

C.R.A. EXPLORATION PTY. LIMITED

OPEN FILE

THE BALFOUR-SPECIMEN HILL PROGRAM
SIX MONTHLY REPORT TO DECEMBER 26, 1979

Author: T.M. Porter

Date: January 17, 1980

Submitted to: I.R. Johnson

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(i)

LIST OF PLANS

<u>Plan No.</u>	<u>Title</u>	<u>Scale</u>
Tv 36 (Based on Tc 151) 8/79	SPL 781 - NW Tas Specimen Hill Grid - Balfour Geochemical Plan - Sn Results	1:5 000
Tv 19	SPL 781 - Balfour Specimen Hill Bulk Sampling	1: 2 500

LIST OF APPENDICES

Appendix 1 Memo by T. Kerr - Specimen Hill
IP - Stage 2

Appendix 2 Memo by R.R. Large - Balfour Jacro
Drilling Programme (including geochemical sample ledgers
for Jacro Auger and Diamond Drilling.)

Appendix 3 Geochemical Sampling Ledger Sheets
(for bulk samples only.)

1. SUMMARY

During the six-month period to December 26, 1979 a fill-in IP survey, a 120-hole Jacro auger sampling program, a series of bulk rock chip/channel samples and four Jacro diamond drill holes were undertaken on the Specimen Hill Grid within SPL 781.

The IP survey indicated that the large resistivity low and accompanying chargeability high on the western margin of the Specimen Hill Grid is continuous. It also indicated a weak response over the main magnetic high on the south western margin of the grid.

The Jacro weathered bedrock sampling indicated a number of significant tin anomalies of from 300 to 1900 ppm Sn below the broad alluvium covered flats between the Specimen Hill, Peters Ridge and Murrays Reward ridges. The shallow diamond drilling intersected two 1m thick pyritic quartzite units below Peters Ridge assaying 0.11% and 0.16% Sn respectively. Otherwise, the results of this work were disappointing. The final hole below portion of the major IP anomaly on the western margin of the grid intersected strong graphite accumulations.

2. INTRODUCTION

This report covers work undertaken during the six-month period June 27 to December 26, 1979 on the following titles, subject to farm in - joint venture agreements with the vendors listed:

L & L Syndicate - ML's 10/73, 44/77, 2/76, 1/76, 120/67,
121/67, 93/77 & 95/77 Tasmania

L & B Syndicate - SPL's 774 & 781 Tasmania
ML's 72/77, 73/77, 104/77, 103/77,
8/78 and 20/76 Tasmania

L & L and L & B Syndicate - ML 19m/76 Tasmania

The program carried out included:

A fill-in IP survey of some six lines to extend the coverage of the anomalies outlined by the preceding survey.

A Jacro auger sampling program involving 120 auger holes and 176 samples. This was aimed at filling in holes in the geochemical data in areas of no outcrop.

Four Jacro diamond drill holes to test shallow IP - geochemical anomalies and the near surface extension of the large IP anomaly on the western margin of the Specimen Hill Grid.

A series of bulk chip samples were collected from the main zone of veining on Specimen Hill.

The IP survey was planned and interpreted by Tom Kerr and carried out by Geoterrex Ltd. The auger sampling and Jacro diamond drilling was carried out under contract by Geopeko Ltd. with geological supervision by N.R. Langsford. The auger samples were prepared and the core split by Geopeko Ltd. All assays were by ALS in Brisbane.

The auger sampling and Jacro drilling was planned by T.M. Porter (C.R.A.E.) and R. Large (Geopeko).

The bulk sampling was carried out by N.R. Langsford with assays by AMDEL in Adelaide.

3. IP SURVEY

A dipole-dipole IP survey using 50m dipoles was undertaken by Geoterrex Ltd. on portions of lines 89, 99, 101, 103, 106 and 109 N of the Specimen Hill Grid. The results are discussed and illustrated in the accompanying memo by Tom Kerr (Appendix 1).

4. AUGER SAMPLING

A Jacro auger sampling program comprising 120 auger holes and 176 samples were undertaken under contract by Geopeko Ltd. In each hole a bedrock sample commencing 25 cm below the alluvium (or eluvium) - bedrock interface was sampled. Where sufficient alluvial or eluvial material was encountered this was also sampled. The bedrock values from this sampling are illustrated on Plan No. Tc 151 while the full assay data are listed on the geochemical ledger sheets (Appendix 3).

Appendix 2 of this report
by R.R. Large P.7.

Plan No Tv 36
(back of this report)

5. BULK SAMPLING

A series of bulk rock chip/channel samples were collected in the main zone of veining on Specimen Hill. (See Plan No. Tv 19). Each sample represents a 10 m sample interval and totalled around 15 kg. Two parallel samples 1 m apart were collected over each of these 10 m intervals. Each of these samples was crushed and two splits taken for assay.

The best results were from Traverse 1 A and B which averaged 0.13% Sn over a 30 m width. The other traverses yielded results from 200 to 1100 ppm Sn. The results are (illustrated) ^{indicated} on Plan No. Tv 19 while the full assay data are listed on the geochemical ledger sheets in Appendix 3.

6. JACRO DIAMOND DRILLING

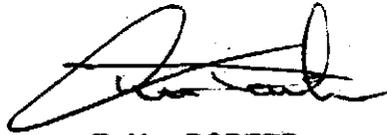
Four Jacro diamond drill holes were drilled. The results of this work are outlined in the accompanying memo by Ross Large (Appendix 2).

7. FUTURE WORK

The following work is planned for 1980:

- . Fill-in Jacro soil sampling on the central Specimen Hill Grid with extensions to the east to cover the Murrays Reward Line of copper workings.
- . Limited extensions of the Specimen Hill Grid to the north and south. These would be geologically mapped.

- . Ground magnetic surveying of extension to the Specimen Hill Grid.
- . Fill-in IP surveying of the central sections of the Specimen Hill Grid.
- . Shallow Jacro diamond drilling to test further IP/geochemical targets.
- . Possibly 2 or more deeper (150 to 220 m) diamond drill holes.
- . Resampling and assaying of the old ACI core from the Murrays Reward area to test for tin.



T.M. PORTER

APPENDIX 1

MEMO BY T. KERR - SPECIMEN HILL

IP - STAGE 2

**C.R.A. EXPLORATION PTY. LIMITED**

(Incorporated in New South Wales)

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FYSHWICK, A.C.T., 2609P.O. BOX 656,
FYSHWICK, 2609
TELEPHONE CANBERRA (062) 80 5665
TELEX: AA 62750

13th November 1979

Memorandum to : T.M. PORTER ✓

Copy : R.J. Rebek

From : T. KERR

SPECIMEN HILL I.P. - STAGE 21 Introduction

In October 1979, six lines of dipole-dipole I.P. were run at Specimen Hill. The primary goal was to establish continuity between conductors A and B (Refer to T. Kerr 27.8.79 for details), and test the peak of the magnetic anomaly on line 89N. An S.P. survey was run at the same time using the I.P. receiver. The equipment employed comprised C.R.A.'s Huntec 2.5 kw transmitter and an I.P.R.-7 receiver furnished by the contractor, Geoterrex.

Several pieces of carbonaceous rock from the grid were also tested for I.P. effect using a Phoenix C.T.1 core tester.

2 Conclusions

The previous A and B conductors are actually continuous.

A weak anomaly was found on line 89N at the site of the magnetic high. This is presumed to be due to disseminated pyrrhotite.

It is quite certain that rocks identical to the submitted samples are not the source of significant I.P. anomalies.

3 Recommendations

The conductor should be drilled to determine its nature. A recommended target is 9750E, depth 75m. The test should be made between 100 and 101N and probably closer to the latter. Tentatively, an easterly dip is indicated, but core angles from DDB 6 should be consulted.

4 Discussion

4.1 I.P. pseudosections with marked features are included. An update I.P. Conductor Trace plan is also presented.

The most obvious feature on the pseudosections is the extremely low resistivity encountered. On line 101N this is down to 2 ohm-m at n=2. Chargeabilities are generally ragged, which might be excused in view of the low resistivities. Resistivities such as these are most commonly associated with massive sulphide or graphite.

On lines 101, 106, and 110N, the coverage extends sufficiently to the west to reveal a new high resistivity unit. The inference is that the anomaly occurs on or near a contact or shear. Similarly, the irregular anomaly patterns on lines 93, 103, and 107N suggest that faulting may be present. Where a clean anomaly pattern is present, it would appear to indicate an easterly dip. This must be taken as a very tentative suggestion.

4.2 The self-potential results are not very useful. Generally, they show negative anomalies over the mineralized zones - as expected - but the anomalies have widths of typically 400m which precludes the spotting of drill holes.

4.3 The rock samples from the grid had been in air for three weeks. In lieu of rewetting them in a vacuum, they were let to soak for three weeks, and tests performed at a six day interval to detect any soaking effects. The results are tabulated below:

SAMPLE	LOCATION	DATE	RESISTIVITY	P.F.E.
Balfour 1	10070N,	2.11.79	636 Ω -m	0-1 (noisy)
	9900E	8.11.79	1000 Ω -m	0.1
1a	10070N,	2.11.79	936 Ω -m	1.9
	9900E	8.11.79	882 Ω -m	1.8
Balfour 2	10270N,	2.11.79	810 Ω -m	3.3
	9540E	8.11.79	662 Ω -m	2.8

The results from different dates are reasonably similar, indicating good precision which, hopefully, indicates the accuracy is not altogether wrong. If a multiplier of 5 is applied to the P.F.E., the results indicate a moderately chargeable, but resistive rock. Accordingly, this particular dark rock is not the source of the resistivity anomaly.



