ARIS SUMMARY SHEET

District Geologist, Nelson — Off Confidential: 90.01.17

ASSESSMENT REPORT 18845 — MINING DIVISION: Revelstoke — Slocan

PROPERTY: Black Warrior
LOCATION: LAT 50 47 25 LONG 117 25 06
UTM 11 5626368 470512
NTS 082K14W
CLAIM(S): Black Warrior,Morgan,Galena,Ellsmere,Horne,Ferg 1-9,Circle City
OPERATOR(S): Golden Range Res.
AUTHOR(S): Hlava, M.
REPORT YEAR: 1989, 79 Pages
COMMODITIES
SEARCHED FOR: Silver,Lead,Zinc,Copper,Gold
KEYWORDS: Paleozoic,Index Formation,Phyllites,Limestones,Schists,Galena
Sphalerite,Pyrite,Magnetite
WORK
DONE: Geophysical,Geochemical,Geological,Physical
EMGR 14.9 km;VLF
GEOL 5.0 ha
LINE 14.9 km
MAGG 14.9 km
REST 5.0 km
ROAD 6.5 km
SOIL 331 sample(s) ;ME
MI FILE: 082KNW110

REPORT ON 1988 EXPLORATION WORK

ON

BLACK WARRIOR CLAIM GROUP

LOCATED IN

REVELSTOKE / SLOCAN MINING DIVISION

NTS 82 K 11 & 14

LATITUDE 50° 45' 25"

LONGITUDE 117° 24' 45"

FOR GOLDEN RANGE RESOURCES INC.

BY

MILAN HLAVA B.Bc.

APRIL 1989

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INTRODUCTION

During the period of September 21 1988 and November 30, 1988 the author and additional crew of three men completed geological, geochemical and geophysical surveys for Golden Range Resources Inc on the Black Warrior Claim Group in the Ladeau Area of southeastern British Columbia (figure 1) as a part of the 1988 exploration program.

LOCATION AND ACCESS

The Black Warrior Claim Group are located at the head waters of Galena Creek, 15.5 air kilometers north-northeast of the community of Trout Lake, NTS 82 k/11 &14, latitude 50° 45'25'' and longitude 117° 24'45''.
The most practical access to the claims is by helicopter from Nakusp (60 air km). Highland Helicopters Ltd. with the base at Nakusp provided transportation to and from the property on a daily basis.

PHYSIOGRAPHY

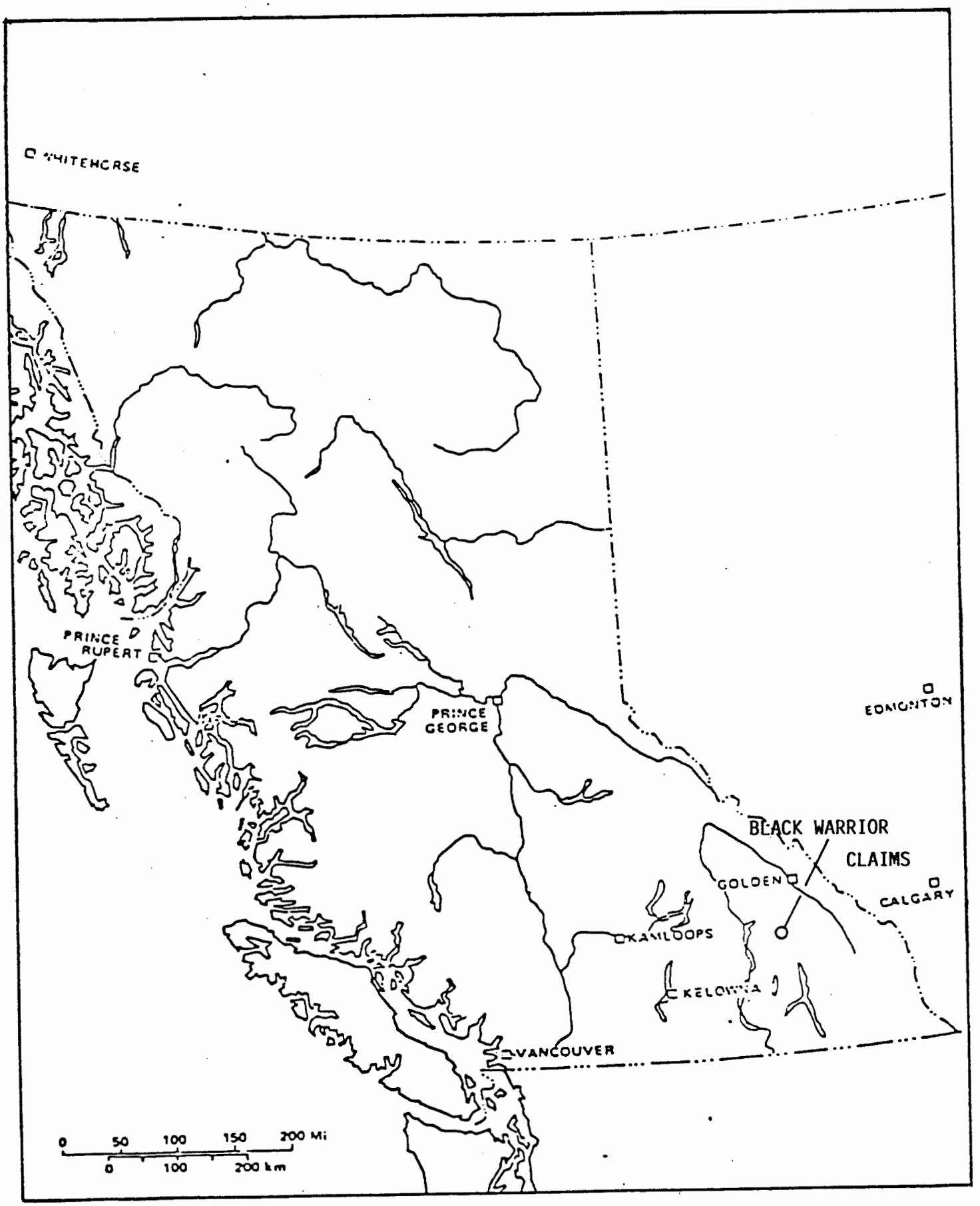
The property covers height of land which divides the Lardeau and Westfall drainage and which also forms the boundary between the Slocan and Revelstoke Mining Division. Following drainage originate on the property: Galena, Dave Morgan and Surprise Creek which flow south-westerly to Ferguson Creek; and McDonald and the north tributary of Marsh-Adam Creek which flow northeast to the Wesfall River.

Two small alpine glaciers are located on the property situated at the divide between Mc Donald Creek and unnamed drainage in the portion of the property. The glaciers cover approximately 50 hectares and are located above 2100 m elevation.

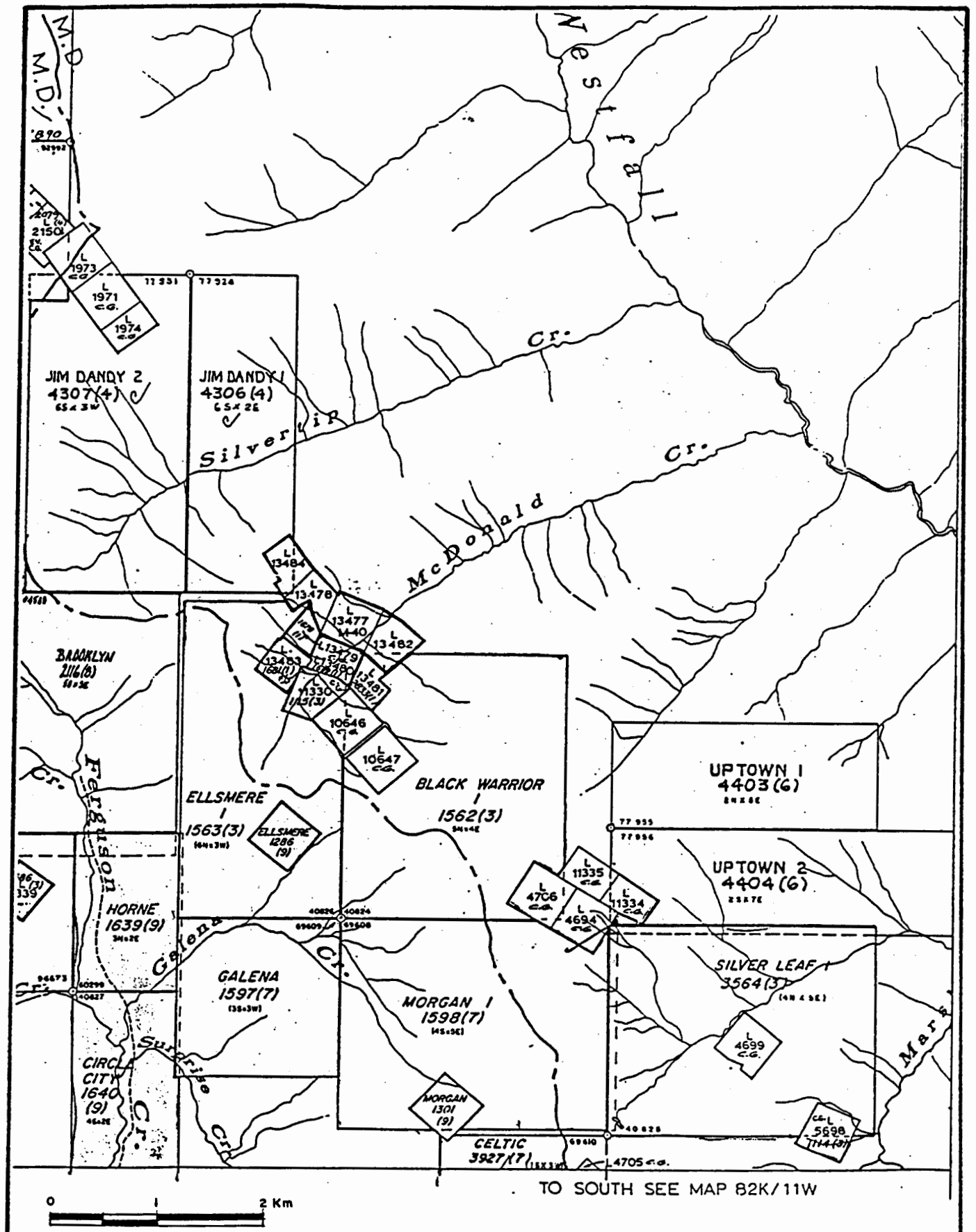
Elevation on the property vary from 1150 m at Ferguson Creek to 2680 m at the divide between Dave Morgan and Marsh-Adams Creeks

PROPERTY DESCRIPTION FIG 2 & 3

The Black Warrior Group consists of 99 claim units including 2 crown grants, optioned from Eric Denny and Jack Denny. The following is the status, pending acceptance of this report by the Mining Recorder.

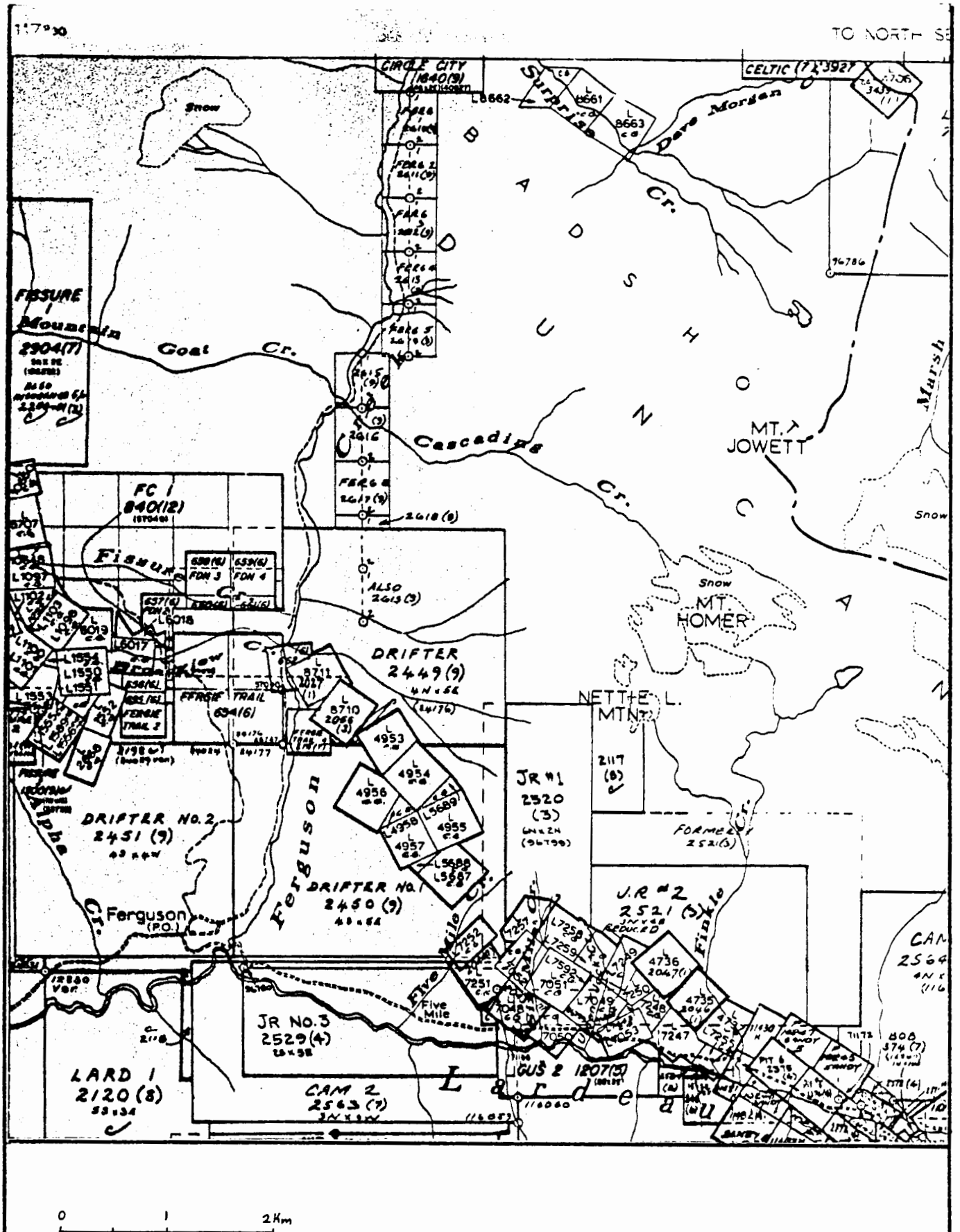


INDEX MAP: FIGURE 1



PORTION OF MINERAL CLAIM MAP 82K/14W

FIGURE 2



PORTION OF MINERAL CLAIM MAP 82K/11W

FIGURE 3

SUMMARY OF CLAIMS

CLAIM NAME	EXPIRY DATE	UNITS	RECORD NO.
Clack Warrior #1	90-03-01	20	1562
Ellsmere #1	90-03-01	18	1563
Black Burn	90-07-16	20	2423
Galena	89-07-08	9	1597
Celtic	83-07-07	3	3927
Circle City	89-09-15	8	1640
Horne	91-09-15	6	1639
Ellsmere	89-09-29	1	2601
Morgan	90-09-29	1	1301
White Star	91-03-02	1	1115
Copper Glance	89-01-17	1	1681
Victoria	89-01-17	1	1678
Gladstone	89-01-17	1	1679
Snowstorm	89-01-18	1	2833
Canadian Girl	83-01-24	1	3439
Black Warrior	Crown 1913	1	-
Eva May	Crown 1913	1	-
Ferg #1	89-09-22	1	2610
Ferg #2	89-09-22	1	2611
Ferg #3	89-09-22	1	2612
Ferg #4	89-09-22	1	2613
Ferg #5	89-09-22	1	2614
Ferg #6	89-09-22	1	2615
Ferg #7	89-09-22	1	2616
Ferg #8	89-09-22	1	2617
Ferg #9	89-09-22	1	2618

REGIONAL GEOLOGY.

The unfossiliferous members of the Lardeau and Hamill Groups indentified by Read (1977) are presumed to be of Paleozoic and Proterezoic Ages respectively. Both groups form a broad belt of northwesterly trending formations between Kuskanax and Battle Range Batholits. All the formations are

part of a transgressive geosyncline sedimentary series of Kootenay Arc. The sedimentary sequence is completely isoclinaly folded with a generally steep dip to the northwest. Regional faulting so far identified consists of northwest-southeast trending trust faulting with strike slip offset. Table 1 lists Age relations of the sedimentary series within the region.

PROPERTY GEOLOGY.

During the mapping following units of Index formation were incountered: Gray phillite, Gray limestone, Graphitic schist, Chlorite schist and Sericite-pyrite schist.

Due to the size of the property and lack of suitable topographic base map, a detail interpretation of stratigraphy was not undertaken. Most of the geological mapping was completed near known mineralized areas and is presented in Appendix A.

The chorite schist & gray phillite are predominant rock types within the property. In mineralized areas these rock types are in gradational contact with sericite-pyrite schist.

The limestone occurs within the sequence in bands from 1 m to 150 m in thickness. Commonly the limestone is thinly laminated. In mineralized areas the limestone is altered to marble.

The field observations suggest that the folding and faulting within the property is complex and it will require detail mapping to define the stratigraphy and structure of the property.

MINERALIZATION.

The Horne Ledge zone occurs at a limestone-schist contact over a strike length of 3.6 km and 850 M vertically. The observed width is 1 m to 5 m. The mineralization consists of limonite galena, sphalerite pyrite and magnetite. The texture, grain size and style of mineralization is typical for replacement-skarn type. The best assay was 51.2% Pb, 2.78%,Ag, 0.066% Au from the float 50 cm in diameter found in Galena Creek. Where exposed by trenching the mineralization is deeply oxidized. The depth of oxidation is > 3 m. Therefore the surface sampling will not permit adequate evaluation of the true grade of mineralization.

TABLE 1

TABLE OF FORMATIONS

EON	ERA	PERIOD	GROUP	FORMATION	LITHOLOGY
PHANEROZOIC	PALEOZOIC	DEVONIAN	LARDEAU	BROADVIEW	- gray and green phyllitic grit - phyllite
				SHARON	- dark gray to black siliceous phyllite
				AJAX	- massive grey quartzite
				INDEX	- phillite - arenaceous limestone - minor gray phillite - gray and light green phyllite - limestone and quartz grit - minor phyllitic limestone
		CONFORMABLE CONTACT			
		CAMBRIAN LOWER CAMBRIAN		BADSHOT (LADE PEAK)	- gray & white limestone
PRECAMBRIAN	PROTEROZOIC		HAMILL	MOHICAN	- green phyllite - minor gray phyllite - limestone
				MARSH-ADAMS	- white, gray, green quartzite - phillitic quartzite - minor gray and black phillite

AFTER READ, 1976

Ellsmere Ledge Zone also occurs at a limestone-schist contact intermittently over a strike length of 2 km. The observed width is 2 m - 4 m. Mineralization consist of sphalerite, galena, pyrite and chalcopyrite.

The Black Warrior Zone consists of a quartz vein 190 cm wide. The defined strike length is 100 m. The quartz vein is mineralized with Cpy, Py, Zn, Pb. It is located at the contact between limestone and graphitic schist with attitude of north 35° west and dip of 75° west. The chip sample taken across 190 cm of exposed vein assayed 0.15% Cu; 20.3% Pb; 0.22% Zn; 24.64 oz Ag and 0.029 oz Au. 50 m south of adit #1 trenching has exposed 1 m wide zone of hydrothermally altered limestone with quartz carbonate stockwork. Grab sample from this location assayed 5.16% Cu; 0.08% Pb; 9.39% Zn; 1.93 oz Ag and 0.439 oz Au.

PREVIOUS WORK.

The Galena Creek Area was actively explored during the period 1893 to 1917. During that period many claims were recorded and crown granted. Gordon Turner's 1983 assessment report summarizes the history of exploration in this region and the reader is referred to his report for information on previous work.

In 1985 Nakusp Resources conducted 8 day exploration program on the property.

In 1987 Golden Range Resources conducted exploration program consisting of reconnaissance geological mapping, experimental geophysical surveys, airborne magnetometer and VLF surveys and sampling of known showings. Figure 4 summarize the results of sampling.

EXPLORATION WORK 1988.

During the period of September 21, 1988 and November 30th 1988 a crew consisting of senior geologist, geologist prospector and helper spend a total of 104 man days working on the claim group. The work consisted of:

- Flagging & Chaining of lines 14.94 km
- VLF EM Survey 14.94 km
- Magnetometer Survey 14.94 km
- Resistivity Survey 5.00 km

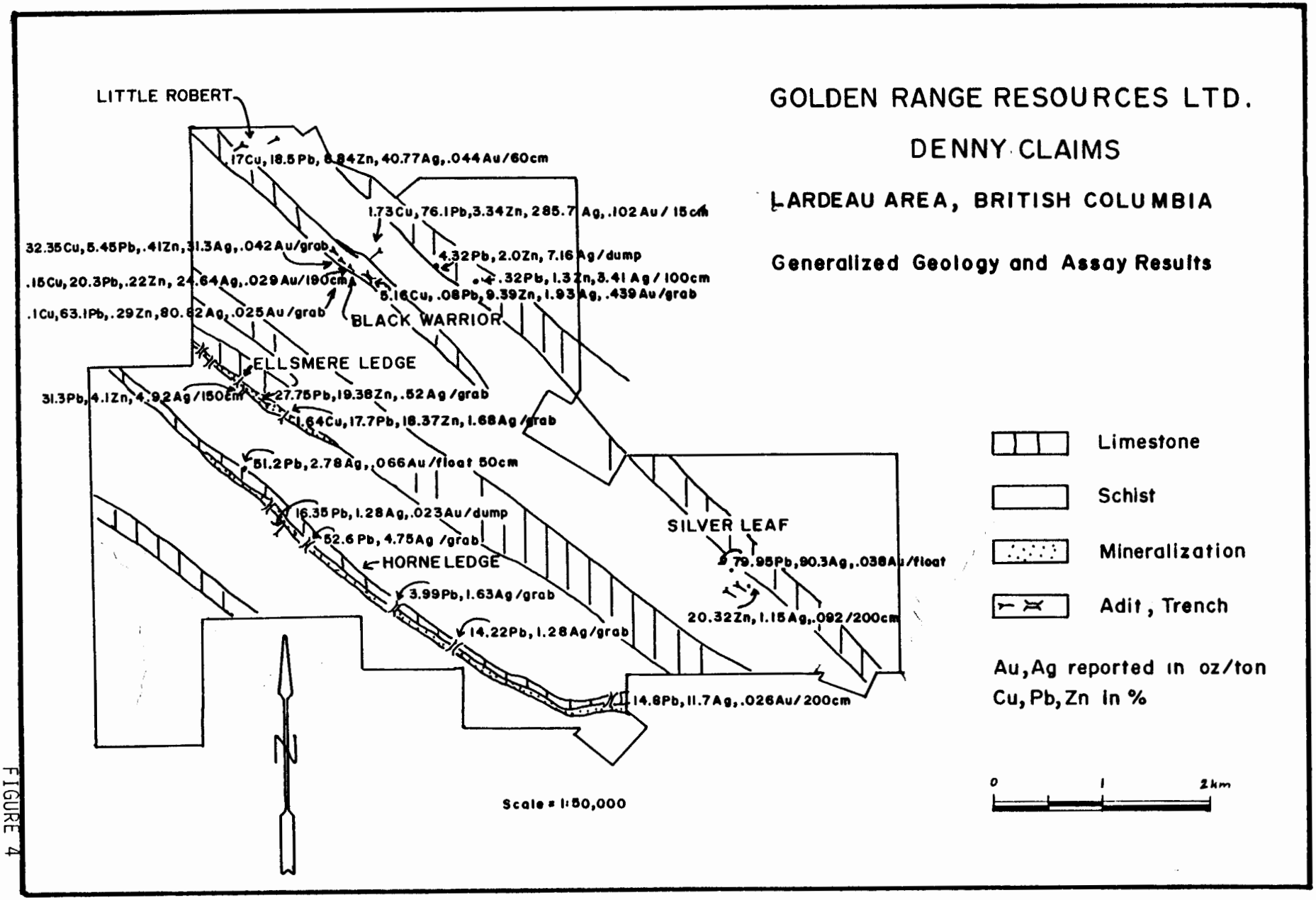

GOLDEN RANGE RESOURCES LTD.
DENNY CLAIMS
LARDEAU AREA, BRITISH COLUMBIA
Generalized Geology and Assay Results
LITTLE ROBERT
.17Cu, 18.5Pb, 8.84Zn, 40.77Ag, .044Au/60cm
1.73Cu, 76.1Pb, 3.34Zn, 285.7 Ag, .102Au / 15cm
32.35Cu, 5.45Pb, .41Zn, 31.3Ag, .042Au/grab
4.32Pb, 2.0Zn, 7.16Ag/dump
.15Cu, 20.3Pb, .22Zn, 24.64Ag, .029Au/190cm
.32Pb, 1.3Zn, 3.41Ag / 100cm
.1Cu, 63.1Pb, .29Zn, 80.62Ag, .025Au/grab
5.16Cu, .08Pb, 9.39Zn, 1.93Ag, .439Au/grab
BLACK WARRIOR
ELLSMERE LEDGE
31.3Pb, 4.1Zn, 4.9.2Ag/150cm
27.75Pb, 19.38Zn, .52Ag/grab
1.64Cu, 17.7Pb, 18.37Zn, 1.68Ag/grab
51.2Pb, 2.78Ag, .066Au/float 50cm
16.35Pb, 1.28Ag, .023Au/dump
52.6Pb, 4.75Ag/grab
SILVER LEAF
79.95Pb, 90.3Ag, .038Au/float
HORNE LEDGE
3.99Pb, 1.63Ag/grab
20.32Zn, 1.15Ag, .092/200cm
14.22Pb, 1.28Ag/grab
14.8Pb, 11.7Ag, .026Au/200cm
N
Scale = 1:50,000
Limestone
Schist
Mineralization
Adit, Trench
Au, Ag reported in oz/ton
Cu, Pb, Zn in %
0
1
2km

FIGURE 4

- Soil Geochemical Survey 331 samples
- Geological Mapping 5 km
- Road Construction 6.5 km

GRID ESTABLISHMENT.

A total of 14.94 km of lines were established by chain compass and clinometer with 25 meter station interval to provide control for VLF-EM; Magnetometer, Resistivity Surveys, Mapping and Sampling. The following is summary of lines by locality

Ellsmere	4.575 km
Horne	7.275 km
Black Warrior	1.390 km
Galena Creek	1.700 km
Total	14.940 km

VLF EM 16 ELECTROMAGNETIC SURVEY.

The electromagnetic survey carried out utilizing a Geonics EM 16, VLF EM receiver. The unit measures the vertical In-phase component (tangent of the tilt angle of the polarization ellipsoid) and vertical Out-of-phase component (the short axis of the polarization ellipsoid compared to the long axis) of the secondary field generated in the conductors.

The transmitter station used for the survey was NSS Annapolis, Maryland with a frequency of 21.4 Khz. The Azimuth to the station (NAA) is 115° . All the readings were taken with the operator facing east.

VLF-EM 16 ELECTROMAGNETIC SURVEY RESULTS.

The results are presented in Appendix B. The purpose of the survey was to test the usefulness of the technique to detect and trace the known sulfide mineralization. The results indicate that the VLF EM survey did not detect the known mineralization. However this does not rules out usefulness of this type geophysical survey on other parts of the property if the mineralized zone contains higher content of pyrite and chalcopyrite.

RESISTIVITY SURVEY.

The instrument used in survey was a Geonics EM16R which measures Apparent Resistivity of the ground in ohm-meter and phase angle. The measurement is made by orienting the instrument so that the coil is maximally coupled to tangential magnetic field (determined from an audio signal) and direction indicated by the instrument orientation. After the audio signal is nulled by means of two controls, the phase angle and apparent resistivity valves can be read directly from the instrument. The apparent transmitter azimuth of 66 was determined from the orientation of the instrument. For the present survey the signal utilized was from NLK Seattle, Washington at frequency 24.8 Khz.

RESISTIVITY SURVEY RESULTS.

The survey results are presented in Appendix C. The resistivity survey was successful to detect the Horne Ledge Zone and Ellsmere Ledge Zone, and Black Warrior Zone.

GROUND MAGNETOMETER SURVEY.

The ground magnetometer survey was completed utilizing a proton magnetometer Scintrex Model MP-2 capable of reading total field values to an accuracy of ± 1 gamma. The main base station was established at BL 0 + 00. Secondary base stations were established at 100 m intervals along the base line to provide data for diurnal corrections.

Diurnal variation was corrected by tieing in to the base stations at time intervals less than 35 minutes . Maximum misclosure was 20 gammas.

GROUND MAGNETOMETER SURVEY - RESULTS.

The results of magnetometer survey are presented in Aappendix D. The results indicate that there is no correlation between magnetometer survey and known mineralization.

GEOCHEMISTRY.

Total of 242 soil samples were collected on Horn Ledge zone. The samples were taken at 25 m intervals (where possible) along the grid lines spaced 100 m apart.

88 soil samples were collected in Galena Creek zone at 30 m interval.

Soil samples were collected from the "B" horizon at a depth of 1-30 cm with the aid OF mattock. All sample locations were flagged in the field.

Soil samples were analyzed for 30 elements by Acme Analytical Laboratories LTD, Vancouver, British Columbia. The geochemical results, analytical method, sample location are given
in Appendix E.

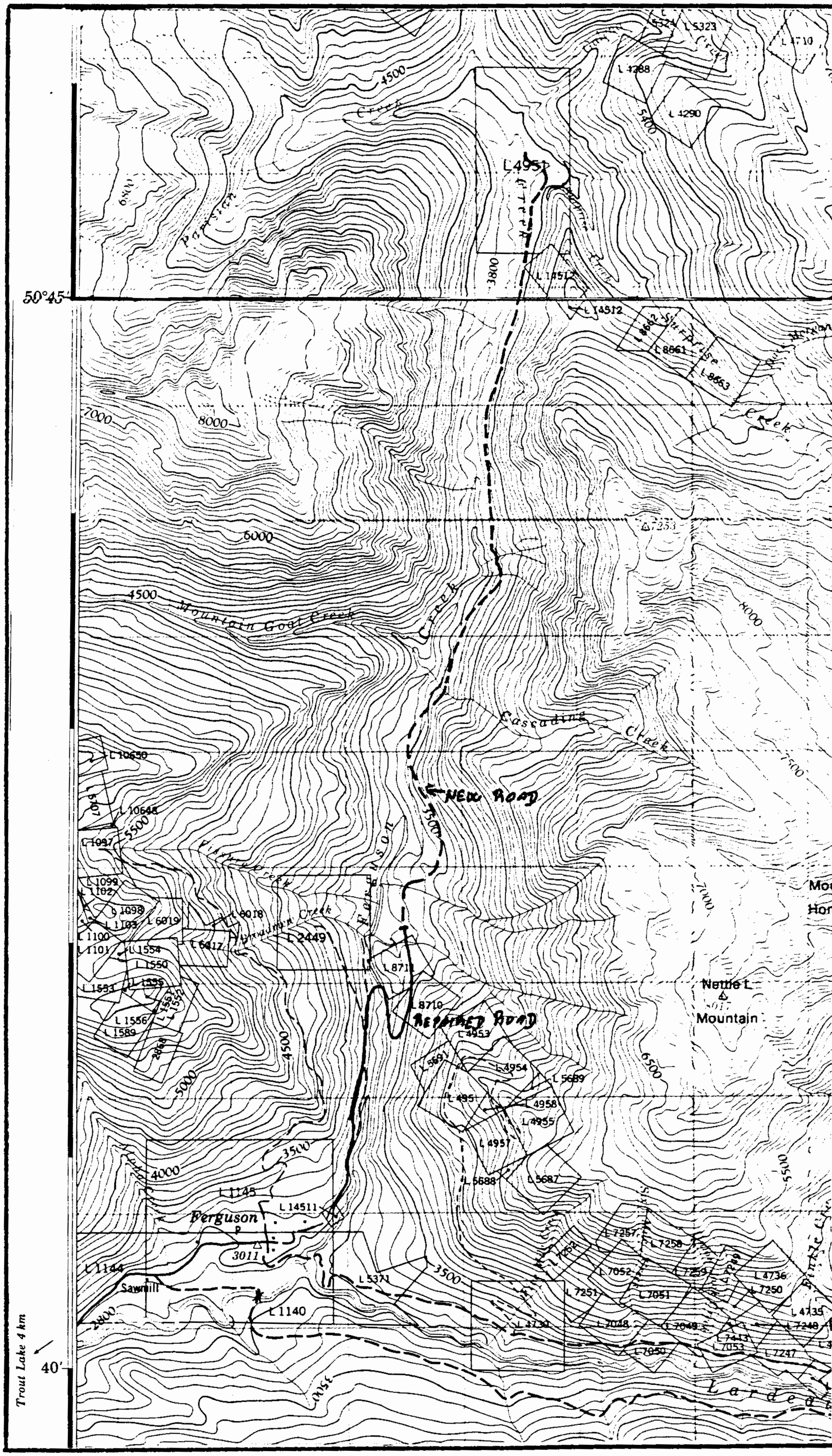
GEOCHEMISTRY RESULTS.

