000

753001

Meredith Granite Project
Progress Report For The Six Months
Ending April 20, 1982

DISTRIBUTION:

Dept. Of Mines, Tasmania
Burnie Office
Hawthorn East Office

R. M. JOYCE
GEOLOGIST

MAY 1982

001

753002

TABLE OF CONTENTS

	PAGE NO.
Introduction	1
General Geological Setting	2
Upper Castray River Area	
IFIELD CREEK AREA	3,4
FOLLOW-UP STREAM SEDIMENT (SAMPLE 20156P PLATE MER 43)	4
Mt. Youngbuck Skarn	
GRID EXTENSIONS	5
MAX-MIN II SURVEY	6,7
SURFACE GEOLOGY	7,8
DIAMOND DRILLING	8-10
Summary & Conclusions	
IFIELD CREEK AREA	11
MT. YOUNGBUCK	11
PROPOSED FURTHER WORK	11
Expenditure	12

APPENDICES

A. Petrological Reports

B. Drill Log & Assay Data For DDH.MY.1

002

753003

List of Plates

MER 12	(In Text)	Locality Plan	1:1,000,000
MER 3		Geological Summary Map	1:50,000
MER 46	(In Text)	Stream Sampling Summary Plan showing Ifield Creek & Upper Castray River Area	1:50,000
MER 42	(In Text)	Ifield Creek Area, Summary Geochemistry	1:2500 (approx)
MER 43	(In Text)	Upper Castray River Area, Summary Geochemistry	1:2500 (approx)
MER 18		Geological Legend	
MER 4	355/400	Surface Outcrop Geology	1:10,000
MER 19	(Sheet 1)	Mt. Youngbuck Grid - Soil Geochemistry	1:1000
	(Sheet 2)	Mt. Youngbuck Grid - Soil Geochemistry	1:1000
	(Sheet 3)	" "	
	(Sheet 4)	" "	
MER 22	(Sheet 1)	" Outcrop Geology	1:1000
	(Sheet 2)	" "	
	(Sheet 3)	" "	
	(Sheet 4)	" "	
MER 26	(Sheet 3)	" Ground Magnetics	1:1000
	(Sheet 4)	" "	1:1000
MER 45		Mt. Youngbuck Line 29700N: Drill Hole MY.1	1:1000
MER 47		Cross Section Line 29720N: MY.1	1:500

Introduction

The Meredith Granite exploration licence in North-Western Tasmania was pegged by Aberfoyle in 1978 (Plate MER 12).

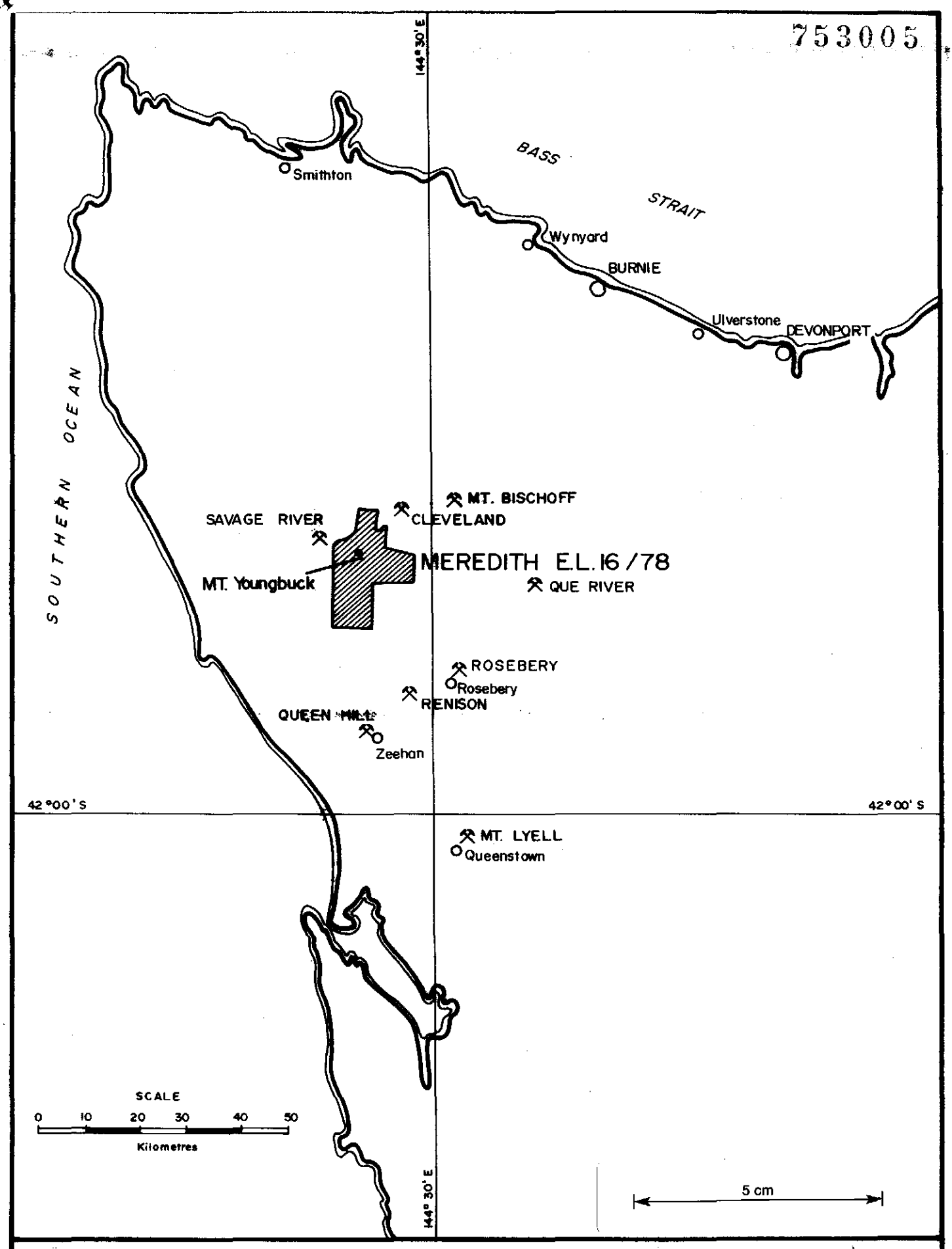
Previously, Comstaff, under E.L. 1/68, and ANZECO (E.L. 11/75) undertook regional stream sediment sampling programmes, limited detailed grid work and drilling follow-up.

Aberfoyle commenced exploration of the licence in the summer of 1978-79 with a reconnaissance mapping and stream sediment programme, which continued in the 1979-80 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 anomalies.

To date, work in 1981-82 has been concentrated on further grid coverage and diamond drilling of a scheelite bearing magnetite-pyrrhotite-hastingsite skarn on Mt. Youngbuck. Two areas of high tin geochemistry in the Upper Castray River area were also followed up.

004

753005



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

General Geological Setting (Plate MER 3)

The licence includes most of the outcrop extent of the Upper Devonian Meredith Granite, and its northern contacts.

The bulk of the Meredith Granite is composed of medium-coarse grained, equigranular biotite granite/adamellite. Marginal phases, and late stage intrusive bodies are generally finer grained and porphyritic. The margins of the granite are irregular and marked by great textural variations.

To the west, the granite intrudes quartzites, quartz-mica schists and carbonaceous black shales of the Pre-Cambrian Whyte Schist Complex.

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

In the north-west, sediments and tuffaceous rocks of probable Cambrian age (Crimson Creek Formation?) occur. In general these rocks appear to be a sequence of turbiditic volcolithic sandstones, siltstones and shales with significant tuffaceous component, with minor chert and carbonate horizons.

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

Upper Castray River Area

Two areas of highly anomalous tin stream geochemistry in the upper reaches of the Castray River were followed up by hand auger soil sampling (for locations see Plate MER 46).

(i) IFIELD CREEK AREA (PLATE MER 42)

This tributary of the Upper Castray River 2 km east of the Mt. Stewart Mine was first sampled by ANZECO in 1975-76. ANZECO took six (6) heavy metal concentrate samples from the creek and its tributaries. All were highly anomalous for tin and one sample contained anomalous gold. A rock sample from the area assayed 6900 ppm Pb, and > 1% Zn (probably a galena-sphalerite bearing quartz vein).

Aberfoyle sampled the creek in 1978/79 and confirmed the anomalous tin drainage. Further stream sediment coverage and base of slope soil sampling of a minor tributary in 1979/80, outlined the source of the anomalies.

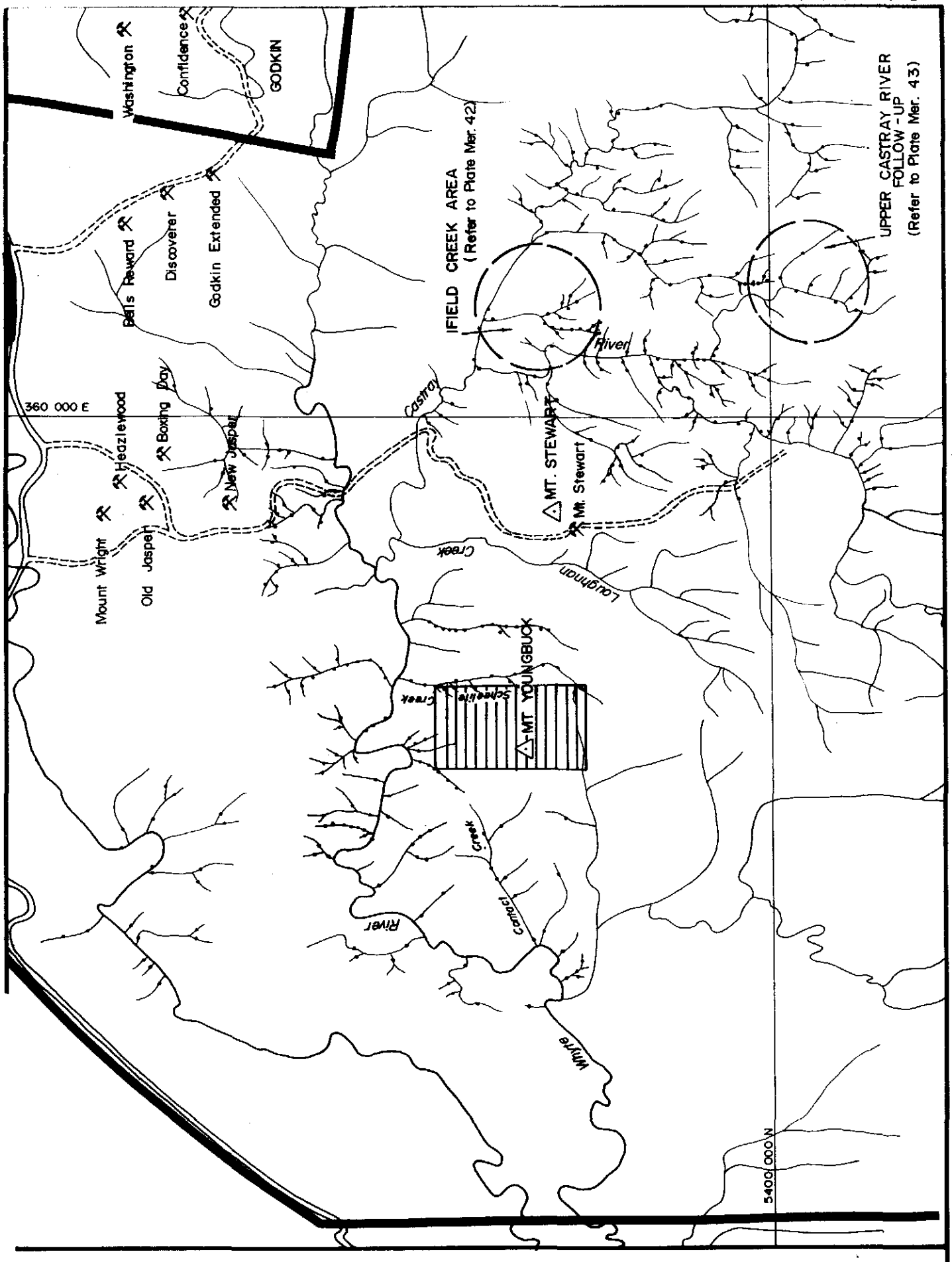
This season, ten metre spaced soil samples were taken on a reconnaissance grid over the area outlined by previous work. In total, 54 samples were taken on 5 lines, with the result that an area of greater than 200 x 80 metres containing anomalous Sn and Zn soil geochemistry has been outlined. The anomalous area is open to the north, south and west.
Maximum values:

Sn	1250 ppm
Zn	5100 ppm

The geology of the area is largely unknown, and outcrop is poor. Although previously mapped as granite, the Ifield Creek area may contain contact altered ultrabasic rocks or sediments.