T. Kerr

BALFOUR TASMANIA

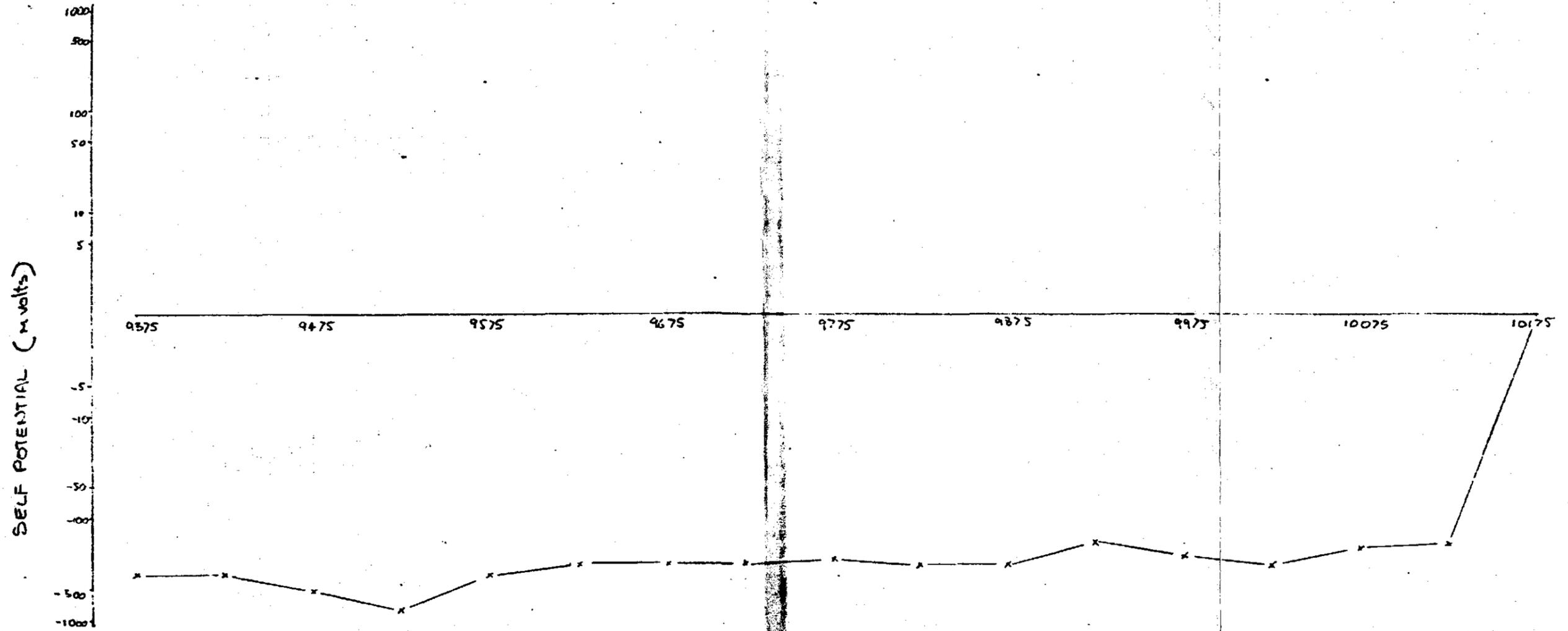
SELF POTENTIAL PROFILE

051012

LINE 89N

SURVEYED BY GEOTERREX PTY LTD

OCTOBER 1979



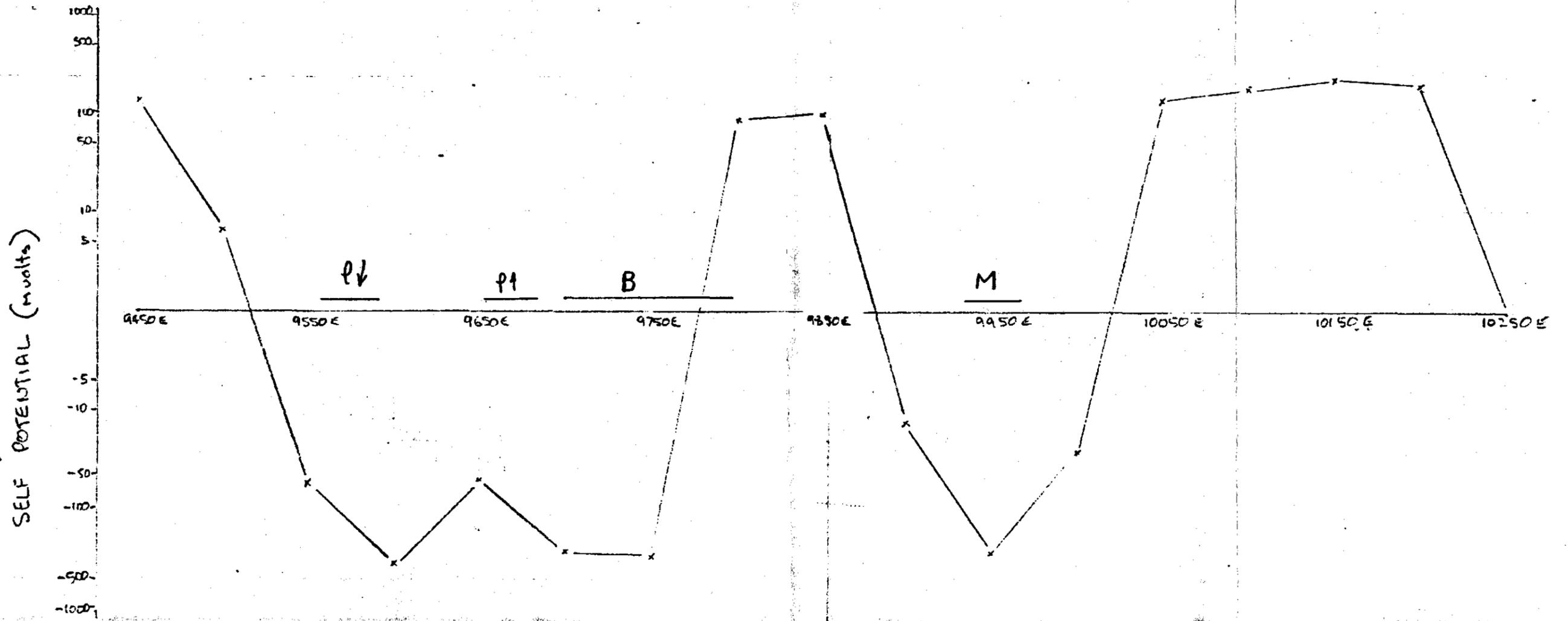
BALFOUR TASMANIA

SELF POTENTIAL PROFILE

LINE 99 N

SURVEYED BY GEOTERRIX

OCTOBER 1979

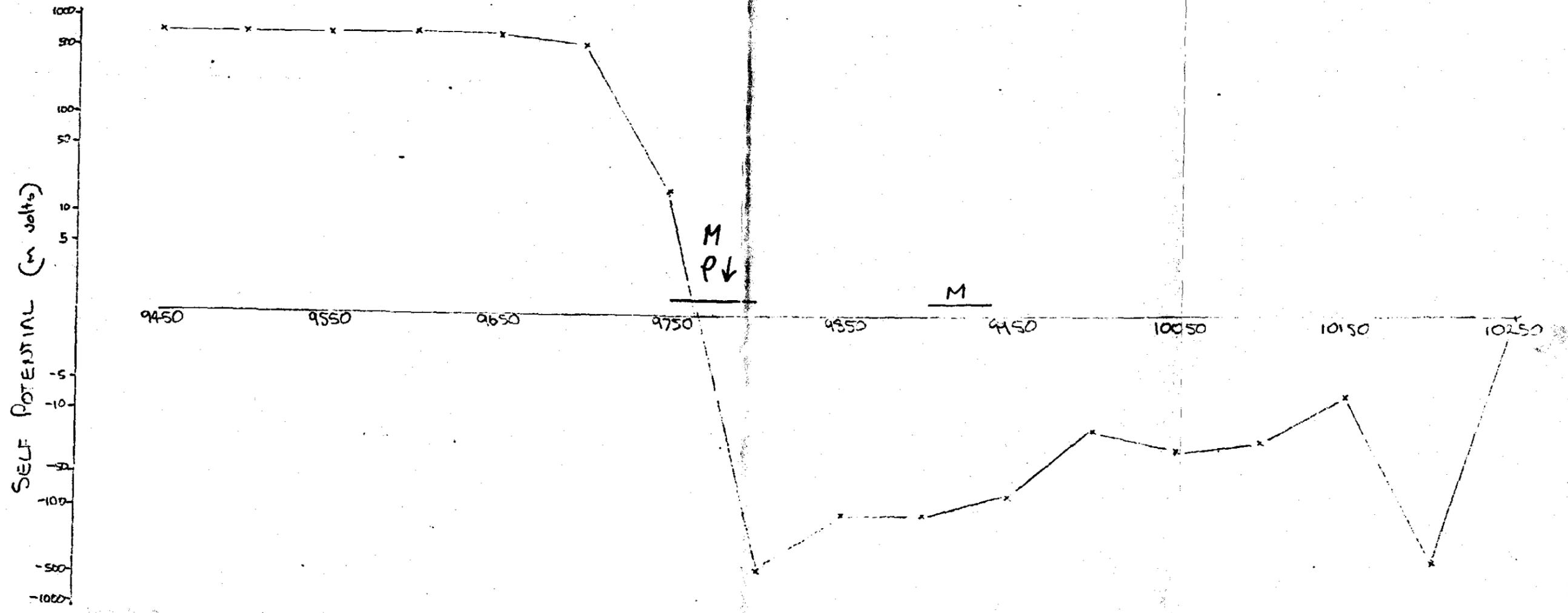


NB ON ALL SP'S
 WESTERN POT P,
 RH RED MARK POSITIVE.

051014

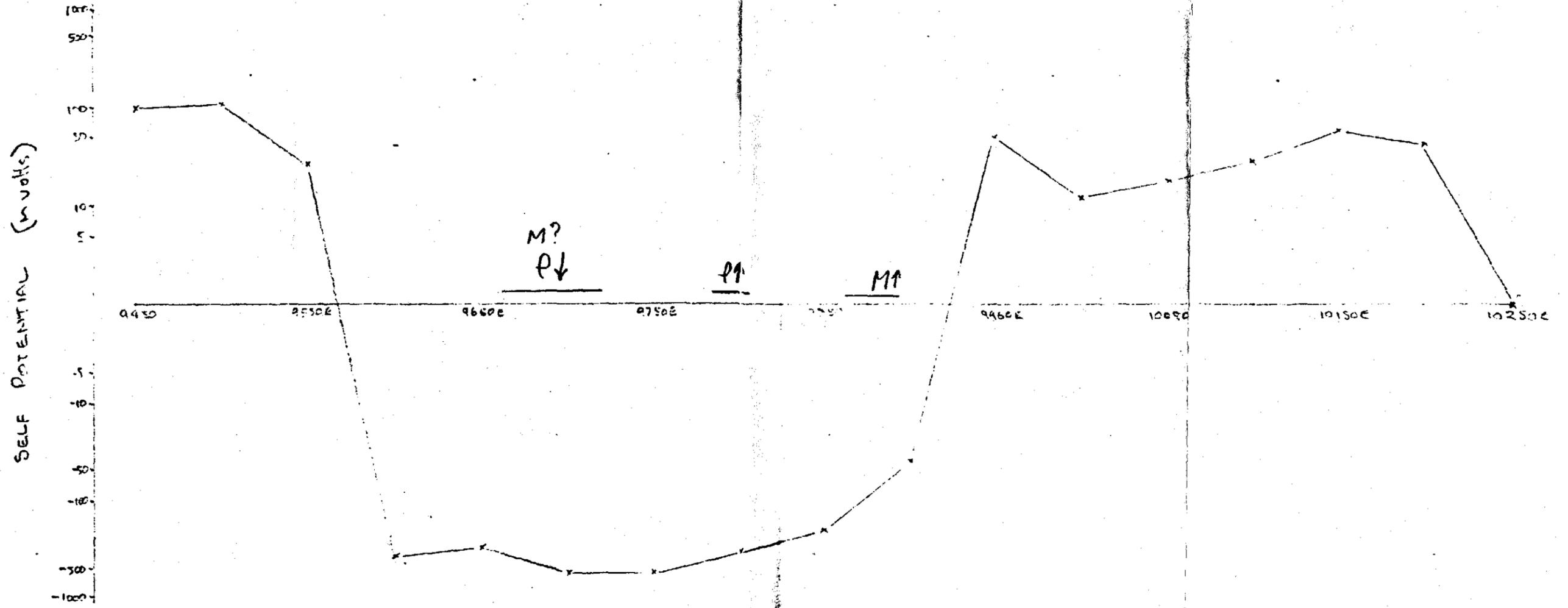
BALFOUR TASMANIA

SELF POTENTIAL PROFILE
LINE 101N
SURVEYED BY GEOTERREX
OCTOBER 1979



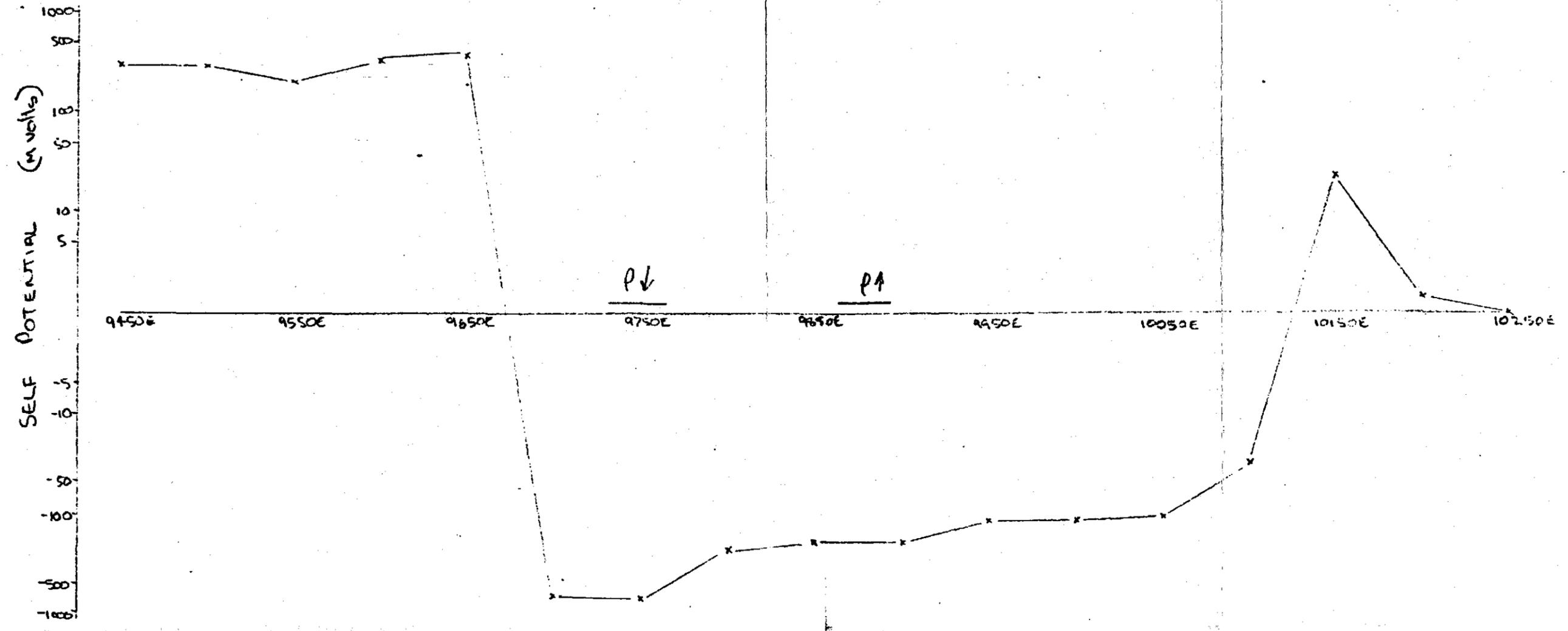
BALFOUR TASMANIA

051015
SELF POTENTIAL PROFILE
LINE 103 N
SURVEYED BY GEOTEARLEX
OCTOBER 1979



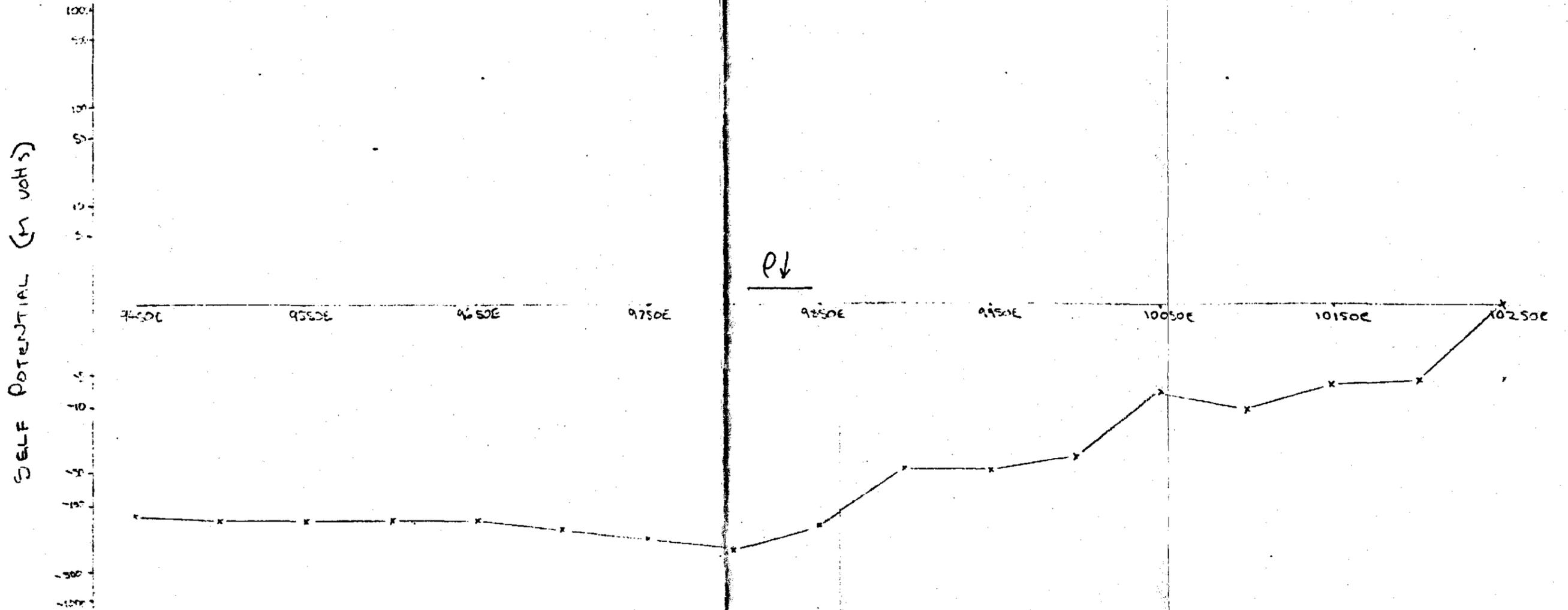
BALFOUR TASMANIA

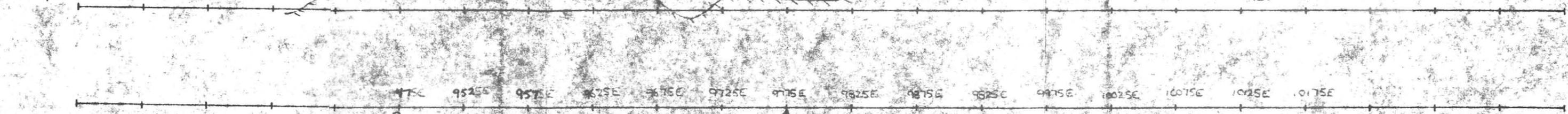
051016
SELF POTENTIAL PROFILE
LINE 106 N
SURVEYED BY GEOTERREX
OCTOBER 1979



