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ORIGINAL HATFIELD COPY, EL 15/73
(DUPLICATE MACKINTOSH COPY, EL 2/70)

81-1579.

MICROFILMED

of Mr. A.O.	C.G.	E.O.	D.S.M.E.
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25-8-81

ANNUAL REPORT
EXPLORATION LICENCES 15/73 AND 2/70
HATFIELD AND MACKINTOSH WEST
TASMANIA
For 12 months ending June 1, 1981

OPEN FILE

J.R. Sise,
Project Geologist, Tasmania
June 30, 1981

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948003

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SUMMARY

This report details exploration conducted over the adjoining Hatfield and Mackintosh West Licences, which enclose the Que River Mineral Leases, during the period June 2, 1980, to June 1, 1981. With the consent of the Director of Mines reporting for the two licence areas has been combined as the boundary between the two virtually bisects a single project area.

The exploration programme during the 1980-81 field season consisted of gridding, detailed mapping, soil geochemistry and I.P. geophysics centred on a belt of prospective stratigraphy situated to the west and north-west of the Que River mine area.

In the Hatfield Licence, an I.P. anomaly over a button grass swamp centred on 8000N, 4200E will be re-sampled geochemically using a bombardier-mounted auger. The previously completed hand auger programme is not now considered to have adequately sampled bed-rock.

A coincident soil-geochemical and I.P. anomaly was delineated towards the north of the Mackintosh West Licence between lines 9700N and 10600N. Initial follow-up of this anomaly will be conducted by extending the grid and 50 metre dipole-dipole I.P.

INTRODUCTION

The Hatfield River Exploration Licence 15/73 covers an area of 65 sq. km and was pegged on May 5, 1973 by Cominco Exploration Pty.Ltd. The E.L. was transferred from Cominco to Abminco N.L. early in 1978. The name Abminco N.L. was changed to Cleveland Tin Limited in early 1979 and then to Aberfoyle Exploration Pty.Ltd. in mid-1979. Work is managed by Aberfoyle Exploration Pty.Ltd.

Licence expiry date is June 25, 1981 and the licence may be renewed at six monthly intervals. E.L. 15/73 is partly over private land owned by Associated Forest Holdings Pty.Ltd. who also have a timber concession covering the entire licence area.

Exploration Licence 2/70 Mackintosh River covers an area of 232 sq. km and was granted to Aberfoyle Tin N.L. in January 1970. The licence is now defined in two parts, the western being to the east of the Murchison Highway, the eastern to the immediate north-west of the Cradle Mountain-Lake St. Clair National Park. The E.L. was transferred from Aberfoyle to Abminco N.L. in early 1978. The name Abminco N.L. was changed to Cleveland Tin Limited in early 1979. Work is managed by Aberfoyle Exploration Pty.Ltd. The licence is subject of a joint venture between Aberfoyle Limited and Paringa Mining & Exploration Co. Ltd. Current equities are Paringa 10%, and Aberfoyle Limited 90%. The licence expires on June 30, 1981. It may be renewed at six monthly intervals.

In August 1979 the part of E.L. 2/70 described as Mackintosh East became managed by Geopeko - a division of Peko-Wallsend Operations Ltd. under a joint venture agreement. Geopeko report independently on E.L. E/70 Mackintosh East.

During the 1980-81 summer field season detailed follow-up was completed over a belt of prospective stratigraphy extending from immediately west of the Que River Mineral Leases in the Hatfield Licence to the north-eastern part of the Mackintosh West Licence where the volcanic succession is thought to plunge beneath the Que River Slates in a closing anticlinal structure.

The exploration programme involved gridding, detailed mapping, C-horizon soil geochemistry and a 100 metre dipole-dipole I.P. geophysical survey. Each one of these facets is detailed as follows:-

GRIDDING

Dense rain forest in the licence areas necessitates the use of cut lines for access and routine exploration. Gridding along cut lines at 50 metre intervals has been an on-going programme since the initial ground E.M. evaluation of anomaly 8. (Now the Que River Mine).

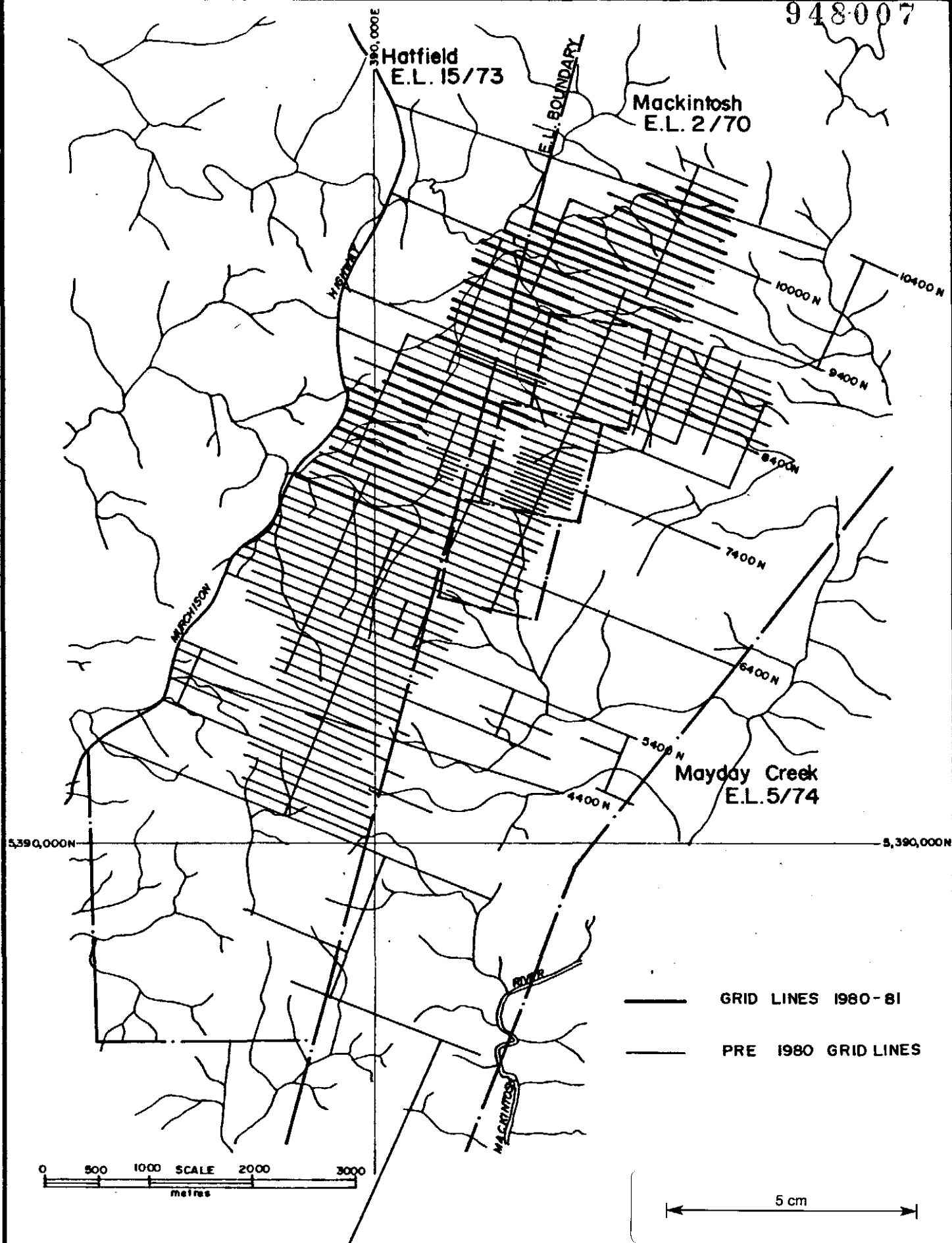
During the past year chain and compass survey with clinometer control for slope corrections was used to extend earlier gridding and fill-in between existing lines to establish a 100 metre spaced coverage over the area involved in the 1980-1981 season follow-up. A total of 32,100 metres of gridding was accomplished; details are given below and summarised on Plate Mac 63, in text.

<u>Northings</u>	<u>Eastings</u>	<u>Length (metres)</u>
6500N	3000E - 4500E	1500
6700N	3100E - 4500E	1400
6900N	3200E - 4500E	1300
7000N	3500E - 3900E	400
7100N	3200E - 3950E	750
7200N	3500E - 3950E	450
7300N	3200E - 4000E	800
7500N	3200E - 4000E	800
7600N	3700E - 4000E	300
7700N	3400E - 4000E	600
7800N	3700E - 4900E	1200
7900N	3500E - 4900E	1400
8100N	3600E - 4900E	1300
8200N	4000E - 4900E	900
8300N	3700E - 4900E	1200
8500N	3800E - 4900E	1100
8600N	3800E - 4900E	1100
8700N	3800E - 4900E	1100
8800N	4300E - 4900E	600
8900N	3800E - 4900E	1100
9000N	4300E - 4900E	600
9100N	3800E - 4900E	1100
9300N	3800E - 6000E	2200
9500N	3900E - 6000E	2100
9600N	4500E - 5300E	800
9700N	4200E - 5900E	1700
9900N	4600E - 6000E	1400
10100N	4900E - 6100E	1200
10300N	5100E - 6100E	1000
10500N	5400E - 6100E	700
TOTAL		32100 metres
		=====

This is distributed as follows:-

Hatfield	15500 metres
Mackintosh West	16600 metres

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GEOLOGY

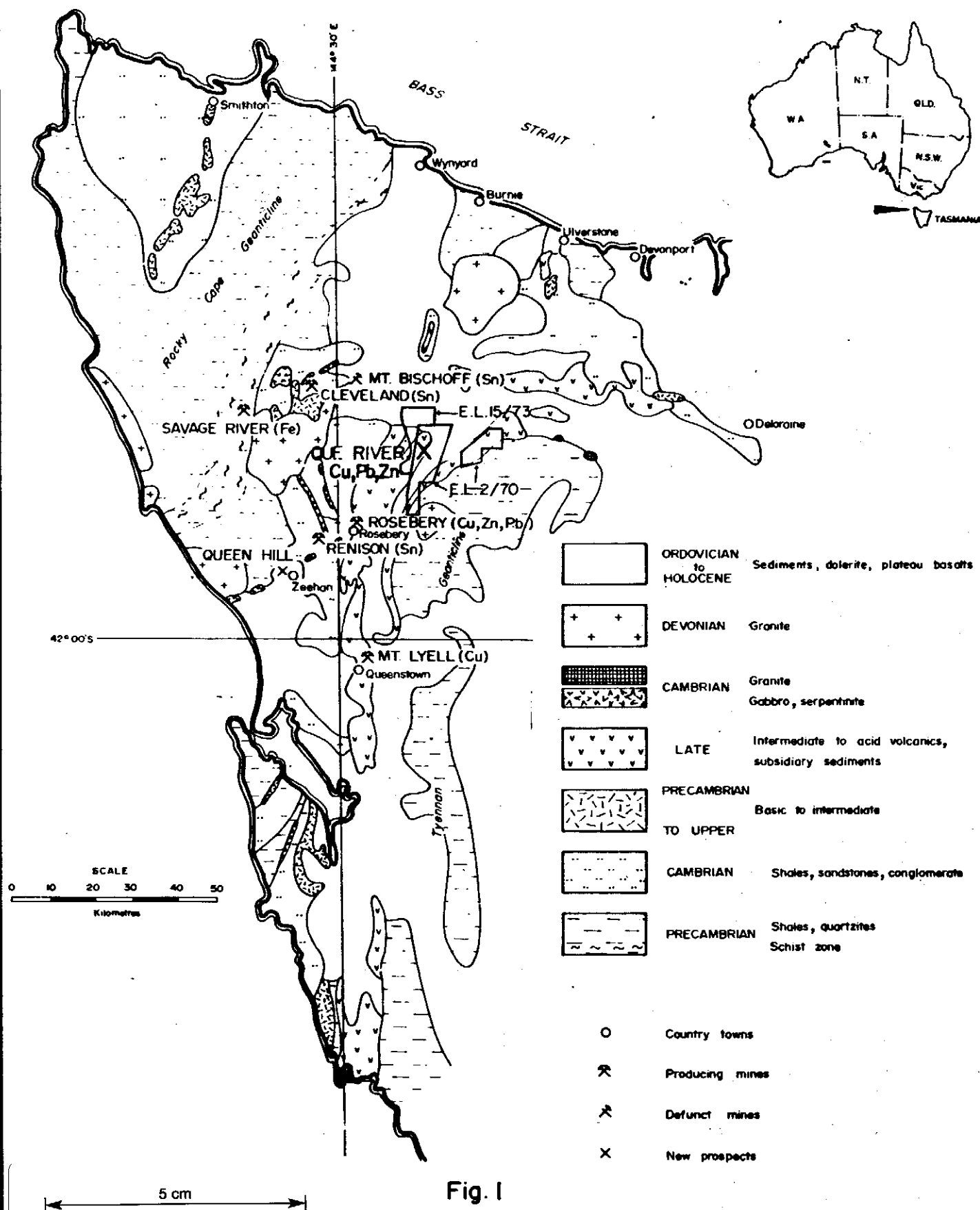
The regional geological setting of the Mackintosh West and Hatfield Licences (Plate DT80, in text) and the detailed geology within the licence areas has been described in detail in earlier reports (Young, 1977, 1978 a,b). The aim of the 1980-1981 work was to extend this knowledge into an area where earlier reconnaissance mapping had shown prospective volcanics to exist.

Mapping took place along the new grid lines (Plate Mac 63, in text) with exposures being traced along strike where access would permit. Outcrop geology was plotted at 1:2,500 scale (Plate Nos. QR81 a, b, h, j and Appendix A), and compiled at 1:10,000 scale and as a 1:50,000 scale summary map (Plate Mac 53, in text), the latter depicting the current state of regional geological knowledge at the completion of the 1980-1981 field work.

The following is an edited account of the geology by student geologist, Stephenson (1981):-

The rock types within the map area consist mainly of andesitic and dacitic volcanics. They occur as lavas, often containing sub-angular vesicular fragments in the case of the andesites, tuffs and various pyroclastics including reworked pyroclastics. Vesicular andesites are very common and often include quartz and/or carbonate infillings. Vesicular dacites are absent from the mine area and were not identified with the area mapped. Dacitic lavas tend to be too highly weathered to exhibit textures, but occasionally flow banding is seen.

The tuffs and pyroclastics vary from uniform fine grained bedded tuffs to pyroclastics containing what appear to be rounded boulder-size fragments in a tuff agglomerate matrix (e.g. along the power line road cut at 7900N). Lithic pyroclastics are quite common, a good example being on the power line road cut at 8200N. Andesitic tuffs, characterised by phenocrysts of feldspar up to 2-3 mm diameter, were also noted.



Aberfoyle Exploration Pty Ltd

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Traced: A.E.R.

Checked:

Revised by Date

GEOLOGY

OF

NORTH WEST TASMANIA

(after Williams 1976, Gee 1977)

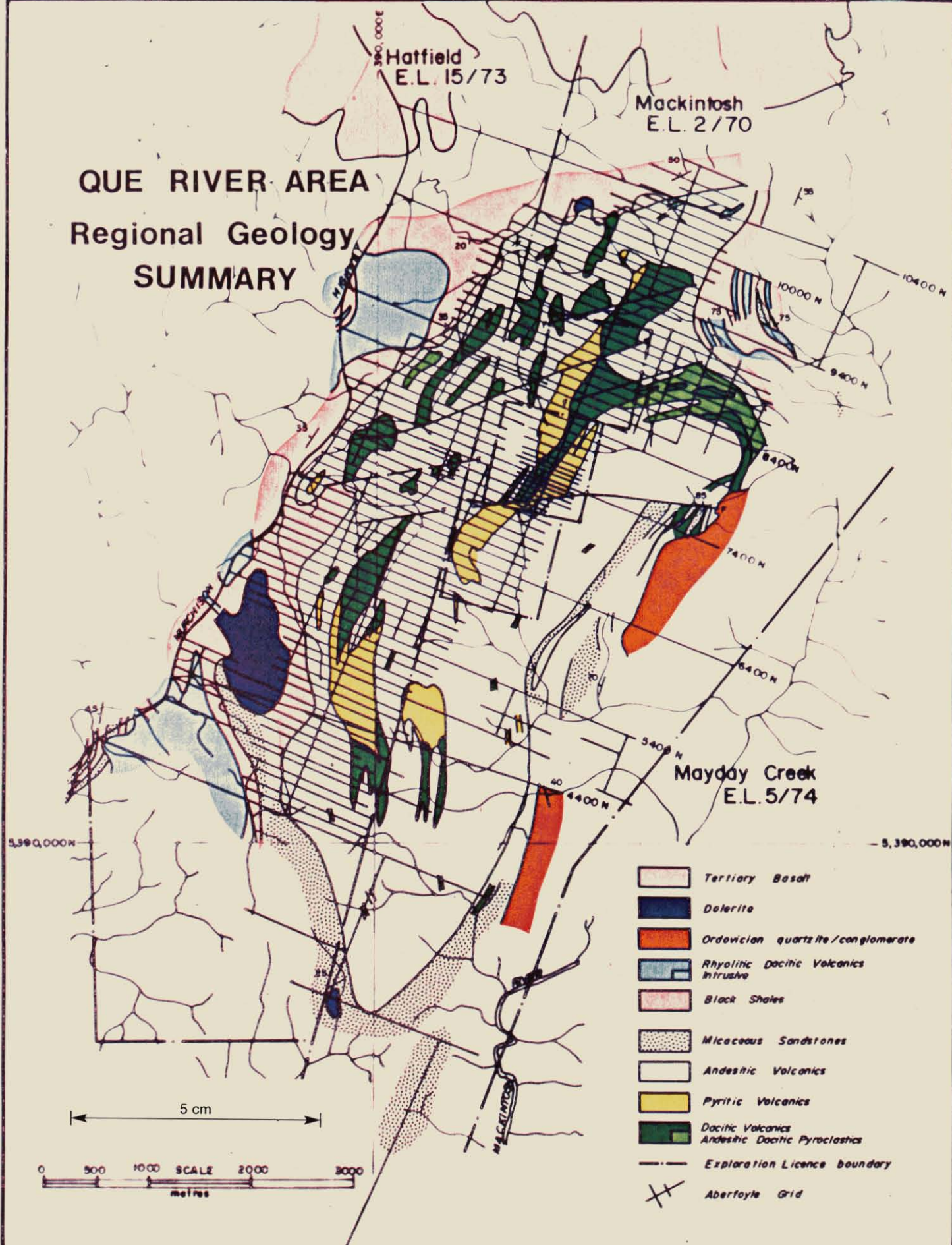
Location code:

Date: June 1978

Scale: 1:1,250,000 approx.

