

ARIS SUMMARY SHEET

District Geologist, Kamloops

Off Confidential: 89.11.08

ASSESSMENT REPORT 17984

MINING DIVISION: Vernon

PROPERTY: Big P
LOCATION: LAT 49 53 00 LONG 118 32 00
UTM 11 5526567 389843
NTS 082E15E

CLAIM(S): B16 P2-P3, Tee 1-6

OPERATOR(S): Zalmac Mines

AUTHOR(S): Higgins, A.G.

REPORT YEAR: 1988, 22 Pages

COMMODITIES

SEARCHED FOR: Lead, Copper, Silver

GEOLOGICAL

SUMMARY: A roof pendant of metavolcanics and metasediments of Permo-Carboniferous age is intruded by Mesozoic granites. Skarn is developed near the granitic contact. Pyritic and sericitic alteration occurs peripheral to shears. Mineralization consists of narrow seams and blebs of sphalerite and galena with traces of gold in partings and veinlets in shear zones. A 25-40 centimetre thick bed of skarn is exposed over a strike length of 40 metres.

WORK

DONE: Geochemical, Physical
ROCK 70 sample(s) ;AU,AG,PB,ZN,CU
TREN 240.0 m 4 trench(es)
Map(s) - 1; Scale(s) - 1:10 000

MINFILE: 082ENE031

LOG NO: 1116	RD.
ACTION:	
FILE NO:	

TRENCHING REPORT

BIG P GROUP

Vernon Mining Division, British Columbia

FILMED

N.T.S. 82 E/15 E, 16 W

49° 53' N, 118° 32' W **GEOLOGICAL BRANCH
ASSESSMENT REPORT**

17,984

OWNER: Zalmac Mines Limited

OPERATOR: Zalmac Mines Limited

CONSULTANT: A. Higgins

AUTHOR: A. Higgins

November 3, 1988

**GOLD COMMISSIONER
RECEIVED and RECORDED**
NOV 10 1988
M.R. _____ \$ _____
VERNON, B.C.

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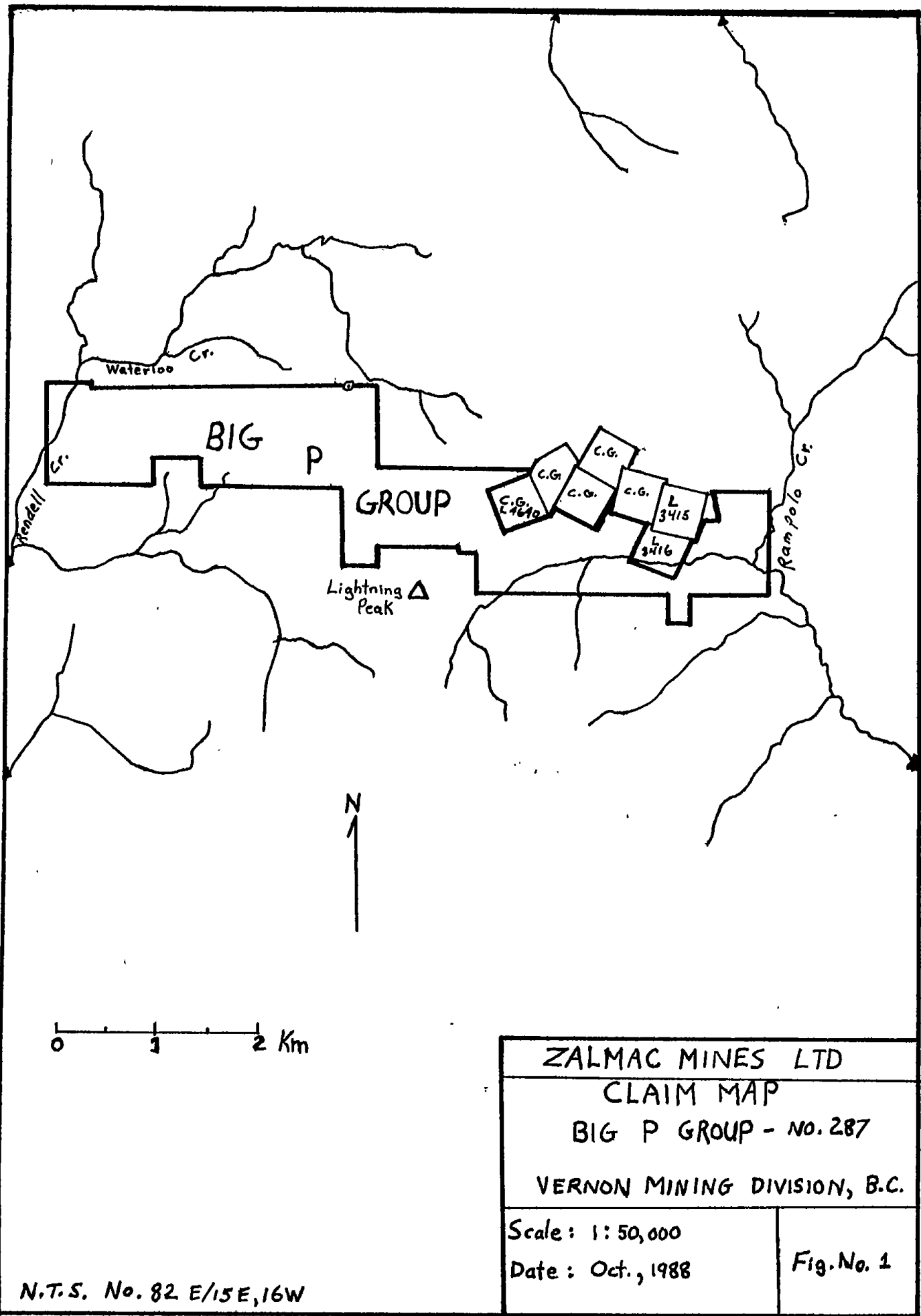
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A. Higgins



