85-653-13829

SELF POTENTIAL SURVEY REPORT

ON THE

VAL CLAIM GROUP

SIMILKAMEEN MINING DIVISION

92H6
(Latitude 49° 29', Longitude 121° 02')

OWNER AND OPERATOR
B. R. MOWRY
PRINCETON, B.C.

Author: G. D. Bysouth

Submitted: 4 October 1985

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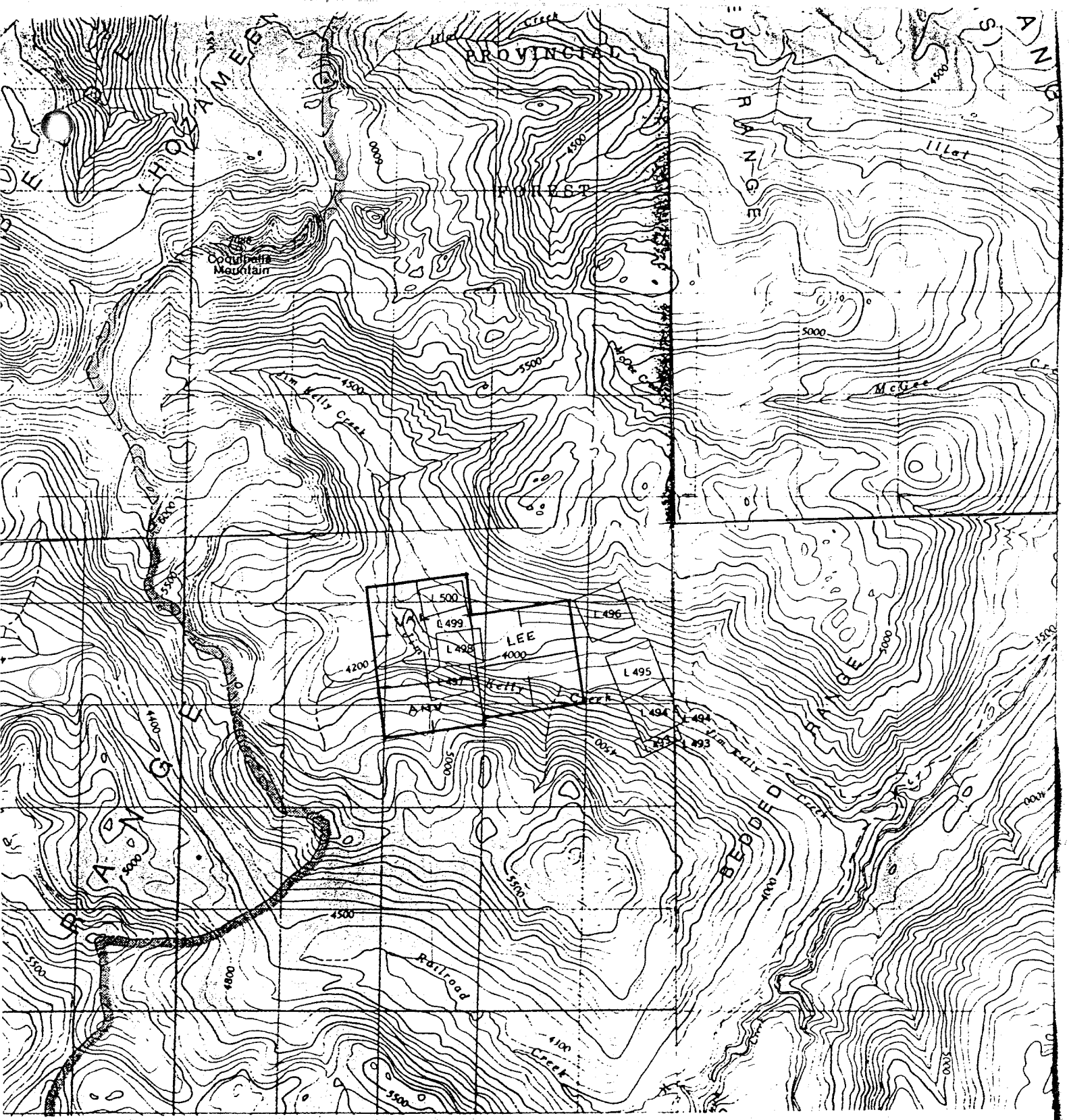


FIGURE 1 LOCATION MAP

VAL MINERAL CLAIM GROUP

Scale 1:50,000 Échelle

Miles 1 0 1 2 3 Milles

Metres 1000 0 1000 2000 3000 4000 Mètres

Yards 1000 0 1000 2000 3000 4000 Verges

1.0 INTRODUCTION

The Val Mineral Claim Group is located in the valley of Jim Kelly Creek about three miles (4.8 km) from the Tulameen River. The nearest settlement is Tulameen, B.C. which lies about 15 (24 km) to the northeast. Access is via a bulldozed trail which leaves the Tulameen River road near Kelly Creek bridge and extends westerly to Coquihalla Mountain.

The claims cover several old gold prospects. The most prominent is the John Bull [1] which is located in the creek canyon and has been explored by a 20 - foot open cut and adjoining 25 - foot tunnel. Another showing lies about 2400 - feet to the northwest in the canyon of the north fork. It has been explored by a 15 - foot open cut.

The objective of the S. P. survey wqs to search for possible extensions of mineralization exposed in these two prospects and to also test for conductors in adjacent areas. A grid - type survey was used over the north fork shear zone. Two lines were run over the John Bull shear zone and a long reconnaissance line was used to test the northerly extension of this system and to search for other sulfide - bearing zones to the east and west. In both areas complete coverage was hindered by a thick clay cover, steep rock canyons and the creek bed.

Field work was done during August 31, September 1, 21 and 22, 1985. A total of 6945 - feet (2118 meters) of line was run, which involved 174 pot locations.

2.0 MINERAL CLAIMS

The location of the Val Mineral Claim Group is shown in Figure 1. Claims of the Group are given below:

CLAIM NAME	RECORD NO.	ANNIVERSARY DATE
Val 1 - 4	1566 - 1569	October 5
Anv 1 - 2	2288 - 2289	October 12
Lee 1 - 4	2216 - 2219	August 13

The Val and Lee claims are owned by B.R. Mowry of Princeton, B.C. The Anv claims are owned by G. Kurz of Squamish, B.C. As shown in Figure 2, the work was done on the Val 2, Val 3, Lee 2 and Lee 4 claims.

3.0 GEOLOGY

The Val Group is confined entirely within the Jim Kelly Creek valley. Bedrock exposures are plentiful along the steep southeast side of the valley and within the creek canyons. Along the northeast side, above the canyons and up to the 4300 - foot level, rock exposures are virtually absent. Here, thick deposits of glacial till and sandy outwash form a broad, almost plateau - like topography which is poorly drained and subject to numerous mudflows and land slumps along the creek valley.

Bedrock underlying the claims has not been adequately identified. It had been classified as a dioritic phase of the Eagle Granodiorite [2] but exposures in the canyons around the prospects reveal a complex assemblage of sheared and altered fine grain green rocks. Alteration appears most intense within the shear zones where the rock consists of various mixtures of quartz, chlorite, ankerite and sericite.

The sulfides appear most concentrated within the shear zones, either as strong disseminations or as vein material along with quartz. Pyrite is the major sulfide and is often accompanied by minor chalcopyrite. In places it forms massive lenses, but the total amount of sulfides throughout any of the known shear zones probably does not exceed 5%. Most of these systems are less than 50 - feet wide. Most strike northwesterly and dip steeply to the southwest. None appear to be strong geophysical conductors.

4.0 SELF POTENTIAL SURVEY

4.1 GENERAL APPROACH

Two problems are evident in conducting an S. P. survey within this environ - ment. The first involves the low response expected from the shear zone mineral - ization. This may be no more than 20 milli - volts which is within the range of normal background variations, and therefore not readily recognizable as anomalous. In this survey, however, such low amplitude anomalies would be considered a possible expression of mineralization if they occurred along the projected strike of known shear zones and could be repeated along adjacent lines. As such, they would provide a useful target for further exploration. The second problem is

more serious. It involves the glacial clays which cover most of the area. In the writer's experience, these clays can mask the strongest of S. P. generators, and therefore would be expected to completely hide weaker anomalies. Accordingly, most of the S. P. lines were run over areas assumed to have only a thin overburden cover. This consideration, and the general arrangement of rock canyons and stream beds prevented a systematic grid - type coverage of the area.

4.2 EQUIPMENT AND FIELD PROCEDURES

The S. P. equipment consisted of two pots, a reel of wire and a voltmeter. The pots were ceramic, about three inches in diameter with unglazed porous bottom halves. The pots were filled with saturated copper sulfate solution containing some solid crystals to maintain saturation. Rubber plugs were used to hold the copper electrodes and to form a leak - proof top. About 1000 - feet of No. 18 stranded copper wire was used on a large reel fitted with a commutator. The voltmeter was a LCD Micronta Digital Multimeter with a 10 megaohm impedance.

