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Memorandum Report
on the
Eholt Property
for
Westley Technologies Ltd.
by
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Date: September 22, 1994

Introduction

GeoSci Data Analysis Ltd. was commissioned by Westley Technologies Ltd. to review magnetic geophysical data across the Eholt Property. This property is located in south-central B.C., some 12 kilometres northeast of Greenwood. It lies within the Phoenix-Greenwood mining camp from which there has been significant historic production of copper-gold ores from skarn hosted deposits. Two principal type of mineralization occur on the Eholt property, including sulfide and/or magnetite replacements within or associated with skarn, and disseminated and stringer sulfides within metavolcanics and sharpstone.

Recent exploration by Orvana Resources Corp. included geological mapping, survey grid preparation, rock and soil sampling and magnetic, vlf and induced polarization surveying. This exploration has identified six areas of interest and a number of drill holes have been proposed as the next exploration phase. One of these targets is a referred to as the magnetic dipole. Three of the recommended seven drill holes across this target have been completed, including drill hole EDD93-3 which was presumably intended to test the strongest portion of the magnetic dipole. So far the drill results have yet to explain the geophysical anomaly and it is the intention of this study to review the interpretation of the magnetic data.

Exploration data was provided by Peter Bradshaw and Doyle Albers of Orvana Resources Corp. and consisted of a bound report entitled "1992 Summary Report and Proposed Work Program" authored by Robert Fredericks, a 3.5 inch DOS compatible floppy disk containing the magnetic survey data for the Eholt grid, a composite profile of line 9760N (including a magnetic profile, IP psuedo -sections, soil geochemistry profiles, and an interpreted geological cross-section) and a cross-sectional plot showing the results of 3 drill holes.

Discussion of Results

The following general observations concerning the geophysical exploration program are noted:

- The magnetic data in the area are very erratic, with variations of hundreds of nTs being commonly observed between stations 10 metres apart. I would consider these data to be relatively noisy however several magnetic trends are evident across the area which exhibit excellent line to line correlation. This suggests that the near surface rocks and/or overburden contain significant portions of disseminated magnetite and or pyrrhotite.

- Neither the magnetic profiles included in the composite profile maps nor the contours outlined on the planimetric contour map agree with the data as provided in the digital data files. I am assuming that the data has been filtered or smoothed prior to plotting, probably to remove the high spacial variations mentioned above.

- The magnetic contour map, and subsequently the survey grid, has not been registered to the geology and claim map. Based on the topographic profiles included on the composite profile maps, it appears that the peak of Eholt Mt. (elevation ~ 1200 m) is located near station 10500 on line 9760N. This suggests that the magnetic dipole

anomaly is located in the northwest corner of the Eholt #2 claim along a south-southeast facing slope. Although this slope approaches some 20 degrees at its' steepest point, relief across the east-west oriented survey lines is significantly less and not considered critical in the profile analysis.

- Although this does not fall within the scope of this project, I noted that Frederick states that the VLF-EM data was fraser filtered prior to interpretation. This is a spacial filtering technique which is used to convert the profile data into a contourable form in order to create an aesthetically pleasing display. Data analysis and interpretation is normally conducted on unfiltered vlf-em profiles.

Dipole Anomaly

Fifteen east-west survey lines (9340N to 10180N) spaced on 60 meters centers and flagged with 10 metre stations cover the area of the strong magnetic dipole. In a contoured plan view (Figure 1) the anomaly is seen as an elliptically shaped feature striking approximately N15°E, some 400 - 500 metres long and 200 - 300 metres wide. The feature may also be offset at its' north and south ends. A maximum peak to peak amplitude of 2400 n'l's is indicated. It is apparent that these data have been filtered or smoothed prior to generating this display and additional information can be ascertained by examining the magnetic responses in a stacked profile format. This presentation (Figure 2) highlights variations in the character of the anomaly along strike. The anomaly appears as a dipole feature only in the centre of the grid (lines 9520N to 9980N) with a strong negative inflection on its' western flank and exhibits extremely high amplitude, some 7166 nTs peak to peak at its' strongest point. The high amplitude maximum continues to the north as far as line 10000N, appearing as a monopole response.

There is no unique interpretation which can be determined for any magnetic signature however general characteristics and limitations can be estimated by analyzing the size, amplitude, shape, symmetry and wavelength of the anomaly. The source body for the dipole anomaly has a strike length of some 300 to 400 metres and is centred near grid line 9700N. The dipolar nature suggests that the source is a thin slab or layer, likely no more than 20 to 30 metres thick. Furthermore it has a finite depth extent (between 100 and 200 metres) therefore cannot be modeled as a thin dike or vertical sheet. The asymmetry indicates that the body dips to grid east. A half-width of approximately 20 metres suggests that the top of the zone approaches to within 20 to 25 metres of ground surface (possibly less). The amplitude of the response suggests that the causative body contains the equivalent of 10% to 15% magnetite.

