Geophysical and Trenching Report

- on the -

Big P Group

Vernon Mining Division, British Columbia
N.T.S. 82E/15E, 16W

- for -

Zalmac Mines Limited

P.O. Box 1027

Vernon, B. C.

Prepared by:

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August 9, 1985

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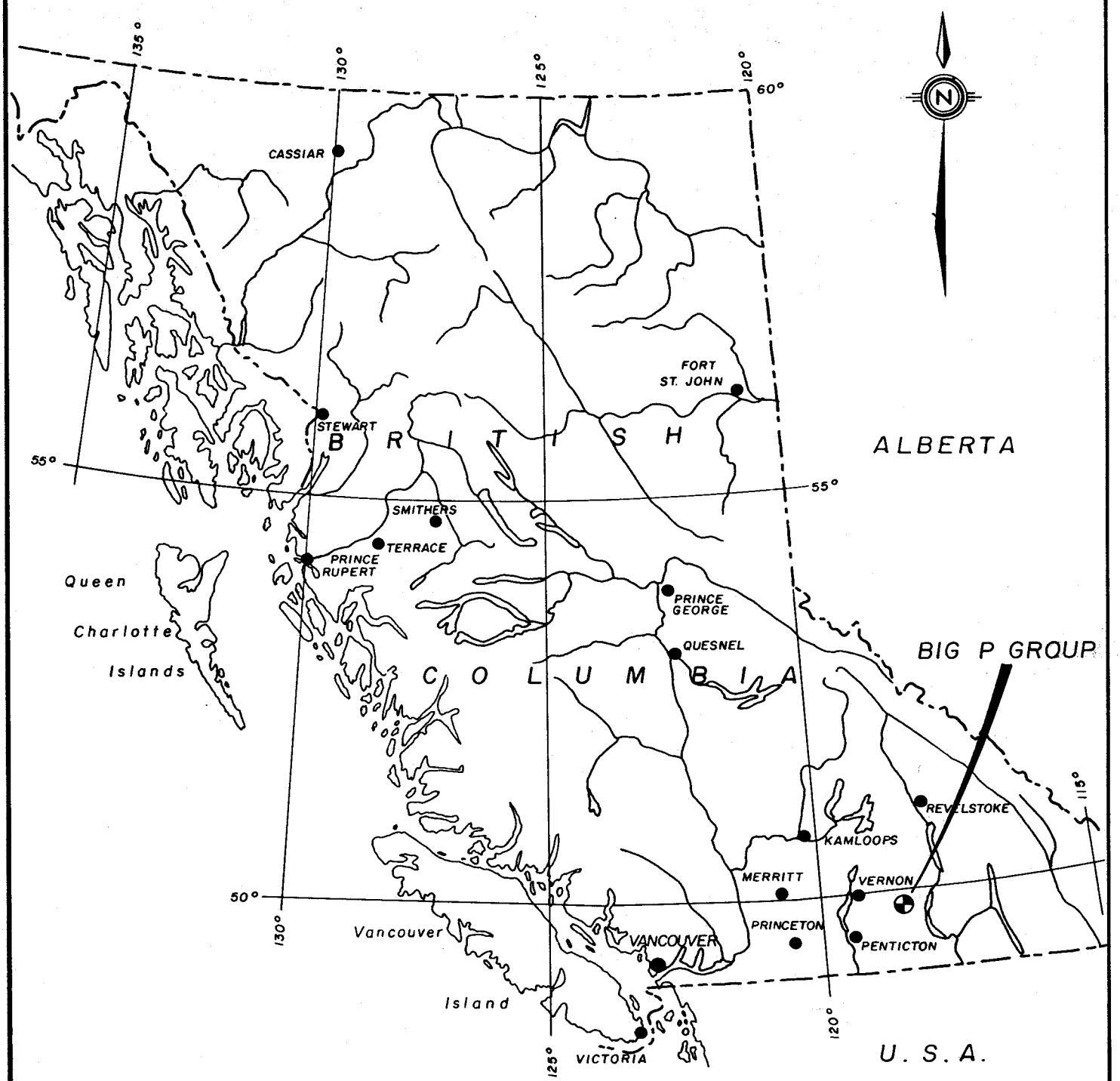
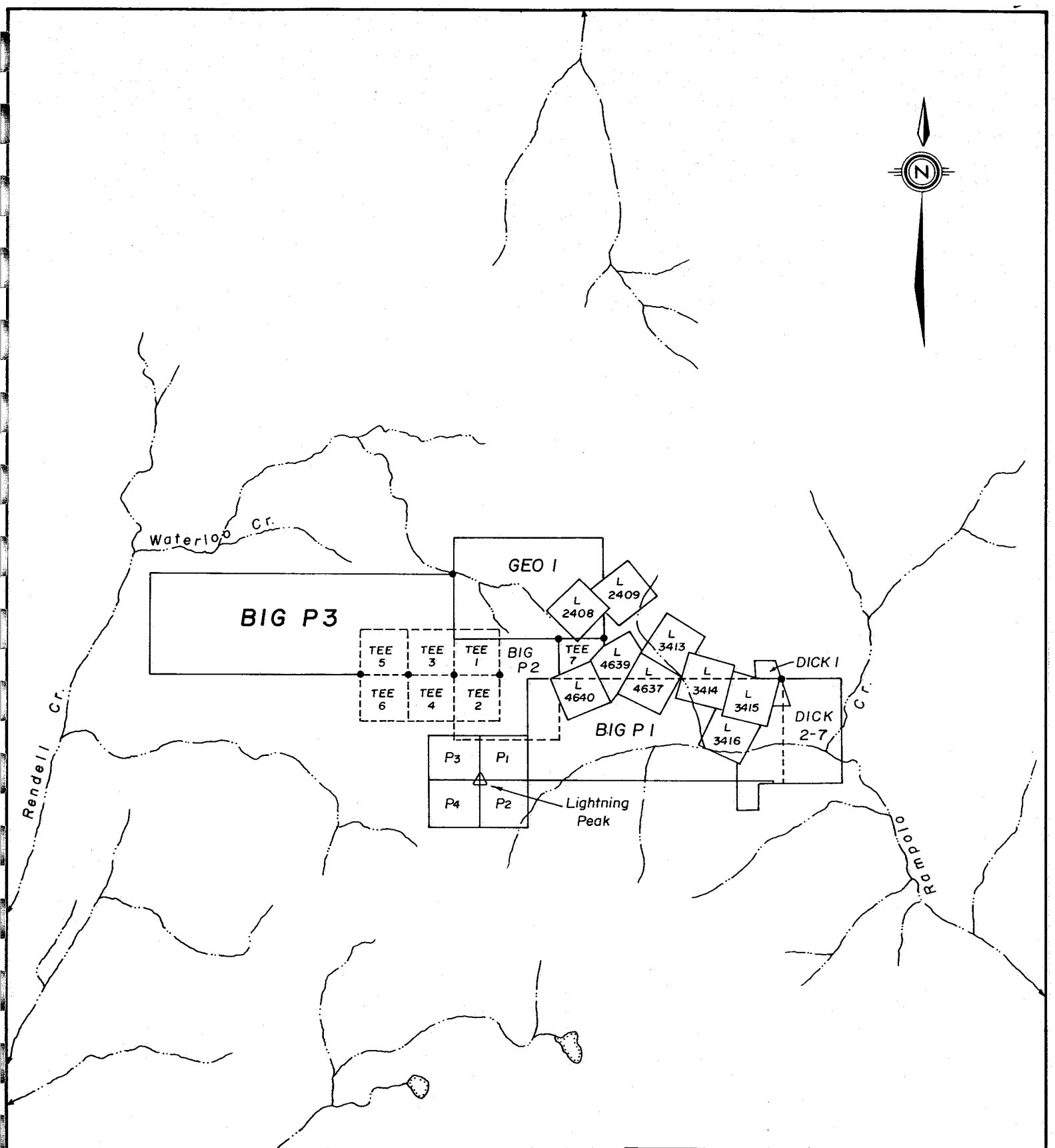


ZALMAC MINES LTD.	
LOCATION MAP	
BIG P GROUP	
VERNON MINING DIVISION, B.C.	
Technical Work by: G.Belik and Assoc. Ltd.	Date : Nov., 1984.
Scale : 1cm. = 87 km.	Dwg No. 1038-1



ZALMAC MINES LTD	
CLAIM MAP	
BIG P GROUP	
VERNON MINING DIVISION, B.C.	
Tech. Work By: G. Belik and Assoc. Ltd	Scale: 1:50,000
Drawn By: W.G.	Date: Nov., 1984.
Approved By: G.B.	Fig. No. 1038-2

N.T.S. No. 82 E/15E, 16W

To accompany a report by G. Belik, M.Sc.

INTRODUCTION

This report presents the results of a 2-phase exploration program carried out on the Big P Property, Vernon Mining Division, south-central British Columbia. Phase I, which included grid preparation, V.L.F. - Electromagnetic and Induced Polarization/Resistivity surveys, was carried out during the periods July 4-10 and July 12-17, 1985. Phase II, consisting of backhoe trenching of selected geophysical targets identified by Phase I, was completed during the period July 27-August 3, 1985. Field work was carried out by G. Belik & Associates Ltd., Kamloops, B. C., under the supervision of G. D. Belik, M.Sc.

CLAIMS

The Big P Property consists of 5 contiguous MGS claims totalling 39 units and 7 2-post claims as detailed below:

Mining Division	Claim Name	Units	Record No.	Record Date
Vernon	Dick 1	1	671	August, 1979
Vernon	Dick 2-7	6	891	July, 1980
Vernon	Big P1	10	955	November, 1980
Vernon	Big P2	4	956	November, 1980

Vernon	Big P3	18	957	November, 1980
Vernon	Tee 1	2-post	1877	October, 1984
Vernon	Tee 2	2-post	1878	October, 1984
Vernon	Tee 3	2-post	1879	October, 1984
Vernon	Tee 4	2-post	1880	October, 1984
Vernon	Tee 5	2-post	1881	October, 1984
Vernon	Tee 6	2-post	1882	October, 1984
Vernon	Tee 6	2-post	1914	November, 1984

The registered owner of the above claims is Zalmac Mines Limited, P.O. Box 1027, Vernon, B. C.

LOCATION AND ACCESSIBILITY

The Big P Property is located in the Vernon Mining Division, southcentral British Columbia (N.T.S. 82E/15E, 16W). The center of the property is situated about 70 km southeast of the city of Vernon at geographic co-ordinates 49° 53' North Latitude and 118° 32' West Longitude.

The property can be reached by travelling east from Vernon along highway 6 for about 80 km and thence southerly along the Kettle River road. At K62 on the Kettle River road, a secondary logging road is then followed southeast across Winnifred Creek, up over a divide into the Lightning Peak area. The final segment of road,

which is rough, extends southerly to Lightning Peak, through the central part of the claim area.

PHYSIOGRAPHY AND VEGETATION

The claim area is situated on the southwest flank of the Monashee Mountains near the north end of the Midway Range. The claim area extends across a plateau-like area centered between Rampalo Creek to the east and Rendell Creek to the west. Lightning Peak, the Highest point in the vicinity of the claims attains an elevation of 2,139 meters.

Elevation of the claim area ranges from about 1500 meters a.s.l. to about 2000 meters a.s.l. The central part of the claim area is characterized by areas of gentle to moderate relief with thick overburden and few bedrock exposures. Relief in the western part of the claim area, adjacent to Rendell Creek and the eastern part of the claim area, adjacent to Rampalo Creek is moderate to steep with local cliffs and rocky bluffs.

Below 1800 meters a.s.l. thick stands of mature balsam, spruce, fir and cedar with heavy underbrush predominate. Above 1800 meters a.s.l. forest cover is lighter and above 2,000 meters a.s.l. alpine-type vege-

tation prevails.

GENERAL GEOLOGICAL SETTING

The claim area straddles the contact between a pendant of Anarchist Group metavolcanics and metasediments to the north and Nelson and Valhalla granites to the south. Pendant lithologies are well exposed along a series of ridges extending north from Lightning Peak into the southcentral part of the Big P2 claim area. Outcrops of Nelson-type granites are abundant within the west half of the Big P3 claim, the east half of the Dick 2-7 claim, and along the southern margin of the Big P1 claim. Outcrop within the remainder of the claim area generally is scarce with large areas totally concealed by overburden.

Numerous small silver-bearing and locally goldbearing, polymetallic quartz veins and shear zones are evident within the pendant area. Most of these occurences are described by C. E. Cairnes in G.S.C. Summary Report 1930, Part A, pp. 79A-115A. Briefly summarized the showings are of two general types which include a) sulphide-quartz-carbonate lenses within strong east-west shear zones, and b) steeply dipping, northerly trending quartz veins.

The only known mineralization within the area of the

subject claims is the Lumpy showing. This prospect, which is situated in the northcentral part of the Big P2 claim, was explored by three short adits and a few shallow surface cuts between 1908 and 1910. This work exposed a pyritic, partly silicified limestone which locally contains very narrow seams and blebs of sphalerite and galena with high silver ± gold values.

PREVIOUS EXPLORATION

All of the known showings in the Lightning Peak area were initially explored in the late 1800's to early 1930's. During this period a few hundred to a few thousand tons of hand sorted ore, grading 100-700 oz silver per ton, were shipped from the district, principally from the Waterloo, Killaney, First Chance and West Fork Leases. In 1948 the Waterloo Property was acquired by the Paycheck Mining Company. Paycheck reportedly built a small mill and mined the Waterloo vein until 1954; the amount of ore milled is unknown.

With the dramatic rise in silver and gold prices in the late 1970's interest in the Lightning Peak area was renewed. From about 1978 to present considerable exploration work was carried out within and adjacent to several

of the old leases with the principal work having been carried out on the old Waterloo Lease. In 1978 underground workings on the Waterloo vein were rehabilitated and a program of underground mapping, sampling and drilling was carried out aimed primarily at developing larger reserves of low-grade ore. The results of this work were largely negative. The results of work carried out on other leases in the area or subsequence work carried out on the Waterloo Lease are not known.

The principal claims of the subject claim areas were acquired by Zalmac in 1979 and 1980 in order to cover the southerly extension of the roof pendant, adjacent to the known occurences. Apart from early work on the Lumpy Prospect and a broad based soil sampling program carried out in 1968 and 1969 by the Great Horn Mining Syndicate (Ass. Rept. 1812), there are no records of appreciable work having previously been carried out within the claim area.

Prior to the 1985 program, work carried out by Zalmac included mapping and sampling in the immediate vicinity of the Lumpy showing in 1981 and preliminary V.L.F. - Electromagnetic, induced polarization/resistivity surveys within the central part of the claim area in 1984. Results of this work are summarized in reports filed for

assessment credit with the B.C.D.M. (Bayrock, 1981; Belik, 1984).

1985 PROGRAM

Grid Preparation

A grid constructed in 1984 was expanded in 1985 to provide coverage over most of the claim area at a line spacing of about 200 meters. Intermediate lines were placed between 0+00W to 16+00W, providing coverage in the central part of the claim area at a line spacing of 100 meters.

Lines constructed in 1985, as in 1984, were blazed and marked with orange flagging with stations at 50-meter intervals identified by yellow and orange flagging marked with the line number and station location.

In total 19.8 km of new grid was constructed during the 1985 program.

V.L.F. Electromagnetic Survey

The electromagnetic survey was carried out utilizing

a Saber Model 27 V.L.F.-E.M. receiver manufactured by Saber Electronic Instruments Ltd., 4245 East Hastings Street, Vancouver, B. C. This instrument measures the relative strength and dip of electromagnetic fields transmitted by radio stations in the 15-25 KH_z range. These 'primary fields' are horizontal but can be disrupted by the presence of electrical conductors and by local topographic relief. Disruptions caused by conductors are actually caused by 'secondary fields' which are induced by the primary field. The tilt of the secondary field can be obtained by measuring the angle of null (minimum signal) in a vertical plane, normal to the wave front of the primary field.

The relative strength and magnitude of the secondary field caused by a conductor can be affected by many factors which include:

1. Conductivity of the conductor
2. Width of the conductor
3. Length of the conductor
4. Depth of the conductor
5. Orientation of the conductor relative to the transmitter station
6. Frequency of the transmitter

For tabular elongate bodies maximum coupling and

hence the strongest secondary electromagnetic field is obtained when the conductor is aligned normal to the primary wave (ie. conductor points to the transmitting station). There is virtually no coupling when conductors are aligned parallel to the primary field.

Local topographic relief can also cause a tilting of the primary field and lead to anomalous responses along ridge crests or along a sharp break-in-slope. In theory topographic anomalies can be eliminated by a lack of a corresponding increase in field strength values which generally are associated with bedrock conductors. However, this is not always the case and care must be taken when interpreting V.L.F. anomalies within areas of moderate to steep topographic relief.

For this survey the transmitting station utilized is located at Annapolis, Maryland (21.4 KH_z). Readings were taken at 25-meter intervals along all north-south lines. In total 18.0 km of grid was surveyed in 1985.

Presentation of Results

The dip angles and relative field strength values obtained during the survey are listed in Appendix I. Drawing 1038-3 is a contour map of the filtered dip

angles and shows definite (solid), probable (long dash) and possible (short dash) conductor axes. Drawing 1038-3 also incorporates data collected in 1984 along even numbered lines between 18+00W and 14+00E inclusive.

The filtering technique utilized was developed by D. C. Fraser (Geophysic, V.34, No. 6, P. 958-967; 1969). Briefly summarized, this technique converts anomalous cross-overs and inflections into positive values by a simple mathematical treatment of the dip angle data. This technique overcomes the difficulty, in many cases, of interpreting profiles and enables the data to be plotted in plan form with conductor areas defined by contours.

Discussion of Results

Numerous anomalies were defined within the survey area. Based on the general magnitude of anomalous inflections and on corresponding field strength values conductors have been categorized as definite, probable and possible. Anomalies which appear to be caused solely by changes in topography are indicated as such on Map 1038-3.

Induced Polarization Resistivity Survey

An Induced Polarization/Resistivity was carried out in order to further evaluate conductive zones identified by the V.L.F.-E.M. survey. In total 12 set-ups were completed covering segments of conductors 1,2,4,5,6,7,9, 10,11,12,13,14 and 18.

The survey was carried out utilizing variable frequency I.P. equipment manufactured by Sabre Electronic Instruments Limited, 4245 East Hastings Street, Vancouver, B. C.

The theory of Induced Polarization as applied in mining exploration is fully described in the literature. Briefly summarized, this phenomenon refers to the blocking action or capacitive-like effect of electronic conducting minerals* in rock through which an electrical current is being passed. This blocking action creates a resistance to current flow which increases with the length of time that a d.c. current is allowed to flow. Thus, assuming that appreciable conducting minerals are present, it can be seen that by varying the frequency of the transmitted current (ie. varying the length of

*includes most metallic sulphides, graphite, magnetite and some varieties of hematite.

time that current is allowed to flow in any one direction) the apparent resistivity of the rock mass being tested will change. The percent change in apparent resistivity when measured at two frequencies is recorded as Percent Frequency Effect or P.F.E. For this survey frequencies of $10H_z$ and $0.3H_z$ were utilized.

Method

A dipole-dipole electrode configuation was employed with an electrode separation of 25 meters. Readings were taken every 25 meters to n= 4 (ie. 25m, 50m, 75m and 100 meter separation between current electrodes and potential electrodes).

Presentation of Results

In this report the results of the Induced Polarization and Resistivity Survey are presented and contoured in profile form (Figures 1038-4 to 1038-12) at a scale of 1:1,250.

On the section maps, percent frequency effect values are plotted on the top line of the data profile above resistivity values. On the third line, below the resis-

tivity values are plotted metal factors (Metal Factor= $\frac{\text{F.E. x 1000}}{\text{Resistivity}}$). Values are plotted midpoint between the locations of current and potential electrodes.

The separation between current and potential electrodes is only one factor which determines the depth of penetration at any one set up. Thus, while the section maps illustrate in a general way changes in frequency effect and apparent resistivity with depth this relationship is one-linear and may vary significantly depending on the resistivity of the ground being tested and the dipole separation utilized. As a general rule the depth of penetration is between 0.5 and 1.0 times the electrode spread for the first separation (n= 1) and diminishes for successively greater separations.

In some situations the measured voltage at the low frequency setting ($0.3H_z$) is too noisy to render a reliable F.E. reading. In this situation the symbol N/R is recorded on the data plot. A data plot followed by the symbol (N) indicates that the reading was noisy but considered reliable. Occasionally negative F.E. values are recorded (indicated in brackets () on the Data Plot). Small negative F.E. values fall within the range of instrument and/or operator error when little polarizable material is present within the groundmass being tested. Larger negative values may be a result of spurious elec-

trical effects or unusual geological conditions.

Discussion of Results

Numerous resistivity lows were identified within the area surveyed which correlate well with conductive zones identified by the V.L.F.-E.M. survey. Segments of 8 of the conductors evaluated are associated with anomalous F.E. values.

Line 2+00W

Three anomalous I.P. zones were identified on line 2+00W. The north anomaly, which corresponds closely to the trace of conductor 11, is characterized by a F.E. high associated with a distinct resistivity low centered at about 1+65N. The anomaly width is between one and two dipoles (ie. apparent width of 25m-50m).