The mean and standard deviation values were calculated for the Cu, Zn, Pb, Ag, Mn, Sr. The threshold value was determined as mean + standard deviation. Values equal to or greater than threshold are considered to be anomalous. Following table summarizes the results:

ELEMENT	MEAN	STANDARD DEVIATION	THRESHOLD
Cu	22 ppm	10 ppm	32 ppm
Zn	81 ppm	72 ppm	153 ppm
Pb	36 ppm	28 ppm	64 ppm
Au	0.2 ppm	0.2 ppm	0.4 ppm
Mn	1363 ppm	1020 ppm	2383 ppm
Sr	63 ppm	78 ppm	141 ppm

ROAD CONSTRUCTION.

Four wheel drive road construction was contracted out to Logs Unlimited Box 447 Nakusp, B.C. The company utilized D-6 dozer to construct 6.5 kilometer of new road, and upgrading 3 kilometer of old logging road. The total of 454.5 hours of D-6 time and 20 hours of loader time was required to complete the road. The road follows the old pack trail to Circle City along the east side of Ferguson Creek Figure 5 shows the location of road.



82-K/14

82-K/11

ROAD LOCATION

Scale 1:50000

0 1km

Figure 5.

CONCLUSIONS AND RECOMMENDATIONS.

Exploration work to date indicates that:

1. Mineralization is not reflected in soil samples. This can be attributed to extensive leaching of surface exposures of mineralization.

2. Magnetometer survey did not detected any distinct anomalous areas.

3. VLF - EM survey detected several anomalous zones none of which correspond to the known mineralization.

4. Resistivity survey was able to trace the known mineralization indirectly by detecting silicification associated with the mineralization.

5. Geological observations indicate that the mineralization is hydrothermal and/or scarn type, source of which is postulated to be deep-seated concealed intrusive.

In order to test continuity, nature and grade of mineralization following drill holes are recommended:

HORNE LEDGE:

1 Location: line 9+00 N 1+25 W; Azimuth: 40° ; Dip -45° Length 150 m

2 Location: line 10+00 N 1+25 W; Azimuth 40° ; Dip -45° Length 150 m

BLACK WARRIOR:

3 Location: line 0+00 0+20 W Azimuth 35° Dip -50° Length 150 m

4 Location: line 0+50 S 0+20 E Azimuth 215° Dip -45°
Length 150 m.

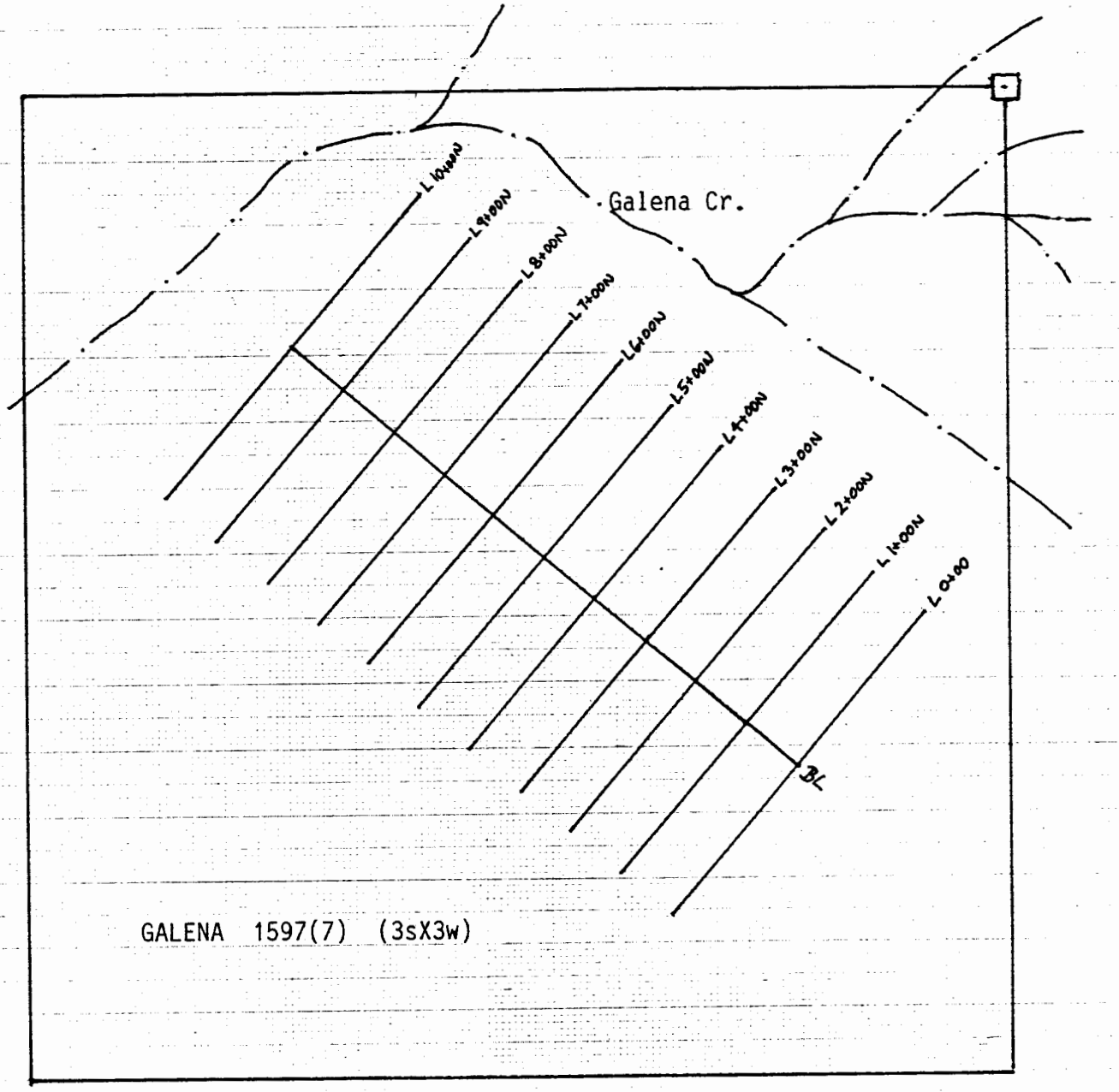
Respectfully submitted,

Milan Hlava

Milan Hlava, B.Sc., F.G.A.C.

APPENDIX A

GEOLOGICAL MAPPING



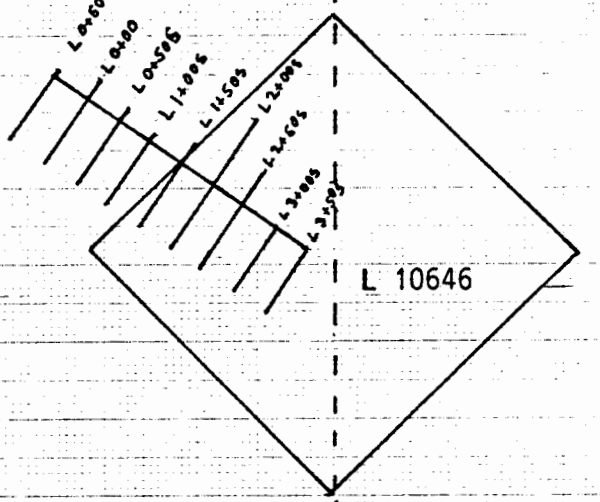
GALENA 1597(7) (3sX3w)

N

HORNE LEDGE

GRID LOCATION

Scale 1:10000 0 100 200 300 400 m



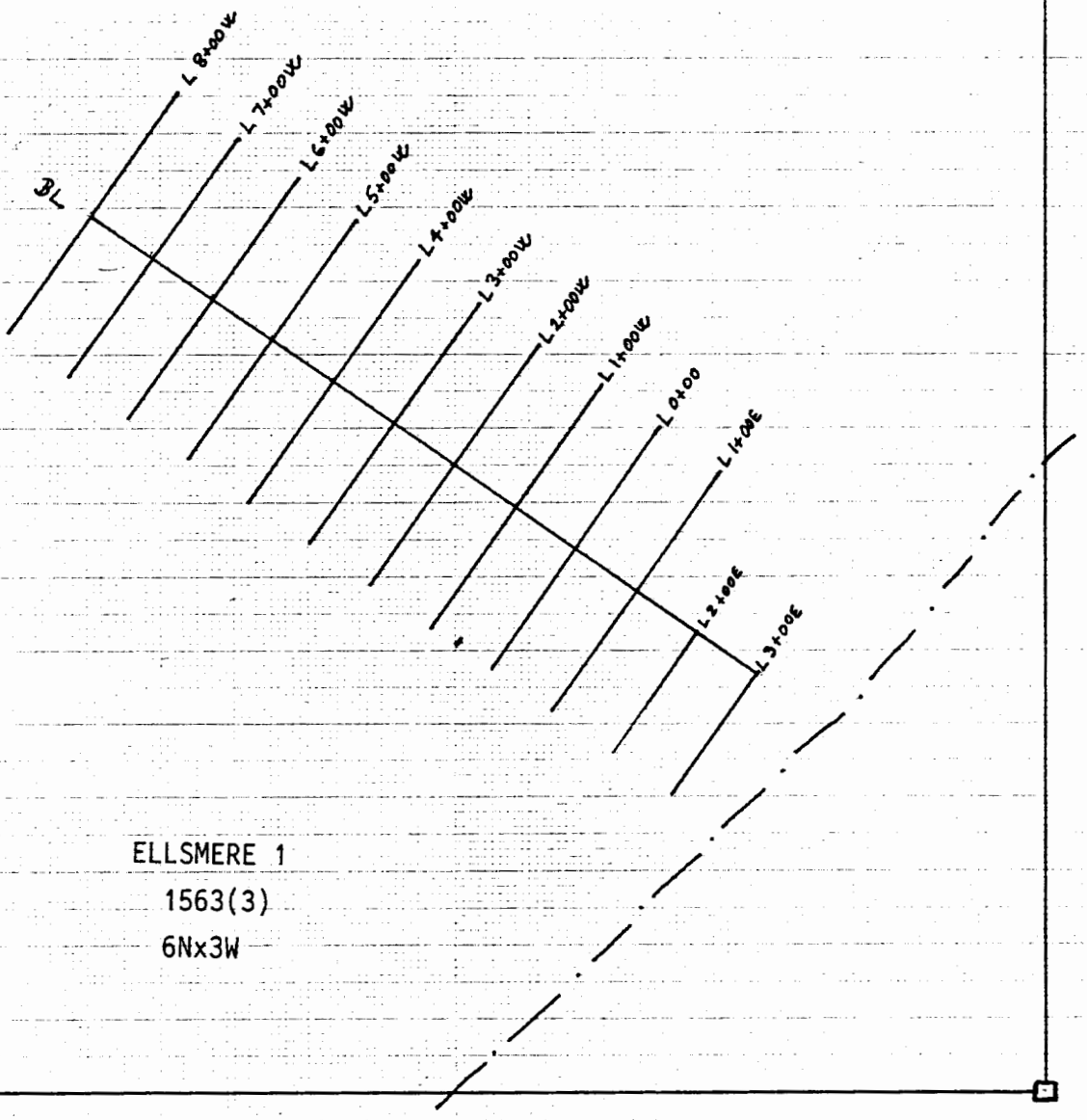
ELLSMERE 1
1563(3)
6Nx3W

BLACK WARRIOR 1
1562(3)
5Nx4E

BLACK WARRIOR

GRID LOCATION

Scale 1:10000 0 100 200 300 400 m



ELLSMERE 1
1563(3)
6Nx3W

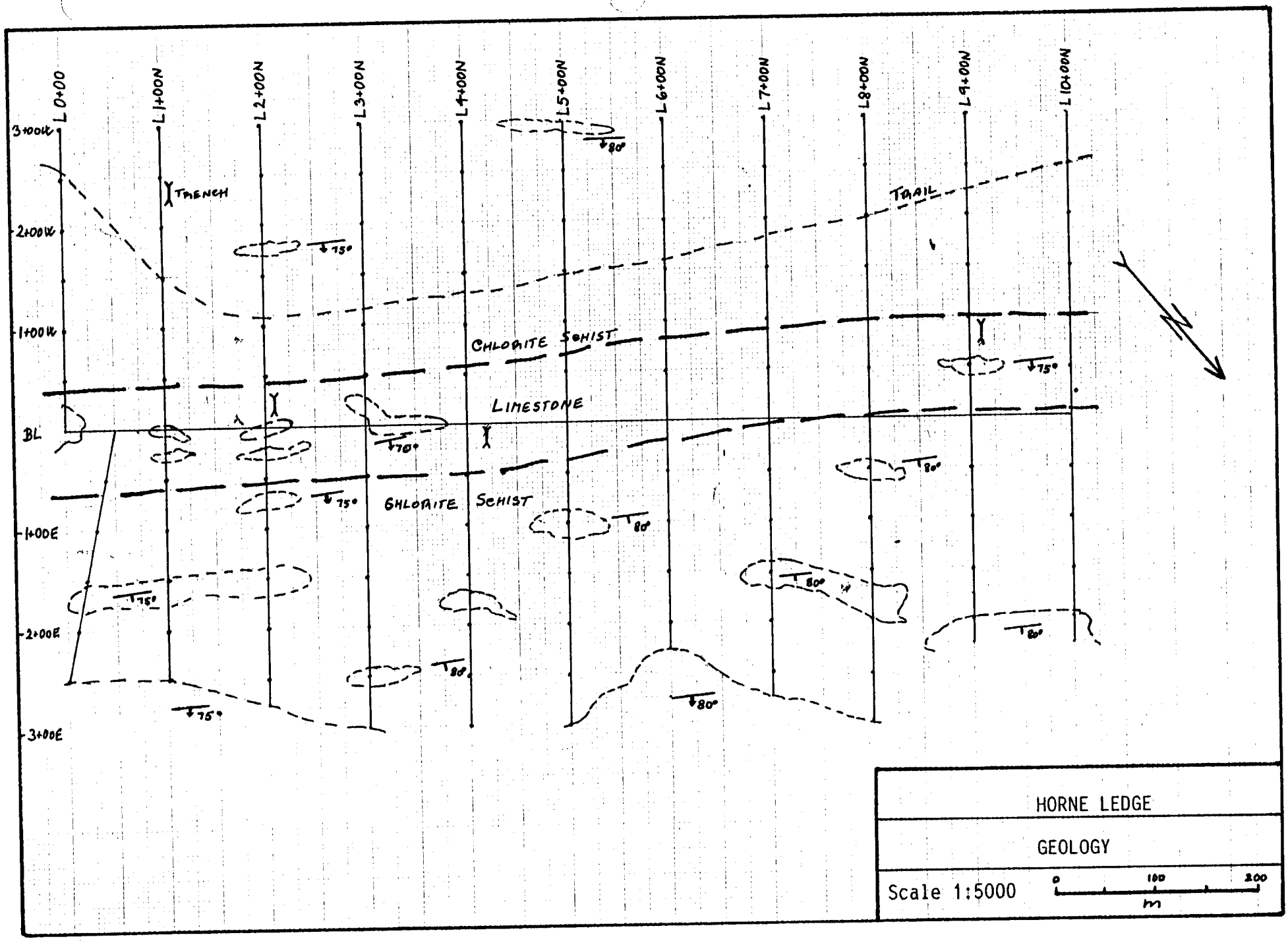
N

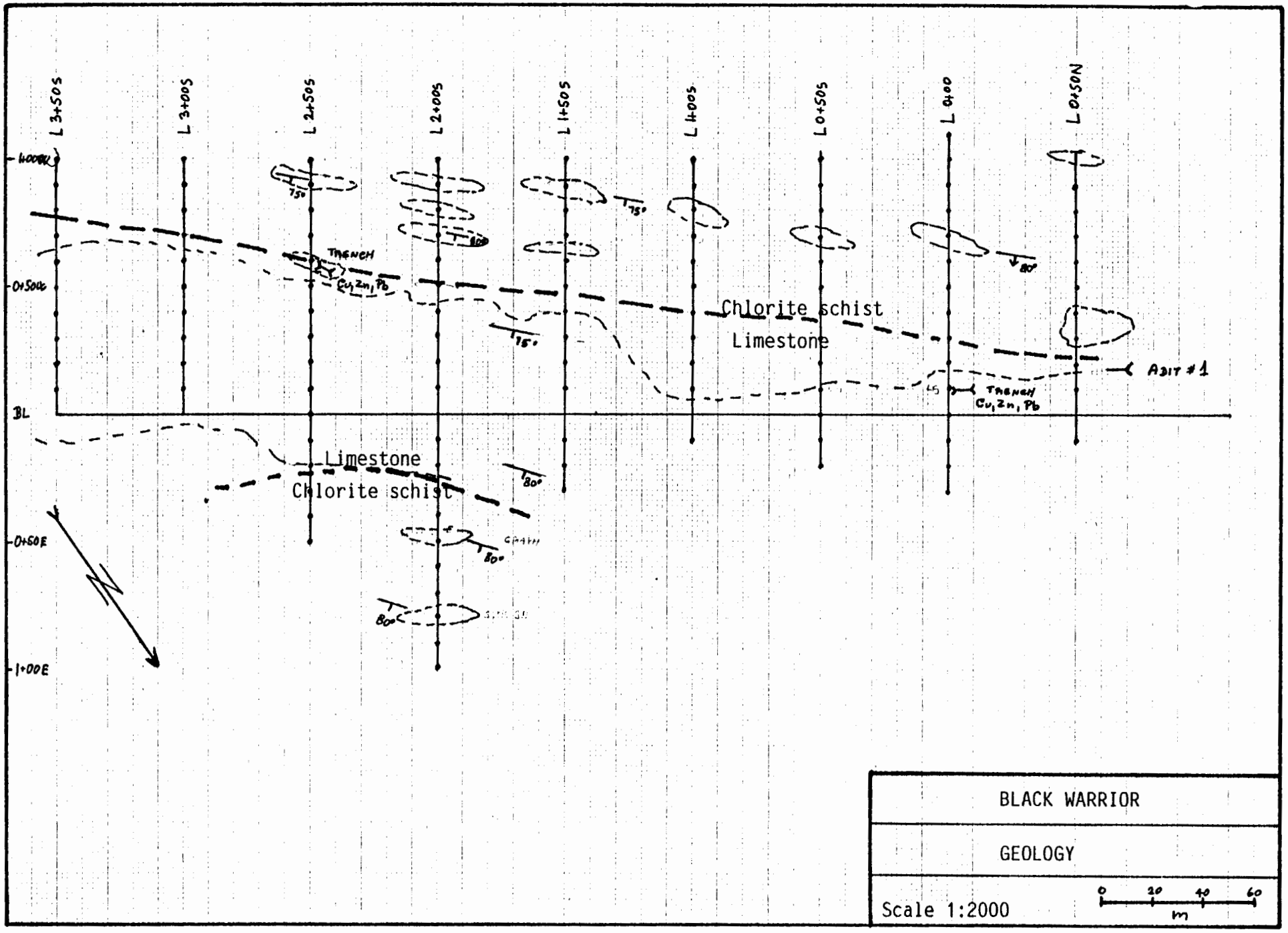
ELLSMERE

GRID LOCATION

Scale 1:10000

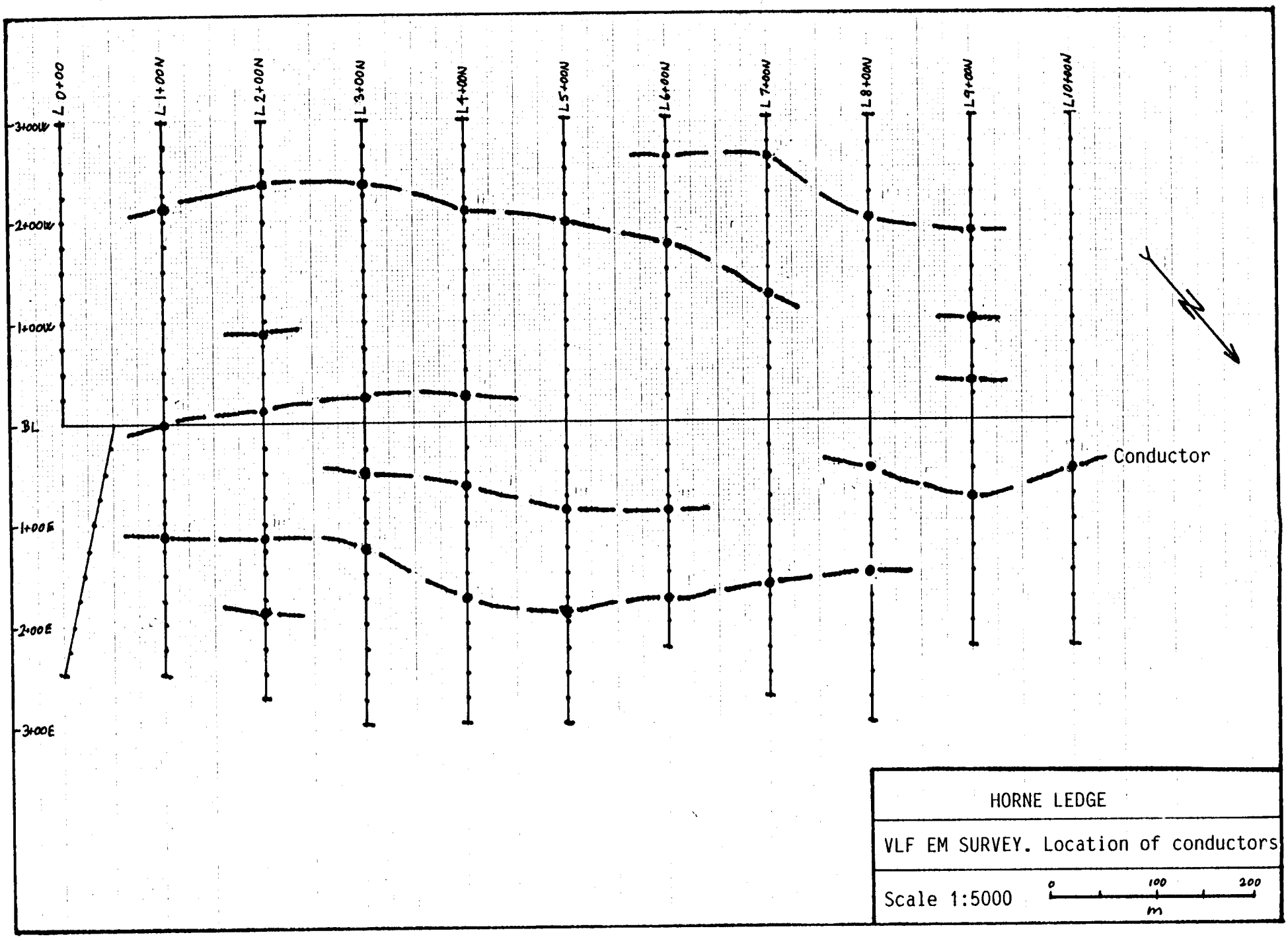
m


L 0+00
L1+00N
L2+00N
L3+00N
L4+00N
L5+00N
L6+00N
L7+00N
L8+00N
L9+00N
N00+10 L
3+00W
2+00W
1+00W
BL
1+00E
2+00E
3+00E
TRENCH
TRAIL
CHLORITE SCHIST
LIMESTONE
CHLORITE SCHIST
HORNE LEDGE
GEOLOGY
Scale 1:5000
0
100
200
m



BLACK WARRIOR
GEOLOGY
Scale 1:2000

0 20 40 60
m



HORNE LEDGE

VLF EM SURVEY. Location of conductors

Scale 1:5000

0 100 200

m

ELLSMERE
(2601)

