099001

MICROFILMED

VOLUME 1
PROGRESS REPORT
QUEEN HILL JOINT VENTURE
E.L. 47/71 TASMANIA
QUARTER TO MARCH 31, 1980

OPEN FILE

This report covers the
Aberfoyle quarter (to period 2)
ending February 11, 1980.

C.H. Young,
Project Geologist,
Tasmania.

March 31, 1980.

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	QH 140 (Sn)	Sn Geochemistry - Actual	1:1000
	QH 140 (Bi)	Bi Geochemistry - Actual	1:1000
	QH 141 (As)	As Geochemistry - Enriched	1:1000
	QH 141 (F)	F Geochemistry - Enriched	1:1000
	QH 141 (W)	W Geochemistry - Enriched	1:1000
	QH 141 (Rb)	Rb Geochemistry - Enriched	1:1000
	QH 141 (Sn)	Sn Geochemistry - Enriched	1:1000
	QH 142 (As)	As Geochemistry - Smoothed Enriched	1:1000
	QH 142 (F)	F Geochemistry - Smoothed Enriched	1:1000
	QH 142 (W)	W Geochemistry - Smoothed Enriched	1:1000
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099004

INTRODUCTION

This report summarises work completed in the quarter ended February 11, 1980 and includes preparation and drafting through to March 31, 1980. Reported expenditure is for the Aberfoyle quarter ending February 11, 1980.

During the quarter, the ore reserve and exploration drilling programme continued and six exploration holes were completed for 1880.6 metres. As indicated in the previous quarterly report, an additional programme consisting of five ore reserve holes and three exploration holes was planned. This programme commenced with ore reserve hole G60, which is now in progress.

To evaluate the reliability of XRF sampling of the critical ore intersections and attempt to validate the original spectrographic assay values ½ NQ drill core from holes G1 and G3 was split and analysed by XRF. Only a poor correlation was obtained.

Detailed geological mapping of the Queen Hill grid area is nearing completion. A geological report and drafted geological plans should be ready for presentation in the next quarterly report.

Work was initiated on characterisation of the metasomatic aureole about Queen Hill by R.V. Sale (Geochemist) during 1979. This involved the assay of core grinder samples for the elements Sn, W, F, Rb, As and Bi. The samples are from drill holes which provide an almost continuous section from Queen Hill to Severn. The raw assay data, "enriched" and smoothed "enriched" metal values are presented in this report.

The exploration potential of the dolomite-volcanic contact was evaluated by a programme of detailed contact soil sampling. Samples were collected by hand auger and assayed for Sn. No new anomalies were detected.

Re-assessment of pre-existing data for Severn was completed. Preliminary geological interpretation indicates the mineralisation intersected in G39 is fracture controlled and does not favour any particular lithology but may represent a steeply plunging fault/fissure controlled body of mineralisation.

099005

A mise-a-la-masse survey was conducted about an electrode positioned in exploration hole G46. The survey was designed to aid definition of drill targets for the proposed exploration holes and suggests electrical continuity of the intersected sulphides to the south-west. This area will be tested by the first exploration drill hole.

An orientation DIGHEM survey was flown on five lines over Queen Hill. A more extensive survey involving approximately 160 line km was flown over the north-western part of the licence area near the Heemskirk Granite contact. The analogue data now available is in a preliminary form and ground location and evaluation of one anomaly was conducted. Flight line recovery and digital processing of the EM data is awaited to facilitate thorough appraisal of the survey data and detailed follow-up of all anomalies.

In anticipation of the requirement to excavate a bulk sample for the Matte Fuming pilot plant at Kalgoorlie it was necessary to define the grade of the outcropping mineralisation at Queen Hill. This was done by channel sampling every 2 metres along strike with geological control provided by 1:250 scale mapping.

Regional geological mapping of the St. Dizier area at 1:10,000 scale is complete. A geological report and drafted geological plans are in preparation and will be presented in the next quarterly report.

QUEEN HILL ORE RESERVE AND EXPLORATION DRILLING PROGRAMME

During the quarter, six exploration holes were completed for 1880.6 metres. These holes, G54 - G59, were designed to test the main coincident I.P., geophysical and soil geochemical anomalies within the gross 900 metre long geophysical/geochemical anomaly. Each hole was also designed to intersect the favourable dolomitic siltstone and volcanic contact. The location of the holes is shown on Plate QH62.

All the holes intersected the volcanic contact and whilst the dolomitic horizon was not always present, it was intersected by G56 on the western side of the volcanics, thus supporting the new structural interpretation.

099006

QUEEN HILL — Diamond Drilling Summary

D.H. No.	Co-ordinates North	East	Elev-ation	Mag Brg	Angle	Commence	Complete	Depth m	Cumulative metres	Section	GEOLOGY/MINERALISATION	RL of Intersection	Intersection
G54	2077.24	1022.56	180.5	281.1	-38.3°	23.11.79	8.1.80	270.7	2817.3	3440	Intersected the main volcanic contact at 254.8 m. Up to 10% pyrite over short intervals. Fissure lode 51-52 m.	39 149	No significant Sn mineralisation. (51 -52 m/3.15% Zn, 1.9% Pb,102.5 gm/T Ag).
G55	1986.6	567.4	191.6	102.3	-59.25°	27.11.79	10.12.79	511.3	3328.6	3180	Dolomitic and carbonaceous siltstone host unit intersected between 362.5 and 472.6 m. 30 cm only of weakly replaced dolomite 463.7-464m.	-180	No significant Sn mineralisation. (463.7 - 464 m/0.5% Sn).
G56	2216.84	787.78	187.03	280.4	-45.7°	13.12.79	21.12.79	283.2	3611.8	3480	Dolomitic and pyritic siltstone unit between 72 and 85 m.	137	No significant Sn mineralisation.
G57	1345.4	558.4	219.3	302.25	-55.5°	5. 1.80	11. 1.80	307.4	3919.2	2640	Dolomitic and carbonaceous siltstone host unit intersected between 245.9 and 273 m. 60% coarse grained pyrite from 245.9 - 246.9 m.	25	No significant Sn mineralisation. (245.85-246.95 0.15% Sn).
G58	2160.5	613.1	189.8	100.5	-43.3°	11.1.80	6.2.80	292.0	4211.2	3360	110.1 - 111.1 m 30% Pyrite as veins in siderite rich breccia zone.	116	No significant Sn mineralisation.
G59	2366.4	727.8	200.0	280.25	45.5°	17.1.80	11.2.80	216.0	4427.2	3600	77 - 79 m, old workings. 96.22 - 96.4 m, 20% Pyrite in re-crystallised dolomite. 104.9 - 107.5 m. Fissure lode, sphalerite and galena noted (major core loss).	138 123 118	No significant Sn mineralisation.

099007

2640 2800 2920 2960 3000 3040 3060 3080 3120 3150 3160 3180 3200 3240 3360 3440 3480 3600

RL 200
100
00
-100
-200

QUEEN 44 L
QUEEN No.1 L
QUEEN No.2 L

No.1 No.2 No.3 No.4 No.6 No.7

G1 G2 G3 G4 G5 G6 G7 G8 G10 G11 G12 G13 G14 G15 G16 G18 G22 G23 G24 G25 G26 G28 G33 G45 G46 G47 G48 G49 G50 G51B G52 G53 G54 G55 G56 G57 G58 G59 G60 G60W

EXP 1 EXP 2 EXP 3

OR1 OR2 OR4 OR5

W1 W2

INTERSECTION OF CLARKES & DUNKLEYS

348

- LEGEND -

- Hole completed
- Ore Reserve hole proposed
- Exploration hole proposed
- Queen Hill Lode (Interpreted outline only)
- Inner Lode (Interpreted outline only)

5 cm

Week Ending

Aberfoyle Exploration Pty Ltd

Geology:	
Drawn:	R.J.E.
Traced:	R.J.E.
Checked:	
Revised by: R.J.E	Date: APRIL, 80

NORTH WEST TASMANIA

QUEEN HILL

SUMMARY LONGITUDINAL PROJECTION

1980 DRILL PROGRAMME

Location code:	
Date:	April, 1980
Scale:	1 : 2,500
Plate No	QH 147

099008

None of the exploration holes intersected significant tin mineralisation. Low order tin values associated with minor sulphide rich fissure veins are the apparent explanation for the tin soil geochemical anomalies. Black carbonaceous shales appear to be the source of the I.P. anomalies. It is intended to conduct I.P. and conductivity measurements on core samples to assess I.P. response.

Two holes, G54 and G59, intersected old workings and silver-lead vein mineralisation. One hole, G58, intersected 4.0 m of fine grained bedded pyrite (up to 70% pyrite). All mineralisation is being sampled and assayed.

Check assays for gold mineralisation in the intersections of G45, G46, G49, G51B, G52 and G53 were conducted. The results to hand indicate a complete lack of gold associated with the cassiterite-sulphide mineralisation.

A summary of the exploration drilling programme is included, together with a summary longitudinal section (Plate QH147). Petrological reports are appended, (Appendix A). All drill logs are appended, together with drill hole assay data in a preliminary form, (Appendix B). Cross sections at 1:500 scale are attached.

QUEEN HILL CORE ANALYSIS

The original intersections in Drill Holes G1 and G3 (not G2 as indicated in the December 1979 report) were re-sampled and assayed by XRF to evaluate the reliability of further sampling and XRF assaying for all the critical holes within the main body of mineralisation and hopefully to validate the original spectrographic assay values.

The core samples available for the sampling consisted of the hand split ½ NQ remainder from the original sampling, less those pieces taken for geochemical and petrological studies. For the current exercise the ½ NQ core was sawn into halves again, thus a new sample, representing ¼ NQ core only, was used for the XRF check assay. There is poor correlation of results as shown below.

099009

TABLE 1

COMPARISON OF XRF AND SPECTROGRAPHIC ASSAY VALUES FOR G1 AND G3

	Total Sn XRF	Spectrometer	
G1			
46.33 - 64.00 in 1 metre intervals	2.52%	46.33 - 64.00 in 1 foot intervals	3.16%
G3			
65.80 - 80.80 in 1 metre intervals	1.39%	65.84 - 80.77 in 1 foot intervals	2.54%

Factors resulting in the poor correlation are thought to include;

1. The nugget like distribution of cassiterite associated with the small core volume (¼ NQ).

2. The disruption of the original core including samples taken for geochemical and petrological studies.

Further check assaying by XRF of the remaining critical holes, which are all ½ BQ core size, may be meaningless and is not recommended.

QUEEN HILL METASOMATIC AUREOLE

A metasomatic aureole is expected to occur at Queen Hill related to the influence of the tin bearing hydrothermal regime and a study has commenced to characterise the primary element distribution in wall rocks adjacent to the cassiterite-sulphide mineralisation. As the metasomatic aureole is anticipated to be far larger than the zones of cassiterite-sulphide mineralisation themselves its definition achieves the objective of increasing geochemical target size, but can also serve to focus detailed geophysical and geological follow-up in the instances where mineralisation does not outcrop.

099010

Initial definition of the metasomatic aureole in fresh rock was accomplished by assay of core grinder samples for the elements Sn, W, F, Rb, As and Bi. The core grinding was only performed on core that had not been previously sawn and assayed. The samples come from an almost continuous section from Queen Hill to Severn. The results are presented as raw assay values, "enriched" assay values, and smoothed "enriched" metal values on Plates QH140 - 142. A rigorous interpretation of the data is yet to be completed.

Further evaluation of the results is proposed and testing to see if the aureole is reflected in surface materials will be conducted.

CONTACT TIN SOIL SAMPLING

Current understanding of the local geology indicates the Queen Hill dolomitic siltstone sequence is repeated by isoclinal folding on both the east and west sides of the main mapped outcrops of the volcanics and also in the lower Crimson Creek Formation on the east side of Queen Hill.

To evaluate exploration potential along the favourable dolomite-volcanic contact a programme of contact soil sampling was conducted, designed to sample the prospective horizon in far greater detail than accomplished by the grid sampling programme. Samples were collected by hand auger at 20 m intervals along the main volcanic contacts.

Results are plotted together with the grid soil sampling programme (Plates QH134). No significant anomalies were detected away from the area of known mineralisation at Queen Hill and Severn.

SEVERN DATA RE-ASSESSMENT

Re-logging of the Severn drill core was completed. Tin mineralisation is related to a pyrite-pyrrhotite vein network in zones of fractured ground and does not appear to favour any particular lithology.

Lithologies noted include quartzite and siltstone of the Queen Hill Quartzite Ridge, thinly bedded slates and quartzites of the Slate-Quartzite sequence and a mixed sequence of tuffaceous greywacke and shale which includes dolomitic siltstone, dolomite, andesitic lavas and tuff, of the lower Crimson Creek Formation (Plate QH156).

Preliminary geological interpretation indicates the mineralisation intersected in G39 is fracture controlled and may represent a steeply plunging fault/fissure controlled body.

Further assessment of this data is in progress including drafting of new cross sections at 1:500 scale. Re-logging of drill core from the Montana area is also in progress.

MISE-A-LA-MASSE SURVEY

A mise-a-la-masse survey was conducted about an electrode positioned in exploration hole G46. The survey was designed to aid definition of drill targets for the proposed exploration holes.

The surface equipotential contour map (Plate QH157) suggests electrical continuity of the intersected sulphides to the south west of Hole G46. There is no strong evidence for the sulphide zone to continue to the north, or join up with the Queen Hill ore body.

The results of the survey cannot be regarded as definitive for the following reasons:

1. The exact strike of the trend could not be well defined because of inadequate coverage. More north-south lines are needed to do this.

2. The sulphide zone is deep and does not give strong surface readings.

3. The maximum potential is offset some 100 metres from the electrode position (Plate QH157). This may be due to topographic effects or a sulphide rich fissure lode (Clarkes Lode) which underlies the zone of maximum potential.

Taking these problems into consideration, the interpretation is somewhat consistent with what was expected and the first drill hole will be directed to the south-west of the G46 intersection.

DIGHEM SURVEY

An orientation DIGHEM survey was flown at Queen Hill and a more extensive survey was completed in the north-western part of the licence area near the Heemskirk Granite contact and St. Dizier. The survey was conducted as outlined in the December 1979 report.

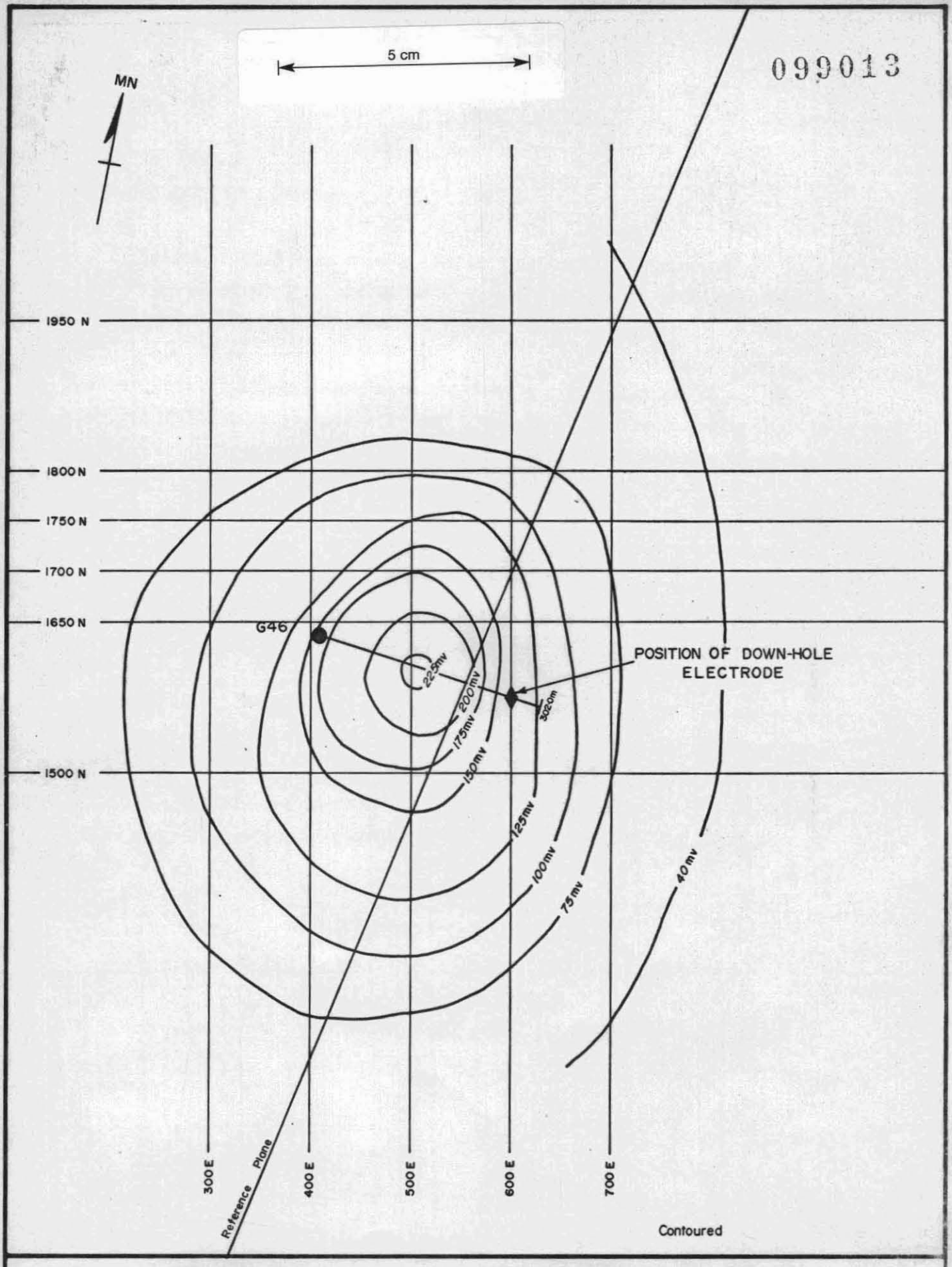
Analogue data for the St. Dizier area showed two conductors which were not related to the magnetite skarn. These are in the Rocky Creek and 12 Mile Creek areas.

The anomaly in the 12 Mile Creek area has been located on the ground. Two backhoe trenches, each of 40 m were completed to evaluate the source of the anomaly. The underlying rocks are uniformly, black pelitic slates with carbonaceous bands and andalusite porphyroblasts indicative of thermal metamorphism. No obvious mineralisation was noted. Conductivity measurements on the slate give values in the order of 76 ohm metres whereas the conductivity expected by comparison with the DIGHEM anomaly is 2-3 ohm metres, thus on explanation is yet available for the DIGHEM anomaly. Assay results for the trench samples are awaited before further investigation, possibly in the form of drill testing, is undertaken.

The DIGHEM anomaly in the Rocky Creek area has a coincident magnetic anomaly and it is expected this anomaly will be located by ground magnetics.

Flight line recovery and digital processing of the EM data is awaited to facilitate thorough appraisal of the survey data and detailed follow-up of other anomalies.

099013



Aberfoyle Exploration Pty Ltd

Drawn: JS	NORTH WEST TASMANIA QUEEN HILL MISE - A - LA - MASSE	Location code:
Traced: JB		Date: February 1980
Checked:		Scale: 1:5000
Revised by: Date:		Plate No QH 157

QUEEN HILL BULK SAMPLE

It is anticipated that a bulk sample at a grade in excess of 1% Sn will be required from the Queen Hill and Stormsdown mineralisation for the Matte Fuming pilot plant at Kalgoorlie.

The grade of Stormsdown mineralisation is reasonably well defined with three diamond drill intersections close to the surface and several outcrop samples which together indicate the tin content on average to be in excess of 1% Sn.

The Queen Hill lens has not been sampled by diamond drilling within 30 metres of the surface and available records showed only two samples of the sulphide outcrop, both of which are low grade. Consequently it was necessary to define the grade at outcrop.

A sampling programme was completed with channel samples collected every 2 metres along strike from hand dug trenches. Prior to sampling the trenches were thoroughly cleaned by sluicing and the area was mapped in detail at 1:250 scale. The geological plan is attached and includes the sample results, a grade of 0.73% Sn is indicated (Plate QH150).

WORK PLANNED

- Ore reserve and exploration drilling at Queen Hill.
- Re-logging of core and re-assessment of ore potential at Montana and Severn, with the likelihood of further drilling.
- Follow-up DIGHEM anomalies located from the analogue data and any other anomalies defined when flight line recovery and digitial processing of E.M. data is complete.
- Assess the St. Dizier magnetite skarn in the Big H area for tin potential with the intention of defining drill targets.

099015

- Follow-up ground magnetics over the north-west anomaly and rock chip sampling of the Silver Stream area.

- Completion of geological mapping of the Queen Hill grid extensions.

- Continue work on characterisation of the metasomatic aureole about Queen Hill.

EXPENDITURE

The Joint Venture Statement of Expenditure for the Aberfoyle quarter, periods 1 - 3 (ending February 11, 1980) is split into two parts. One pertains to expenditure incurred on the Queen Hill mineral leases and the other expenditure incurred on the exploration licence and termed, St. Dizier.

QUEEN HILL

Salaries and Wages	32,991
Contract Drilling	105,904
Petrology	495
Geophysics	171
Geochemistry	556
Assay	2,142
Materials	15,026
Accommodation	5,970
Vehicles	5,245
Communication	1,267
Sundries	1,172
	170,939
Overhead @ 15%	25,641
	$196,580

ST. DIZIER

Salaries and Wages	4,764
Contract	1,356
Materials	49
Plant	145
Accommodation	463
Vehicles	19
Tenure	820
Sundries	8
	7,624
Overhead @ 15%	1,144
	$8,768

Special expenditure charged to the Matte Fuming project and not included in the Joint Venture Statement above:

Salaries and Wages	650
Assays	560
	$1,210

REFERENCES

Young, C.H. (1979) Progress Report Queen Hill Joint Venture E.L. 47/71 Tasmania. Quarter to September 30, 1979.

Young, C.H. (1979) Progress Report Queen Hill Joint Venture E.L. 47/71 Tasmania. Quarter to December 31, 1979.

SIGNED: C.H. Young

C.H. Young,
Project Geologist, Tasmania.

ENDORSED: K.R. Yates.

K.R. Yates,
Manager - ~~Outside~~ Exploration.

APPENDIX A

Petrological Reports.

REPORT CMS 79/12/44

Queen Hill Samples 138964 - 138967

Four drill core samples were received for petrological description of the host-rock material; thin-sections only were prepared at this stage.

138 964 G3/78.7 m (T.S. 30543)

Much of the original rock has been replaced, but relict patches of microcrystalline quartz have survived and are believed to represent a crystallized chert; thus, the rock may be termed a mineralised, metasomatised chert. Since pure cherts are generally fairly impervious and unreactive, it is assumed that the original chert was impure, containing carbonate and/or clay.

The patches of microcrystalline quartz are sprinkled with small (5-30 μ), poorly defined, cloudy cassiterite crystals. Most of the rock now consists of poikiloblastic patches of cloudy siderite containing inclusions of quartz, sulphides (dominantly pyrite, minor galena, possibly others) and cassiterite (single crystals < 30 μ and small clusters). Patches of fluorite have formed sporadically, up to 3 mm in size; these also contain cassiterite. A few matted sericite aggregates are present, with cassiterite inclusions. Hence, the ubiquitous occurrence of fine cassiterite in all minerals, apparently without preference, suggests that it was introduced at a very early stage prior to carbonate-sulphide-fluorite metasomatism.

138 965 G4/75.2 m (T.S. 30544)

The available evidence suggests that this heavily sideritised rock may have been an argillite or cherty argillite; it is substantially mineralised, but the cassiterite is very fine-grained.

The bulk of the rock consists of small interlocking patches of brown, partly oxidised siderite in which subtle relict bedding is preserved. There are irregular patches of illite-sericite as aggregates of matted fine flakes with embedded quartz, passing into more quartzose patches; these are thought to represent part of the original rock, and form recognisable fragments of less severely sideritised rock in the hand specimen.

Cassiterite occurs throughout, as 5 μ to 40 μ grains, sometimes as zones of loosely-aggregated grains, traversing the bedding. As before, cassiterite is included in all other minerals without preference.

Quartz veins cut the rock and appear to pre-date the sideritisation; they contain isolated fluorite patches. The veins are fractured, displaced and partly penetrated by siderite; it is believed that they post-date the deposition of the cassiterite.

138 966 G6/84.4 m (T.S. 30545)

A strange rock, apparently of mixed sedimentary and volcanic origin, possibly a subaqueous lava with included pockets of a clastic rock (siltstone); the rock is weakly mineralised but, significantly, the cassiterite occurs in illite-sericite patches and in late-stage siderite.

The rock consists of irregular, but generally subparallel-elongate patches of cryptocrystalline silica with bubbly/scoriaceous textures in places and with rare illite-sericite pseudomorphs after ?feldspar microphenocrysts (the illite contains cassiterite grains); these patches have diffuse boundaries. Thereare pockets of clastic material, occurring both interstitially (i.e. between silica patches) and as inclusions within silica patches; the clastic material consists of silt-sized quartz grains and relatively conspicuous detrital heavy-minerals (zircon, tourmaline, leucoxene), as well as mica flakes.

The silica patches could be of chemical rather than volcanic origin, but the bubble textures and faint flow-banding are not easily explained.

Siderite has formed, replacing illite-sericite patches and incorporating the contained cassiterite. Pyrite crystals are haphazardly scattered through the rock.

138 967 G52/133.6 m (T.S. 30546)

A very extensively metasomatised rock, but containing relict patches of fine quartz which are thought to represent chert.

The dominant mineral is siderite, occurring as interlocking, poikiloblastic patches with many inclusions of quartz, crystallized ?chert, pyrite, streaks of fine carbonaceous matter (this occurs in the ?chert as well) and ultrafine cassiterite (< 20 μ). One unusual feature of this rock is the presence of large, irregular patches of apatite up to 1.5 mm in size,evidently introduced and showing the same replacive relationship towards the ?chert as the siderite. Patches of coarse vein-quartz have also been introduced; cassiterite occurs within these as well as in all the other minerals.

H.W. Fander, M. Sc.

APPENDIX B

Drill Hole Assay Data and
Diamond Drill Logs G54 - G59.

ABERFOYLE

DRILL HOLE RECORD

Location QUEEN HILL **Property** QUEEN HILL **District** ZEEHAN **Bearing (M)** 281·1° **Hole No** G54

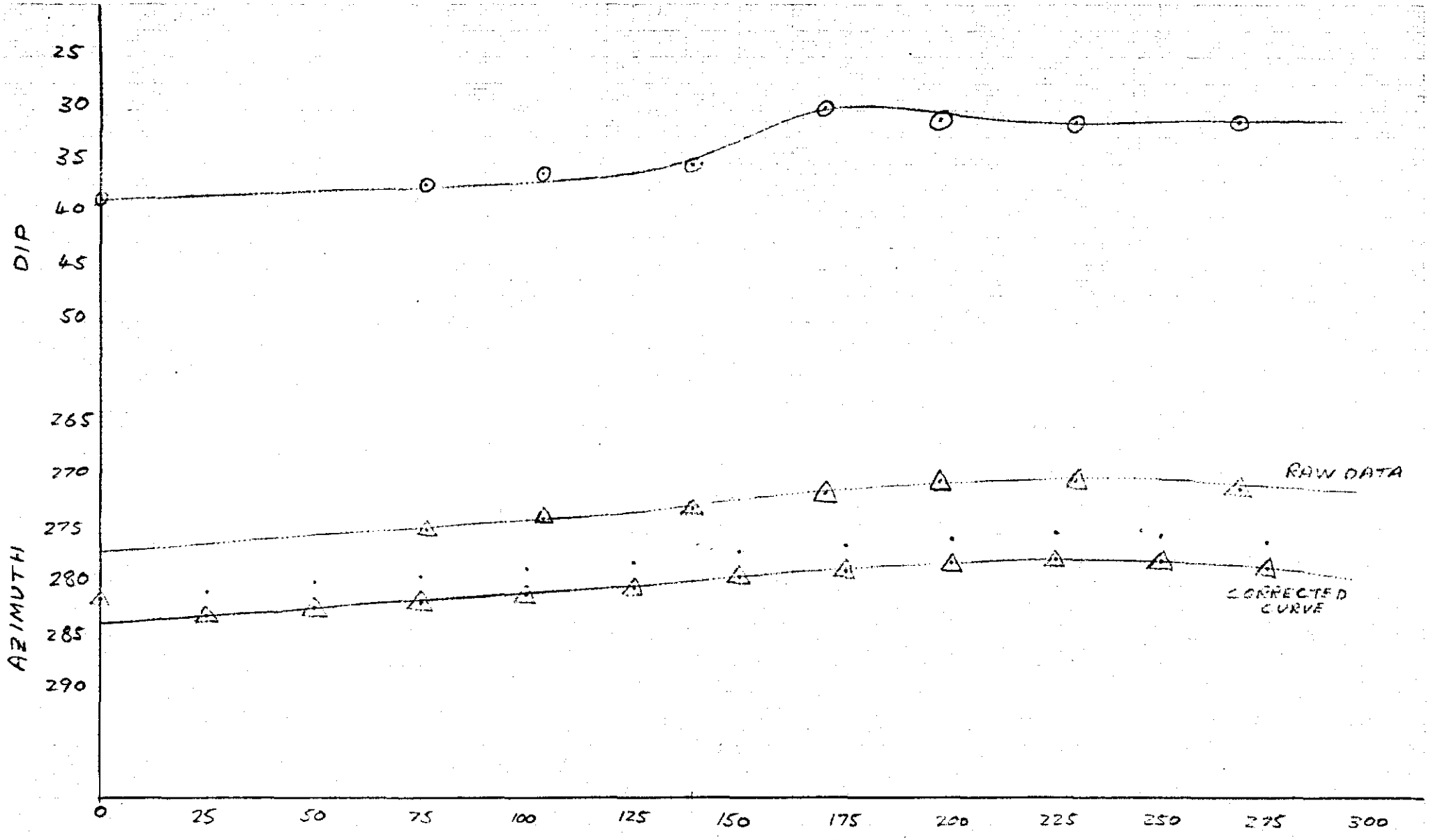
Commenced 23/11/79 **Completed** 8/1/80 **% Recovery** ≈ 88% **Grid bearing (M)** −11·25° **Date** 28-1-80

Objective To test attractive stratigraphy and coincident I.P. and geochemical anomalies. **Core size** HQ TO 24M NQ TO 76·8M BQ TO 270·7M **Logged** M. TEAKLE

Co-ordinates 5362077·24N 361022·56E **Dip** 38·3° **Alt./R.L.** 180·49

SURVEY DATA				GRAPH DERIVED DATA			CALCULATED CO-ORDINATES			REMARKS
DEPTH	DIP	BEARING(M)	INSTRUMENT TYPE	DEPTH	DIP	BEARING(M)	NORTHING	EASTING	ALTITUDE	
76M	37°	274·75°	EASTMAN	0M	38·3°	281·1°	5362077·24	361022·56	180·49	
103·2M	36	273·75	"	25	38	280·5	2084·62	4·34	165·05	FISSURE LODE AND OLD
139·2M	35	272·75	"	50	37·5	279·6	2091·80	−14·08	149·74	WORKINGS.
170 M	29·75	271	"	75	37·25	279·1	2098·79	−32·67	134·56	51–52 m.
197 M	30·75	270·5	"	100	36·75	278·3	2105·59	−51·42	119·49	
229M	31	270	"	125	36	277·7	2112·23	−70·42	104·66	
269M	31	271	"	150	33	276·7	2118·74	−89·96	90·50	
EOH	270·7	M		175	29·5	276·1	2125·22	−110·32	77·54	NO SIGNIFICANT Sn
				200	30·25	275·5	2131·57	−131·03	65·08	MINERALISATION
				225	31	274·9	2137·66	−151·66	52·33	? 1·5% Zn, 1·92% Pb, 10·25 gm/T Ag
				250	31	275·2	2143·68	−172·23	39·46	
				275	31	275·7	2149·84	−192·75	26·58	

0090021



CORRECTION FACTOR FOR CORRECTED CURVE -2.4°

220660

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	grammes per Tonne SILVER	grammes per Tonne GOLD	SAMPLE No.
954	50·00	-5·00								
	51·00	610	<10	20	1800	1100		5·0		238313
	52·00	1900	80	130	60000	23500		130·0		238314
	53·00	2550	60	80	3100	14500		75·0		238315
	53·50	1700	<10	15	740	4500		11·0		238316
	54·00	1450	<10	30	6400	5000		24·0		238317
	54·20	-5·00								
	55·20	640	40	30	6000	13500		80·0		238318
	55·50	2050	115	220	54000	60000		350·0		238317
	56·50	160	<10	25	7300	2600		12·5		238320
	57·50	-5·00								
	57·80	540	50	200	76000	2700		40·0		238321
	58·50	1850	<10	15	1100	340		2·5		238322
	85·50	-5·00								
	85·60	640	<10	60	13000	7000		27·0		238323

20 0 0 0

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	grammes per Tonne SILVER	grammes per Tonne GOLD	SAMPLE No.
654	121·50	-5·00								
	122·50	11·00	10	25	3600	7000		16·0		238324
	122·70	40·00	50	270	46000	50000		160·0		238325
	123·50	2·50	<10	40	2400	7500		12·0		238326
	210·50	-5·00								
	211·00	1·40	<10	35	200	260		1·0		238327
	211·50	6	<10	30	40	210		<1·0		238328
	212·50	1·40	<10	40	3900	1400		6·0		238329
	253·60	-5·00								
	254·30	<4	<10	40	520	75		<1·0		238330
	254·60	4	<10	25	400	200		<1·0		238331
	255·60	6	<10	35	120	35		<1·0		238332
	256·60	2·20	<10	70	3200	400		1·0		238333

090024

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein; c carbonate, q quartz

Hole No. G54 **Mineralization** 099025

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY
0.5		assorted weathered pebbles and fragments predominantly f. to m.gr. quartzarenite (micaceous in part) some milky qtz pebbles
0.35		
	5	
0.9		weathered (possibly sheared) off-white f.gr. quartzarenite ~ well developed cleavage siltstone?
0.55		
0.5 →		probably reasonably fresh siltstone - shale partings greeny-grey to black → sheared
0.67		sheared zone contorted qtz veining
0.95	10	lithology as above (dark shaly siltstone) brecciated? contains qtz frags & heavily veined with siderite shearing ~ 20° to c.a.
1.2		10.8 here predominantly carbonaceous shale marked carbonaceous beds ~ 1cm thick bedding ~ 40° to c.a. 11.6 - fault? sheared
1.3		12.7 5 cm siderite vein ∥ to bedding 12.9 graphite, galena
0.5		extensive siderite & qtz veining → fault ? 13.6 well laminated → 1 mm bedding ; probly sandier layering sid. sandy shale and shale 14.2 10cm siderite vein
0.85		
1.0	15	ext. fissile, poss. faulted dominantly galena in shale, broken core thinly intercalated slst. & sh. occ. small kink folds. bedding ~ 40° to c.a.
1.0		
<10cm	17.0	Fault zone → broken core lithology as above
0.1		
0.3		
1.0		black-grey well laminated sandy shale
	20	
0.6		
0.3		possibly fault zone ↑ cavity (1m)
		well bedded carbonaceous slst - shale
1.0		
0.9		
HQ 0.3		
NQ 0.15		
0.4	25	