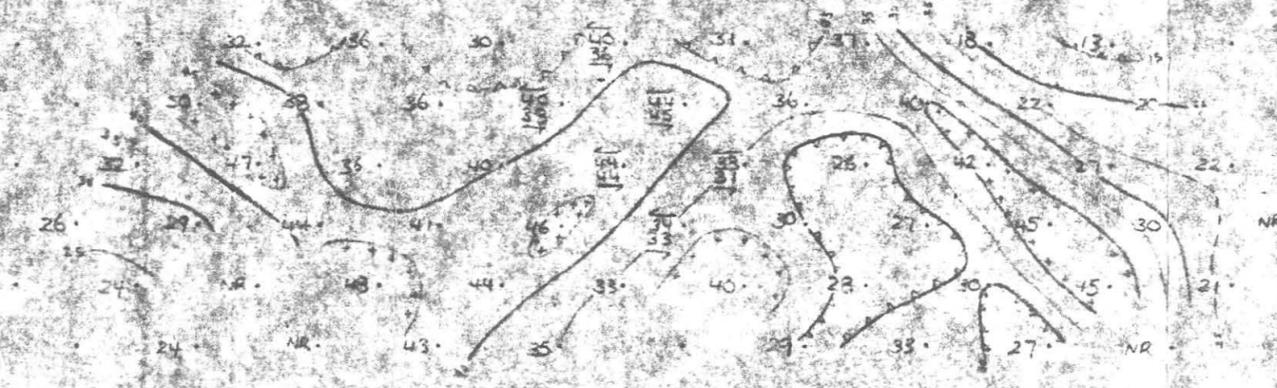
BAILEY TASMANIA

051017
SELF POTENTIAL PROFILE
LINE 110 N
SURVEYED BY GEOTERREX
OCTOBER 1979



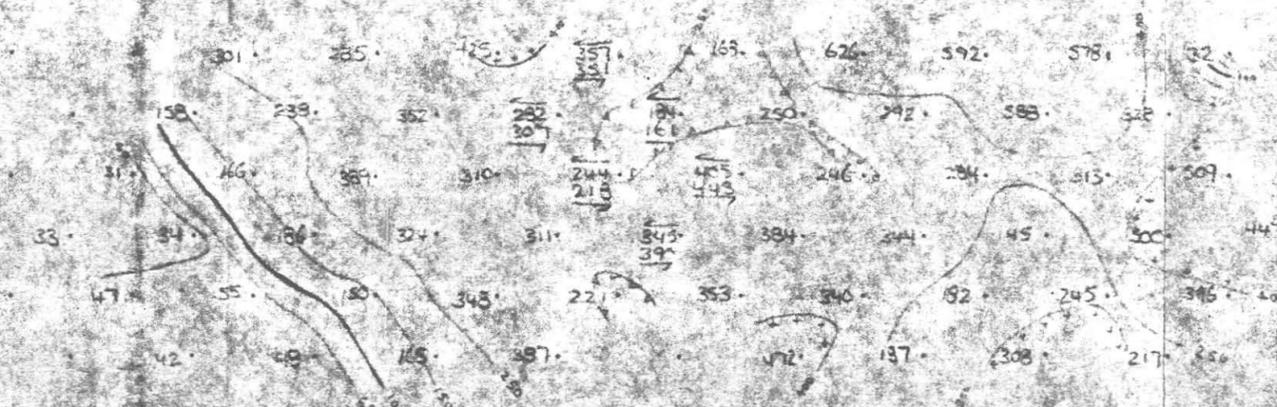


n=1
n=2
n=3
n=4
n=5
n=6

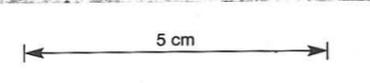


Apparent Chargeability (msecs)

n=1
n=2
n=3
n=4
n=5
n=6



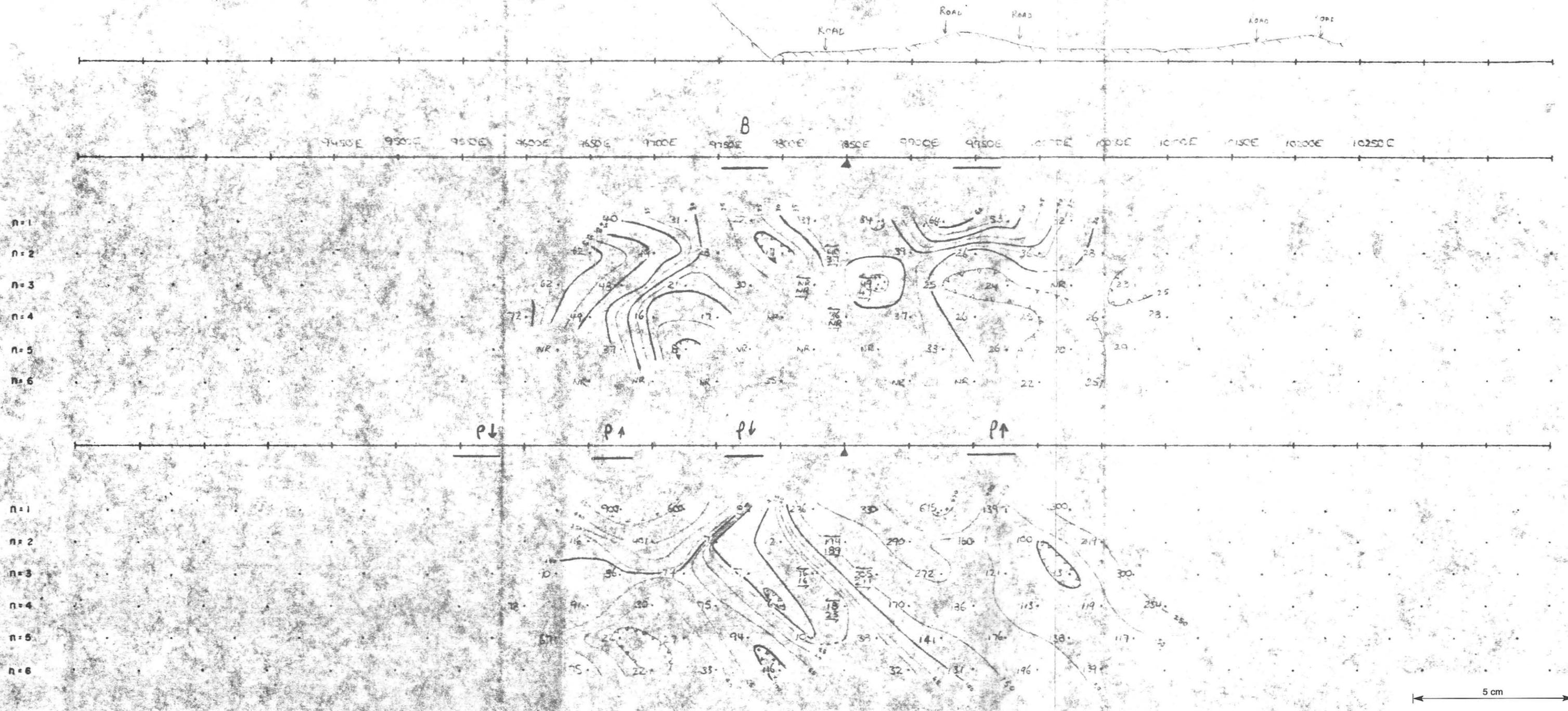
Apparent Resistivity (ohm m)



Transmitter type: ELLIOTT 1.5 KVA
Timing sequence: 2 sec on / 2 sec off
Receiver type: ICHTREN IPR-7
Integration: 50 - 1100 m SEC
IP measured over one current cycle



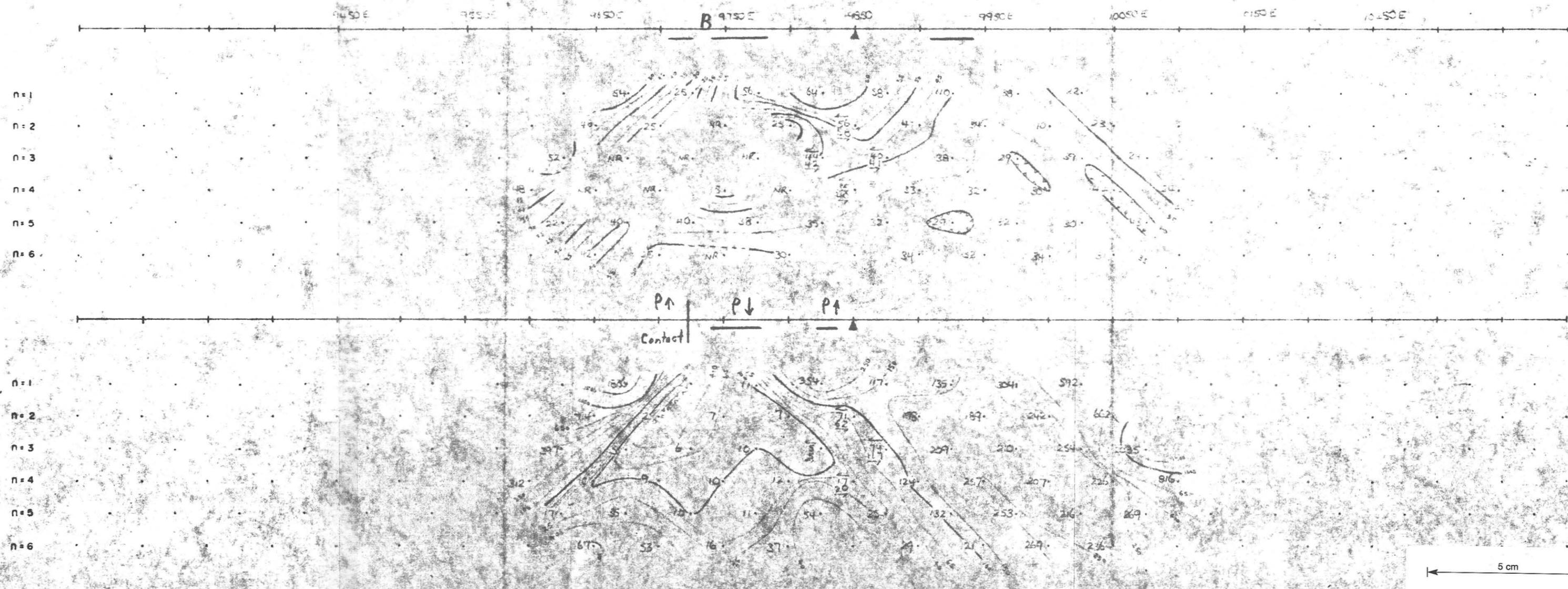
CRA EXPLORATION		
INDUCED POLARIZATION and RESISTIVITY SURVEY		
BALFOUR TAS		
LINE 89 N		
Array	Dipole - Dipole	Dipole length 50 METRES
Date	Job No 35 163	Scale 2500



Transmitter type ELLIOT 15 KVA
 Timing sequence 2 sec. on / 2 sec. off
 Receiver type ICINTREX IPR-7
 Integration 450 - 1100 M SEC.
 P measured over one current cycle



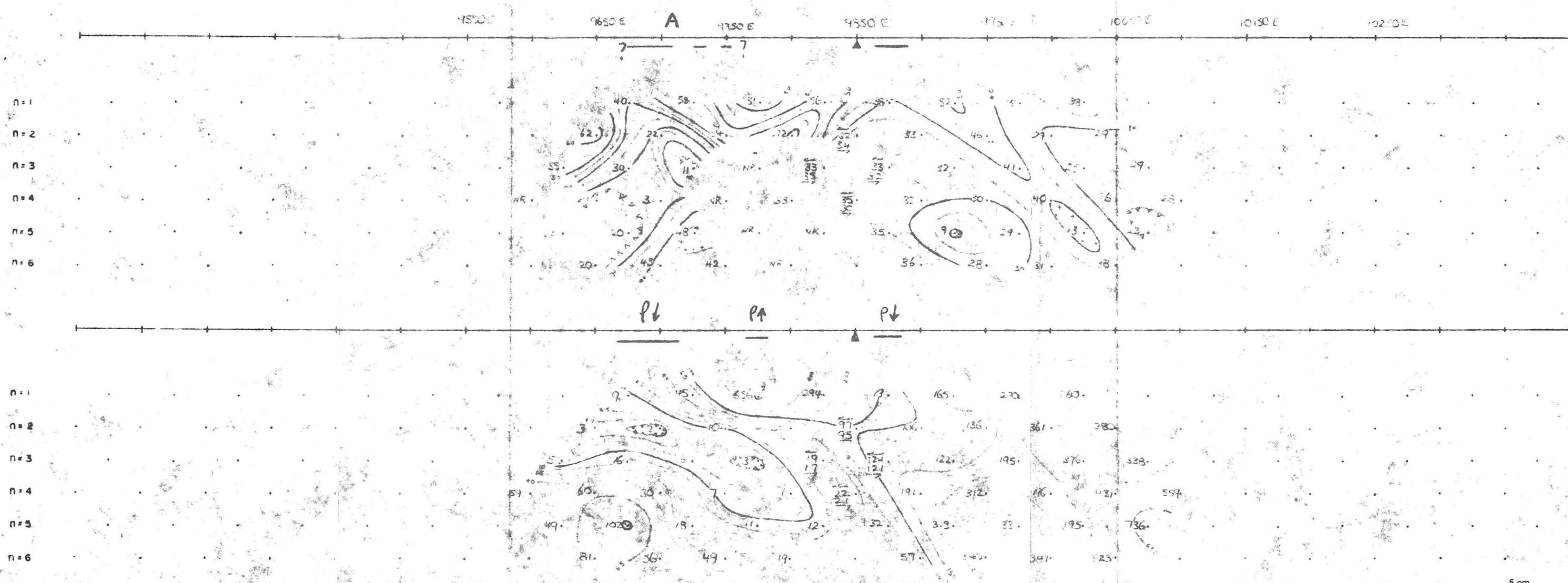
CRA EXPLORATION		
INDUCED POLARIZATION and RESISTIVITY SURVEY		
BALFOUR TAS		
LINE : 99 N		
Array Dipole - Dipole	Dipole length 50 METRES	
Date 16/11/79	Job No 9215-113	Scale 1:2500
Author	Report No	Plot No



Transmitter type **ELLIOT 15 KVA**
 Timing sequence **2 sec on / 2 sec off**
 Receiver type **ICONTREX 102-7**
 Integration **450-1100 m sec**
 IP measured over one current cycle



CRA EXPLORATION		
INDUCED POLARIZATION and RESISTIVITY SURVEY		
BALEOUR TAS		
LINE : 101 N		
Array Dipole - Dipole	Dipole length 50 METRES	
Date 18-10-79	Job No 95-1163	Scale 1:250
Author	Report No	Encl. No



n=1
n=2
n=3
n=4
n=5
n=6

n=1
n=2
n=3
n=4
n=5
n=6

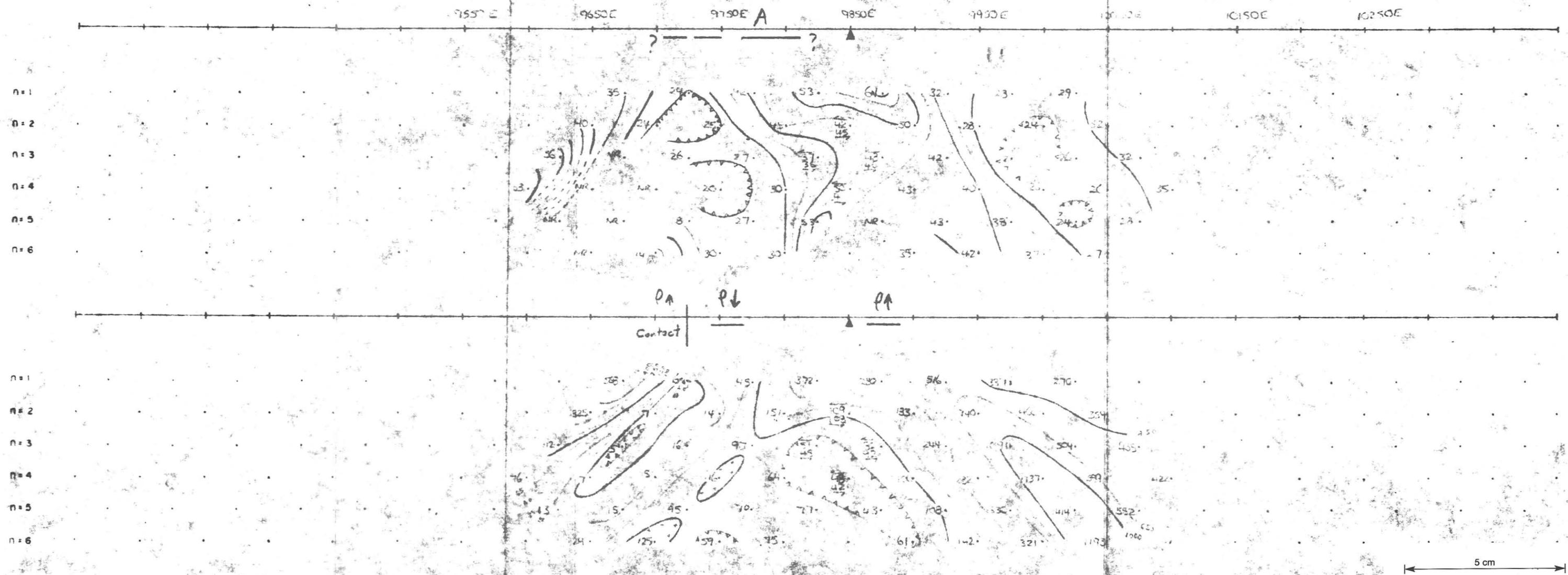
Apparent Chargeability (msecs)

Apparent Resistivity (ohm m)

Transmitter type	ELLIOT
Timing sequence	2 sec on / 2 sec off
Receiver type	ICINTELEX PR 7
Integration	L 150 - 1000 M.S.C
Time used	over one current cycle



CRA EXPLORATION			
INDUCED POLARIZATION and RESISTIVITY SURVEY			
BALFOUR TAS			
LINE : 103 N			
Array	Dipole - Dipole	Scale length	50 METRES
Date	19 4 20 10 79	Job No	85 - 83
Author		Scale	1:2500
	Report No.	Encl No.	



