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962001

VOL. I

81-1565

ABERFOYLE EXPLORATION PTY.LTD.

MEREDITH GRANITE PROJECT

PROGRESS REPORT FOR THE SIX MONTHS

ENDING APRIL 20, 1981

23-6-81

R.M. Joyce
Geologist

May 1981

001

962002

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962005

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INTRODUCTION

The Meredith Granite E.L. 16/78 was pegged in 1978 over vacant ground adjoining the south-west side of the Cleveland Exploration Licence in northwestern Tasmania (Plate MER.12).

Comstaff Pty.Ltd. under E.L. 1/68 were the first to use modern exploration techniques in an area which had been prospected for hard rock and alluvial tin deposits for decades. Both Comstaff and ANZECO (E.L. 11/75) undertook regional stream sediment sampling programmes covering both areas within the Meredith Granite, and the northern contact rocks.

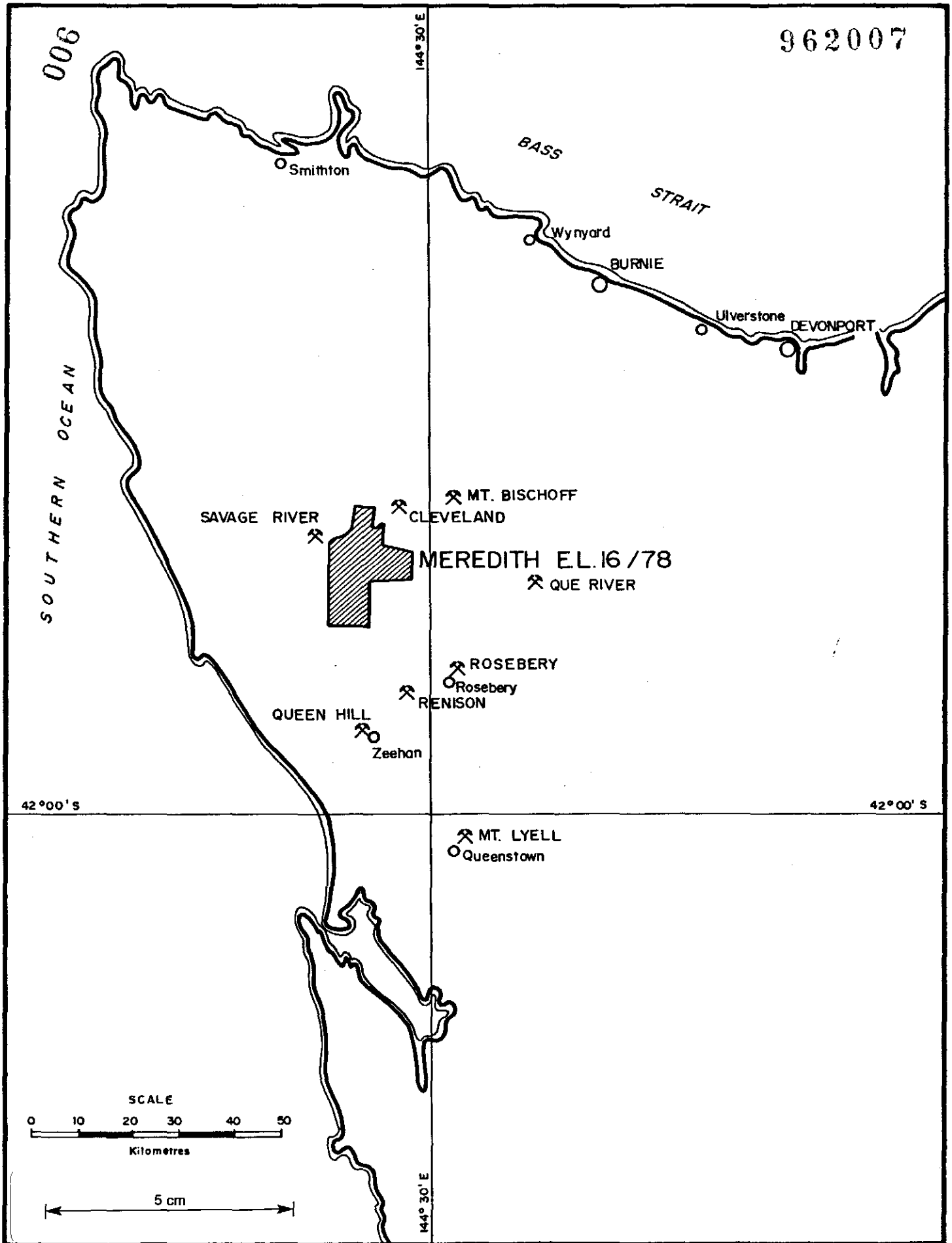
Aberfoyle commenced exploration of the E.L. in the summer of 1978-79 with a reconnaissance mapping and stream sediment sampling programme, which continued in the 1979/80 summer season. A DIGHEM survey flown in January 1980 provided many follow-up targets, and most of the summer of 1980/81 was spent in assessment of these E.M. anomalies.

GENERAL GEOLOGICAL SETTING (Plate MER. 11)

The licence includes most of the outcrop extent of the Meredith Granite and its northern contacts. The Meredith Granite is an Upper Devonian (K/AR;350 my, Pb/Sr 353 ± 7 my) intrusive, closely related in both age and composition to the Housetop, Pieman, Granite Tor and Heemskirk Granites in Western Tasmania.

Work by Aberfoyle has been concentrated on the northern margins of the intrusive, where porphyritic granite variants are common. Variations in these porphyritic marginal phases are common, usually involving relative phenocryst abundance and/or the abundance of biotite as a groundmass constituent. Other variations include grain size, and changes in the relative abundance of plagioclase, cordierite and tourmaline.

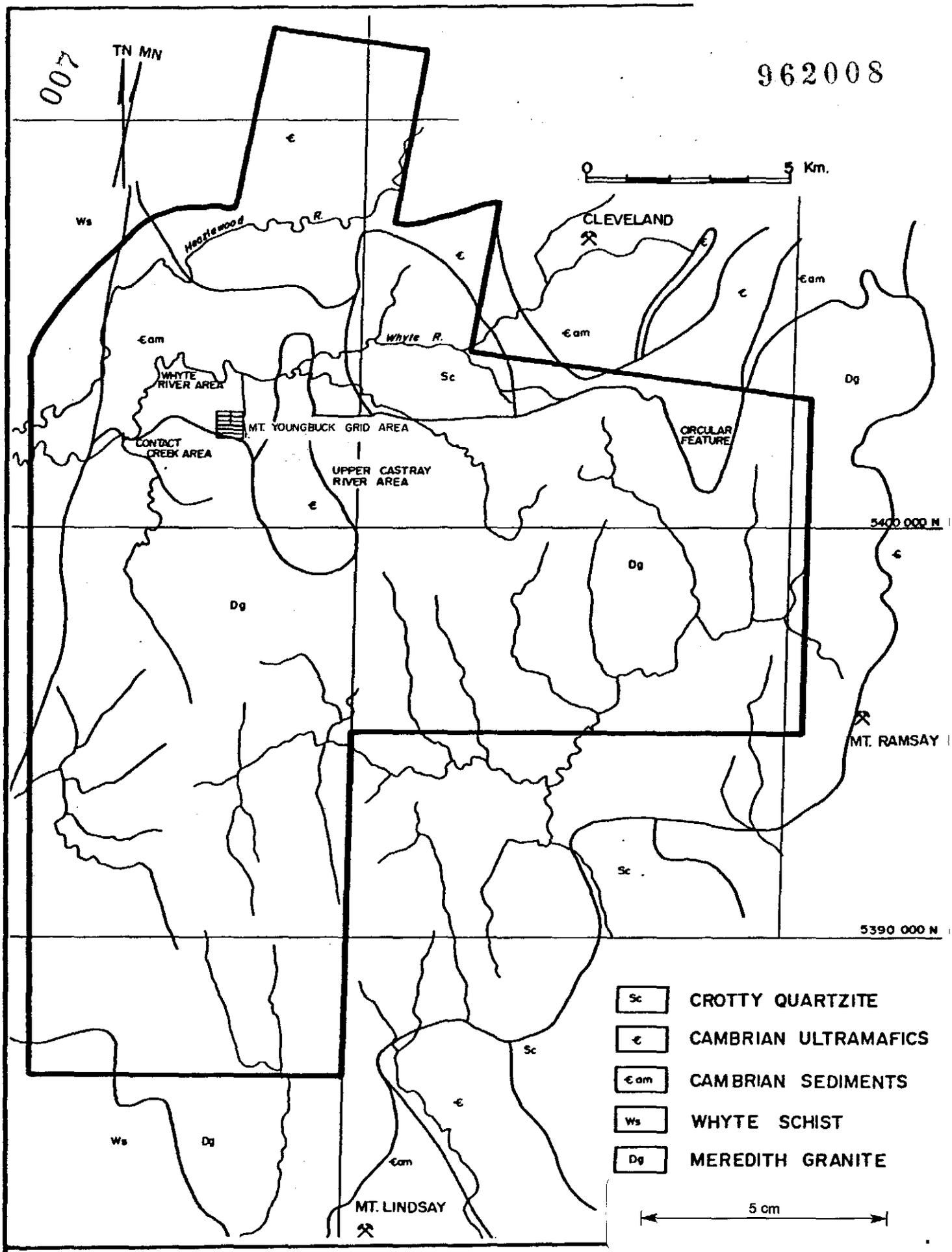
To the west the granite intrudes quartzites, quartz-muscovite schists, and carbonaceous black shales of the Precambrian Whyte Schist Complex.



Aberfoyle Exploration Pty Ltd

Drawn: R. J. E.	NORTH WEST TASMANIA MEREDITH E.L. 16/78 Locality Map	Location code:
Traced:		Date: September, 1979
Checked:		Scale: 1 : 1,000,000
Revised by: Date:		Plate No Mer. 12

962008



Aberfoyle Exploration Pty Ltd

Drawn:	NORTH WEST TASMANIA	Location code:
Traced: R.J.E.	MEREDITH E.L. 16/78	Date: April, 1981
Checked:	GEOLOGICAL SUMMARY PLAN	Scale: 1:125,000
Date		Plate No MER. 11

To the north-east pyroxenites, peridotites, serpentinites, altered basic volcanics and tuffs and undifferentiated igneous rocks of the Cambrian Heazlewood Complex and similar mafic-ultramafic ophiolite suites outcrop.

In the north-west sediments of probable Cambrian age appear to correlate with the Crimson Creek Formation. In general these sediments appear to be a sequence of tuffs, turbiditic volcolithic sandstones, siltstones and shales and rare conglomerates, chert and carbonates.

Ordovician-Silurian sediments are also in contact with the granite to the north, and apparently unconformably overly the Cambrian sequence. Silurian quartzites constitute the bulk of these younger sediments but stylolitic limestone, perhaps related to the Ordovician Gordon Limestone has been mapped in the Castray River and mineralised limestones occur to the north-east (Godkin).

SUMMARY OF WORK TO DATE

Following initial reconnaissance work in the summer of 1978/79, three distinct areas with potential for Sn, W mineralisation were outlined:

1. Betts Track Area
2. Upper Castray River Area
3. Contact Creek/Scheelite Creek Area

The 1979/80 summer season was primarily devoted to more detailed examination of geochemical anomalies generated by the initial survey.

The results of a DIGHEM survey flown over two areas within the licence provided further targets for follow-up, and work in the latter part of the 1979/80 season. Most of 1980/81 involved gridding and follow-up of E.M. anomalies.

DIGHEM FOLLOW-UP 1980/81

Targets generated by a DIGHEM survey flown in January 1980 were followed up by gridding, soil sampling, ground magnetics and detailed mapping and rock chip sampling.

In all, approx. 17 line-km of grid was cut and surveyed for the purposes of both access and sampling. On the grid lines, 734 twenty metre spaced soil samples and 440 rock samples were taken. Ground magnetics at 10 metre spacing and geological mapping at 1:2500 scale were completed on all access and grid lines.

The anomalies were in three areas:

i) Contact Creek Area

- three aero-magnetic anomalies within Cambrian Sediments

ii) Whyte Schist Zone

- four E.M. anomalies within the Pre-Cambrian Whyte Schists

iii) Circular Feature Area

- four apparent E.M. anomalies within Devonian Meredith Granite and Cambrian Mafic/Ultra-Mafic rocks

(refer Plate MER.24)

Ground Magnetics

In the Contact Creek area the three aero-magnetic anomalies were located with ground magnetics and found to be caused by disseminated magnetite within metasomatically altered sandstone and siltstones. No significant geochemical anomalies were detected associated with the magnetic anomalies.

Ground E.M.

The eight airborne E.M. anomalies were located and tested using the Max-Min II horizontal loop E.M. system. The Max-Min II system was operated in a slingram-type arrangement (Constant TX-RX separation) and the in-phase and out-of-phase component of secondary magnetic fields (these due to induced eddy currents in conductive features) were obtained at frequencies of 222, 444, 888, 1777 and 3555 Hz.

962011

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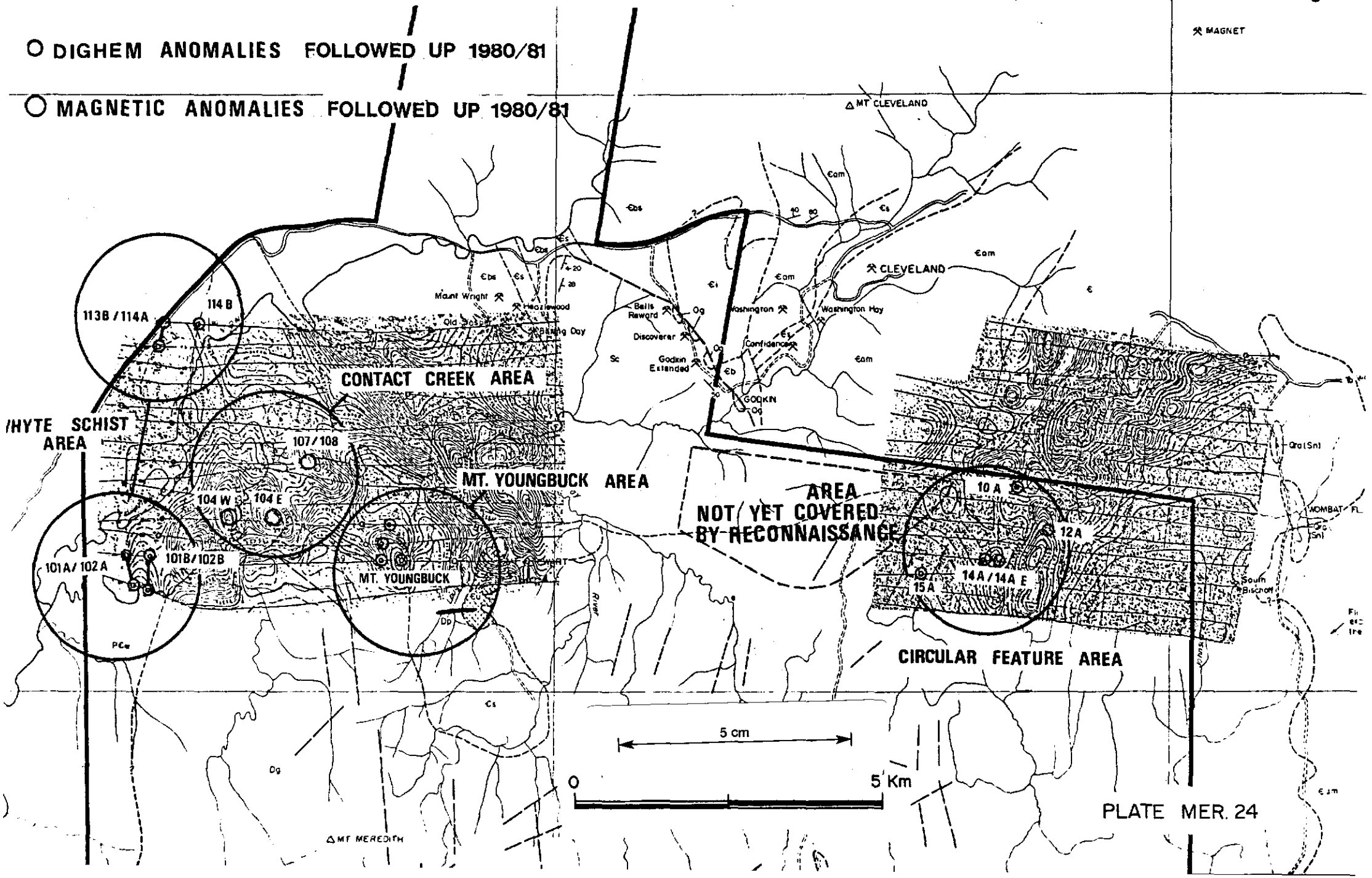
MEREDITH E.L. 16/78 DIGHEM COVERAGE

O DIGHEM ANOMALIES FOLLOWED UP 1980/81

O MAGNETIC ANOMALIES FOLLOWED UP 1980/81



The separation between the transmitting and receiving coils was kept at 100 metres, which, under ideal conditions should give a maximum depth of penetration of 70 metres. This compares well with the DIGHEM system which has a maximum 60-70 metres depth of penetration.

Although five frequency data was collected, only one or two frequencies were used in plotting, as it was found that at all sites, the information contained at different frequencies was essentially the same.

Prior to ground follow-up, it was understood that all anomalies chosen for follow-up in the Circular Feature area could be explained as being due to aerodynamic or magnetite caused noise on the in-phase channels. No conductors were located in this area and it is thus concluded that the airborne anomalies were of a spurious nature.

In the Whyte Schist area three of the four E.M. anomalies were tested, the fourth was attributed to carbonaceous shales after geological and geochemical follow-up, and was not tested.

All of the three anomalies tested were located in the same geological environment, i.e. interbedded quartzites and shales, and the lack of geochemical encouragement suggests that the anomalies may all be due to black shales.

All geological, geochemical and geophysical data is presented at 1:2500 scale in the detail of anomaly follow-up which follows:-

MT. YOUNGBUCK

A further five 760 m lines were added to the south of the existing Mt. Youngbuck grid to facilitate sampling of a magnetite skarn encountered towards the close of the 1979/80 season. (See Plate MER 23).

Detailed geological mapping (1:1000 scale) and rock chip sampling, 10 metre spaced hand auger soil sampling and 10 metre spaced ground magnetic surveys were carried out on the grid extensions (See Plates MER 19, 22, 26).

Ground magnetics over the existing grid was repeated to investigate possible magnetic anomalies coinciding with the large E.M. anomalies delineated by SIROTEM & DIGHEM on the northern part of the grid area. (See Meredith Report to Oct. 20 1980).

Ground E.M. system Max-Min II was used to test the E.M. response of the skarn horizon, and to confirm the presence of a conductor to the west of the skarn (DIGHEM anomaly 102D).

Geology

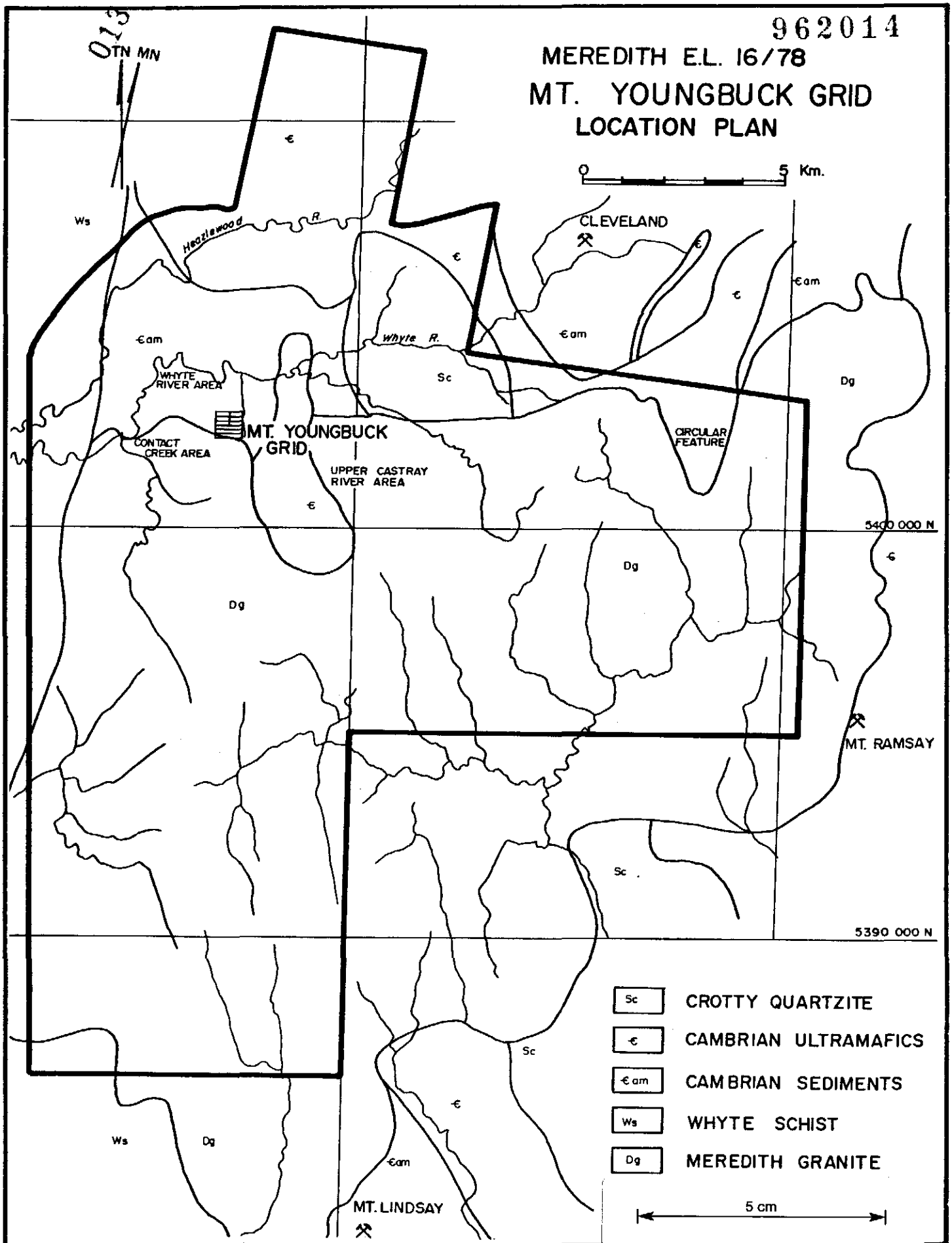
Mt. Youngbuck is the northern-most peak of the Meredith Range. To the south, the range is composed entirely of Devonian Meredith Granite, whilst Mt. Youngbuck is underlain by metamorphosed and metasomatised sediments. The sedimentary sequence on Youngbuck is very similar to the Crimson Creek Formation as described at Renison and Mt. Lindsay.

The bulk of the sequence consists of massive purple and green immature tuffaceous sandstones and/or tuffs. Sedimentary structures compatible with a turbiditic mode of deposition are occasionally evident, but outcrop is poor and any petrological distinctions between tuffs and poorly reworked tuffs have been obscured by pervasive metasomatic alteration.

Interbedded with the coarser clastic material are fine laminated and massive turbiditic siltstones, and rare shales (occasionally very graphitic). Carbonate horizons occur in the south of the grid, where their pyrometasomatically altered equivalents outcrop strongly, i.e. skarn horizon.

962014

MEREDITH E.L. 16/78
MT. YOUNGBUCK GRID
LOCATION PLAN



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Drawn:	NORTH WEST TASMANIA	Location code:
Traced: R.J.E.	MEREDITH E.L. 16/78	Date: April, 1981
Checked:	MT. YOUNGBUCK GRID	Scale: 1:125,000
Revised by: Date:	LOCATION PLAN	Plate No MER. 23

Doleritic material comprises much of the outcrop and scree on the mountain. The dolerite pre-dates the granite, and has been altered in a fashion very similar to the sedimentary pile. The dolerite occurs as sill-like bodies striking approximately parallel to the surrounding sediments. Because of its resistant nature, the doleritic material covers much of the grid as large boulders.

The sedimentary sequence on Mt. Youngbuck strikes consistently between 0 °and 30° Mag., with steep westerly dips of 50°-90°. No facing information has been observed in the field; nor any outcrop scale folding.

The major skarn horizon strikes at 010° mag along most of its strike length, and dips very steeply to the west.

Mineralization

The pyrometasomatic rocks occur near the top of Mt. Youngbuck, within 500 m of the granite contact. A major skarn horizon of 10-12 metres true width has been mapped, and several smaller (and less altered?) carbonate beds occur in the vicinity of the main skarn.

The skarns outcrop only in the vicinity of grid lines 29600N and 29700N, with scattered float occurring on line 29500N.

Field observation and petrological examination have revealed two major skarn types:

i) garnet (grossularite) - vesuvianite - clinopyroxene (diopside) ± amphibole, sphene

ii) amphibole (ferro-hastingsite) ± magnetite (0.90%) with accessory scheelite, fluorite, cassiterite.

The first type probably represents a high grade metamorphic assemblage (pyroxene - garnet hornfels). The second type is probably the product of hydrothermal alteration of this primary metamorphic/metasomatically formed skarn.

Significant Sn, WO_3 mineralization is restricted to the hastingsite - magnetite skarn.

maximum	Sn	1750 ppm
	WO_3	1.09%

The pyroxene - garnet skarns contain anomalous Sn, WO_3 and As, but are not significantly mineralized.

Distribution of these two skarn types appears irregular, and no zonation can be established without considerable further work.

Geophysics

i) Magnetics

Ten metre spaced ground magnetic surveys were performed over the entire ten line grid on Mt. Youngbuck. Magnetics on the old 5 line grid were repeated to check apparent magnetic anomalies associated with conductors defined by SIROTEM.

Results show possible coincident E.M. and magnetic anomalies on lines 30000N and 30200N (Plates MER 27), although high amplitude surficial noise due to disseminated pyrrhotite hampers interpretation.

On the new grid, an intense magnetic anomaly associated with the magnetite skarn was detected on all five lines. To the south, the anomaly is less intense with an apparent source at approx. 20 metres depth. To the north, outcropping magnetite-rich skarn gives a very intense anomaly. The anomaly disappears between lines 29700N and 29800N, and only an off-end effect is picked up on 29800N.

A second magnetic anomaly occurs 100 metres east of the major skarn anomaly on the southern three lines (29300N, 29400N and 29500N). High Sn geochemistry (max 330 ppm Sn) is associated with this anomaly on line 29400N in an area covered by dolerite float.

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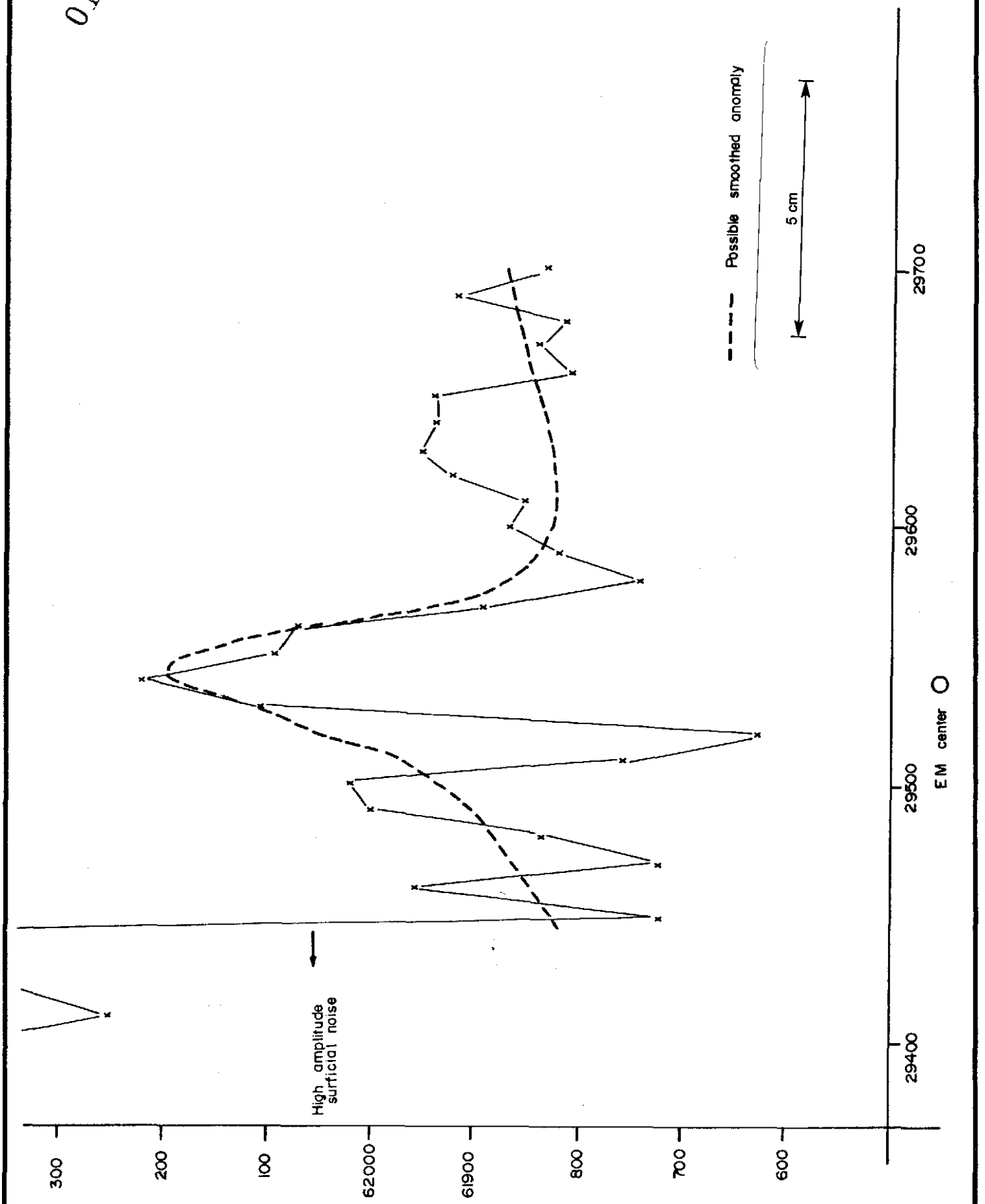
962017



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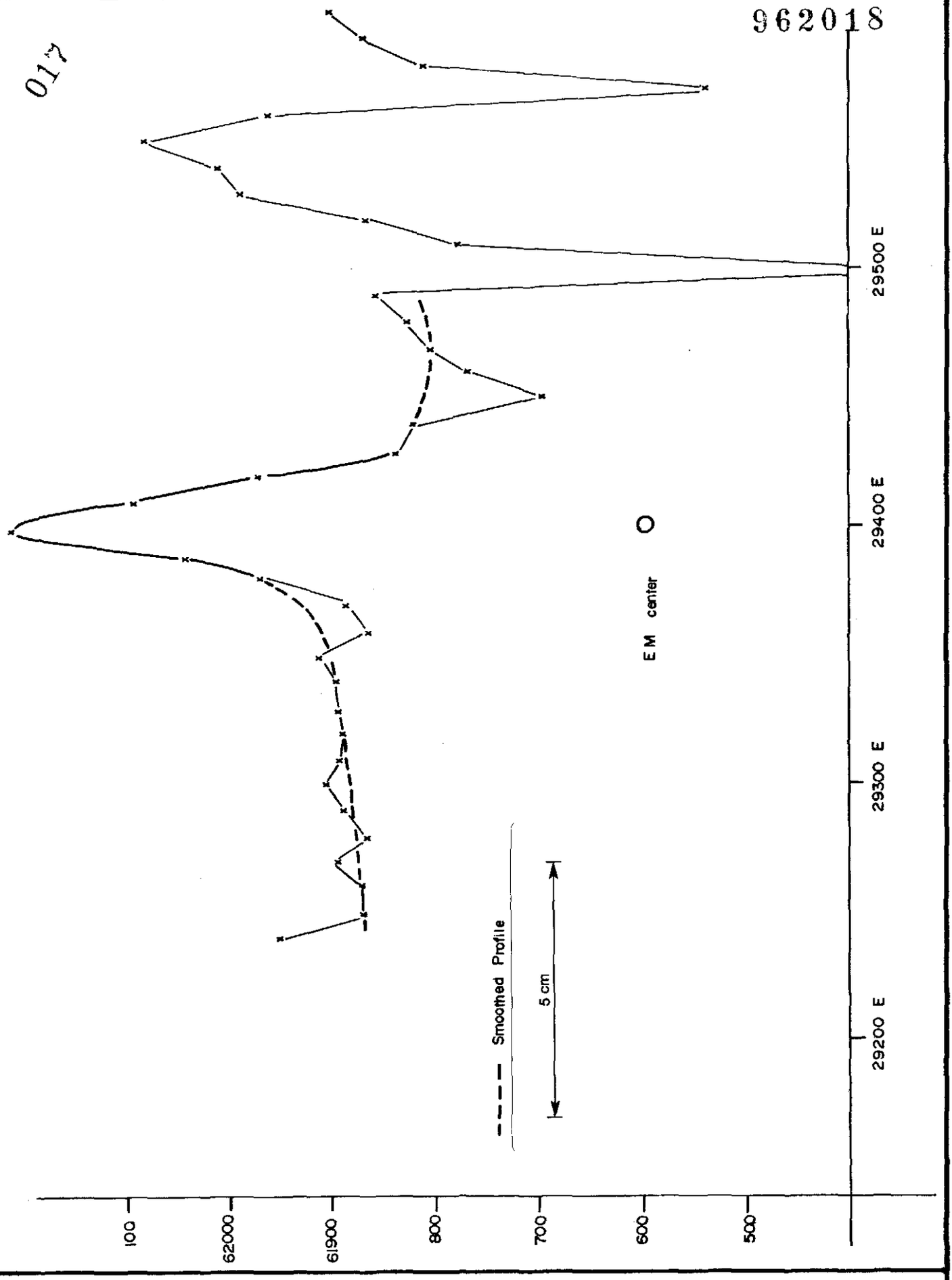
Drawn: J.S.	NORTH WEST TASMANIA	Location code:
Traced: J.L.R.	MEREDITH E.L. 16/78	Date: Jan. 1981
Checked:	MT. YOUNGBUCK GRID	Scale: 1:2000
Revised by: Date	GROUND MAGNETICS -SECTION 30000N	Plate No MER 27 - 30000

962018

017



Aberfoyle Exploration Pty Ltd

Drawn: J.S.	NORTH WEST TASMANIA	Location code:
Traced: J.L.R	MEREDITH E.L. 16/78	Date: Jan. 1981
Checked:	MT. YOUNGBUCK GRID	Scale: 1:2000
Revised by: Date:	GROUND MAGNETICS - SECTION 30200 N	Plate No MER 27-30200

ii) Ground E.M. (Plates MER 40)

The Mt. Youngbuck scheelite-magnetite skarn was picked out by the airborne survey (DIGHEM), as a very moderate conductor with a coincident 1100 T magnetic response. A conductor (102D) to the west of the skarn was also recognised.

The ground E.M. (Max-Min II) shows the skarn to be a steeply west dipping structure, with its conductivity thickness product decreasing from the northern to the southern lines.

Conductor 102D was located but not closed off. Grid extensions are required before the anomaly can be properly defined.

Geochemistry

Ten metre spaced hand auger soil samples were taken on the new 5 line grid. Samples were assayed for Sn, W, As (XRF) and Cu, Pb, Zn (AAS), by Comlabs.

Anomalies in Sn, W, As and Cu (Plate MER 19) were recorded over the skarn zone, and geochemical anomalies clearly coincide with the magnetic anomaly. Down-slope dispersion of more mobile elements, notably As, and to a lesser extent W, hamper clear interpretation, but contouring of results shows a linear anomaly trending approximately north-south. Geochemical anomalies are strongest to the north (where the skarn outcrops),

maximum	Sn	1050 ppm
	W	1550 ppm
	As	8700 ppm
	Cu	460 ppm

Anomalous geochemistry does not continue through to the old grid. Like the magnetic anomaly, the geochemical anomaly associated with the skarn is truncated between 29700N and 29800N.