100 ' T
x
1200 ' L
x
600 '
÷
8
9 MHT
10%-15%
Magnetite

These parameters were used as the starting values in an interactive modeling program which allows the interpreter to build and edit a geological model while continually monitoring the theoretical magnetic profile and comparing it to observed data. In this manner, proposed geological structures and environments can be evaluated and the sensitivity of the model to variations in any of the parameters determined. Of the hundreds of models constructed during this exercise, four are included in this report for illustrating the conclusions cited. The theoretical profiles are normally calculated as induced magnetic fields, which is the dominant factor in most magnetic surveys. Remnant magnetism is usually considered if the proposed models conflict with geological constraints.

Fredericks' report states the dipole anomaly can be modeled (Line 9820N) as an east dipping (45°-53°) body containing the equivalent of 10% magnetite, with a thickness of approximately 20 metres or less, a depth to the top of the zone of approximately 20 metres and extending some 125 metres in depth. This model has been evaluated and although it would produce the asymmetric magnetic high which makes up the eastern half of the anomaly, it would not generate the strong magnetic low observed on its' western flank. It does however, produce a reasonable match to the magnetic profile observed at the northern end of the anomaly. Plate 1 compares the theoretical profile for this model to the observed profile on line 10000N.

The strong negative inflection observed on lines 9880N through 9520N could be caused by a second magnetic body. The model study on line 9700N (Plate 2) illustrates how the dipole effect can be generated by two relatively thin layers (28 metres) dipping shallowly (15 ° -20 °) to grid east. The up dip edge of the eastern zone is positioned immediately below the inflection point of the magnetic dipole, at a depth of some 10 metres while the western zone is buried some 100 metres below that. This model gives the impression that the two layers may be separated by a steep easterly dipping fault.

Drill hole EDD93-3 was collared on line 9760N at station 11140 and dipped 55 ° to the west. The magnetic crossover on this line, which defines the western limit of the interpreted source body, is located at station 11100 and the drill hole should have intersected a high susceptibility zone somewhere between 25 and 40 metres depth. Magnetic susceptibility values plotted on the cross-section display give no indication of any appreciable increase in this area. There is however a noticeable increase in magnetic susceptibility in a 20 metre section from 165m to 185m depth (130 metres below surface). Additionally, a fault-rubble zone is logged immediately above this section. These later observations support the model proposed on Plate 2. The drill hole was spotted close to the western edge of the interpreted magnetic body and it is possible that the hole simply passed above the target. An error of 20 metres in either the positioning of the drill hole or in the plotting of the magnetic survey data could cause the mistie. It is unknown whether the plotted susceptibility measurements were taken from the core or in the hole. The later technique provides more information in the sense that any magnetic body in the proximity of the drill hole, would be identified.

A different interpretation of the magnetic data could be made if one assumes that the anomaly is attributed to remnant rather than induced magnetization. Under these conditions the geometric limitations of an easterly dipping source can be relaxed and a number of configurations for the thin, finite dimensioned source body could produce the observed responses. Based on other exploration data, it is likely that a convex or dome shaped basement high strikes NNE across the area, immediately east of the dipole anomaly. This interpretation is presented in the composite profiles included in Fredericks' report and is supported by coincident NNE trending magnetic lineations. Plate 3 compares the observed response on line 9760N to a theoretical profile for a westerly dipping body, possibly blanketing the western slope of the basement high. In this model the source body contains the equivalent of 30% magnetite and has a magnetic moment oriented at 90 ° to the earths' field. In this model, drill hole EDD93-3 would have passed beneath the magnetic source.

Other Magnetic Trends

Although the extreme amplitude of the dipole anomaly dominates the response it is apparent from the stacked profile display that other magnetic trends are present in the area. Although they are not the focus of this analysis they define the general geological environment. These trends are highlighted on Figure 2 and briefly described below.

- A contact type response (Trend A) observed along the western ends of the survey lines. This trend is masked by the stronger dipole anomaly near the centre of the grid and is only clearly evident on the southernmost (9340N to 9460N) and northernmost (10000N to 10180N) survey lines. It appears as a 400 to 600 nTs shift in the amplitude of the background magnetic intensity. The probable source of this feature is a contact between the Tlt (Tertiary latite of the Penticton Group) and Trmv (Triassic metavolcanic of the Brooklyn Formation) lithologies as indicated on the geological map.