753008

007



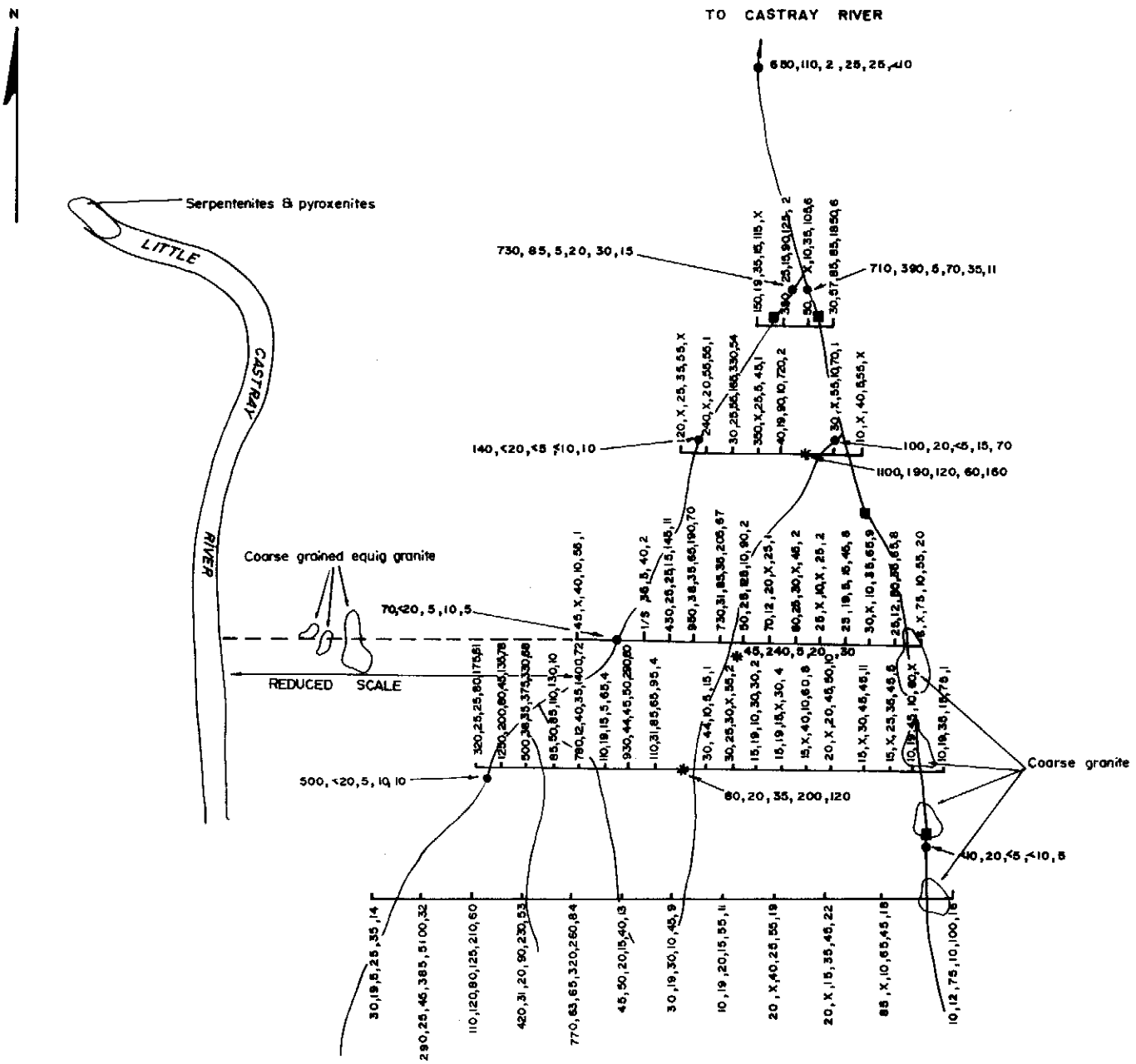
5 cm

Aberfoyle Exploration Pty Ltd

Drawn:	NORTH WEST TASMANIA	Location code:
Traced: J.L.R.	MEREDITH E.L. 16/78	Date: April, 1982
Checked:	STREAM SAMPLING SUMMARY PLAN SHOWING	Scale: 1:50,000
Revised by: Date:	IFIELD CK & UPPER CASTRAY RIVER AREAS	Plate No MER 46

003

753009



Aberfoyle Exploration Pty Ltd

Geology:	NORTH WEST TASMANIA	Location code:
Drawn: R.M.J.	MEREDITH E.L. 16/78	Date: January, 1982
Traced: J.L.R.	IFIELD CREEK AREA	Scale: 1: 2500 approx.
Checked:	SUMMARY GEOCHEMISTRY	Plate No MER 42
Revised by: Date:		

Coarse grained equigranular granite occurs in outcrop to the east and west of the zone of high geochemistry. Thus, the mineralization occurs either within the granite, or in an embayment in the granite contact.

(ii) FOLLOW-UP OF STREAM SEDIMENT (SAMPLE 20156P-PLATE MER 43)

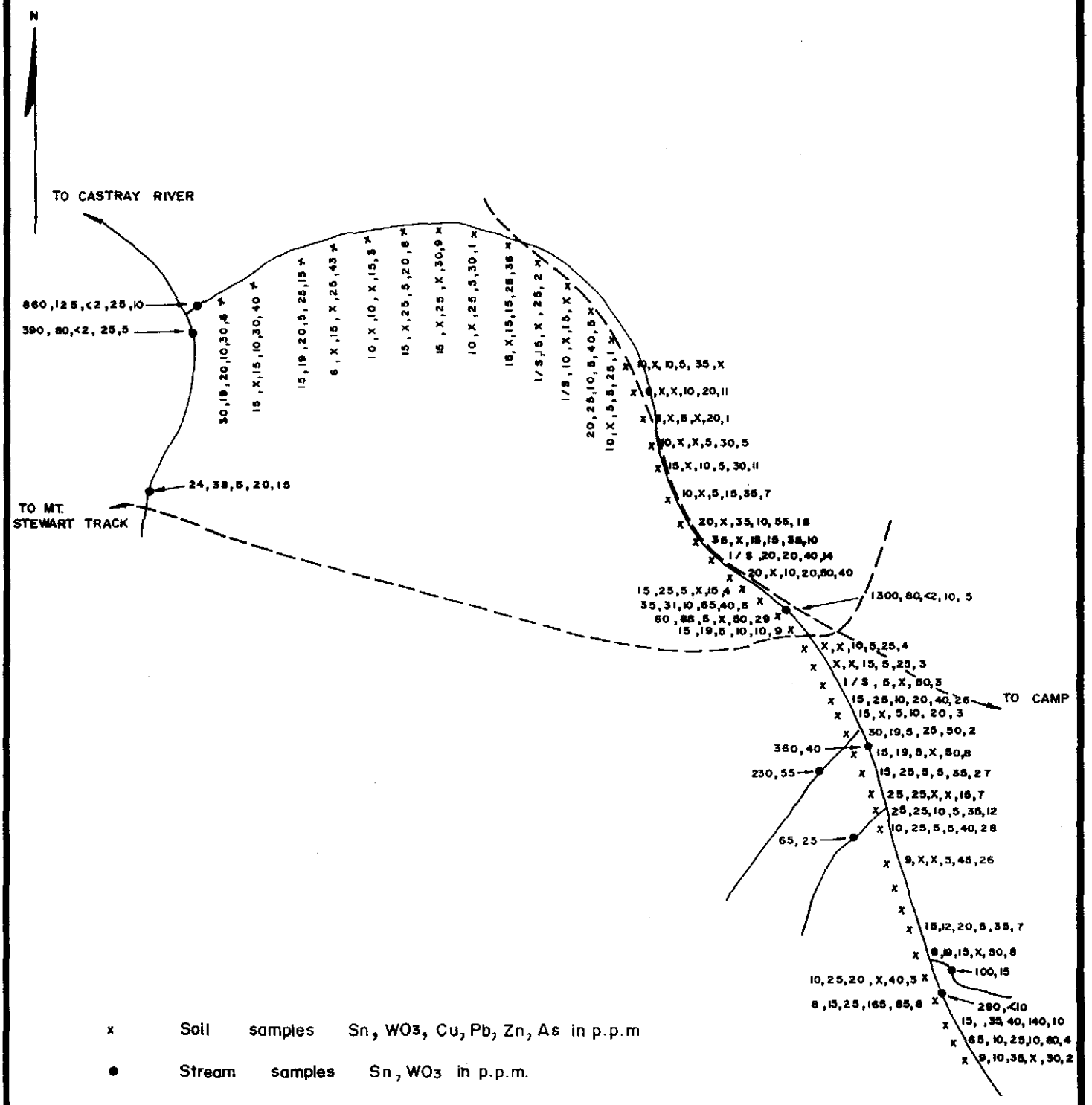
Base of slope sampling was performed along the southern bank of a creek system showing consistently anomalous tin drainage. The area is approximately 3 km south-east of the Mt. Stewart Mine.

Stream sediment samples (1978/79 and 79/80) show tin anomalies to 1300 ppm, with the tin source apparently south of the creek.

The base of slope soil sampling failed to detect coherent geochemically anomalous zones, and indicates that the stream anomalies may be due to isolated greisen veins within the granite.

010

253011



Aberfoyle Exploration Pty Ltd

Geology:	NORTH WEST TASMANIA	Location code:
Drawn: R.M.J	MEREDITH E.L. 16/78	Date: January, 1982
Traced: J.L.R.	UPPER CASTRAY RIVER AREA	Scale: 1: 2500 approx.
Checked:	SUMMARY GEOCHEMISTRY	Plate No MER. 43
Revised by: Date:		

Mt. Youngbuck Skarn

The bulk of the 1981/82 summer season was spent in further assessment of the Mt. Youngbuck skarn prospect. Grid extensions to the north and west, and preliminary diamond drilling were completed.

(i) GRID EXTENSIONS (PLATE MER 4 - 355/400)

Five 760 metre cut lines were added to the north of the existing ten line Mt. Youngbuck grid.

Geological mapping at 1:1000 scale, ground magnetometer survey with a G816 proton magnetometer (station spacing 10 metres), and C-Horizon hand auger soil sampling at 10 metre intervals were completed.

The northern extensions contained little exposure and geological mapping did not detect any trace of the mineralised stratigraphy.

Similarly, no significant geochemical or geophysical anomalies were detected.

Results are shown on Plates MER 19, 22 and 26 (Sheet 3).

The Mt. Youngbuck grid was also extended to the west in order to provide access for ground E.M. follow-up of DIGHEM conductor 102D, which was incompletely surveyed in 1980/81.

The western extensions were also soil sampled, geologically mapped and covered by ground magnetics survey.

Lines 29600N, 29700N and 29800N were extended to the west until the granite contact was reached. All exposure mapped was of tuffaceous rocks similar to those on the eastern slopes of Mt. Youngbuck. No doleritic material was encountered.

Weak arsenic anomalies on line 29700N (max 120 ppm) may be related to skarn mineralization, although no magnetic anomaly occurs in the vicinity of the geochemical high. Results are shown on Plates MER 19, 22 and 26 (Sheet 4).

(ii) MAX-MIN II SURVEY

A series of E.M. anomalies to the north of the outcropping mineralization at Mt. Youngbuck were detailed using Sirotem in 1979/80.

Further ground E.M. detailing was completed this year using the Max-Min II ground E.M. system. Five lines: 29800N, 24400N, 30000N, 30100N and 30200N, were covered using a Tx-Rx separation of 100 metres.

A summary of the results from line to line follows:-
(J. Silic, Company Geophysicist)

(1) Line 30200N

A single conductor is centred on 29410E. The dip is to the west. This interpretation is consistent with the SIROTEM data.

(2) Line 30100N

The profile on this line is complex. The preliminary interpretation considering that no 50 metre separation data is available, is that the response is caused by two conductors, one at 29430E, and the other one at 29340E. The conductors are very shallow (less than 10 metres).

It is very important that this line be covered by a 50 metre separation Max-Min survey. Note that SIROTEM data does not disprove the existence of two conductors. SIROTEM data peak is at 29390E, which is half way between the conductors, and also there is a "trough" in the SIROTEM response at 29330E Note - thin conductors give a "trough" in the SIROTEM data, when the loop is directly over the conductor.

(3) Line 30000N

Conductors on this line are centred on about 29450E. It is dipping to the west and is at a depth of about 30 - 50 metres. Note that 50 metre data will have to be obtained for a better depth estimate. The SIROTEM data can be reconciled with this interpretation if we accept the fact that "trough" in the the SIROTEM response at 29460E is marking the position of the conductors. It is possible that we are looking at a multiple conductor situation here.