D.D. 1 OF 397918 M

20
26
50
40
40
CHLORITE SCHIST

3+00S

10

8

6+00S

80

9+00S

75

+++ *BOULDERS & MASSIVE GALENA

CHLORITE SHIST

45

LIMESTONE

CHLORITE SCHIST

80

12+00S

75

80

15+00S

75

CHLORITE SHIST

17+10S

LIMESTONE

N

GALENA CREEK

GEOLOGY

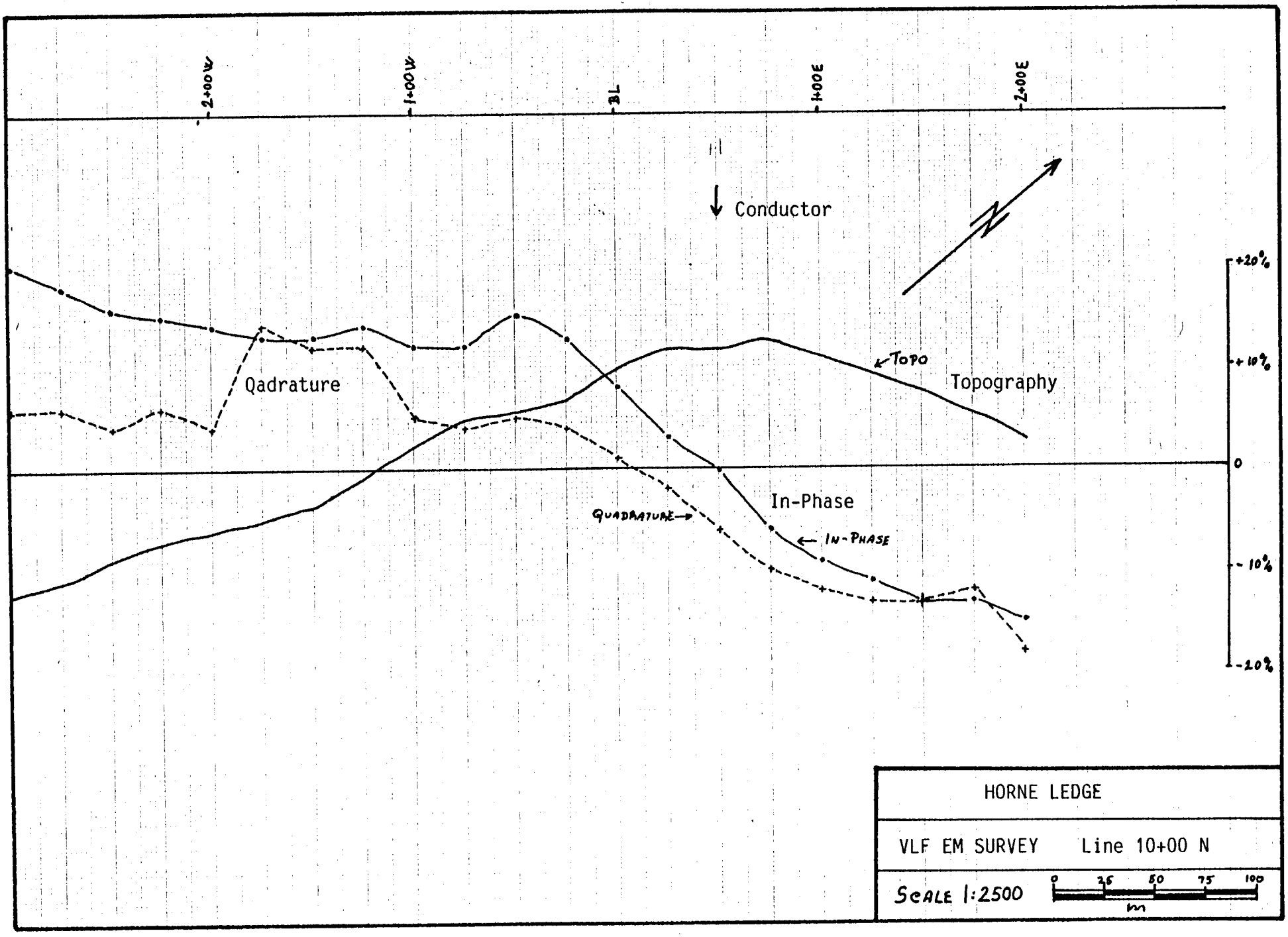
SCALE 1:5000

0 50 100 150
m

APPENDIX B

VLF-EM 16 ELECTROMAGNETIC SURVEY RESULTS

10 N

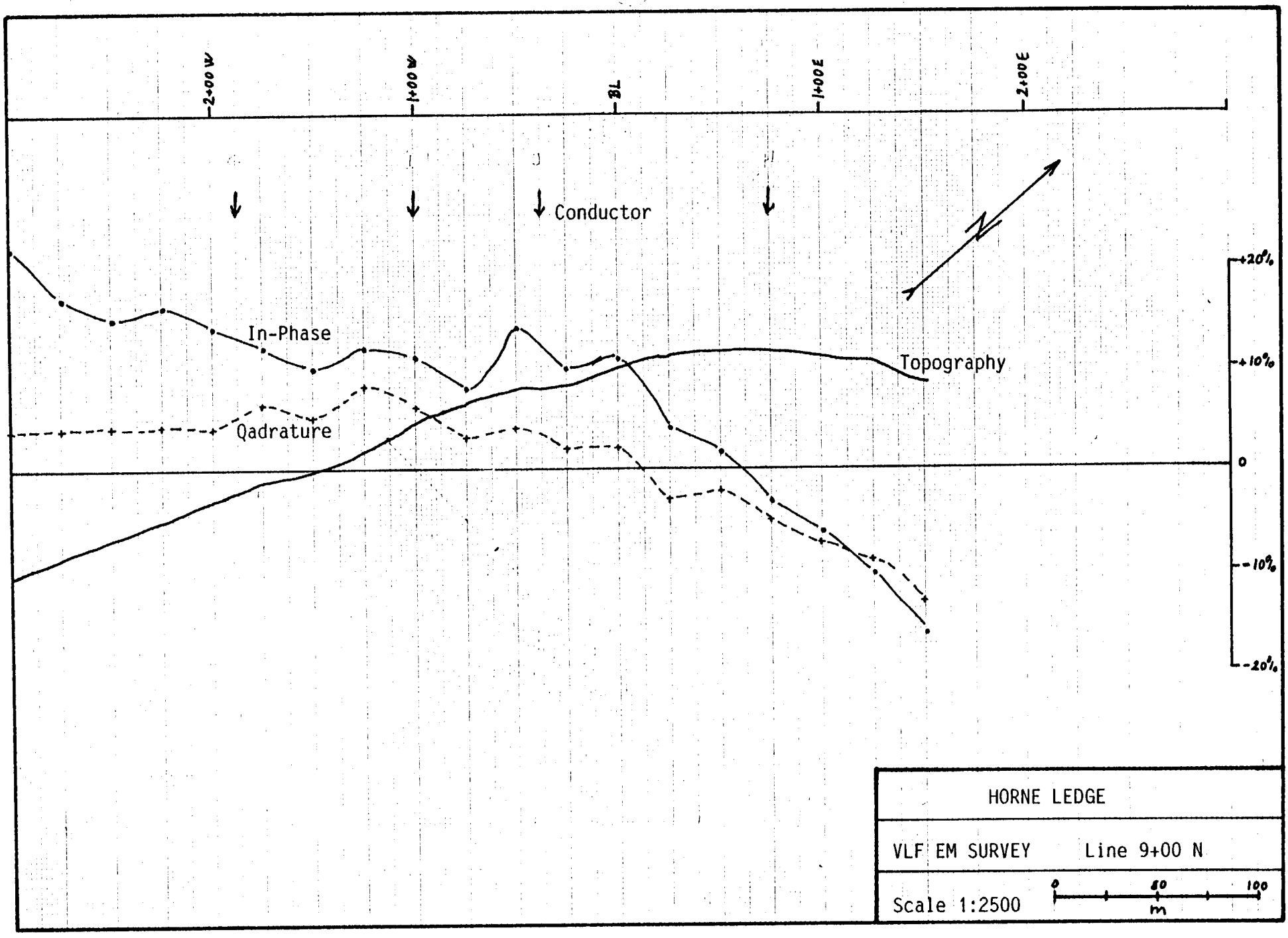


HORNE LEDGE

VLF EM SURVEY Line 10+00 N

SCALE 1:2500 0 25 50 75 100 m

9+00N



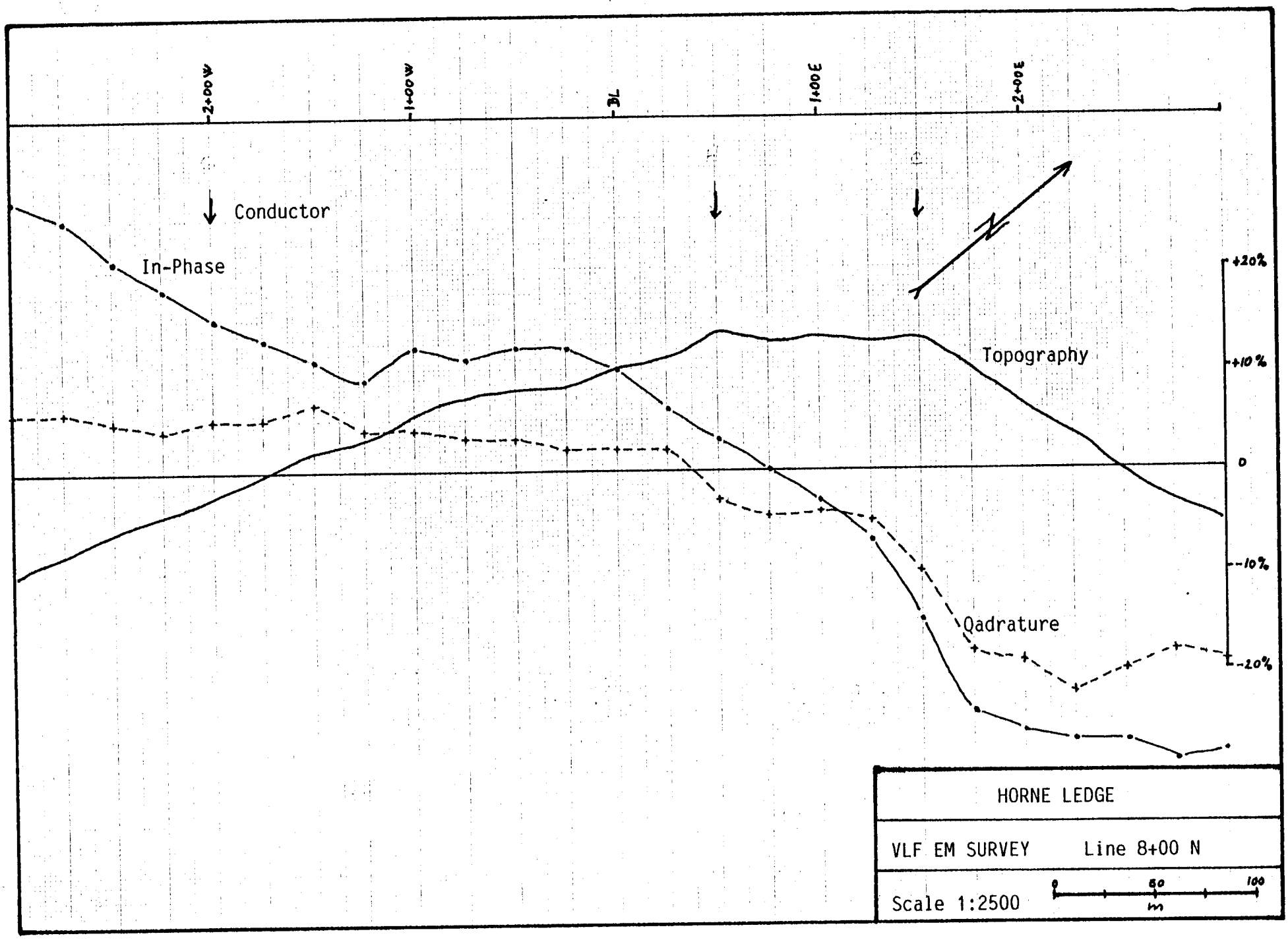
HORNE LEDGE

VLF EM SURVEY Line 9+00 N

Scale 1:2500

0 50 100
m

8+00N

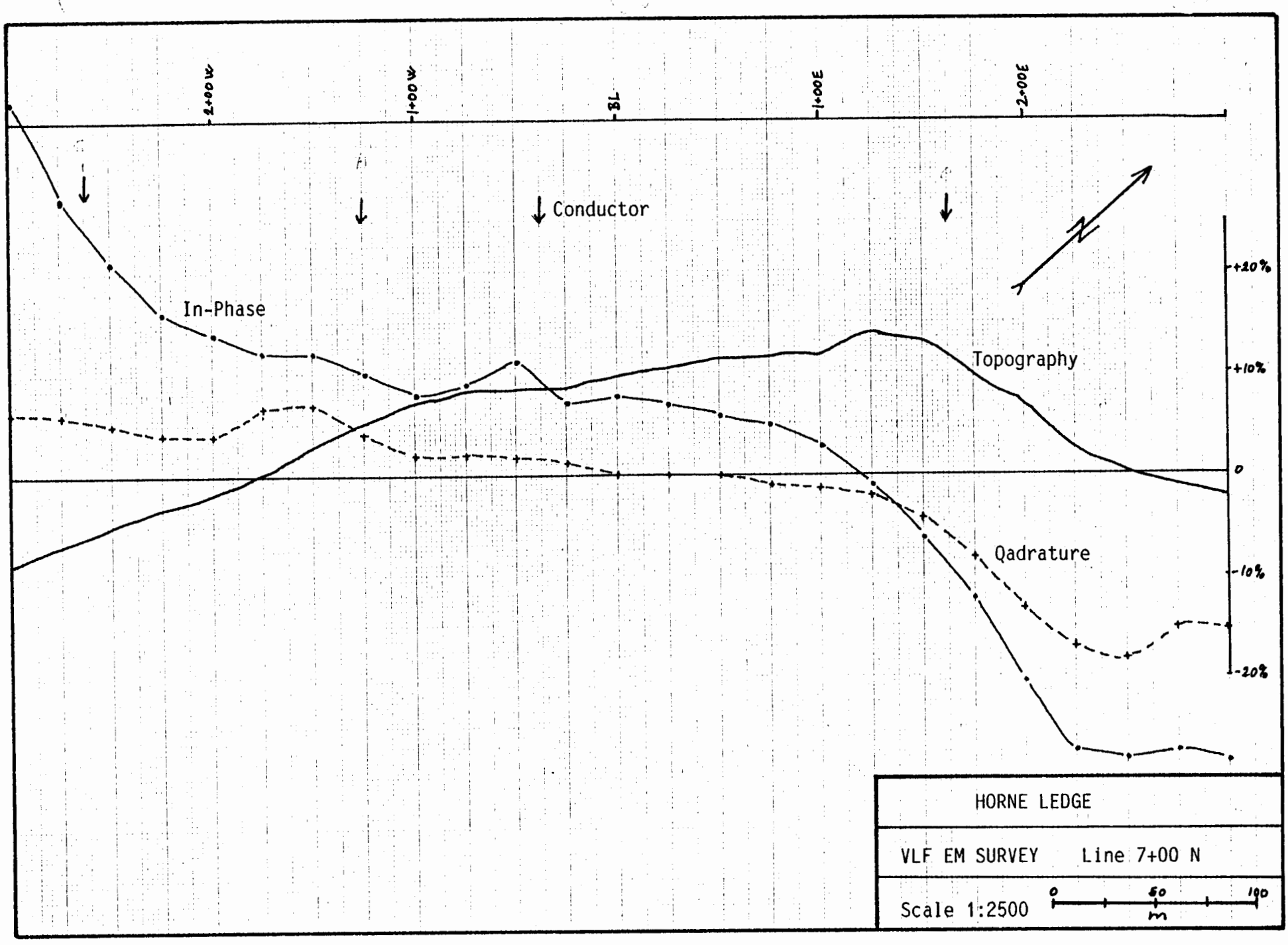


HORNE LEDGE

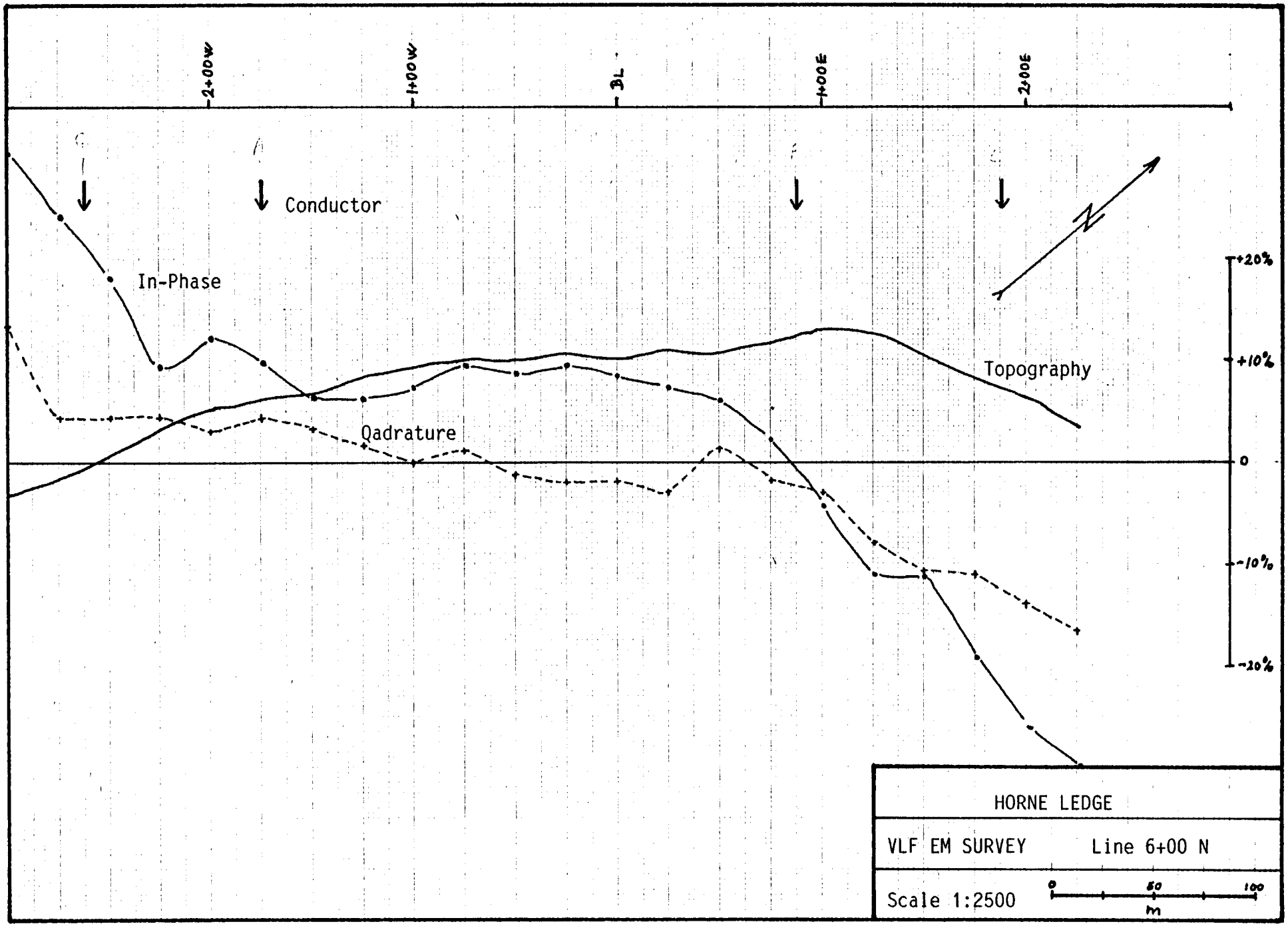
VLF EM SURVEY Line 8+00 N

Scale 1:2500

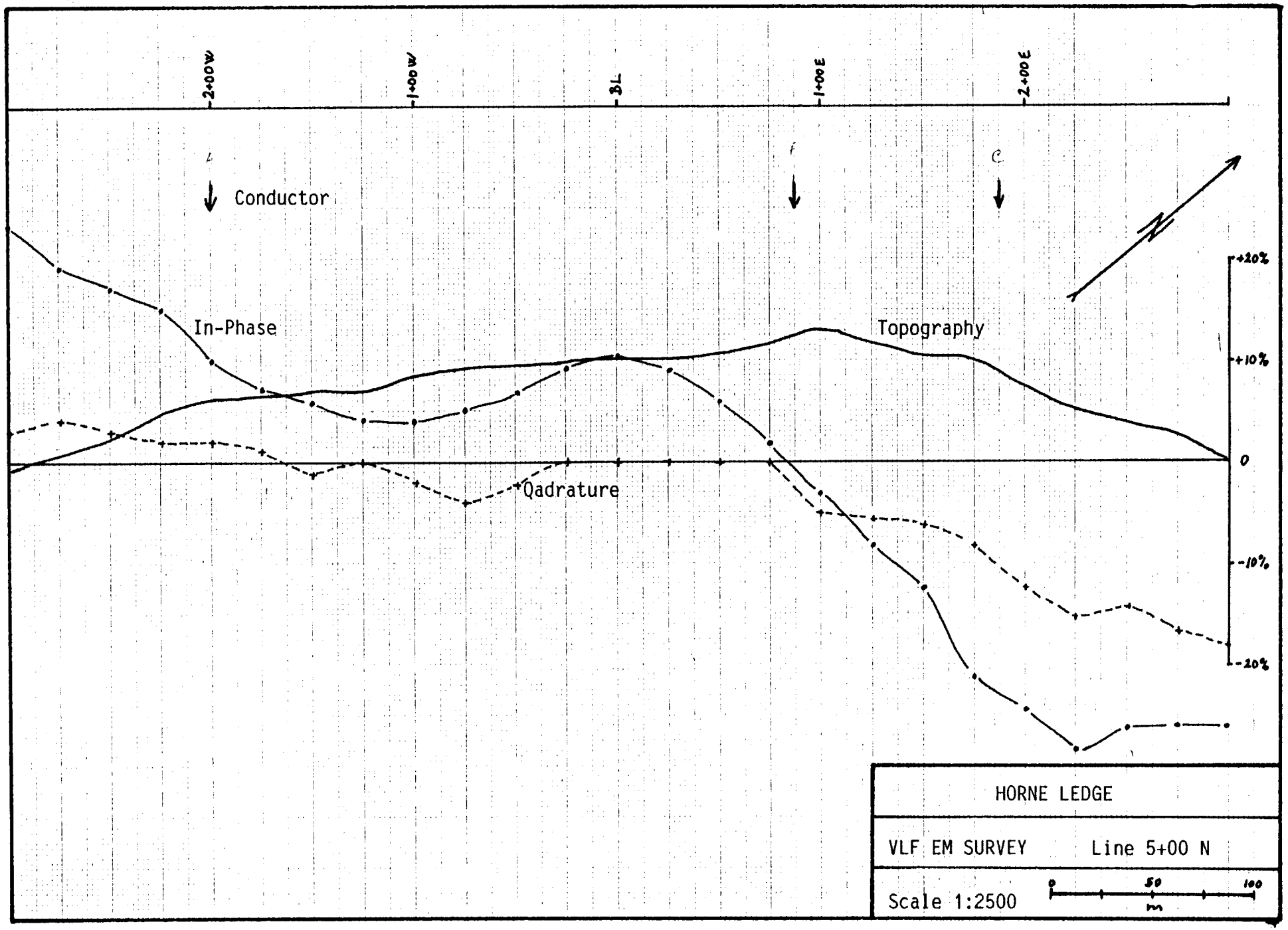
0 50 100
m


1+00W
1+00W
BL
1+00E
2+00E
Conductor
In-Phase
Topography
Qadrature
+20%
+10%
0
-10%
-20%
HORNE LEDGE
VLF EM SURVEY Line 7+00 N
Scale 1:2500
0
50
100
m

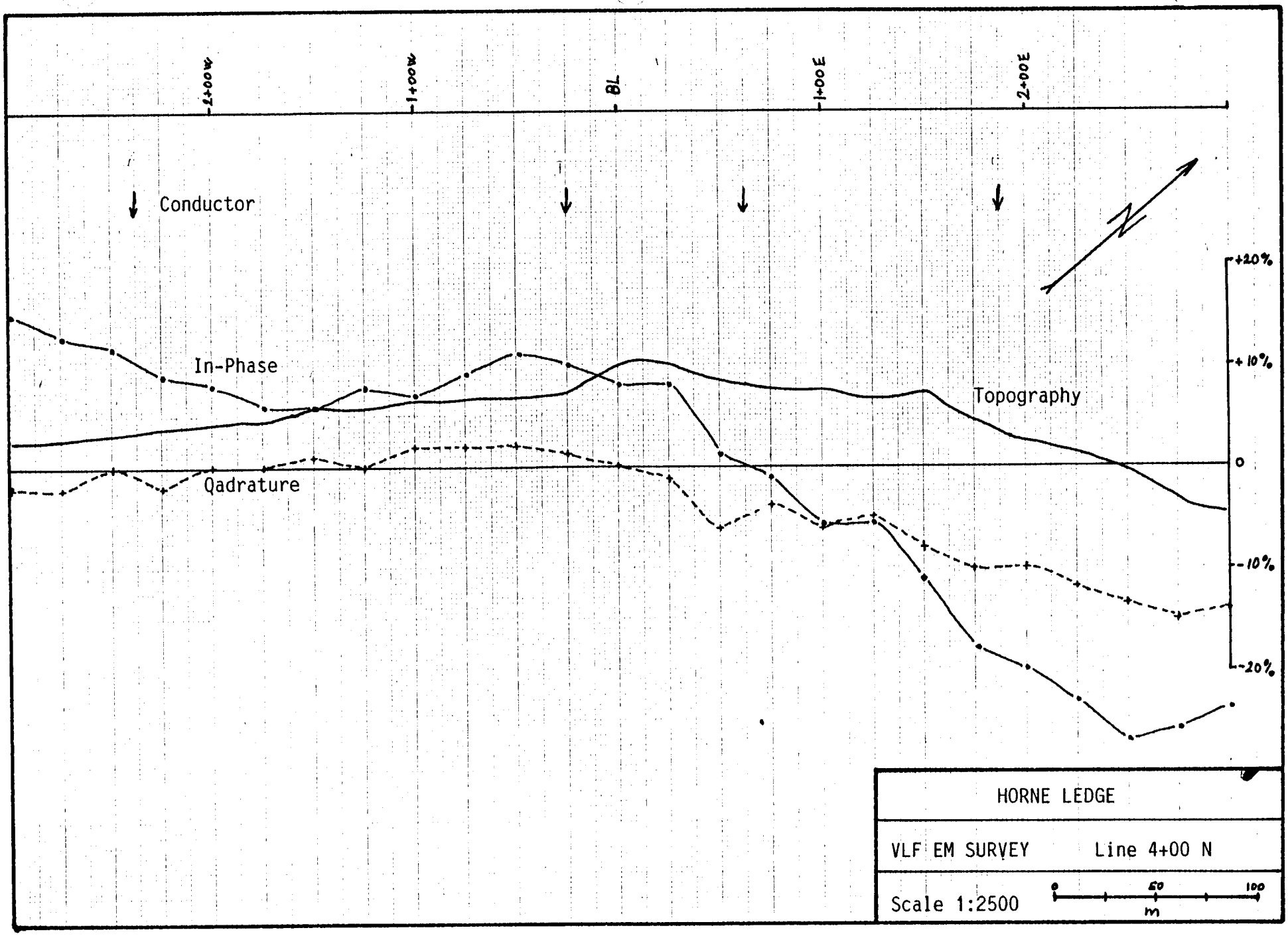
6 N


2+00W
1+00W
BL
1+00E
2+00E
Conductor
In-Phase
Qadrature
Topography
+20%
+10%
0
-10%
-20%
HORNE LEDGE
VLF EM SURVEY
Line 6+00 N
Scale 1:2500
0
50
100
m

5N


2+00W
1+00W
BL
1+00E
2+00E
A
Conductor
F
C
In-Phase
Topography
Qadrature
+20%
+10%
0
-10%
-20%
HORNE LEDGE
VLF EM SURVEY
Line 5+00 N
Scale 1:2500
0
50
100
m

4+00N

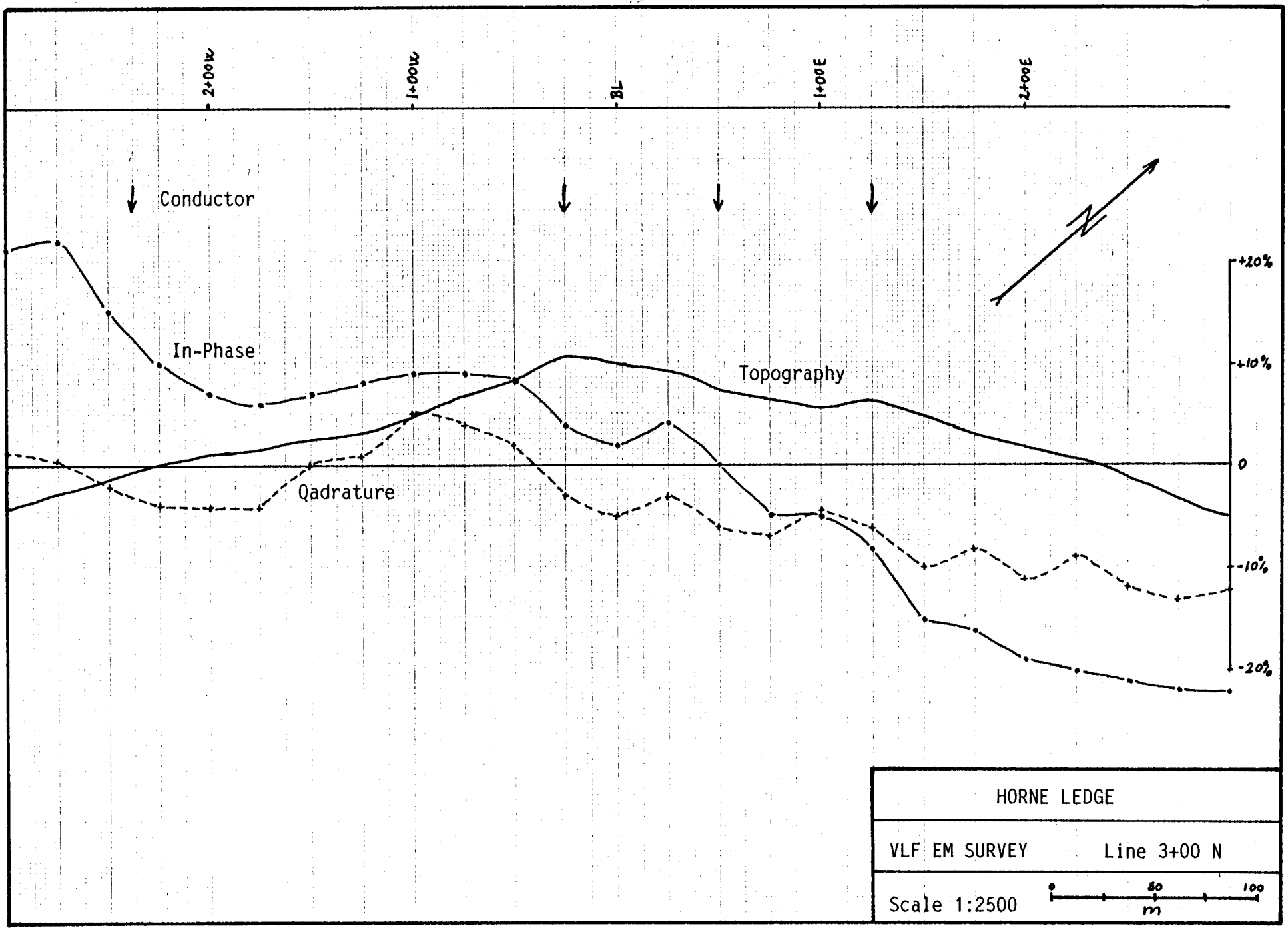


HORNE LEDGE

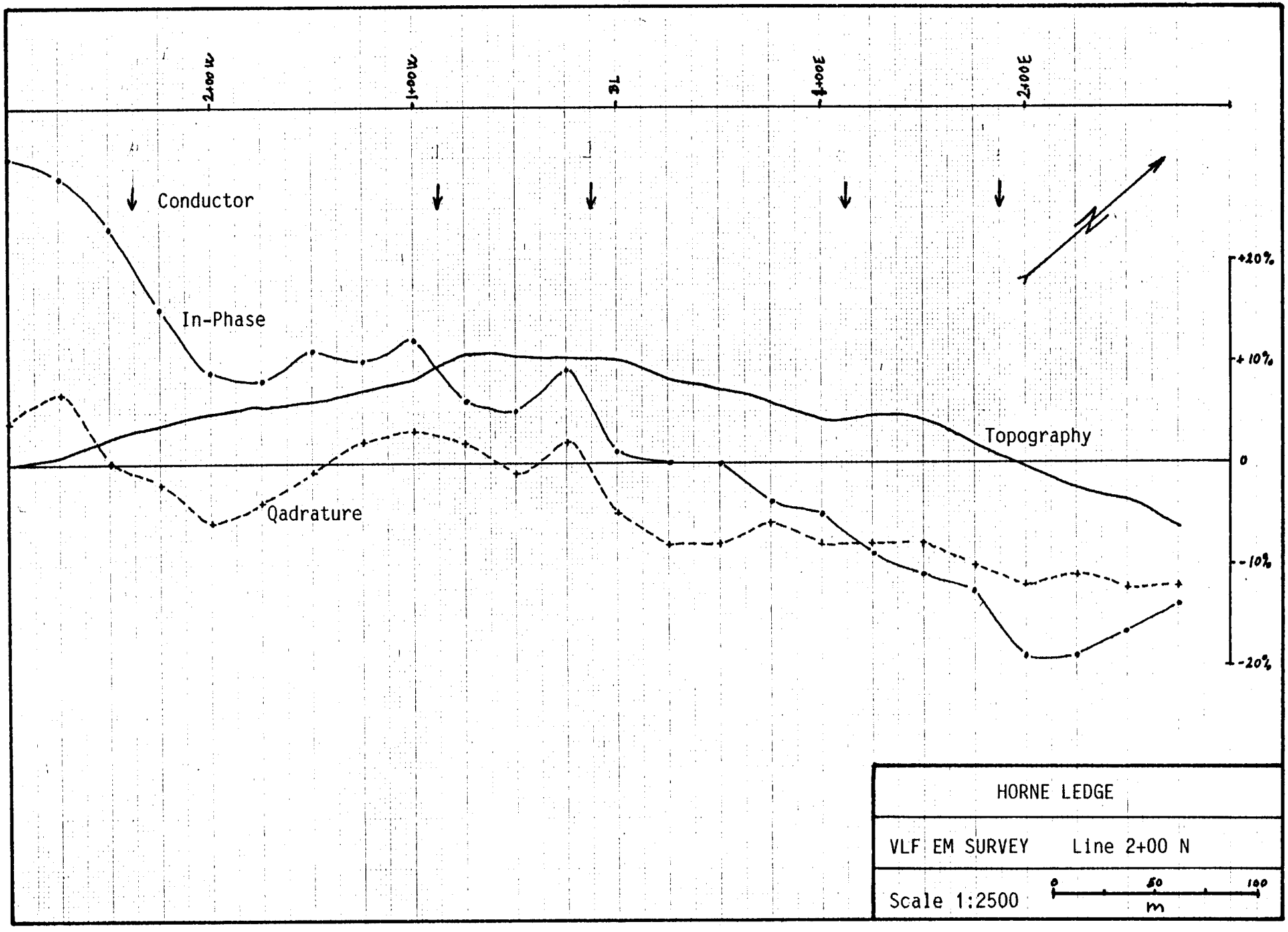
VLF EM SURVEY Line 4+00 N

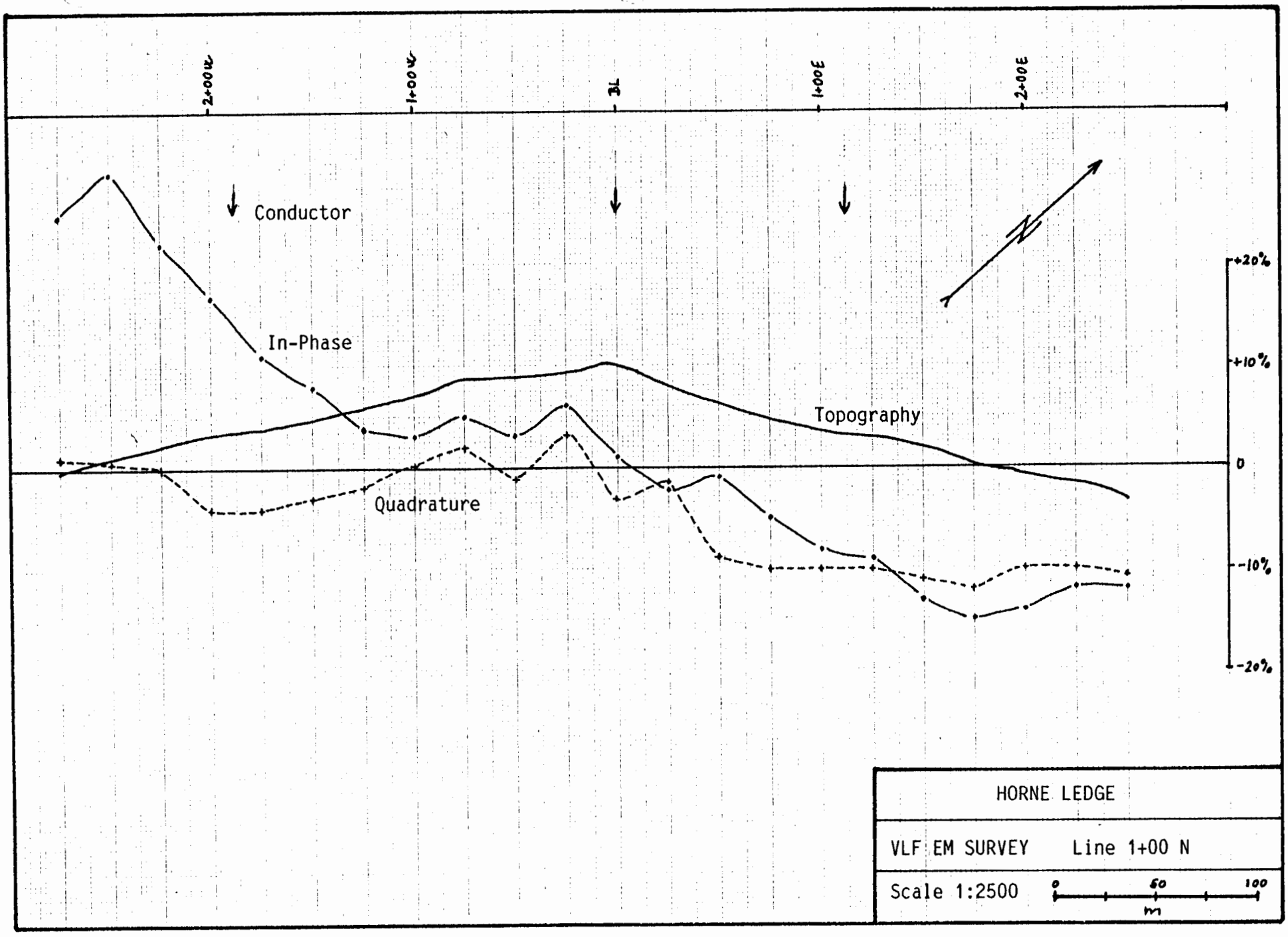
Scale 1:2500 0 50 100 m

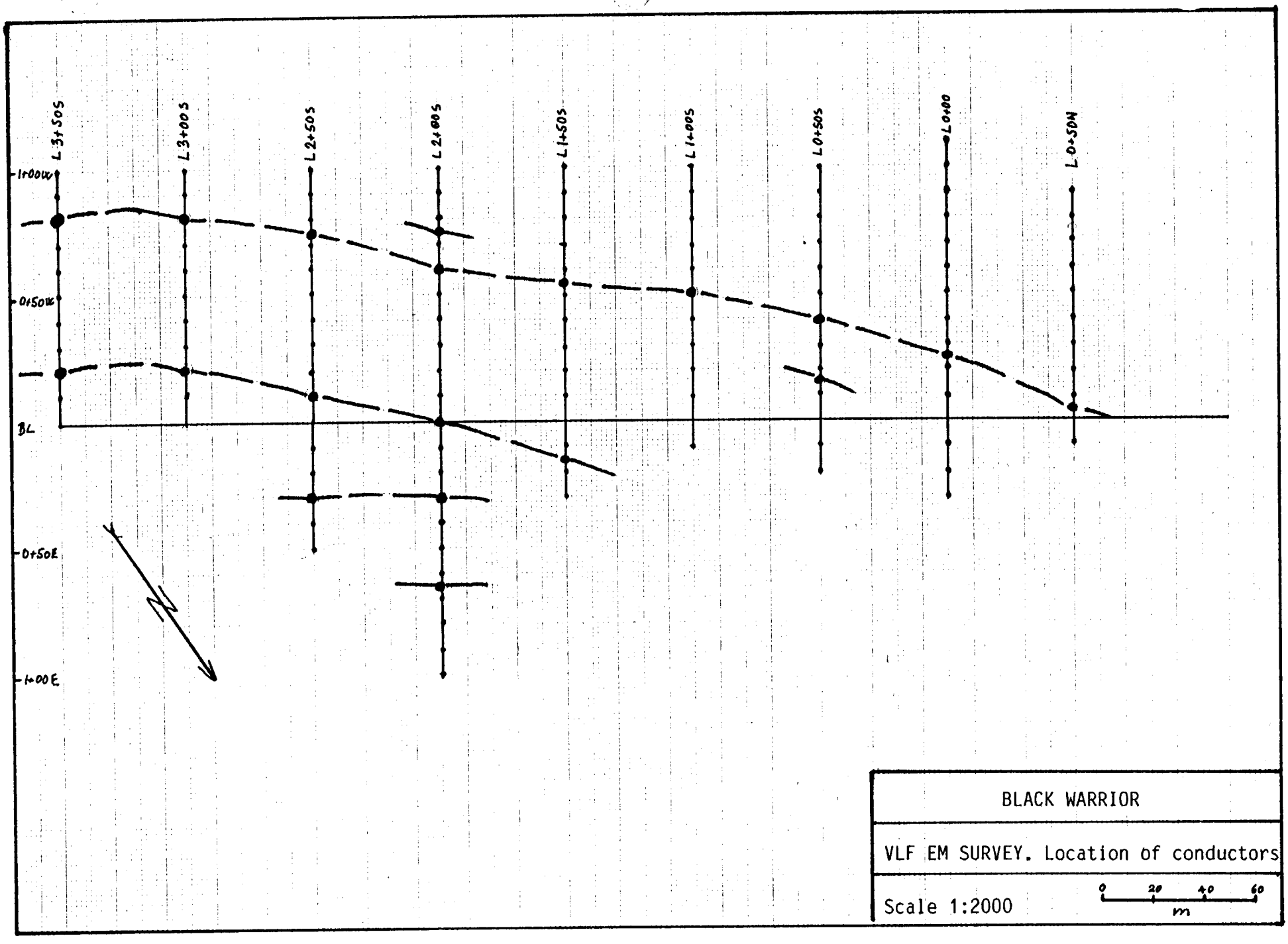
3 N



HORNE LEDGE	
VLF EM SURVEY	Line 3+00 N
Scale 1:2500	0 50 100 m


2+00 W
1+00 W
TL
1+00 E
2+00 E
Conductor
In-Phase
Qadrature
Topography
+20%
+10%
0
-10%
-20%
HORNE LEDGE
VLF EM SURVEY Line 2+00 N
Scale 1:2500
0
50
100
m