- Another magnetic response (Trend B) is described as a broad magnetic high typically some 300 to 600 nTs in amplitude and some 100 to 150 metres wide. It forms a NNE trending band flanking the dipole anomaly to the east. Like the contact feature described above, this response is masked by the strong dipole anomaly near the centre of the grid, appearing as a distortion on the eastern flank of the stronger feature. It can best be seen as an isolated feature on lines 9400N, 9460N, 10060N and 10120N. This trend can be modeled as convex or dome shaped buried intrusive type body as suggested on the geological cross-sections included in the composite profiles in the Orvana report. Plate 4 compares the observed profile for line 9400N with this model.

- Two narrow magnetic high trends (labeled Trend C and Trend D) are observed immediately east of and parallel to the above mentioned zone. These features are not evident on the smoothed contoured map and likely reflect the strike of the underlying geology.

Summary and Conclusions

Recent exploration for gold and copper skarns on the Eholt property has identified six target areas which were recommended for drill tests. Three drill holes, of a seven hole program, have been completed on a strong magnetic dipole anomaly however the source to the geophysical feature has not been identified. A review of the existing magnetic data was requested by Westley Technologies Ltd..

I can find no serious fault with the interpretation presented by Orvana Resources Corp. Assuming an induced magnetic field, the survey data describes a high susceptibility, easterly dipping, finite length body which approaches to within 20 metres of the surface on line 9760N. As collared and oriented, drill hole EDD93-3 should have intersected the source at a depth of some 20 to 40 metres.

Assuming that the magnetic data is valid, the conflict between the interpretation and the drill results is likely attributed to one of three situations:

- A positioning error in either the location of the drill hole or the plotting of the magnetic data which caused the drill hole to pass over the target body.
- The magnetic anomaly is the result of some unobserved cultural feature at or very near the ground surface.
- The magnetic anomaly is caused by a body with strong remnant magnetization, oriented perpendicular to the earths' field. In this situation, it is possible that the drill hole may have passed beneath the target.

Recommendations

The following recommendations are proposed:

- Resurvey line 9760N. This will provide two checks: 1) confirm the validity of the magnetic survey data and 2) confirm the location of drill hole EDD93-3 with respect to the magnetic profile. The drill hole was spotted very close to the near surface extension of the source body and a positioning error of 20 metres or more, in either the location of the drill hole or in the plotting position of the magnetic data, could explain the results.

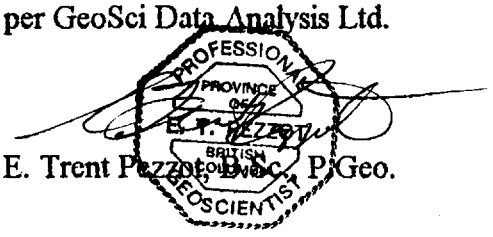
- Re-examine the drill core from EDD93-3. The source of the magnetic ammaly should be a minimum of 10% magnetite and it is unlikely that any such material would have been incorrectly logged. However, a simple examination with a prospectors pen magnet will confirm that no magnetic material is present in the core.

Assuming that the discrepancy between the drilling and geophysics can not been resolved by either of the above tests, it is necessary to assume that the anomaly is due to a source which possesses remnant magnetism.

- If it has not already been done, the area should be examined for any possible cultural sources; such as steel cables abandoned from previous mining or forestry operations, drainage culverts, etc. This search should be concentrated from line 9820N to 9520N in the area between the maximum and minimum magnetic values which define the dipole anomaly.

- A buried source, depending on its' direction of magnetization, could be oriented a number of ways and still produce the dipole type effect observed. A westerly dipping skarn layer, possibly blanketing a basement high, is one possibility. A drill hole collared to the west of the dipole anomaly and angled to grid east would test this hypothesis. A more comprehensive test, would be to drill a fence of shallow (30 metre), vertical holes across the dipole anomaly.

Respectively submitted
per GeoSci Data Analysis Ltd.