The reasons for this truncation are difficult to determine due to lack of outcrop in the area in question, however, three possibilities are:-

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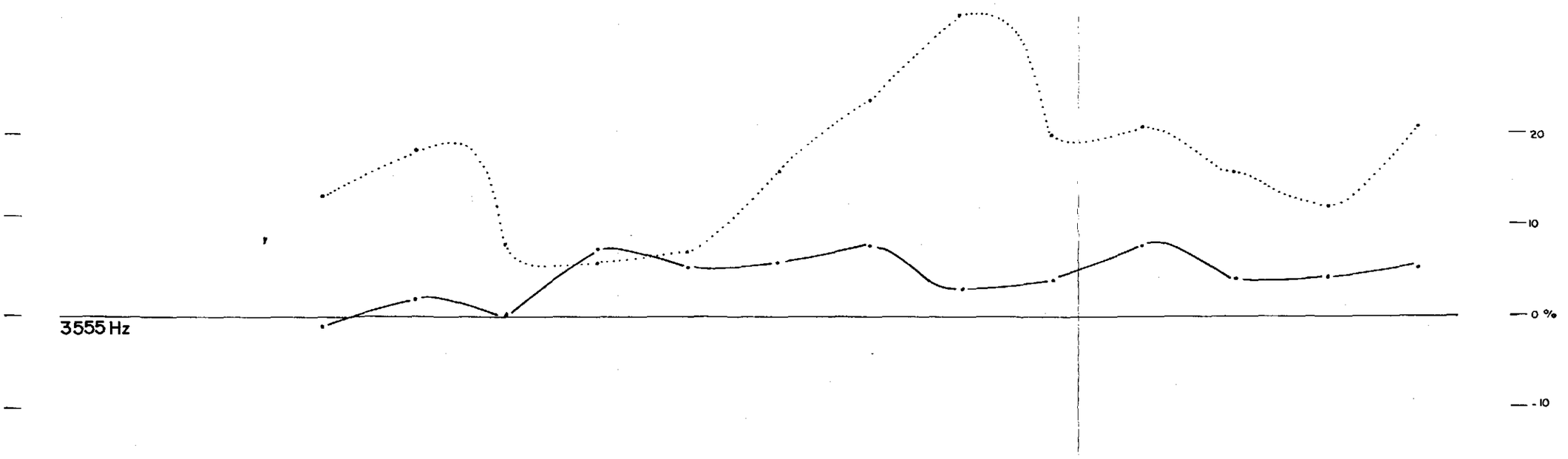
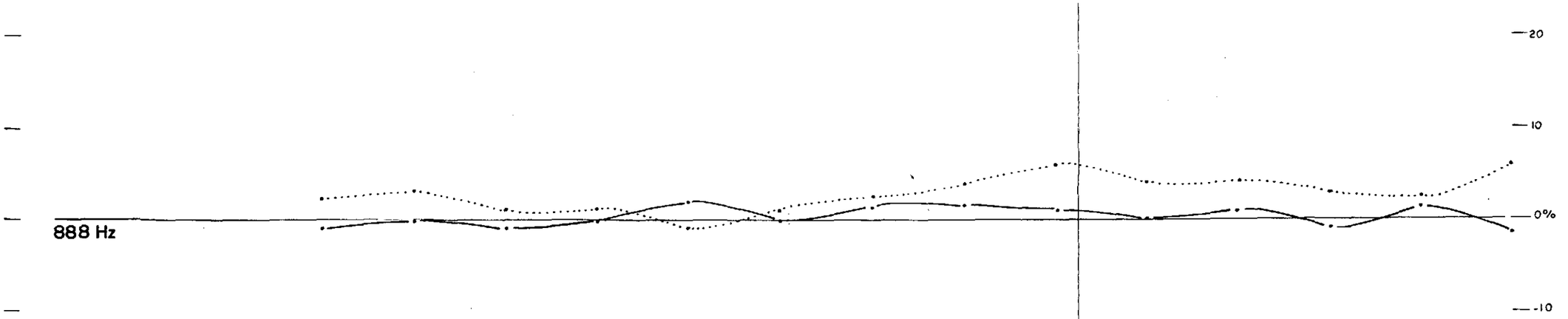
29200 E | 29300 E | 29400 E | 29500 E | 29600 E | 29700 E | 29800 E | 29900 E | 30000 E





Ground E M, out-of-phase

Ground E M, in-phase

100 metres

Tx — plotting point — Rx

5 cm

29200 E | 29300 E | 29400 E | 29500 E | 29600 E

Aberfoyle Exploration Pty Ltd

Geology:	NORTH WEST TASMANIA	Location code:
Drawn: J. S.	MEREDITH E.L. 16/78	Date: April, 1981
Traced: J.L.R.	MAX-MIN II GROUND E.M. SURVEY	Scale: 1:2500
Checked:	MT. YOUNGBUCK LINE 29300N	Plate No MER 40/29300
Revised by: Date:		

962021

020

W

E

29200 E | 29300 E | 29400 E | 29500 E | 29600 E | 29700 E | 29800E | 29900 E | 30000 E

3555 Hz

888 Hz

Skarn Response

20 | 10 | 0 % | -10 | -20 | 10 | 0% | -10

PERCENTAGES

Ground EM, out-of-phase

Ground EM, in-phase

100 metres

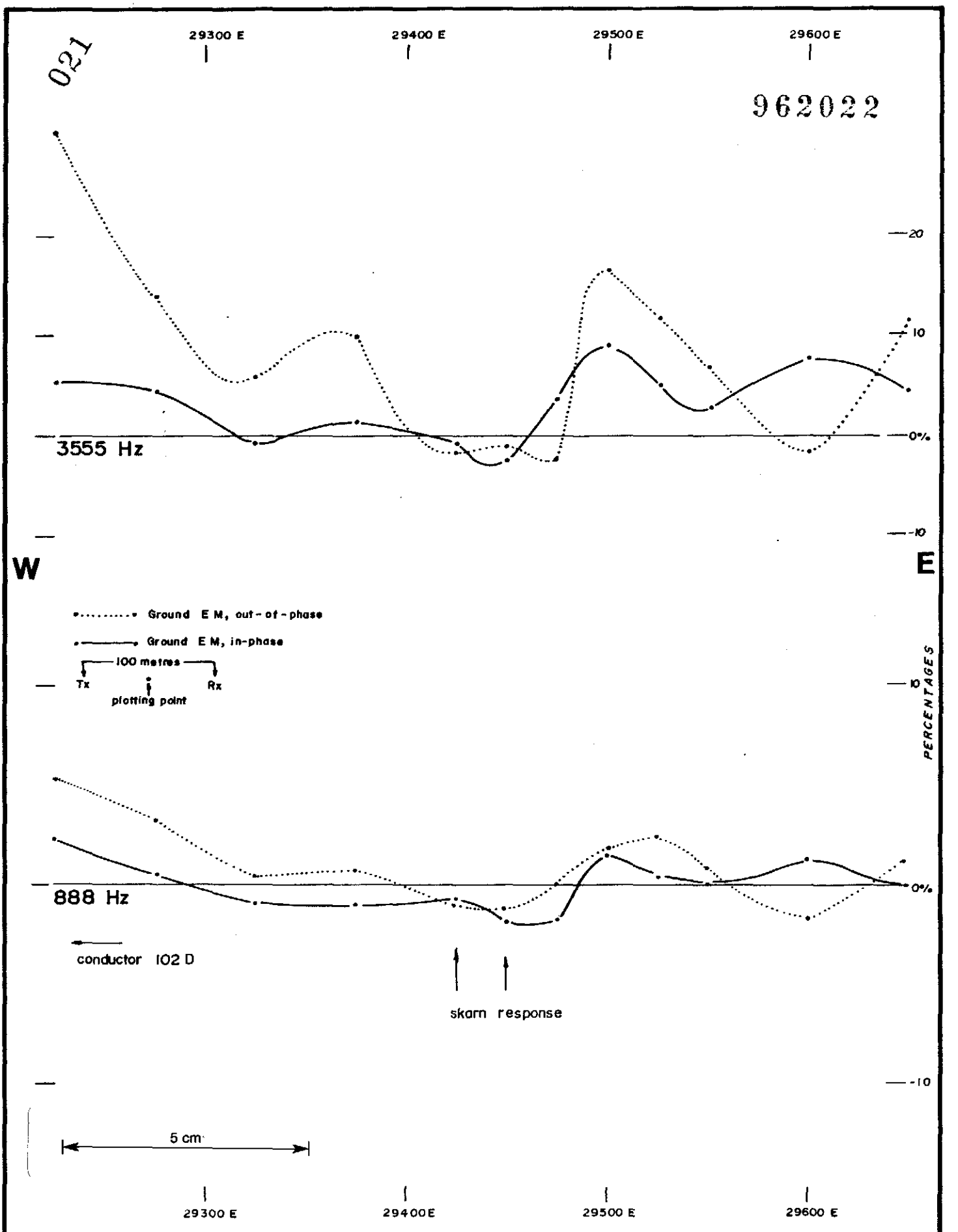
Tx | plotting point | Rx

5 cm

29200 E | 29300 E | 29400 E | 29500 E | 29600 E

Aberfoyle Exploration Pty Ltd

Geology:	NORTH WEST TASMANIA	Location code:
Drawn: J.S.	MEREDITH E.L. 16/78	Date: April, 1981
Traced: J.L.R.	MAX - MIN II GROUND E.M. SURVEY	Scale: 1:2500
Checked:	MT. YOUNGBUCK LINE 29400N	Plate No MER 40/29400
Revised by: Date:		



Aberfoyle Exploration Pty Ltd

Drawn: J.S	TASMANIA MEREDITH E.L.16/78 GROUND E.M. SURVEY MT. YOUNGBUCK LINE 29500N	Location code:
Traced: J.L.R.		Date: April, 1981
Checked:		Scale: 1: 2500
Revised by: Date		Plate No MER 40/29500

962023

022

29240 E | 29340 E | 29440 E | 29540 E | 29640 E | 29740 E | 29840 E | 29940 E

3553 Hz

888 Hz

Conductor 102 D

Skarn Response

20 | 0% | -20

PERCENTAGES

W

E

Ground EM, out-of-phase

Ground EM, in-phase

100 metres

Tx Rx

plotting point

5 cm

29240 E | 29340 E | 29440 E | 29540 E | 29640 E

Aberfoyle Exploration Pty Ltd		
Geology:	NORTH WEST TASMANIA	Location code:
Drawn: J. S	MEREDITH E.L. 16/78	Date: April, 1981
Traced: J.L.R.	MAX-MIN II GROUND E.M. SURVEY	Scale: 1:2500
Checked:	MT. YOUNGBUCK LINE 29600N	Plate No MER 40/29600
Revised by: Date:		

962024

023

29200 E | 29300 E | 29400 E | 29500 E | 29600 E | 29700 E

444 Hz

20 | 0% | -20

Dip

W

E

20 | 0% | -20

PERCENTAGES

888 Hz

Conductor 102 D

Dip

Skarn Response

29200 E | 29300 E | 29400 E

Ground EM, out-of-phase

Ground EM, in-phase

100 metres

Tx — plotting point — Rx

5 cm

Aberfoyle Exploration Pty Ltd

Geology:	NORTH WEST TASMANIA	Location code:
Drawn: J. S.	MEREDITH E.L. 16/78	Date: April, 1981
Traced: J.L.R.	MAX-MIN II GROUND E.M. SURVEY	Scale: 1:2500
Checked:	MT. YOUNGBUCK LINE 29700 N	Plate No MER 40/29700
Revised by: Date:		

i) Faulting out of the carbonate horizon(s) either before or after granite intrusion and subsequent pyrometasomatic alteration.

ii) Along strike compositional variation within the carbonates resulting in rocks less susceptible to skarn formation occurring to the north.

iii) Truncation of the prospective horizon by dolerite intrusion.

CONTACT CREEK MAGNETIC ANOMALIES

Whyte River Meander Area

MAGNETIC ANOMALY 107-108E

Geology (Plate MER 29a)

Cambrian volcolithic sandstones, siltstones and shales underly most of the gridded area, with large doleritic sills in the east and west. The dolerites have weak magnetic anomalies associated with them, but disseminated magnetite in altered sediment is the likely source of the major ground magnetic anomaly in the gridded area.

Pyritic shales in the far north-east of the grid are presumably merely a lithological peculiarity.

Geochemistry (Plate MER 29c)

Much of this grid is underlain by an alluvial flat associated with the Whyte River. In this area the Whyte carries Sn and Cu from tailings at the Cleveland Mine, some 10 km upstream. Samples taken close to the river reflect this contamination. (Sn - max. 2500 ppm; Cu - max. 690 ppm).

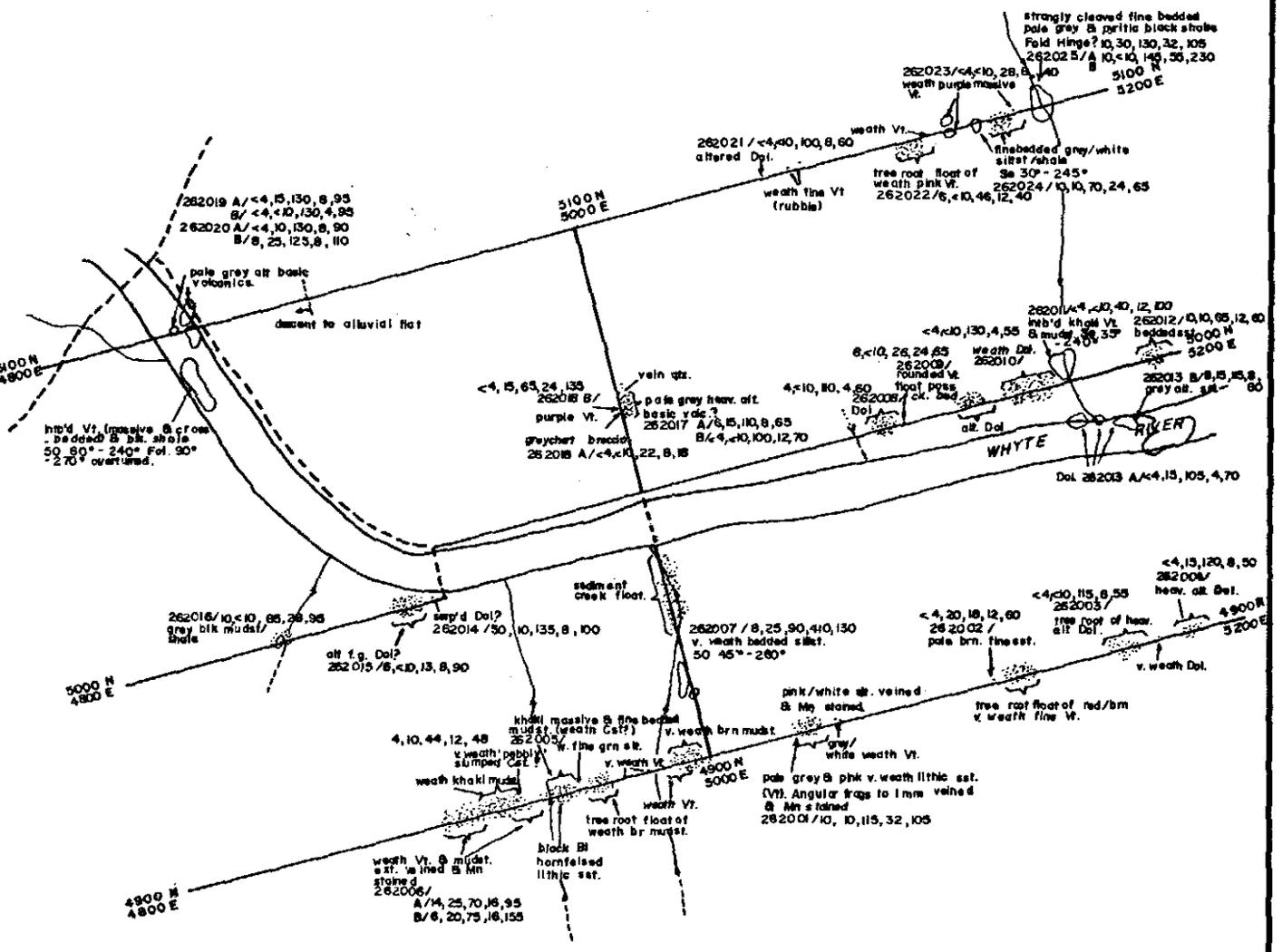
Geophysics (ground magnetics) (Plate MER 29b)

Two ground magnetic anomalies occur on the grid. A 500 ɣ anomaly occurs in the north-west associated with pyrrhotite bearing doleritic volcanics. A larger 1500 ɣ anomaly occurs within metasomatized volcolithic sediments and its probably due to disseminated magentite.

026

962027

MN



OUTCROP GEOLOGY

● 262005/ Rock chip sample locations & results in ppm. Sn, W, Cu, Pb, Zn

For Legend See Plate MER. 18

NOTE: For Location Refer Meredith Plate No. MER.4

355/400

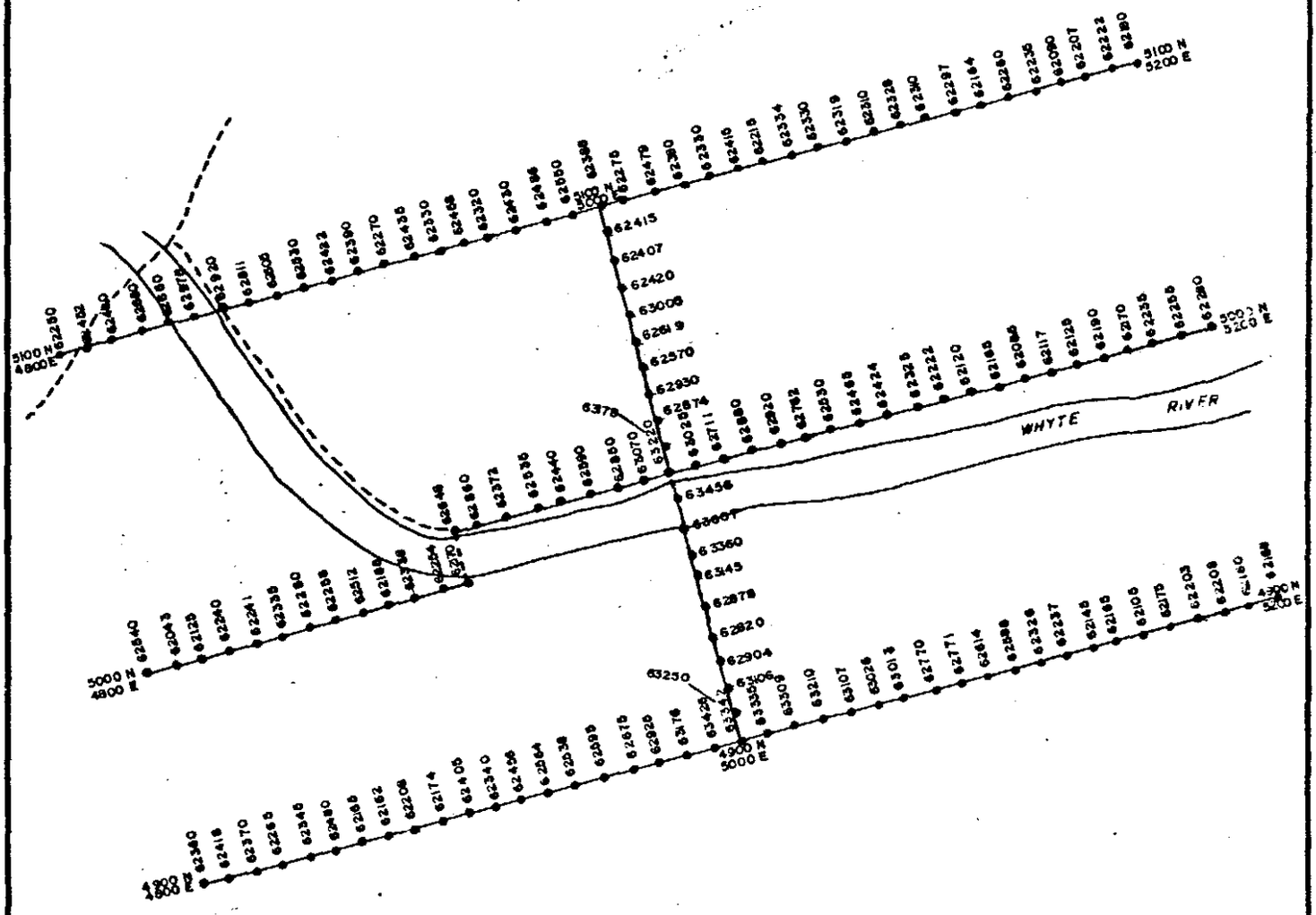
5 cm

Aberfoyle Exploration Pty Ltd

Drawn: R.M.J.	NORTH WEST TASMANIA	Location code:
Traced: J.L.R.	MEREDITH E.L. 16/78	Date: Feb. 1981
Checked:	DIGHEM FOLLOW-UP 1980-81	Scale: 1:2500
Revised by: Date:	WHYTE RIVER MEANDER AREA	Plate No MER. 29a
	MAGNETIC ANOMALY 107-108E	

027

962028



GROUND MAGNETICS

● 63250 Location and Reading in gammas

NOTE: For Location Refer Meredith Plate No MER.4 355/400

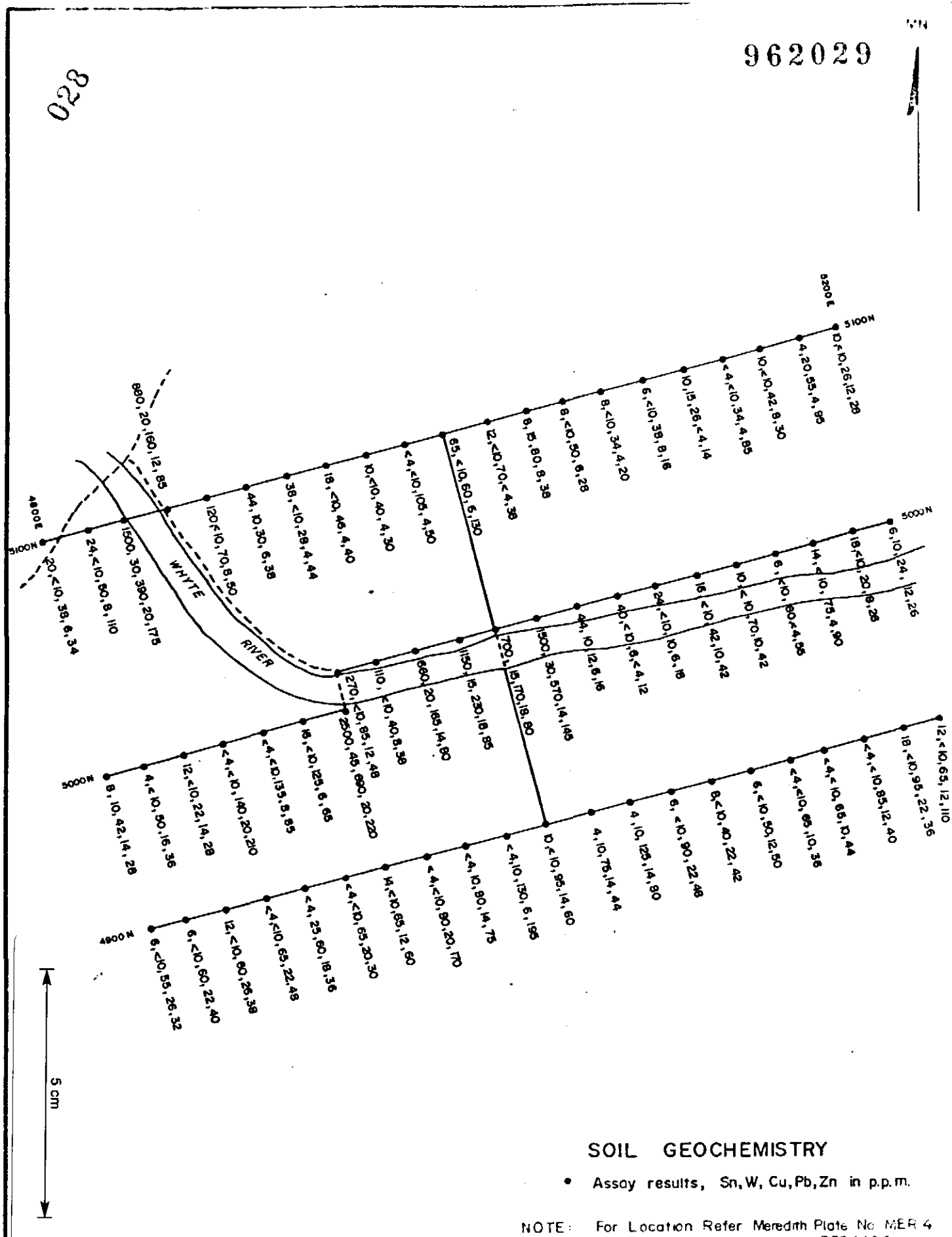
5 cm

Aberfoyle Exploration Pty Ltd

Drn: R.M.J	NORTH WEST TASMANIA	Location code
Trace: J.C.R	MEREDITH E.L. 16/78	Date Feb 1981
Ck:	DIGHEM FOLLOW-UP 1980-81	Scale 1:2500
	WHYTE RIVER MEANDER AREA	Plate No MER 29 b
	MAGNETIC ANOMALY 107/108 E	

962029

028



SOIL GEOCHEMISTRY

- Assay results, Sn, W, Cu, Pb, Zn in p.p.m.

NOTE: For Location Refer Meredith Plate No MER 4 355/400

Aberfoyle Exploration Pty Ltd

Drawn: R.M.J	
Traced: J.L.R	
Checked:	
Revised by: Date	

NORTH WEST TASMANIA

MEREDITH E.L. 16/78

DIGHEM FOLLOW-UP 1980-81

WHYTE RIVER MEANDER AREA

MAGNETIC ANOMALY 107/108 E

Location code:	
Date: Feb 1981	
Scale: 1:2500	
Plate No: MER 29 C	

029

CONTACT CREEK

962030

MAGNETIC ANOMALY 104E

Geology (Plate MER 31a)

The magnetic anomaly occurs within 800 m of the granite contact and thus sediments outcropping in the area are extensively metasomatized and metamorphosed. Purple and dark grey tremolitized sandstones (greywackes) and siltstones (pelites) cover most of the gridded area with a dolerite dyke/sill in the north-east corner. Outcrop is very poor and only scattered float occurs, much of which is extensively weathered. Much of the sediment float in the grid is strongly magnetic. Petrology indicates that these rocks contain "accessory to abundant fine clastic opaques", much of which is magnetite. A large amount of this magnetite is probably primary, although some may be due to low-grade metamorphic recrystallization of other primary Fe-oxide phases.

There is no evidence of skarn mineralization in the gridded area, and the observed magnetic anomaly is probably due to disseminated magnetite within metasomatized sediments.

Geochemistry (Plate MER 31c)

Twenty metre spaced hand-auger soil samples detected no significant geochemical anomalies. Results were uniformly low (Sn < 4 to 18 ppm).

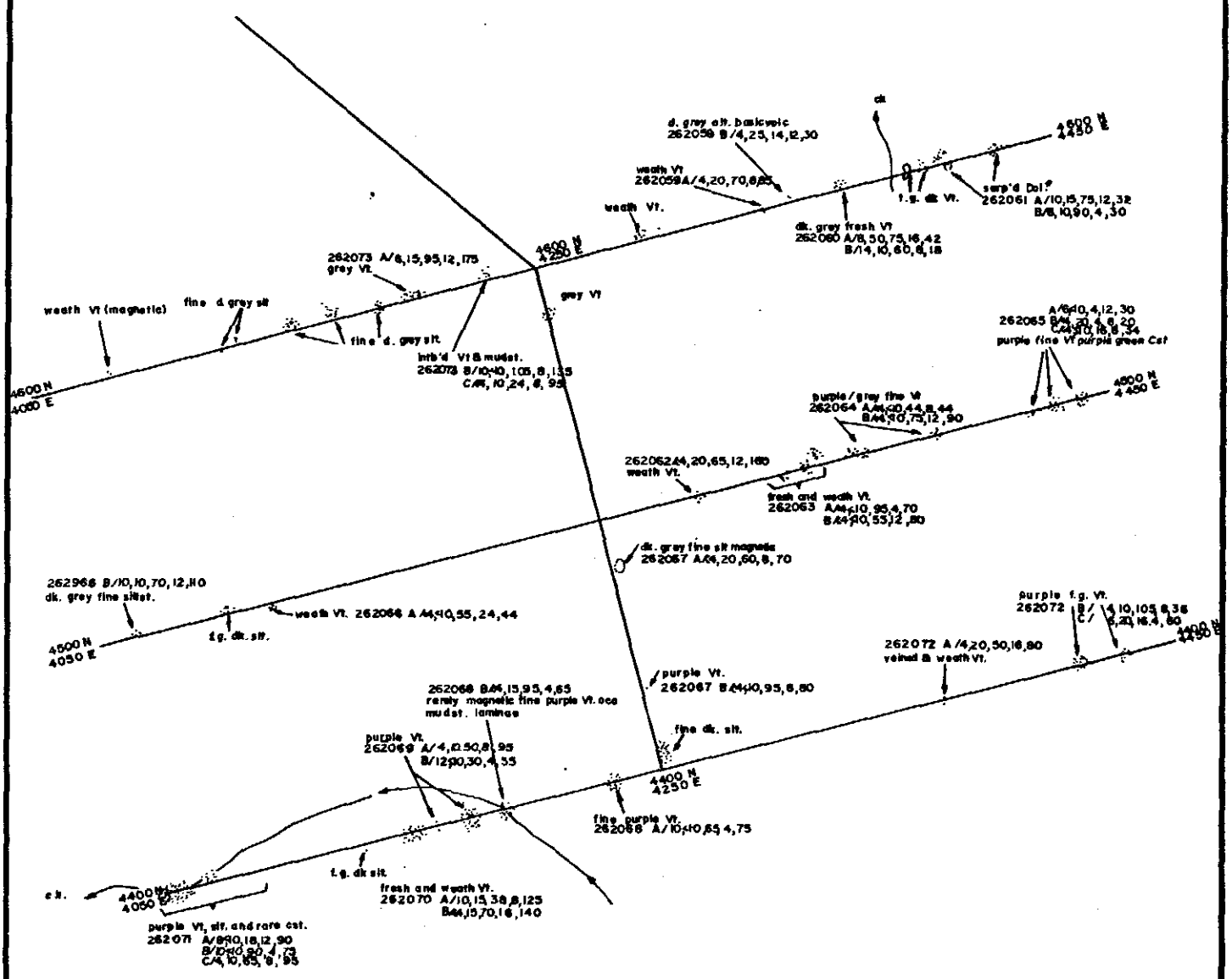
Ground Magnetics (Plate MER 31b)

Ground magnetics outline several N-W striking anomalies of up to 1500 γ suggesting that distribution of disseminated Fe-oxides is a primary lithological feature.