The central anomaly consists of a broad zone of weakly to moderately anomalous F.E. values extending from about 1+25N to 1+25S. Two zones of lower resistivity, centered at about 0+25N and 0+65S correspond to the trace of conductors 12 and 13.

The south anomaly, centered at 3+00S, consists of a pronounced resistivity low, associated with a distinct zone of weakly anomalous F.E. values which appear to

strengthen with depth. The south anomaly correlates well with V.L.F. conductor 18.

Line 3+00W

On line 3+00W a zone of moderately anomalous F.E. values was partly delineated north of 1+00N. The anomaly appears to be flanked on the south by a weak resistivity high.

Line 6+00W

Two weak to moderate I.P. anomalies were delineated on line 6+00W centered at about 1+50N and 2+85N. A third, moderately anomalous zone was partly delineated north of 1+75S.

The northern anomaly occurs near the southern margin of a broad resistivity low associated with conductors 9 and 10. The anomaly centered at 1+50N is flanked on the south by a distinct, narrow resistivity low which correlates well with the position of conductor 11.

Line 9+00W

On line 9+00W, conductor 10 is associated with a definite, moderate I.P. anomaly and a coincident, sharp, well-defined resistivity low. The anomalous zone, which is between one and two dipoles wide, is centered at about 3+65N.

Line 10+00W

Two I.P. anomalies were identified on the segment of line 10+00W surveyed. One anomaly was partly delineated north of 0+75N. A second anomaly occurs centered near the baseline.

The north anomaly is flanked on the south by a zone of lower resistivity which appears to be associated with conductor 6.

The baseline anomaly strengthens considerably with depth which suggests either the source of the anomaly strengthens with depth or the source is covered by thick overburden (ie. greater than 12m).

Line 14+00W

The I.P./Resistivity survey carried out along the north end of line 14+00W evaluated the eastern segment of conductor 1. Results indicate the conductor is associated with a broad resistivity low with no truly anomalous F.E. values.

The resistivity profile suggests that the conductor is near surface and flat lying; the most probable source is a conductive overburden layer.

Line 15+00W

The I.P./Resistivity survey on line 15+00W evaluated the strongest segment of conductor 2. Results confirm the presence of a broad, pronounced, resistivity low extending north of 5+25N to at least 6+50N.

The F.E. profile shows a moderately anomalous zone along the south edge of the resistivity low. A second, weakly anomalous zone occurs near the north edge.

Line 16+00W

On line 16+00W, a broad, moderate to strong I.P. anomaly extends from 1+50N to 3+00N. The strongest segment of the zone is centered at about 2+50N.

The north edge of the I.P. anomaly occurs at or near a major resistivity contact; a zone of low resistivities extends to the south and an area of moderate to high resistivities is situated to the north. More conductive segments within the resistivity low correlate well with the trace of conductors 4 and 5.

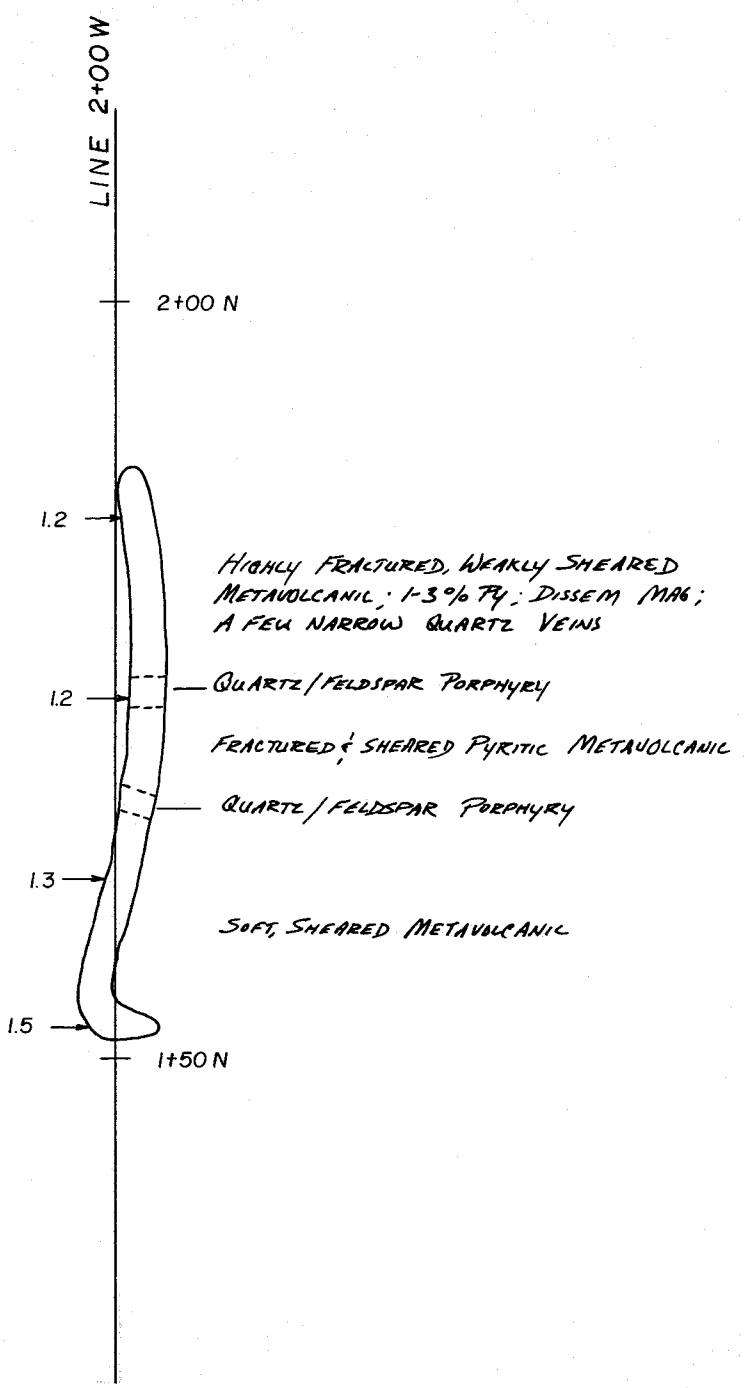
Line 22+00W

On line 22+00W a moderate I.P. anomaly was partly defined south of 9+00N. This anomaly may be associated with the western extension of conductor 2, which crosses line 22+00W at about 8+50N.

Backhoe Trenching

A preliminary trenching program was carried out in order to evaluate some of the priority geophysical targets identified by the 1984 and 1985 surveys. In total 9 trenches were completed utilizing a Hein-Werner C-16 excavator operated by Johanson Contracting of Vernon, B. C. The location of the trenches, the depth of overburden, rock analyses and a brief description of bedrock lithologies, where exposed, are given in Drawing 1038-13 to 1038-21 inclusive.

Briefly summarized, trenches 1-3,5 and 7-9 exposed pyritic mineralization within broad, weakly developed shear zones or within altered zones adjacent to granodiorite dykes. Trench 4 exposed a strong shear zone, 15 meters wide, with moderate to strong carbonate alteration and veining. Two samples collected from this zone returned moderately anomalous lead and weakly anomalous silver values. A similar, strong shear zone, 5 meters wide, was exposed near the north end of trench 9. This zone is flanked on the north by a highly siliceous unit, about 3 meters wide, resembling a vein. Samples collected from the two zones returned high lead (382 and 2880 ppm) and moderately anomalous silver (7.2 and 7.7 ppm) values.



LEGEND

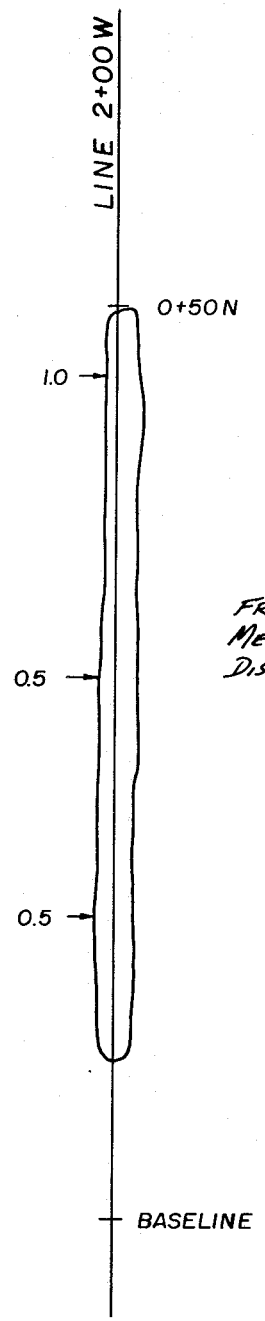
1+50N	GRID LINE WITH STATION LOCATION
	TRENCH OUTLINE
1.5m	OVERBURDEN DEPTH (METERS)
	GEOLOGICAL CONTACT
85 LP-2	SAMPLE LOCATION (PPM Pb, PPM Ag, PPB Au)

ZALMAC MINES LTD.

TRENCH 85TR-1

BIG P GROUP

Technical Work By: G. Belik and Assoc. Ltd.	Scale: 1:500 0 5 m 10 15
Drawn By: W.G.	Date: August, 1985.
Approved By:	Fig No. 1038-13



FRACTURED, WEAKLY SHEARED, ANDESITIC METAVOLCANIC; LOCALLY PYRITIC; FINELY DISSEMINATED MAGNETITE.

—LEGEND—

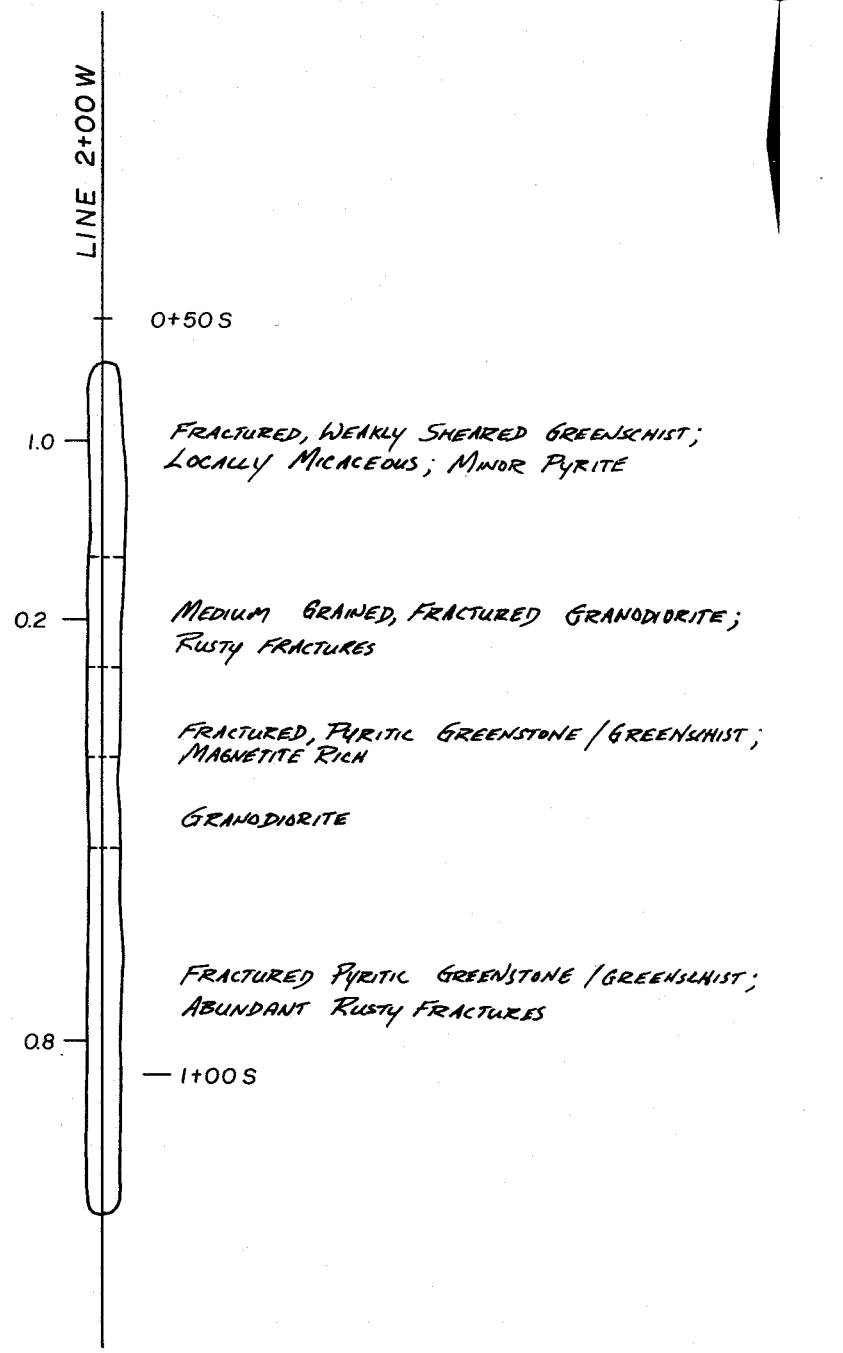
- 1+50N — GRID LINE WITH STATION LOCATION
- TRENCH OUTLINE
- 1.5m — OVERBURDEN DEPTH (METERS)
- GEOLOGICAL CONTACT
- 85 LP-2 — SAMPLE LOCATION (PPM Pb, PPM Ag, PPB Au)

ZALMAC MINES LTD.

TRENCH 85TR-2

BIG P GROUP

Technical Work By: G. Belik and Assoc. Ltd.	Scale: 1:500 0 5 m 10 15
Drawn By: W.G.	Date: August, 1985.
Approved By:	Fig No. 1038-14



—LEGEND—

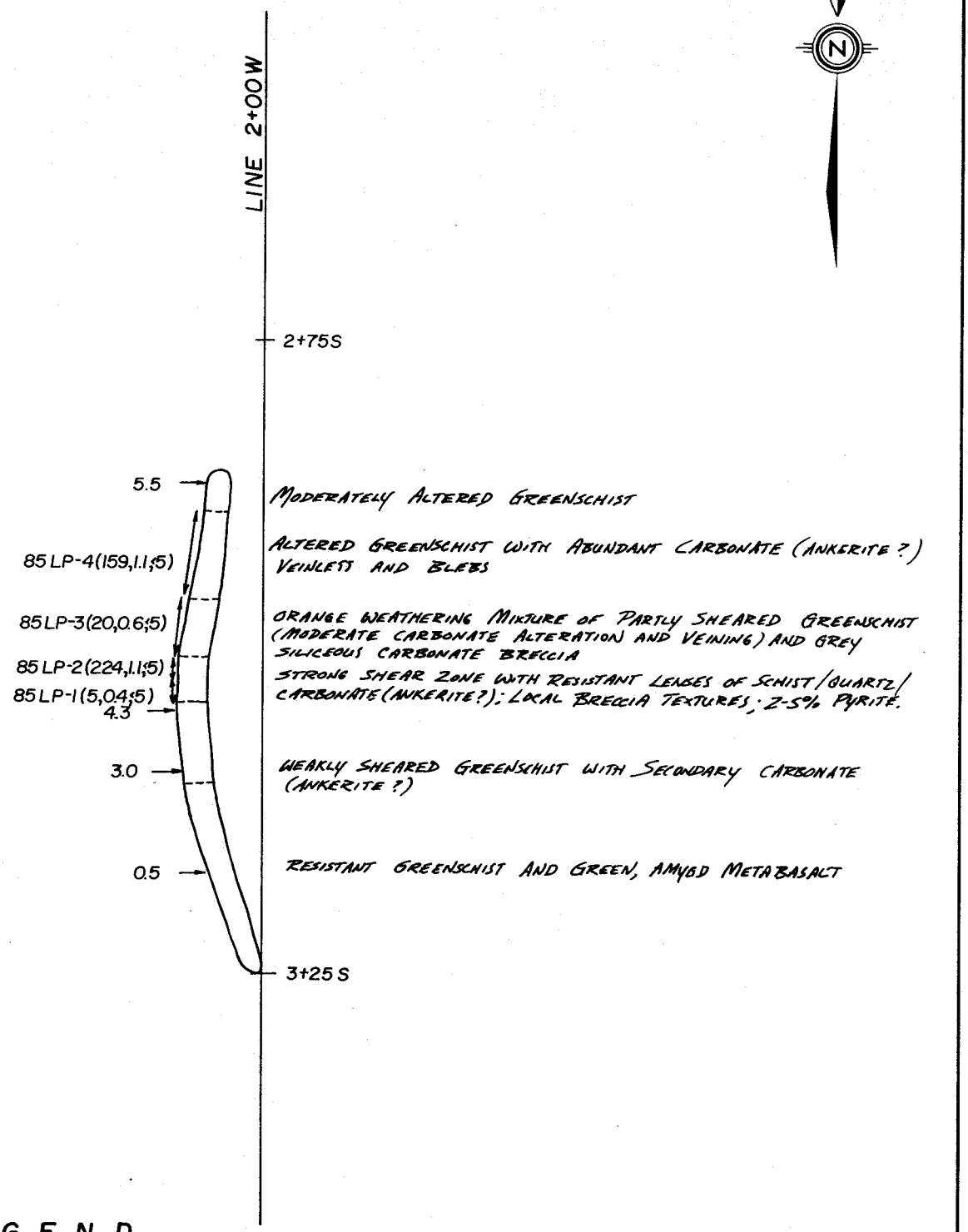
- 1+50N — GRID LINE WITH STATION LOCATION
- TRENCH OUTLINE
- 1.5m — OVERBURDEN DEPTH (METERS)
- – – – – GEOLOGICAL CONTACT
- 85 LP-2 — SAMPLE LOCATION (PPM Pb, PPM Ag, PPB Au)

ZALMAC MINES LTD.

TRENCH 85 TR-3

BIG P GROUP

Technical Work By: G. Belik and Assoc. Ltd.	Scale: 1:500 0 5 m 10 15
Drawn By: W.G.	Date: August, 1985.
Approved By:	Fig No. 1038-15



—LEGEND—

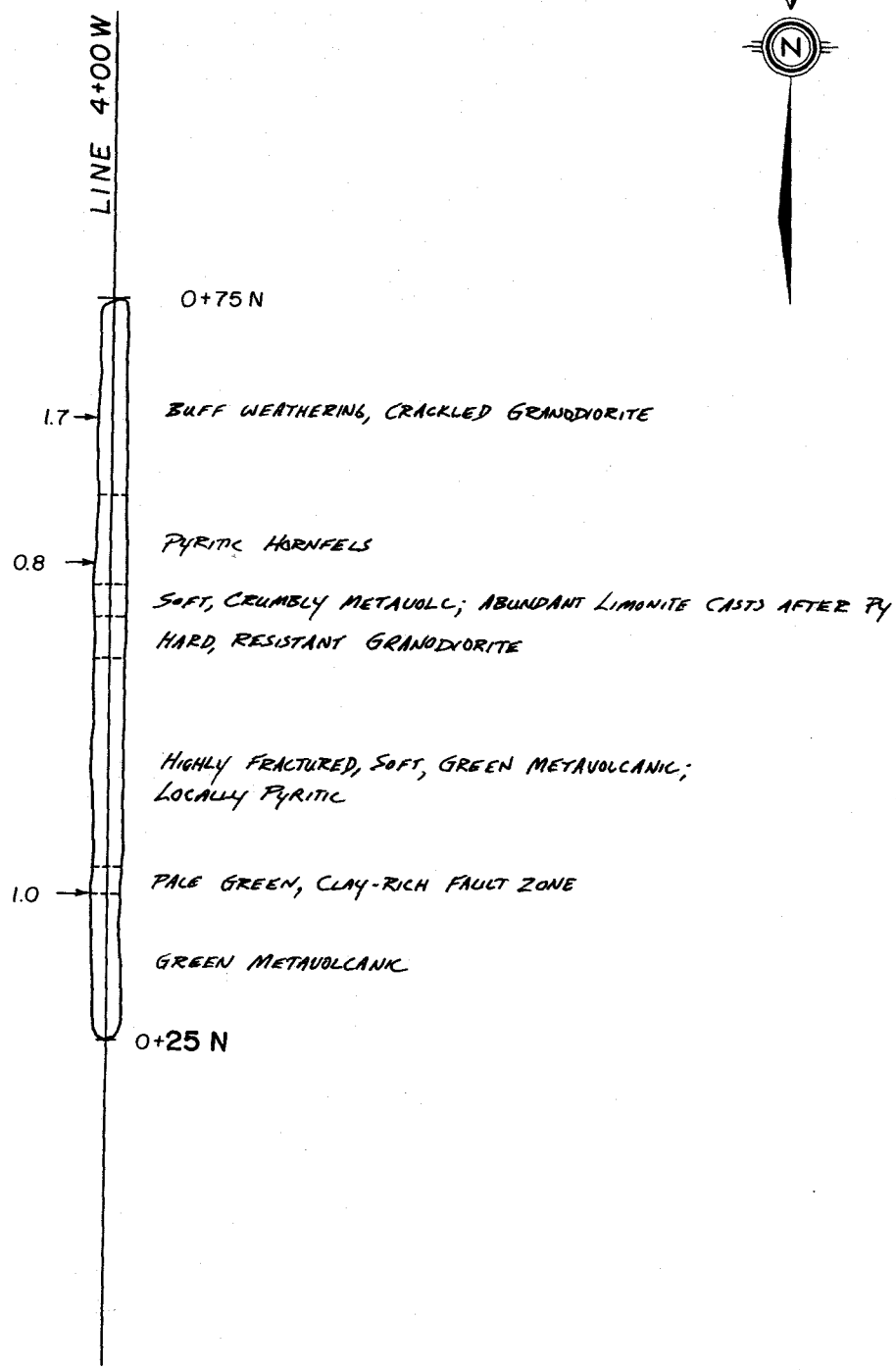
- 1+50N — GRID LINE WITH STATION LOCATION
- TRENCH OUTLINE
- 1.5m — OVERBURDEN DEPTH (METERS)
- GEOLOGICAL CONTACT
- 85 LP-2 — SAMPLE LOCATION (PPM Pb, PPM Ag, PPB Au)

ZALMAC MINES LTD.