The field procedures used generally followed those set out by Burr [3]. For each traverse a base station was first established over a favourable area assumed to be background. The pot difference was then checked by placing both pots on the bare ground, about an inch apart, taking a reading, then reversing the pot connections and taking a second reading. The pot difference would be an average of the two readings. Differences of a few millivolts were generally ignored. Large differences indicate a problem with the pots and must be corrected before further surveying. The pot difference was taken at each new base station. Next, the connections were made between the pots, reel and multimeter so that the forward pot would be positive and the base, or stationary pot, would be negative. The pots were clearly marked and never interchanged. Following this procedure, the forward pot was moved out along the traverse and stations were made at 50 - foot intervals or less. At each station, care was taken to dig below the humous and make a good damp ground contact. Topography was also noted and each station was marked by ribbon. Control was by compass and pace. Care was taken to study the results in the field, and in some cases to examine the areas having anomalous readings.

4.3 RESULTS AND INTERPRETATION

The locations of the lines and grid are shown on Figure 2. S. P. profiles for the John Bull traverses and the reconnaissance line are shown on Figure 3. The grid readings are shown as a contoured plan on Figure 4. The field notes are appended.

As well as some very puzzling results, the reconnaissance line revealed two weak negative anomalies, which were later found to lie along the strike projection of some known shear zones. High positive zones were encountered throughout the survey. There is no adequate explanation for them, although the abundance of springs along the traverse route may suggest that they were caused by zones of high ground - water flow. Spurious negative results were obtained along Traverse G following a sudden rain storm. The readings appeared quite stable but could not be duplicated. A large pot difference was also evident. The problem may have involved the pots or shorting of the system due to dampness. At any rate the traverse was abandoned and run again on September 21 with different pots, which yielded more reliable results. Of the two weak negative anomalies, the most interesting was centered around the 150 W. station of Traverse A. This anomaly was only about 20 milli - volts but was later found to lie along the strike of a strong shear zone containing about five - percent pyrite. This, of course, increases its significance. Unfortunately, the zero base station for the rest of the traverse was established near this zone and if it was also in a negative low, the rest of the traverses would be relatively more positive. The graph suggests this has taken place and the actual zero line should be raised bout 15 milli - volts toward the positive side. The second anomaly is centered at the 600 W. station of Traverse B. It overlies the projection of another shear zone which appears barren on the surface but contains large quartz carbonate veins. This anomaly is very weak but is of interest because it has been developed over an area of relatively thick overburden. Both anomalies are only conjectural at this point and must be validated by further work.

The two traverses over the John Bull shear zone were disappointing. As shown on the graphs, a 20 milli - volt response was obtained in the second traverse which was over thin overburden. Hardly any response was achieved in the first traverse which was over thicker overburden.

The results from the grid survey over the North Fork shear zone were more encouraging. A low grade anomaly was outlined along line 0 and was partially supported by adjacent lines, but a complete definition of the anomaly was prevented by the position of the stream bed. Instead, the adjacent lines appear to be picking up the edge of the anomaly. This idea was supported later by trenching near the end of line 2 S. which uncovered a strongly sheared rusty zone. It should be noted that the anomaly occurs over water - saturated ground which normally gives a high positive background. The negative 19 and 20 milli - volt readings on line 0 and the negative 12 milli - volt reading on line 1 S. may therefore be more significant than the actual values indicate. The anomaly does not appear to coincide with the strike of the North Fork shear zone but may represent some structure subsiduary to it. Very little response was obtained over the old open cut. The line to the north of it was over thick clay over - burden.

5.0 STATEMENT OF EXPENDITURES

a) Personnel Costs

G.D. Bysouth, geologist			
Aug. 31	8 hrs.		
Sept. 1	10 hrs.		
Sept. 21	10 hrs.		
Sept. 22	8 hrs.		
	36 hrs.	@ $20.00/hr.	$720.00
B.R. Mowry, helper			
Aug. 31	8 hrs.		
Sept. 1	10 hrs.		
	18 hrs.	@ $12.00/hr.	$216.00
G. Kurz, helper			
Sept. 21	10 hrs.		
Sept. 22	8 hrs.		
	18 hrs.	@ $12.00/hr.	$216.00

b) Vehicle Costs

4 x 4 1979 Chev.
4 days @ $20.00/day — $ 80.00

c) Camp Costs

2 days @ 15.00/day — $ 30.00

d) Report Preparation

G.D. Bysouth
16 hrs. @ $20.00/hr. — $320.00

e) Supplies

(ribbon, notebooks, markers, stationary supplies) — $ 20.00

TOTAL COSTS — $1602.00

6.0 CONCLUSIONS

The weak negative anomalies encountered in this survey should be regarded as only probable, or possible anomalies. They are within the realm of normal background variation and are made significant only by certain field relations. They will be useful, however, in directing more S.P. work and other forms of exploration.

G.D. Bysouth

G.D. Bysouth
Geologist

APPENDIX A

STATEMENT OF QUALIFICATION

I, Garry D. Bysouth, of Williams Lake, B.C., do certify that:

1. I am a geologist.
2. I am a graduate of the University of B.C., with a B.Sc. degree in geology in 1966.
3. From 1966 to the present I have been engaged in mining and exploration geology in B.C.
4. I have theoretical and practical experience in the application of the S.P. survey method and in the interpretation of the results.

Garry D. Bysouth

Garry D. Bysouth

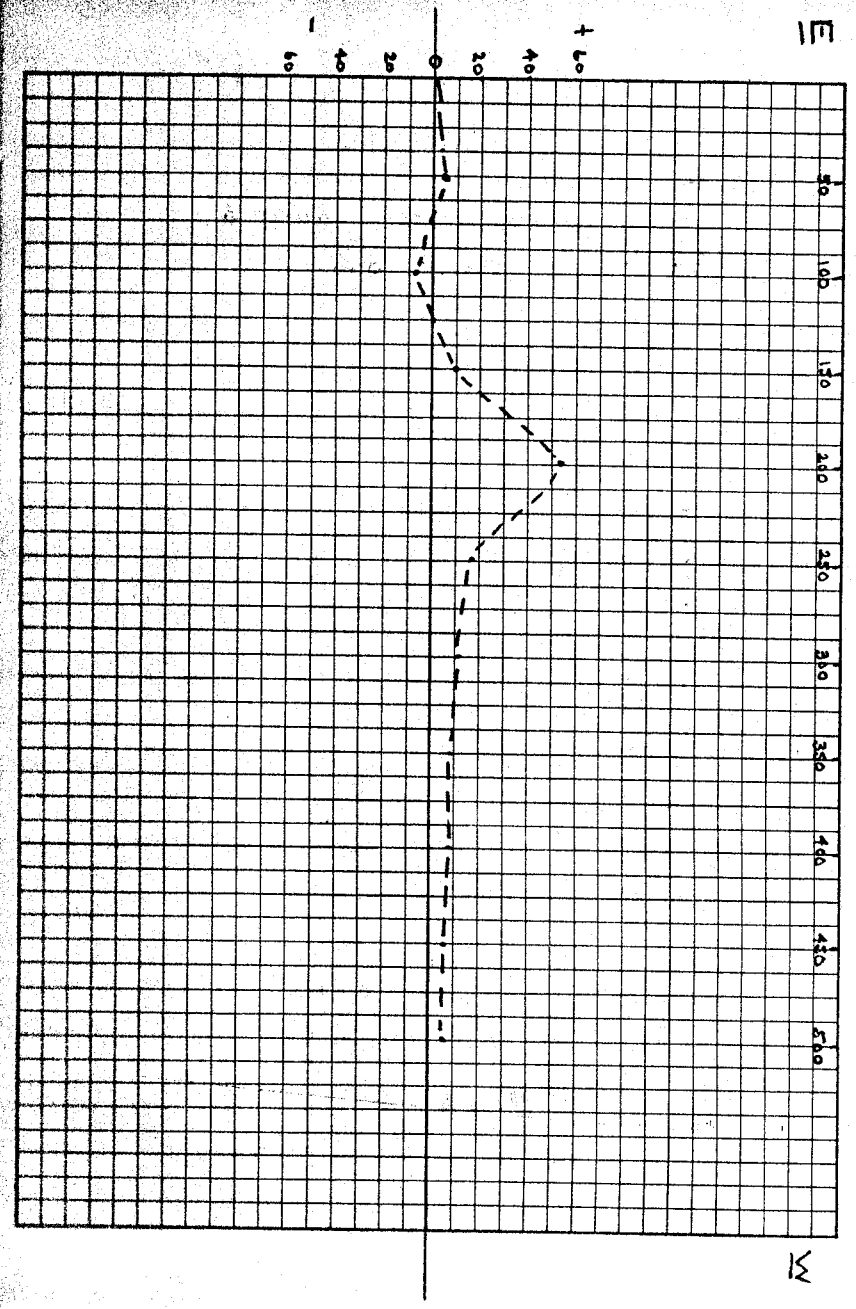
Val Group - Sp Survey Aug 31/85

Traverse A : Stn 0 is on access trail ~700' easterly from John Bull adit

Pot Diff : +.002 vs +.003 mv

Stn	V.F. Read	Topo	Re-Survey
0	-	flat	Sept 22/85
50' W'ly	+.002	"	+.002
100'	-.008	"	+.010
150'	+.010	"	+.008
200'	+.053	"	+.015
250	+.018	"	-.000
300	+.012	"	
350	+.009	"	
400	-.009	"	
450	+.007	"	
500	+.007	"	