(4) Line 29900N

A westerly dipping, weak conductor centred on about 29490E has been defined. This is consistent with the SIROTEM data where a "trough" in the response is evident at 29460E. This conductor could be deep and therefore 50 metre data is necessary to highlight this point. Also more data to the east of 29550E is needed.

(5) Line 29800N

A broad response is observed on this line, indicating the presence of a very broad conductor or a series of separate conductors, centred on 29420E. Again this is consistent with the SIROTEM data, which shows a very broad response centred on about 29400E. The 50 metre data will have to be obtained on this line, in order to estimate the depth to the sources and to ascertain whether the response is due to a single broad conductor or a number of separate conductors.

From the 100 metre separation data it is evident that the 50 metre data will need to be collected in order to define the depths to the conductors and to ascertain whether the Mt. Youngbuck "conductive zones" are made up of multiple conductors or broad single conductors.

(iii) SURFACE GEOLOGY (PLATE MER 22, SHEET 1 & 2, MER 18)

Additional exposure created by road-making and drill site preparation was mapped at 1:1000 scale. Approximately 40 metres west of the collar position of DDH.MY.1, bulldozer excavation proved the existence of a magnetite bearing skarn previously interpreted from ground magnetics and soil geochemical data. The outcrop is at least 2-3 metres wide.

Magnetite-amphibole skarn rocks were also exposed during the building of the main Mt. Youngbuck access road (Plate MER 19, Sheet 3; 29550N, 29600E). The exposure coincides with ground magnetic and soil geochemical anomalies on grid lines 29500N and 29600N, and C-Horizon soil samples taken along the road confirm the existence of a distinct geochemical anomaly (Max. Sn 440 ppm).

Mapping of the Mt. Youngbuck access road also disclosed the presence of several granite dykes on the eastern slopes of the mountain. These dykes presumably indicate the close proximity at depth of the main granite mass.

Descriptions of samples collected for petrological examination during mapping are appended (Appendix A).

(iv) DIAMOND DRILLING (PLATES MER 45 & 47)

A planned diamond drilling programme of 600 metres (4 x 150 metre holes), was undertaken to test the sub-surface potential of the Mt. Youngbuck skarn. Considerable delays in drilling led to very slow progress and at the time of submission of this report only one hole, MY.1 (140.85 metres) had been completed. A second hole, MY.2, was in progress.

DDH.MY.1

collar co-ordinates	-	29720N, 29490E
azimuth	-	085° Mag.
dip	-	-50°
completed depth	-	140.85 metres
date commenced	-	20/2/82
date completed	-	27/3/82
drill type	-	Longyear 38, skid mounted

Considerable equipment failure and access problems, combined with difficulties in maintaining water supply to the drill-rig resulted in very slow progress in the drilling of MY.1.

The hole was collared in purple-brown tuffaceous sandstones, siltstones and shales, and intersected a thick sequence of variably mineralized calc-silicate hornfels (skarns) from 35.92 metres to 87.00 metres.

Doleritic sills (?), apparently intrusive, were encountered between 61.14m and 64.16m, and 66.39m to 77.95m. The contacts between dolerite and skarn are obscured by fine cloudy diopside alteration.

The calc-silicate sequence contains crudely banded garnet-pyroxene-vesuvianite rocks (generally weakly mineralized), interbedded with amphibole-magnetite-pyrrhotite-scheelite skarns (1 cm to 2 m). Common arsenopyrite and chalcopyrite appear to replace pyrrhotite.

Trace visible scheelite occurs throughout the calc-silicate rocks, generally associated with magnetite-amphibole rich bands, although scheelite also occurs intergrown with carbonate and pyrrhotite. The scheelite is coarse grained and patchy in distribution.

The footwall of the skarn sequence is marked by a sharp contact between mineralized skarn, and grey siltstones with finely laminated pyrrhotite. A sequence of tuffaceous sediments similar to those in the hangingwall continue to the end of the hole at 140.85 metres. The footwall sequence differs, however, in that finely laminated pyrrhotite in greyish siltstones give much of the core a significant magnetic susceptibility.

Petrological descriptions of two samples from the footwall sequence (Appendix A), indicate that these grey siltstones are not tuffaceous and are thus atypical of the bulk of the Mt. Youngbuck rocks.

The stratigraphy dips steeply to the west (75^{o} to 90^{o}). Minor small scale folding (shallow plunge) occurs in fine bedded siltstones around 89.0 metres. Tentative facing directions obtained from apparent graded bedding and current bedding were obtained in both the hangingwall and footwall sequences. All indicate facing down-hole (overturned). This is consistent with observations from elsewhere in the area.

Thus the non-tuffaceous grey siltstones appear to represent a marked change in source and probably in depositional environment, that stratigraphically immediately preceded the deposition of the carbonate horizon(s) that host mineralization.

Assay results for the intervals 34.92 to 66.92 metres, and 76.95 to 87.95 metres are available. Tin values are low (max. 900 ppm) and tin probably occurs both as cassiterite and within silicate lattices (eg. garnet), as soluble Sn assays comprise up to 60% of total Sn in some samples.

Tungsten values were patchy (max. 6800 ppm over 0.75m) and reflect the coarse grainsize and irregular distribution of the scheelite.

Summary & Conclusions

IFIELD CREEK AREA

(i) A geochemically anomalous zone of greater than 200m x 80m has been outlined by hand auger soil sampling.

(ii) Geological knowledge of the area is poor and the mineralization may occur either within the granite (greisen-style), or in contact mineralized country rocks.

MOUNT YOUNGBUCK

(i) Grid extensions to the north failed to detect any significant geological, geochemical or geophysical anomalies.

(ii) Preliminary drilling of the Mt. Youngbuck skarn indicate a thickness of approximately 50 metres (dyke intruded?) of patchily mineralized calc-silicate rocks.

(iii) Road-making and drill site preparation has exposed further skarn mineralization both east and west of the horizon currently being tested by diamond drilling.

Proposed Further Work

.. Complete petrological and assay examination of DDH.MY.1.
.. Logging, assaying and petrology of DDH.MY.2.
.. Assessment of the Mt. Youngbuck and Ifield Creek prospects once data compilation is completed.

A summary of project status will be included in the next six monthly progress report (due on October 20th, 1982).

EXPENDITURE

MEREDITH, Exploration Licence 16/78

Six months to 20th April, 1982

The Statement of Expenditure for Exploration Licence 16/78 pertains to Aberfoyle periods ending 3rd May, 1982.

GEOLOGY	23,761
SURVEY	150
GEOPHYSICS	1,112
GEOCHEMISTRY	14,718
DIAMOND DRILLING	57,983
ASSAYS	10,524
ACCESS	3,984
TENURE	2,773
SUNDRY	229
DIRECT COSTS	$115,234
INDIRECT COSTS	17,285
TOTAL	$132,519

013

753020

Aberfoyle Exploration Pty. Ltd.
Meredith Granite Project
Progress Report For The Six Months
Ending April 20, 1982

COMPILED: R. M. Joyce
R. M. JOYCE
GEOLOGIST

PER: R. A. Ibsenford

ENDORSED: C. H. Young
C. H. YOUNG
DISTRICT MANAGER

RMJ/JMcM

020

753021

Appendix A

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

SAMPLE LOCATIONS ARE GIVEN ON THE
ACCOMPANYING LEDGER SHEETS

REPORT CMS 81/12/42

Rock Samples 265816-820, 265823

Six samples were received for petrological examination, with special reference to any Sn/W mineralisation. Thin-sections were prepared and are briefly described in the attached table; the offcuts were checked for scheelite, using a short-wave UV source, but none was detected.

Summary

Four of the rocks are skarns composed of various combinations and proportions of diopside, grossularite, vesuvianite and ferrohastingsite, and represent pyrometasomatised carbonate rocks; if anomalous Sn values occur, these must be in the form of dispersed Sn in silicates rather than as discrete minerals. No wolframite was identified.

265819 is a thoroughly metasomatised sediment, and may have been a greywacke or a tuff, possibly one of the units of the Crimson Creek formation.

265823 has a totally different character, and gives the impression of being a young, immature sediment formed from granitic material.

H.W. Fander, M. Sc.

ple	Rock Type - Composition	Fabric	Minor Minerals	Central Mineralogical Service Comments
816 S. 96)	Skarn. Dominantly composed of fine iopside and grossularite, intergrown and as separate bands; minor vesuvianite poikiloblasts, and prehnite patches.	Microgranular; vague compositional banding and vein-like bodies.	A few carbonate patches. Traces of pyrrhotite. Granular sphene throughout.	Featureless skarn, representing metasomatised carbonate rock. UV test negative. Sn, if present, in silicate form.
817	Diopside Skarn. Major component is finely-granular to subhedral diopside, with interspersed grossularite and interstitial, replacive prehnite.	Fine-grained, with preferred orientation; uniform, featureless.	Parallel streaks of granular sphene. Patches of secondary chlorite.	Very similar to 265816, with different mineral ratios. Short-wave UV check for scheelite negative.
818	Banded Skarn. Bands of ultrafine, cloudy diopside, intergrown diopside/ferro-hastingsite, vesuvianite, and vesuvianite/ ferrohastingsite.	Crude compositional banding is inherited from original rock. Fine/medium-grained.	Irregular grains of extensively altered pyrrhotite, and of chalcopyrite.	UV check negative. Similar to 265816, 817, though garnet absent and ferrohastingsite has formed, thus of darker colour
819	Metasomatised ?Tuff. Small grains of plagio-clase and sericite aggregates; extensive developmentof very fine diopside crystals and phlogopite flakes.	Preferred orientation (?bedding) and relict clastic textures.	Thin streaks of fine sphene throughout. Pyrrhotite, arseno-pyrite.	Believed to be metasomatised sediment, possibly Crimson Creek lithology, but most features obliterated. UV check negative.
820	Ferrohastingsite Skarn. Mainly coarse pris-matic interlocking ferrohastingsite crystals, with subordinate interstitial diopside and minor magnetite.	Coarsely-crystalline, random orientation; no relict features.	Scattered sphene. Pyrite and pyrrhotite, partly oxidised.	UV check negative. Ferro-hastingsite may be replacing diopside, but evidence not clear. Fe-rich.
823 S. 01)	Argillaceous, Feldspathic Sandstone. Irregular grains of quartz, cleavage-fragments of orthoclase, in a matrix-cement of kaolinite-illite.	Poorly-sorted/sized, weakly bedded, medium/fine-grained.	Pervasive limonite. A few degraded biotite flakes.	Appears to be a young, poorly-lithified sediment with a broadly granitic provenance.

753023 022

753024

623

CENTRAL MINERALOGICAL SERVICES PTY. LTD.

Date 16th March, 1982

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

IDENTIFICATION
260621, 260623
260621 - Metasediment (Hornfels)
260623 - Metasomatised ?Dolerite

Job No. CMS 82/2/37 Date Received: 19.2.1982

Reference Order No. 5207

Sample No. 260621, 260623

Nature of Sample: Hand Specimens

DESCRIPTION **SECTION No.** 41030, 41031

a. Hand Specimen:

b. Microscopic:

260 621 (T.S. 41030)

This is a low-grade metasediment, essentially a metasiltstone/metaquartzite; it could be regarded as a low-grade hornfels, i.e. a product of very mild contact-metamorphism. Sedimentary structures and textures are preserved.

The coarser portions consist of subrounded clastic quartz grains, with interstitial fine sericite, conspicuous detrital tourmaline, relatively abundant hematite, and other heavy-mineral grains (zircon, leucoxene); the hematite is probably introduced.

The finer portions contain the same major minerals, i.e. quartz and sericite, but with a higher proportion of sericite. The rock is quartz-veined, and is brecciated; the fractures are filled with cellular goethite representing oxidised sulphides (pyrite, sphalerite); some unaltered pyrite occurs.

260 623 (T.S. 41031)

This is a thoroughly metasomatised medium-grained intrusive igneous rock, originally of basic to intermediate composition, ie. a dolerite or microdiorite

The rock is composed of occasional plagioclase phenocrysts largely replaced by fine quartz, and smaller plagio c lase laths, with abundant replacive pale amphibole (actinolite) as matted needles, as well as elongate aggregates of

matted phlogopite flakes; these have formed around original (primary) oxide opaques, remnants of which are still present.

The style of metasomatism is typical of that occurring around granitic intrusives; if this is in fact the geological setting, it indicates that the ?dolerite was pre-Devonian.

H.W. Fander, M. Sc.

753026

025

CENTRAL MINERALOGICAL SERVICES PTY. LTD.