5 cm

DEPTH m	MINERALIZATION
5	
9.4	veinlets & dissem. pyr.
10	pyr. trace sph. ~40% pyr.
11	f.gr. pyr.
11.3	f.gr. sph ≤ qtz & carb veinlet
11.5	" " dissem. pyr.
12.3→12.4	v.f.gr. dissem. pyr. < 5%
13.2	f.gr. dissem. pyr. 30%, sph veins <10%
13.5 ←	galena ~10% in siderite vein. 3cm. pyr. blebs. dissem. veinlets.
14.9	syn. pyr. < 5%
15	
15.4	pyr. blebs
16.7	pyr. vein in fracture c qtz., CO_2 ~ 2cm
16.9	< 1% bedded sph.
18.9	< 1% sph. in sid. vein ~ 5 mm thick.
19.0	} disem & veined pyr. ~ 15%
19.3	} sph. in blebs & small veins < 5%
19.5	} ~ 5% veined & dissem. m.gr. pyr.
19.7	< 1% sph. as flecks & pyr. in qtz veins
20	and veins.
20.3	4 cm vein ~ 30% pyr, 15% sph, < 2% gal.
20.6	% of total vein, mostly qtz. veins pyr. < 1%
21.9	pyrite (f. → m.gr.) veinlets some sub parallel to bedding ~ 10% associated sphalerite 1-3% with qtz veins.
23.0	} pyr. veinlets ~ 5% mostly ∥ to bedding
	} sph. < 1%
24.0	} pyr. veinlets ~ 2% sph. < 1 %
25	

Hole No. G54 Page No.2

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization

099026

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE / COMMON / ABUNDANT / MASSIVE	DEPTH m	MINERALIZATION
0.3	25.1 / 25.3	sheared → fault ?				pyr veins ~ 1%
0.3		f. to m.gr. lt. grey massive quartzite → little evidence of bedding here.			25.9	f. to m.gr. pyr. in veins → 5mm thick sometimes with qtz. Approx. 1%
0.5		siderite veining → 2cm wide common			26.3 / 26.5 →	<1% f.gr. vein pyr.
0.5		consists of ~5-10% of rock often with thin veins of dark, v.f.gr. clst or carb. shale			27.5	sph. & gal. veins both ~1% in association.
0.8					27.9	Pyr. occurring as before < 1%
0.4					28.2	rgn pyr. v.f. gr. ~ 2-3%
0.15					28.4	f.gr. pyr. veins < 1%
1.7	30	bedding now discernible ~70° to c.a. extensive siderite veinlets av. ~ 2mm thick subparallel to bedding (some). This later veining postdating qtz veining (1-2 cm thick)			29.0	sph. & gal. & siderite veins ~ 1cm thick sph ~ 5-6% gal ~ 10-12% f.gr. pyr. veins ~ 1%
0.7					29.6	
0.9						
0.2		broken core possibly faulted. 32.8 / 33.2				
0.5						
0.8	35	Quartz vein (35.1) ~5cm thick. prob. some shear faces here			35.1	m.gr. disem & vein pyr. ~ 3%
1.3		slightly coarser grained quartzite still lt. grey			37.8 / 38.0	m.gr. vein pyr. ~ 5mm thick, minor sph.
					38.5	m. to c.gr. vein pyr. up to 1cm thick pyr ~ 3% sph. <1%
		fractured, qtz veining ~ fracture zone			39.0 / 39.3	f. to m.gr. vein pyr ~ 2% sph. vein < 2%
1.7	40					pyr. & sph. veins ~ 2 mm thick approx. every 4-5 cm along core pyr. ~ 2% sph. < 2% commonly in association (veins) with siderite
2.2		5 cm			41.0	
					42.0	several 1-2cm veins pyr. sph. in qtz with graphite ~1%
					43.4	dominantly vein pyr. ~ every 4-5 cm sph. < 1-2% of vein.
0.7	45	broken up core possibly faulted.				pyr (f.gr) 20%, sph ~10-15% gal ~5% in siderite & qtz veins → 2 cm thick in this fractured zone veins are approx 10% of this part of core.
		46.3 siderite vein ~5cm			45.0	
0.15						vein pyr. ~ 1-2 mm thick
0.6					47.8	
1.0					48.0 / 48.5	(2) 2cm - 4cm wide veins, carb. sid. qtz 60% of vein is pyr. minor sph. sid. veins 1-2 cm pyr. 20% sph 20-25% gal 10%
1.1	50	dark gray → black siltstone - shale QS bedding is frequently very contorted, outlined by thin qtz beds or veins. bedding ~ 20-30° to c.a.			49.5 / 50.0	V. f. gr. pyr. occurs in thin disem. & veins in qtz veins and in rock itself although mostly in qtz veins pyr. veins ~ 1-2 cm in thickness

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein; c carbonate, q quartz

Mineralization 099027

Trace 1–5%
Common 5–15%
Abundant 15–60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
1.8	50	lithology as above silty shale of argillaceous strt. fairly carbonaceous. qtz veins	q	50.0	pyr (f.gr.) 50% of qtz veins & pyr. veins veins ~2cm wide Sph.<1% pyr. ~5% of total core section
		fracture/fault?		51.0	vein. sph. ~60% galena 20% pyr 10% carb. siderite remainder
0.2		fractured & mineralized zone brecciated, fissile, graphitic. 52.0 → 52.6 extensive qtz veining.		52.0	pyr. veins exclusive ~40% f.gr.→ v.c. gr. galena ~20% some with qtz veining.
0.8				52.8	3 pyr. veins (m. to v.c. gr.) ~15%
0.7		bedding plane fracturing & brecciation (intra) fairly common.		53.0	m.gr. pyr. in veins ~3% of core length.
				53.5	pyr. vein ~5% in qtz
2.2	55	54.3 pyr. here occurring in ring specks in bedding? layers ~1-5mm in thickness and alternate light and dark grey coloured. much still occurs with no apparent directional control as veins ~2mm thick, however.		54.3	Syn. pyr. ~1% in bedding plane dissem.
				55.0	qtz vein 1cm thick 2% pyr.
				55.2	2-3cm gal. ~50% pyr ~15-20% sph. <2%
				55.5	
				55.8	carb vein 2cm pyr. 80% sph. 2%
0.4				56.0	qtz, carb. veins 2-3 cm pyr. 50% sph 15%
				56.2	several 1-2 mm veinlets composed of essentially pyr. Veins comprise <1% of this core length.
				57	
0.3		crumbled core — fault? sericite, siderite gn		57.5	sid. & qtz veining. m to c.g. pyr. 25% sph. 35% gal <5%
				57.8	
1.2		silty carbonaceous f. grained quartzite			several qtz & pyr. veinlets → 1cm thick composed of v.f. gr. pyr. sid. & sph. (minor) <3% of core.
59 CORE BROKEN		sideritic vein		59.0	10-12 cm sid. vein sph. 10% gal. 5-10%
0.7	60			60.5	5mm pyr vein 5-10% gal. 20% siderite.
62					
0.4		crumbled core → fault?			
1.5		QS as before (before 50 m) f.gr. dark grey to black contorted and brecciated bedding consisting of intercalated qtzi, shale, slst & thin qtz veins and beds generally very fissile and graphitic overall, essentially siltstone; bedding ~20° → 40° to c.a.		63.9	
				64.1	20cm qtz, sid veins 85% pyr. gal. R sph. <1%
				64.4	finely dissem. & vein pyr <5%
	65			64.6	2 x ½ cm. pyr. bleb.
				65.0	3-5 mm pyr. vein 20° to c.a. 2x3cm bleb.
3.0				65.9	sid. vein. pyr. 60% sph. <1% 1-2cm vein several 1x1 cm blebs pyr.
				66.1	
				68.0	
3.0				68.3	0.5-1 cm pyr. blebs v.f.gr. dissem ≤ qtz. <5% of core.
	70			69.6	1 X 2 cm pyr. bleb.
					pyr. blebs <1%
				70.6	
2.8					pyr. (v.f.gr.→ vare)
		extensive contortion & qtz veining (thin).		72.8	2 x 1 cm pyr. bleb.
2.4	75	5 cm			

Hole No. G54 Page No. 4

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099028

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE / COMMON / ABUNDANT / MASSIVE	DEPTH m	MINERALIZATION
2.4		lithology as above: brecciated, contorted bedded siltstones and shales containing qtzi frags. and beds. Some rounded, most subangular fragments				
0.4						
NQ 3Q DROPPED TRAY		5mm siderite 78.6 vein.				
		78.7 2x1 cm subangular qtzi frag.				
		bedding ~ 30-40° to c.a.			80	f.gr. pyr ~40%
	80	80.0→ brecciated zone 2cm wide siderite veining			80.3	intraclasts of pyr. (f.gr.) brecciated ~1% of core
9.5		bedding 28-30° to c.a.			82.2	2 cm qtzi frag. dissem. & specks pyr. <1%
					82.5	1x½ cm f.gr. pyr. frag. ≤ qtz. Pyr. >90%
					83.5	pyr. ≤ qtzi frag ~15%
	84.0	crushed core - fault? Siderite veins.			84.0	6x4 mm pyr. frag.
	84.2					
	85				85	
		fissure lode siderite vein 2-3cm wide			85.5	sph. 60% gal. 30%
					85.7	2mm pyr. veins, 5 mm frags and specks.
		1cm 86.5 ^ siderite vein some sericite.			86.0	Small specks, veins pyr. <1% of core
3.1					86.5	sph. 6% gal. <2% Pyr. 5-6% f.gr.
					88.3	½ mm specks sph. minor pyr. ≤ siderite, qtz veins
					89.0	→1cm frags f.gr. pyr.
					89.2	→1cm frags. f.gr. pyr <1% core length
					89.5	
					92.7	pyr. as frags. → 1cm in size and specks and inclusions in fragments mostly of qtzi or sist. ~1% of core length.
3.0	90					
					92.2	
					93.5	trace f.gr. pyr in inclusions.
		3cm qtz vein.			94.2	v.f.gr. pyr. ~80% of vein.
					94.6	3x2cm f.gr. pyr. minor qtz.
					94.8	sid. sericite brecciated zone pyr. 60%
	95	broken core & breccia, sericite, siderite, graphitic fault?			95	
		fine intraclasts ~30% of core here				
3.0	96.4				96.0	1 cm pyr. vein.
	96.7	broken core - fault?				
	97.5	5x2 cm finely bedded subrounded qtzi frag.				
3.0						
	100				100	v.f.gr. syn. pyr. in frags ~5% of frag 3 cm

5 cm

Feature — Bedding, Foliation, Fragment (size & shape), Fracturing, Fault, Vein, c carbonate, q quartz

Hole No. G54 **Mineralization** 099029

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m 100	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m 100	MINERALIZATION
		lithology as above possibly higher percentage of intraclastic material is more quartzitic						100.6	<1% core ½-1cm pyr. frags. f. gr.
		fissures in fragmental material filled with qtz & occasionally pyrite.						101.0	qtzi frags 2-4cm contain finely disem. pyr. <1%
3.0		brecciated zone 2-5cm						103.0	sh. frags contain ~30% f.gr. pyr. frags →3cm
									→ pyr. in small frags or minor as veinlets all <1% i.e. rare.
	105							104.2	
		1053 siderite vein → [brecciated sid. veins 1-5cm qtz. ~15%]						105	gal. ~10%
3.0		approximately 80% breccia frags. 30° to c.a.							pyr. frag. 1-2cm. in qtz vein.
	106.0	106.0							
		f. to m.gr. light grey silty and shaley quartzite still fragmental although highly angular with large 5-6 cm frags and larger.						106.5	2×3cm. frag. of pyr.
	107.3								
	107.6	black intraclastic shale							
		qtzi as before (106.0 - 107.3)							
	108.2								
2.9		black intraclastic shale, contorted bedding, fragments of qtzi, numerous qtz veins. fairly non-fragmental							
	110	110.2 — fissures containing drusy qtz.						110	
3.0		111.2 5mm sid. vein 60° to c.a.							
		112.4 5mm sid. & qtz vein bedding 10° to c.a.							
		113.4 fragmental here							
	113.7	m.gr. qtzi fragmental on boundaries							
	113.8	shales as per 108.2 bedding 25° to c.a.						114.0	chalcobound ? pyr. ~3% of 1cm bed
3.1								115.0	
	115	115.2 axl. fissile graphitic zone, sericite & qtz. → fault?						115.4	qtzi/sericite frag. ~3% gal. frag. 5×3 cm.
		115.6							
		sid. vein 30° to c.a.						116.9	2cm sid. vein. pyr. ~15%
2.9								117.7	1×½ cm pyr blebs.
		pulverized core - fault (<10cm thick)							
	120							120	
		120.5 ½ cm. sid. & qtz. vein.							±2 cm. pyr. frags.
		121.0 qtz, sid. vein in fragmented part 5-10 cm.							trace to minor pyr. in blobs
	121.8							121.9	thin gal. in sid. vein ~3%
	122.0	brecciated, powdered core — siderite veining						122.0	Pyr. in vein ~5%
		fragmental zone 122.5 122.7						122.5	f.gr. pyr veins & infillings ~50%; sph. ~5%
3.0								122.7	~gal. 10-15%
								122.2	2×1 cm frag pyr.
								123.8	4×2 cm vein of f.gr. pyr.
		5 cm							pyr. <1% as <1cm frags. of core length.
	125							125	

Hole No. G54 Page No. 6

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein, c carbonate, q quartz

Mineralization 099030

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE RECD	DEPTH m 125	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m 125	MINERALIZATION
2.9		Lithology as above qtz veins → 3 mm thick approx. every 10-15 cm.						126.1	5x1 cm frag. >80% pyr. minor qtz.
		5mm sid. vein 126.3 10 cm qtzi bed 126.5-.9						127.0	sev. 1cm pyr. frags.
	127.9	crumbled sheared core — fault. graphitic							
	128.2							128.8	½ mm qtz. vein 50% pyr.
2.5								128.9	vf. gr. dissem. pyr ~5% in 2 cm.
		2mm sid. vein 129.8							trace sph. in sid. vein < 0.5%
	130.0	crumbled core frags av. 2x2cm.						130	
		Fault zone							
0.4	131.6								
0.5	132.0								
	132.4	crumbled core — fault?							
1.9		all this core v. weakly pyritic with small < 1cm. frags.							
	134.6								
	135							135	
3.0								136.5	pyr. in veins, frags. ~1% or less
								137.2	
		2±½ cm sid. veins 138.1						137.9	qtz vein 2cm pyr. ~75% sph. < 1%
3.1	138.7	shear zone.							
		numerous up to 1 cm sid. veins. containing rarely ~~galenite~~ sphalerite & galena							
	140							140	
		bedding ~ 25° to c.a.						140.8	1cm pyr. vein ± sid. minor sph.
3.0								141.2	vein, frag. & dissem. pyr ~1% of core length.
								142.1	
	143.0	f. to m.gr. light grey massive quartzite							
	143.7	Black, carbonaceous usually graphitic shale containing clasts of lt. grey qtzi up to 5 cm in size. Bedding is generally highly contorted possibly due to development of cleavage roughly paralleling c.a. QS? Frequent observation is intercalation on the scale of mm. to cm. of qtzi with shale							
3.0	145							145	
								146.6	3x2cm pyr. bleb in qtz vein >80% pyr.
3.2									
		5 cm							
	150							150	

Feature

Bedding
Foliation
Fragment (size & shape)
Cleavage
Fault
Vein
c carbonate
q quartz

Hole No. G54
Mineralization
099031

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY
3.0	150	Lithology as above: large qtzi frags → 10 cm long usually associated with qtz.
	150.6	m-sc qtzi = possibly fragmental.
	150.8	Lithology as at 150.0 m. black usually carbonaceous shales and siltstones containing qtzi frags. & intercalations.
3.0		
	153.4	crumbled, sheared pug — fault?
	153.6	
	155	some siderite veining.
3.0	156.4	crumbled, puggy zone — fault
	158.0	
	158.4	fault zone - crumbled core
	158.6	
3.0	160	
		5 cm
2.0		4cm qtz vein 162.7
	163.6	
0.5		crumbled, puggy core — fault?
0.7	165	faulted contact
		⊕ lt. grey m.g. qtzi
0.4		QS dark grey to black siltstone, shale, qtzi intercalations usually contorted and fragmental w.r.t. qtzi
1.6		
0.8		
	169.0	crumbled core, graphitic — Fault zone
1.5	169.6	
	170	
0.5		
1.2		large brecc. qtzi frag. 171.3
	172.0	
0.8		severely crumbled puggy core — Fault zone
	173.4	
0.4		
	174.2	CAVITY
0.0		
	175	

VISUAL LOG | TRACE | COMMON | ABUNDANT | MASSIVE

DEPTH m	MINERALIZATION
150	
151.2	~15% in frag. with sericite. (pyr.)
151.4	~1% syn. pyr. BBBs → ½ cm
152.9	2x1cm frag. syn. pyr.
154.8	trace syn. pyr. ≤2% pyr in core length.
155	
	trace syn. pyr. <1% core length.
157.5	
157.9	pyr. ~15% sph. ~20% gal. ~5-10%
158.2	
159.2	2x2cm syn. pyr.
159.4	1x2 cm syn. pyr.
160	
160.2	3x1 cm pyr. ~65% vein. qtz.
162.9	1cm syn. pyr. & frags.
165	
166.3	2x1cm py 45 frag. syn.
	syn. Pyr. rare 165.0-175.0
170	
171.8	3x1cm Py 90 frag. syn.
175	

Feature — Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein (c carbonate, q quartz)

Hole No. G54 — Page No.8

Mineralization 099032

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m 175	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m 175	MINERALIZATION
0.2	175.0	puggy, crumbled core — Fault Zone							
0.5	175.8	Q — lt. grey m-f.gr. siderite massive qtzite							
	176.4								
0.5		crumbled, sheared core Fault Zone ~0° to c.a.							
	177.1	FAULTED CONTACT						177.1	Trace-rare Py. dissem. & ~~vein~~ frag.
0.6		grey to black fragmental sist.-shale-qtzi. qtzi is frequently banded; usually occurs as frags. bedding generally contorted to greater or lesser degree.							
0.6	178.6								
0.3	180	crumbled puggy core — Fault Zone 3mm sid. vein						180	
2.9		5 cm							
1.0									
	184.5	2cm qtz sid vein ~0° to c.a.							
2.0	185							185	
	185.6							185.6	Syn. Py. 2% (bedded)
	186.5							186.5	
3.0									
	187.6	dol. now occurs here as extremely fractured & qtz veined fragments ≯ 10 cm in length. dolomite is cryptocrystalline dark olive green-grey coloured and extremely firmed.							
	190							190	
3.0		bedding ~40° to c.a.							
2.9	193.6	Sthinly bedded lt. grey siltstone							
	194.0	Qs Lithology as at 177.1							
	195							195	
	195.8	Q lt. grey f.g. weakly pyritic quartzite						195.8	Syn. Py. 4% in qtzi.
2.2	196.3	Qs Lithology as at 194.0						196.3	
	197.1								
		broken core & pug Fault Zone							
	197.7								
0.5	198.2							198.3	Syn. Py. 4% in distinct layers & mud.
2.5		Q-S siltstone or qtzi light grey, f. to m.gr. extensive qtz, minor siderite veining.	ESSENTIALLY QUARTZ						
	199.7								
	200	Q m.g. light grey qtz veined quartzite						200	

Feature — Bedding, Foliation, Fragment (size & shape) — Shearing, Fault, Vein — c carbonate, q quartz

Hole No. G54 **Mineralization** Page No. 9

099033

Trace 1-5% Common 5-15% Abundant 15-60% Massive >60%

CORE REC'D	DEPTH m	GEOLOGY
	200	
	200.4	Lithology as above
	200.6	QS as @ 200 PS. essentially SLST & sh. bedding 40 c.a.
0.2		Broken, puggy core — Fault Zone
1.6	201.6	
1.3		4cm qtz vein 203.0
		2cm qtz vein 204.0
	205	
3.1	205.3	QS? siltstone-shale intercalated · bedding is fairly planar (i.e. non-contorted) ~40° to c.a. Contains occasional thin → 3 mm qtz veins frequently parallel to bedding.
	207.3	
		SLt Black, pyritic weakly fragmental carbonaceous shale. Some thin siltstone beds
3.0	208.3	
		S gy to black well bedded pyritic siltstone. Fragmental in part.
	209.8	
	210	Broken & puggy core — Fault Zone qtz & sid. veining.
	210.3	Dolomite fragments appearing — still siltstone overall, however.
3.1	210.8	DoL: olive-green grey extremely fine grained, very finely bedded dolomite mudstone. Contains fragments (poorly sorted; moderately rounded) up to several centimetres in size. Dol. is characterized by extensive multiple qtz-filled fracturing. Fragm. predominantly slst & qtzi. Pyritic
	212.3	QS Lithology as at 200.4. poss. dolomitic?
	213.0	Broken & puggy core — Fault Zone
	213.4	FAULTED CONTACT
0.3		DoL-SLt Base weakly dolomitic grades into black carbonaceous pyritic shales & siltstones. Gmonally well bedded, occasionally fragmental & intraclastic.
	214.5	
0.7	215	Broken core, some parts puggy — Fault Zone
	215.4	
1.0		
3.1		
	219.0	sedimentary breccia — intraclastic.
	220	
3.0		
		bedding ~30° to c.a.
3.1		
	225	

5 cm

VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE

DEPTH m	MINERALIZATION
200	
200.0	v.f.gr. Pyr. syn. 8-10%
200.4	
201.7	veinous cph. trace.
202.4	f.gr. Pyr. >90% vein 1-2 cm.
204.2	syn. Py. >90 syn. bed ~5mm thick.
205.0	syn. Py <5% v.f.gr. well bedded. minor fragmental.
205.4	syn. Py. 50% 3 cm.
207.5	
208.9	syn. Py. 5-4% v.f.g.
209.4	
210	
211.0	v.f. gr syn. Py 10 f. to m.g. Py. also occurs as 2 mm veins → replacement?
212.4	v.f.gr. syn Py. 1-5
213.6	
215	
215.4	v.f. gr. syn. Py ~1-2%
216.5	
217.5	v.f. gr. syn Py. ~1-2%
218.9	
220	
220.3	v.f. gr. syn. Py. 2-3%
221.3	
221.6	v.f.gr. syn Py & bedded f.gr. ~10%
223.6	v. f.g. syn. Py ~15%
224.0	
224.2	syn. Py. f-mg. dissem. ~20-30% 1cm
225	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099034

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m 225	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m 225	MINERALIZATION
2.2		Lithology as above black carbonaceous pyritic siltstone - shale						225.4	v.f.g. syn. Pyr. ~2%
		225.6 1cm sid Qtz vein						225.9	v.f.g & f.-m.g. syn Py. ~10% recrystallized Pyr.?
								226.3	
0.8		Pyritic Dolomite 227.9 frag. 10cm							
	228.1								
1.2	228.4	sheared pyrite & broken core Fault zone						228.5	syn. Py. 1-2
1.6	230							230.0	
3.1									
								233.5	1-2 Py. syn.
0.5	235							235	
0.4	235.6	DARK MATERIAL OR FOAM						235.6	
	235.7								
1.8									
								237.8	2-5 syn Py.
1.2									
								238.9	5x2 cm syn. Py. >90%
0.3								239.2	
1.0	240							240	
	241.3	VT fine grained sericitic lithic tuff, light grey-green, Pods carbonate-rich. Clasts up to 30 mm.							
2.9									
3.0	245							245	
3.1									
		5 cm							
	250	possibly pyroclast ~10-15 cms long; chilled margins - lava?						250	

Feature — Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein; c carbonate, q quartz

Hole No. G54 — Page No. 11

Mineralization

099035

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
3.0	250			250	
	250.7	Py??, sheared, broken core - FAULT ZONE		250.7	vein-sph.
	251.1	FAULTED CONTACT			Syn. Py. rare as before in shales
		SH Black, v.f.g. carbonaceous pyritic? shale.			
0.3				252.6	Syn. Py. 1-2% parts recrystall. Py.
	253.5	Si? - Dol. Light grey well bedded v.f.g. → aphanitic siliceous (carbonaceous) dolomite (intraclastic & fragmental)		253.6	
2.9	254.3	VT Lithology as before: pyritic, light ~~grey~~ green (lithic tuff) ± tuff agglomerate ± sericitic; composed essentially of pyroclasts → 60 mm or more in size vesicules sericite, qtz, py. filled		254.3	Py 2-5% as veins, infillings and what appears to be Repr.
	255			255	Py ~~5-10%~~ occ. as above - fracture infills.
3.1				255.6	
3.0	260			260	Py. trace to rare (ie < 1%) as veins, infillings
3.0					
	265			265	
3.0					
3.0	270			270	
		EOH 270.7 metres			

5 cm

Cominco

DRILL HOLE RECORD

Location QUEEN HILL | Property QUEEN HILL | District ZEEHAN | Alt./R.L. 191·7 | Hole No G55

Commenced 27/11/79 | Completed 10/12/79 | Core size HQ NQ BQ | Co-ordinate 1986·8N 567 E | Date 10-1-80

Objective TO TEST POTENTIAL FOR STRATIFORM MINERALISATION BENEATH G18 RL – 130. | % Recovery 94% | Bearing (M) 102·6° | Grid bearing (M) -11·25° | Logged S. RICHARDSON | Dip -59°·2

SURVEY DATA

DEPTH	DIP	BEARING(M)	INSTRUMENT TYPE
49	59	107	EASTMAN
82	56 75	108	"
103	56 5	110	"
130	57 5	107,5	"
175	57°	106 5	"
301	52·25	100°	"
331	49.75	98·5	"
360	46·75	97°	"
390	47°	100°	"
247	56·25	103·5	"
211	57°	103·5°	"
145	57·75	105°	"
433·3	45.25	97·5	"
459	45·25	-	"
490	44·75	96·25	"
	EOH	508·3	

GRAPH DERIVED DATA

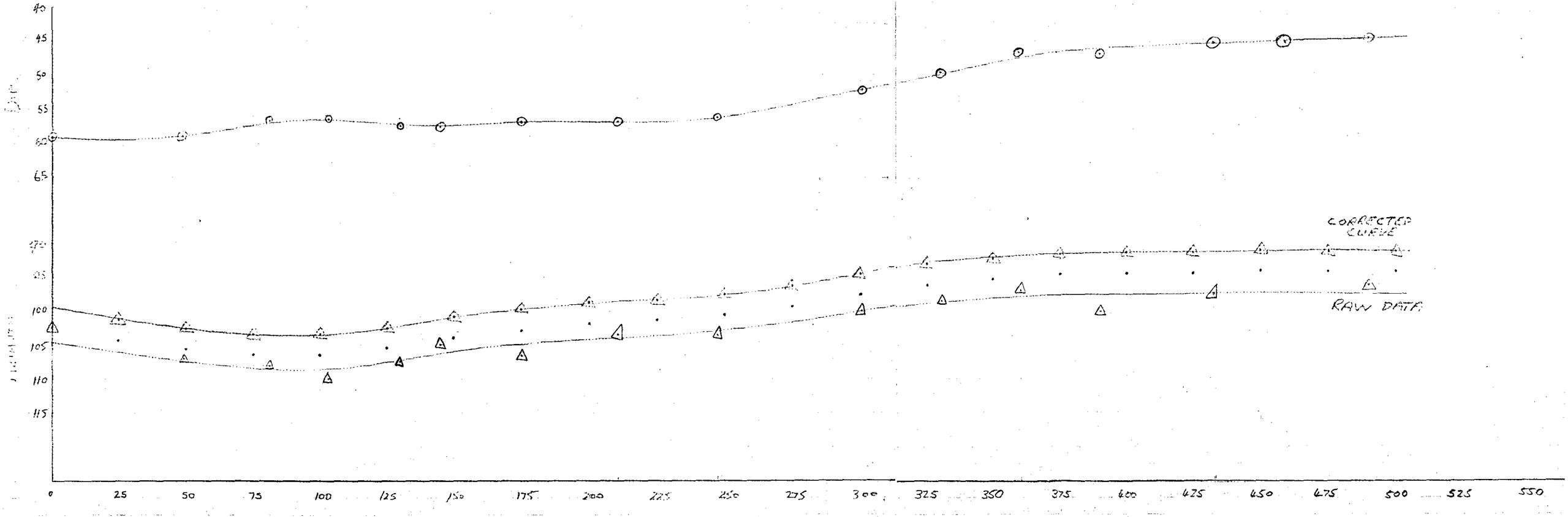
DEPTH	DIP	BEARING(M)	NORTHING	EASTING	ALTITUDE
0	59·23	102·28	1986·61	360567·43	191·70
25	59·6	104·1	1981 34	579.03	170.19
50	59·0	105·5	1975·72	590·51	148·71
75	57·5	106·4	1969·71	602·21	127·45
100	56·5	106·3	1963·41	614·26	106·47
125	57·0	105·4	1957·17	626·45	85·55
150	57·5	103·9	1951·26	638·61	64.53
175	57·0	102·9	1945·62	650.90	43·50
200	57·0	101·9	1940·16	663.37	22 54
225	57·0	101·4	1934.86	675.92	1 57
250	56·25	100·5	1929·67	688.64	-19.31
275	54·5	99·1	1924.58	701·89	-39.89
300	52·25	97·5	1919·60	715.93	-59·96
325	50·25	96·0	1914·77	730.80	-79·46
350	48·25	95·1	1910.06	746.40	-98·42
375	46·5	94·5	1905·39	762.66	-116.82
400	46·0	94·4	1900·71	779·31	-134·87
425	45·5	94·4	1896.00	796.10	-152.78
450	45·25	94·1	1891.31	813.02	-170.58
475	45·0	94·3	1886.62	830.01	-188.31
500	44·75	94·3	1881.87	847.07	-205.95

REMARKS

No Significant Sn Mineralisation.

099036

099037



CORRECTION FACTOR FOR CORRECTED CURVE +3.03

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	grammes per Tonne SILVER	grammes per Tonne GOLD		SAMPLE No.
L55	430·60	-5·00									
	430·85	85	<10	20	1900	350		<1·0			238582
	431·05	105	15	25	635	330		<1·0			238583
	431·60	22	10	15	220	220		<1·0			238591
	431·95	10	<10	30	170	115		2·0			238590
	432·25	10	*	15	420	210		<1·0			238611
	432·60	16	15	20	670	400		<1·0			238612
	436·25	-5·00									
	437·20	10	<10	20	50	150		2·0			238613
	460·60	-5·00									
	460·85	1250	30	190	480	1800		16·0			238614
	461·40	-5·00									
	462·05	5600	30	100	660	1000		3·0			238615
	463·70	-5·00									
	464·00	5050	30	150	150	2100		4·0			238616
	464·25	100	<10	25	720	400		8·0			238617

* IMPOSSIBLE TO KEEP IN TEST TUBE!