Plate No: DT 80

QUE RIVER AREA Regional Geology SUMMARY



A Aberfoyle Exploration Pty Ltd

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Traced JLR

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Revised by Date

**NORTH WEST TASMANIA
Mackintosh West / Hatfield Licence Areas**

Location code

Date: May, 1981

Scale 1:50,000

Plate No Mac. 53

Other rock types observed were cherts and black shales. The shales often exhibit a slaty cleavage as seen on the Murchinson Highway road cut on 6500N. The shales border the volcanics to the west and appear to do so in the north and north-east, although gridding did not extend to these areas. Shale also occurs as thin bands within the volcanic sequence indicating periods of quiescence. The cherts occur as beds, veins and fragments within both andesites and dacites and in association with black shales. Their precise mode of origin is uncertain.

The main structural feature in the area mapped is a north-east trending belt of volcanics which plunges under a cover of black shales in the north-east of the Mackintosh West Licence to form a broad closing anticlinal feature.

The andesite is the most voluminous and boldly outcropping rock type, often weathering to form silicified "tors" up to 6 metres in diameter. The dacites, which occur largely within the andesitic body, tend to outcrop much less strongly and weather more severely. The dacitic lavas are generally massive with occasional green phenocrysts and patches of green illite-hydromuscovite.

The only mineralisation noted was as disseminations and minor pyrite veining with trace base metal sulphides in some of the andesites. Quartz-carbonate veining appears to bear a close relationship to this type of mineralisation.

SOIL GEOCHEMISTRY

Soil sampling along all cut grid lines is a prime technique in the exploration of the Licences. The grid summary plan (Plate Mac 63, in text) illustrates the total coverage, and the area covered during the past year by grid lines and hence by soil geochemistry. All soil samples were collected by hand auger at 10 metre intervals. Where possible, the C-horizon was taken. Sample analysis was for Cu, Pb, Zn by atomic absorption spectroscopy of the minus 80 mesh fraction. All results have been plotted at 1:2500 scale as separate sheets for Cu, Pb, Zn (Plates Mac 45, 46, and 47 : Sheets (a), (b), (h), (j).) and contoured using levels determined by inspection as follows:-

Copper	100 ppm	200 ppm		
Lead	250 ppm	500 ppm	1000 ppm	2000 ppm
Zinc	200 ppm	400 ppm		

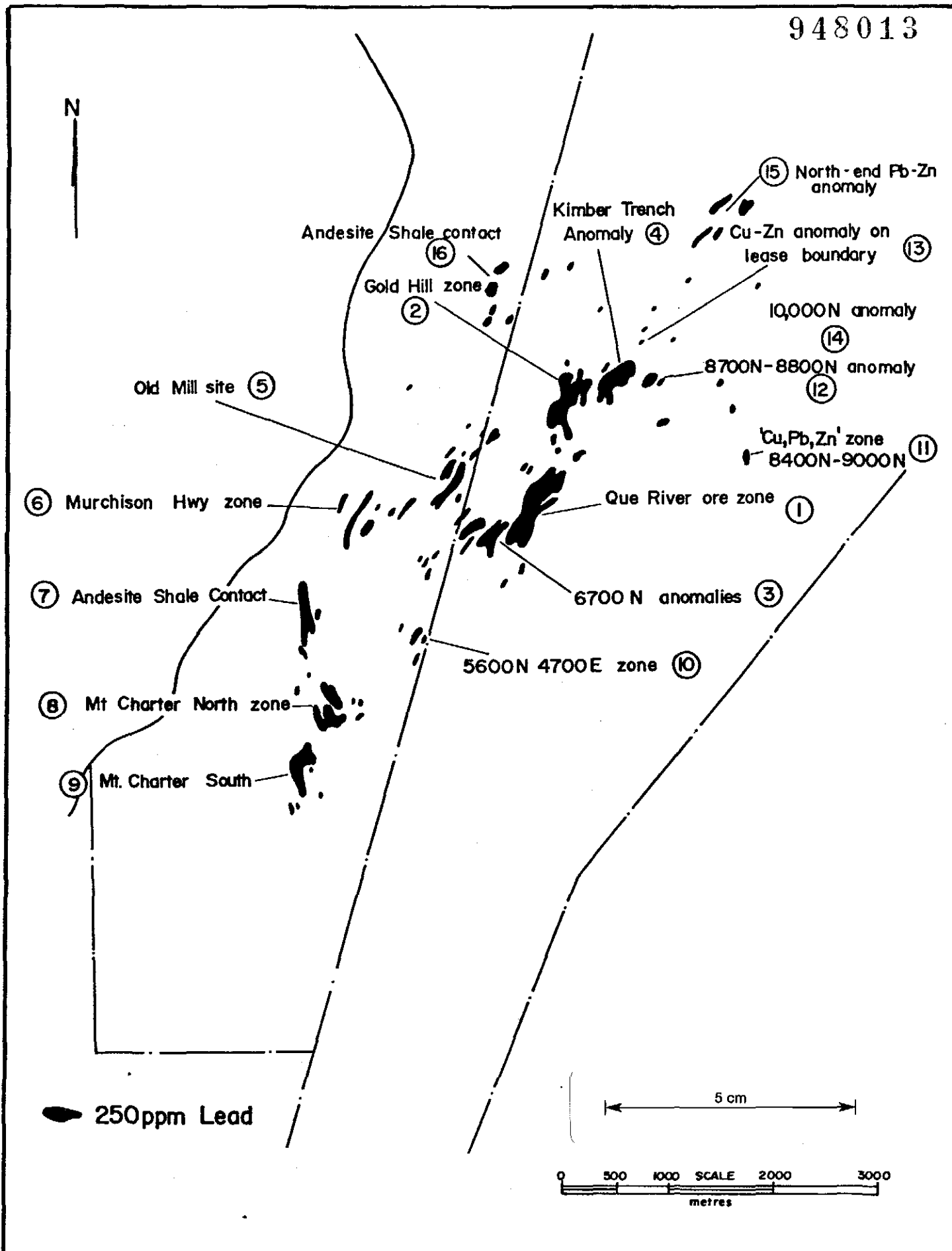
Computer analysis of all C-horizon soil geochemical data (Young, 1979) derived statistical threshold levels (mean $\pm 2 \times$ SD) that are higher than those based on a comparison of visual estimates correlated with the known distribution of metal in the bedrock. However, the contour levels indicated above have historically been shown to be valid for anomaly delineation. The relative immobility, and hence discrimination of lead with respect to zinc and copper is well illustrated over the Que River ore zone. A summary plan (Plate QR100, in text) showing lead geochemistry outlined by the 250 ppm contour illustrates the anomalies detected so far in the licence area. Anomaly numbers 1 to 14 have been described in detail in earlier reports (Young 1977, 1978 a,b). The past years work has confirmed known anomalies located on the earlier reconnaissance grid and located two new anomalous zones.

1) Anomaly No.15 North-end Pb-Zn anomaly (Mackintosh West)

This is a broad zone of anomalous lead and zinc with values up to 1350 ppm Pb and 950 ppm Zn and coincident I.P. (see following section). The zone is 700 metres long and open to the north-east. The underlying geology is mapped as vesicular andesite with rare occurrence of altered dacite, some with hydromuscovite shreds.

2) Anomaly No.16 Andesite-Shale Contact (Hatfield)

This anomaly is similar to Anomalies 6 and 7 previously described (Young, 1977). Two small areas with lead values to 710 ppm and 400 ppm Pb occur over andesite adjacent to the shale contact. There is no supporting Zn and Cu (or I.P.). Drilling of similar occurrences, HC1 and HC2 (Young, 1977) intersected broken pyrite black shales and then intercalated shales and carbonated andesitic volcanics with inclusions of chert. Disseminated pyrite and trace base metals were recorded.



Aberfoyle Exploration Pty. Ltd.

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Revised by: Date:

NORTH WEST TASMANIA
MACKINTOSH / HATFIELD E.L. AREAS
GEOCHEMICAL SUMMARY PLAN

Location code:

Date: July, 1981

Scale: 1:50,000

Plate No: QR 100

Several other isolated single value anomalies were located on grid lines north-east of the mineral leases and south of anomaly 15. Historically these isolated high values found in the andesites have been due to quartz-carbonate veining, possibly fault controlled, carrying minor pyrite and trace amounts of galena and sphalerite. Further work on these anomalies will be considered once follow-up has been completed ^tas the more prospective anomaly 15.

GEOPHYSICS

A summary plan, Plate Mac 62 in text, outlines the total area now covered by I.P. geophysics. For details of I.P. traverses completed prior to the 1980-1981 field season refer to Young (1977, 1978 a, b).

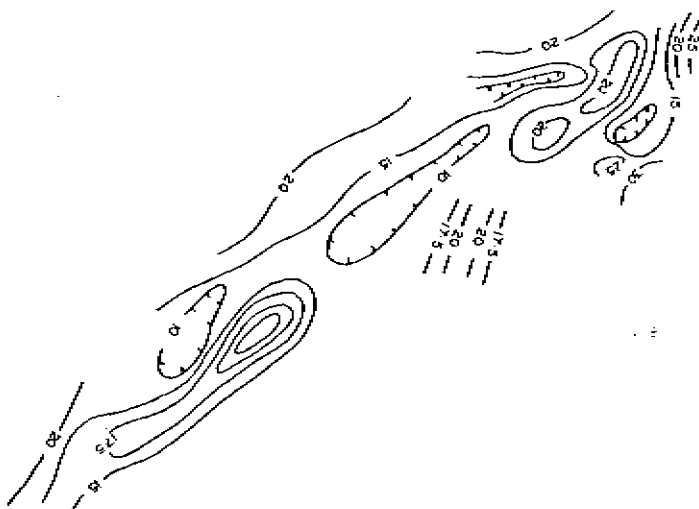
In the past year, 15,700 metres of 100 metre dipole-dipole I.P. on lines 200 metres apart was completed as follows:-

<u>N</u>	<u>E</u>	<u>No. of set ups</u>
10,600	5600 - 6000	1
10,400	5300 - 6100	2
10,200	5100 - 6000	2.25
10,000	4900 - 5900	2.5
9,800	4400 - 5900	3.25
9,600	4100 - 5900	4.5
9,400	3950 - 4750	1
9,000	3900 - 5900	5
8,800	3900 - 4700	2
8,600	3900 - 4700	2
8,200	3800 - 4600	2
8,000	3600 - 4600	2.5
7,800	3500 - 4500	2.5
7,600	3400 - 4200	2
7,200	3200 - 4100	2.25
6,800	3200 - 3600	1

This is distributed as follows:-

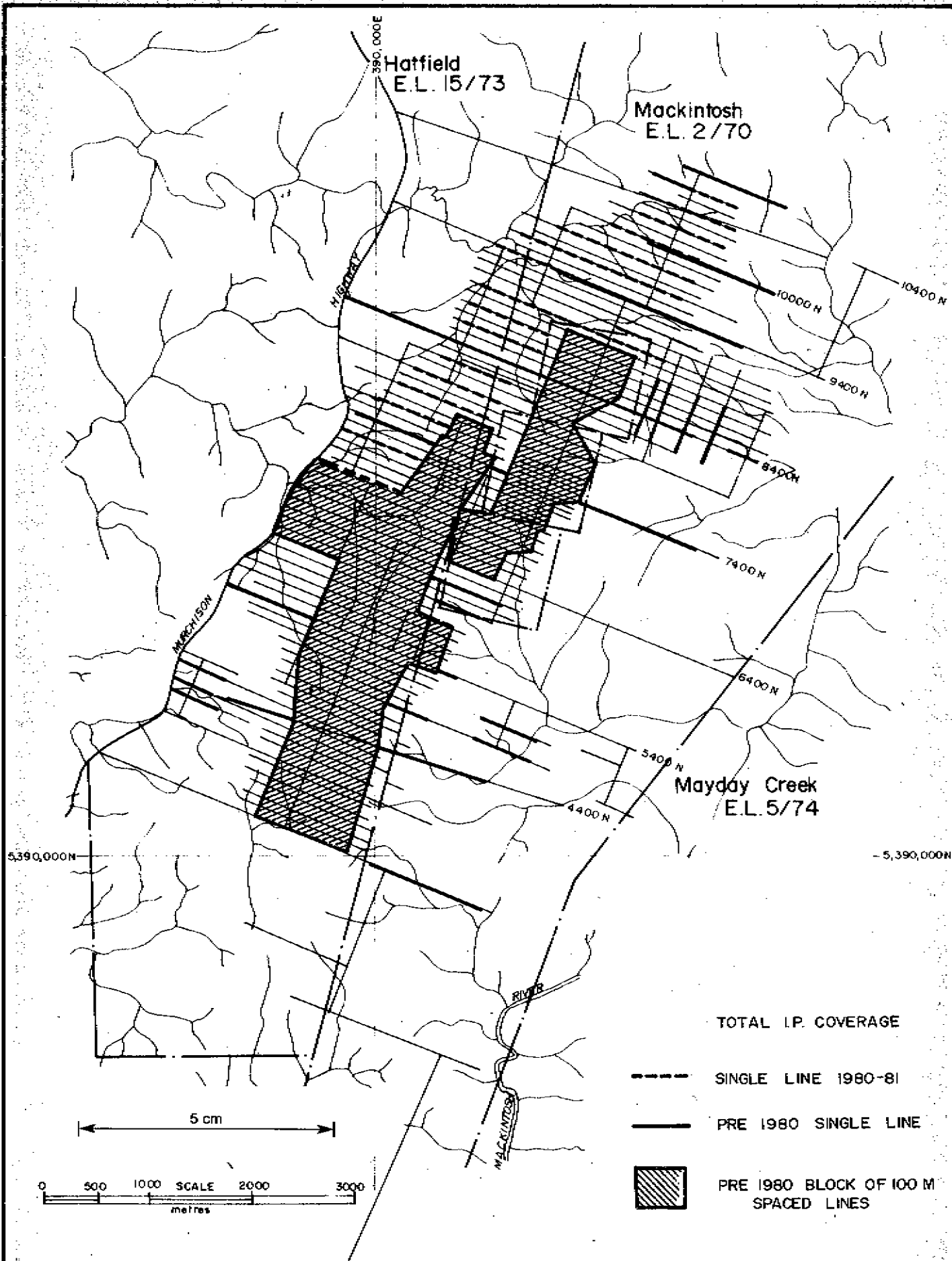
Hatfield	6300 metres
Mackintosh West	9400 metres

I.P. profiles are appended (B).



I.P. Chargeability Contours 1980-81
(contour interval 2.5 milliseconds)

Map of the Mackintosh area showing land parcels, roads, and elevation contours. The map includes labels for Hatfield E.L. 15/73, Mackintosh E.L. 2/70, Mayday Creek E.L. 5/74, and the Mackintosh River. A legend indicates 'TOTAL I.P. COVERAGE', 'SINGLE LINE 1980-81', 'PRE 1980 SINGLE LINE', and 'PRE 1980 BLOCK OF 100 M SPACED LINES'. A scale bar shows 0 to 3000 metres, and a 5 cm scale is also indicated.



Aberfoyle Exploration Pty Ltd

Drawn. J R. S

Traced: J L R.