030

962031

MN



OUTCROP GEOLOGY

● 262068/ Rock chip sample locations & results in p.p.m Sn, W, Cu, Pb, Zn

For Legend See Plate MER.18

NOTE: For Location Refer Meredith Plate No. MER 4

355/400

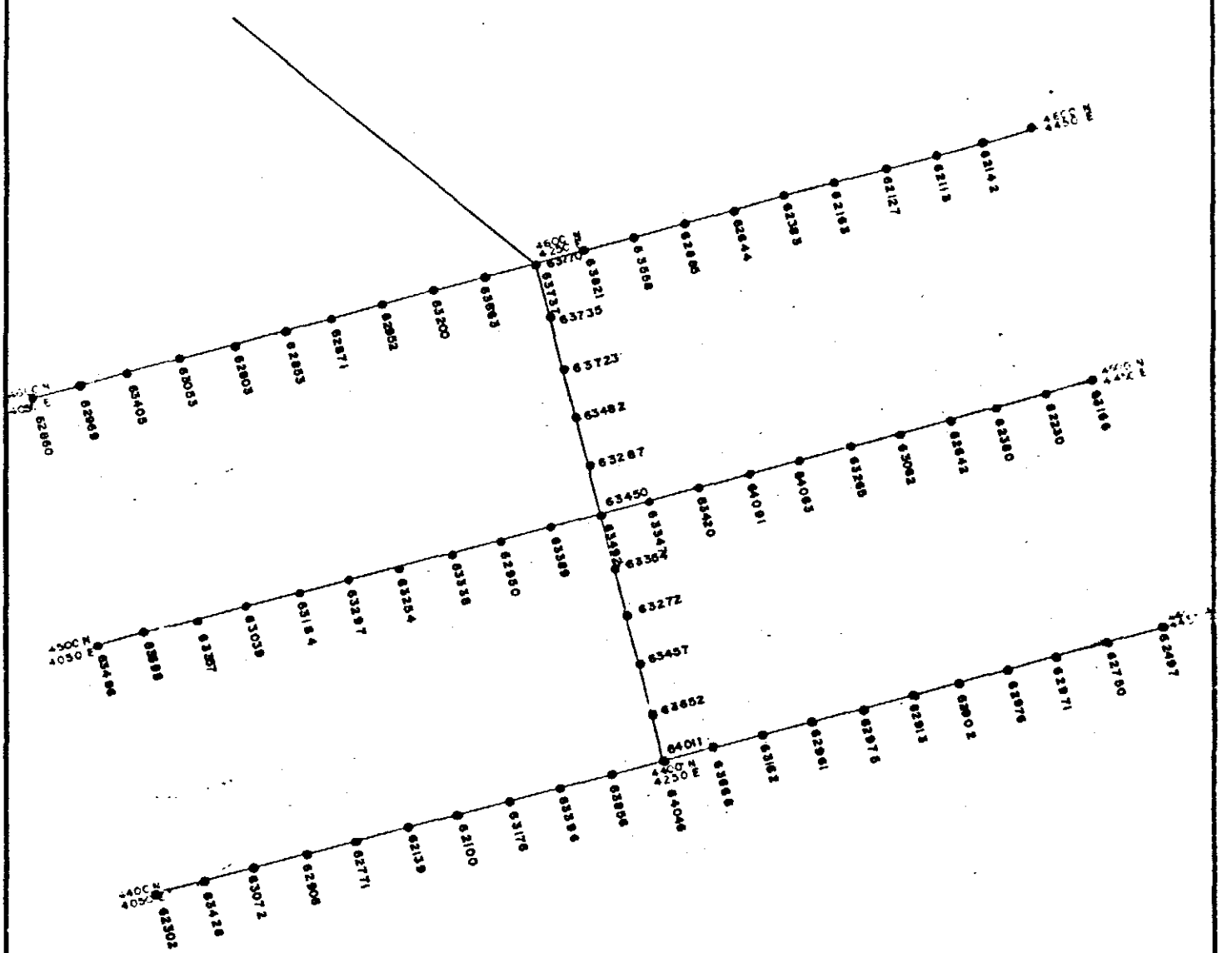
5 cm

Aberfoyle Exploration Pty Ltd

Drawn: R.M.J.	NORTH WEST TASMANIA	Location code:
Traced: J.L.R.	MEREDITH E.L. 16/78	Date: Feb. 1981
Checked:	DIGHEM FOLLOW-UP 1980-81	Scale: 1:2500
Revised by: Date:	CONTACT CREEK	Plate No. MER. 31a
	MAGNETIC ANOMALY 104 E	

031

962032



5 cm

GROUND MAGNETICS

●63396 Location and Reading in gammas

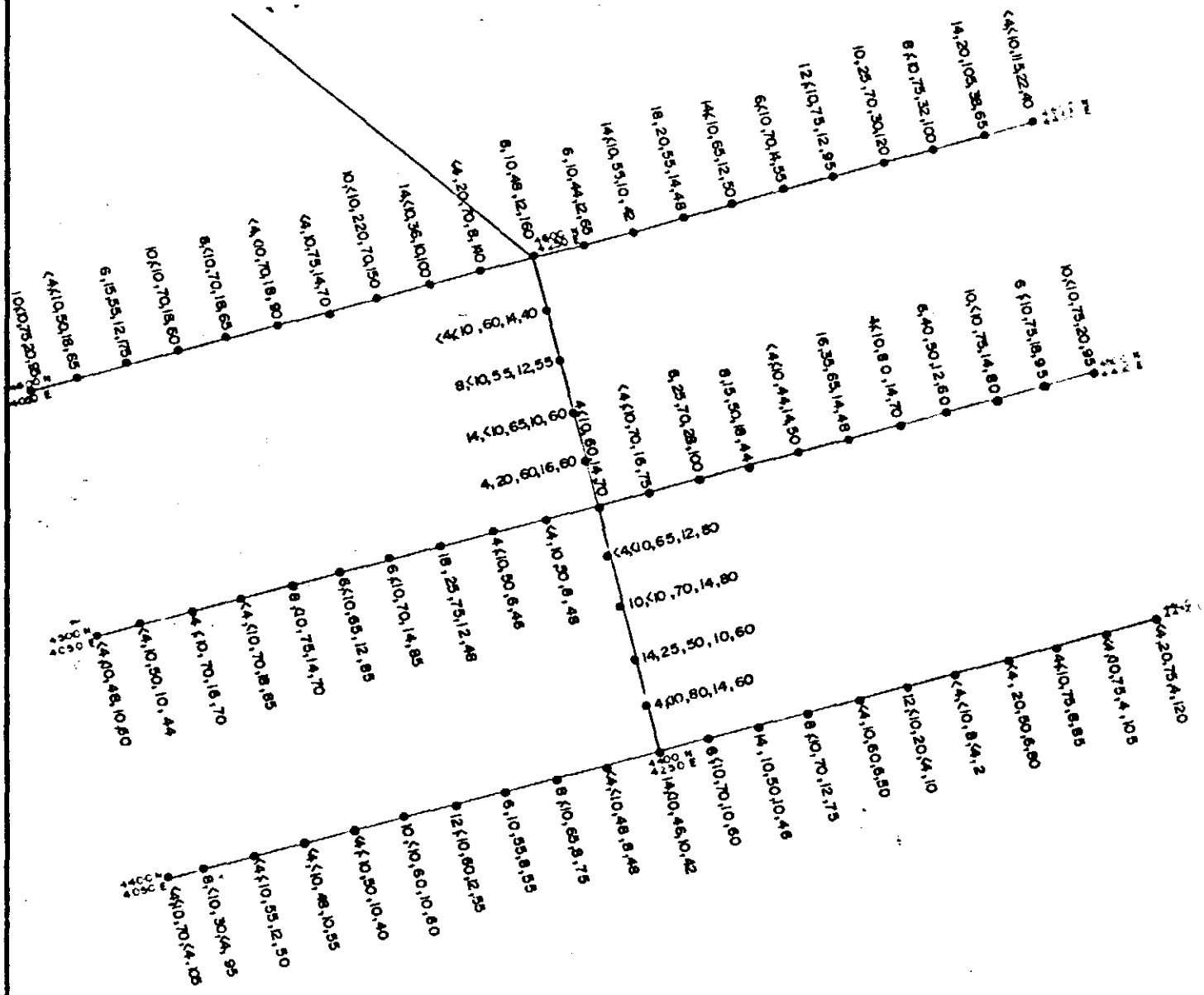
NOTE: For Location Refer Meredith Plate No. MER 4 355/400

Aberfoyle Exploration Pty Ltd

Drawn R.M.J.	NORTH WEST TASMANIA	Location code
Traced J.L.R	MEREDITH E.L. 16/78	Date Feb 1991
Checked	DIGHEM FOLLOW-UP 1980-81	Scale 1:2500
	CONTACT CREEK	Plate No. MER 5b
	MAGNETIC ANOMALY 104 E	

962033

032



Aberfoyle Exploration Pty Ltd

Drawn R.M.J	NORTH WEST TASMANIA	Location code
Traced J.L.R	MEREDITH E.L. 16/78	Date Feb 1981
Checked	DIGHEM FOLLOW-UP 1980-81	Scale 1:2500
	CONTACT CREEK	Plan No MER 31c
	MAGNETIC ANOMALY 104 E	

CONTACT CREEK

MAGNETIC ANOMALY 104W

Geology (Plate MER 30a)

This anomaly is underlain by sediments similar to those over anomaly 104E. Metasomatized tuffaceous sediments with accessory to abundant disseminated Fe-oxides (mostly magnetite) occur throughout the gridded area. The sediments strike NNW and dip to the west. (see ANOM. 104E)

Geochemistry (MER 30c)

No significant anomalies (Sn <4 to 24 ppm)

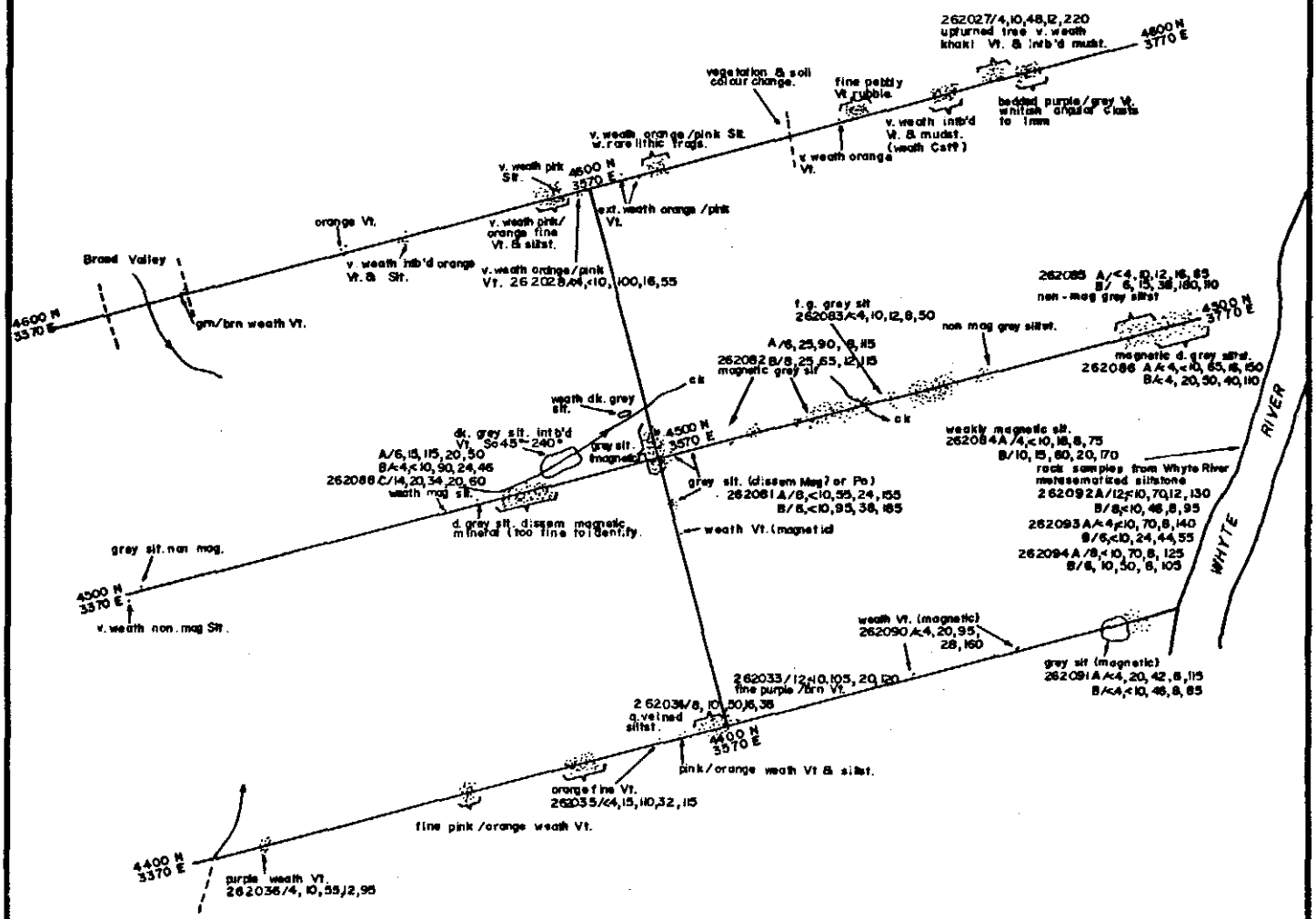
Geophysics (Ground Magnetics) (Plate MER 30b)

As for anomaly 104E, ground magnetics outline distinct N-W trending anomalies related to lithologies with greater abundances of primary Fe-oxides.

034

962035

MN



OUTCROP GEOLOGY

● 262034/ Rock chip sample locations & results in ppm Sn, W, Cu, Pb, Zn

For Legend See Plate MER. 18

5 cm

NOTE: For Location Refer Meredith Plate No. MER. 4

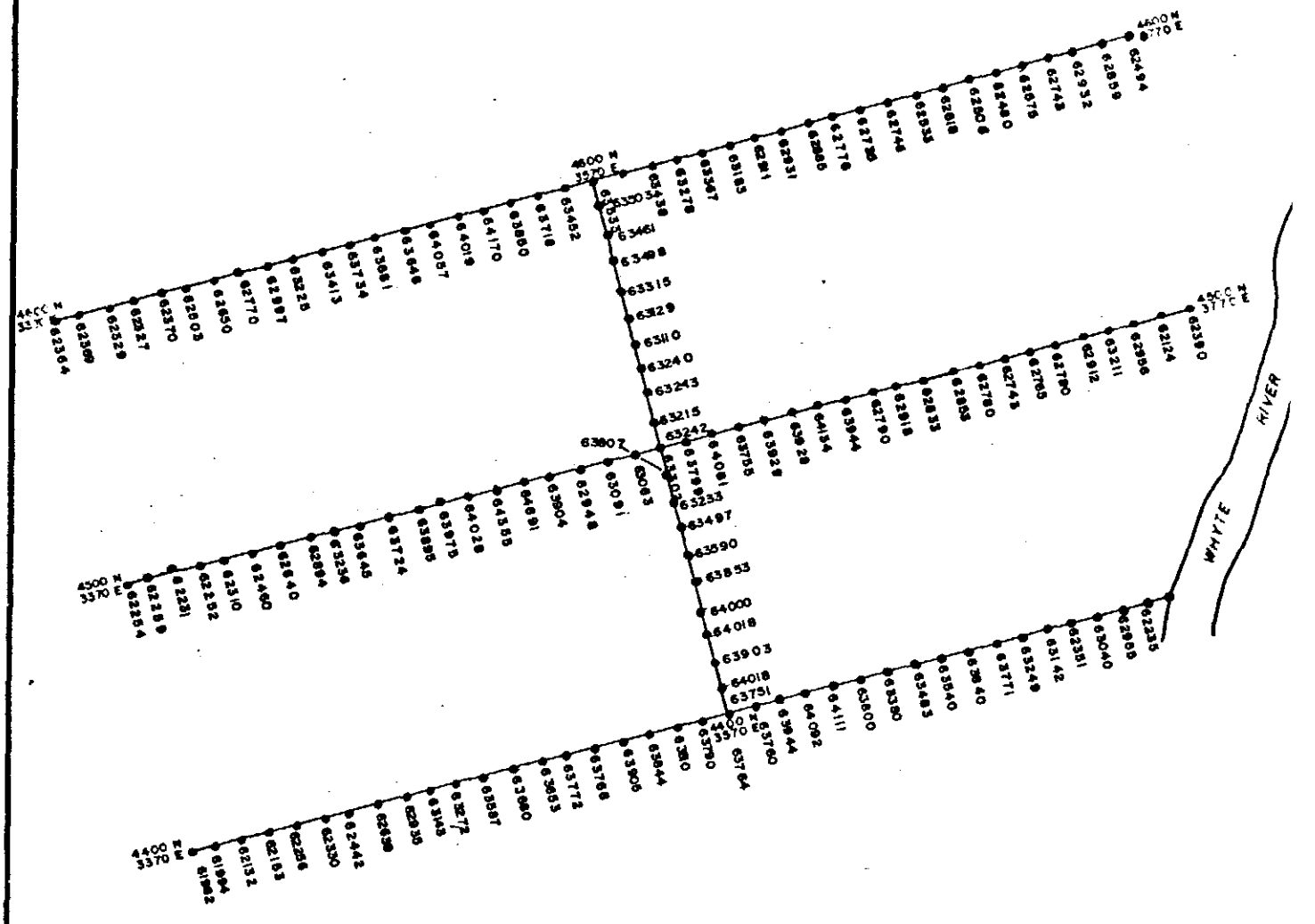
347/400

Aberfoyle Exploration Pty Ltd

Drawn: R.M.J.	NORTH WEST TASMANIA	Location code:
Traced: J.L.R.	MEREDITH E.L. 16/78	Date: Feb. 1981
Checked:	DIGHEM FOLLOW-UP 1980-81	Scale: 1:2500
Revised by: Date:	CONTACT CREEK	Plate No MER 30a
	MAGNETIC ANOMALY-104 W	

035

962036



5 cm

GROUND MAGNETICS

● 63771 Location and Reading in gammas

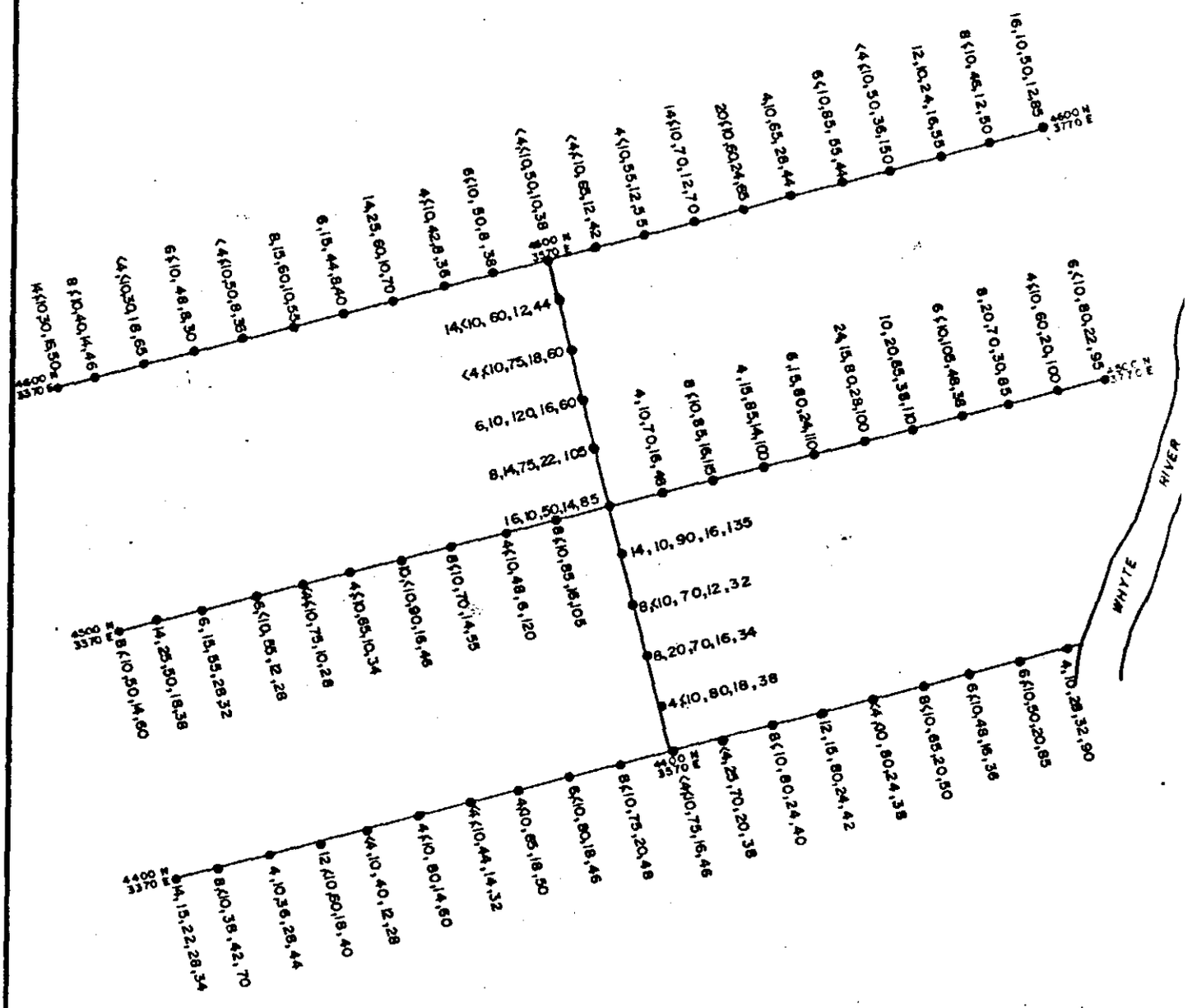
NOTE: For Location Refer Meredith Plate No. MER. 347/400

Aberfoyle Exploration Pty Ltd

Drawn: R.M.J	NORTH WEST TASMANIA	Location code
Traced: J.L.R	MEREDITH E.L. 16/78	Date Feb 1981
Checked	DIGHEM FOLLOW-UP 1980-81	Scale 1:2500
	CONTACT CREEK	Plate No MER 35 b
	MAGNETIC ANOMALY 104 W	

036

962037



5 cm

SOIL GEOCHEMISTRY

• Assay Results Sn, W, Cu, Pb, Zn in p.p.m.

NOTE: For Location Refer Meredith Plate No MER 4 347/400

Aberfoyle Exploration Pty Ltd

Drawn: R.M.J.	NORTH WEST TASMANIA	Location code:
Traced: J.L.R.	MEREDITH E.L. 16/78	Date: Feb 1981
Checked	DIGHEM FOLLOW-UP 1980-81	Scale: 1:2500
	CONTACT CREEK	Plate No MER 30c
	MAGNETIC ANOMALY-104 W	

037

WHYTE SCHIST ZONE

E.M. ANOMALY 101/102B

DIGHEM ANOMALY DESCRIPTION

- Four line anomaly
- Strong thick E.M. conductor
- Strong resistivity low
- No magnetic response
- Probably formational, underlain by carbonaceous slates

Geology (MER 32a)

Outcrop on the grid is poor, and the best exposure occurs in a creek section on line 4500N. In this area extremely graphitic black shales occur interbedded with grey shales, and rare thin grey quartzite horizons. Lithologies are steeply dipping and strike north-south. There is also a very strongly developed N-S cleavage. Black shale horizons to 10 m width were observed. In the south-west corner of the grid, massive green altered basic volcanics occur, with rare disseminated Po and Py. The north-west corner of the grid contains huge cliff-like outcrops of tremolotized laminated green and purple shales and siltstones. The metasomatic alteration styles, and the lithologic are very similar to those observed in the Cambrian sediments to the east and north.

Geochemistry (MER 32c)

No significant anomalies. Sn $\leq$4 to 24 ppm.

Geophysics

A. Ground Magnetics (MER 32b)

Ten metre spaced ground magnetics detected no major anomalies. The volcanic rocks in the south-west of the grid cause a noticeable magnetic low.

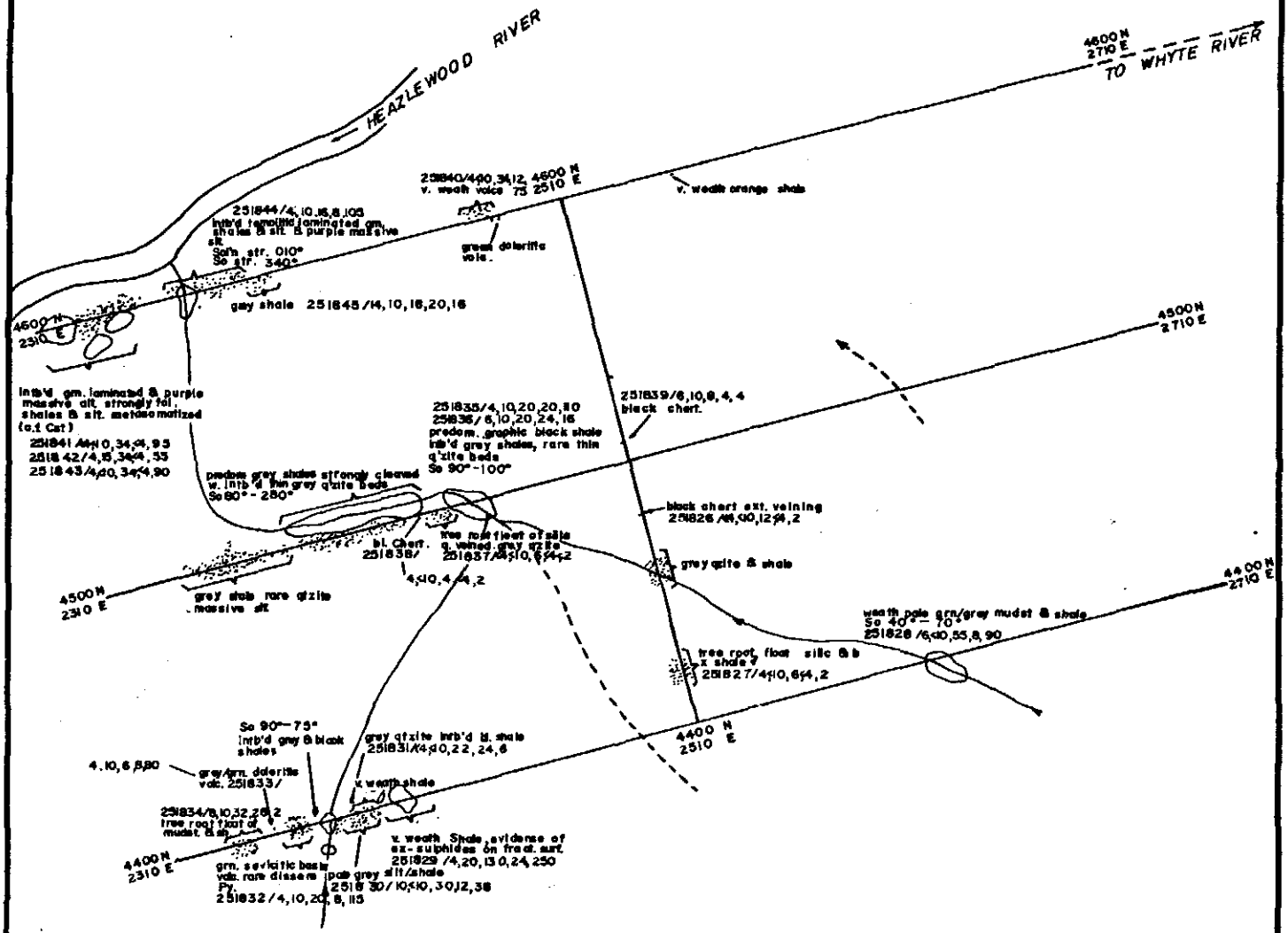
B. Ground E.M. (Max-Min 2)

This anomaly was not tested with ground E.M. equipment because of the presence of outcropping carbonaceous black shales.

962039

038

MN



5 cm

OUTCROP GEOLOGY

● 251837 Rock chip sample locations & results in p.p.m. Sn, W, Cu, Pb, Zn

For Legend See Plate MER 18

NOTE: For Location Refer Meredith Plate No. MER 4

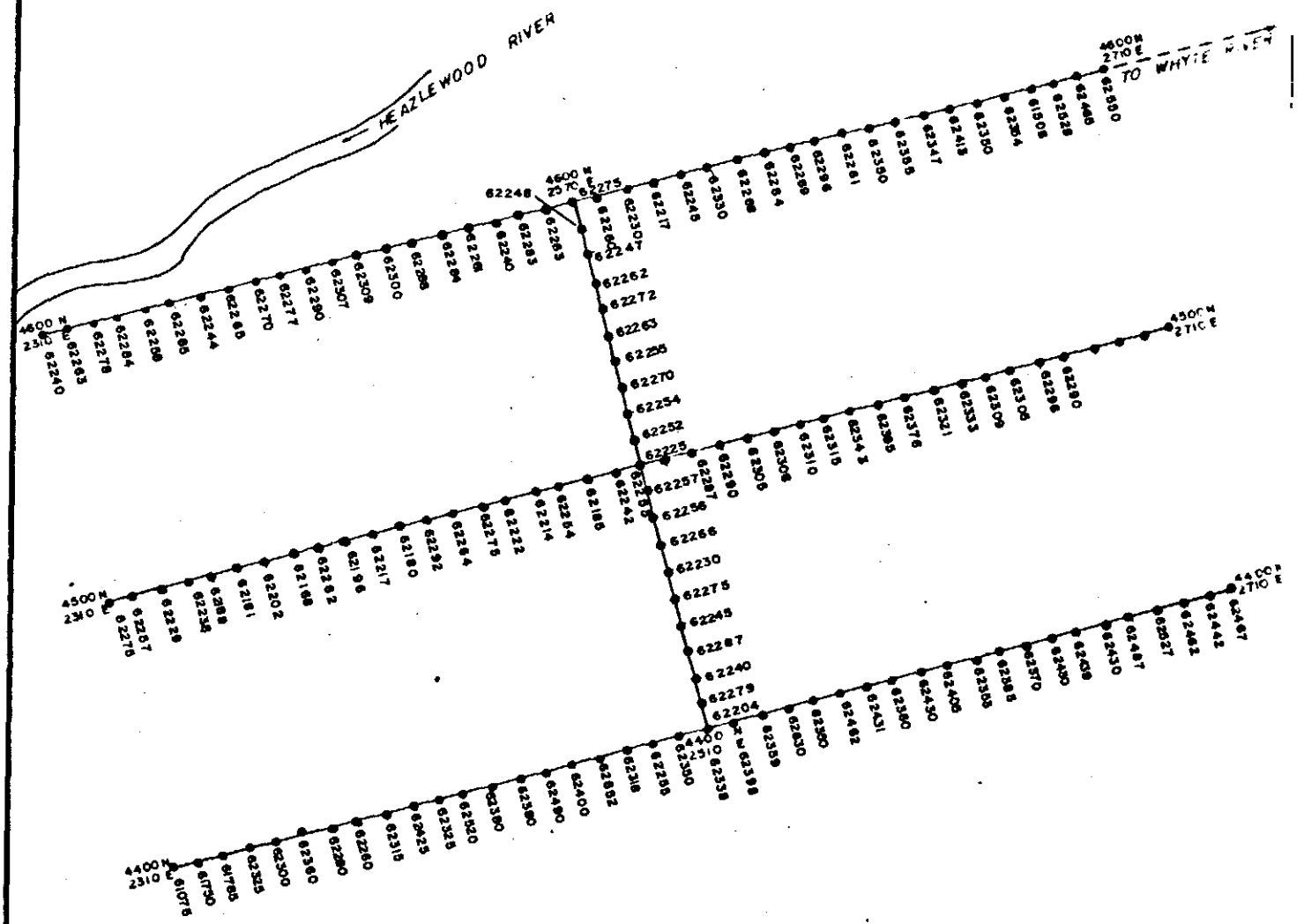
347/400

Aberfoyle Exploration Pty Ltd

Drawn: R. M. J.	NORTH WEST TASMANIA	Location code:
Traced: J.L.R.	MEREDITH E.L. 16/78	Date: Feb 1981
Checked:	DIGHEM FOLLOW-UP 1980-81	Scale: 1:2500
Revised by: Date:	CONTACT CREEK	Plate No MER 32d
	E.M ANOMALY 101-102B	

039

962040



5 cm

GROUND MAGNETICS

● 62350 Location and Reading in gammas

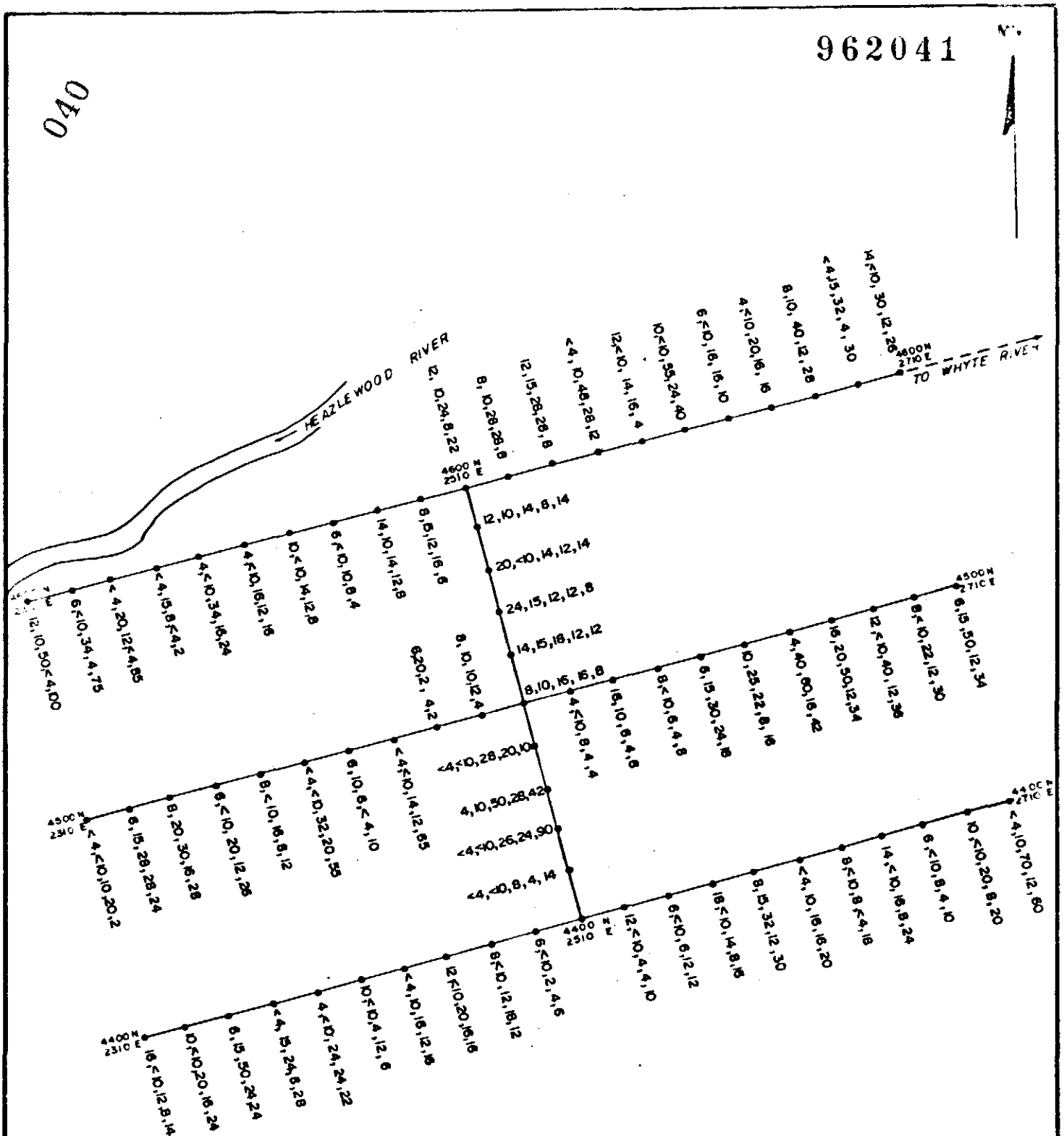
NOTE: For Location Refer Meredith Plate No. MER 4 347/400

Aberfoyle Exploration Pty Ltd

Dr... R M J	NORTH WEST TASMANIA	Location code
T... J L R	MEREDITH E.L. 16/78	Date Feb 1981
C...	DIGHEM FOLLOW-UP 1980-81	Scale 1:2500
...	CONTACT CREEK	Plate No MER 32b
	E M ANOMALY 101-102B	

962041

040



5 cm

SOIL GEOCHEMISTRY

- Assay results, Sn, W, Cu, Pb, Zn in p.p.m.

NOTE: For Location Refer Meredith Plate No MER 4

Aberfoyle Exploration Pty Ltd

NORTH WEST TASMANIA

MEREDITH E.L. 16/78
DIGHEM FOLLOW-UP 1980-81
CONTACT CREEK
F M ANOMALY 101-102 B

Location code	
Date	Feb 1981
Scale	1:2500
Plate No	MER 32c

041

962042

WHYTE SCHIST ZONE

Corrina Highway Area

E.M. ANOMALY 113B-114A

DIGHEM ANOMALY DESCRIPTION
- Three line anomaly
- Strong E.M. conductor
- Strong resistivity low
- No magnetic response
- Possibly carbonaceous shale

Geology (MER 33a)

The anomaly is within the Whyte Schist and three major lithologies occur within the gridded area. Most of the area consists of grey crystalline, often micaceous quartzite, with abundant quartz veining. A N-S trending strike ridge, composed of quartzite, is the dominant topographic feature in the area.

Pale green sericite schist occurs in the west of the grid, and this lithologic occurrence is marked by a distinct vegetation change.

Rare black carbonaceous shales occur interbedded with the quartzites.

Geochemistry (MER 33c)

No significant geochemical anomalies were recorded. Sn< 4 to 32 ppm.

Geophysics

A. Ground Magnetics (MER 33b)

No significant anomalies.

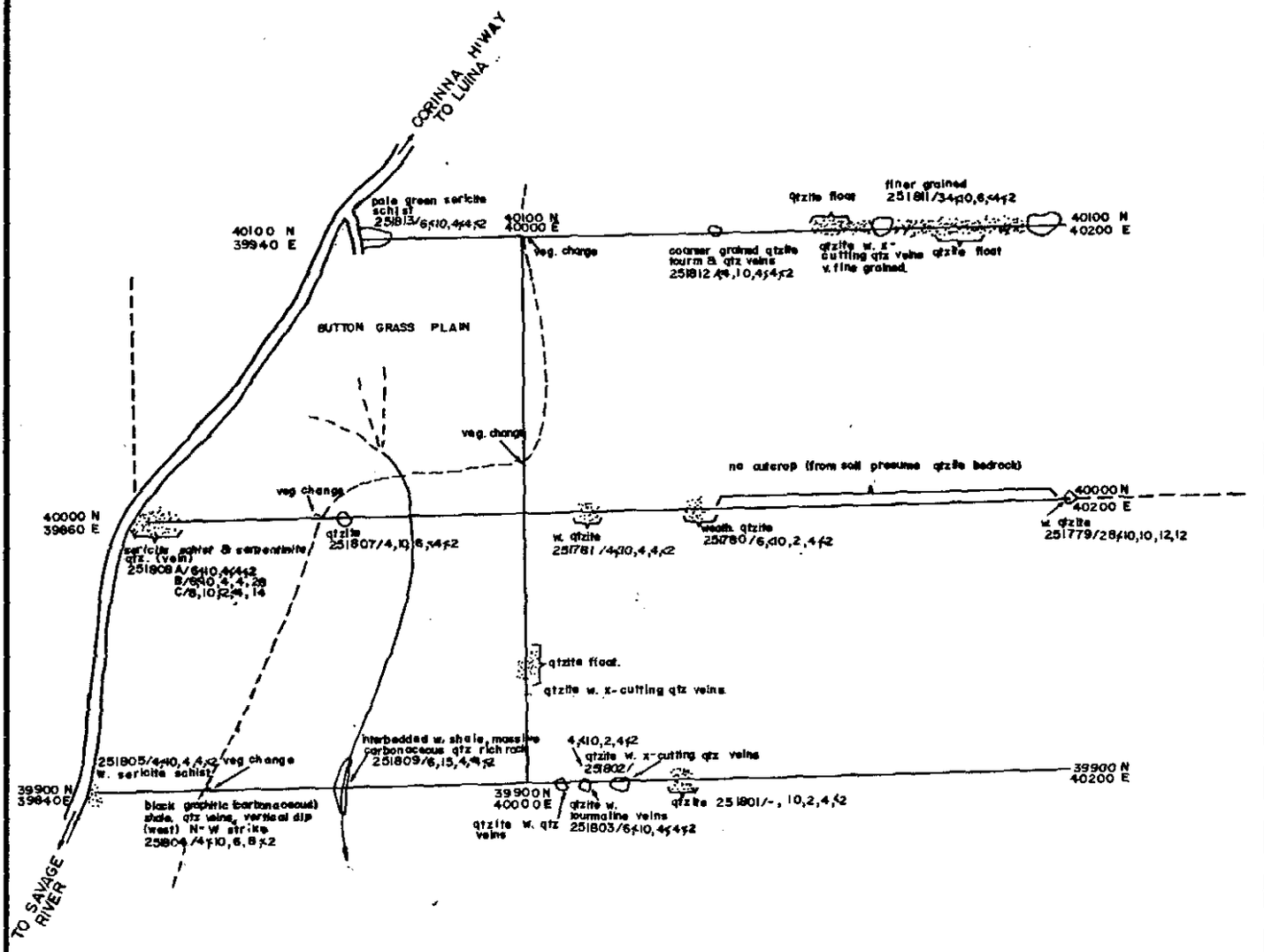
B. Ground E.M. (MER 33d)

The ground data shows the presence of a dipping, very moderate conductor (conductive thickness product 2-3 mhos) centred on about 40100E. Although the data is too incomplete to permit an accurate determination of dip, there is a clear suggestion that the conductor is dipping to the east. Also the very broad negative out-phase response suggests that there is also a weakly conducting unit to the west of the main conductor.