090038

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	grammes per Tonne SILVER	grammes per Tonne GOLD		SAMPLE No.
G55	464·75	550	20	50	130	290		13·5			238599
	467·50	-5·00									
	468·50	4	<10	35	50	500		<1·0			238599
	140·00	-5·00									
	140·04	30	10	70	100	95		1·0			238600
	357·90	-5·00									
	358·30	<4·0	<10	30	105	80		<1·0			238580
	359·30	14·0	<10	50	110	25		<1·0			238581
	360·90	8·0	<10	30	80	30		<1·0			238582
	361·30	100·0	20	40	60	30		3·0			238583
	362·30	32·0	<10	35	310	125		<1·0			238584
	362·50	75·0	15	15	75	40		<1·0			238585
	362·74	8·0	15	70	90	50		<1·0			238586

630639

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	grammes per Tonne SILVER	grammes per Tonne GOLD		SAMPLE No.
G55	457·60	-5·00									
	458·60	70									23454
	459·60	1350									23455
	460·60	4150									23456
	460·85	-5·00									
	461·40	260									23457
	462·05	-5·00									
	463·05	420									23458
	463·30	3500									23459
	463·70	150									23460
	464·75	-5·00									
	465·05	5000									23461
	466·00	145									23462
	466·50	33									23463
	467·20	-5·00									
	467·50	12									23464

090020

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	grammes per Tonne SILVER	grammes per Tonne GOLD		SAMPLE No.
655	465·50	−5·00									
	469·10	18									238465
	469·40	710									238466

090041

Hole No. G55 Page No. 1

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099042

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
Swamp		Broken and weathered volcanics The weathered nature and broken character of the rock does not allow detailed differentiation of lithology. The bulk of the rock appears to be lithic tuff whilst lavas are present.							
·6									
·5	5							5	
·4									
·3	10							10	
·2									
·3									
·3									
·9	15							15	
·6									
·5									
·5	20							20	
0									
·1									
·5									
	25							25	

5 cm

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099043

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
.6									
1.9									
.5									
.7	30							30	
1.3									
1.5									
.6	35							35	
1.3									
1.1									
1.9	40	APPROX. BASE OF WEATHERING.						40	
1.8		Lt. grey green sericitic and chloritic lithic tuff and fine agglomerate Rock composed of vesicular lava fragments from ≈ 1mm to >10 cm (av 1cm) av. 80-90% of the whole. Composition - sericite-chlorite-carbonate as is the rock matrix. Fragments are irregular angular to subrounded.							
.9									
1.5									
.6	45							45	
3.1									
	50	5 cm						50	

Feature Bedding, Foliation, Fragment size & shape; Shearing, Fault, Vein; c carbonate q quartz

Mineralization 099044

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		Lithology - as above - lt. grey green volc - fine agglomerate & tuff.							
3.0	55							55	
3.0									
3.0	60	5 cm						60	
2.9	62.7	Lithic tuff fining downwards to fine tuff. Lower 30 cm of interval is well bedded tuff - 20° to c.A.							
3.0	64.7 65	FAULT ZONE - Broken core - graphitic surfaces. Puggy in part.						65	
	66.3								
3.0	68.05	Interbedded med. grey and black siltstones. This is an extremely well laminated rock. Av. 1cm beds of med. grey sericitic siltstone interbedded with black siltstone beds which are thinner, av. .3 cm. Evidence of an early foliation forming event is present. Isoclinal folds occasionaly rootless are common. Si is axial planar. Beds occasionaly thicken & thin or boudinage altogether possibly as a result of transposition during this early event. Si/so is at a generally low angle to c.A. (av. 25°) but often							
3.0	70							70	
3.0									
3.0	75							75	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein; c carbonate, q quartz

Mineralization 099045

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
		becomes parallel.							
3.0									
	80							80	
3.0		5 cm							
3.0	85							85	86.5 - .5cm bed of cgn. py // to c.a.
3.0									
		88.7 - 1cm qtz vein.							
	89.0	Med grey generally uniform siltstones							
2.7	89.9 90	FAULT ZONE Broken core						90	
	90.4							90.5	
	90.8 91.0	FAULT ZONE - Broken core							
1.7	92.0	FAULT ZONE Broken core - 5-10° to c.a.?							
	92.5								
2.1									
	94.6 94.8 95	FAULT ZONE - Broken core						95	
		89.0 - 96.8m Med grey highly sericitic poorly laminated rock with a weak cleavage parallel to primary layering.							
2.8	96.8	Laminated grey siltstones							
		97.8 - Fault w. pug 15° to c.a.							
3.0		98.8m - silt vein 2 cm						98.8	
	100							100	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099046

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		Lamination av. 5cm of lt. grey to dk. grey siltstone. So at 0-10° to c.A. Numerous very thin (av 2mm) vein of q/tz ± sid ± py often at 90° to c.A.							
	103.1	FAULT ZONE - Broken core							
	103.3	103.3 - 5cm q/tz vein							
3.0	105	104.3 1cm sid vein 45° to c.A						105	105.3 - 1 cm py in def. vein?
3.0									
	108.8	10 cm sid veinlets at base of zone							
		Uniform med grey sericitic siltstone							
3.0	110	Rock is more uniform (less strikingly laminated) So is at 0-15° to c.A. Laminations between slightly variable siltstone. Lt. grey to med grey.						110	
3.0									
	115	115 - D1 fold?						115	
2.0		116.3 - Fault - broken core 10° to c.A.						116.3	
1.0									
3.0	120							120	
3.0									
	125	5 cm						125	

Feature Bedding, Foliation, Fragment size & shape; Shearing, Fault, Vein; F; c carbonate q quartz

Mineralization 099047

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		lithology - as previously - uniform laminated sericitic siltstones.							
		5 cm							
3.0	130							130	
3.0	132.3	132.3 - 140.0 m Lt. grey to dark grey laminated siltstone Thinly laminated sericitic rock. lamination more outstanding due to contrasting colouration of siltstone At approx 138.5 m So/Si swings from 0-10° to c.A. to approx 25-40° to c.A. 138.7 - slumping? 1cm sid vein - 40° to c.A							
3.0	135							135	
3.0								139.7	
3.0	140	Lt. grey green lithic tuff Weakly vesicular volc. frag. in dk. grey silt? matrix. Grades to fine tuff at bottom of interval						140	140-140.3 - py 30% as blebs diss. in matrix of tuff.
	141.65	Dark grey silty fine tuff.? Fine tuffaceous ? rock containing frag av 1-3mm of grey siltstone. 143.3 - qz sid 1cm	qz sid						
3.0	144.05	lt. grey to dark grey laminated siltstones As for 132.3 - 140.0 m Si/So av 30° to c.A.							<< 1% syn py as beds av 3-4 mm thick.
3.0	145							145	
		147.5 - 1cm sid vein // to Si/So						147.5	
3.0	150							150	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein, F, c carbonate, q quartz

Mineralization 099048

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
		Lithology – as above – interbedded lt. & dk. grey siltstones.							
3.0									
3.0	155							155	
3.0		158.9 - 1cm sed dyke?							
	160							160	
	160.45	Grey green F.g. tuff. – sericitic & contains flecks of sid.							160.7 – 2cm sid vein
3.0	160.9	160.9 - possible fault contact. Fracture and bedding truncated. 160.0 – Lt. grey uniform to weakly laminated sericitic siltstone. S_1/S_0 @ 30° to C.A.							
3.0	164.7 165	Interbedded lt. & dk. grey siltstones.						165	
3.0		167.9 - 10 cm q/taite.							
	168.7								
	169.1	Lt grey to dk. grey banded q/zite. Uniform med grey laminated siltstone As described for 160.9 – 164.7 m							
3.0	170							170	
3.0									
		5 cm							
	175							175	

Fracture Bedding Foliation Fragment size & shape Bearing Fault Vein F c carbonate q quartz

Mineralization 099049

Trace 1-5% Common 5-15% Abundant 15-60% Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0	176.3	Interbedded lt. grey to black siltstone and lt. grey micaceous f to m.g. qtzite. Thin beds of qtzite begin to appear at 176.3 and become increasingly dominant towards the contact with the volcanics below. Qtzite bands from 1mm to 40 cm, av. 2-3 cm. & shale bands 1mm to 3cm, av 1 cm.							
2.0	180							180	
NQ BQ 1.0									
		Broken core ⇒ Fault	F					181.4	
1.0									
		Broken core ⇒ Fault?	F						
1.5	185							185	
	188.1	FAULT ZONE - Broken core.							
3.0									
	190							190	
.7	191.0								
	191.6								
2.3	191.9	Lt. grey green m.g. tuff w. minor wisps of siltstone near base 191.9 - q vein 1cm				base			
3.0	195	5 cm						195	
2.3									
	198.5	198.5 - Fault breccia.						198.5	
.7		Olive green vesicular lava - very fine to coarse vesicles filled w. chlorite & sericite.							
	199.3								
	200							200	

Hole No. G55 Page No. 9

Feature Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099050

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		201.3 – q/vein 30° to c.A.						201.3	
3.0		203.2 – sid vein 80° to c.A						203.2	
	205							205	
3.0	205.7	Grey green sericitic ± volcs. These are sericitic ± chloritic carbonate rich intermediate? to basic? volcs.							
	207.3								
	207.7	Grey green vesicular lava (or block?)							
3.0	210							210	
								210.4	
3.0		5 cm							
3.0	215							215	
	216.75								
	216.95	Grey green vesic. lava							
	217.9								
	218.3	Grey green vesic. lava							
3.0	218.4	grey green vesic. lava							
	219.25								
	219.6	Grey green vesic lava – 10-15° to c.A.							
	220							220	
	220.2								
3.0	222.3								
		222.3 – 237.7 m Grey green sericitic carbonate rich vesicular lava and minor lava breccia? Individual flows appear to reach over 2m.							
		223.5 carb vein – 1cm						223.5	
3.0	225							225	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099051

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0	230	The lavas in this interval are very carbonate rich. Vesicles are often infilled with calcite and small veinlets & blebs of calcite occur.						227.3	
		227.3-227.65 – calcite vein?	calcite					227.65	
3.0		calcite vein – 80° to c.A.						230	
								231.8	
3.0	235	sid vein – 40° to c.A.	c					234.3	
								235	
3.0		q/sid vein – 25° to c.A.						236.1	
	237.7	lt. grey green sericitic, c carb. rich lithic tuff and fine agglomerate							
3.0	240							240	
	240.9	lt. grey green vesic. lava – chilled contacts 30-40° to c.A.							
	241.45								
3.0									
	245							245	
3.0									
3.0									
	250							250	

5 cm

Feature Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099052

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE RECD	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		Lithology - as previously - sericitic lithic tuff and fine agglomerate. (rare)							
3.0	255							255	
3.0									
3.0	260							260	
3.0									
3.0	265							265	
3.0									
3.0	270							270	
3.0									
	275							275	

5 cm

Hole No. G55 Page No. 12

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099053

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0	277.0	Lithology - as previously - lt. grey green sericitic lithic tuff and minor fine agglomerate.						277.2	
	277.3	lt. grey green vesic lava. 45° to c.A. -ve							
	278.0	10 cm lava at 278.0 & 277.6 & 278.5?							
3.0		5 cm							
	280							280	
3.0									
								283.8	
		283.8 1cm sid vein 40° to c.A.							
3.0	285	2cm sid vein 45° to c.A.						285.0	
		qtz vein 1cm. 30° to c.A.						285.5	
3.0									
	290							290	
3.0		1cm sid vein -30° to c.A.						291.5	
	295							295	
3.0									
		1cm q x sid vein -20° to c.A.						298.1	
3.0	300							300	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099054

Trace 1-5%
Common 5-15%
Abund ant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3·0	303·5	Lithology - as previously - lt. grey green sericitic lithic tuff and minor fine agglomerate thin lavas??							
	304·0	lt. grey vesicular lava. - contacts chilled? 45°60° to c.a.							
3·0	305	The rock contains numerous vesicular lava intervals, av. 10-20 cm thick, which often show flattened vesicles at their top and bottom contacts. This may be interpreted as flow top and bottom of a thin flow or as a deformation feature causing flattening of the vesicles on the margins of a homogeneous blocks?						305	
3·0	310							310	
3·0	315							315	
3·0	320							320	
3·0	325	5 cm						325	

Feature Bedding, Foliation, Fragment size & shape; Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099055

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		Lithology – as previously – lt. grey green sericitic lithic tuff and fine agglomerate							
3.0	330							330	
3.0		1.5cm sid vein – 20° to c.A.						333.3	
		2cm sid vein – 45° to c.A.						333.7	
3.0	335	3cm sid vein – 70° to c.A.						335 335.45	
3.0		1cm sid vein ⊥ to c.A.						337.5	
3.0	340							340	
3.0		1.5cm sid. vein						343.6	
3.0	345							345	
3.0		5 cm							
	350	349.95m – Fault – pug 40°? to c.A.						350	

Hole No. G55 Page No. 15

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099056

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		5 cm							
3.0	355							355	
3.0									
3.0	358.5 360	Weakly silicified & pyritic tuff - agglomerate The matrix of the tuff in this interval appears to have been replaced by v.f.g. sericite - quartz ? This alteration is associated with the introduction of minor amounts of py. which often replaces lithic fragments.						360	Py 2-3 (5) as f.g. to flecks and blebs assoc w. sericite - qtz? alteration and rep. lithic frag.
3.0	362.3 362.75 363.4 363.6	Interbedded dol. black siltstone & coarse tuff. lt. grey dolomitic siltstone - weakly veined by qtz. 363.4 - 10cm tuff Interbedded med. grey to black siltstones Thinly laminated to massive siltstones. Si/So high angle to c.A - av 60°. Rare py. siltstone eg 5cm at 364.6. Main occurence is as wisps of bedded pyrite. Note syn. py fragments.							
3.0	365							365	Py <1% as v.f.g. syn. py. wisps ; rare py siltstone.
3.0	370							370	
1.9	371.5 372.7	371.3-.5 - qtz, sid, py veinlets FAULT ZONE - Broken core & pug							
3.0	373.3 375	lt. grey siltstone An interval of generally uniform well bedded lt. grey siltstone which grades at the base to interbedded lt. grey						375	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein, F, c carbonate, q quartz

Mineralization 099057

Trace 1–5%
Common 5–15%
Abundant 15–60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
		and dk. grey siltstones.							
0.9									
3.0	378.05	Pyritic siltstones – variably pyritic siltstones. Most pyritic contain siltstone dropstones ⇒ younging up hole. Bedding 60° to c.A.							Py 10–15 (30) v.f.g. syn. py. as bo laminations
	379.55								
	380	Lt. grey to black siltstone, dolomite & black carbonaceous shale. Intervals of each of the order of 30 cm thick.						380	
3.0	380.85	Pyritic siltstone – laminated 50–45° to c.A.							Py 15–20 (40) v.f.g. bedded syn. py.
	381.5	Possible younging from strip down hole?							
		Blacle carbonaceos shale. – S1/S0? 0–30° to c.A. Very weakly pyritic							<1% v.f.g. diss. syn py.
3.0	383.15	Med. grey to dk. grey dolomite							
	385	The rock in this interval is generally a massive strongly veined dolomitic siltstone. Veining by dolomite? leads to local brecciation of the rock. Veins vary from < 1mm to 1 cm and are unoriented and stockworks in nature. Within the unit are local siltstone beds to .						385	385.15 – 385.3 – 30–40% py in pyritic siltstone.
3.0									386.65 – 10 cm py 20–30 f.g. syn. py. in py. siltstone.
		25mm/sid vein including bedding core.						388.0	Py 10–15 clo v.f.g syn py in py. siltstone breccia.
								388.4	
								388.65	
3.0	390	389.9 – 390.2 – Black shale.						390	
								390.2.	
3.0									
	395							395	
3.0									
3.0									
	400	5 cm						400	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein; c carbonate, q quartz

Mineralization 099058

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE / COMMON / ABUNDANT / MASSIVE	DEPTH m	MINERALIZATION
3.0		5 cm				
3.0	405				405	
1.8	406.6	Dk. grey to black carbonaceous siltstones w. thin dolomite interbeds; q/c veins. FAULT ZONE? - Zone of broken core and extensive thin qtz + carb veining.				407.4 - 5cm py & trace Sp. f.g. in q/sid vein 45° to c.A.
.7	408.3				408.3	
1.0	410	FAULT ZONE - Broken core, often fractured at low angle to C.A.			410	
1.1	411.60					
3.0		414.4 - 25cm dolomitic sed. breccia				
3	415				415	
3.1	418.70	med. grey dolomitic siltstone - bedding near lower contact - 45° to c.A. Rock is generally massive with minor thin dolomite veins. 420.1 Fault - broken core	F		420 420.1	
3.0	420.8	Black carbonaceous siltstone as previously. 423.0 - Fault - broken core 424.1 - " "	F F		423 424.1	
	425				425	

Feature Bedding, Foliation, Fragment size & shape; Shearing, Fault, Vein; c carbonate, q quartz

Mineralization 099059

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY
2·7	424·1	FAULT ZONE - broken core and pug
·6		
·8	428·9	
1·5	430 / 430·15	Brecciated dolomite w. thin black siltstone and grey-green f.g. tuff associated with pyritic siltstone.
3·0	431·66 / 431·96 / 434·45	Lt. grey brecciated dolomite - post depositional or soft-sed brecciation & fracturing. — Silicified dolomite - as above, higher as. Py. content. — Lt grey dolomite - as previously — Silicified locally brecciated dolomite - Gen. a highly siliceous rock. Silicification often appears assoc. w. v.f.g. Py.
3·0	434·5 / 435 / 436·05	Pyritic sed. Breccia - Dom. lt. grey dol. frag < 1mm to 2cm. Py frag. & bedded py. — Lt. grey weakly brecciated dolomitic siltstone. Very uniform rock which grades down into a weakly pyritic dolomite (6cm) and then a highly siliceous bedded siltst. (35cm)
3·0	436·25 / 438·15	Pyritic siltstone, pyritic dolomite & py. & dolomitic sed breccia w. minor m.g. tuff. - Complex interval of gen. well bedded rocks (S/So 30-45° to c.A.) Youngging at 438m up hole from dropped pebble. YOUNGING
3·0	440	Medium grey massive dolomite. A very uniform interval of med. grey massive weakly to moderately carbonate veined dolomite. Veining is irregular often stockwork in nature. Veins (dol? & siderite) av 2-3mm. 440·2. Fault - broken core
3·0	445	Fault - Broken core
3·0		FAULT ZONE - Broken core. FAULT - Broken core. FAULT - Broken core.
2·7	450	5 cm

DEPTH m	MINERALIZATION
429·5 / 429·95 / 430	Py 3-5 - syn-py. diss & frag.
430·6 / 430·8 / 431·08	Py v. rare. Py 2-8 as flecks & in thin veinlets trace sp. Py in 15-30 as large strat. mass & assoc blebs in dol. Trace sp. & Ga.
431·66 / 431·95 / 432·25	Py ≈1% thin veinlets & blebs in dol. Py 5-10 v.f.g. wisps assoc. w. silicif. Py. rare. Py 1-2 (20) as v.f.g. diss & masses, & as f.g. & flecks & blebs.
434·5 / 435·05	Py 5 - V.f.g. syn Py (bedded) & Py frag. <1mm to 0·1cm.
435·45 / 436·05 / 436·25	Py rare. 10cm py & v.f.g. syn py; bedded. Py 15-20 (40) v.f.g. syn. py. in Py. siltstone py. dol.
437·2	Py 1 (15) v.f.g. to f.g. mainly syn
438·15	
440 / 440·2	
445 / 445·55 / 445·9	
446·8	
447·5	
450	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099060 — Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
		Lithology - as above - med. grey dolomite			
3.0		5 cm			
	454.3	FAULT ZONE - Broken core.			
	454.6				
	455	455 - FAULT - Broken core		455	
2.5	456	Dk. grey to black siltstone - Si/So 30° to c.A.			
	456.25	Interbedded grey dolomite & black siltstone Typical dol & uniform siltstone			
	457.2	Black Siltstone - A massive to well bedded occasionaly weakly pyritic rock.		457.2	Py - 1 as v.f.g. syn. py. & as Py frag. av. 5cm
2.7	458.2	FAULT ZONE - Extensive broken core and pug with associated siderite healed fault breccias.		458.1	
	460			460	
3.1	462.05			460.6 460.75 460.85 461.4 462.05	Py 25 - f-c.g. assoc. w. sid in fault brec. Py 5 - as above. Py 1 - v.f.g. syn Py & syn Frag. Py 10-12 - F. to c.g. assoc. w. sid. in fault brecc. Rare py. siltstone? Rare vein
	463.7	Replaced Dolomite? - Py. in a grey locally rest. dol. host. common sid. veining - over prints min.		463.7 464	Py 30 - m.g. meshwork in rest. dol. Py 5-10 - F.g. blebs assoc. w. sid?
3.1	464.25	Pyritic Siltstone w. minor thin dolomite beds		464.25 464.75	Py 30-40 - v.f.g. syn Py in bedded siltstone. Minor vein.
	464.75 465 465.05	Pyritic Siltstone - Grey brown well laminated (Si/So 20 to 30° to c.A.) Pyritic siltstone.		465 465.05	Py 30-40 - v.f.g. syn-py. in laminated pyritic siltstone.
	466.0	Cream grey brecciated dolomite - Minor thin siltstone laminae 20° to c.A.		466.0	Py rare f.g.
3.0	467.5	Grey brown pyritic siltstone w. thin interbeds of grey siltstone av 1cm.		467.5	Py 30-40 - v.f.g laminated syn. py. in py. siltstone.
	469.1	Grey siltstone grading downwards to grey dolomite		469.1 469.45	Py 5 - f.g. & Fleaks Py 10-15 - v.f.g syn & blebs in dol.
	469.75 470	VT Lt. grey green sericitic lithic tuff. - weakly vesic. frag. av .5cm form 80% of rock. Sericitic frag. in darker green matrix. pass were chloritic. Weak f.o. foln. 40° to c.A.		470	
3.1	471.35	Dk. grey f. to m.g. tuff. - a very uniform tuff with a very weak fabric (So) 30° to c.A.			
	472.95	Lt. grey lithic tuff - 70% non. vesic. frag. to 5cm. av. 3cm.			
	473.4	Dk. grey f. to m.g. tuff. - uniform weakly bedded rock So = 70-60° to c.A. : Minor calc.			
3.0		Association ??			
	4 475	FAULT ZONE - broken core.		475	

Feature Bedding, Foliation, Fragment size & shape; Shearing, Fault, Vein; c carbonate, q quartz

Mineralization 099061

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0	475.95	Lt. grey lithic tuff. - non vesic. frag. av. 5cm. in darker grey matrix.							
	478.0							478.3	
2.0	480	478.3 - Fault - broken core Interbedded grey lithic tuff and dk grey f.g. tuff. Fine grained tuff. grades into a black bedded siltstone so 30° to c.A.						480 480.4	
	480.8	480.4 - Fault - pug							
3.0	483.6 483.8	481.4 - Fault 30° to c.A - pug Lt. grey lithic tuff. - Rock is composed of weakly vesicular sericitic fragments av. 20% set in a darker more chloritic (or silty) matrix. FAULT ZONE - Broken Core						481.4	
3.0	485	484.55 - Fault - broken core Fragment size is very variable from cmsm to sev. cms. Rock is gen. very poorly sorted. Weak p.o. fabric // to a weak lith. layering. may be compaction or tectonic. Si/so gen low angle typ. 10-20°						484.55 485	
		486.25 - Fault - 25° to c.A.						486.95	
3.0	490	487.75 - Fault - pug 489.05 - Fault - pug 490.1 - Fault - pug - 70° c.A.						487.75 489.05 490 490.1	
3.0	495	493.95 - Fault - pug & broken core						493.95 495	
	496	FAULT. Fault runs // to c.A. - assoc. w. c. vein over much of its length.							
3.0	499.5							498.8	1cm py 15 - c. vein
	500	5 cm						500	

Feature — Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein; c carbonate, q quartz

Hole No. G55 — Page No. 21

Mineralization 099062

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		Lithology - as above - gray green sericitic lithic tuff.							
		500.7 - 501.25 - gray vesicular lava?							
		501.85 - 502.25 - " "							
3.0									
	505	FAULT ZONE - Broken core w/abnor. c.bly. veins.						505	Py 10-12 - as rim mat'l in c. veins assoc. w. fault zone.
	505.3								
3.0								506.3	
								507.25	Py 5-cvein
	508.3	END OF HOLE							
	510							510	
	515							515	
	520							520	
	525							525	

5 cm

ABERFOYLE

DRILL HOLE RECORD

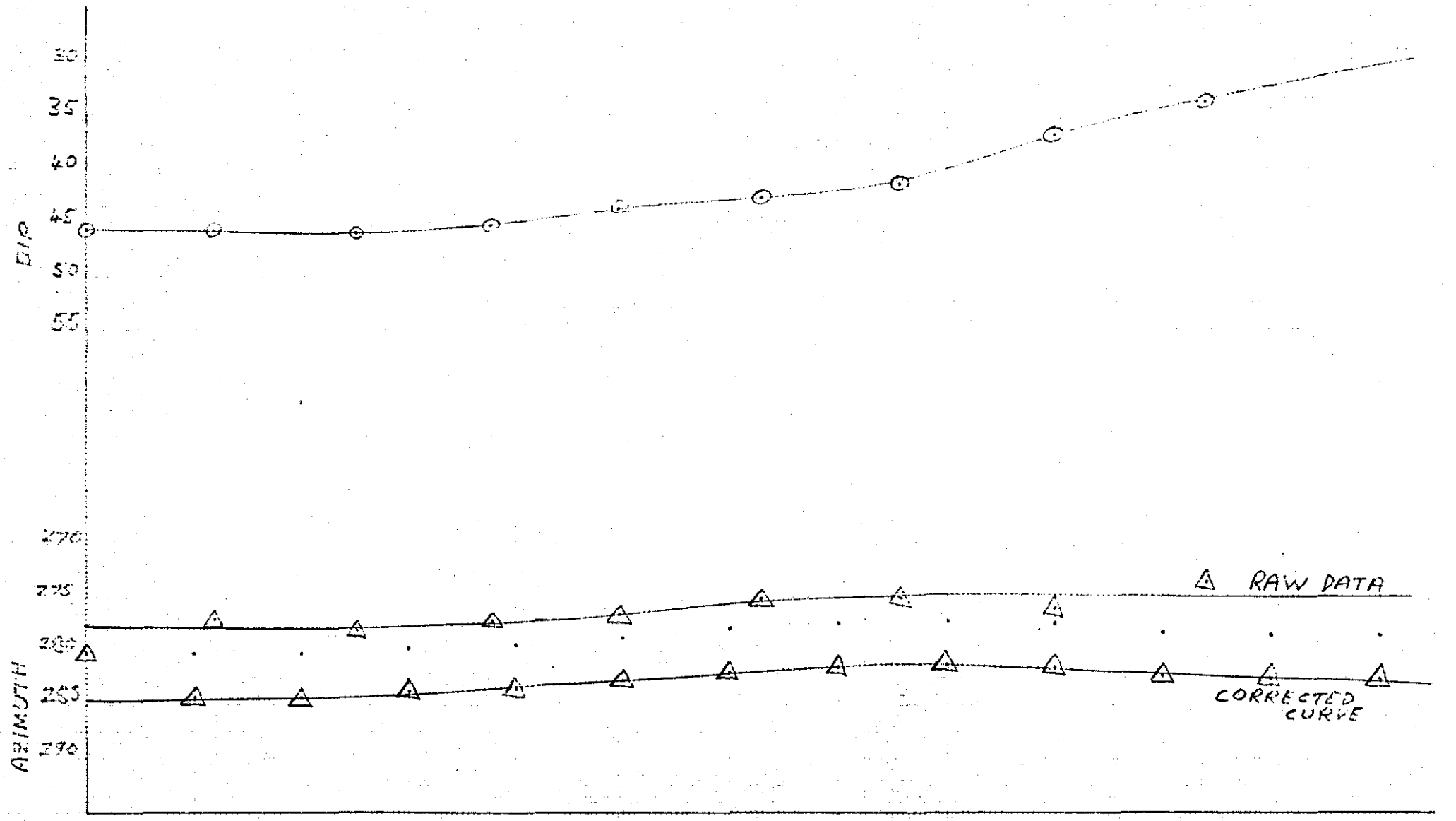
Location QUEEN HILL **Property** QUEEN HILL **District** ZEEHAN **Bearing (M)** 280·4° **Hole No** G56

Commenced 13/12/79 **Completed** 21/12/79 **% Recovery** 91% **Grid bearing (M)** −11·25° **Date** 3-2-80

Objective Exploration hole into I.P. + soil geochem. anomaly. **Core size** HW TO 3M HQ TO 42M NQ TO 135M BQ TO 283·2M **Logged** S. RICHARDSON

Co-ordinates S 362216·84N 360787·78E **Dip** 45·7° **Alt./R.L.** 187·03

SURVEY DATA				GRAPH DERIVED DATA			CALCULATED CO-ORDINATES			REMARKS
DEPTH	DIP	BEARING(M)	INSTRUMENT TYPE	DEPTH	DIP	BEARING(M)	NORTHING	EASTING	ALTITUDE	
30 M	45·75	277	EASTMAN	0 M	45·7	280·4	S362216·84	360787·78	187·03	
63 M	46	278	"	25	45·8	280·1	2223·23	771·55	169·12	No significant Sn mineralisation.
94 M	45·25	277	"	50	46	280·1	2229·57	755·35	151·17	
124 M	43·75	276·5	"	75	45·9	279·7	2235·84	739·13	133·20	
159 M	42·75	275	"	100	45	279·4	2242·07	722·74	115·39	
189 M	41·5	275	"	125	43·5	278·8	2248·29	705·95	97·94	
225 M	37	276	"	150	43	277·4	2254·40	688·80	80·81	
260 M	34	273·5	"	175	42	277·4	2260·37	671·36	63·92	
EOH	283·2 M			200	40	277·1	2266·35	653·47	47·52	
				225	37	277·4	2272·56	634·92	31·97	
				250	34·5	278·1	2279·17	615·74	17·36	
				275	32·5	278·4	2286·13	596·10	3·57	
				300	30·5	278·5	2293·31	576·03	−9·49	



CORRECTION FACTOR FOR CORRECTED CURVE
-4.1°

090064

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 | 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	grammes per Tonne SILVER	grammes per Tonne GOLD		SAMPLE No.
G56	209·40	-5·00									
	210·20	<4	<10	70	120	80		<1·0			238420
	211·20	12	<10	80	380	140		1·5			238421
	211·90	55	<10	20	80	25		<1·0			238422
	212·25	16	<10	30	100	30		<1·0			238423
	212·55	<4	<10	100	60	140		1·0			238424
	213·20	12	<10	50	90	30		<1·0			238425
	216·20	-5·00									
	216·90	8	<10	110	80	95		1·0			238426

099065

Feature

Bedding
Foliation
Fragment size & shape

Fracturing
Fault
Vein

F
c carbonate
q quartz

Hole No. G56
Mineralization
099066

Page No. 1

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE RECD	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
1·3		Brown tailings							
1·0	2·5	Cream grey to dk. grey micaceous quartzite fragments & vein quartz fragments Angular to subrounded fragments 1cm to 5cm.							
HW HQ	5							5	
·3									
	10							10	
0									
	13·2	Lt. grey green sericitic lithic tuff-agglomerate. This is a grey-green rock composed of a high % (≈80%) of vesicular lava fragments. These are irregular and angular often elongated and range in size from <1mm to >20cm as 1cm. Vesicles are generally filled with sericite, siderite, chlorite or less commonly with qtz. The matrix of the rock is of identical composition - sericite/chlorite, carbonate (siderite?) and qtz? A weak p.D. fabric defined by the inequant fragments and vesicles (flattened) is presumably tectonic. Si ow 30-60° to c.A.							Py v. rare.
·2	15							15	
·4									
1·5									
·4	20							20	
·5									
·25									
·5									
2·9	25							25	

5 cm

Hole No. G56 | Page No. 2

Feature Bedding | Foliation | Fragment (size & shape) | Shearing | Fault | Vein (c carbonate, q quartz)

Mineralization 099067

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
2.8	26.7 26.9	FAULT ZONE - Broken core. Lithology - as above - lt. grey green sericitic lithic tuff and fine agglomerate.							
3.0	30							30	
2.6									
3.0	35							35	
3.0									
1.8	40							40	
HQ / NQ .9									
3.0	45							45	
3.0		5 cm							
	49.7 50.0	FAULT ZONE - Broken core & clay @ 15° to C.A.						50	

Feature — Bedding, Foliation, Fragment (size & shape), Fracturing, Fault, Vein, c carbonate, q quartz

Hole No. G56 — Page No.3

Mineralization 099068

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
2.1		5 cm			
.9					
2.0					
1.1	55			55	
3.0					
2.5	60			60	
	60.6	FAULT ZONE Broken core & pug. - zone covers boundary between volcs. & seds.			
1.2	62.85				
	63.5	Interbedded grey f.g. micaceous quartzite and dk. grey siltstones - well bedded to slumped rock. S_1/S_0 - 50° av. to c.A. Interlaminated on scale of few mm's & c.m's.			
3.4	65			65	
	65.8	Lt. grey green sericitic lithic tuff. Lacks agglomerate component - description as for → 62.85 m.			
2.0	70	Fault - broken core Fault - broken core - 45° c.A.		70 70.1 70.5	
3.0	72.2	Interbedded pyritic siltstone and brecciated lt. grey siltstone - lt. grey dol. frag. (rounded) in siltstone. and sed. brec. siltstone. S_1/S_0 - 40 - 0° to c.A.		72.2	Py 5-10 - v.f.g. syn Py. bedded in Py siltstone.
	73.35	Lt. grey massive dolomite - weakly veined by carbonate.		73.35	
	73.8	Interbedded lt. grey siltstone & grey brown pyritic siltst. Interbeds av. 10 cm. S_1/S_0 ≈ 25° to c.A.		73.8	Py 10-15 v.f.g. bedded syn. Py. in beds av. 10cm. interbedded w. grey siltstone.
3.0	75			75	

Feature Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein; c carbonate, q quartz

Mineralization 099069

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
	75.2	Med grey massive dolomite - moderately to extensively veined by carbonate. The lower 20 cm of this interval is coarsely text. carbonate							
2.9	76.8	Fault - broken core Interbedded grey brown pyritic siltstone, grey siltstone and lt grey dolomitic siltstone. The major component is py. siltstone as gen. well bedded intervals. The more weakly pyritic siltstone typically contains suborounded to rounded frag. av 1cm of grey siltstone & grey dolomite. S_1/S_0 5°-20° to c.A.						76.8	Py 1-5 v.f.g bedded.
2.7	80	Dolomitic siltstone is more common in the upper portions of the interval. Fault - broken core 90°						79.9 80 80.1	Py 30-40 v.f.g bedded.
1.7	81.6 81.8	FAULT ZONE? - Broken core						81.6	Py 3-5 (30) v.f.g. bedded.
1.1	84.3							84.3	
2.2	85 86.6	Black carbonaceous siltstone A generally massive rock containing numerous syn. py. frag. & dol. frag. (ang. to round) 1mm to 3cm (av. 5cm) ≈5% frag. FAULT ZONE? - Broken core						85	
2.6	88.4 89.4 90	Interbedded lt. grey to black siltstone - shale and lt. grey f.g. quartzite Dk. grey siltstone - locally carbonaceous - contains thin laminations of f.g. lt. grey qtzite. Laminations 1mm to ≈ 3cm av. 5cm. Soft. sed. deformation is evidenced by rafted beds and						90	
1.0	91.2	FAULT ZONE? - Broken core Local contortions. S_1/S_0 5°-60° to c.A.							
1.2	93.75								
2.4	95							95	
	95.45 95.9	FAULT ZONE? - Broken core							
2.4		The rocks in this interval grades downward to inter laminated lt. grey & dk grey siltstones. lamination on a scale <1cm. av.							
1.2	100	5 cm						100	

Feature — Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein; c carbonate, q quartz

Hole No. G56
Mineralization
099070

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		Fault - broken core At approx. 102m interbedded siltstone & quartzite is replaced by lt. grey siltstone. This is a transitional change.	F					102.2	
.8									
2.0	105							105	
2.7									
	108.4	FAULT ZONE - Broken core & pug.							
	109.0								
		Fault - broken core - c.vn.	F					109.5	
	110							110	
3.0									
	111.05	FAULT ZONE - Pug & c. healed fault breccia. 45° to c.A.							
	111.3								
3.0									
	114.6								
	115	Interbedded black carbonaceous siltstones and lt. grey fragmented occasionally dolomitic siltstones. Boundary is essentially gradational with the above unit.						115	
3.0		The unit consists essentially of black carbonaceous siltstone - shale which most often, but not always, contains lt. grey usually slumped & brecciated locally dolomitic siltstones. Fragments, angular to rounded of lt. grey siltstone occur with the deformed beds. These range from 1mm to 3cm.						116.1	
		The rock is very similar to the more deformed Q.S.							
3.0	120							120	
		120.75 - 10cm med. grey mas. dol	c						
		2cm sid - 10° to c.A.	sil 2cm					122.2	
3.0									
	125	5 cm						125	

Area

Bedding
Foliation
Fragment size & shape

Shearing
Fault
Vein — c carbonate, q quartz

Hole No. G56
Mineralization
099071

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
2.9		Lithology - as above							
3.0		Fault - broken core.	F					128.0	
	128.9	FAULT ZONE - broken core - pug. 25° to c.A.	F						
	129.3	Fault - broken core - 25° to c.A	F					129.6	
	130	Fault - broken core.	F					130	
3.0		Fault - broken core - 10° to c.A	F					131.7	
		Fault - broken core.	F					133.0	
1.8									
NQ	134.9								
BQ	135	Black carbonaceous siltstone with minor lt. grey siltstone fragments. Fragments 1mm to 2cm. av. 5cm. 2-3% of rock. Lithology as above and below minus siltstone component.						135	
1.2									
2.9		Fault - broken core - 10° to c.A	F					138.6	
	139.3								
	140	Interbedded black carbonaceous siltstones & lt. grey fragmented (dolomitic) siltstones						140	
3.0		Description as above.							
3.0									
	144.1	FAULT ZONE - broken core - 3cm gtd. vn. 45° to c.A.							
	144.3	q/c vein - 45° to c.A.						144.5	
	145							145	
3.0									
3.0									
	150							150	

5 cm

Hole No. G56 Page No.7

Feature Bedding, Foliation, Fragment size & shape, Shearing, Fault, Vein, F, c carbonate, q quartz

Mineralization 099072

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
		Lithology - as above -							Trace syn. py. as rounded frag. av. 1mm.
3.0		5 cm							
3.0	155							155	
3.0	159.0	Black carbonaceous siltstone - Interval lacks grey siltstone component. Massive siltstone. Contains rare? syn. py. frag. 1mm to 3cm. av. 4cm. <1%.							
	160							160	
3.0	162.9								
2.2		Fault - broken core - 30° Lithology - as for → 159.0 m.	F					163.4	
	165	Fault - broken core Fault - broken core - 40°?	F F					164.75 165 166.3	
2.4	166.0 166.3	med. grey dolomitic siltstone - weak carb. veining Lithology - as for → 159.0 m. 10mm q/c vein 35° to c.A.	K					167.9	
	168.2	FAULT ZONE - Broken core							
1.0	168.6 169.4								
1.3		FAULT ZONE - Broken core							
	170.0							170	
2.0		Fault - broken core Fault - broken core - 10° to c.A.?	F F					172.3 172.7	
	173.1	FAULT ZONE - Broken core & pug - 50° to c.A.?	c.					173.1	
1.9	173.5								
	175							175	