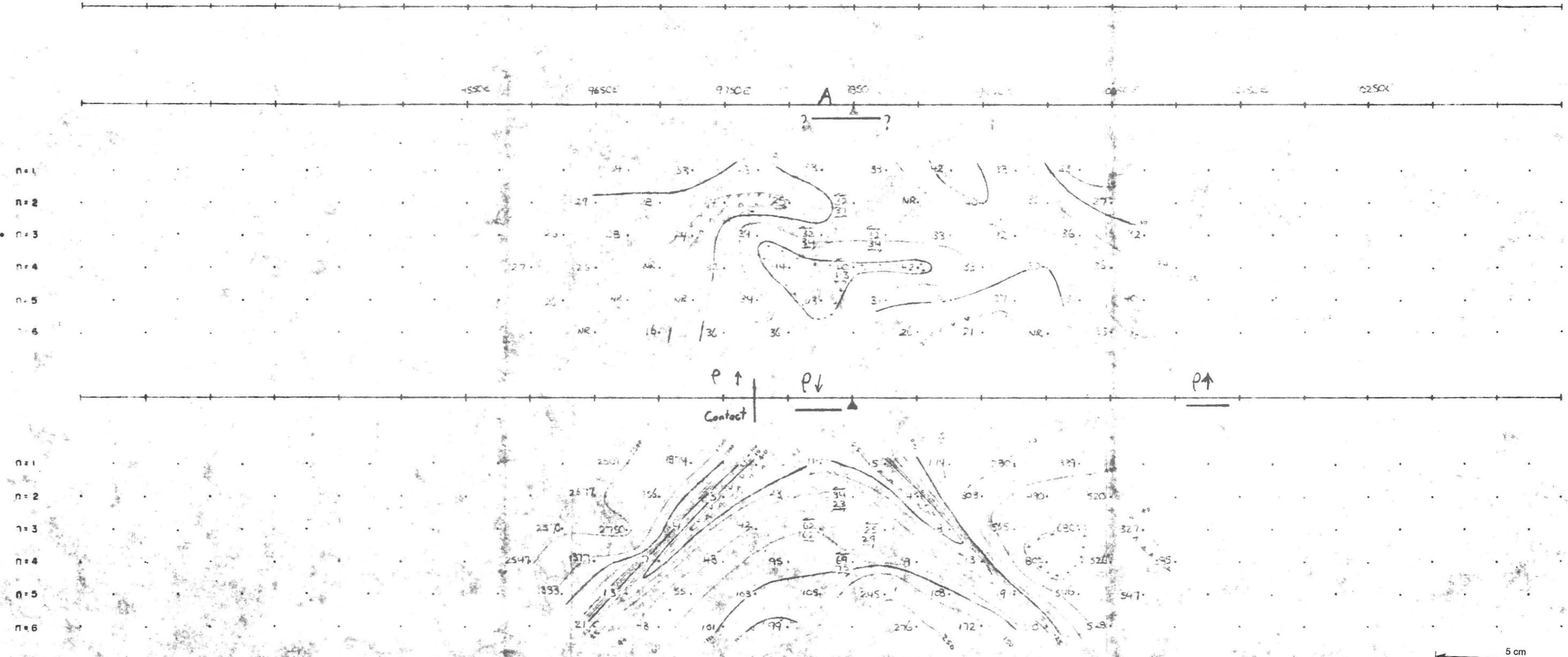
n=1
n=2
n=3
n=4
n=5
n=6

n=1
n=2
n=3
n=4
n=5
n=6

Transmitter type **ELLIOT 15 kVA**
 Timing sequence **2 sec on / 2 sec off**
 Receiver type **ICINTRIX IPR-7**
 Weight **4.50 - 110 g m sec**
 * measured over one current cycle



CRA EXPLORATION		
INDUCED POLARIZATION and RESISTIVITY SURVEY		
BALFOUR TAS.		
LINE 106 N		
Array	Dipole - Dipole	Dipole length 50 METRES
Date	23 10 79	Job No 35-1163
Author	Resist No.	Encl No.



Transmitter type ELLIPT 15kVA
 Timing sequence 2 sec on / 2 sec off
 Receiver type ICINTEX PR-7
 Integration 450-110 msec
 P measured over one current cycle



CRA EXPLORATION		
INDUCED POLARIZATION and RESISTIVITY SURVEY		
BALFOUR TAS		
LINE : 110 N		
Date	Scale - Dipole	Dipole length
10/1/84	1:2500	50 m (PES)
Sheet	Report No.	Enc. No.
	85-1163	

APPENDIX 2

MEMO BY R.^R. LARGE - BALFOUR JACRO
DRILLING PROGRAMME

INTER-OFFICE MEMO

Our Ref.:

~~Geochem~~
DEVONPORT

Your Ref.:

From: R.R. LARGE

20-2-80

To: K. WRIGHT

cc G.H. Sherrington
P.J. Legge C.R.A.E. Preston
A. McKay C.R.A.E. BurnieBALFOUR JACRO DRILLING PROGRAMME

A programme of Jacro bedrock sampling and shallow diamond drilling was completed by Geopeko in the period 21-11-79 to 22-12-79 under contract from C.R.A. Exploration Pty. Ltd.

The purpose of the programme was two-fold;

- a) To obtain bedrock geochemical values of Sn, W and base metals on selected lines in areas of little outcrop over previously defined magnetic and I.P. anomalies.
- b) To test with shallow AQ diamond holes a number of coincident geophysical and geochemical anomalies on the grid.

1. Auger Drilling*25m spacing*

Five lines were selected for auger drilling, on the following basis;

- LINE 109N*
- a) 10,900N from 9,700E to 10,200E to cross the northern magnetic anomaly and linear high intensity resistivity anomaly further west.

LINE 101N

- b) Line 10,100N from 9,600E to 10,000E to cross the strong I.P. anomaly centred at 9,760E.

LINE 97N

- c) Line 9,700N from 10,300 to 10,750E to cross the rock-chip Sn anomaly and I.P. anomaly on Peters Ridge and extend east to the Murrays Reward workings.

LINE 93N

- d) Line 9,300N from 10,000E to 10,550E to test bedrock samples over swampy ground between the southern end of Specimen Hill and the line of Murrays Reward Copper workings.

LINE 89N

- e) Line 8,900N from 9,575E to 10,375E to cross the broad magnetic anomaly extending south from Specimen Hill.

A total of 115 bedrock auger holes were drilled to a depth ranging from 2 to 5 metres. Particular care was taken to achieve a clean bedrock sample and avoid contamination from alluvial and eluvial material at the tops of the holes. The samples were analysed for Sn, W, Cu, Pb, Zn and Fe. The results on C.R.A. Exploration Geochemical sample ledgers are given in appendix 1, with geological descriptions of the rock chips by contract geologist Mr. N.R. Langsford. *P.7. of this section*

The auger Sn values have been plotted on the rock-chip geochemical plan in figure 1. Where more than one sample was taken down the hole, the value of the bottom sample is plotted. Profiles of the Sn results are plotted in figures 2 to 6.

FOLLOWING PAGE 24

of this section

FIGURE TV 36 at back

Results - Generally the results are very encouraging and indicate that the areas of no outcrop and swamp cover contain the same degree of bedrock tin mineralization as the areas of exposed mineralization on Specimen Hill and Peters Ridge.

The most significant features are;

- 1) An erratic response for Sn, with values up to 555ppm Sn observed on line 10,100N over the major I.P. anomaly. The rolling three point mean profile in figure 3 smooths out this anomaly.
- 2) Anomalous bedrock values up to 1900ppm occur in the low lying area between Specimen Hill and Murrays Reward (lines 9,300N and 9,700N).
- 3) A weak Sn anomaly (225ppm maximum) is coincident with the magnetic anomaly on line 10,900N. However background Sn values occur over the I.P. anomaly further west (approximately 9,850E).
- 4) No distinct Sn anomaly is present on line 8,900N over the broad magnetic anomaly.

Tungsten values are consistently low, generally less than 20ppm with a maximum of 170ppm. Copper and zinc show a variable response with some correlation with Sn values.

2. Shallow Diamond Drilling

Four AQ diamond holes have been drilled to test selected targets previously defined by C.R.A.E rock chip sampling and geophysical surveys. Geological logs with assay results are given in appendix II.

A brief summary of results is given below:

*DDB7; Collar - 9500N, 10,460E
 Dip - 60° to west
 Purpose - test a coincident rock chip geochemical and I.P. anomaly.

<u>Depth (m)</u>	<u>Dominant Rock Type</u>	<u>Range of Sn values</u>
0-17	green siltstones, minor sandstones	20 - 300ppm
17-32	white/green quartzites	10 - 105ppm
32-33	pyritic quartzite	1100ppm
33-37	pyjama siltstones and green sandstones	15 - 110ppm
37-38	pyritic quartzite	1600ppm
38-40.1	green quartzite	15 - 220ppm

The only tin values of significance occur in the pyritic quartzite units adjacent to the pyjama siltstones not associated with quartz veins.

DDB8 Collar - 9,100N, 10,240E (approx)
 Dip - 60° to west
 Purpose - to test a coincident I.P. and rock-chip Sn anomaly.

<u>Depth</u>	<u>Dominant Rock Type</u>	<u>Range of Sn values</u>
0-40.3	Siliceous siltstones	5 to 895ppm

The siliceous siltstones are cut by occasional veinlets of quartz*pyrtie-arsenipyrite from 0.2 to 3cm thick. Very minor cassiterite occurs in the veinlets and accounts for the anomalous Sn values.

* Numbers have been continued on from the B.H.P. drilling (6 holes).

DDB9; Collar - 10,900N, 10,050E
 Dip - 60° to east
 Purpose - to test magnetic anomaly
 (model studies indicated
 a westerly dip).

The hole was drilled to 15.5m and stopped after examination of the core indicated the hole was passing roughly parallel to bedding. Massive siltstones and sandstones carrying 1-2% pyrite with less than 5ppm Sn were intersected over the length of the hole.

DDB10; Collar - 10,100N, 9,770E
 Dip - 55° to west
 Purpose - to test the major I.P.
 anomaly.

<u>Depth</u>	<u>Dominant Rock Type</u>	<u>Range in Sn</u>
0-18m	quartzite, sandstone and minor black shale	<5 to 340ppm
18-39m	black graphitic shale, minor quartzite.	5 to 225ppm

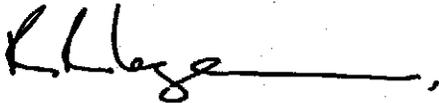
Assay results from the intervals 32-39m are yet to be received.

Conclusions:

- 1) The two pyritic quartzite horizons intersected below Peters Ridge in DDB 7 contain significant tin values (0.11% and 0.16% Sn) and further work is required to assess the potential of these horizons to host ore grades.
- 2) The graphitic shales intersected in DDB 10 explain the low resistivity I.P. anomaly on the western side of the grid. The potential of this horizon to host a massive sulphide tin orebody requires further evaluation.

- 3) DDB 9 failed to test the coincident magnetic and geochemical anomaly on the northern end of the grid. Further bedrock sampling and Jacro drilling will be required in this area.

The proposed 1980 programme of complete bedrock Jacro sampling over the central Balfour grid with fill-in I.P. and V.L.F. - E.M. will provide a clear understanding of tin distribution over the entire area and enable the correlation of geophysical features with tin anomalies. The extent of the stratabound tin mineralization intersected in DDB 7 and the graphitic shales in DDB 10 should emerge from this programme.



R.R. LARGE.
Supervising Geologist.

GEOCHEMICAL SAMPLE LEGERS

FOR AUGER DRILLING

APPENDIX I of

GEOTEKO }
ROSS LARGE } REPORT.

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name SPL 781 No. 189176 → 189187 Sample numbers 189176 → 189187 Collected by N. RL Sheet no. 1
 Area / Prospect SPECIMEN HILL Date 21 Nov 79
 Map / Photo reference Analysed by ALS DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %						Grid ref	Geological Observations							
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn			Au	Sn	W	Fe%			
		o/c sample type ***																					
		s sample type ****																					
89176	Bedrock	FROM				To (m)		5	10	20								35	10	0.76	10000E	Soft cream siltstone.	
		0.2				2																	
77	"	2				4		10	10	25								65	10	0.92	10000E	light green siltstone.	
78	Bedrock	0.5				1.5		55	10	30								60	10	1.52	9975E	Grey green laminated siltstone.	
79	Bedrock	0				2		720	40	30								45	10	0.96	9950E	Dark brown passing to dark green siltstone	
80	Bedrock	2				4		160	25	60								495	20	0.10	9950E	Dark green to grey siltstone.	
81	Bedrock	0				2		390	40	80								25	10	2.80	9925E	Dark grey-green siltstone.	
82	Bedrock	2				4		35	6	190								5	10	1.44	9925E	Dark grey siltstone.	
83	Bedrock	0				2		20	10	100								30	20	1.16	9900E	Grey siltstone.	
84	Bedrock	2				4		35	10	60								40	10	0.76	9900E	Grey siltstone	
85	Bedrock	0				2		145	30	190								255	10	0.10	9875E	Brown siltstone (mud)	
86	Bedrock	1				3		72	35	135								60	10	1.08	9850E	0-1m peat, then grey green pyritic siltstone.	
87	Bedrock	3				5		20	30	30								10	10	1.16	9850E	"	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)
 **** Soil sample type sugar hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LEDGER

Tenement name..... SPL 781 No. Sample numbers. 189200 - 209 Collected by..... N.R.L. Sheet no. 3
 Area / Prospect..... Specimen Hill Date..... 21 Nov 79
 Map / Photo reference..... Analysed by..... ALS DPO no.....

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations			
		fl	wi	al	co	cs	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Sn	W	Fe %					
		o/c sample type ***																					
		s sample type ****																					
189200	Bedrock		0	- 1.3 m					30	10	15								255	10	3.28	9780E	Red brown siltstone.
189201	Bedrock		0	- 2 m					10	5	10								255	30	0.52	9770E	Grey siltstone and quartzite.
202	Bedrock		2	- 3					10	10	5								30	10	1.20	9770E	Grey rubble siltstone.
203	Bedrock		0	- 1.5m					10	15	10								555	20	0.56	9750E	Dark grey laminated siltstone
204	Bedrock		0	- 2					5	5	5								35	30	0.24	9675E	White sandstone.
205	Bedrock		2	- 3.2					5	10	2								30	10	0.38	9675E	Grey siltstone.
206	Bedrock		0	- 2					5	20	5								20	20	0.28	9650E	White sandstone.
207	Bedrock		2	- 4					5	10	5								80	10	0.44	9650	White sandstone.
208	Bedrock		0	- 1.7					5	5	5								10	10	0.32	9625	Grey siltstone.
209	Bedrock		0	- 2m					5	5	2								20	10	0.32	9600	White sandstone.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial cs = catchment km2
 *** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)
 **** Soil sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LEDGER

Tenement name..... SPL 781 No. Sample numbers... 189210 - 221 Collected by... N.R.L. Sheet no. 4
 Area / Prospect... Specimen Hill Date... 22 Nov 79
 Map / Photo reference..... Analysed by... ALS DPO no.....