042

962043

MN



OUTCROP GEOLOGY

● 251801/ Rock chip sample locations & results in p.p.m Sn, W, Cu, Pb, Zn

For Legend See Plate MER 18

NOTE: For Location Refer Meredith Plate No. MER 4

347/405

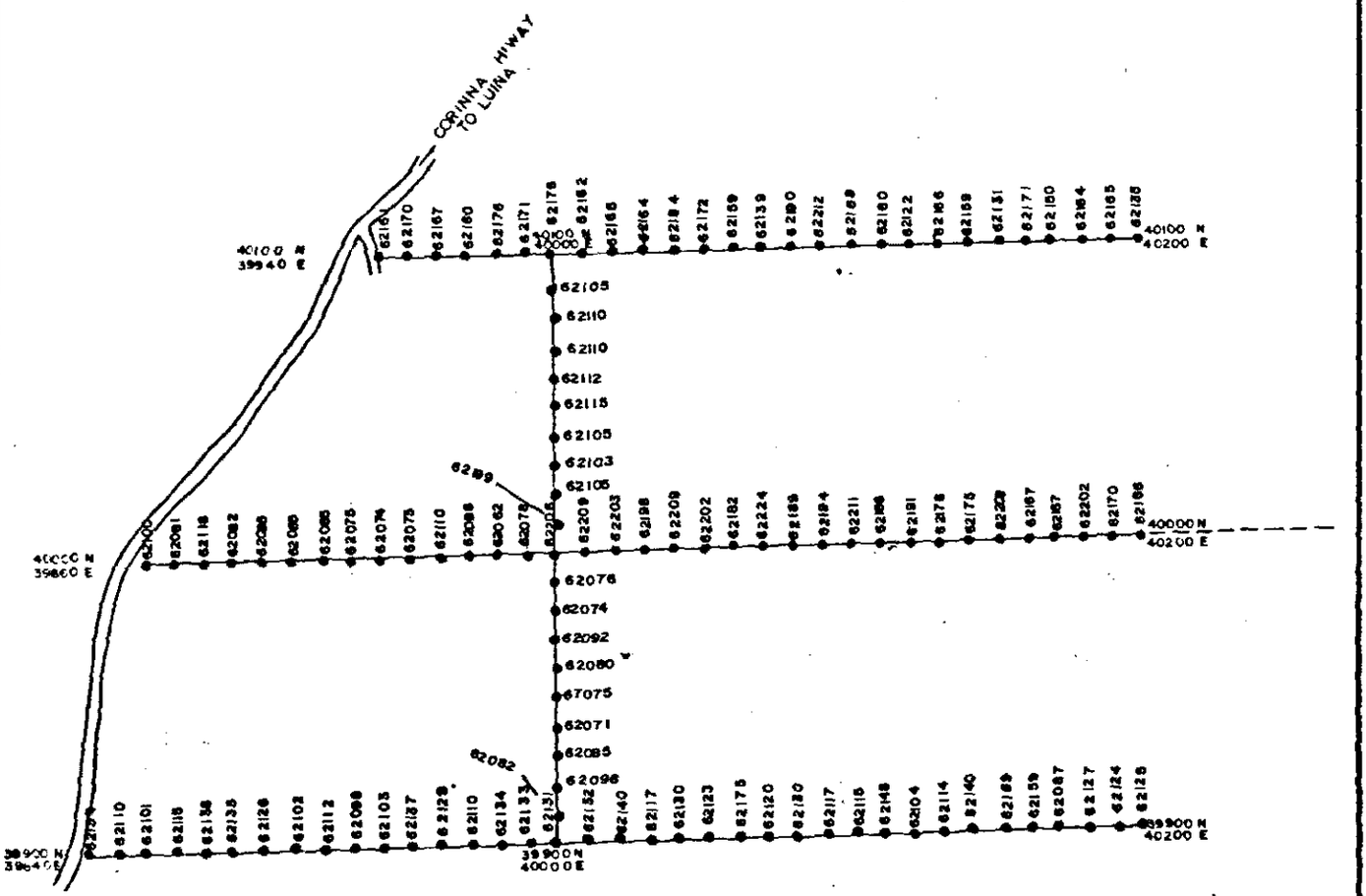
5 cm

Aberfoyle Exploration Pty Ltd

Drawn: R.M.J.	NORTH WEST TASMANIA	Location code:
Traced: J.L.R.	MEREDITH E.L. 16/78	Date: Feb. 1981
Checked:	DIGHEM FOLLOW-UP 1980-81	Scale: 1:2500
Revised by: Date:	CORRINA HIGHWAY AREA	Plate No MER 33a
	E M ANOMALY 113B-114A	

962044

043



GROUND MAGNETICS

●62175 Location and Reading in gammas

NOTE: For Location Refer Meredith Plate No. MER 4
347/405

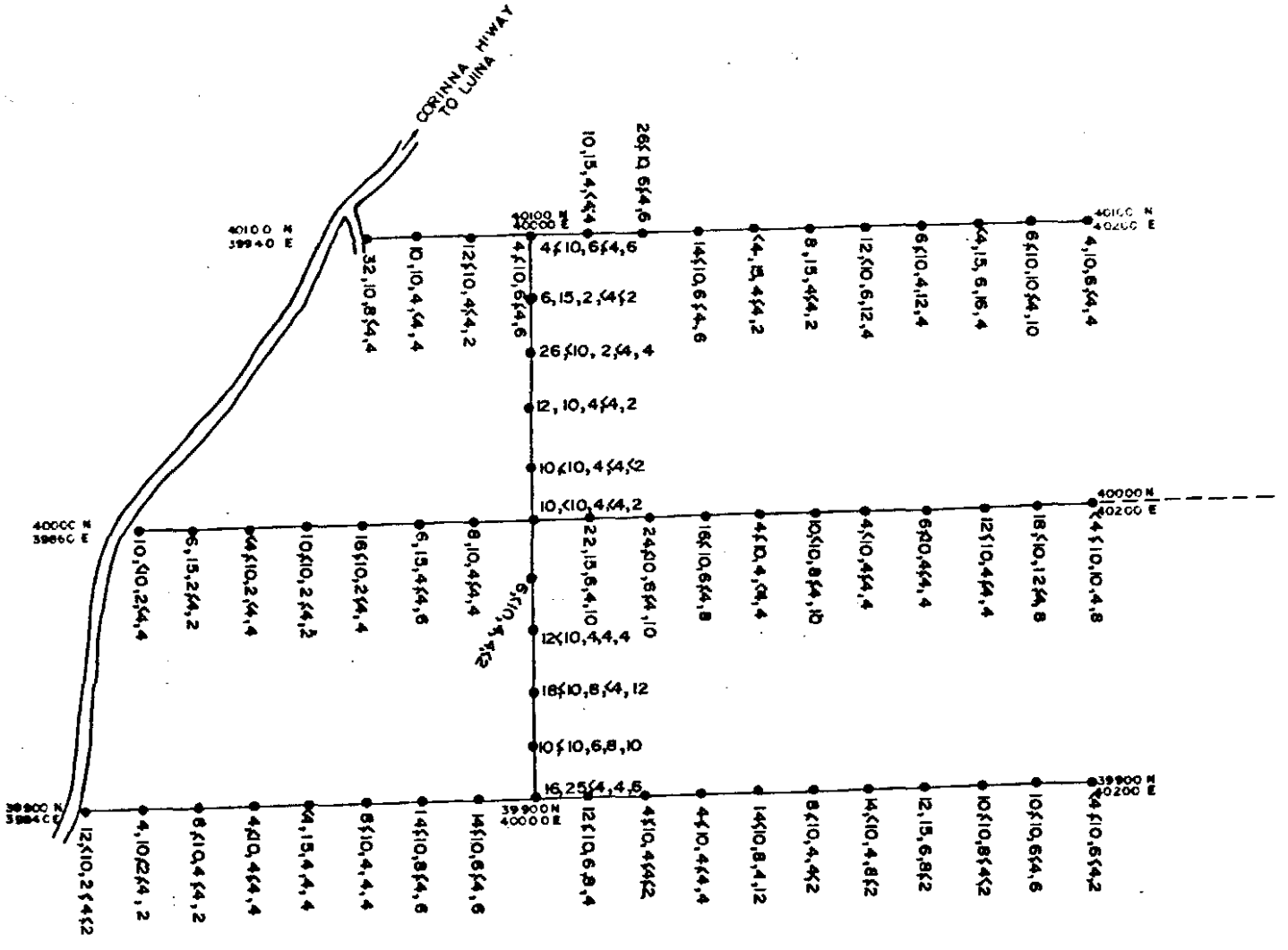
5 cm

Aberfoyle Exploration Pty Ltd

Drawn: R. D. J	NORTH WEST TASMANIA	Location code
Traced: J. L. R	MEREDITH E.L. 16/78	Date: Feb 1981
Checked	DIGHEM FOLLOW-UP 1980-81	Scale: 1:2500
Re...ed by ... Date	CORRINA HIGHWAY AREA	Plate No. MER 33 b
	E M ANOMALY 113 B-114A	

044

962045



SOIL GEOCHEMISTRY

• Assay Results Sn, W, Cu, Pb, Zn in p.p.m.

5 cm

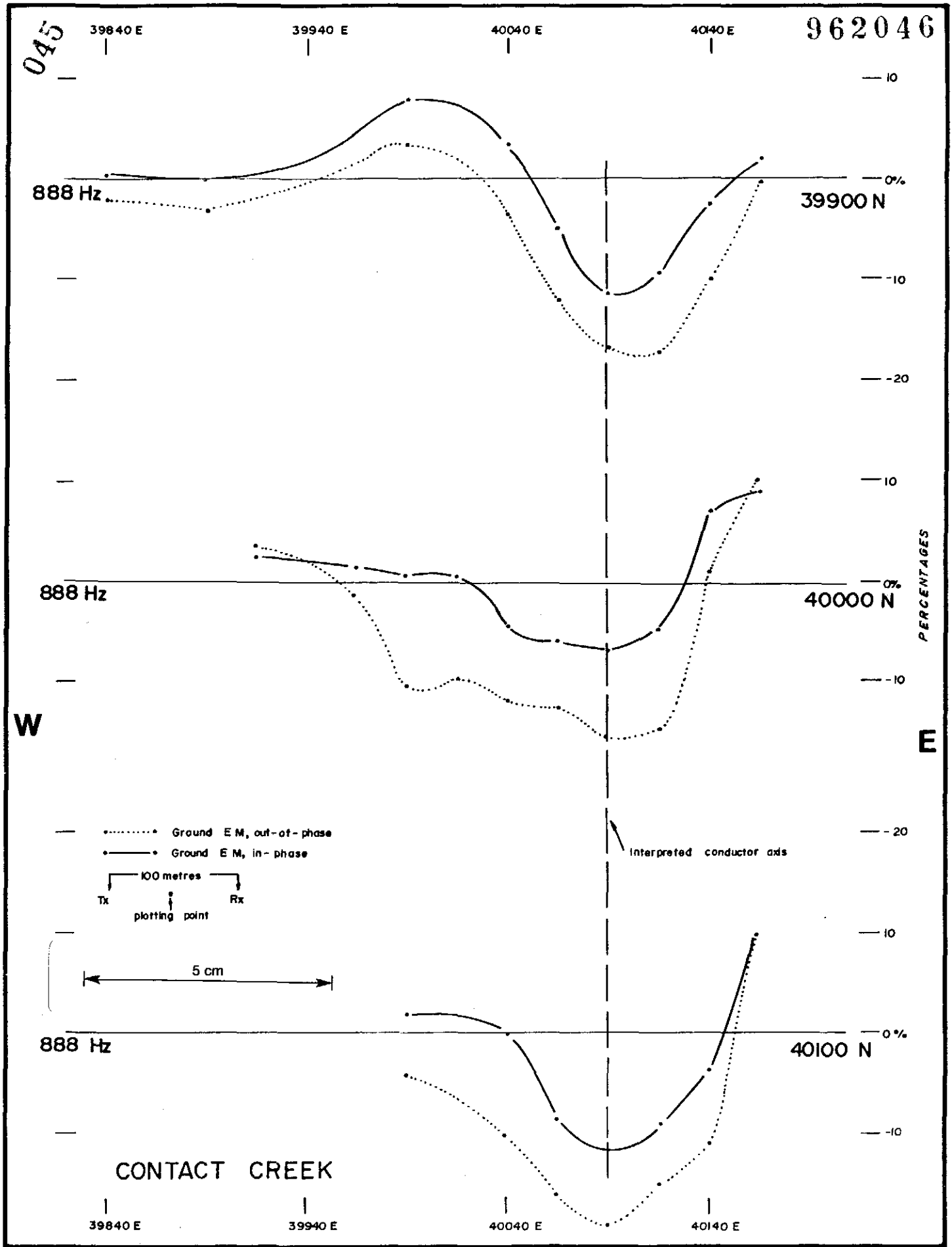
NOTE: For Location Refer Meredith Plate No. MER 4
347/405

Aberfoyle Exploration Pty Ltd

Drawn: R. M. J.	NORTH WEST TASMANIA	Location code
Traced: J. L. R.	MEREDITH E.L. 16/78	Date: Feb 1981
Checked	DIGHEM FOLLOW-UP 1980-81	Scale: 1:2500
Passed	CORRINA HIGHWAY AREA	Plate No. MER 33c
	E.M. ANOMALY 113B-114A	

045

962046



Aberfoyle Exploration Pty Ltd

Drawn: J. S.	NORTH WEST TASMANIA MEREDITH E.L. 16/78 GROUND E. M. SURVEY DIGHEM ANOMALY 113B/114A	Location code:
Traced: J.L.R		Date: April, 1981
Checked:		Scale: 1:2500
Revised by: Date:		Plate No: MER 33d

WHYTE SCHIST ZONE

Heazlewood River

E.M. ANOMALY 114B

Geology (MER 34a)

This anomaly lies close to the contact between the Pre-Cambrian Whyte Schists and Cambrian sediments probably related to the Crimson Creek Formation. This contact occurs in the far west of the grid.

The Cambrian sequence in the area consists of interbedded metasomatized tuffs and immature volcolithic sediments, mudstones and shales. Concordant doleritic sills/dykes occur throughout.

The Pre-Cambrian in the area is predominantly grey-black quartz-veined quartzite.

Geochemistry (MER 34c)

No significant anomalies.

Sn <4 to 22 ppm. The Pre-Cambrian rocks to the west contain noticeably lower Cu, Pb, Zn values than the Cambrian sediments.

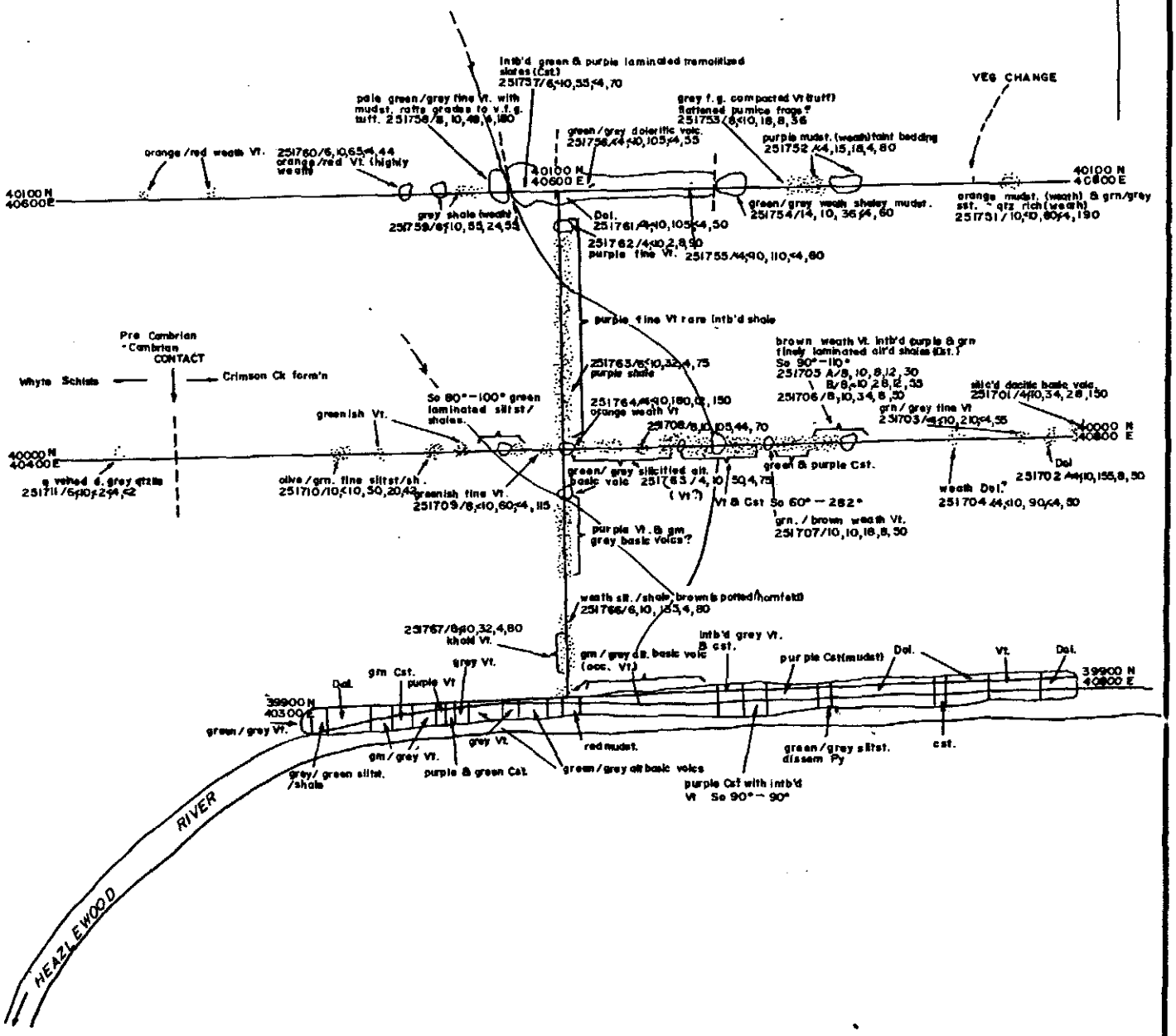
Geophysics (MER 34b, MER 34d)

This very moderate conductor anomaly was interpreted as having a coincident magnetic anomaly. The ground follow-up showed that this is not so.

It is evident from the ground profile that the peak of the magnetic anomaly is about 50-75 metres to the east of the conductor. The conductor is very moderate, it is in the Pre-Cambrian and it has a width of greater than 25 metres. The airborne system was not capable of resolving the distance between the magnetic and E.M. anomaly, because of the anomaly "smearing" (broadening) effects common to all airborne techniques, and therefore it was interpreted that there was a possible coincidence between the E.M. and magnetic anomalies.

962048 MN

047



5 cm

OUTCROP GEOLOGY

● 251751/ Rock chip sample locations & results in p.p.m Sn, W, Cu, Pb, Zn

For Legend See Plate MER.18

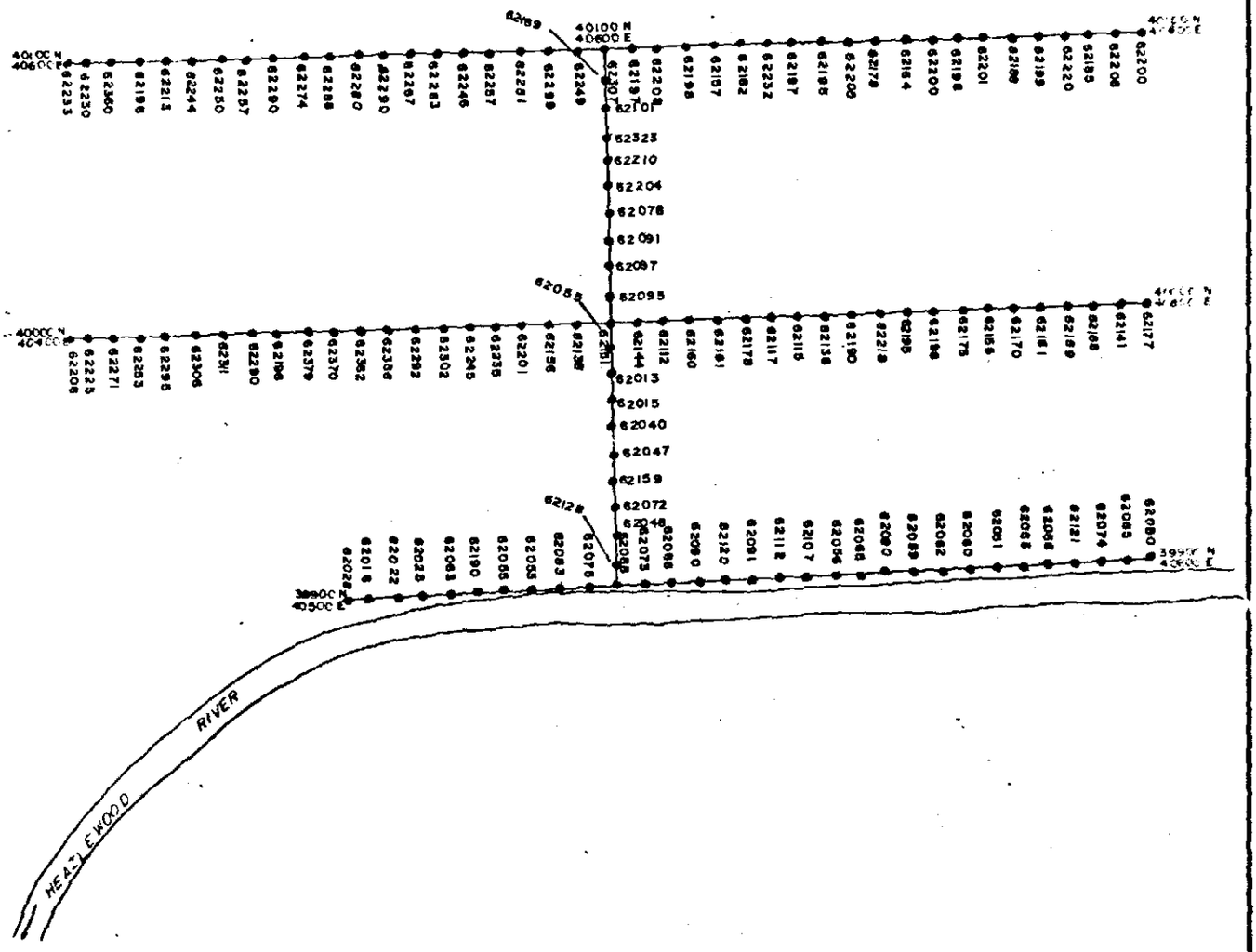
NOTE: For Location Refer Meredith Plate No. MER4 347/405

Aberfoyle Exploration Pty Ltd

Drawn: R.M.J.	NORTH WEST TASMANIA	Location code:
Traced: J.L.R.	MEREDITH E.L. 16/78	Date: Feb. 1981
Checked:	DIGHEM FOLLOW-UP 1980-81	Scale: 1:2500
Revised by: Date:	HEAZLEWOOD RIVER AREA	Plate No. MER.34a
	E M ANOMALY 114B	

962049

048



GROUND MAGNETICS

● 62091 Location and Reading in gammas

NOTE For Location Refer Meredith Plate No. MER 4 347/405

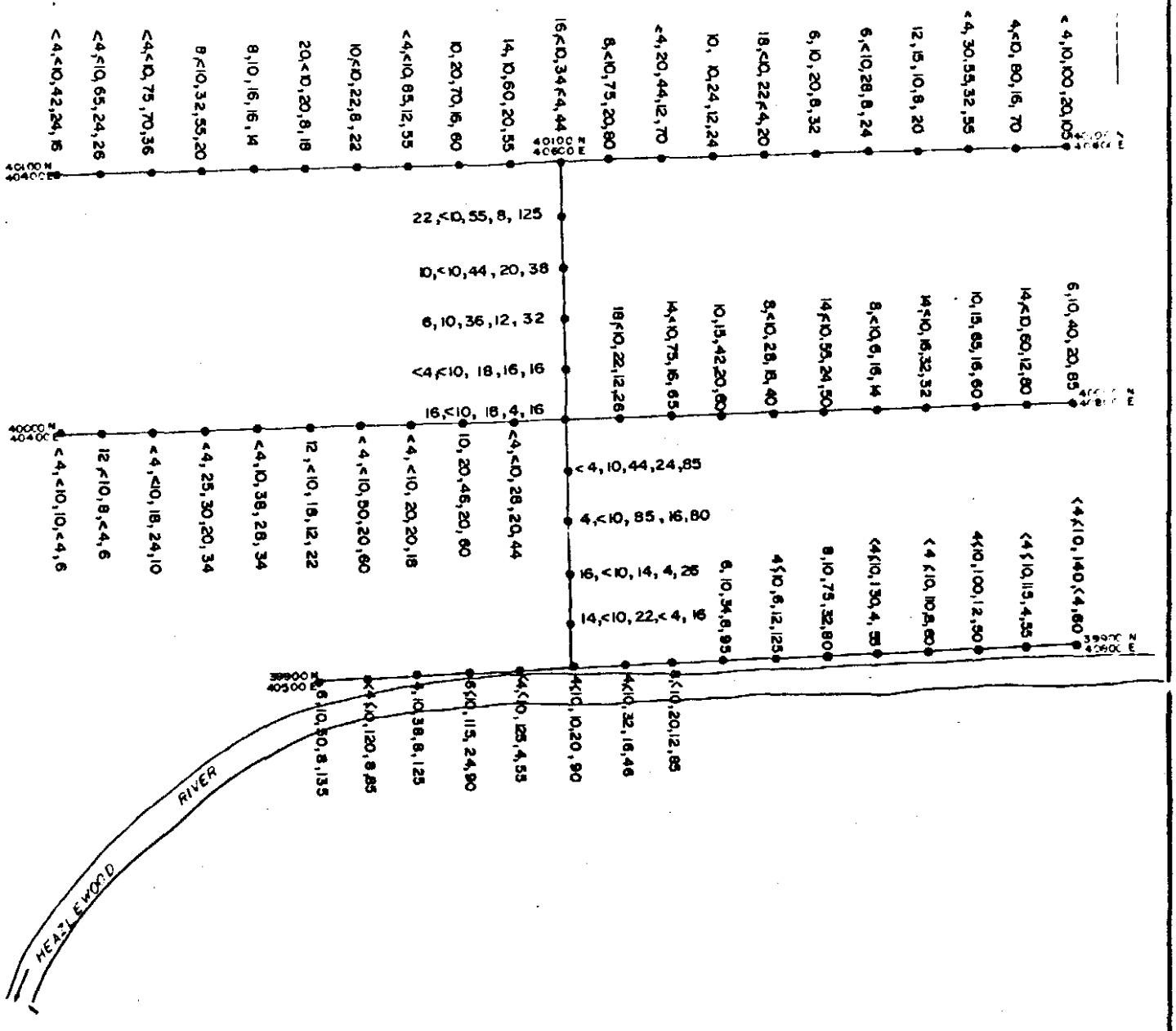
5 cm

Aberfoyle Exploration Pty Ltd

Drawn	NORTH WEST TASMANIA	Location code
Traced	MEREDITH E.L. 16/78	Date Feb. 1981
Checked	DIGHEM FOLLOW-UP 1980-81	Scale 1:2500
	HEAZLEWOOD RIVER AREA	Plate No MER 34 b
	EM ANOMALY 114B	

049

962050



SOIL GEOCHEMISTRY

• Assay results, Sn, W, Cu, Pb, Zn in ppm

5 cm

NOTE For Location Refer Meredith Fig. No. ME-4
347/405

Aberfoyle Exploration Pty Ltd

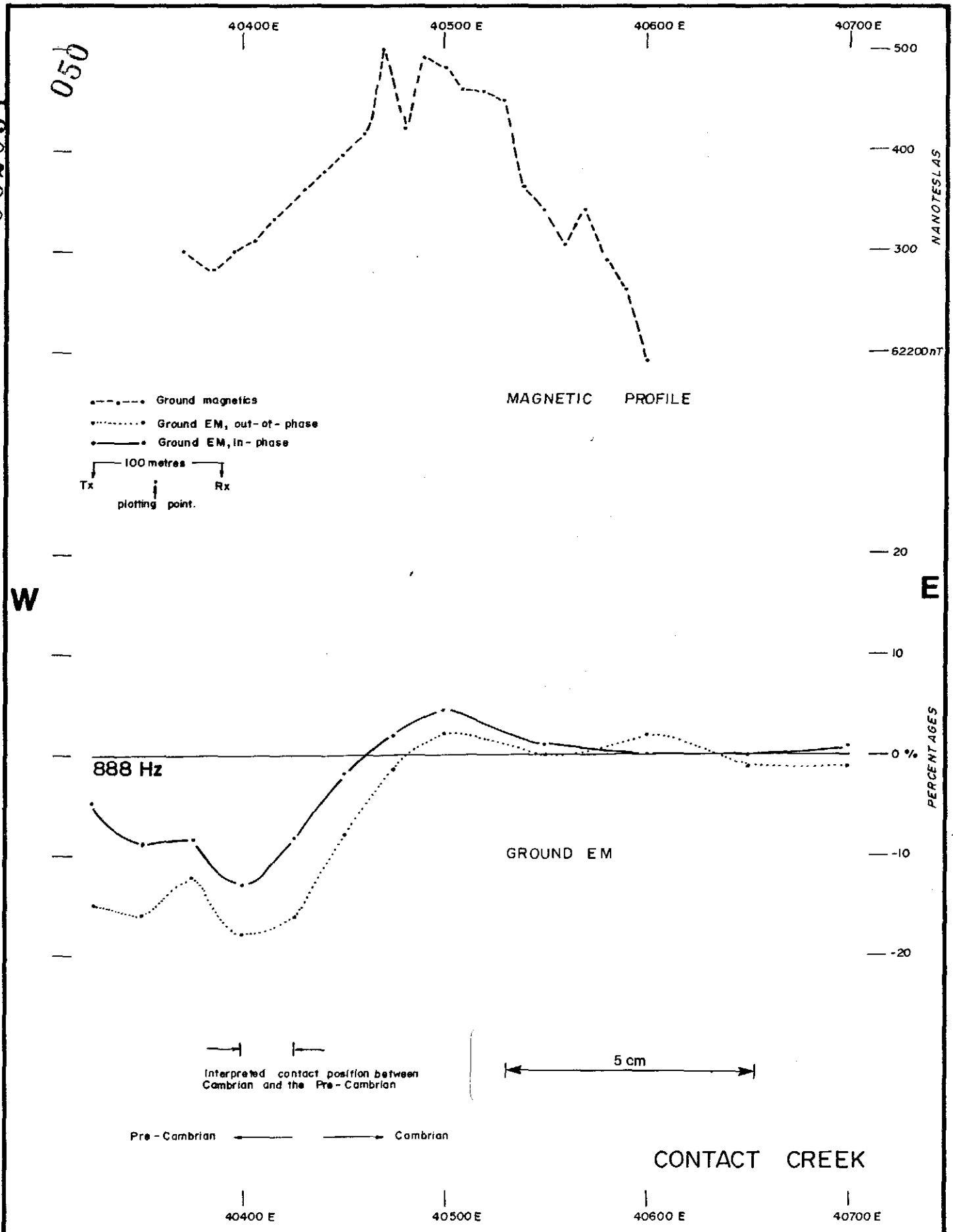
Drawn R. M.
Traced J.L.S.
Checked

NORTH WEST TASMANIA
MEREDITH E.L. 16/78
DIGHEM FOLLOW-UP 1980-81
HEAZLEWOOD RIVER AREA
E.M. ANOMALY 114B

Location code
Date Feb. 1981
Scale 1:500
Fig. No. ME-34c

962051

050



Aberfoyle Exploration Pty Ltd

Drawn: J.S	NORTH WEST TASMANIA MEREDITH E.L. 16/78 GROUND MAGNETICS & E.M. SURVEY DIGHEM ANOMALY 114B	Location code:
Traced: J.L.R.		Date: April, 1981
Checked:		Scale: 1:2500
Revised by: Date:		Plate No MER.34d

051

WHYTE SCHIST ZONE

Contact Creek Area

E.M. ANOMALY 101A/102A

Description: Two line anomaly
Possible thin weak E.M. conductor
Weak resistivity anomaly
No magnetic anomaly
Underlain by Whyte Schist

Geology

The area has not yet been mapped in detail, but reconnaissance suggests that most of the bedrock in the area is Pre-Cambrian quartzite with interbedded shale.

Geochemistry

No sampling as yet.

Geophysics

a) Ground magnetics - Not performed to date.