ZALMAC MINES LTD	
CLAIM MAP	
BIG P GROUP - NO. 287	
VERNON MINING DIVISION, B.C.	
Scale: 1: 50,000	Fig. No. 1
Date: Oct., 1988	

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

1. Introduction:

(i) Location, Access and Physiography:

The Big P claim group is located in the Vernon Mining Division, south central British Columbia (N.T.S. 82E/15E, 16W). The center of the property is located about 70 km southeast of Vernon at Latitude $49^{\circ} 53' N$ and Longitude $118^{\circ} 32' W$. Elevation varies from 1500 to 2,000 meters a.s.l.

Access from Vernon is east along Highway 6 for about ~~50~~⁸ km, then south 10 km on Kettle River road. At K62 on Kettle River Road, the Winnifred Creek forest road is followed up and over a divide into the vicinity of Lightning Peak. The last stretch of road is rough, extending southerly through the center of the claim group to Lightning Peak.

Elevation of the claim area varies from 1500 to 2000 meters a.s.l. Overburden in the area of trenching is generally thick, with little bedrock exposure. Forest cover in the same area is fairly light.

(ii) Property Definition:

The Big P Group consists of 4 contiguous MGS claims totalling 38 units and 7 2-post claims.

Mining Division	Claim Name	Units	Record No.	Record Date
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		1878	October, 1984
Vernon	Tee 3		1879	October, 1984
Vernon	Tee 4		1880	October, 1984
Vernon	Tee 5		1881	October, 1984
Vernon	Tee 6		1882	October, 1984
Vernon	Tee 6		1914	November, 1984

Previous work on the property consists of prospecting (1980), and an exploration program in 1985 which included grid preparation, V.L.F.-Electromagnetic and Induced Polarization/Resistivity surveys and backhoe trenching of selected geophysical targets.

Owner and operator of the claim group is Zalmac Mines Limited, P.O. Box 1027, Vernon, B.C.

The general geology and economic potential of the claim area is well-documented in previous reports. Briefly, the claim area straddles a contact between a pendant of metavolcanics and metasediments of the Paleozoic Anarchist Group in the north and Mesozoic "Nelson" granitics to the south.

Many small silver-bearing and locally gold-bearing polymetallic quartz veins and shear zones are known in the pendant area.

The only documented mineralization of the claim group except for the 1985 program which found 2 anomalous areas for lead and silver in shear zones, is the Lumpy showing in the north part of the Big P claim. This showing was explored by 3 short adits and shallow trenching. Mineralization reportedly consisted of very narrow seams and blebs of sphalerite and galena with high silver +/- gold values.

A 1968 soil geochemical survey by Great Horn Mining Syndicate (Assessment Report No. 1812) has identified several anomalous and possibly anomalous areas for copper and zinc.

(iii) 1988 Work Summary:

Work in August, 1988 consisted of backhoe trenching and rock chip sampling in the vicinity of the Lumpy showing in the north central part of the Big P2 claim, and trenching on a previously identified geochemical soil anomaly and exposure of skarn-type mineralization in the southeast part of the Big P3 claim and north central part of the Tee claims.

2. 1988 Backhoe Trenching Program:

(i) Purpose:

A trenching program was carried out to (1) evaluate a geophysical target in the vicinity of the Lumpy showing where 1985 trenching did not reach bedrock, and (2) investigate an area straddling the boundary of the Big P3 and Tee claims where 1985 trenching encountered highly anomalous lead mineralization and moderately anomalous silver values. The second area was also chosen because of anomalous zinc and possibly anomalous copper in soils determined by Great Horn Mining Syndicate in 1968. In the same area, unrecorded trenching has exposed skarn-type mineralization.

In total, 4 trenches were completed utilizing a Warner - Swayze 211 backhoe excavator operated by Act Construction of Vernon, B.C.

Trench locations, depth of overburden, rock analyses and description of bedrock lithologies are given in Figures 3 to 7.

Only trench 88-1 was visited by the geologist; for the other trenches rock types and sample locations were determined by D. Simmons.