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Revised by: _____ Date: _____

NORTH WEST TASMANIA
Mackintosh West / Hatfield Licence Areas
I. P. COVERAGE 1980-81

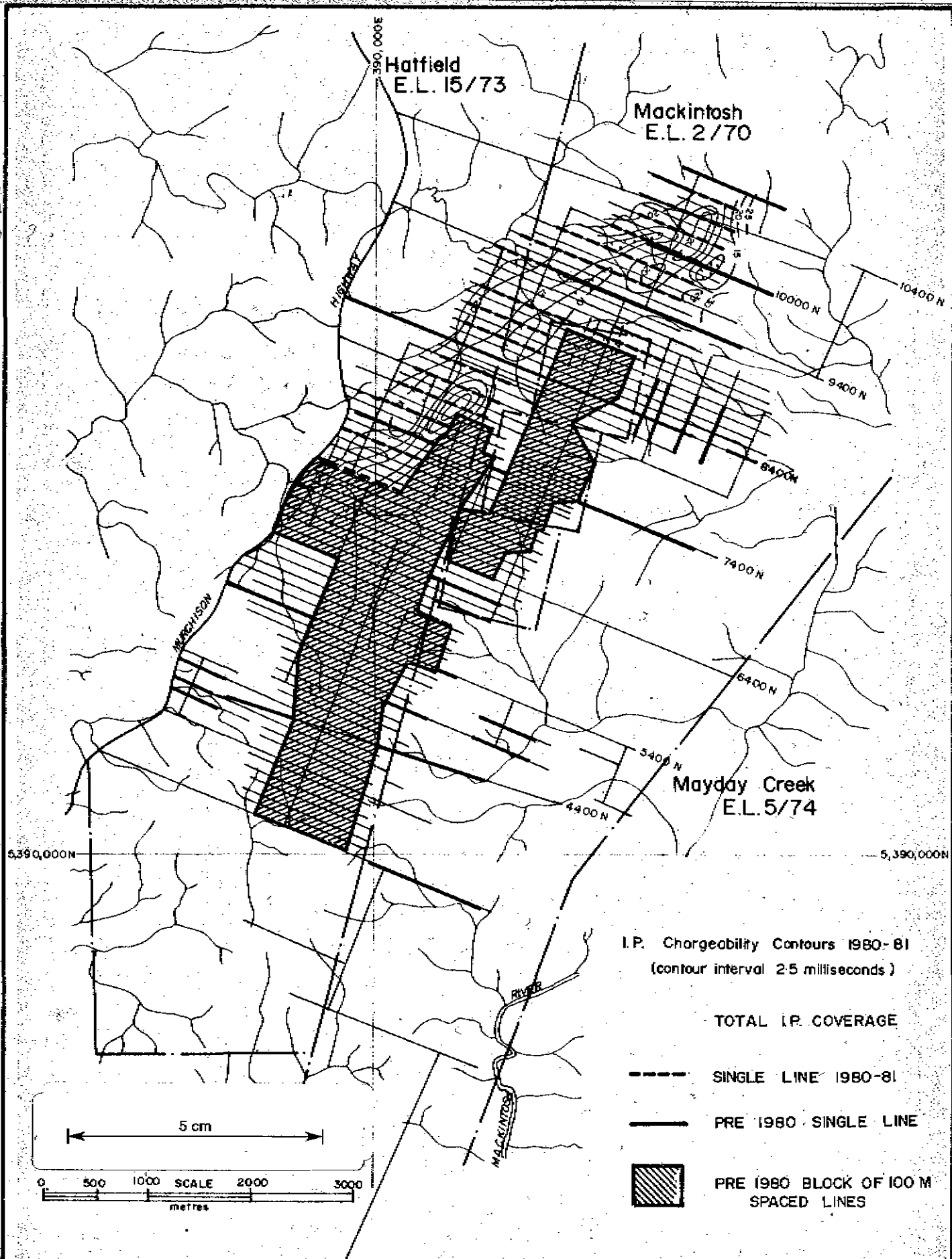
Location code:

Date: May, 1981

Scale. 1:50,000

Plate No. Mac 62

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Aberfoyle Exploration Pty Ltd

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Traced: J.L.R.

Checked:

Revised by: Date:

NORTH WEST TASMANIA
Mackintosh West / Hatfield Licence Areas
I. P. COVERAGE 1980-81

Location code:

Date: May, 1981

Scale: 1:50,000

Plate No Mac 62

A summary plan, Plate Mac 63A, in text, outlines the chargeability contours of the past season's survey. Two clearly defined anomalous zones are defined and require immediate follow-up:

- 1) An anomaly centred on line 8000N at 4200E, in the Hatfield Licence, close to the boundary between the two licences. This anomaly is located over a button grass swamp in an area where extensions along strike of known dacitic volcanics are thought to exist. The I.P. anomaly is not due to effects related to the swamp.

A single point anomaly of 400 ppm Pb is recorded in the I.P. anomalous zone, but overall the geochemistry is very low, possibly due to the inability of the hand auger to effectively penetrate the swamp. Follow-up with a bombardier-mounted power auger is planned to re-sample the area.

- 2) This anomaly is located, in the Mackintosh West Licence, 3 km north-east of the Que River Mine in an area where the volcanic stratigraphy plunges northwards under the Que River Slates. The I.P. has defined an anomalous zone extending from line 9700N to 10600N with coincident Pb and Zn geochemistry. On line 10600N at 6000E the edge of a further chargeability high has been detected.

Follow-up work is clearly warranted in this region and will commence with grid extensions and 50 metre spaced dipole I.P., with a view to defining the best target for diamond drilling.

CONCLUSIONS

Geological mapping, soil sampling and I.P. have been the prime techniques in the exploration of the Mackintosh West and Hatfield Licence areas since the initial ground E.M. evaluation of anomaly 8 (Que River).

During the 1980-1981 field season this procedure was applied to a belt of prospective stratigraphy situated to the west and north-west of the Que River Mine area. Two anomalous areas have been defined by this work, one within the Hatfield Licence area is an I.P. target over an area of poor geochemical response possibly due to a swamp, the second within the Mackintosh West Licence area is a coincident I.P. and soil geochemical anomaly situated between previous reconnaissance grid lines and consequently missed by the earlier work.

WORK PLANNED

- Re-sampling of the button grass swamp anomaly using a power auger.
- Grid extensions followed by detailed I.P. and fill-in soil sampling over the North-end anomaly.
- I.P. over lines 7000N and 9200N.

EXPENDITURE

HATFIELD EL 15/73

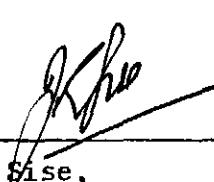
Expenditure for the twelve months from July 1, 1980 to June 29, 1981

	\$
Geology	4,347
Survey	3,629
Geophysics	12,369
Geochemistry	14,679
Access	1,705
Tenure	927
Sundries	359
Overheads @ 15%	5,702
	<u>\$43,717</u>
	=====

REFERENCES

- Stephenson, P.J. (1981): Summary of the geological outcrop mapping exercise conducted at Que River from 6/1/81 to 12/2/81.
- Young, C.H. (1977): Summary review of the results of exploration on Exploration Licences Mackintosh River 2/70 and Hatfield River 15/73.
- Young, C.H. (1978a): Annual Report, Exploration Licence 15/73 Hatfield, Tasmania. For 12 months ending June 1, 1978.
- Young, C.H. (1978b): Annual Report, Exploration Licence 2/70 Mackintosh, Tasmania. For 12 months ending June 1, 1978.
- Young, C.H. (1979): Annual Report, Exploration Licences 15/73 and 2/70, Hatfield and Mackintosh. For 12 months ending June 1, 1979.

SIGNED: _____


J.R. Sise,
Project Geologist - Tasmania.

ENDORSED: _____


C.H. Young,
District Manager.

APPENDIX A

Plate QR 84, Que River Prospect

Geological Legend and Colour Code

N°	NAME / COMPOSITION	CODE	OCCURRENCE	TEXTURE	ROCK COLOUR	ALTERATION TYPE	SULPHIDE CONTENT
42	ANDESITE	A	Flow and intrusive	Por, Vesic, massive-fine grained	Green	Carbonate, chlorite	Py ≤ 1% rare base metal sulphides
43	ANDESITIC PYROCLASTICS	AP	Pyroclastic	Variously idophatic, ta, some amygdaloidal fragments	Green	Carbonate, chlorite	Py ≤ 1% rare base metal sulphides
46	ANDESITIC STREAKY PYROCLASTICS	ASP	Pyroclastic	It, Ita streaky porphyritic	Pale green	Carbonate, chlorite	Py ≤ 1% rare base metal sulphides
44	ANDESITIC - DACITIC PYROCLASTICS	ADP	Pyroclastic green andesitic fragments in an otherwise dacitic pyroclastic	It, Ita	Grey, dark green (grey matrix)	Carbonate, chlorite, sericite, silica	Py ≤ 10% stringer Sph, Gn, Cpy
63	DACITE MAGNETIC DACITE	DMD	Flow and intrusive	Fine grained, occasionally Por, vesicular	Buff, pink, green, brown	Carbonate (sericite, chlorite)	Py ≤ 1%
55	DACITIC TUFF LAVA	DTL	Pyroclastic (welded, may be in part sub-aerial)	t, It, Ita, a, fragments similar to matrix	Buff-pink green	Carbonate, sericite	Py ≤ 1%
64	DACITIC PYROCLASTIC	DP	Pyroclastic fragments typically dacite in grey matrix	t, It, Ita, a	Buff-pink and green fragments	Carbonate (silica, sericite, chlorite)	Py ≤ 3%
18	PORPHYRITIC DACITE	PD	Flow and intrusive (auto brecciated, fractured)	Porphyry	Buff-grey, yellow green (mottled)	Carbonate, sericite (silica, chlorite)	Py ≤ 10% including stringer mineralisation
6	PORPHYRITIC DACITIC PYROCLASTICS	PDP	Pyroclastic. Fragments typically porphyritic dacite	t, It, coarse It, Ita	Blue-grey, grey	Carbonate, sericite, silica (chlorite)	Py ≤ 10% also stringer Sph, Gn, Cpy
70	DACITIC REWORKED TUFFS	DRWT	Reworked pyroclastics	t, It, coarse It, Ita	Blue-grey, grey	Carbonate, sericite	Py ≤ 10% also minor Sph, Gn, Cpy
68	DACITIC SHALY TUFFS	DSNT	Pyroclastic argillaceous	Fine t, t, It	Grey	Sericite	Py ≤ 20% also Sph, Gn, Cpy
INDETERMINATE COMPOSITION							
	FLAWS AND INTRUSIVES	L	Flow and intrusive	Por vesic massive-fine grained	Green, buff	Carbonate, chlorite	Py ≤ 10%
	PYROCLASTICS	P	Pyroclastic	t, It, Ita	Green, grey-buff	Carbonate, sericite, chlorite	Py ≤ 10%
27	STREAKY PYROCLASTICS	SP	Pyroclastic	It, Ita, streaky porphyritic	Green, grey, off-white	Carbonate, sericite	Py ≤ 10%

SULPHIDES

- 21/12  Massive sphalerite-galena Greater than 5% combined Cu, Pb, Zn
- 29  Massive Pyrite > 60%
-  Pyrite > 10% Pyritic rocks

DOMINANT ALTERATION TYPES

-  Carbonate (ankerite)
-  Silica
-  Chlorite massive / Chlorite disseminated
-  Illite hydromuscovite

Alteration illustrated as overprint on some side as rock type
Contacts shown as

SECTION

Serite rich, calc. serite
Chlorite rich, calc. chlorite
Carbonate rich, heavily carbonated
Siderite, serite, calc. siderite
Vesicular, amygdaloidal
Foliated, original character
Foliated, sericite, leading fine bedding
Cleavage
Fault unmeasured breacher
Fault measured
Fault zone unmeasured breacher
Fault zone measured
Foliated zone

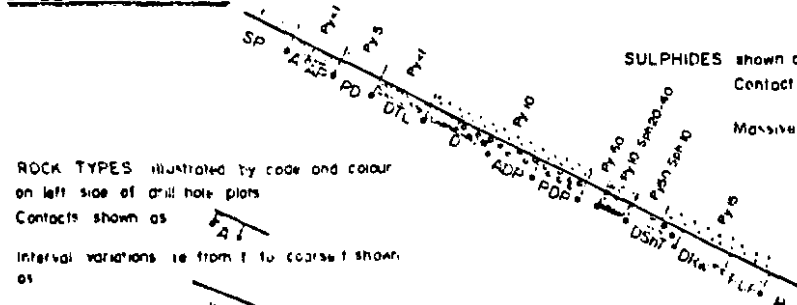
DRILL HOLE TRACE

Pyrite (100)
Pyrite (100)
Gn 2
Sph 5
Cpy 15
No 5
a vein
c vein
Pyrite (100)
Pyrite (100)
Gn 2
Sph 5
Cpy 15
No 5
a vein
c vein

PLAN

Bedding, strike-slip, vertical
Cleavage with dip-slip
Fault with dip-slip
Unit with dip-slip, horizontal
Location, direction and plunge

DRILL HOLE TRACE



SULPHIDES shown on right side of drill hole plot as overprint
Contact shown as

Massive sulphide shown as both sulphide and rock type

ROCK TYPES illustrated by code and colour on left side of drill hole plots
Contacts shown as

Interval variations in from 1 to coarsest shown as

ABERFOYLE EXPLORATION PTY. LTD.

Drawn: EHS CHY
Traced: RAY
Checked:
Revised: Date

QUE RIVER PROSPECT
Geological Legend and Colour Code

Location code
Scale
Date

948022

APPENDIX B

I.P. PROFILES

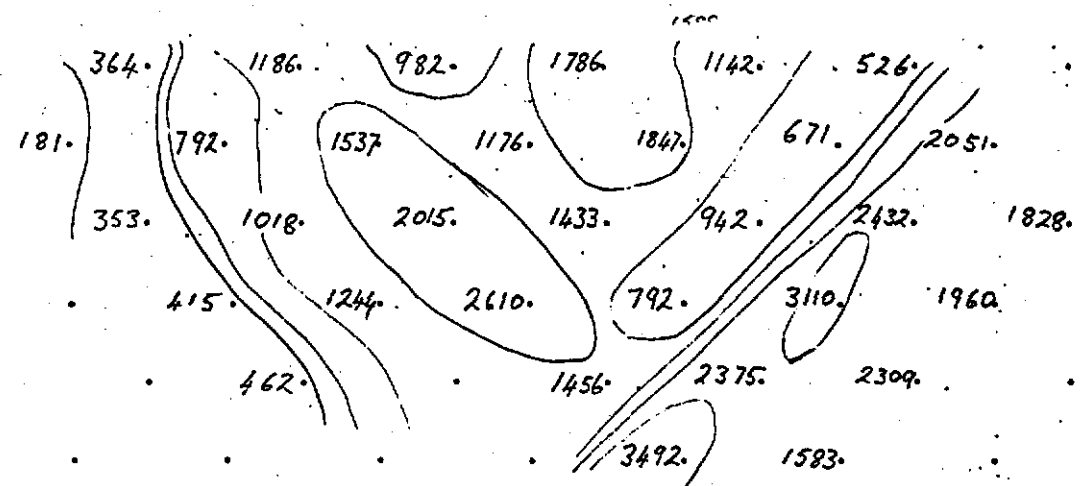
Lines 6,800N to 10,600N on
lines 200 m apart (excluding lines
7000N, 7400N, 8400N, 9200N)

I.P. & RESISTIVITY SURVEY (DIPOLE-DIPOLE ARRAY L=100m)
 3150E 3350 3550 3750

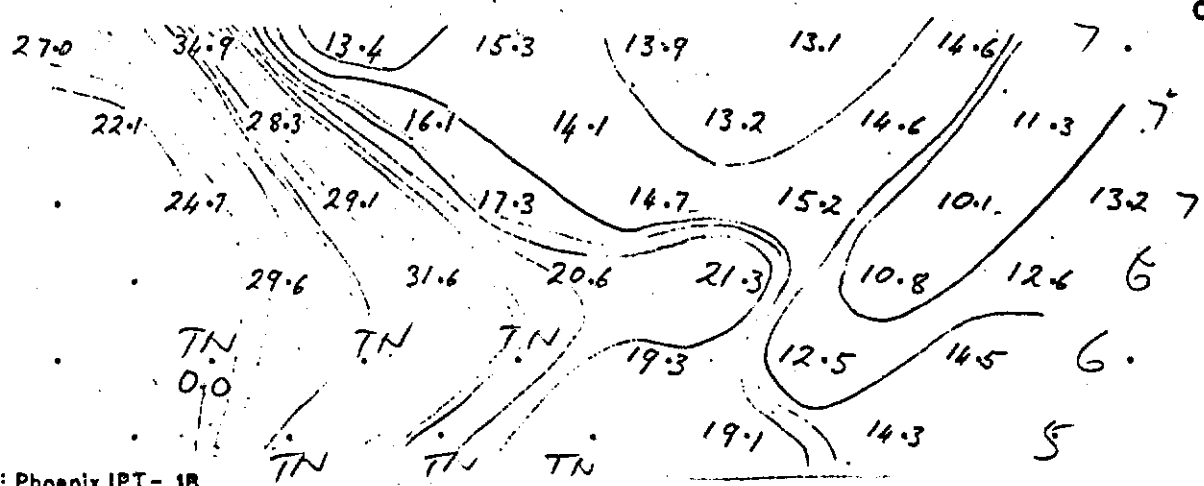
948024

CULTURE PLAN

APPARENT RESISTIVITY (ohm m)
 LOGARITHMIC CONTOUR INTERVAL



APPARENT CHARGEABILITY (mv/v)
 CONTOUR INTERVAL 2 msec



TRANSMITTER TYPE: Phoenix IPT- 1B
 TIMING SEQUENCE: 2 sec on 2 sec off
 RECEIVER TYPE: Huntec Mk IV (Serial No. 1007)
 INTEGRATION TIME: 140 m/sec after cut off

ABERFOYLE EXPLORATION PTY. LTD.