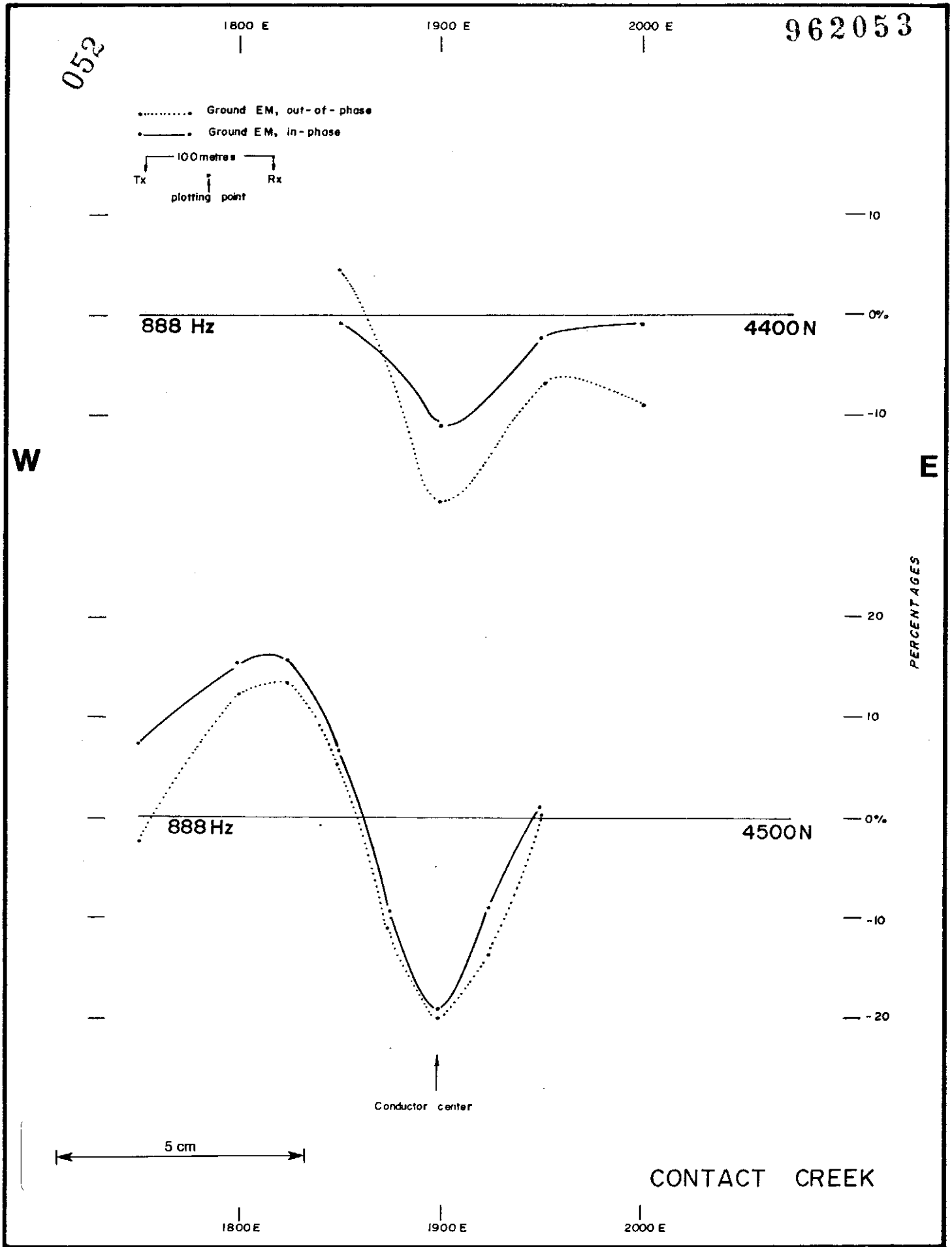
b) Ground E.M. (MER 35)

Anomaly 101A/102A was interpreted as being due to a thin steeply dipping conductor of moderate conductance. The ground follow-up confirmed this interpretation.

The ground data shows the presence of a dipping thin conductor on lines 4500N and 4400N at 1900E. No accurate determination of dip is possible. The conductivity thickness product is estimated to be about 3 mhos, in other words a very moderate conductor.

962053

052



Aberfoyle Exploration Pty Ltd

Drawn: J. S	NORTH WEST TASMANIA	Location code:
Traced: J. L. R.	MEREDITH E.L. 16/78	Date: April, 1981
Checked:	GROUND E.M. SURVEY	Scale: 1:2500
Revised by: Date:	DIGHEM ANOMALY 101A/102A	Plate No MER 35

053

CIRCULAR FEATURE

E.M. ANOMALY 15A

Geology (MER 36a)

This anomaly occurs on a small button grass plain within the main mass of the Meredith Granite. Outcrop is very poor and can be found only around the edges of the button grass near the break in slope.

All rock on the grid is unaltered biotite adamellite/granite.

Geochemistry (MER 36c)

Sn geochemistry is uniformly low on the grid with the exception of one sample taken near a creek (Sn 240 ppm).

Geophysics

A. Ground Magnetics (MER 36b)

No anomalies were detected.

B. Ground E.M. (MER 34d)

The airborne anomaly appears to be related to the edge of the button grass plain (swamp). The button grass is a resistivity low.

962055

MN

054

9280 S

10100 N

c.g. G coarse B phenos
256498/
A/8,15,4,22,44,240,55
B/8,<10,2,8,22,250,50
C/8,<10,2,6,18,230,48

c.g. G
256499/10,10,<2,6,12,250,50

v.weath c.g. G
256497/ N/S

c.g. G
v. lge Kspar phenos
256500/
A/6,<10,2,6,26,250,60
B/4,<10,4,8,70,220,44

BUTTON GRASS PLAIN
(qtz - rich granitic soil)

10000 N

weath grey c.g. G
256495/4,40,2,4,42,270,75

9900 N 8880 E

5 cm

OUTCROP GEOLOGY

● 256497/ Rock chip sample locations & results in p.p.m. Sn, WO_3, Cu, Pb, Zn, Rb, Sr

For Legend See Plate MER. 18

NOTE: For Location Refer Meredith Plate No. MER.4
363/400

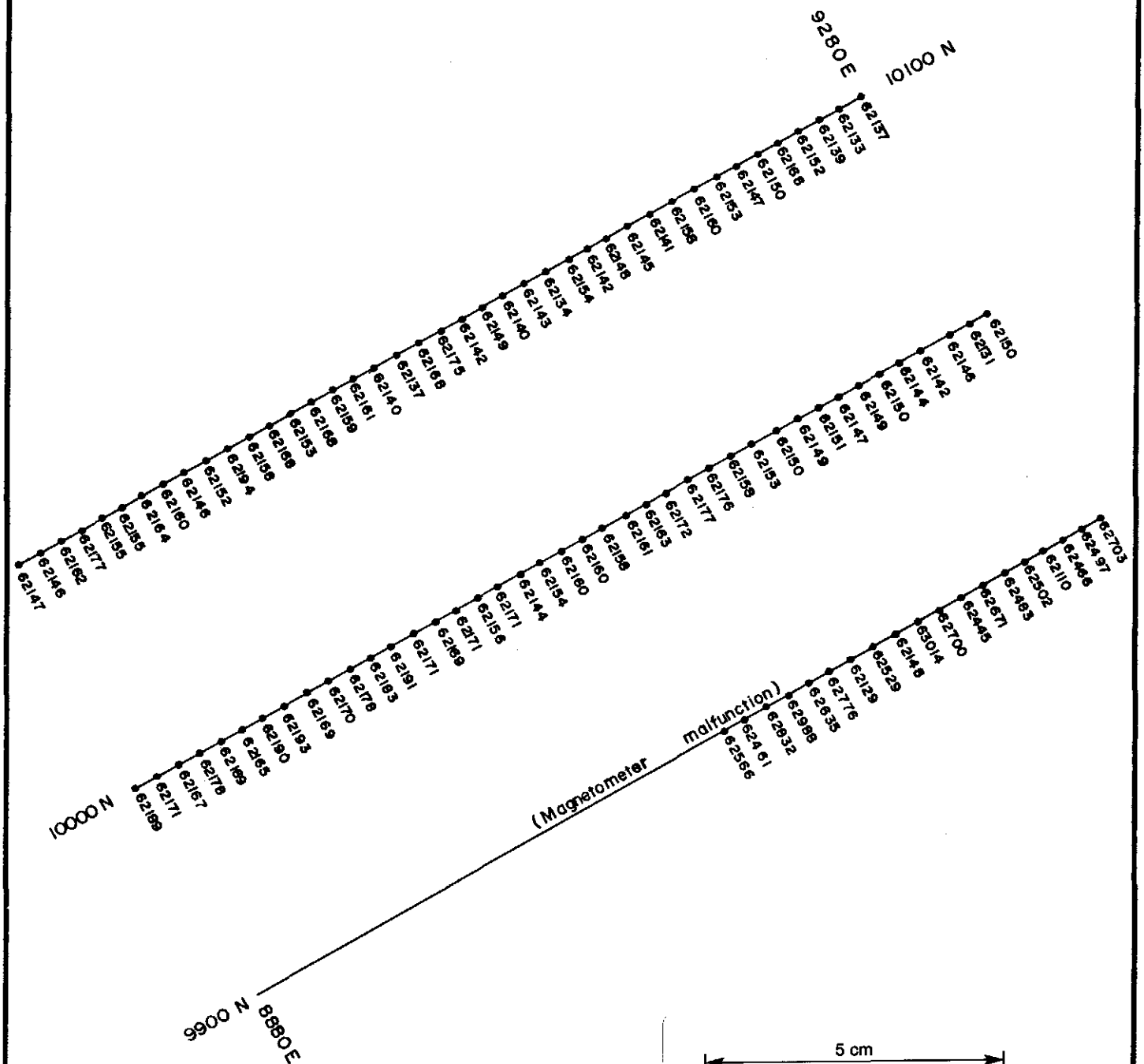
Aberfoyle Exploration Pty Ltd

Drawn: R.M.J.	NORTH WEST TASMANIA	Location code:
Traced: J.L.R	MEREDITH E.L. 16/78 DIGHEM FOLLOW-UP 1980-81 CIRCULAR FEATURE E.M. ANOMALY 15A	Date: March, 1981
Checked:		Scale: 1:2500
Revised by Date		Plate No MER. 36a

055

962056

MN



GROUND MAGNETICS

• 62193 Location and Reading in gammas

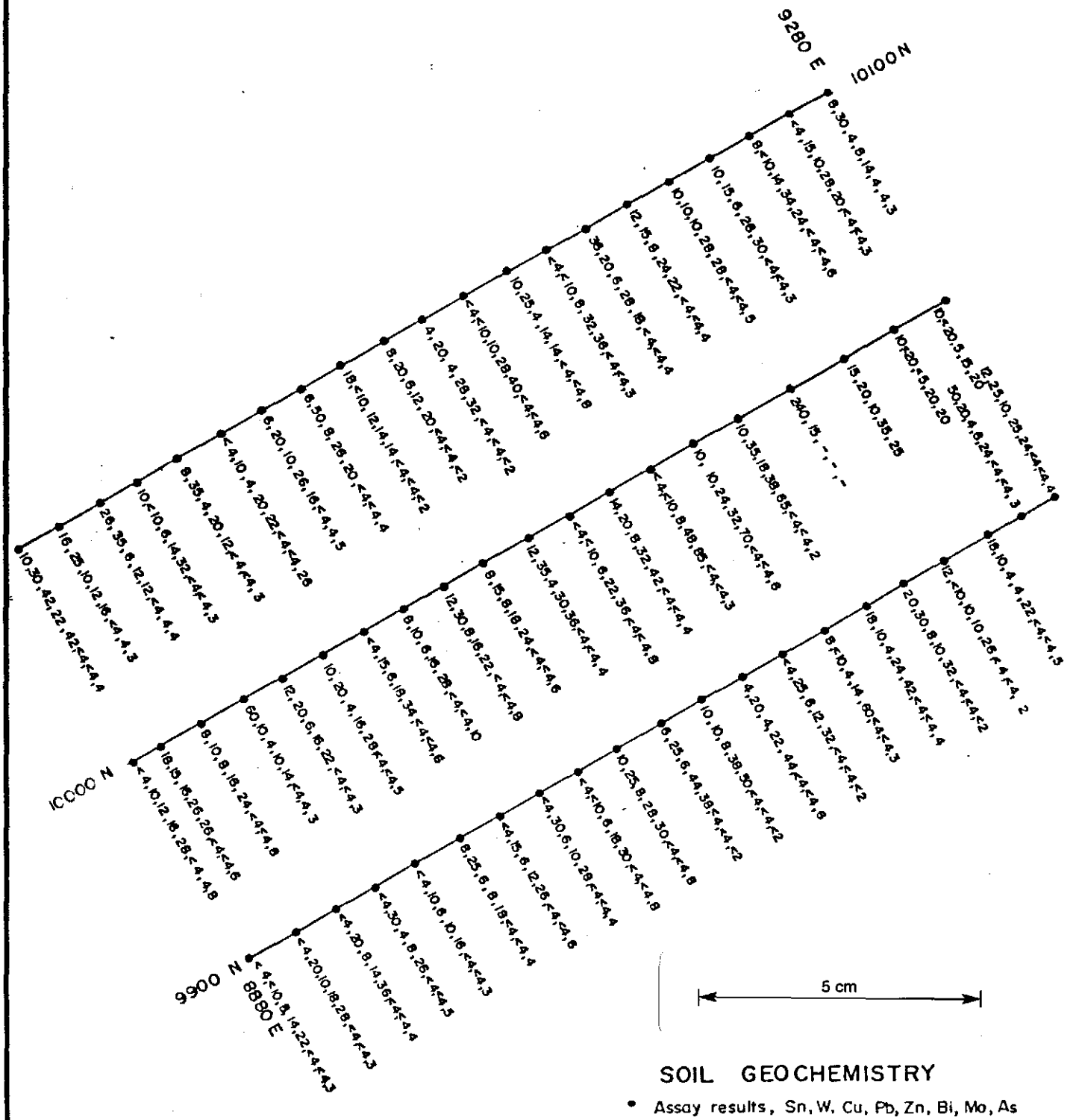
NOTE: For Location Refer Meredith Plate No. MER 4
363/400

Aberfoyle Exploration Pty Ltd

Drawn: R. M. J.	NORTH WEST TASMANIA	Location code:
Traced: R.J.E.	MEREDITH E.L. 16/78	Date: March, 1980
Checked:	DIGHEM FOLLOW-UP 1980-81	Scale: 1:2500
Revised by: Date:	CIRCULAR FEATURE E.M. ANOMALY 15A	Plate No MER. 36b

056

962057 MN



SOIL GEOCHEMISTRY

• Assay results, Sn, W, Cu, Pb, Zn, Bi, Mo, As

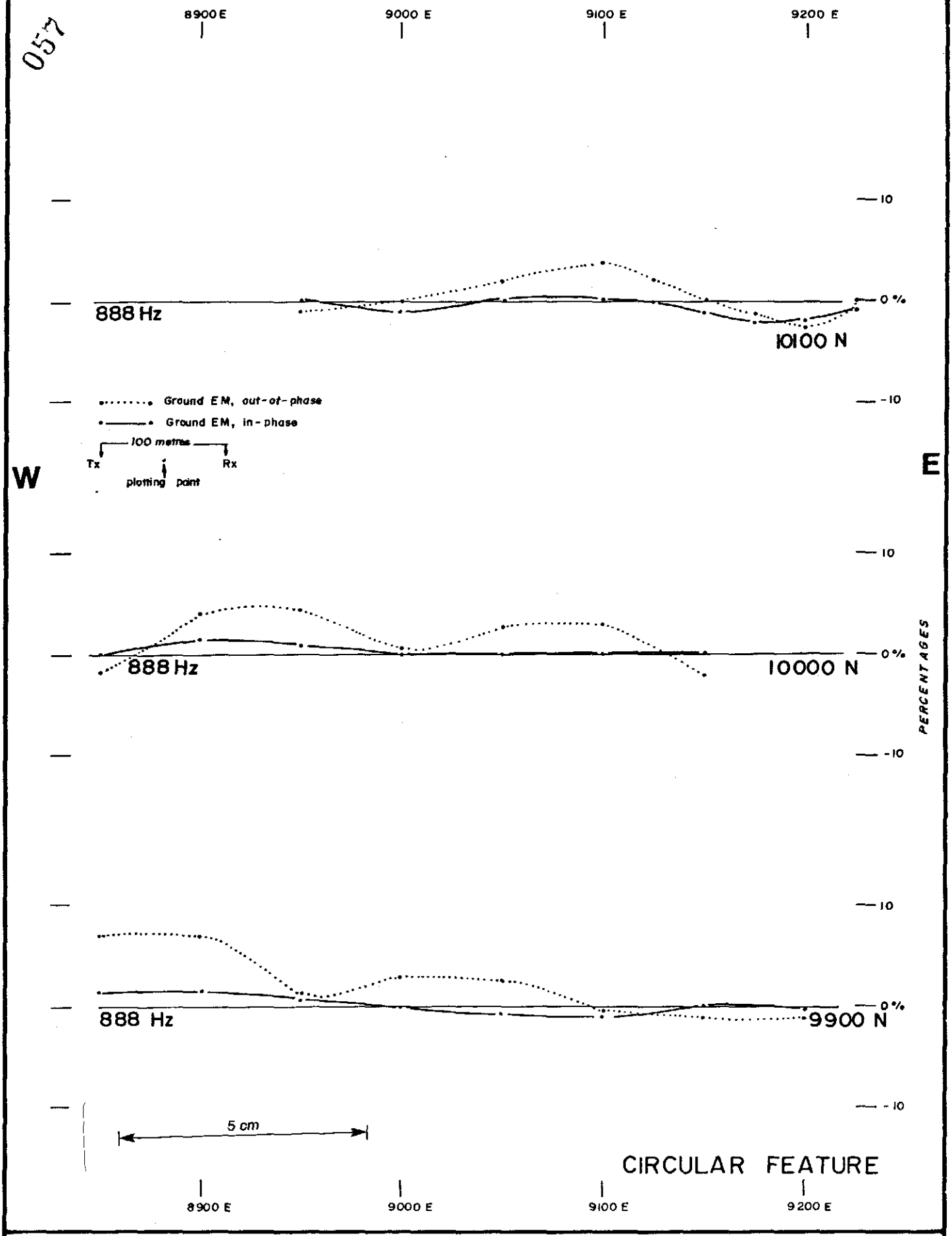
NOTE: For Location Refer Meredith Plate No. MER 4
363/400

Aberfoyle Exploration Pty Ltd

Drawn R.M.J	NORTH WEST TASMANIA	Location code
Traced J.L.R	MEREDITH E.L. 16/78	Date March, 1981
Checked	DIGHEM FOLLOW-UP 1980-81	Scale 1:2500
	CIRCULAR FEATURE	Plate No. MER 35c
	E.M. ANOMALY 15A	

962058

057



Aberfoyle Exploration Pty Ltd

Drawn: J.S	NORTH WEST TASMANIA	Location code:
Traced: J.L.R.	MEREDITH E.L. 16/78	Date: April, 1981
Checked:	GROUND E.M. SURVEY	Scale: 1: 2500
Approved: Date	DIGHEM ANOMALY 15A	Plate No. MER 36 d

058

CIRCULAR FEATURE

962059

E.M. ANOMALY 12A

Geology (MER 37a)

This anomaly occurs within a Cambrian mafic-ultramafic suite close to its contact with the Meredith Granite.

The mafic-ultramafic rocks consist predominantly of green-grey altered amygdaloidal basic lavas and tuffs, and green-black asbestos veined magnetite-rich serpentenites.

The granite contact occurs in the south-east corner of the grid, where chalcedonic silica, and extensively silicified serpentenites occur.

Geochemistry (MER 37c)

The granite contact is marked by anomalous Sn, Pb and Zn geochemistry (Sn 350 ppm, Pb 155 ppm, Zn 230 ppm). Within the mafic-ultramafic suite, apart from a high Zn background (>100 ppm) in ultramafic rocks, geochemistry is uniformly discouraging.

Geophysics

A. Ground Magnetics (MER 37b)
Very high magnitude surficial noise marks the outcrop extent of magnetite-rich serpentenites in the eastern half of the grid.

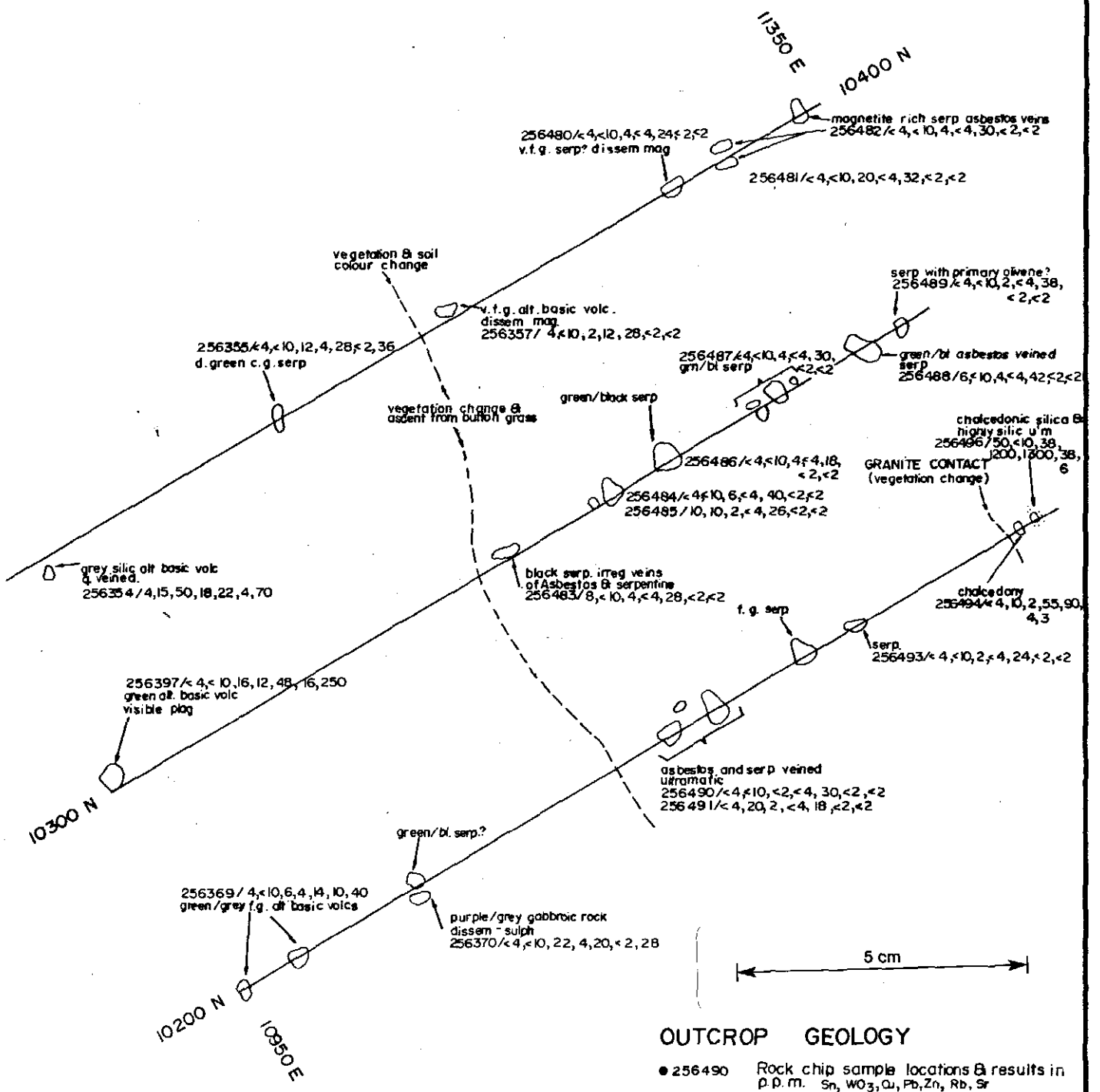
B. Ground E.M. (MER 37d)

No conductor was found. The anomaly is presumed to be spurious.

059

962060

MN



OUTCROP GEOLOGY

● 256490 Rock chip sample locations & results in p.p.m. Sn, WO_3, Cu, Pb, Zn, Rb, Sr

For Legend See Plate MER. 18

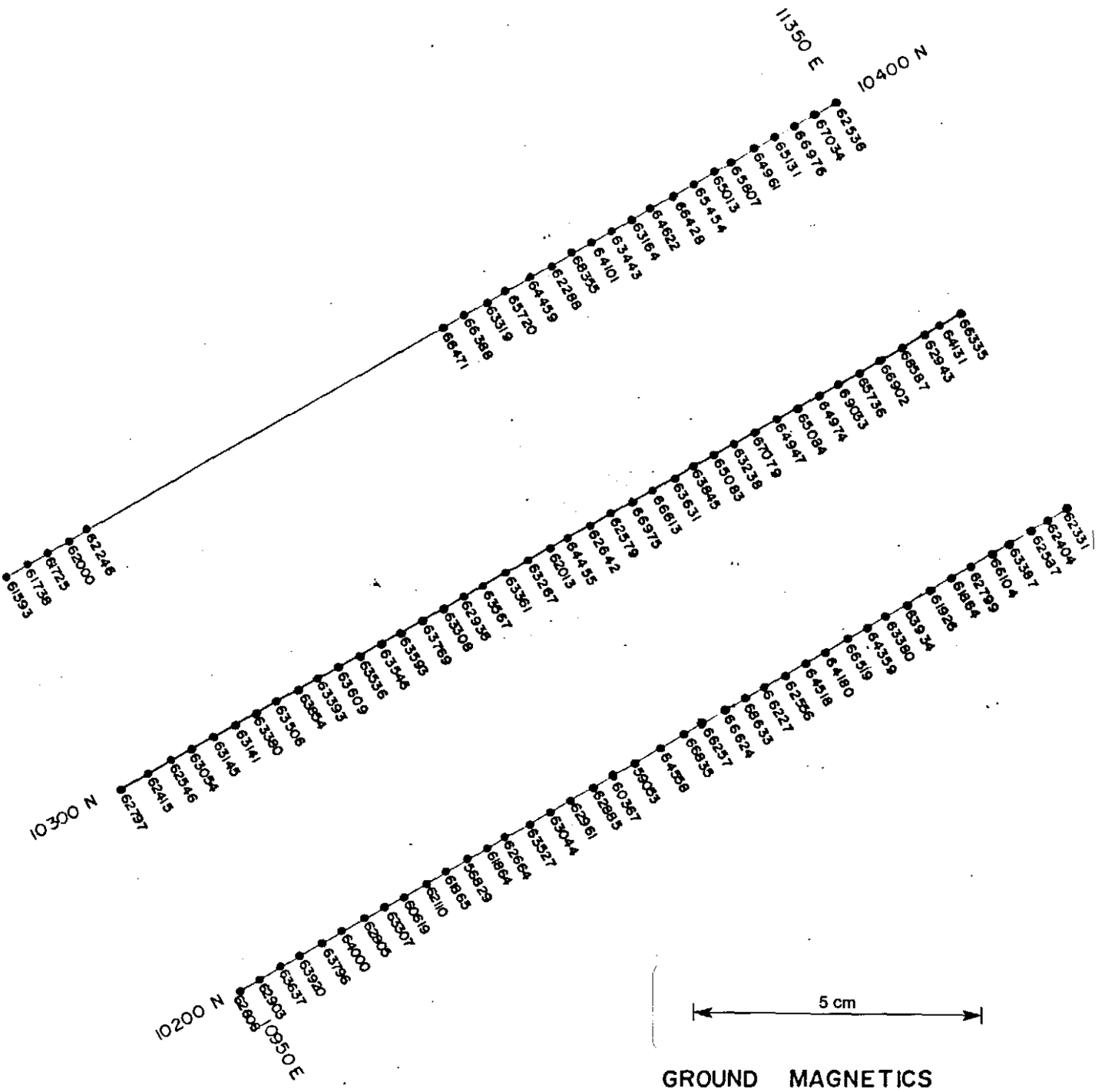
NOTE: For Location Refer Meredith Plate No. MER 4. 363/400

Aberfoyle Exploration Pty Ltd

Drawn: R.M.J.	NORTH WEST TASMANIA MEREDITH E.L. 16/78 DIGHEM FOLLOW-UP 1980-81 CIRCULAR FEATURE E M ANOMALY 12 A	Location code:
Traced: J.L.R.		Date: March, 1981
Checked:		Scale: 1:2500
Approved: Date:		Plate No MER.37a

962061

060



5 cm

GROUND MAGNETICS

● 62060 Location and Reading in gammas

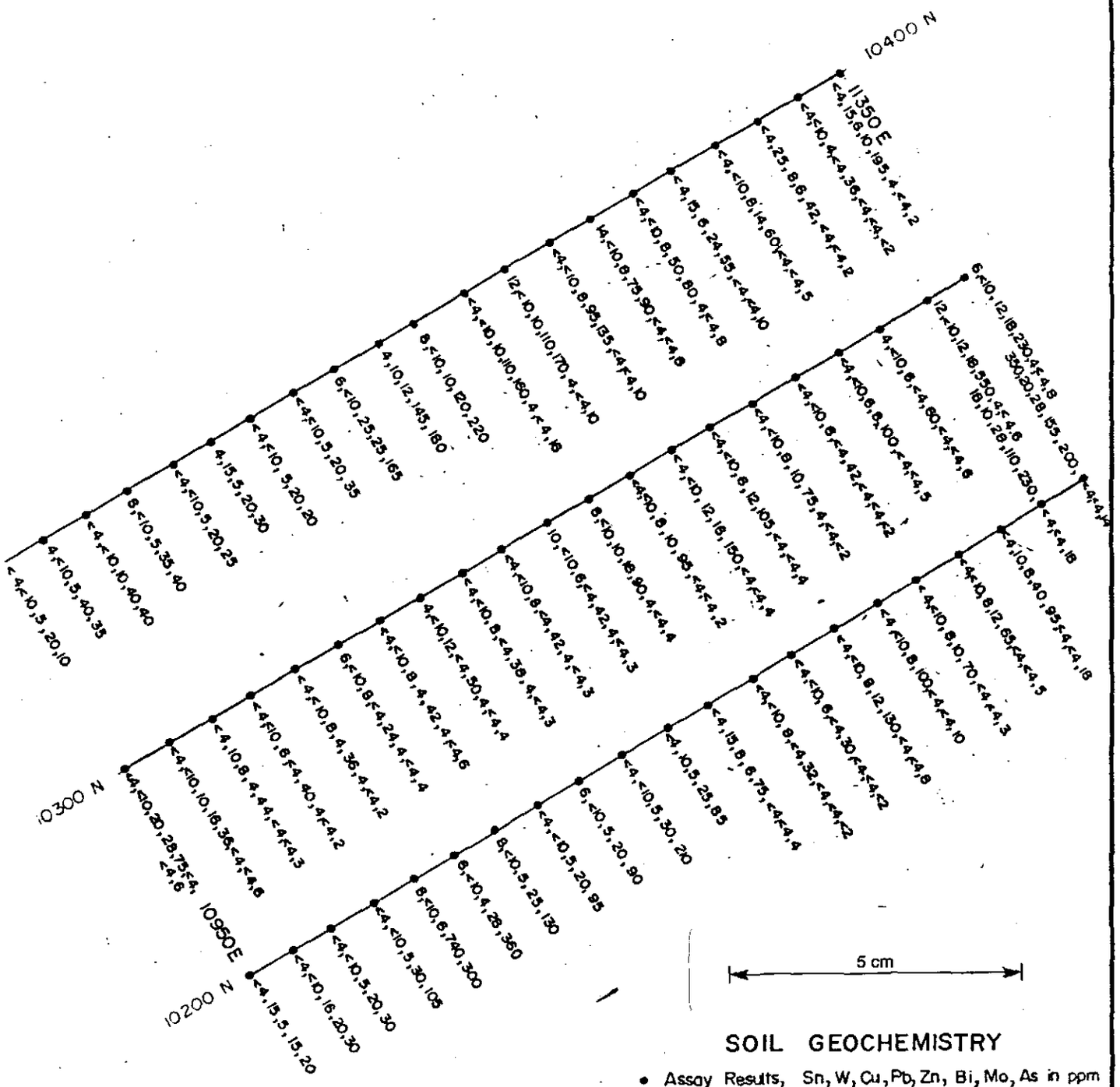
NOTE: For Location Refer Meredith Plate No. MER 4 363/400

Aberfoyle Exploration Pty Ltd

D: R M J	NORTH WEST TASMANIA MEREDITH E.L. 16 / 78 DIGHEM FOLLOW-UP 1980-81 CIRCULAR FEATURE F M ANOMALY 12 A	Location code
[illegible]: J _ R		Date March, 1981
[illegible]		Scale 1:2500
		Plate No MER.37b

061

962062



SOIL GEOCHEMISTRY

• Assay Results, Sn, W, Cu, Pb, Zn, Bi, Mo, As in ppm

NOTE : For Location Refer Meredith Plate No MER 4
363/400

Aberfoyle Exploration Pty Ltd

D R M J J E R	NORTH WEST TASMANIA MEREDITH E.L. 16 / 78 DIGHEM FOLLOW-UP 1980-81 CIRCULAR FEATURE F M ANOMALY 12 A	Location code Date March, 1981 Scale 1:2500 Plate No MER. 37c

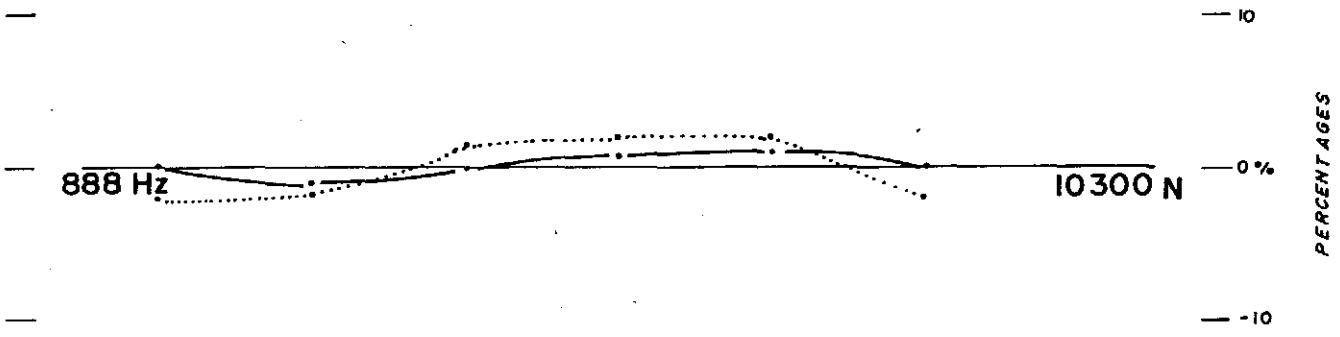
062

962063

11050 E | 11150 E | 11250 E

W

E



•.....• Ground EM, out-of-phase

•——• Ground EM, in-phase

100 metres

Tx Rx

plotting point

5 cm

CIRCULAR FEATURE

11050 E | 11150 E | 11250 E

Aberfoyle Exploration Pty Ltd

Drawn: J. S	NORTH WEST TASMANIA	Location code:
Traced: J.L.R.	MEREDITH E.L. 16/78	Date: April, 1981
Checked:	GROUND E.M. SURVEY	Scale: 1:2500
Revised by: Date:	DIGHEM ANOMALY 12 A	Plate No MER. 37d

063

CIRCULAR FEATURE

E.M. ANOMALY 10A

Geology (MER 38a)

This anomaly occurs on an open button-grass plain within a mafic-ultramafic complex. Most outcrop is of microgabbroic intrusives, which have a weak magnetic response. To the east of the grid, a small outcrop of tremolitized serpentenite occurs. This outcrop has an associated 4500γ ground magnetic anomaly.

Geochemistry (MER 38c)

Sn results are extremely low, max 8 ppm. Apart from the usual high Zn background within the ultramafic suite, geochemistry is uniformly low.