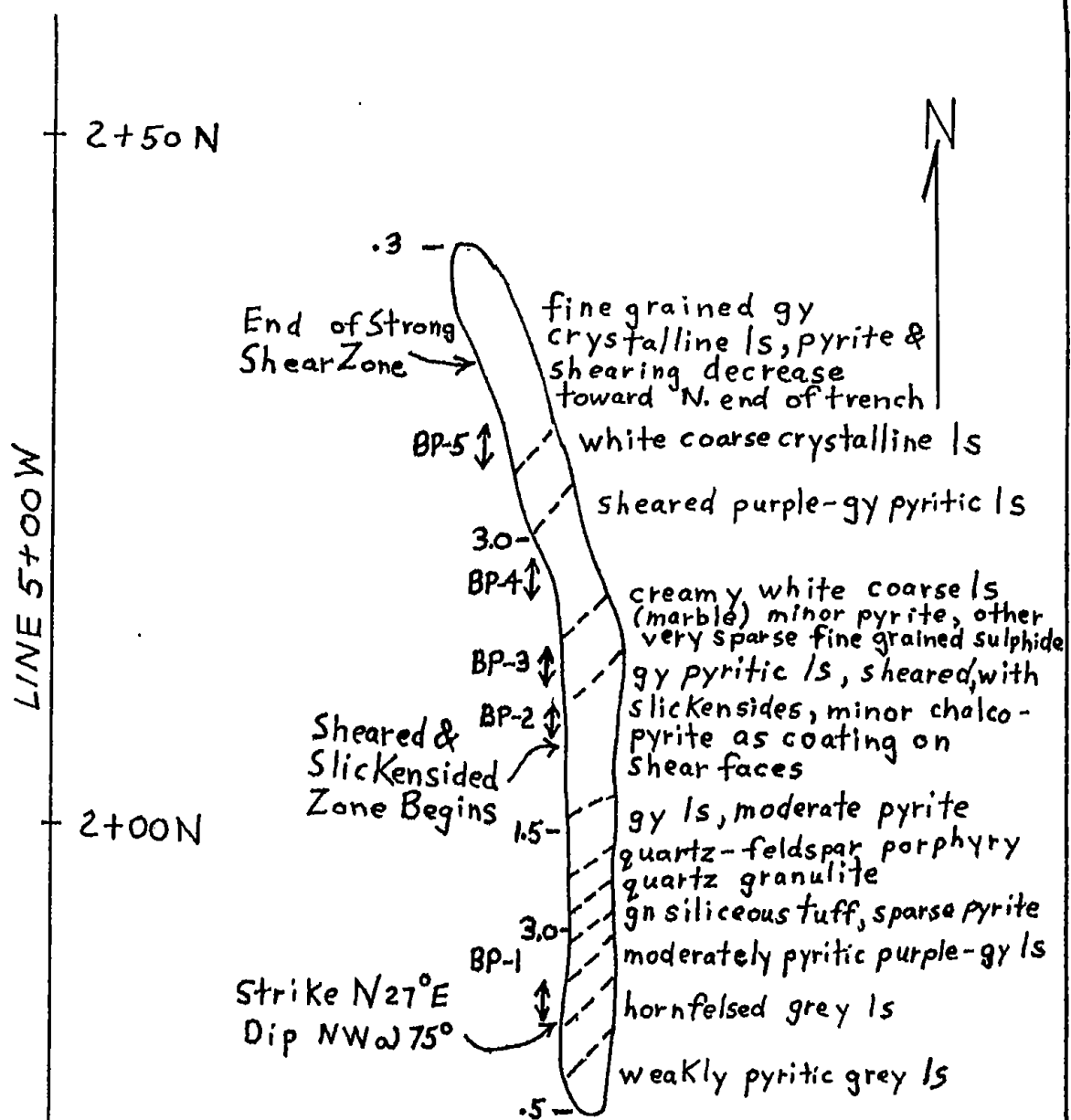
(ii) Results:

In summary, trenches 88-1 and 88-2 exposed pyritic mineralization with very minor lead, zinc, silver and copper sulphides in hand samples from a moderately developed 30 meter wide shear zone. Trench 88-3 in an area of anomalous zinc in soils did not reach bedrock, and the first segment of trench 88-4 (4A) exposed a steeply dipping bed of oxidized sulphides 25 to 40 cm thick, with visible chalcopyrite as coatings on rock faces. This bed was followed over a strike length of 40 metres but was lost in soft ground which could not be trenched. Samples collected returned anomalously high copper (0.11 %) and moderately anomalous silver (0.20 oz/st) values.

(iii) Interpretation and Conclusions:

Trenching in the vicinity of the Lumpy showing indicates that no potential economic mineralization is present and the shear does not appear to be very well developed, therefore no future work in this area is recommended.

Anomalous copper and silver values from skarn-type mineralization from trench 88-4 are encouraging. These values, plus anomalous zinc in soils which was not explained by the program indicates that more work in this area is warranted. Detailed soil geochemical sampling is recommended to pinpoint possible targets.