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %								Grid ref	Geological Observations		
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Sn			W	Fe %
		o/c sample type ***																		
		s sample type ****																		
189210	Alluv.		0		2			5	25	5								109N 9825E	Gravelly peat - could not penetrate to bedrock.	
211	Bedrock		0		2			5	25	5								9850E	White siltstone.	
212	Bedrock		0		2			2	10	5								9875E	White siltite.	
213	Bedrock		2		3			20	60	10								9875E	Dark grey to brown siltstone.	
214	Alluv.		0		18			2	25	5								9900E	Gravelly peat - could not penetrate to bedrock.	
215	Alluv		0		2			5	5	5								9925E	Gravelly peat.	
216	Bedrock		2		4			15	10	10								9925E	Dark grey-green siltstone.	
217	Bedrock		0		2			10	20	35								9950E	Brown → grey green siltstone.	
218	Bedrock		2		4			10	10	180								9950E	Grey green siltstone.	
219	Bedrock		0		2			15	30	75								9975E	Brown to grey green siltstone.	
220	Bedrock		2		4			20	55	10								9975E	Grey green siltstone.	
221	Bedrock		0		1.5			5	20	25.								10000E	White siltstone.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m³/sec wi = width m al = alluvial co = colluvial ca = catchment km²

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type super hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name SPL 781
 Area / Prospect Specimen Hill
 Map / Photo reference

No. Sample numbers 189222 → 189233 Collected by N.R.L.
 Analysed by ALS

Sheet no. 5
 Date 22 Nov 79
 DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Sn	W	Fe %		
		o/c sample type ***																		
		s sample type ****																		
189222	Bedrock		0			1.2		2	10	10						150	10	0.96	109N 10025E	White siltstone / sandstone
223	Bedrock		0			1.7		5	10	15						20	10	1.08	10050E	White siltstone
224	Bedrock		0			2		10	10	20						225	10	1.72	10075E	Grey mud (siltstone)
225	Bedrock		1.5			2		5	10	15						195	10	1.40	10100E	0-1.5 peat 1.5-2 m green grey pyritic siltstone.
226	Bedrock		0			2		5	5	5						25	10	1.60	10125E	Brown to grey green siltstone
227	Bedrock		2			3.7		5	5	5						25	10	1.12	10175E	Grey green siltstone.
228	Bedrock		0			2		5	10	15						25	10	6.40	10150E	Orange clay
229	Bedrock		2			4		15	10	15						25	10	4.40	10150E	Yellow siltstone.
230	Bedrock		0			2		5	5	10						25	10	6.50	10175E	Pale green siltstone.
231	Bedrock		2			4		15	20	15						25	10	1.88	10175E	Pale green siltstone.
232	Bedrock		1.2			1.8		10	15	25						185	10	1.92	10200E	Grey mud (siltstone)
233	Alluv.		0			1		5	25	5						25	10	0.36	9750E	Quartzite rubble.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)
 **** Soil sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LEDGER

Tenement name SPL 781 No. 191234-245 Sample numbers 191234-245 Collected by N.R.L. Sheet no. 6
 Area / Prospect Specimen Hill Date 22/23 Nov 79
 Map / Photo reference Analysed by ALS DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %											Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Sn	W	Fe %			
		o/c sample type ***																			
		s sample type ****																			
189234	Alluv		0			2		5	25	5					25	210	0.28	109N 9725E	White sand.		
235	Alluv		2			3.8		2	25	5				5	10	0.32	9725	Quartzite rubble.			
236	Alluv		0			1.7		5	25	10				5	210	0.31	9700 97N	White sand.			
19237	Bedrock		2			4		55	30	30				660	40	3.60	10310E	0-2 m. peat + rubble 2-4 Grey siltstone.			
238	Alluv		0			1.5		15	20	35				10	210	1.36	10325E	Brown clayey wash.			
239	Bedrock		1.5			2.7		660	60	920				130	10	2.40	10325E	Grey pyritic siltite.			
240	Bedrock		1.5			2.3		250	150	6000				365	40	1.44	10350E	0-1.5m peat 1.5-2.3 stiff grey clay.			
241	Bedrock		0.3			2		85	25	40				580	20	1.80	10375E	0-0.3 peat. 0.3-2 stiff grey clay.			
242	Bedrock		0.2			2		90	40	160				5	10	1.42	10400E	0-0.2 rubble.			
243	Bedrock		2			3.5		50	20	310				15	210	2.80		0.2-3.5 Brown grey green siltite.			
244	Bedrock		0			2		620	20	35				260	10	1.46	10425E	Dark brown to cream siltite.			
245			2			4		390	10	110.				35.	210	1.32	10425E	Yellow siltstone.			

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m³/sec wi = width m al = alluvial co = colluvial ca = catchment km²

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

G.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name SPL 781 No. 189246-250 Sample numbers 189351-357 Collected by N.R.L. Sheet no. 7
 Area / Prospect Specimen Hill Map / Photo reference Analysed by ALS Date 23 Nov 79 DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations	
		ss *	fl	wi	al	co	cs		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Sn	W			Fe
		oc	o/c sample type ***																		
		f	s sample type ****																		
89246	Bedrock		0				2		90	40	15					800	40	2.80	10475E	Yellow to orange pyritic siltstone.	
89247	Bedrock		2				3.5		50	160	10					280	20	1.32	10475E	Pale green siltstone	
89248	Bedrock		0				2		2	10	45					55	40	2.40	10500E	Pale green siltstone.	
89249	Bedrock		0				2		75	10	30					5	40	2.28	10525E	Brown siltstone	
89250	Bedrock		0				2		115	20	55					880	10	2.40	10550E	Pale green siltstone	
189351	Bedrock		0				2		10	25	35					45	40	2.40	10575E	Pale green siltstone.	
189352	Bedrock		0				2		5	15	45					20	40	3.20	10600E	Pale green siltstone	
189353	Bedrock		0				2		15	20	35					40	40	2.24	10625E	Pale green siltstone.	
189354	Bedrock		20				4		120	30	40					215	40	2.60	10625E	Pale green siltstone	
189355	Bedrock		0				2		10	10	30					15	40	2.20	10650E	Pale green siltstone	
189356	Bedrock		7				3.5		10	20	40					20	40	3.60	10650E	Pale green siltstone	
189357	Bedrock		0				2		290	10	45					35	40	4.00	10675E	Pale green siltstone.	

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial cs = catchment km2
 *** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)
 **** Soil sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LEDGER

Tenement name SPL 781 No. 189358 - 368 Sample numbers 189358 - 368 Collected by NRL Sheet no. 8
 Area / Prospect Specimen Hill Date 23/24 Nov 79
 Map / Photo reference Analysed by ALS DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations			
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Sn	W	Fe %					
		o/c sample type ***																					
		s sample type ****																					
189358	Bedrock	2		3	8			45	20	40								95	210	3.20	10675E	97N	Green siltstone.
189359	Bedrock	1		2				10	10	15								5	210	3.10	10725E		0-1 atk 1-2 green siltstone.
360	Bedrock	1		2				75	15	20								10	210	2.80	10750E	93N	0-1 atk 1-2 green siltstone.
361	Alluv	0		3				20	25	30								390	20	1.32	10450E		Peat and gravel.
362	Bedrock	3		3.5				90	25	9200								710	170	8.80	10450E		Grey to brown siltstone.
363	Alluv	0		2				15	20	135								175	10	1.28	10475E		Gravelly peat.
364	Bedrock	2		2.5				65	10	360								80	210	3.20	10475E		Grey siltstone.
365	Alluv	0		1.5				10	10	15								40	10	0.22	10500E		Sandy peat.
366	Bedrock	1.5		2.7				105	70	130								225	210	1.00	10500E		Grey to yellow siltstone.
367	Alluv	0		2.5				5	15	140								35	210	0.36	10525E		Peaty clay
368	Bedrock	2.5		3				140	110	9100								380	50	1.00	10525E		Grey siltstone.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)
 **** Soil sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LEDGER

Tenement name SPL 781 No. 189369 - 380 Sample numbers N.R.L. Collected by A.L.S. Sheet no. 9
 Area / Prospect SPECIMEN HILL Date 24 Nov 79
 Map / Photo reference Analysed by DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations		
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Sn	W			Fe	
		oc	o/c sample type ***																			
		f	s sample type ****																			
189369	Alluv		0			1		310	85	480							120	210	3.40	93M	10550E	Peaty gravel.
370	Bedrock		1			1.8		25	50	720							35	210	3.60		10550E	Grey siltstone.
371	Alluv		1			1.8		10	25	85							200	20	1.96		10425E	Peaty gravel
372	Bedrock		2			3		45	10	110							95	210	2.80		10425E	Grey green siltstone.
373	Bedrock		0			2		20	20	50							25	210	3.20		10400E	Green yellow siltstone
374	Alluv		0			1.5		15	10	10							1500	20	0.56		10375E	Peaty gravel
375	Bedrock		1.5			2.5		20	10	30							1300	210	1.44		10375E	Yellow brown clay
376	Bedrock		0			1.8		10	20	35							250	20	1.020		10350E	Yellow clay.
377	Bedrock		0			2		2	10	2							55	210	0.12		10325E	Dark brown siltstone.
378	Bedrock		2			4		100	15	10							20	10	0.28		10325E	Dark brown siltstone
379	Bedrock		0			2		145	80	180							350	210	0.40		10300E	Dark brown siltstone
380	Bedrock		2			4		300	20	125							240	19	0.40		10300E	Grey siltstone.

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m³/sec wi = width m al = alluvial co = colluvial ca = catchment km²
 *** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)
 **** Soil sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LEDGER

Tenement name SPL 781 No. 189381 - 189392 Sample numbers 189381 - 189392 Collected by N.R.L. Sheet no. 10
 Area / Prospect SPECIMEN HILL Date 24 Nov
 Map / Photo reference Analysed by ALS DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Sn	W	Fe		
		o/c sample type ***																		
		s sample type ****																		
189381	Bedrock	0		2				330	740	3600					275	60	3.40	10275E	Grey siltstone.	
382	Bedrock	2		4				90	330	1600					3.5	50	1.20	10275E	Grey siltstone.	
383	Bedrock	0		2				15	10	500				10	210	2.32	10250E	Grey green siltstone		
384	Bedrock	2		4				80	20	560				120	210	8.60	10250E	Grey green pyritic siltstone.		
385	Bedrock	0		2				50	10	1000				100	30	1.88	10225E	Grey green siltstone.		
386	Bedrock	1		3				55	10	2800				115	10	3.00	10200E	0-1 peat, attk. 1-3 grey siltstone.		
387	Bedrock	0.5		1.5				5	5	15				1900	30	0.24	10150E	0-0.5 peat 0.5-1.5 white siltstone		
388	Bedrock	0		12				5	10	45				75	210	3.20	10125E	Grey green siltstone.		
389	Bedrock	0		0.5				20	5	35				70	20	0.28	10100E	Hard brown siltstone.		
390	Bedrock	0		1				25	10	25				210	210	0.36	10075E	Hard brown siltstone.		
391	Bedrock	0		12				5	5	25				120	210	2.04	10050E	Light grey green siltstone		
392	Bedrock	0		1				5	5	10				70	210	0.32	10025E	light grey siltstone.		

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)
 **** Soil sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name SPL 781 No. 189393-420 Sample numbers 189424-427 Collected by N.R.L. Sheet no. 11
 Area / Prospect SPECIMEN HILL Date 25 Nov
 Map / Photo reference Analysed by ALS DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations			
		ss *	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Sn	W			Fe %		
		oc	o/c sample type ***																				
		f	s sample type ****																				
89393	Bedrock		0		2				100	10	480								120	<10	2.80	10000E 92050N	Brown green siltstone
394	Bedrock		0		2				110	10	500								15	10	1.24	10000E 92025N	Light green yellow siltstone
395	Bedrock		0		2				10	30	15								45	20	1.12	10000E 92025N	Yellow to cream siltstone
396	Bedrock		2		4				20	45	20								20	10	1.76	10000E 9200N	Mainly yellow siltstone
397	Bedrock		0		2				20	10	20								15	10	1.40	1000E 89N	Yellow-grey, green siltstone
398	Bedrock Bedrock		1		3				50	30	15								15	<10	0.32	9675E	Red Grey green siltstone
399	Bedrock		3		5				20	80	35								20	<10	0.64	9575E	Very dark grey green siltstone
400	Bedrock		1		3				45	30	175								10	10	1.44	9600E	Grey and yellow clay
424	Bedrock		3		5				25	35	240								25	<10	1.64	9600E	Grey and yellow clay
425	Bedrock		1		3				20	25	150								15	<10	1.28	9625E	Grey siltstone
426	Bedrock		3		5				25	10	110								15	<10	1.60	9625E	Grey siltstone
427	Bedrock		1		3				60	50	165								310	30	0.64	9650E	Grey siltstone

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m³/sec wi = width m al = alluvial co = colluvial ca = catchment km²

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name..... SPL 781 No. Sample numbers..... 189428 - 439 Collected by..... N.R.L. Sheet no. 12
 Area / Prospect..... SPECIMEN HILL Date..... 25 NOV.
 Map / Photo reference..... Analysed by..... ALS DPO no.....

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations		
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Sn	W	Fe %				
		o/c sample type ***																				
		s sample type ****																				
189428	Bedrock		3		5			60	90	560								350	10	0.28	89N 9650E	Grey siltstone
429	Bedrock		1		3			Sample Not Received										9675E	Brown green siltstone			
430	Bedrock		0		2			10	10	35								60	10	0.72	9700E	Grey siltstones
431	Bedrock		0		2			15	10	50								10	10	2.80	9725E	Yellow clay and grey green siltstone
432	Bedrock		2		4			10	10	15								15	10	0.38	9725E	Grey green siltstone
433	Bedrock		0		2			20	15	20								20	10	0.60	9750E	Grey green siltstone
434	Bedrock		2		4			30	30	20								5	10	0.28	9750E	Grey green siltstone.
435	Bedrock		0		2			5	10	15								30	10	0.20	9775E	Grey to grey-green siltstone
436	Bedrock		0		2			10	10	35								30	10	1.32	9800E	Grey siltstone
437	Bedrock		0		2			30	10	20								10	10	1.64	9825E	Yellow clay to grey siltstone
438	Bedrock		0.5		2			85	60	20								10	20	4.20	9850E	0-0.5 @ quartzite rubble 0.5-2 Yellow siltstone + quartzite
439	Bedrock		0		2			25	20	30								15	10	0.60	985E	Yellow siltstone

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name SPL 781 No. 189440 - 451 Sample numbers 189440 - 451 Collected by NRL Sheet no. 13
 Area / Prospect SPECIMEN HILL Date 24 Nov / 25 Nov
 Map / Photo reference Analysed by ALS DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations		
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	S	W	Fe %				
		o/c sample type ***																				
		s sample type ****																				
89440	Bedrock	0	2					5	10	30								20	110	3.60	89N 9900E	Yellow to pale green siltstones
441	Bedrock	0	2					20	30	60								120	110	3.00	89N 9925E	Grey siltstone
442	Bedrock	0	2					5	10	45								15	110	2.80	89N 9950E	Cream to yellow siltstones
443	Bedrock	0	2					5	10	20								120	10	1.24	89N 10025E	Hard grey siltstones
444	Alluv	0.2	1.2					5	5	5								150	20	0.24	89N 10050E	Peat and quartzite rubble
445	Bedrock	1.2	2					15	10	10								105	10	0.92	89N 10050E	Yellow siltstone
446	Bedrock	0.4	2					Sample not received										10075E	Peat + Quartzite rubble 0-0.4 Grey siltstone 0.4-2			
447	Bedrock	0	2					5	10	50								25	110	3.60	89N 10100E	Grey siltstone
448	Bedrock	0	1.2					Sample not received										10125E	Yellow siltstone			
449	Bedrock	1	1.3					5	5	20								115	110	1.12	89N 10150E	0-1 Peat mud 1-1.3 Hard grey siltstone
450	Bedrock	0.5	1.8					5	10	80								5	110	3.20	89N 10175E	0-0.5 Peat mud 0.5-1.8 Hard grey siltstone
451	Bedrock	0.2	2					5	20	75								30	110	4.00	89N 10200E	Hard pale green siltstone

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)
 **** Soil sample type super hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name SPL 781 No. 89452-462 Sample numbers 89452-462 Collected by NRL Sheet no. 14
 Area / Prospect SPECIMEN HILL Date 25 Nov - 26 Nov
 Map / Photo reference Analysed by ALS DPO no.