Hole No. G56 Page No.8

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099073

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
2.6	175.35 175.45	FAULT ZONE - broken core							
1.1	179.3 179.6	FAULT ZONE - Broken core & pug							
1.2	180 180.6	FAULT ZONE - Broken core & pug.						180	
3.1	181.6	Well laminated interbedded lt. grey siltstone and f.g. quartzite & dk grey siltstone - locally contorted. Si/So av. 45° to c.A. A finely laminated interval (on the mm. scale) of the above rock types. Resembles true QS. lithology.							
3.0	185.0	Interbedded black carbonaceous siltstones & lt. grey fragmented (dolomitic) siltstones Description as for 114.5 - 134.9						185	
2.8	187.3 187.45	FAULT ZONE - Broken core & pug. 2cm q/c Aspy vein. Fault - pug - 60° to c.A.?	F					187.3 188.95	Aspy 20% over 2cm q/c vein. Tr py
3.0	190							190	
3.0	195							195	
3.0		5 cm							
	198.7 198.9	Siderite, gyp vein.						198.7	20cm gas sp.1, c. vein.
	200							200	

Hole No. G56

Feature — Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization — Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive >60%

099074

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		5 cm							
3.0	203.8	Grey dolomitic conglomerate - breccia, massive brecciated dolomite, py. sltst, black carbonaceous shale. The above rock types occur in thin alternating units. Massive dolomite is extensively veined. Carbonaceous shale contains syn-py. frag.						205	Py trace syn py frag in carb. shale
3.0	206.15	Interbedded black carbonaceous siltstones & lt. grey fragmented (dolomitic) siltstones. As for 114.5 - 134.9						207.7	Py 2-3 (5) as f.g. diss. & as frag. poss. dol. rep?
3.0	210	1cm py siltstone →						209.6 210	1cm py 30 - v.f.g. syn-py - bedded 20° to c.A.
3.0	211.9	Med. grey mas dolomite - extensive c. veins						211.2	Py 3-5 (10) f.g. to c.g. & blebs.
	212.05 212.25	Black carbonaceous shale						211.9 212.25	Py v. rare;
	212.7	Py dol., & dol breccia & basal black carb shale						212.55	212.25-55 - Py 10-15 v.f.g. syn? & rem? blebs.
	213.15	Contorted Black & lt. grey siltstones - as above.						213.15	Py v. rare.
	213.95	Black carbonaceous siltstone - trace syn. py. fragments as prev.							Py <1 v.f.g. diss. & ~ pyritic frag.
	214.2	Contorted black & lt. grey siltstone w. minor dol. frag						213.75	
	214.8	Lt. grey dolomite - weak early brecciation							
3.0	215	Contorted & broken interbeded black & lt. grey siltstones - as previously						215	
	216.2	Grey brown pyritic siltstone - Si/So 0-20° to c.A.							Py 20-30 v.f.g. syn. py. bedded minor rem.? blebs.
	216.9	10cm basal py-dol.							
		216.9 - 223.8 m							
		Black carbonaceous siltstone w. minor Sed? deformed lt. grey siltstone.							
3.0		Lt. grey siltstone occurs as often elongate fragments and rare or as "brecciated" beds							Py rare.
	218.8 219.2	FAULT ZONE Broken core & pug. 30° to c.A? or v. low?							
	220	presumably the result of sed. def. Si/So av. 0-20° to c.A. Trace syn py. frag av. 5cm, usually rounded. Fault zone marks lower boundary.						220	
2.9									
	223.15	FAULT ZONE - broken core, c veins, solution cav. & breccia.							
1.0	223.8	Well Laminated interbedded lt. grey and dk. grey siltstone							
		Fault? - broken core.						224.8 225	
	225								

Feature — Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Hole No. G56
Mineralization
099075

Page No. 10
Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
1·5		A well laminated interval of interbedded lt. grey to dk. grey siltstone. Av. 1cm for scale of lamination. Trace lt. grey quartzite. Fault as basal contact. Si/So av. 30° to c.A. - gen constant.							
3·0	227·8	FAULT ZONE - Broken core & pug - 2cm c. vein						228·2	
	228·5	1cm c. vein.						229·3	
	230	Fault - broken core - 20°						230	
3·0	231·0	231·0 - Fault - pug & 2cm c. vein, 70° to c.A.						230·7 231·0	
		1cm c. vein 45° to c.A.						231·3	
	232·3	Black carbonaceous conglomeratic siltstone containing grey rext. dol/frag. Lower 40cm may be 1 frag or rext. dol.							
3·0		Black carbonaceous siltstone with locally deformed & contorted lt. grey siltstone interbeds. Description as previously.						233·0	
		233·0 1cm c. vein 50° c.A.							
	235	18cm qtz-sid vein - 70° to c.A.						235	
		Si/So 45° to c.A.						235·1	
3·0		5 cm							
3·0	240							240	
3·0		1cm c. vein 20° to c.A.						244·0	
		1cm c. vein 45° to c.A.						244·2	
	245	Si/So - 45° to c.A.						245	
3·0		1cm c. vein 45° to c.A.						246·35	
3·0	248·5	FAULT ZONE Broken core							
	248·8							249·8	
	250	Fault - broken core						250	

Feature — Bedding, Foliation, Fragment (size & shape) — Shearing, Fault, Vein — c carbonate, q quartz

Hole No. G56 — Page No.11

Mineralization

099076

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		Lithology - as above.							
3.0	255	1cm c vein 30° to c.A. 1cm c vein 70° to c.A. Fault - c. vein 3cm 50° to c.A. 255.2 - 10cm dolomitic conglomerate.						254.8 255 255.7	3cm py, cpy tr. sid vein
3.0									
3.0	260 260.15	3cm q/c vein (py) 50° c.A. Black carbonaceous siltstone containing lt. grey micaceous qtzite frag. from <1mm to 3cm. minor volc. frag.						259.9 260	3cm py q/c vein
3.0	261.5	VT Lt. grey green sericitic lithic tuff.							Py v. rare.
3.0	265							265	
3.0									
3.0	270	3cm c vein 40° to c.A.						269.3 270	
3.0									
	275	5 cm						275	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099077

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		Lithology – as above – lt. grey green sericitic lithic tuff.							
3.0	280							280	
3.0									
	283.2	END OF HOLE							
	285							285	
								285	
	290							290	
	295							295	
	300							300	

5 cm

ABERFOYLE

DRILL HOLE RECORD

Location QUEEN HILL Property QUEEN HILL District ZEEHAN Bearing (M) 302·2° Hole No G57

Commenced 5/1/80 Completed 11/1/80 % Recovery ≈95% Grid bearing (M) −11·25° Date 28-1-80

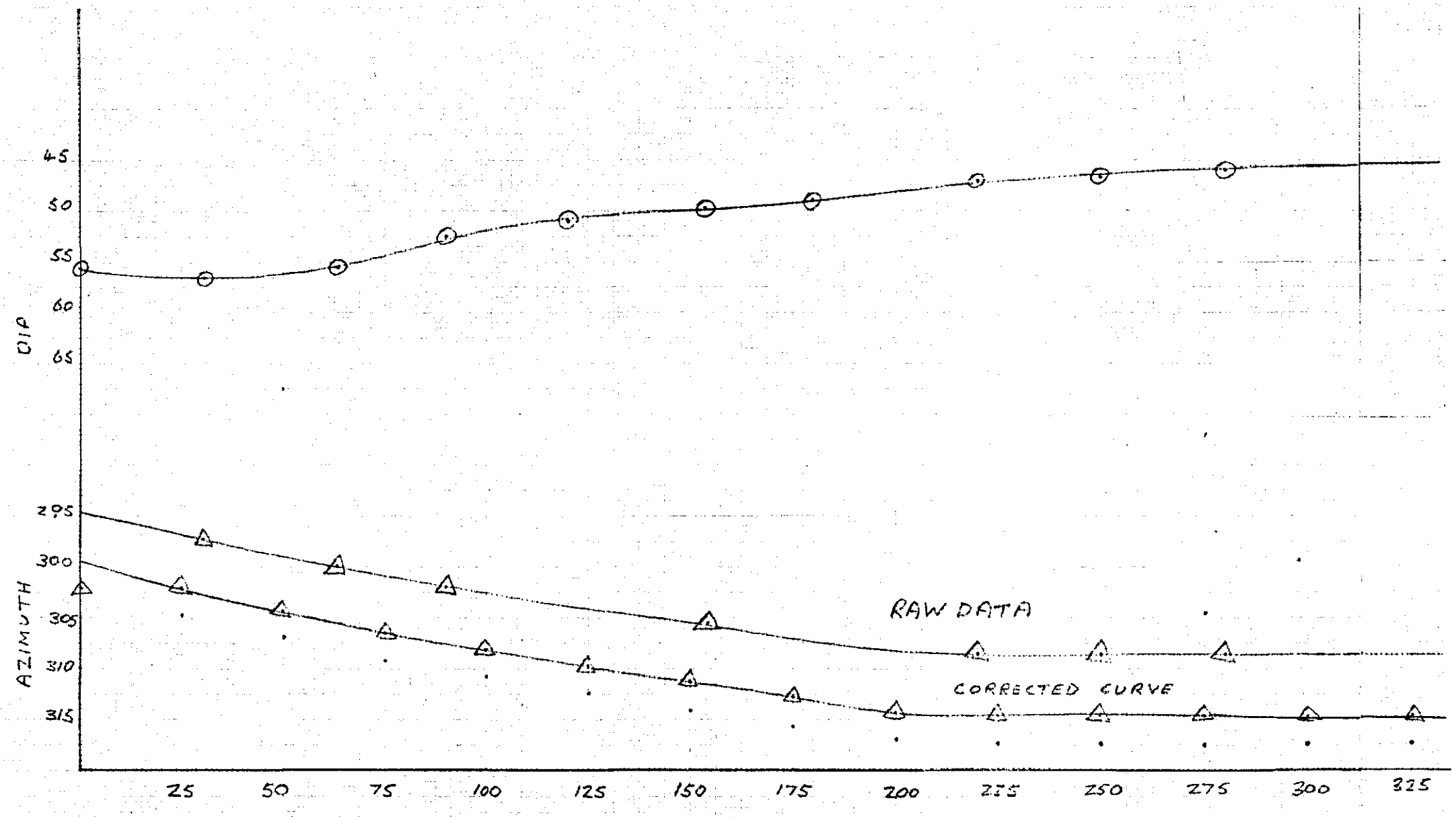
Objective To test attractive stratigraphy 160m south-west of NL G46 intersection at RL 50. Core size HQ TO 18M NQ TO 99M BQ TO 307·4M Logged S. RICHARDSON

Co-ordinates 5361345·36N 360558·38E Dip 55·6° Alt./R.L. 219·26

SURVEY DATA			
DEPTH	DIP	BEARING(M)	INSTRUMENT TYPE
31M	56·5°	297·5°	EASTMAN
63M	55·5°	300°	"
90M	52·5°	302°	"
120M	51·0°	—	"
154M	49·75°	305·5°	"
180M	49·0°	—	"
220M	47°	308·5°	"
250M	46·75°	308·5°	"
280M	46°	308·5°	"
EOH	307·4M		

GRAPH DERIVED DATA			CALCULATED CO-ORDINATES			REMARKS
DEPTH	DIP	BEARING(M)	NORTHING	EASTING	ALTITUDE	
0 M	55·6°	302·2°	5361345·36	360558·38	219·26	
25	56·5°	304·7°	1355·18	548·46	198·52	60% Coarse grained Syenite as veins in sediments breccia zone.
50	56°	306·9°	1365·34	539·00	177·74	
75	54·25	309·2	1376·17	529·69	157·22	
100	52	310·8	1387·86	520·31	137·22	
125	50·5	312·4	1400·34	510·86	117·73	RL 25, 245.85 - 246.95 0.15%
150	50	314·0	1413·34	501·57	98·50	
175	49·25	315·6	1426·77	492·54	79·45	
200	48	316·9	1440·70	483·66	60·69	
225	47	317·3	1455·08	474·80	42·26	
250	46·5	317·3	1469·69	465·87	24·05	
275	46	317·4	1484·44	456·86	5·99	
300	45·5	317·4	1499·34	447·78	−11·92	
325	45·5	317·4	1514·31	438·67	−29·75	

S40660



CORRECTION FACTOR FOR CORRECTED CURVE
+2.7°

64-0660

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	grammes per Tonne SILVER	grammes per Tonne GOLD	SAMPLE No.
C57	298·50	-5·00								
	299·50	6	<10	50	115	25		<1·0		238270
	300·50	12	10	40	75	25		<1·0		238271
	241·90	-5·00								
	242·85	40	<10	45	1050	700		3·0		238272
	243·85	160	<10	30	185	500		2·0		238273
	244·25	42	<10	60	730	900		3·0		238274
	244·40	50	10	100	6400	550		2·5		238275
	244·85	38	30					2·0		238548
	245·85	150	30	30	120	400		1·0		238549
	246·05	2200	30	70	490	700		4·0		238550
	246·85	1300	30	100	130	600		3·5		238301
	246·95	2000	50	80	85	600		4·5		238302
	247·85	130	<10	50	1300	400		6·0		238303
	248·85	30	<10	70	840	500		6·0		238304

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	grammes per Tonne SILVER	grammes per Tonne GOLD		SAMPLE No.
C57	273·10	-5·00									
	274·10	6	<10	20	65	60		1·0			238305
	275·10	6	<10	40	45	40		1·0			238306
	276·10	4	<10	50	75	30		<1·0			238307
	277·10	14	<10	50	790	650		2·5			238308
	278·10	36	<10	30	455	300		2·0			238309
	279·10	32	<10	30	310	250		2·0			238310
	280·10	14	10	40	145	160		1·0			238311
	281·10	55	<10	40	465	400		1·0			238312

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 | 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	grammes per Tonne SILVER	grammes per Tonne GOLD		SAMPLE No.
C.57	220·80	-5·00									
	221·30	3·0									28839
	221·90	5·5									28840
	222·90	3·2									28841
	223·90	7·0									28842
	224·40	9·5									28843
	224·75	9·40									28844
	224·90	17·50									28845
	225·90	7·0									28846
	226·90	7·0									28847
	227·90	3·2									28848

28839 28848

Hole No. G57

099083

Feature — Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization — Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
0		Dark grey to black shale interbedded with grey f.g. micaceous quartzite beds. Most distinctive feature of the rock is the locally extremely contorted nature which is associated with the fracturing of the quartzite beds. The grey quartzite ranges from thin laminae < 1 mm thick to beds > 30cm thick; av. .5-1cm. The quartzite also occurs as angular to subrounded fragments, possibly the result of rafting of beds during soft sed. def. Although s.sed. def. may have affected the rock, tectonic folding is present as tight often angular folds. The rock has a well developed layer // fabric (S1/S0) defined by the prefered orientation of f.g. sericite + graphite // to the primary layering. S1/S0 varies considerably in orientation; av. 30° to C.A.							
2.0	5							5	
2.5									
	10							10	
3.0									
	13.0	FAULT ZONE - Broken core & pug							
3.1	13.2								
	15							15	
		Fault - broken core	F					16.0	
2.0	16.0	FAULT - fault running // to C.A. - pug on fault plane.	F						
HQ NQ	17.0								
1.3									
	20							20	
		Fault - broken core - 60° to C.A.	F					20.4	
3.0									
		5 cm							
3.0			F						
	25	Fault - pug - 30° to C.A.						25.0	

Feature Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein (c carbonate, q quartz)

Hole No. G57
Mineralization
099084

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY
		Lithology - as above.
3.0		
		28.6 - 1cm c. vein.
2.6	30	
3.0		
	33.65	Lt. grey f.g. quartzite - same lithology as foregoing.
	34.0	
	34.4	Mid. grey uniform siltstone.
	35	
	35.45	
	36.7	
3.0		FAULT ZONE Broken core in several small faults.
	36.4	
2.7		
	39.8	
	40	FAULT ZONE Broken core and fug
	40.4	
	41.7	
3.0		FAULT ZONE - Broken core.
	42.5	
	42.8	FAULT ZONE - Broken core
3.0		
	44.9	FAULT ZONE - Broken core
	45	
	45.15	
	46.9	FAULT ZONE - Breccia core & fug ~20°? to C.A.
	46.1	
3.0		
	47.95	mid. grey f.g. quartzite
	48.3	
	50	

DEPTH m	MINERALIZATION
28.6	
	29.9 - 5cm Py & f.g. syn py. clasts?
30	
36	
40	
43.9	Py vein 1cm. v. early as is def.
45	
50	

5 cm

Hole No: G57 — Page No: 3

Feature

Bedding
Foliation
Fragment size & shape
Shearing
Fault
Vein
c carbonate
q quartz

Mineralization

099085

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY
3.0		Lithology - as above - interbedded black shale and grey f.g. quartzite - locally contorted.
	51.9	Med. grey siltstone - interval lacks grey quartzite
	53.4	
3.0		54.8 - Fault - broken core
	55	
3.0		
2.2		
	60	
	60.4	FAULT ZONE - Broken core & pug
	60.8	
.7		
3.0		
	65	
3.0		
3.0		
	70	
3.0		
		5 cm
		73.6 - Fault - broken core
2.1		74.6 - Fault - broken core - q/c vein 2cm
	75	

VISUAL LOG | TRACE | COMMON | ABUNDANT | MASSIVE

DEPTH m	MINERALIZATION
55	
60	
65	
70	
73.6	
74.6	Py 5 - q/c vein 2cm.
75	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault (F), Vein (c carbonate, q quartz)

Hole No. G57
Mineralization
099086

Page No.4
Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
		Lithology - as above - dk. grey to black shale & siltstone with med. grey f.g. quartzite interbeds & fragments. Often contorted. S1/S0 av. 30-40° to c.A.							
1.0									
1.9									
	80							80	
3.0	80.9	FAULT ZONE - Broken core							
	81.7								
3.0									
	85							85	
	85.4 / 85.6	FAULT ZONE - Broken core							
2.7	86.9 / 87.2	FAULT ZONE - Broken core & pug							
								89.5	89.5m - 2cm py to c vein
3.0	89.9 / 90	lt. grey f.g. micaceous quartzite - some lithology as qtzite interbeds. Occ. thin siltstone beds to 2cm., 30° to c.A.						90	
	91.7	Black contorted carbonaceous shale w. grey quartzite fragments. - The interval below the quartzite is notable for the carbonaceous nature of the shale. Also notable is the fact that beds of f.g. grey quartzite are not present; rather the quartzite occurs as tectonically flattened angular to rounded fragments from <1 mm to >4cm.							
3.0									
	95							95	
3.0									
1.8									
NQ / BQ									
1.4	100							100	

5 cm

Feature

Bedding
Foliation
Fragment size & shape
Shearing
Fault
Vein
c carbonate
q quartz

Hole No. G57
Mineralization
099087

Page No.5

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		Lithology - as above - black carbonaceous shale w. grey qtzite. fragments. - contorted						102.9	1cm py. to c.g. assoc. w. q. vein.
1.5	104.9 104.7	FAULT ZONE - Broken core & pug							
	105							105	
1.3	105.65 105.8	FAULT ZONE - Broken core & pug - logs 4 to c.A?							
3.0									
	108.75	lt. grey f.g. micaceous quartzite - minor thin black shale band. 10cm.							
	109.55								
	110	Dark grey to black locally carbonaceous siltstone and shale with lt. grey micaceous qtzite interbeds and fragments						110	
3.0		5 cm							
3.0									
	115							115	115.5 - 2cm py 10 - veinlets
3.0								116.3	1cm Py 40, c vein
		119.6 - 3cm q/c vein 20° to c.A.						119.6	
3.0	120	120.5 - 1cm q/c vein 25° to c.A.						120 120.5	
		121.15 - 2cm q/c vein 40° to c.A.						121.15	
2.7									
	123.6	FAULT ZONE - Broken core & pug at low angle to C.A							
	124.1								
	125							125	

Feature Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein; c carbonate, q quartz

Mineralization 099088

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
3·1		Fault - broken core		126·0	126·0 - 1cm py 10 ; q/c vein. 126·1-126·2 - py 15 veins.
		Lithology - as above - dk. grey to black siltstone ± shale with thin interbedded quartzite.			
1·2	128·2	FAULT ZONE - Broken core & pug		127·9 128·3	py 1-3 c.g. in q/zite & minor vein
	128·7			128·8	1cm py 5, c vein
1·5	129·3 129·6	FAULT ZONE - Broken core			
	130			130	
2·4					py <1 venlets.
		Fault - low & to c.A. Broken core.		133·3	
				133·7	1cm py 15, c vein
3·0	135			134·9 135 135·2	py 1-3 f.g. assoc w. qtz veins, early.
2·2		Fault - broken core		138·0	
	138·85	FAULT ZONE - Pug. 5cm py vein in middle		138·85 139·1	139·0 - 5cm py vein.
·35	139·1				
	140 140·1	Sulphide Rock. Py 80-90. as a.g. vein? mat. ± silic. matrix		140	py 80-90 vein?
	140·45	Qs. as above			py 1 - venlets.
3·0	141·15	Grey f.g. micaceous quartzite. 30° to c.A.		141·6	
		Qs as above			
		25° to c.A.		142·6	
	143·25	FAULT ZONE - Pug & broken core.			
2·9	143·6				
		Fault - broken core		145 145·1	
	145				
3·0					
3·0	150			150	

5 cm

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099089

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
		Lithology - as above - Dk. grey to black siltstone & shale w. thin grey f.g. micaceous quartzite interbeds & fragments - may be locally contorted.			
3.0				152.9	1cm Py 10, c vein
2.0	155 155.1 155.4	FAULT ZONE - Broken core & solution cavities		155	
		$S_1 \mid S_0$ - 20° to C.A.			
	156.4 156.6	FAULT ZONE - Broken core			
1.0	158.0 158.3	FAULT ZONE - Broken core			
		$S_1 \mid S_0$ 5° to C.A.			
1.8	158.9 159.4	FAULT ZONE - Broken core & pug			
	160	Fault - pug.		160	
1.0	161	FAULT ZONE - Broken core and pug - core loss.			
1.2	164.2	q-veins to 164.6		164.15 164.6 165	Py 1-2 - vein (mass w. qtz veins)
1.3	165				
				166.45	5cm Py 5, f.g. syn Py. bed-rafted
1.3					
1.2					
3.0	170			170 170.5	1cm Py vein
				173.2	8cm Py 2 cg. in qtz vein
3.0	175			175	

5 cm

Feature Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein (F, c carbonate, q quartz)

Mineralization 099090

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
2.5	177.6	lithology - as above - dk. grey to black siltstone & shale w. thin grey f.g. quartzite interbeds.							
		FAULT ZONE - Broken core & pug							
.5									
.5	180							179.3	5cm py vein
1.0									
.25	181.8								
.35		FAULT ZONE - Broken core & pug.							
.3	182.9								
1.5	183.7	VT							
.2		Fault - broken core						184.65	
2.6	185	Lt. grey green sericitic lithic tuff-agglomerate 70-80% of the rock is composed of irregular often elongate vesicular lava fragments between 2mm and 1m. Fragments are highly sericitic, vesicles being filled with siderite, or dk. green sericite / chlorite. Blebs, veinlets are of siderite are common. The other component is blocks of grey green ves lava to 30 cm. thick. Cusps ⇒ blocks rather than flows.								
.3									
2.7	189.3								
	189.7	FAULT ZONE - Broken core.							
	190								
3.0	191.4	From 191.4m the volcanics become darker green in colour due to a dramatic increase in chlorite? content.							
		Fault - broken core						193.9	
3.0	195								
3.0	197.95								
	198.25	FAULT ZONE - Broken core							
	200								

5 cm

Feature Bedding, Foliation, Fragment size & shape; Shearing, Fault, Vein; F; c carbonate, q quartz

Mineralization 099091

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0		Fault - broken core						201.5	
	202.3	Fault - broken core, pug						202.29	
		Grey green sericitic lithic tuff and interbedded f.g. to c.g. tuff. Fault - broken core - 15° CA						203.2	
3.0		Agglomerate component no longer present. Weakly vesicular lithic component as above							
	204.3								
	204.6	FAULT ZONE - broken core							
	205							205	
	205.1	FAULT ZONE - Broken core - Low ∠ to C.A.							
	205.4								
3.0		The proportion of f.g. to c.g. tuff increases down the hole, ie there is a macro-grading down the unit, from agglomerate to f.g. tuff down the hole. Fault - // to C.A.						207.0	
3.0									
	210							209.9 210	3cm Py 60 q/c vein 35° to C.A.
	210.1	FAULT ZONE - broken core - fractures at low angle to C.A.							
	211.1								
3.0									
	213.4	← LOST DRILLING WATER.						213.4 213.55	15cm Py 80, c vein.
	215							215	
3.0									
		5 cm							
3.0									
	220							220	
3.0			1m sid					221.0 221.3 221.55 221.7 221.9	Py 1 - f.g. blebs + veinlets 1cm, Py 70 c. vein. Py 2-3 f.g. + blebs. Tr sp., Cp.
	223.0 223.2	FAULT ZONE - Poss. Low ∠ F.							
		223.7 - 15cm sid vein, 40° CA						223.7 223.9 223.95	Py 2-3 f.g. + assoc. w. c. veins
3.0								224.4 224.75	Py 10-12 (15) veinlets
	225							225	

Feature Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein (c carbonate, q quartz)

Hole No. G57 **Mineralization** 099092

Page No.10

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
		226·1 c vein 1cm 15° to c.A Fault - broken core - 30° c.A						226·1 226·3 226·7 227·4	Py ≈ 1 f.g. flecks + blebs in sid. rich volc.
3·0		5 cm							
3·0	230							230	
2·1		233·5 - 1cm c vein 18° c.A.							
	233·95 234·20	Black siltstone - S1/S0 35° to c.A.							
	234·75								
3·1	235	Grey green vesicular lava agglomerate in a black siltstone to grey f.g. quartzite matrix. Blocks to 30cm (av 3-5 cm) of coarsely vesicular lava in a massive to bedded black siltstone or grey quartzite matrix. Blocks & fragments show excellent cusps.						235 235·8	
6									
2·8	240	239·4 1cm c vein 30° to c.A 239·7 2cm c vein 40° to c.A						239·4 239·7 240	
	241·9	241·9 2cm c vein 60° to c.A						241·9	
	242·55	Med. grey bedded f.g. to m.g. micaceous quartzite S1/S0 - 5-10° to c.A.							Py as below
3·0		QS Interbedded black siltstone & grey f.g. micaceous quartzite - often contorted and fractured							Py 3-5 veinlets av 2-3mm. unoriented.
	245	245·25 - 1cm c vein 30° 245·45 - 10cm c vein 30°						244·25 244·4 245 245·3 245·45	Py 40 c.g. in sid-qtz fault breccia. Py 1-2 unoriented veinlets av 2 mm 8cm Py vein
2·8	245·85	Quartz siderite sulphide rock. Contains agate form open space silica fillings. c.g. cream sid. to 20-30. Fault Breccia?						245·85 246·05	Py 95 - qtz vein. 40° to c.A. Py 20-40 (60) c.g. assoc. w. c.g. sid & qtz.
	246·95	Fault - pug - 60 to c.A.						246·8 246·95	
3·0		Black Siltstone. - contains approx 5% subrounded to rounded siltstone & sym py. fragments 1mm to 3cm. S1/S0? - 35° to c.A. 247·9 - 5cm c vein 60°						247·9	Py 1-2 v.f.g. diss. & py. frag.
	249·6								
	250							250	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099093

Trace 1-5% Common 5-15% Abundant 15-60% Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG (TRACE / COMMON / ABUNDANT / MASSIVE)	DEPTH m	MINERALIZATION
.7	250.5	Grey brown pyritic siltstone - w. ≈ 5-10% siltstone clasts to 3mm and 1cm. Sa/So 20° to c.A.		250.5	Py 15-20% f.g. syn. py. in bedded py. silst
	251.0	Lt. grey dolomite - weakly brecciated - diagenetic?		251.0	Py v. rare
2.3		Grey locally pyritic dolomitic siltstone. - Dolomitic interval containing subrounded to rounded siltstone clasts all 5cm (1mm to 3cm). Bedded 30-45° to c.A.		252.6	Py 2-3 v.f.g. syn. py. diss & clasts. tr. vein.
	253.35			252.95	Py 10-15 - v.f.g. syn py diss in py dol.
2.9		Lt. grey weakly brecciated dolomitic siltstone The interval is distinguished by the early? brecciation of the rock with stylolitic features traversing the rock. Silt is a lge. component of the interval.			252.95 - 263.75 - Py v. rare
	255			255	
	255.4	FAULT ZONE - Broken core			
	255.8				
	256.75	Silicified grey dolomite - pervasive silica flooding assoc. w. minor brecciation			
	257.35				
	257.6	Lt. grey dol. as above.			
3.0		Med. grey massive dolomite - weakly to moderately veined by white sil? veins av 2mm thick. These are unoriented and stockwork in nature.			
	260			260	
	260.45				
	260.6	FAULT ZONE = Healed Fault breccia			
3.0		Fault breccia - 60° to c.A.		261.5	
1.8					
	263.5	Vein of cream grey sil. 80% & grey qtz 30 - 30-45° c.A			
	263.75	Weakly to extensively silicified dolomite? grading downwards to carbonate rich f.g. tuff		263.75	263.75 - 273.1 - Py 2-3 v.f.g. diss and thin veinlets.
1.2	265	Silicified grey dolomites appear to grade downwards to weakly silicified more granular often carbonate rich fine grained tuffs? The first definite volcanic material is vesicular fragments at 271.8m.		265	
3.0		5 cm			
	270	← silicification decreases.		270	
3.0	270.1	FAULT ZONE = Broken core - Shallow ∠			
	270.3				
		Fault - broke core - // c.A.		271.2	
	273.1	Fault - 20°? to c.A.		273	Py 3-5(10)% f.g. py. diss in carb. rich tuff
3.0		Lt. grey green sericitic locally extremely carbonate rich lithic tuff - agglomerate			
	275	Fault - // to c.A - broken core		274.3	

5 cm

Feature Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099094

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
3.0		Lithology - as above - Lt. grey green sericitic locally carbonate rich lithic tuff - agglomerate.		277.1	273.1 - 281.4 (approx) Py 2-3 (10) v.f.g. Py diss & as v.f.g. rimming (replacing) lithic fragments.
			Sil. Vn.	277.4	
		1cm c. vein - 60° c.A.		277.8	
		1cm c vein - 80° c.A.		278.4	
3.0		10cm c. vein - 40° c.A.		279.35	
	280			280	
		3 - 1cm c veins 70° to c.A.		281.0	
		Fault - broken core - 40° c.A.		281.3	
3.0				281.4	281.4 - 309.4 - Py trace (1-2) as v.f.g. Py. rimming lithic fragments.
	285			285	
3.0					
3.0	290			290	
3.0		Fault - broken core.		293.2	
	295			295	
3.0					
3.0	300			300	

5 cm

Hole No. G57 Page No. 13

Feature Bedding Foliation Fragment (size & shape) Shearing Fault Vein (F, c carbonate, q quartz)

Mineralization 099095

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
		Lithology - as above - Lt. grey green sericitic & carbonate rich lithic tuff.-agglomerate.							
		1cm c. vein // to c.A						301.6	
3.0									
	305							305	
3.0									
		END OF HOLE							
	307.4								
	310							310	
	315							315	
	320							320	
	325							326	

5 cm

ABERFOYLE

DRILL HOLE RECORD

Location QUEEN HILL | Property QUEEN HILL | District ZEEHAN | Bearing (M) 100·5° | Hole No G58

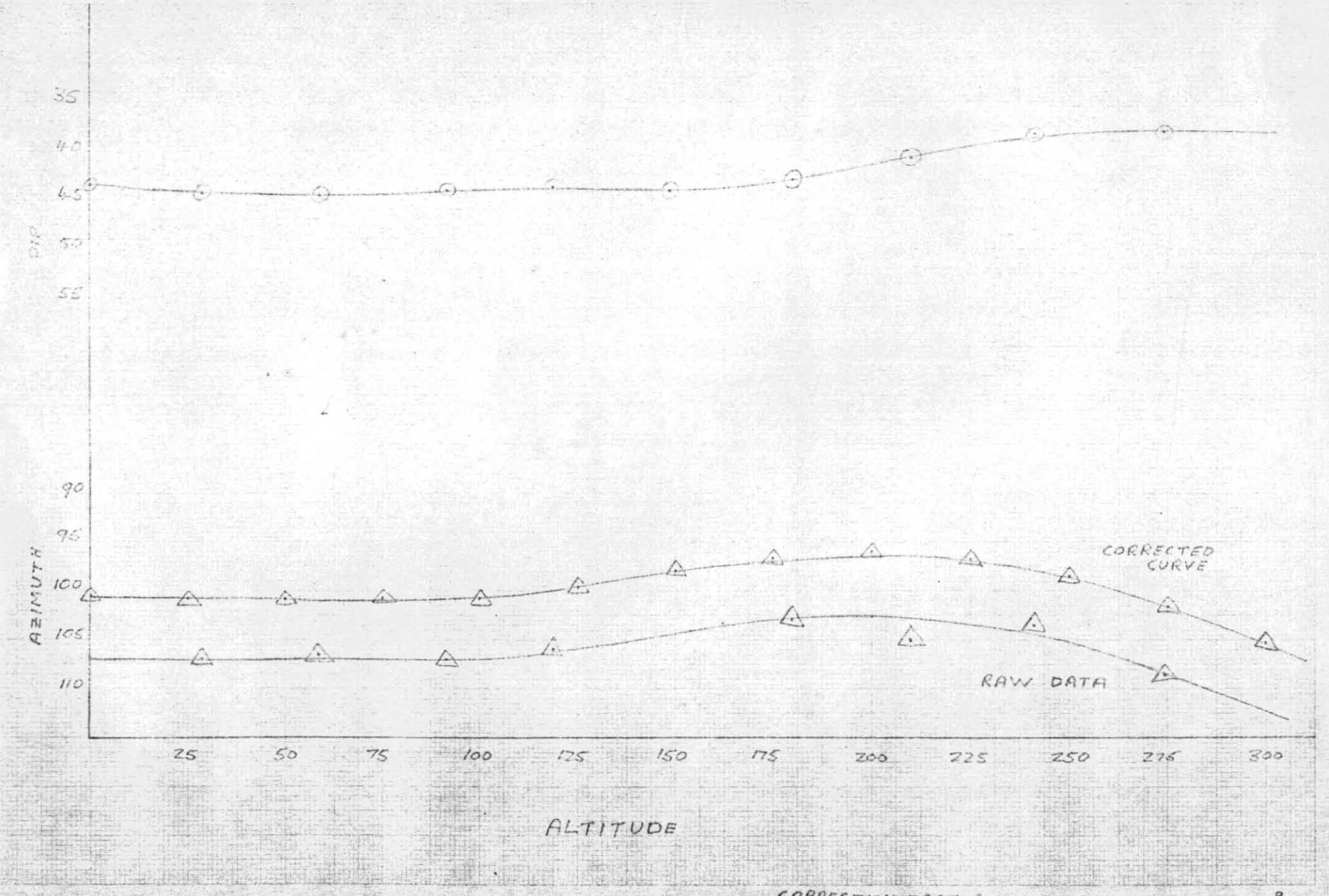
Commenced 11/1/80 | Completed 5/2/80 | % Recovery 87 | Grid bearing (M) −11·25° | Date 24/2/80

Objective To test attractive stratigraphy and coincident I.P. and geochemical anomalies. | Core size HQ TO 20·7M NQ TO 72·7M BQ TO 292 M | Logged MGT

Co-ordinates 5362160·53N 360613·07E | Dip 43·3° | Alt./R.L. 189·84

SURVEY DATA				GRAPH DERIVED DATA			CALCULATED CO-ORDINATES			REMARKS
DEPTH	DIP	BEARING(M)	INSTRUMENT TYPE	DEPTH	DIP	BEARING(M)	NORTHING	EASTING	ALTITUDE	
28·6M	44·25	107°	EASTMAN	0 M	43·3	100·5	5362160·53	360613·07	189·84	
59 M	44·5	106·5	"	25	44	100·75	2153·79	629·86	172 58	No significant In mineralisation
91·6M	44	107	"	50	44·5	100·75	2147·08	646·46	155 14	
119 M	43·75	106	"	75	44·5	100·75	2140·40	662·99	137 62	
149 M	44	CAMERA IN RODS	"	100	44	100·75	2133·69	679·60	120·17	
179M	43	103	"	125	43·75	99·75	2127·05	696·36	102·34	
210M	42·75	105	"	150	44	98	2120·89	713·28	85 52	
241M	38·25	103·5	"	175	43·25	96·6	2115·13	730·44	68·27	
274·6M	38	108·5	"	200	41·5	96	2109·57	748·04	51·42	
EOH	292M			225	39·5	96·75	2103·81	766·16	35·19	
				250	38·25	98·5	2097·51	784·57	19·50	
				275	38	101·6	2090·37	802·39	4·06	
				300	38	105·4	2082·13	820·77	−11·33	

099666



CORRECTION FACTOR FOR CORRECTED CURVE = 0°
I.E. SURVEYORS AZIMUTH MATCHES CORRECTED CURVE

060909

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	grammes per Tonne SILVER	grammes per Tonne GOLD		SAMPLE No.
G58	109·40	-5·00									
	110·10			270							23842 7
	110·50			65							23842 8
	111·10			620							23842 9
	111·50			36							23843 0
	221·60	-5·00									
	222·20			265							23843 1
	222·40			26							23843 2
	222·60			4							23843 3
	223·80	-5·00									
	223·90			10							23843 4
	224·60			4							23843 5
	224·80			<4							23843 6
	225·80			14							23843 7
	226·80			8							23843 0
	227·80			<4							23843 1
	228·50			<4							23844 0
	229·80			6							23844 1

860660

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	grammes per Tonne SILVER	grammes per Tonne GOLD		SAMPLE No.
G58	230·20			10							23S442
	230·80			6							23S443
	231·20			4							23S444
	231·40			<4							23S445
	231·80			<4							23S446
	232·20			8							23S447
	232·80			<4							23S448
	234·20	−5·00									
	234·40			4							23S449
	235·00			130							23S450
	235·20			22							23S451
	236·00	−5·00									
	237·00			8							23S452
	235·00			<4							23S453

660660

Feature — Bedding, Foliation, Fragment (size & shape), Fault, Vein, g, F, c carbonate, q quartz

Hole No. G58 — Page No. 1

Mineralization 099100

Trace 1–5%
Common 5–15%
Abundant 15–60%
Massive >60%

CORE RECD	DEPTH m	GEOLOGY
0.7	0	Grey black, highly weathered (v. broken ground) conglomeratic mudstone – siltstone. Carbonaceous. On occasion contains fragments of light grey v.f. gr. mudstone probably pyritic. Brecciated layers are generally poorly sorted & rounded; frequently close packed
0.8	5	
0.4		
0.5		
0.3	10	
0.6		5 cm
1.3	15	11.0 → 20 cm conglomeratic bed; clasts ~90%
0.8		
0.9	20	
HQ / NQ 0.8		
1.4		bedding ~ 10–15° to c.a.
	23.5	
1.0	24.9	S Black carbonaceous siltstone, conglomeratic. Little evidence of bedding. Matrix supp. clasts ~5–10%
2.0	25	Lithology → see next page.