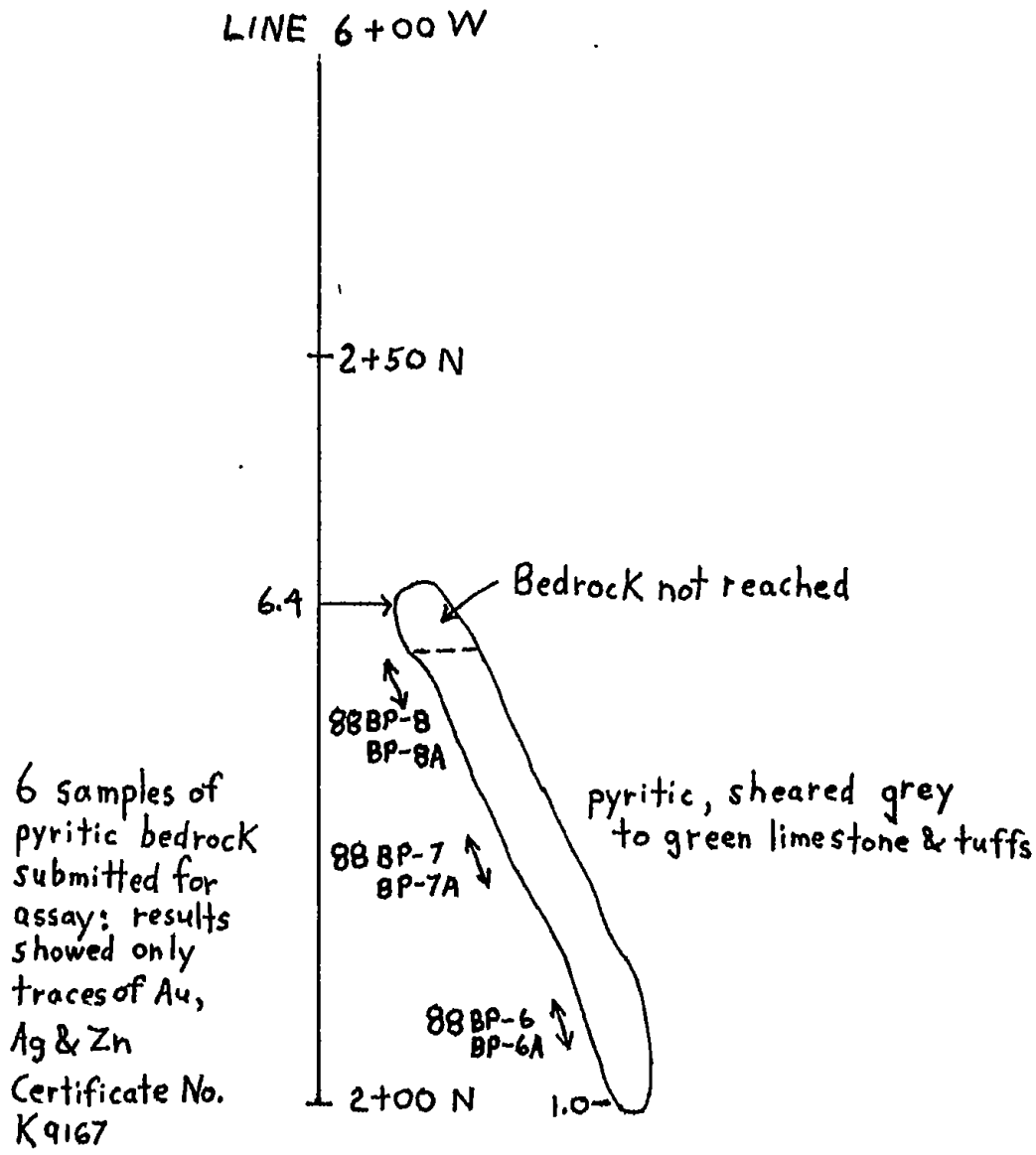


ls = limestone
 gy = grey
 gn = green

LEGEND

- ┆ 1+50N GRID LINE WITH STATION
- TRENCH OUTLINE
- 1.5 — OVERBURDEN DEPTH (METERS)
- GEOLOGICAL CONTACT
- ↑ 88-BP1 SAMPLE LOCATION (PPM Pb, PPM Ag, PPM Ba, PPM Zn, PPM Cu)

ZALMAC MINES LTD.	
TRENCH 88TR-881	
BIG P GROUP	
Scale: 1:500	
Date: Oct, 1988	FIG. No. 3

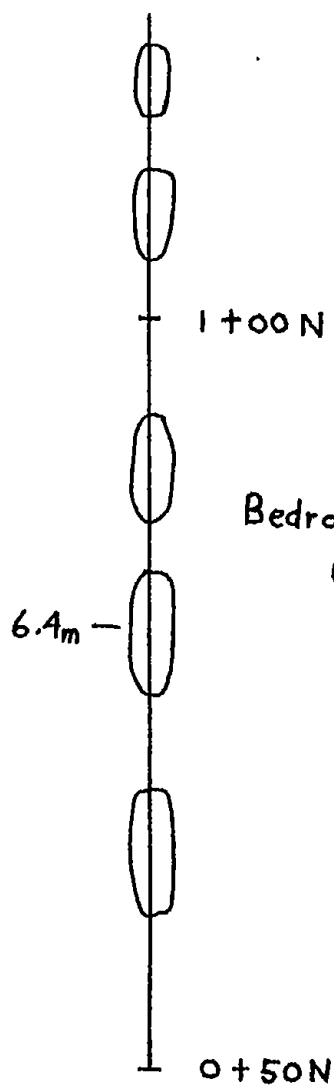


LEGEND

- + 1+50N GRID LINE WITH STATION
- TRENCH OUTLINE
- 1.5m — OVERBURDEN DEPTH (METERS)
- GEOLOGICAL CONTACT
- ↑ 88-BPI SAMPLE LOCATION (PPM Pb, PPM Ag, PPM Au, PPM Zn, PPM Cu)