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
		fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Mo	Mn	Au	Sn	W	Fe		
		o/c sample type ***																		
		s sample type ****																		
89452	Bedrock	0.5		2.5				250	150	500					560	<10	1.20	10225E	0-0.5 Peat 0.5-2.5 Yellow siltstones and yellow clay & quartzite fragments	
453	Bedrock	2.5		3.2				165	80	230				960	10	3.40	10225E	Yellow siltstones & yellow clay & quartzite fragments		
454	Bedrock	0		2				10	10	55				40	<10	3.40	10250E	Yellow & light grey, green siltstones		
455	Bedrock	0		2				30	10	65				255	<10	3.60	10215E	Yellow siltstones		
471	Bedrock	0		2				30	25	90				15	<10	1.92	10300E	Pale grey green siltstones		
456	Bedrock	0		2				55	80	760				55	<10	2.32	10325E	Pale grey green siltstone - quite hard		
457	Bedrock	0		2				70	20	250				145	<10	3.60	10350E	Pale green siltstone		
458	Bedrock	0.4		2.4				30	25	50				240	30	2.00	10375E	0-0.4 Peat 0.4-2.4 Yellow clay and grey green siltstone - soft.		
459	Bedrock	2.4		3.4				15	20	140				45	<10	1.80	10375E	Grey green siltstone		
460	Bedrock	0		2				15	15	65				90	<10	2.80	10400E	Pale grey green siltstone - hard		
461	Bedrock	0		1.8				5	10	35				40	<10	2.16	10425E	Hard brown, pale yellow green siltstone		
462	Bedrock	0		1.7				Sample not received.								10450E	Pale green siltstone			

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)
 **** Soil sample type s = sugar hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name..... SPL 781 No. Sample numbers... 189463 - 474 Collected by... NRL Sheet no. 15
 Area / Prospect... SPECIMEN HILL Date... 26 Nov
 Map / Photo reference..... Analysed by... ALS DPO no.....

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %									Grid ref	Geological Observations		
		ss*	fl	wi	al	co	ca		pH	Cu	Pb	Zn	Ag	Mo	Mn	Au	Sn			W	Fe %
		oc	o/c sample type ***																		
		f	s sample type ****																		
89463	Bedrock		0		2				35	130	210						10	<10	2.80	10475E	Hard grey siltstones
464	Bedrock		0		1.7				110	190	2600						75	<10	3.40	10500E	Grey siltstones
465	Bedrock		0		1.3				5	40	60						115	<10	2.80	10525E	Grey siltstones
466	Bedrock		0		1.6				10	10	40						15	<10	2.20	10550E	Pale grey green siltstones
467	Bedrock		0.2		2.2				35	10	10						20	<10	0.76	10575E	0-0.2 Peat 0.2-2.2 Yellow siltstones
468	Bedrock		2.2		4.2				320	70	105						5	<10	1.48	10575E	Yellow to grey siltstones
469	Alluv.		0		1.5				5	5	5						195	10	0.20	10600E	Brown to green alluvial
470	Alluv		1.5		2.3				35	20	155						135	<10	1.92	10600E	Brown to green alluvial
472	Bedrock		0		2				20	40	115						540	110	5.20		chocolate to dark green clay
473	Bedrock		2		4				1100	30	65						350	70	1.28		Pale brown clay and quartz fragments
474	Bedrock.		4		8				Sample not received										Very dark green highly pyritic clays		

* Sample type ss = stream sediment oc = outcrop f = float s = soil
 ** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2
 *** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)
 **** Soil sample type s = sugar hole or pit depth m A, B or C horizon

DIAMOND DRILL LOGS

HOLES	DDB 7
	DDB 8
	DDB 9
	DDB 10

GEOPEKO DIAMOND DRILL LOG - TASMANIA BASE

DDH No.	DDB 7
PROSPECT	BALFOUR
CO ORDINATES	9500N 10460E
REDUCED LEVEL	-
BEARING	227 ^o Mag
INCLINATION	-60 ^o
DEPTH	40.1m
DRILL TYPE	JACRO AQ
HOLE PROPOSED BY	R.R. LARGE, T.M. PORTER
HOLE LOGGED BY	R.R. LARGE
DATE COMMENCED	5-12-79
DATE COMPLETED	6-12-79
SURVEY	NONE
REMARKS	

- 0 - 3.0m No core
- 3.0 - 4.5m Oxidized white siltstone becoming light green down the hole. Very minor pyrite in aggregates 1 - 3mm aligned in beds - oxidized out to leave holes in the upper section.
- 4.5 - 11.3m Light green weakly pyritic siltstone. Well laminated with bedding angle to long core axis of 70°. Pyrite occurs in fine disseminations (<1mm) or blebs (<3mm) generally aligned parallel to bedding laminations. Some cross cutting pyrite is aligned into cleavage. Pyrite content is about 2%. Larger pyrite aggregates are concentrated at the base of some beds indicating a crude grading.
- 11.3 - 14.6m Brown and green massive sandstone. Very minor pyrite in narrow veins. No bedded pyrite.
- 14.6 - 16.0m Laminated green siltstones and fine light green sandstones. Pyrite is concentrated in particular horizons parallel to bedding laminations. Very minor vein pyrite. No quartz veining.
- 16.0 - 17.0m Grey and green laminated siltstones with minor pyrite. A possible version of the pyjama siltstones. The dark layers may be tourmaline. A pyrite-quartz vein occurs at 16.9m.
- 17.0 - 24.0m Grey and white quartzite. Very poor core recovery. Minor quartz-pyrite veins 1 - 2mm thick throughout.

- 24.0 - 24.7 Cream to green coarse laminated sandy siltstone. Very minor disseminated pyrite. Bedding angle to long core axis is $15 - 20^{\circ}$.
- 24.7 - 29.6 Massive grey to green quartzite. Minor quartz veining. White quartz with diffuse boundaries is later than the mineralization. Minor blebs of sphalerite are observed in fractures at 25.2m.
- 29.6 - 30.8 Fine grained white siltstone and light grey quartzite.
- 30.8 - 32 Massive white quartzite with a trace of pyrite.
- 32 - 33.3 Massive grey pyritic quartzite. Much of the pyrite is disseminated in fine dendritic type growths which give a characteristic texture to the quartzite. Overall pyrite content averages about 5%. Minor disseminated sphalerite is evident at 32.8 to 33m.
- 33.3 - 35.0 Laminated white to green sandy siltstones with black argillaceous siltstone. Typical of the so called pyjama rocks. The black argillaceous beds are strongly chloritic and may contain tourmaline. No sulphides or mineralization is evident. Sedimentary structures such as cross bedding, sandstone dikelets, load structures and micro faulting are common. Bedding angle to core axis varies 90 to 70° .

- 35.0 - 36.9 Light green sandy siltstones with
minor dark green to black chloritic
argillite laminations.
- 36.9 - 38.3 Massive pyritic quartzite with dendritic
type pyrite identical to the previous
interval 32 - 33.3m. Pyrite content
varies 5 - 7%.
- 38.3 - 40.1 Green to white quartzite.

E.O.H.

ASSAY SHEETHOLE NO: DDB 7

Sample No:	Depth (m)	Core Recovered (m)	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
KR 6251	3-5	1.3	25	-10	15	45	280	N/A	1.84
52	5-7	1.4	25	-10	30	50	180	N/A	2.64
53	7-9	1.5	25	-10	25	30	340	N/A	2.20
54	9-11	0.8	55	-10	60	15	480	N/A	1.84
55	11-13	1.3	300	-10	20	65	175	N/A	2.24
56	13-15	0.8	15	-10	5	60	220	N/A	2.96
57	15-17	1.6	20	-10	10	15	200	N/A	2.72
58	17-20	0.5	10	-10	25	45	60	N/A	0.88
59	20-24	No analyses recieved							
KR 6260	24-25	1.0	45	10	35	25	340	2	1.80
61	25-26	0.9	15	-10	35	20	540	1	1.28
62	26-27	0.9	105	-10	45	140	50	3	1.14
63	27-28	0.9	15	-10	25	15	55	1	1.28
64	28-29	0.9	25	-10	20	25	95	2	1.36
65	29-30	0.8	40	-10	50	20	85	2	1.72
66	30-31	0.7	70	-10	40	15	210	1	1.08
67	31-32	0.4	80	10	35	30	860	2	0.90
68	32-33	0.6	0.11%	30	380	120	0.26%	3	3.32
69	33-34	1.0	110	-10	75	25	230	-1	2.36
KR 6270	34-35	1.0	90	-10	60	15	155	-1	2.84
71	35-36	0.7	50	20	55	35	480	1	3.08
72	36-37	0.75	15	10	35	25	210	-1	1.56
73	37-38	0.7	0.16%	20	400	30	600	1	2.24
74	38-39	0.7	220	10	115	25	0.16%	1	1.92
75	39-40.1	0.8	15	10	35	20	310	-1	1.32

E.O.H.

N/A Not assayed

(-) Means less than

GEOPEKO DIAMOND DRILL LOG - TASMANIA BASE

DDH No.	DDB 8
PROSPECT	BALFOUR
CO ORDINATES	9100N, 10 240E (approx)
REDUCED LEVEL	-
BEARING	227 ^o Mag
INCLINATION	-60 ^o
DEPTH	40.3m
DRILL TYPE	JACRO AQ
HOLE PROPOSED BY	R.R. LARGE, T.M. PORTER
HOLE LOGGED BY	J. STOCKLEY
DATE COMMENCED	7-12-79
DATE COMPLETED	13-12-79
SURVEY	NONE
REMARKS	

- 0 - 5m Grey, finely laminated siliceous siltstone non-magnetic, minor open quartz veins occur (0.5cm thick). Well graded laminations are 0.5cm thick, at about 80° to core axis. Phyllitic sheen to folded beds at 2.2-2.5m. Quartz slickenside at 2.8m. Quartz-pyrite (very fine grained) veins occur at approximately 4.8m (< 0.5 cm thick).
- 5 - 6.15m Fractured finely laminated siliceous sandstone beds.
- 6.15 - 7.15m Dark grey finely banded siliceous siltstone with minor pyrite-quartz veins and open quartz veins in folded zones.
- 7.15 - 11.75m Pale grey fine banded well sorted siliceous siltstone with minor narrow (0.5cm) pyrite-quartz vein. Bedding angle to core axis of 75° .
- 11.75 - 11.80m White quartz-pyrite-arsenopyrite vein.
- 11.8 - 11.95m Dark siliceous siltstone bed.
- 11.95 - 12.05m White quartz-pyrite-arsenopyrite veined zone.
- 12.05 - 16.8m Rubble zone with white quartz-pyrite-chalcopyrite veins occurring. Rock is strongly folded with a resultant phyllitic sheen. Poor core recovery ($< 50\%$) in dark grey siliceous sandstone.
- 16.8 - 17.8m Dark grey, folded well bedded siliceous siltstone.

- 17.8 - 21.5m Pale grey well sorted and bedded siliceous sandstone with narrow (< 0.5cm) quartz-pyrite-arsenopyrite veinlets occurring.
- 21.5 - 23.0m Banded grey-white siliceous siltstone with numerous quartz-pyrite-arsenopyrite veinlets.
- 23.0 - 23.8m Dark grey even grained siltstone. Folded with minor quartz pyrite veins.
- 23.8 - 25m Even grained, well sorted, laminated siliceous siltstone.
- 25 - 26.8m Pale grey, laminated, folded siltstone with narrow cross-cutting white quartz-pyrite-arsenopyrite veins and concordant pyrite bands (films).
- 26.8 - 27m Rubble zone.
- 27 - 35m Grey, well sorted and banded, folded and veined siliceous siltstone. Minor disseminated pyrite in rock.
- 35 - 40.3m Mixed horizon of dark grey, grey and pale grey laminated, intraform folded siliceous sandstone with minor quartz-pyrite veinlets.

E.O.H.

ASSAY SHEET

HOLE NO: DDB 8

Sample No:	Depth (m)	Core Recovered (m)	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
KR 6276	0-1	0.75	165	-10	5	10	75	-1	2.68
77	1-2	0.75	390	-10	20	5	135	-1	1.96
78	2-3	0.75	-5	-10	45	5	125	-1	3.00
79	3-4	0.7	20	-10	20	10	195	-1	3.36
KR 6280	4-5	0.7	45	-10	35	10	80	-1	2.24
81	5-6	0.7	100	10	960	125	150	1	2.04
82	6-8	0.76	95	20	75	15	200	-1	1.10
83	8-9	0.5	35	20	55	5	130	-1	0.60
84	9-10	0.5	10	10	50	55	300	-1	1.12
85	10-11	0.5	20	-10	10	5	145	-1	1.52
86	11-13	0.5	290	-10	200	35	90	2	1.64
87	13-15	0.5	895	-10	260	80	65	2	3.72
88	15-17	0.6	40	10	40	5	55	-1	1.90
89	17-19	0.4	25	-10	20	5	90	-1	2.72
90	19-21	1.1	85	-10	50	20	65	-1	2.08
91	21-23	1.1	70	10	105	20	175	1	1.88
92	23-25	1.9	35	-10	55	10	80	-1	3.04
93	25-27	0.4	30	-10	55	15	85	-1	2.88
94	27-29	0.4	55	-10	40	20	80	-1	1.88
95	29-31	0.3	15	-10	25	10	210	-1	2.56
96	31-33	0.3	40	-10	70	10	95	-1	1.92
97	33-34	0.5	50	-10	50	15	45	-1	1.72
98	34-35	0.5	70	10	75	15	50	-1	1.52
99	35-36	0.5	40	-10	40	10	100	-1	2.88
KR 6300	36-37	0.6	60	-10	40	15	95	-1	2.10
01	37-38	0.6	90	10	90	15	135	-1	1.52
02	38-39	0.9	20	-10	45	15	400	-1	1.56
03	39-40.3	1.1	20	-10	25	10	80	-1	1.68

E.O.H.

GEOPEKO DIAMOND DRILL LOG - TASMANIA BASE

DDH No.	DDB 9
PROSPECT	BALFOUR
CO ORDINATES	10900N 10050E
REDUCED LEVEL	-
BEARING	47° Mag
INCLINATION	60°
DEPTH	15.5m
DRILL TYPE	JACRO AQ
HOLE PROPOSED BY	R.R. LARGE. T.M. PORTER
HOLE LOGGED BY	J. STOCKLEY
DATE COMMENCED	14-12-79
DATE COMPLETED	18-12-79
SURVEY	NONE
REMARKS	HOLE TERMINATED BEFORE TARGET AS DRILLING PARALLEL TO BEDDING

- 0-1.45m No core, one pebble of weathered siltstone and several pieces of white quartz vein occur.
- 1.45-2.3m Pale grey fine grained soft banded argillaceous siltstone ("claystone") with disseminated fine grained pyrite throughout (< 1%). Bedding to core axis angle is very shallow approx. 30°.
- 2.3-10.0m Cream, soft, uniform grained argillaceous siltstone with disseminated fine grained pyrite and quartz pyrite arsenopyrite veinlets (1mm thick) occurring. Bedding to core axis angle approx. 45°. Dark spots in rock are probably chlorite flecks; white patches maybe leucoxene.
- 10-11.85m Grey fine grained soft argillaceous siltstone, bedded at 40° to core axis. Disseminated pyrite chlorite and ? leucoxene occurs.
- 11.85-15.5m White-cream to grey fine grained well-sorted soft siltstone (claystone) with quartz-chlorite (pale green) veins 1cm thick, narrow veinlets of pyrite-arsenopyrite and blebs of pyrite throughout (< 2%). Bedding to core axis angle approx. 45°. Slump structures occur;

E.O.H.