Geophysics

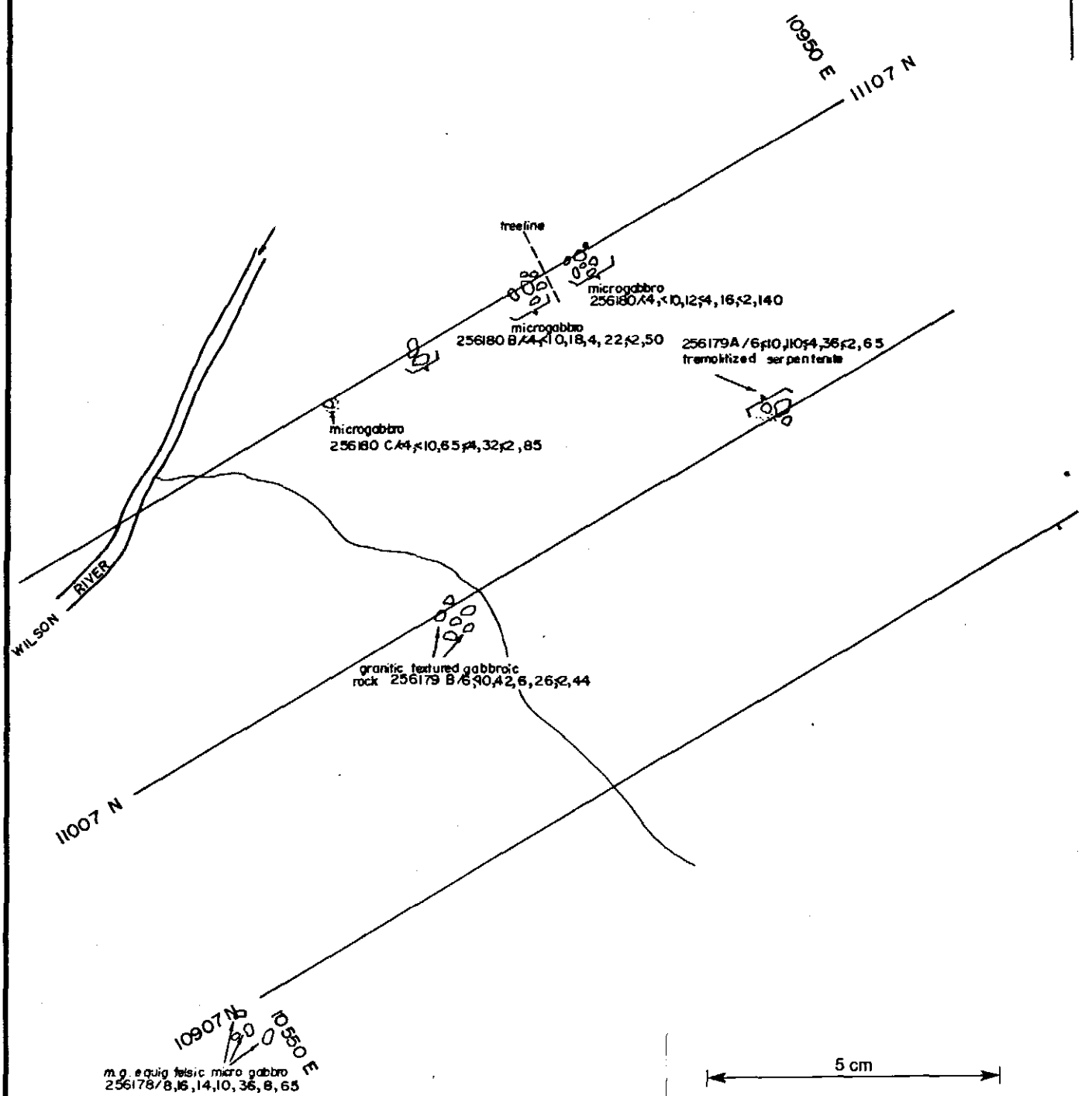
A. Ground Magnetics (MER 38b)
   See above.

B. Ground E.M. (MER 38d)
   No conductor was detected.

064

962065

MN



OUTCROP GEOLOGY

● 256180/ Rock chip sample locations & results in p.p.m. Sn, WO_3, Cu, Pb, Zn, Rb, Sr

For Legend See Plate MER. 18

NOTE: For Location Refer Meredith Plate No. MER 4. 363/400

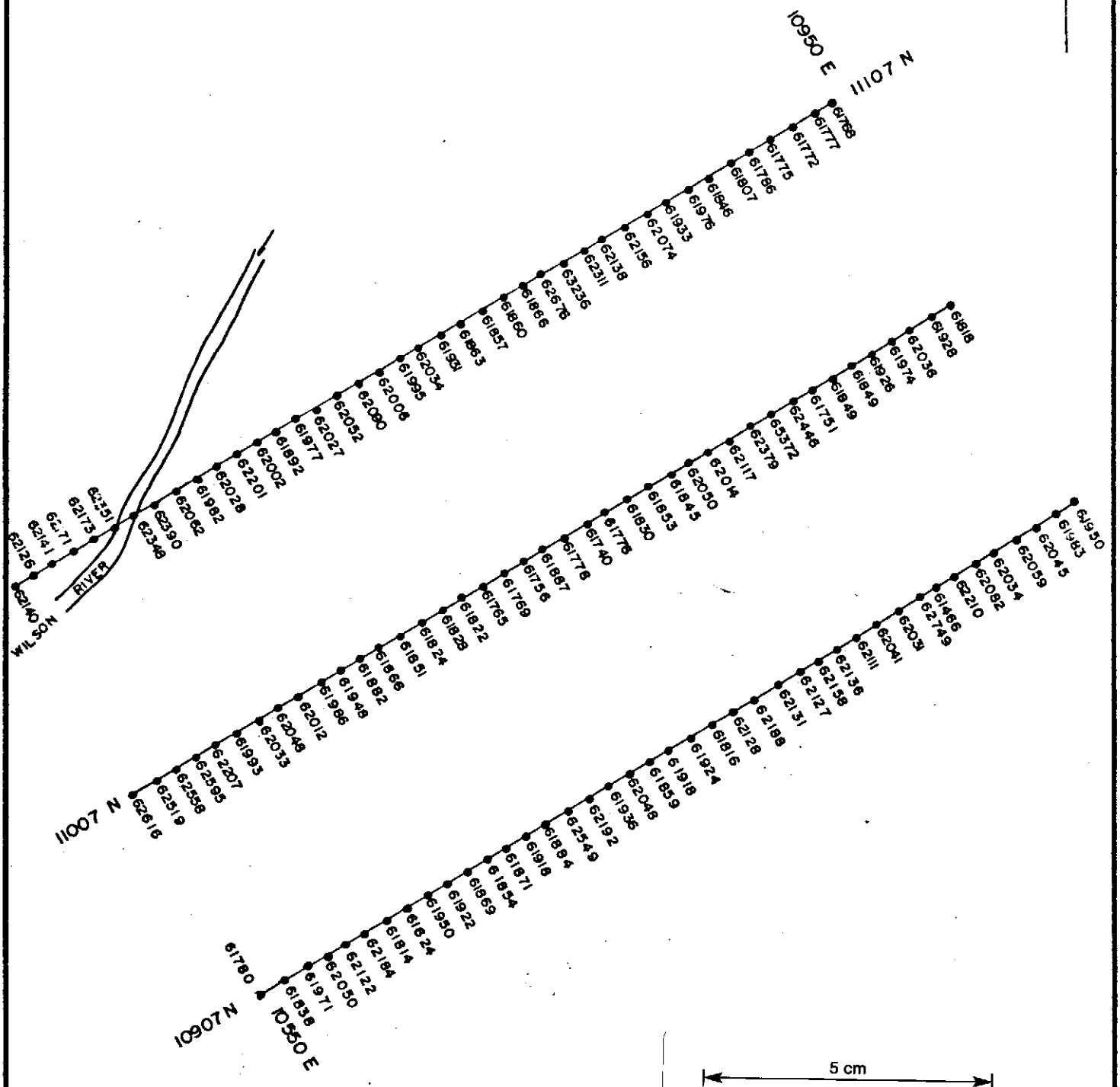
Aberfoyle Exploration Pty Ltd

Drawn: R.M.J	NORTH WEST TASMANIA	Location code:
Traced: J.L.R.	MEREDITH E.L. 16/78	Date: March, 1981
Checked:	DIGHEM FOLLOW-UP 1980-81	Scale: 1:2500
Revised by: Date:	CIRCULAR FEATURE	Plate No MER. 38a
	E M ANOMALY 10A	

962066

065

MN



GROUND MAGNETICS

●61838 Location and Reading in gammas

NOTE: For Location Refer Meredith Plate No. MER 4.
363/400

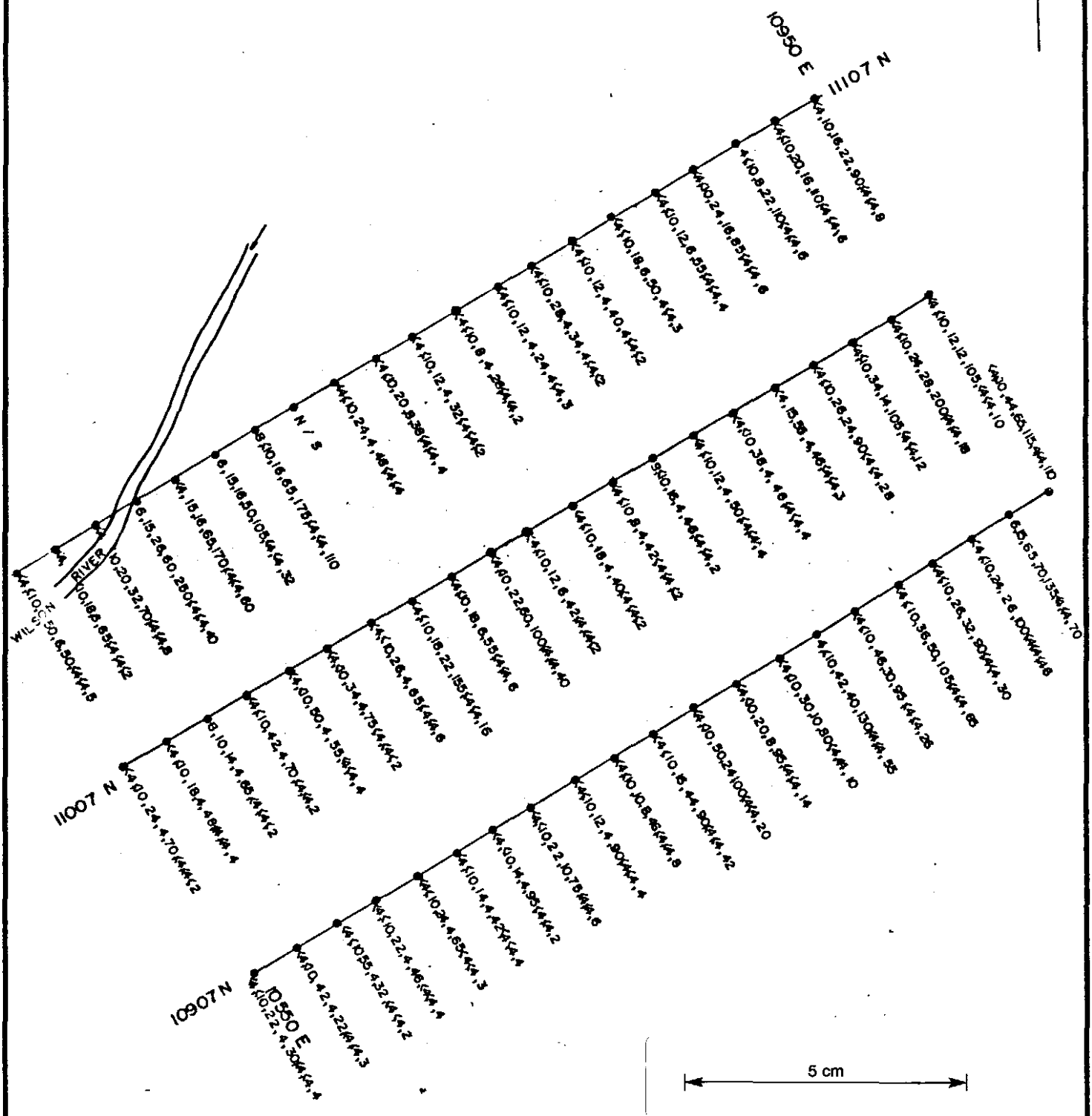
Aberfoyle Exploration Pty Ltd

Drawn: R.M.J	NORTH WEST TASMANIA	Location code:
Traced: J.L.R.	MEREDITH E.L. 16/ 78	Date: March, 1981
Checked:	DIGHEM FOLLOW-UP 1980-81	Scale. 1: 2500
Revised by: Date	CIRCULAR FEATURE	Plate No MER. 38b
	E M ANOMALY 10 A	

962067

066

MN



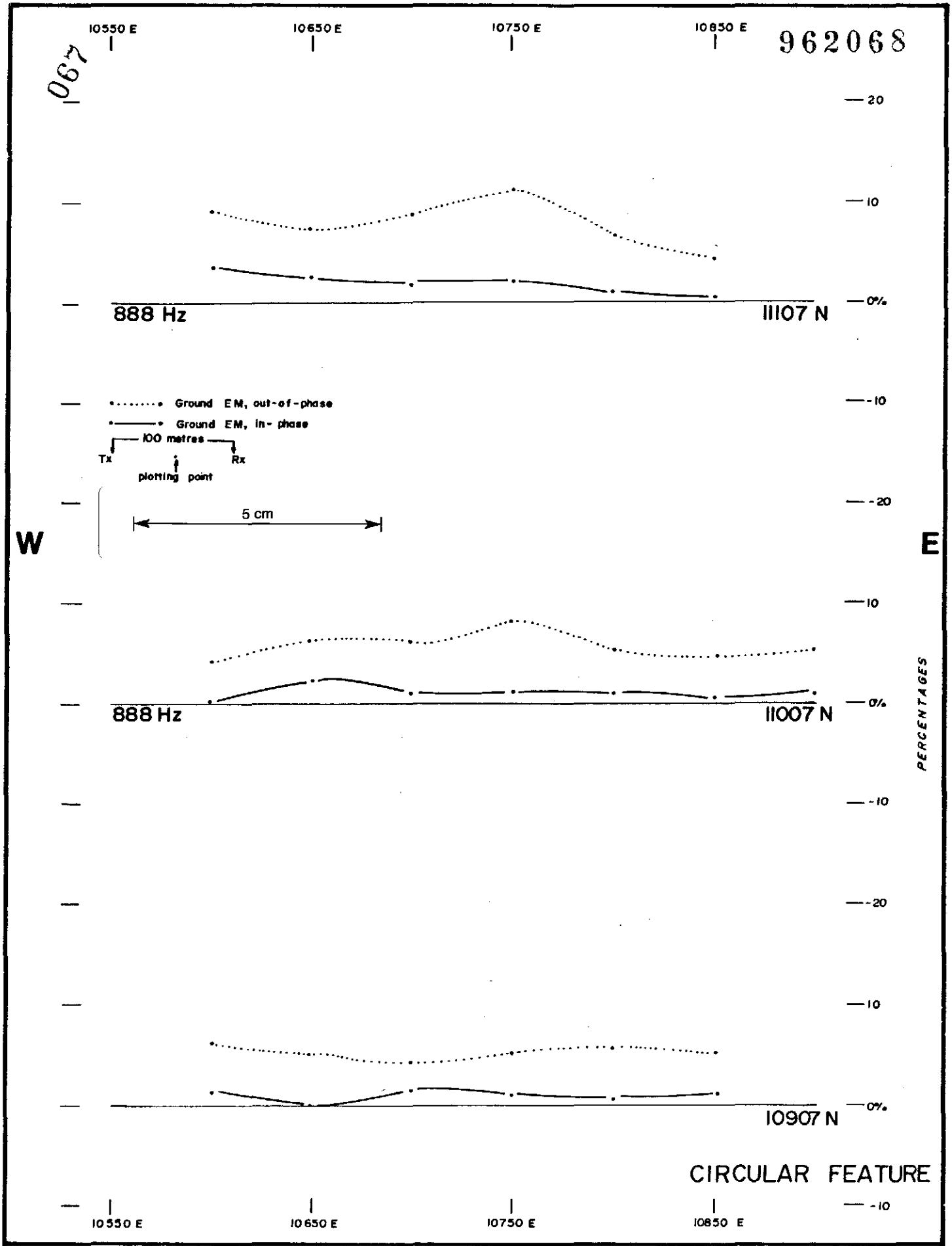
SOIL GEOCHEMISTRY

- Assay results, Sn, W, Cu, Pb, Zn, Mo, Bi, As in p.p.m.

NOTE: For Location Refer Meredith Plate No. MER 4. 363/400

Aberfoyle Exploration Pty Ltd

Drawn: R.M.J	NORTH WEST TASMANIA	Location code:
Traced: J.L.R.	MEREDITH E.L. 16/78	Date: March, 1981
Checked:	DIGHEM FOLLOW-UP 1980-81	Scale: 1:2500
	CIRCULAR FEATURE	Plate No MER 38c
	E.M. ANOMALY 10A	



Aberfoyle Exploration Pty Ltd

Drawn: J.S.	NORTH WEST TASMANIA MEREDITH E.L. 16/78 GROUND E.M. SURVEY DIGHEM ANOMALY 10A	Location code:
Traced: J.L.R.		Date: April, 1981
Checked		Scale: 1:2500
Revised by: Date:		Plate No. MER 38d

068

CIRCULAR FEATURE

E.M. ANOMALIES 14A and 14A EAST

Geology (MER 39a)

These two E.M. anomalies occur close to the contact between the Meredith Granite and altered basic volcanics perhaps associated with a mafic-ultramafic suite. The granite within the gridded area shows great textural variations but is essentially unaltered. Petrological reports suggest compositional variations from biotite adamellite to granite, and grain-size is suggestive of a marginal phase.

The altered volcanics comprise amydaloidal basic lavas which are metamorphosed to hornblende hornfels facies. The volcanics are commonly quartz-veined and silicified but rock chip assay results are discouraging.

Geochemistry (MER 39c)

The results of 20 m spaced soil samples show no significant geochmeical anomalies. Within the granite maximum Sn values are 50 ppm, and within the contact rocks Sn values are all below 20 ppm.

Geophysics

A. Ground Magnetics (MER 39b)

Magnetometer mal-function on two of the three lines hampered interpretation, however no major anomalies were detected.

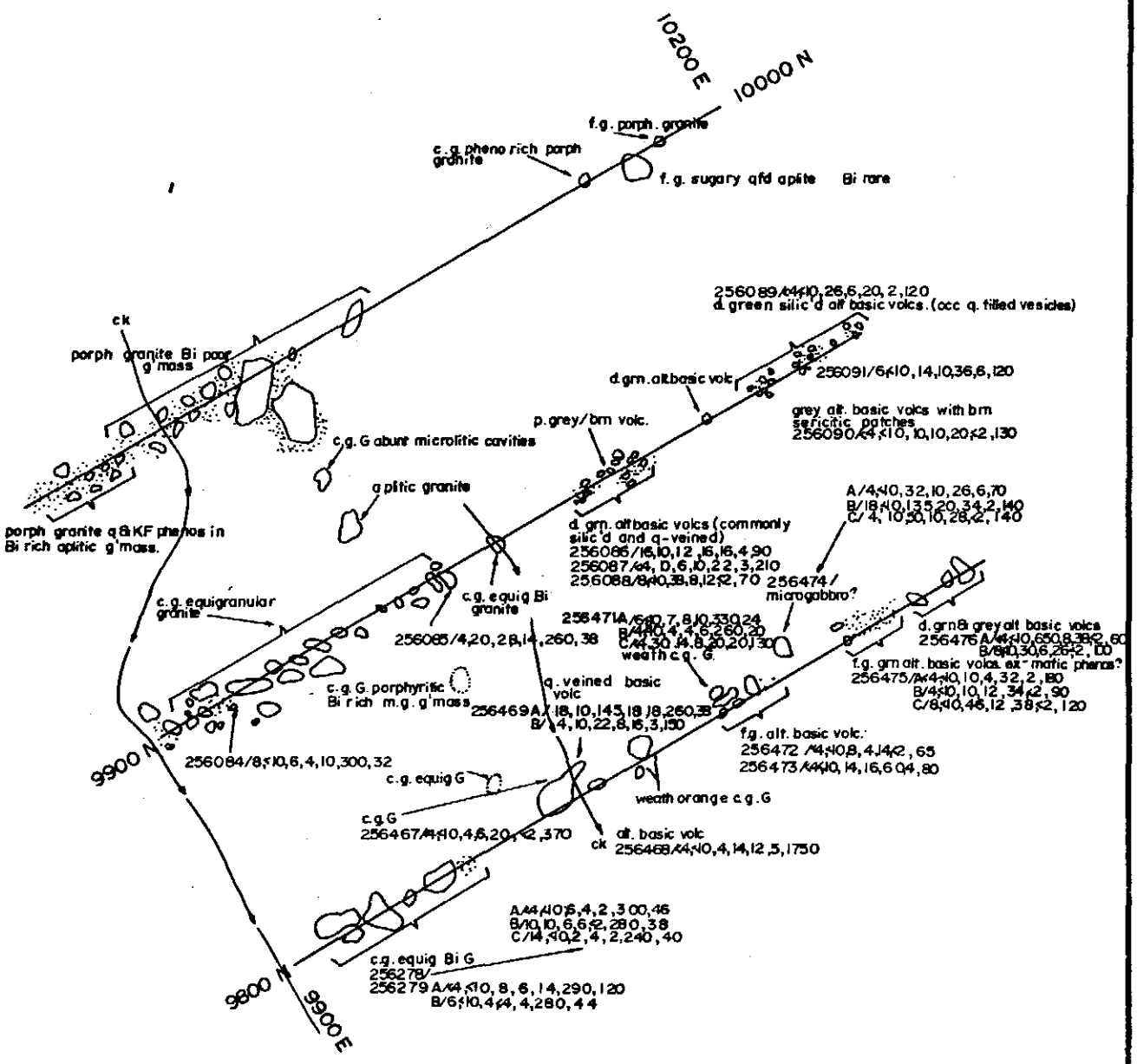
B. Ground E.M. (MER 39d)

No conductors detected.

069

962070

MN



5 cm

OUTCROP GEOLOGY

• 256278 / Rock chip sample locations & results in p.p.m. Sn, WO_3, Cu, Pb, Zn, Rb, Sr

For Legend See Plate MER. 18

NOTE: For Location Refer Meredith Plate No. MER.4

363/400

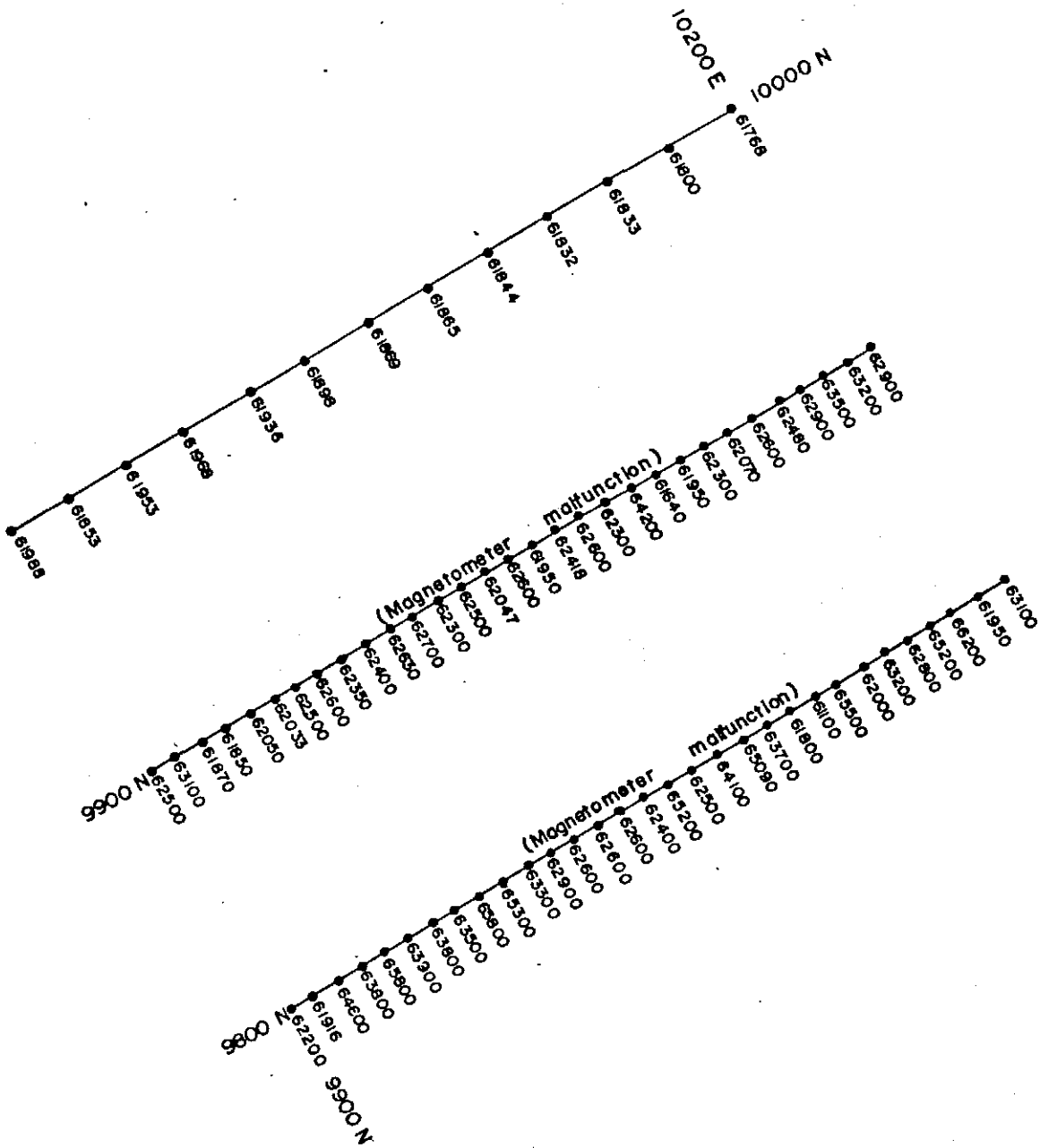
Aberfoyle Exploration Pty Ltd

Drawn: R.M.J.	NORTH WEST TASMANIA	Location code:
Traced: J.L.R	MEREDITH E.L. 16/78	Date: March, 1981
Checked:	DIGHEM FOLLOW-UP 1980-81	Scale: 1:2500
Revised by: Date:	CIRCULAR FEATURE	Plate No MER. 39a
	E.M. ANOMALIES 14A / 14A E	

070

962071

MN



GROUND MAGNETICS

●63200 Location and Reading in gammas

NOTE: For Location Refer Meredith Plate No. MER.4 363/400

5 cm

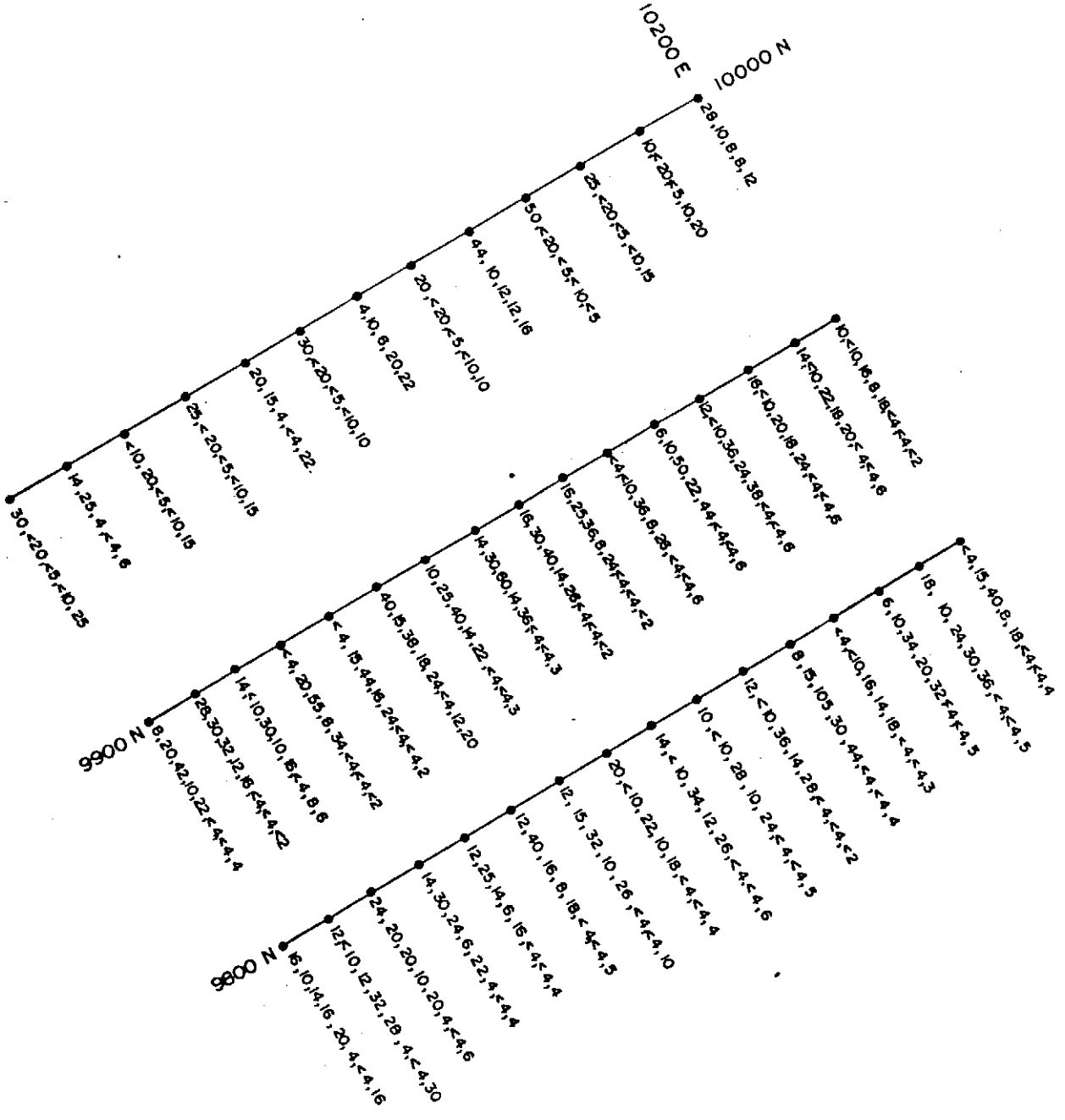
Aberfoyle Exploration Pty Ltd

Drawn. R.M.J	NORTH WEST TASMANIA	Location code:
Traced. J.L.R	MEREDITH E.L. 16/78	Date: March, 1981
Checked	DIGHEM FOLLOW-UP 1980-81	Scale. 1:2500
Re...d by ... Date	CIRCULAR FEATURE	Plate No. MER.39b
	E M ANOMALIES 14A/14A E	

071

962072

MN



SOIL GEOCHEMISTRY

• Assay results, Sn, W, Cu, Pb, Zn, Bi, Mo, As

5 cm

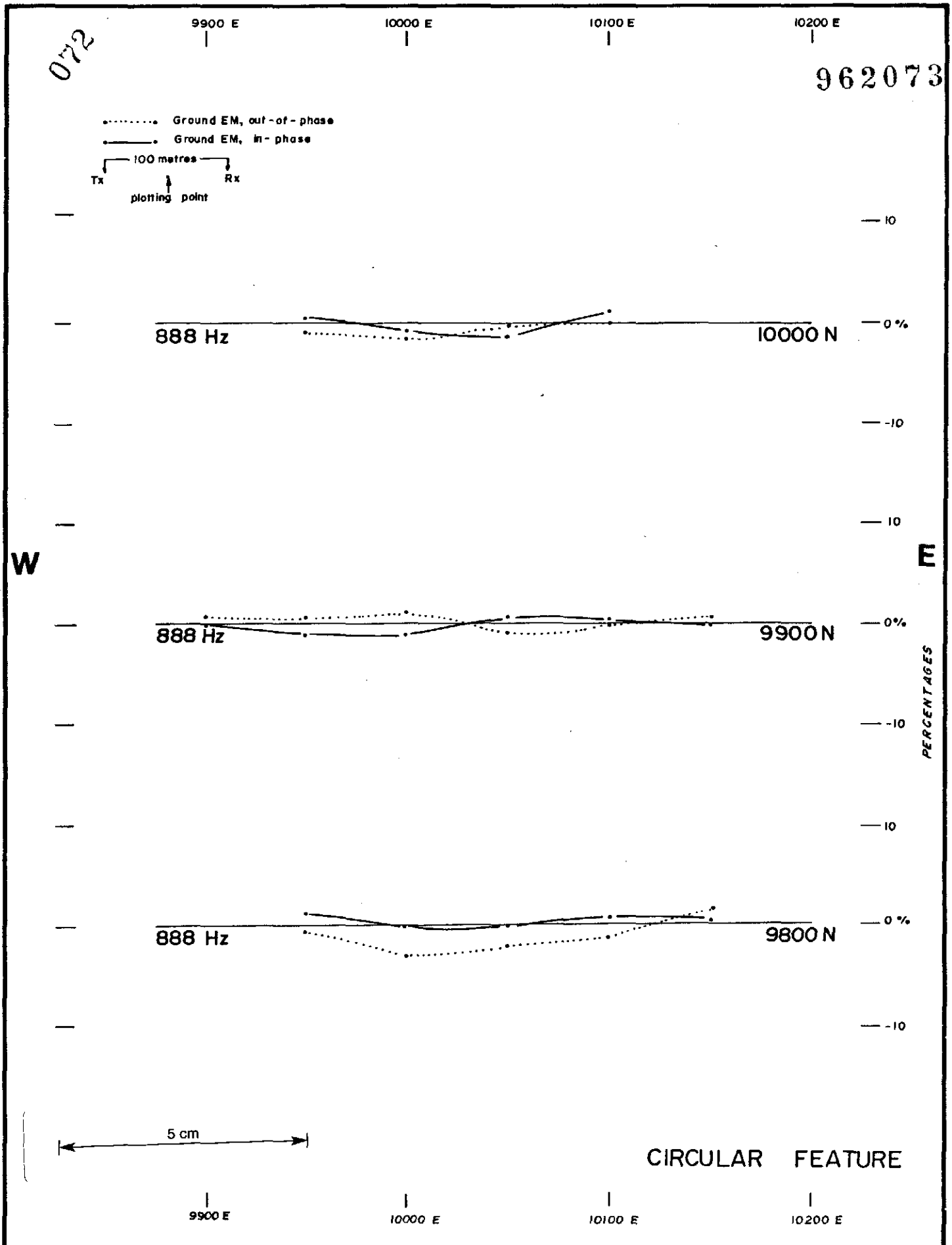
NOTE: For Location Refer Meredith Plate No MER.4 363/400

Aberfoyle Exploration Pty Ltd

Drawn: R.M.J.	NORTH WEST TASMANIA	Location code:
Traced: J.L.R	MEREDITH E.L. 16/78	Date: March, 1981
Checked:	DIGHEM FOLLOW-UP 1980-81	Scale: 1:2500
Revised by: Date	CIRCULAR FEATURE	Plate No: MER.39c
	E.M. ANOMALIES 14A/14A E	

072

962073



Aberfoyle Exploration Pty Ltd

Drawn: J. S	NORTH WEST TASMANIA	Location code:
Traced: J.L.R	MEREDITH E.L. 16/78	Date: April, 1981
Checked:	GROUND E.M. SURVEY	Scale: 1:2500
Revised by: Date:	DIGHEM ANOMALY 14 A	Plate No MER 39d

CONCLUSIONS

DIGHEM FOLLOW-UP

MT. YOUNGBUCK SKARN

i) The skarn horizon has a width of 10-12 metres and strike length of approx. 500 metres. It is truncated to the south by the Meredith Granite, and to the north by a possible fault.

ii) Ground magnetics indicate that the skarn is in places buried beneath a thin (20 m) cover of doleritic material. A second magnetic anomaly immediately east of the major skarn may be another horizon buried beneath dolerite.

iii) C-Horizon soil geochemistry clearly detects the skarn, but down-slope dispersion of up to 300 m makes precise interpretation difficult.

iv) Ground E.M. follow-up with a Max-Min II system found that the greatest conductance within the skarn occurs towards the centre of the grid area.

CONTACT CREEK AREA

i) Magnetic anomalies in Cambrian sediments near the Meredith Granite are due to disseminated magnetite within metasomatized and metamorphosed siltstones and sandstones.

WHYTE SCHIST ZONE

i) E.M. anomalies in the Pre-Cambrian are apparently due to carbonaceous black shales.

CIRCULAR FEATURE AREA

i) Apparent E.M. anomalies detected by DIGHEM are spurious and due in most cases to high magnetic content in ultramafic rocks.

ii) No significant geochemical anomalies have been generated by this season's sampling.

PROPOSED FURTHER WORK

With the exception of the Mt. Youngbuck skarn, there appears to be little potential for economic Sn, WO_3 mineralization within the areas entered to date on the northern contact of the Meredith Granite.

However, other areas have not yet been adequately explored, and further work is proposed to enable evaluation of their potential.