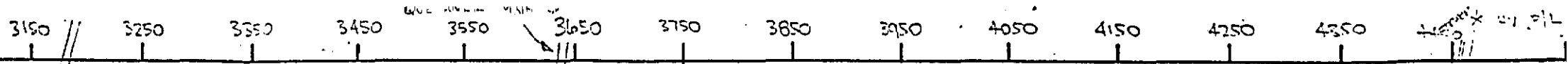
AREA: Q. RIVER

LINE: 6800N
 SCALE: 1:5000
 DATE: 17.3.81

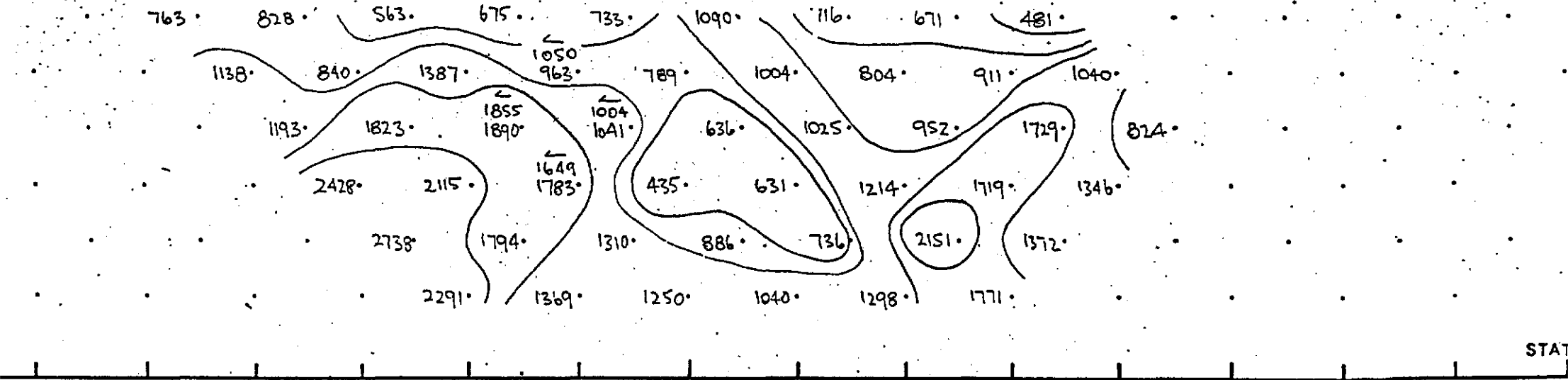
SOLO GEOPHYSICS AND COMPANY

81-1579

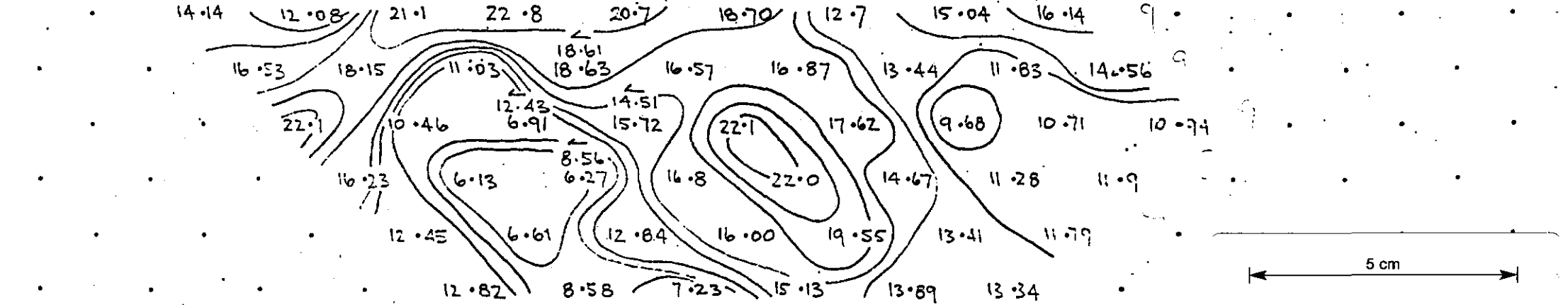
81-1579 (250)



APPARENT RESISTIVITY (ohm m)
LOGARITHMIC CONTOUR INTERVAL



APPARENT CHARGEABILITY (mv/v)
CONTOUR INTERVAL .2 msec



TRANSMITTER TYPE: Phoenix IPT- 1B

TIMING SEQUENCE: 2 sec on 2 sec off

RECEIVER TYPE: Huntex Mk IV (Serial No. 1007)

INTEGRATION TIME: 150 m/sec after cut off to 1650

ABERFOYLE EXPLORATION PTY. LTD.

SOLO GEOPHYSICS AND COMPANY.

AREA: QUE RIVER
TASMANIA

LINE: 7200 S

SCALE: 1:5000

DATE: 14-3-80

81-1579 (85)

I.P. & RESISTIVITY SURVEY (DIPOLE-DIPOLE ARRAY L=100m)

CULTURE PL.

3400

3600

3800E

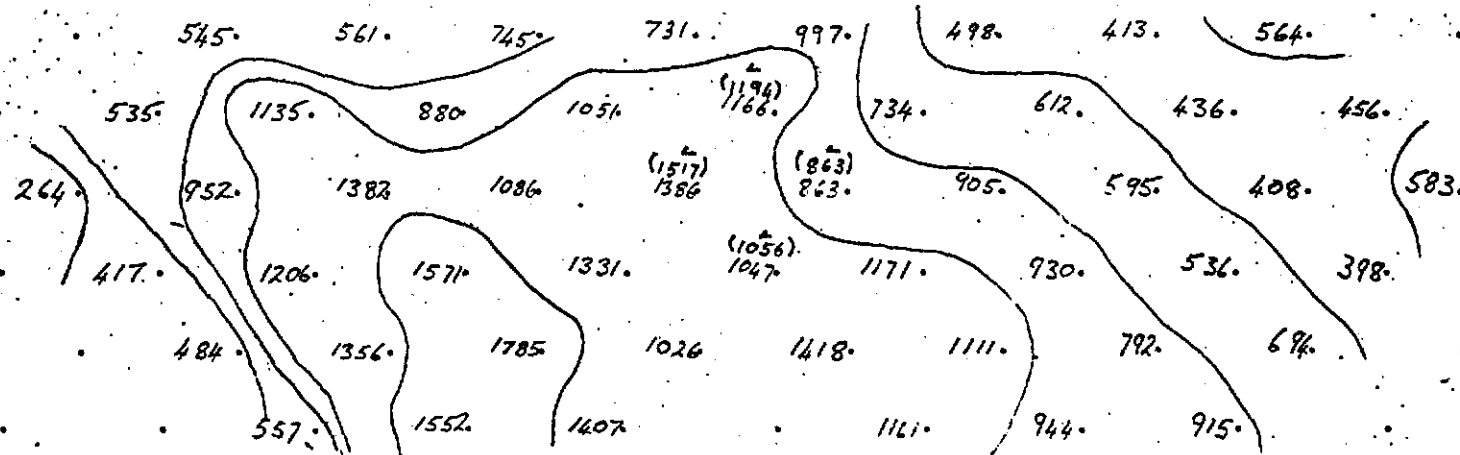
4000

4200

948026

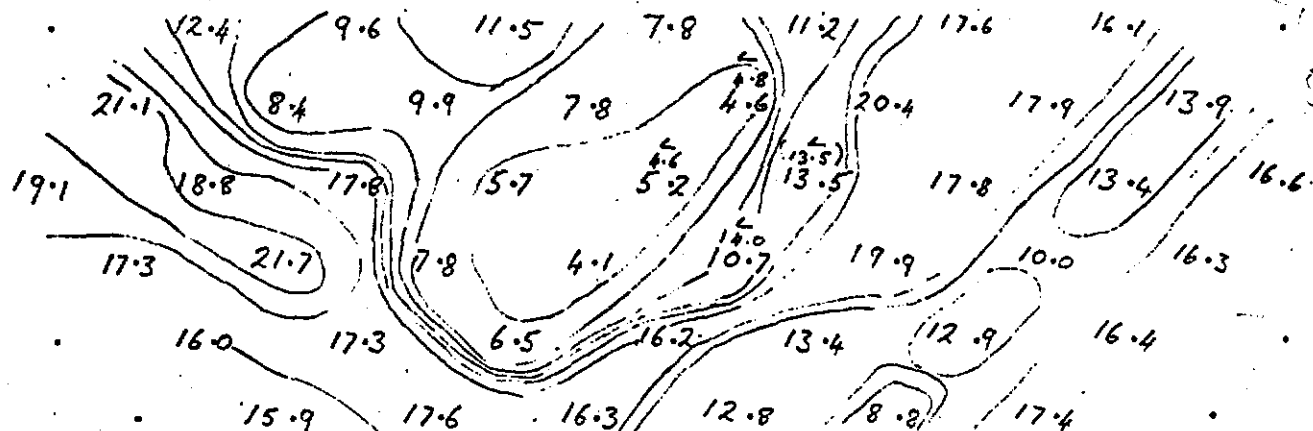
APPARENT RESISTIVITY (ohm m)

LOGARITHMIC CONTOUR INTERVAL



APPARENT CHARGEABILITY (mv/v)

CONTOUR INTERVAL 2 msec



5 cm

TRANSMITTER TYPE: Phoenix IPT-1B

TIMING SEQUENCE: 2 sec on 2 sec off

RECEIVER TYPE: Huntex Mk IV (Serial No. 1007)

INTEGRATION TIME: 140 m/sec after cut off

ABERFOYLE EXPLORATION PTY. LTD.

AREA: O. RIVER

LINE: 7600 N

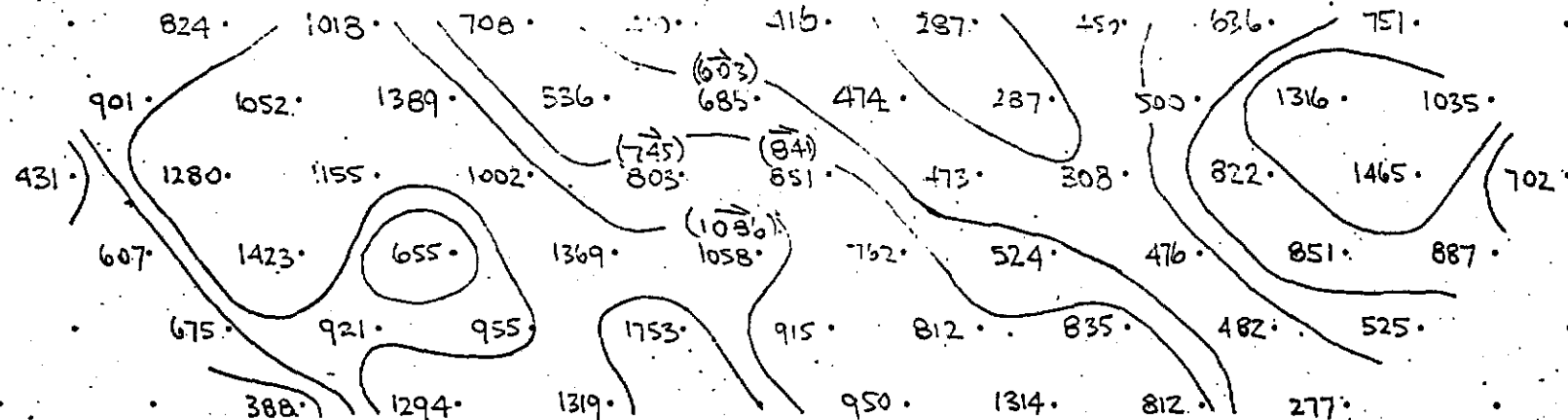
SCALE: 1:5000

DATE: 17.3.81

SOLO GEOPHYSICS AND COMPANY

81-1579

LOGARITHMIC CONTOUR INTERVAL

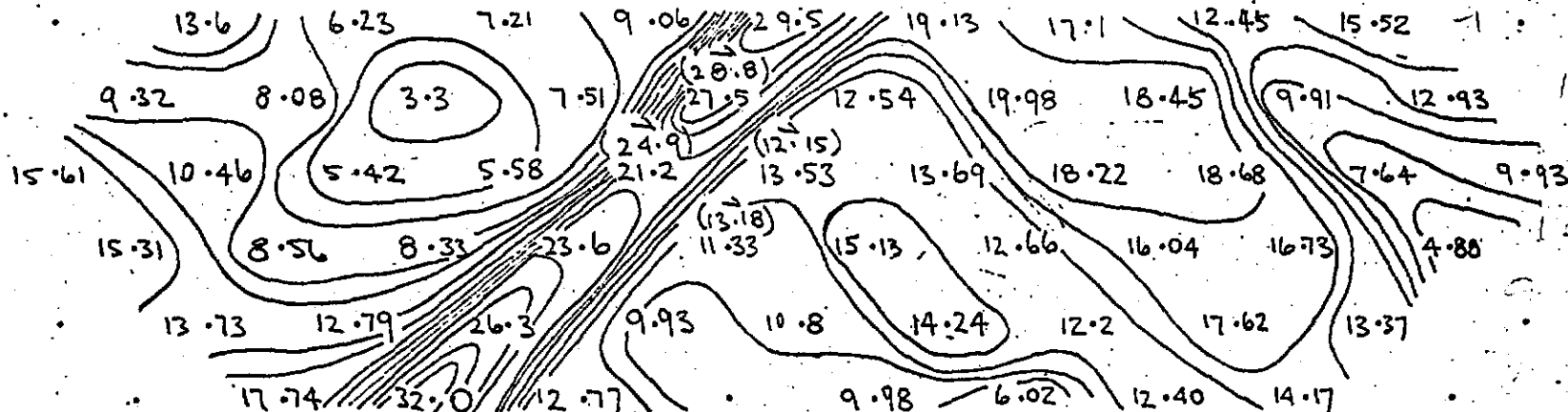


4000

STAT

APPARENT CHARGEABILITY (mv/v)

CONTOUR INTERVAL 2 msec



TRANSMITTER TYPE: Phoenix IPT- 1B

TIMING SEQUENCE: 2 sec on 2 sec off

RECEIVER TYPE: Huntex Mk IV (Serial No. 1007)

INTEGRATION TIME: 150 m/sec after cut off 650

ABERFOYLE EXPLORATION PTY. LTD.

SOLO GEOPHYSICS AND COMPANY

AREA: ONE RIVER
TASMANIA

LINE: 7800N

SCALE: 1:5000

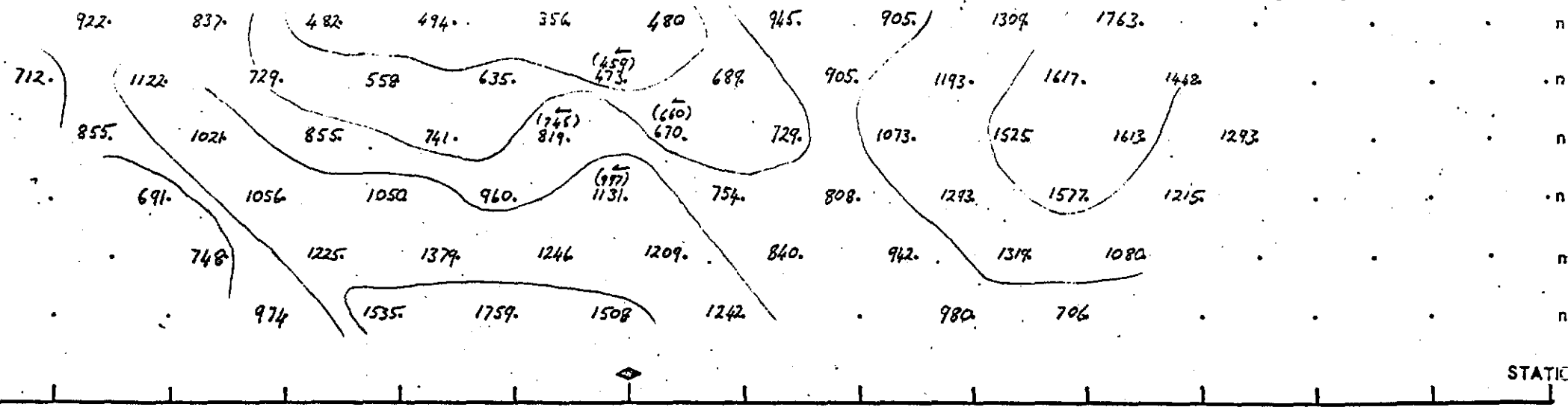
DATE: 13-3-81

5 cm

REPEAT S/VF with B.Ran.

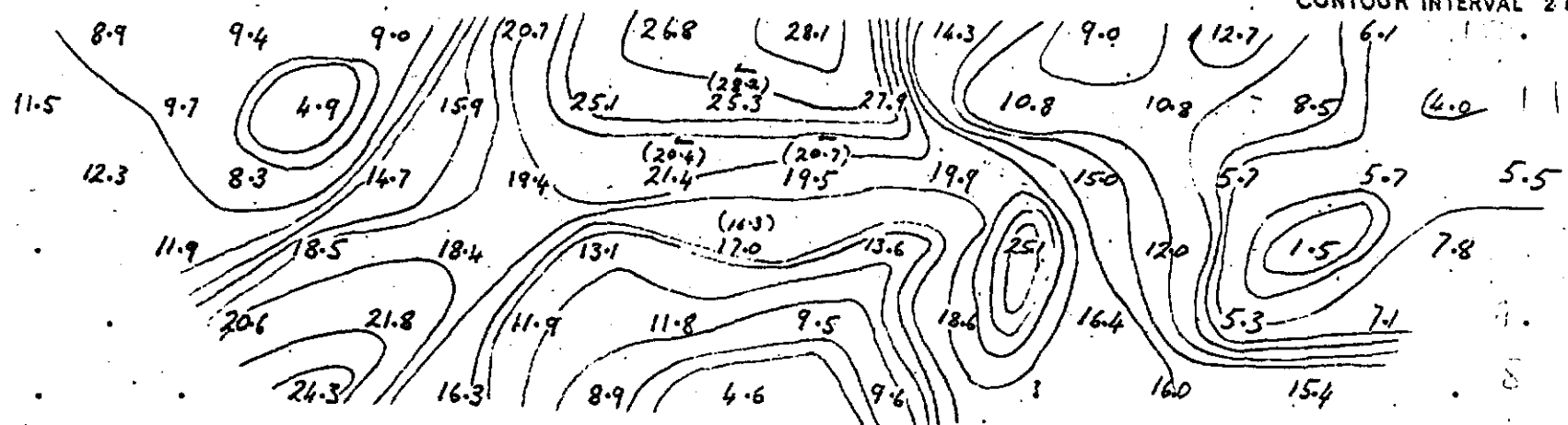
81-1579

948027



APPARENT CHARGEABILITY (mv/v)

CONTOUR INTERVAL 2 msec



TRANSMITTER TYPE: Phoenix IPT- 1B

TIMING SEQUENCE: 2 sec on 2 sec off

RECEIVER TYPE: Huntex Mk IV (Serial No.1007)

INTEGRATION TIME: 140 mV/sec after cut-off

ABERFOYLE EXPLORATION PTY. LTD.