2+00W
1+00W
BL
1+00E
2+00E
Conductor
In-Phase
Topography
Quadrature
+20%
+10%
0
-10%
-20%
HORNE LEDGE
VLF EM SURVEY Line 1+00 N
Scale 1:2500
0
50
100
m

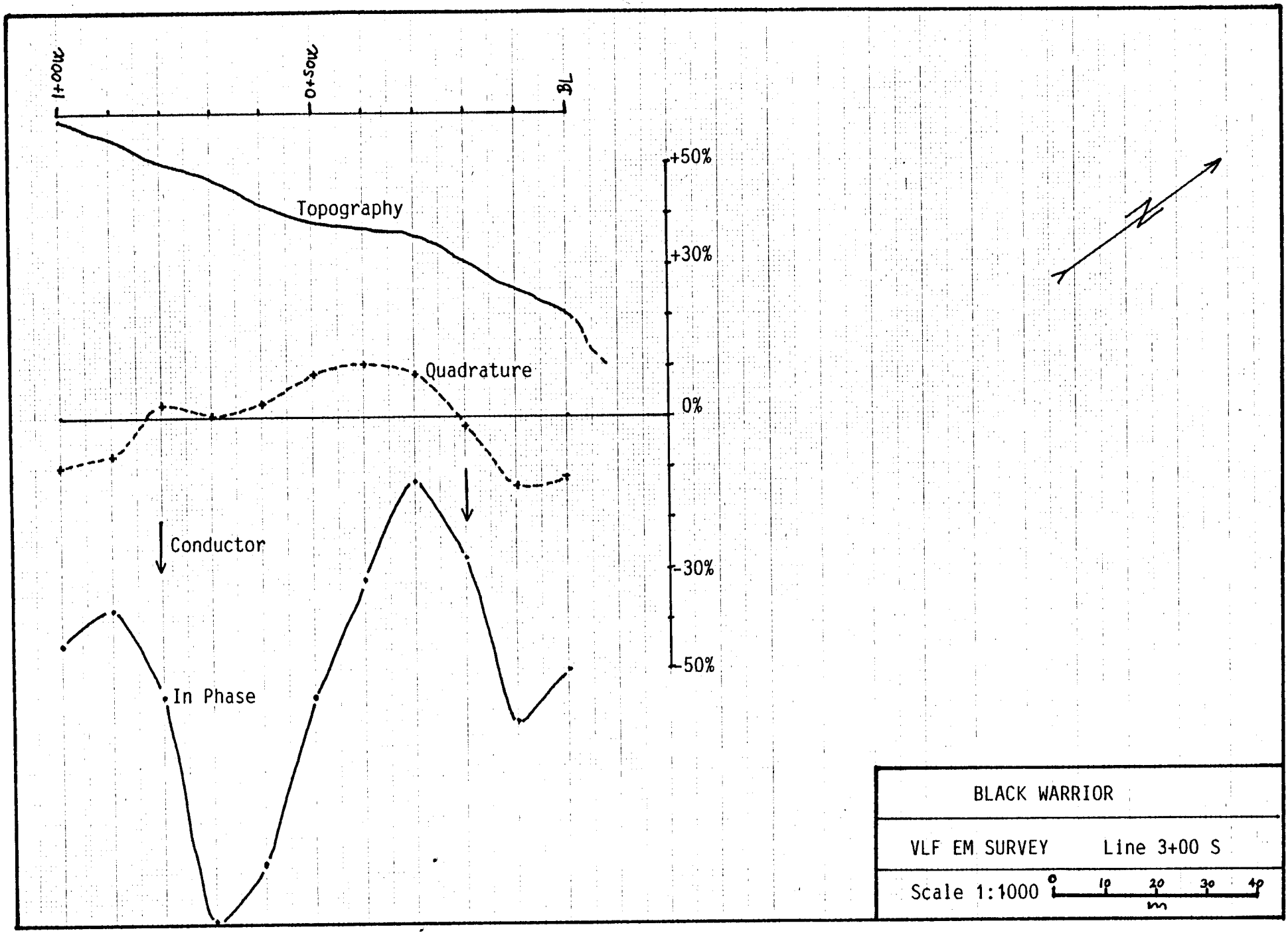


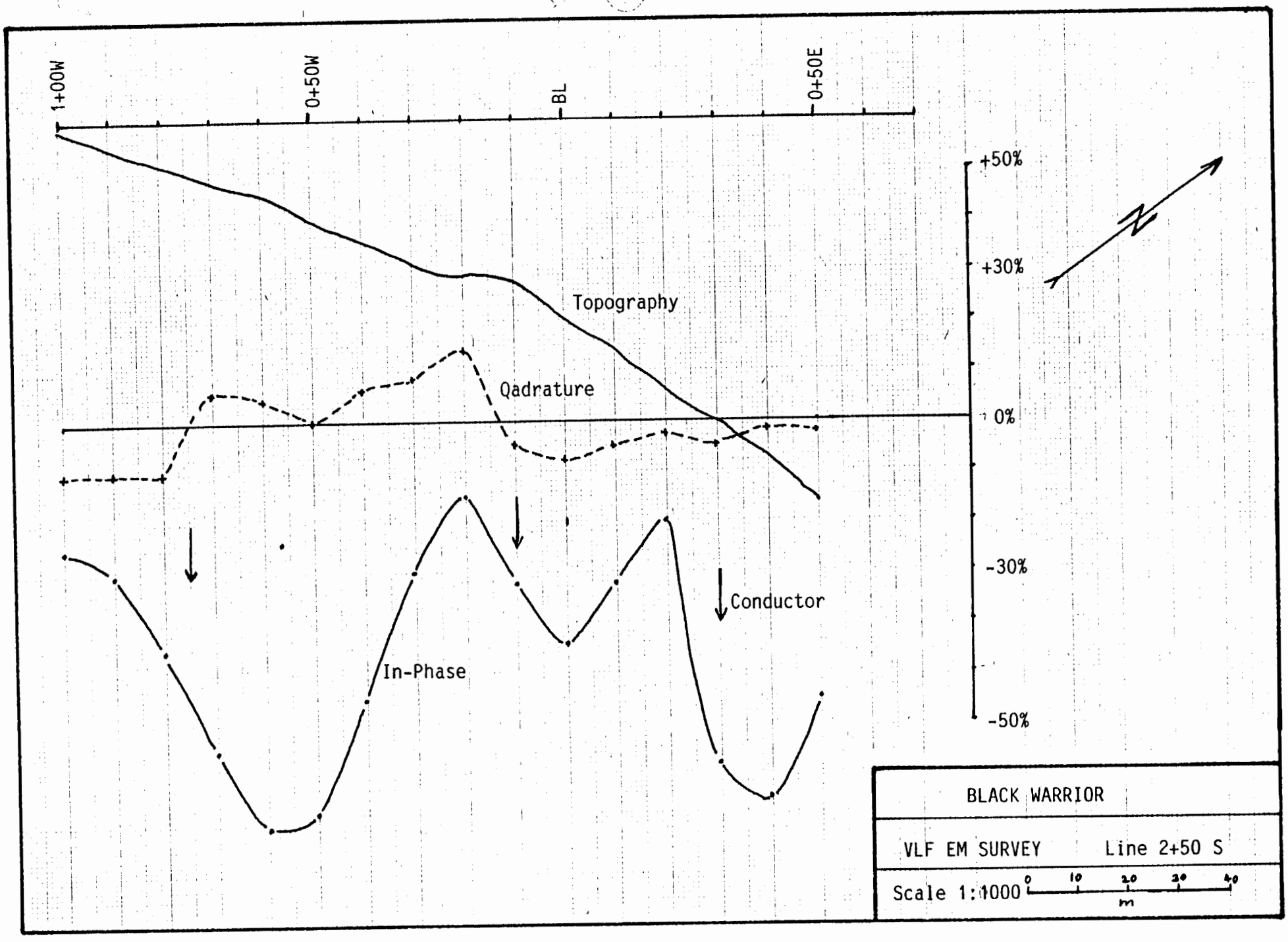
BLACK WARRIOR

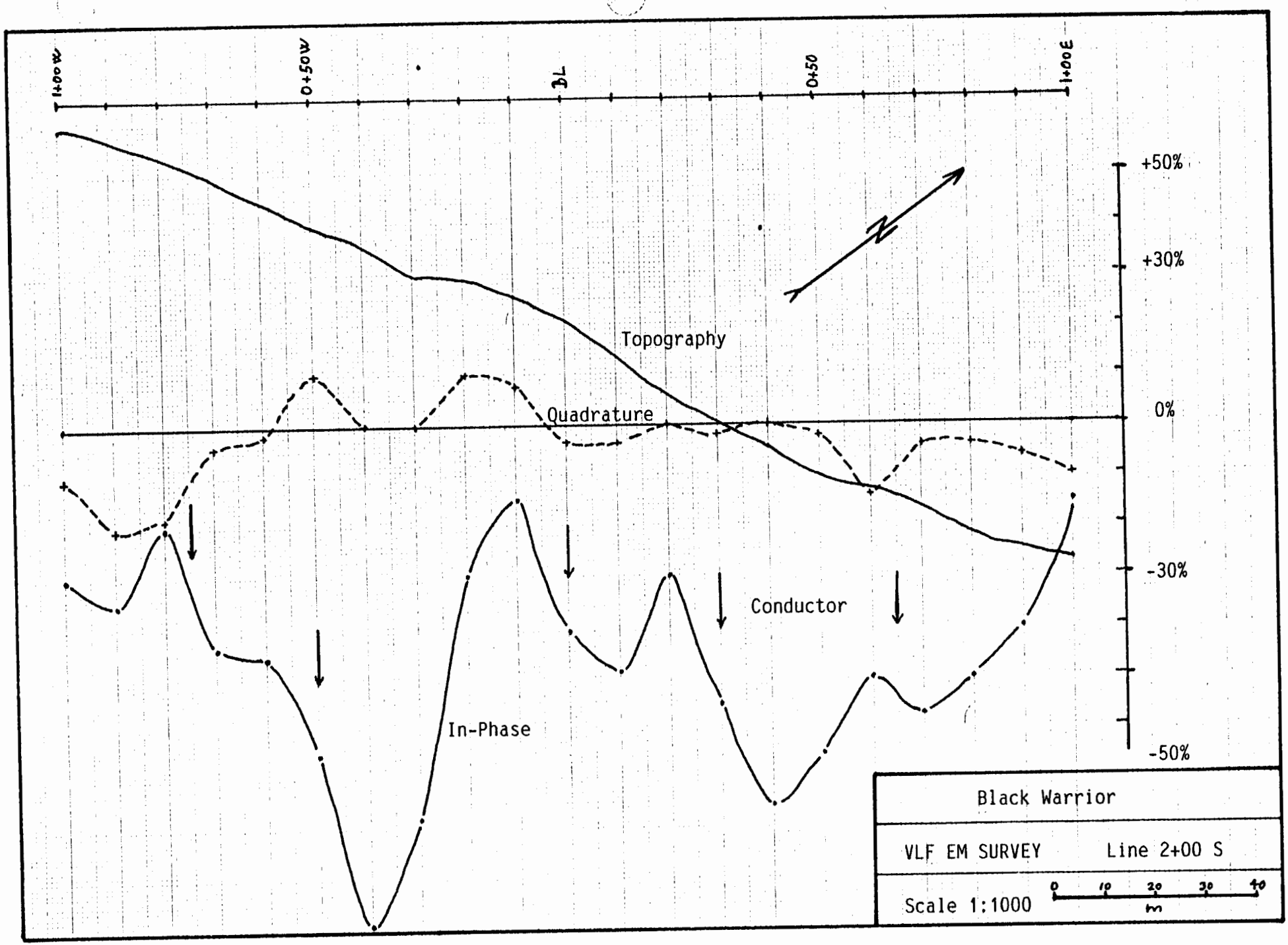
VLF EM SURVEY. Location of conductors

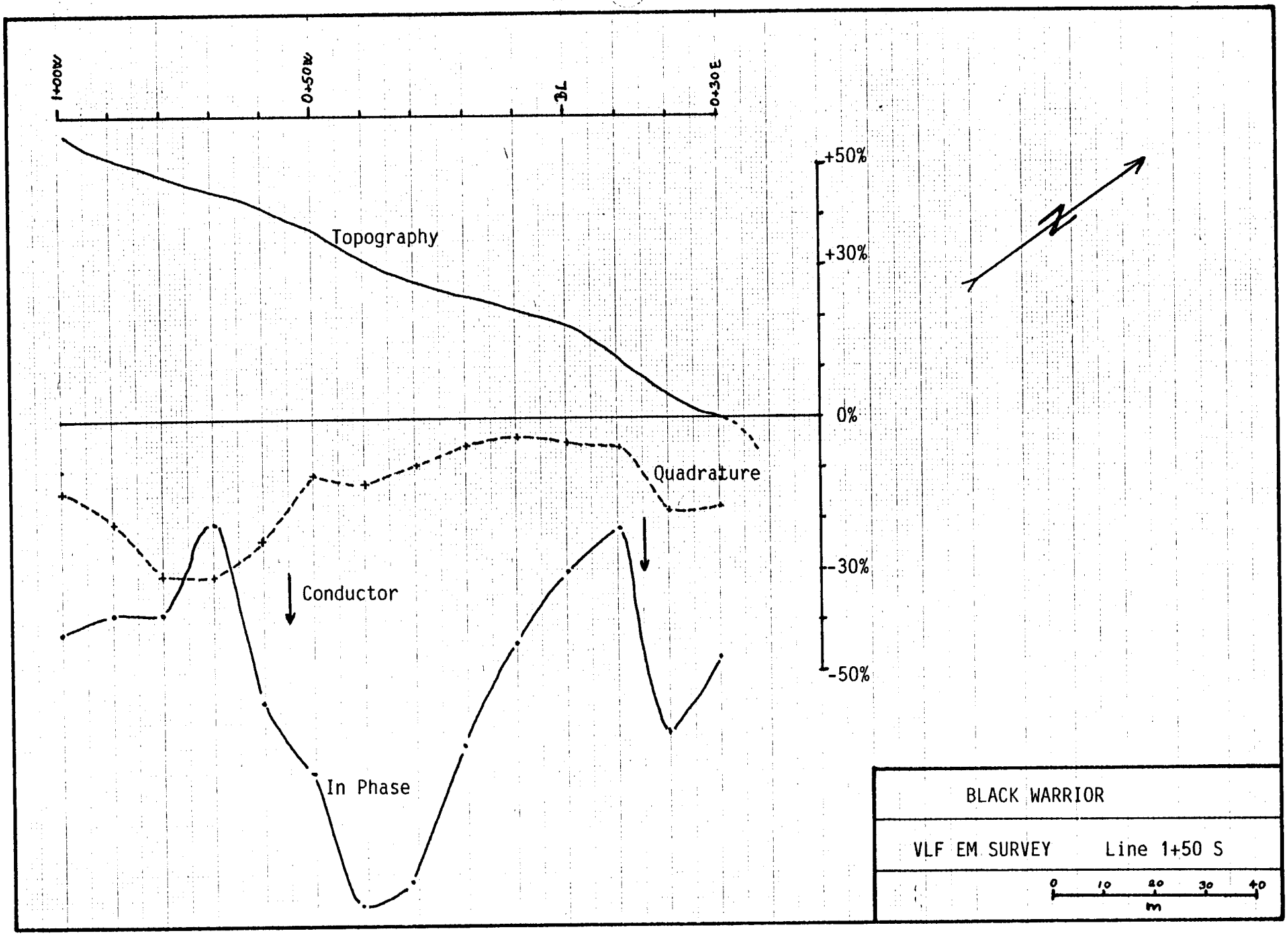
Scale 1:2000

0 20 40 60
m

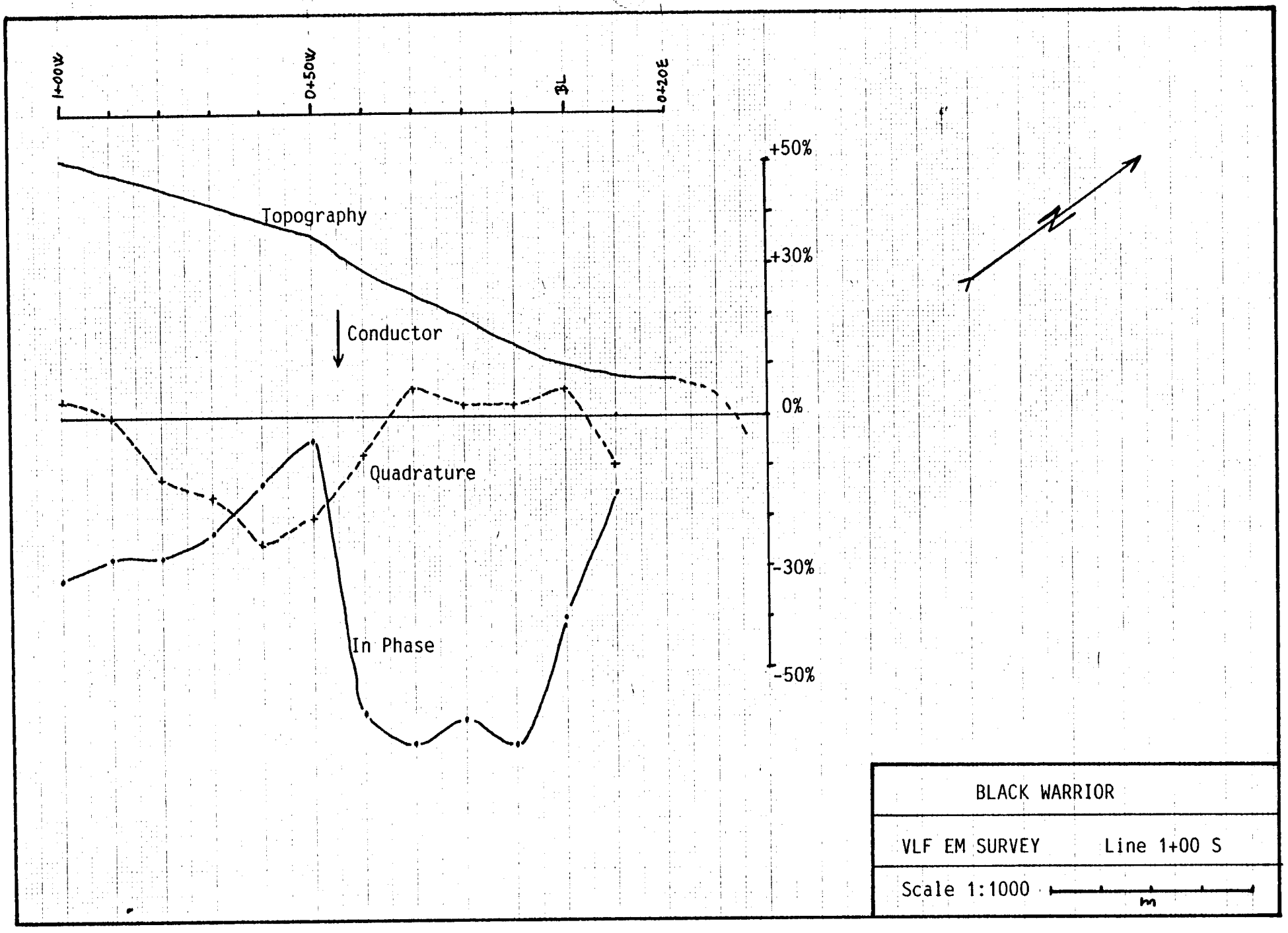

1+00W
0+50W
BL
Topography
Quadrature
Conductor
In Phase
+50%
+30%
0%
-30%
-50%
N
BLACK WARRIOR
VLF EM SURVEY
Line 3+00 S
Scale 1:1000
0
10
20
30
40
m

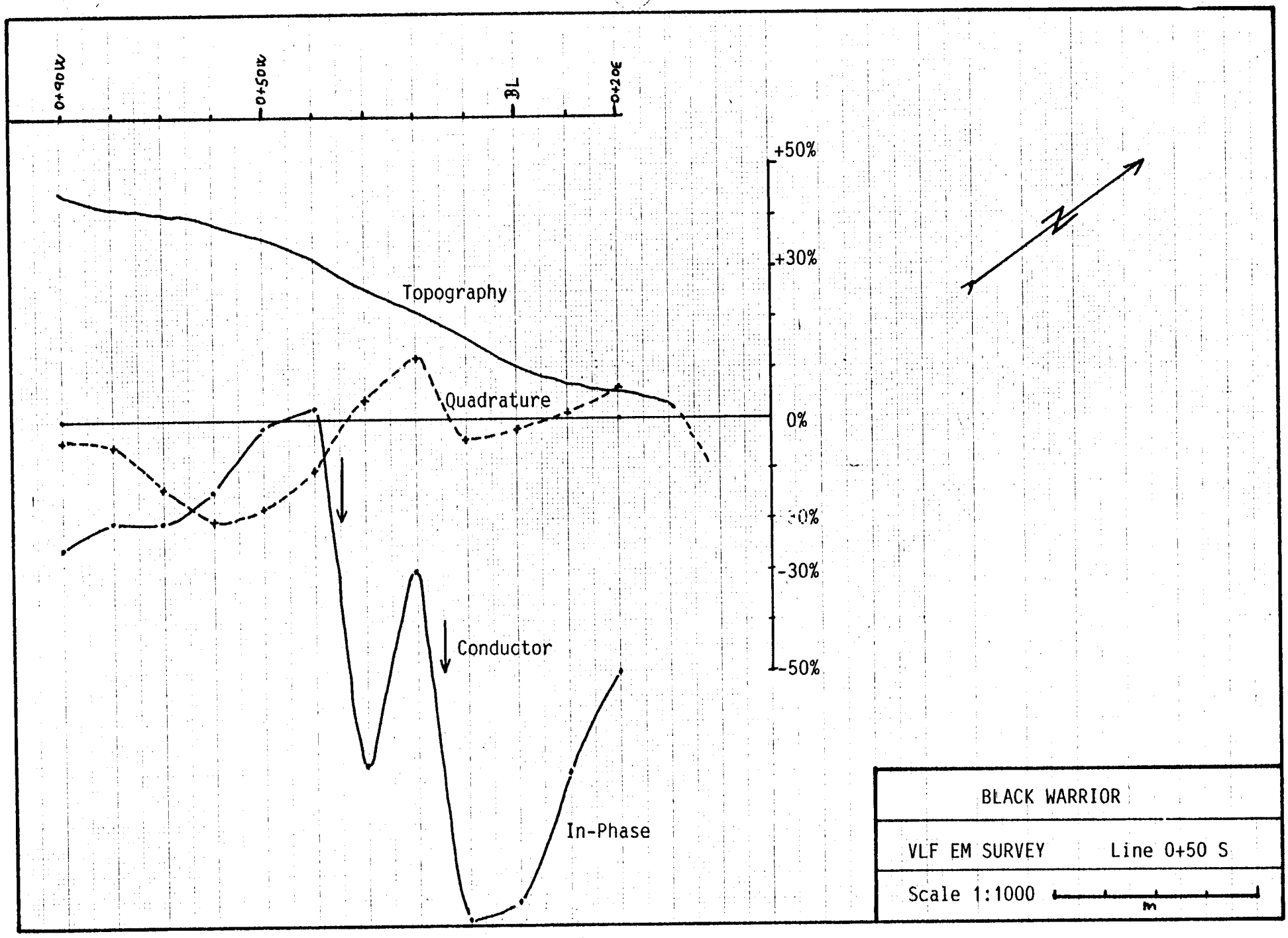

1+00W
0+50W
BL
0+50E
+50%
+30%
0%
-30%
-50%
Topography
Qadrature
In-Phase
Conductor
BLACK WARRIOR
VLF EM SURVEY
Line 2+50 S
Scale 1:1000
0
10
20
30
40
m


1+00W
0+50W
BL
0+50
1+00E
+50%
+30%
0%
-30%
-50%
Topography
Quadrature
In-Phase
Conductor
Black Warrior
VLF EM SURVEY
Line 2+00 S
Scale 1:1000
0
10
20
30
40
m

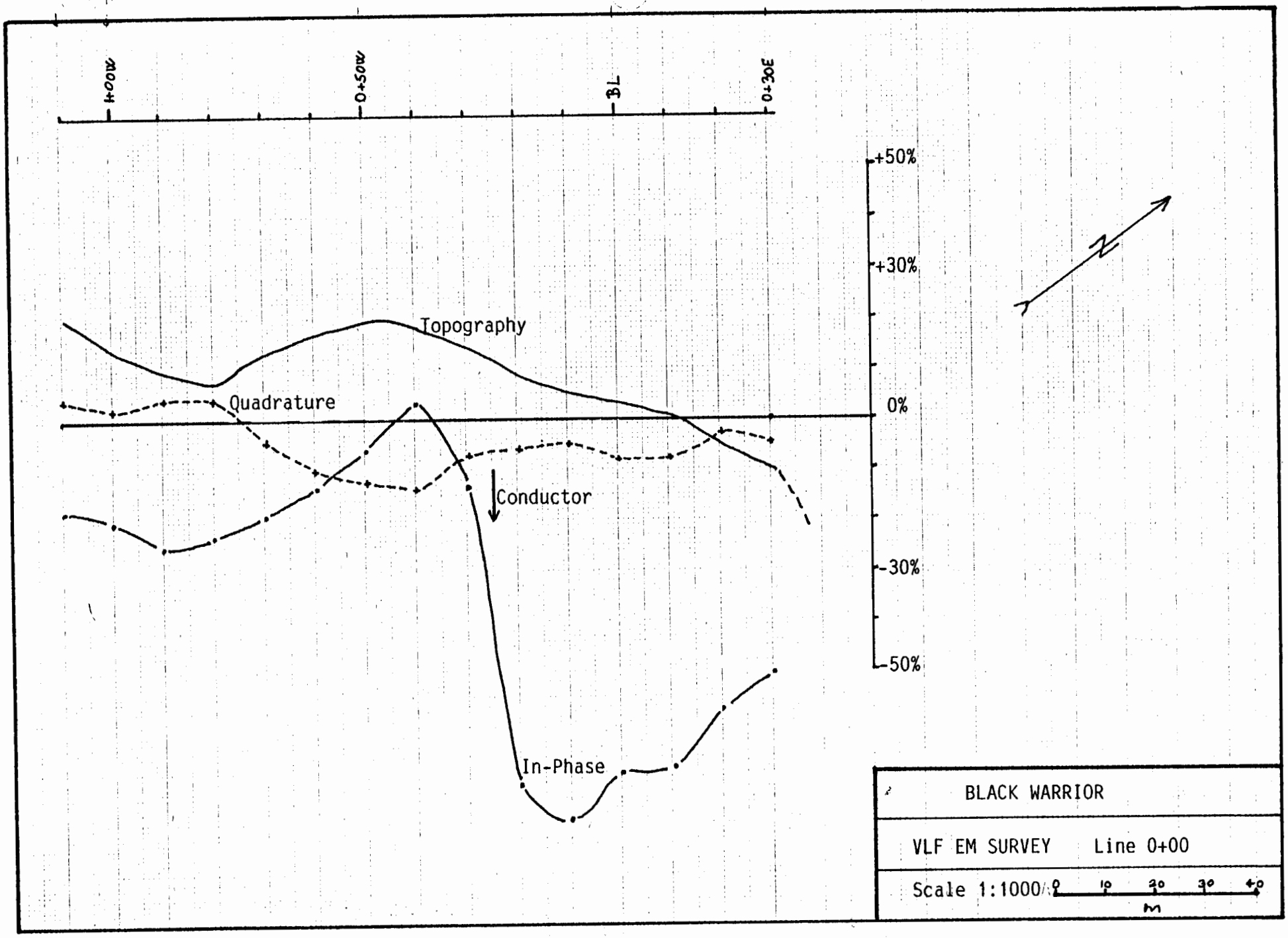

1+00W
0+50W
TL
0+30E
+50%
+30%
0%
-30%
-50%
Topography
Quadrature
Conductor
In Phase
BLACK WARRIOR
VLF EM SURVEY Line 1+50 S
0 10 20 30 40
m