AREA 1 - Mt. Youngbuck Skarn

4 x 150 metre diamond drilling programme designed to test both the magnetite skarn, and the SIROTEM conductor in the northern part of the grid area.

AREA 2 - Area West of Betts Track

Regional stream sediment and reconnaissance mapping programme in an area not yet entered. In this area, along strike continuation of Cleveland stratigraphy is possible (refer Plate MER 41).

AREA 3 - Ordovician - Silurian Rocks

Stream sampling and reconnaissance mapping of Whyte River tributaries within Ordovician - Silurian quartzites and limestones east of Mt. Stewart.

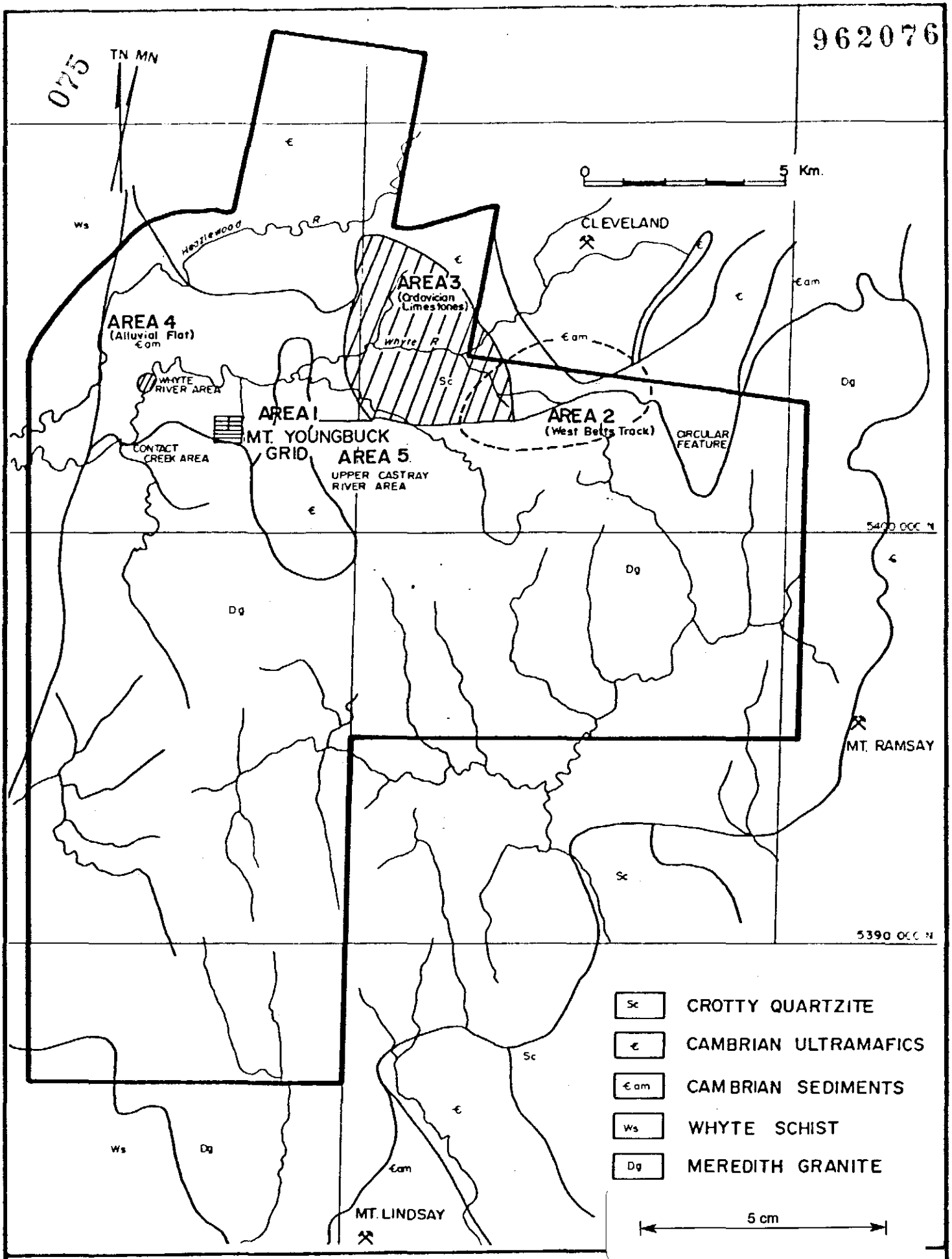
AREA 4 - Alluvial Flat

Evaluate the potential of an alluvial flat area near Contact Creek by hand augering and sludging.

AREA 5 - Castray River Granite Area

Base of slope follow-up of high stream geochemistry.

962076



Aberfoyle Exploration Pty Ltd

Drawn:	NORTH WEST TASMANIA	Location code
Traced R J E	MEREDITH E.L. 16/78	Date April, 1981
Checked	PROPOSED WORK (1981/82) SEASON	Scale 1:25,000
	LOCATION PLAN	Figure No. 41

076

FINANCE

MEREDITH, Exploration Licence 16/78

Six months to 20th April, 1981

	$
Salaries and Wages	42,149
Contractors, Consultants	
- Geology	58
- Geochemistry	9277
- Access	4950
Materials	3466
Accommodation & Travel	6453
Vehicles	3818
Communications	256
Tenure	1126
Equipment Use	3463
Sundries	756
Administration at 15%	11,366
	$87,138

REFERENCES

Young, C.H. 1978 Property Generation Report for the Meredith Granite Area. Internal Report Aberfoyle Exploration.

Young, C.H. 1979 Aberfoyle Exploration Pty.Ltd. Meredith Granite Project. Report for the six months ending October 20, 1979.

Joyce, R.M. 1980 Aberfoyle Exploration Pty.Ltd. Meredith Granite Project. Progress Report for the six months ending April 20, 1980.

Joyce, R.M. 1980 Aberfoyle Exploration Pty.Ltd. Meredith Granite Project. Progress Report for the six months ending October 20, 1980.

SIGNED: R.M. Joyce
R.M. Joyce,
Geologist.

ENDORSED: C.H. Young
C.H. Young,
District Manager.

APPENDIX I

Petrological Reports by H.W. Fander, M.Sc.

and D. Cowan, B.Sc.

Refer to Plates - MER 22, MER 16
& APPENDIX 1 PLATES

for Sample locations and assay results

078

962079

REPORT CMS 81/1/6

Nine rock samples were received for thin-section preparation and petrological examination; the rocks were from the northern contact of the Meredith Granite.

Summary

This suite comprises five skarns, two altered dolerites, an arkose and a spotted hornfels.

The two dolerites are altered, partly due to normal deuteric and retrograde processes, partly by metasomatic replacement by actinolitic amphibole accompanied by pyrrhotite. They are probably dykes/sills, affected by the granite and thus presumably older.

The skarns consist of varying combinations of the mineral assemblage vesuvianite-grossularite-ferrohastingsite-diopside, with patchy magnetite and sulphides, as well as ultrafine sphene; all were checked under a short-wave UV source, but no scheelite was detected. Onesample (2561518) contains definitely identifiable cassiterite as well as sphene; the others may contain cassiterite, but ultrafine sphene and cassiterite are not distinguishable with certainty, hence Sn assays should be carried out on all the skarns.

Studies of other pyrometasomatic skarns have suggested that cassiterite as such is not common; rather, any Sn present often occurs in solid solution in a wide range of silicates and other mineral phases, and may report as "soluble Sn" in assays. This should also be checked as a precautionary measure, i.e. assays for total Sn and "soluble Sn" should be carried out.

H.W. Fander, M. Sc.

Central Mineralogical Services

Sample No.	Rock Type - Composition	Fabric	Minor Minerals	Comments
253 426 (T.S. 35694)	Uralitised Dolerite. Scattered andesine and uralitised augite phenocrysts in medium-grained mass of saussuritised plagioclase, fibrous actinolite.	Intrusive igneous fabric well-preserved, verging on basaltic fabric.	Veins, wedges of matted, fibrous actinolite, with pyrrhotite masses.	Evidence of metasomatism as well as normal uralitisation. Probably a dyke associated with the granite.
253 427	Kaolinised Arkose. Framework of subangular quartz grains and partly kaolinised feldspars; matrix/cement of fine quartz, kaolinite. Iron-stained.	Moderately-sized/sorted, weakly bedded. Medium-sand-size.	Detrital heavy-mineral grains. Patches of hydromuscovite in places.	Normal arkose, incompletely kaolinised. Small hydromuscovite patches may be effect of granite, but weak.
253 429A	Altered, Spotted Hornfels. Many small spots of sericitised ?cordierite, interstitial fine sericite, quartz, phlogopite, carbonaceous matter (?graphite).	Very fine-grained, with poorly-preserved textures. Weak preferred orientation.	Traces of fine sulphide (?pyrrhotite). A few chlorite aggregates.	Appears to be an altered, weakly contact-metamorphosed pelitic, carbonaceous sediment.
253 436B	Carbonaceous Skarn. Dominantly grossularite garnet with fine diopside; coarser garnet patches. Streaks of anthracite-like carbon throughout.	Typical massive skarn fabric. Fine, faint streakiness may be relict bedding.	Ultrafine granular ?sphene embedded in diopside.	Ultrafine ?sphene (< 20μ) not distinguishable from fine cassiterite with certainty; therefore Sn assay needed.
253 438	Skarn. Mostly very coarse vesuvianite with embedded small diopside, garnet crystals; coarse ferrohastingsite porphyroblasts.	Generally very coarsely-crystalline. No relict features.	Traces of pyrite, pyrrhotite, graphite. Cavities with fibrous gypsum.	No fluorescent minerals detected in this rock or 436B. Fairly typical pyrometasomatic rock.
253 439	Skarn. Fine intergrowth of granular garnet (grossularite) and diopside, scattered ferrohastingsite. Very abundant ultrafine ?sphene throughout.	Finely-granular, homogeneous fabric with no relict textures, structures.	Crosscutting veins of diopside, fibrous actinolite.	Ultrafine ?sphene (mostly < 10μ) cannot be identified with certainty. Sn assay recommended.
253 445B	Skarn. Zones of coarse prismatic vesuvianite with embedded fine diopside, and zones of ferrohastingsite. Scattered fine grossularite.	Crude compositional banding. Single vesuvianite crystal up to 25 mm.	Ultrafine ?sphene and a few coarser crystals.	No fluorescence detected. Composition similar to 253438. Banding may reflect original composition.
253 450	Uralitised Dolerite. Mostly replacive pale hornblende patches/pseudomorphs; small plagioclase laths, mostly recrystallized. Biotite aggregates.	Medium-grained doleritic fabricpreserved. Replacement textures.	Scattered magnetite crystals. Actinolite veins with pyrrhotite.	Similar to 253426. Pyroxene may have been metasomatically replaced, rather than being "uralitised".
256 1518 (T.S. 35702)	Mineralised Skarn. Dominantly fine matted and coarser prismatic ferrohastingsite; magnetite patches. Cassiterite crystals up to 100x400 μ.	Random, medium-grained fabric; no relict textures/structures.	Small sphene crystals scattered through rock.	Both sphene and cassiterite present; finer grains indistinguishable. Cassiterite is granular to prismatic, 10 μ to 400 μ.

Notes:

Brief petrological descriptions were prepared in tabulated form.These incorporate data from microscopic (stereobinocular and petrological) examination of representative thin-sections and related offcuts, and from subsidiary observations, for example K-feldspar staining tests. Descriptions include comments on interpretation and alteration trends where applicable.

The suite can be categorised into two groups broadly, "granitoids" and altered basics/ultramafics.

Granitoids range from biotite adamellitic to granitic in composition and are typically medium-grained, thus suggestive of a marginal to minor intrusive facies. These rocks are very mildly altered, with semi-pervasive, but incipient to weak preferential sericitisation of plagioclase and associated, variably developed chloritisation of biotite. There are compositional affinities with the *mineralising Devonian granitoids* (e.g. Pine Hill Porphyry), but little tendency to the marked greisening and concentrations of "volatiles" (e.g. tourmaline, topaz) that tends to characterise these facies elsewhere.

The basic suite comprises amygdaloidal lavas (and possibly minor intrusives) of basic to locally intermediate affinities, gabbro and altered ultramafics of peridotitic character with, perhaps, subordinate pyroxenites. Lavas are typically hornfelsed at upper albite-epidote to hornblende-hornfels facies. Ultramafics are serpentinised, with variable development of secondary talc or tremolitic assemblages of low-grade tectonic to distinctly contact-metasomatised character respectively.

D. Cowan, B. Sc.

Central Mineralogical Services

Sample No.	Classification - Composition	Fabric	Accessories	Comments
256 158 (T.S. 36019)	Uralitised Gabbro. Tremolite-stained/partly albitised labradorite and tremolite-actinolite pseudomorphed pyroxene in near-equant proportions. Patchy vein tremolite-actinolite.	Relict coarse, even-grained, gabbroic.	Ultrafine "exsolved" opaques in uralitised pyroxene.	Pervasive uralitic alteration, probably deuteric in absence of recrystallization effects.
256 179A	Tremolitised Serpentinite. Pale green tremolite-actinolite with disseminated relict primary chromite, patchy, very fine "exsolved" magnetite.	Finegrained, random tremolite. Vague relict serpentine mesh-structure.	Minor traces chlorite.	Patchy distribution of exsolved opaques, suggestive of serpentinised (± carbonate), subsequently metasomatically tremolitised peridotite.
256 188	Biotite Granite. Orthoclase-microperthite and quartz, subordinate, incipiently sericitised oligoclase, disseminated biotite flakes.	Orthoclase-porphyritic, granitic, with patchy subgraphic segregations.	Rare muscovite. Traces chlorite, epidote, after biotite. Sparse zircon, ?monazite.	Verges on alkali granite. Only mildly altered, but with late kaolin-staining of feldspars (weathering).
256 198	Hornblende Hornfels. Pale green hornblende with subordinate, closely intergrown quartz, poorly twinned ?oligoclase. Frequent mildly recrystallized clots of quartz, albite.	Essentially fine-grained hornfelsic with conspicuous, partly recrystallized amygdales.	Conspicuous fine to ultrafine magnetite. Rare pyrite, ?chalcopyrite in amygdales.	Hornfelsed, strongly amygdaloidal, basic-intermediate fine-grained lava or marginal/minor intrusive. Finer details obliterated by recrystallization
256 200	Tremolitised ?Serpentinite. Fine tremolite with subordinate, patchy, closely intergrown quartz. Disseminated fine to ultrafine chromiferous magnetite.	Essentially random, with weakly clotted opaques, vague pyroxene-derived structures.	Minor traces late chlorite (after tremolite).	Similar paragenesis to 256179A, but apparently incompletely serpentinised and mildly sheared prior to tremolitisation.
256 282B	Biotite Micro-Adamellite. Orthoclase-microperthite and incipiently sericite-stained oligoclase in near-equant proportions; slightly subordinate quartz, disseminated, variably chloritised biotite flakes.	Banded, coarse granitic to (trend) aplitic, locally micrographic (granophyric). Incipiently stressed.	Extremely fine zircon, metamict ?monazite. Traces secondary adularia (in chloritised biotite).	Affinities with 256188, but slightly basic (calcic oligoclase) in comparison. Alteration is incipient only.
256 286	Biotite Microgranite. Ortnoclase and quartz, relatively minor, weakly sericite-stained oligoclase, disseminated, weakly chloritised biotite flakes.	Quartz-feldspar-biotite porphyry. Granitic groundmass, mean 200 μ. Incipiently stressed.	Minor traces muscovite, zircon, ?monazite.	Affinities with 256188, relatively alkaline in comparison with 256282. Mildly weathered but, in common with associated granites, only incipiently altered.
256 380	Serpentinite. Mesh-textured antigorite with subordinate cross-fibre chrysotile. Conspicuous relict primary chromite and ultrafine (partly oxidised) exsolved opaques.	Coarse relict, granular fabric. Olivine- and pyroxene-derived mesh-textures.	Minor traces oxidised extremely fine sulphide? Rare talc flakes.	Primarily a coarse granular peridotite (?harzburgite). Thoroughly serpentinised, but unmetasomatised in contrast to 256179A and 256200.
256 400A (T.S. 36027)	Talcose Serpentinite. Weakly orientated, semi-mesh-textured antigorite, patchy impregnations, foliae of talc. Disseminated relict primary chromite, ultrafine exsolved opaques.	Semi-schistose with variably sized, pyroxene-derived mesh-textures.	Minor chrysotile, pale green Mg-chlorite.	No definite olivine-derived structures, but conceivably obliterated by mild shearing. Alternately, a serpentinised, partly steatitised pyroxenite.

Central Mineralogical Services

Sample No.	Classification - Composition	Fabric	Accessories	Comments
256 473 (T.S. 36028)	Hornblende Hornfels. Disseminated andesine-pseudomorphed plagioclase phenocrysts, frequent recrystallized quartz amygdales in fine-grained green hornblende with subordinate, closely intergrown andesine.	Hornfelsic, with relict, strongly amygdaloidal "basaltic" fabric; weak relict flow-structure.	Conspicuous magnetite, sparse, strongly poikilitic diopside.	Close affinities with 256198, but reflects slightly higher grade contact-metamorphism. Relict fabric consistent with flow-marginal facies.
256 475B	"Hornblende Hornfels". Pale brown anthophyllite (gedrite) and poorly twinned oligoclase, minor quartz andcummingtonite, conspicuous, very fine magnetite.	Relict, weakly quartz-amygdaloidal, fine-grained, basaltic fabric. Fine hornfelsic overprint.	Minor patchy late chlorite (after amphiboles).	Analogies with 256198, 473, but relaitvely feldspathic (?trend andesitic). Gedrite, cummingtonite closely intergrown, suggest pre-hornfels chloritic alteration.
256 475C	"Hornblende Hornfels". Poorly twinned oligoclase with closely intergrown, very pale cummingtonite, minor, similarly-coloured anthophyllite, re-crystallized amygdaloidal and veinlet quartz.	Closely analogous to 256475B, but slightly finer-grained.	Late veinlet albite, adularia, zeolite with hornblende-rich selvedges. Minor fine magnetite.	Close affinities with 256475B, but with a weak polymetamorphic character. Primarily a weakly vesicular basic-intermediate flow.
256 500B (T.S. 36031)	Biotite Micro-Adamellite. Weakly to moderately sericitised oligoclase, quartz, subordinate but variably orthoclase, conspicuous biotite.	Sporadic feldspar, quartz phenocrysts in medium-grained granitic, trend aplitic, banded groundmass.	Rare zircon, apatite. Minor traces chlorite (after biotite).	Affinities with 256188 and particularly 2562828 and 256286, slightly more altered (mildly greisened). Banding reflects distribution of orthoclase.

083

962084

REPORT CMS 81/2/25

Notes:

Ten specimens were received for petrological examination and definition of "magnetic mineralogy". Individual specimens are described briefly, in tabulated form.

Three groups are evident, comprising variably altered microgabbros (262013B, 262014, 262020A), an intraformationally brecciated and mildly metasomatised impure chert (262018A), and a sequence of mildly to strongly metasomatised labile (tuffaceous) psammopelites (262054C, 262059B, 262078B, 262079C, 262081A, 262087B).

The latter group is locally brecciated and in general bears close affinities with labile turbiditic psammopelites of the Crimson Creek Formation. These rocks are characterised by accessory to abundant fine clastic opaques, in part a reflection of their basic-intermediate volcanomict/reworked tuffaceous character. Much of this opaque material is magnetite, no doubt primary in part, although a certain (andindefinite) proportion may reflect low-grade metamorphic crystallization of diverse clastic oxide phases (e.g. hematite, Fe-oxide "exsolved" *from leucoxenised ilmenite*, etc.).

There is no real evidence in support of a metasomatic introduction of magnetite. Crimson Creek labile facies include conspicuous "bedded" opaques even where relatively unaltered.

Microgabbros similarly represent primary concentrations of magnetite, although the main phase here is strongly titaniferous and generally thoroughly leucoxenised. This trend is offset to some extent by the occurrence in these rocks of traces of pyrrhotite.

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Sample No.	Classification - Composition	Fabric	Accessories	Comments
262 013B (T.S. 36104)	Uralitic Microgabbro. Saussurite-stained/partly albitised labradorite laths, slightly subordinate, partly tremolitised pigeonitic pyroxene, thinly disseminated very fine leucoxenic opaques.	Doleritic (subophitic), even-grained (mean 50 μ plagioclase laths).	Traces fine to ultrafine pyrrhotite, magnetite. Minor late chlorite (after tremolite).	Magnetite (relict primary) and pyrrhotite (secondary) pervasive, but sparse (<1%). Alteration probably deuteric. Minor intrusive characteristics.
262 014	Microgabbro. Saussurite-stained/albitised plagioclase laths, subordinate, weakly chlorite-stained clinopyroxene, sparse serpentinised olivine granules, mesostasis chlorite. Disseminated leucoxenised opaques.	Doleritic (subophitic). Plagioclase laths mean 100 μ, relatively coarse pyroxene.	Minor veinlets tremolite-actinolite. Traces fine to ultrafine pyrrhotite, very rare chalcopyrite.	Affinities with 262 013, but coarser-grained. Opaques virtually entirely leucoxenised (?Ti-magnetite), relatively sparse pyrrhotite, partly pyritised.
262 018A	Impure Chert. Crypto - microcrystalline quartz, subordinate to minor semi-sericitic albite, mica, chlorite. Thinly disseminated, extremely fine pyrite.	Weakly laminated, locally pelletal, intraformationally brecciated. Minor late microfractures.	Minor traces metasomatic phlogopite, sideritic carbonate.	Chert breccia, mildly metasomatised, subsequently weakly microfractured. Pyrite evidently primary "syngenetic".
262020A	Microgabbro. Weakly saussurite-stained/albitised labradorite laths, subordinate, weakly chloritised clinopyroxene, sparse chloritised olivine granules, mesostasis chlorite. Disseminated leucoxenised opaques.	Doleritic (subophitic), virtually identical with 262014.	Traces uralitic tremolite-actinolite. Minor traces extremely fine pyrrhotite, pyrite.	Very similar and closely related to 262014. Opaques virtually entirely leucoxenised. Actinolite postdates deuteric chlorite (similarly 014).
262 054C	Metasomatised Pelite. Ultrafine quartz, phlogopite, tremolite-actinolite in varying proportions, sporadic quartz-albite-phlogopite veinlets/stressed veins with late segregations actinolite (hastingsitic).	Fractured to brecciated, relict fine silty pelitic banding.	Sparse to locally conspicuous relict clastic opaques.	Primarily a labile (?tuffaceous) silty pelite. Opaques magnetite in part. Prograde metasomatic assemblage with actinolite partly after phlogopite.
262 059B	Metasomatised Tuffaceous Greywacke. Pale green tremolite-actinolite, minor closely intergrown albite. Disseminated relict clastic quartz, plagioclase, lava clasts, shards, fine opaques.	Relict silty to medium sandy clastic fabric. Sparse tremolite microveinlets.	Minor phlogopite, chlorite. Minor traces pyrrhotite, ?chalcopyrite.	Clastic opaques relatively conspicuous, magnetite in part with offcuts weakly magnetic. Affinities with 262054C, but distinctly coarser, psammitic.
262 078B	Metasomatised Breccia. Variably stressed vein-type quartz with patches of actinolite, phlogopite. Disseminated clasts of actinolitised/phlogopitised labile psammopelite.	Deformed angular clasts to 5 mm. irregular films, aggregates actinolite, phlogopite, vein-quartz.	Extremely fine relict clastic opaques, partly replaced by cloudy, ultrafine sphene.	Quartz-healed breccia with late phase of actinolite-phlogopite alteration. Ultrafine opaques are indeterminate, inconspicuous.
262 079C	Metasomatised Labile Pelite. Ultrafine tremolite and relict microcrystalline quartzofeldspathic material, minor relict clastic fine silt-sized quartz, muscovite. Abundant fine silty clastic opaques.	Submillimetric to microscale, slightly lenticular pelitic bedding.	Rare ultrafine Fe sulphide. Minor traces chlorite, phlogopite.	Affinities with 262054C etc. Clastic opaques leucoxenised in part, but with conspicuous magnetite; offcuts distinctly magnetic.
262 081A (T.S. 36112)	Metasomatised Labile Pelite. Ultrafine tremolite and relict quartzofeldspathic material. Pervasive lenticular clots of pale actinolite. Interbeds of similarly altered fine sandy silt.	Incipient tectonic cleavage, discordant to bedding. Otherwise similar to 262079C.	Ultrafine to fine silt-sized clastic opaques, leucoxenic semi-opaques.	Close affinities with 262054C etc. Opaques poorly resolved, but clearly magnetite in part. Actinolitic clots represent altered diagenetic carbonate.

Central Mineralogical Services

Sample No.	Classification - Composition	Fabric	Accessories	Comments
262 0878 (T.S. 36113)	Metasomatised Labile Pelite. Microcrystalline quartzofeldspathic material with pervasive extremely fine tremolite. Conspicuous relict clastic quartz, feldspar, lava clasts. Abundant paques.	Weakly slumped, sub- to millimetric intercalation of fine sandy silt, argillaceous fine silt.	Traces pale phlogopite (partly chloritised).	Abundant fine silt-sized clastic opaques with high proportion of magnetite, strongly magnetic offcuts.

962087

23-6-81

VOL.II

81-1565

ABERFOYLE EXPLORATION PTY.LTD.

MEREDITH GRANITE PROJECT

PROGRESS REPORT FOR THE SIX MONTHS

ENDING APRIL 20, 1981

R.M. Joyce
Geologist

May 1981

962088

VOLUME II

LIST OF PLATES

Plate No.	Title	Scale
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Mer.4 - 355/400	Surface Outcrop Geology	1:10,000
Mer.4 - 355/405	Surface Outcrop Geology	1:10,000
Mer.4 - 363/400	Surface Outcrop Geology	1:10,000
Mer.16 - 363/4000	Surface Geology	1:5000
Mer.16 - 367/4000	Surface Geology	1:5000
Mer.16 - 367/4025	Surface Geology	1:5000
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Mer.20 - (Sheet 2)	Circular Feature - Soil Geochemistry	1:2500
Mer.28 (Sheet 1)	Circular Feature - Ground Magnetics	1:2500
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Mer.19 (Sheet 1)	Mt. Youngbuck Grid - Soil Geochemistry	1:1000
Mer.19 (Sheet 2)	Mt. Youngbuck Grid - Soil Geochemistry	1:1000
Mer.22 (Sheet 1)	Mt. Youngbuck Grid - Outcrop Geology	1:1000
Mer.22 (Sheet 2)	Mt. Youngbuck Grid - Outcrop Geology	1:1000
Mer.26 (Sheet 1)	Mt. Youngbuck Grid - Ground Magnetics	1:1000
Mer.26 (Sheet 2)	Mt. Youngbuck Grid - Ground Magnetics	1:1000

QUATERNARY	3	Qa / DQ	Alluvium / Dolerite Talus
	8		
TERTIARY	51	Tb	Basalt
	27	Tc	Conglomerate & grit
	71	Tg	Gravels
	34	Ts	Sand, silt, clay & limestone
DEVONIAN	14	Dg	Meredith Granite / Adamellite
SILURIAN	18	Sc	Crotty Quartzite
ORDOVICIAN	26	Og	Gordon Limestone
	65	Om	Moina Sandstone
CAMBRIAN	39	Dol	Dolerite sill
	47	Vb	Basic Volcanic, probably lavas
	24	Vt	Basic Tuffs and tuffaceous greywacke
	68	mss/ba/slt	Black biotite hornfelsed (micaceous) sandstones and siltstones (commonly volcolithic)
	25	Cst	Cherty siltstone (Pelitic ash)
	57	sh	Black, grey, purple, brown shales
	36	ch	Chert, undifferentiated
	33	dom	Dolomite
	46	um / ub	Rocks of ultrabasic affinity, includes serpentinite, pyroxenite, gabbro, dolerite, both coarse & fine grained occasionally amygdaloidal probably related to Heazelwood River Complex
	44		Basic lavas
PRE CAMBRIAN	58	Puo	Oonah Quartzite and Slate
	70	Swc / Apb	WHYTE SCHIST Foliated interbedded and massive quartzite, sericite schist, black shale, quartz schist
	43		Amphibolite

GENERAL ABBREVIATIONS

MINERAL

Py	-	Pyrite
Cpy	-	Chalcopyrite
Sph	-	Sphalerite
Gn	-	Galena
Po	-	Pyrrhotite
Si	-	Siderite
Mag	-	Magnetite
Ma	-	Marcasite
Ar	-	Arsenopyrite
Stn	-	Stannite
musc	-	muscovite
graph	-	graphite
lim	-	limonite
hem	-	hematite
tm	-	tourmaline
Kspar	-	K feldspar
fd	-	feldspar
bi	-	biotite
plag	-	plagioclase
serp	-	serpentine
chl	-	chlastolite
calc	-	calcareous
q	-	quartz
cord	-	cordierite
chlor	-	chlorite
trem	-	tremolite
diop	-	diopside
pyrox	-	pyroxene
carb	-	carbonate
dom	-	dolomite
Fl	-	fluorite
Am	-	amphibole

TEXTURE

xeno	-	xenocrysts
mic	-	micaceous
socch	-	saccharoidal
tuff	-	tuffaceous
homog	-	homogenous
porph	-	porphyry
phen	-	phenocrysts
brec	-	breccia
rx	-	recrystallised
dissem	-	disseminated
interb	-	interbedded
nod	-	nodules
frag	-	fragments
alt	-	altered
lam	-	laminated
abund	-	abundant
weath	-	weathered
undiff	-	undifferentiated
fg	-	fine grained
mg	-	medium grained
cg	-	coarse grained
st	-	staining

STRUCTURE

fol	-	foliation / foliated
ax pl	-	axial plane
cr cl.	-	crenulated cleavage
vert	-	vertical
f a.	-	fold axis
80 —80°M	-	dip/dip direction magnetic

Folding

Fo^1	-	F_1 fold deforming bedding plane
Fo^2	-	F_2 fold deforming bedding plane

Deformation history

Se	-	bedding
S1	-	first deformation
Sz	-	second deformation

Lineations

L1	-	lineation produced by S1
Lz	-	lineation produced by Sz

ROCK TYPES

Sediments

sst	-	sandstone
qtz	-	quartzite
sh	-	shale
sl	-	slate
slt	-	siltstone
a	-	argillite
ch	-	chert
lst	-	limestone
dom	-	dolomite
gw	-	greywacke
cong	-	conglomerate
ms	-	mudstone

Igneous

Vt	-	tuff
Vb	-	lavas
Va	-	agglomerate
um/ub	-	rocks of ultrabasic affinity
dol	-	dolerite
A	-	adamellite
G	-	granite
serp	-	serpentinite

GENERAL SYMBOLS

- Outcrop boundary
- Float
- Contact known
- Contact interpreted
- Contact inferred
- Fault definite (known dip)
- Fault inferred
- Bedding strike & dip
- Schistosity with dip
- Joint with dip
- Minor folding showing plunge & trend
- Fold axis showing plunge & trend
- DDH — Diamond drill hole, with projected trace of hole (collar location accurate)
- DDH — Diamond drill hole, with projected trace of hole (collar location not accurate)
- PD — Percussion drill hole
- Shaft
- Trig station
- Lease corner peg
- Building
- Costean or trench
- Pit
- Dump
- Scarp, cliff or breakaway
- River or creek
- Railway or tram track
- Adit
- Topographical contours & interval
- Cleared area
- Swamp
- Alluvial deposits
- Track
- Road (unsealed)
- Highway (sealed)
- Licence boundary & number
- Dam on stream
- T/S — Thin section
- Mine

962089

81-1565 VOL 2/2

Aberfoyle Exploration Pty Ltd

Geology CHY, RMJ.	NORTH WEST TASMANIA MEREDITH LICENCE 16/78 GEOLOGICAL LEGEND	Date August, 1980
Drawn RJE		Scale
Traced		Plate MER 18

2919

For Geology Legend See Plate MER 18

5 cm

X 234089 Rock chip sample location and number, W, Sn, Cu, Pb, Zn (Mo, As) in p p m

STATE GN MN
11° 18'
Magnetic north correct 1978 - annual change easterly by 0.4'

339/405	347/405	355/405
339/400	347/400	355/400
339/395	347/395	355/395

Index to adjoining sheets

81-1565
Vol 2/2

Aberfoyle Exploration Pty Ltd

Geology	J R T J W
Drawn	J R T
Traced	R J E
Checked	
Revised by	Date

962090 2920
NORTH WEST TASMANIA
DUNDAS TROUGH
MEREDITH E.L. 16/78
Surface Outcrop Geology

Location code	
Date	June, 1979
Scale	1:10,000
Plate No	Mer 4 - 347/400

347000 E | 348000 E | 349000 E | 350000 E | 351000 E | 352000 E | 353000 E | 354000 E | 355000 E

5410000 N | 9000 N | 8000 N | 7000 N | 6000 N | 5405000 N

Fulfords Creek | Spruce Road | Spruce Creek | Hull River | Bradshaw Creek | Savage River | PIPELINE | Armstrong Creek | RIVER | Savage River | Little Savage River | SAVAGE RIVER | BURNT SPUR | OPEN CUT MINE | SAVAGE RIVER MINE | TAILINGS DAM | Norwegian Hill Creek | Elliott Creek | Lower Elliott Creek | Alwyns Creek | HEADLEWOOD

To BURNIE

Contact
Gravel pit
ms grey + green siltstone sheared in part, with boudinaged layers common
heavily sheared, grey & red siltstone - fd 90-80m
Whyte Schist consisting of: Muscovite schists, quartzites, chlorite-talc schists | D_1 axial plane cleavage (slaty cleavage)
Def history ? D_1 slaty cleavage event; D_2 sporadic crenulation cleavage & isoclinal folding
Whyte Schist
black carbonaceous shale (ws)
Anomaly 114 B Refer to plates MER 34
ms black siltstone So 90-90m
So 90-80m
So 60-90m
RIVER
ms red & grey fine mica silst
strate B bm mica schist
black carbonaceous shale
red, black-cream bedded siltstones & mudstones
ms red-black siltstone with numerous small (±1m) dol/dykes est vert dip, strike ≈ NE/SW
Anomaly 113 B 114 A Refer to plates MER 33
ms black siltstone
Whyte Schist
E.L. 16/78
ms black siltstone
bedded black siltstone 80-255 m minor dissem po/py (<1%)
block ms ± hnc siltstone fdd fragments to 10mm
vughy, brecciated ? red & black siltstone
ms black fine mica siltstone

51 | 52 | 53 | 54 | 55

339/410	347/410	355/410
339/405	347/405	355/405
339/400	347/400	355/400

5 cm

For Geology Legend See Plate MER 18

962091

81-1565

Vol 2/2

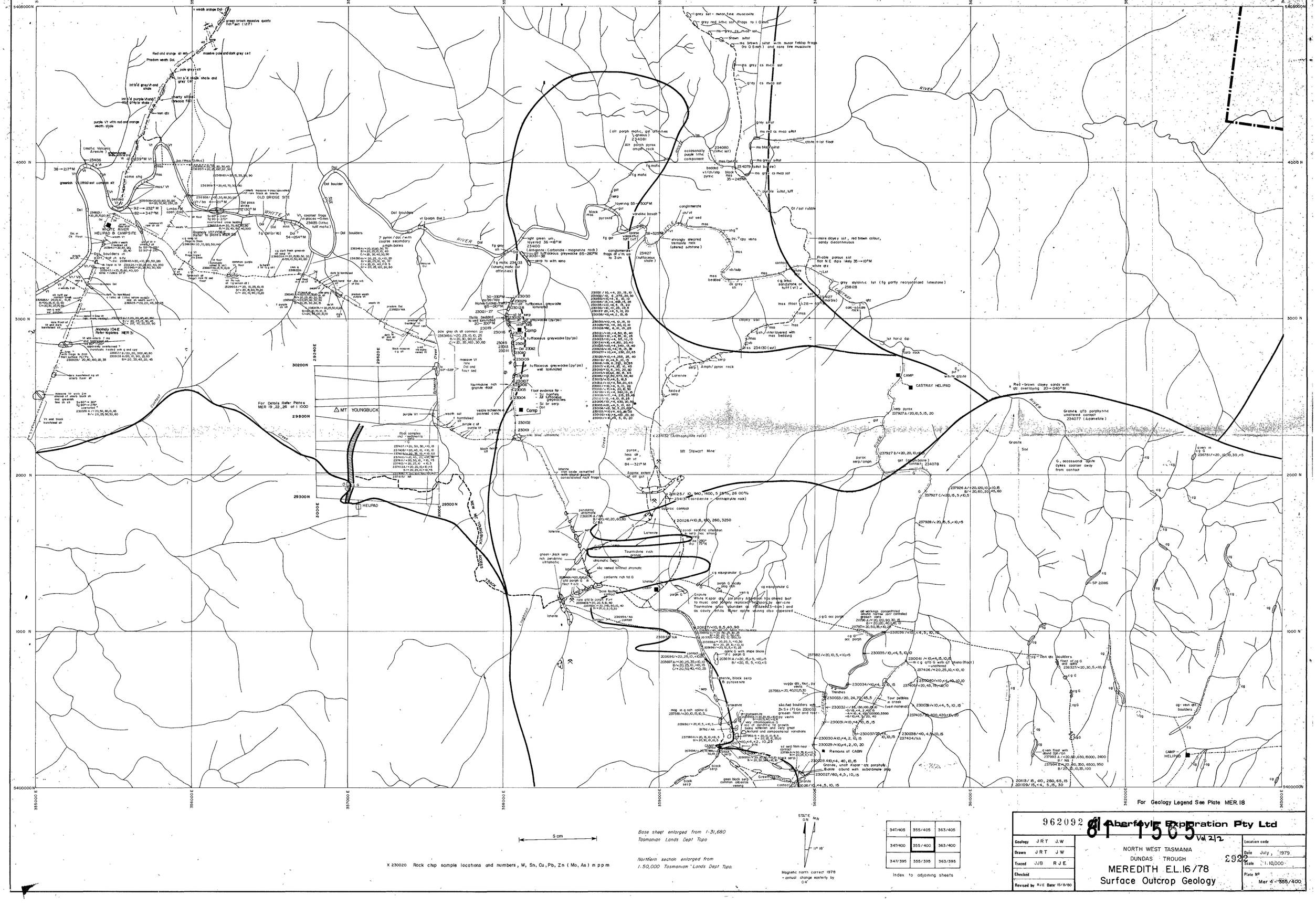
Aberfoyle Exploration Pty Ltd

Geology	J R T J W
Drawn	J W
Traced	J J B R J E
Checked	
Revised by	Date:

NORTH WEST TASMANIA
DUNDAS TROUGH
MEREDITH E.L. 16/78
Surface Outcrop Geology

Location code	
Date	June, 1979
Scale	1 10,000
Plate No	Mer 4 - 347/405

2921



For Geology Legend See Plate MER.18

5 cm

x 230020 Rock chip sample locations and numbers, W, Sn, Cu, Pb, Zn (Mo, As) in ppm

Base sheet enlarged from 1·31,680 Tasmanian Lands Dept Topo

Northern section enlarged from 1.50,000 Tasmanian Lands Dept Topo.