AREA: Q.RIVER.

LINE: 8000N

SCALE: 1:5000

DATE: 27/3/81

SOLO GEOPHYSICS AND COMPANY

81-1579

948028

I.P. & RESISTIVITY SURVEY (DIPOLE-DIPOLE ARRAY L=100m)

CULTURE PLAN

3800E

4200E

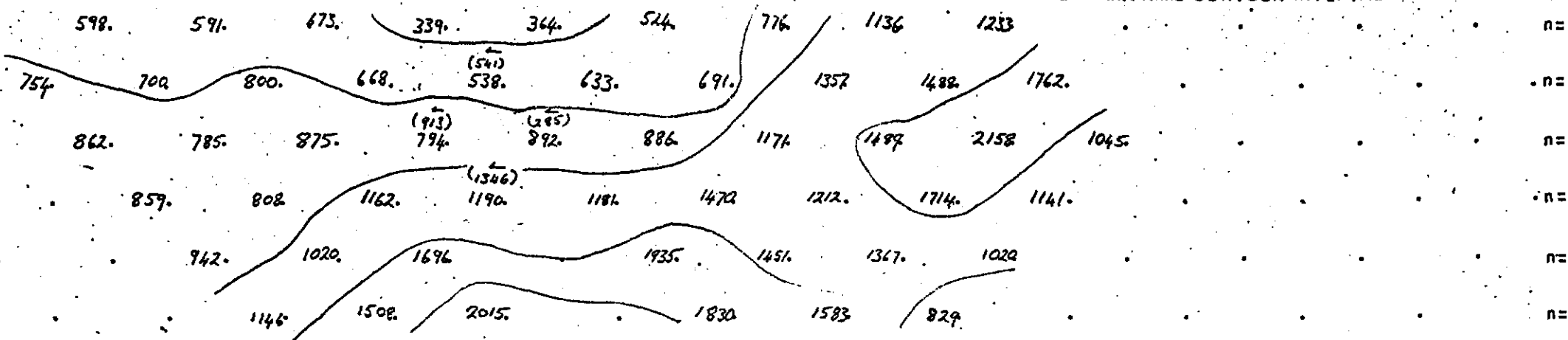
4600E

948029

H.E.C.
Line
Road

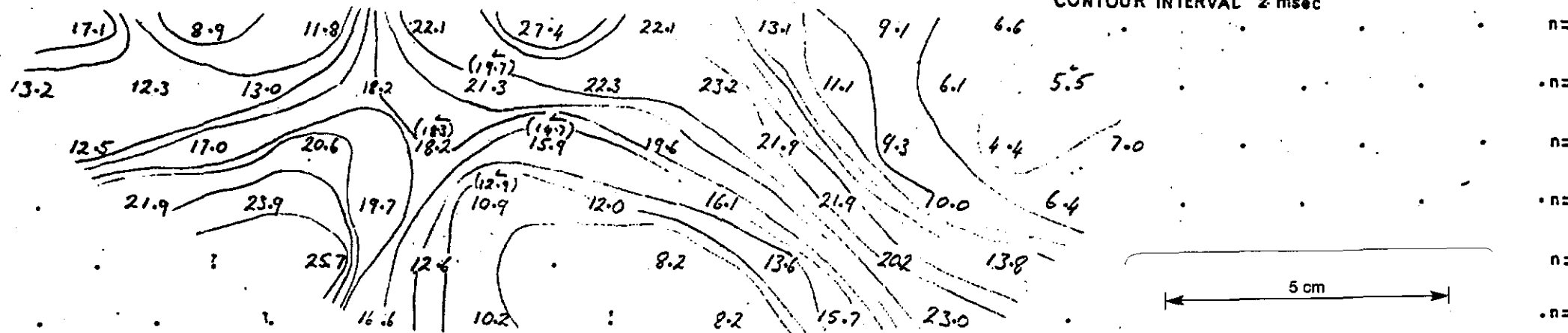
APPARENT RESISTIVITY (ohm m)

LOGARITHMIC CONTOUR INTERVAL



APPARENT CHARGEABILITY (mv/v)

CONTOUR INTERVAL 2 msec



TRANSMITTER TYPE: Phoenix IPT-1B

TIMING SEQUENCE: 2 sec on 2 sec off

RECEIVER TYPE: Huntec Mk IV (Serial No. 1007)

INTEGRATION TIME: 140 mV/sec after cut off

ABERFOYLE EXPLORATION PTY. LTD.

AREA: Q. RIVER.

LINE: 8200N.

SCALE: 1:5000

DATE: 27-3-81

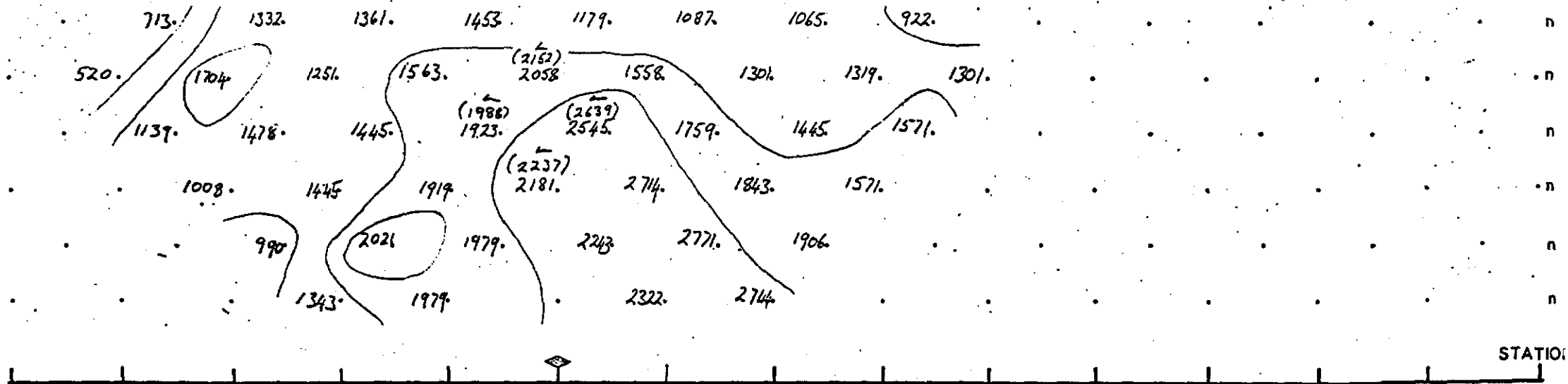
SOLO GEOPHYSICS AND COMPANY

81-1579

← L →

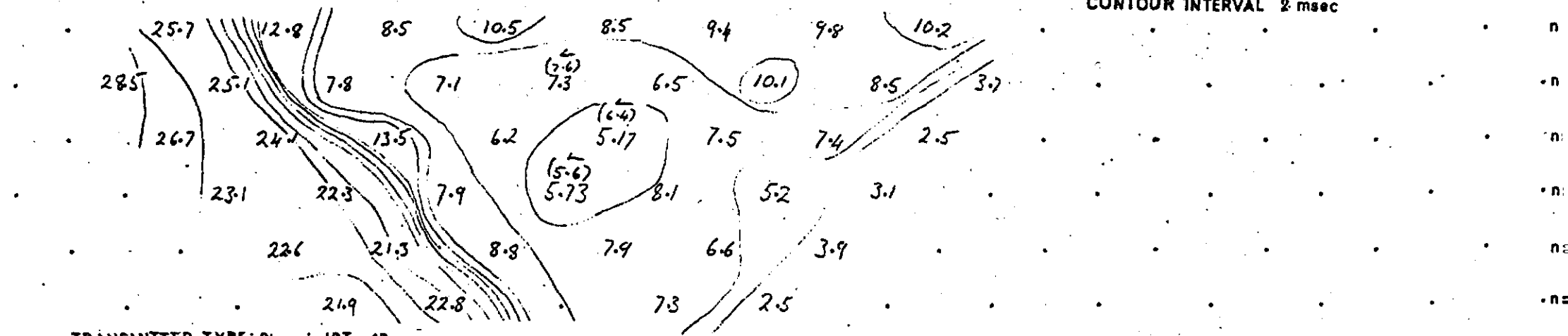
APPARENT RESISTIVITY (ohm m)

LOGARITHMIC CONTOUR INTERVAL



APPARENT CHARGEABILITY (mv/v)

CONTOUR INTERVAL 2 msec



TRANSMITTER TYPE: Phoenix IPT- 18

TIMING SEQUENCE: 2 sec on 2 sec off

RECEIVER TYPE: Huntco Mk IV (Serial No. 1007)

INTEGRATION TIME: 140 mVsec after cut off

ABERFOYLE EXPLORATION PTY. LTD.

AREA: Q. RIVER.

LINE: 8800N

SCALE: 1:5000

DATE: 31-3-81

SOLO GEOPHYSICS AND COMPANY

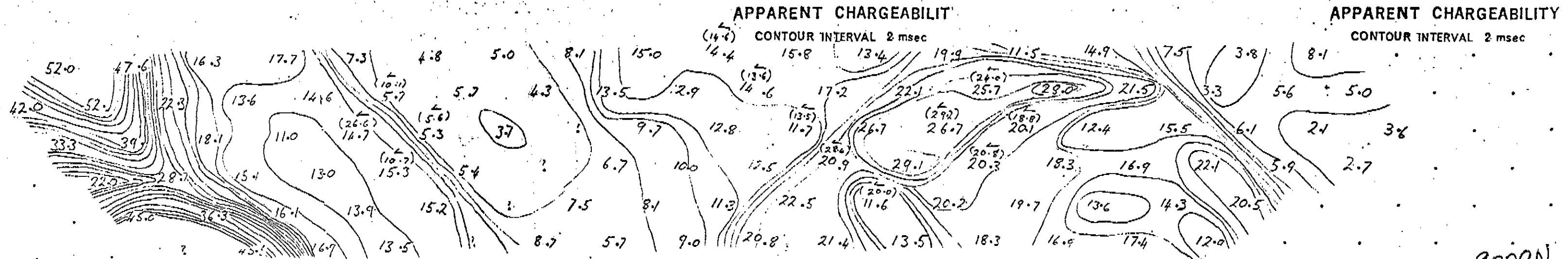
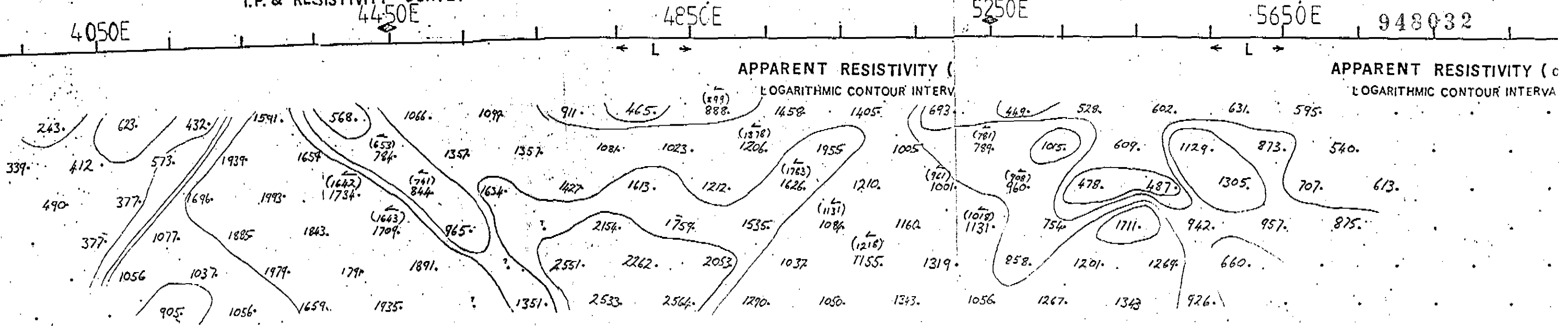
948031

81-1579

5 cm

I.P. & RESISTIVITY SURVEY (DIPOLE-DIPOLE ARRAY L=100m)

VITY SURVEY (DIPOLE-DIPOLE ARRAY L=100m)



TRANSMITTER TYPE: Phoenix IPT-1B

ABERDEEN EXPLORATION PTY. LTD.

AREA:

LINE: ABERFOYLE EXPLORATION PTY. LTD.

AREA: Q. RIVER

SCALE:

DATE

SOLO GEOPHYSICS AND COMPANY

LINE: 9000N

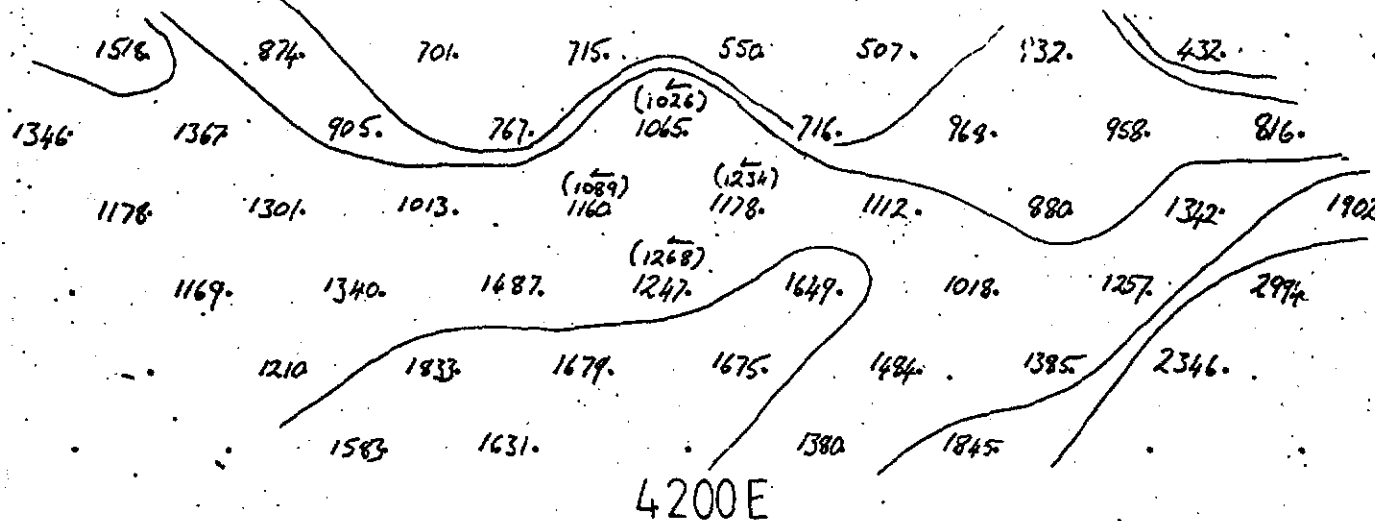
SCALE:

DATE:

81-1579

APPARENT RESISTIVITY (ohm m)

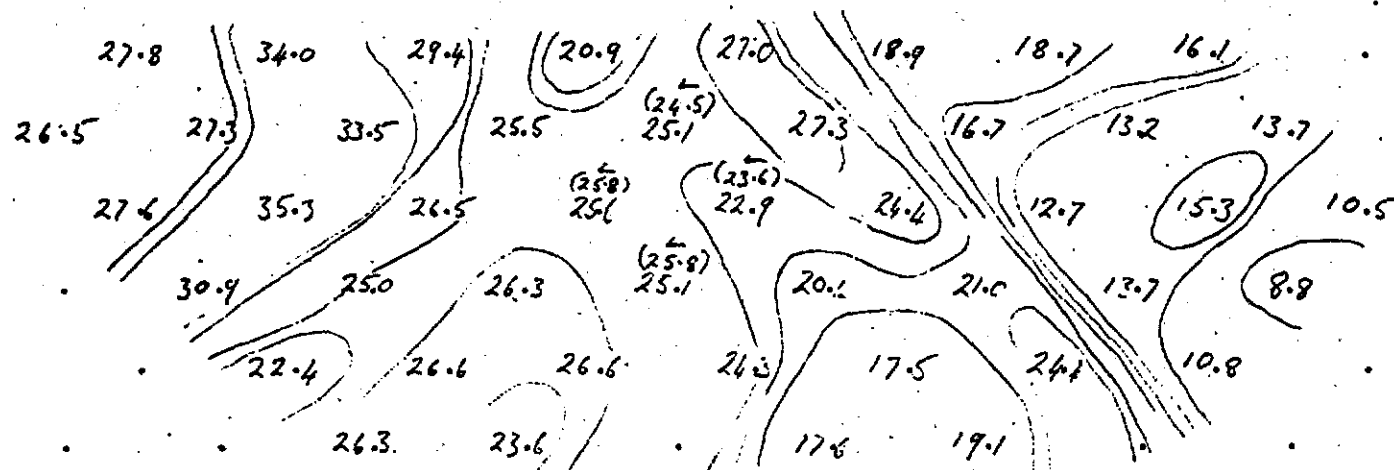
LOGARITHMIC CONTOUR INTERVAL



STATION

APPARENT CHARGEABILITY (mv/v)

CONTOUR INTERVAL 2 msec



TRANSMITTER TYPE: Phoenix IPT-1B

TIMING SEQUENCE: 2 sec on 2 sec off

RECEIVER TYPE: Huntlec Mk IV (Serial No. 1007)

INTEGRATION TIME: 140 msec after cut off

ABERFOYLE EXPLORATION PTY. LTD.