- all soil contacts damp or wet



Val Group S.P. Survey Aug 31/85

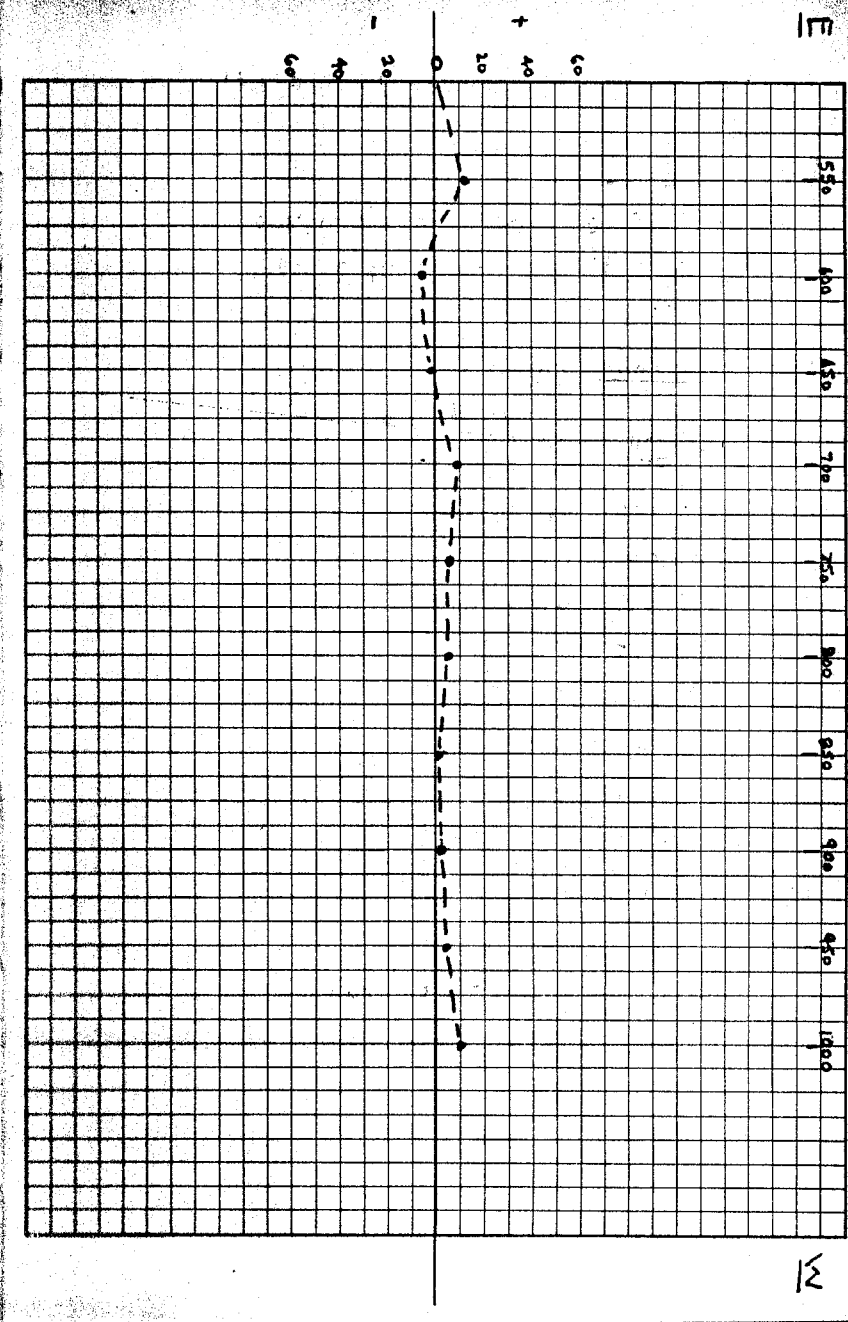
Traverse B

Start @ 500' stn of Traverse A

Pot Diff .000 vs .000

Stn	V's Read	Topo
500' W/p	-	
550	+.012	flat
600	-.005	up 10°
650	-.001	up 15°
700	+.010	up 5°
750	+.007	± 5°
800	+.007	"
850	+.001	"
900	+.003	"
950	+.005	"
1000	+.011	

- all soil contacts damp



Val Group - S.P. Survey Aug 31/85

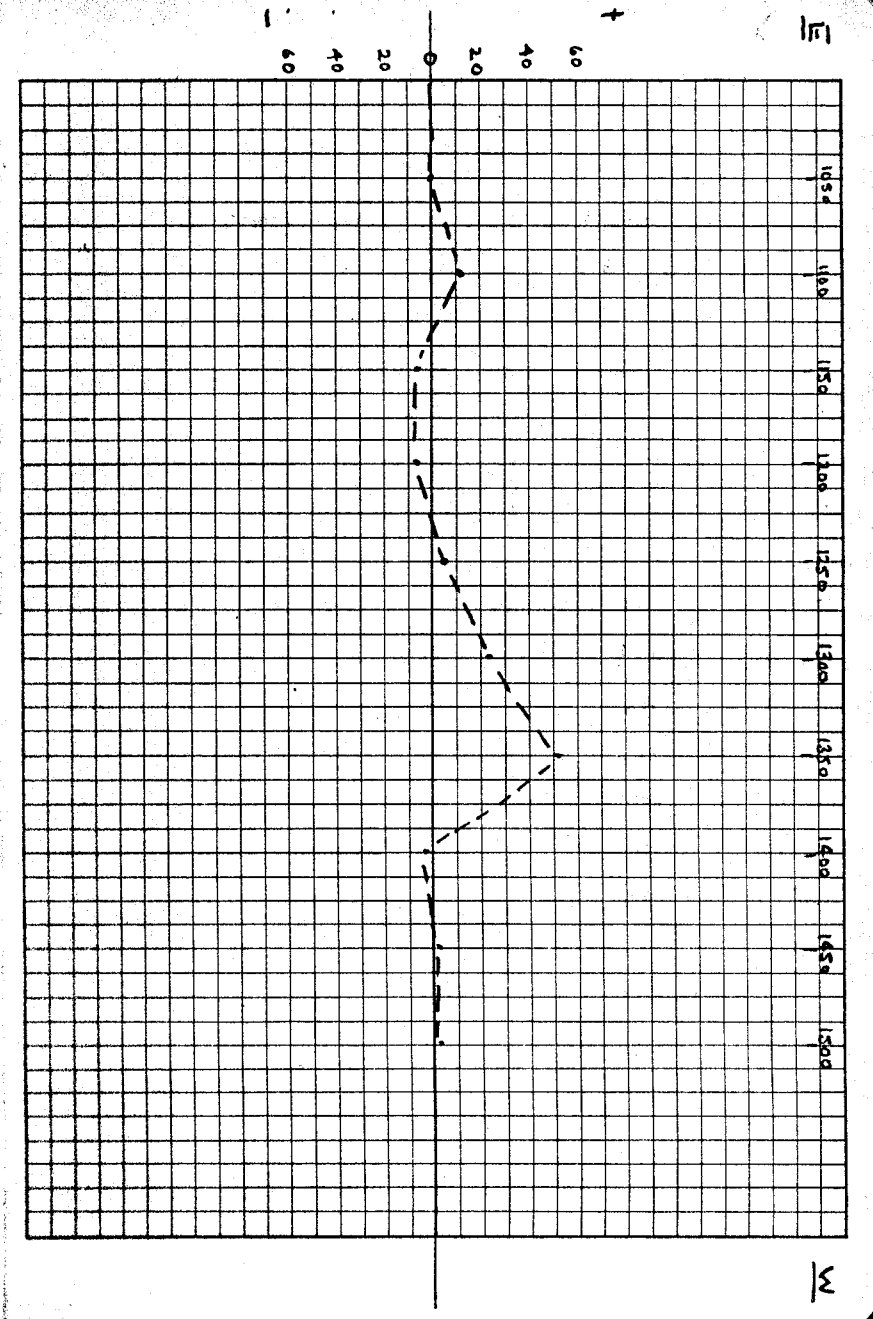
Traverse C

Start @ 1000' stn. of Traverse B

Pot Diff. +.004 vs -.003

Stn.	V's Read.	Topo
1000 W.L.	-	
1050	.000	up 5°
1100	+.011	up 10°
1150	-.005	up 10°
1200	-.006	up 15°
1250	+.005	± 5°
1300	+.023	"
1350	+.055	"
1400	-.001	"
1450	+.002	"
1500	+.002	"

- all soil contacts damp.