ZALMAG MINES LTD.	
TRENCH 88TR-2	
BIG P GROUP	
Scale: 1:500	
Date: Oct, 1988	FIG. NO. 4

LINE 16 +00W

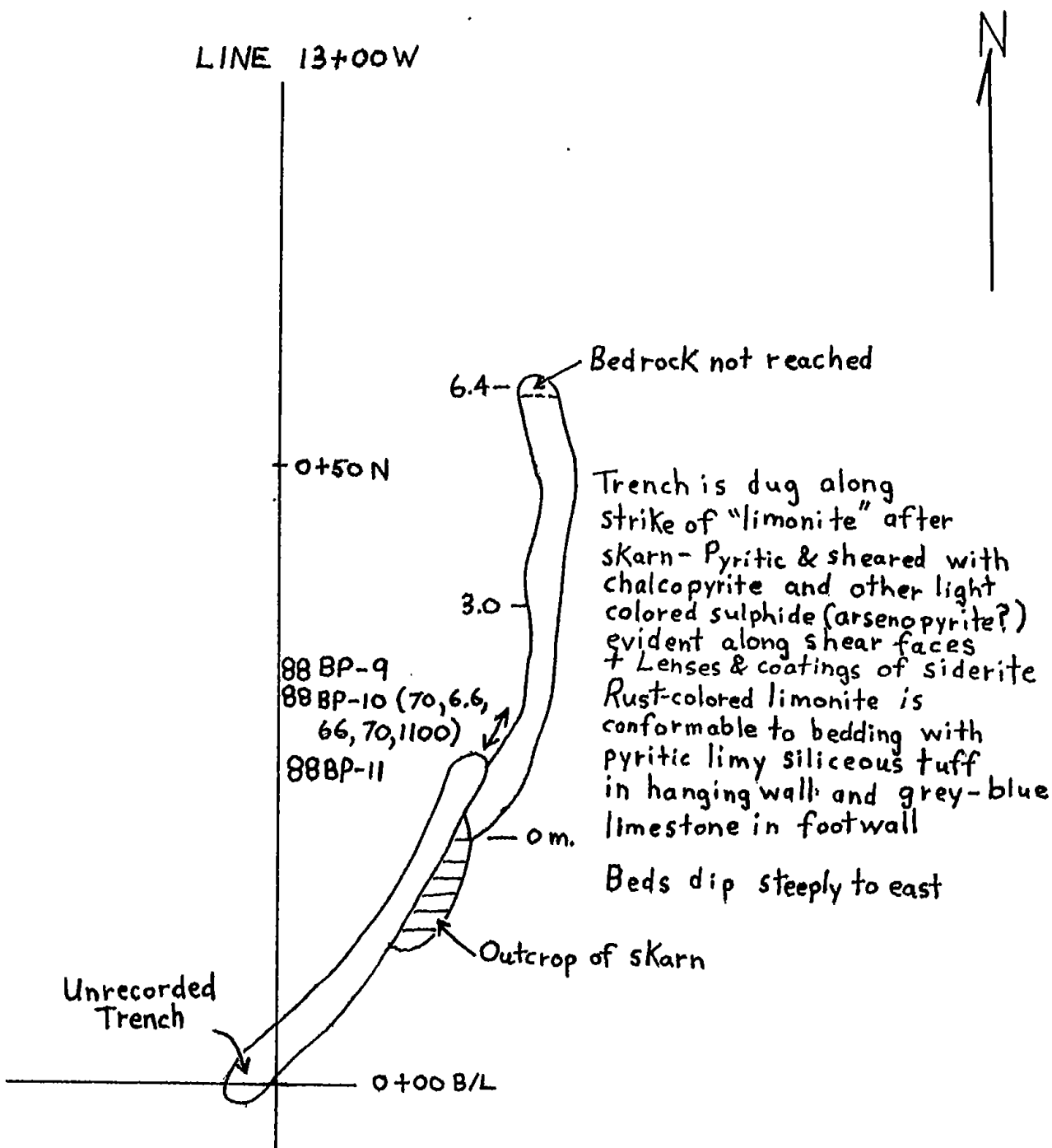


Bedrock not reached
(All holes)

LEGEND

- + 1+50N GRID LINE WITH STATION
- TRENCH OUTLINE
- 1.5 — OVERBURDEN DEPTH (METERS)
- GEOLOGICAL CONTACT
- ↑ 88-BP1 SAMPLE LOCATION
(PPM Pb, PPM Ag, PPBAu, PPM Zn, PPM Cu)