TRENCH 85TR-4

BIG P GROUP

Technical Work By : G. Belik and Assoc. Ltd.	Scale : 1:500 0 5 m 10 15
Drawn By: W.G.	Date : August, 1985.
Approved By:	Fig No. 1038-16



—LEGEND—

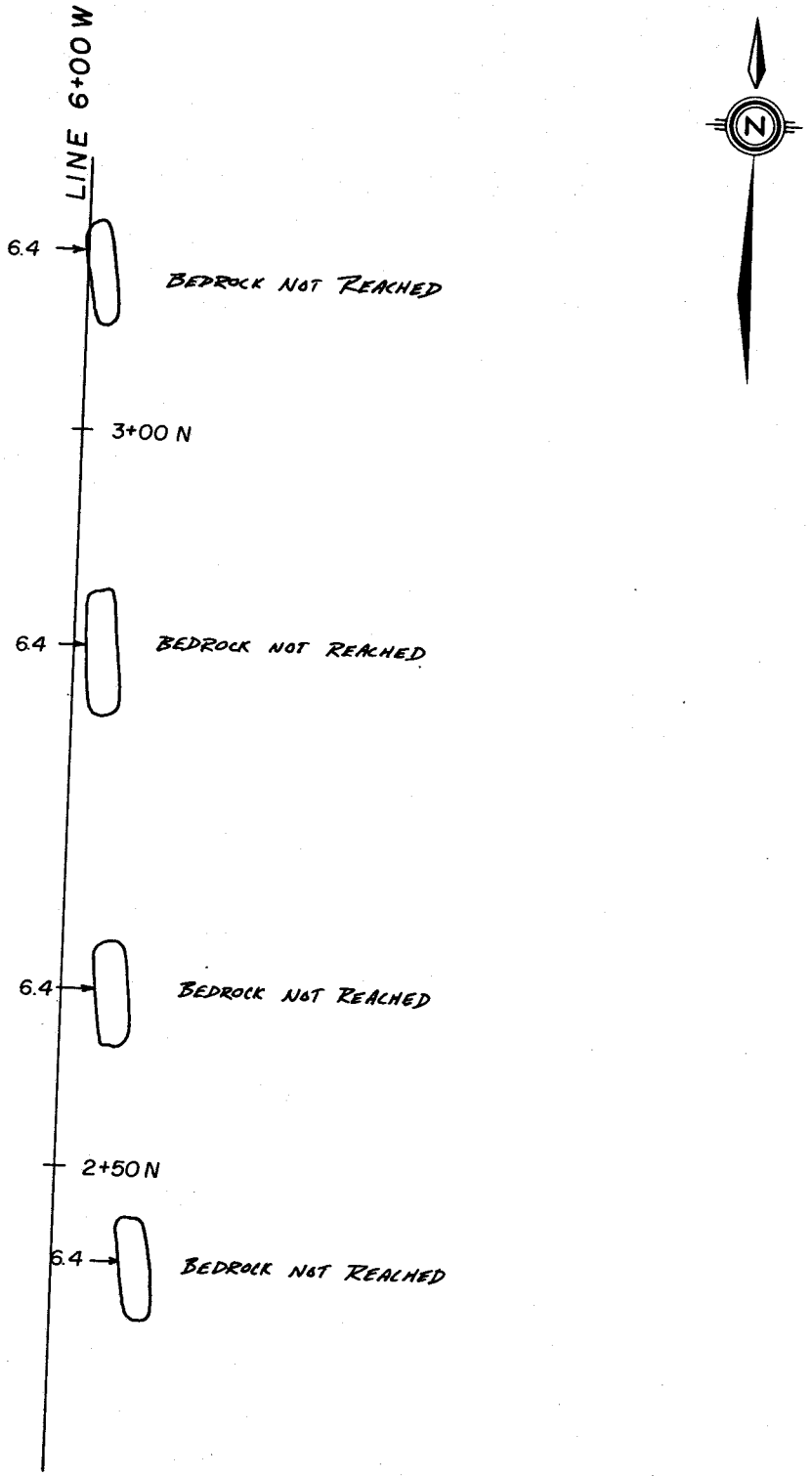
- 1+50N — GRID LINE WITH STATION LOCATION
- TRENCH OUTLINE
- 1.5m — OVERBURDEN DEPTH (METERS)
- GEOLOGICAL CONTACT
- 85 LP-2 — SAMPLE LOCATION (PPM Pb, PPM Ag, PPB Au)

ZALMAC MINES LTD.

TRENCH 85TR-5

BIG P GROUP

Technical Work By: G. Belik and Assoc. Ltd.	Scale: 1:500 0 5 m 10 15
Drawn By: W.G.	Date: August, 1985.
Approved By:	Fig No. 1038-17



-LEGEND-

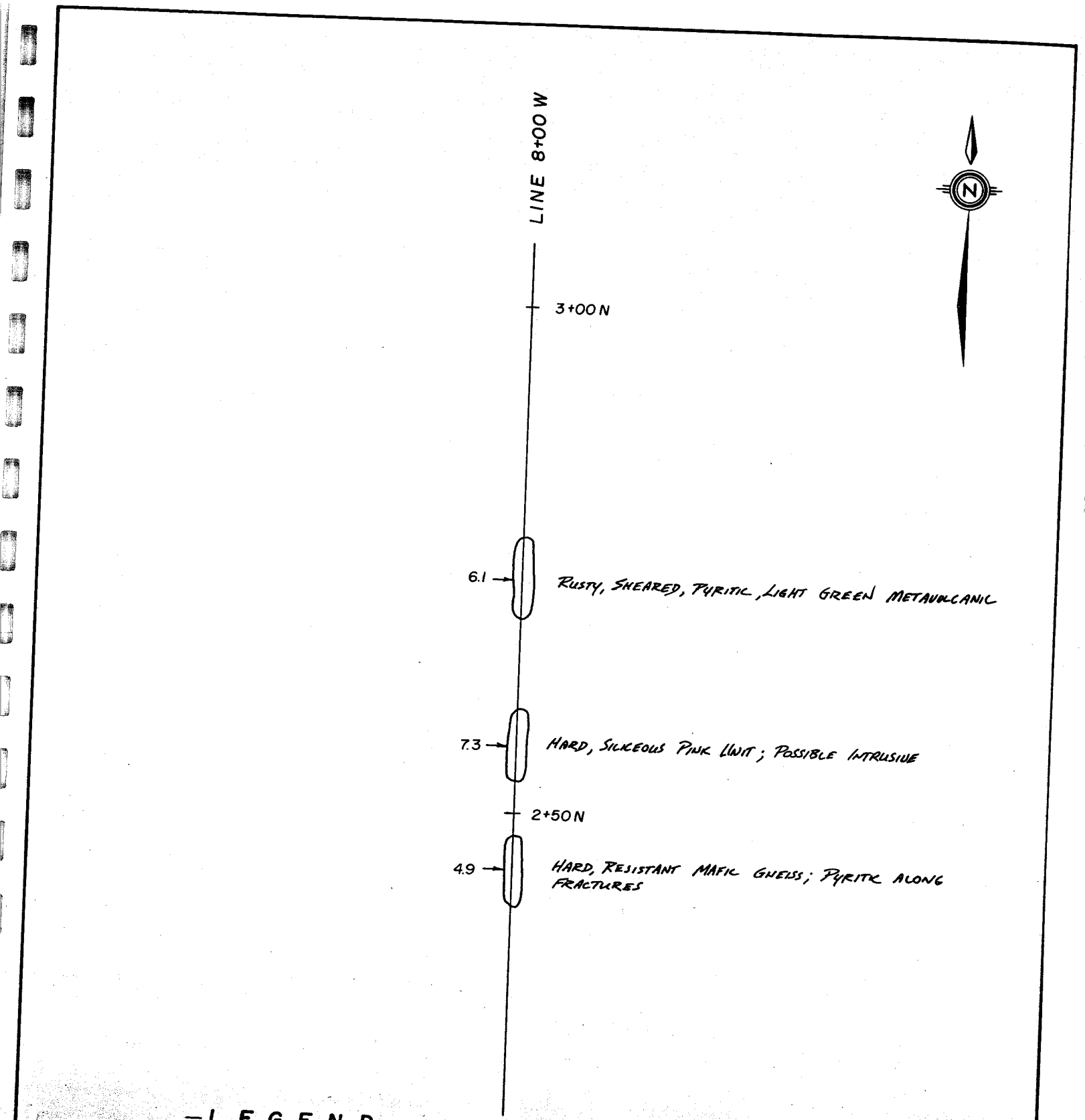
- 1+50N — GRID LINE WITH STATION LOCATION
- TRENCH OUTLINE
- 1.5m — OVERBURDEN DEPTH (METERS)
- GEOLOGICAL CONTACT
- 85 LP-2 — SAMPLE LOCATION (PPM Pb, PPM Ag, PPB Au)

ZALMAC MINES LTD.

TRENCH 85TR-6

BIG P GROUP

Technical Work By: G. Belik and Assoc. Ltd.	Scale: 1:500 0 5 m 10 15
Drawn By: W.G.	Date: August, 1985.
Approved By:	Fig No. 1038-18



LEGEND

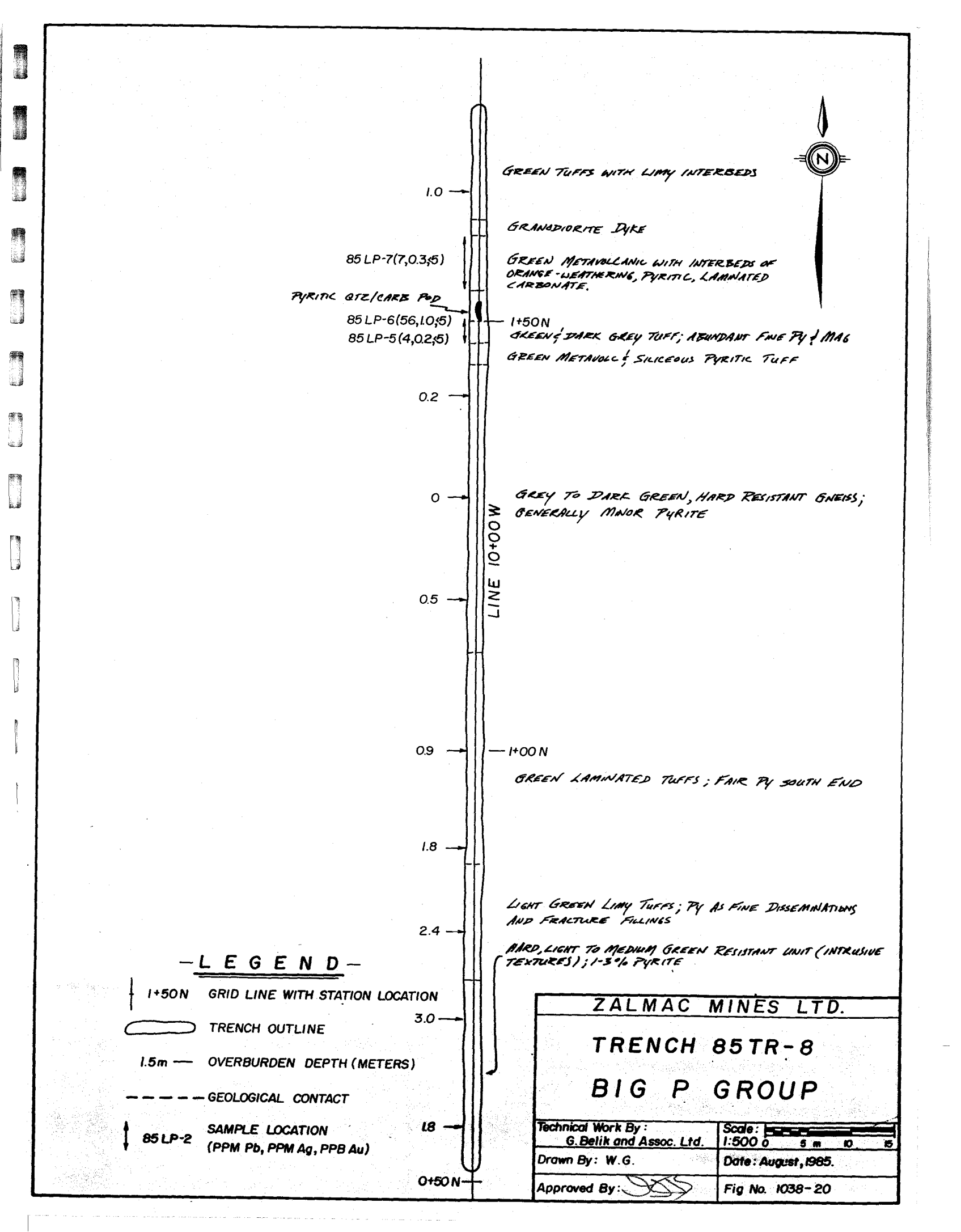
- 1+50N — GRID LINE WITH STATION LOCATION
- TRENCH OUTLINE
- 1.5m — OVERBURDEN DEPTH (METERS)
- GEOLOGICAL CONTACT
- 85 LP-2 — SAMPLE LOCATION (PPM Pb, PPM Ag, PPB Au)

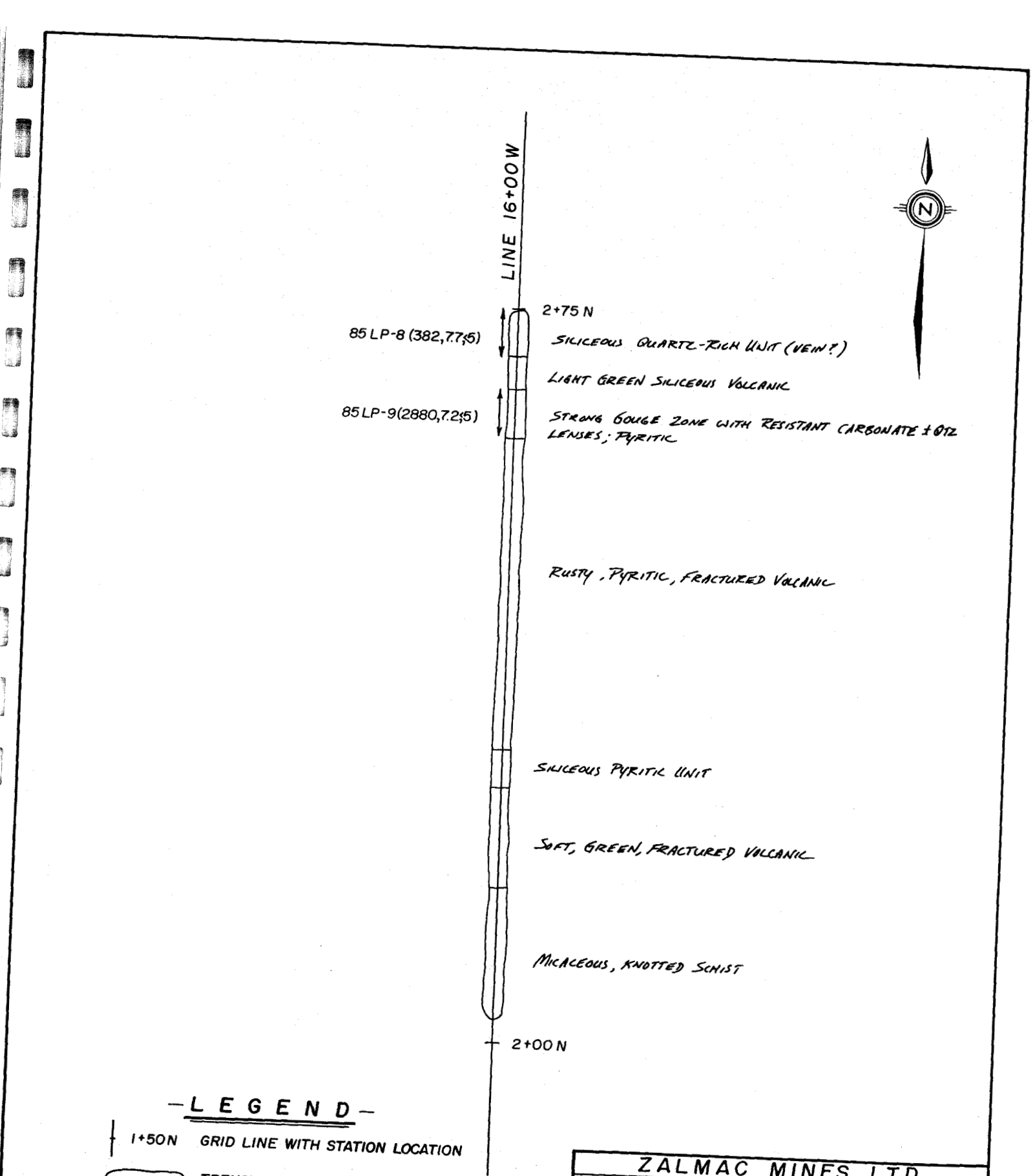
ZALMAC MINES LTD.

TRENCH 85 TR-7

BIG P GROUP

Technical Work By: G. Belik and Assoc. Ltd.	Scale: 1:500 0 5 10 15
Drawn By: W.G.	Date: August, 1985.
Approved By:	Fig No. 1038-19


GREEN TUFFS WITH LIMY INTERBEDS
1.0
GRANADIORITE DYKE
85 LP-7(7,0.3;5)
GREEN METAVOLCANIC WITH INTERBEDS OF ORANGE-WEATHERING, PYRITIC, LAMINATED CARBONATE.
PYRITIC QTZ/CARB POD
85 LP-6(56,1.0;5)
1+50N
85 LP-5(4,0.2;5)
GREEN & DARK GREY TUFF; ABUNDANT FINE Py & MAG
GREEN METAVOLC & SILICEOUS PYRITIC TUFF
0.2
0
GREY TO DARK GREEN, HARD RESISTANT GNEISS; GENERALLY MINOR PYRITE
LINE 10+00W
0.5
0.9
1+00N
GREEN LAMINATED TUFFS; FAIR Py SOUTH END
1.8
LIGHT GREEN LIMY TUFFS; Py AS FINE DISSEMINATIONS AND FRACTURE FILLINGS
2.4
HARD, LIGHT TO MEDIUM GREEN RESISTANT UNIT (INTRUSIVE TEXTURES); 1-3% PYRITE
3.0
1.8
0+50N
N
-LEGEND-
1+50N GRID LINE WITH STATION LOCATION
TRENCH OUTLINE
1.5m — OVERBURDEN DEPTH (METERS)
GEOLOGICAL CONTACT
85 LP-2 SAMPLE LOCATION (PPM Pb, PPM Ag, PPB Au)
ZALMAC MINES LTD.
TRENCH 85TR-8
BIG P GROUP
Technical Work By: G. Belik and Assoc. Ltd.
Scale: 1:500 0 5 m 10 15
Drawn By: W.G.
Date: August, 1985.
Approved By:
Fig No. 1038-20



-LEGEND-

- 1+50N — GRID LINE WITH STATION LOCATION
- TRENCH OUTLINE
- 1.5m — OVERBURDEN DEPTH (METERS)
- – – – – GEOLOGICAL CONTACT
- 85 LP-2 — SAMPLE LOCATION (PPM Pb, PPM Ag, PPB Au)

ZALMAC MINES LTD.

TRENCH 85TR-9

BIG P GROUP

Technical Work By: G. Belik and Assoc. Ltd.	Scale: 1:500 0 50m 100 15
Drawn By: W.G.	Date: August, 1985.
Approved By:	Fig No. 1038-21

CONCLUSIONS AND RECOMMENDATIONS

Geophysical surveys carried out in 1984 and 1985 have identified numerous targets. A preliminary trenching program has confirmed that several of these targets are associated with shear zones, similar in character to the structures which host the known deposits in the Lightning Peak area. Although no economic mineralization has been encountered to date, two structures have been identified which contain anomalous values in lead and silver, the principal mineralization in the Lightning Peak area. This demonstrates that the basic ore-forming processes may have been operative within the claim area. Thus, assuming local, favourable geological conditions, stronger mineralized zones would also be expected to occur.

A program of further exploration is warranted. The next phase of exploration should include additional trenching along the projected strike of the anomalous structures identified in trenches 4 and 9. Trenching should also be carried out along several other priority geophysical targets which have not been tested, most notable of which are conductors 2,3,5,8,17,19,20 and 21.