Val Group - S.P. Survey Sept 1/85

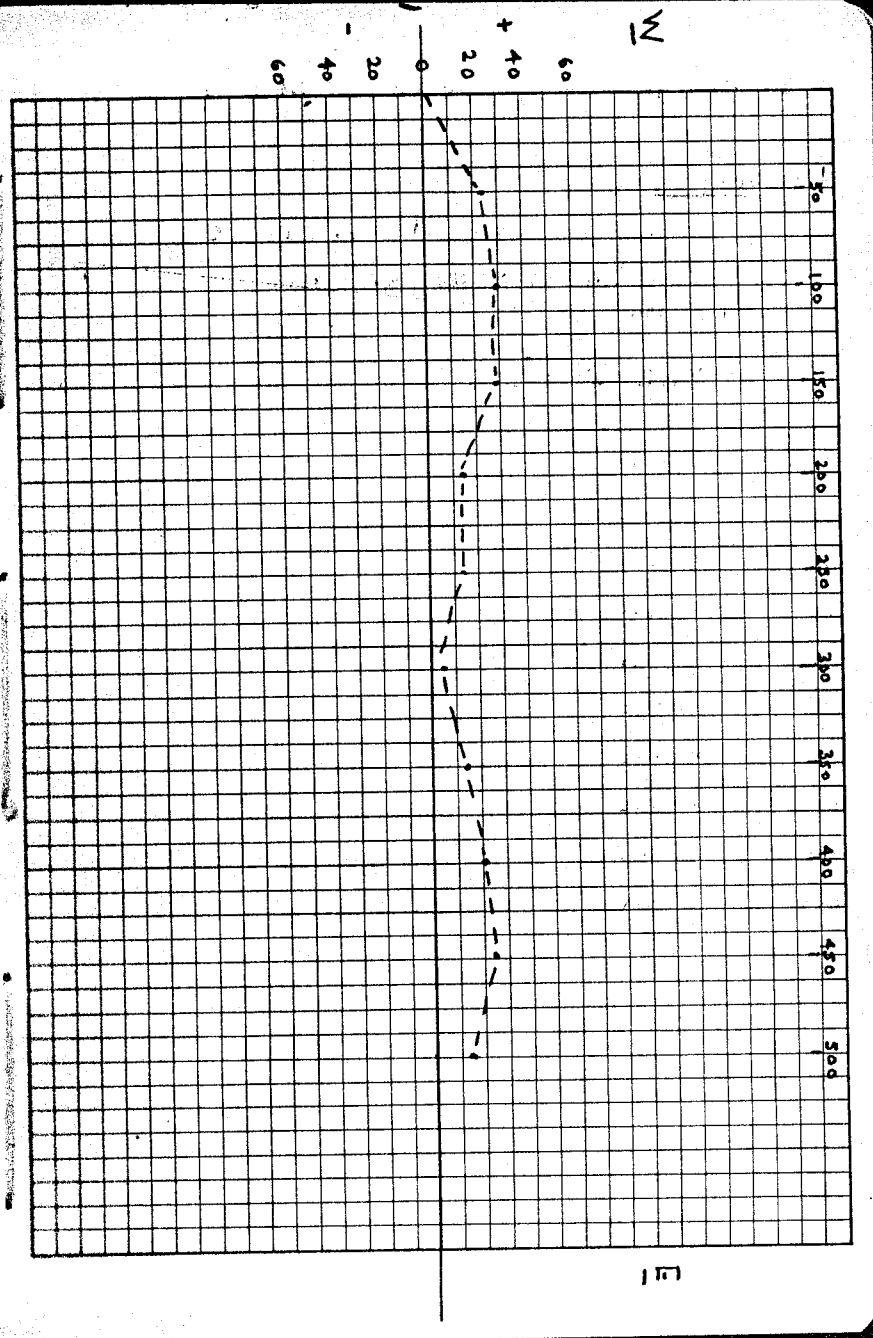
Traverse D

Start @ 0' stn of Traverse A

Direction of traverse - easterly along access trail

Pot. Diff. .000 vs -.000

Stn	Vis Read	Tape
0		
50 E'ly	+ .023	flat
100	+ .029	"
150	+ .029	"
200	+ .014	"
250	+ .013	"
300	+ .006	"
350	+ .016	"
400	+ .020	"
450	+ .023	"
500	+ .017	"



Val Group - S.P. Survey Sept 1/85

J.B. Traverse 1

Detailed traverse over John Bull vein system

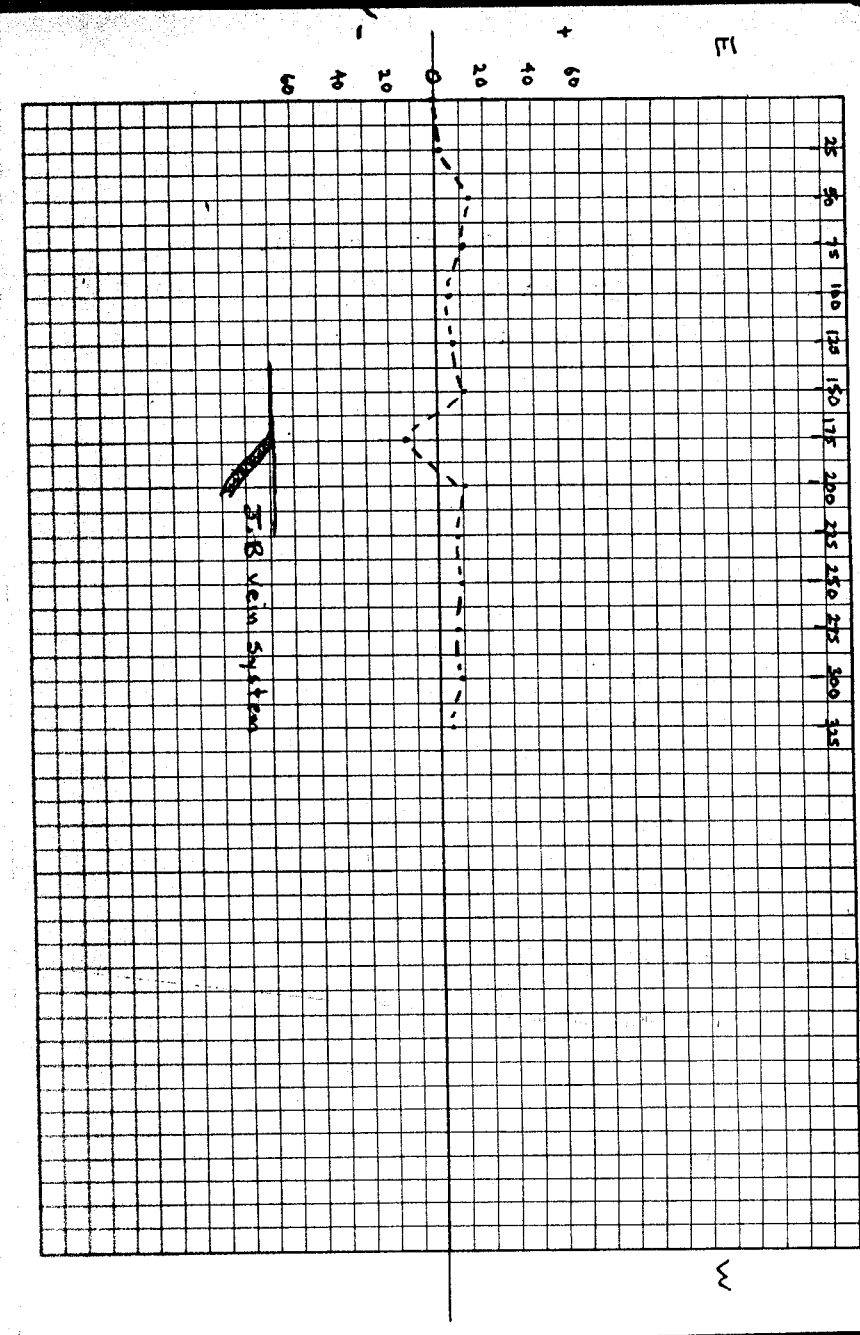
Starting point @ 550' stn of Trav. B

Direction 200° az

Pot diff. +.001 vs .000

Stn	V's Read	Topo
0	• -	
25' W	+.002	flat
50' W	+.014	down 5°
75 W	+.011	down 10°
100 W	+.007	down 15°
125 W	+.008	± 5°
150 W	+.011	"
175 W	-.011	" - over J.B. vein system
200 W	+.011	" - very wet contact
225 "	+.009	"
250 "	+.010	"
275 "	+.008	"
300 "	+.009	"
325 "	+.005	