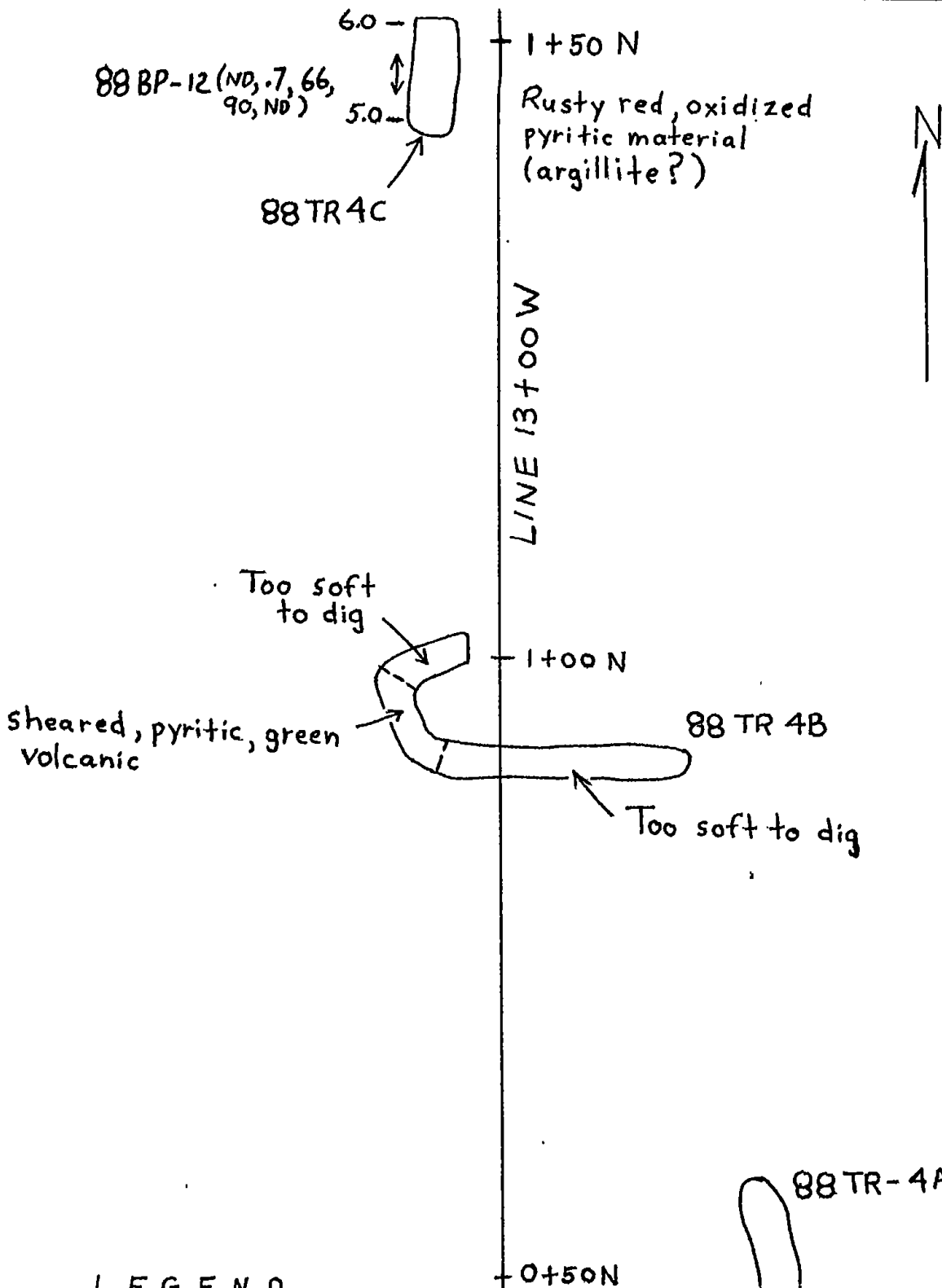
ZALMAC MINES LTD.	
TRENCH 88TR-3	
BIG P GROUP	
Scale: 1:500	
Date: Oct, 1988	FIG.No. 5



LEGEND

- + 1+50N GRID LINE WITH STATION
- TRENCH OUTLINE
- 1.5 — OVERBURDEN DEPTH (METERS)
- GEOLOGICAL CONTACT
- ↑ ↓ 88-BP1 SAMPLE LOCATION (PPM Pb, PPM Ag, PPM Au, PPM Zn, PPM Cu)

ZALMAC MINES LTD.	
TRENCH 88TR-4A	
BIG P GROUP	
Scale: 1:500	0 5 m 10 15
Date: Oct, 1988	FIG. NO. 6



LEGEND

- + 1+50N GRID LINE WITH STATION
- TRENCH OUTLINE
- 1.5 — OVERBURDEN DEPTH (METERS)
- GEOLOGICAL CONTACT
- ↕ 88-BP_i SAMPLE LOCATION (PPM Pb, PPM Ag, PPM Au, PPM Zn, PPM Cu)

ZALMAC MINES LTD.	
TRENCH 88TR-4B&C	
BIG P GROUP	
Scale: 1:500	0 5m 10 15
Date: Oct, 1988	FIG. No. 7

APPENDIX I

Assay and Geochemical Certificates



Member
Canadian Testing
Association

KAMLOOPS RESEARCH & ASSAY LABORATORY LTD.

912 - 1 LAVAL CRESCENT — KAMLOOPS, B.C.
V2C 5P5

PHONE: (604) 372-2784 — TELEX 0-48-8323

CERTIFICATE OF ASSAY

B.C. LICENSED ASSAYERS
GEOCHEMICAL ANALYSTS
METALLURGISTS

TO Zalmaq Mines Ltd.

R.R. #1 Site 3, Comp. 61

Vernon, B.C. V1T 6L4

Certificate No. K 9151

Date August 29, 1988

I hereby certify that the following are the results of assays made by us upon samples

Kral No	Marked	Au		Ag		Report Sample No
		ozs / ton		ozs / ton		
1.		L.001		L.01		BP-1
2.		L.001		L.01		BP-2
3.		L.001		L.01		BP-3
4.		L.001		L.01		BP-4
5.		L.001		L.01		BP-5
	L means "less than"					

NOTE:
Rejects retained three weeks
Pulps retained three months
unless otherwise arranged.

Deane A. Stewart

Registered Assayer, Province of British Columbia



KAMLOOPS RESEARCH & ASSAY LABORATORY LTD.

912-1 LAVAL CRESCENT—KAMLOOPS, B.C.
Y2C 5P5
PHONE (604) 372-2784—TELEX 048-8920
CERTIFICATE OF ASSAY

B.C. LICENSED ASSAYERS
GEOCHEMICAL ANALYSTS
METALLURGISTS

TO Zalmac Mines Certificate No. K 9167
3117 - 30th Ave. Date August 30, 1988
Vernon, B.C.