AREA: Q. RIVER.

LINE: 9400N

SCALE: 1:5000

DATE: 1-4-81

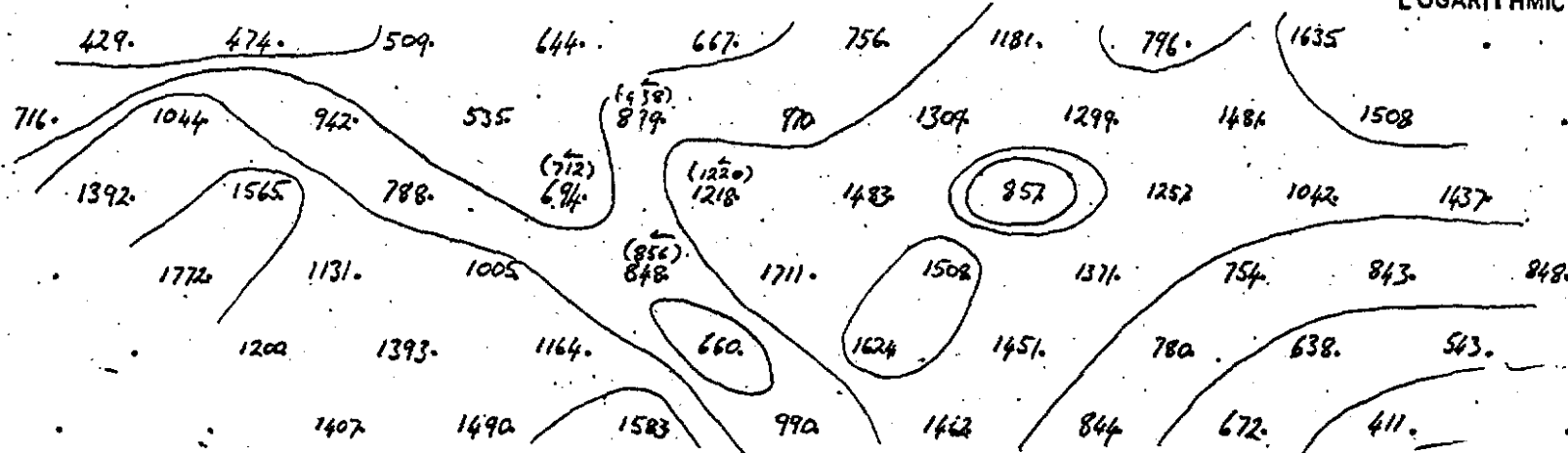
SOLO GEOPHYSICS AND COMPANY

5 cm

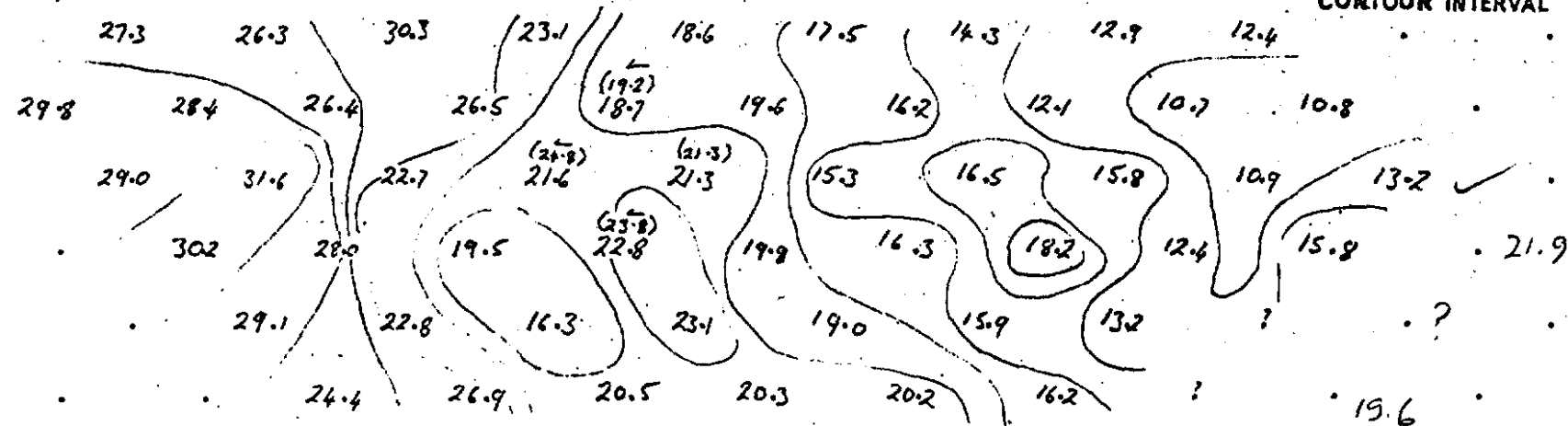
948033

81-1579

APPARENT RESISTIVITY (ohm m)
LOGARITHMIC CONTOUR INTERVAL



APPARENT CHARGEABILITY (mv/v)
CONTOUR INTERVAL 2 msec



TRANSMITTER TYPE: Phoenix IPT- 1B

TIMING SEQUENCE: 2 sec on 2 sec off

RECEIVER TYPE: Huntec Mk IV (Serial No.1007)

INTEGRATION TIME: 140 m/sec after cut off

ABERFOYLE EXPLORATION PTY. LTD.

SOLO GEOPHYSICS AND COMPANY

AREA: Q. RIVER

LINE: 9600N

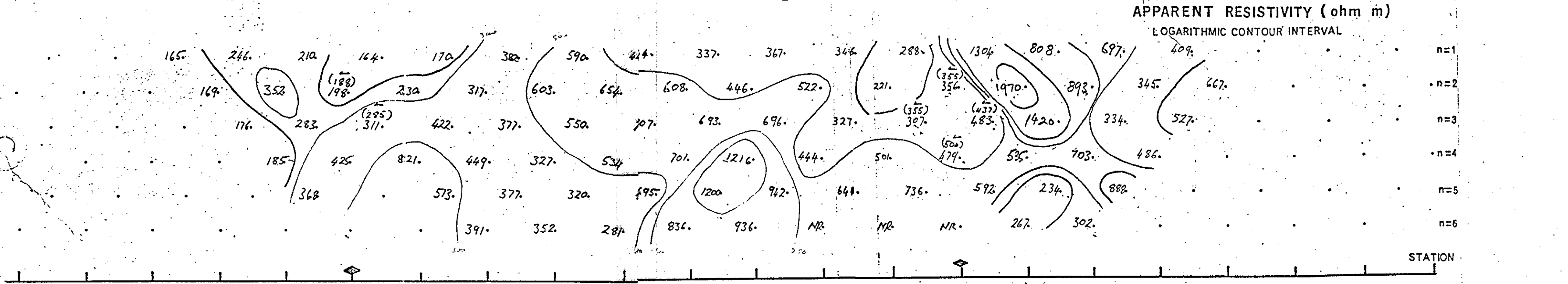
SCALE: 1:5000

DATE: 2-4-81

948034

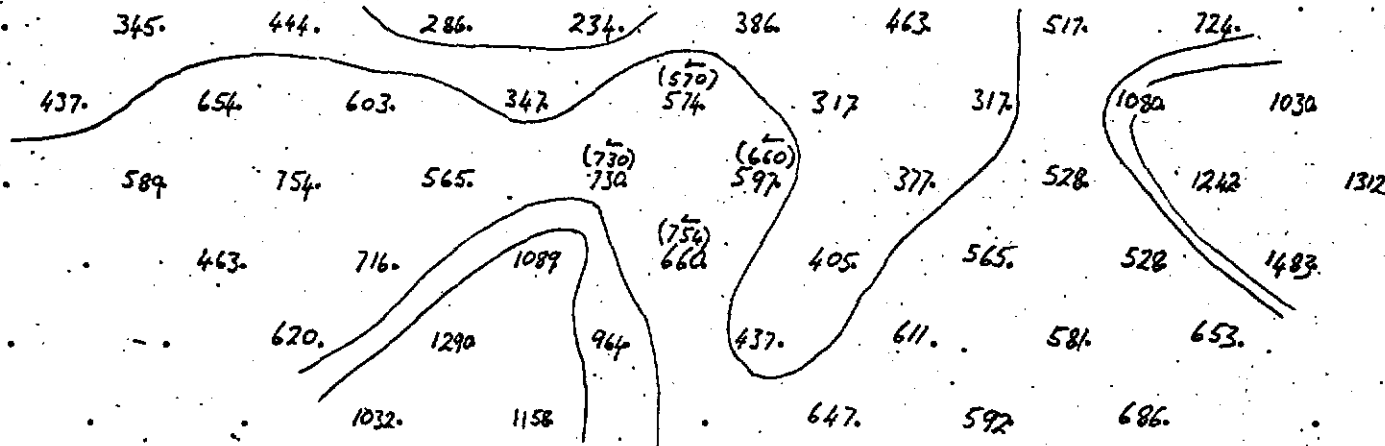
81-1579

5 cm



APPARENT RESISTIVITY (ohm m)

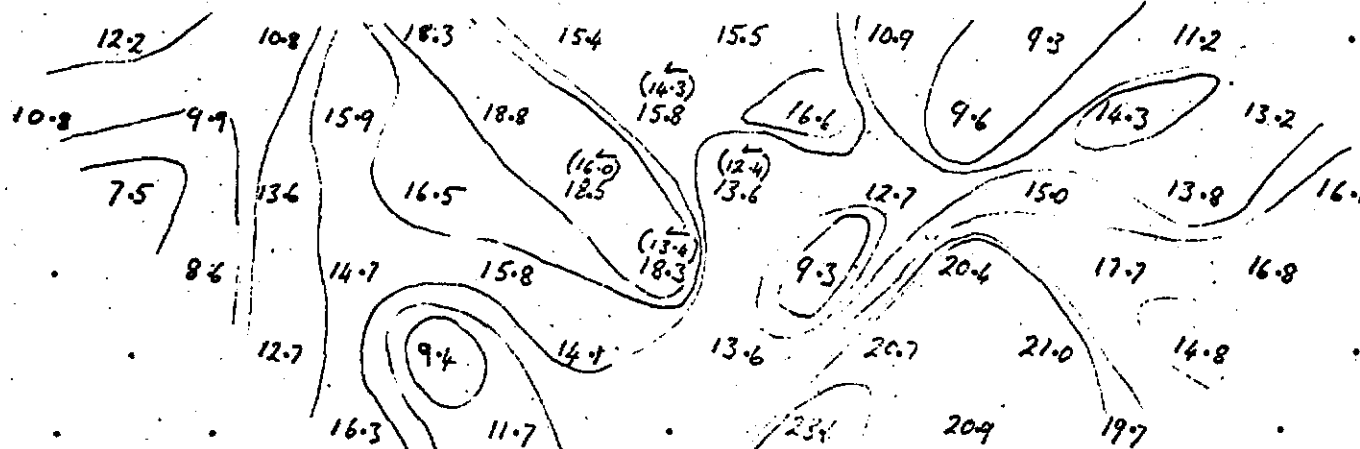
LOGARITHMIC CONTOUR INTERVAL



STATION

APPARENT CHARGEABILITY (mv/v)

CONTOUR INTERVAL 2 msec



TRANSMITTER TYPE: Phoenix IPT-18

TIMING SEQUENCE: 2 sec on 2 sec off

RECEIVER TYPE: Huntlec Mk IV (Serial No. 1007)

INTEGRATION TIME: 140 mVsec after cut off

ABERFOYLE EXPLORATION PTY. LTD.

AREA: Q. RIVER.

LINE: 10000N

SCALE: 1:5000

DATE: 9-4-81

SOLO GEOPHYSICS AND COMPANY

81-1579

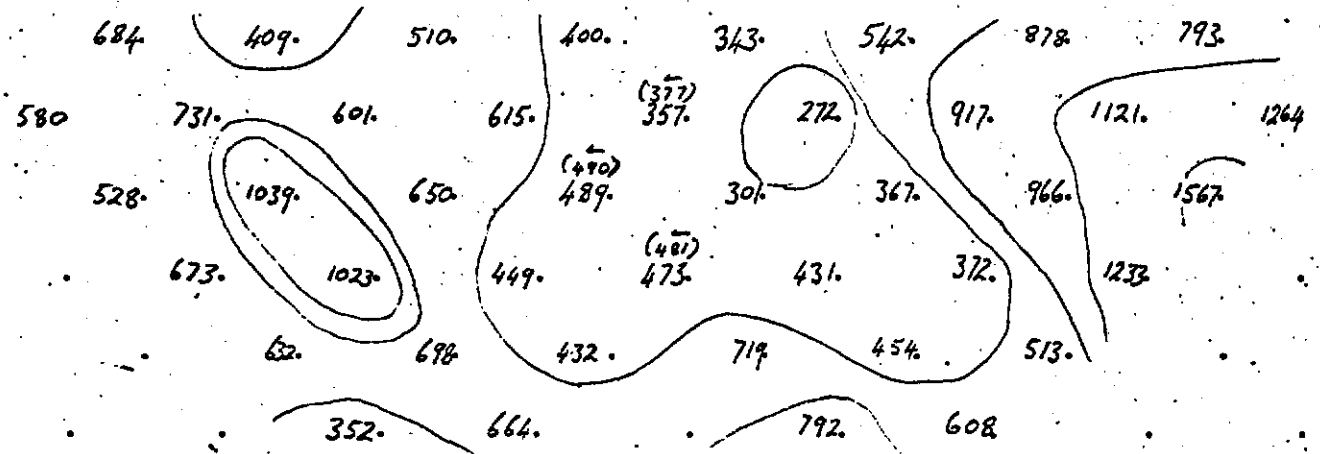
5 cm

948036

← L →

APPARENT RESISTIVITY (ohm m)

LOGARITHMIC CONTOUR INTERVAL

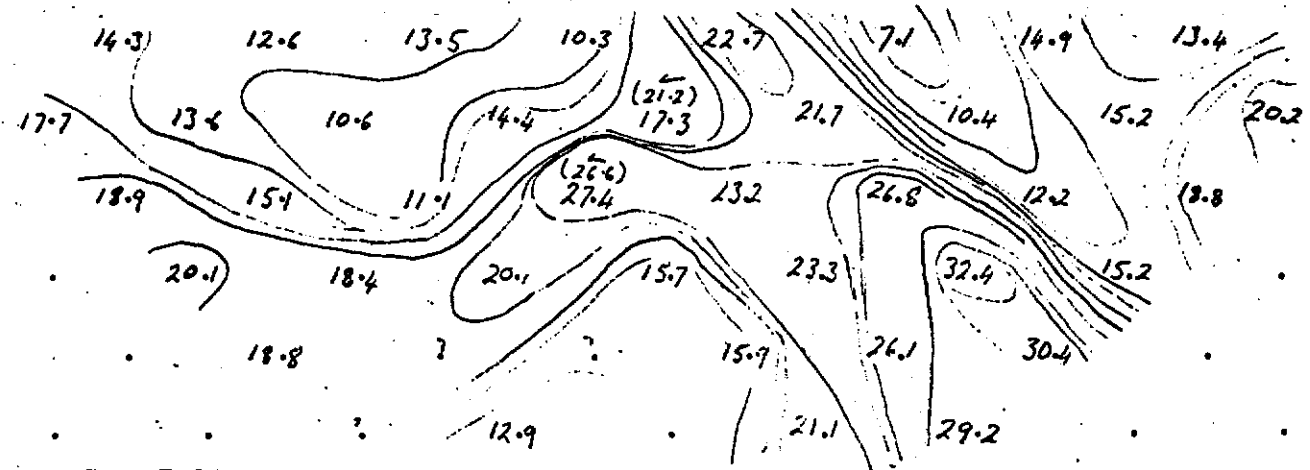


n=1
n=2
n=3
n=4
n=5
n=6

STATION

APPARENT CHARGEABILITY (mv/v)

CONTOUR INTERVAL 2 msec



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

TRANSMITTER TYPE: Phoenix IPT- 1B

TIMING SEQUENCE: 2 sec on 2 sec off

RECEIVER TYPE: Huntec Mk IV (Serial No. 1007)

INTEGRATION TIME: 140 mV/sec after cut off

ABERFOYLE EXPLORATION PTY. LTD.

AREA: Q. RIVER.