VISUAL LOG — TRACE | COMMON | ABUNDANT | MASSIVE

1cm

DEPTH m	MINERALIZATION
0	Py. rare. syn. frags.
5	
10	
15	
19.0	Py. 1 syn. in frags & bedc.
19.2	
19.9	Py. 10–15 f.gr. syn? & frags.
20	
20.2	Py. 1 syn. frags & dissem. blebs.
25	

Feature: Bedding, Foliation, Fragment (size & shape), Shear, Fault, Vein, c carbonate, q quartz

Mineralization 099101

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
1.9	25	Sh Black carbonaceous conglomeratic mudstone. clasts & fragmental lenses of lt. grey siltstone, Py. & (qtz). v. finely bedded ~ 5-10° c.a. Frags. appear to be moderately well rounded to subangular. comprise ~ 2-5 % ie matrix supported.			
1.0	27.1	Sh light grey v.f.gr. claystone. First 0.5 m completely fragmental ≤ previous lithology. Contains frags. Py.		27.4	Py. 5-7 syn. & frags.
2.1	29.1	Sh Black carbonaceous conglomeratic mudstone. contains fragmental py. slst. with slst/cst. intercalations and beds. 29.5 → 10 cm fragment slst.		29.0 29.6	Py. 5-8 syn. & frags.
	30			30 30.2	
	30.4	Broken core — fault			
1.9	30.7	This unit contains beds ≈ 20-30 cm thick of fractured lt. grey claystone at 32.2 ≤ tuffaceous m.gr. arenite 5cm.			Py. Frags up to 3cm.
	32.0	Broken & puggy core — fault zone	Py		
	32.6				
1.4		fragmental claystone bed. 33.0 33.2			
		proportion of clasts significantly higher & clasts larger.		33.6 33.9	Py. 6 syn. & frags.
1.5	35				Py. 3-5 syn. & frags.
				35 35.6	6x4 cm. py. frag.
2.4					
	37.6	Broken crumbled core — Fault Zone?		37.5	Py. rare
	38.2	Dol. clasts here > 50% of cong. mudstone.			
1.0	38.5	DOL Medium grey extensively qtz veined dolomite mudstone			
	39.3	SH Lithology as at 29.1 m			
0.6	39.8	QSI Thinly intercalated black micaceous sh. with light grey siltstone. Well bedded ~ 40 c.a.			
	40			40	
0.5					
				41.0	Py. 1-2 syn.
1.0		'Intercalations' are here qtzi (m.g.) ≤ slst. & micaceous black shale.			
0.2				44.0	Py. rare to trace
	45			45	
1.8		5 cm			
	47.2	Broken core — Fault Zone			
0.9	47.9				
1.6	49.6	Broken, crumbled core Fault Zone			
	50.0			50	

Feature — Bedding, Foliation, Fragment (size & shape), Fault, Vein, F, c carbonate, q quartz

Mineralization 099102 — Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
1.6 as before	50.6	Lithology as above - contorted bedding here. highly fragmental.	TRACE / COMMON / ABUNDANT / MASSIVE	50.6	Py. 5-10 syn. & frags. f. gr.
1.0	51.2	Broken & crumbled core - Fault Zone			Py. rare
0.6	51.6 / 52.2	Broken & crumbled core - Fault Zone?			
0.5				53.4	Py 2 syn. & frags
1.2	53.5 / 53.8	Crumbled core - Fault?	F		
	55			55	
1.3		Reasonably well bedded here ~ 10 c.a. several tuffaceous arenite beds 5-10 mm			
0.5	56.3	Broken & crumbled core, carbonate & qtz veining Fault Zone	F	56.4	Py. rare
1.2	57.2 / 58.0	FAULTED CONTACT (S) Black carbonaceous siltstone locally arenaceous, pyritic	F	57.9 / 58.0	Py. v.f.g. syn. 20
1.0					Py. rare
1.2	59.7 / 60	FAIRLY GRADATIONAL FROM PREVIOUS 0.5 m. (GS) Lithology as previous 58.0 - well bedded ~ 10-20 C.A. carb. siltstones, shales & qtzi. Pyritic.		59.8 / 60	Py. syn. 20 v.f. gr. bedded → 10 cm
				60.6	well bedded Py. syn v.f.gr. 15
1.5		5 cm		61.0	Py. v.f.gr. syn 1-2
0.4					
0.6					
0.8				64.4	
0.3	65		F	65	Py. rare
0.6					
0.7					
1.9	67.5 / 68.0	Broken, sheared core - Fault Zone? Probably less siltstone more argillaceous here			
0.6				68.7	v.f.g. syn Py. 5
1.5				69.3 / 69.9	v.f.gr. syn. Py. 40
	70			70	
1.2					
0.9				71.5	3cm qtz vein Py. 780
NQ / BQ					
2.2				72.1	Py. rare
	74.5	Interbedded black carb. shales & slst. with yellowish grey tuffaceous arenite variably grainsized. Dol. frags.			
	75			75	

Hole No. G58

Feature Bedding / Foliation / Fragment (size & shape) / Sheeting / Fault / Vein / F / c carbonate / q quartz

Mineralization 099103

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
3.0	75	Bedding is fairly contorted, on occasion parallels core axis Little or no tuffaceous component to arenites here.						75	Py. rare syn.
3.1									
3.1	80	Tuffaceous quartzarenites here						80	
3.1	85	Predominantly black carbonaceous (graphitic) shales minor siltstones & qtzi.						85	
	85.6	Last 0.5m m-gr. qtzarenite.							
2.5	87.9	Interbedded tuffaceous arenites & shales, extensive carbonate veining; brownish grey coloured, fragmental						87.0 88.3	syn. frag. Py. 1-2
	89.4	Black carb(pyritic) shales extremely contorted & fragmental							syn. Py < 1%
0.7	90	Lithology as at 75 m. Contorted bedded siltstone shales & qtzi. Fragmental.						90	
0.6									
2.5									
	94.6								
	95 95.1	Crumbled, sheared core — Fault Zone						95	
1.1									
1.6		5 cm							
3.0	100	Tuffaceous component here.						100	

Bedding
Foliation
Fragment size & shape
Fault
Vein
c carbonate
q quartz

Mineralization

099104

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE RECD	DEPTH m /100	GEOLOGY	VISUAL LOG	DEPTH m /100	MINERALIZATION
3.0		Lithology as above - QS fragmental contorted bedding predominantly qtzi & siltstone, light grey. Siderite, qtz veining common.		101.1	syn. & frag v.f gr-f.gr. Py. 1-2
2.9		yellow carbonate veining ext. 5 cm		104.0	syn. & frag f.gr. Py. 1.
1.3	105			105	Syn. Py. rare to trace
0.3	107.7	Broken & crumbled core - Fault Zone			
0.4	108.6				
0.2	108.8	Broken & crumbled core - Fault Zone			
0.4	107.9				
1.0	109.8	FAULTED CONTACT			
	109.9	Broken, puggy core Fault Zone		109.4	Py. f.g. vein & syn 1-2
1.6	110	SM Black carbonaceous conglomeratic sideritic mudstone Pyritic. Frags. py. sid. qtz. qtzi.		110	Py. 20 } Brecciated defined by Py. 40-50 } Py. (f.g.) & sid. vein network
		Fault Zone??		110.5	
0.9				111.1	Py. rare
0.6	111.7	S Black carbonaceous fragmental siltstone. Locally arenaceous.			
1.5	112.6	Brecciated zone defined by sid. vein network.			
	112.7			113.6	Py. syn. frags 1
1.9				114.0	
	114.8			114.7	Py frags 1-2
	115	SM Black, carb. cong. mudstone. Pyritic.		115.0	Sd. vein 20 cm Py. 50-55
	115.3	VT Off-white to yellowish brown andesitic lithic to coarse tuff. v.f. vesicles. Locally with s/st. intercalations.		115.2	
1.1	115.9	S Grey black well bedded carbonaceous siltstone Locally ~~sideritic~~ sideritic, containing < 2 mm tuffaceous layers particularly over first 0.5 m.		115.9	gal. specks << 1%
1.8				116.9	Py. syn, veins 2-3
	118.1	VT Olive green grey siliceous (sericitic) lithic tuff. Qtz veining common.		117.2	
1.2	118.3	S Lithology as at 115.9. Locally tuffaceous.			
1.5	120			120	
				121.1	1cm vein Py.
0.5	121.6				
0.7	122.0	Broken core, qtz, carb. veining - Fault Zone			Frags. Py rare
0.1					
1.7		Well bedded 10-15° c.a. arenaceous & argillaceous layers with siltstone new. Distinctly more arenaceous.			
	125	5 cm		125	

Hole No. G58 Page No.6

Feature Bedding, Foliation, Fragment (size & shape), Schistosity, Fault, Vein (c carbonate, q quartz)

Mineralization 099105

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE RECD	DEPTH m 125	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m 125	MINERALIZATION
0.4		Lithology as above: interbedded qtzi, siltstone & shale predominantly qtzi & shale here 80:20							Py. rare to absent.
0.6		Well bedded, weakly fragmental 30° c.A.							
0.5									
0.7									
0.4									
1.3									
0.4									
0.9	130							130	
0.3									
0.7									
0.5								131.9	1 cm f.g. syn Py.
1.3		possible younging ↓							
3.2	135							135	
	135.7	FAULTED CONTACT?							
		VT Grey-green v.f.gr. amygdaloidal lava? or v.fine tuff. chilled margins evidenced by smaller vesicles							
0.4		Lithology as prior 135.7. Dominantly f.-m.gr. well bedded, parallel lam. qtzi interbedded black sh., siltstone relatively minor.							
1.5	140							140	
0.5									
2.2									
3.0	145							145	
	MS4	VT Light greeny grey sericitic lithic to coarse tuff. Contact is gradational over 20 cm with dd siltstone & fragments.							
	146.3	VT Darker greeny grey sericitic lithic tuff.							
2.9									
	150							150	

5 cm

Hole No. G58 Page No.7

Feature: Bedding, Foliation, Fragment (size & shape), Fault, Vein (c carbonate, q quartz)

Mineralization: 099106

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE RECD	DEPTH m 150	GEOLOGY	VISUAL LOG	DEPTH m 150	MINERALIZATION
3.2		Lithology as above: grey green sericitic lithic tuff (frags < 30 mm); variably sized frags down to < 2 mm. Predominantly 10-30 mm. Minor siltstone-shale clasts moderately well rounded.			Py. rare
3.1	155			155	
1.5			sericitic		
0.4					
0.9					
1.7	160			160	
0.1					
0.8		5 cm			
2.9					
3.0	165			165	
3.1	167.8	cont'd Greeny grey-black moderately well rounded, poorly sorted volcanic conglomerate. Volcanic frags up to 5 cm. Black carb. mudstone matrix. Packing ie matrix percentage, variable.	numerous q/c veins		
	170		numerous q/c veins	170	
3.0				172.4	2cm Py 2 q vein
3.1	175			174.1	5 cm Py 1 q/c vein
				175	

Hole No. G58 Page No. 8

Feature Bedding, Foliation, Fragment (size & shape), Fault, Vein, g, F, c carbonate, q quartz

Mineralization 099107

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m 175	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m 175	MINERALIZATION
3.1		Lithology as above							Py. vare some specks Gn noted.
	176.2	M. grey green sericitic (carbonate) lithic tuff. carbonate/qtz veining common.							
3.0	177.3	Puggy qtz-carbonate veined core — Fault Zone							
	177.6								
1.7	180							180	
	180.2	Puggy & broken core — Fault Zone							
	180.6								
	180.9								
0.5		Broken, puggy qtz/siderite veined core — Fault Zone	EXTENSIVELY C-VEINED						
0.5									
0.4	182.3	M. grey green sericitic fine tuff — frags < 2mm.							
	182.7	FAULTED CONTACT							
3.1		TA lt. grey-green sericitic tuff agglomerate. Volcanic, minor siltstone, shale clasts & cement (matrix)							
	184.8								
	185	M. grey-green sericitic lithic tuff (coarse tuff)						185	
3.1									
	188.1	Sheared, puggy core — Fault Zone							
	188.5								
3.0		30 c.a. →							
	190	Lithology as above, textural: fine tuff.						190	
	190.3	Greeny-grey sericitic lithic tuff, locally coarse tuff. Contains angular frags. off-white coloured pumiceous material ~ 20-30 %							
3.1									
	195							195	
3.0									
0.7									
2.4		5 cm							
	200							200	

Bedding / Foliation / Fragment (size & shape) / Fault / Vein / c carbonate / c quartz

Mineralization 099108

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE / COMMON / ABUNDANT / MASSIVE	DEPTH m	MINERALIZATION
	200	Lithology as above			200	Py. rare.
3.0		5 cm				
3.1	205				205	
2.7	206.7	TA dark grey black-greengrey carbonaceous tuff agglomerate. Approx. 50% dark micaceous angillite component. bedding? ~20 C.A.			206.0	Py 3-4 m.g. bedded & vericle infillings.
	208.6	Broken, puggy, heavily q/c veined core - Fault Zone			208.3	
	209.6					
3.0	210				210	
	211.2	Broken core - Fault Zone				
	211.5	FAULTED CONTACT				
		VL Greeny grey sericitic lithic tuff.				
	213.0	Puggy, sheared core - Fault Zone				
2.9	213.3					
	214.3	VH Greeny grey sericitic tuff agglomerate. Contains large white pumiceous & vesicular frags.				
	215				215	
3.0						
					217.7	20cm Py1 c vein.
3.1	220				220	
	221.6	Black carbonaceous congl. mudstone.			221.6	Py 1-2 veins & frags. Sph traces.
	221.8					
	222.1	Grey-black heavily q/c veined dolomite.			222.2	Py 15 veins Sph 1 Gn 1 blebs.
1.4	222.3	Broken puggy core - Fault Zone Grey black pyritic siltstone			222.4	Py 50 sgn v.f.g → m.g. bedded
	222.6	light grey aphanitic dolomite mudstone			222.6	
						1 cm Py 8 Sph 1 c vein
	223.5					
1.1	223.8	Grey black pyritic siltstone-mudstone.			223.9	Py 50 sgn. v.f.g → m.g. bedded.
	224.7					Py 3 bedded v.f.g. → m.g. & veins.
	224.6	Green grey-black pyritic mudstone.			224.6	
	225	224.7-.8 interbedded siltstone & f.g. strz black-grey.			225	see next page

Feature — Bedding / Foliation / Fragment (size & shape) — Cleavage / Fault / Vein — c carbonate, q quartz

Hole No. G58 — Page No.10

Mineralization — 099109

Trace 1-5% — Common 5-15% — Abundant 15-60% — Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	MINERALIZATION
3.1	225	Lithology as above : contains bedded v.f.g. & disseminated f. → m.g. Py; ill-bedded dol.	Py. 50-60 bedded v.f.g → m.g. Py vein. Py 50-60 " " " "
	225.8	Grey green matrix supp. pyritic cong. mudstone. Poorly sorted, mod. well rounded clasts dol, Py, pumiceous volc, slst.	Py. 40 bedded, v.f.g → m.g. fragr.
3.0	228.4	Green - black pyr. siltstone.	Py 50 bedded v.f.g. → m.g.
	228.6	Lithology as at 225.8	Py 30-40 bedded v.f.g. fragr m.g.
	228.8	Greeny-black pyr. (carb.) siltstone.	Py 60-70 bedded v.f.g → f.g.
	230		
	230.2	Lithology as at 228.6; better sorted, coarser grained matrix.	Py 30 bedded v.f.g. dissem.
	230.4	as at 228.8	Py 50 " "
	230.7	as at 228.6	Py 20-30 bedded v.f.g → f.g. fragr. dissem.
3.2	231.2	Grey black gte veined dol.	Py. rare.
	231.4	Lt. grey, Poorly sorted, moderately well rounded matrix supported dolomite conglomerate. Dol. matrix, clasts. Arenaceous (dolomitic) interbeds.	Py 10 bedded, fragr. dissem.
	232.2		Py 4 bedded, dissem. fragr.
	234.2		
	234.4		Py 80-90 dissem. & bedded → m.g.
2.8	234.7	Mod. dk grey heavily veined (graphitic) ic carb. dolomite.	Py 20-25 bedded v.f.g → m.g.
	235	Broken, crumbled core - Fault Zone?	
	235.5		
	236.0		
	236.3	Broken, puggy core - Fault Zone?	Py. 50 bedded v.f.g. dissem. m.g.
	236.6	greeny grey pyritic dolomitic mudstone.	
1.9			
	237.9		10 cm Py 50 v.f.g. bedded. Py 50 " "
	238.2	Black carbonaceous siltstone. Parts contain clasts dol Py. (pyritic)	Py<1
1.5			
	239.3		10 cm Py 50 v.f.g. bedded 5 cm Py 40 v.f.g. bedded.
	240		
	240.1		Py 5 fragr. dissem.
3.2	241.2		Py 2-3 fragr dissem. & beds
	245		
3.1		5 cm	
1.6	246.2	Broken & puggy core - Fault Zone	
	247.5		
0.8	247.9	Broken & puggy core - Fault Zone	
	248.6		
2.0	249.1	Light grey dolomite mudstone.	
	250		

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099110

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE / COMMON / ABUNDANT / MASSIVE	DEPTH m	MINERALIZATION
2.0	250	Lithology as above			250	
	250.5	Black carbonaceous siltstone-shale. contains py. frags.			250.5	Py 1-2 <1 mm seds & blebs.
0.8						
2.2	253.4	Light grey qtz veined dolomite mudstone; carbonaceous.			252.4	Py. rare
1.1	254.5	Black carbonaceous pyritic shales. Locally contains dol. frags. Crumbled, puggy core = Fault.			253.7	Py 1-2 < 1 mm beds & blebs, frags.
	254.2					
	254.4					
	255				255	
3.0						
1.2	257.1	Broken, puggy, sheared core — Fault Zone				
	257.1	Light grey (carbonate rich) lithic tuff.			257.1	
1.3	260				260	Py. rare to absent.
1.9	261.4					
	262.0	Broken, puggy core — Fault Zone				
	262.1					
	262.6					
1.2	262.8	Light grey (carbonate rich) tuff-agglomerate. Contains black shale intercalations & dol. frags.				
3.1	265				265	
	265.2	Broken, puggy, weathered core — Fault Zone				
	266.9					
	267.1	Weathered core - Fault Zone?				
	267.8					
3.1					268.6	20 cm Py 1-2 blebs, discon. qtz vein.
0.4	270	extensively qtz veined.			270	
2.7						
		5 cm				
3.1	272.7	Lt. grey highly brecciated (tuffaceous) claystone. Extensive Veining.				
	273.8					
	275	Gradational contact - 0.5 m. see next page.			275	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099111 — Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive >60%

CORE REC'D	DEPTH m 275	GEOLOGY
2.1	275.2	Black carbonaceous pyritic shales.
2.4	277.3	Crumbled puggy core – Fault Zone
1.3	278.6	
	279.5	
	280	Crumbled, puggy core – Fault Zone
0.2		
0.3		
0.3	281.4	
3.0	281.6	Lt. grey-black fragmental (carbonaceous) siltstone. Contains black shale interpolations.
	283.7	Crumbled, puggy core – Fault Zone
	284.0	FAULTED CONTACT
		Black carbonaceous shale
	284.8	
2.5	285	Lt. grey v.f.g. dolomite mudstone - claystone.
	286.7	Black carbonaceous shale
	287.5	Lt. grey dolomite claystone; ext. qtz veined.
1.2	288.1	Black carbonaceous shale.
0.2	290	
0.0		
	292.0	EOH

DEPTH m 275	MINERALIZATION
275.2	Py 1-2 blebs, disem. with q veins.
280	
280.5	Py. vein
285	
285.6	1cm Py & c vein
287.9	5cm Py & qtz vein.
290	

5 cm

ABERFOYLE

DRILL HOLE RECORD

Location QUEEN HILL Property QUEEN HILL District ZEEHAN Bearing (M) Z80·2° Hole No G59

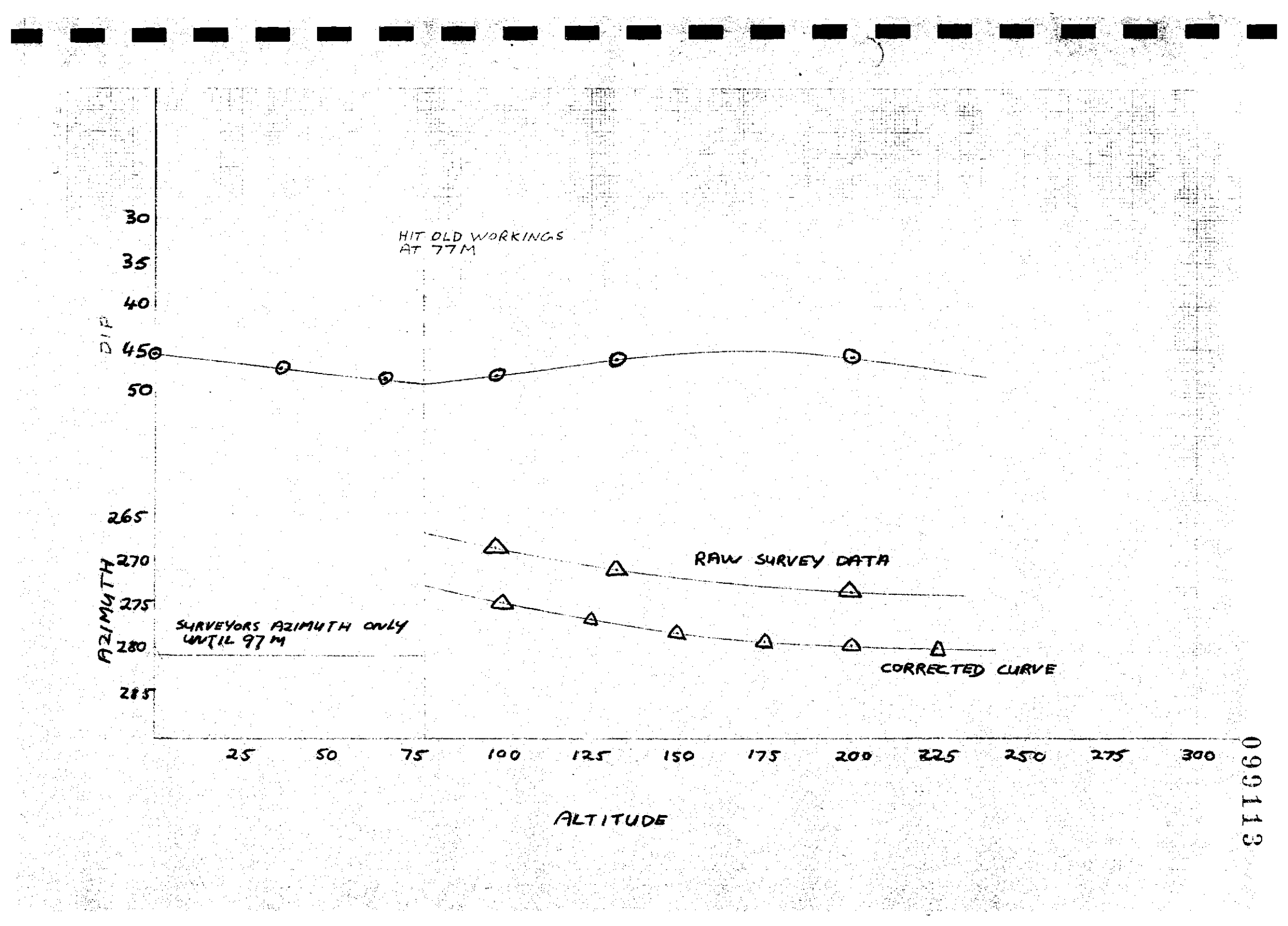
Commenced 17/1/80 Completed 11/2/80 % Recovery 70% Grid bearing (M) −11·25° Date 14-2-80

Objective To test attractive stratigraphy and coincident I.P. and geochemical anomalies in the Queen No 5. shaft area. Core size HQ TO 21M NQ TO 99M BQ TO 216M Logged S. RICHARDSON

Co-ordinates 5362366·38N 360727·77E Dip 45·5° Alt./R.L. 199·98

SURVEY DATA				GRAPH DERIVED DATA			CALCULATED CO-ORDINATES			REMARKS
DEPTH	DIP	BEARING(M)	INSTRUMENT TYPE	DEPTH	DIP	BEARING(M)	NORTHING	EASTING	ALTITUDE	
36M	47·25°	CAMERA IN RODS	EASTMAN	0M	45·5°	280·2	5362366·38	360727·77	199·98	
66M	48·5	"	"	25	46·75	280·2	2372·72	711·64	181·96	Ground in general very broken
97M	48	268	"	50	48	280·2	2378·91	695·89	163·57	69 m HQ & 99 m NQ casing used
132·6M	46·25	270·5	"	75	49	280·2	2384·96	680·47	144·84	18 m HQ & 35m NQ casing lost.
200M	46	273	"	100	48	274·25	2390·20	664·78	126·12	15 m of old workings (including
				125	46·75	276·1	2394·99	648·54	107·73	30cm ø of timber intersected from 77 m.
				150	45·5	277·75	2400·39	632·08	39·71	
				175	45·25	278·75	2406·26	615·53	71·91	No significant Sn mineralisation
				200	46	279·2	2412·30	599·12	54·04	
				225	47·5	279·5	2418 33	583·04	35 84	

09/1980


30
35
40
DIP
45
50
HIT OLD WORKINGS
AT 77M
265
270
275
AZIMUTH
280
285
SURVEYORS AZIMUTH ONLY
UNTIL 97M
RAW SURVEY DATA
CORRECTED CURVE
25
50
75
100
125
150
175
200
225
250
275
300
ALTITUDE
090113

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 | 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	grammes per Tonne SILVER	grammes per Tonne GOLD		SAMPLE No.
G59	95·40	-5·00									
	96·22	80	40	105	3600	7000		8·0			238334
	96·40	14	20	30	1600	50		3·0			238335
	97·40	65	20	95	1100	500		5·0			238336
	102·30	-5·00									
	102·50	360	260	1150	85000	70000		37·0			238337
* 30cm Core	104·90	-5·00									
Recovery.	107·50	360	140	245	39000	85000		34·0			238338

0911174

Hole No. G59 Page No.1

Feature Bedding, Foliation, Fragment size & shape; Shearing, Fault, Vein; c carbonate q quartz

Mineralization 099115

Trace 1-5% Common 5-15% Abundant 15-60% Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
·4		Black carbonaceous shale w. fragments and brecciated interbeds of lt. grey siltstone.							Py v. rare.
·6	5	Bulk of the rock is black carbonaceous shale containing approx. 5-10% lt. grey gen. massive siltstone clasts. These are subrounded to rounded and <1mm to 2cm; av. 3mm. They are often flattened in the cleavage and can be brecciated in nature.						5	
·5		Also occuring are beds of lt. grey siltstone up to 30cm. These are not common and are usually well broken up by sed.? deformation. Deformation is usually in the form of brecciation. clasts are angular to rounded in these beds.							
·8		Core is extremely broken to 40.5 m.							
	10							10	
2.5									
1.5	15	5 cm						15	
1.2									
·5									
·4	20							20	
HQ / NQ ·3	22.5	FAULT ZONE - cream coloured pug containing angular rock fragments.							
·5									
	24.3								
·4									
	25							25	

Hole No. G59 Page No.2

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein; c carbonate, q quartz

Mineralization 099116

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
·8		Lithology - as above							Py as above - v. rare
·6									
1·0	30							30	
·4									
·3									
	34·2							34·2	
1·1	35	Cream gray to dk gray siltstones c.g. siltstones showing evidence of sed. def. in the form of slumps etc are dominant.						34·7 35	Sp 10 in >2cm sid vein ≈ 10° to c.A. 34·2 - Py 10 over 2cm sid. vein.
	35·7	FAULT ZONE - c. healed breccia 65° to c.A.							
1·4	35·9	Med. gray to dk. gray siltstones dominate with cream grey interbeds av. few cms. Si/So av 20-30° to c.A. 34·2 - 4cm qtz-c. vein ≡ to fault? 34·7 - >2cm sid vein w. sp. 37·5 - 3cm c.vein 20° c.A.						37·5	
·5									
·4	40							40	
2·5	40·5	core is very broken to this depth - may be associated with faulting in part.							
	43·8							47·1	
1·5	45	43·8 - 52·1 m FAULT ZONE? 5cm recent. sid? Broken core & pug.						45	
·5									
·6	50	5 cm						50	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099117 — Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	MINERALIZATION
·8	51·9	Lithology - as above.	Py as above - v. rare
1·1	52·1	Cream grey siltstone - massive siltstone - mudstone showing sed. brecciation.	
	53·4	Med grey siltstone - bedded 5.|30 - 40° to C.A.	
·8	54·4	Lt. grey green tuffaceous sandstone F.g to m.g. volc.? detritus in a massive tuffaceous rock. Mainly pug in fault zone.	
1·2	55		
	56·3	56·3 - 73·1 - FAULT ZONE? - broken core & pug in this interval is in part (at least) due to faulting.	
·8	60		
·5	61·7	Interbedded lt. grey to dk. grey siltstones	
·8		A sequence of generally med. to dk. grey siltstone, often massive, with thin often sed. deformed lt. grey mudstone laminations. This unit appears to grade downward into the unit below. Rounded quartzite pebbles appearing at ≈ 80 m.	
·5	65		
·9			
	70		
2·5			
	73·1		73 - 74·5 - q veins.
1·8	75		

5 cm

Hole No. G59 Page No.4

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099118 — Trace 1-5%, Common 5-15%, Abundant 15-60%, Massive >60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
·6	76·1								Py as above – v. rare
·2		FAULT ZONE? – Broken core. Core is very broken with substantial loss. 76·1 – 80·7m Black carbonaceous shale A very uniform highly carbonaceous rock: 77m – 78·5m – old workings including timber	old workings						
·4	80							80	
·8	80·6 / 80·7	Interbedded lt. grey to dk. grey siltstones Evidence of sed def. in form of cstt. & loro beds. & conglomeratic fragments (gen. rare).							
·8	82·5 / 82·9	FAULT ZONE?– Broken core							
2·5	83·6	Well laminated interbedded f.g. quartzite & dk. grey shale grading downwards to interbedded lt. grey & dk grey siltstones – A well laminated interval on the scale of ≈ 1 cm. with a good layer parallel fabric. Si/So is constant around 40–50° to c.A. – lt. grey f.g. micaceous quartzite bands. – Dk. grey well foliated shale, generally carbonaceous.						85	
1·2	85								
1·2									
·8									
1·9	90	lt grey f.g. quartzite replaced by lt. grey siltstone at ≈ 90·8m.						90	
3·0		5 cm							
3·0	95 / 95·4	Black carbonaceous conglomeratic shale. – description as below 96·0 – 5cm c vein – brecciation						95 / 96·0	
	96·22 / 96·4	Lt. Grey recr. bedded sid. dol. w. banded & bleb. pyrite						96·22 / 96·4	Py. 20 as bands // to bedding av. 3mm thick. Bands are discontinuous and connect with crosscutting veins & blebs. Py is fg.
2·0	98·2	Black carbonaceous conglomeratic shale Highly carbonaceous rock w. frag (gen rounded) of lt. grey siltstone. Frag 5-10% FAULT – Broken core – 25° to c.A. 97·95 – 2cm sid & qa ven. 20° to c.A. FAULT – Broken core – 30°? c.A.						97·6 / 97·95 / 98·2	2cm Ga Py, c vein
NQ BQ ·9	100	Interbedded black carbonaceous shale & lt. grey siltstone–mudstone & minor dolomite. lt. grey often sed. def. siltstone beds to 30 cm. Locally recr. dol. to 20cm.						99·4 / 100	