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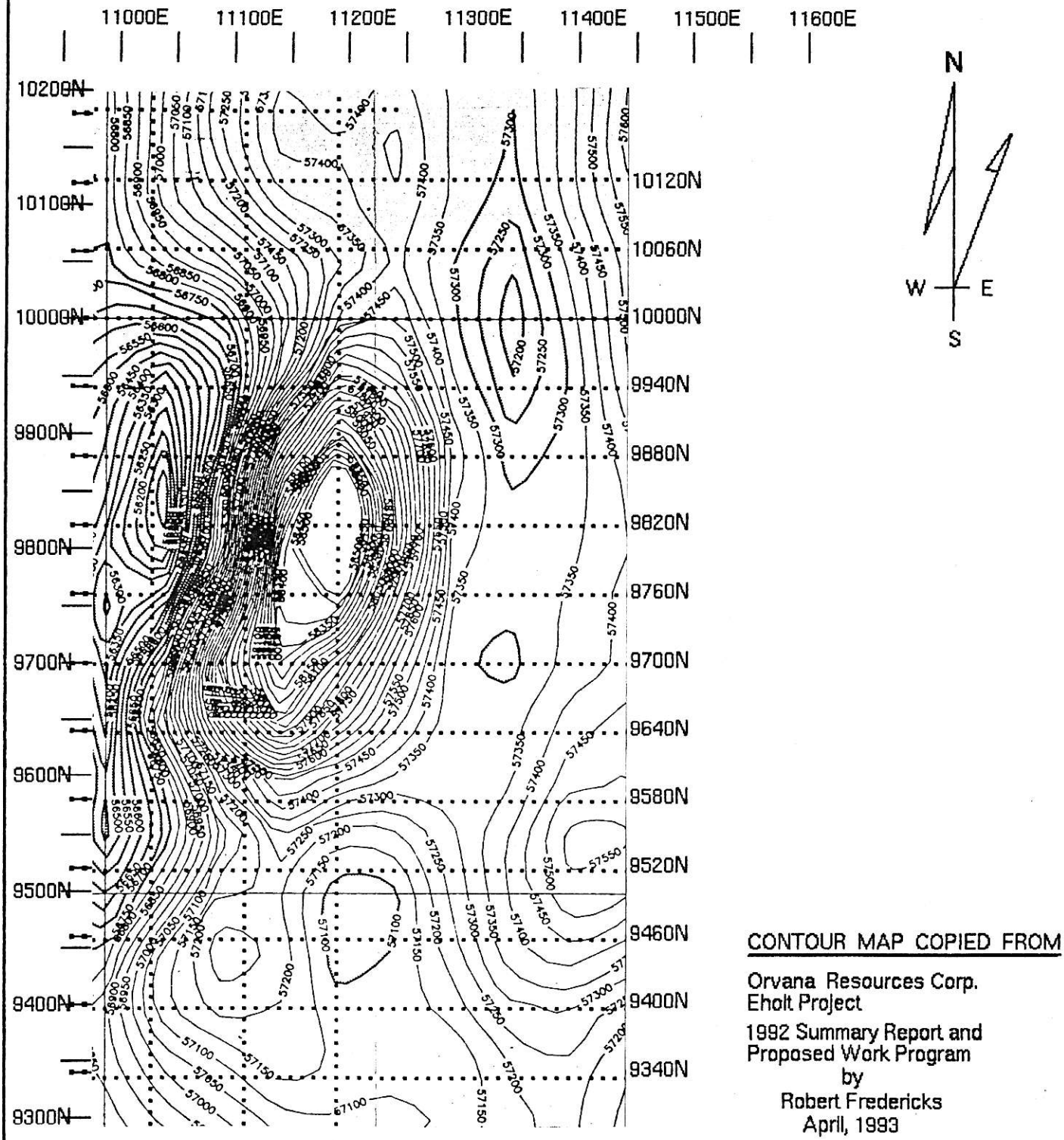