Date 14th May, 1982

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

IDENTIFICATION
252249
Hornfels with Sulphides

Job No. CMS 82/4/37 Date Received: 28.4.1982

Reference Order No. 5258

Sample No. 252249 MT. YOUNGBUCK . MY1 : 88.45m

Nature of Sample: D.D. Core

DESCRIPTION **SECTION No.** 41861

a. Hand Specimen:

Brown, fine-grained, banded rock with sulphides.

b. Microscopic:

This is a spotted hornfels or metasiltstone, probably weakly metasomatised as well as being mildly contact-metamorphosed.

The rock consists mainly of matted fine hydromuscovite flakes with intergrown fine quartz, andmany small (about 0.1 mm) mica aggregates which probably represent poorly-developed cordierite or andalusite. There are also sporadic larger bodies of muscovite flakes with intergrown albite and sulphides, and these are thought to be of metasomatic origin. Relict clastic quartz grains are occasionally seen.

The banding is inherited from the original sediment, and is accentuated by the formation of sulphides along certain bands. These dominantly comprise fine pyrrhotite, with pyrite veinlets and a minor trace of chalcopyrite.

Thin (0.3 mm) zeolite veins cut the rock; the zeolite is laumontite.

The mineral assemblage indicates a low grade of thermal metamorphism, assigned to the albite-epidote hornfels facies.

H.W. Fander, M. Sc.

753027

926

CENTRAL MINERALOGICAL SERVICES PTY. LTD.

Date 14th May, 1982

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

IDENTIFICATION
252250
Biotite Hornfels

Job No. CMS 82/4/37 Date Received: 28.4.1982

Reference Order No. 5258

Sample No. 252250 MT. YOUNGBUCK MY1 : 95.85m

Nature of Sample: D.D. Core

DESCRIPTION **SECTION No.** 41862

a. Hand Specimen:

Grey-brown, banded rock with sulphides.

b. Microscopic:

This is a well-banded biotite hornfels with clearly preserved sedimentary features; sulphides have formed preferentially along some bands, and were introduced, thus providing evidence of metasomatism.

The original rock was a laminated sandstone/siltstone, with alternating thin bands of silt and sand; the silt bands (grey) must have been composed of fine clastic quartz and clays with fine carbonaceous material. The clays are represented by fine biotite. The sandy bands consisted of generally well-rounded quartz grains and a few lithic fragments (quartzite, chert, quartzose siltstone and others), with a biotitised clay-quartz matrix. There are coarser biotite aggregates representing completely biotitised clastic (lithic) grains. The sandy bands contain detrital zircon and smoky apatite, as well as irregular patches of introduced sulphides; these are pyrrhotite with isolated chalcopyrite inclusions.

Although the sulphides in both rocks are mainly confined to bands, there is no real evidence that they were syngenetic, though the possibility cannot be discounted.

Neither rock shows evidence of derivation from the tuffaceous units of the Crimson Creek formation which are usually distinctive even after mild metamorphism/metasomatism.

H.W. Fander, M. Sc.

[redacted] Abel Foyle Exploration — GEOCHEMICAL SAMPLE LEDGER

027

PROJECT: MEREDITH MT. YOUNGBUCK.

BSS SIEVE SIZE CODE - MESH NUMBER: A 200 D 80 G 30 / B 150 E 60 H 20 / C 100 F 40 T = TOTAL

SAMPLE TYPE CODE: ☐ OXIDIZED PRODUCTS O / ☒ FRESH ROCK R / ☐ STREAM SEDIMENTS S / ☐ WEATHERED BEDROCK / ☐ SURFACE TRANSPORTED T / ☐ RESIDUAL SOIL E / ☐ MINE DUMP M

CARD PUNCH PRINT VERIFY: YES ☐ NO ☐ YES ☐ NO ☐

DATE: 21/1/82

SHEET: 1

EASTINGS	NORTHINGS	SAMPLE NUMBER	DEPTH in CMS		SIZE FRACTION	Sample Type	Sn	METAL VALUES PPM WO3	Cu	Pb	Zn	As	GEOLOGICAL LOG
SAMPLES FROM MT. YOUNGBUCK ROAD GRID CO-ORDS RELATING TO 29500N CROSSLINE.													
29755	29490	260620					25	10	45	30	80	41	green/grey silic and ser'd basic volc?
29740	29490	260621	PET	metasiltstone - metaquartzite.			4	X	230	30	40	45	silic'd and q-veined pale grey alt'd volc. 5% py.
29740	29490	260622		q-veined + brecciated			5	X	50	25	170	7	strongly foliated (sheared), q-fel-lithic tuff (v.weath).
29710	29485	260623	PET	contact altered dolerite			8	10	100	15	75	5	heavily cordierite spotted tuff?
29580	29550	260624					260	1050	260	X	325	4	v.weath dolerite

753028

OPERATOR | COMPUTER | CHECK | PLOTTER | DATE

[redacted] Exploration [redacted] GEOCHEMICAL SAMPLE LEDGER

028

PROJECT: MEREDITH MT. YOUNGBUCK

BSS SIEVE SIZE CODE - MESH NUMBER: A 200, B 150, C 100, D 80, E 60, F 40, G 30, H 20, T = TOTAL

SAMPLE TYPE CODE: ☐ OXIDIZED PRODUCTS O; ☑ FRESH ROCK R; ☐ STREAM SEDIMENTS S; ☐ WEATHERED BEDROCK W; ☐ SURFACE TRANSPORTED T; ☐ RESIDUAL SOIL E; ☐ MINE DUMP M

CARD PUNCH: PRINT YES ☐ NO ☐ VERIFY YES ☐ NO ☐

DATE: 22/12/81

SHEET: 2

EASTINGS	NORTHINGS	SAMPLE NUMBER	DEPTH in CMS	SAMPLE FRACTION	Sample Type	WO_3	Cu	Pb	Zn	As	GEOLOGICAL LOG
	2190	26581		4		31	250	4400	4900	94	pale grey family banded metasomatized sandstone
	2172	815		40		X	140	195	365	28	fine grey sandstone
MT. YOUNGBUCK	2172	816	PET	130		X	30	95	190	10	diopside - grossular - vesuv. Skarn. Tr. Po.
ROAD.	2172	817	PET	130		107	20	80	140	42	diopside skarn & minor grossular.
	2172	818	PET	1150		44	110	65	195	32	Banded skarn, diopside - amphibole - vesuvianite Tr cpy
	2145	819	PET	45		X	140	45	140	20	Metasomatized tuff. fine diopside - phlogopite
	2145	820	PET	1400		50	295	55	175	7	Ferrohastingsite skarn - minor magnetite, Py, Po
	1620	821		50		X	90	60	180	1	
	1160	822		6		X	25	95	215	3	
	740	823	PET	20		X	60	50	45	14	Feldspathic sandstone (arkose ?) - Younger
29560	30500	824		15		X	70	80	170	1	
29375	30500	825		3		X	35	65	170	1	

753029

OPERATOR | COMPUTER | CHECK | PLOTTER | DATE

Appendix B

Drill Log & Assay Data For DDH.MY.1

Cleveland Tin Limited Laboratory

030

Note: Intervals not analysed should be recorded such that a complete hole is itemised.
For any section not analysed, a value −5·00 should be entered in the relevant assay columns.
It is not necessary to record a zero.

PROGRAM | PROGRAMMER | DATE

HOLE IDENT.	DISTANCE FROM COLLAR TO BOTTOM OF SAMPLE (metres)	ASSAY ppm / % SNT	ASSAY ppm STANNITE	ASSAY ppm / % COPPER	ASSAY ppm ZINC	ASSAY ppm LEAD	ASSAY ppm / % TUNGSTEN WO3	grammes per Tonne SILVER	grammes per Tonne GOLD		SAMPLE No.
MY1	34·92	−5·00									
	35·92	0·01		0·01	80	<5	<0·005				16572
	36·92	<0·01		0·01	15	<5	0·005				72
	37·92	0·02		0·04	20	<5	0·010				72
	38·92	0·04		0·05	40	<5	0·015				72
	39·92	0·02		0·01	40	35	0·015				72
	40·20	0·01		0·03	150	70	<0·005				72
	40·92	0·04		0·01	20	<5	<0·005				72
	41·92	0·03		0·05	35	<5	0·035				72
	42·92	0·03		0·09	40	<5	0·010				72
	43·92	0·03		0·03	100	40	0·070				72
	44·92	0·05		0·07	25	<5	0·010				73
	45·92	0·03		0·04	20	<5	0·005				73
	46·92	0·04		0·04	40	15	0·030				73
	47·92	0·05		0·05	35	<5	0·010				73
	48·92	0·07		0·05	50	<5	0·195				73
	49·52	0·05		0·04	60	10	0·025				73
	49·92	0·07		0·09	30	<5	0·415				73
	50·66	0·06		0·05	25	<5	0·055				73
	50·92	0·05		0·08	60	<5	0·005				16573

Note: Intervals not analysed should be recorded such that a complete hole is itemised.
For any section not analysed, a value −5·00 should be entered in the relevant assay columns.
It is not necessary to record a zero.

PROGRAM | PROGRAMMER | DATE

HOLE IDENT.	DISTANCE FROM COLLAR TO BOTTOM OF SAMPLE (metres)	ASSAY ppm % SNT	ASSAY ppm STANNITE	ASSAY ppm % COPPER	ASSAY ppm ZINC	ASSAY ppm LEAD	ASSAY ppm % TUNGSTEN WO3	grammes per Tonne SILVER	grammes per Tonne GOLD		SAMPLE No.
MY1	50·92	-5·00									
	51·92	0·04		0·05	60	15	0·0020				26573
	52·92	0·05		0·07	30	<5	0·510				74
	53·92	0·07		0·04	50	<5	0·015				74
	54·92	0·04		0·04	30	<5	0·0035				74
	55·92	0·05		0·04	40	<5	0·150				74
	56·92	0·06		0·05	40	<5	0·285				74
	57·92	0·04		0·02	70	15	0·0020				74
	58·66	0·03		0·06	40	<5	0·0025				74
	58·92	0·03		0·01	60	5	0·0035				74
	59·92	0·09		0·05	30	<5	0·375				74
	60·50	0·08		0·03	25	<5	0·520				74
	60·92	0·05		0·01	20	<5	0·015				75
	61·14	0·03		0·06	160	50	0·0060				75
	61·92	0·01		0·02	60	15	0·0065				75
	62·92	0·01		0·01	35	<5	0·0005				75
	63·42	0·09		0·05	20	<5	0·015				75
	63·92	0·08		0·05	30	<5	0·015				75
	64·16	0·01		0·23	80	20	<0·0005				75
	64·92	0·01		0·02	30	<5	0·0005				75

Note: Intervals not analysed should be recorded such that a complete hole is itemised.
For any section not analysed, a value −5·00 should be entered in the relevant assay columns.
It is not necessary to record a zero.

PROGRAM PROGRAMMER DATE

HOLE IDENT.	DISTANCE FROM COLLAR TO BOTTOM OF SAMPLE (metres)	ASSAY ppm / % SNT	ASSAY ppm STANNITE	ASSAY ppm / % COPPER	ASSAY ppm / % ZINC	ASSAY ppm / % LEAD	ASSAY ppm / % TUNGSTEN WO3	grammes per Tonne SILVER	grammes per Tonne GOLD		SAMPLE No.
MY 1	64·92	−5·00									
	65·92	0·04		0·24	20	<5	0·0110				26575
	66·39	0·05		0·04	20	<5	0·0110				75
	66·92	0·01		0·02	10	<5	0·0055				26576

033

Note: Intervals not analysed should be recorded such that a complete hole is itemised.
For any section not analysed, a value -5·00 should be entered in the relevant assay columns.
It is not necessary to record a zero.