Respectfully Submitted,

Gary D. Belik

APPENDIX I

V.L.F. - Electromagnetic Data

VLF – EM SURVEY

PROJECT L.P. PAGE 1
GRID WEST DATE 5/7/85
LINE 1+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	66	+11	23		
4+00S	68	+12	22	5	
	70	+10	18	12	PEND OUT
	72	+8	10	16	DRY GOOD TR LOC
	75	+2	2	13	
3+00S	71	0	-3	1	
	65	-3	-3	-	
	63	0	5	-	
	60	+5	12	-	
2+00S	63	+7	19	-	
	66	+12	21	3	
	73	+9	16	13	
	73	+7	8	15	
1+00S	72	+1	1	8	
	64	0	0	0	
	63	0	-1	2	
	66	-1	-2	-	
B.L	62	-1	5	-	
	65	+6	8	3	
	69	+12	2	13	
	70	0	-5	10	
1+00N	69	-5	-8	2	

VLF – EM SURVEY

PROJECT L.P. PAGE 3
GRID WEST DATE 5/7/85
LINE 3+00W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	70	-3	-7		
4+00S	70	-4	-10	2	
	68	-6	-9	-	
	67	-3	-2	-	F= 62°/155 BOUNDARY
	65	+1	1	0	F= 72°/90
3+00S	65	0	-2	2	
	62	-2	-1	-	
	61	+1	3	-	
	57	+2	6	-	
2+00S	58	+4	11	-	
	59	+7	16	-	CK
	62	+9	20	-	
	65	+11	17	9	
1+00S	72	+6	11	9	
	72	+5	8	9	
	72	+3	2	11	30 m TR
B.L.	70	-1	-3	5	
	65	-2	-3	8	
	71	-1	-11	16	
	72	-10	-19	12	
1+00N	66	-9	-23	10	

VLF – EM SURVEY

PROJECT L.P. PAGE 5
GRID WEST DATE 5/7/85
LINE 5+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
4+00S	58	+3	3		GN OUT
	60	0	-1	5	
	58	-1	-2	2	
	62	-1	-3	3	
3+00S	57	-2	-5	3	
	57	-3	-6	-	
	58	-3	-4	-	F=142
	55	-1	0	-	
2+00S	57	+1	1	6	GN
	60	0	-6	12	CK
	60	-6	-11	2	ROAD 8m S
	55	-5	-0	-	
1+00S	55	-3	-8	#1	
	52	-5	-9	1	
	55	-4	-9	2	GN F=30/90
	56	-5	-11	-	VERY CONDUCTIVE F=143/150
B.L	57	-6	-7	-	
	59	-1	-3	4	NAFIA GN
	62	-2	-11	16	
	62	-9	-19	9	OUT 10m N
1+00N	57	-10	-20	-	

VLF – EM SURVEY

PROJECT L.P. PAGE 7
GRID WEST DATE 5/7/85
LINE L 7+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
4+00S	57	-5	-6		GN
	54	-1	-2	-	
	57	-1	-3	4	
	54	-2	-6	6	
3+00S	55	-4	-9	4	OUT GN
	57	-5	-10	7	OUT GN
	57	-5	-16	8	
	57	-11	-18	1	ROAD
2+00S	53	-7	-17	1	
	53	-10	-19	0	
	52	-9	-17	-	OUT
	52	-8	-17	-	
1+00S	51	-9	-18	-	
	48	-9	-16	-	GN
	48	-7	-12	-	
	48	-5	-7	-	
B.L	50	-2	-4	-	
	50	-2	-4	-	
	52	-2	-3	-	
	50	-1	-2	-	
1+00N	54	-1	-2	-	

VLF – EM SURVEY

PROJECT L.P PAGE 4
GRID WEST DATE 5/7/85
LINE 3+00W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	64	-14	-29	4	ROAD
	59	-15	-27	–	
	55	-12	-24	–	
2+00N	56	-12	-22	–	ROAD 3m WEST +7m N
	57	-10	-23	0	
	56	-13	-22	0	
	56	-9	-23	1	
3+00N	56	-14	-23	–	
	53	-9	-17	–	
	52	-8	-11	–	E-W ROAD
	50	-3	-1	–	
4+00N	52	+2	6	–	
	57	+4	7		
	58	+3			

VLF – EM SURVEY

PROJECT L.P PAGE 2
GRID WEST DATE 5/7/85
LINE 1+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	62	-3	-7	–	
	63	-4	-7	–	
	63	-3	-5	–	
2+00N	61	-2	-4	–	
	60	-2	-4	0	
	62	-2	-4	3	
	63	-2	-7	4	
3+00N	62	-5	-8	0	
	60	-3	-7	2	
	63	-4	-10	4	
	62	-6	-11	–	
4+00N	60	-5	-8		F.S. 2750
	63	-3			

VLF – EM SURVEY

PROJECT L.P PAGE 8
GRID WEST DATE 5/7/85
LINE 7+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	52	-1	0	–	
	52	+1	4	–	
	58	+3	1	8	
2+00N	58	-2	-4	5	
	54	-2	-4	–	
	53	-2	-2	–	
	53	0	0	2	
3+00N	62	0	-4	11	
	63	-4	-11	12	
	62	-7	-16	9	
	62	-9	-20	8	
4+00N	59	-11	-24	8	BLAZE LN 4m N
	59	-13	-28	8	
	60	-15	-32	8	
	56	-17	-36		
5+00N	53	-19			

VLF – EM SURVEY

PROJECT L.P. PAGE 6
GRID WEST DATE 5/7/85
LINE 5+00W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	54	-10	-17	–	
	52	-7	-9	–	↑ RED > E = 120 755
	54	-2	-1	-5 L.S.	PIT 3m W
2+00N	56	+1	0	5	PIT 8m N
	62	-1	-6	5	CUT 15m WEST
	53	-5	-5	–	2 PITS 2-5m E
	52	0	1	–	LUMPY ROCK (S.)
3+00N	57	+1	2	–	8m W x 10m N
	54	+1	3	–	
	59	+2	7	–	
	63	+5	5	11	CLAIM POST 4m E of (No Tags)
4+00N	68	0	-4	17	
	70	-4	-12	11	
	68	-8	-15	8	
	69	-7	-20	17	
5+00N	72	-13	-32	20	E-W LN BLAZED
	65	-19	-40		
	56	-21			

VLF – EM SURVEY

PROJECT LIGHTENING PEAK PAGE 11
GRID WEST DATE 6 JULY 85
LINE 11W OPERATOR Dale Owens
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
			-12		2810
4+00S	55	-6	-11	—	
	56	-6	-7	1	
3+50S	55	-5	-12	6	o/c 3+65S
	56	-4	-15	0	WESTERN SLOPE of Knoll
3+00S	55	-8	-12	—	O/C
	55	-7	-10	—	
	60	-5	-11	6	DRY CK 2+20S
	57	-5	-16	8	small draw
2+00S	56	-6	-19	—	OTHER SIDE OF draw
	55	-10	-15	—	2+50 small KNOLL
	54	-9	-13	—	
	54	-6	-11	—	
1+00S	53	-7	-5	—	
	54	-4	-1	—	
	53	-1	-2	2	O+25 TRAIL/RD
	55	0	-3	1	5m to E / 10m long
B/L	57	-2	-3	2	
	57	-1	-5	7	O+10mN CK (E/W)
	62	-2	-10	9	
	63	-3	-14	4	
1+00N	63	-7			

VLF – EM SURVEY

PROJECT L.P PAGE 9
GRID WEST DATE 5/7/85
LINE 9+00W OPERATOR G.B
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
			-4		ON 2+00S L.P.
4+00S	50	-2	-4	2	ROAD 18m
	50	-2	-6	6	
	53	-2	-10	3	
	53	-4	-9	—	
3+00S	52	-6	-4	—	
	50	-3	-2	—	
	50	-1	-3	5	
	50	-1	-7	6	
2+00S	52	-2	-9	—	GN
	53	-5	-4	—	
	50	-4	0	—	
	48	0	1	—	
1+00S	50	0	3	—	
	50	+1	3	2	
	51	+2	1	5	
	53	+1	-2	5	
B.L	56	0	-6	8	
	56	-2	-10	8	GN
	56	-4	-14	5	
	55	-6	-15	—	
1+00N	52	-8			

VLF – EM SURVEY

PROJECT LIGHTENING PK PAGE 15
GRID WEST DATE 6 JULY 85
LINE L 13W OPERATOR DA
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
			-20	1	336 = 50 FS
6+00N	66	-10	-19	—	
	67	-10	-16	—	
	58	-9	-15	—	
	58	-7	-11	—	
7+00N	60	-8	-9	8	
	64	-3	-19	23	
	67	-6	-32	18	
	73	-13	-37	4	
8+00N	68	-19	-36	—	
	63	-18	-32	—	FF A12453 15mW of 8+50
	54	-18	-28	—	B+60 old claim line
	52	-14	-22	—	
9+00N	53	-14	-13	—	
	47	-8	-5	—	
	44	-5	0		S.BL at 9+60
	46	0			
10+00N	50	0			

VLF – EM SURVEY

PROJECT L PEAK PAGE 13
GRID WEST DATE 6 JULY 85
LINE L11W OPERATOR DA
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
6+50N	58	-8	-20	4	
	58	-12	-22	0	
7+00N	54	-10	-20	—	
	53	-10	-20	—	
	51	-10	-18	—	
	54	-8	-15	—	
8+00N	54	-7	-16	3	
	57	-9	-18	4	
	55	-9	-20	1	
	54	-11	-9	—	8+50N 10YR BLAZED LINE W/N
9+00N	50	-8	-13	—	
	48	-5	-10	—	9+45N S.B/L 50
	48	-5	-5	—	
	49	0	-2	—	
10+00N	50	-2	-4		TRAIL/OLD RD ~600
	58	-2			30mE is a
					B line 15+00W 3+
					G 89
B/L 13	58	0	0		NO LCP IN AIR
0+25	61	0	2	—	
0+50	64	+2	3	8	TRENCH SITE 0

VLF – EM SURVEY

PROJECT L.P. PAGE 10
GRID WEST DATE 5/7/85
LINE 9+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	50	-7	-12	—	
	50	-5	-10	—	
	49	-5	-6	—	
2+00N	51	-1	-1	—	
	54	0	0	—	
	57	0	5	0	
	57	+5	0	27	
3+00N	71	-5	-22	37	
	65	-17	-37	20	TR
	58	-20	-42	2	
	53	-22	-39	—	
4+00N	48	-17	-27	—	BL LN 5mN
	50	-10	-23	—	BIG P 2W
	50	-13	-23	—	4+00N 9+90W
	48	-10	-19	—	
5+00N	47	-9	-15		
	48	-6			

VLF – EM SURVEY

PROJECT L-PEAK PAGE 12
GRID WEST DATE 6 JUL 85
LINE L11W OPERATOR DA
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
L11W 1+25	60	-7	-14	—	TOP OF KNOLL
50	60	-1	-13	—	
75	58	-6	-12	—	O/C
2+00N	57	-6	-11	—	
	60	-5	-11	0	
50	60	-6	-11	4	
	61	-5	-15	9	
3+00N	67	-10	-20	4	
	62	-10	-19	—	
	57	-9	-16	—	
	58	-7	-15	—	
4+00N	58	-8	-17	—	
	58	-6	-11	—	
	57	-5	-10	—	O/C N FACE SLOPE
	57	-5	-10	0	
5+00N	58	-5	-10	2	
	60	-5	-12	5	
	62	-7	-15	6	
	61	-8	-18	0	
6+00N	58	-10	-15	—	
L11W 6+25N	58	-7	-15	5	

VLF – EM SURVEY

PROJECT LIGHTENING PK PAGE 14
GRID WEST DATE 6 JUL 85
LINE L13W OPERATOR DA
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
0+75N	70	+1	-6	16	
1+00N	78	-7	-13	6	
	69	-6	-12	—	
	72	-6	-12	3	
	65	-6	-15	4	
2+00N	67	-9	-16	—	2+00N CK
	61	-7	-12	—	
	61	-5	-9	—	
	64	-4	-11	—	
3+00N	64	-7	-11	—	
	62	-4	-10	0	
	61	-6	-11	—	
	58	-5	-6	—	
4+00N	60	-1	-2	—	
	63	-1	-2	—	
	64	-1	-1	6	4+50 CK
4+75	73	0	-8	16	
5+00	74	-8	-17	9	
	68	-9	-17	—	
+50	67	-8	-16	1	
5+75	66	-8	-18	4	

VLF – EM SURVEY

PROJECT _____ PAGE _____
GRID _____ DATE _____
LINE _____ OPERATOR _____
SOURCE STATION _____

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS

G. Belik and Associates Ltd., - I.P. Data Sheets

CLIENT: Zalmac Mines Ltd.
PROPERTY: Big P Group
OPERATOR: G. Belik
FREQ'S USED: 10Hz/0.3H
DATE: July, 1985

Line 2+00W

Tx Location: 0+75S
Calibration:

B.L. - 0+25S	+4.0
0+25 - 0+50S	+2.5
0+50 - 0+75S	+3.8
0+75 - 1+00S	+3.8
1+00 - 1+25S	+3.0
1+25 - 1+50S	+2.2
1+50 - 1+75S	+2.0

Rx Loc.	Tx Loc.	Vernier Voltage	Voltage Scale	I	F.E.	Corr. F.E.	Apparent Resistivity
0+50-0+75N	B.L.-0+25S	226	100	120	9.2	5.2	56
	0+25-0+50S	547	10	115	6.2(N)	3.7	36
	0+50-0+75S	351	10	125	6.5(N)	2.7	42
0+25-0+50N	B.L.-0+25S	972	100	120	10.0	6.0	61
	0+25-0+50S	160	100	115	9.0	6.5	42
	0+50-0+75S	762	10	125	6.5	2.7	46
	0+75-1+00S	335	10	130	NR	-	39
B.L.-0+25N	0+25-0+50S	242	1000	115	6.0	3.5	158
	0+50-0+75S	678	100	125	6.5	2.7	163
	0+75-1+00S	220	100	130	6.8	3.0	127
	1+00-1+25S	100	100	130	8.2(N)	5.2	115
0+25S-B.L.	0+50-0+75S	188	1000	125	6.6	2.8	113
	0+75-1+00S	408	100	130	6.2	2.4	94
	1+00-1+25S	179	100	130	7.5	4.5	103

Line: 2+00W Tx: 0+75S

Rx Loc.	Tx Loc.	Vernier Voltage	Voltage Scale	I	F.E.	Corr. F.E.	Apparent Resistivity
0+25-0+50S	0+75-1+00S	106	1000	130	7.5	3.7	61
	1+00-1+25S	354	100	130	7.0	4.0	82
0+50-0+75S	1+00-1+25S	160	1000	130	6.2	3.2	92
1+25-1+50S	0+75-1+00S	420	1000	130	7.8	4.0	242
	0+50-0+75S	812	100	120	5.3	1.5	203
	0+25-0+50S	186	100	115	6.4	3.9	121
	B.L.-0+25S	109	100	120	9.2	5.2	136
1+50-1+75S	1+00-1+25S	364	1000	130	7.0	4.0	210
	0+75-1+00S	084	1000	135	7.0	3.2	202
	0+50-0+75S	256	100	120	4.6	0.8	160
	0+25-0+50S	670	10	115	4.5	2.0	87
1+75-2+00S	1+25-1+50S	224	1000	165	3.7	1.5	102
	1+00-1+25S	350	100	130	6.0	3.0	81
	0+75-1+00S	134	100	125	6.6	2.8	80
	0+50-0+75S	476	10	120	3.5(N)	(.3)	59
2+00-2+25S	1+50-1+75S	310	1000	190	3.1	1.1	122
	1+25-1+50S	658	100	165	4.2	2.0	120
	1+00-1+25S	140	100	130	7.2	4.2	81
	0+75-1+00S	648	10	125	5.5	1.7	78

Line 3+00W

Tx Location: 0+50N
Calibration:

1+00 - 1+25N	+3.0
0+75 - 1+00N	+2.6
0+50 - 0+75N	+2.4
0+25 - 0+50N	+2.1
B.L. - 0+25N	+2.0
0+25S - B.L.	+1.0

Rx Loc.	Tx Loc.	Vernier Voltage	Voltage Scale	I	F.E.	Corr. F.E.	Apparent Resistivity
2+25-2+50N	1+00-1+25N	928	10	140	6.5(N)	3.5	99
2+00-2+25N	1+00-1+25N	128	100	140	7.5	4.5	69
	0+75-1+00N	104	100	125	8.0	5.4	125
1+75-2+00N	1+00-1+25N	258	100	140	5.9	2.9	55
	0+75-1+00N	198	100	125	6.3	3.7	119
	0+50-0+75N	406	10	110	5.5(N)	3.1	55
1+50-1+75N	1+00-1+25N	622	100	140	4.5	1.5	33
	0+75-1+00N	318	100	125	4.8	2.2	76
	0+50-0+75N	544	10	110	6.0	3.6	37
	0+25-0+50N	512	10	125	NR	-	61
1+25-1+50N	0+75-1+00N	104	1000	125	6.7	4.1	62
	0+50-0+75N	105	100	110	7.2	4.8	29
	0+25-0+50N	822	10	125	6.2(N)	4.1	49
	B.L.-0+25N	550	10	135	7.5(N)	5.5	61
1+00-1+25N	0+50-0+75N	512	100	110	3.5	1.1	35
	0+25-0+50N	230	100	125	5.0	2.9	55
	B.L.-0+25N	130	100	135	4.5(N)	2.5	72

Line: 3+00W Tx: 0+50N

0+75-1+00N	0+25-0+50N	944	100	125	2.5	0.4	57
	B.L.-0+25N	388	100	135	3.5	1.5	86
0+50-0+75N	B.L.-0+25N	790	100	135	2.2	0.2	44
B.L.-0+25S	0+25-0+50N	106	1000	125	3.9	1.8	64
	0+50-0+75N	218	100	110	3.8	1.4	59

	0+75-1+00N	170	100	125	5.7	3.1	102
	1+00-1+25N	648	10	140	7.0	4.0	69
0+25-0+50S	B.L.-0+25N	629	100	135	3.0	1.0	35
	0+25-0+50N	250	100	125	3.9	1.8	60
	0+50-0+75N	828	10	110	3.8	1.4	56
	0+75-1+00N	754	10	125	5.0	2.4	90
0+50-0+75S	0+25S-B.L.	724	100	165	1.8	0.8	33
	B.L.-0+25N	170	100	130	3.9	1.9	39
	0+25-0+50N	939	10	120	3.5	1.4	59
	0+50-0+75N	341	10	100	4.5(N)	2.1	51
0+75-1+00S	0+25S-B.L.	173	100	165	3.3	2.3	31
	B.L.-0+25N	654	10	135	3.6	1.6	36
	0+25-0+50N	407	10	125	4.0	1.9	49
1+00S-1+25S	0+25S-B.L.	102	100	165	4.7	3.7	46
	B.L.-0+25N	465	10	130	4.0	2.0	54
1+25S-1+50S	0+25S-B.L.	664	10	165	3.0	2.0	60

Line 6+00W

Tx Location: 2+75S
Calibration:

2+00 - 2+25S	+2.3
2+25 - 2+50S	+2.4
2+50 - 2+75S	+1.8
2+75 - 3+00S	+1.7
3+00 - 3+25S	+2.2
3+25 - 3+50S	+2.9

Rx Loc.	Tx Loc.	Vernier Voltage	Voltage Scale	I	F.E.	Corr. F.E.	Apparent Resistivity
0+75-1+00S	2+00-2+25S	176	100	125	6.7	4.4	211
1+00-1+25S	2+00-2+25S	125	100	125	6.6	4.3	75
	2+25-2+50S	124	100	150	8.0	5.6	124
1+25-1+50S	2+00-2+25S	100	1000	125	5.2	2.9	240
	2+25-2+50S	298	100	150	5.4	3.0	149
	2+50-2+75S	196	100	175	5.7	3.9	168
1+50-1+75S	2+00-2+25S	513	1000	125	2.4	0.1	308
	2+25-2+50S	870	100	150	2.7	0.3	174
	2+50-2+75S	438	100	175	3.7	2.0	188
	2+75-3+00S	212	100	135	3.9	2.2	236
1+75-2+00S	2+25-2+50S	243	1000	150	3.9	1.5	122
	2+50-2+75S	774	100	175	3.3	1.5	133
	2+75-3+00S	273	100	135	2.8	1.1	152
	3+00-3+25S	934	10	110	3.0	0.8	127
2+00S-2+25S	2+50-2+75S	203	1000	175	3.9	2.1	87
	2+75-3+00S	498	100	135	2.5	0.8	111
	3+00-3+25S	139	100	110	4.3	2.1	95

Line: 2+00W Tx: 1+50N

2+25-2+50S	2+75-3+00S	198	1000	150	2.7	1.0	99
	3+00-3+25S	368	100	110	3.0	0.8	100
2+50-2+75S	3+00-3+25S	195	1000	110	2.8	0.6	133
3+25-3+50S	2+75-3+00S	215	1000	140	2.7	1.0	115
	2+50-2+75S	489	100	180	2.0	0.2	81