LINE: 10200N

SCALE: 1:5000

DATE: 9-4-81

SOLO GEOPHYSICS AND COMPANY

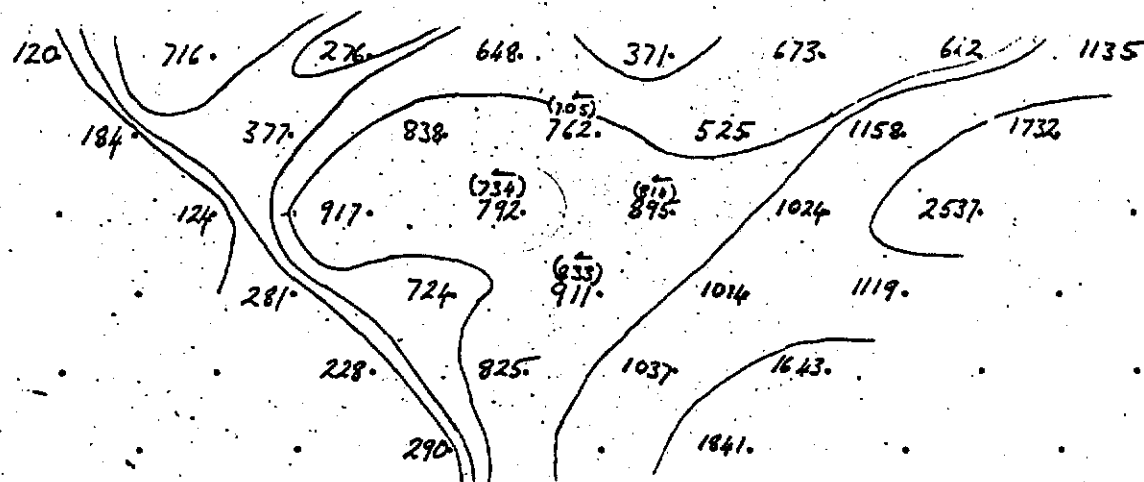
948037

81-15.79

5 cm

APPARENT RESISTIVITY (ohm m)

LOGARITHMIC CONTOUR INTERVAL



n=

n=

n=

n=

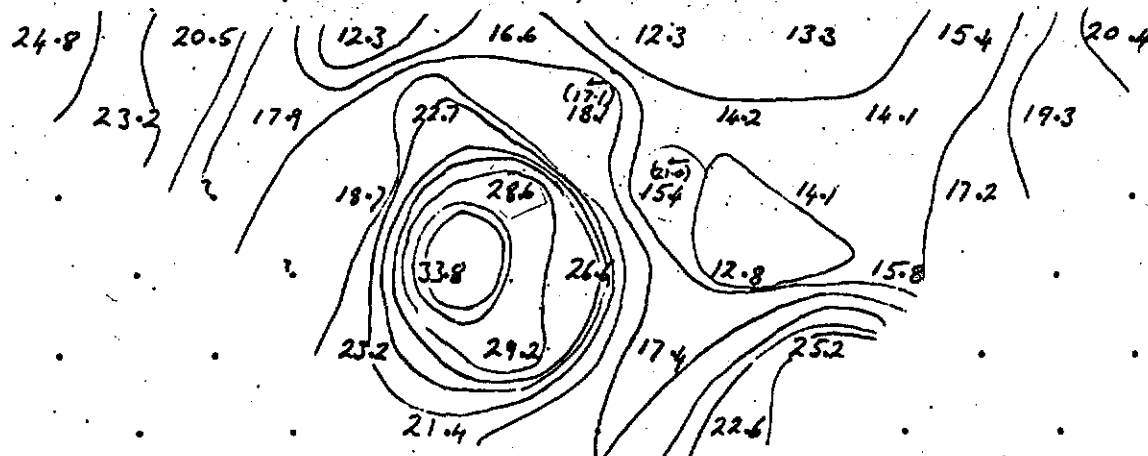
n=

n=

STATION

APPARENT CHARGEABILITY (mv/v)

CONTOUR INTERVAL 2 msec



n=

n=

n=

n=

n=

n=

TRANSMITTER TYPE: Phoenix IPT-1B

TIMING SEQUENCE: 2 sec on 2 sec off

RECEIVER TYPE: Huntco Mk IV (Serial No. 1007)

INTEGRATION TIME: 140 m/sec after cut off

ABERFOYLE EXPLORATION PTY. LTD.

AREA: Q. RIVER

LINE: 10400N.

SCALE: 1:5000

DATE: 10-4-81

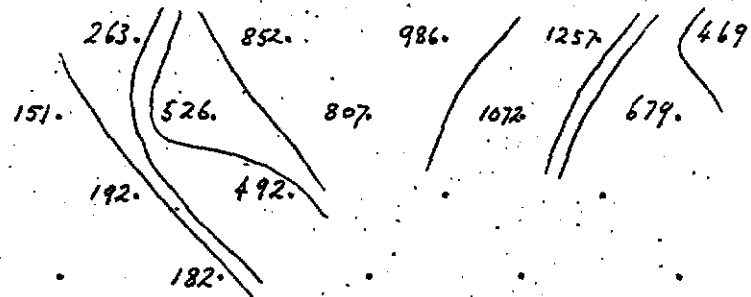
SOLO GEOPHYSICS AND COMPANY

5 cm

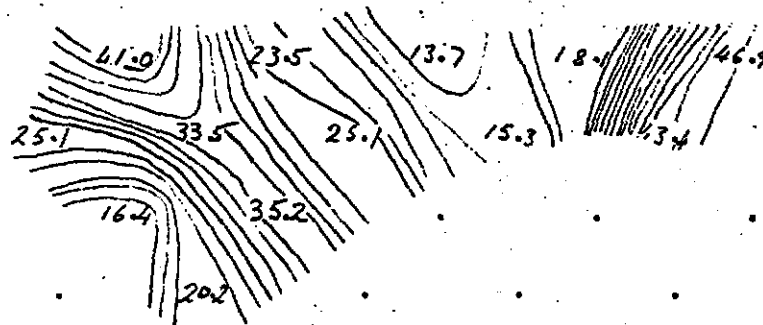
948038

81-1579

APPARENT RESISTIVITY (ohm m)
LOGARITHMIC CONTOUR INTERVAL



APPARENT CHARGEABILITY (mv/v)
CONTOUR INTERVAL 2 msec



TRANSMITTER TYPE: Phoenix IPT-1B

TIMING SEQUENCE: 2 sec on 2 sec off

RECEIVER TYPE: Huntco Mk IV (Serial No. 1007)

INTEGRATION TIME: 140 mV/sec after cut off

ABERFOYLE EXPLORATION PTY. LTD.

SOLO GEOPHYSICS AND COMPANY

AREA: Q. RIVER

LINE: 10600N

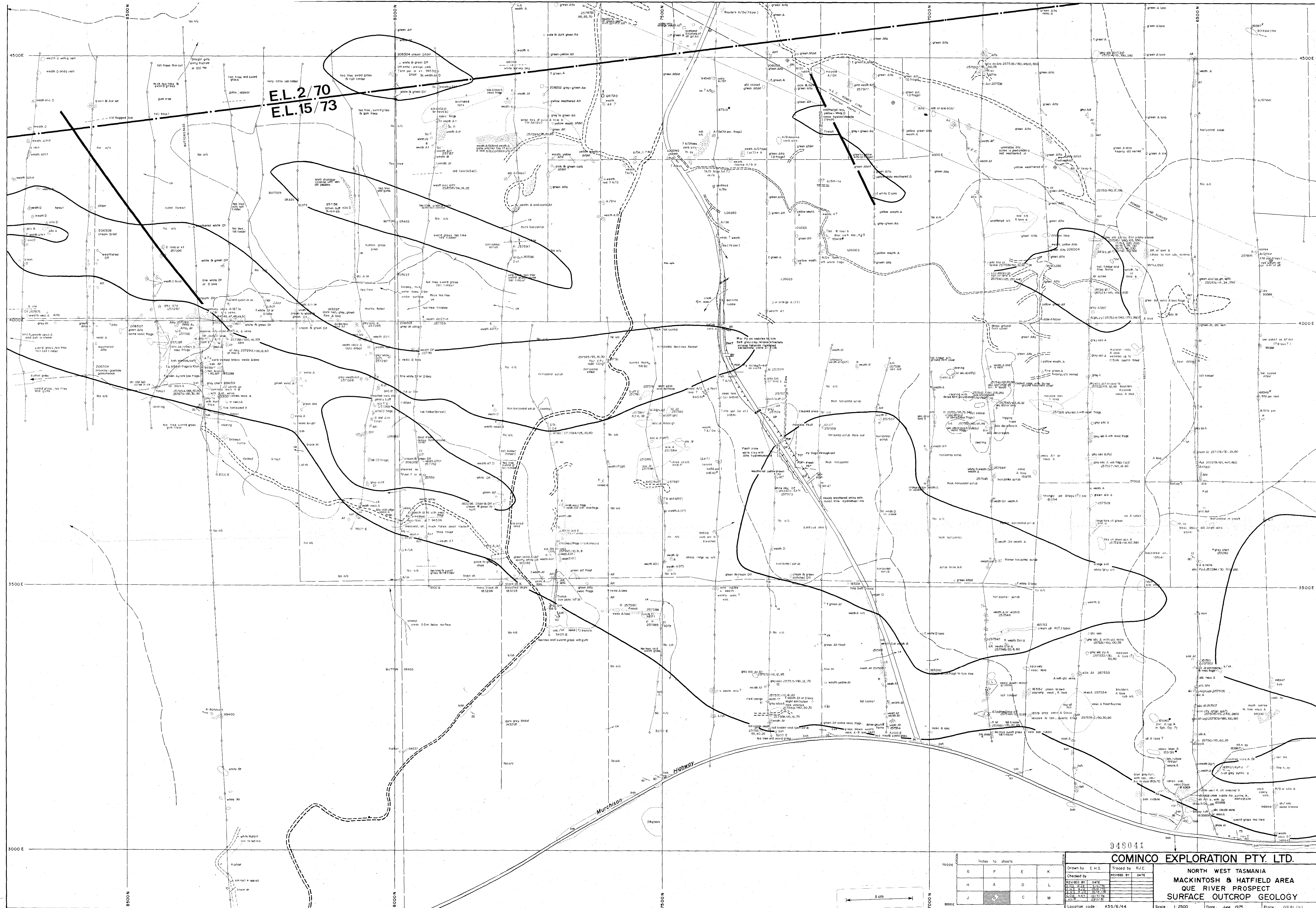
SCALE: 1:5000

DATE: 10-4-81

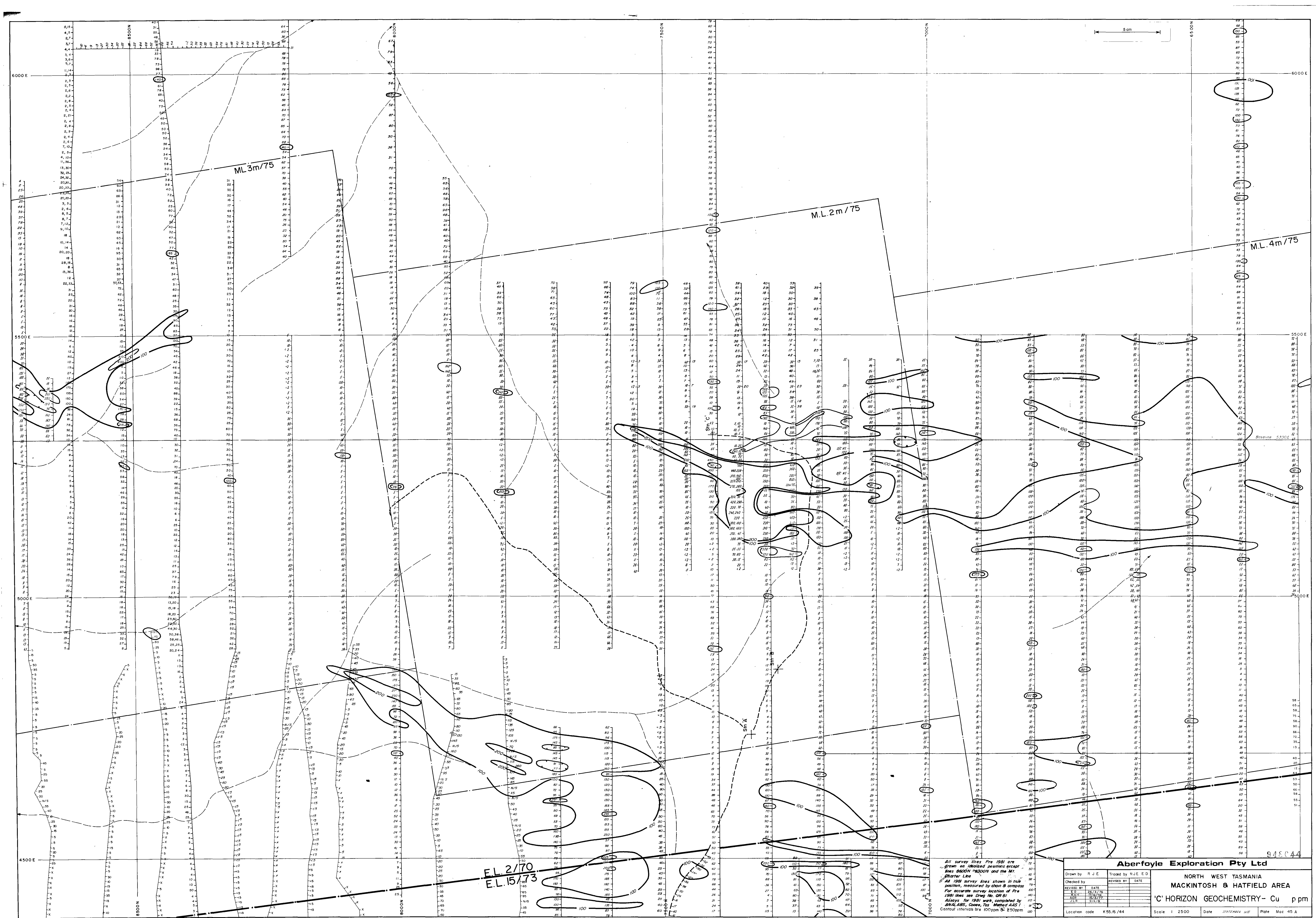
5 cm

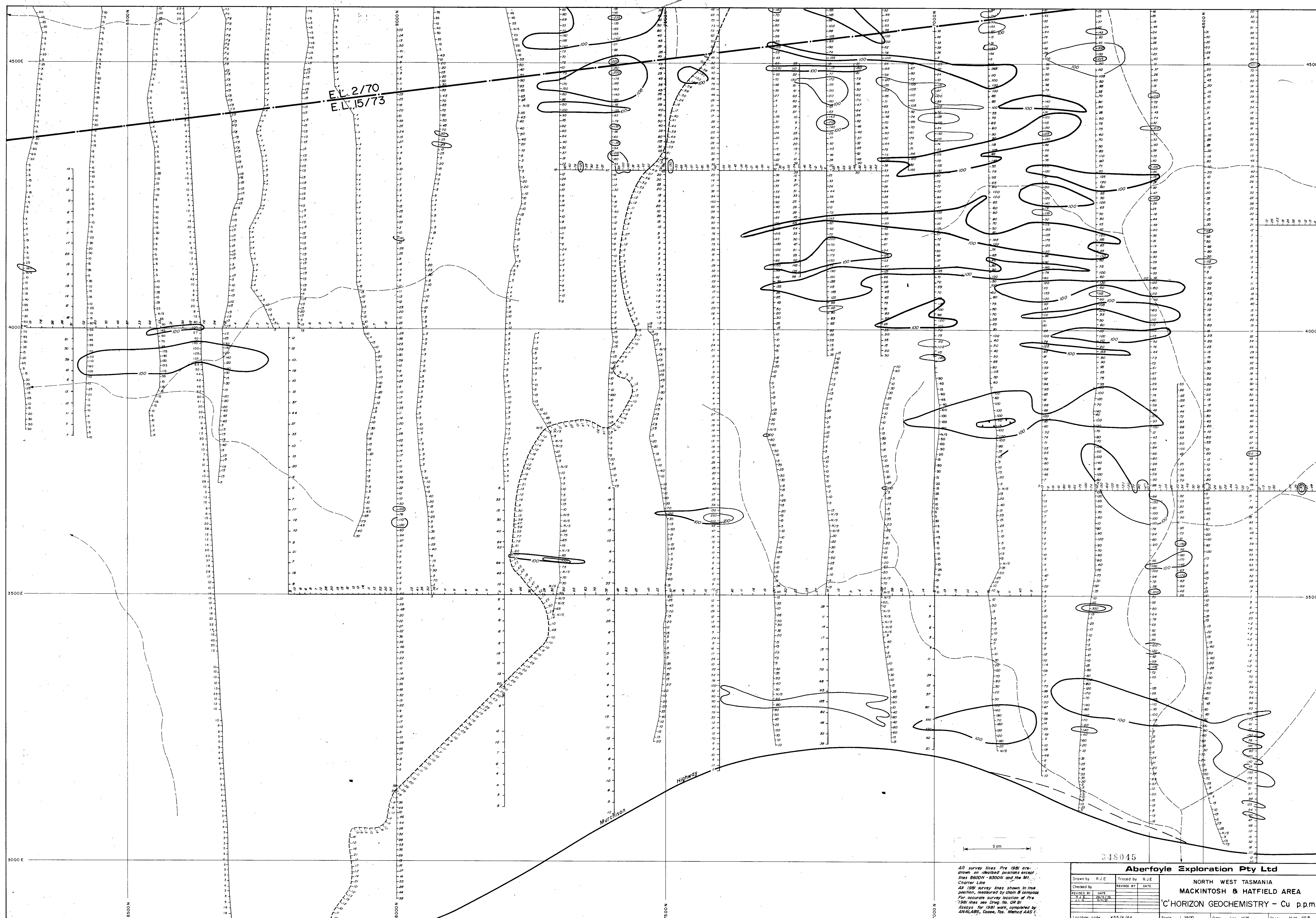
948039

81-1579









EL 2/70
EL 15/73

Highway
Murchison

5 cm

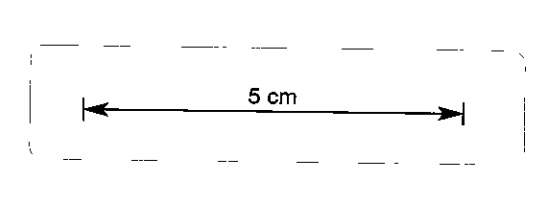
318045

All survey lines Pre 1981 are drawn on idealized positions except lines 8500N-8500N and the Mt. Charter Line.
All 1981 survey lines shown in true position, measured by chain & compass.
For accurate survey location of Pre 1981 lines see Drwg. No. GR 81.
Assays for 1981 work, completed by ANALABS, Coles, Tas. Method AAS I.

