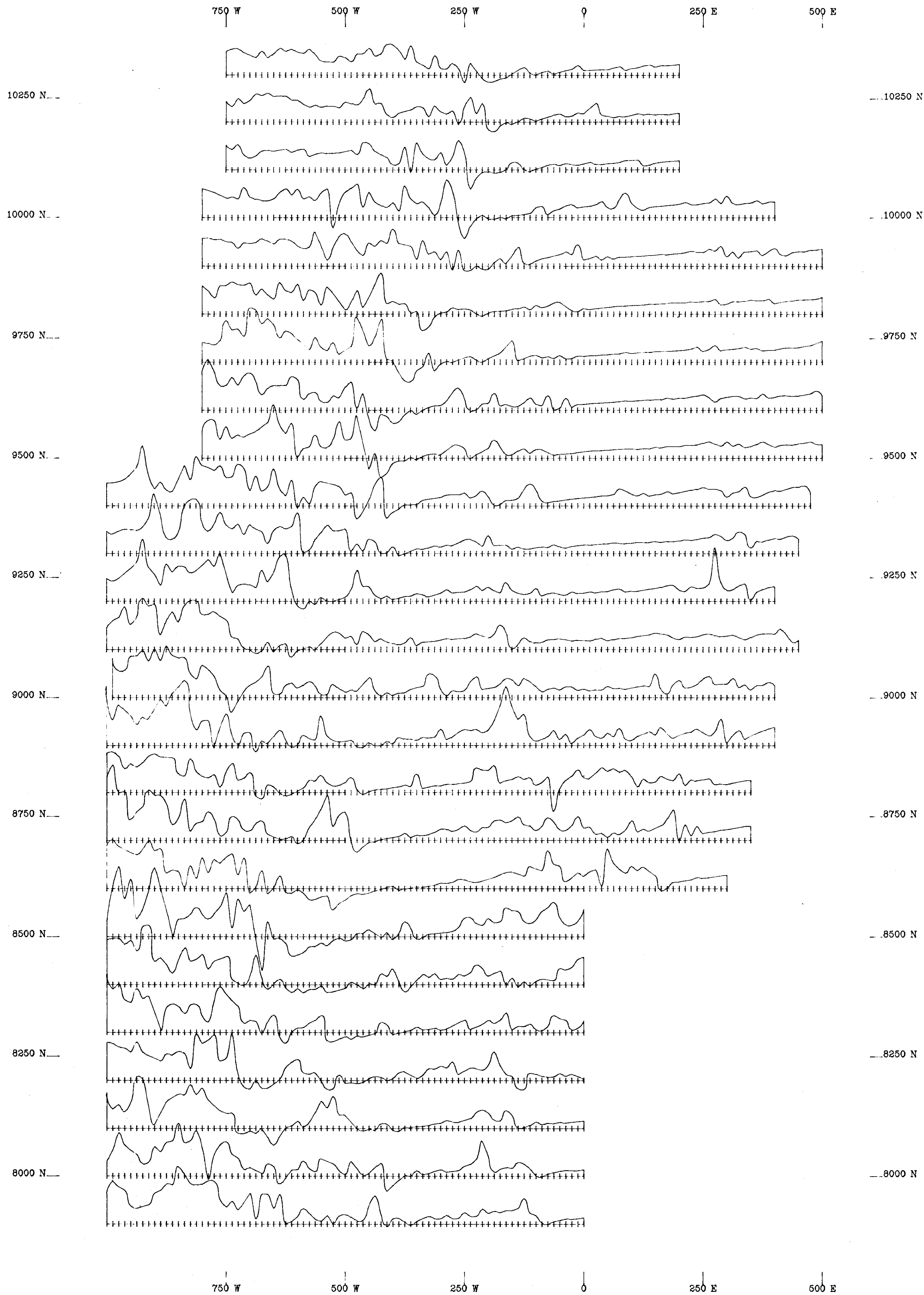
NORAMCO MINING CORPORATION
 KENA SOUTH PROJECT
 INDUCED POLARIZATION / RESISTIVITY PROFILES
 Chargeability solid line @ 1 cm = 20 mV/V, base 10 mV/V
 Resistivity dash line @ 1 cm = 2000 ohm-m, base 3000 ohm-m
 Gradient Array, AB = 1800m, MN = 50m
 Delta Geoscience Limited