	2+25-2+50S	286	100	160	3.4	1.0	134
	2+00-2+25S	110	100	125	3.9	1.6	132
3+50-3+75S	3+00-3+25S	306	1000	110	3.0	0.8	209
	2+75-3+00S	135	1000	140	3.6	1.9	289
	2+50-2+75S	680	100	180	2.4	0.6	283
	2+25-2+50S	248	100	160	3.9	1.5	233
3+75-4+00S	3+25-3+50S	397	1000	76	4.3	1.4	392
	3+00-3+25S	096	1000	110	4.2	2.0	262
	2+75-3+00S	564	100	135	3.0	1.3	313
	2+50-2+75S	331	100	180	3.0	1.2	276
4+00-4+25S	3+25-3+50S	154	1000	76	5.4	2.5	608
	3+00-3+25S	474	100	110	2.4	0.2	323
	2+75-3+00S	345	100	135	2.5	0.8	383
4+25-4+50S	3+25-3+50S	491	100	76	4.8	1.9	485
	3+00-3+25S	182	100	110	3.9	1.7	248
4+50-4+75S	3+25-3+50S	232	100	76	4.6	1.7	458

Line 6+00W

Tx Location: 3+50N
Calibration:

4+00 - 4+25N	+0.5
3+75 - 4+00N	+0.8
3+50 - 3+75N	+2.1
3+25 - 3+50N	+2.2
3+00 - 3+25N	+2.5
2+75 - 3+00N	+2.1

Rx Loc.	Tx Loc.	Vernier Voltage	Voltage Scale	I	F.E.	Corr. F.E.	Apparent Resistivity
5+25-5+50N	4+00-4+25N	198	100	170	2.0(N)	1.5	175
5+00-5+25N	4+00-4+25N	245	100	170	1.5	1.0	108
	3+75-4+00N	102	100	125	1.8	1.0	122
4+75-5+00N	4+00-4+25N	377	100	170	0.8	0.3	67
	3+75-4+00N	124	100	125	1.4	0.6	74
	3+50-3+75N	728	10	120	1.8	(0.3)	91
4+50-4+75N	4+00-4+25N	125	1000	170	1.2	0.7	55
	3+75-4+00N	284	100	125	1.0	0.2	68
	3+50-3+75N	137	100	120	2.7	0.6	86
	3+25-3+50N	111	100	140	3.5	1.3	118
4+25-4+50N	3+75-4+00N	753	100	125	0.8	0	45
	3+50-3+75N	264	100	120	2.2	0.1	66
	3+25-3+50N	182	100	140	3.2	1.0	98
	3+00-3+25N	124	100	150	4.2	1.7	124

Line: 6+00W Tx: 3+50N

4+00-4+25N	3+50-3+75N	537	100	120	1.8	(0.3)	34
	3+25-3+50N	273	100	140	2.7	0.5	59
	3+00-3+25N	160	100	150	3.5	1.0	80
3+75-4+00N	3+25-3+50N	529	100	140	3.0	0.8	28
	3+00-3+25N	238	100	150	3.3	0.8	48
3+50-3+75N	3+00-3+25N	797	100	150	3.4	0.9	40
2+75-3+00N	3+25-3+50N	120	1000	140	4.6	2.4	64

VLF – EM SURVEY

PROJECT Lightning Peak PAGE 16
GRID West DATE July 6 85
LINE 15+00W OPERATOR DA
SOURCE STATION Annap

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
					320 = 57
BL 15W	57	+3	6		
0+25N	58	+3	7	3	
0+50N	61	+4	3	5	
	61	-1	2	—	
1+00N	61	+3	4	1	
	67	+1	1	5	EW BLAZED LINE 1+60N
	68	0	-1	7	
	71	-1	-6	8	BACKHOE TRAIL
2+00N	73	-5	-9	4	
	67	-4	-10	4	
	64	-6	-13	2	
	61	-7	-12	—	
3+00N	58	-5	-11	—	
	56	-6	-10	—	
	52	-4	-8	—	
	50	-4	-7	—	
4+00N	48	-3	-2	—	
	50	+1	4	—	
	55	+3	5	—	
4+75N	54	+2	8	—	

VLF – EM SURVEY

PROJECT Lightning Peak PAGE 18
GRID West DATE 6 July
LINE L17+00W OPERATOR DA
SOURCE STATION Annapolis

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
					320 = 60
BL17	57	+2	7		
	55	+5	13	—	
50N	57	+8	14	3	
	58	+6	10	9	
1+00N	61	+4	5	7	
	61	+1	3	3	
	61	+2	2	1	
	61	0	2	—	
2+00N	61	+2	3	1	
	68	+1	1	9	
	72	0	-6	15	
	64	-6	-14	12	
3+00N	64	-8	-18	2	
	60	-10	-16	—	
	58	-6	-10	—	
	56	-4	-8	—	
4+00N	56	-4	-6	—	
	57	-2	-3	—	
	56	-1	-1	—	
	56	0	0	—	
5+00N	56	0	2	—	

VLF – EM SURVEY

PROJECT L.P. PAGE 20
GRID West DATE 13/7/85
LINE Line 20+00W OPERATOR G.B.
SOURCE STATION Annapolis

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
B.L.	55	+1	2		12 mm Short 20+60mW
	63	+1	1	1	GRAND OUT
	62	0	1	—	
	62	+1	4	—	
1+00N	63	+3	6	—	
	63	+3	5	3	
	67	+2	3	3	GRAND OUT
	65	+1	2	0	
2+00N	64	+1	3	—	
	62	+2	6	—	
	62	+4	10	—	BRAND OUT
	62	+6	14	—	
3+00N	66	+8	19	—	
	67	+11	22	0	
	71	+11	19	10	HIGH O.P
	73	+8	12	11	
4+00N	73	+4	8	11	
	71	+4	9	—	
	71	+5	11	—	
	73	+6	14	1	
5+00N	74	+8	10	13	HIGH O.P.

VLF – EM SURVEY

PROJECT L.P. PAGE 22
GRID West DATE 13/7/85
LINE 22+00W OPERATOR G.B.
SOURCE STATION Annapolis

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
B.L.	68	0	-6		
	68	-6	-12	4	
	63	-6	-10	—	
	59	-4	-8	—	GRAND OUT
1+00N	58	-4	-6	—	
	58	-2	-2	—	
	58	0	1	—	
	59	+1	3	—	
2+00N	61	+2	4	—	GRAND OUT
	64	+2	5	1	
	61	+3	3	3	
	62	0	2	—	
3+00N	62	+2	6	—	
	62	+4	7	—	
	61	+3	7	—	
	62	+4	10	—	
4+00N	62	+6	15	—	
	64	+9	17	1	
	64	+8	14	1	
	63	+6	16	—	
5+00N	62	+10	22	—	

VLF – EM SURVEY

PROJECT L.P. PAGE 17
GRID WEST DATE JULY 6/85
LINE 15+00W OPERATOR DA
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
5+00N	55	+6			
	62	+9	15	–	
	80	+2	11	19	
	78	-6	-4	28	
6+00N	75	-11	-17	19	
	67	-12	-23	8	
	62	-13	-25	5	
	59	-15	-28	4	CREEK
7+00N	52	-14	-29	–	Parallels line
	48	-9	-23	–	↓
	50	-5	-14	–	
	54	+3	-2	–	
8+00N	54	0	3	–	
	58	+2	2	2	
	58	-1	1	3	↑
	60	0	-1	5	CREEK
9+00N	58	-4	-4	8	
	58	-5	-7	10	
	56	-9	-14	9	
	51	-9	-18	3	
10+00N	49	-8	-17		CREEK

VLF – EM SURVEY

PROJECT L.P. PAGE 19
GRID WEST DATE JULY 6/85
LINE L17W OPERATOR D.A.
SOURCE STATION

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
5+25N	57	+2	6	0	
	61	+4	2	15	
	70	-2	-9	17	
6+00N	70	-7	-15	9	
	67	-8	-18	6	
	65	-10	-21	2	
	63	-11	-20	–	
7+00N	60	-9	-19	0	
	58	-10	-20	–	
	55	-12	-16	–	
	53	-6	-10	–	
8+00N	55	-4	-8	1	
	58	-4	-11	5	
	62	-7	-13	5	
	61	-6	-16	3	
9+00N	60	-10	-16	–	
	60	-6	-14	0	
	60	-8	-16	3	
	61	-8	-17		
10+00N	60	-9			320=60

VLF – EM SURVEY

PROJECT L.P. PAGE 21
GRID WEST DATE 13/7/85
LINE 20+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	78	+2	1	11	HIGH O.P
	75	-1	-1	3	↓
	73	0	-2	3	
6+00N	73	-2	-4	1	
	72	-2	-3	–	HIGH O.P
	71	-1	-1	–	
	70	0	3	–	
7+00N	73	+3	8	–	
	76	+5	7	5	
	76	+2	3	7	
	74	+1	0	11	
8+00N	78	-1	-8	17	
	78	-2	-17	11	TR
	72	-10	-19	–	
	63	-9	-15	–	
9+00N	62	-6	-6	–	
	62	0	4	–	SMALL CR
	67	+4	5	4	
	75	+1	0	12	
10+00N	73	-1	-8		F.S. 2250
	73	-7			

VLF – EM SURVEY

PROJECT L.P. PAGE 23
GRID WEST DATE 13/7/85
LINE 22+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	65	+12	24	2	GRAD = OUT
	72	+12	20	13	↓
	80	+8	11	19	X HIGH O.P
6+00N	80	+3	1	7	" "
	75	-2	4	–	" "
	67	+6	11	–	" " NOISY
	71	+5	8	5	" " "
7+00N	71	+3	6	2	" " "
	71	+3	6	0	" " "
	64	+3	6	–	" " "
	70	+3	8	–	" " "
8+00N	68	+5	11	–	" "
	76	+6	10	9	
	77	+4	2	13	
	74	-2	-3	3	
9+00N	68	-1	-1	–	
	70	0	2	–	
	70	+2	1	7	
	75	-1	-5	15	
10+00N	78	-4	-14	20	
	75	-10	-25		
	68	-15			

VLF – EM SURVEY

PROJECT L.P. PAGE 24
GRID WEST DATE 13/7/85
LINE 24+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
B.L.	58	+2	0		
	66	-2	-4	3	
	62	-2	-3	—	
	60	-1	-1	—	
1+00N	57	0	-1	2	
	58	-1	-3	2	
	57	-2	-3	—	
	57	-1	-1	—	
2+00N	56	0	1	—	
	57	+1	2	—	
	57	+1	4	—	
	56	+3	6	—	
3+00N	55	+3	6	2	
	57	+3	4	4	
	57	+1	2	3	
	58	+1	1	2	
4+00N	59	0	0	0	
	60	0	1	—	
	64	+1	2	0	
	62	+1	1	1	
5+00N	59	0	1	0	GRAND OUT

VLF – EM SURVEY

PROJECT L.P. PAGE 26
GRID WEST DATE 13/7/85
LINE 26+00 W OPERATOR G.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
B.L.	68	-3	-8		
	63	-5	-11	4	
	60	-6	-12	—	
	54	-6	-10	—	
1+00N	52	-4	-7	—	
	52	-3	-5	—	GRAND O
	51	-2	-4	—	
	51	-2	-3	—	
2+00N	53	-1	1	—	
	52	+2	8	—	
	53	+6	15	—	
	52	+9	18	—	
3+00N	55	+9	18	—	
	58	+9	19	—	
	58	+10	20	—	
	59	+10	21	4	
4+00N	64	+11	16	11	
	65	+5	10	5	GRAND O
	63	+5	11	—	
	61	+6	12	—	
5+00N	62	+6	15	—	

VLF – EM SURVEY

PROJECT L.P. PAGE 28
GRID WEST DATE 13/7/85
LINE 28+00W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
B.L.	67	-3	-6		10m LONG 27+93W
	61	-3	0	—	
	59	+3	1	5	LARGE CRENE
	67	-2	-5	2	
1+00N	61	-3	-3	—	
	56	0	2	—	
	54	+2	3	0	
	55	+1	2	1	
2+00N	54	+1	2	—	
	55	+1	3	—	
	57	+2	5	—	
	57	+3	9	—	GRAND OUT
3+00N	56	+6	11	—	GRAND SUB
	58	+5	10	0	
	57	+5	11	—	
	60	+6	13	—	
4+00N	66	+7	13	0	
	65	+6	13	—	
	63	+7	14	—	
	65	+7	14	2	
5+00N	65	+7	12	4	

VLF – EM SURVEY

PROJECT L.P. PAGE 30
GRID WEST DATE 13/7/85
LINE L30+00W OPERATOR G.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARK
5+00N	74	-3	-7		LN AT 3
	68	-4	-6	0	
	61	-2	-7	2	
	65	-5	-8	—	
6+00N	65	-3	-4	—	
	63	-1	-3	—	
	62	-2	-3	—	
	60	-1	-2	—	
7+00N	61	-1	-2	1	
	60	-1	-3	1	
	63	-2	-3	—	
	63	-1	0	0	
8+00N	60	+1	3	—	
	62	+2	5	—	
	60	+3	6	—	
	62	+3	7	—	
9+00N	61	+4	7	—	
	65	+3	8	—	
	63	+5	8	1	
	62	+3	7	0	
10+00N	62	+4			GRAND

VLF – EM SURVEY

PROJECT L.P. PAGE 27
GRID WEST DATE 13/7/85
LINE 26+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	63	+9	23	-	
	66	+14	29	0	
	68	+15	23	7	
6+00N	72	+8	12	13	EDGE SWAMP
	74	+4	10	-	MAJOR SWAMP CREEK TR 198°
	73	+6	14	-	
	74	+8	12	12	
7+00N	75	+4	2	15	EDGE SWAMP
	73	-2	-3	-4	
	68	-1	-2	-	
	67	-1	-1	-	
8+00N	64	0	2	-	
	63	+2	4	-	
	64	+2	4	1	
	62	+2	3	1	
9+00N	60	+1	3	-	
	61	+2	6	-	
	63	+4	11	-	
	66	+7	9	7	
10+00N	67	+2	4		
	68	+2			GRAND OUT

VLF – EM SURVEY

PROJECT L.P. PAGE 25
GRID WEST DATE 13/7/85
LINE 24+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	63	+1	1	1	
	61	0	0	2	
	60	0	-1	0	
6+00N	60	-1	0	-	
	60	+1	2	-	GRAND FLOAT
	58	+1	1	0	E-W CK
	58	0	2	-	
7+00N	58	+2	4	-	
	61	+2	3	-	
	60	+1	5	-	
	59	+4	8	-	
8+00N	61	+4	11	-	
	60	+7	15	-	
	64	+8	14	6	
	68	+6	9	7	
9+00N	71	+3	7	-	
	71	+4	11	-	
	71	+7	11	10	
	74	+4	1	22	
10+00N	78	-3	-11	19	
	73	-8	-20		
	66	-12	-19	8	
	67	-9			

VLF – EM SURVEY

PROJECT L.P. PAGE 31
GRID WEST DATE 12/7/85
LINE 30+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	63	+4	8	0	
	65	+3	7	5	
	64	0	3	8	GRAND
11+00N	68	-1	-1		GRAN/OUT
					CONTACT

VLF – EM SURVEY

PROJECT L.P. PAGE 29
GRID WEST DATE 13/7/85
LINE 28+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	65	+5	10	3	
	64	+5	9	4	
	65	+4	6	6	
6+00N	70	+2	3	5	
	68	+1	1	3	GRAND OUT
	66	0	0	1	
	68	0	0	3	NOISY
7+00N	70	0	-3	3	
	67	-3	-3	-	
	67	0	-1	-	NOISY
	62	-1	-2	7	
8+00N	63	-1	-8	9	
	65	-7	-13	1	
	61	-6	-9	-	
	60	-3	-4	-	
9+00N	60	-1	-2	-	GRAND OUT
	58	-1	-2	0	* GNEISS → BEDRK L.S. TR 140° 80° E
	57	-1	-2	-	
	57	-1	-1		
10+00N	58	0			GRAND OUT

VLF – EM SURVEY

PROJECT L.P. PAGE 32
GRID WEST DATE 17/7/85
LINE L 32+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
5+00N	63	-4	-7		
	62	-3	-5	—	
	61	-2	-4	—	
	60	-2	-2	—	
6+00N	60	0	1	—	
	60	+1	1	1	
	62	0	0	0	
	62	0	1	—	GRAND OUT
7+00N	63	+1	1	2	
	64	0	-1	3	GRAND OUT
	63	-1	-2	2	
	65	-1	-3	2	
8+00N	67	-2	-4	6	
	66	-2	-9	6	
	63	-7	-10	—	
	59	-3	-5	—	
9+00N	60	-2	-5	2	
	60	-3	-7	1	
	63	-4	-6	—	
	64	-2	-6	2	
10+00N	62	-4			

VLF – EM SURVEY

PROJECT L.P. PAGE 34
GRID WEST DATE 17/7/8
LINE 34+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
5+00N	65	-3	-5		
	62	-2	-4	—	
	63	-2	-4	1	
	63	-2	-5	2	
6+00N	63	-3	-6	1	
	65	-3	-6	—	
	64	-3	-5	—	
	64	-2	-5	0	
7+00N	63	-3	-5	—	
	63	-2	-4	0	
	65	-2	-5	1	
	65	-3	-5	0	GRAND OUT
8+00N	66	-2	-5	1	
	65	-3	-6	3	
	63	-3	-8	3	
	62	-5	-9	0	GRAND OUT
9+00N	63	-4	-8	—	
	61	-4	-7	—	
	59	-3	-5	0	
	61	-2	-7	5	
10+00N	62	-5			

VLF – EM SURVEY

PROJECT L.P. PAGE 36
GRID WEST DATE 17/7/85
LINE 36+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
5+00N	63	0	0		F.S. 2750
	67	0	-1	3	
	63	-1	-3	5	
	67	-2	-6	4	
6+00N	62	-4	-7	0	
	61	-3	-6	—	GRAND OUT
	60	-3	-5	—	
	58	-2	-2	—	
7+00N	61	0	1	—	
	63	+1	2	—	
	66	+1	2	3	
	66	+1	-1	10	GRAND OUT
8+00N	67	-2	-8	12	
	72	-6	-13	5	
	67	-7	-13	—	
	61	-6	-11	—	
9+00N	60	-5	-10	—	
	58	-5	-8	—	
	58	-3			

VLF – EM SURVEY

PROJECT L.P. PAGE 38
GRID EAST DATE 14/7/8
LINE 1+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
					AT BEND
12+00S	37	-1	7		CK 11+8
	35	+8	22	—	
	35	+14	30	1	
	43	+16	21	23	STEEP HILL
11+00S	47	+5	7	12	TOPO
	37	+2	9	—	
	35	+7	24	—	STEEP HILL
	37	+17	39	—	
10+00S	38	+22	45	—	
	42	+23	45	—	
	43	+22	46	—	GRAND C
	45	+24	48	—	PEND
9+00S	45	+24	49	—	↑
	48	+25	49	2	GRAND OU
	51	+24	47	7	TOPO
	53	+23	42	9	
8+00S	58	+19	38	2	
	59	+19	40	3	

VLF – EM SURVEY

PROJECT L.P. PAGE 35
GRID WEST DATE 17/7/85
LINE 34+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	61	-5	-10	4	
	60	-6	-11	2	
	63	-6	-12	5	
11+00N	62	-10	-16		

VLF – EM SURVEY

PROJECT L.P. PAGE 33
GRID WEST DATE 17/7/85
LINE 32+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	61	-4	-8	3	
	60	-5	-9	1	
	58	-4	-9	0	
11+00N	59	-5	-9		

VLF – EM SURVEY

PROJECT L.P. PAGE 39
GRID EAST DATE 14/9/85
LINE 14+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	61	+21	35	15	
	71	+14	25	14	
7+00S	68	+11	21	5	
	63	+10	20	5	
	63	+10	16	10	PEAK OUT
	67	+6	10	7	
6+00S	61	+4	9	—	
	58	+5	14	—	
	60	+9	16	1	GRAD OUT
	62	+7	13		
5+00S	62	+6			

VLF – EM SURVEY

PROJECT L.P. PAGE 37
GRID WEST DATE 17/7/85
LINE 36+00W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	60	-2	-5	—	
10+00N	60	-2	-4	2	GRAD OUT
	65	-5	-7	10	
	69	-9	-14	14	
	60	-12	-21	10	
11+00N	57	-12	-24		

VLF – EM SURVEY

PROJECT L.P. PAGE 40
GRID EAST DATE 14/7/85
LINE 3+00 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
			-12		
12+00S	44	-8	-3	-	
	37	-4	5	-	AID F.S. - 200
	35	+1	13	-	Ck 11+70 S
	35	+4	23	-	
11+00S	39	+9	31	-	START STEEP HILL
	32	+14	38	-	
	37	+17	46	-	
	37	+21	52	-	
10+00S	39	+25	54	-	
	42	+27	54	1	
	42	+27	53	2	
	45	+27	52	-	
9+00S	51	+26	59	-	
	50	+26	64	-	
	48	+32	65	13	
	55	+32	51	37	
8+00S	72	+33	28	31	
	81	+18	20	10	
	70	+10	18	5	TOP CLIFFS
	68	+10	15	5	
7+00S	67	+8			

VLF – EM SURVEY

PROJECT L.P. PAGE 42
GRID EAST DATE 14/7/
LINE L1E OPERATOR Da
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
			12		L 1+50E Ran
10+00S	53	+8	9	5	
	53	+4	7	-	
	56	+5	10	-	
	56	+2	15	-	
9+00S	59	+8	13	3	
	60	+7	12	4	
	61	+6	9	10	
	61	+6	2	10	
8+00S	64	+3	-1	2	
	63	-1	0	-	
	62	0	2	-	7+25 N/S CK
	61	0	3	-	
7+00S	61	+2	3	-	
	60	+1	5	-	
	59	+2	8	-	
	61	+3	10	-	
6+00S	60	+5	9	2	
	61	+5	8	2	
	61	+4	7		
	63	+4			
5+00S	63	+3			