Aberfoyle Exploration Pty Ltd			
NORTH WEST TASMANIA			
MACKINTOSH & HATFIELD AREA			
C'HORIZON GEOCHEMISTRY - Cu p.p.m.			
Drawn by	RJE	Traced by	RJE
Checked by		Revised by	
DATE	1973/10	DATE	
FILE	318045	FILE	
Scale	1:2500	Date	June, 1975
Location code	K55/6/44	Plate	MOC 45B



All survey lines Pre 1981 are drawn on idealised positions except lines BOOON - BOOON and the Mt. Charter Line
All 1981 survey lines shown in true position, measured by chain & compass
For accurate survey location of Pre 1981 lines see Drwg No. OR 81
Assays for 1981 work compiled by AVALABS, Cooma, Tas. Memo 145/1



Aberfoyle Exploration Pty Ltd	
NORTH WEST TASMANIA	
MACKINTOSH & HATFIELD AREA	
'C' HORIZON GEOCHEMISTRY - Cu ppm	
Drawn by	Traced by E D
Checked by	
DATE	26/3/76
ASS	10/3/76
FILE	145/1
Location code	K55/6/44
Scale	1:2,500
Date	SEPTEMBER 1975
Plate	Mac 45 H



All survey lines Pre 1981 are drawn on idealised positions except lines 8600N - 8300N and the Mt. Charter Line.
All 1981 survey lines shown in true position, measured by chain & compass.
For accurate survey location of Pre 1981 lines see Drwg. No. GR B1.
Assays for 1981 work, completed by ANALABS, Cooma, Tas. Method AAS.

Aberfoyle Exploration Pty Ltd			
Drawn by		Traced by JJB	
Checked by	REVISOR	DATE	
	N. J. F.	MARCH 1981	
Location code K55/6/44			
Scale 1:2500		Date Nov '79	Plate Mac 45J

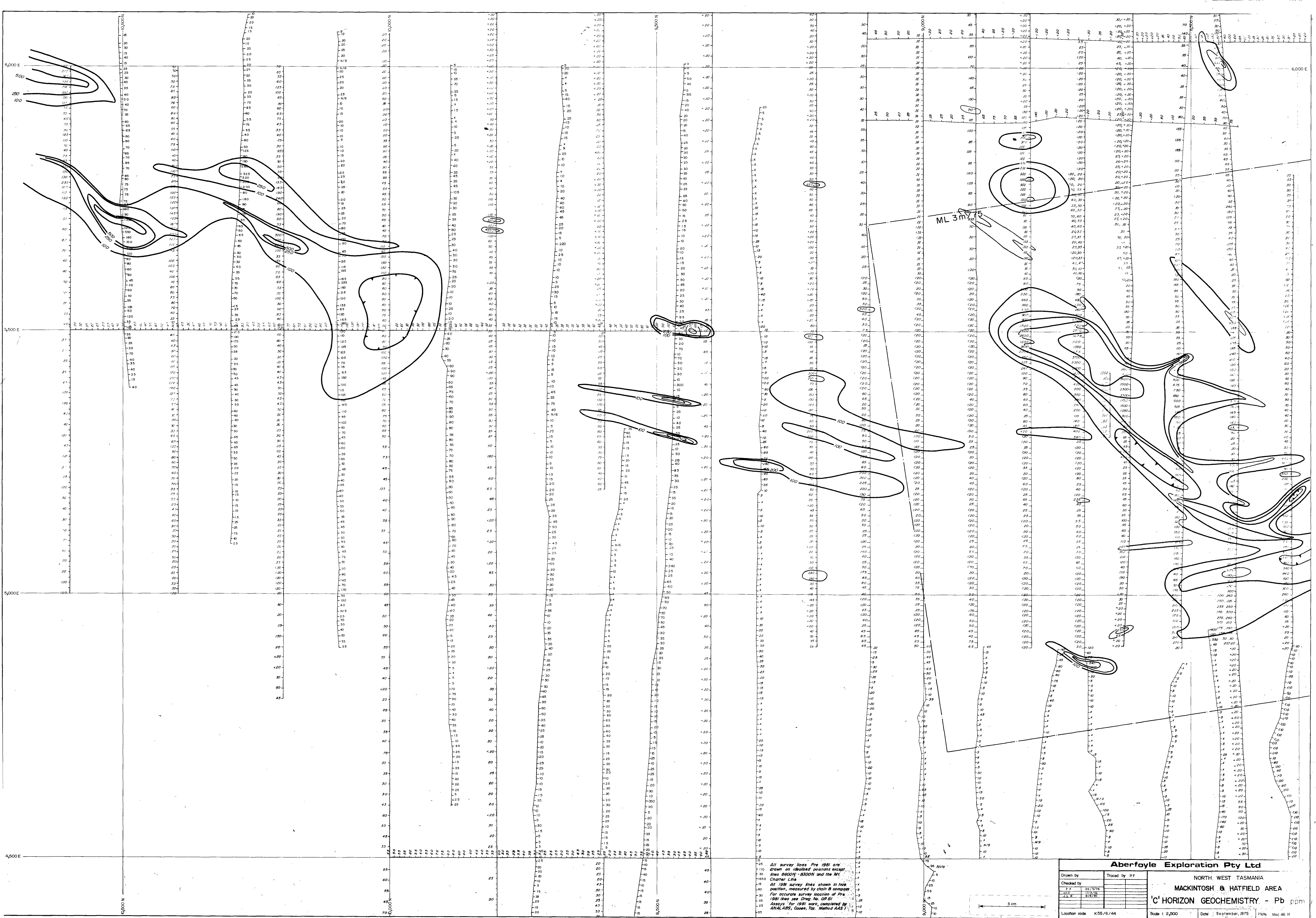
948047

NORTH WEST TASMANIA
MACKINTOSH & HATFIELD AREA
'C' HORIZON GEOCHEMISTRY- Cu p.p.m.



All survey lines Pre 1981 are drawn on dashed positions except lines 8600N - 8300N and the Mt Charter Line
All 1981 survey lines shown in true position, measured by chain & compass
For accurate survey location of Pre 1981 lines see Drawing No. GR 91
Assays for 1981 work, completed by ANALABS, Coonawarra, Tas. Method AAS 1

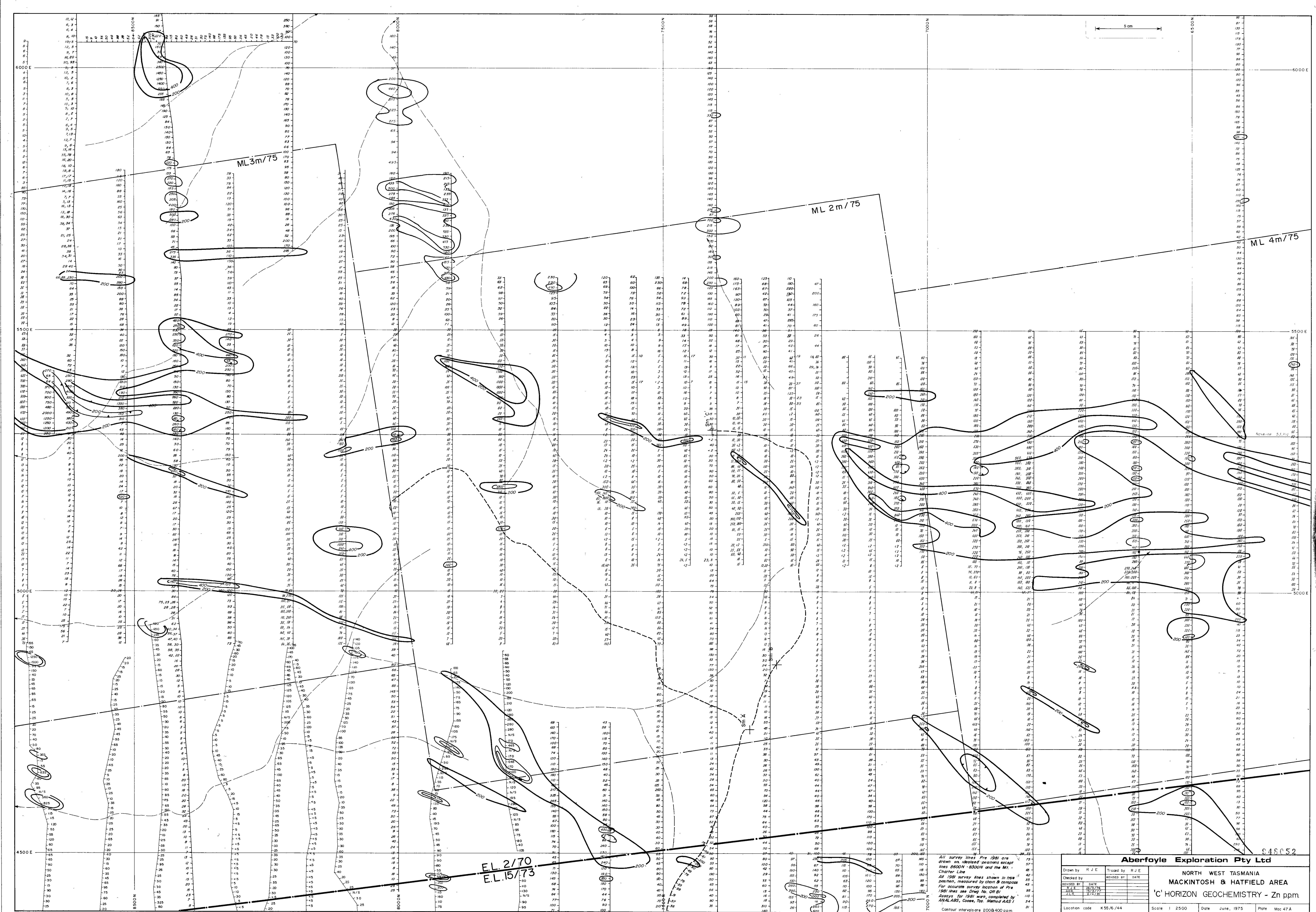
Aberfoyle Exploration Pty Ltd			
NORTH WEST TASMANIA MACKINTOSH & HATFIELD AREA 'C' HORIZON GEOCHEMISTRY - Pb p.p.m.			
Drawn by	RJE	Traced by	RJE
Checked by		Revised by	
REVISOR BY	DATE	REVISOR BY	DATE
J.V.R.	2/7/78		
Location code K55/6/44		Scale 1:2500	Date June, 1975
		Plate	Mac 46 B





All survey lines Pre 1981 are drawn on dashed positions except lines 9000N - 8300N and the Mt. Charter Line.
All 1981 survey lines shown in heavy position, measured by chain & compass.
For accurate survey location of Pre 1981 lines see Drop No. ON B.
Assays by 1981 work, completed by ANALABS, Coles, Tas. Method AAS.

Aberfoyle Exploration Pty Ltd		
Geology:	NORTH WEST TASMANIA	Location code: K55/G44
Drawn:	MACKINTOSH AND HATFIELD AREA	Date: October, 1980
Traced: J. L. R.	'C' HORIZON GEOCHEMISTRY - Pb - ppm.	Scale: 1:2500
Checked:		Plate No: Mac. 46 J
Revised by: J. L. R. Date: 9/4/81		

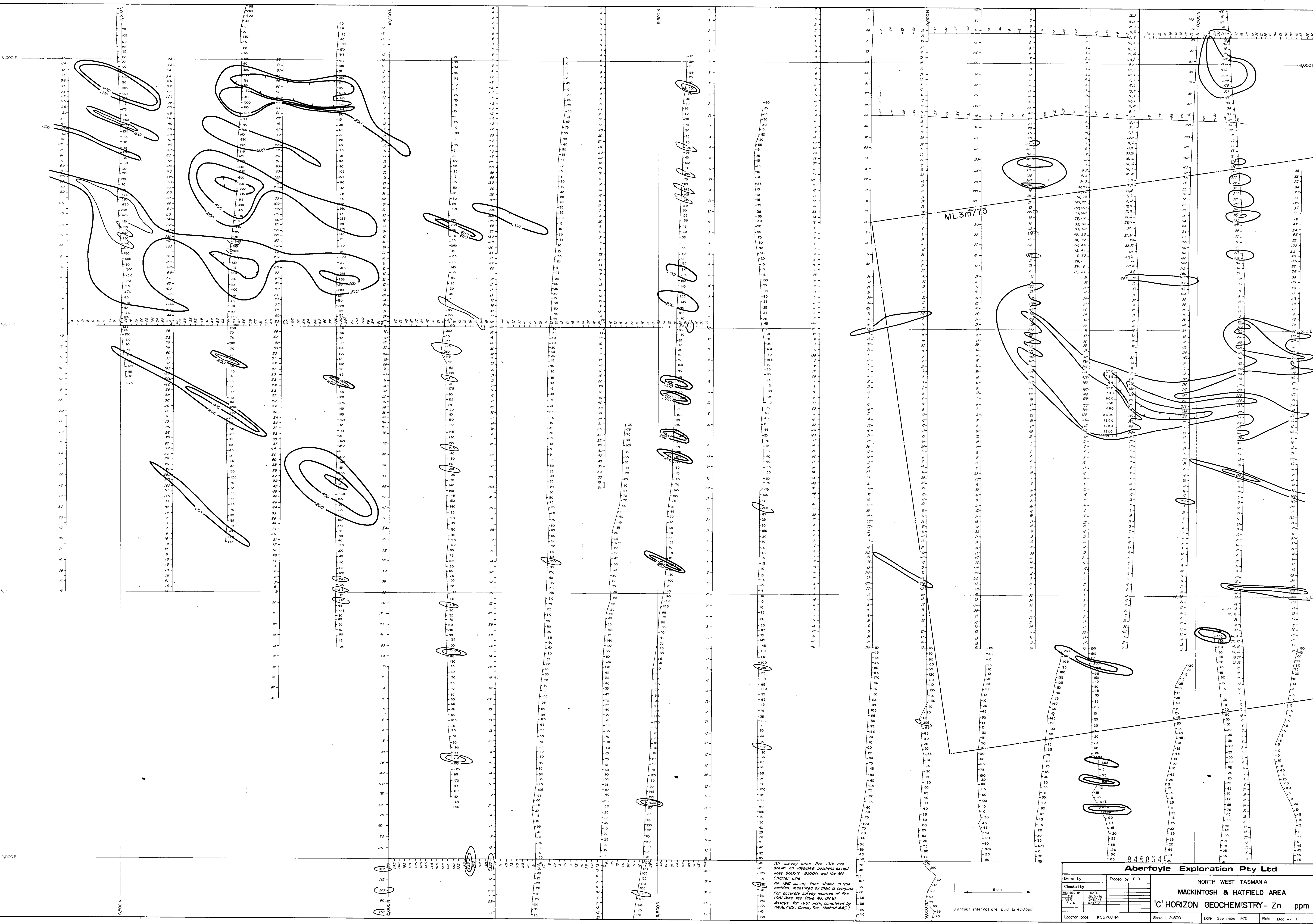


Aberfoyle Exploration Pty Ltd			
Drawn by RJE		Traced by RJE	
Checked by RJE		Revised by RJE	
DATE 16/7/76		DATE 16/7/76	
FILE 8/2/81		FILE 8/2/81	
Location code K55/6/44		Scale 1:2500	
Date June, 1975		Plate Mac 47 A	



All survey lines Pre 1981 are drawn on idealised positions except lines 8600N - 8300N and the Mt. Charter Line.
All 1981 survey lines shown in true position, measured by chain & compass.
For accurate survey location of Pre 1981 lines see Drawing No. GR 81.
Assays for 1981 work, completed by ANALABS, Geosc. Tas. Method AAS 1.

Aberfoyle Exploration Pty Ltd	
NORTH WEST TASMANIA	
MACKINTOSH & HATFIELD AREA	
'C' HORIZON GEOCHEMISTRY- Zn p.p.m.	
Drawn by R J E	Traced by R J E
Checked by	Revised by
DATE	DATE
R J E	R J E
Location code K55/6/44	Scale 1:2500
Date June, 1975	Plate Mac 47 B



All survey lines Pre 1981 are shown on labelled positions except lines 8600N - 8300N and the Mt Charter Line. All 1981 survey lines shown in true position, measured by chain & compass. For accurate survey location of Pre 1981 lines see Draw No. 04/81. Always for 1981 work, completed by ANALABS, Coopers, Tas. Method AAS 1

5 cm

Contour interval are 200 & 400ppm

Aberfoyle Exploration Pty Ltd	
NORTH WEST TASMANIA	
MACKINTOSH & HATFIELD AREA	
'C' HORIZON GEOCHEMISTRY - Zn ppm	
Drawn by	Traced by E.D.
Checked by	
REVISED BY	DATE
REVISED BY	DATE
REVISED BY	DATE
Location code	K55/6/44
Scale	1:2,500
Date	September 975
Plate	Mac 47 H