Hole No. G59 Page No.5

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099119

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
2.0	100.6	FAULT ZONE - begins approx - 99.3m - broken core. Lithology - as above 102.3-102.5 - c, sp vein 45°?						102.3 102.5	Py as above - v. rare sp 10 e.g. in c vein
.5	102.7 ≥104	FAULT ZONE ? - Broken core. med grey coarsely crystalline siderite rock - grades down into siltstone.							
.02	104.9 105	Fissure lode material ? Coarsely crystalline siderite with approx 10-15% sp and 2-5 Ga as blebs & veins. Very poor core recovery.						104.9 105	sp 10-15 blebs & veins, Ga 2-5 assoc. w. sp. Cream siderite (coarse grained) is the host material.
.06									
1.4	107.5 107.7	Lt. green grey to dk green grey sericitic and carbonate rich lithic tuff. The basal 50cm of this unit grade from fine lithic tuff downwards to f.g. bedded tuff. Fragments - angular to subrounded, 80-90% of rock, 1mm to 3cm, sericitic and vesicular (weakly) matrix - ≤10% often locally siderite rich. - gen - sericitic. No fabric. Rock contains numerous thin unoriented c. veins, not? siderite - white crosscutting cream siderite veins.						107.5	
.8	110							110.0 110.1 110.2	Ga 5-10 blebs in c vein 10cm.
2.1								110.75	
2.0		114-15 - 10cm ga. c vein						114.15	10cm Ga 5-10 c vein sp + trace.
.8	115							115	
3.0	118.75	115.8 - 1cm c vein 20° to c.a. lt grey bedded f.g. silty quartzite with minor thin lt. grey siltstone interbeds - bulk of the interval is a close to massive quartzite.							
3.0	117.8 118.2 120	med. grey silty lithic tuff. - f.g. lithic tuff w. silty matrix - 5/50 sp 10cm silty lithic tuff. Well laminated interbedded lt. grey f.g. micaceous quartzite and lt. grey to dk. grey siltstone / shale Well laminated QS 5 cm						120	Py trace < 1% as v.f.g. (syn?) diss and py rich beds. also as occasional frag. in QS.
2.0	122.9	FAULT ZONE ? Broken core							
.3	124								
	125							125	

Hole No. G59 Page No.6

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099120

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
2.5									Py trace - as above
3.0		c vein 60° to c.A. 1cm						127.95	
.85	130	c vein 30° to c.A. 1cm.						130	
3.0		130.5 - Fault - broken core	F					130.2 130.5	
		c vein 90° to c.A 1cm						132.3	
3.0	135							135	
.8								136.14	
.9									
.7		c vein 80° to c.A. 1cm.						138.4	
	139.0 139.2	FAULT ZONE - Broken core							
.6	140							140	
1.0		c. vein 50° to c.A. 1cm.						140.9	
2.8		5 cm							
.4	145	2cm c vein 20° to c.A. 1cm c. vein 30° to c.A.						144.8 145 145.35	
.8	145.9	FAULT ZONE Broken core & qtz. veins.							
	147.7								
2.4		3cm c, gy, sl. vein 40° to c.A.						148.9	3cm ga 30 sp 30 c vein
	150							150	

Feature Bedding, Foliation, Fragment (size & shape), Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099121

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	DEPTH m	MINERALIZATION
		Lithology - as above - well laminated interbedded lt. grey f.g. micaceous quartzite and lt. grey to black siltstone/shale.		150.6	Py trace - as above
2.3					
.3	152.3	FAULT ZONE? Broken core, loss & qtz seinlets			
	153.4				
3.0	155	MISSING CORE BLOCK ??	1cm. q vein 25° to c.A. 1cm q vein 60° to c.A.	154.5 155	
1.5			20cm q veins 1cm q vein 45° to c.A. 1cm q vein. 2cm q vein 45° to c.A. 2cm q vein // to c.A. Fault - plug - 50° to c.A.	157.6 157.9 158.4 158.5 158.7 159.05	
.7	160			160	
.8					
1.5					
.8		5 cm			
.3					
1.2	165			165	
	165.3	FAULT ZONE - Broken core & q/tz veining			
.5					
.5					
.3					
.4	168.5				
1.0		Numerous thin quartz veins. unoriented		170	
3.0	170	Thin q/tz veins. unoriented c vein - 2cm.		171.1	Trace ga, sp in c. vein.
3.0		1cm q vein 60° to c.A. 3cm q vein. 60° to c.A.		173.2 173.6	
	175			175	

Feature Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099122

Trace 1-5% Common 5-15% Abundant 15-60% Massive >60%

CORE RECD	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
2.0		Lithology - as above - well laminated interbedded lt. grey f.g. quartzite and lt. grey to black siltstone - shale.							Py trace - as above
1.2	177.9	Grey fragmented dolomite assoc. with dk. grey siltstone and f.g. grey quartzite beds.						177.9	177.9 - 182.0 - Py v. rare.
1.1	179.6	Lt. grey bedded dolomite w. minor lt. grey qtzite blebs. s/s 45° to c.A. 5cm Py. mudstone xbd.						180	
	180	Lt. grey c.g. tuff. - sericitic & carbonate rich.							
	180.3	Lt. grey bedded dolomite w. minor black siltstone. s/s 45° to c.A.							
3.0	181.0	Cream grey fine lithic tuff. - sericitic, weakly vesicular fragments.							
	181.6	Interbedded f.g. grey qtzite & dk. grey siltstone. w. minor dolomite						182.0	
.6	182.0	Lt. grey green sericitic lithic tuff with rare fine agglomerate 80-90% of rock composed of grey green vesicular lava fragments. These are angular irregular in general and av. 1cm. (1mm to >5cm). Vesicles gen. filled with dk. green chlorite or cream carbonate. Matrix of similar composition, locally very carbonate rich. Weak fabric defined by the p.o. of inequant fragments. Pervasive compaction of def?							Py trace (<1%) as f.g. rare flecks.
3.0	185			1m				184.6 185 184.9 185.7	
	187.7	FAULT Fault // to c.A. causing broken core							
3.0	188.6	1cm q/c ~30° to c.A.						189.0	
	190	5 cm						189.9 190	
3.0		1cm q vein ~25° to c.A.						193.6	
1.4	195							195	
2.9		Fault - broken core Fault - broken core 1cm q/v ~ 30° to c.A.						195.8 196.3 197.4	
	197.5	FAULT ZONE - Broken core & pug							
1.5	199.5	qveins to 200						200	
	200								

Hole No. G59 Page No. 9

Feature Bedding, Foliation, Fragment (size & shape); Shearing, Fault, Vein (c carbonate, q quartz)

Mineralization 099123

Trace 1-5%
Common 5-15%
Abundant 15-60%
Massive > 60%

CORE REC'D	DEPTH m	GEOLOGY	VISUAL LOG	TRACE	COMMON	ABUNDANT	MASSIVE	DEPTH m	MINERALIZATION
		Lithology – as above – lithic tuff & rare aggl.						200.2	Py trace as above
		Fault – 20°? to c.A. broken core						201.1	
2.2	201.4	FAULT ZONE – broken core & pug 30-40° to c.A.?							
	201.8								
	202.8	FAULT ZONE – broken core & pug.							
	203.7								
	204.3								
2.5		FAULT ZONE – broken core + much fracturing & pug.							
	205							205	
	205.2								
	205.7	FAULT ZONE – broken core & pug.							
	205.9	Grey green coarsely vesicular lava.						206.0	
1.0		Interval bounded above by fault & below by qtz. ven. Massive lava containing local tuff intervals to 10 cm.						206.8	
		The interval contains numerous unoriented qtz±k. veinlets.							
3.0		Fault – pug – 10° to c.A.						208.7	
	209.2	2 cm q/v – 40° to c.A.						209.2	
		Fault – pug – 10° to c.A.						209.4	
		Fault – pug – 5° to c.A.						209.8	
	210							210	
1.1		Fault – pug – 5°-0° to c.A.						210.5	
	210.8	FAULT ZONE – pug							
	210.95								
1.7									
2.6									
	215	1 cm q/c vein 45° to c.A.						215.6	
	215.6	END OF HOLE							
	220							220	
	225							225	

5 cm

SURFACE GEOLOGY REFERENCE

Derwent Colour Pencil No.		
3	€qt	Massive light grey - buff quartzite
70	€mq	Flaggy micaceous quartzites in thin (< ½") beds
57	€st	Siltstones, carbonaceous in part } locally tuffaceous
68	€bs	Black shales and slates } locally tuffaceous
47	€vt	Spilitic tuff
	€va	Spilitic agglomerate
	€v	Spilitic lavas

py — Quartz pyrite, massive pyrite lodes

(py) — Bedded, disseminated, stringers, veins and clots

Outcrop boundary

F — Fault

Strike and dip

Schistosity with dip

Joint with dip

Minor folding showing plunge and trend

Fold axis showing plunge and trend

Diamond drill hole, collar location accurate

Diamond drill hole, collar location not accurate

Shaft

Pits or trenches

Adits

2200 — Topographical contours and interval

Road

Cleared area

5 cm

DRILL HOLE REFERENCE

3	Q	Massive quartzite
70	Qs	Thinly bedded quartzites / shales & slates
36	C	Chert
33	D	Dolomite
59	S	Siltstones (calcareous), (pyritic mudstone)
63	Sh	Black shale
46	Ts	Tuffaceous shale
47	Vt	Spilitic tuff
	Vb	Spilitic lava
12		Py ≥ 5% as veins
20		Py heavily disseminated to massive ≥ 10%
21		Po with or without Py, dissem. to massive
22		Gn and/or Sph and/or Stn. with or without Py as veins

ALTERATION

Sericite rich, locally sericitic	ser (ser)
Chlorite rich, locally chloritic	chlor (chlor)
Carbonate rich, locally carbonated	carb (carb)
Silicified, locally silicified	silic (silic)
Vesicular, amygdaloidal	vesic
Probable original character	siliceous
Bedding	
Cleavage, foliation	
Fault, unmeasured orientation	
Fault, measured orientation	
Fault Zone, unmeasured orientation	
Fault Zone, measured orientation	
Recrystallisation	
Sedimentary breccia	

Drill hole trace

Py 5(50)	Pyrite 5%, locally 50%
Py 5-10	Pyrite 5-10%
Gn 2	Galena 2%
Sph 5	Sphalerite 5%
Cpy 15	Chalcopyrite 15%
Ba 5	Barite 5%
q vein	quartz vein
c vein	carbonate vein
Si vein	Siderite vein

Drill hole trace

ROCK TYPES illustrated by code and colour on left side of drill hole plots.
Contact shown thus

Internal variations shown

1:500 SURFACE GEOLOGY INDEX TO SHEETS

360000E

	04/25	08/25	12/25
	04/22	08/22	12/22
00/20	04/20	08/20	
00/17	04/17	08/17	
00/15	04/15	08/15	
	04/12	08/12	
	04/10		

536 1000 N

099124

Geology traced from early Cominco drawings 7A-H dated March, 1972

Topography was traced from enlarged 1:1000 sheets supplied by Renison Ltd.
Geological data has been traced on a "best fit" basis.

80-1423-1/2

Aberfoyle Exploration Pty Ltd

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

NORTH WEST TASMANIA

QUEEN HILL

Geological Legend

To accompany 1:500 Surface Geology & Cross Sections

Location code:	
Date:	February, 1979
Scale:	
Plate No	QH 138

E.L. 47/71

ML 52 M 76
49M/76

ML 47 M 76
48M/76

MINOPS Oonah Lease

359,000 E

360,000 E

361,000 E

362,000 E

MONTANA

STORMSDOWN

QUEEN HILL

SEVERN

ZEEHAN

ML 43 M 76

ML 51 M 76
47M/76

Consolidated Lease 43M/73

50M/76
ML 48 M 76

52M/76
ML 50 M 76

51M/76
ML 49 M 76

S-W GRID

TRAMWAY GRID

MANGANESE HILL

Montana Section

G46 - G57 - G39 Section

BASE LINE

Reference Point

G59 G56 G58 G54 G55 G47 G46 G57

5,362,000 N

5,361,000 N

T.N.
GN
MN
19°10'
10°52'

G59 Exploration Diamond drill holes 1979-80 programme to date

CAMBRIAN
- O Ordovician and younger sediments
- C Crimson Ck Formation - Siltstones shale dolomitic sed. minor chert.

PRE CAMBRIAN — Oonah Quartzite & Slate
- S Bedded Quartzite, slate and shale
- Q Massive Quartzite
- V Basic Volcanics

N.B. Quaternary Sediments not shown

- Airborne magnetic anomaly (selected contours only)
- Fault - established
- - position approx.
- Geological boundary - position accurate
- - approximate
- - inferred
- Diamond drill hole
- Cleavage
- Schistosity
- Bedding with dip
- Joints
- Shearing
- Flow banding
- Road
- Track
- Creek
- Shaft
- Adit
- Tenure boundary
- >7% Pfe Dipole - Dipole I.P. 1978-79
- <7% Pfe
- A ∋ UTEM Survey
- >50 ppm Sn contour (Soil Geochem.)
- x 235 Mullock Sample ie not in situ
- • 153 Sample taken from outcrop

099125

Assays by XRF "Total Tin" uncorrected for mass absorption below 1000 ppm. with results in ppm unless otherwise stated.

5 cm

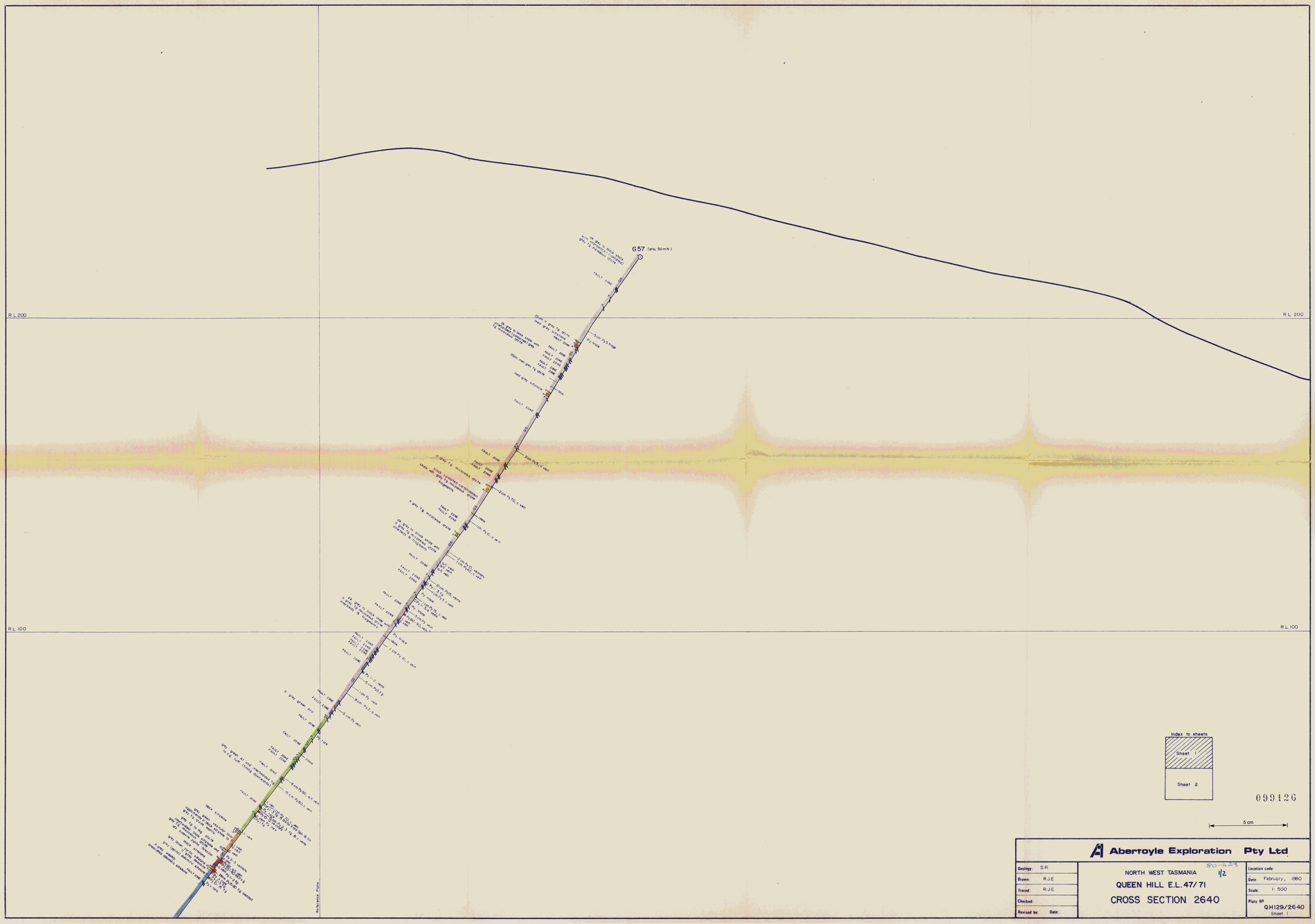
SCALE
100 0 100 200 300 400 500 metres

Aberfoyle Exploration Pty Ltd 80-1423 1/2

Drawn DCS		Traced RKY	
Checked			
REVISED R.J.E	DATE JULY, 1979		
Location grids			

NORTH WEST TIN FIELD, TASMANIA
QUEEN HILL, ZEEHAN AREA
SUMMARY PLAN
Geology after mapping by Aberfoyle and Blisset (1962)

Scale 1:5,000 | Date November 1979 | Plate QH 62



Index to sheets

Sheet 1

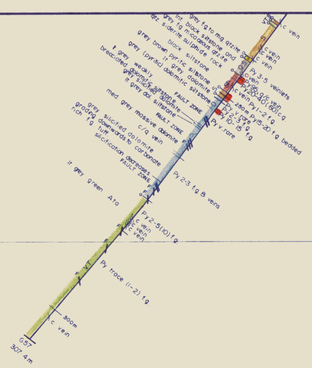
Sheet 2

099126

5 cm

Aberfoyle Exploration Pty Ltd

Geology: S.R.	NORTH WEST TASMANIA 50-1423 1/2	Location code:
Drawn: R.J.E.	QUEEN HILL E.L. 47/71	Date: February, 1980
Traced: R.J.E.	CROSS SECTION 2640	Scale: 1:500
Checked:		Plate No QH129/2640 Sheet 1
Revised by: Date:		



Index to sheets

Sheet 1

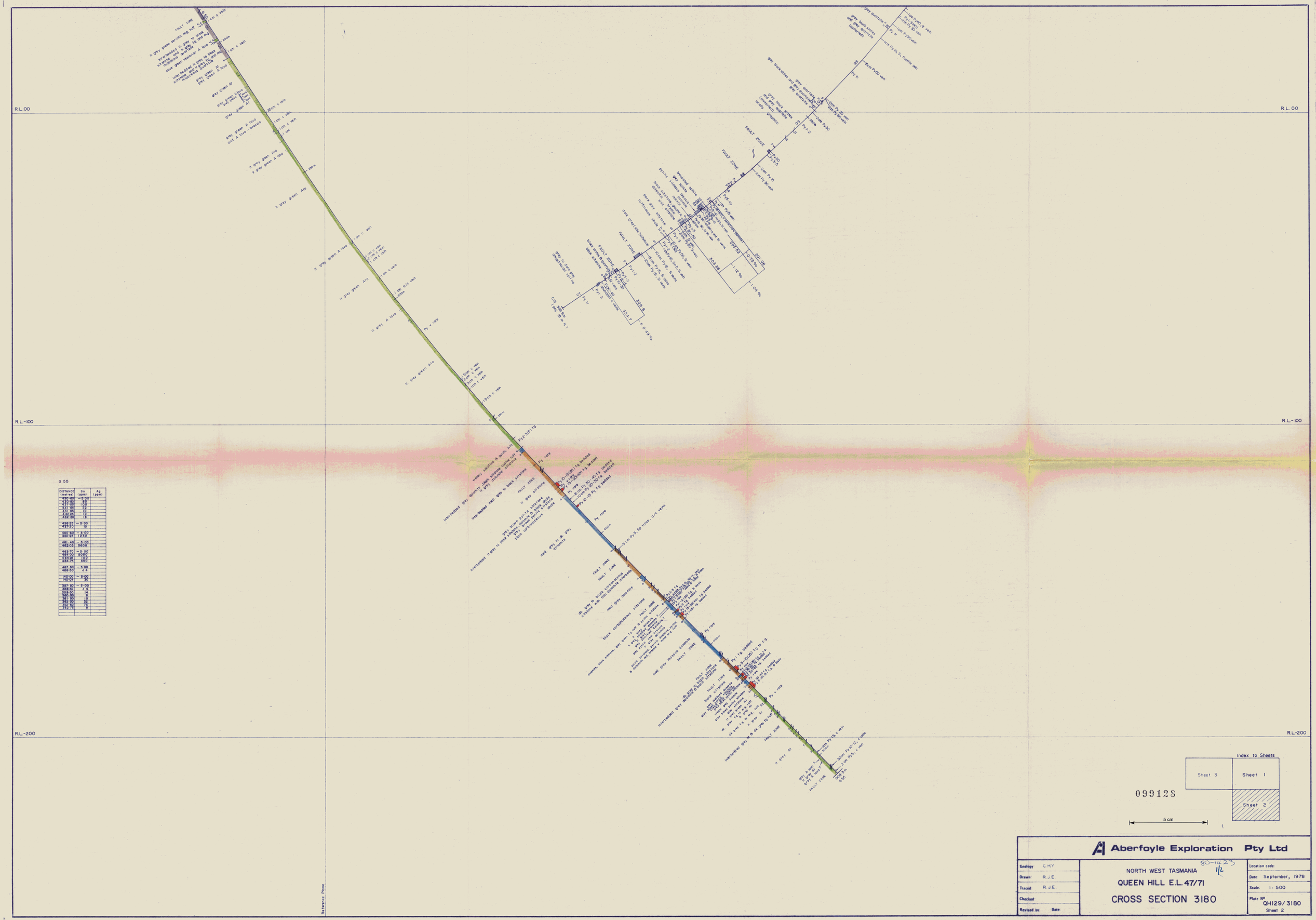
Sheet 2

5 cm

099127

Aberfoyle Exploration Pty Ltd

Geology: S.R.	NORTH WEST TASMANIA 80-1623 1/2
Drawn: R.J.E.	QUEEN HILL E.L.47/71
Traced: R.J.E.	CROSS SECTION 2640
Checked:	
Revised by: Date:	Location code:
	Date: February, 1980
	Scale: 1:500
	Plate No: QH129/2640 Sheet 2


R.L. 00
R.L. -100
R.L. -200
FAULT ZONE
grey green sericite mg tuff
grey green A lava
grey green A lava and A lava breccia
grey green A lava
grey green A10
grey A lava
grey green A10
Py rare
Py1-2
Py1-3
Py1-5
Py1-10
Py1-15
Py1-20
Py1-30
Py1-50
Py1-100
Py1-200
Py1-300
Py1-500
Py1-1000
Py1-2000
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Py1-5000
Py1-10000
Py1-15000
Py1-20000
Py1-30000
Py1-50000
Py1-100000
Py1-200000
Py1-300000
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Py1-50000

R.L.200

R.L.200

DDH G 55

grey green Alo

lt grey green Alo

lt grey green Alo fining downwards to fine tuff FAULT ZONE

interbedded med grey and black siltstone

1cm c vein

1cm c vein

F ZONE

F ZONE

F ZONE

F ZONE

F ZONE

med grey siltstone

crumbling grey siltstone

C veins

med grey uniform siltstone

interbedded lt grey to dk grey siltstone

1cm c vein

3cm Py 30 to B.Datts

2cm a/c vein

lt grey green Alt

dk grey silty fine tuff ?

interbedded lt grey to dk grey siltstones

grey green sericite fg tuff

lt grey uniform siltstone

interbedding lt grey and dk grey siltstone

lt grey to dk grey quartzite

med grey uniform siltstone

interbedded lt grey to black siltstone and lt grey to mg microcrenulated quartzite

FAULT ZONE

1cm a vein

lt grey green sericitic mg tuff

interbedded lt grey to black siltstone and lt grey to mg microcrenulated quartzite

olive green sericitic Alo

1cm c vein

interbedded lt grey to black siltstone and lt grey to mg microcrenulated quartzite

lt grey green Alt

Reference Plane

Index to sheets

Sheet 3

Sheet 1

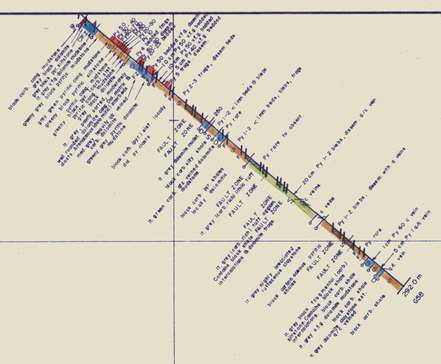
Sheet 2

099129

5 cm

Aberfoyle Exploration Pty Ltd

Geology: C.H.Y.	NORTH WEST TASMANIA 80-1423 1/2
Drawn: R.J.E.	QUEEN HILL E.L. 47/71
Traced: R.J.E.	CROSS SECTION 3180
Checked:	
Revised by: Date:	
Location code:	
Date: January, 1980	
Scale: 1:500	
Plate No QH129/3180 Sheet 3	



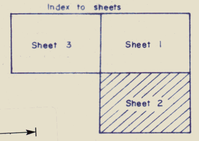
R.L. 00

R.L. - 100

R.L. - 200

Reference Plane

Index to sheets

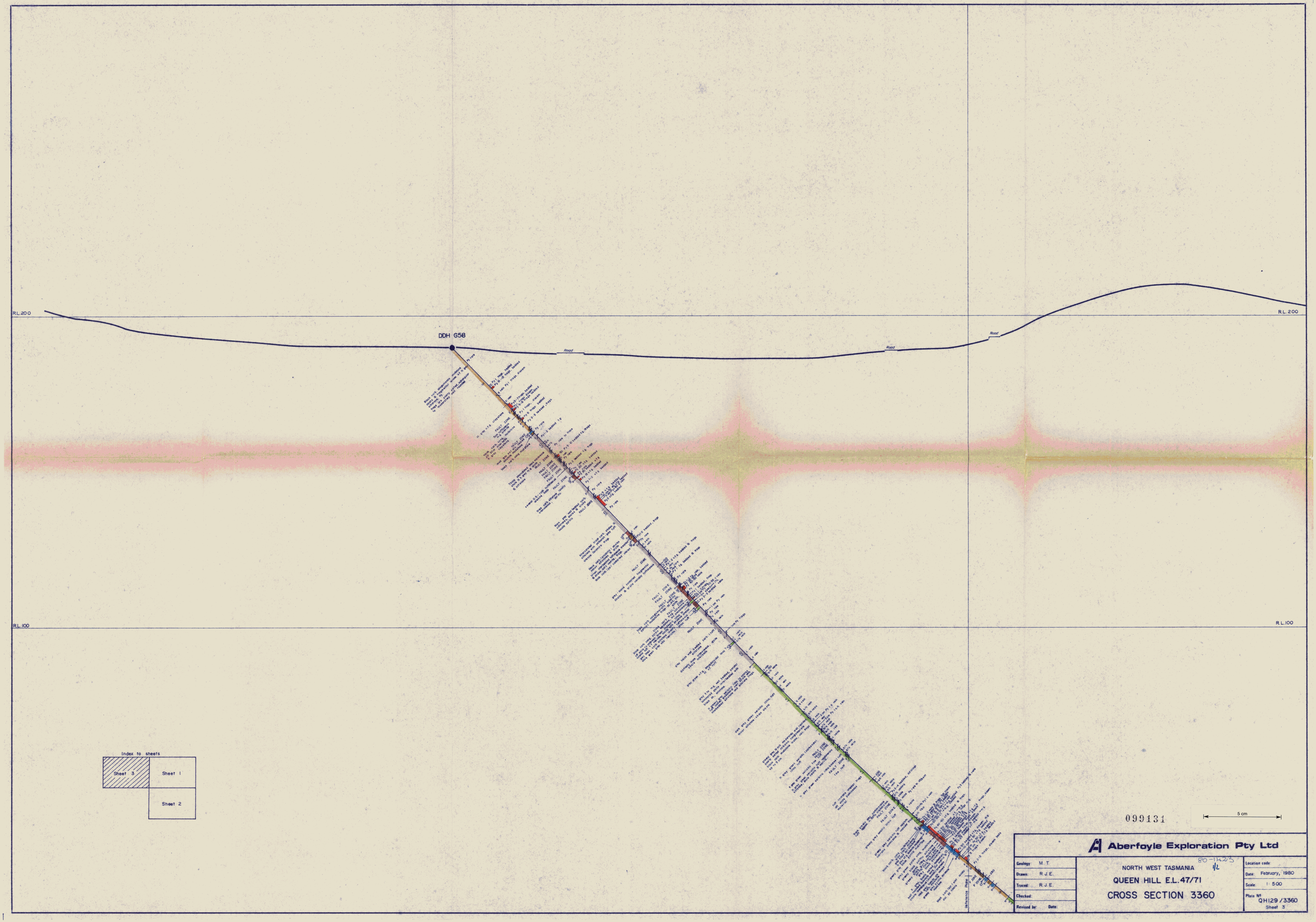


5 cm

099130

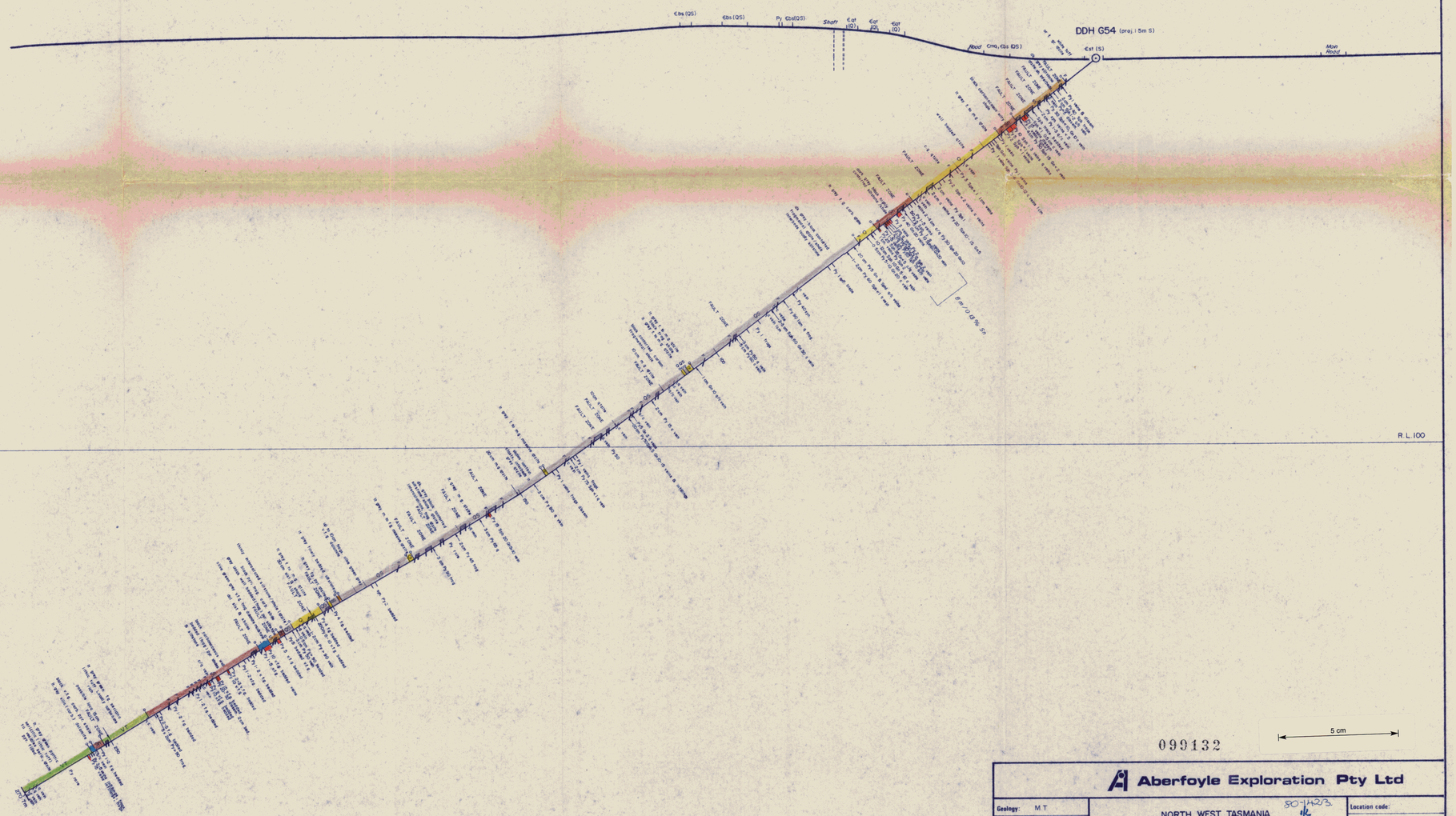
Aberfoyle Exploration Pty Ltd

Geology: S.R.	NORTH WEST TASMANIA 80-423	Location code:
Drawn: R.J.E.	QUEEN HILL E.L.47/71	Date: February, 1980
Traced: R.J.E.	CROSS SECTION 3360	Scale: 1:500
Checked:		Plate No QH129/3360 Sheet 2
Revised by: Date:		


R.L. 200
DDH G58
Road
Road
Road
R.L. 200
R.L. 100
R.L. 100
Index to sheets
Sheet 3
Sheet 1
Sheet 2
099131
5 cm
Aberfoyle Exploration Pty Ltd
Geology: M. T.
Drawn: R. J. E.
Traced: R. J. E.
Checked:
Revised by: Date:
NORTH WEST TASMANIA
80-1423
1/2
QUEEN HILL E.L. 47/71
CROSS SECTION 3360
Location code:
Date: February, 1980
Scale: 1:500
Plate No QH129/3360
Sheet 3

R.L. 200

R.L. 100


DDH G54 (proj. 15m S)
Cbs (QS)
Cbs (QS)
Py Cbs (QS)
Skarn
Cat (Q)
Cat (Q)
Cat (Q)
Basalt
Cmq, Cbs (QS)
Cat (S)
Moon Basalt
FAULT ZONE
FAULT ZONE
FAULT ZONE

RL 200

RL 100

Road

G56

Index to sheets

Sheet 1

Sheet 2

099133

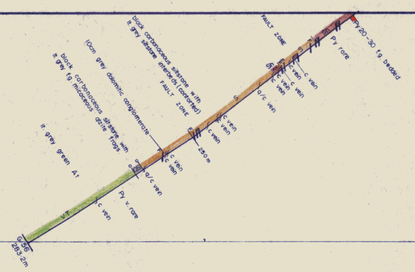
5 cm

Aberfoyle Exploration Pty Ltd

Geology: S. R.	NORTH WEST TASMANIA		Location code:
Drawn: R.J.E.	QUEEN HILL E.L. 47/71		Date: February, 1980
Traced: R.J.E.	CROSS SECTION 3480		Scale: 1 500
Checked:			Plate No QH 129/3480 Sheet 1
Revised by: Date:			