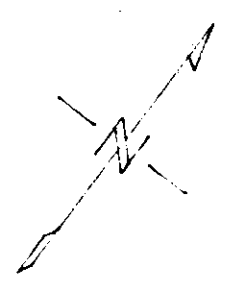
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NORAMCO MINING CORPORATION
 KENA SOUTH PROJECT
 VLF-EM PROFILES
 Vertical inphase solid line @ 1 cm = 20%, base -15%
 Horizontal field dash line @ 1 cm = 5, base 10
 August, 1991
 Delta Geoscience Limited



GEOLOGICAL BRANCH
ASSESSMENT REPORT
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Scale 1:5000
100 0 100 200 300
(metres)

NORAMCO MINING CORPORATION
KENA SOUTH PROJECT TOTAL FIELD MAGNETIC PROFILES
1 cm = 800 nt, base 56400 nt EDA Omni plus systems August, 1991
Delta Geoscience Limited

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ASSESSMENT REPORT

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21, 9 17

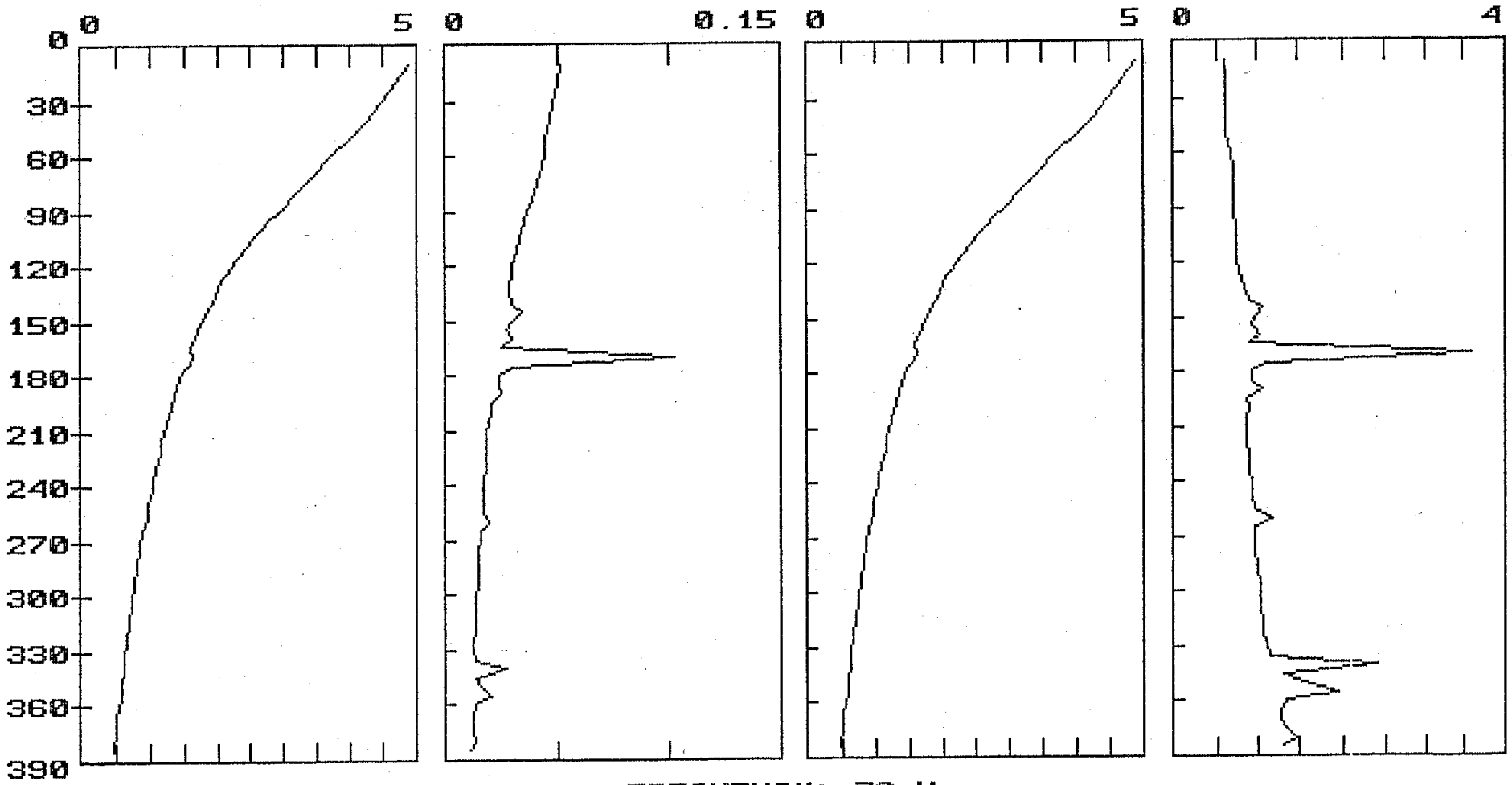
BOREHOLE EM, NELSON, DDH 90-4

IN PHASE

OUT PHASE

AMPLITUDE

PHASE



FREQUENCY: 70 Hz

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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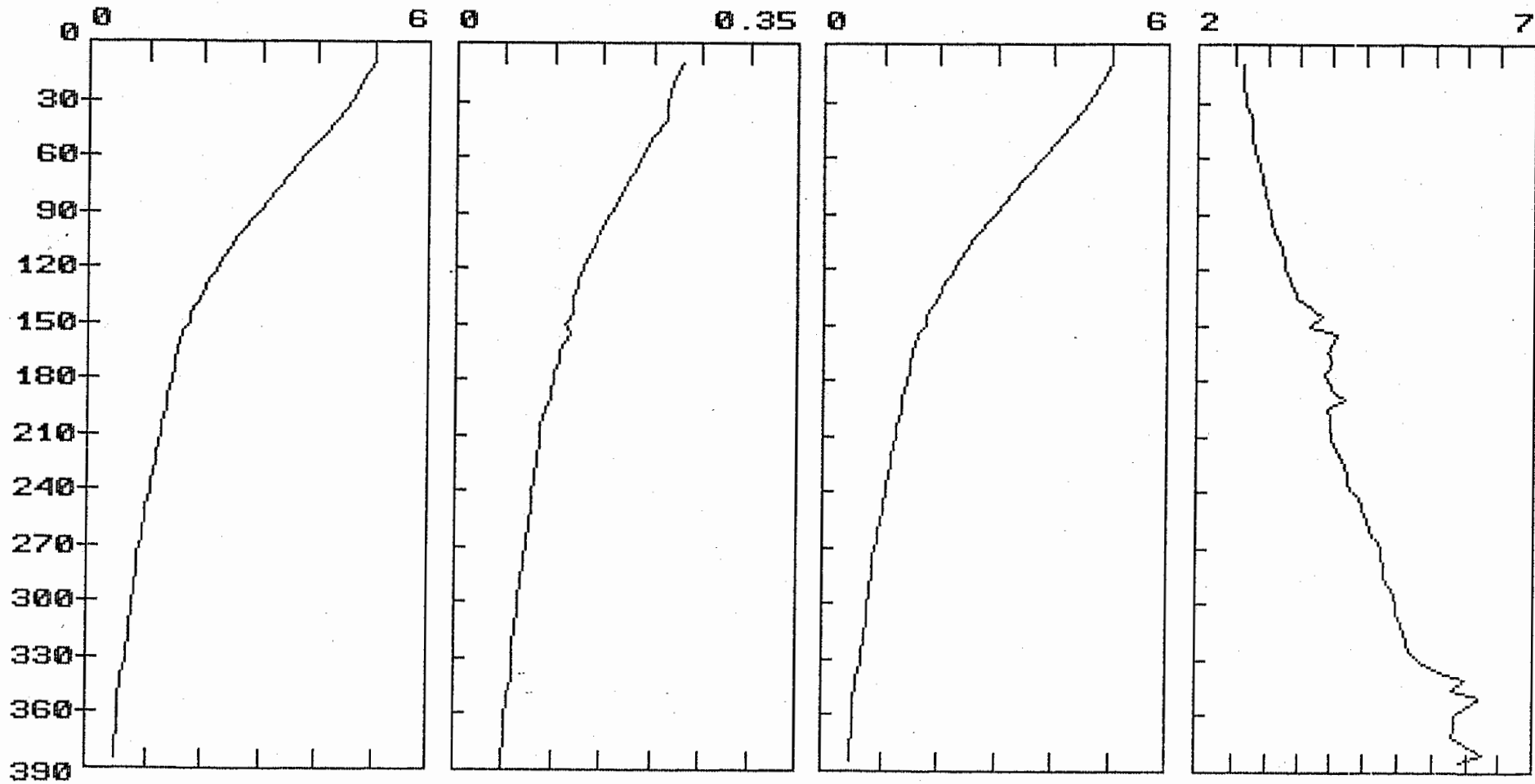
BOREHOLE EM, NELSON, D.H. 90-4

IN PHASE

OUT PHASE

AMPLITUDE

PHASE



FREQUENCY: 449.6 Hz

FIG. 25b.