CONTOUR MAP COPIED FROM

Orvana Resources Corp.
Eholt Project

1992 Summary Report and
Proposed Work Program
by
Robert Fredericks
April, 1993

0 50 100 150 200 250 300 350 metres

HORIZONTAL SCALE 1:5000

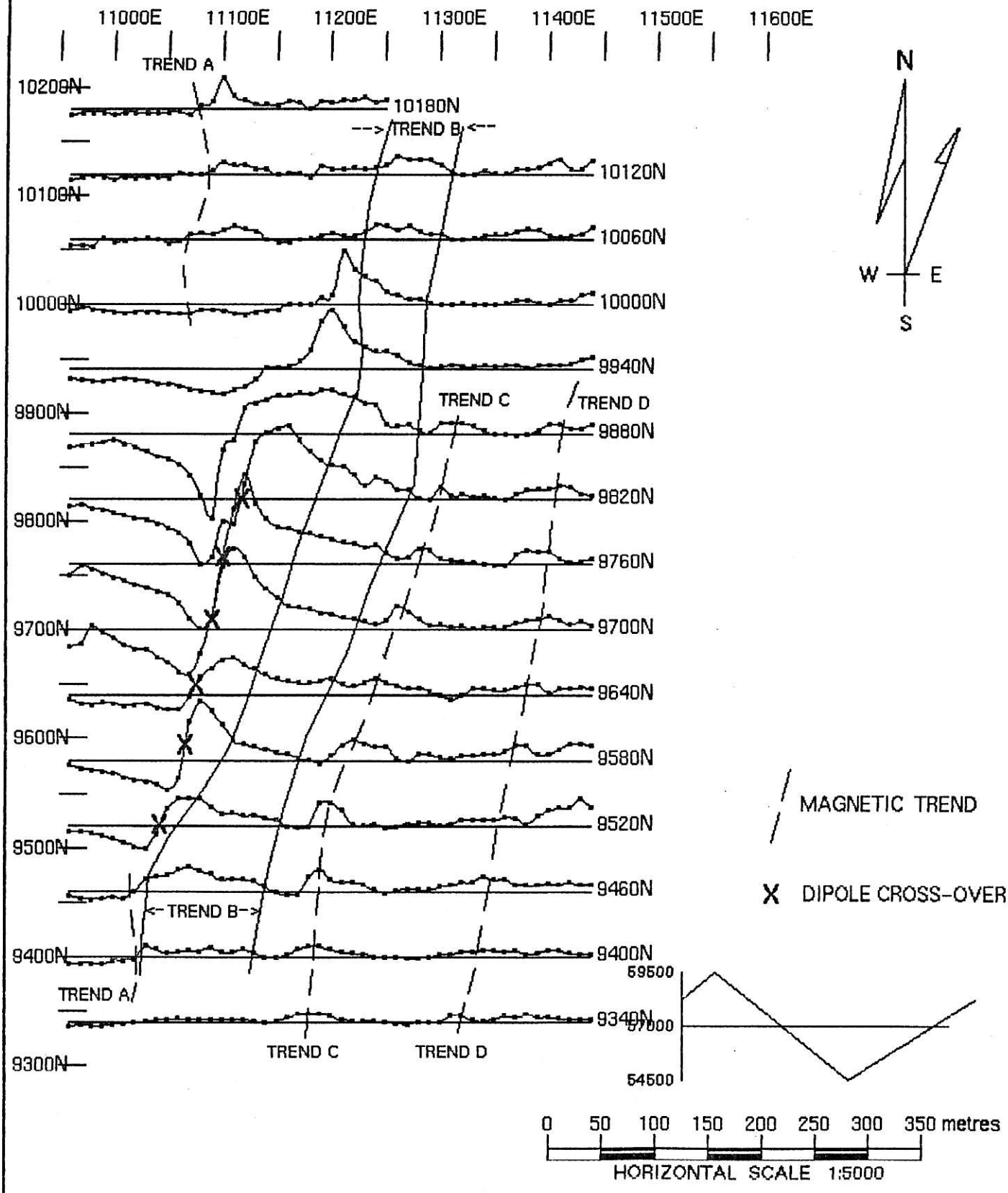
WESTLEY TECHNOLOGIES LTD.
EHOLT PROJECT

CONTOUR MAP
TOTAL FIELD MAGNETICS

GEOSCI DATA ANALYSIS LTD.