VLF – EM SURVEY

PROJECT L.P. PAGE 44
GRID EAST DATE 14/7/85
LINE L4+00E OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	58	+6	13		
18+00	58	+7	17	-	
	59	+10	18	3	
	61	+8	14	5	
9+00S	65	+6	13	3	
	66	+7	11	5	
	64	+4	8	2	
	67	+4	9	0	
8+00S	72	+5	8	4	
	74	+3	5	4	
	74	+2	4	2	
	74	+2	3	1	
7+00S	73	+1	3	2	
	73	+2	1	3	
	79	-1	0	1	
	74	+1	0	4	
6+00S	75	-1	-4	4	
	71	-3	-4	-	
	62	-1	0	-	
	68	+1	2	-	
5+00S	71	+1	2	-	
	70	+1	3	0	
	70	+2	2	1	

VLF – EM SURVEY

PROJECT L.P. PAGE 43
GRID EAST DATE 14/7/85
LINE 1400 E OPERATOR D.A.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS

VLF – EM SURVEY

PROJECT L.P. PAGE 41
GRID EAST DATE 14/7/85
LINE 3400 W OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	66	+7	13	1	
	63	+6	14	—	
	61	+8	15	0	
6+00S	62	+7	14	0	
	64	+7	15	—	
	61	+8	15	0	
	63	+7	15		
5+00S	60	+8			

VLF – EM SURVEY

PROJECT L.P. PAGE 45
GRID EAST DATE 14/7/85
LINE 4400 E OPERATOR G.B.
SOURCE STATION ANNAPOLIS

STATION	OUT OF PHASE	IN PHASE	FRASER FILTER		REMARKS
	70	0	2	—	
4+00S	68	+2	4	—	↑
	67	+2	6	—	
	68	+4	7	1	GRAN OUT
	68	+3	5	3	
3+00S	71	+2	4	—	
	68	+2	7	—	
	68	+5	10	—	E EDGE RANDOLU
	68	+5	9	2	// TO RANDOLU
2+00S	70	+4	8	0	↑
	68	+4	9	2	
	69	+5	6	3	
	70	+1	6	0	
1+00S	69	+5	6	5	GRAN OUT
	68	+1	1	4	
	68	0	2	3	
	68	+2	-2		
0+00	64	-4			F.S. 251B
					CK 4400 - 4450E

APPENDIX II

Induced Polarization/Resistivity Data

	3+50-3+75N	328	100	120	3.1	1.0	82
	3+75-4+00N	160	100	125	2.2	1.4	96
	4+00-4+25N	127	100	160	2.0	1.5	119
2+50-2+75N	3+00-3+25N	887	100	140	3.3	0.8	48
	3+25-3+50N	345	100	140	4.6	2.4	74
	3+50-3+75N	126	100	120	3.5	1.4	79
	3+75-4+00N	724	10	125	1.2	0.4	87
2+25-2+50N	2+75-3+00N	132	1000	160	4.0	1.9	62
	3+00-3+25N	454	100	140	4.7	2.2	97
	3+25-3+50N	235	100	140	5.7	3.5	126
	3+50-3+75N	096	100	120	5.0	2.9	120

Line 6+00W

Tx Location: 1+50N
Calibration:

2+00 - 2+25N	+0.7
1+75 - 2+00N	+1.4
1+50 - 1+75N	+2.2
1+25 - 1+50N	+2.0
1+00 - 1+25N	+0.8
0+75 - 1+00N	+0.8

Rx Loc.	Tx Loc.	Vernier Voltage	Voltage Scale	I	F.E.	Corr. F.E.	Apparent Resistivity
3+25-3+50N	2+00-2+25N	216	100	150	3.6	2.9	216
3+00-3+25N	2+00-2+25N	335	100	150	3.3	2.6	167
	1+75-2+00N	385	100	125	3.0	1.6	462
2+75-3+00N	2+00-2+25N	622	100	150	2.1	1.4	124
	1+75-2+00N	652	100	125	3.2	1.8	391
	1+50-1+75N	261	100	125	5.2	3.0	313
2+50-2+75N	2+00-2+25N	135	1000	150	2.4	1.7	68
	1+75-2+00N	108	1000	125	2.9	1.5	259
	1+50-1+75N	371	100	125	3.6	1.4	223
	1+25-1+50N	166	100	135	5.2	3.2	184
2+25-2+50N	1+75-2+00N	284	1000	125	1.2	(0.2)	170
	1+50-1+75N	776	100	125	2.5	0.3	186
	1+25-1+50N	308	100	135	3.9	1.9	171
	1+00-1+25N	250	100	150	4.4	3.6	250

Line: 6+00W Tx: 1+50N

2+00-2+25N	1+50-1+75N	269	1000	125	2.9	0.7	161
	1+25-1+50N	744	100	135	4.1	2.1	165
	1+00-1+25	520	100	150	4.0	3.2	260
1+75-2+00N	1+25-1+50N	294	1000	135	4.0	2.0	163
	1+00-1+25N	163	1000	150	4.5	3.7	326
1+50-1+75N	1+00-1+25N	276	1000	150	3.5	2.7	138
0+75-1+00N	1+25-1+50N	164	1000	135	3.5	1.5	91

	1+50-1+75N	663	100	125	4.3	2.1	159
	1+75-2+00N	549	100	125	4.2	2.8	329
	2+00-2+25N	217	100	150	4.5	3.8	217
0+50-0+75N	1+00-1+25N	323	1000	150	0.8	0	161
	1+25-1+50N	538	100	135	2.6	0.6	119
	1+50-1+75N	318	100	125	3.6	1.4	191
	1+75-2+00N	308	100	125	3.2	1.8	370
0+25-0+50N	0+75-1+00N	448	1000	170	0.8	0	198
	1+00-1+25N	108	1000	150	2.0	1.2	216
	1+25-1+50N	298	100	135	3.0	1.0	165
	1+50-1+75N	214	100	125	3.8	1.6	257

Line: 6+00W Tx: 1+50N

0+25N-B.L.	0+75-1+00N	106	1000	170	1.7	0.9	187
	1+00-1+25N	354	100	150	1.4	0.6	177
	1+25-1+50N	125	100	135	4.3	2.3	139
B.L.-0+25S	0+75-1+00N	328	100	170	1.6	0.8	145
	1+00-1+25N	161	100	150	3.0	2.2	161
0+25-0+50S	0+75-1+00N	209	100	170	3.2	2.4	184

Line 9+00W

Tx Location: 3+25N
Calibration:

3+75 - 4+00N	+2.3
3+50 - 3+75N	+2.3
3+25 - 3+50N	+1.5
3+00 - 3+25N	+3.0
2+75 - 3+00N	+2.6
2+50 - 2+75N	+2.4

Rx Loc.	Tx Loc.	Vernier Voltage	Voltage Scale	I	F.E.	Corr. F.E.	Apparent Resistivity
5+00-5+25N	3+75-4+00N	378	100	155	4.2	1.9	366
4+75-5+00N	3+75-4+00N	686	100	155	4.0	1.7	332
	3+50-3+75N	176	100	160	6.0	3.7	165
4+50-4+75N	3+75-4+00N	138	1000	155	4.4	2.1	267
	3+50-3+75N	291	100	160	4.2	1.9	136
	3+25-3+50N	194	100	200	5.0	3.5	146
4+25-4+50N	3+75-4+00N	392	1000	155	3.7	1.4	190
	3+50-3+75N	511	100	160	4.3	2.0	96
	3+25-3+50N	270	100	200	4.5	3.0	101
	3+00-3+25N	584	10	120	5.0	2.0	73

Line: 9+00W Tx: 3+25N

4+00-4+25N	3+50-3+75N	197	1000	160	6.1	3.8	92
	3+25-3+50N	598	100	200	4.8	3.3	90
	3+00-3+25N	118	100	120	7.0	4.0	74
	2+75-3+00N	620	10	150	5.0	2.4	62
3+75-4+00N	3+25-3+50N	198	1000	200	5.7	4.2	74
	3+00-3+25N	325	100	125	6.0	3.0	78
	2+75-3+00N	129	100	150	6.5	3.9	65
3+50-3+75N	3+00-3+25N	120	1000	125	7.0	4.0	72
	2+75-3+00N	264	100	150	5.0	2.4	53
3+25-3+50N	2+75-3+00N	692	100	150	2.6	0	35
2+50-2+75N	3+00-3+25N	110	1000	125	3.1	0.1	66

	3+25-3+50N	402	100	200	2.4	0.9	60
	3+50-3+75N	225	100	160	5.2	2.9	105
	3+75-4+00N	165	100	155	5.7	3.4	160
2+25-2+50N	2+75-3+00N	268	1000	150	2.8	0.2	134
	3+00-3+25N	594	100	125	3.4	0.4	143
	3+25-3+50N	224	100	200	2.6	1.1	84
	3+50-3+75N	196	100	160	6.3	4.0	184

Line: 9+00W Tx: 3+25N

2+00-2+25N	2+50-2+75N	354	1000	130	3.3	0.9	204
	2+75-3+00N	107	1000	150	4.7	2.1	214
	3+00-3+25N	356	100	125	4.3	1.3	214
	3+25-3+50N	155	100	200	4.1	2.6	116
1+75-2+00N	2+50-2+75N	786	100	130	2.7	0.3	181
	2+75-3+00N	290	100	150	3.1	0.5	145
	3+00-3+25N	116	100	125	5.5	2.5	140
1+50-1+75N	2+50-2+75N	180	100	130	3.6	1.2	104
	2+75-3+00N	674	10	150	2.2	(0.4)	67
1+25-1+50	2+50-2+75N	110	100	130	4.5	2.1	127

Line 10+00W

Tx Location: 0+25N
Calibration:

0+50 - 0+75N	+4.5
0+25 - 0+50N	+3.9
B.L. - 0+25N	+2.2
0+25S - B.L.	+2.2
0+25 - 0+50S	+2.5

Rx Loc.	Tx Loc.	Vernier Voltage	Voltage Scale	I	F.E.	Corr, F.E.	Apparent Resistivity
1+75-2+00N	0+50-0+75N	082	100	120	7.2	2.7	102
1+50-1+75N	0+50-0+75N	138	100	125	10.0	5.5	83
	0+25-0+50N	098	100	125	9.8	5.9	118
1+25-1+50N	0+50-0+75N	455	100	120	6.3	1.8	114
	0+25-0+50N	255	100	125	6.8	2.9	153
	B.L.-0+25N	165	100	280	6.0	3.8	88
1+00-1+25N	0+50-0+75N	104	1000	120	9.9	5.4	65
	0+25-0+50N	407	100	125	7.4	3.5	98
	B.L.-0+25N	230	100	300	7.0(N)	4.8	57
	0+25S-B.L.	160	100	320	7.0(N)	4.8	75
0+75-1+00N	0+25-0+50N	115	1000	120	7.2	3.3	72
	B.L.-0+25N	385	100	280	4.5	2.3	41
	0+25S-B.L.	230	100	300	4.5	2.3	57
	0+50S-0+25S	626	10	120	4.8	2.3	78

Line: 10+00W Tx: 0+25N

0+50-0+75N	B.L.-0+25N	112	1000	140	5.2	3.0	60
	0+25S-B.L.	477	100	160	4.0	1.8	89
	0+25-0+50S	188	100	120	6.2	3.7	117
0+25-0+50N	0+25S-B.L.	247	1000	165	3.9	1.7	112
	0+25-0+50S	606	100	125	4.5(N)	2.0	145
B.L.-0+25N	0+25-0+50S	202	1000	125	3.4	0.9	121
0+50-0+75S	0+25S-B.L.	264	1000	160	3.4	1.2	124
	B.L.-0+25N	660	100	135	4.2	2.0	147
	0+25-0+50N	302	100	115	7.8	3.9	197
	0+50-0+75N	106	100	115	10.7(N)	6.2	138

0+75-1+00S	0+25-0+50S	260	1000	120	2.7	0.2	162
	B.L.-0+25S	707	100	155	3.4	1.2	137
	B.L.-0+25N	245	100	130	4.5	2.3	141
	0+25-0+50N	137	100	110	8.0	4.1	187
1+00-1+25S	0+25-0+50S	517	100	115	2.8	0.3	135
	B.L.-0+25S	219	100	150	3.7	1.5	110
	B.L.-0+25N	098	100	130	6.0(N)	3.5	113
1+25-1+50S	0+25-0+50S	247	100	115	4.2	1.7	161
	B.L.-0+25S	128	100	150	4.5	2.3	128
1+50-1+75S	0+25-0+50S	120	100	110	4.5	2.0	164

Line 14+00W

Tx Location: 9+00N
Calibration:

9+50 - 9+75N	+1.7
9+25 - 9+50N	+1.0
9+00 - 9+25N	+1.2
8+75 - 9+00N	+1.7
8+50 - 8+75N	+2.5
8+25 - 8+50N	+2.0

Rx Loc.	Tx Loc.	Vernier Voltage	Voltage Scale	I	F.E.	Corr. F.E.	Apparent Resistivity
10+75-11+00N	9+50-9+75N	218	100	175	3.5	1.8	187
10+50-10+75N	9+50-9+75N	624	100	175	3.4	1.7	267
	9+25-9+50N	361	100	270	3.1	2.1	201
10+25-10+50N	9+50-9+75N	104	1000	175	4.2	2.5	178
	9+25-9+50N	500	100	270	2.1	1.1	139
	9+00-9+25N	292	100	270	2.2	1.0	162
10+00-10+25N	9+50-9+75N	282	1000	175	3.5	1.8	121
	9+25-9+50N	924	100	270	1.8	0.8	103
	9+00-9+25N	454	100	270	1.8	0.6	126
	8+75-9+00N	172	100	210	3.9	2.2	123
9+75-10+00N	9+25-9+50N	204	1000	270	2.6	1.6	56
	9+00-9+25N	628	100	270	2.0	0.8	70
	8+75-9+00N	198	100	210	3.4	1.7	71
	8+50-8+75N	128	100	190	4.4	1.9	101

Line: 14+00W Tx: 9+00N

9+50-9+75N	9+00-9+25N	239	1000	270	2.8	1.6	66
	8+75-9+00N	500	100	210	2.5	0.8	71
	8+50-8+75N	280	100	190	3.6	1.1	111
9+25-9+50N	8+75-9+00N	116	1000	210	3.8	2.1	41
	8+50-8+75N	476	100	190	2.8	0.3	75
9+00-9+25N	8+50-8+75N	141	1000	190	3.6	1.1	56
8+25-8+50N	8+75-9+00N	244	1000	205	3.3	1.6	89

	9+00-9+25N	866	100	250	2.2	1.0	1.4
	9+25-9+50N	436	100	250	2.4	1.4	131
	9+50-9+75N	190	100	165	4.8	3.1	173
8+00-8+25N	8+50-8+75N	188	1000	180	3.0	0.5	78
	8+75-9+00N	326	100	190	2.8	1.1	51
	9+00-9+25N	217	100	240	2.5	1.3	68
	9+25-9+50N	130	100	240	3.0	2.0	81
7+75-8+00N	8+25-8+50N	188	1000	90	3.3	1.3	156
	8+50-8+75N	430	100	90	2.5	0	143
	8+75-9+00N	133	100	100	3.1	1.4	100
	9+00-9+25N	134	100	100	2.5	1.3	201

Line: 14+00W Tx: 9+00N

7+50-7+75N	8+25-8+50N	513	100	86	2.4	0.4	179
	8+50-8+75N	148	100	90	3.6	1.1	123
	8+75-9+00N	619	10	100	2.0(N)	0.3	93
7+25-7+50N	8+25-8+50N	339	100	86	4.5	2.5	295
	8+50-8+75N	125	100	90	5.7	3.2	208
7+00-7+25N	8+25-8+50N	232	100	90	5.8	3.8	387

Line 15+00W

Tx Location: 5+75N
Calibration:

6+25 - 6+50N	+3.5
6+00 - 6+25N	+3.5
5+75 - 6+00N	+1.5
5+50 - 5+75N	+1.5
5+25 - 5+50N	+1.0
5+00 - 5+25N	+1.2

Rx Loc.	Tx Loc.	Vernier Voltage	Voltage Scale	I	F.E.	Corr. F.E.	Apparent Resistivity
7+50-7+75N	6+25-6+50N	325	10	125	5.2(N)	1.7	39
7+25-7+50N	6+25-6+50N	698	10	125	5.2	1.7	42
	6+00-6+25N	338	10	110	5.0	1.5	46
7+00-7+25N	6+25-6+50N	098	100	125	6.4	2.9	24
	6+00-6+25N	456	10	115	5.5	2.0	30
	5+75-6+00N	382	10	165	4.5	3.0	35
6+75-7+00N	6+25-6+50N	417	100	125	4.7	1.2	25
	6+00-6+25N	124	100	115	6.3	2.8	32
	5+75-6+00N	912	10	165	3.8	2.3	41
	5+50-5+75N	438	10	180	4.0(N)	2.5	36
6+50-6+75N	6+00-6+25N	478	100	115	3.8	0.3	31
	5+75-6+00N	244	100	165	2.8	1.3	44
	5+50-5+75N	102	100	180	4.2	2.7	42
	5+25-5+50N	442	10	185	3.5	2.5	36

Line: 15+00W Tx: 5+75N

6+25-6+50N	5+75-6+00N	578	100	165	0.8	(0.7)	26
	5+50-5+75N	184	100	180	1.5	0	31
	5+25-5+50N	713	10	185	2.0(N)	1.0	29
6+00-6+25N	5+50-5+75N	496	100	180	1.3	(0.2)	21
	5+25-5+50N	148	100	185	2.7	1.7	24
5+75-6+00N	5+25-5+50N	513	100	185	1.5	0.5	21
5+00-5+25N	5+50-5+75N	773	100	170	1.5	0	34
	5+75-6+00N	188	100	160	3.0	1.5	35
	6+00-6+25N	596	10	115	4.0	0.5	39
	6+25-6+50N	350	10	125	4.0(N)	0.5	42
4+75-5+00N	5+25-5+50N	156	1000	180	3.3	2.3	65
	5+50-5+75N	308	100	175	2.5	1.0	53

	5+75-6+00N	110	100	160	3.0	1.5	52
	6+00-6+25N	385	10	115	4.5(N)	1.0	50
4+50-4+75N	5+00-5+25N	188	1000	130	4.5	3.3	108
	5+25-5+50N	600	100	175	3.0	2.0	103
	5+50-5+75N	178	100	170	3.3	1.8	78
	5+75-6+00N	082	100	160	4.2	2.7	77

Line: 15+00W Tx: 5+75N

4+25-4+50N	5+00-5+25N	487	100	130	2.7	1.5	112
	5+25-5+50N	269	100	175	3.6	2.6	115
	5+50-5+75N	114	100	170	5.8	4.3	101
4+00-4+25N	5+00-5+25N	342	100	130	4.8	3.6	197
	5+25-5+50N	188	100	170	4.6	3.6	166
3+75-4+00N	5+00-5+25N	108	100	130	6.0(N)	4.8	125

Line 16+00W

Tx Location: 1+00N
Calibration:

1+50 - 1+75N	+0.8
1+25 - 1+50N	+1.4
1+00 - 1+25N	+1.5
0+75 - 1+00N	+2.0
0+50 - 0+75N	+2.5

Rx Loc.	Tx Loc.	Vernier Voltage	Voltage Scale	I	F.E.	Corr. F.E.	Apparent Resistivity
2+75-3+00N	1+50-1+75N	156	100	225	8.0(N)	7.2	104
2+50-2+75N	1+50-1+75N	225	100	225	7.5(N)	6.7	75
	1+25-1+50N	116	100	200	8.5	7.1	87
2+25-2+50N	1+50-1+75N	488	100	225	5.7	4.9	65
	1+25-1+50N	212	100	200	6.3	4.9	80
	1+00-1+25N	734	10	200	6.0(N)	4.5	55
2+00-2+25N	1+50-1+75N	200	1000	225	4.2	3.4	67
	1+25-1+50N	668	100	200	3.6	2.2	100
	1+00-1+25N	178	100	200	5.0	3.5	67
	0+75-1+00N	834	10	165	3.5	1.5	76
1+75-2+00N	1+25-1+50N	209	1000	200	3.4	2.0	78
	1+00-1+25N	349	100	200	3.7	2.2	52
	0+75-1+00N	126	100	165	5.1	3.1	57
	0+50-0+75N	600	10	110	2.4	(0.1)	82

Line: 16+00W Tx: 1+00N

1+50-1+75N	1+00-1+25N	150	1000	200	3.6	2.1	56
	0+75-1+00N	334	100	165	3.5	1.5	61
	0+50-0+75N	129	100	110	4.8	2.3	88
1+25-1+50N	0+75-1+00N	832	100	165	2.0	0	38
	0+50-0+75N	241	100	110	3.1	0.6	66
1+00-1+25N	0+50-0+75N	982	100	110	2.0	(0.5)	67
0+25-0+50N	0+75-1+00N	203	1000	165	3.0	1.0	92
	1+00N-1+25N	452	100	200	2.0	0.5	68