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21,917

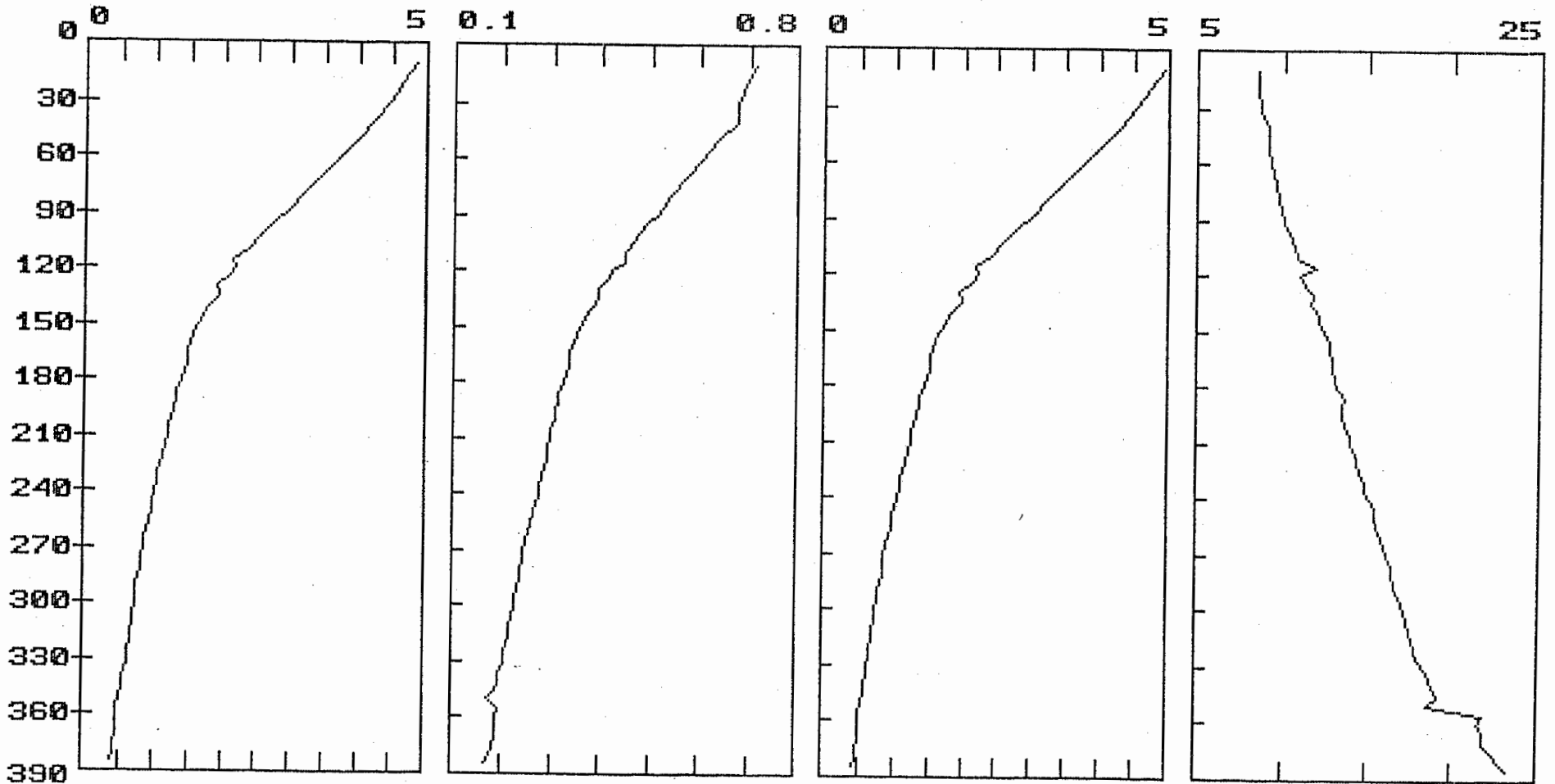
BOREHOLE EM, NELSON, DDH 90-4

IN PHASE

OUT PHASE

AMPLITUDE

PHASE



FREQUENCY: 1798 Hz

FIG. 25c.