DATE: SEPTEMBER, 1994

FIGURE: 1



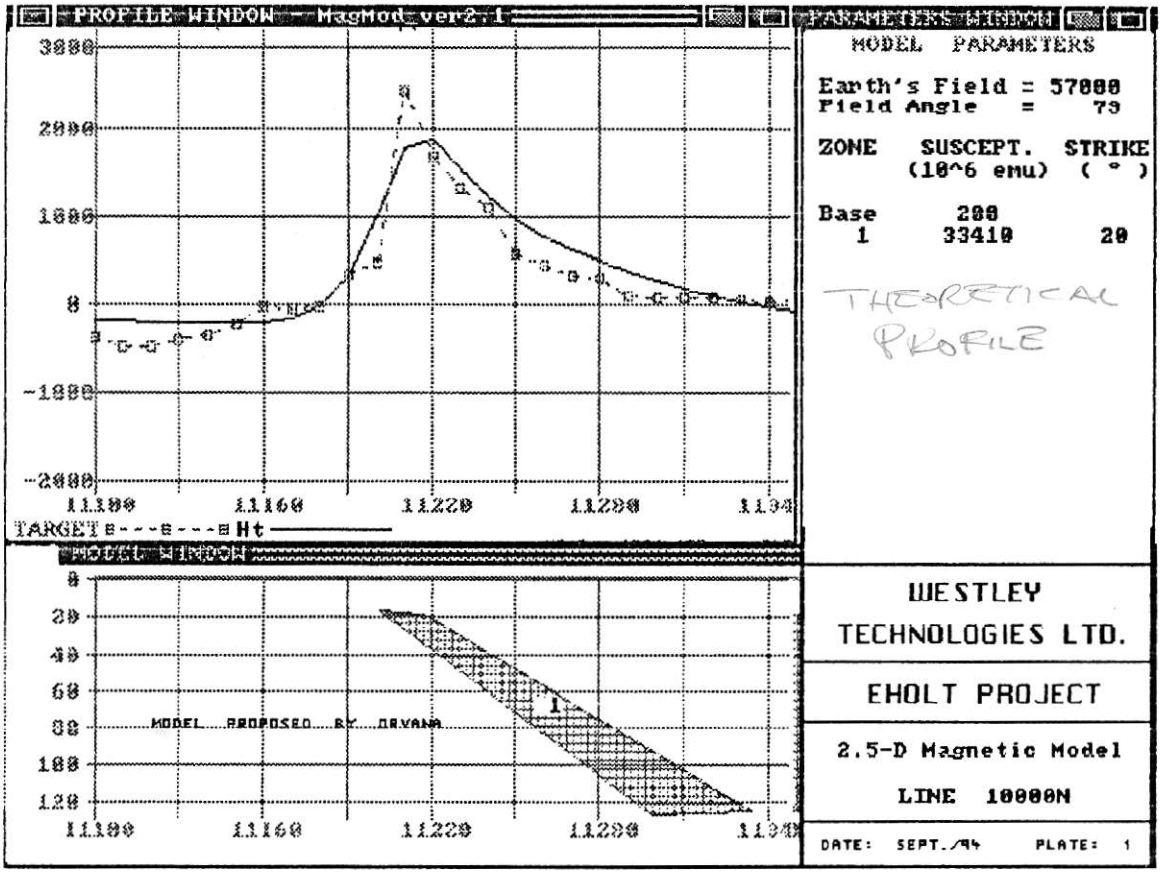
WESTLEY TECHNOLOGIES LTD.
EHOLT PROJECT

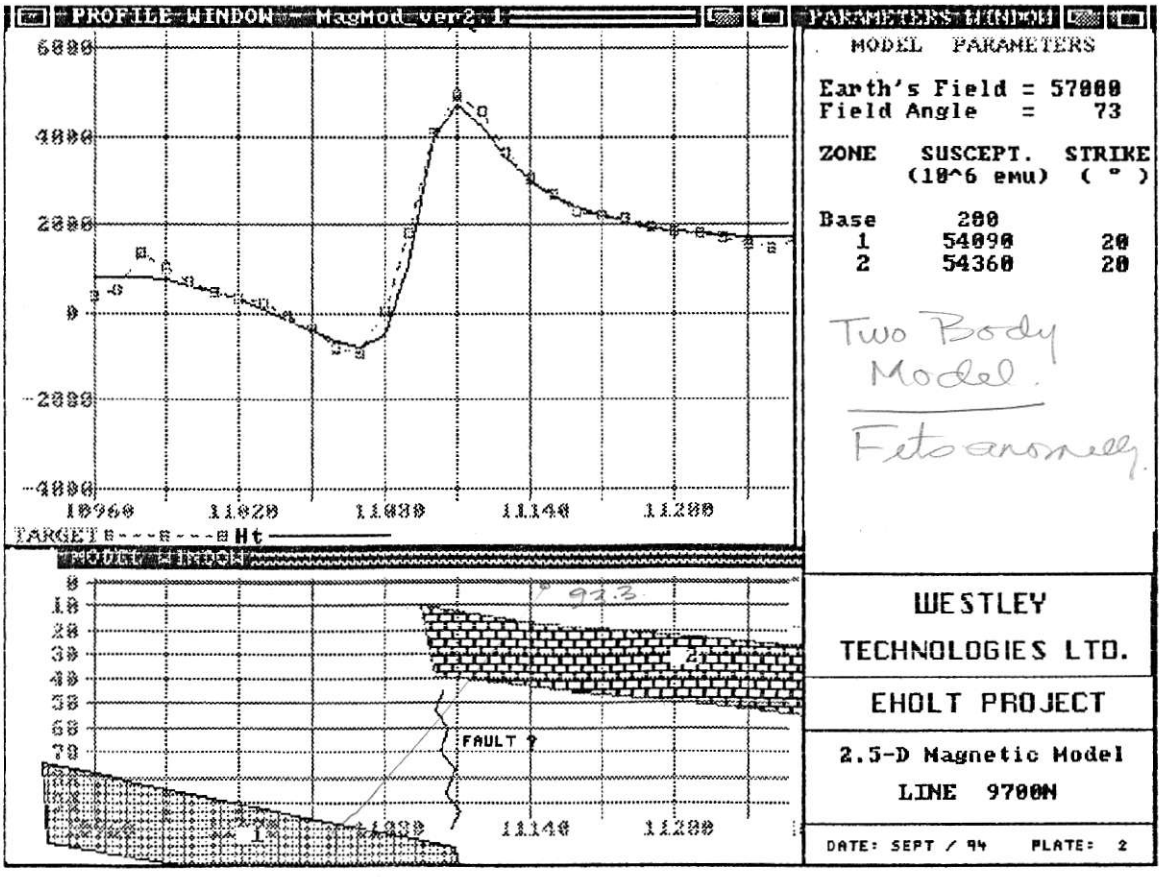
STACKED PROFILE MAP
TOTAL FIELD MAGNETICS