	1+25-1+50N	242	100	200	3.0	1.6	91
	1+50-1+75N	144	100	225	5.1	4.3	96
B.L.-0+25N	0+50-0+75N	126	1000	110	4.3	1.8	86
	0+75-1+00N	410	100	165	3.0	1.0	75
	1+00-1+25N	188	100	200	3.2	1.7	71
	1+25-1+50N	115	100	200	5.0	3.6	86
B.L.-0+25S	0+50-0+75N	328	100	110	2.2	(0.3)	89
	0+75-1+00N	159	100	165	3.0	1.0	72
	1+00-1+25N	098	100	200	3.6	2.1	74
0+25-0+50S	0+50-0+75N	107	100	110	3.5	1.0	73
	0+75-1+00N	662	10	165	2.5(N)	0.5	60
0+50-0+75S	0+50-0+75N	864	10	110	3.2	0.7	118

Line 16+00W

Tx Location: 3+00N

Calibration:

3+25 - 3+50N	+2.8
3+00 - 3+25N	+3.6
2+75 - 3+00N	+3.5
2+50 - 2+75N	+2.1
2+25 - 2+50N	+1.5

Rx Loc.	Tx Loc.	Vernier Voltage	Voltage Scale	I	F.E.	Corr. F.E.	Apparent Resistivity
4+50-4+75N	3+25-3+50N	154	100	160	7.0(N)	4.2	144
4+25-4+50N	3+25-3+50N	334	100	160	6.2	3.4	157
	3+00-3+25N	133	100	125	7.2	3.6	160
4+00-4+25N	3+25-3+50N	948	100	160	6.2	3.4	178
	3+00-3+25N	338	100	125	6.2	2.6	203
	2+75-3+00N	425	100	145	6.8	3.3	440
3+75-4+00N	3+25-3+50N	176	1000	160	6.6	3.8	83
	3+00-3+25N	534	100	125	6.0	2.4	128
	2+75-3+00N	626	100	145	7.5	4.0	324
	2+50-2+75N	217	100	185	11.0	8.9	176
3+50-3+75N	3+00-3+25N	798	100	125	4.5	1.7	48
	2+75-3+00N	760	100	145	6.6	3.1	157
	2+50-2+75N	244	100	185	8.5	6.4	99
	2+25-2+50N	102	100	210	12.0(N)	10.5	73

Line: 16+00W Tx: 3+00N

3+25-3+50N	2+75-3+00N	278	1000	145	6.0	2.5	144
	2+50-2+75N	708	100	185	8.0	5.9	115
	2+25-2+50N	240	100	210	11.0	9.5	86
3+00-3+25N	2+50-2+75N	104	1000	185	6.5	4.4	42
	2+25-2+50N	226	100	210	8.5	7.0	32
2+75-3+00N	2+25-2+50N	100	1000	210	10.5	9.0	36
2+00-2+25N	2+50-2+75N	137	1000	185	11.5	9.4	56
	2+75-3+00N	300	100	145	12.0	8.5	62

	3+00-3+25N	094	100	125	12.0	8.4	56
	3+25-3+50N	118	100	160	13.0	10.2	111
1+75-2+00	2+25-2+50N	188	1000	210	4.5	3.0	67
	2+50-2+75N	412	100	185	7.0	4.9	67
	2+75-3+00N	142	100	145	9.5	6.0	73
	3+00-3+25N	518	10	125	7.5(N)	3.9	62

Line 22+00W

Tx Location: 9+75N
Calibration:

10+00 - 10+25N	+3.0
9+75 - 10+00N	+3.0
9+50 - 9+75N	+2.1
9+25 - 9+50N	+1.0
9+00 - 9+25N	+1.8

Rx Loc.	Tx Loc.	Vernier Voltage	Voltage Scale	I	F.E.	Corr. F.E.	Apparent Resistivity
11+25-11+50N	10+00-10+25N	538	10	140	4.0(N)	1.0	58
11+00-11+25N	10+00-10+25N	123	100	140	4.0	1.0	67
	9+75-10+00N	822	10	150	4.5(N)	1.5	82
10+75-11+00N	10+00-10+25N	335	100	140	3.8	0.8	72
	9+75-10+00N	174	100	150	5.2	2.2	87
	9+50-9+75N	143	100	215	4.5	2.4	100
10+50-10+75N	10+00-10+25N	786	100	140	2.8	(0.2)	42
	9+75-10+00N	308	100	150	3.0	0	62
	9+50-9+75N	228	100	215	3.2	1.1	80
	9+25-9+50N	188	100	270	3.9	2.9	104
10+25-10+50N	9+75-10+00N	622	100	150	2.5	(0.5)	31
	9+50-9+75N	363	100	215	2.0	(0.1)	51
	9+25-9+50N	250	100	270	3.2	2.2	69
	9+00-9+25N	102	100	190	4.5	2.7	81

Line: 22+00W Tx: 9+75N

10+00-10+25N	9+50-9+75N	819	100	215	1.5	(0.6)	27
	9+25-9+50N	415	100	270	2.0	1.0	46
	9+00-9+25N	159	100	190	4.8	3.0	63
9+75-10+00N	9+25-9+50N	175	1000	270	2.4	1.4	49
	9+00-9+25N	466	100	190	2.7	0.9	74
9+50-9+75N	9+00-9+25N	180	1000	190	3.2	1.4	71

8+75-9+00N	9+25-9+50N	350	1000	270	3.8	2.8	97
	9+50-9+75N	568	100	215	4.1	2.0	79
	9+75-10+00N	133	100	150	6.4	3.4	67
	10+00-10+25N	532	10	140	5.0(N)	2.0	57
8+50-8+75N	9+00-9+25N	132	1000	190	5.5	3.7	52
	9+25-9+50N	377	100	270	5.4	4.4	42
	9+50-9+75N	101	100	215	5.2	3.1	35
	9+75-10+00N	314	10	150	4.0	1.0	31
8+25-8+50N	9+00-9+25N	268	100	190	6.3	4.5	42
	9+25-9+50N	160	100	270	5.5	4.5	44
	9+50-9+75N	590	10	215	4.2	2.1	41
8+00-8+25N	9+00-9+25N	138	100	190	7.2	5.4	54
	9+25-9+50N	104	100	270	6.0	5.0	58
7+75-8+00N	9+00-9+25N	763	10	190	9.0(N)	7.2	60

APPENDIX III

Geochemical Certificate

KAMLOOPS RESEARCH
&
ASSAY LABORATORY
LTD.

B.C. CERTIFIED ASSAYERS
912 LAVAL CRESCENT
PHONE 372-2784 - TELEX 048-8320

GEOCHEMICAL LAB REPORT

G. BELIK & ASSOCIATES
664 SUN VALLEY DR.,
KAMLOOPS, B.C.
V2B 6S4

DATE AUGUST 13,1985

FILE NO. G 1341

XRAL NO.	IDENTIFICATION	AU	AG	PB
1	85 LP-1	3.0	0.4	5.0
2	85 LP-2	3.0	1.1	224.0
3	85 LP-3	3.0	0.6	20.0
4	85 LP-4	3.0	1.1	159.0
5	85 LP-5	3.0	0.2	4.0
6	85 LP-6	3.0	1.0	56.0
7	85 LP-7	3.0	0.3	7.0
8	85 LP-8	3.0	7.7	382.0
9	85 LP-9	3.0	7.2	2880.0

IN AU COLUMN 3 INDICATES LESS THAN 5 PPB

SAMPLE PREPARATION CRUSH GRIND SCREEN TO -100 MESH

AU METHOD FIRE ASSAY ATOMIC ABSORPTION

AG PB METHOD HOT ACID EXTRACTION ATOMIC ABSORPTION

APPENDIX IV

Statement of Expenditures

Statement of Expenditures

Big P Project

A. Grid Preparation and Geophysical Surveys

Crew: G. Belik, M.Sc., Supervisor
D. Arens, Senior Assistant
J. Belik, Assistant
W. Sharp, Assistant

Dates: July 4-10, 1985 inclusive
July 12-17, 1985 inclusive

Cost: 13.0 days at $800/day	$10,400.00

- daily rate includes crew, mob/demob, camp, food, truck rental, insurance and maintenance, travel expenses, geophysical equipment rentals, field supplies and report preparation

Total Geophysical Surveys and Grid Preparation	$10,400.00

B. Trenching Supervision

1. Labour

G. Belik, M.Sc. -July 27-Aug. 3, 1985 -8.0 days at $300/day	$2,400	
D. Arens, Assistant -July 27-Aug. 3, 1985 -8.0 days at $150/day	1,200	3,600.00

2. Truck Rental & Operating Expenses	529.75
3. Food, Supplies & Travel Expenses	272.37
4. Chain Saw Rental -8.0 days slashing at $15/day	120.00
5. Field Supplies	15.00

6.	Geochemical Assays	101.70
7.	Preparation of Trench Maps -professional fees, drafting, sepias, xerox	276.20
8.	Miscellaneous Items	35.00
	Total Trenching Program	4,950.02
	Total Geoph & Trenching Programs	$15,350.02
	Plus	7,846.00
	TOTAL	$23,196.00

J.C.L. Ventures LTD.

P.O. BOX 1164, VERNON, B.C. V1T 6N4 • PHONE (604) 542-4301
WATER AND SEWER CONTRACTING

№ 323

TO Zalmac Mines Ltd.
c/o Barrie Amies

DATE Aug. 12. 1985.

YOUR ORDER NO.

TERMS. ACCOUNTS DUE AND PAYABLE WHEN RENDERED.
INTEREST AT 2% PER MONTH CHARGED ON OVERDUE ACCOUNTS.

QUAN.	DESCRIPTION	RATE	AMOUNT
	Equipment Rent		
	8 days @ 8 hrs/day	(per hr 98.00)	6,272.00
	Vernon Moving & Storage Bill see attached		787.00
		TAX	—
		TOTAL	7,059.00

RECEIVED BY

Vernon Moving & Storage Ltd.

2506 - 37TH ST., VERNON, B.C., P.O. BOX 267 — PHONE 545-2185
VERNON, B.C. V1T 6M2

Expedited Service on
- LOWBEDS
- FLAT DECKS
- POLE TRAILERS

№ 14461

J. C.L. Ventures Ltd.
Box 1164
Vernon, B.C.
V1T 6N4

39040

DATE July 27 1985

UNIT	DESCRIPTION	WT./HRS.	RATE	AMOUNT
120	C 16 Hoe Vernon to Lightning Peaks	8hrs	55.00	440.00
	Permit			23.00
120	C 16 Hoe Lightning Peaks to Vernon	5½hrs	55.00	302.00
	Permit			22.00
				787.00

TERMS: NET 30 DAYS. INTEREST OF 1½% PER MONTH CHARGED ON OVERDUE ACCOUNTS. PLEASE PAY FROM THIS INVOICE

APPENDIX V

Statement of Qualifications
G. D. Belik

GARY D. BELIK, M.Sc.
Consulting Geologist
Mineral Exploration

#6 NICOLA PLACE, 310 NICOLA STREET • KAMLOOPS, B.C. V2C 2P5 • PHONE (604) 374-4247

CERTIFICATE

I, GARY D. BELIK, OF THE CITY OF KAMLOOPS, BRITISH COLUMBIA, DO HEREBY CERTIFY THAT:

(1). I am a member of the Canadian Institute of Mining and Metallurgy, and a fellow of the Geological Association of Canada.

(2). I am employed by G. Belik and Associates Limited, with my office at 664 Sunvalley Drive, Kamloops, B. C.

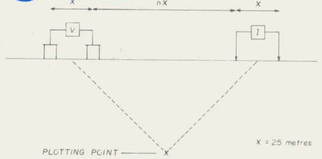
(3). I am a graduate of the University of British Columbia with a B.Sc. in Honors Geology and a M.Sc. in Geology.

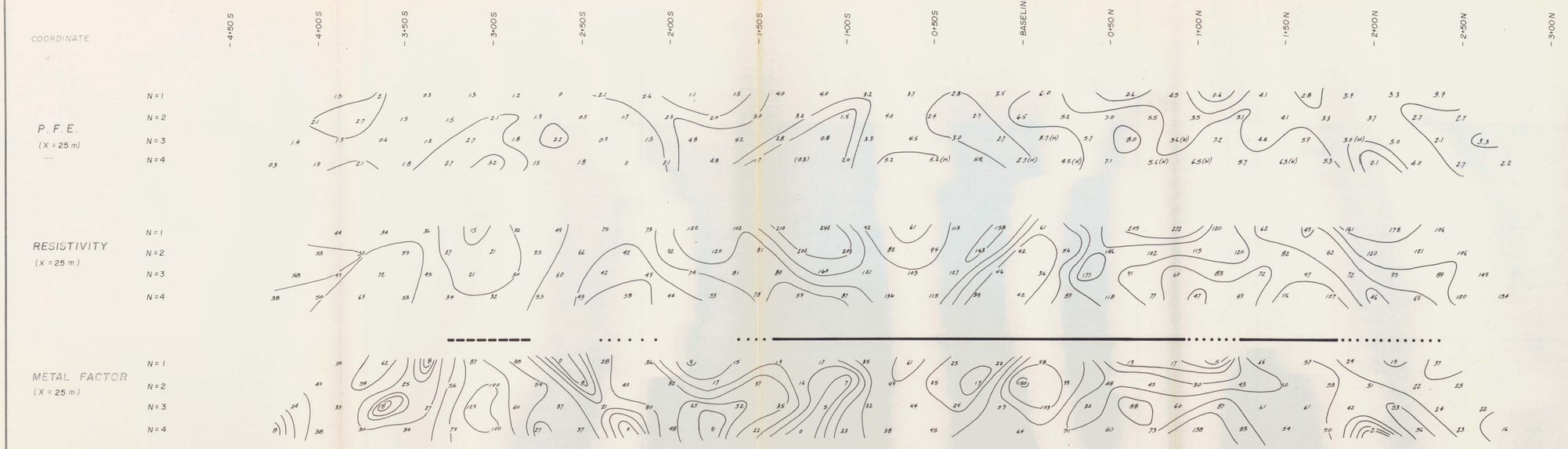
(4). I have practised continuously as a geologist since May, 1970.

(5). I have gained considerable geophysical experience over the past 11 years including extensive use of Induced Polarization and V.L.F.-E.M. systems.

Gary D. Belik, M.Sc.
GEOLOGIST

August 9, 1985





SURFACE PROJECTION OF ANOMALOUS ZONE

DEFINITE ——————

PROBABLE - - - - - - - - - -

POSSIBLE .....

CONTOUR INTERVALS

P F E -20, 30, 50, 75, 10, 15

RESISTIVITY - 1, 1.5, 3, 5, 7.5, 10, 15.....

METAL FACTOR - 10, 15, 20, 30, 50, 75, 100

ZALMAC MINES LTD.

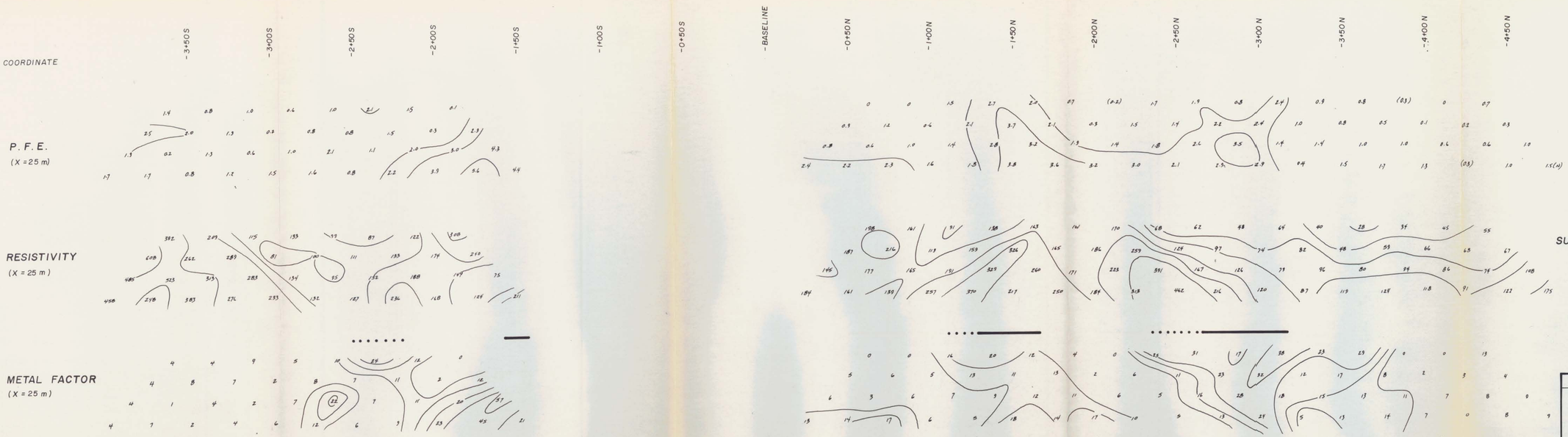
INDUCED POLARIZATION & RESISTIVITY SURVEY

LINE NO. 2+00W

BIG P GROUP

VERNON MINING DIVISION, B.C.

TECHNICAL WORK BY G. BELIK AND ASSOCIATES LTD.	DATE SURVEYED OCTOBER, 1984.
APPROVED BY G. BELIK, M.Sc.	FIG. NO. 1038-4



GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,861

SURFACE PROJECTION OF ANOMALOUS ZONE

DEFINITE
PROBABLE
POSSIBLE

CONTOUR INTERVALS

P.F.E. - 3.0, 5.0, 7.5, 10, 15
RESISTIVITY - 1, 1.5, 3, 5, 7.5 ...
METAL FACTOR - 10, 15, 20, 30, 50, 75, 100 ...

ZALMAC MINES LTD.

INDUCED POLARIZATION RESISTIVITY SURVEY

LINE NO. 6+00 W

BIG P GROUP

VERNON MINING DIVISION, B.C.

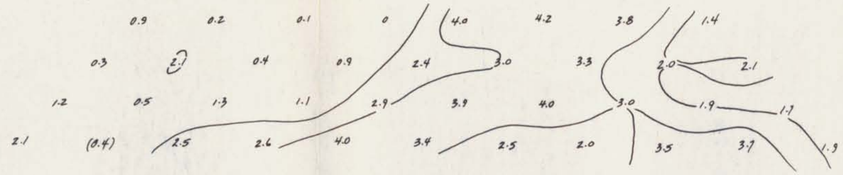
TECHNICAL WORK BY: G. BELIK AND ASSOCIATES LTD.	DATE SURVEYED: JULY, 1985.
APPROVED BY: G. BELIK, M.Sc.	FIG. NO. 1038-6


GEOLOGICAL BRANCH
ASSESSMENT REPORT
13,861
LEGEND
CREEK
ROAD
CLAIM BOUNDARY
GRID LINE WITH STATION MARKERS
ADIT
FRASER FILTERED VALUES (POSITIVE), CONTOURS IN 5° INTERVALS.
ANOMALY REFERENCE NUMBER
85 TR 3 TRENCH LOCATION
CONDUCTORS
DEFINITE
PROBABLE
POSSIBLE
ZALMAC MINES LTD.
VLF-EM SURVEY
TRANSMITTER : ANNAPOLIS, MARYLAND 21.4 KHz.
BIG P GROUP
VERNON MINING DIVISION, BRITISH COLUMBIA.
TECHNICAL WORK BY: G. BELIK AND ASSOCIATES LTD.
DRAWN BY: W.G.
APPROVED BY: G. BELIK, M.Sc.
SCALE: 1:5,000
0 25 50 100 meters 200
DATE: AUGUST, 1985
FIG. NO. 1038-3
To accompany a report by G. Belik, M.Sc.
BIG P 3
GEO 1
L.P. 26
PAYDAY
L 2408
L 2409
TEE 7
L 3413
L 4639
L 4640
L 4637
L 3414
L 3415
L 3416
East Grid Area
DICK 2-7
BIG P 1
Rampolo Creek
Conductive swamp
Edge effect conductive swamp
0+00 B/L
L-36+00W
L-34+00W
L-32+00W
L-30+00W
L-28+00W
L-26+00W
L-24+00W
L-22+00W
L-20+00W
L-18+00W
L-16+00W
L-15+00W
L-14+00W
L-13+00W
L-12+00W
L-11+00W
L-10+00W
L-9+00W
L-8+00W
L-7+00W
L-6+00W
L-5+00W
L-4+00W
L-3+00W
L-2+00W
L-1+00W
L-0+00
L-2+00E
L-4+00E
L-6+00E
L-8+00E
L-10+00E
L-12+00E
L-14+00E
L-3+00W
L-1+00W
L-0+00
L-4+00S Baseline
N

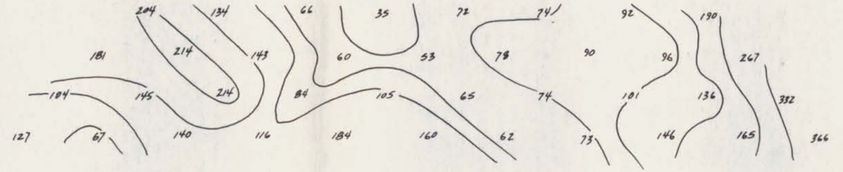
CO-ORDINATE

-1+50 N | -2+00 N | -2+50 N | -3+00 N | -3+50 N | -4+00 N | -4+50 N

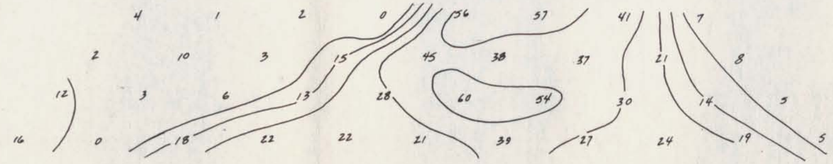
P. F. E.
(X = 25 m)

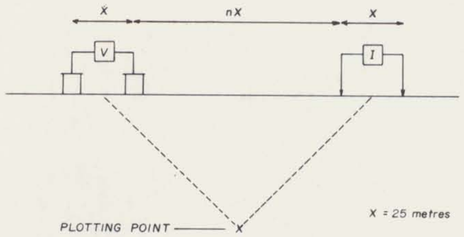


RESISTIVITY
(X = 25 m)



METAL FACTOR
(X = 25 m)





SURFACE PROJECTION OF ANOMALOUS ZONE

DEFINITE ——————

PROBABLE – – – – – – –

POSSIBLE .....

