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ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

West Coast Mines

STERLING VALLEY EXPLORATION LICENCE

E.L. 4/73

Progress Report on Activity

July, 1980 - June, 1981.

Geological Dept.

Report No. 143.

I.R. McDonald

December, 1981

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1. INTRODUCTION

Exploration Licence 4/73 covers an area of 33 sq.km. centred about 6km south of Tullah on the West Coast of Tasmania. This report covers work on the Licence between 30th June, 1980 and 30th June, 1981. The work was carried out by Electrolytic Zinc Company of Australasia Limited on behalf of a Joint Venture between E.Z., Getty Oil Development Co. Ltd. and Aberfoyle Exploration Pty. Ltd.

2. PREVIOUS EXPLORATION

E.Z. Report No. 133 - "E.L. 4/73 Progress Report on Activity July, 1979 to June, 1980" - in addition to detailing all work carried out during 1979/80, also contains reference to all previous exploration in the Licence area.

3. ABBREVIATIONS

Standard symbols and terminology used on geological plans and drill sections can be found on Plate 1 - Geological Legend Exploration.

4. EXPLORATION UNDERTAKEN 30.6.'80 - 30.6.'81 (Refer to Plan No. A4-526-0031)

4.1. Eastern Volcanics

4.1.1. Work Completed

Six groups of old workings, known to lie within the area of the Eastern Volcanics, were located, examined and sampled. Mr. J. Smythe, an experienced local prospector, helped locate some of the workings and provided information on the history of

each one examined. The workings examined were:-

1. Thomas Blocks
2. Donoghues Section
3. Tullah Ag, Pb Mine (T.P.A.)
4. Midson Mine
5. Mace's Mine
6. Turley's Workings (Fulford's Claim)

4.1.2. Results Received

1. Thomas Blocks:

Co-Ordinates: 5,375,040mN 385,440mE (A.M.G.)

Location: A cross cutting adit approximately 60m long trending east-west, starts in the west bank of the medium size creek 10m east of the southern approach to the Murchison River Highway bridge (see reports by W.R. Layer in Asarco Progress Report to June, 1974, E.L. 4/73).

A shaft to a north-south drive connected to this adit is located on the south bank of the same creek about 50m up stream from the adit.

Geology: The entrance to the adit lies in black slate and volcanoclastic sediments with carbonate (siderite and calcite) veins. A cleaved lithic tuff of acid composition occurs at the shaft.

Mineralisation: Massive galena and sphalerite occur as fracture filling pods in the rhyolite (see Layer, 1974).

A sample of weakly mineralised ash flow tuff was taken from the dump at the shaft head. It had the following assay:

Sample No.	Mn	Fe	Cu	Zn	As	Pb	Sn
29524	7800	1.6%	45	2000	11	405	10

Conclusion: From the inspection and available literature this old show represents a high grade hydrothermal deposit of small size.

2. Donoghues Section:

Co-Ordinates: 5,374,640mN 385,490mE (A.M.G.)

Location: Two adits are cut into the western side of a small steep creek valley. The northern adit is about 6m long while the adit 25m south of it is only 3m long. Both adits trend east-west.

Geology: The two adits occur within cleaved and sericitised lithic crystal vitric acid tuffs. Sericite and chlorite alteration is localised about the mineralisation. The surrounding rocks are lithic ash flows with quartz phenocrysts.

Mineralisation: Galena and sphalerite occur as small veins upto 5cm wide and show a typical coarse fracture filling texture. The veins trend north-south and dip steeply to the west along cleavage planes.

A sample of cleaved porphyritic rhyolite taken from the dump at the southern adit assayed:-

Sample No.	Mn	Fe	Cu	Zn	As	Pb	Sn
29552	60	3700	35	1250	160	2400	5

Conclusions: Two very small adits have intersected minor hydrothermal lead-zinc mineralisation of no economic interest.

3. Tullah Lead Silver Mine (T.P.A.):

Co-Ordinates: 5,374,700mN 385,800mE (A.M.G.)

Location: A large mullock heap and east-west trending adit are located at the junction of two small creeks. The trench at the mouth of the adit and the adit itself are obscured by vegetation. The adit and trench are 2m wide, the trench is 30m long and the declining adit is filled with water preventing access.

Geology:

The host rock for mineralisation is a brecciated quartz-phyric lithic acid tuff which is chloritised. Chlorite alteration in the rocks around the adit is quite strong and parallel to strike, but 40m west of the adit entrance chlorite alteration is weak. Quartz veining is associated with the chlorite alteration. The cleavage has a strike of 005° with a 70° west dip.

Mineralisation:

Galena occurs as massive coarse grained hydrothermal fracture fillings. These fractures cut the adit approximately 20m in from its mouth with a 010° strike and steep west dip (personal communication J. Smythe). Pyrite is associated with chlorite alteration and occurs in the host horizon as veins, cubes and disseminations.