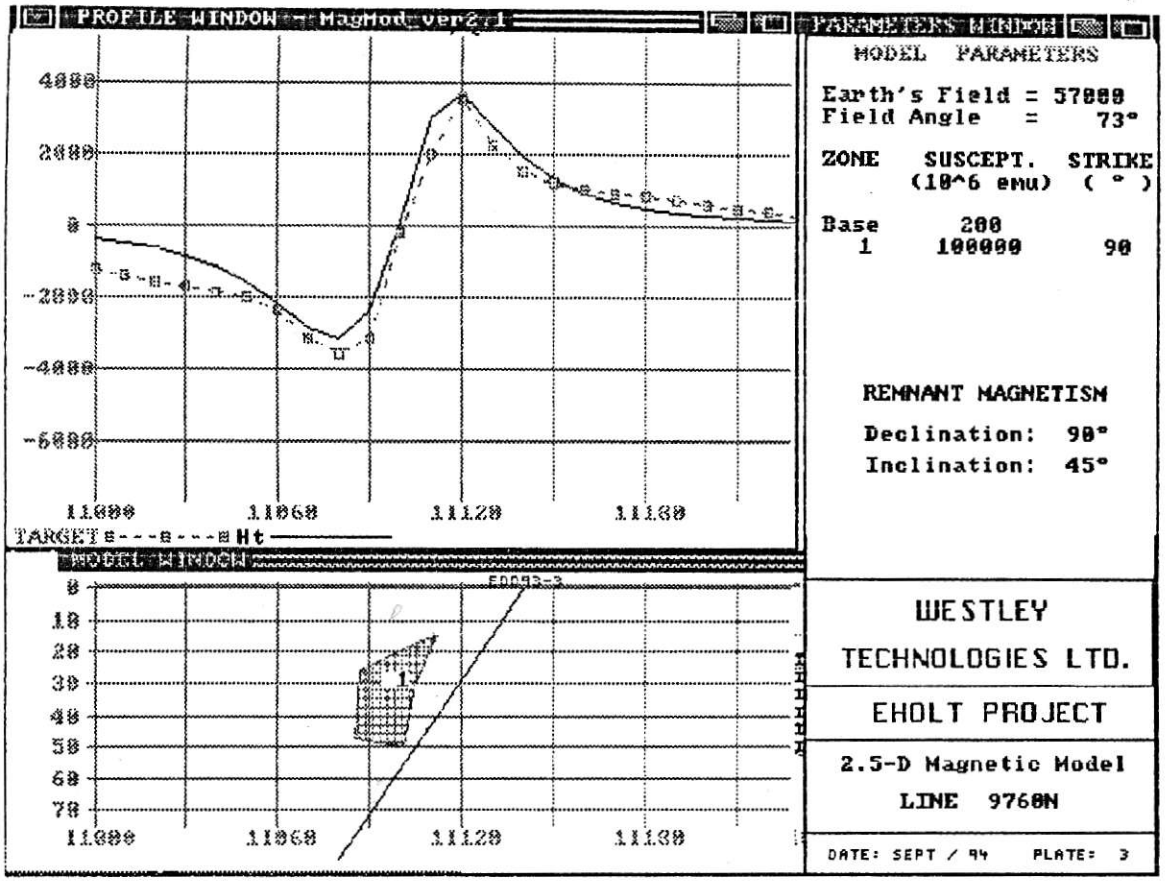
GEOSCI DATA ANALYSIS LTD.