- good damp soil contacts
- about 1-5' of overburden



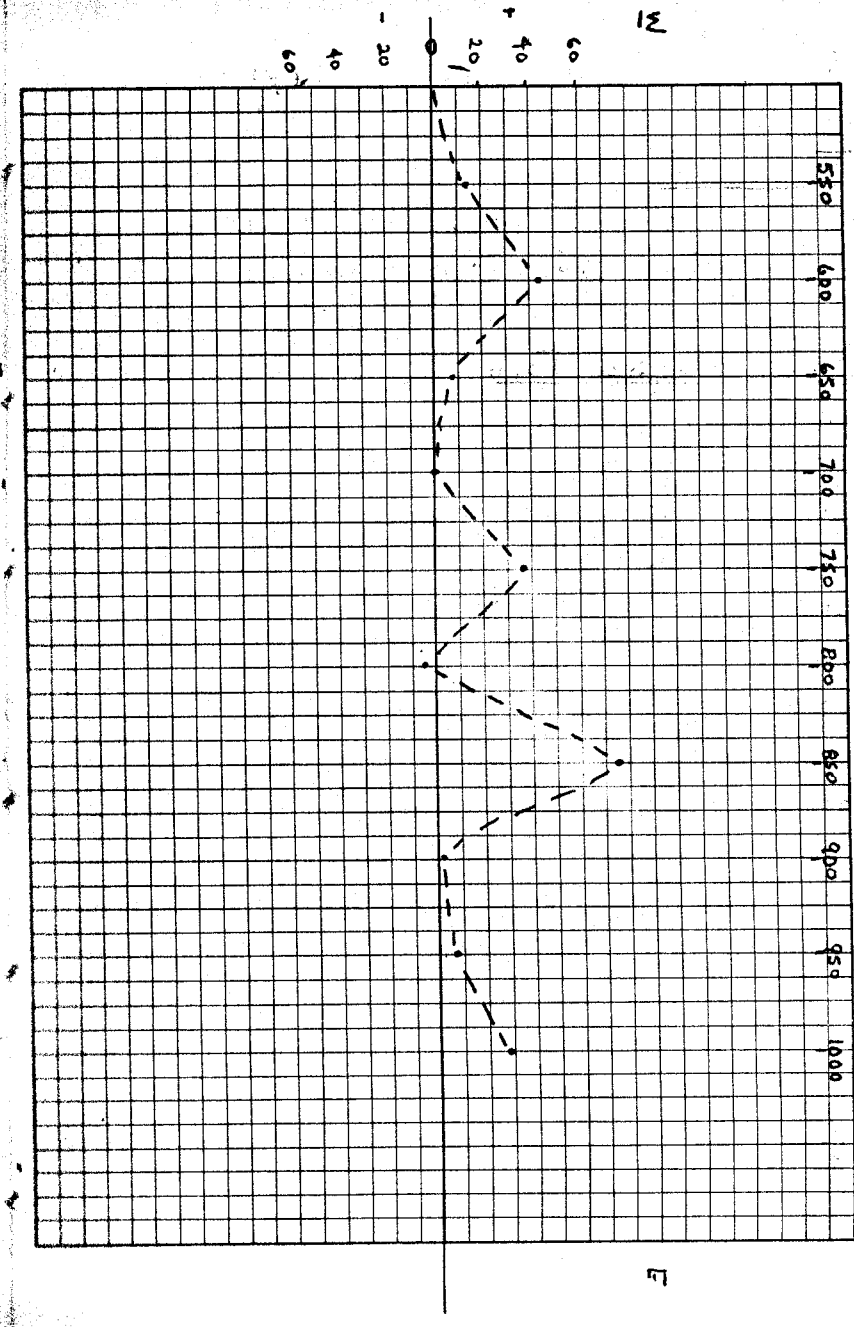
Val Group - S.P. Survey Sept 1/85

Traverse E

Start @ 500' stn of traverse D

Pat Diff. .001 vs -.002

Stn	V.S Read.	Topo
500 E'ly	-	rolling
550 "	+ .014	± 5°
600 "	+ .046	"
650 "	+ .009	"
700 "	+ .001	"
750 "	+ .039	"
800 "	- .005	"
850 "	+ ~~.078~~ .040	"
900 "	+ .002	"
950 "	+ .008	"
1000 "	+ .029	"



Val Group - S.P. Survey Sept 1/85

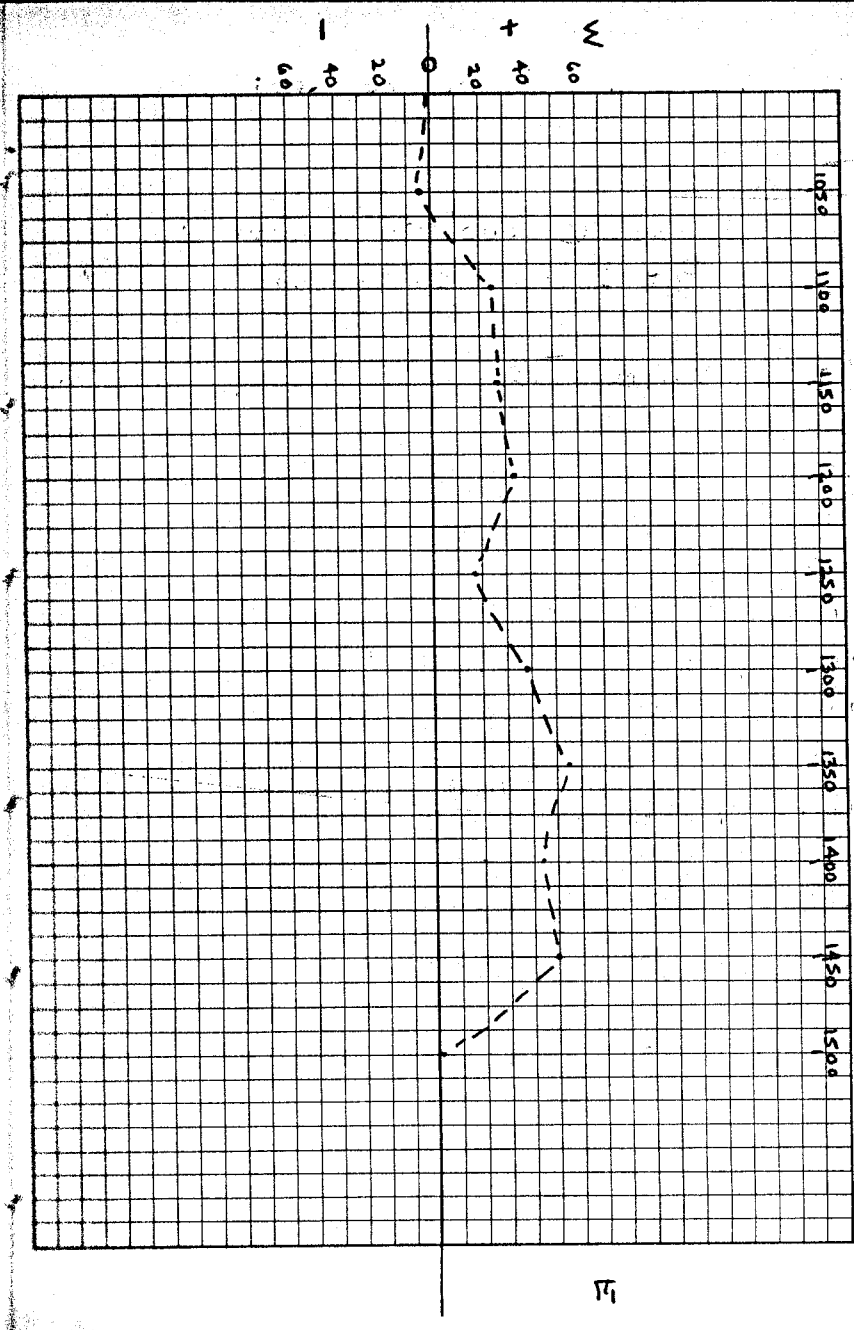
Traverse E

Start @ 1000' stn of Trav. E

Pot Diff. +.002 vs -.001

Stn.	N's Read	Topo
1000 E'N	-	rolling
1050	-.006	± 5°
1100	+.026	"
1150	+.028	"
1200	+.033	"
1250	+.018	"
1300	+.039	"
1350	+.056	"
1400	+.044	"
1450	+.049	"
1500	+.001	"

- a sudden storm occurred between stn's 1000 to 1450 - a light rain fell - no observable magnetic activity