ASSAY SHEETHOLE NO: DDB 9

Sample No:	Depth (m)	Core Recov ered (m)	Sn ppm	W ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Fe %
KR 6304	0-2	0.7	-5	-10	-2	10	10	-1	1.70
05	2-3	0.7	-5	-10	-2	5	10	-1	1.52
06	3-4	0.7	-5	-10	-2	15	20	-1	1.66
07	4-5	0.7	-5	-10	2	10	35	-1	1.34
08	5-6	0.5	-5	-10	2	5	30	-1	1.50
09	6-7	0.5	-5	-10	5	10	20	-1	1.58
KR 6310	7-8	0.5	-5	-10	-2	10	30	-1	1.38
11	8-9	0.9	-5	-10	2	5	25	-1	1.34
12	9-10	0.9	-5	-10	5	15	15	-1	1.66
13	10-11	0.9	-5	-10	5	15	10	-1	1.72
14	11-12	1.0	-5	-10	5	15	10	-1	1.58
15	12-13	1.0	-5	-10	5	10	15	-1	2.14
16	13-14	1.0	-5	-10	10	10	10	-1	1.86
17	14-15.5	1.5	-5	-10	-2	10	15	-1	1.62

E.O.H.

GEOPEKO DIAMOND DRILL LOG - TASMANIA BASE

DDH No.	DDB 10
PROSPECT	BALFOUR
CO ORDINATES	10 100N 9 770E
REDUCED LEVEL	-
BEARING	227 ^o Mag
INCLINATION	55 ^o
DEPTH	39m
DRILL TYPE	JACRO AQ
HOLE PROPOSED BY	R.R. LARGE, T.M. PORTER
HOLE LOGGED BY	R.R. LARGE
DATE COMMENCED	19-12-79
DATE COMPLETED	21-12-79
SURVEY	NONE
REMARKS	

- 0 - 1.8m No core. Few pebbles of white quartzite and oxidized brown sandstone.
- 1.8 - 2.5m Oxidized brown limonitic sandstone.
- 2.5 - 5.5m White and grey shale with minor sandstone.
- 5.5 - 6.5m Spotted grey sandstones. Grey spots 2-3mm across are set in a cream matrix. The spotting resembles a contact metamorphic effect.
- 6.5 - 10.0m Brown ironstained quartzite.
- 10.0 - 15.1m Interbedded black shales with white quartzite. Bedding to long core axis is $0-10^{\circ}$. Black shale laminations are 0.3 to 1cm thick. Dark grey spotted quartzites occur over the last 2 metres.
- 15.1 - 15.8m Fine siliceous brown tuff? Light green pseudomorphs of chlorite after feldspar? are dotted through a brown aphanitic matrix. Need thin section to check this identification.
- 15.8 - 17.9 Interbedded white to grey quartzite with minor black shale. Bedding angle to long core axis is 30° .
- 17.9 - 38.7 Laminated black graphitic shale with minor grey to white quartzite. Minor disseminated pyrite occurs from 20.4 to 22.6. The pyrite is concentrated in zones parallel to bedding but does not exceed about 2%.

Minor quartz veins from 1-3mm thick occur with a frequency of 2-4 metre. Angle of bedding to long core axis varies down the hole;

18m	30°	30m	45°
20m	30°	32m	40°
22m	40°	34m	35°
24m	40°	36m	40°
26m	50°	38m	65°
28m	25°		

38.7 - 39.0m

White quartzite with minor black shale laminations.

E.O.H.

ASSAY SHEETHOLE NO: DDB 10

<u>Sample No:</u>	<u>Depth</u> (m)	<u>Core</u> <u>Recover</u> <u>-ed</u> (m)	<u>Sn</u> ppm	<u>W</u> ppm	<u>Cu</u> ppm	<u>Pb</u> ppm	<u>Zn</u> ppm	<u>Fe</u> %
KR 6318	1.8-4.0	0.8	5	210	25	55	20	1.18
19	4-6	0.7	-5	190	20	80	20	0.58
KR 6320	6-8	0.7	20	20	35	20	35	1.70
21	8-10	0.7	-5	20	40	10	35	1.76
22	10-12	0.9	-5	-10	20	15	20	1.50
23	12-13	0.7	10	-10	10	45	20	1.80
24	13-14	0.65	340	30	35	65	25	1.88
25	14-15	0.4	-5	20	15	50	35	2.22
26	15-16	0.4	40	-10	30	75	35	2.10
27	16-17	0.5	135	-10	25	40	15	1.08
28	17-18	1.0	5	-10	30	35	20	1.14
29	18-19	1.0	45	-10	25	30	45	2.40
KR 6330	19-20	1.0	40	-10	30	35	45	1.30
31	20-21	0.85	75	-10	60	30	220	2.72
32	21-22	0.85	40	-10	40	20	35	1.30
33	22-23	0.9	225	-10	65	35	40	1.50
34	23-24	0.9	15	-10	40	20	75	2.44
35	24-25	0.9	270	-10	80	25	300	1.56
36	25-26	0.9	30	20	30	40	125	1.30
37	26-27	0.9	15	-10	15	15	110	1.70
38	27-28	0.9	95	-10	45	15	145	4.00
39	28-29	0.9	30	-10	15	20	300	3.40
KR 6340	29-30	0.9	10	-10	15	15	230	3.00
41	30-31	0.9	100	10	60	15	110	1.62
KR 6342	31-32	0.9	10	-10	5	45	145	2.40

32-39m assay results yet to be received

E.O.H. 39m

051064

FIG. 2
LINE 109

LINE 109N

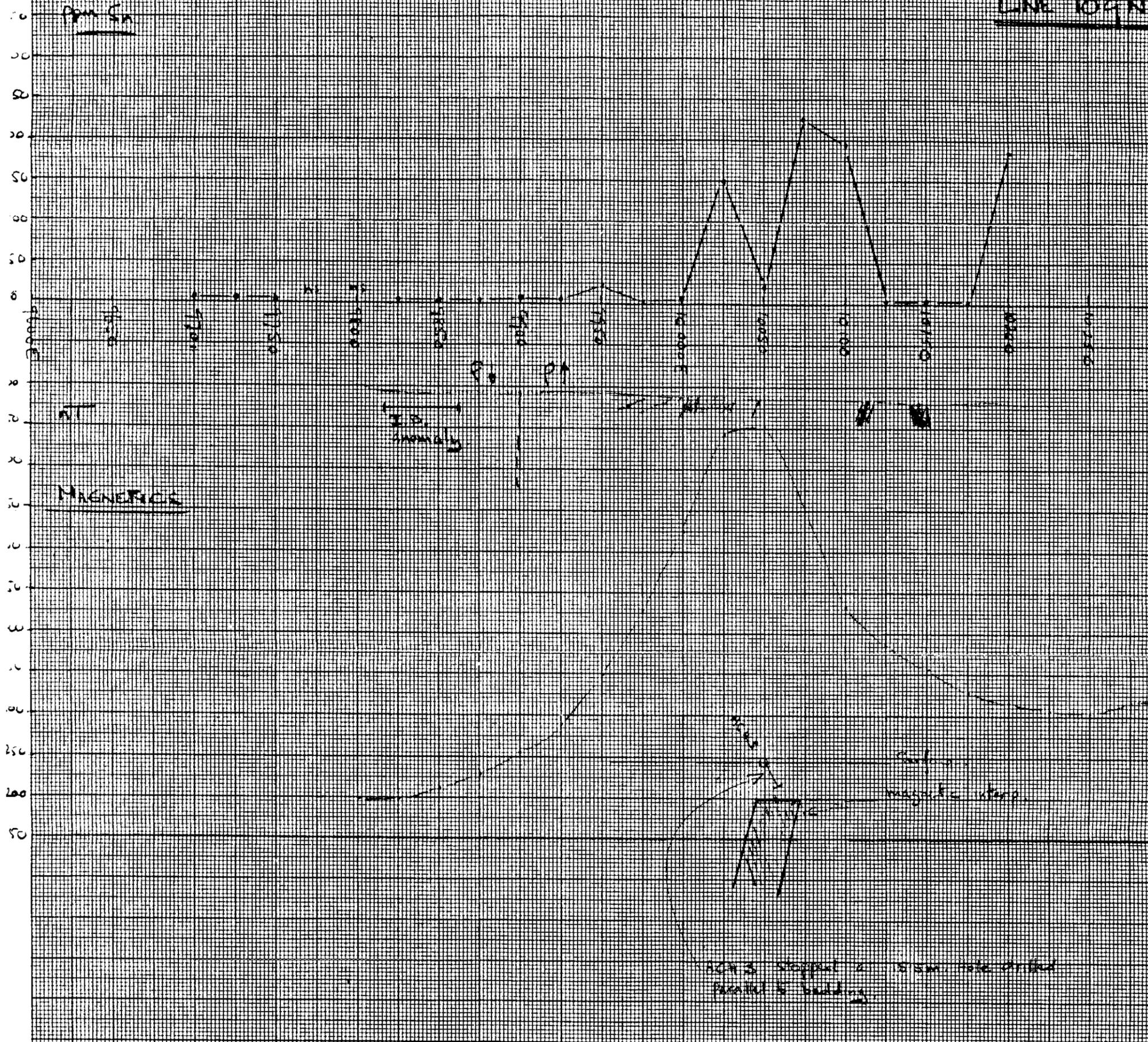
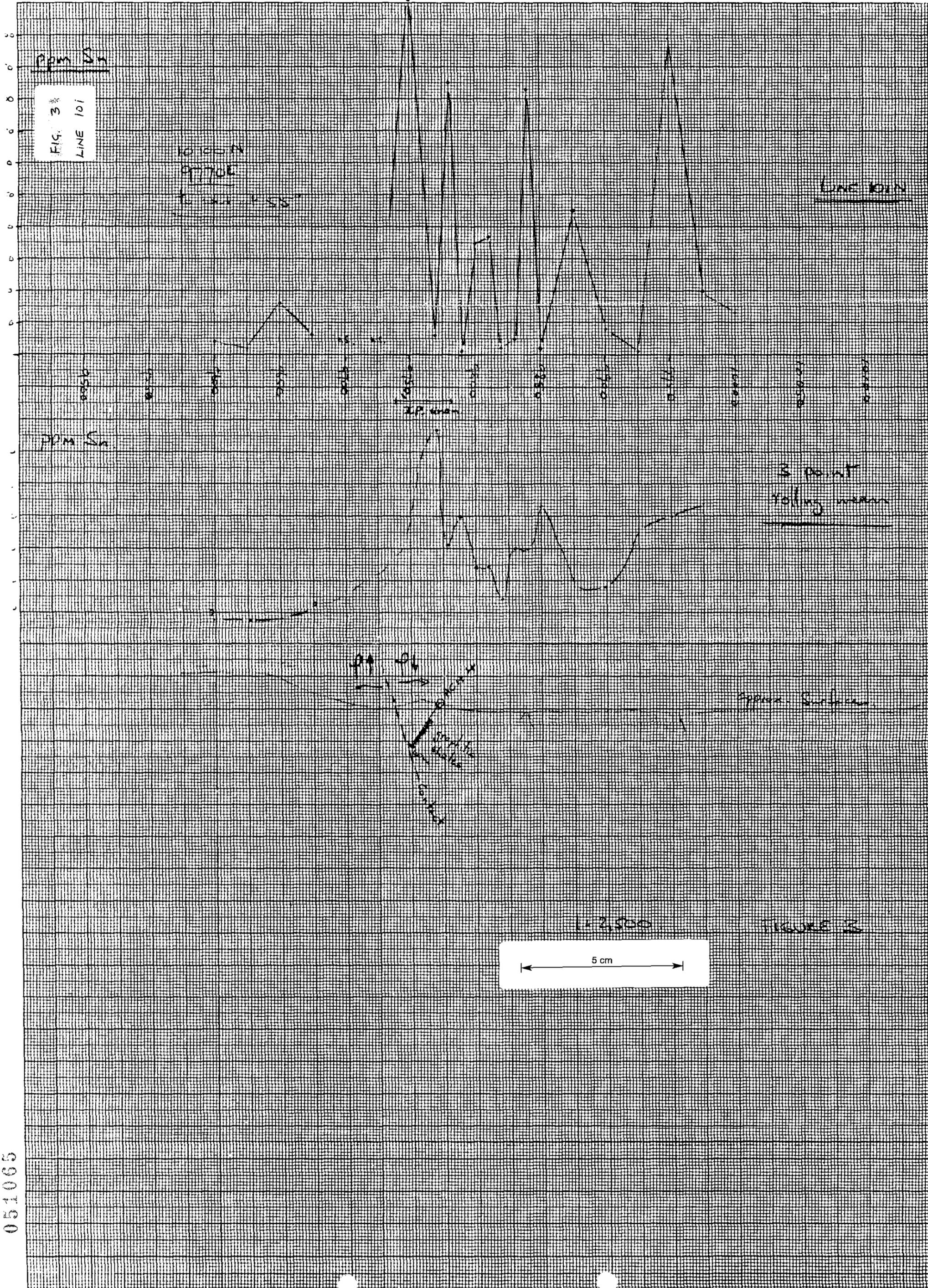


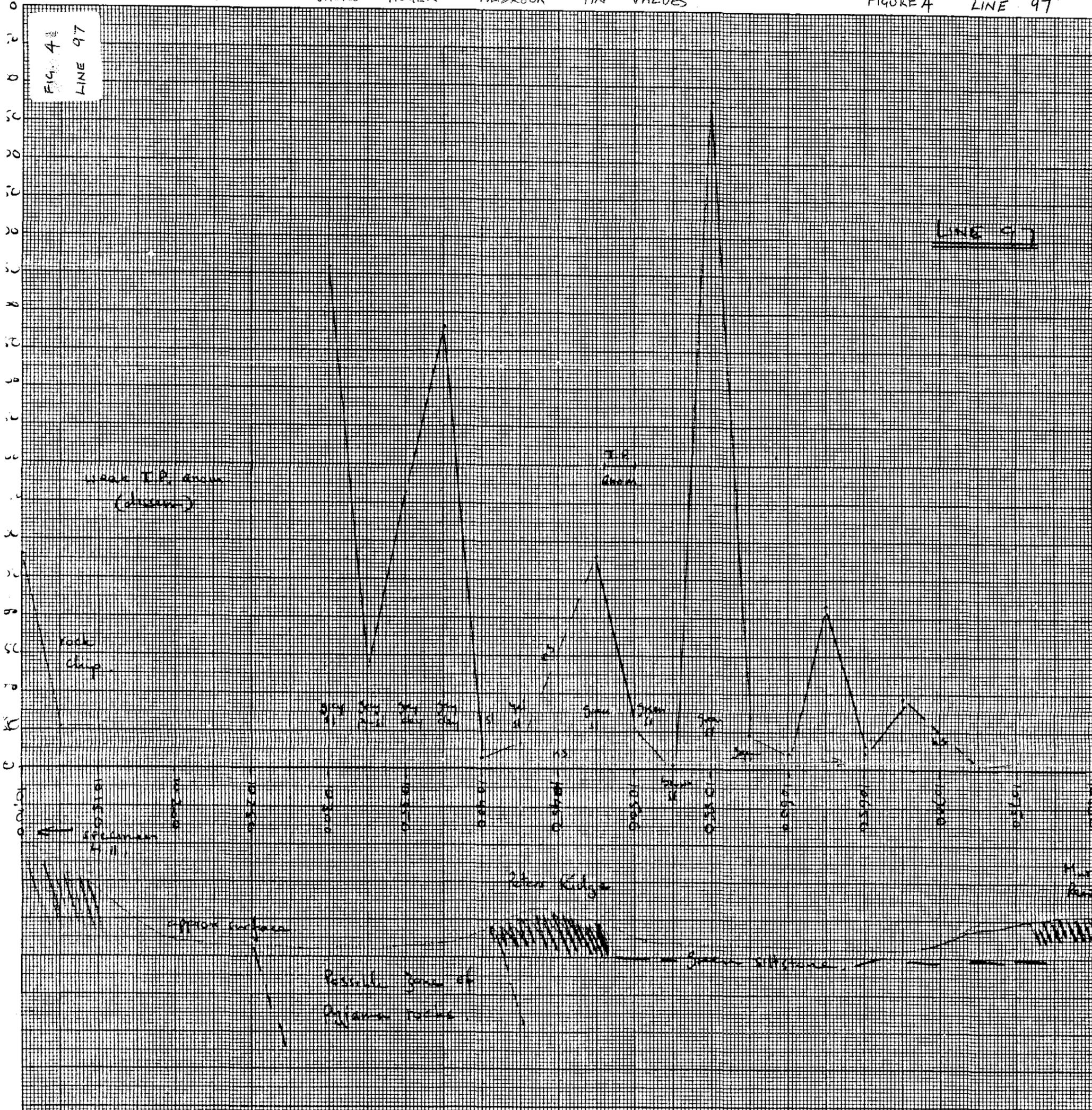
FIGURE 2



051065

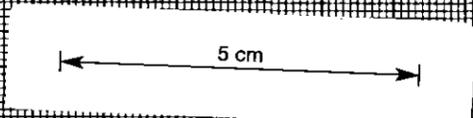
FIG. 4
LINE 97

LINE 97



1:2,500

FIGURE 4



051000



APPENDIX 3

GEOCHEMICAL SAMPLING LEDGER SHEETS

GROUND CORE - JAGERS DAM SPECIMEN HILL.
GEOCHEMICAL ROCK SAMPLING LEDGER

Page No. 1

TENEMENT S.P.L. 781

D.P.O. No. 413

AREA/PROSPECT SPECIMEN HILL SAMPLE No's. 717701 - 718 GEOLOGIST TMP. DATE

PLAN REFERENCE ANALYSED BY AMDEL.