80-1423 12

Reference Plans





099134

5 cm

Aberfoyle Exploration Pty Ltd

Geology: S. R.	NORTH WEST TASMANIA		Location code:
Drawn: R.J.E.	QUEEN HILL E.L. 47/71	80-1423 ½	Date: February, 1980
Traced: R.J.E.	CROSS SECTION 3480		Scale: 1:500
Checked:			Plate No QH129/3480 Sheet 2
Revised by: Date:			

RL 200

DDH G59

RL 200

Coniang Road

RL 100

RL 100

099135

5 cm

Aberfoyle Exploration Pty Ltd

Geology: S. R.	NORTH WEST TASMANIA	Location code:
Drawn: R. J. E.	QUEEN HILL E.L. 47/71	Date: February, 1980
Traced: R. J. E.	CROSS SECTION 3600	Scale: 1 : 500
Checked:		Plate No QH 129/3600
Revised by: Date:		

50-1422

Reference Plans

099136

MICROFILMED

VOLUME 2

PROGRESS REPORT

QUEEN HILL JOINT VENTURE

E,L. 47/71 TASMANIA

QUARTER TO 31st MARCH, 1980

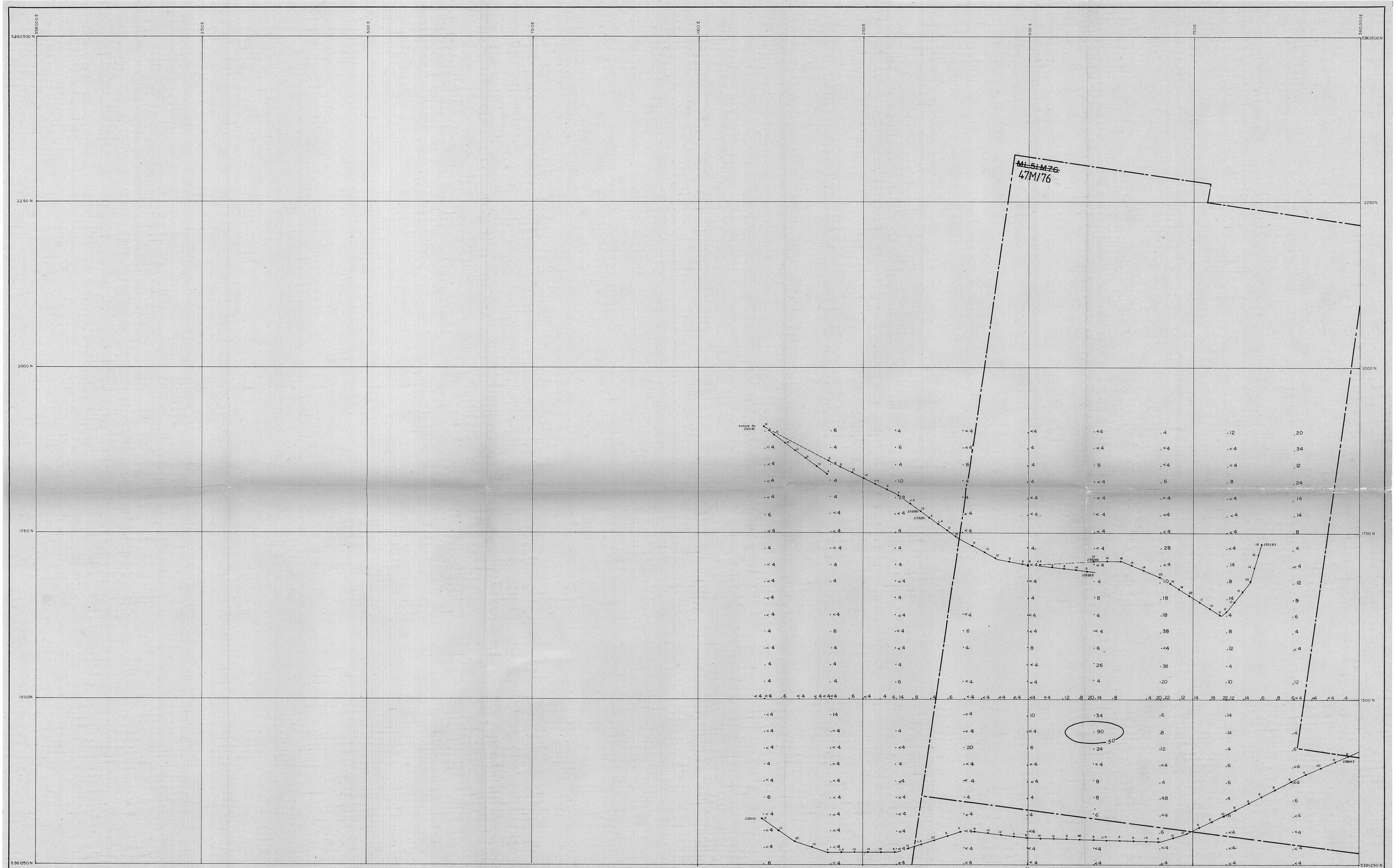
OPEN FILE

099137

LIST OF PLATES - VOLUME 2

Plate No.	Title	Scale
QH 134/80/12	Queen Hill - Tin Geochemistry	1:2500
QH 134/00/12	Queen Hill - Tin Geochemistry	1:2500
	Metasomatic Aureole Characterisation Composite Cross Section 3040 - 3080	
QH 140 (As)	As Geochemistry - Actual	1:1000
QH 140 (F)	F Geochemistry - Actual	1:1000
QH 140 (W)	W Geochemistry - Actual	1:1000
QH 140 (Rb)	RB Geochemistry - Actual	1:1000
QH 140 (Sn)	Sn Geochemistry - Actual	1:1000
QH 140 (Bi)	Bi Geochemistry - Actual	1:1000
QH 141 (As)	As Geochemistry - Enriched	1:1000
QH 141 (F)	F Geochemistry - Enriched	1:1000
QH 141 (W)	W Geochemistry - Enriched	1:1000
QH 141 (Rb)	RB Geochemistry - Enriched	1:1000
QH 141 (Sn)	Sn Geochemistry - Enriched	1:1000
QH 142 (As)	As Geochemistry - Smoothed Enriched	1:1000
QH 142 (F)	F Geochemistry - Smoothed Enriched	1:1000
QH 142 (W)	W Geochemistry - Smoothed Enriched	1:1000
QH 142 (Rb)	Rb Geochemistry - Smoothed Enriched	1:1000
QH 142 (Sn)	Sn Geochemistry - Smoothed Enriched	1:1000
QH 150	RL 220 Bench Level Geology Plan	1:250
QH 151.	Summary Map showing Ag/Pb Production : Zeehan	1 : 10,000.

(At End) Also Dept. of Mines Mineral Charts showing correct lease numbering.



5 cm

60/25	80/25	00/25
60/12	80/12	00/12
60/00	80/00	00/00

Index to adjoining sheets

Aberfoyle Exploration Pty Ltd

Geology:	NORTH WEST TASMANIA 50-1423 2/2	**Location code:**
Drawn: R.J.E.	QUEEN HILL	**Date:** June, 1979
Traced:	TIN GEOCHEMISTRY	**Scale:** 1:2,500
Checked:		**Plate No** QH 134/80/12
Revised by: R.J.E. **Date:** 19/3/80		

QUEEN HILL TIN GEOCHEMISTRY

NORTH WEST TASMANIA

Aberfoyle Exploration Pty Ltd

Geology	
Drawn	
Traced RKY	
Checked	
Revised RJE Date 19/3/80	
Location code	80-1423 4L
Date	June, 1979
Scale	1:2,500
Plate No.	QH 134/00/12

099139

NS - No Sample taken

Sn soil values in ppm, -80# fraction, analysis by XRF.

·20 Samples taken by hand auger up to 1m in depth.

°8 Samples taken by hand at depths between 5-15cm

Soil Samples taken along volcanic contact

G.N. M.N. 11° 14' 00"

Magnetic north (correct 1978 annual change easterly by 04')

SCALE metres 0 20 40 60 80 100 metres

5 cm

80/25	00/25	20/25
80/12	00/12	20/12
80/00	00/00	20/00

Index to adjoining sheets

49M/176
~~ML 52M 76~~

48M/176
~~ML 47M 76~~

Minops ML 35M 72

~~ML 54M 76~~
47M/176

~~ML 48M 76~~
50M/176

Consolidated Lease 43M 73

Oonah Hill

Queen Hill

Montana No. 2 Right Dam

No. 2 Montana Shaft

Queen No. 2 shaft

Queen No. 4 shaft

ADAMS STREET

TARLETON STREET

MAIN STREET

SEVEN STREET

TRENT STREET

EMMA STREET

WILSON STREET

3600000E 250E 500E 750E 1000E 1250E 1500E 1750E 3620000E

5362500N 2250N 2000N 1750N 1500N 5361250N

9400 E
9500 E
9600 E
9700 E
9800 E
9900 E
10,000 E

RL 200
RL 100
RL 00
RL -100
RL -200

G11, G12
G23
G28
G43 G39 G41
(G43)
(G39)
(G41)

117.4m
63.7m
265.2m
335.3m
292.5m
364.2m
358.5m

5 cm

099140

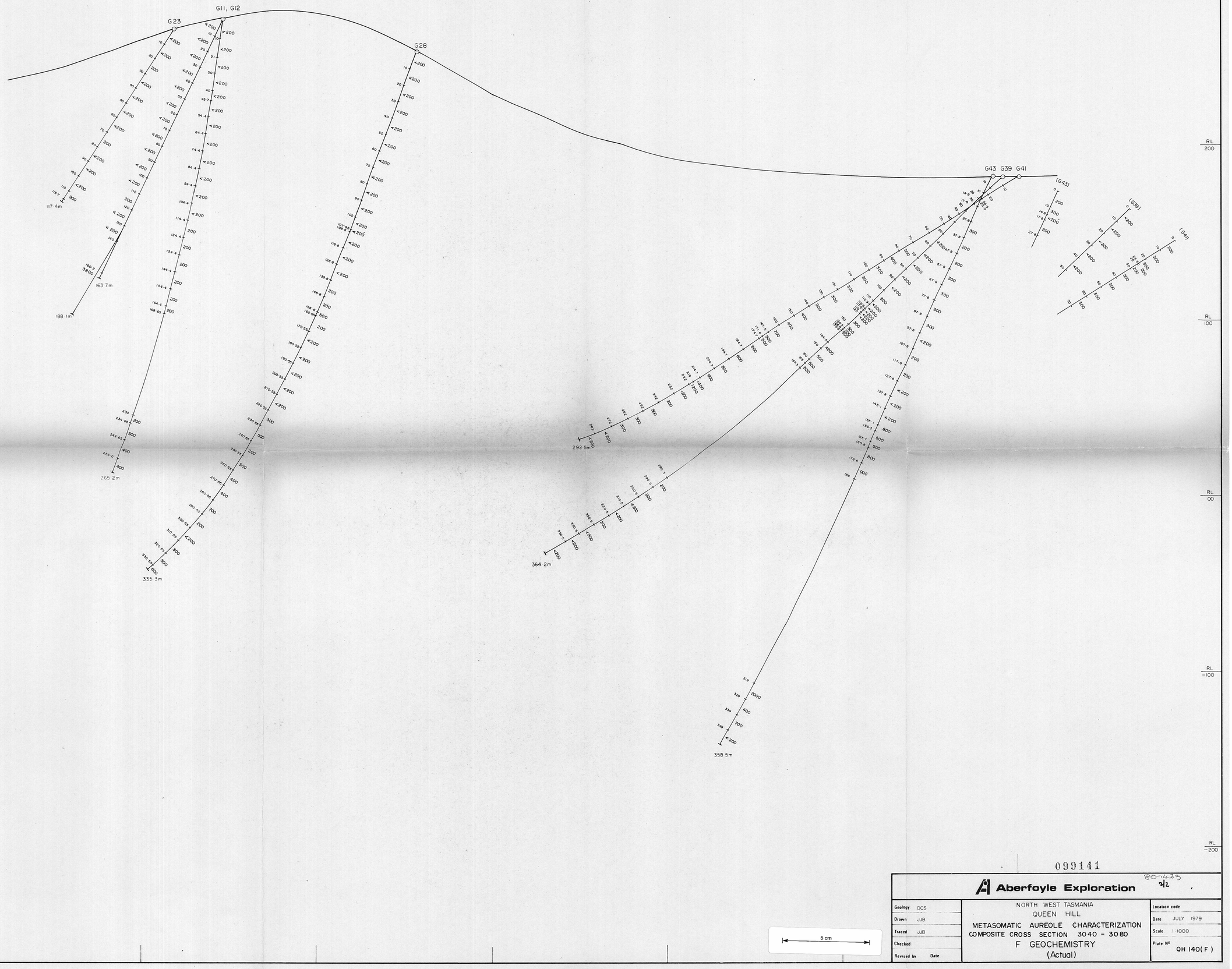
80-1423
2/2

Aberfoyle Exploration

Geology DCS	NORTH WEST TASMANIA	Location code	
Drawn JJB	QUEEN HILL	Date JULY 1979	
Traced JJB	METASOMATIC AUREOLE CHARACTERIZATION	Scale 1:1000	
Checked	COMPOSITE CROSS SECTION 3040 - 3080	Plate No	
Revised by Date	As GEOCHEMISTRY (Actual)	QH 140 (As)	

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10,000 E

RL 200 | RL 100 | RL 00 | RL -100 | RL -200



099141

80-1423
2/2

Aberfoyle Exploration

Geology DCS	NORTH WEST TASMANIA QUEEN HILL METASOMATIC AUREOLE CHARACTERIZATION COMPOSITE CROSS SECTION 3040 - 3080 F GEOCHEMISTRY (Actual)	Location code
Drawn JJB		Date JULY 1979
Traced JJB		Scale 1:1000
Checked		Plate No QH 140(F)
Revised by Date		

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10,000 E

RL 200 | RL 100 | RL 00 | RL -100 | RL -200

G11, G12 | G23 | G28 | G43 G39 G41 | (G43) | (G39) | (G41)

117.4m | 163.7 m | 188 m | 265.2 m | 335.3m | 292.5m | 364.2m | 358.5m

5 cm

099142

Aberfoyle Exploration

850423 2/2

Geology DCS	NORTH WEST TASMANIA QUEEN HILL METASOMATIC AUREOLE CHARACTERIZATION COMPOSITE CROSS SECTION 3040 - 3080 W GEOCHEMISTRY (Actual)	Location code
Drawn JJB		Date JULY 1979
Traced JJB		Scale 1:1000
Checked		Plate No QH 140 (W)
Revised by Date		

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10,000 E

RL 200 | RL 100 | RL 00 | RL -100 | RL -200

G23 | G11, G12 | G28 | G43 G39 G41 | (G43) | (G39) | (G41)

117.4m | 163.7m | 188.1m | 265.2m | 292.5m | 335.3m | 364.2m | 358.5m

5 cm

099143

80-1423
212

Aberfoyle Exploration

Geology DCS	NORTH WEST TASMANIA	Location code
Drawn JJB	QUEEN HILL	Date JULY 1979
Traced JJB	METASOMATIC AUREOLE CHARACTERIZATION	Scale 1:1000
Checked	COMPOSITE CROSS SECTION 3040 - 3080	Plate No QH 140(Rb)
Revised by Date	Rb GEOCHEMISTRY (Actual)	

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10,000 E

RL 200 | RL 100 | RL 00 | RL -100 | RL -200



099144

5 cm

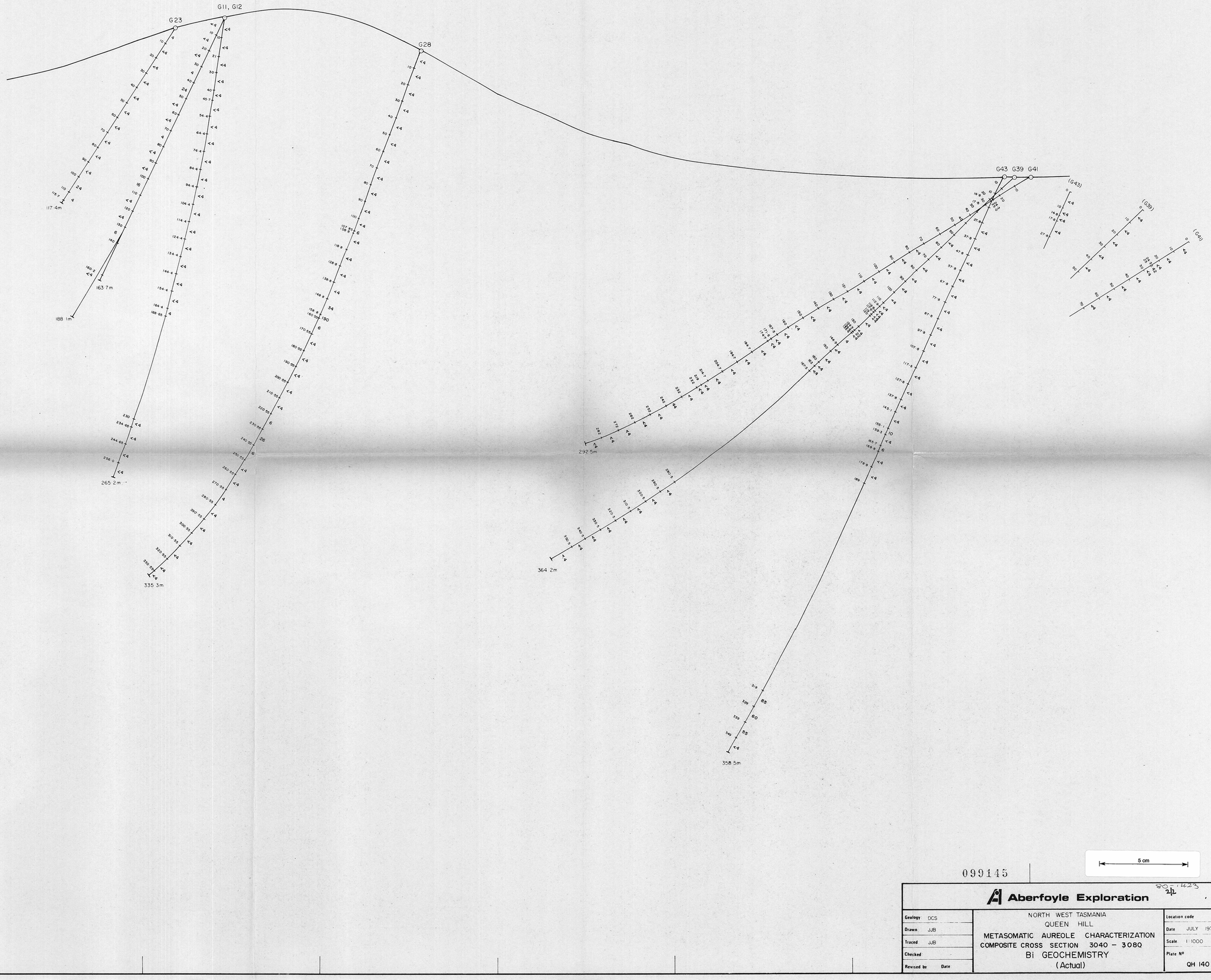
820-1435
2/2

Aberfoyle Exploration

Geology DCS	NORTH WEST TASMANIA QUEEN HILL METASOMATIC AUREOLE CHARACTERIZATION COMPOSITE CROSS SECTION 3040 – 3080 Sn GEOCHEMISTRY (Actual)	Location code
Drawn JJB		Date JULY 1979
Traced JJB		Scale 1:1000
Checked		Plate No
Revised by Date		QH 140 (Sn)

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10,000 E

RL 200 | RL 100 | RL 00 | RL −100 | RL −200



099145

5 cm

Aberfoyle Exploration

Geology DCS	NORTH WEST TASMANIA QUEEN HILL METASOMATIC AUREOLE CHARACTERIZATION COMPOSITE CROSS SECTION 3040 – 3080 Bi GEOCHEMISTRY (Actual)	Location code
Drawn JJB		Date JULY 1979
Traced JJB		Scale 1:1000
Checked		Plate No QH 140 (Bi)
Revised by Date		

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10,000 E

RL 200 | RL 100 | RL 00 | RL -100 | RL -200

G23 | G11, G12 | G28 | G43, G39, G41

117.4m | 188.1m | 163.7m | 265.2m | 135.1m | 292.5m | 364.2m | 358.5m

The following values are considered 'normal' for each lithology.
Reference: DIVIS, A.F. (1977) Island Arc Copper Deposits, Exploration and Evaluations, Colorado School of Mines: Notes.

TUREKIAN, K.K. and WEDEPOHL, K.H. (1961)
Distribution of the elements in some major units of the earth's crust.
Bull. Geol. Soc. Am. 72 p 175 - 192

	Sn	W	Rb	Bi	As	F
Basalts	1.5	1	30	0.15	2	400
Shales	4	2	140	0.18	15	740
Sandstone (quartzite)	3	2	60	0.1	1	270
Dolomite (carbonate)	4	0.5	3	0.1	3	330

"Enriched" metal values are calculated by subtracting the background metal value from the actual metal value.

Geology shown on this plate is the assumed geology for background calculations. The 'fact' lithological intervals are shown on plate.

5 cm

099146

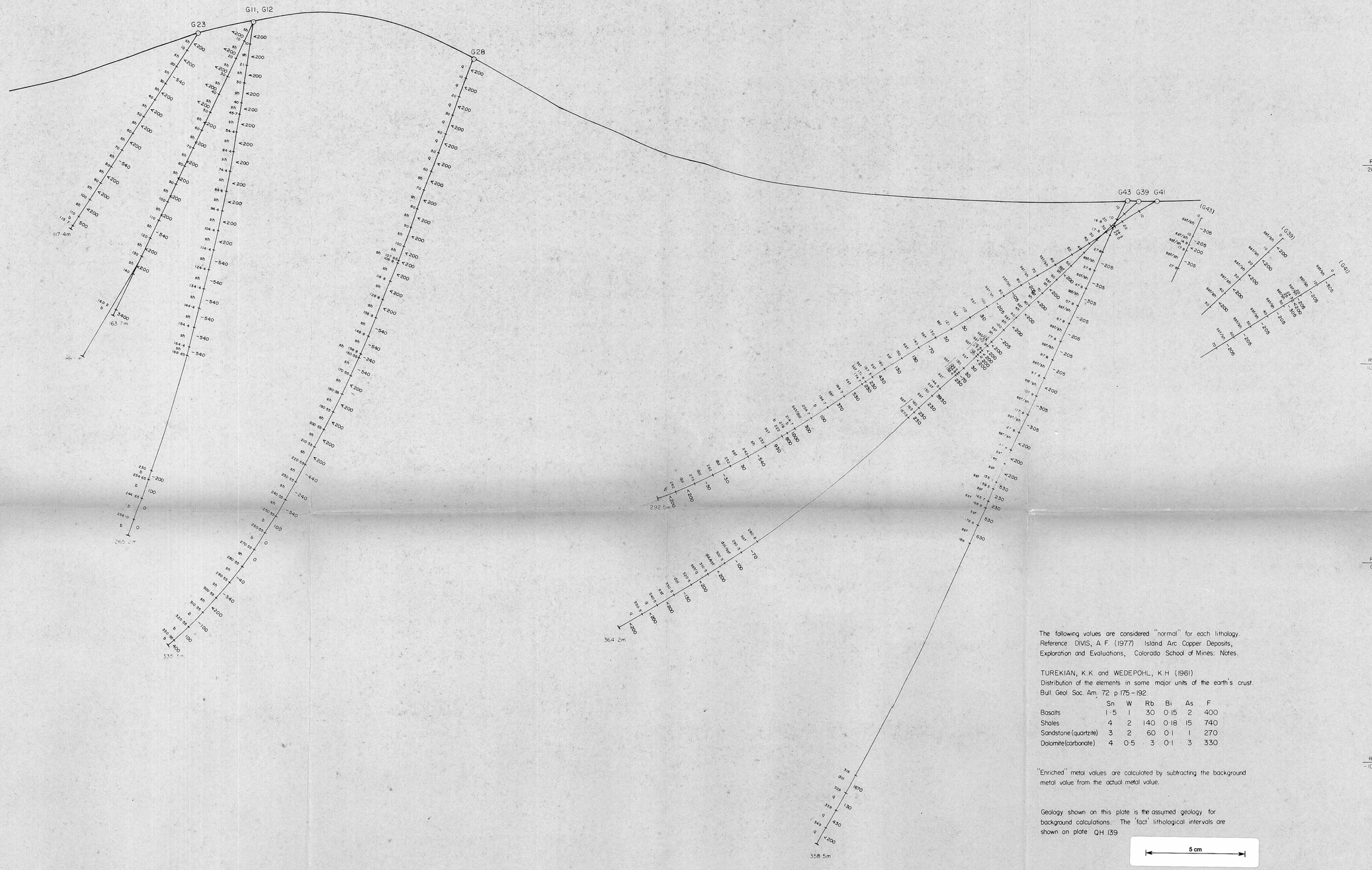
80-1423
2/2

Aberfoyle Exploration

Geology TKS	NORTH WEST TASMANIA	Location code
Drawn JJB	QUEEN HILL	Date JULY 1979
Traced JJB	METASOMATIC AUREOLE CHARACTERIZATION	Scale 1:1000
Checked	COMPOSITE CROSS SECTION 3040 - 3080	Plate No QH 141 (As)
Revised by Date	As GEOCHEMISTRY (Enriched)	

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10000 E

RL 200 | RL 100 | RL 00 | RL -100 | RL -200



The following values are considered "normal" for each lithology.
Reference: DIVIS, A.F. (1977) Island Arc Copper Deposits, Exploration and Evaluations, Colorado School of Mines: Notes.

TUREKIAN, K.K. and WEDEPOHL, K.H. (1961)
Distribution of the elements in some major units of the earth's crust.
Bull. Geol. Soc. Am. 72 p 175 – 192

	Sn	W	Rb	Bi	As	F
Basalts	1·5	1	30	0·15	2	400
Shales	4	2	140	0·18	15	740
Sandstone (quartzite)	3	2	60	0·1	1	270
Dolomite (carbonate)	4	0·5	3	0·1	3	330

"Enriched" metal values are calculated by subtracting the background metal value from the actual metal value.

Geology shown on this plate is the assumed geology for background calculations. The 'fact' lithological intervals are shown on plate QH 139

5 cm

099147

80-1423
42

Aberfoyle Exploration

Geology DCS	NORTH WEST TASMANIA QUEEN HILL METASOMATIC AUREOLE CHARACTERIZATION COMPOSITE CROSS SECTION 3040 – 3080 F GEOCHEMISTRY (Enriched)	Location code
Drawn JJB		Date JULY 1979
Traced JJB		Scale 1:1000
Checked		Plate No QH 141(F)
Revised by Date		

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10,000 E

RL 200 | RL 100 | RL 00 | RL -100 | RL -200

G23 | G11, G12 | G28 | G43 G39 G41

117.4m | 163.7m | 188.1m | 265.2m | 335.3m | 358.5m

(G43) | (G39) | (G41)

The following values are considered "normal" for each lithology.
Reference: DIVIS, A. F. (1977) Island Arc Copper Deposits, Exploration and Evaluations, Colorado School of Mines: Notes.

TUREKIAN, K.K. and WEDEPOHL, K.H (1961)
Distribution of the elements in some major units of the earth's crust.
Bull. Geol. Soc. Am. 72 p 175 – 192.

	Sn	W	Rb	Bi	As	F
Basalts	1·5	1	30	0·15	2	400
Shales	4	2	140	0·18	15	740
Sandstone (quartzite)	3	2	60	0·1	1	270
Dolomite (carbonate)	4	0·5	3	0·1	3	330

"Enriched" metal values are calculated by subtracting the background metal value from the actual metal value.

Geology shown on this plate is the assumed geology for background calculations. The 'fact' lithological intervals are shown on plate QH 139

5 cm

099148

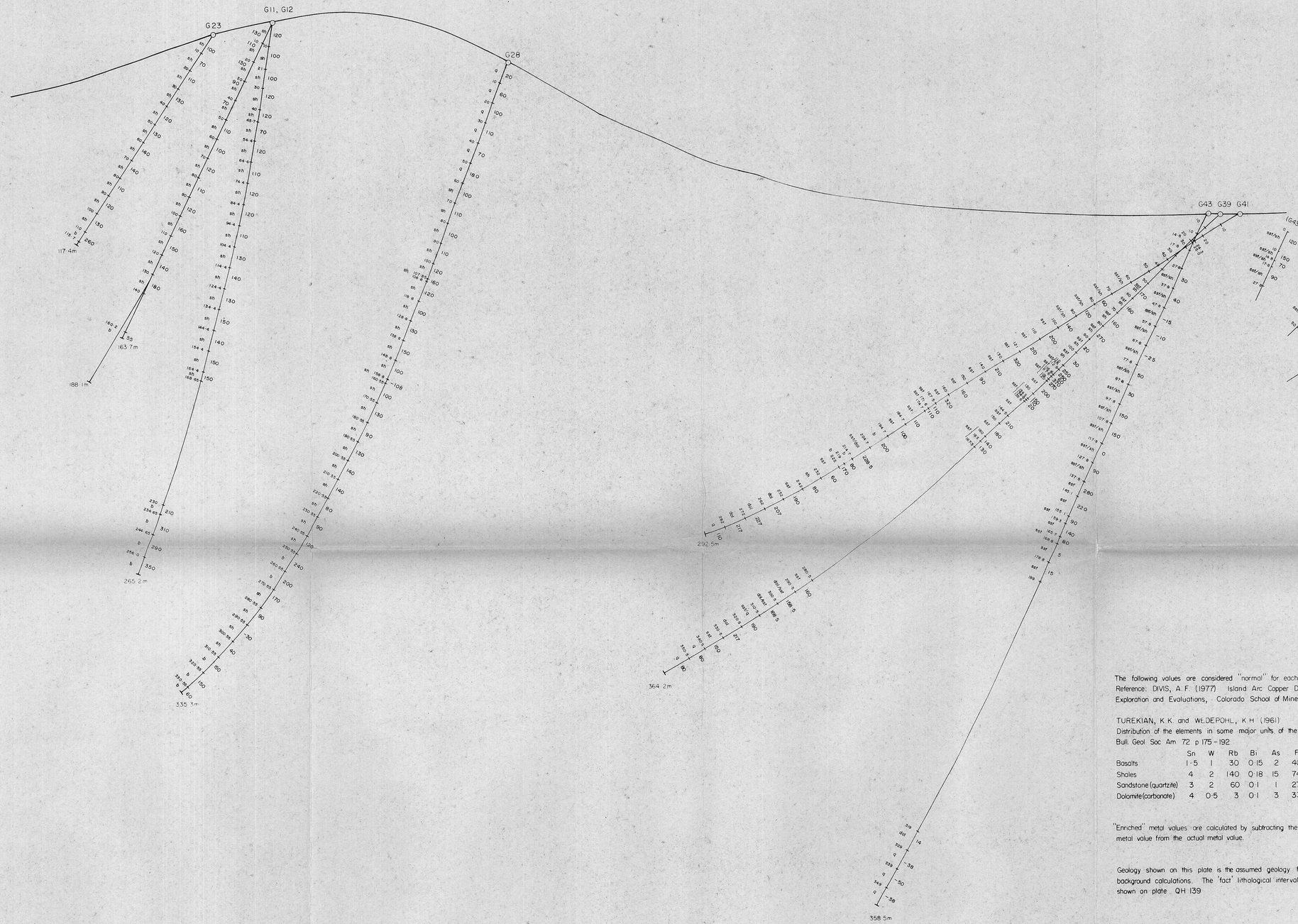
30-04-23
2/2

Aberfoyle Exploration

Geology	NORTH WEST TASMANIA	Location code
Drawn JJH	QUEEN HILL	Date JULY 1979
Traced JJH	METASOMATIC AUREOLE CHARACTERIZATION	Scale 1:1000
Checked	COMPOSITE CROSS SECTION 3040 - 3080	Plate No
Revised by Date	W GEOCHEMISTRY (Enriched)	QH 141 (W)

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10000

RL 200 | RL 100 | RL 00 | RL -100 | RL -200



The following values are considered "normal" for each lithology
Reference: DIVIS, A.F. (1977) Island Arc Copper Deposits, Exploration and Evaluations, Colorado School of Mines: Notes

TUREKIAN, K.K. and WEDEPOHL, K.H. (1961)
Distribution of the elements in some major units of the earth's crust
Bull. Geol. Soc. Am. 72 p 175-192

	Sn	W	Rb	Bi	As	F
Basalts	1·5	1	30	0·15	2	400
Shales	4	2	140	0·18	15	740
Sandstone (quartzite)	3	2	60	0·1	1	270
Dolomite (carbonate)	4	0·5	3	0·1	3	330

"Enriched" metal values are calculated by subtracting the background metal value from the actual metal value.