PAGE 1 OF 1

PROGRAM PROGRAMMER D Shearer DATE 15/4/82

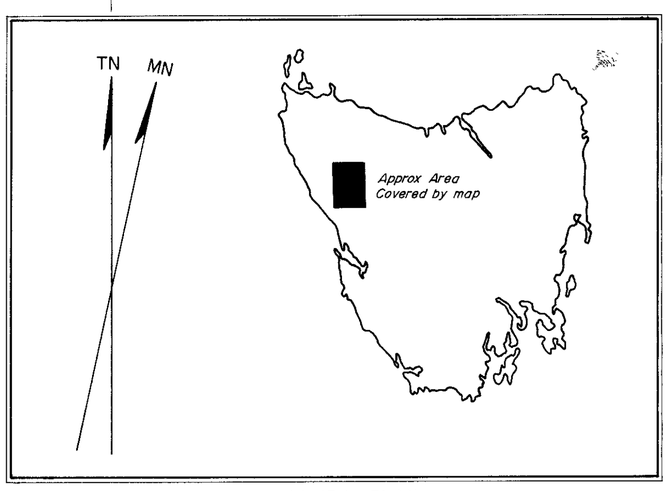
HOLE IDENT.	DISTANCE FROM COLLAR TO BOTTOM OF SAMPLE (metres)	ASSAY ppm % SNT	ASSAY ppm % STANNITE	ASSAY ppm COPPER	ASSAY ppm ZINC	ASSAY ppm LEAD	ASSAY ppm % TUNGSTEN WO3	grammes per Tonne SILVER	grammes per Tonne GOLD		SAMPL No.
MY. 1	76.95	-5.00									
	77.95	<0.01	<0.01				0.005				2657
	78.95	0.08	0.04				0.280				7
	79.70	0.05	0.02				0.680				7
	79.95	0.04	0.01				0.005				7
	80.95	0.06	0.02				0.150				7
	81.32	0.05	0.01				0.005				7
	81.95	0.06	0.02				0.010				7
	82.80	0.06	0.04				0.155				7
	82.95	0.07	0.01				0.005				7
	83.95	0.05	0.01				0.045				7
	84.46	0.01	<0.01				0.075				7
	84.95	0.03	<0.01				0.055				7
	85.95	0.05	0.01				0.100				7
	87.00	0.07	0.03				0.045				7
	87.95	<0.01	<0.01				0.005				7

7530 34

350 000mE

360 000mE

370 000mE



LOCALITY PLAN

5410 000mN

5400 000mN

5390 000mN

△ MT CLEVELAND

⚒ CLEVELAND

⚒ MAGNET

Mount Wright ⚒ Heazlewood

Old Jasper ⚒ Boxing Day

⚒ New Jasper

Bells Reward ⚒ Og

Discoverer ⚒

Godkin Extended

Washington ⚒ Washington Hay

Confidence ⚒

GODKIN Og

To Waratah

BETTS TRACK

Qra(Sn)

WOMBAT FLAT

South Bischoff ?

Floodplain Tb with sporadic exposures of €am along the granite contact

Heazlewood River

Scheelite Ck

Loughman Creek

Castray River

MT STEWART

Mt Stewart

Wilson R.

Johnson Ck

White River

△ MT MEREDITH

Qra(Sn)

⚒ Cu, Zn

MT RAMSAY SCHEELITE MINE

MT RAMSAY △ Trig 455

Yellowband Ck

Wilson River

Little Harmon River

Rocky River

Post Office Creek

Stanley River

△ MT LIVINGSTON

PARSONS HOOD

⚒ Mt Lindsay Mine

Dg

€am

Es

Ebs

Eb

Eu

Ed

Ei

Sc

Og

Dp

Jd

P€w

P€o

Tertiary	Tb	Porphyritic Alkali Olivine Basalt
Quarternary	Qra	Alluvium and swamp deposits, (Sn) Tin bearing
Silurian	Sc	Crotty Quartzite
Ordovician	Og	Gordon Limestone
Cambrian	€am	Turbidites and lithic sandstones and pelites
Precambriam	P€o	Oonah Quartzite and slate
	P€w	Whyte Schist

Igneous Rocks

Jurassic	Jd	Dolerite
Devonian	Dp	Quartz porphyry
		Microgranite dyke
	Dg	Meredith granite
Cambrian	€i	Intermediate igneous (€d dolerite)
	€b	Basic igneous suite (€bs, Spillite)
	€u	Ultrabasic igneous suite (pyroxenite & peridotite)
	€s	Serpentinite
	€	Undifferentiated, predominantly igneous rocks

753035

5 cm

1 0 1 2 3 4 5 Kilometres

82-1785

Aberfoyle Exploration

Geology	N.W TASMANIA	2594	Location code
Drawn	MEREDITH E.L. 16/78		Date October, 1978
Traced R J E	Geological Summary Map		Scale 1 50, 000
Checked	(after D I. Groves 1962-67)		Plate No MER 3
Revised by. JRT Date 1/6/79			

QUATERNARY	3	Qa	Alluvium
	8	DQ	Dolerite Talus
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	Rocks of ultrabasic affinity, includes serpentinite, pyroxenite, gabbro, dolerite, both coarse & fine grained occasionally amygdaloidal probably related to Heazelwood River Complex
	44	ub	Basic lavas
PRE CAMBRIAN	58	Puo	Oonah Quartzite and Slate
	70	Swc	WHYTE SCHIST Foliated interbedded and massive quartzite, sericite schist, black shale, quartz schist
	43	Apb	Amphibolite

GENERAL ABBREVIATIONS

MINERAL

Py	-	Pyrite
Cpy	-	Chalcopyrite
Spn	-	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
chi	-	chiastolite
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
so →63°M	-	dip / dip direction magnetic

Folding

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

Deformation history

So	-	bedding
S_1	-	first deformation
S_2	-	second deformation

Lineations

L_1	-	lineation produced by S_1
L_2	-	lineation produced by S_2

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

- 0·2 — Outcrop boundary
- Float
- 0·4 — Contact known
- Contact interpreted
- Contact inferred
- F 70° — Fault definite (known dip)
- F — 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 tramway
- Adit
- 2200 — Topographical contours & interval
- Cleared area
- Swamp
- Alluvial deposits
- Track
- Road (unsealed)
- Highway (sealed)
- EL 47/71 — Licence boundary & number
- Dam on stream
- T/S — Thin section
- Mine

753036

82-1785

Aberfoyle Exploration Pty Ltd

Geology CHY, RMJ	NORTH WEST TASMANIA MEREDITH LICENCE 16/78 GEOLOGICAL LEGEND	2595	Date August, 1980
Drawn RJE			Scale
Traced			Plate MER 18

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

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

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

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

Index to adjoining sheets

Aberfoyle Exploration Pty Ltd

82 1785 2596

NORTH WEST TASMANIA

DUNDAS TROUGH

MEREDITH E.L.16/78

Surface Outcrop Geology

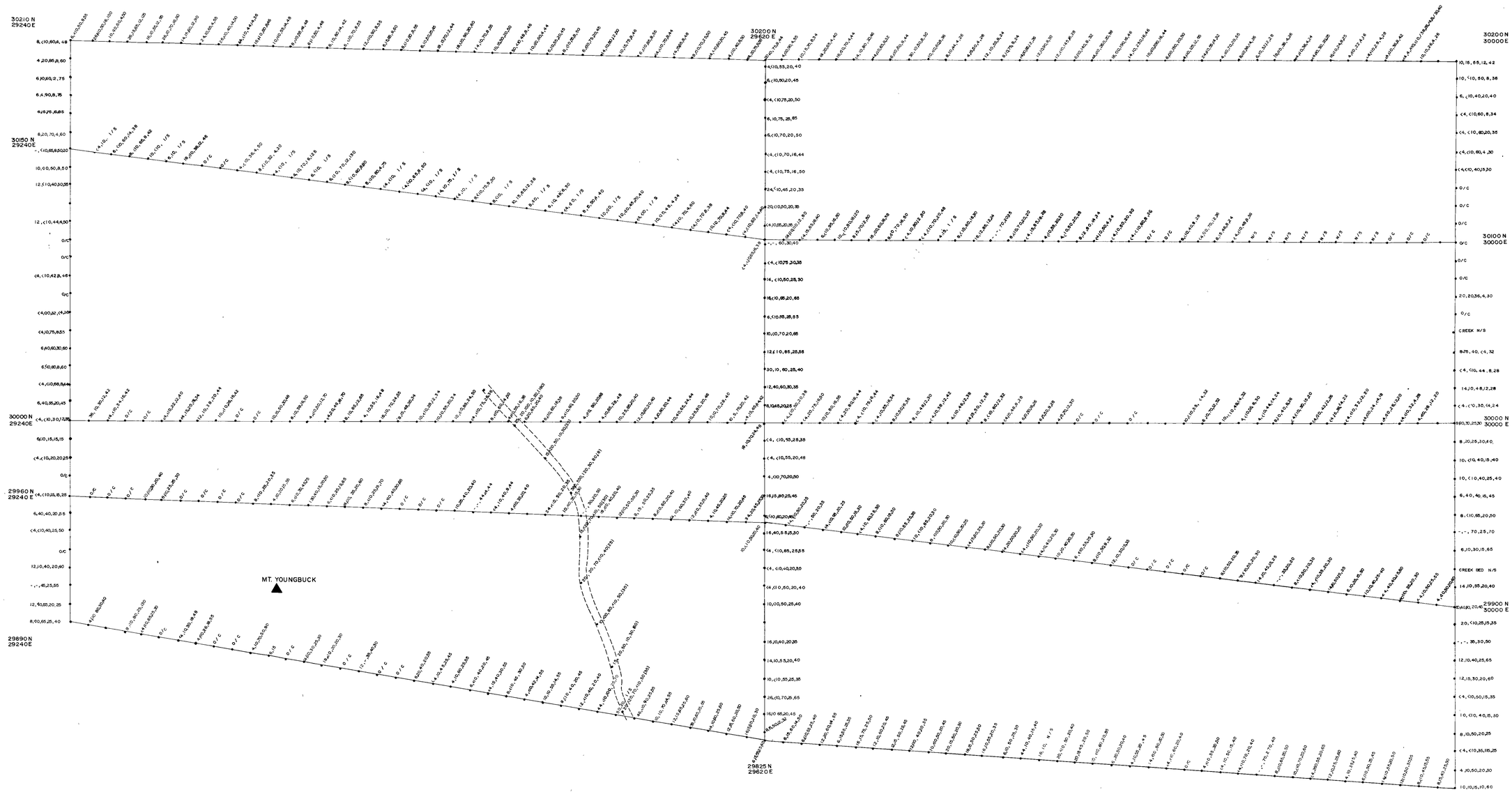
Geology	JRT	J.W
Drawn	JRT	J.W
Traced	JJB	RJE
Checked		
Revised by	RJE JLR	Date 15/8/80 20/4/82

Location code

Date July, 1979

Scale 1:10,000

Plate No Mer 4 - 355/400



LEGEND

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

82-178

753038

Aberfoyle Exploration Pty Ltd

Geology:	NORTH WEST TASMANIA 2597	Location code
Drawn: N R B	MEREDITH E.L 16/78	Date. Sept 1980
Traced J L B	Mt. Youngbuck Grid	Scale 1 : 5,000
Checked	SOIL GEOCHEMISTRY	Plate N° MER 19 (Sheet 1)
Revised by Date:		

82-1785

Aberfoyle Exploration Pty Ltd

NORTH WEST TASMANIA 2593

MEREDITH E.L. 16/78

MT. YOUNGBUCK GRID

SOIL GEOCHEMISTRY

Geology	
Drawn R.M.J	
Traced J.L.R	
Checked	
Revised by Date	
Location code:	
Date Dec 1980	
Scale 1:1000	
Plate No MER 19 (Sheet 2)	

30730 N
29240 E

30650N
29240E

30523 N
29240 E

30440 N
29240E

30340 N
29240 E

30210 N
29240E

30700 N
30000 E

30600 N
30000 E

30500 N
30000 E

30400 N
30000 E

30300 N
30000 E

30200 N
30000 E

TN

Index to sheets

Sheet 3

Sheet 4 | Sheet 1 | Sheet 2

5 cm

82-1785

753040

LEGEND

- Soil Sample location and assay results Sn, WO_3, Cu, Pb, Zn, As in p p m
- o/c outcrop
- N/S No sample
- I/S Insufficient sample
- X Below limit of detection

Aberfoyle Exploration Pty Ltd

Geology R.M.J	NORTH WEST TASMANIA 2599	Location code:
Drawn	MEREDITH EL. 16/78	Date: December, 1981
Traced: J.L.R	Mt. Youngbuck Grid	Scale 1:1000
Checked.	SOIL GEOCHEMISTRY	Plate No MER 19 (Sheet 3)
Revised by: Date		

TN

30200 N
29240 E

30100 N
29240E

30000 N
29240 E

29900 N
29240 E

29800 N
29240 E

29700 N
29240 E

29600 N
29240 E

LEGEND

- • Soil Sample location and assay results Sn, WO, Cu, Pb, Zn, As in p p m
- o/c Outcrop
- N/S No sample
- I/S Insufficient sample
- X Below limit of detection