L 1+00S


1+00W
0+50W
BL
0+20E
+50%
+30%
0%
-30%
-50%
Topography
Conductor
Quadrature
In Phase
BLACK WARRIOR
VLF EM SURVEY
Line 1+00 S
Scale 1:1000
m


0+90W
0+50W
BL
0+20E
+50%
+30%
Topography
Quadrature
0%
-30%
-50%
Conductor
In-Phase
BLACK WARRIOR
VLF EM SURVEY
Line 0+50 S
Scale 1:1000
m

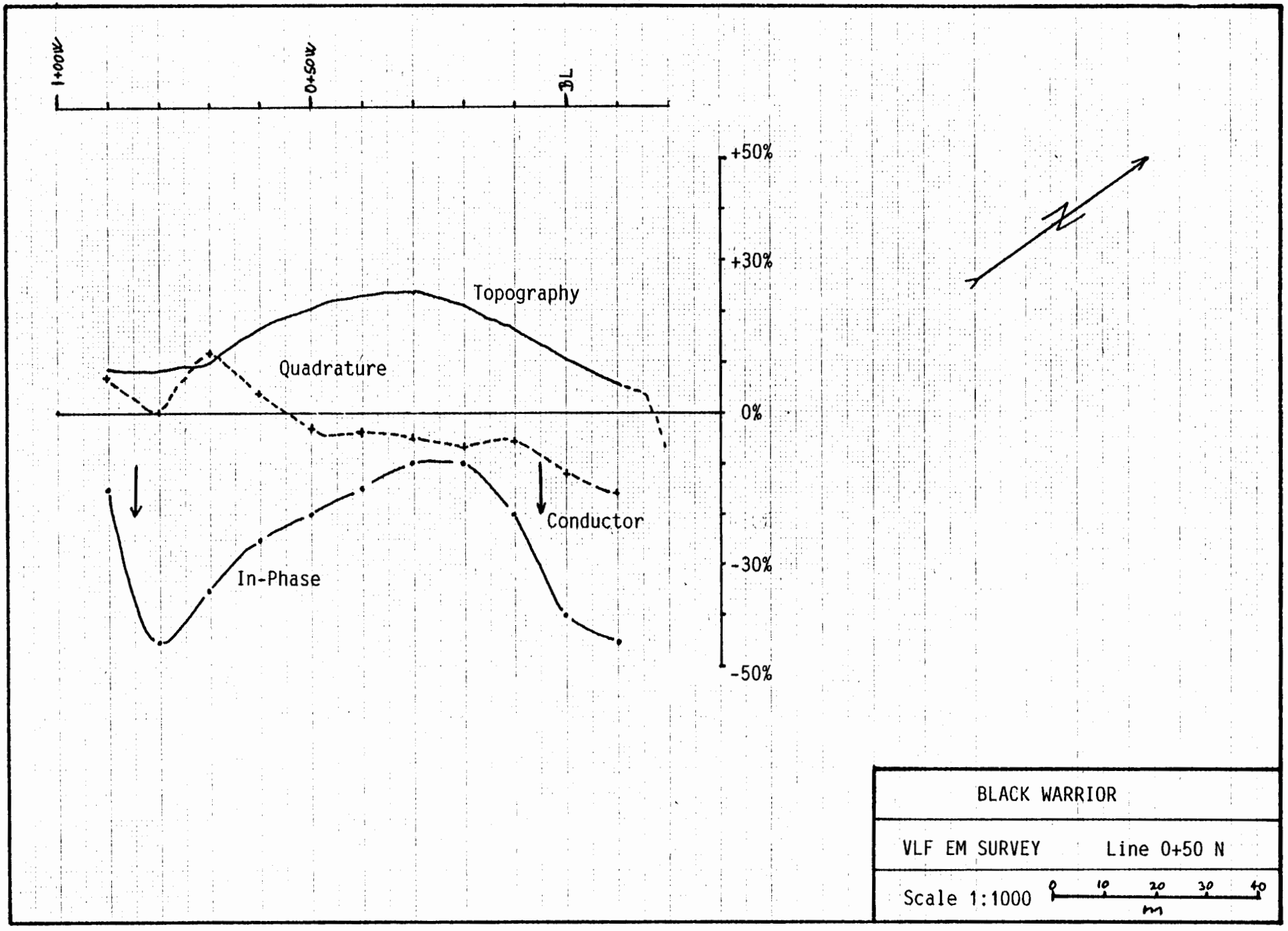
L 0+00



BLACK WARRIOR

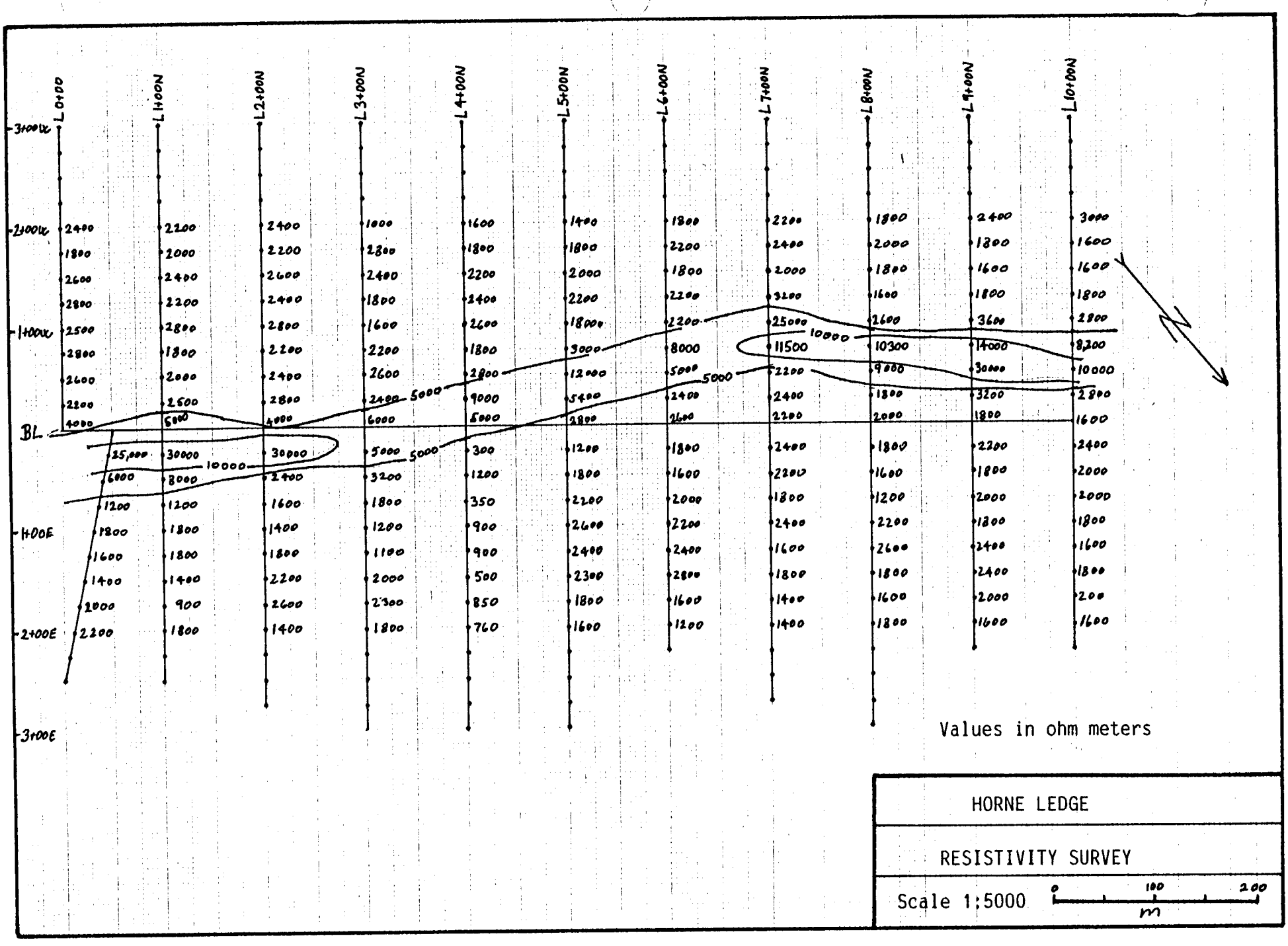
VLF EM SURVEY Line 0+00

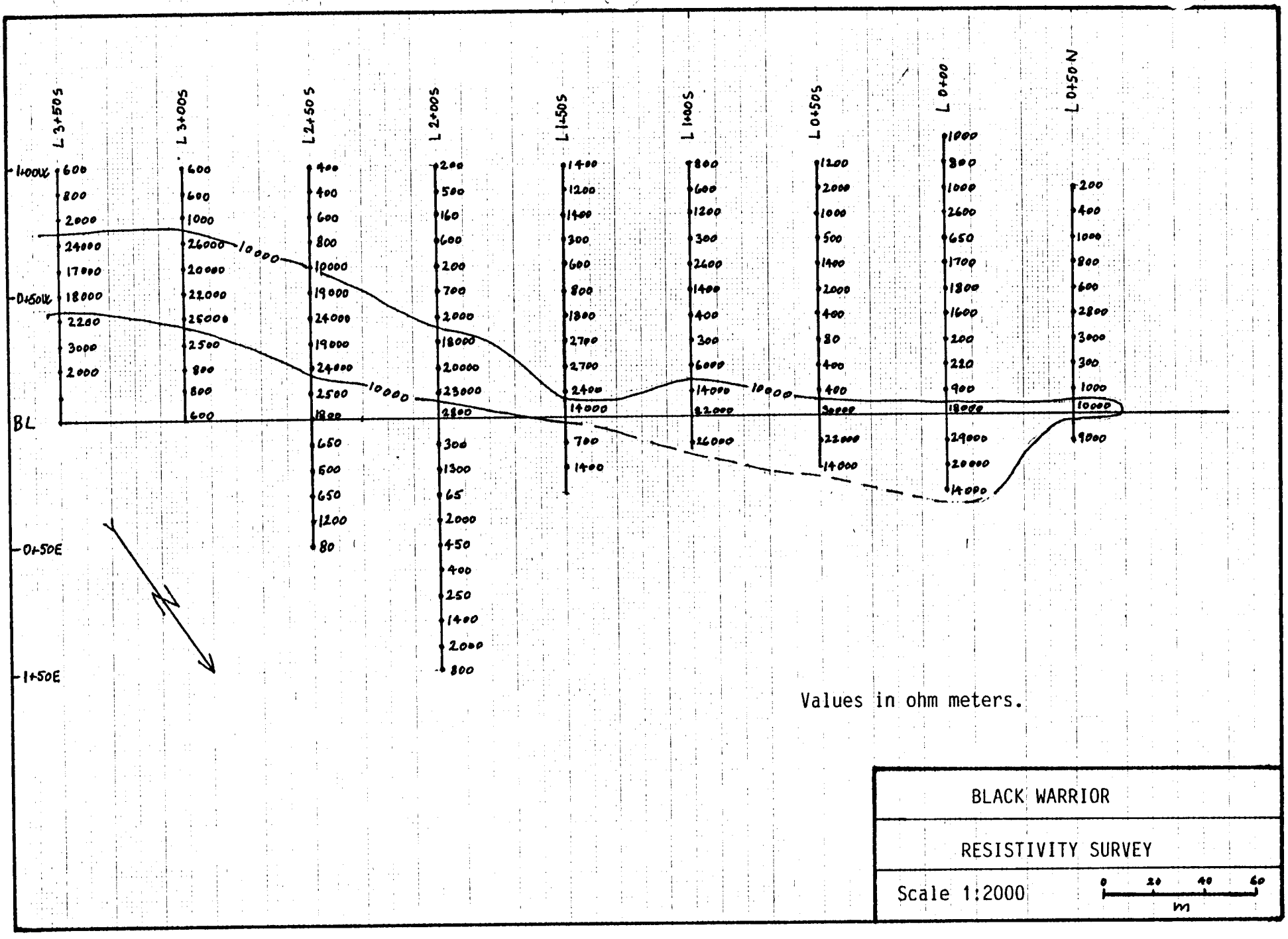
Scale 1:1000 0 10 20 30 40 m


1+00W
0+50W
TG
+50%
+30%
0%
-30%
-50%
Topography
Quadrature
In-Phase
Conductor
N
BLACK WARRIOR
VLF EM SURVEY
Line 0+50 N
Scale 1:1000
0
10
20
30
40
m

APPENDIX C

RESISTIVITY SURVEY RESULTS


L 0+00
L1+00N
L2+00N
L3+00N
L4+00N
L5+00N
L6+00N
L7+00N
L8+00N
L9+00N
L10+00N
3+00W
2+00W
1+00W
BL.
1+00E
2+00E
3+00E
N
Values in ohm meters
HORNE LEDGE
RESISTIVITY SURVEY
Scale 1:5000
0
100
200
m



Values in ohm meters.

BLACK WARRIOR

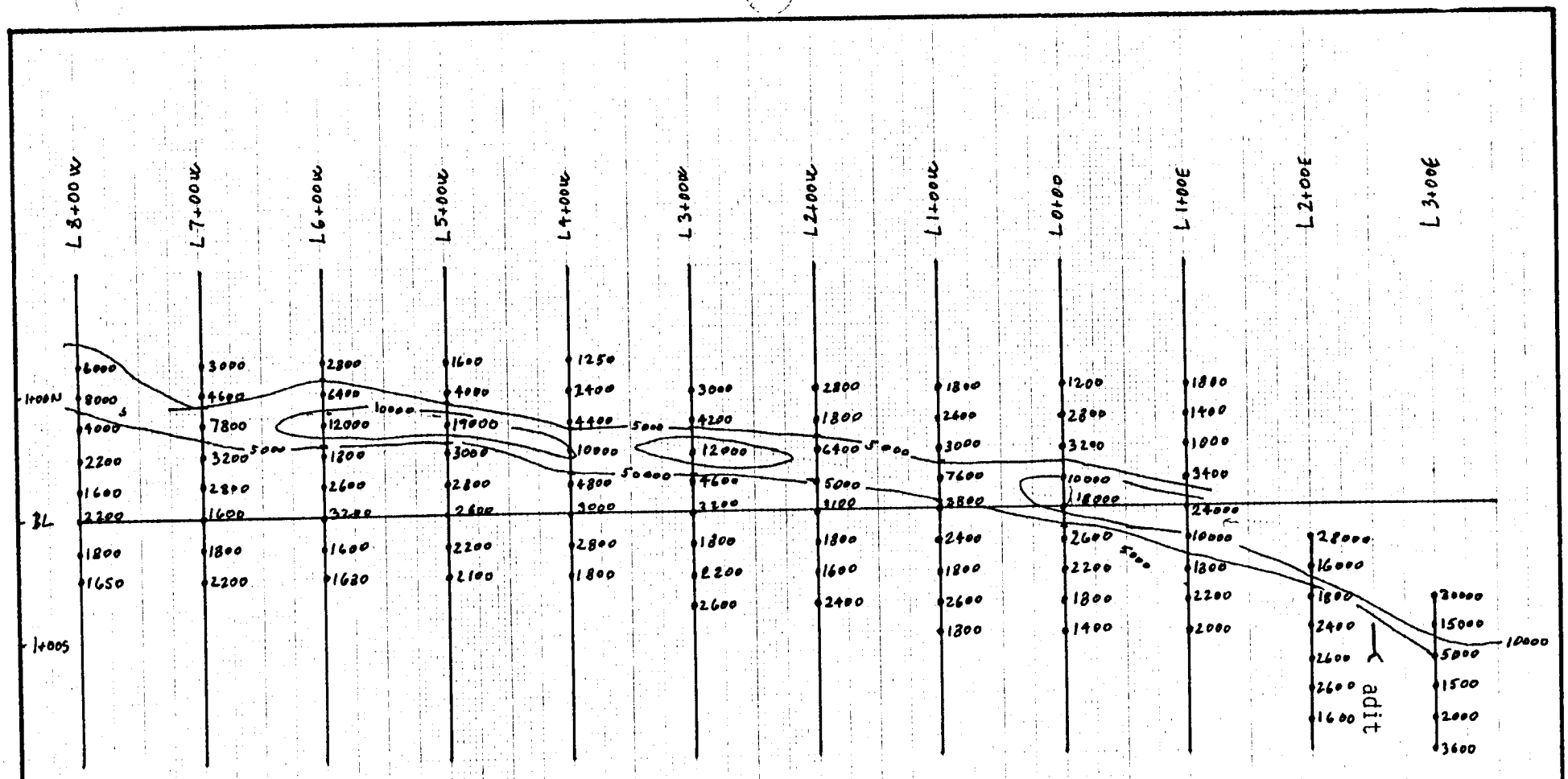
RESISTIVITY SURVEY

Scale 1:2000

0 20 40 60

m

1:5,000



ELLSMERE

RESISTIVITY SURVEY

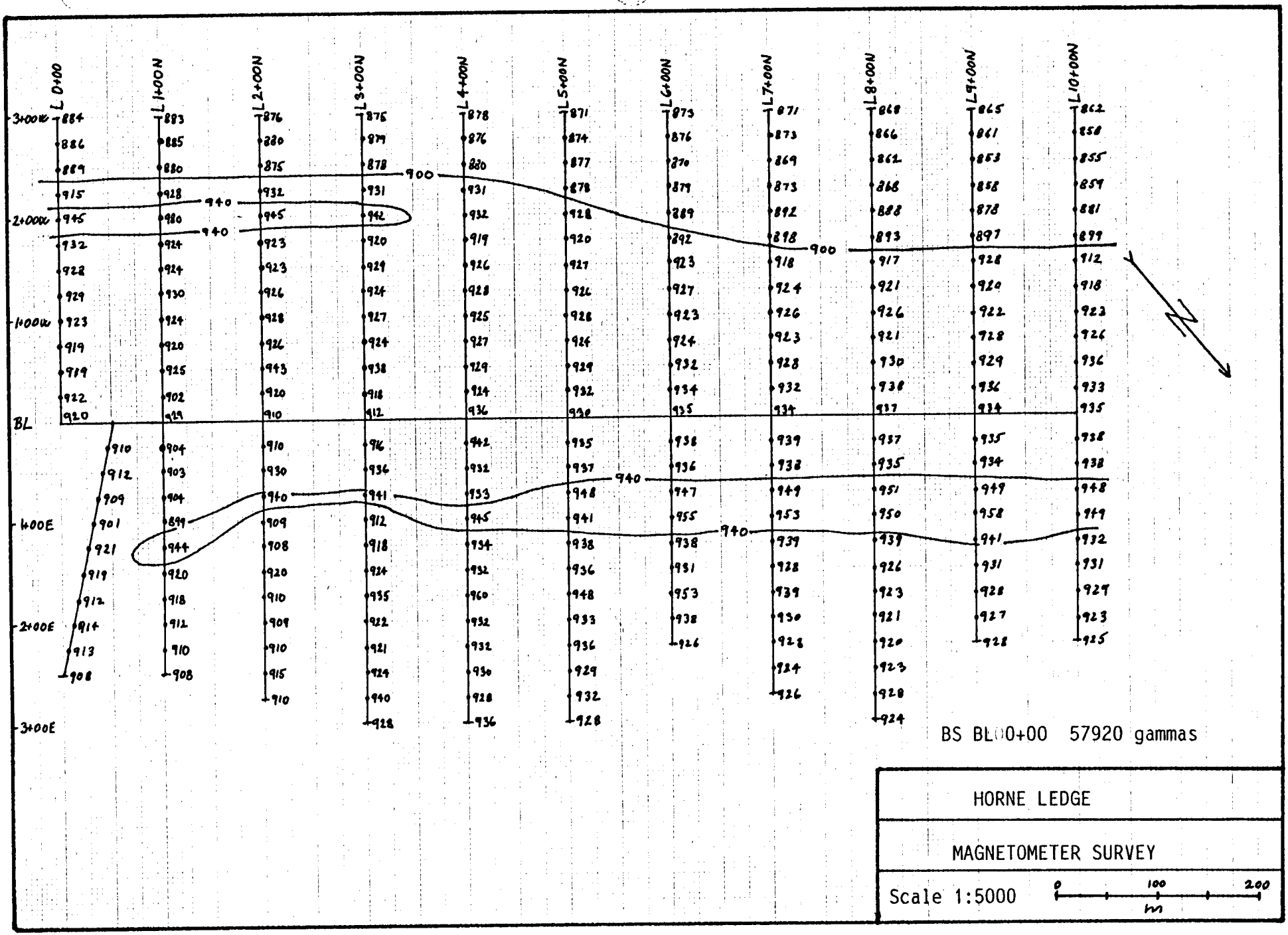
Scale 1:5000

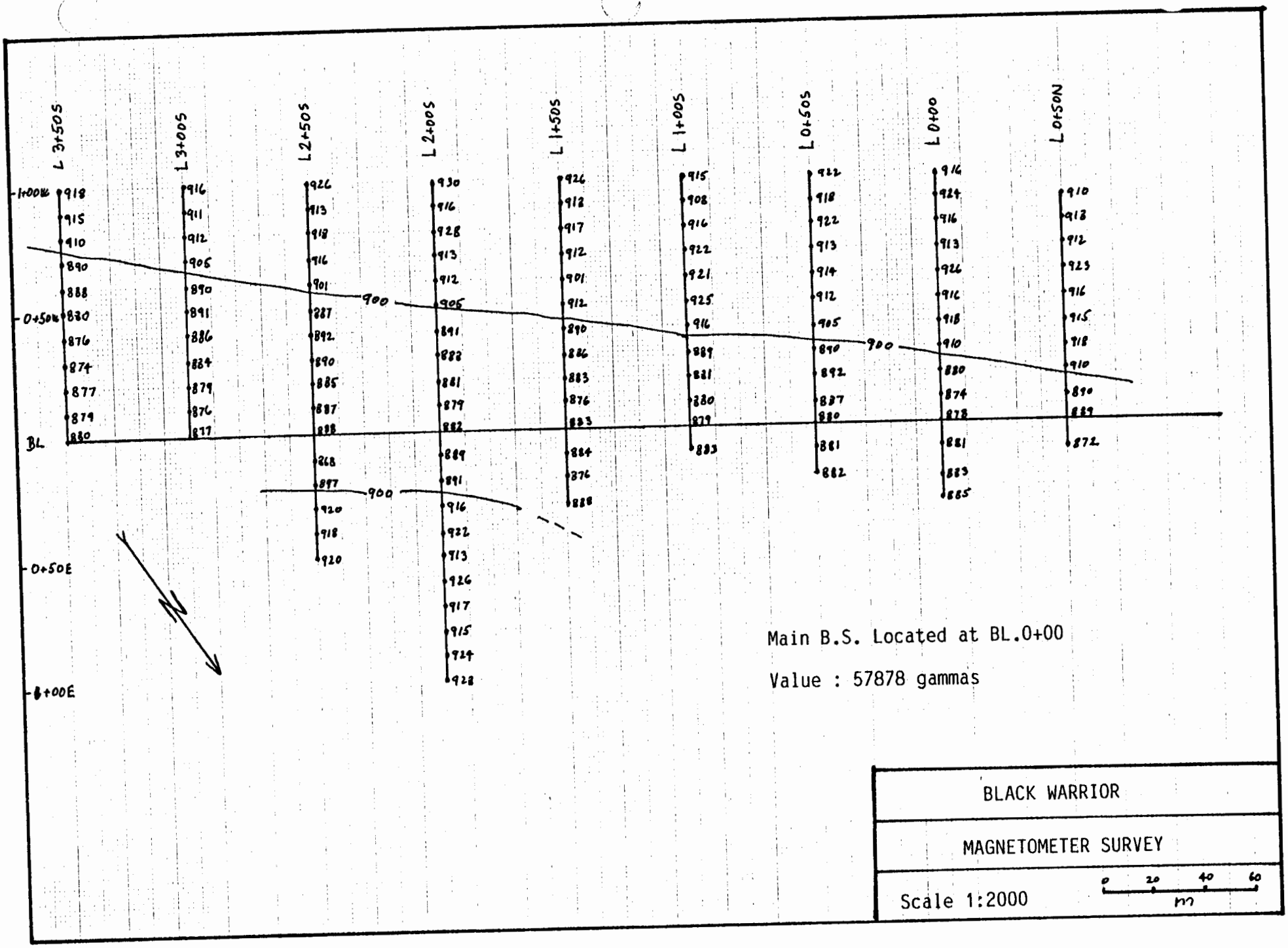
0 50 100 150 200

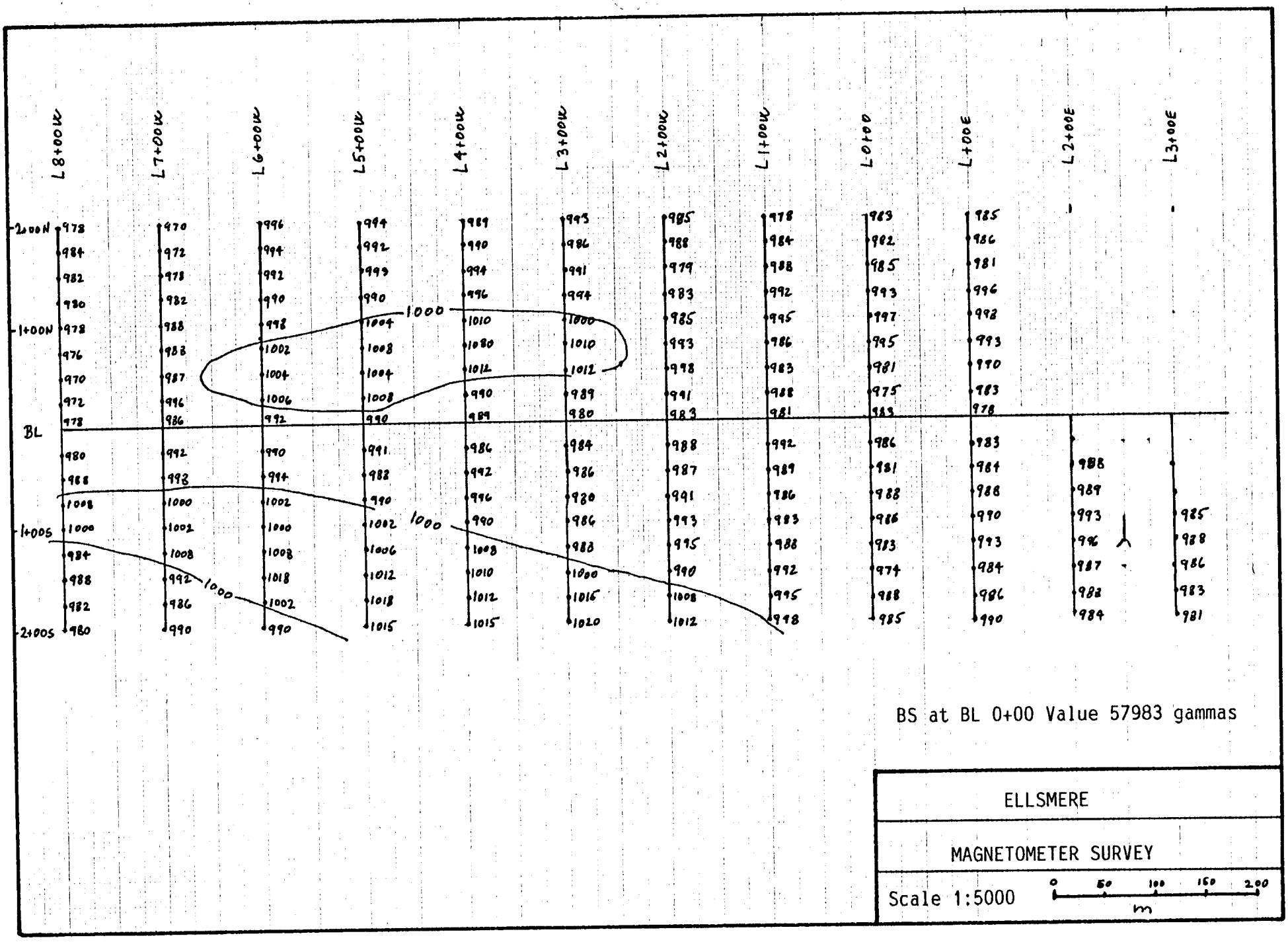
M

APPENDIX D

MAGNETOMETER SURVEY RESULTS

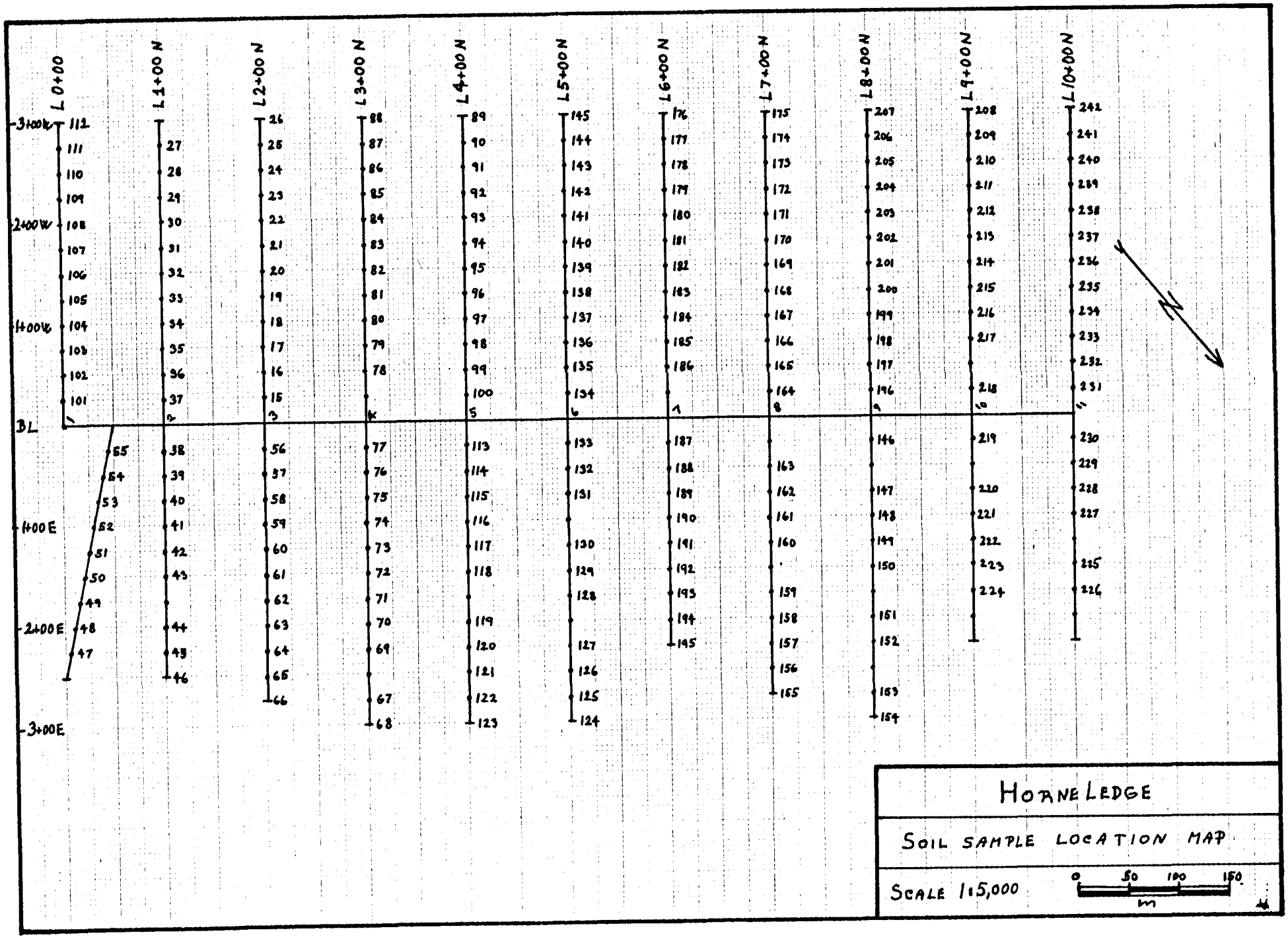

L 0+00
L 1+00N
L 2+00N
L 3+00N
L 4+00N
L 5+00N
L 6+00N
L 7+00N
L 8+00N
L 9+00N
L 10+00N
3+00W
2+00W
1+00W
BL
1+00E
2+00E
3+00E
900
940
940
940
940
BS BL 0+00 57920 gammas
HORNE LEDGE
MAGNETOMETER SURVEY
Scale 1:5000
0
100
200
m