Geology shown on this plate is the assumed geology for background calculations. The 'fact' lithological intervals are shown on plate QH 139

5 cm

099149

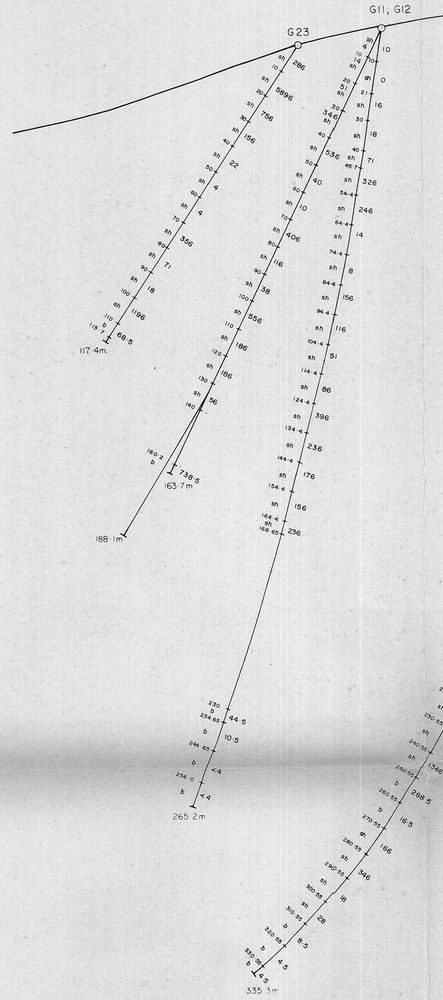
80-1423

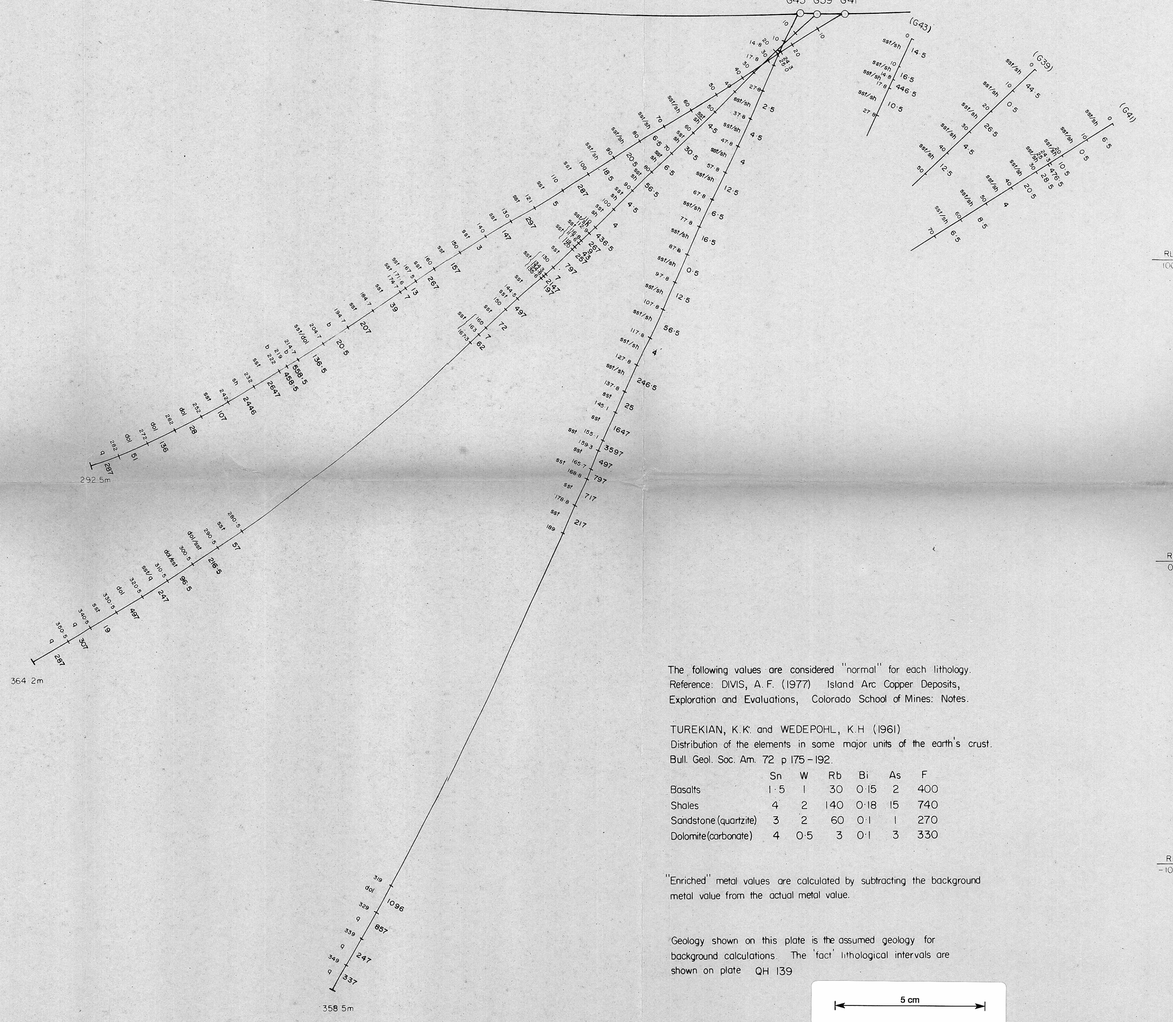
Aberfoyle Exploration

Geology DCS	NORTH WEST TASMANIA QUEEN HILL METASOMATIC AUREOLE CHARACTERIZATION COMPOSITE CROSS SECTION 3040 – 3080 Rb GEOCHEMISTRY (Enriched)	Location code
Drawn JJB		Date JULY 1979
Traced JJB		Scale 1:1000
Checked		Plate No QH 141 (Rb)
Revised by Date		

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10,000 E

RL 200 | RL 100 | RL 00 | RL -100 | RL -200





The following values are considered "normal" for each lithology.
Reference: DIVIS, A.F. (1977) Island Arc Copper Deposits, Exploration and Evaluations, Colorado School of Mines: Notes.

TUREKIAN, K.K. and WEDEPOHL, K.H. (1961)
Distribution of the elements in some major units of the earth's crust.
Bull. Geol. Soc. Am. 72 p 175 – 192.

	Sn	W	Rb	Bi	As	F
Basalts	1·5	1	30	0·15	2	400
Shales	4	2	140	0·18	15	740
Sandstone (quartzite)	3	2	60	0·1	1	270
Dolomite (carbonate)	4	0·5	3	0·1	3	330

"Enriched" metal values are calculated by subtracting the background metal value from the actual metal value.

Geology shown on this plate is the assumed geology for background calculations. The 'fact' lithological intervals are shown on plate QH 139

5 cm

099150

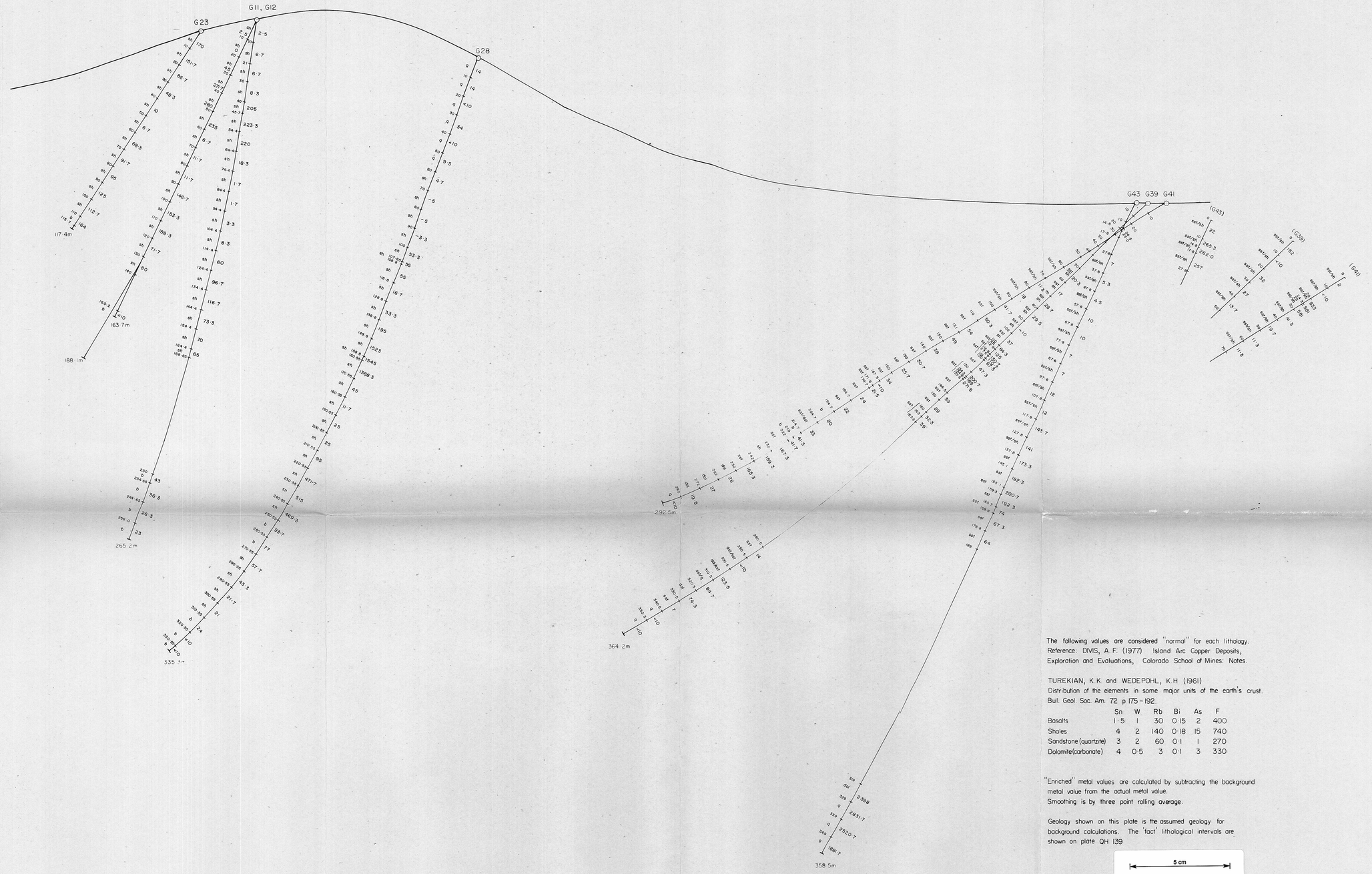
80-1423
2/2

Aberfoyle Exploration

Geology DCS	NORTH WEST TASMANIA	Location code
Drawn JJB	QUEEN HILL	Date JULY 1979
Traced JJB	METASOMATIC AUREOLE CHARACTERIZATION	Scale 1:1000
Checked	COMPOSITE CROSS SECTION 3040 – 3080	Plate No QH 141 (Sn)
Revised by Date	Sn GEOCHEMISTRY (Enriched)	

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10000 E

RL 200 | RL 100 | RL 00 | RL -100 | RL -200



The following values are considered "normal" for each lithology.
Reference: DIVIS, A. F. (1977) Island Arc Copper Deposits, Exploration and Evaluations, Colorado School of Mines: Notes.

TUREKIAN, K.K. and WEDEPOHL, K.H (1961)
Distribution of the elements in some major units of the earth's crust.
Bull. Geol. Soc. Am. 72 p 175 - 192.

	Sn	W	Rb	Bi	As	F
Basalts	1·5	1	30	0·15	2	400
Shales	4	2	140	0·18	15	740
Sandstone (quartzite)	3	2	60	0·1	1	270
Dolomite (carbonate)	4	0·5	3	0·1	3	330

"Enriched" metal values are calculated by subtracting the background metal value from the actual metal value.
Smoothing is by three point rolling average.

Geology shown on this plate is the assumed geology for background calculations. The 'fact' lithological intervals are shown on plate QH 139

5 cm

099151

Aberfoyle Exploration

Geology	KCS	NORTH WEST TASMANIA QUEEN HILL METASOMATIC AUREOLE CHARACTERIZATION COMPOSITE CROSS SECTION 3040 - 3080 As GEOCHEMISTRY "Smoothed Enriched"	Location code
Drawn	JJB		Date JULY 1979
Traced	JJB		Scale 1:1000
Checked			Plate No QH 142 (As)
Revised by	Date		

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10000 E

RL 200 | RL 100 | RL 00 | RL -100 | RL -200

G23 | G11, G12 | G28 | G43 G39 G41

117.4m | 188.1m | 163.7m | 265.2m | 335.3m | 292.1m | 364.2m | 358.5m

(G43) (G39) (G41)

The following values are considered "normal" for each lithology.
Reference: DIVIS, A.F. (1977) Island Arc Copper Deposits, Exploration and Evaluations, Colorado School of Mines. Notes.

TUREKIAN, K.K. and WEDEPOHL, K.H. (1961)
Distribution of the elements in some major units of the earth's crust.
Bull. Geol. Soc. Am. 72 p 175-192.

	Sn	W	Rb	Bi	As	F
Basalts	1·5	1	30	0·15	2	400
Shales	4	2	140	0·18	15	740
Sandstone (quartzite)	3	2	60	0·1	1	270
Dolomite (carbonate)	4	0·5	3	0·1	3	330

"Enriched" metal values are calculated by subtracting the background metal value from the actual metal value.
"Smoothing" is by three point rolling average.

Geology shown on this plate is the assumed geology for background calculations. The 'fact' lithological intervals are shown on plate QH 139

5 cm

099152

80-1123
2/2

Aberfoyle Exploration

Geology DCS	NORTH WEST TASMANIA QUEEN HILL METASOMATIC AUREOLE CHARACTERIZATION COMPOSITE CROSS SECTION 3040 – 3080 F GEOCHEMISTRY "Smoothed Enriched"	Location code
Drawn JJB		Date JULY 1979
Traced JJB		Scale 1:1000
Checked		Plate No QH 142(F)
Revised by Date		

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10,000 E

RL 200 | RL 100 | RL 00 | RL -100 | RL -200

G23 | G11, G12 | G28 | G43 G39 G41

117.4m | 188.1m | 163.7m | 265.2m | 335.3m | 292.5m | 364.2m | 358.5m

The following values are considered "normal" for each lithology.
Reference: DIVIS, A.F. (1977) Island Arc Copper Deposits, Exploration and Evaluations, Colorado School of Mines: Notes.

TUREKIAN, K.K. and WEDEPOHL, K.H (1961)
Distribution of the elements in some major units of the earth's crust.
Bull. Geol. Soc. Am. 72 p 175 – 192.

	Sn	W	Rb	Bi	As	F
Basalts	1·5	1	30	0·15	2	400
Shales	4	2	140	0·18	15	740
Sandstone (quartzite)	3	2	60	0·1	1	270
Dolomite (carbonate)	4	0·5	3	0·1	3	330

"Enriched" metal values are calculated by subtracting the background metal value from the actual metal value.
"Smoothing" is by three point rolling average

Geology shown on this plate is the assumed geology for background calculations. The 'fact' lithological intervals are shown on plate QH 139

5 cm

099153

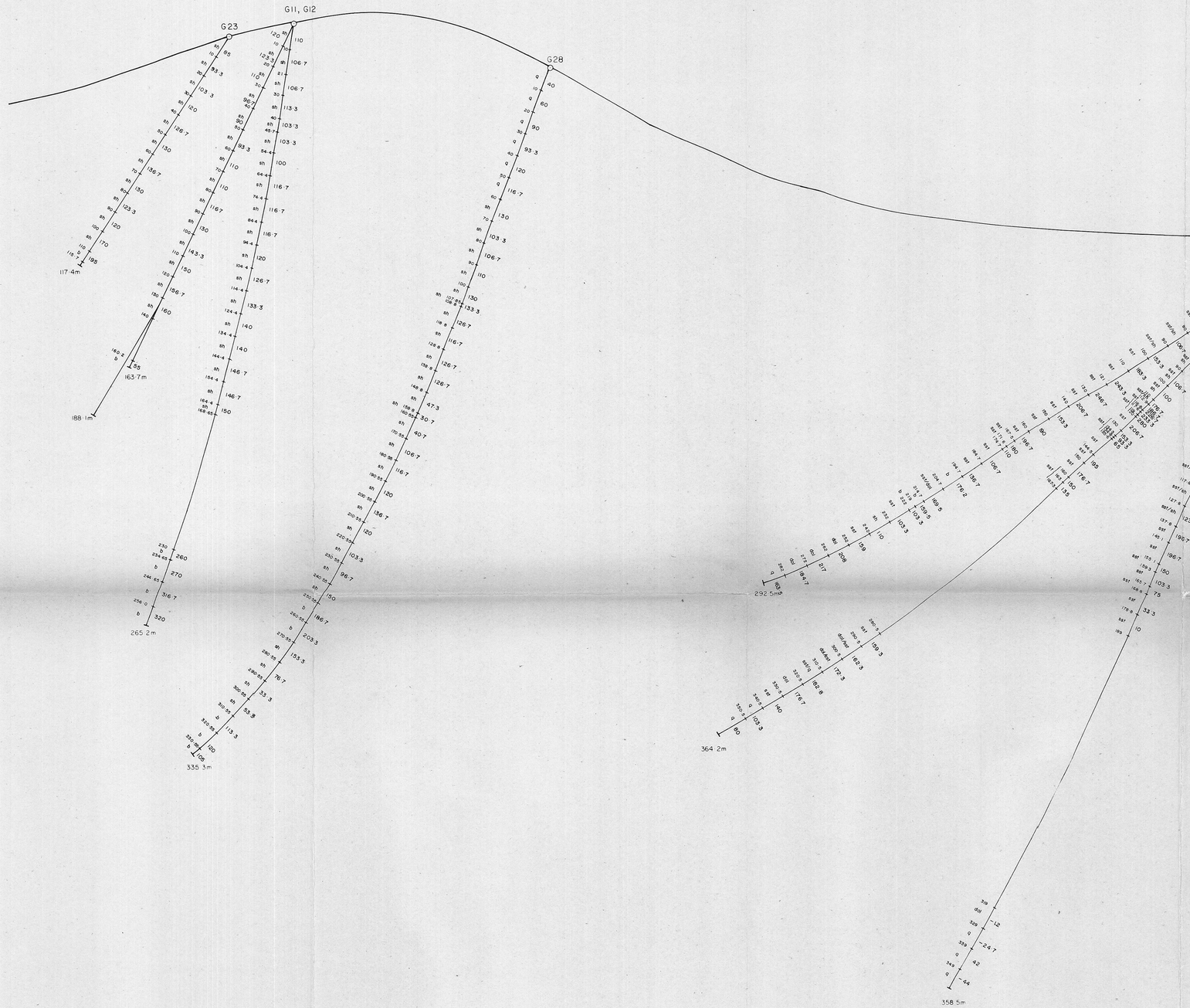
80-1423
2/2

Aberfoyle Exploration

Geology DCS	NORTH WEST TASMANIA
Drawn JJB	QUEEN HILL
Traced JJB	METASOMATIC AUREOLE CHARACTERIZATION
Checked	COMPOSITE CROSS SECTION 3040 – 3080
Revised by Date	W GEOCHEMISTRY "Smoothed Enriched"
Location code	
Date JULY 1979	
Scale 1:1000	
Plate No QH 142 (W)	

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10,000 E

RL 200 | RL 100 | RL 00 | RL -100 | RL -200



The following values are considered "normal" for each lithology.
Reference: DIVIS, A.F. (1977) Island Arc Copper Deposits, Exploration and Evaluations, Colorado School of Mines: Notes.

TUREKIAN, K.K. and WEDEPOHL, K.H. (1961)
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Bull. Geol. Soc. Am. 72 p.175-192

	Sn	W	Rb	Bi	As	F
Basalts	1·5	1	30	0·15	2	400
Shales	4	2	140	0·18	15	740
Sandstone (quartzite)	3	2	60	0·1	1	270
Dolomite (carbonate)	4	0·5	3	0·1	3	330

"Enriched" metal values are calculated by subtracting the background metal value from the actual metal value.
"Smoothing" is by three point rolling average.

Geology shown on this plate is the assumed geology for background calculations. The 'fact' lithological intervals are shown on plate QH 139

5 cm

099154

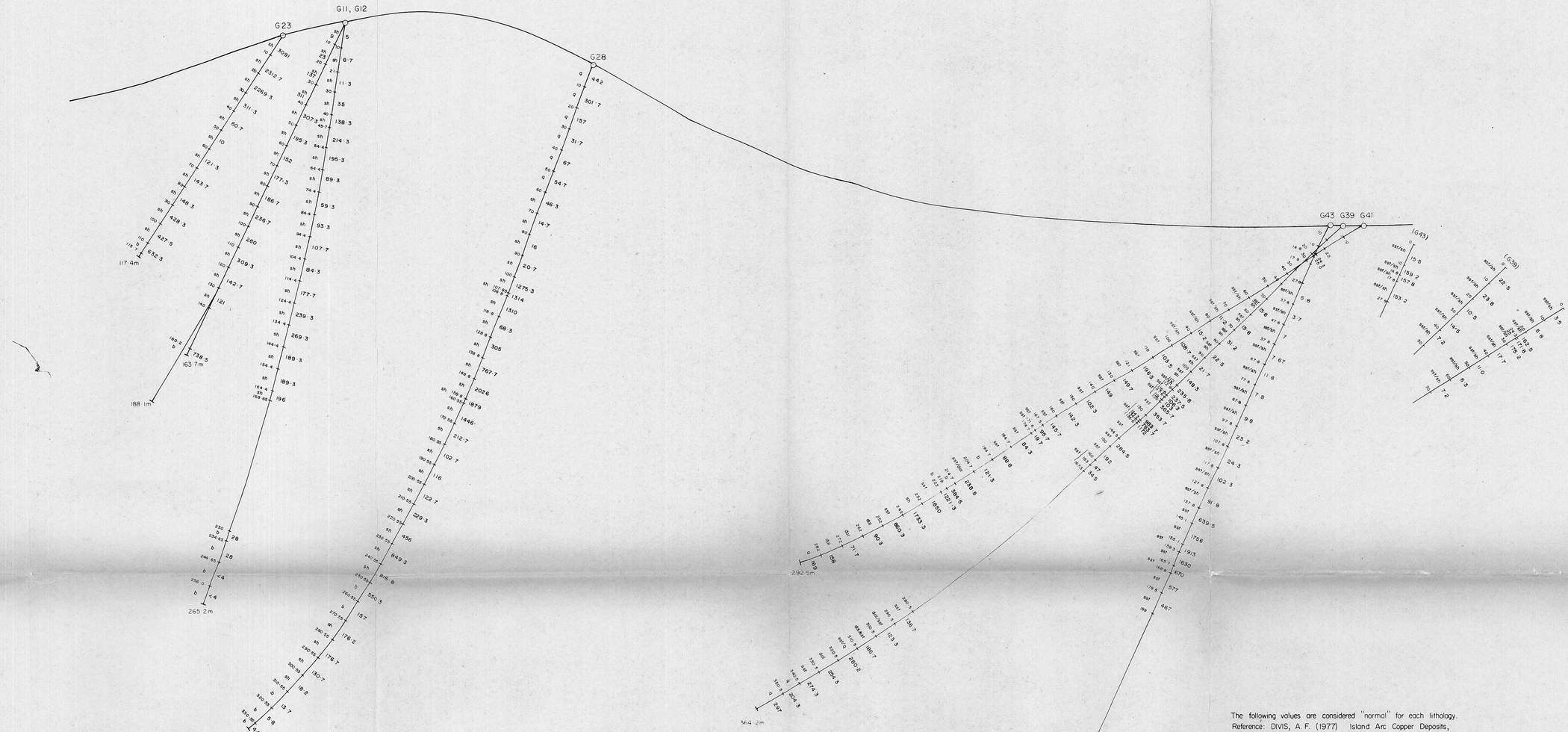
80-1423

Aberfoyle Exploration

Geology DCS	NORTH WEST TASMANIA		Location code
Drawn JJB	QUEEN HILL		Date JULY 1979
Traced JJB	METASOMATIC AUREOLE CHARACTERIZATION		Scale 1:1000
Checked	COMPOSITE CROSS SECTION 3040 - 3080		Plate No QH 142(Rb)
Revised by Date	Rb GEOCHEMISTRY "Smoothed Enriched"		

9400 E | 9500 E | 9600 E | 9700 E | 9800 E | 9900 E | 10000 E

RL 200 | RL 100 | RL 00 | RL -100 | RL -200



The following values are considered "normal" for each lithology.
Reference: DIVIS, A. F. (1977) Island Arc Copper Deposits, Exploration and Evaluations, Colorado School of Mines: Notes.

TUREKIAN, K.K. and WEDEPOHL, K.H (1961)
Distribution of the elements in some major units of the earth's crust.
Bull. Geol. Soc. Am. 72 p 175 – 192.

	Sn	W	Rb	Bi	As	F
Basalts	1·5	1	30	0·15	2	400
Shales	4	2	140	0·18	15	740
Sandstone (quartzite)	3	2	60	0·1	1	270
Dolomite (carbonate)	4	0·5	3	0·1	3	330

"Enriched" metal values are calculated by subtracting the background metal value from the actual metal value.
"Smoothing" is by three point rolling average

Geology shown on this plate is the assumed geology for background calculations. The 'fact' lithological intervals are shown on plate QH 139

5 cm

099155

80-423
2/2

Aberfoyle Exploration

Geology DCS	NORTH WEST TASMANIA
Drawn JJB	QUEEN HILL
Traced JJB	METASOMATIC AUREOLE CHARACTERIZATION
Checked	COMPOSITE CROSS SECTION 3040 – 3080
Revised by Date	Sn GEOCHEMISTRY
	"Smoothed Enriched"
Location code	
Date JULY 1979	
Scale 1:1000	
Plate No	QH 142(Sn)

LEGEND

- S — Black Siltstone commonly sheared and contorted
- Pyrite rock 30% to massive, includes syngenetic and metasomatic Py.
- Pyritised rock, either
  - V — volcanics
  - or
  - S — black siltstones

  Py 10–30% as netted veinlets or disseminated
- V — Volcanics
- Q — Quartzite
- Rock face
- Bottom of face
- 55° — Fault with dip
- Edge of exposure (stope wall)
- Scree
- Trenches and sampling baseline
- 3150 — Reference plane with numbered sections

G.N.

3180
3160
3155
3150
3120
3080
3040
3000
2980

900N
850N
800N
750 N

700E
650E
600E

N° 4 ADIT

G1
G2

75°

Sample Reference Line

Fill

CLARKES LODE

Bedded Dolomite, siltstone, pyrite and chert sequence.

Random Chip Sample 0·05% SnT

Pyritic rock predominantly syngenetic and includes significant unmineralized dolomite.

34 samples of sulphide Arithmetic mean 0·73 % SnT
Std. Dev. 0·78

Note. All sample numbers are prefixed 2388 ie. 238810

(Assays % Snt)
21 0·36
(Sample number)

5 cm

SCALE
0 5 10 15 20 25
metres

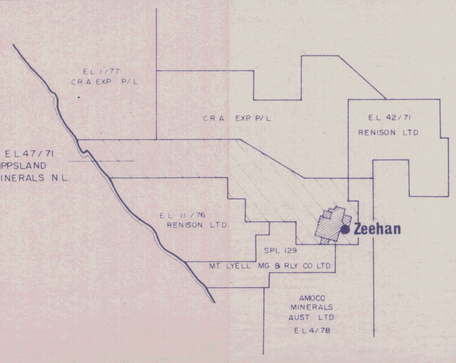
099156

Aberfoyle Exploration

80-11 23
2/2

Geology:	TASMANIA	Location code:
Drawn:	QUEEN HILL	Date: FEB 1980
Traced: LED	R.L. 220 BENCH LEVEL	Scale: 1 : 250
Checked:	Showing Outcrop Sampling	Plate Nº QH 150
Revised by: Date:		

E.L. 47/71



Scale 1 250,000

NAME	LEAD (Tons)	Silver (oz)	Production Years
Quigleys	32·5	2754	1912 - 1925
Barnetts	60·4	7231	1910 - 1949

1,000,000 oz Ag +
100,000 - 1,000,000 oz Ag
10,000 - 100,000 oz Ag
0 — 10,000 oz Ag
Sn occurence
v Volcanics
q Quartzites

PRODUCTION IN ZEEHAN FIELD

NAME	LEAD (Tons)	SILVER (oz.)	PRODUCTION YEARS
Montana Silver Lead	2304	279,348	1899 - 1958
Zeehan Western	26,300	4,800,000	1901 - 1928
Junction	15	8728	1888 - 1906
Zeehan - Montana	49,580	7,058,122	1892 - 1936
Oonah	11,724	2,050,135	1888 - 1925
Queen	16,532	1,973,746	1902 - 1929
Mt Zeehan	1540	166,850	1883 - 1893
Despatch	No recorded production		
New Great Eastern	No ore produced		
Tasmanian Crown	113	15,737	1893 - 1956
Florence	10,200	1,400,000	1900 - 1910
Argent No 2	1,750	207,347	1899 - 1925
Argent No 5	1,100	170,000	1915 - 1917
Argent No 6	1,398	183,763	1920 - 1925
Spray, Brittania, Mt Zeehan	41,700	6,456,674	1893 - 1923
Nike	2,149	225,830	1896 - 1954
Grubbs, Colonel North	1534	127,225	1890 - 1909
Victoria Zeehan	15	850	
Nubeena	325	42,000	1894 - 1910
Montague No.1	115	1500	1887 - 1894
Maxim	60	10,000	1890 - 1910
Watt & McAuliffs & North Austral	250	50,000	1901 - 1905
Austral Valley	800	33,000	1907 - 1913
Silver King	5000	350,000	1887 - 1908
Zeehan Bell	600	27,500	1890 - 1908
Sunrise	36	4,760	1892 - 1910
Oceana	14,902	614,981	1893 - 1960
TOTALS	190,042	26,258,096	

Part SPL 129
MT. LYELL MG. & RLY. CO. LTD.

Part E.L. 4/78
AMOCO MINERALS

SOUTH ZEEHAN - COMSTOCK FIELD

NAME	LEAD (Tons)	SILVER (oz)	PRODUCTION YEARS
Comstock & South Comstock	545	57, 096	1888 - 1952
North Comstock	No record of production		
Silver Stream	165	9,200	1888 - 1903
Boss	70	6,500	1888 - 1916
Susannite	20	3,500	1888 - 1923
Sylvester	274	16,560	1893 - 1950
Doric	0·5	30	1928
T.L.E.	200	30,000	1888 - 1911
Stonehenge	30	2,700	1888 - 1894
North Tasmanian	Production unknown		
Swansea	1319	35,630	1925 - 1929
Tasmanian (incl. N. Tas.)	720	41, 229	1893 - 1953
Silver Duke	No production		
TOTALS	3,343·5	202, 445	

REFERENCES -
Tas Mines Dept A.H. Blissett, 1962
Tas Mines Dept Williams & Both Report No.11, 1971
Twelvetrees & Ward, 1910
Plan by Tas Mines Dept. Waller, 1908

099157

Aberfoyle Exploration Pty Ltd

Geology:	NORTH WEST TASMANIA	Location code:
Drawn: R.J.E.	EXPLORATION LICENCE 47/71	Date: March, 1980
Traced: R.J.E.	Summary Map showing known Silver - Lead Production - Zeehan area	Scale: 1 10,000
Checked:		Plate No QH 151
Revised by: Date:		

099158

80-1423.

EXEMPT FROM THE MINING ACT. 1929 S.R. 1974 NO.141

E.L. 30/79 160 SKM. C.R.A. EXPL. P/L 15 11 80

E.L. 47/71 122 SKM. GIPPSLAND MINERALS N.L. 21 6 80

E.L. 47/71 122 SKM. GIPPSLAND MINERALS N.L. 21 6 80

5 cm

to Granville Hr.

Piney Creek

Tramway Creek

Bunkleys Tramway

Zeehan-Granville Hr. Road

Parting

Shampoo Creek

Tillite Creek

Lather Creek

Big Ben Creek

Barnett

Oonah Hill

Rivulet

Zeehan-Dundas Bay

C.J. Blacklow

Pur.

BIG BEN

MONTANA SILVER LEAD

MONTANA EXT.

WESTERN MAY QUEEN

QUIGLEY

BARNETT

MONTAGU

TAS. CROWN

ZEEHAN

JUNCTION ZEEHAN

ZEEHAN MONTANA

GIPPSLAND Montana Hill

GIPPSLAND MINERALS N.L. DISPATCH

ZEEHAN QUEEN

GIPPSLAND MINERALS N.L. NO.4

STORMSDOWN No.2

NEW MT. ZEEHAN

GIPPSLAND MINERALS N.L.

QUEEN HILL

SILVER QUEEN No.2

QUEEN EXT. (NIKE)

GIPPSLAND MINERALS N.L.

ARGENT No.1

STATE ARGENT No.5 No.3 No.6

GIPPSLAND MINERALS N.L.

Manganese Hill

BALSTROPS MANGANESE HILL

CENTRAL BALSTRUP

FLORENCE

ZEEHAN

WILLS

SILVER KING

RENISON LTD.

OONAH MINOPS PTY. LTD.

NORTH COMSTOCK

SYLVESTER

COMSTOCK LEASE

SUSANITE

CONSD. COMSTOCK

ELECTROLYTIC ZINC CO. OF A'SIA. LTD.

BRITANNIA

SOUTH COMSTOCK

STONE HENGE

TEN LEGION

SILVER STREAM (KYNANCE)

INDUSTRIAL & MINING INVESTIGATIONS PTY. LTD.

INDUSTRIAL & MNG. INVESTIGATIONS P/L.

McIVOR

McIvor Hill

BORIC

VICTORIA ZEEHAN

COLONEL NORTH

WATTS and McAULIFFE

SPRAY

Trial Harbour

99M/39 80

100M/39 80

98M/39 40

128/93M 80

522/91M 80

524/91M 80

833/91M 78

1218/93M 80

1352/93M 80

3105/M 40

3449/93M 80

3448/93M 80

3924/93M 80

3359/87M 80

3368/87M

4991/93M 40

4990/93M 40

858/91M 40

1008/91M 80

3462/93M 80

3617/M 40

2072/87M 40

11996/M 40

11924/M 40

11791/M 40

11789/M 40

11904/M 71

11935/M 40

11933/M 31

11929/M 80

11931/M 80

1888/91M 80

980/93M 40

981/93M 25

42M/40 40

41M/40 40

101M/47 20

8944/M 20

8940/M

8943/M

8942/M 80

8941/M

8997/M

8703/M 78

8701/M 40

8551/M 10

3987/M 40

3952/M

3794/M 17

3618/M 38

3408/M 20

3321/87M 80

3359/87M 80

3258/M 80

3120/M 41

2781/M 80

2674/93M 74

2675/93M 40

2599/M 40

2359/M 80

2185/87M 80

2036/87M 40

1883/91M 80

1893/91M 80

1168/87M 40

1846/M

1813/M 30

661/M 30

2835/M 25

590/M 40

581/M 79

3235/87M 34

1015/93M 32

3270/87M 40

3233/87M 40

1244/93M 40

3271/87M 40

268/91M 40

4512/M 69

4577/M 40

3106/M 40

5084/93M 65

4579/M 32

3037/M 40

3247/M 12

3452/M 5

3037/M 40

3247/M 12

2888/M 40

1168/91M 40

1243/87M 80

196/91M 76

3020/M 40

1169/91M 39

3826/87M 80

4242/93M 40

3826/87M 80

4269/93M 40

3923/93M

2164/87M 39

1111/87M

11912/M 79

969/187M 80

4067/M 74

943/M 40

546/M 76

11977/M 80

1780/M 60

1976/M 80

218/87M 40

219/87M 20

7175/M 40

306/M 40

6954/M 39

7281/M 40

2851/M 192

1758/M 20

2193/93M 20

3825/87M

25/M 79

26/M 80

27/M 80

2072/87M 40

1271/87M 80

1270/87M 80

1269/87M 80

11996/M 40

11924/M 40

132M/47 40

9349/M 40

54M/47 40

60M/47 80

2180/87M 80

978/91M 40

1981/87M 80

1797/91M 48

828/91M 80

167/91M 77

1012/93M 76

841/91M 80

893/91M 74

840/91M 78

2185/87M 80

1893/91M 80

1168/87M 40

53M 75 56 ha.

50M 73 2ha

64M/73 to E.A. Clark & Franc-esconi

52M 75 16 ha.

54M 75 16 ha.

51M 75 55 ha.

INDUSTRIAL & MINING INVESTIGATIONS P/L.

INDUSTRIAL & MNG. INVESTIGATIONS P/L.

INDUSTRIAL & MINING INVESTIGATIONS Pty. Ltd.

49M/76 20 ha. GIPPSLAND MINERALS N.L.

48M/76 66 ha.

47M 76 61 ha.

35M 72 32 ha.

52M/78 100 ha. Queen Hill

51M/76 100 ha.

49M 76 16 ha.

50M/76 65 ha.

68M 73 30 ha.

12M/72 6 ha. RENISON LTD.

35M/72 32 ha. MINOPS PTY. LTD. 264/21

6M 73 VO.

2M/74 41 ha.

EMU RECREATION RESERVE

RESERVE FOR CEMETERY AND PARK

CEMETERY RESERVE

RECREATION RESERVE

BOTANICAL GARDENS RESERVE

Pur. L.D.

Pur. S.W.

Pur. W.M. Male

Pur. C.A. Wilson

Pur. A.R. Austin

Pur. L.N.R. Enright Moony

Pur. L.N.R. Enright Moony

SILVER KING