STATE GN MN
11° 18'
Magnetic north correct 1978 - annual change easterly by 04'

347/405	355/405	363/405
347/400	**355/400**	363/400
347/395	355/395	363/395

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962092 81 1565 Vol 2/2

Aberfoyle Exploration Pty Ltd

Geology	JRT	J.W
Drawn	JRT	JW
Traced	JJB	RJE
Checked		
Revised by RJE Date 15/8/80		

NORTH WEST TASMANIA
DUNDAS TROUGH

MEREDITH E.L.16/78
Surface Outcrop Geology

2922

Location code
Date July, 1979
Scale 1.10,000
Plate No Mer 4 - 355/400

962093

For Geology Legend See Plate MER. 18

5 cm

x 201289 Rock chip sample locations and numbers, W, Sn, Cu, Pb, Zn (Mo, As) in p.p.m

STATE G.N
MN
11°
Magnetic north correct 1978 - annual change easterly by 02'

347/410	355/410	363/410
347/405	**355/405**	363/405
347/400	355/400	363/400

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Aberfoyle Exploration Pty Ltd

81-1565 Vol 2/2

Geology JRT JW
Drawn JRT. JW
Traced RJE
Checked
Revised by Date

NORTH WEST TASMANIA
DUNDAS TROUGH

MEREDITH E.L. 16/78
Surface Outcrop Geology

2023

Location code
Date June, 1979
Scale 1:10,000
Plate No Mer 4 - 355/405

E.L. 1/63

E.L. 16/78

PREDOMINANTLY ALT BASIC VOLCANICS & GABBROIC INTRUSIVES

PREDOMINANTLY SERPENTENITE & GABBROIC ROCKS

poorly sorted congl
So 180 — 105°M
Si 30 — 00°M

Hornfelsed congl weh chl porph
So 70 — 145° M
Si 60 — 030° M

mcg Porph qfb G

Hornfelsed, poorly sorted congl moderately rounded cobbles up to 20cm across

230042 < A10, 16, much WIL-SON sample

high Magnetite content in alluvum 201838/<10, 4, 15, 10, 15

E M Anom 10A (Refer Plates 38a,b,c,d)

10070N

10170N

10070E

230046 / <10, 18, 200, 25, 90

Small aplite dykes with Magnetite (?) crystals and Mn stained fracture surfaces 201845/<10, <4, <2, 10, 20

floated hornfelsed congl and unfferentiated basic volc Abundant volc detritus common within congl

c g qfb G dyse - texturably variable 230047 / <10, <4, 5, 45, 25

201847/<10, 4, 15, 10, 30

Approx position of granite contact

Strongly porph (K-spar) qfb G

hornfelsed congl

O high Magnetite content in alluvum

230043 / <10, <4, 40, 10, 30

white weathered serp

E M Anom 12A (Refer Plates 37a,b,c,d)

10400 N

10300 N

10200 N

10000 N

9800 N

9600 N

9400 N

serp

serp ~10% serp after Magnetite Augite

grey hornfelsed gtzee 230048/<10, 8, 125, 15, 135

Alt basic Gok with fracture surface py/go 230045/<10, 8, 735, 30, 20

floated hornfelses & unaff basic volcs

201844/<10, <4, 5, 15, 45

Solid qtz vein with Magnetite / minor py / v.minor Gn Contacts obscured

chalcedonic silica

E.M. Anoms 14A/14AE (Refer Plates 39a,b,c,d)

E M Anom 5A (Refer Plates 36a,b,c,d)

10100 N

10000N

9900N

87500 E

10000E

RIVER

WILSON

CREEK

Creek

Qra Sn

Old workings - small dam

high magnetite content in alluvum

c g qfb G

major jointing strikes 250°M and dips vert

major jointing strikes 255°M and dips vert

Johnson Creek

f m g qfb G with qf phenos Numerous textural variations

fcg qfb G with large fq phenos

cg G

Mine

Creek

Track

Bens

201108/15, <4, 10, 15, 15

Creek

WILSON

Johnson

Base sheet enlarged from 1:31,680 Tasmanian Lands Dept Topo

Northern section enlarged from 1:50,000 Tasmanian Lands Dept Topo.

5 cm

X 201847 Rock chip sample locations and numbers, W, Sn, Cu, Pb, Zn (Mo, As) in p.p.m

STATE GN MN

11°18'

Magnetic north correct 1978 - annual change easterly by 0.4'

355/405	363/405	371/405
355/400	363/400	371/400
355/395	363/395	371/395

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262094

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For Geology Legend See Plate MER. 18

Aberfoyle Exploration Pty Ltd

Geology J R T J.W	NORTH WEST TASMANIA 2924
Drawn J R T	DUNDAS TROUGH
Traced J J B R J E	MEREDITH E.L.16/78
Checked	Surface Outcrop Geology
Revised by Date	

Location code

Date June, 1979

Scale 1:10,000

Plate No Mer 4 - 363/400

363000E
4000E
5000E
6000E
367000E
5402500N
2000 N
1000 N
5400000N

E.L. 16/78

E. M. Anom. 15 A
(Refer Plates 36a,b,c,d)
10150N
10000N
9850N

Moor

Track

Beri's

Creek

962095

For Geology Legend See Plate Mer. 18

81-1505 Vol 2/2

5 cm

STATE G.N. M.N.

Magnetic north correct 1978 - annual change easterly by 04'

359/4025	363/4025	367/4025
359/4000	363/4000	367/4000
359/3975	363/3975	367/3975

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Aberfoyle Exploration Pty Ltd

Geology: R. M. J.	NORTH WEST TASMANIA	2925	Location code:
Drawn: R. M. J.	MEREDITH E.L. 16/78		Date: March, 1981
Traced: R. J. E.	Surface Geology		Scale: 1 : 5000
Checked:			Plate No MER. 16 / 363/4000
Revised by: Date:			

E.L. 16/78

E.L. 5/63

RIVER

Creek

Johnson

Moor Creek

WILSON

Johnson Creek

For Geology Legend See Plate MER.18

x 237988/ Rock chip sample locations and numbers, W, Sn, Cu, Pb, Zn, Rb, Sr in ppm
NA Not Assayed

5 cm

Magnetic north correct 1978 - annual change easterly by 0.4°

363/4025	367/4025	371/4025
363/4000	367/4000	371/4000
363/3965	363/3995	371/3995

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81-1565

Aberfoyle Exploration Pty Ltd

Geology	R M J
Drawn	R M J
Traced	R J E.
Checked	
Revised by	Date

NORTH WEST TASMANIA

MEREDITH E.L. 16/78

Surface Geology

2926

Location code

Date August, 1980

Scale 1 : 5000

Plate N° MER 16/367/4000

367000 E
8000 E
9000 E
370000E
371000E
5405000N
4000 N
3000 N
5402500N

E.L. 1/63

E.L. 16/78

E.L. 5/63

RIVER
Summer
Creek
WILSON
Johnson Creek

E M Anom 10A
(Refer Plates 38a,b,c)

E.M. Anom. 12 A
(Refer Plates 37a,b,c,d)

CAMPSITE
WATERFALL

v weath ultra mafic coarse aligned amphiboles

v weath ultramafic coarse chlor + amph ± greenish clayey groundmass 237376/<10, 4, 30, <5, 35

serpentenite x 211774/ 10, <4, <2, 10, 25

green/grey alt basic volc chl tex groundmass with black ex mafic phenos weath surface shows large clasts 237377/<20, 10, 10, 10, 15

pale grey alt basic volc

green/grey alt basic volc ser / chlor groundmass 237378/<20, 15, 10, <10, 10

alt basic volc with good cleavage 211773/< 20, 25, 30, 10, 35 Sa 35°—302° Si 51°—310°

alt basic volc crude layering defined by layers depleted in large phenocrysts ? (or clasts) up to 10mm on weath surface strike 255°

x finely bedded alt basic volc 28772/<20, <10, 10, 10, 20

porph G bottle x depleted groundmass 211792 / NA

green grey alt basic volc diskem ? dimmite

fg micro G 211790/ NA

cg porph G 211791/ NA

pale grey alt basic volc

green grey alt basic volc

pale grey alt basic volc with large white spots (filled vesicles ?)

microgabbro float vein q

237379/10, 15, 20, 5, 10 green grey chlorinc

237379/<10, 15, 15, 90 alt basic volc acc whitish spots (ex phenos ?) 237379/<10, 25, 20, <5, 10

alt basic volc clusters of iron oxide flakes up to 3mm 237369/<20, 45, 15, 90

alt basic volc 237380/<20, 45, <10, <10

dark green alt basic volc dissem Po 237380/< 20, 45, 20, <10, 10

float of musc gneiss 236083/30, 150, 25, <5, 10

237381 / 237384

c g porph G

c g porph G bonnie depleted groundmass 237381 / NA

alt basic volc

aplite dyke, strike NE 237382 / NA

serpentinised microgabbro 211781 / NA

dark alt basic volc 211780/<20, 20, 160, 10, 10

x green alt basic volc 211782/<20, 10, 10, 10

211770/15, 4, <2, <5, 20 porph alt basic volc ex pyroxene ? phenos in chloritic groundmass, rare mag

236359/ porph alt basic volc

green grey fg chlorinc alt basic volc

dark green translucent alt basic volc

fg gm basic volc

grey/green alt volc 256366/8, 15, 70, 4, 95, 18, 10

c g gabbro 256355/<4, 10, 12, 4, 28, <2, 36

fg alt basic volc

256358/<4, 30, 0, 4, 16, 3, 60

256359/< 4, 20, 55, 10, 24, <2, 80

gm alt basic volc 256397/<4, 10, 16, 12, 48, 16, 250

gm/grey alt volcs 256369/<4, 10, 6, 4, 14, 40

fg serp?

256364/<4, 10, 8, 4, 24, <2, 3

66/<4, 5, 4, 4, 32, <2, 2

67/8, <10, 8, 4, 20, <2, 2

68/<4, <10, 4, 4, 4, 18, <2, 2

x 211794/<10, <4, 2, <5, 40

x 211795/ -, -, 5, 5, 25

q vein alt basic volc 211793/ -, -, 5, 5, 25

finely bedded alt tuff ?

x 237988/ 10, 9, <2, <5, 20
87/ <10, 6, 2, <5, 6
85/ 5, 10, <2, <5, 15
85/15, 8, <2, <5, 5
84/<10, 18, <2, <2, 25
83/<10, 34, 2, <5, 15
82/ NA

237339/ 25, 800, <2, <5, 15
94A/10, 155, <2, <5, 60
94/ 10, 250, <2, <5, 10
C/ 15, 80, <2, <5, 30
95/<10, <4, <2, <5, 20

x 253812 / 20, 40, 5, 30, 35

Mag rich serp asbestos veining

float of skarn deep green alt basic lava

10720 N
10907 N
11007N
10915S
10925S
10000 N
10300 N
10200 N

256482/<4, <10, 4, <4, 30, <2, <2 magnetite - rich serp asbestos veined

fg serp? 256480/<4, <10, 4, <4, 24, 2×2

fg gm/fg serp 256479/<4, 10, 4, <4, 34, <2, <2

gm/fg serpenth mag asbestos veinlets

GRANITE / CONTACT

chalcedonic silica 256494/<4, 10, 2, 5, 25, 90, 4, 3 256496/50, <10, 30, 1200, 1300, 30, 6

asbestos vein chlor rich serp 256497/<4, 10, 2, <4, 18, 2, <2, 5 495/<4, <10, 2, <4, 24, <2, <2

B A<4, 15, 2, <4, 32, <2, <2 C/<4, 15, 4, <4, 34, <2 <2

256483/8, <10, 4, <4, 28, <2, <2 484/<4, <10, 4, <4, 30, <2, <2 485/<4, <10, 4, <4, 30, <2, <2 486/<4, <10, 4, <4, 30, <2, <2 487/<4, <10, 4, <4, 30, <2, <2 488/<4, <10, 4, <4, 30, <2, <2 489/<4, <10, 2, <4, 36, <2, <2

G brec 211778/10, <4, 2, 50, 90

weath alt G 211779/ NA

For Geology Legend See Plate MER. 18

962097

x 237988/ Rock chip sample locations and numbers, W, Sn, Cu, Pb, Zn, Rb, Sr
NA Not Assayed

5 cm

STATE G.N. MN

Magnetic north correct 1978 - annual change easterly by 0.4°

363/4050	367/4050	371/4050
363/4025	367/4025	371/4025
363/4000	367/4000	371/4000

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Aberfoyle Exploration Pty Ltd

Geology R M J	NORTH WEST TASMANIA 2927
Drawn R M J	MEREDITH E.L. 16/78
Traced R J E	Surface Geology
Checked	
Revised by Date	

Location code
Date August, 1980
Scale 1 5000
Plate No MER 16/367/4025

81 1565 Vol 2/2

N

E.M. ANOMALY 10 A
(Refer Plates 58 b,b,c-d)

E.M. ANOMALY 12A
(Refer Plates 57 a,b,c-d)

(Grid as per 82)

(25 m Spacing)

(20m Spacing)

10000 E 11400 N

10700 N 10000 E

10950 E 11107 N

11007 N

10907 N

10950 E 10720 N

10400 N 10950 E

10200 N

10300 N 11350 E

10400 N

10600 N

10000 N 11350 E

5 cm

Index to sheets
Sheet 1
Sheet 2

LEGEND
• Soil Sample Location & Assay Results
Sn, W, Cu, Pb, Zn, in ppm & Bi, Mo, As
N/S No Sample

81-1565

962098 2928

Aberfoyle Exploration Pty Ltd		
Geology	NORTH WEST TASMANIA	Location code
Drawn N R B	MEREDITH E.L. 16/78	Date Jan 1981
Traced J.L.R.	CIRCULAR FEATURE GRID	Scale 1:2500
Checked	SOIL GEOCHEMISTRY	Plate No Mer 20 (Sheet 1)
Revised by Date		

MN

E.M. ANOMALY 15A
(Perlar Plates 36b,b1,c,d)

E.M. ANOMALIES 14A / 14AE
(Perlar Plates 38b,b1,c,d)

BASELINE

(60° Mag)

(25m/mN Spacing)

(20m Spacing)

10200 E

10200 N

10000 N

9800 E

9600 N

9400 N

9790 N

9990 N

10100 N

10600 E

10750 E

9600 E

10320 E

N/S

3N (13.5°W)

5 cm

Index to sheets

Sheet 1

Sheet 2

LEGEND

Soil Sample Location & Assay Results
Sn, W, Cu, Pb, Zn in ppm & Bi, Mo, As

N/S No Sample

962099 2929

81-1565

Vol 2/2

Aberfoyle Exploration Pty Ltd

Geology:	NORTH WEST TASMANIA	Location code:
Drawn N. R. B.	MEREDITH E.L. 16/78	Date Jan 1981
Traced J. L. R.	CIRCULAR FEATURE GRID	Scale 1:2500
Checked	SOIL GEOCHEMISTRY	Plate No Mar 20 (Sheet 2)
Revised by: Date		

N

E.M. ANOMALY 10A
(Refer Plates 3B,b,c,d)

E.M. ANOMALY 12A
(Refer Plates 3Ta,b,c,d)

Ground Magnetic Location and Reading in gammas

Index to sheets

Sheet 1

Sheet 2

5 cm

962100

2930

81-1565

Vol 1/2

Aberfoyle Exploration Pty Ltd

Geology	NORTH WEST TASMANIA	Location code
Drawn	MEREDITH E.L. 16/78	Date. Jan 1981
Traced: J. L. R	CIRCULAR FEATURE GRID	Scale 1:2500
Checked	GROUND MAGNETICS	Plate No MER 28 (Sheet 1)
Revised by. Date		

M N

E.M. ANOMALY 14A/14AE
(Refer Plates 38a,b, c,d)

E.M. ANOMALY 15A
(Refer Plates 36a,b, c,d)

62016 Ground Magnetic Location and Reading in gammas

5 cm

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Sheet 1

Sheet 2

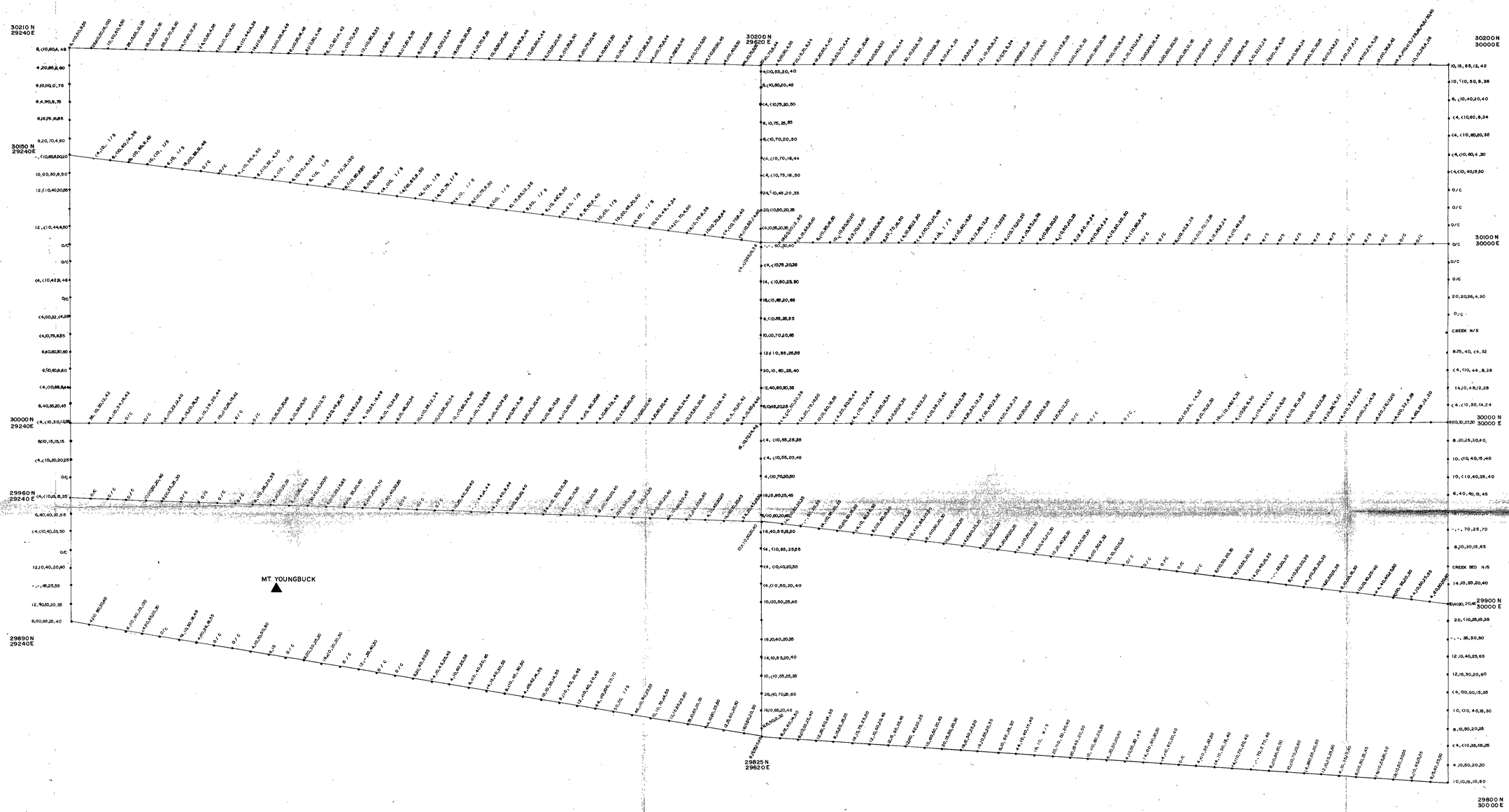
962101

81-1565

Vol 2/2

Aberfoyle Exploration Pty Ltd		
Geology	NORTH WEST TASMANIA	Location code:
Drawn	MEREDITH E.L. 16/78	Date Jan 1981
Traced J L R	CIRCULAR FEATURE GRID	Scale 1:2500
Checked	GROUND MAGNETICS	Plate No MER 28 (Sheet 2)
Revised by Date		

2931



LEGEND

- • Soil Sample location and assay results Sn, W, Cu, Pb, Zn in p.p.m.
- o/c outcrop
- N/S No sample
- I/S Insufficient sample

Index to sheets

Sheet 1

Sheet 2

5 cm

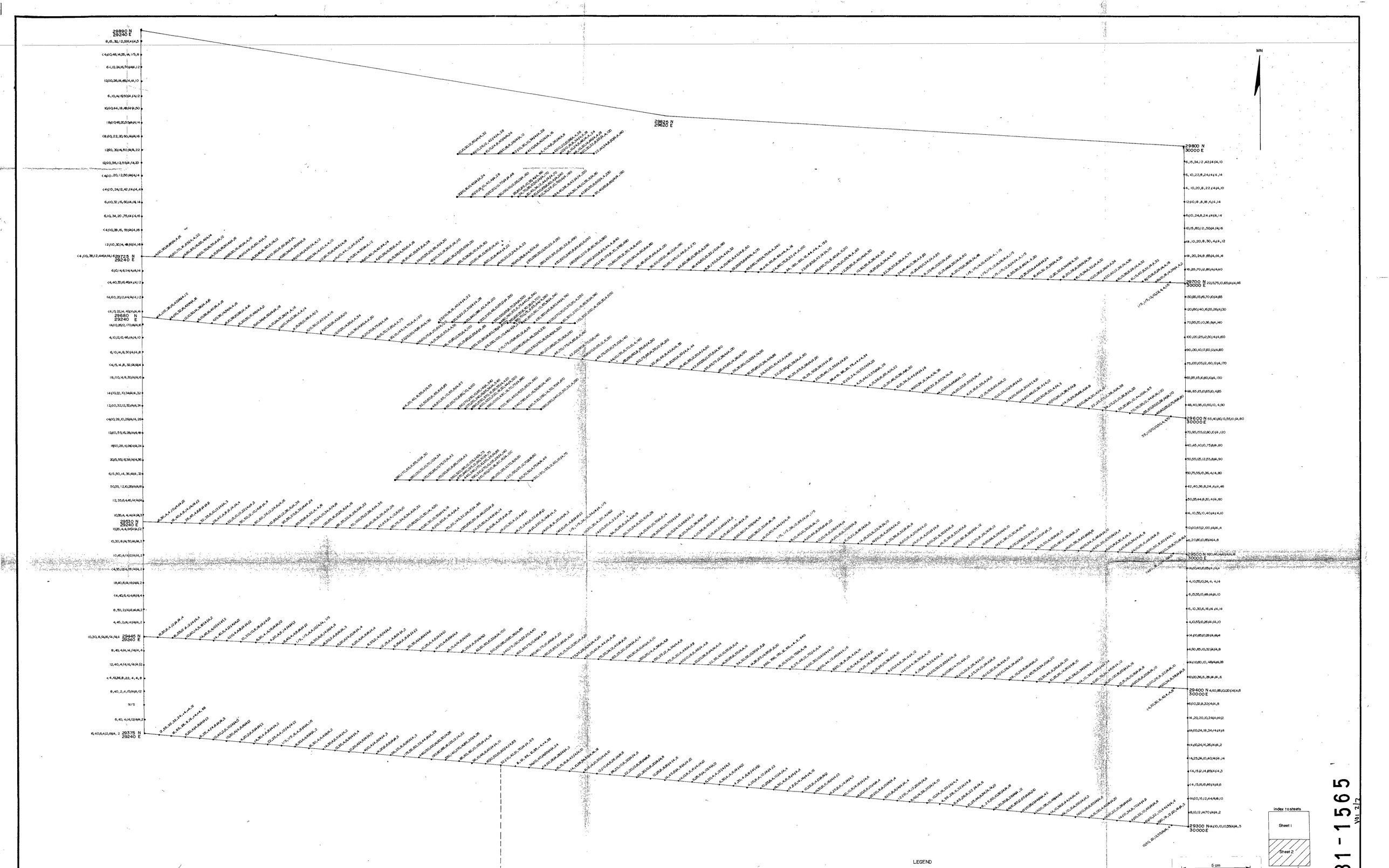
962102

81-1565

Vol 2/2

Aberfoyle Exploration Pty Ltd		
Geology:	NORTH WEST TASMANIA	Location code.
Drawn: N R B	MEREDITH EL.16/78	Date: Sept 1980
Traced: J.L.R	Mt. Youngbuck Grid	Scale: 1 1,000
Checked.	SOIL GEOCHEMISTRY.	Plate N° MER. 19 (Sheet 1)
Revised by: Date:		

2932



LEGEND

- Soil Sample location and assay results Sn, W, Cu, Pb, Zn, Ba, Mo, As in p.p.m.

o/c outcrop

N/S No sample

I/S Insufficient sample

Aberfoyle Exploration Pty Ltd

Geology	NORTH WEST TASMANIA	Location code:
Drawn R M.J.	MEREDITH EL. 16/78	Date: Dec. 1980
Traced J.L.R	MT. YOUNGBUCK GRID	Scale: 1:1000
Checked:	SOIL GEOCHEMISTRY	Plate N° MER 19 (Sheet 2)
Revised by: Date		

962103

81-1565

Vol 2/2

2933

MT. YOUNGBUCK

Rock chip sample location and assay results in ppm Sn,W,Cu,Pb,Zn

Contour Interval 50'

FOR GEOLOGY LEGEND REFER PLATE MER 18

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Sheet 1

Sheet 2

5 cm

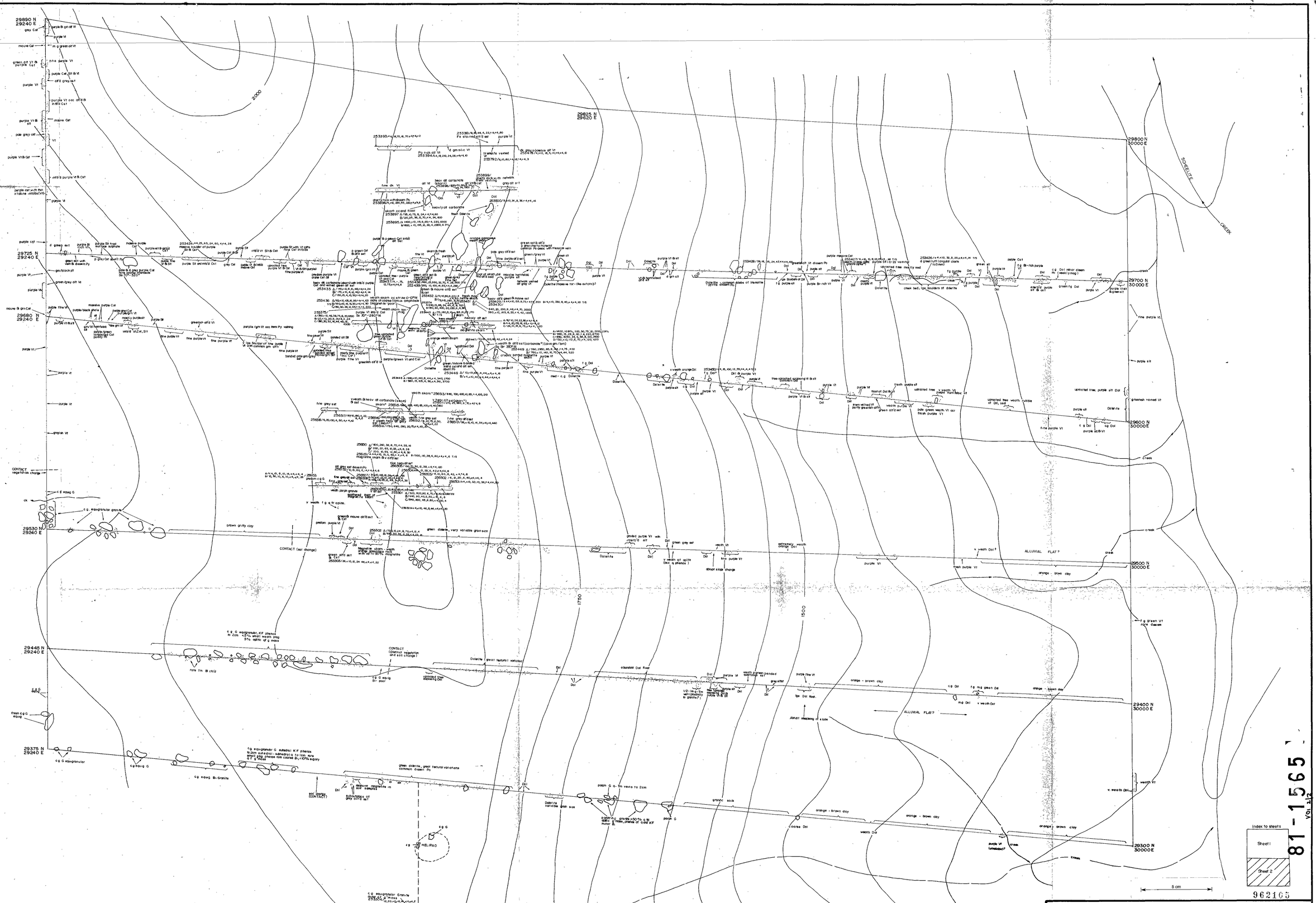
81-1565

Vol 2/2

962164

Aberfoyle Exploration Pty Ltd		
Geology: R.M.J	NORTH WEST TASMANIA MEREDITH E.L. 16/78 MT. YOUNGBUCK GRID Outcrop Geology	Location code:
Drawn: R.M.J		Date: NOV 1980
Traced: R.J.E		Scale: 1 1000
Checked:		Plate No MER 22 (Sheet 1.)
Revised by: Date:		

2934



Aberfoyle Exploration Pty Ltd		
Geology: R.M.J	NORTH WEST TASMANIA	Location code:
Drawn: R.M.J.	MEREDITH E.L. 16/78	Date: Dec. 1980
Traced: J.L.R	MT. YOUNGBUCK GRID	Scale: 1:1000
Checked:	OUTCROP GEOLOGY	Plate No MER 22 (Sheet 2)
Passed by: Date:		

237715/ Rock chip sample location and assay results in p.p.m. Sn, W, Cu, Pb, Zn, Mo, Bi, As

Contour Interval 50'

FOR GEOLOGY LEGEND REFER PLATE MER 18

MN

COINCIDENT E M
+ Mag (200~T)

30210 N
29240 E

30200 N
29820 E

30200N
30000E

30150 N
29240 E

SIROTEM ANOMALY PEAK

E M 1 CENTRE

COHERENT 5000~T MAGNETIC ANOMALY SOURCE CLOSE TO THE SURFACE & OF LIMITED STRIKE EXTENT

SIROTEM ANOMALY PEAK

30100 N
30000E

AREA I

CHARACTERISED BY NOISY MAGNETICS CAUSED BY INTENSE DISCREET SOURCES CLOSE TO THE SURFACE

EM 3 CENTRE COINCIDENCE BETWEEN EM & MAG POOR BECAUSE THERE IS NO EVIDENCE FOR A COHERENT MAGNETIC ANOMALY

30000 N
29240 E

E.M. COINCIDING WITH NOISY MAGNETICS E.M. COULD ALSO BE REFLECTING THE WESTERLY DIP OF ANOMALY E.M. 3

30000 N
30000 E

SIROTEM ANOMALY PEAK

MT. YOUNGBUCK

29900N
29240E

E.M. 4 COINCIDING WITH NOISY MAGNETICS

29900N
30000 E

29825 N
29620E

29800 N
30000 E

Index to sheets

Sheet 1

Sheet 2

5 cm

81-1565]
Vol 2/2

962106

Aberfoyle Exploration Pty Ltd

Geologist	NORTH WEST TASMANIA
Drawn J.S	MEREDITH E.L. 16/78
Traced J.L.R	MT. YOUNGBUCK GRID GROUND MAGNETICS
Checked	
Revised by: Date	
Location code	
Date JAN. 1981	
Scale 1:1000	
Plate No MER 26 (Sheet 1)	

2936

29890 N
29240 E

29825 N
29620 E

29800 N
30000 E

29725 N
29240 E

29700 N
30000 E

29680 N
29240 E

29600 N
30000 E

29530 N
29240 E

29500 N
30000 E

29445 N
29240 E

29400 N
30000 E

29375 N
29240 E

29300 N
30000 E

29240 N
29450 E

29200 N
29950 E

65000

65000

65000

70000

65000

65000

65000

MN

Index to sheets

Sheet 1

Sheet 2

5 cm

962107

81-1565

Vol 2b

Aberfoyle Exploration Pty Ltd

Geology:	NORTH WEST TASMANIA	Location code
Drawn J S	MEREDITH E.L. 16/78	Date Dec 1980
Traced J.L.R	MT. YOUNGBUCK GRID	Scale 1:1000
Checked:	GROUND MAGNETICS	Plate No MER 26 (Sheet 2)
Revised by: Date:		

2937