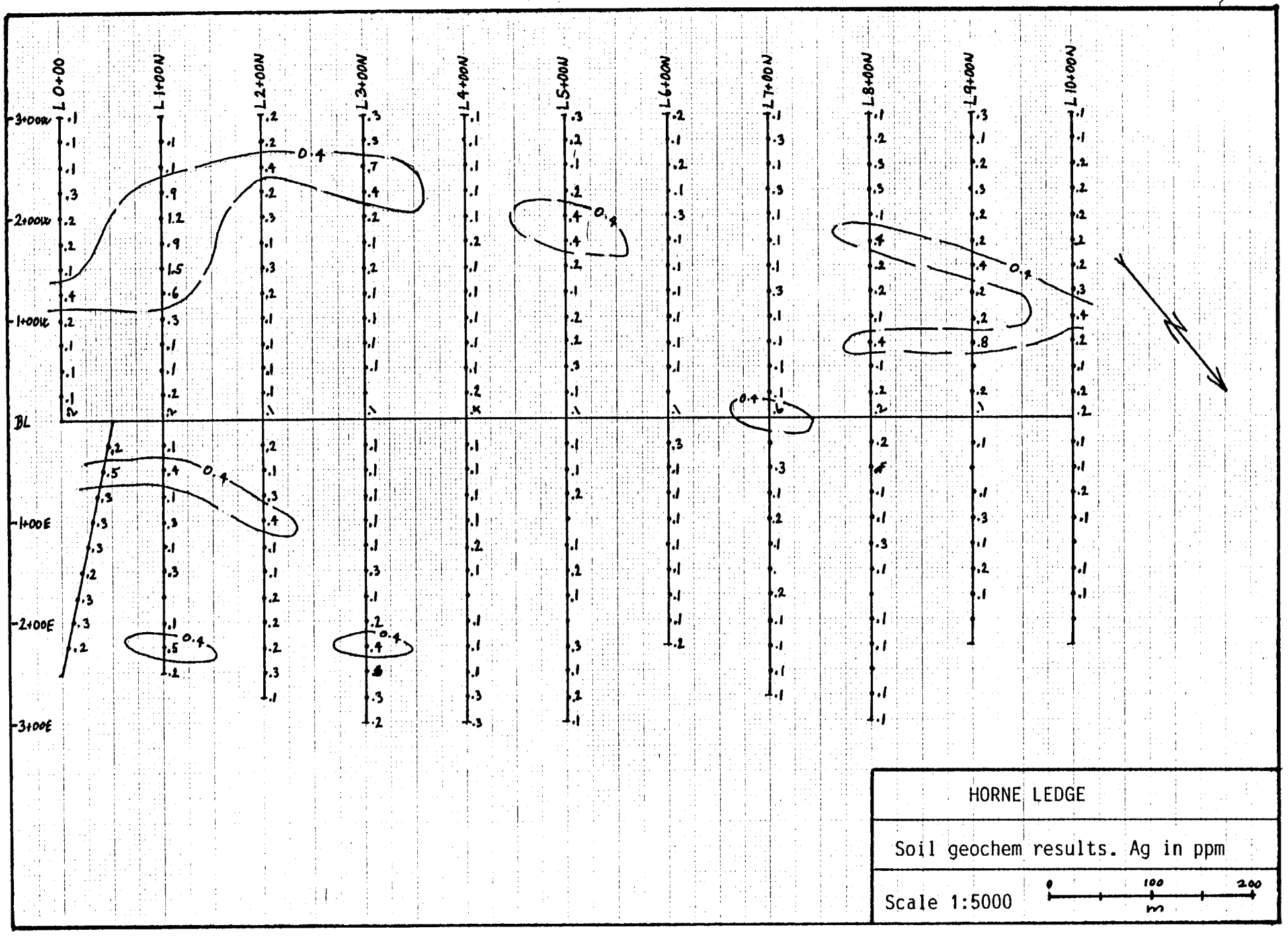

L 3+50S
L 3+00S
L 2+50S
L 2+00S
L 1+50S
L 1+00S
L 0+50S
L 0+00
L 0+50N
1+00N
0+50N
BL
0+50E
1+00E
900
900
900
Main B.S. Located at BL.0+00
Value : 57878 gammas
BLACK WARRIOR
MAGNETOMETER SURVEY
Scale 1:2000
0 20 40 60
m


L8+00W
L7+00W
L6+00W
L5+00W
L4+00W
L3+00W
L2+00W
L1+00W
L0+00
L1+00E
L2+00E
L3+00E
2+00N
1+00N
BL
1+00S
2+00S
1000
1000
1000
BS at BL 0+00 Value 57983 gammas
ELLSMERE
MAGNETOMETER SURVEY
Scale 1:5000
0 50 100 150 200
m

APPENDIX E

GEOCHEMICAL SURVEY RESULTS


L 0+00
L 1+00 N
L 2+00 N
L 3+00 N
L 4+00 N
L 5+00 N
L 6+00 N
L 7+00 N
L 8+00N
L 9+00N
L 10+00N
3+00W
2+00W
1+00W
BL
1+00E
2+00E
3+00E
HORNE LEDGE
SOIL SAMPLE LOCATION MAP
SCALE 1:5,000
0
50
100
150
m

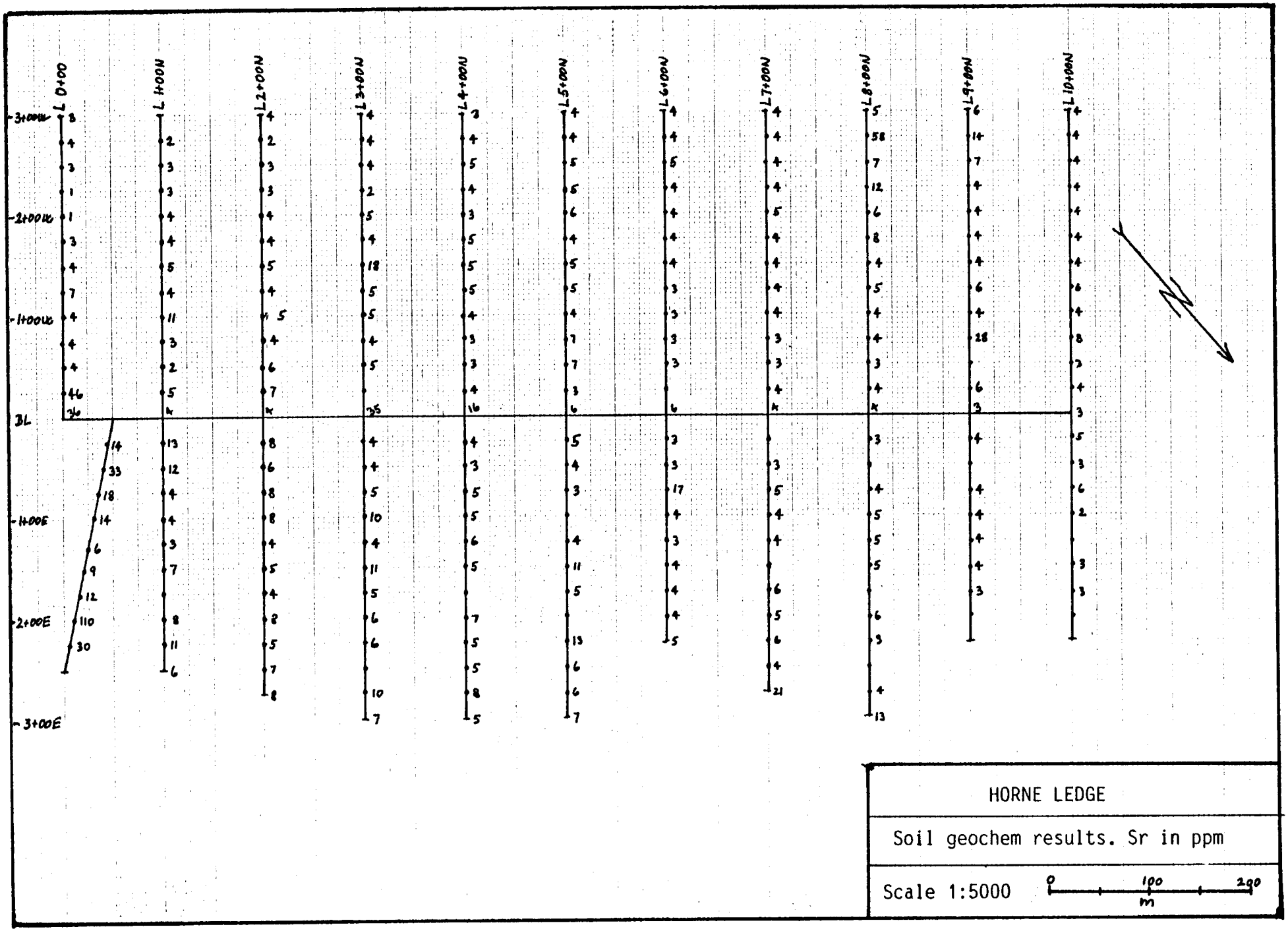


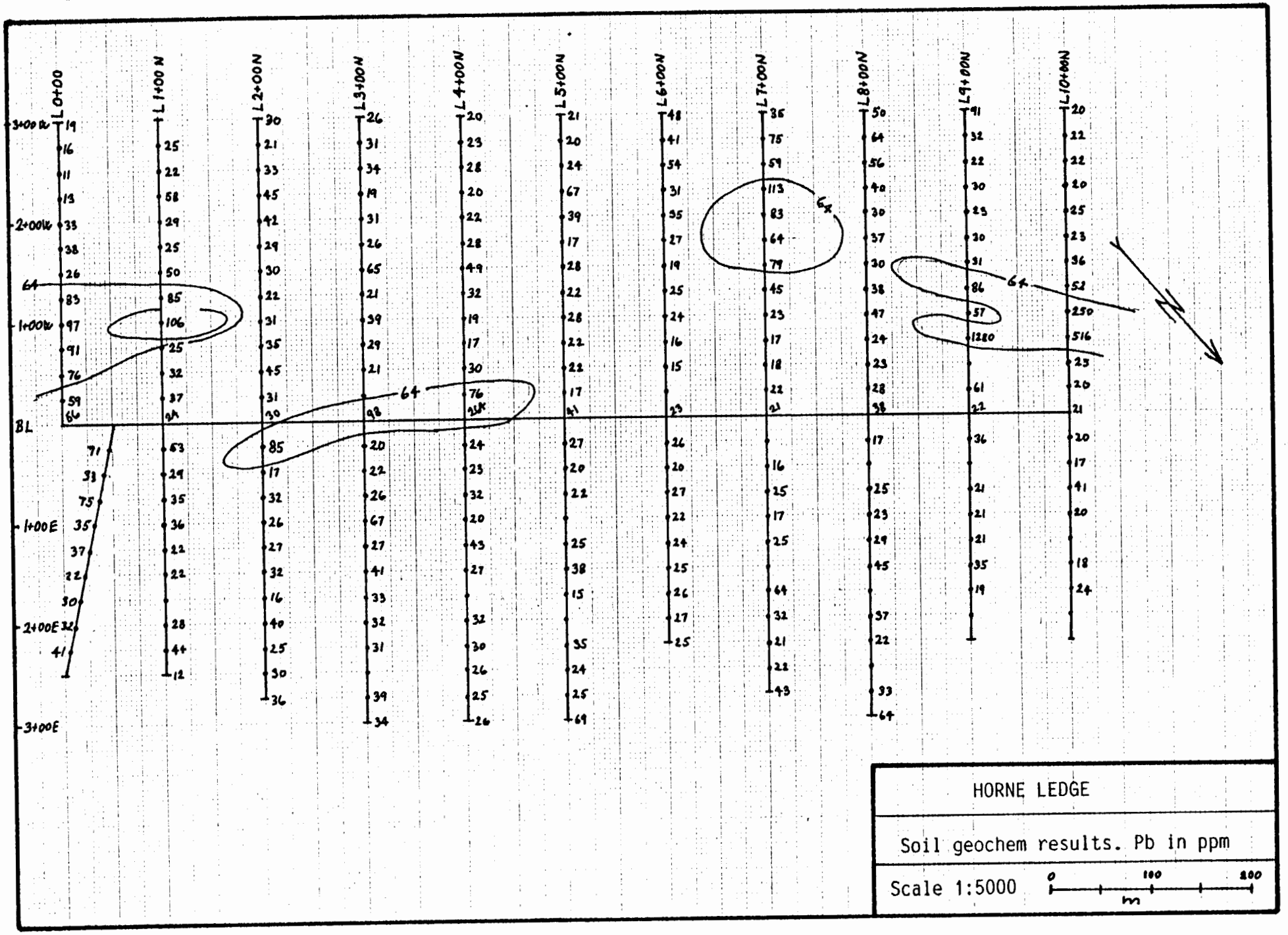
HORNE LEDGE

Soil geochem results. Ag in ppm

Scale 1:5000

0 100 200
m

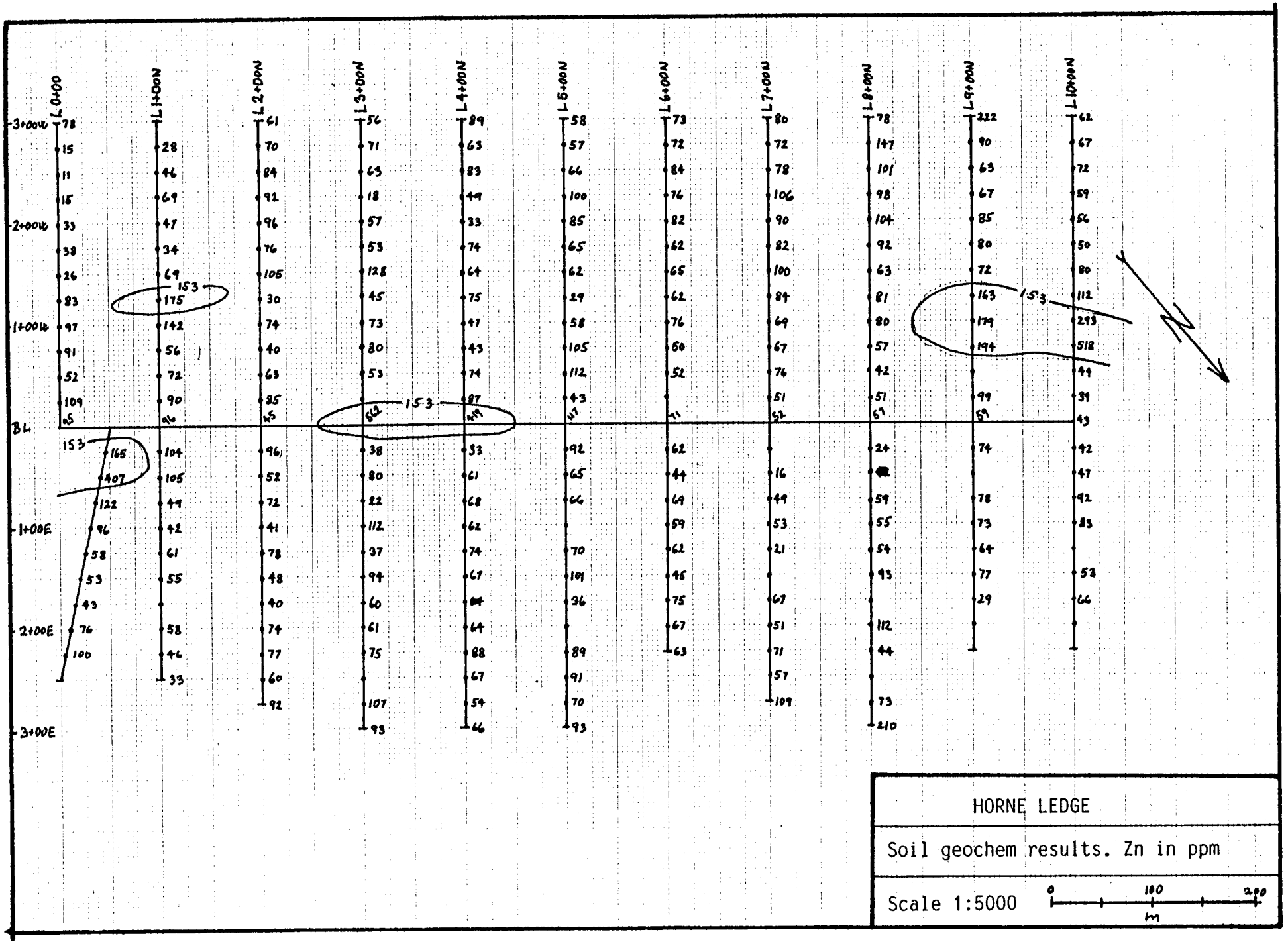

L 0+00
L 1+00N
L 2+00N
L 3+00N
L 4+00N
L 5+00N
L 6+00N
L 7+00N
L 8+00N
L 9+00N
L 10+00N
3+00W
2+00W
1+00W
BL
1+00E
2+00E
3+00E
HORNE LEDGE
Soil geochem results. Sr in ppm
Scale 1:5000
0
100
200
m



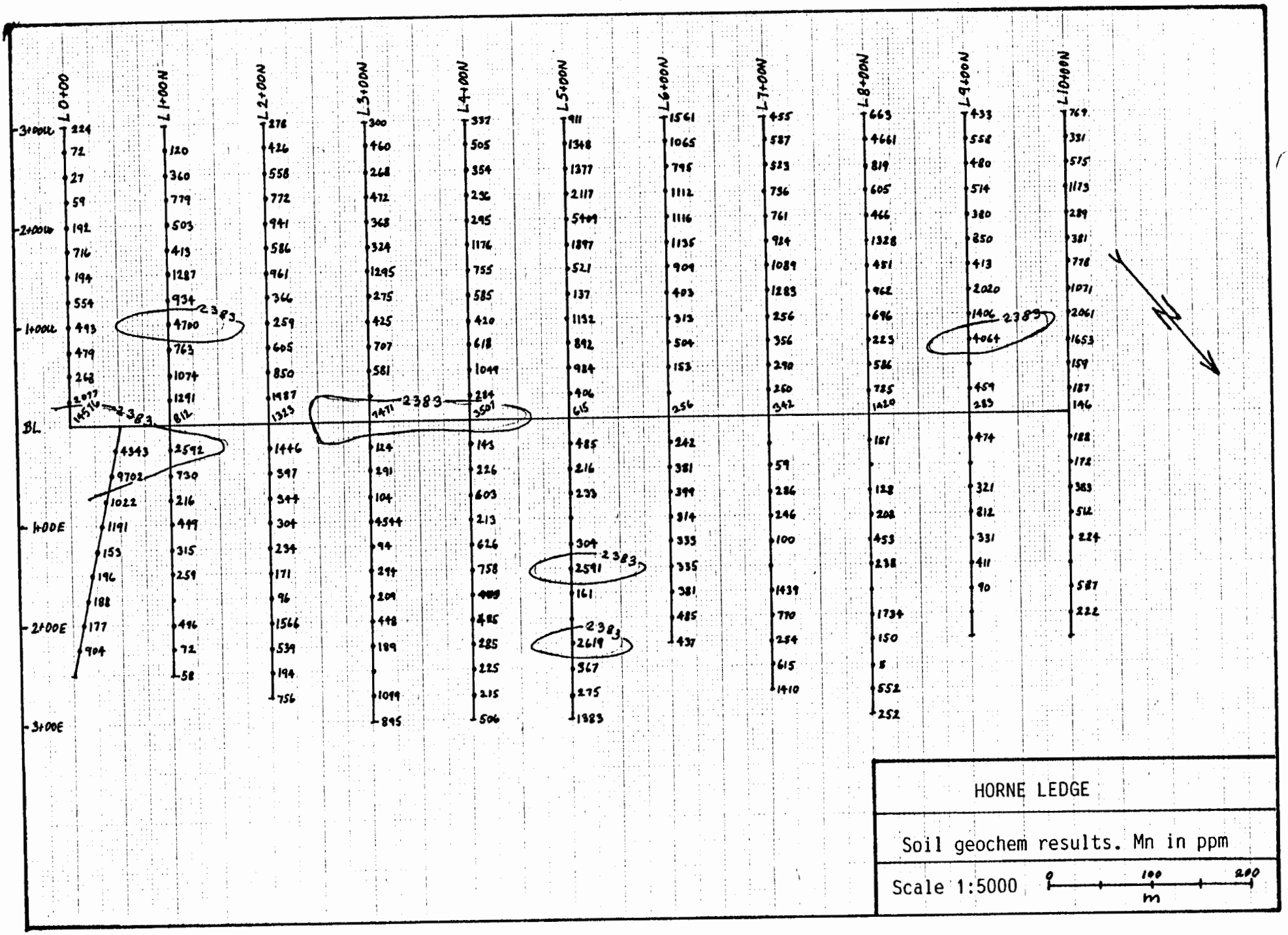
HORNE LEDGE

Soil geochem results. Pb in ppm

Scale 1:5000 0 100 200 m


L 0+00
L 1+00N
L 2+00N
L 3+00N
L 4+00N
L 5+00N
L 6+00N
L 7+00N
L 8+00N
L 9+00N
L 10+00N
3+00W
2+00W
1+00W
BL
1+00E
2+00E
3+00E
153
175
153
153
HORNE LEDGE
Soil geochem results. Zn in ppm
Scale 1:5000
0
100
200
m

Mn


L0+00
L1+00N
L2+00N
L3+00N
L4+00N
L5+00N
L6+00N
L7+00N
L8+00N
L9+00N
L10+00N
3+00N
2+00N
1+00N
BL
1+00E
2+00E
3+00E
2383
HORNE LEDGE
Soil geochem results. Mn in ppm
Scale 1:5000
0
100
200
m

ELLSMERE
(2601)

243 dw 1 of 397918 M
244
245
246
247
248
249
250
251
252
3+00S → 253
254
255
256
257
258
259
260
261
262
6+00S → 263
264
265
266
268
269
267
270
271
272
273
274
276
275
277
278
279
280
9+00S → 281
282
284
283
285
286
287
288
289
290
293
292
295
294
297
296
300
299
12+00S → 302
301
304
303
306
305
308
307
310
309
312
311
314
313
316
315
318
317
320
319
15+00S → 322
321
324
323
326
325
328
327
330
329
332
333
334
17+10S

N

GALENA CREEK

SOIL SAMPLE LOCATIONS

SCALE 1:5000

0 50 100 150
m

ELLSMERE
(2601)

1 OF 397918 M

3+00S

6+00S

9+00S

12+00S

15+00S

17+10S

N

GALENA CREEK

SOIL GEOCHEM RESULTS. Ag IN PPM

SCALE 1:5000

0 50 100 150
m

ELLSMERE
(2601)

Lot 1 of 397918 M

64 32 241 25 35 24 19 27 32 40 27 20 19 19 23 9 47 37 49 99 33 37 105 85 62 42 56 48 43 59 31 48 40 59 28 45 49 487 80 269 57 116 42 48 57 69 73 42 32 43 59 45 40 39 55 63 53 48 61 78 105 41 40 64 55 44 22 47 30 51 43 47 84 185 52 60 47 48 28 53 59 47 57 149 58 77 98 44 50 57

3+00S
6+00S
9+00S
12+00S
15+00S
17+10S

N

GALENA CREEK

SOIL GEOCHEM RESULTS. Pb IN ppm

SCALE 1:5000

0 50 100 150
m

ELLSMERE
(2601)

153 76 398 82 119 80 153 110 207 123 139 132 129 126 118 123 91 148 134 128 120 128 158 144 134 104 121 123 106 121 96 116 124 127 99 124 134 239 153 161 328 130 171 102 153 127 132 132 166 153 112 133 107 122 126 123 109 147 142 125 122 142 165 242 153 111 130 142 135 122 124 122 119 123 128 153 128 131 375 132 144 147 142 110 138 141 137 142 149 147 142 98 127 208 153 154

1 of 397918 M

3+00S
6+00S
9+00S
12+00S
15+00S
17+10S

N

GALENA CREEK

SOIL GEOCHEM RESULTS. Zn IN ppm

SCALE 1:5000

0 50 100 150
m

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: SOIL

DATE RECEIVED: OCT 18 1988 DATE REPORT MAILED: Oct 21/88 SIGNED BY. C. Leong ..D.TOYE, C.LEONG, B.CHAN, J.WANG; CERTIFIED B.C. ASSAYERS

GOLDEN RANGE RESOURCES File # 88-5278 Page 1

HOMNE LEDGE

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM
S-1	1	90	56	95	.2	21	13	14546	17.59	18	5	ND	3	36	1	2	2	9	.24	.089	28	8	.12	95	.01	2	1.74	.01	.02	1
S-2	1	26	24	96	.2	34	14	812	7.15	15	5	ND	9	4	1	2	2	19	.02	.068	26	27	.60	31	.01	2	2.02	.01	.03	3
S-3	1	23	30	45	.1	11	8	1323	3.97	10	5	ND	1	4	1	2	2	22	.01	.076	16	12	.18	18	.03	2	1.46	.01	.03	3
S-4	1	27	98	562	.1	23	10	7471	5.86	22	5	ND	1	35	1	2	2	22	.84	.196	22	14	.27	125	.03	2	2.59	.01	.04	1
S-5	1	29	264	419	.4	28	13	3507	7.49	26	5	ND	5	16	1	2	2	19	.38	.147	34	15	.30	62	.02	2	2.22	.01	.04	1
S-6	1	36	41	117	.1	37	16	615	6.14	25	5	ND	6	6	1	2	2	21	.06	.082	28	28	.68	27	.01	2	2.66	.01	.04	3
S-7	1	21	23	71	.1	22	9	256	5.83	10	5	ND	3	6	1	2	2	32	.03	.056	25	23	.46	17	.04	2	1.89	.01	.03	2
S-8	1	18	21	52	.6	17	7	342	4.74	9	5	ND	3	4	1	2	2	28	.01	.082	23	17	.32	20	.04	2	1.75	.01	.03	2
S-9	1	22	38	57	.2	14	11	1420	6.56	11	5	ND	4	4	1	2	2	36	.01	.108	17	24	.23	37	.08	2	3.15	.01	.03	3
S-10	1	20	22	59	.1	20	9	283	5.37	11	5	ND	7	3	1	2	2	28	.01	.053	28	20	.42	23	.02	2	1.64	.01	.03	2
S-11	1	14	21	43	.2	13	6	146	5.26	6	5	ND	4	3	1	2	2	41	.01	.041	22	16	.21	20	.08	2	1.26	.01	.04	3
S-12	1	27	18	90	.1	30	13	254	7.79	6	5	ND	4	4	1	2	2	27	.01	.089	18	26	.68	30	.03	2	2.46	.01	.04	2
S-13	1	21	18	70	.2	23	9	245	5.45	14	5	ND	2	5	1	2	2	32	.02	.058	19	25	.47	26	.03	2	2.88	.01	.04	3
S-14	1	19	71	79	.2	27	15	1146	4.81	31	5	ND	4	70	1	2	2	8	.99	.089	30	7	.09	41	.01	2	.91	.01	.04	1
S-15	1	32	31	85	.3	23	10	1987	6.90	12	5	ND	3	7	1	2	2	20	.05	.067	25	16	.32	43	.03	2	1.76	.01	.05	1
S-16	1	22	45	63	.1	18	11	850	4.77	17	5	ND	2	6	1	2	2	16	.03	.065	21	12	.16	23	.03	2	1.85	.01	.02	2
S-17	1	14	35	40	.1	12	7	605	4.69	15	5	ND	3	4	1	2	2	21	.01	.028	22	8	.07	34	.03	2	1.82	.01	.03	3
S-18	1	17	31	74	.1	24	10	259	4.54	10	5	ND	3	5	1	2	2	17	.04	.055	21	16	.40	28	.02	2	2.32	.01	.04	2
S-19	1	14	22	30	.2	6	3	366	3.78	12	5	ND	2	4	1	2	2	26	.01	.043	18	11	.10	23	.05	2	2.27	.01	.02	4
S-20	1	26	30	105	.3	27	12	969	6.08	13	5	ND	2	7	1	2	2	28	.02	.076	26	22	.46	26	.03	2	1.86	.01	.04	2
S-21	1	24	29	76	.1	20	9	586	6.15	20	5	ND	3	3	1	2	2	24	.01	.074	27	17	.33	18	.02	2	1.35	.01	.05	2
S-22	1	27	42	96	.3	24	12	941	6.57	19	5	ND	2	5	1	2	2	22	.01	.046	30	19	.36	23	.02	2	1.69	.01	.05	2
S-23	1	29	45	92	.2	32	13	772	5.77	24	5	ND	8	5	1	2	2	14	.02	.051	33	19	.50	33	.01	2	2.34	.01	.06	2
S-24	1	27	33	84	.4	24	11	558	6.89	13	5	ND	3	4	1	2	2	20	.01	.088	26	18	.33	21	.02	2	1.26	.01	.05	21
S-25	1	15	21	70	.2	22	9	426	6.11	12	5	ND	2	3	1	2	2	25	.01	.073	29	20	.38	19	.02	2	1.21	.01	.05	2
S-26	1	23	30	61	.2	20	8	278	4.27	9	5	ND	7	4	1	2	2	21	.01	.037	19	19	.31	22	.05	2	2.52	.01	.05	2
S-27	1	7	25	28	.1	7	3	120	5.25	11	5	ND	4	2	1	2	2	29	.02	.035	10	23	.10	17	.06	2	3.08	.01	.03	4
S-28	1	13	22	46	.1	11	5	360	4.41	11	5	ND	2	3	1	2	2	22	.01	.048	16	14	.18	19	.05	2	2.16	.01	.04	4
S-29	1	17	58	69	.9	13	7	779	5.60	13	5	ND	2	3	1	2	2	25	.01	.040	21	12	.14	24	.04	2	1.29	.01	.05	2
S-30	1	16	29	47	1.2	11	5	503	3.89	10	5	ND	2	4	1	2	2	25	.01	.081	25	10	.13	29	.05	2	1.02	.01	.04	3
S-31	1	15	25	34	.9	6	4	413	3.48	9	5	ND	2	4	1	2	2	24	.02	.041	16	11	.12	22	.07	2	2.24	.01	.04	3
S-32	1	20	50	69	1.5	13	9	1287	3.85	20	5	ND	1	5	1	2	2	23	.02	.048	25	11	.14	31	.03	2	1.18	.01	.05	3
S-33	1	42	85	175	.6	32	17	934	7.48	42	5	ND	6	4	1	2	2	16	.01	.059	31	18	.34	21	.01	2	1.47	.01	.04	2
S-34	1	25	106	142	.3	24	12	4700	5.01	21	5	ND	2	11	1	2	2	23	.08	.094	33	13	.20	70	.04	2	2.62	.01	.05	3
S-35	1	16	25	56	.1	14	6	763	4.37	16	5	ND	3	3	1	2	2	11	.01	.041	33	7	.05	19	.01	2	.71	.01	.03	1
S-36	1	24	32	72	.1	18	14	1074	5.24	20	5	ND	2	4	1	2	2	19	.01	.063	20	16	.22	26	.03	2	2.14	.01	.03	3
STD C	19	57	37	132	6.5	67	28	943	3.99	36	22	7	37	47	17	17	20	57	.49	.089	38	55	.90	172	.06	32	2.00	.06	.13	11