I hereby certify that the following are the results of assays made by us upon the herein described _____ samples

Kral No	Marked	Au ozs/ton	Ag ozs/ton	Zn percent	Report Sample No
1.	1	L.001	L.01	L.01	BP-6
2.	1A	L.001	L.01	L.01	BP-6A
3.	2	L.001	L.01	L.01	BP-7
4.	2A	L.001	L.01	L.01	BP-7A
5.	3	L.001	L.01	L.01	BP-8
6.	3A	L.001	L.01	L.01	BP-8A

L means "less than"

NOTE:
Rejects retained three weeks.



SGS SUPERVISION SERVICES INC.
General Testing Laboratories Division

1001 East Pender Street,
Vancouver, B.C., Canada. V6A 1W2
Telephone: (604) 254-1647
Telex: 04-507514

CERTIFICATE OF ASSAY

Date: September 12, 1988
File: 8809-0153

TO: ZALMAC MINES LTD.
c/o Baron Insurance Agencies
(Attn: Mr. Barry Amies)
3117 - 30 Ave.
Vernon, B.C.
V1T 2C4

We hereby certify that the following are the results of assays on: Ore samples

MARKED	GOLD	SILVER	Copper	Zinc	Lead	xxxxxxx	xxxxxxxxxxx	xxxxx
	oz/st	oz/st	Cu (%)	Zn (%)	Pb (%)			Report Sample No.
1	0.002	0.02	-	0.009	-			BP - 9
2	0.002	0.02	-	0.004	-			BP - 9A
3	0.004	0.02	-	0.004	-			} surface grab samples vicinity of TR 85-9
4	0.003	0.02	-	0.006	-			
5	0.002	0.20	0.11	0.007	0.007			
6	0.002	0.02	-	0.007	-			BP - 10
7	0.002	0.02	-	0.009	-			BP - 11
								BP - 12

NOTE: REJECTS RETAINED ONE MONTH. PULPS RETAINED THREE MONTHS. ON REQUEST PULPS AND REJECTS WILL BE STORE FOR A MAXIMUM OF ONE YEAR.
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L. Wong
PROVINCIAL ASSAYER

Analytical and Consulting Chemists, Bulk Cargo Specialists, Surveyors, Inspectors, Samplers, Weighers
MEMBER: American Society For Testing Materials • The American Oil Chemists Society • Canadian Testing Association
REFEREE AND OR OFFICIAL CHEMISTS FOR: National Institute of Oilseed Products • The American Oil Chemists' Society
OFFICIAL WEIGHMASTERS FOR: Vancouver Board Of Trade

CERTIFICATE OF ANALYSIS



SGS SUPERVISION SERVICES INC.

General Testing Laboratories Division
 1001 East Pender Street,
 Vancouver, B.C., Canada. V6A 1W2
 Telephone: (604) 254-1647
 Telex: 04-507514

Zalmac Mines Ltd.

Date: September 28, 1988
 No.:
 File: 8809-0153

I C P ANALYSIS

Description: Ore samples

Element	1	3	5
AG (ppm)	0.15	0.22	1.88
AL (ppm)	587.40	2169.16	3169.66
AS (ppm)	2.61	17.05	13.86
BA (ppm)	15.56	19.21	8.92
CA (ppm)	2345.00	> 1%	2583.19
CD (ppm)	1.49	1.00	7.80
CO (ppm)	7.62	0.71	70.78
CR (ppm)	61.77	37.59	217.56
CU (ppm)	65.33	6.50	1045.99
FE (ppm)	> 1%	> 1%	> 1%
MG (ppm)	273.33	1692.32	2047.22
MN (ppm)	51.75	361.22	240.54
MO (ppm)	0.98	51.30	9.21
NI (ppm)	20.47	14.15	71.95
P (ppm)	1025.00	322.06	561.53
PB (ppm)	3.93	7.65	21.36
SB (ppm)	2.41	4.60	11.14
SR (ppm)	8.61	249.43	7.02
TI (ppm)	52.12	8.74	31.97
V (ppm)	4.39	14.24	23.39
ZN (ppm)	19.42	13.06	37.98

Note: Sample 1 = 88BP-9
 Sample 3 = 88BP-11
 Sample 5 = 88BP-10

THIS COMPANY ACCEPTS NO RESPONSIBILITY EXCEPT FOR THE DUE PERFORMANCE OF INSPECTION AND/OR ANALYSIS IN GOOD FAITH AND ACCORDING TO THE RULES OF THE TRADE AND OF SCIENCE.


 L. Newnes, Chemist
 SIGNATURE AND TITLE

APPENDIX II

COST STATEMENT

BIG P TRENCHING PROJECT

A: Trenching Costs

Crew: D. Simmons, Rodell Enterprises Ltd., Supervisor
Machine Operator, Act Construction Ltd., Vernon
R. Ovens, Assistant

Dates: August 15, 1988
August 19, 1988
August 21 - 27, 1988 inclusive
August 29 - September 1, 1988 inclusive

Costs:

1. D. Simmons		
- 119 hours at \$25/hr	2,975.00	
- hourly rate includes supervisor, camp, food & field supplies		
Gas	268.29	
Truck Rental & Maintenance	<u>228.00</u>	
Total D. Simmons		\$ 3,471.29
2. Machine & Operator		
- 76 hours at \$90/hr	6,840.00	
- hourly rate includes machine, operator, insurance & maintenance, food and travel expenses for operator		
Machine mob & demob	712.50	
Trailer for operator, rental, mob & demob, travel time operator	<u>678.00</u>	
Total machine & operator		<u>\$ 8,230.50</u>
Total Trenching Program		\$ 11,701.79