DATE: SEPTEMBER, 1994

FIGURE: 2


PROFILE WINDOW - MagMod ver2.1
3000
2000
1000
0
-1000
-2000
11100
11160
11220
11280
TARGET
Ht
MODEL WINDOW
MODEL PROPOSED BY DEVANA
PARAMETERS WINDOW
MODEL PARAMETERS
Earth's Field = 57000
Field Angle = 73
ZONE SUSCEPT. (10^6 emu) STRIKE (°)
Base 200
1 33410 20
THEORETICAL PROFILE
WESTLEY TECHNOLOGIES LTD.
EHOLT PROJECT
2.5-D Magnetic Model
LINE 10000N
DATE: SEPT./94 PLATE: 1

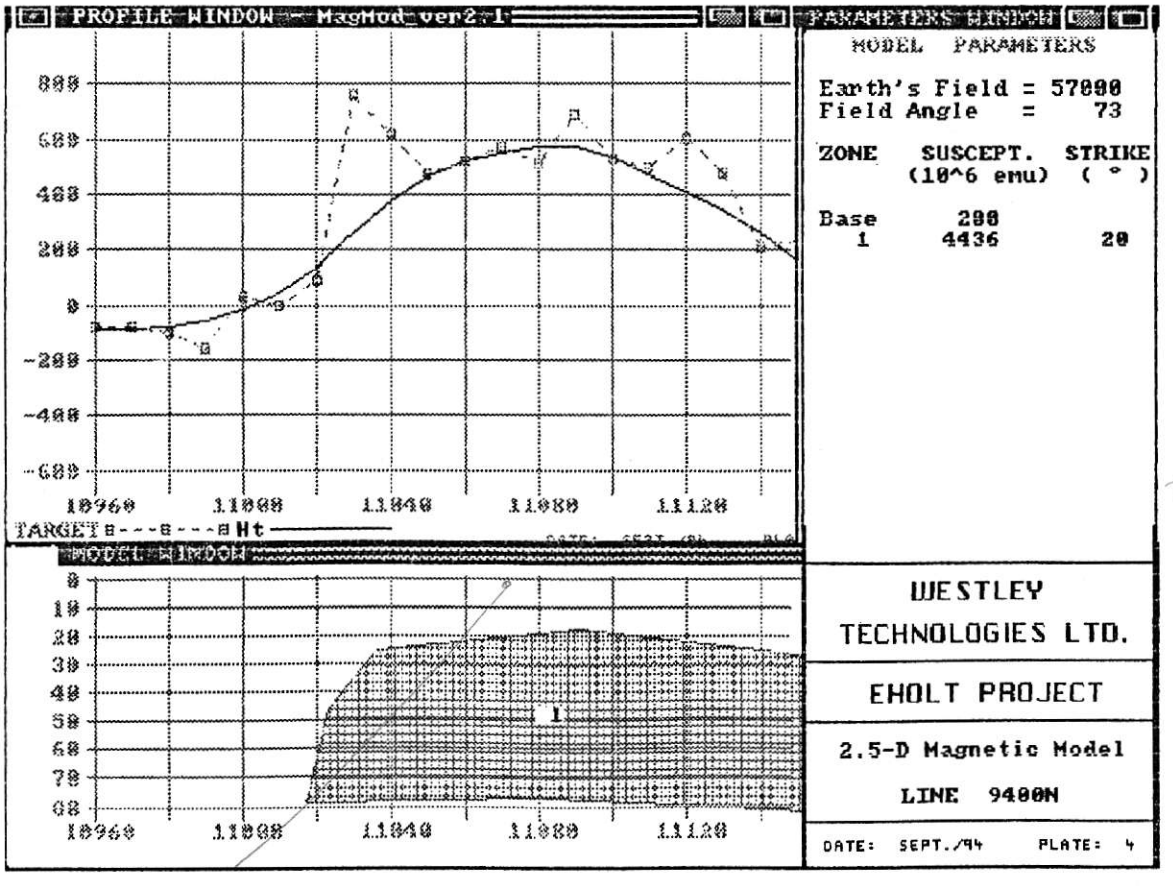

PROFILE WINDOW - MagMod ver2.1
6000
4000
2000
0
-2000
-4000
10960
11020
11080
11140
11200
TARGET
Ht
MODEL WINDOW
FAULT ?
PARAMETERS WINDOW
MODEL PARAMETERS
Earth's Field = 57000
Field Angle = 73
ZONE SUSCEPT. (10^6 emu) STRIKE (°)
Base 200
1 54090 20
2 54360 20
Two Body Model.
Fetaanomaly.
WESTLEY TECHNOLOGIES LTD.
EHOLT PROJECT
2.5-D Magnetic Model
LINE 9700N
DATE: SEPT / 94 PLATE: 2



30% magnetite

30m high × 15m W × 350m L

625,000T



Basified Intrusive