Val Group - S.P. Survey Sept 1/85

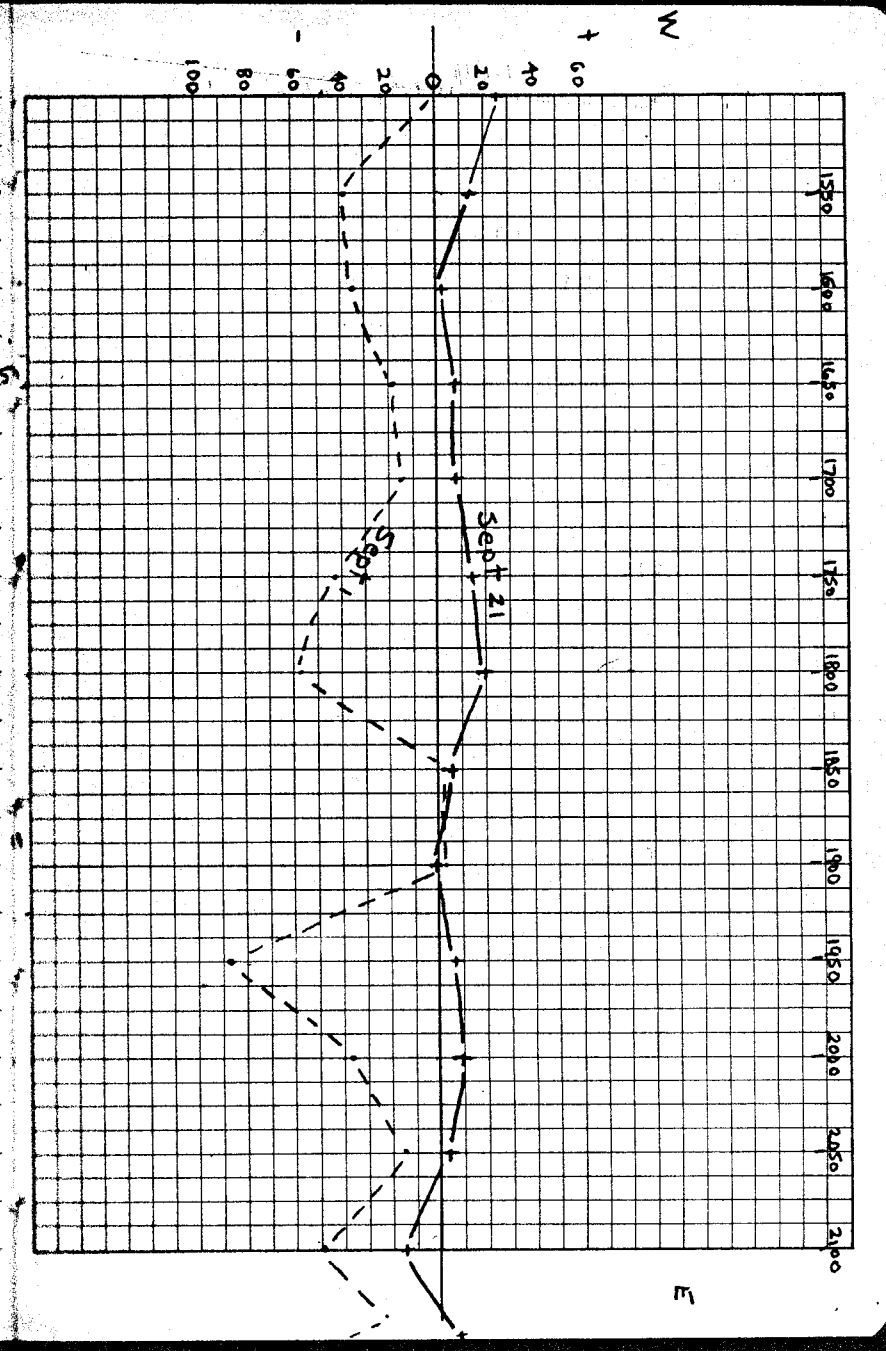
Traverse G

Start @ 1500 stn of Trav. F

Pot Diff -.003 vs +.005

Stn	V.S. Read	Topo	Re-Survey Sept 21/85
1500 E'ly	—		
1550	-.039	down s°	+.016
1600	-.036	down s°	+.002
1650	-.019	up 8°	+.008
1700	+.017	up 8°	+.009
1750	-.042	up 5°	+.015
1800	-.057	± 5-10°	+.020
1850	+.002	"	+.005
1900	+.003	"	.000
1950	-.087	"	+.008
2000	-.037	"	+.010
2050	-.015	"	+.004
2100	-.050	"	-.012
2150	-.025	"	+.007
2200	-.055	"	

* ground very wet from rain



Val Group - S.P. Survey Sept 1/85

Detailed traverse over the 1550' anomaly
Start @ 1450' stn of traverse F
Pot Diff : -017 vs +023 ??
↑ erratic

Stn	Vs Read
1450 Ely	—
1475	-.065
1500	-.030 to .052
1525	-.093
1550	-.025
1575	-.062
1600	-.056

* these readings appear erratic
— they are not reproduceable

Westerly readings from stn 1450

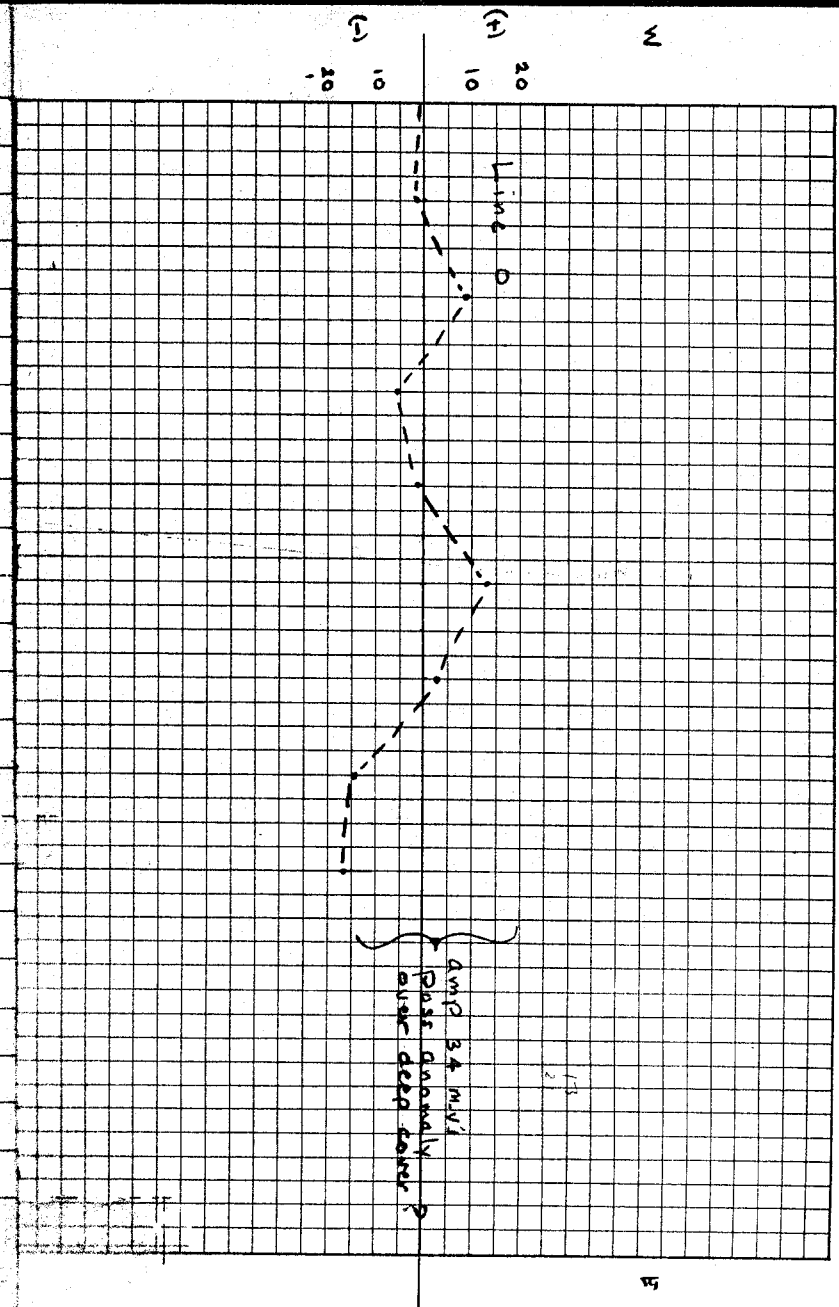
1425	+17
1400	-56 ?

- shorting?
- magnetic storm activity?

Val Group - S.P. Survey Sept 21/85

Grid Survey over N. Fork vein
Base stn. 50's and 75' W of vein
Pot. diff. +.001 vs .000

Stn	V's Read.	Topo	
Line 0	-		
25 E	-.002	down 10°	
50 E	+.009	down 8°	
75 "	-.006	down 5	
100 "	-.002	"	
125 "	+.013	"	
150 "	+.003	"	
175	-.019	down 5	old creek bed?
200	-.021	flat	~ 5' to crk
Line 15 (25'S)			
25' S	-.003	side hill	
25' E	-.002	down 10°	
50' E	+.010	down 8°	
75 E	-.004	down 6°	
100E	+.006	down 5°	
125E	+.010	"	
150	-.003	"	
175	-.012	"	~10' to crk



Val Group - S.P. Survey Sept 21/85

Grid Survey over N. Fork vein

Stn	V's Read	Tape	
Line 2S (50'S)			
25'S	-.004	sidehill	
25'E	+.001	down 8°	
50E	-.003	down 5°	
75"	-.006	"	
100"	.000	"	
125"	+.009	"	
150"	.000	down 15°	- rocky ~ 10' w of crk bed
Line 3S (150'S)	+.001	sidehill	
25S	+.003	down 8°	
25E	-.005	down 5°	
50E	-.002	down 10°	
75E	-.002	down 5°	- cliffs
100E	-.005		} moved 25's for these
125E	-.025		} stn's due to cliff.

Val Group - S.P. Survey Sept 22/85

Grid Survey over N. Fork vein

Stn	V's Read	Topo	
L 2N*			
75 E	-.005	flat -	← reading @ N. Fork vein open cut.
100E	-.000	line ↓	
125E	+.002	along	clay banks
150E	+.008	crk bank	clay banks
200E	+.010		clay banks
L 3N			
50 E	+.001	rocky knoll	
75 E	-.003	down 5' ← over N. Fork vein	
100	+.002	± 5'	clay cover.
125	+.003		clay cover.
150	+.002		clay cover.
200	+.004		clay cover.