B: Geological & Report Costs

1. Labour		
A. Higgins, Geologist		
- August 22, 1988		
- Examine Trenching 1.0 day at \$250/day	250.00	
- Sample examination and assay selection		
- August 23 - September 1, 1988		
10.0 hours at \$25/hr	250.00	
R. Ovens, Assistant		
- August 22, 23, 24, 1988		
30.0 hours at \$10/hr	<u>300.00</u>	
Total Labour		\$ 800.00
2. Report Preparation		
- Includes professional fees, drafting	750.00	
- Incidental Costs,		
(photocopying, map purchase)	<u>36.00</u>	
Total Report		\$ 786.00
3. Mineral assays, rock geochemical analysis		<u>\$ 756.55</u>
Total Geological and Report		<u>\$ 2,342.55</u>
Total Trenching, Geological and Report		\$ 14,044.34

APPENDIX III

Statement of Qualifications

A. G. Higgins

Andrew G. Higgins, B.A., F.G.A.C., has 20 years experience mining and prospecting.

November 3, 1988

Andrew G. Higgins



ZALMAC MINES LTD.
 TRENCHING PROGRAM
 BIG P GROUP
 VERNON MINING DIVISION, B.C.

DATE: OCT, 1988 SCALE: 1:5,000
 0 50 100 meters 200

GEOLOGICAL BRANCH
 ASSESSMENT REPORT

17.984

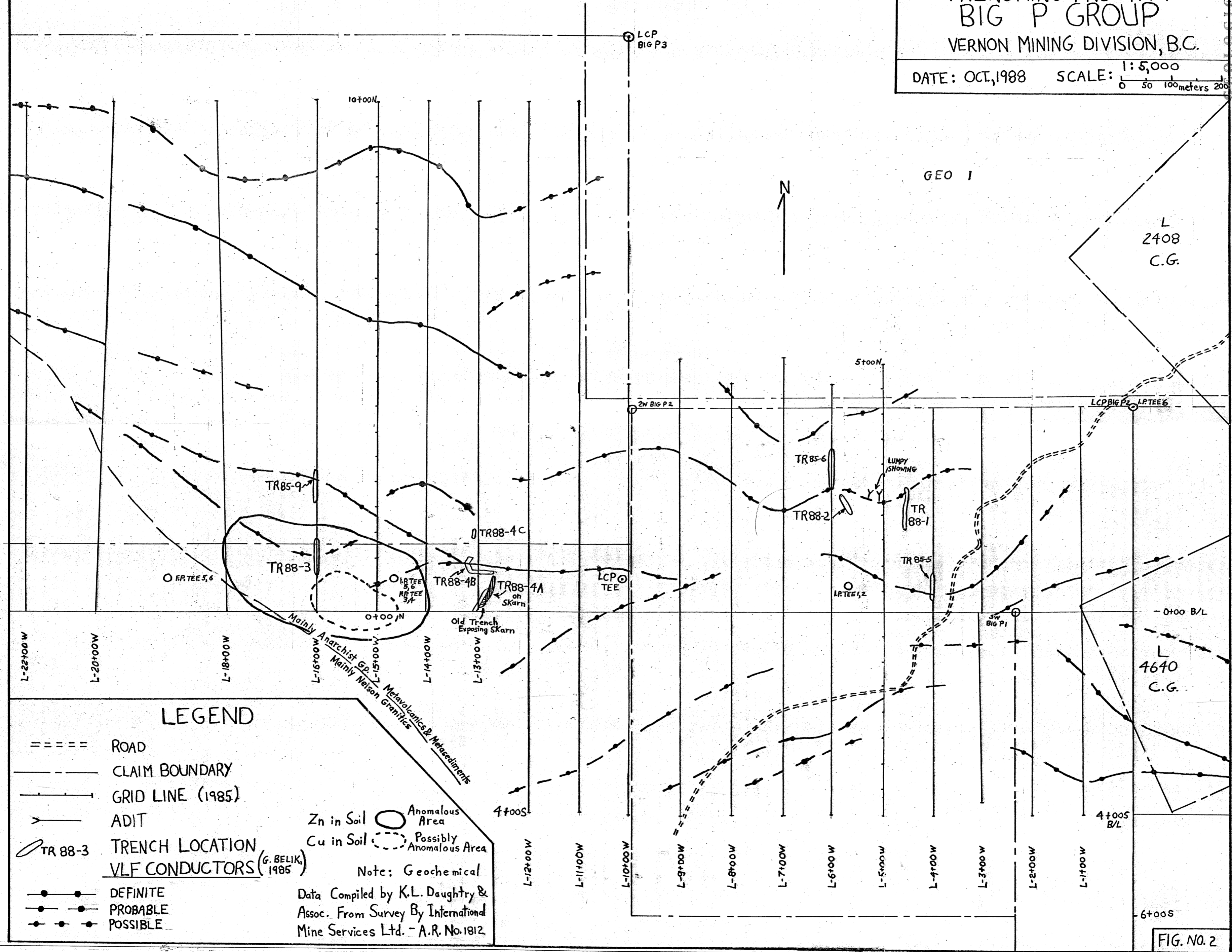


FIG. NO. 2