GOLDEN RANGE RESOURCES FILE # 88-5278

HORNE LEDGE

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM
S-37	1	21	37	90	.2	28	13	1291	5.40	28	5	ND	8	5	1	2	2	11	.02	.071	34	9	.18	43	.01	2	.95	.01	.01	1
S-38	1	18	53	104	.1	16	10	2592	5.04	21	5	ND	1	13	1	2	2	23	.25	.153	22	14	.22	44	.02	2	2.41	.01	.01	2
S-39	1	25	29	105	.4	26	16	730	4.60	13	5	ND	1	12	1	2	2	21	.16	.100	19	21	.50	55	.01	2	2.30	.01	.01	3
S-40	1	18	35	49	.1	12	6	216	3.99	13	5	ND	1	4	1	2	2	23	.01	.049	21	14	.22	17	.03	2	1.72	.01	.01	4
S-41	1	18	36	42	.3	8	7	449	4.06	12	5	ND	1	4	1	2	2	25	.02	.052	19	14	.14	15	.04	2	1.56	.01	.01	2
S-42	1	20	22	61	.1	17	8	315	5.00	9	5	ND	1	3	1	2	2	33	.01	.037	21	19	.34	17	.06	2	2.16	.01	.01	2
S-43	1	20	22	55	.3	13	7	259	3.04	12	5	ND	1	7	1	2	2	19	.04	.081	16	17	.31	21	.01	2	2.01	.01	.02	2
S-44	1	20	28	58	.1	14	9	496	4.17	9	5	ND	1	8	1	2	2	27	.04	.042	17	16	.31	21	.05	2	2.23	.01	.02	2
S-45	1	20	44	46	.5	16	5	72	2.19	7	5	ND	1	11	1	2	2	20	.06	.076	17	17	.33	33	.02	2	2.22	.01	.02	3
S-46	1	7	12	36	.2	10	4	58	2.17	5	5	ND	1	6	1	2	2	19	.01	.047	16	12	.24	19	.02	2	.94	.01	.03	2
S-47	1	22	41	100	.2	22	18	904	4.14	21	5	ND	1	30	1	2	2	14	.28	.110	15	15	.32	26	.02	2	1.84	.01	.01	2
S-48	1	36	32	76	.3	23	10	177	2.39	10	5	ND	1	110	1	2	2	19	1.35	.125	9	19	.55	42	.02	2	1.94	.01	.05	2
S-49	1	20	30	43	.3	7	5	188	1.92	4	5	ND	1	12	1	3	2	15	.07	.039	11	9	.14	18	.06	2	2.03	.01	.01	3
S-50	1	12	27	53	.2	9	5	196	4.60	16	5	ND	2	9	1	2	2	28	.05	.033	18	19	.29	18	.05	2	2.05	.01	.01	2
S-51	1	25	31	58	.3	15	7	153	4.01	8	5	ND	1	6	1	2	2	33	.04	.043	25	14	.31	20	.03	2	1.71	.01	.02	2
S-52	1	24	30	96	.3	25	15	1191	5.11	17	5	ND	1	14	1	2	2	26	.16	.061	24	22	.44	35	.02	2	1.77	.01	.02	2
S-53	1	29	75	122	.3	23	16	1022	4.56	17	5	ND	2	18	1	2	2	16	.24	.105	20	19	.42	29	.02	2	2.96	.01	.03	3
S-54	1	28	33	407	.5	19	11	9702	2.89	9	5	ND	1	33	3	2	2	22	.89	.161	14	14	.22	169	.04	2	3.24	.01	.02	1
S-55	1	24	71	165	.2	18	9	4343	5.51	21	5	ND	1	14	1	2	2	22	.23	.183	21	12	.28	69	.03	2	3.11	.01	.02	6
S-56	1	19	85	96	.2	17	10	1446	5.52	22	5	ND	2	8	1	2	2	32	.04	.065	21	18	.34	41	.04	2	2.32	.01	.03	2
S-57	1	12	17	52	.1	13	6	397	3.71	9	5	ND	2	6	1	2	2	48	.01	.040	38	15	.23	25	.06	2	.99	.01	.03	1
S-58	1	31	32	72	.3	17	9	344	4.29	12	5	ND	1	8	1	2	3	27	.05	.050	19	18	.41	37	.04	2	2.09	.01	.03	1
S-59	1	12	26	41	.4	6	4	304	3.26	7	5	ND	1	8	1	2	2	24	.07	.038	12	8	.11	25	.09	2	1.63	.01	.02	3
S-60	1	22	27	78	.1	20	9	234	5.82	17	5	ND	2	4	1	2	2	31	.02	.034	25	20	.46	28	.05	2	2.21	.01	.02	2
S-61	1	15	32	48	.1	10	6	171	4.50	15	5	ND	1	5	1	2	2	26	.01	.055	18	14	.22	17	.04	2	1.55	.01	.02	3
S-62	1	8	16	40	.2	9	4	96	3.07	9	5	ND	1	4	1	2	2	27	.01	.038	27	13	.24	25	.02	2	1.08	.01	.03	2
S-63	1	30	40	74	.2	17	28	1566	3.65	13	5	ND	1	8	1	3	2	23	.05	.099	14	19	.45	30	.02	2	2.81	.01	.04	3
S-64	1	21	25	77	.2	23	12	539	4.79	11	5	ND	1	5	1	2	2	23	.02	.059	26	22	.53	25	.02	2	1.94	.01	.04	2
S-65	1	28	30	60	.3	18	8	196	3.56	17	5	ND	1	7	1	3	2	18	.03	.085	18	19	.42	23	.02	2	2.86	.01	.02	3
S-66	1	20	36	92	.1	25	21	756	5.16	12	5	ND	2	8	1	2	2	23	.03	.103	22	23	.61	39	.01	2	2.55	.01	.06	2
S-67	1	28	39	107	.2	30	17	985	5.96	22	5	ND	2	7	1	2	2	23	.04	.097	23	27	.71	36	.01	2	2.53	.01	.05	3
S-68	1	23	34	93	.3	22	16	1099	4.19	12	5	ND	1	10	1	2	2	21	.06	.125	18	20	.54	33	.01	2	2.29	.01	.05	2
S-69	1	22	31	75	.4	20	8	189	4.11	14	5	ND	1	6	1	2	2	23	.03	.070	19	21	.52	30	.02	2	2.40	.01	.04	3
S-70	1	18	32	61	.2	15	9	448	3.99	11	5	ND	1	6	1	2	2	23	.02	.054	22	18	.37	27	.03	2	2.24	.01	.03	2
S-71	1	16	33	60	.1	12	6	209	4.75	11	5	ND	1	5	1	2	2	27	.02	.056	17	19	.33	20	.04	2	2.02	.01	.03	1
S-72	1	21	41	94	.3	24	11	294	4.49	16	5	ND	1	11	1	4	2	24	.07	.125	14	24	.55	28	.01	2	2.88	.01	.04	4
STD C	18	57	42	132	7.1	68	29	960	4.05	42	20	7	37	48	18	16	19	57	.49	.091	38	55	.91	177	.07	32	2.02	.06	.14	12

GOLDEN RANGE RESOURCES FILE # 88-5278

HORNE LEDGE

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM
S-73	1	13	27	37	.1	10	4	94	3.76	4	5	ND	4	4	1	2	2	33	.01	.024	20	12	.17	23	.08	2	1.05	.01	.03	2
S-74	1	24	67	112	.1	24	22	4544	4.35	11	5	ND	1	10	1	2	2	20	.09	.164	16	20	.47	40	.02	2	2.51	.01	.04	2
S-75	1	23	26	22	.1	6	2	104	1.62	6	5	ND	1	5	1	2	2	15	.06	.054	6	7	.12	10	.09	2	3.52	.01	.01	3
S-76	1	26	22	80	.1	26	10	291	5.60	11	5	ND	2	4	1	2	2	23	.02	.068	22	22	.55	25	.02	2	2.71	.01	.03	3
S-77	1	13	20	38	.1	10	4	124	3.12	6	5	ND	2	4	1	2	2	40	.01	.032	23	12	.16	20	.07	2	1.07	.01	.04	3
S-78	1	16	21	53	.1	16	6	581	4.35	12	5	ND	3	5	1	2	2	20	.02	.035	26	10	.16	35	.03	2	1.20	.01	.03	1
S-79	1	30	29	80	.1	23	10	707	7.17	18	5	ND	5	4	1	2	2	17	.01	.048	30	15	.26	28	.02	2	1.28	.01	.04	1
S-80	1	26	39	73	.1	26	11	425	6.18	17	5	ND	8	5	1	2	2	23	.02	.040	29	16	.30	28	.03	2	1.63	.01	.03	2
S-81	1	14	21	45	.1	12	5	275	3.12	6	5	ND	3	5	1	2	2	28	.01	.036	25	12	.21	18	.06	2	.96	.01	.03	3
S-82	1	23	65	128	.2	27	13	1295	4.57	26	5	ND	3	18	1	2	2	19	.16	.095	30	12	.17	39	.03	2	2.24	.01	.02	2
S-83	1	15	26	53	.1	16	6	324	5.60	8	5	ND	3	4	1	2	2	39	.01	.061	20	17	.30	16	.06	2	1.43	.01	.03	2
S-84	1	23	31	57	.2	17	7	368	4.66	17	5	ND	3	5	1	2	2	26	.01	.070	15	19	.31	25	.04	2	2.76	.01	.04	3
S-85	1	14	19	18	.4	4	2	472	2.71	6	5	ND	3	2	1	2	2	21	.02	.038	6	8	.06	18	.09	2	4.78	.01	.03	4
S-86	1	19	34	63	.7	17	7	268	5.65	12	5	ND	4	4	1	2	2	28	.01	.041	22	14	.26	21	.06	2	1.74	.01	.04	3
S-87	1	15	31	71	.3	19	7	460	4.76	12	5	ND	2	4	1	2	2	19	.01	.042	26	13	.27	22	.03	2	1.21	.01	.06	2
S-88	1	18	26	56	.3	14	6	300	5.25	12	5	ND	2	4	1	2	2	22	.01	.051	25	14	.21	21	.02	2	1.44	.01	.05	1
S-89	1	56	20	89	.1	31	12	337	5.88	13	5	ND	3	3	1	2	2	20	.01	.048	24	27	.67	24	.02	2	1.82	.01	.03	2
S-90	1	14	23	63	.1	16	6	505	4.22	13	5	ND	3	4	1	2	2	34	.01	.039	20	20	.33	28	.04	2	1.65	.01	.04	2
S-91	1	25	28	83	.1	28	9	354	7.02	23	5	ND	5	5	1	2	2	27	.02	.109	19	31	.60	28	.02	2	1.87	.01	.04	2
S-92	1	20	20	49	.1	15	6	236	4.59	10	5	ND	2	4	1	2	2	33	.01	.050	27	18	.25	19	.02	2	1.20	.01	.04	2
S-93	1	12	22	33	.1	10	4	295	3.90	7	5	ND	2	3	1	2	2	24	.01	.032	19	14	.19	20	.04	2	1.60	.01	.02	3
S-94	1	27	28	74	.2	16	9	1176	5.22	18	5	ND	2	5	1	2	2	25	.02	.049	15	18	.25	36	.03	2	2.70	.01	.03	2
S-95	1	22	49	64	.1	21	10	755	5.47	14	5	ND	3	5	1	2	2	19	.03	.049	22	16	.27	23	.02	2	1.35	.01	.03	2
S-96	1	26	32	75	.1	30	10	585	5.35	17	5	ND	4	5	1	2	2	22	.03	.061	22	24	.53	41	.01	2	1.91	.01	.04	2
S-97	1	17	19	47	.1	15	5	420	4.70	17	5	ND	2	4	1	2	2	35	.01	.041	20	21	.38	28	.04	2	1.58	.01	.03	3
S-98	1	13	17	43	.1	14	5	618	3.24	10	5	ND	1	3	1	2	2	24	.01	.041	21	18	.33	41	.02	2	1.22	.01	.04	3
S-99	1	23	30	74	.1	28	12	1049	5.58	6	5	ND	4	3	1	2	2	21	.01	.038	33	20	.57	31	.02	2	1.53	.01	.03	2
S-100	1	15	76	87	.2	15	6	284	4.92	7	5	ND	5	4	1	2	2	26	.01	.034	13	20	.31	29	.06	2	2.49	.01	.05	3
S-101	1	24	59	109	.1	36	15	2077	5.77	20	5	ND	16	46	1	2	2	8	.35	.060	43	6	.07	75	.01	2	.95	.01	.03	2
S-102	1	14	23	52	.1	15	7	268	3.66	8	5	ND	2	4	1	2	2	15	.01	.032	28	11	.22	21	.02	2	.95	.01	.03	1
S-103	1	24	47	91	.1	21	10	479	6.26	11	5	ND	3	4	1	2	2	21	.03	.045	21	15	.24	31	.03	2	1.87	.01	.03	2
S-104	1	30	37	97	.2	31	13	493	5.33	20	5	ND	3	4	1	2	2	17	.01	.036	27	17	.46	30	.02	2	1.74	.01	.05	2
S-105	1	24	45	83	.4	19	8	554	5.47	9	5	ND	5	7	1	2	2	38	.04	.142	18	16	.30	106	.09	2	1.59	.01	.07	1
S-106	1	10	16	26	.1	6	2	194	1.77	8	5	ND	1	4	1	2	2	16	.03	.045	6	6	.09	17	.08	2	3.00	.01	.02	3
S-107	1	13	18	38	.2	9	4	716	3.24	7	5	ND	2	3	1	2	2	21	.01	.052	12	11	.15	28	.05	2	3.13	.01	.05	4
S-108	1	12	18	33	.2	7	3	192	3.58	9	5	ND	2	3	1	2	2	29	.01	.040	12	11	.10	17	.08	2	2.94	.01	.02	5
STD C	17	58	40	132	6.5	67	29	948	4.11	39	22	7	38	47	18	18	19	58	.51	.092	39	55	.94	171	.07	32	1.95	.06	.14	11

GOLDEN RANGE RESOURCES FILE # 88-5278

HORNE LEDGE

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM
S-109	1	8	13	15	.3	4	1	59	1.64	9	5	ND	1	4	1	2	2	18	.02	.040	8	7	.04	24	.07	2	2.23	.01	.01	2
S-110	1	6	11	11	.1	4	1	27	1.21	4	5	ND	1	3	1	2	2	13	.01	.020	18	6	.04	23	.04	2	1.07	.01	.02	1
S-111	1	10	16	15	.1	5	2	72	2.92	13	5	ND	3	4	1	2	2	30	.04	.030	4	9	.09	9	.13	2	3.21	.01	.01	4
S-112	1	24	19	78	.1	30	11	224	6.35	8	5	ND	12	3	1	2	2	31	.01	.029	28	23	.46	26	.05	2	2.68	.01	.04	2
S-113	1	10	24	33	.1	9	3	143	2.45	6	5	ND	3	4	1	2	2	33	.01	.031	22	9	.15	17	.08	2	1.05	.01	.02	2
S-114	1	20	23	61	.1	19	7	226	5.75	12	5	ND	2	3	1	2	2	37	.01	.062	18	19	.34	16	.05	2	1.80	.01	.02	1
S-115	1	19	32	68	.1	20	7	603	5.68	16	5	ND	1	5	1	2	2	34	.01	.063	19	19	.33	23	.04	2	1.91	.01	.02	2
S-116	2	34	20	62	.1	23	8	213	6.19	24	5	ND	2	5	1	2	2	45	.01	.070	27	22	.44	24	.04	2	1.91	.01	.02	2
S-117	1	13	43	74	.2	18	11	626	3.81	10	5	ND	1	6	1	2	2	25	.02	.054	27	19	.40	32	.03	3	1.87	.01	.04	3
S-118	2	24	27	67	.1	19	8	758	6.66	26	5	ND	1	5	1	2	2	49	.01	.086	20	23	.38	21	.03	2	2.06	.01	.04	3
S-119	1	21	32	64	.1	19	10	465	3.77	12	5	ND	1	7	1	2	2	23	.02	.083	15	20	.51	26	.02	2	2.15	.01	.03	2
S-120	2	29	30	88	.1	26	10	285	6.52	18	5	ND	2	5	1	2	2	28	.01	.052	21	22	.48	23	.03	2	2.27	.01	.04	1
S-121	1	21	26	67	.1	21	8	225	4.83	13	5	ND	1	5	1	2	2	29	.02	.054	18	21	.45	28	.04	2	2.54	.01	.05	2
S-122	1	26	25	54	.3	17	5	215	3.30	10	5	ND	1	8	1	2	2	23	.03	.101	13	17	.39	24	.03	2	2.64	.01	.05	3
S-123	1	12	26	66	.3	19	10	506	3.93	10	5	ND	1	5	1	2	2	23	.02	.059	20	18	.46	29	.02	2	1.49	.01	.05	1
S-124	1	21	69	93	.1	27	18	1383	5.09	15	5	ND	1	7	1	2	2	26	.03	.069	20	21	.50	33	.02	2	1.72	.01	.05	2
S-125	1	17	25	70	.2	21	7	275	5.17	11	5	ND	2	6	1	2	2	29	.02	.047	22	20	.44	31	.06	2	2.38	.01	.06	3
S-126	1	16	24	91	.1	31	11	367	4.83	16	5	ND	5	6	1	2	2	28	.02	.037	28	31	.75	35	.02	2	2.07	.01	.07	1
S-127	1	21	35	89	.3	24	21	2619	4.07	14	5	ND	1	13	1	2	2	25	.09	.116	13	20	.50	39	.02	2	2.10	.01	.06	2
S-128	1	12	15	36	.1	10	4	161	2.75	8	5	ND	1	5	1	2	2	26	.02	.034	33	11	.16	18	.02	2	1.20	.01	.04	2
S-129	1	28	38	101	.2	29	21	2591	4.66	11	5	ND	1	11	1	2	2	22	.08	.117	24	22	.58	43	.02	2	2.51	.01	.07	1
S-130	1	21	25	70	.1	22	9	304	6.54	13	5	ND	3	4	1	2	2	29	.01	.054	29	22	.45	24	.02	2	1.82	.01	.04	2
S-131	1	24	22	66	.2	26	8	233	5.48	17	5	ND	5	3	1	2	2	32	.01	.074	27	24	.51	23	.04	2	1.91	.01	.06	2
S-132	1	20	20	65	.1	22	8	216	5.25	16	5	ND	2	4	1	2	2	29	.02	.054	28	20	.46	16	.04	2	1.60	.01	.04	2
S-133	1	17	27	92	.1	23	8	485	5.50	16	5	ND	2	5	1	2	2	33	.02	.048	25	26	.49	31	.04	2	2.24	.01	.04	3
S-134	1	14	17	43	.1	12	4	406	3.08	10	5	ND	1	3	1	2	2	23	.01	.039	24	14	.25	24	.04	2	1.20	.01	.04	2
S-135	1	25	22	112	.3	29	10	984	4.94	21	5	ND	3	7	1	3	2	29	.03	.053	25	29	.58	34	.02	2	2.13	.01	.04	3
S-136	1	31	22	105	.2	34	12	892	5.21	13	5	ND	3	7	1	2	2	26	.03	.053	26	30	.63	29	.02	2	2.06	.01	.05	1
S-137	1	19	28	58	.2	16	7	1132	5.09	16	5	ND	2	4	1	2	2	26	.01	.041	22	12	.16	36	.04	2	1.11	.01	.04	1
S-138	1	9	22	29	.1	7	2	137	2.54	9	5	ND	3	5	1	2	2	23	.01	.030	25	10	.14	22	.05	2	.89	.01	.04	2
S-139	1	17	28	62	.2	17	6	521	5.01	9	5	ND	2	5	1	2	2	28	.01	.047	20	18	.28	33	.04	2	1.88	.01	.04	2
S-140	1	18	17	65	.4	18	8	1897	4.72	10	5	ND	3	4	1	2	2	23	.01	.063	29	14	.26	61	.03	2	1.08	.01	.05	1
S-141	1	26	39	85	.4	19	10	5409	7.92	17	5	ND	3	6	1	2	2	27	.02	.064	22	14	.23	89	.04	2	1.70	.01	.06	1
S-142	1	21	67	100	.2	21	11	2117	4.35	15	5	ND	1	5	1	2	2	26	.03	.069	21	19	.35	48	.02	2	2.11	.01	.05	2
S-143	1	27	24	66	.1	25	12	1377	6.57	21	5	ND	4	5	1	2	2	17	.01	.051	30	13	.20	38	.01	2	1.40	.01	.05	2
S-144	1	19	20	57	.2	19	9	1348	5.50	19	5	ND	3	4	1	2	2	17	.01	.041	31	12	.20	31	.02	2	1.14	.01	.05	2
STD C	18	57	42	132	6.8	70	28	1025	3.87	40	19	7	36	45	17	20	19	56	.48	.089	37	55	.88	175	.06	32	1.94	.06	.14	12

GOLDEN RANGE RESOURCES FILE # 88-5278

HORNE LEDGE

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM
S-145	1	22	21	58	.3	19	9	911	6.39	15	5	ND	4	4	1	2	2	20	.01	.043	28	13	.17	27	.03	2	1.09	.01	.05	2
S-146	1	13	17	24	.2	6	3	151	3.02	5	5	ND	2	3	1	2	2	27	.01	.057	7	10	.12	21	.08	2	4.18	.01	.03	5
S-147	1	14	25	42	.1	13	4	128	4.01	13	5	ND	3	4	1	2	2	20	.02	.048	16	16	.31	29	.03	2	2.24	.01	.04	4
S-148	1	21	23	59	.1	16	7	208	5.77	14	5	ND	6	5	1	2	2	37	.01	.055	19	20	.30	25	.06	2	2.14	.01	.04	4
S-149	1	27	29	55	.3	15	8	453	5.38	15	5	ND	2	5	1	2	2	28	.02	.071	18	18	.26	28	.04	2	2.51	.01	.04	3
S-150	1	44	45	93	.1	35	13	238	8.24	27	5	ND	4	5	1	2	2	24	.03	.070	15	29	.54	26	.02	2	2.56	.01	.03	3
S-151	1	21	37	112	.1	21	8	1734	4.39	17	5	ND	3	6	1	2	2	27	.02	.059	20	19	.39	62	.04	2	1.30	.01	.05	2
S-152	1	13	22	44	.1	12	4	150	3.83	13	5	ND	3	3	1	2	2	26	.01	.028	19	14	.21	17	.03	2	1.05	.01	.03	3
S-153	1	22	33	73	.1	22	9	552	4.12	13	5	ND	2	4	1	2	2	18	.01	.056	19	20	.50	25	.01	2	1.24	.01	.04	2
S-154	1	28	64	210	.1	38	15	252	4.79	20	5	ND	9	13	1	2	2	16	.10	.082	25	26	.73	55	.01	2	2.45	.01	.06	3
S-155	1	20	43	109	.1	26	14	1410	4.30	12	5	ND	1	21	1	2	2	24	.17	.160	13	21	.52	37	.01	2	1.92	.01	.06	2
S-156	1	18	22	57	.1	14	8	615	5.85	15	5	ND	1	4	1	2	2	23	.01	.067	14	27	.45	17	.02	2	2.06	.01	.03	2
S-157	1	21	21	71	.1	24	9	254	6.29	17	5	ND	6	6	1	2	2	26	.02	.061	26	23	.50	23	.02	2	1.89	.01	.03	2
S-158	1	18	32	51	.1	13	7	770	5.92	17	5	ND	2	5	1	2	2	31	.01	.064	21	22	.29	23	.03	2	1.68	.01	.06	2
S-159	1	65	64	67	.2	24	25	1439	4.76	21	5	ND	3	6	2	2	2	16	.05	.180	12	18	.32	43	.02	2	2.80	.01	.03	4
S-160	1	15	25	21	.1	6	3	100	4.96	12	5	ND	2	4	1	2	2	33	.02	.042	7	14	.08	23	.11	2	3.30	.01	.02	4
S-161	1	15	17	53	.2	18	8	246	4.38	5	5	ND	1	4	1	2	2	24	.01	.039	13	21	.37	29	.03	2	2.46	.01	.02	2
S-162	1	13	25	49	.1	15	6	286	5.01	8	5	ND	3	5	1	2	2	42	.01	.077	23	16	.29	17	.06	2	1.31	.01	.04	3
S-163	1	7	16	16	.2	5	2	59	2.21	7	5	ND	1	3	1	2	2	27	.01	.035	14	7	.08	13	.07	2	.84	.01	.03	2
S-164	1	14	22	51	.1	13	6	250	6.24	9	5	ND	3	4	1	2	2	45	.01	.082	24	18	.24	21	.06	2	1.49	.01	.05	2
S-165	1	21	18	76	.1	25	10	290	7.12	13	5	ND	2	3	1	2	2	31	.01	.082	33	27	.55	21	.02	2	1.99	.01	.04	2
S-166	1	18	17	67	.1	22	9	356	6.35	10	5	ND	4	3	1	2	2	26	.01	.077	32	24	.50	23	.02	2	2.00	.01	.04	2
S-167	1	16	23	69	.1	21	8	256	5.57	13	5	ND	5	4	1	2	2	28	.01	.046	32	23	.45	31	.02	2	2.07	.01	.03	3
S-168	1	18	45	84	.3	22	10	1283	5.86	12	5	ND	3	4	1	2	2	27	.01	.047	26	23	.47	51	.03	2	2.03	.01	.04	3
S-169	1	31	79	100	.1	26	12	1089	6.86	14	5	ND	3	4	1	2	2	24	.02	.057	24	24	.42	37	.02	2	2.25	.01	.02	2
S-170	1	24	64	82	.1	19	10	924	6.16	10	5	ND	2	4	1	2	2	25	.01	.055	30	17	.28	35	.02	2	1.20	.01	.03	2
S-171	1	26	83	90	.1	23	11	761	6.90	7	5	ND	2	5	1	2	2	22	.03	.061	23	20	.35	24	.02	2	1.50	.01	.03	2
S-172	1	29	113	106	.3	23	11	736	7.88	15	5	ND	5	4	1	2	2	24	.02	.100	24	21	.35	24	.03	2	1.45	.01	.03	4
S-173	1	25	59	78	.1	22	10	523	7.10	11	5	ND	7	4	1	2	2	28	.02	.086	29	21	.34	32	.04	2	1.54	.01	.05	3
S-174	1	26	75	72	.3	20	9	587	7.17	13	5	ND	3	4	1	2	2	29	.01	.141	30	19	.28	30	.03	3	1.26	.01	.04	2
S-175	1	25	35	80	.1	25	11	455	6.38	11	5	ND	3	4	1	2	2	25	.01	.117	34	20	.39	24	.02	2	1.37	.01	.03	3
S-176	1	23	48	73	.2	19	9	1561	6.75	12	5	ND	3	4	1	2	2	23	.01	.113	28	16	.24	29	.03	2	1.02	.01	.04	1
S-177	1	19	41	72	.1	17	8	1065	6.26	15	5	ND	3	4	1	2	2	22	.02	.076	30	14	.20	26	.03	2	.84	.01	.03	2
S-178	1	24	54	84	.2	18	8	795	7.47	13	5	ND	3	5	1	2	2	28	.02	.057	22	17	.20	24	.04	2	1.23	.01	.05	2
S-179	1	28	31	76	.1	21	10	1112	6.63	14	5	ND	3	4	1	2	2	24	.01	.046	26	17	.30	35	.03	2	1.30	.01	.03	3
S-180	1	28	35	82	.3	18	9	1116	7.16	15	5	ND	2	4	1	2	2	24	.01	.052	23	16	.27	27	.03	2	1.36	.01	.03	4
STD C	19	59	41	132	7.1	67	29	943	4.27	38	21	8	39	50	18	18	19	58	.50	.094	38	56	.92	171	.07	33	2.07	.06	.14	12

HORNE LEDGE

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM
S-181	1	15	27	62	.1	13	7	1135	4.39	11	5	ND	1	4	1	2	2	27	.01	.041	24	15	.26	34	.04	2	1.31	.01	.03	2
S-182	1	19	19	65	.1	17	9	909	4.63	8	5	ND	1	4	1	2	2	26	.01	.074	27	20	.39	31	.03	2	1.94	.01	.02	2
S-183	1	13	25	62	.1	21	10	403	4.82	2	5	ND	5	3	1	2	2	25	.01	.047	29	20	.43	31	.03	2	1.70	.01	.02	2
S-184	1	20	24	76	.1	23	10	313	6.94	19	5	ND	3	3	1	2	2	36	.01	.056	29	23	.46	29	.04	2	2.08	.01	.01	3
S-185	1	11	16	50	.1	15	6	504	4.68	9	5	ND	4	3	1	2	2	26	.01	.052	37	17	.33	26	.03	2	1.36	.01	.02	3
S-186	1	11	15	52	.1	16	6	153	4.64	9	5	ND	2	3	1	2	2	24	.01	.039	34	20	.39	16	.01	2	1.73	.01	.01	3
S-187	1	23	26	62	.3	20	9	242	5.26	17	5	ND	1	3	1	2	2	33	.01	.075	25	24	.41	18	.01	2	1.64	.01	.02	3
S-188	1	18	20	44	.1	18	6	381	3.94	14	5	ND	2	3	1	2	2	27	.01	.067	22	21	.41	29	.03	2	1.22	.01	.03	3
S-189	1	21	27	69	.1	20	12	399	4.54	6	5	ND	2	17	1	2	2	31	.18	.050	27	19	.42	41	.03	2	2.29	.01	.02	2
S-190	1	17	22	59	.1	17	9	314	4.73	8	5	ND	5	4	1	2	2	33	.02	.043	21	19	.41	36	.05	2	2.17	.01	.02	3
S-191	1	20	24	62	.1	18	8	333	6.07	13	5	ND	2	3	1	2	2	32	.01	.054	26	20	.42	22	.03	2	1.79	.01	.01	2
S-192	1	18	25	45	.1	13	7	335	3.75	16	5	ND	2	4	1	2	2	22	.03	.088	13	19	.33	15	.06	2	4.17	.01	.01	6
S-193	1	29	26	75	.1	20	11	381	5.58	18	5	ND	4	4	1	2	2	24	.02	.070	23	23	.43	28	.02	2	2.84	.01	.03	3
S-194	1	22	27	67	.1	19	9	485	6.48	21	5	ND	2	4	1	2	2	30	.01	.077	25	25	.39	18	.02	2	1.70	.01	.03	2
S-195	1	21	25	63	.2	19	10	437	5.86	19	5	ND	1	5	1	2	2	28	.01	.072	17	25	.42	19	.02	2	1.85	.01	.04	3
S-196	1	19	28	51	.2	11	6	725	4.12	11	5	ND	1	4	1	2	2	32	.02	.104	18	16	.24	24	.07	2	2.10	.01	.02	3
S-197	1	12	23	42	.1	11	5	586	4.26	5	5	ND	1	3	1	2	2	31	.01	.054	29	15	.25	23	.04	2	1.23	.01	.01	3
S-198	1	12	24	57	.4	14	6	223	4.64	12	5	ND	3	4	1	2	2	34	.02	.035	21	17	.31	36	.05	2	2.57	.01	.01	2
S-199	1	23	47	80	.1	21	11	696	6.12	20	5	ND	4	4	1	2	2	22	.01	.045	29	18	.25	32	.02	2	1.92	.01	.02	3
S-200	1	23	38	81	.2	21	10	962	6.71	18	5	ND	3	5	1	2	2	34	.01	.145	29	21	.37	57	.04	2	1.67	.01	.04	2
S-201	1	19	30	63	.2	15	7	451	5.32	18	5	ND	2	4	1	2	2	32	.01	.054	25	20	.31	41	.05	2	2.21	.01	.02	4
S-202	1	24	37	92	.4	25	12	1328	5.96	14	5	ND	3	8	1	2	2	25	.11	.100	25	23	.51	50	.02	2	1.88	.01	.05	2
S-203	1	23	30	104	.1	26	13	466	6.22	18	5	ND	7	6	1	2	2	26	.03	.068	29	27	.56	30	.02	2	2.46	.01	.03	3
S-204	1	36	40	98	.1	25	12	605	7.14	14	5	ND	3	12	1	2	2	24	.14	.057	22	24	.43	45	.01	2	2.11	.01	.02	2
S-205	1	44	56	101	.3	33	15	819	8.64	17	5	ND	8	7	1	2	2	21	.05	.082	21	28	.53	37	.01	2	2.09	.01	.05	2
S-206	1	33	64	147	.3	30	17	4661	5.15	13	5	ND	3	58	1	2	2	16	1.21	.152	13	21	.47	69	.01	3	2.03	.01	.05	2
S-206A	1	46	51	95	.2	21	13	7000	17.23	24	5	ND	5	35	1	2	2	16	.35	.079	22	11	.22	43	.03	2	1.62	.01	.04	1
S-207	1	26	50	78	.1	19	9	663	7.11	13	5	ND	2	5	1	2	2	31	.02	.057	28	20	.29	29	.03	2	1.38	.01	.03	2
S-208	1	29	91	222	.3	27	11	633	5.86	11	5	ND	3	6	1	2	2	24	.04	.056	23	21	.45	30	.01	2	1.67	.01	.03	1
S-209	1	27	32	90	.1	23	13	558	5.82	12	5	ND	2	14	1	2	2	30	.25	.075	27	21	.46	37	.03	2	1.96	.01	.05	2
S-210	1	21	22	63	.2	19	10	480	4.87	2	5	ND	2	7	1	2	2	26	.06	.070	29	18	.40	36	.03	2	1.70	.01	.05	2
S-211	1	22	30	67	.3	18	10	514	5.81	9	5	ND	4	4	1	2	2	30	.02	.063	26	20	.37	30	.04	2	2.20	.01	.04	2
S-212	1	23	23	85	.2	27	13	380	6.33	11	5	ND	3	4	1	2	2	26	.01	.060	28	23	.59	32	.03	2	2.13	.01	.04	3
S-213	1	20	30	80	.2	24	11	850	6.22	8	5	ND	3	4	1	2	2	26	.03	.072	30	22	.50	25	.02	2	1.73	.01	.04	2
S-214	1	20	31	72	.4	19	9	413	7.03	12	5	ND	2	4	1	2	2	37	.01	.091	26	22	.39	26	.04	2	1.78	.01	.03	2
S-215	1	20	86	163	.2	22	14	2020	6.07	18	5	ND	4	6	1	2	2	21	.02	.057	26	14	.20	53	.03	2	1.27	.01	.03	1
STD C	17	57	41	132	7.2	67	29	955	4.06	41	18	7	37	47	17	16	19	58	.50	.091	38	55	.92	176	.07	33	2.02	.06	.13	13