* L2N lies 50' N. of L1N.
L3N lies 25' N of L2N

Val Group - S.P. Survey Sept 22/85

Grid Survey over N. Fork vein

Stn	V's Read	Topo	
Line 1 N			
25'N	-.008	sidehill	} Just above and paralleling steep rock cliffs
25'E	-.009	down S	
50E	-.000	down S	
75E	-.002	down S	N. Fork vein lies ~60' N.
100'	-.007	"	
125'	-.009	"	
150'	-.010	flat	old creek bed
175'	-.008	"	~ 5-10' to crik.

Val Group - S.P. Survey Sept 22/85

J.B Traverse 2

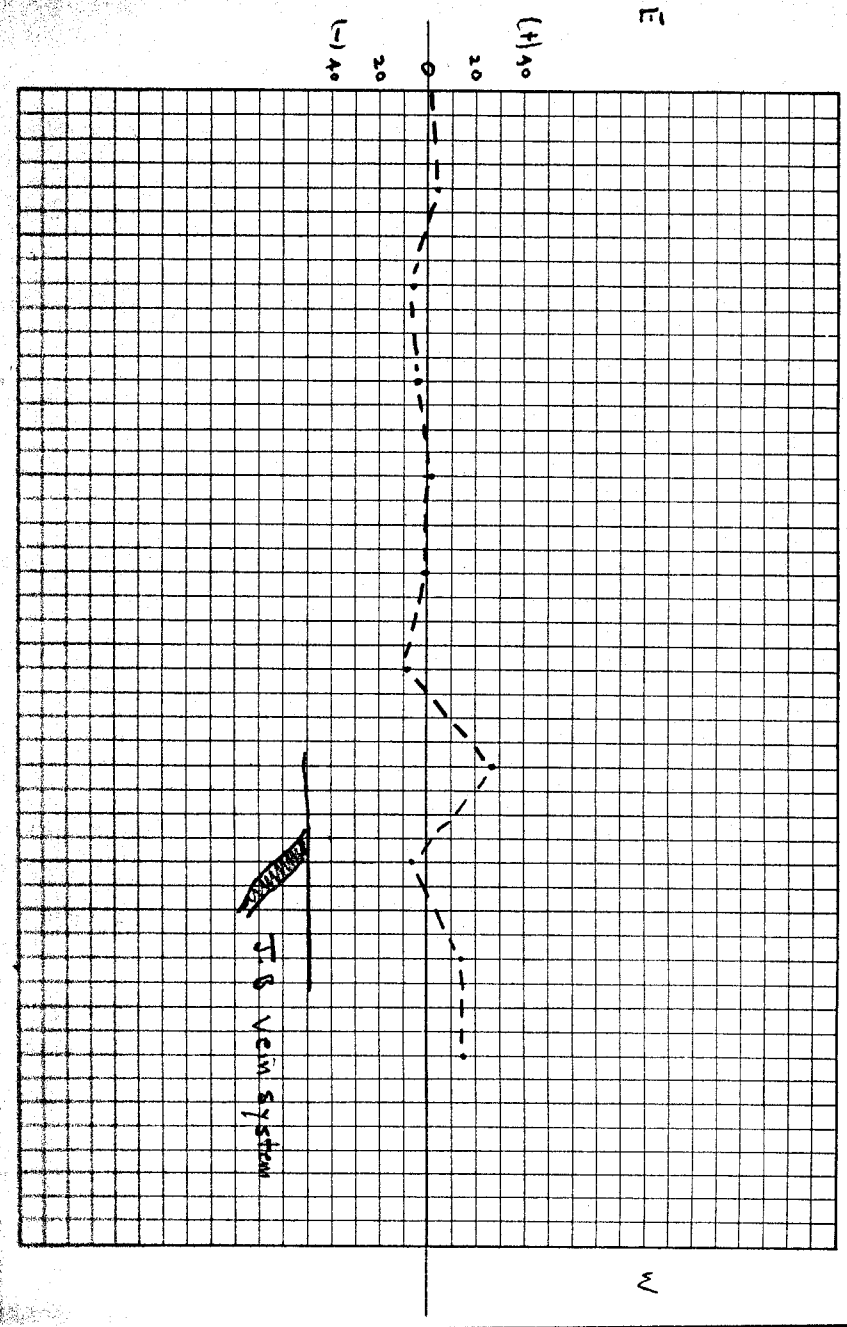
Traverse over John Bull vein system

Start @ 300' stn of Traverse A

Direction ~ 280° az

Pot diff .000 vs .000

Stn	Vi Read	Topo	
0 w/y	-		
50 W	+.004	flat	
100 W	-.004	"	
150 "	-.002	"	
200 "	+.001	"	
250 "	.000	"	
300 "	-.009	up 5°	
350 "	+.028	down 8°	} projection of J. B. vein system
400 "	-.004	"	
450 "	+.013	"	
500	+.015	side hill	



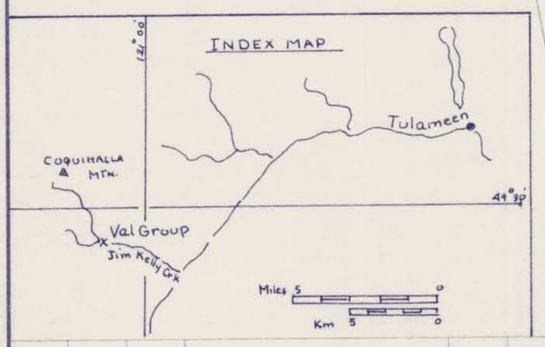
APPENDIX C

REFERENCES

[1] B.C. Minister of Mines, Ann. Report 1913 pp 232-233.

[2] Cairnes, C.E., 1924, Coquihalla Area B.C., Geol. Survey of Can. Mem. 139.

[3] Burr, S.V., 1960, The Self-Potential Method for the Prospector. C.I.M.M., Transactions, Vol LXIII pp 591-597.



GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,829

SCALE 1:4800

Feet 0 400 800

Meters 0 100 200

Control by Chain and compass

DWN.	CHECK	APPR.	ISSUED FOR	DATE	REV.	DESCRIPTION

REFERENCE No. DWG. No.