Index to sheets

- Sheet 3
- Sheet 1
- Sheet 4
- Sheet 2

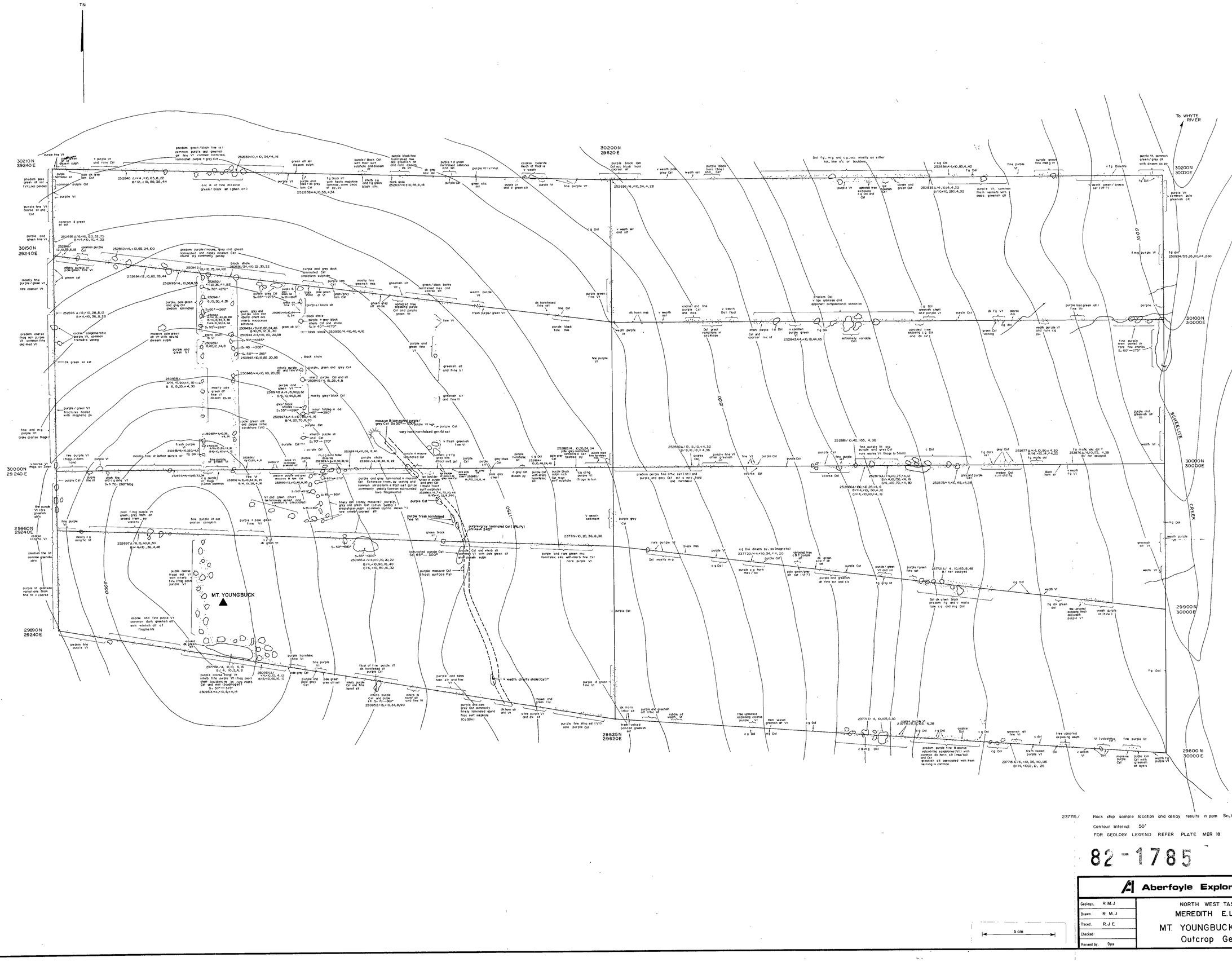
82-1785

753041

5 cm

Aberfoyle Exploration Pty Ltd

Geology	NORTH WEST TASMANIA 2600	Location code
Drawn	MEREDITH E L. 16/78	Date January, 1982
Traced J L R	Mt Youngbuck Grid	Scale 1:1000
Checked	SOIL GEOCHEMISTRY	Plate No MER 19 (Sheet 4)
Revised by Date		



237715/ Rock chip sample location and assay results in ppm Sn,W,Cu,Pb,Zn

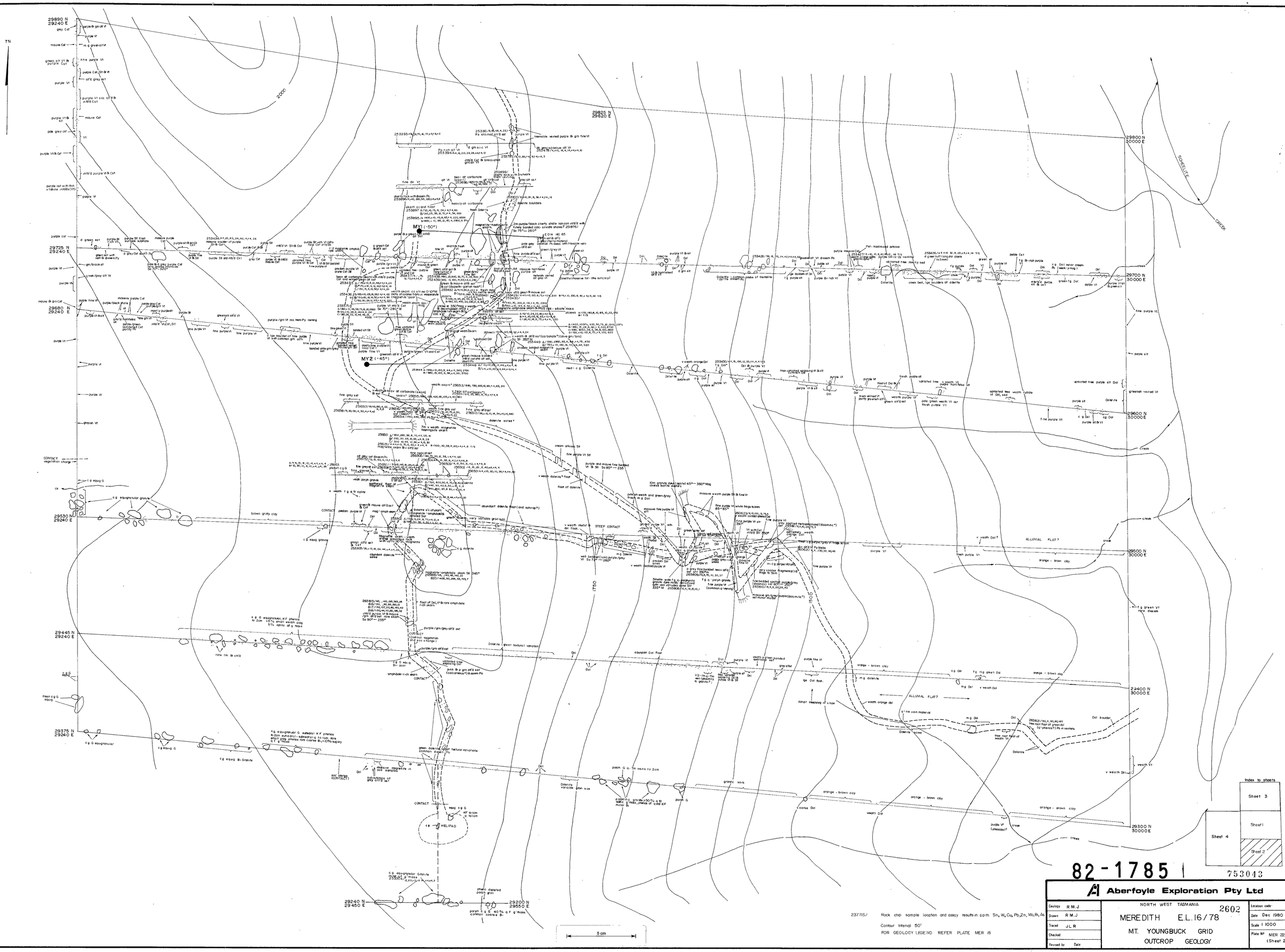
Contour interval 50'

FOR GEOLOGY LEGEND REFER PLATE MER 18

82-1785

Aberfoyle Exploration Pty Ltd

Geology. R.M.J	NORTH WEST TASMANIA 2601	Location code:	
Drawn. R.M.J	MEREDITH E.L. 16/78	Date NOV 1980	
Traced. R.J.E.	MT. YOUNGBUCK GRID	Scale. 1 1000	
Checked:	Outcrop Geology	Plate No MER 22 (Sheet 1)	
Revised by. Date			



237757 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

82-1785

753043

Aberfoyle Exploration Pty Ltd

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

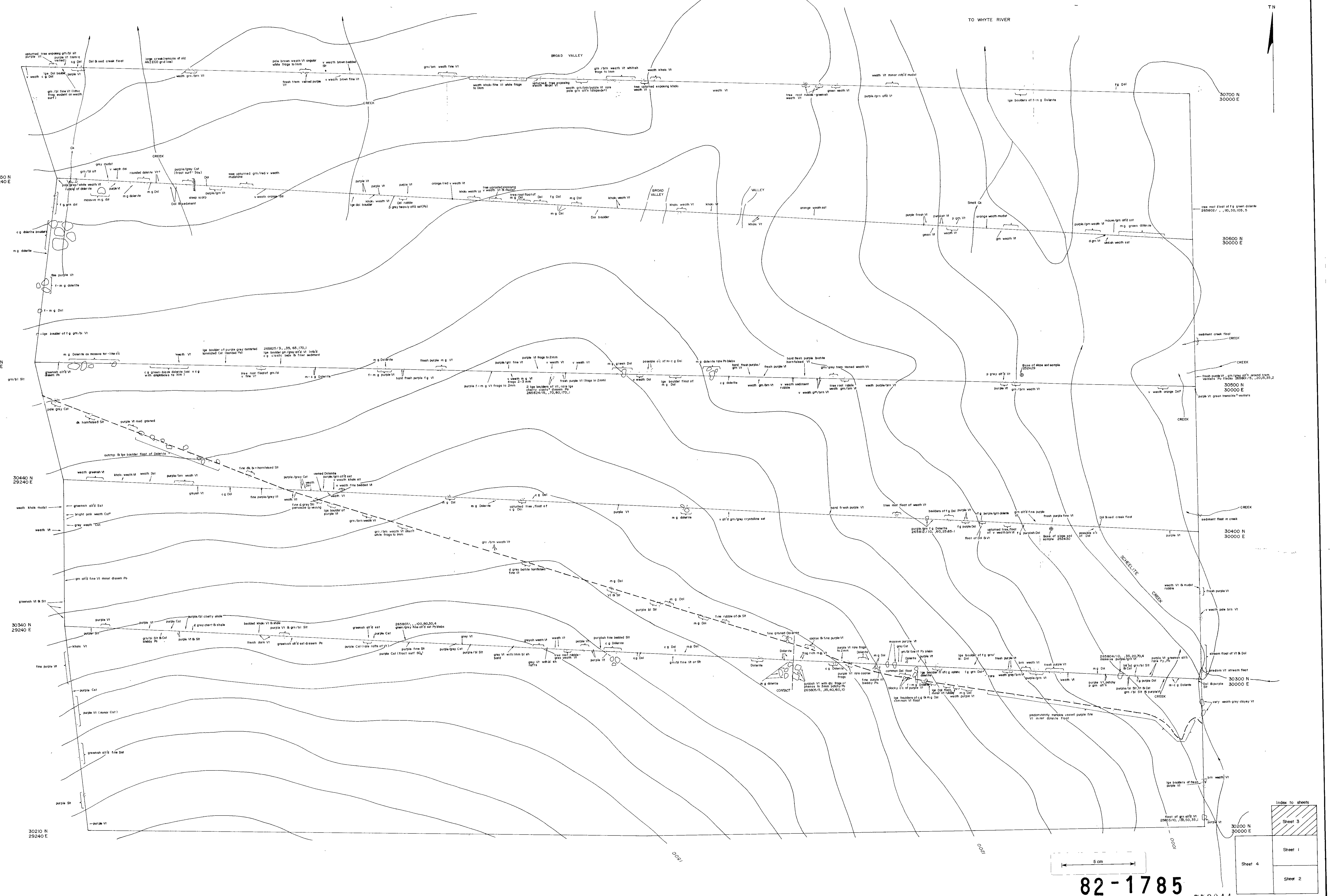
NORTH WEST TASMANIA 2602

MEREDITH E.L. 16/78

MT. YOUNGBUCK GRID

OUTCROP GEOLOGY

Location code	
Date	Dec 1980
Scale	1:1000
Plate No	MER 22 (Sheet 2)



82-1785

752044

23775/ Rock chip sample location and assay results in ppm Sn, WO_3, Cu, Pb, Zn, As