Sample No.	Interval M (approx).	Metal Content in ppm.							Geological observations
		Pb	Zn	Cu	Ag	Bi / Au	Sr	W.	
717701	2.0-3.5	12	190	85	<1	<10 320	22	35	All samples fine laminated tremolite silt (s) and minor disseminated pyrite.
02	3.5-5.0	18	240	75	<1	<10 340	12	25	
03	5.0-6.0	12	160	30	<1	<10 320	10	15	
04	6.5-10.0	28	700	120	<1	<10 250	36	70	
05	10.0-13.5	20	320	150	1	<10 150	520	150	
06	13.5-17.5	12	90	25	<1	<10 130	26	40	
07	17.5-18.7	15	280	45	<1	<10 480	32	50	
08	18.7-20.7	45	2100	230	1	<10 540	180	170	
09	20.7-23.1	15	160	28	<1	<10 460	18	40	
717710	23.1-25.4	30	820	770	1	<10 300	780	110	
11	25.4-27.0	25	200	490	1	10 150	310	55	
12	27.0-29.0	15	260	60	<1	<10 400	50	50	
13	29.0-31.25	15	180	32	<1	<10 580	4	30	
14	31.25-33.5	15	320	60	<1	<10 720	10	25	
15	33.5-35.75	25	220	28	<1	<10 90	4	25	
16	35.75-38.0	30	210	70	<1	<10 810	28	30	
17	38.0-39.6	5	170	55	<1	<10 1000	12	65	
717718	39.6-41.4	8	520	130	<1	<10 920	26	140	

GEOCHEMICAL ROCK SAMPLING LEDGER

Page No. 16

TENEMENT SOL 781

D.P.O. No. 418

AREA/PROSPECT Specimen Hill SAMPLE No's 71756-565

GEOLOGIST NRL DATE July 49

PLAN REFERENCE

ANALYSED BY AWDEL

Sample No.	# (1) (2)	Metal Content in ppm.							Geological observations
		Pb	Zn	Cu	Ag	Sn	W.		
<p>TRAVERSE 1A - measured from east to west.</p>									
717560	10 m	<5	2	8	<10	1800	100.		
	0 to 5.5m	<5	2	8	<10	1350	100	Soft grey to grey-green tourmaline rich siltst. & some fine sandy layers. Abundant (10-15%) quartz veins up to 5cm thick & SnO ₂ . Brown altered siltstone & thin dark green tourmaline bands & minor (<5%) quartz veins.	
	5.5 to 8m								As for 0 to 5.5m
	8 to 10m								
717561	10m	<5	<2	2	<10	1050	75.		
	10 to 13	<5	2	2	<10	1100	80		As for 0 to 5.5m
	13 to 20m								Dark brown to green tourmaline siltstone - hard mainly <5% quartz veins.
717562	7m	<5	5	8	<10	2150	65		
	20 to 27m	<5	2	8	<10	1800	60		As for 13 to 20m
<p>TRAVERSE 1B - 1m to the south of 1A - from east to west.</p>									
717563	10m	<5	2	2	<10	1150	60		
	0 to 8m	<5	2	5	<10	1350	60.		Soft tourmaline rich altered siltst & 10-15% quartz veins & SnO ₂
	8 to 10m								Soft brown to cream siltstone
717564	10m	<5	2	2	<10	660	85.		
	10 to 14m	<5	2	2	<10	840	70		Light grey soft tourmaline siltst & 2% quartz veins.
	14 to 20m								Light brown to grey siltst, <5% quartz veins.
717565	7m	<5	<2	2	<10	1150	55.		
	20 to 27m	<5	<2	8	<10	1200	40		Dark brown siltst & <5% quartz veins - some dark green tourmaline rich bands.

GEOCHEMICAL ROCK SAMPLING LEDGER

TENEMENT SPL 781

D.P.O. No. 48

AREA/PROSPECT Specimen Hill SAMPLE No's. 717566-570

GEOLOGIST NRL DATE July '79

PLAN REFERENCE ANALYSED BY AMDEL

Sample No.	* (1) (2)	Metal Content in ppm.						Geological observations
		Pb	Zn	Cu	Ag	Sn	W	
TRAVERSE 2A - from east to west								
717566	10m	<5	2	8	<10	390	85	White soft sandy altered siltst. & thin dark green tourmaline rich bands. 5-10% quartz veins up to 10cm thick with muscovite selvages & SnO ₂ .
	0 to 10m	<5	2	10	<10	460	95	
717567	6m	<5	2	5	<10	580	80	Brown to dark brown siltst. & 10% quartz veins up to 10cm thick & muscovite selvages & coarse brown SnO ₂ . Pale grey to white tourmaline siltst. & irregular quartz veins
	10 to 12m	<5	2	5	<10	640	85	
	12 to 16m							
TRAVERSE 2B - 1m to the south of 2A - from east to west.								
717568	10m	<5	2	2	<10	310	70	As for 717566.
	0 to 10m	<5	2	2	<10	940	80	
717569	6m	<5	2	5	<10	520	85	As for 717567.
	10 to 16m	<5	2	8	<10	450	100	
TRAVERSE 3A - from west to east.								
717570	10m f	<5	2	2	<10	520	45	Fractured white quartz & minor quartz veins. Green tourmaline along fractures. Thin (<10cm wide) tourmaline zones.
	0 to 5m	<5	2	2	<10	390	65	
	5 to 9m							Grey to dark green tourm. siltst. Thin irreg. quartz veins & SnO ₂ (5-10%). Soft brown siltst.
	9 to 10m							

GEOCHEMICAL ROCK SAMPLING LEDGER

Page No. 18

TENEMENT SPL 781

D.P.O. No. 418

AREA/PROSPECT Specimen Hall SAMPLE No's 717740-74

GEOLOGIST NRL DATE July 1979

PLAN REFERENCE

ANALYSED BY AMDEL

Sample No.	* (1) (2)	Metal Content in ppm.						Geological observations
		Pb	Zn	Cu	Ag	Sn	W	
TRAVERSE 3A cont.								
717740	10m.	<5	2	2	<10	180	60	Grey-green soft tourmaline siltst with 2-5% quartz veins. White fractured quartz <5% quartz veins.
	10 to 18m	<5	22	2	<10	250	60	
	18 to 20m							
717741	10m.	<5	2	5	<10	360	60	Soft tourmaline siltst as above 5-10% quartz veins
	20 to 30m	<5	5	2	<10	350	85	
717745	10m.	<5	22	2	<10	700	55	Pale green to khaki tourmaline siltst. Soft mainly thin, laminated. Thin irregular quartz veins (<5%).
	30 to 40m	<5	22	2	<10	580	55	
717746	10m.	<5	22	2	<10	230	30	As for 30 to 40m. White fracture quartz Sandy becciated quartz.
	40 to 41m	5	22	5	<10	220	15	
	41 to 49m							
	49 to 50m							
717747	10m.	<5	22	2	<10	330	50	As for 30 to 40m
	50 to 60m	<5	22	2	<10			
717748	10m	<5	22	2	<10	880	60	As for 30 to 40m
	60 to 70m	<5	22	2	<10			
TRAVERSE 3B - 1m south of 3A - from west to east.								
717742	10m.	<5	2	10	<10	310	35	As for 717570
	0 to 10m	<5	2	8	<10	250	35	
717743	10m	<5	5	12	<10	230	70	As for 717740
	10 to 20m	<5	22	2	<10	200	65	
717744	10m	<5	22	2	<10	360	75	As for 717741
	20 to 30m	<5	22	2	<10	320	65	

GEOCHEMICAL ROCK SAMPLING LEDGER

TENEMENT SPL 781

D.P.O. No. 418

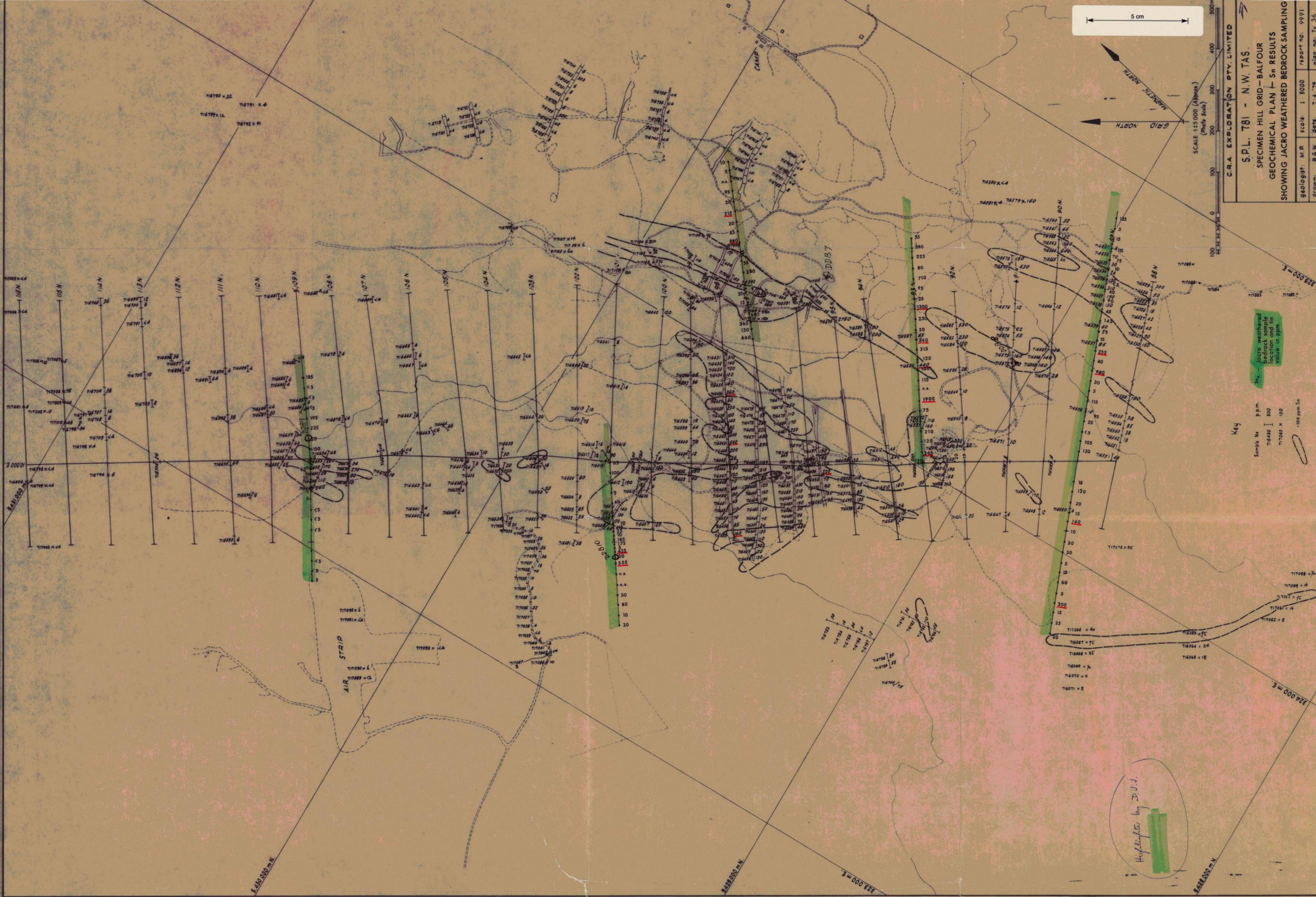
AREA/PROSPECT Specimen Hill SAMPLE No's 717149-750

GEOLOGIST NRL DATE July 79

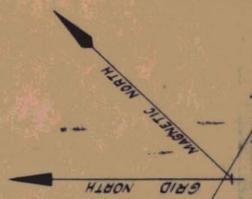
PLAN REFERENCE 717133-136

ANALYSED BY AMDEL

Sample No.	* (1) (2)	Metal Content in ppm.							Geological observations
		Pb	Zn	Cu	Ag	Sn	W		
TRAVERSE 3B (cont)									
717144	10m	45	2	5	410	820	65		
	30 to 40m	45	22	5	410	960	60		As for 717145.
717150	10m	45	22	2	410	230	25		
	40 to 50m	45	22	5	410	220	25		As for 717146.
717133	10m	45	22	5	410	800	35		
	50 to 60m	45	22	5	410	380	40		As for 717147.
717134	10m	45	22	2	410	620	90		
	60 to 70m	45	22	2	410	620	90		As for 717148.
TRAVERSE 4A									
717135	10m	45	22	5	410	660	45		
	0 to 2m	45	2	2	410	700	40		thinly laminated irregular bedded grey-green tourmaline rich siltst. Very thin irregular quartz veins. Massive white quartz with a few 1-2cm wide tin bearing veins. In the middle is a crush zone of angular quartz fragments + tourmaline siltst. Zone rich in visible tin. Soft finely laminated tourmaline siltst (grey-green). No quartz veins.
	2 to 5.5m								
5.5 to 10m									
TRAVERSE 4B									
717136	10m	45	2	8	410	1150	35		
	0 to 10m	45	22	5	410	1150	45		As for 717135.



5 cm



SCALE 1:25,000 (Approx)
(Photo Aerial)

C.R.A. EXPLORATION PTY. LIMITED
 S.P.L. 781 - N.W. TAS.
 SPECIMEN HILL GRID - BALFOUR
 GEOCHEMICAL PLAN - Sn RESULTS
 SHOWING JACRO WEATHERED BEDROCK SAMPLING

Geologist: M.P. scale: 1:5000 report no: 9991
 drawm: R.G.W. date: 7.4.79 plan no: IV. 36

Key

Sample No. p.p.m.
 716420 | 200
 717000 x 100
 100 ppm Sn

Sn - Jacro weathered bedrock sample location and tin value in ppm.

Highlander by D.J.J.