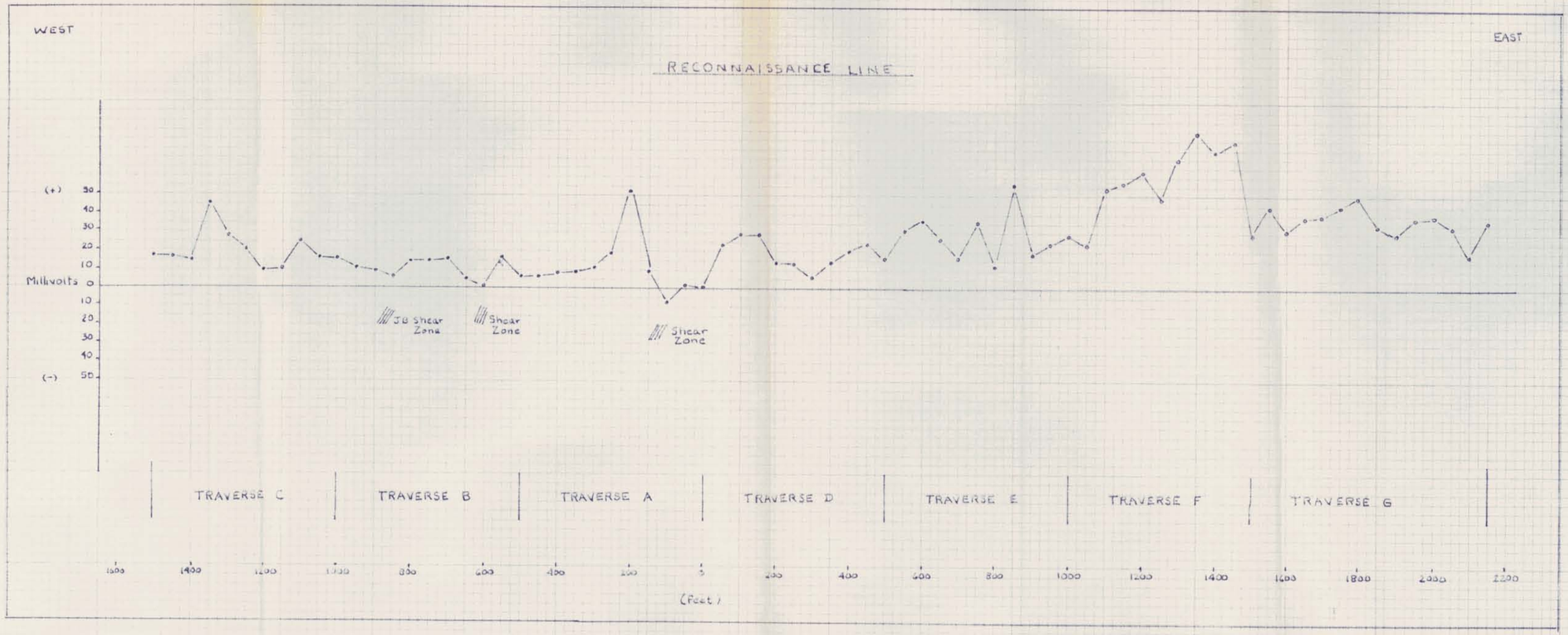
SCALE 1 inch = 400 feet G.P.B Oct 19

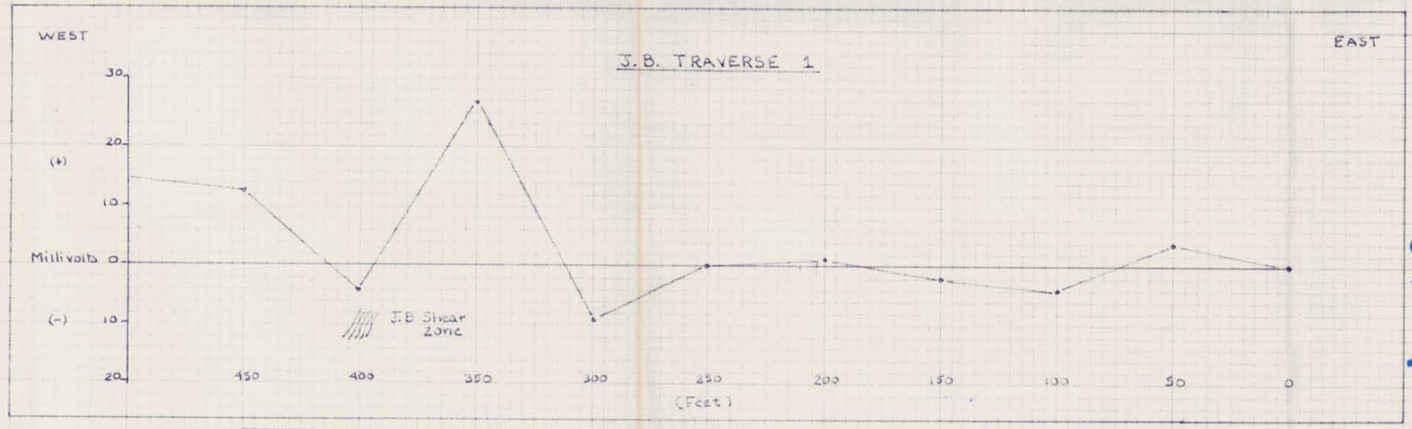
VAL MINERAL CLAIM GROUP

S.P. SURVEY LOCATION MAP

FILE No. FIGURE 2

NCI 210 G.M.L.





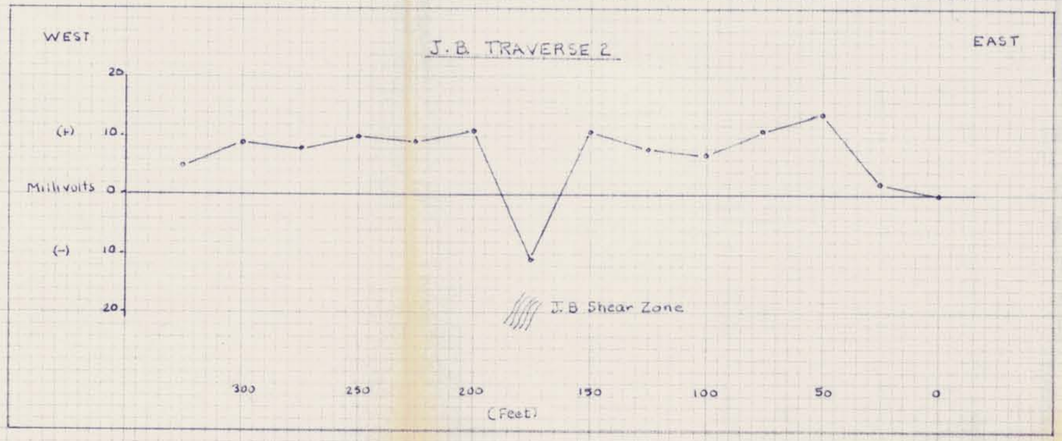
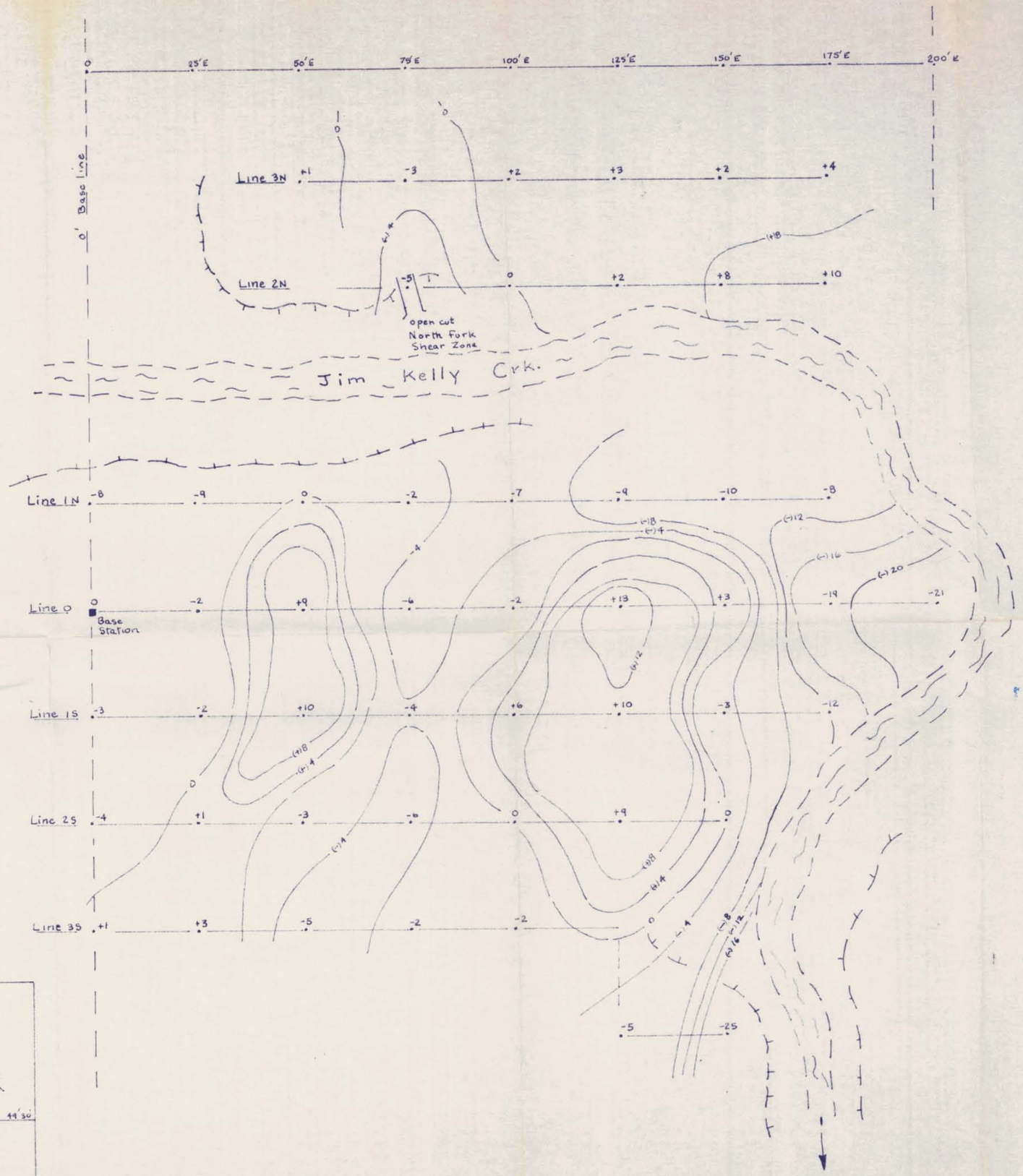


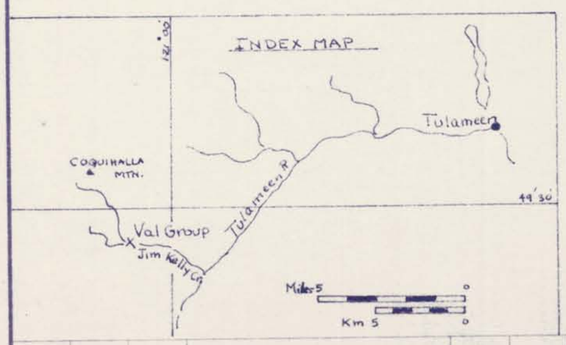
FIGURE 3

VAL MINERAL CLAIM GROUP

S.P. PROFILES

Oct. 1985
G.D.B.





GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,829

LEGEND

rock canyon

•+9 S.P. reading in milli-volts

Scale 1 : 240

0 10 20 30 40

0 2 4 6 8 10 12

Control by pace and compass

DWN.	CHECK	APPR.	ISSUED FOR	DATE	REV.	DESCRIPTION

REFERENCE No. DWG. No.

SCALE 1 inch = 20 feet Oct. 1985

VAL MINERAL CLAIM GROUP

NORTH FORK S.P. GRID

FILE No. FIGURE 4

NCI – 210 – G.M.L.