Contour interval 50'

FOR GEOLOGY LEGEND REFER PLATE MER 18

Aberfoyle Exploration Pty Ltd

Geology R M J	NORTH WEST TASMANIA 2603	Location code
Drawn	MEREDITH E.L. 16/78	Date December, 1981
Traced J L R	Mt Youngbuck Grid	Scale 1:1000
Checked	OUTCROP GEOLOGY	Plate No MER 22 (Sheet 3)
Revised by: Date		

TN

To Whyte River

CONTACT CREEK

1900

1600

30200 N
29240 E

pgrn alt'd fine Vt
predom fine Vt occ Cst
purple laminated Cst
gm alt'd Vt minor dissem Po
v f g black siltst
v c g purple Vt
massive weath purple Cst
fine purple Vt
fine purple Vt
d gm bedded Sst

30100 N
29240 E

predom fine purple Vt
purple/green Vt varying grainsizes
fine B i m g purple Vt
common c g Vt frags 3mm
d grn c g Vt 1/2cm dfz - from veins
purple fine Vt (minor grn from diopside alt'n)

30000 N
29240 E

purple Cst Slt & Vt
purple Slt
massive purple Cst
purple Cst
purple Vt Cst
predom m-c g purple /grn Vt
c g frag-rich Vt
grn alt'd Vt
green/grey Cst
purple Slt
purple Vt with rare lge fragments (3mm)
intb'd purple & gm Cst
intb'd purple Slt & greenish banded chert
fine Vt
mostly fine purple Vt

29900 N
29240 E

banded grn chert c g Vt & Slt
purple Cst
mostly purple Slt
Intensly veined grey chert
purple/grn Vt
fine purple Vt
tree uprooted exposing purple Vt into massive Cst
Vt & Slt
fine Vt
purple Cst
purple massive Cst minor Slt
predom fine purple Vt rare coarser clastic material
med & coarse purple Vt
massive purple Cst

29800 N
29240 E

creek float predom Vt
minor Vt rubble
p grey sandstone
v weath sed rubble
fresh purp Vt
fine Bi hornf purp Vt
251851/ p grey coarse Vt frags to 2 mm fract surp sulph
fresh fine purp Vt
p grey coarse Vt (tuff) angular frags to 3mm
f ac Vt rubble
purp feldspathic Sst
grnish c Vt dissem Po
fine & coarse Vt float
coarse grey Vt (Po flecks)
fine purp Vt minor frem - Py veinlets
251852/ intb'd purp Vt & grn /grey alt'd chert Po veinlets
251853 coarse grey Vt common Py, Po
grey sst (Py)
fine purp Vt
purple Slt
gm /grey alt'd Vt
p grey c g Vt Po flecks
p grey frag rich Vt
fine bedded Vt & grn diopside alt'd Vt
d grey heav alt'd m g Vt
v weath Slt
purp fine Vt
fine Vt & purp Slt
p grey Vt (Po)
purp-grey frag poor c g Vt
coarse purp Vt
weath Vt rubble
p veined Vt
network veined grey chert
251854 gm c g Vt
d grn alt'd Vt
alt'd d grey m g Vt (Po)
d grn grey heav alt'd tuffs
d grn sil'c'd c g Vt
purple & d gm m-c g Vt
predom c g Vt
purple Vt fine & coarse
med-c g purple Vt
fine purple Vt
fg grn Vt
c g Vt rounded frags to 1cm
gm alt'd f-m g Vt
fine purple Vt patchy gm alt'n
fine purple Vt
f g Vt m-c g purple Vt
fine Bi m g purple Vt
greenish alt'd Vt
d gm alt'd Vt (tremolitized?)
c g grn vt (frags to 1cm) abun't Po flecks
purple Slt
fine Vt
fine purple Vt
purple Slt
p grey Cst
f-m g Vt (occ frags to 3mm)

29700 N
29240E

251855/ weath c.g. equig q-fd & adamellite
sediment rubble
fresh purple fine Vt
purp fine Vt
tree root float of fine purp Vt
purple Vt
purple/grey sil'c f-m g Vt
fine purple Vt
purp Vt Slt rare Cst
purp Slt & Cst
fine purple Vt
purp Cst (P% Po flecks non-mag
trem veined grnish alt'd Vt
p grey fine Vt
purple Vt & Slt
intb'd xtalline Vt Cst (purp)
rubbly f Vt & cherty shale Cst
p grey veined & pyritic Cst
purple & grn bedded Cst
purple Vt
p grey Vt
p grey chert
p grey Cst
p grey Cst (Py)
p grey heav alt'd Vt (Py)
purple Vt
massive fine purple Vt
p grey heavily alt Vt
purple Cst

29600 N
29240E

c g G
v weath c g G
equigranular c g G
v weath f g q-fd & aplite
fine purp/grey Vt grn/bl Vt
purple Vt
purp/grey cherty shale (clyt)
purple fine bi-hornf'd Vt
purp fine Vt
purple Vt
a'c purp fine Vt
intb'd purp & rich Vt & Cst
purple Vt
xtalline purp Vt & Cst
purple Vt
cherty shale
purple Vt
finely lam grn bl Sst
purp Vt & Cst
p grey Cst
predom p grey & purple Cst
purple & grey Cst
finely lam. chert
p grey-cream abrupt scarp (v weath a'c of CSE?)

237715/ Rock chip sample location and assay results in ppm Sn, WO, Cu, Pb, Zn, As

Contour Interval 50'

FOR GEOLOGY LEGEND REFER PLATE MER 18

Index to sheets

Sheet 3
Sheet 1
Sheet 4
Sheet 2

82-1785 753045

5 cm

Aberfoyle Exploration Pty Ltd

Geology	NORTH WEST TASMANIA 2604	Location code
Drawn	MEREDITH E L 16/78	Date January, 1982
Traced J L R	Mt. Youngbuck Grid	Scale 1:1000
Checked	OUTCROP GEOLOGY	Plate No MER 22 (Sheet 4)
Revised by Date		

82-1785 753046

Aberfoyle Exploration Pty Ltd

Geology	NORTH WEST TASMANIA	Location code
Drawn	MEREDITH E.L. 16/78 2605	Date
Traced J.L.R.	Mt. Youngbuck Grid	Scale 1:5000
Checked	GROUND MAGNETICS & E.M.	Plate No. MER 26 (Sheet 3)
Relevant by Date		

TN

30200 N
29240 E

30100 N
29240E

30000 N
29240 E

29900 N
29240 E

61325 359 552 885 302 617 569 393 950 966 499 785 61989 62060 62037 61534 62078 62042 61873 62035 030 050 037 074 62053 61740 62130 120 040 62051 61994 62000 043 62060 62015 61576 61993 62489 62302 61330 62000

29800 N
29240E

61721 890 896 866 873 851 847 846 834 837 854 827 840 800 820 821 869 827 883 834 540 150 893 978 196 550 61965

29700 N
29240E

61885 863 877 854 858 861 854 853 848 838 831 802 821 833 902 934 914 920 936 937 912 61946

29600 N
29240E

Index to sheets

Sheet 3
Sheet 1
Sheet 4
Sheet 2

753047

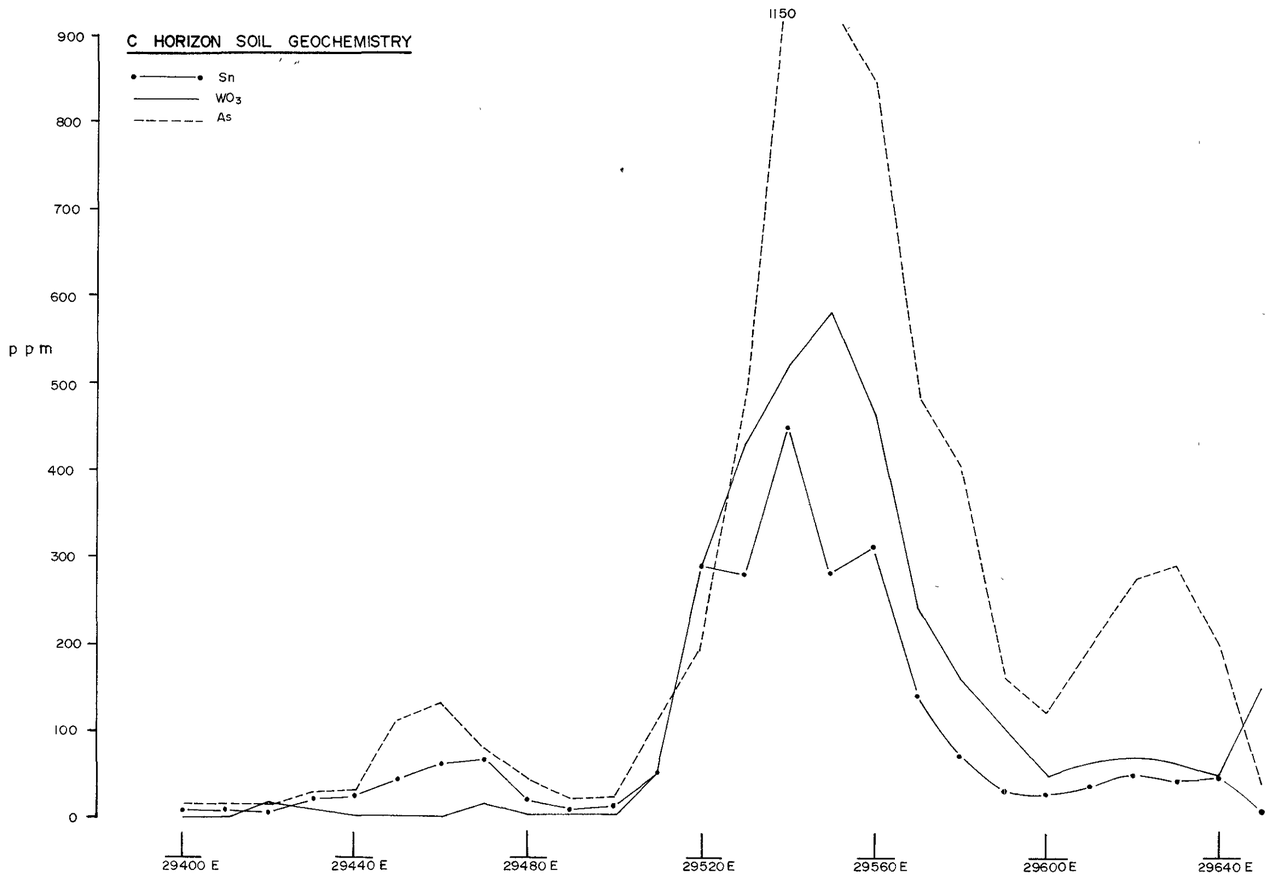
82-1785

5 cm

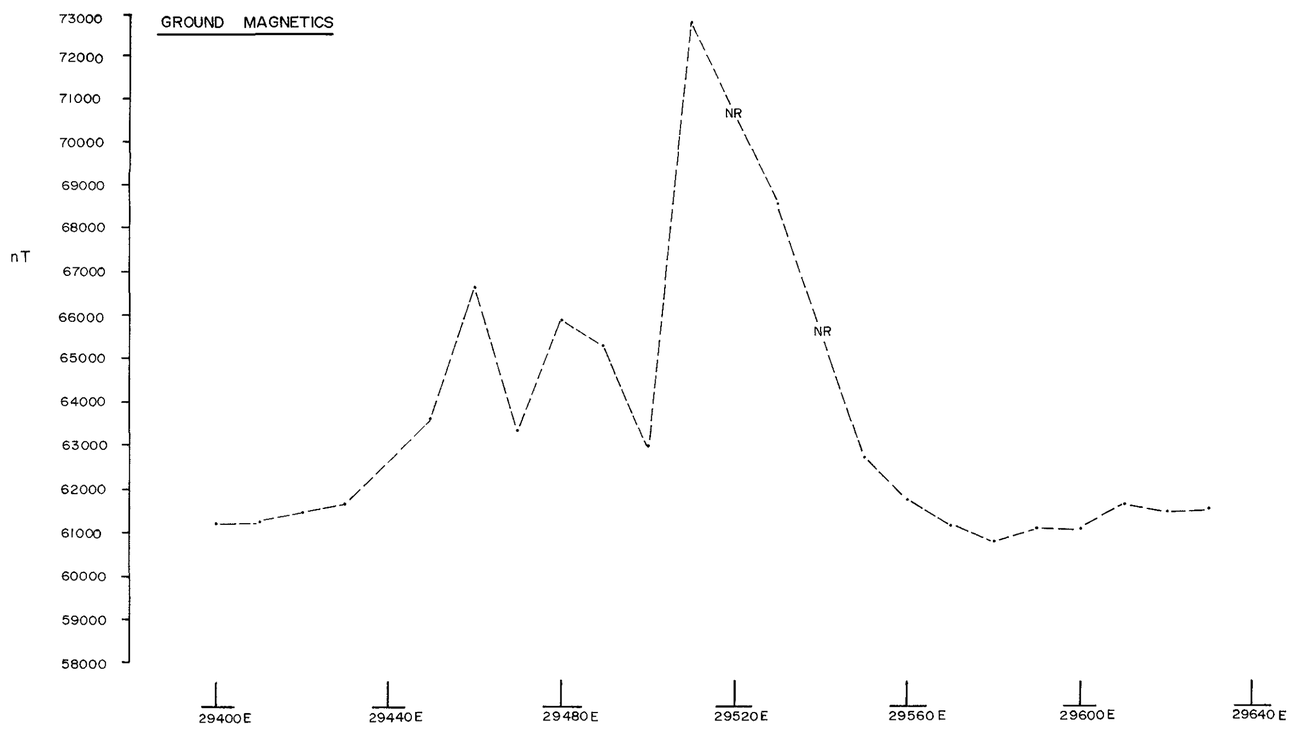
Aberfoyle Exploration Pty Ltd

Geology	NORTH WEST TASMANIA 2606	Location code
Drawn	MEREDITH E.L. 16/78	Date January, 1982
Traced J L R	Mt. Youngbuck Grid	Scale 1:1000
Checked	GROUND MAGNETICS & E.M.	Plate No MER 26 (Sheet 4)
Revised by Date		