CONTOUR INTERVALS

PFE - 3.0, 5.0, 7.5, 10, 15
RESISTIVITY - 1, 1.5, 3, 5, 7.5 ...
METAL FACTOR - 10, 15, 20, 30, 50, 75, 100 ...

ZALMAC MINES LTD.

INDUCED POLARIZATION RESISTIVITY SURVEY

LINE NO. 9+00 W

BIG P GROUP

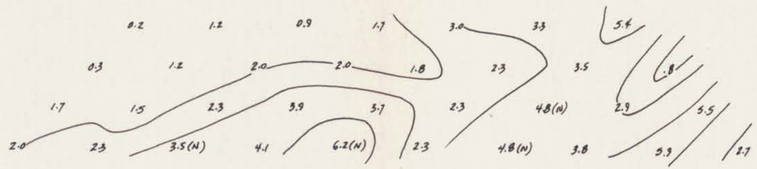
VERNON MINING DIVISION, B.C.

TECHNICAL WORK BY: G. BELIK AND ASSOCIATES LTD.	DATE SURVEYED: JULY, 1985.
APPROVED BY: G. BELIK, M.Sc.	FIG. NO. 1038-7

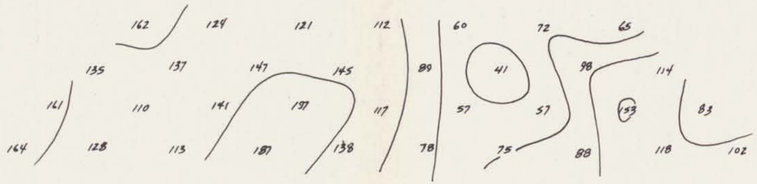
CO-ORDINATE

- 1+50 S
- 1+00 S
- 0+50 S
- BASELINE
- 0+50 N
- 1+00 N
- 1+50 N

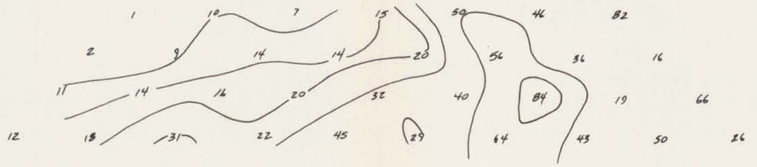
P. F. E.
(X = 25 m)

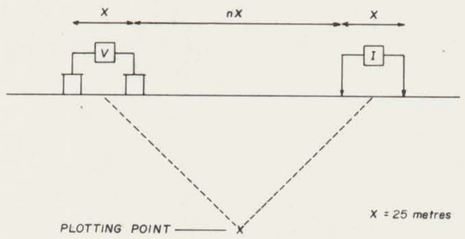


RESISTIVITY
(X = 25 m)



METAL FACTOR
(X = 25 m)





SURFACE PROJECTION OF ANOMALOUS ZONE

DEFINITE ——————

PROBABLE - - - - - - - - - -

POSSIBLE .....

CONTOUR INTERVALS

PFE - 3.0, 5.0, 7.5, 10, 15
RESISTIVITY - 1, 1.5, 3, 5, 7.5 ...
METAL FACTOR - 10, 15, 20, 30, 50, 75, 100 ...

ZALMAC MINES LTD.

INDUCED POLARIZATION RESISTIVITY SURVEY

LINE NO. 10+00 W

BIG P GROUP

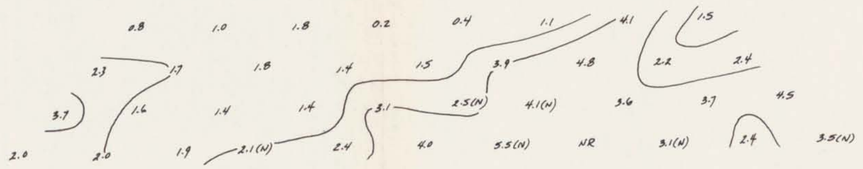
VERNON MINING DIVISION, B.C.

TECHNICAL WORK BY: G. BELIK AND ASSOCIATES LTD.	DATE SURVEYED: JULY, 1985.
APPROVED BY: G. BELIK, M.Sc.	FIG. NO. 1038-8

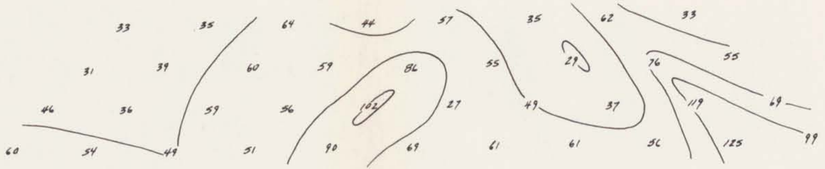
CO-ORDINATE

-1+00S | -0+50S | -BASELINE | -0+50N | -1+00N | -1+50N | -2+00N

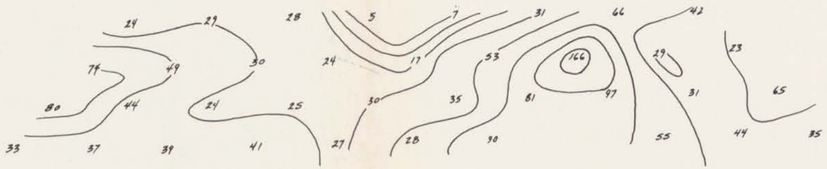
P.F.E.
(X = 25 m)

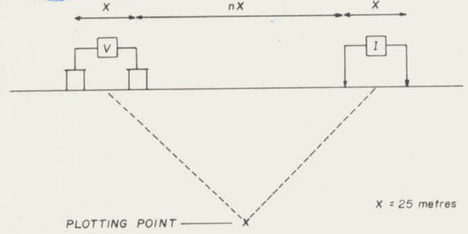


RESISTIVITY
(X = 25 m)



METAL FACTOR
(X = 25 m)





SURFACE PROJECTION OF ANOMALOUS ZONE

DEFINITE ——————
PROBABLE - - - - - - - - -
POSSIBLE .....

CONTOUR INTERVALS

PFE - 3.0, 5.0, 7.5, 10, 15
RESISTIVITY - 1, 1.5, 3, 5, 7.5 ...
METAL FACTOR - 10, 15, 20, 30, 50, 75, 100 ...

ZALMAC MINES LTD.

INDUCED POLARIZATION RESISTIVITY SURVEY

LINE NO. 3+00W

BIG P GROUP

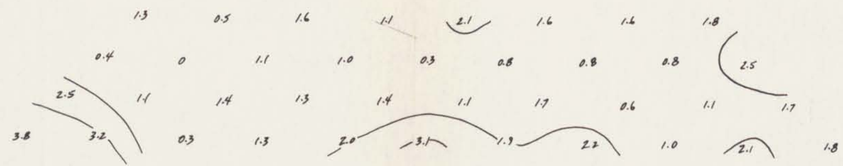
VERNON MINING DIVISION, B.C.

TECHNICAL WORK BY: G. BELIK AND ASSOCIATES LTD.	DATE SURVEYED: JULY, 1985.
APPROVED BY: G. BELIK, M.Sc.	FIG. NO. 1038-5

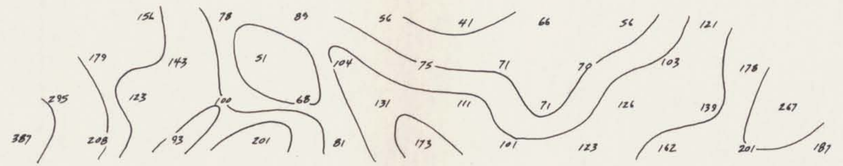
CO-ORDINATE

7+50 N | 8+00 N | 8+50 N | 9+00 N | 9+50 N | 10+00 N | 10+50 N

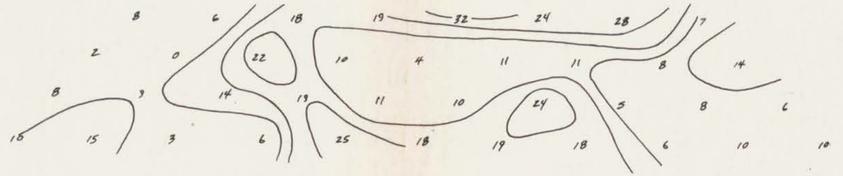
P. F. E.
(X = 25 m)

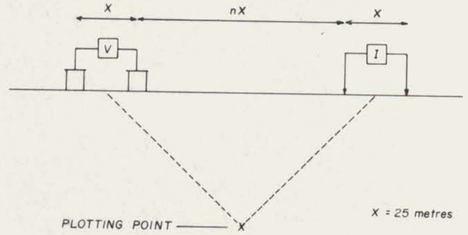


RESISTIVITY
(X = 25 m)



METAL FACTOR
(X = 25 m)





SURFACE PROJECTION OF ANOMALOUS ZONE

DEFINITE ——————

PROBABLE - - - - - - - - -

POSSIBLE .....

CONTOUR INTERVALS

PFE - 30, 50, 75, 10, 15
RESISTIVITY - 1, 1.5, 3, 5, 7.5 ...
METAL FACTOR - 10, 15, 20, 30, 50, 75, 100 ...

ZALMAC MINES LTD.

INDUCED POLARIZATION RESISTIVITY SURVEY

LINE NO. 14+00 W

BIG P GROUP

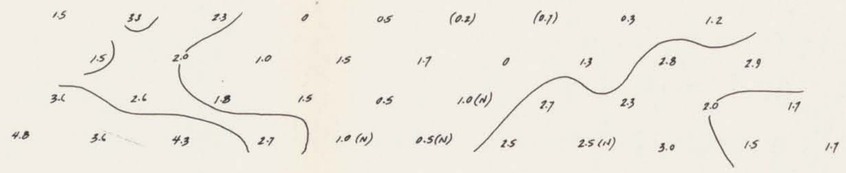
VERNON MINING DIVISION, B.C.

TECHNICAL WORK BY: G. BELIK AND ASSOCIATES LTD.	DATE SURVEYED: JULY, 1985.
APPROVED BY: G. BELIK, M.Sc.	FIG. NO. 1038-9

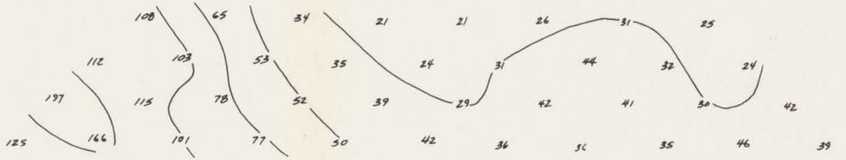
CO-ORDINATE

- 4+00 N
- 4+50 N
- 5+00 N
- 5+50 N
- 6+00 N
- 6+50 N
- 7+00 N

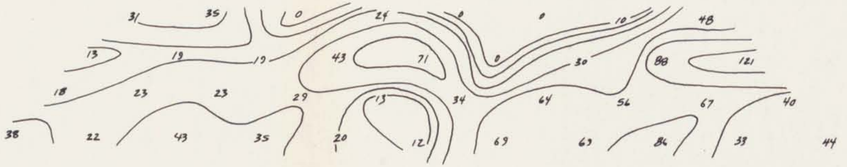
P. F. E.
(X = 25 m)

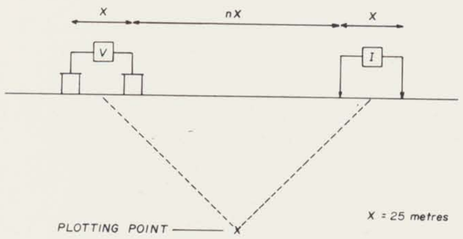


RESISTIVITY
(X = 25 m)



METAL FACTOR
(X = 25 m)





SURFACE PROJECTION OF ANOMALOUS ZONE

DEFINITE ———————

PROBABLE - - - - - - - - -

POSSIBLE .....

CONTOUR INTERVALS

PFE - 30, 50, 75, 10, 15
RESISTIVITY - 1, 15, 3, 5, 75...
METAL FACTOR - 10, 15, 20, 30, 50, 75, 100...

ZALMAC MINES LTD.

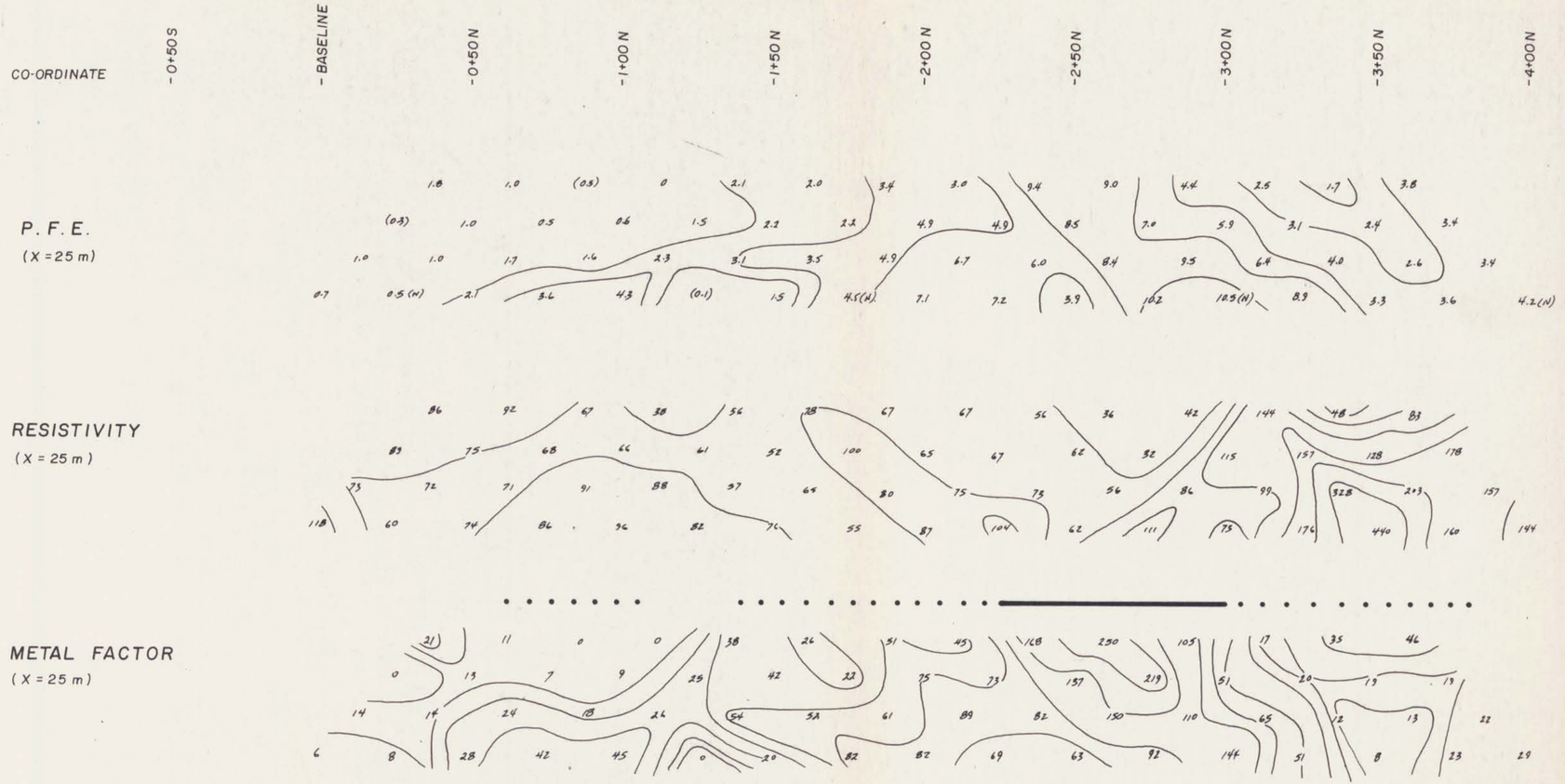
INDUCED POLARIZATION RESISTIVITY SURVEY

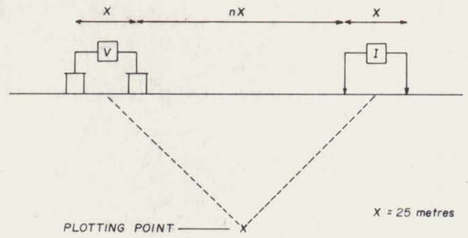
LINE NO. 15+00 W

BIG P GROUP

VERNON MINING DIVISION, B.C.

TECHNICAL WORK BY: G. BELIK AND ASSOCIATES LTD.	DATE SURVEYED: JULY, 1985.
APPROVED BY: G. BELIK, M.Sc.	FIG. NO. 1038-10





SURFACE PROJECTION OF ANOMALOUS ZONE

DEFINITE ——————

PROBABLE – – – – – – – –

POSSIBLE .....

CONTOUR INTERVALS

PFE - 3.0, 5.0, 7.5, 10, 15

RESISTIVITY - 1, 1.5, 3, 5, 7.5 ...

METAL FACTOR - 10, 15, 20, 30, 50, 75, 100 ...

ZALMAC MINES LTD.

INDUCED POLARIZATION RESISTIVITY SURVEY

LINE NO. 16+00 W

BIG P GROUP

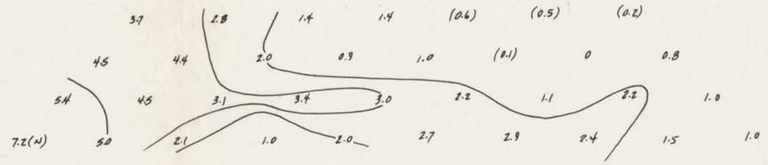
VERNON MINING DIVISION, B.C.

TECHNICAL WORK BY: G. BELIK AND ASSOCIATES LTD.	DATE SURVEYED: JULY, 1985.
APPROVED BY: G. BELIK, M.Sc.	FIG. NO. 1038-11

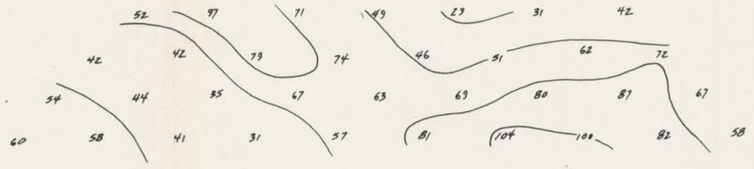
CO-ORDINATE

- 8+00 N
- 8+50 N
- 9+00 N
- 9+50 N
- 10+00 N
- 10+50 N
- 11+00 N

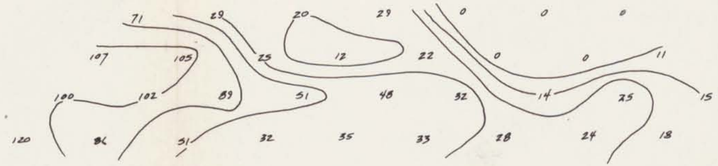
P. F. E.
(X = 25 m)

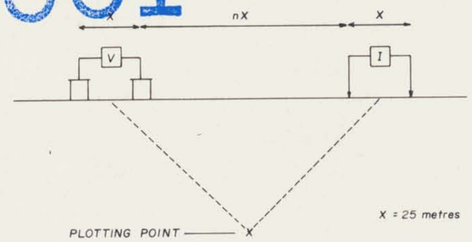


RESISTIVITY
(X = 25 m)



METAL FACTOR
(X = 25 m)





SURFACE PROJECTION OF ANOMALOUS ZONE

DEFINITE ——————

PROBABLE - - - - - - - - -

POSSIBLE .....

CONTOUR INTERVALS

PFE - 3.0, 5.0, 7.5, 10, 15
RESISTIVITY - 1, 1.5, 3, 5, 7.5 ...
METAL FACTOR - 10, 15, 20, 30, 50, 75, 100 ...

ZALMAC MINES LTD.

INDUCED POLARIZATION & RESISTIVITY SURVEY

LINE NO. 22+00 W

BIG P GROUP

VERNON MINING DIVISION, B.C.

TECHNICAL WORK BY: G. BELIK AND ASSOCIATES LTD.	DATE SURVEYED: JULY, 1985.
APPROVED BY: G. BELIK, M.Sc.	FIG. NO. 1038-12