~~2017~~
2017
21,917

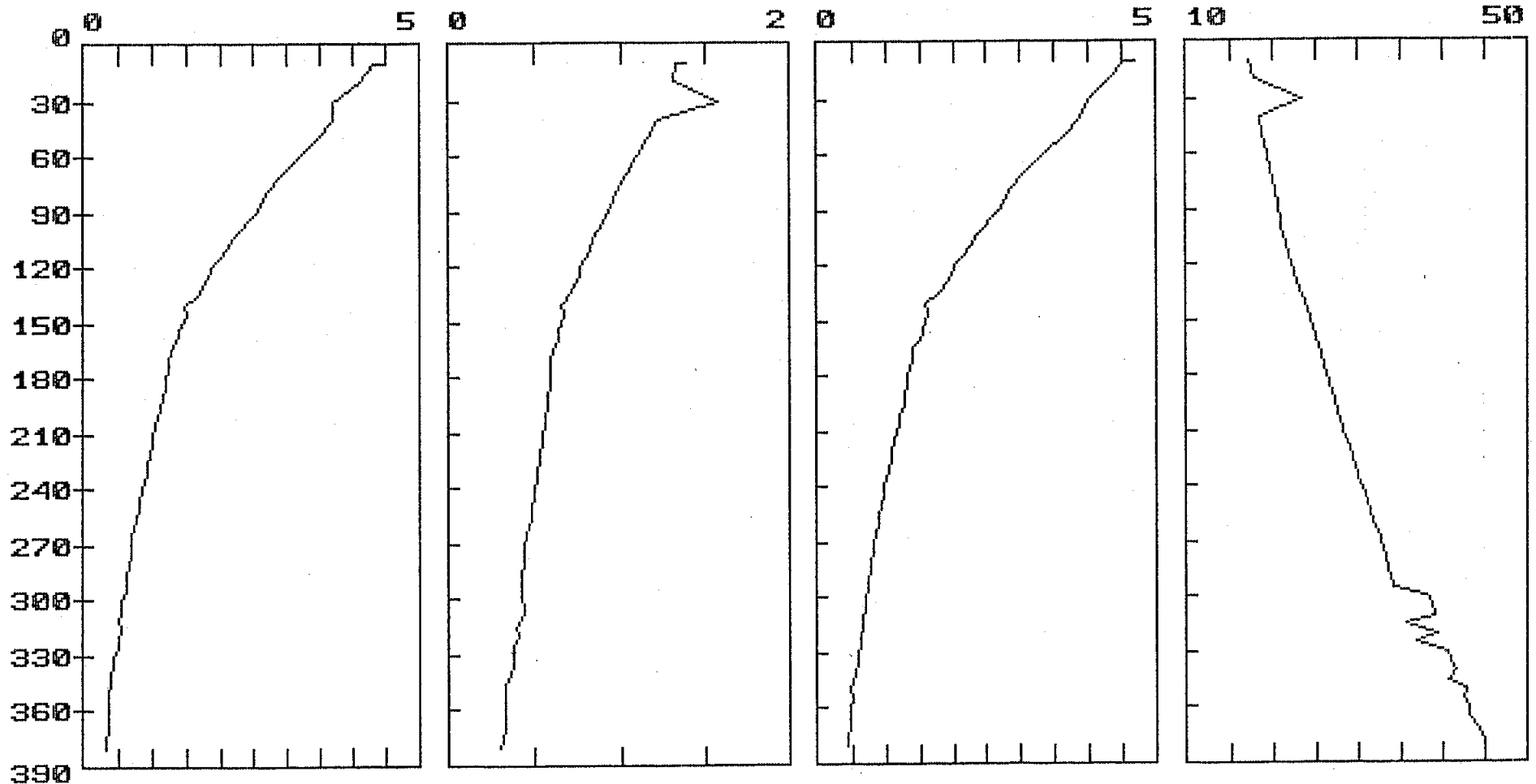
BOREHOLE EM, NELSON, DDH 90-4

IN PHASE

OUT PHASE

AMPLITUDE

PHASE



FREQUENCY: 3623 Hz