GOLDEN RANGE RESOURCES FILE # 88-5278

HORNE LEDGE

GALENA

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM
S-216	1	24	57	179	.2	22	11	1406	6.43	20	5	ND	3	4	1	2	2	25	.01	.047	25	11	.12	34	.02	2	1.01	.01	.01	1
S-217	1	32	1280	194	.8	32	14	4064	6.92	43	5	ND	3	28	1	4	2	18	.38	.140	46	15	.26	61	.01	2	2.14	.01	.03	1
S-218	1	25	61	99	.2	27	11	459	7.65	11	5	ND	2	6	1	2	2	32	.03	.073	19	28	.54	24	.03	2	2.15	.01	.02	3
S-219	1	17	36	74	.1	19	9	474	6.65	8	5	ND	4	4	1	2	2	35	.01	.061	22	22	.39	27	.03	2	1.84	.01	.03	2
S-220	1	23	21	78	.1	24	10	321	5.96	16	5	ND	4	4	1	2	2	28	.02	.073	24	24	.50	28	.02	2	2.04	.01	.03	3
S-221	1	19	21	73	.3	23	9	812	4.46	11	5	ND	8	4	1	2	2	20	.05	.072	25	21	.55	34	.01	2	1.75	.01	.02	2
S-222	1	13	21	64	.1	15	6	331	4.99	18	5	ND	2	4	1	2	2	32	.01	.036	26	18	.35	17	.03	2	1.52	.01	.01	3
S-223	1	21	35	77	.2	20	9	611	7.72	20	5	ND	2	4	1	2	2	37	.01	.052	18	27	.45	19	.03	2	2.00	.01	.02	2
S-224	1	9	19	29	.1	8	3	90	3.40	7	5	ND	2	3	1	2	2	36	.01	.026	17	10	.13	18	.03	2	1.01	.01	.02	2
S-225	1	20	18	53	.1	19	6	587	4.56	12	5	ND	2	3	1	2	2	31	.01	.047	19	21	.24	22	.02	2	1.14	.01	.02	1
S-226	1	18	24	66	.1	22	8	222	5.89	19	5	ND	4	4	1	2	2	21	.01	.041	21	23	.48	25	.01	2	1.99	.01	.02	2
S-227	1	22	20	83	.1	24	10	244	7.39	14	5	ND	5	2	1	2	2	30	.01	.058	19	28	.59	13	.01	2	2.25	.01	.01	2
S-228	1	31	41	92	.2	29	12	512	7.13	16	5	ND	5	6	1	3	2	29	.03	.096	20	28	.58	42	.01	2	2.01	.01	.02	2
S-229	1	12	17	47	.1	13	6	383	3.90	7	5	ND	3	3	1	2	2	26	.01	.045	14	18	.32	35	.05	2	2.97	.01	.02	4
S-230	1	13	20	42	.1	10	5	172	3.20	6	5	ND	3	5	1	2	2	45	.02	.039	25	12	.17	17	.04	2	1.06	.01	.01	2
S-231	1	13	20	39	.2	9	4	188	6.10	9	5	ND	3	4	1	2	2	55	.01	.048	12	15	.14	20	.12	2	1.37	.01	.02	3
S-232	1	12	25	44	.1	12	5	159	5.07	10	5	ND	3	3	1	2	2	39	.01	.041	18	15	.22	20	.07	2	1.34	.01	.01	3
S-233	1	20	516	518	.2	16	9	1653	6.94	20	5	ND	3	8	1	2	2	33	.08	.064	12	17	.22	39	.07	2	3.09	.01	.01	7
S-234	1	28	250	293	.4	11	7	2061	5.47	19	5	ND	1	4	1	2	2	23	.03	.042	15	11	.09	32	.02	2	.96	.01	.02	2
S-235	1	25	52	112	.3	31	13	1701	6.15	17	5	ND	5	6	1	2	2	16	.04	.054	26	17	.42	42	.01	2	1.67	.01	.01	2
S-236	1	13	36	80	.2	13	7	778	5.28	15	5	ND	2	4	1	2	2	25	.01	.056	25	16	.23	22	.02	2	1.21	.01	.03	2
S-237	1	16	23	50	.2	12	6	381	4.40	8	5	ND	2	4	1	2	2	32	.01	.066	23	15	.21	19	.03	2	1.20	.01	.02	2
S-238	1	15	25	56	.2	15	7	289	6.37	8	5	ND	5	4	1	2	2	37	.01	.061	25	20	.34	23	.04	2	1.57	.01	.02	3
S-239	1	20	20	59	.2	16	9	1173	5.64	13	5	ND	2	4	1	2	2	34	.01	.088	16	21	.34	29	.07	2	2.39	.01	.03	3
S-240	1	16	22	72	.2	19	8	575	4.93	10	5	ND	3	4	1	2	2	25	.01	.055	17	23	.41	29	.04	2	2.48	.01	.03	4
S-241	1	19	22	57	.1	16	9	331	5.17	5	5	ND	3	4	1	2	2	31	.01	.051	26	18	.31	21	.04	2	1.71	.01	.02	2
S-242	1	22	20	62	.1	20	11	769	4.56	11	5	ND	4	4	1	2	2	25	.02	.043	31	18	.36	34	.02	2	1.30	.01	.03	2
S-243	1	34	32	76	.1	36	13	485	5.07	22	5	ND	8	5	1	3	2	17	.01	.041	23	26	.65	43	.01	2	2.21	.01	.06	3
S-244	1	60	241	398	.2	56	18	1409	4.91	27	5	ND	14	22	1	2	2	15	.44	.104	43	27	.61	59	.01	2	1.98	.01	.07	1
S-245	1	39	23	82	.1	38	14	571	3.65	19	5	ND	11	325	1	2	2	12	6.71	.068	18	22	.74	33	.01	2	1.42	.01	.06	2
S-246	1	50	35	119	.1	53	18	1476	5.18	28	5	ND	12	44	1	2	2	16	.47	.084	37	29	.92	68	.01	2	2.07	.01	.06	2
S-247	1	15	26	80	.1	23	9	585	4.65	12	5	ND	2	52	1	2	2	28	.29	.054	18	22	.52	39	.02	2	1.52	.01	.05	2
S-248	1	16	19	110	.3	29	10	325	4.34	8	5	ND	8	43	1	2	2	21	.40	.039	16	24	.67	51	.03	2	3.01	.01	.04	3
S-249	1	42	27	207	.1	36	12	4183	2.41	8	6	ND	6	173	1	2	2	10	1.57	.077	5	16	.64	56	.01	2	1.44	.01	.05	1
S-250	1	76	32	123	.1	37	16	1895	4.72	15	5	ND	13	12	1	2	2	19	.14	.046	26	29	.81	61	.01	2	2.13	.01	.05	2
S-251	1	88	40	139	.1	42	17	3026	4.76	16	5	ND	12	14	1	3	2	13	.26	.056	15	22	.89	77	.01	2	1.97	.01	.05	4
STD C	17	58	40	132	6.6	68	29	1050	4.00	42	22	7	37	48	18	20	20	58	.50	.092	39	55	.91	176	.07	33	2.02	.06	.13	12

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM
S-252	1	42	27	106	.1	33	13	1260	3.04	9	5	ND	7	22	1	2	2	13	.39	.063	8	19	.74	64	.01	2	1.34	.01	.04	1
S-253	1	76	20	129	.1	46	14	357	4.97	17	5	ND	18	7	1	2	2	21	.05	.048	18	32	1.11	73	.01	2	2.42	.01	.05	3
S-254	1	49	19	126	.1	42	22	1553	4.87	15	5	ND	11	5	1	2	2	16	.05	.061	15	32	.97	53	.01	2	2.30	.01	.04	3
S-255	1	52	19	118	.1	47	21	807	4.88	12	5	ND	16	7	1	2	2	14	.04	.036	31	30	1.02	48	.01	2	2.26	.01	.04	2
S-256	1	54	23	123	.1	47	21	771	5.01	13	5	ND	16	7	1	2	2	15	.04	.036	33	32	1.06	50	.01	2	2.35	.01	.05	2
S-257	1	16	9	91	.3	35	11	323	4.13	12	5	ND	10	7	1	2	2	15	.04	.033	27	26	.79	32	.01	2	1.87	.01	.04	2
S-258	1	40	47	148	.1	42	22	1231	5.18	18	5	ND	13	10	1	2	2	16	.09	.069	21	27	.86	31	.01	2	1.98	.01	.03	2
S-259	1	50	37	134	.2	48	20	544	6.31	21	5	ND	12	7	1	2	2	19	.04	.041	30	31	.90	28	.01	2	2.41	.01	.04	3
S-261	1	64	49	133	.1	55	28	1306	6.33	27	5	ND	13	11	1	2	2	19	.05	.051	17	32	.90	54	.01	2	2.61	.01	.05	2
S-262	1	36	33	128	.1	38	18	655	5.09	18	5	ND	10	11	1	2	2	17	.05	.058	16	25	.77	38	.01	2	1.94	.01	.02	2
S-263	1	41	37	120	.1	41	18	678	5.13	23	5	ND	9	25	1	2	2	18	.15	.083	15	28	.81	36	.01	2	2.04	.01	.03	4
S-264	1	89	105	158	.1	68	45	1237	8.79	62	5	ND	14	10	1	2	2	10	.04	.054	22	18	.37	26	.01	2	1.10	.01	.04	2
S-266	1	79	85	144	.1	62	40	1350	8.77	56	5	ND	13	26	1	2	2	15	.08	.065	27	25	.61	26	.01	2	1.87	.01	.04	2
S-267	1	70	42	104	.1	52	37	1683	6.84	33	5	ND	9	12	1	2	2	17	.11	.090	19	27	.76	22	.01	2	2.16	.01	.04	2
S-268	1	56	62	134	.2	48	29	1287	6.34	32	5	ND	10	37	1	2	2	14	.20	.077	28	21	.62	26	.01	3	1.77	.01	.05	2
S-269	1	59	56	121	.1	51	31	1268	6.57	28	5	ND	12	28	1	2	2	16	.14	.062	39	26	.75	27	.01	2	1.96	.01	.04	1
S-270	1	61	48	123	.1	50	30	1299	6.67	32	5	ND	12	26	1	2	2	18	.13	.064	37	27	.78	29	.01	2	2.25	.01	.04	2
S-271	1	57	59	121	.1	46	29	1589	5.74	28	5	ND	10	28	1	2	2	14	.28	.082	17	23	.69	36	.01	2	1.89	.01	.04	2
S-272	1	52	43	106	.1	39	20	1144	4.75	21	5	ND	8	50	1	2	2	11	.51	.080	19	19	.59	27	.01	2	1.55	.01	.04	2
S-273	1	40	31	96	.1	33	15	566	3.80	13	8	ND	12	392	1	2	2	11	6.93	.057	20	19	.71	29	.01	2	1.47	.01	.06	2
S-274	1	51	48	116	.1	47	22	1113	5.30	31	5	ND	10	32	1	2	2	14	.37	.083	24	22	.73	29	.01	2	1.71	.01	.04	1
S-275	1	53	59	127	.1	47	27	1153	5.66	30	5	ND	9	31	1	2	2	15	.37	.081	18	24	.76	29	.01	2	1.89	.01	.04	2
S-276	1	48	40	124	.2	47	23	832	5.21	27	5	ND	10	64	1	2	2	14	.91	.074	20	23	.80	25	.01	2	1.71	.01	.03	1
S-277	1	44	28	99	.1	35	17	539	4.23	17	5	ND	10	271	1	2	2	11	5.93	.079	19	17	.68	11	.01	2	1.36	.01	.02	2
S-278	1	60	45	124	.1	48	26	1080	6.40	36	5	ND	10	37	1	2	2	14	.48	.082	21	22	.79	27	.01	2	1.73	.01	.03	2
S-279	1	60	49	134	.1	48	24	927	5.65	26	5	ND	10	39	1	2	2	15	.54	.080	19	24	.87	26	.01	2	1.89	.01	.04	2
S-280	1	70	487	239	.4	44	24	1505	6.10	33	5	ND	8	65	1	2	2	14	.76	.080	17	21	.78	42	.01	2	1.66	.01	.03	2
S-281	1	67	269	328	.6	43	23	2340	6.70	34	5	ND	7	153	1	2	2	10	2.76	.075	16	16	.57	49	.01	2	1.30	.01	.02	2
S-282	1	44	80	161	.2	43	24	1166	5.18	17	5	ND	9	31	1	2	2	13	.44	.065	15	23	.75	47	.01	2	1.88	.01	.04	1
S-283	1	45	116	171	.2	40	21	1462	5.13	20	5	ND	6	59	1	2	2	12	.71	.074	14	19	.64	35	.01	2	1.57	.01	.03	1
S-284	1	49	57	130	.2	42	21	1247	5.06	20	5	ND	7	59	1	2	2	13	.94	.090	17	20	.69	41	.01	2	1.66	.01	.06	1
S-285	1	41	42	102	.1	32	17	644	4.06	21	7	ND	8	349	1	2	2	10	6.26	.069	14	17	.61	24	.01	2	1.18	.01	.04	2
S-286	1	49	48	127	.1	44	22	977	5.08	22	5	ND	10	94	1	2	2	13	1.36	.071	17	21	.76	29	.01	4	1.69	.01	.03	1
S-287	1	51	57	132	.1	44	23	1422	5.30	16	5	ND	9	42	1	2	2	14	.52	.069	21	22	.69	45	.01	2	1.93	.01	.03	1
S-288	1	61	69	132	.2	41	25	964	5.78	29	5	ND	11	139	1	2	2	12	2.88	.070	20	20	.71	21	.01	2	1.58	.01	.03	2
STD C	18	60	39	132	6.8	67	30	1017	4.15	40	21	8	39	49	18	20	20	60	.50	.095	40	52	.92	182	.07	33	2.04	.06	.14	13

GALENA

GOLDEN RANGE RESOURCES FILE # 88-5278

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM
S-289	1	39	73	166	.1	34	18	1670	4.53	20	5	ND	6	132	1	2	2	9	2.01	.125	13	15	.44	38	.01	3	1.05	.01	.05	1
S-289A	1	43	58	125	.1	42	21	1025	5.20	21	5	ND	8	105	1	2	2	12	1.07	.082	23	20	.74	21	.01	3	1.64	.01	.04	2
S-290	1	37	32	133	.1	44	21	787	5.50	18	5	ND	9	58	1	2	2	16	.59	.064	17	26	.96	22	.01	2	2.13	.01	.03	1
S-291	1	54	45	112	.2	38	20	890	4.93	25	5	ND	10	206	1	2	2	12	4.80	.071	19	18	.70	17	.01	2	1.50	.01	.03	2
S-292	1	34	59	127	.2	36	20	1012	4.80	13	5	ND	7	31	1	2	2	15	.40	.092	15	22	.74	44	.01	2	1.83	.01	.04	1
S-293	1	52	43	107	.1	37	19	805	4.69	20	5	ND	10	228	1	2	2	11	5.29	.087	20	18	.65	15	.01	2	1.34	.01	.02	2
S-294	1	31	40	123	.1	32	20	1794	4.23	8	5	ND	5	103	1	2	2	14	1.38	.085	8	21	.66	44	.01	2	1.62	.01	.02	2
S-295	1	40	45	126	.1	41	23	1435	5.43	11	5	ND	9	21	1	2	2	16	.23	.063	22	24	.73	32	.01	2	2.03	.01	.03	1
S-296	1	38	55	147	.1	38	20	764	4.98	11	5	ND	8	21	1	2	2	15	.27	.092	19	24	.78	38	.01	2	2.02	.01	.04	1
S-297	1	39	39	109	.1	35	18	742	4.71	18	5	ND	10	141	1	2	2	13	3.08	.083	21	20	.74	26	.01	2	1.64	.01	.03	3
S-299	1	35	53	125	.1	37	21	925	5.90	20	5	ND	8	45	1	2	2	13	.71	.079	16	22	.71	31	.01	2	1.66	.01	.03	2
S-300	1	42	63	142	.1	39	20	1101	4.80	20	5	ND	8	38	1	2	2	13	.53	.084	17	21	.70	27	.01	2	1.62	.01	.05	2
S-301	1	47	61	142	.1	41	22	1308	5.04	19	5	ND	8	33	1	2	2	14	.39	.105	17	21	.67	49	.01	2	1.89	.01	.04	1
S-302	1	44	48	122	.1	38	20	1009	4.73	18	5	ND	8	104	1	2	2	13	2.15	.082	16	20	.66	27	.01	2	1.63	.01	.03	2
S-303	1	42	105	242	.1	38	19	1763	4.50	13	5	ND	6	26	1	2	2	14	.34	.108	15	22	.68	45	.01	2	1.84	.01	.04	1
S-304	1	53	78	165	.1	45	23	1367	5.44	20	5	ND	9	51	1	2	2	14	.70	.085	19	24	.80	33	.01	2	1.91	.01	.05	2
S-305	1	40	40	130	.1	40	20	1121	4.72	11	5	ND	6	37	1	2	2	15	.39	.098	11	26	.81	65	.01	2	1.91	.01	.03	1
S-306	1	40	41	111	.1	36	16	467	3.72	13	5	ND	7	43	1	2	2	12	.75	.075	14	20	.68	39	.01	2	1.47	.01	.05	1
S-307	1	39	55	135	.2	40	25	1687	5.02	21	5	ND	8	24	1	2	2	16	.27	.114	16	25	.80	49	.01	2	1.93	.01	.04	2
S-308	1	53	64	142	.2	47	24	1044	5.45	27	5	ND	10	66	1	2	2	14	1.06	.076	19	23	.82	28	.01	2	1.80	.01	.05	2
S-309	1	36	22	124	.2	39	20	2003	4.45	9	5	ND	4	32	1	2	2	20	.30	.098	11	24	.70	79	.01	2	1.66	.01	.04	1
S-310	1	48	44	122	.1	41	21	1292	5.14	20	5	ND	8	33	1	2	2	14	.43	.081	19	22	.70	38	.01	2	1.80	.01	.03	2
S-311	1	37	30	119	.1	40	22	1706	5.24	9	5	ND	5	21	1	2	2	19	.22	.077	13	26	.80	63	.01	2	2.23	.01	.03	3
S-312	1	41	47	122	.3	39	20	1041	5.14	12	5	ND	8	33	1	2	2	15	.36	.074	18	22	.70	30	.01	2	1.81	.01	.04	2
S-313	1	32	43	128	.1	35	19	1175	4.44	12	5	ND	6	32	1	2	2	15	.34	.093	12	22	.68	50	.01	2	1.68	.01	.05	2
S-314	1	36	51	123	.2	37	20	1580	4.82	14	5	ND	6	38	1	2	2	14	.52	.092	14	21	.67	51	.01	2	1.59	.01	.05	1
S-315	1	41	84	131	.1	36	26	2822	5.41	11	5	ND	6	20	1	2	2	15	.20	.130	13	22	.50	41	.01	2	1.69	.01	.05	2
S-316	1	38	47	128	.1	38	19	1204	4.31	13	5	ND	6	46	1	2	2	12	.70	.084	14	21	.73	31	.01	3	1.54	.01	.04	2
S-317	1	43	52	132	.2	41	20	1800	5.19	7	5	ND	5	12	1	2	2	18	.21	.098	15	28	.66	25	.01	2	1.72	.01	.05	2
S-318	1	2488	185	375	13.2	25	14	1341	4.60	44	5	ND	6	249	2	2	2	6	11.65	.067	5	7	.24	19	.01	2	.48	.01	.04	1
S-319	1	206	47	147	.9	36	22	1419	4.66	8	5	ND	7	74	1	2	2	15	1.60	.085	10	24	.83	41	.01	3	2.10	.01	.05	1
S-320	1	51	60	144	.2	41	21	1262	5.11	13	5	ND	7	43	1	2	2	15	.61	.089	16	22	.73	45	.01	2	1.79	.01	.05	3
S-321	1	32	28	110	.1	34	20	1036	4.65	7	5	ND	8	46	1	2	2	20	.39	.073	13	26	.83	26	.01	2	2.07	.01	.03	3
S-322	1	42	48	142	.2	39	19	1338	4.40	14	5	ND	6	64	1	2	2	13	1.13	.115	15	20	.69	47	.01	2	1.69	.01	.05	2
S-323	1	275	59	141	2.0	36	18	1182	4.34	17	5	ND	6	75	1	2	2	12	2.30	.079	13	24	.61	30	.01	2	1.44	.01	.03	2
STD C	18	58	44	132	6.7	67	29	1018	4.04	38	20	7	38	47	18	18	19	56	.50	.092	39	56	.92	178	.07	33	2.03	.06	.14	12

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SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM
S-324	1	38	53	138	.1	41	20	736	5.67	14	5	ND	9	11	1	2	2	20	.12	.064	24	28	.80	22	.01	2	2.30	.01	.05	1
S-325	1	59	59	142	.2	59	81	7192	5.48	18	5	ND	7	65	1	2	2	20	.68	.140	12	30	.77	56	.01	2	2.59	.01	.05	1
S-326	1	31	47	137	.1	38	21	1446	5.10	17	5	ND	7	27	1	2	2	15	.29	.096	18	23	.77	42	.01	2	1.86	.01	.06	1
S-327	1	78	58	147	.1	39	20	5299	3.92	11	5	ND	5	46	1	2	2	14	.40	.126	10	20	.73	73	.01	2	1.87	.01	.05	1
S-328	1	34	52	149	.1	41	23	1395	5.14	13	5	ND	7	31	1	2	2	17	.43	.099	15	27	.85	38	.01	2	2.01	.01	.06	1
S-329	1	28	44	98	.1	36	16	532	4.72	26	5	ND	6	49	1	2	2	6	.57	.075	13	10	.31	20	.01	2	.87	.01	.03	1
S-330	1	49	77	142	.1	45	23	1219	5.67	12	5	ND	8	23	1	2	2	19	.28	.079	19	30	.88	37	.01	2	2.15	.01	.04	1
S-332	1	34	50	127	.1	43	22	1214	5.28	18	5	ND	6	28	1	2	2	18	.31	.077	17	28	.84	57	.01	2	1.99	.01	.02	2
S-333	1	27	44	208	.1	29	13	4416	3.58	19	5	ND	4	198	1	2	2	6	2.60	.141	15	8	.23	58	.01	3	.82	.01	.02	1
S-334	1	48	57	154	.2	43	21	1670	5.27	13	5	ND	6	28	1	2	2	21	.36	.118	19	30	.78	69	.02	2	1.83	.01	.04	1
S-335	13	162	64	330	.4	90	33	1236	6.77	59	5	ND	4	47	2	2	2	8	1.03	.181	6	5	.15	64	.01	2	.34	.01	.06	1
S-336	15	143	64	519	.2	73	30	1719	8.10	68	5	ND	4	23	1	2	2	18	.38	.339	3	6	.06	67	.01	2	.36	.01	.07	1
S-337	38	93	349	3588	6.2	217	32	486	6.91	377	6	ND	10	50	45	10	2	47	1.64	.421	2	11	.18	103	.01	2	.45	.01	.12	1
S-338	9	103	81	514	.4	90	32	711	6.17	101	5	ND	12	17	2	2	2	8	.61	.131	3	5	.13	52	.01	2	.39	.01	.05	1
S-339	1	90	45	203	.1	123	60	583	7.04	78	5	ND	13	28	1	2	2	4	.89	.094	4	14	.50	31	.01	2	1.11	.01	.03	1
S-341	11	138	63	648	.7	121	28	853	7.82	105	5	ND	12	16	2	2	2	10	.72	.136	2	5	.17	47	.01	2	.28	.01	.05	1
S-342	9	102	68	587	.3	117	35	753	6.75	82	5	ND	12	17	5	3	2	11	.64	.134	3	13	.29	40	.01	2	.86	.01	.01	2
S-343	9	95	57	385	.3	120	40	824	7.10	84	5	ND	11	10	2	2	2	11	.53	.111	2	13	.22	38	.01	2	.75	.01	.03	1
S-344	9	70	37	494	.2	92	29	471	5.61	52	5	ND	16	7	4	2	2	21	.35	.061	7	17	.34	28	.01	3	.97	.01	.04	1
S-345	9	88	47	499	.2	106	38	679	7.18	76	5	ND	16	8	5	2	2	19	.42	.069	8	20	.41	28	.01	2	1.21	.01	.03	1
S-346	9	121	52	2185	2.0	326	47	910	7.61	64	5	ND	7	86	42	2	2	22	1.63	.143	6	9	.30	129	.01	2	.98	.01	.05	1
S-347	15	353	91	990	1.5	124	24	477	5.78	53	5	ND	3	62	9	5	2	9	2.95	.187	5	2	.35	51	.01	2	.21	.01	.04	1
S-348	24	294	102	1597	2.4	215	46	947	7.05	68	5	ND	8	45	16	3	2	23	.89	.170	9	8	.20	49	.01	2	1.10	.01	.03	1
S-349	28	156	110	1270	1.5	140	25	598	5.55	48	5	ND	9	45	12	4	2	18	.90	.098	11	3	.34	40	.01	2	.38	.01	.05	1
S-350	19	164	114	758	1.4	68	22	492	5.42	42	5	ND	7	32	6	2	2	10	.81	.137	7	2	.10	36	.01	2	.16	.01	.04	1
S-351	39	133	153	1372	1.0	111	15	444	3.44	46	5	ND	7	67	9	8	2	22	3.10	.099	11	2	.75	26	.01	2	.14	.01	.03	1
S-352	64	186	251	2120	2.3	172	18	476	4.64	74	5	ND	6	59	12	13	2	23	2.31	.092	10	2	.79	33	.01	7	.13	.01	.05	1
S-353	37	144	304	1593	2.3	129	17	842	4.16	38	5	ND	2	33	11	5	2	22	1.08	.133	10	3	.15	37	.01	3	.23	.01	.05	1
S-354	46	133	218	1184	3.5	133	25	924	5.33	30	5	ND	2	24	9	3	2	46	.25	.124	10	8	.18	48	.01	2	.52	.01	.09	1
S-355	9	35	43	361	.7	66	6	282	1.54	31	5	ND	1	81	2	3	2	27	7.00	.545	11	6	.70	106	.01	7	.83	.01	.04	1
S-356	12	28	64	662	.2	62	8	1011	2.31	34	5	ND	1	42	3	2	2	42	4.53	1.141	17	11	.40	100	.01	4	1.41	.01	.11	1
S-357	22	72	153	1063	1.5	79	8	514	3.37	58	5	ND	2	48	5	4	2	40	6.34	.731	12	8	.80	71	.01	5	.90	.01	.06	1
S-358	5	31	134	373	.2	38	16	874	4.26	21	5	ND	3	28	1	2	2	15	3.66	.364	16	10	.31	54	.01	3	1.01	.01	.02	1
S-359	4	199	90	483	.1	340	178	953	4.67	38	5	ND	5	24	1	2	2	14	2.32	.402	216	20	.58	54	.01	2	2.08	.01	.03	1
S-360	1	60	33	129	.1	74	32	438	5.91	6	5	ND	10	27	1	2	2	5	2.58	.068	33	10	.55	17	.01	2	.93	.01	.01	1
S-361	3	62	34	101	.1	60	33	437	5.61	9	5	ND	6	25	1	2	2	5	2.85	.081	29	8	.29	13	.01	2	.69	.01	.01	1
STD C	18	57	40	132	6.6	67	29	1018	4.14	39	17	6	37	47	18	19	22	59	.50	.092	39	55	.92	176	.07	32	2.05	.06	.14	12

APPENDIX F

CERTIFICATE

CERTIFICATE

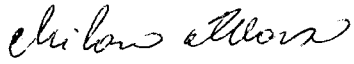
I Milan Hlava of the town of Surrey, Province of British Columbia, Canada do state:

1. That I am a practicing consulting geologist with office at 14746, 90A Avenue Surrey, B.C. V3R 1B2.

2. That I am a graduate of Komensky University, Bratislava, Czechoslovakia (1968) with a degree of Bachelor of Science in Exploration Geology.

3. That I have practiced my profession as a Geologist continuously since 1968 and as a Consulting Geologist continuously since 1984.

4. That the conclusions reached in this report are my own.



Milan Hlava B.Sc., F.G.A.S.
Consulting Geologist

APPENDIX G

SUMMARY OF EXPENDITURES

SUMMARY OF EXPENDITURES

SALARIES			
1 Senior Geologist	26 days	300/day	7,800
1 Geologist	26 days	225/day	5,850
1 Prospector	26 days	175/day	4,550
1 Helper	26 days	125/day	3,250
MOBILIZATION & DEMOBILIZATION			
Vancouver - Nakusp - Vancouver			1,200
FOOD & ACCOMODATION	26 days	55/man/day	6,760
FIELD WORK PLANNING	5 days	300/day	1,500
TRUCK RENTAL	26 days	55/day	1,430
INSTRUMENT RENTAL			1,500
FIELD SUPPLIES			950
DRAFTING,MAPS PRINTS			1,000
COMPILATION INTERPRETATION			2,500
ANALYSES			
30 elements ICP	331 samples	10.00	3,310
ROAD CONSTRUCTION			45,000
HELICOPTER	26.7 hours	585	15,619
		TOTAL	$ 102,219