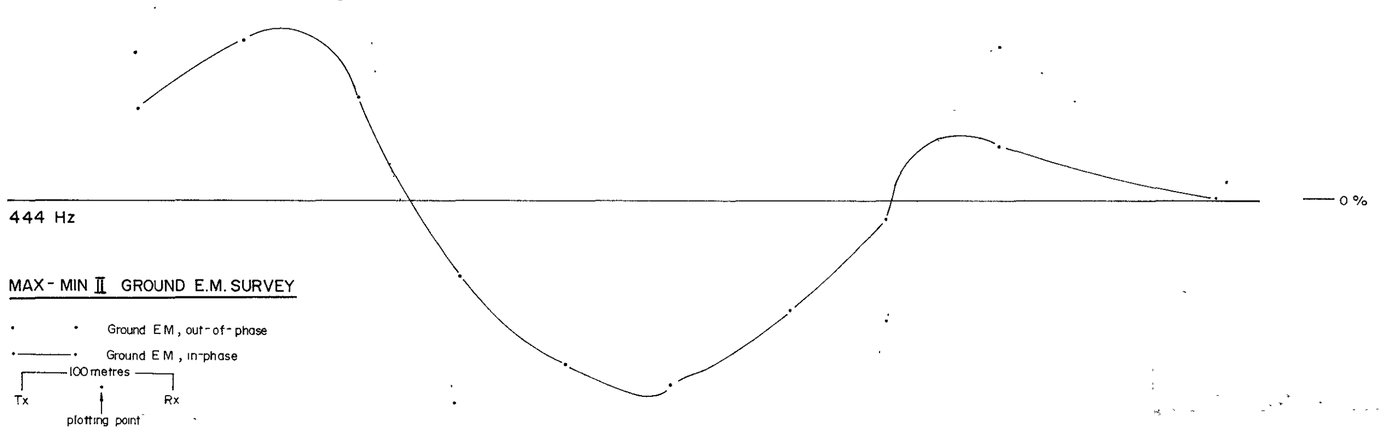
C HORIZON SOIL GEOCHEMISTRY



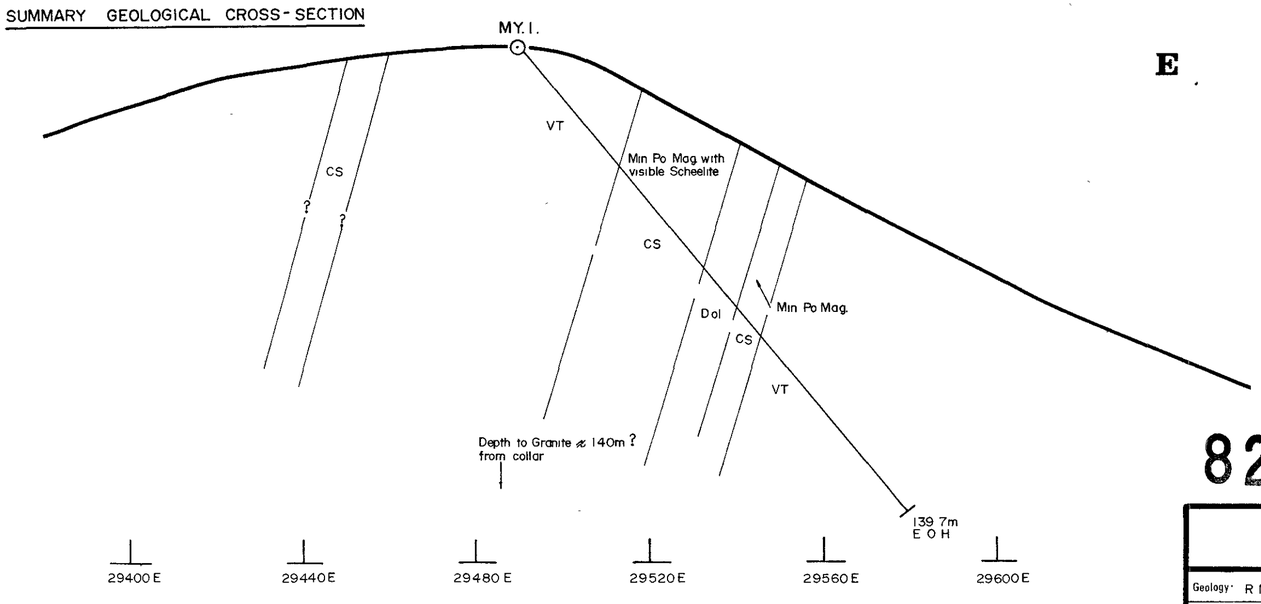
GROUND MAGNETICS



MAX-MIN II GROUND E.M. SURVEY



SUMMARY GEOLOGICAL CROSS-SECTION



LEGEND

CS	Calc-silicate skarn rocks
VT	Tuffaceous sandstones & shales
Dol	Dolerite sill (altered)

753048

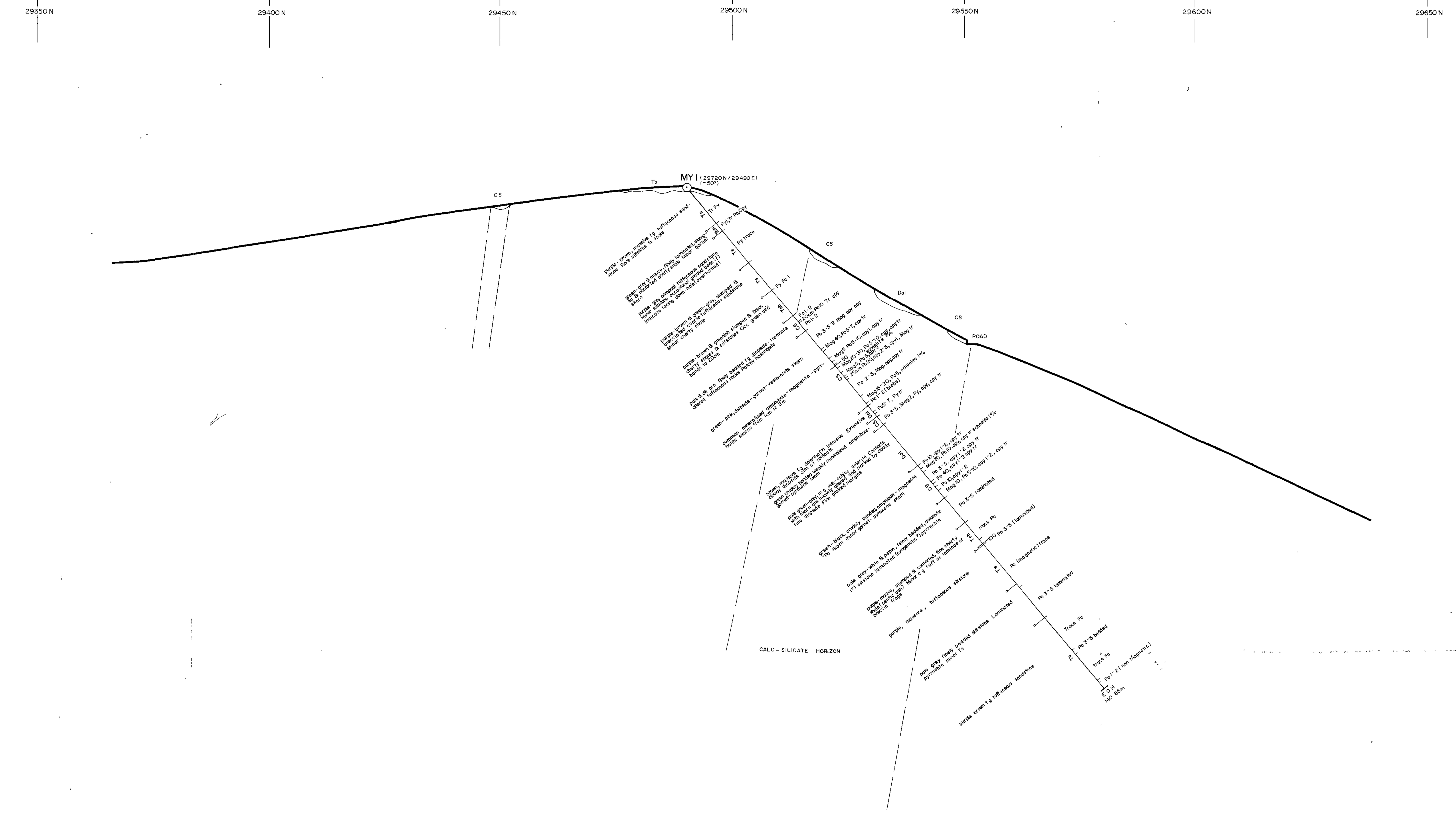
82-1785

5 cm

Aberfoyle Exploration Pty Ltd

Geology R M J	NORTH WEST TASMANIA 2607	Location code
Drawn R M J	MEREDITH E.L 16/78	Date April, 1982
Traced J.L R	MT. YOUNGBUCK LINE 29700N	Scale 1 1000
Checked	DRILL HOLE MY 1.	Plate No MER 45
Revised by Date		

DISTANCE (metres)	Sn (ppm)	WO_3 (ppm)
34 92	−5 00	−5 00
35 92	100	50
36 92	100	50
37 92	200	100
38 92	400	150
39 92	200	150
40 20	100	50
40 92	400	50
41 92	300	350
42 92	300	100
43 92	300	700
44 92	500	100
45 92	800	50
46 92	400	800
47 92	500	100
48 92	700	1950
49·52	500	250
49 92	700	4150
50 66	600	550
50 92	500	50
51 92	400	200
52 92	500	5100
53 92	700	150
54 92	400	350
55·92	500	1500
56 92	600	2850
57 92	400	200
58 66	300	250
58 92	300	350
59 92	900	3750
60 50	800	5200
60 92	500	150
61 14	300	600
61 92	100	650
62 92	100	50
63 42	900	150
63 92	800	150
64 16	100	50
64 92	700	50
65 92	400	100
66 39	500	100
66 92	100	50
76 95	−5 00	−5 00
77 95	100	50
78 95	800	2800
79 70	500	6800
79 95	400	50
80 95	600	1500
81 32	500	50
81 95	600	100
82 80	600	1550
82 95	700	50
83 95	500	450
84 45	100	750
84 95	300	550
85 95	500	1000
87 00	700	450
87 95	100	50



GEOLOGICAL REFERENCE

CAMBRIAN (?)

Dol	Dolerite, fine to coarse grained sub-ophitic sill-like intrusive (?)
Ts	Tuffaceous sandstones & tuffs
Tsh	Tuffaceous shale & pelitic ash
	Pale grey laminated siltstone bedded pyrrhotite
CS	Calc - silicate skarn

5 cm

29600 N **82 - 1785** 29650 N

753049

Aberfoyle Exploration Pty Ltd

Geology R M J	NORTH WEST TASMANIA 2603	Location code
Drawn R M J	MEREDITH E L 16/78	Date May, 1982
Traced J L R	CROSS SECTION 29720 N	Scale 1 500
Checked	MY. I	Plate Nº MER 47
Revised by . Date		

29350 N 29400 N 29450 N 29500 N 29550 N