A sample of galena mineralisation in brecciated lithic tuff was taken from the mullock heap and assayed:-

Sample No..	Mn	Fe	Cu	Zn	As	Pb	Sn
29533	7800	2.1%	225	4500	7	7.8%	10

A sample of chloritised acid tuff taken from an outcrop at the end of the trench assayed:-

Sample No.	Mn	Fe	Cu	Zn	As	Pb	Sn
29531	640	3.1%	180	180	4	1150	X

Conclusions: This is a small high grade fracture filling hydrothermal deposit. Mineralisation is associated with structural features and brecciation of the host.

4. Midson Mine:

Co-Ordinates: 5,374,350mN 385,315mE (A.M.G.)

Location: The workings consist of a large trench trending east-west 3-2m wide and 30m long cutting into the western side of a north-west trending spur.

Geology: The mineralisation occurs in cleaved albitized quartz pyritic lava. Cleavage has a trend of 355° and an 80° west dip.

Mineralisation: Sulphide mineralisation consists of pyrite, chalcopyrite, pyrrhotite, minor galena and sphalerite. Mineralisation occurs as blebs, veins and localised massive chalcopyrite parallel to cleavage, in a 2m band.

A grab sample of massive chalcopyrite from the ore dump assayed:

Sample No.	Mn	Fe	Cu	Zn	As	Pb	Sn
29590	220	17.2%	26.0%	3.4%	72	6450	10

Conclusions: The style of mineralisation displayed in this old working differs from the others in the area. The chalcopyrite

content is greater, than at the other old shows and galena is minor. However, as with the other mines described, the rock structure is the main control on mineralisation.

5. Mace's Mine:

Co-Ordinates: 5,374,110mN 385,960mE (A.M.G.)

Location: Two adits are located on the south side of a steep gully running east-west from the Murchison-Farrell ridge. The larger adit, where the mineralisation occurs, is up-stream from the other and further up the side of the valley.

Geology:

The mineralisation occurs in quartz phytic lithic tuff at the intersection of a fault striking at 340° dipping 80° west and a vertical fault with a 045° trend. A water filled shaft follows this plunging mineralisation (J. Smythe Pers. Comm.).

Mineralisation:

Galena, sphalerite and minor chalcopyrite occur as veins and stringers up to 20cm wide in the fracture intersection.

A grab sample of mineralised lithic tuff at the mouth of the upper adit assayed:-

Sample No.	Mn	Fe	Cu	Zn	As	Pb	Sn
29592	850	3.7%	1400	13.0%	210	7050	10

Conclusions:

This is a small structurally located Pb, Zn and Ag hydrothermal deposit, similar to 1), 2) and 3).

6. Turley's Workings (Fulford's Claim):

Co-Ordinates: 5,373,445mN 384,510mE (A.M.G.)

Location: A 20m long trench cuts the top of a north-south trending low narrow ridge 100m east of the power line.

Geology: The trench cuts across a sequence of bedded, cleaved slates and volcanoclastic greywackes striking at 010° with a steep west dip. Mineralisation occurs parallel to cleavage in the slate bands.

Mineralisation: Pyrite occurs with arsenopyrite, minor pyrrhotite and chalcopyrite in bands up to 0.4m wide. The widest band being at the end of the trench.

These bands were assayed and the highest tin values came from the last and widest band. The values are:

Sample No.	Mn	Fe	Cu	Zn	As	Pb	Sn
38580	30	13.7%	4550	100	1.0%	335	<u>7500</u>

The high tin concentration correlates with previous values from the Farrell Group in Sterling Valley but is relatively high.

Conclusions: The high tin concentration from one of the samples in this trench provides further evidence that high concentrations of tin occur throughout the Farrell Group in Sterling Valley.

References:

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4.2. Western Volcanics

4.2.1. Work Completed

A proton precession ground magnetometer survey was carried out by Scintrex Pty. Ltd. on cut and pegged lines 120m apart between 3,920N and 5,000N, Sterling Valley Grid. Intermediate lines at 60m were also read but these were not cut and pegged. Location was by compass bearing and pacing only, so there

is some uncertainty as to exact station location on these lines. The lines affected are 4,100N, 4,220N, 4,340N, 4,460N, 4,700N and 4,820N. The station interval on all lines was 10m. A total of 10.5km were covered on 17 lines. Repeat surveys totalling 1.7km were carried out on 4 lines; 4,280N, 4,340N, 4,640N and 4,700N to confirm the location of anomalous readings and check on noisy responses.

Three diamond drill holes were completed.

- i) STP 220 was collared on Sterling Valley Grid line 4,280N at 5,000E on a grid east azimuth and -60° dip, and was completed at 268.8m.
- ii) STP 221 was collared on line 4,320N at 4,635E on an A.M.G. azimuth of 76° and -60° dip, and was completed at 203.3m.
- iii) STP 231 was collared on line 4,160N at 5,625E on a grid east azimuth and -60° dip, and was completed at 150.6m.

All holes were geologically logged. All core was geochemically sampled using split core, chip or grind samples which were analysed by Analabs Pty. Ltd. for Cu, Pb, Zn, Ag, Fe, Mn, As and Sn by AAS. Split core samples were also analysed for Au. Magnetic susceptibility measurements were made on all the core. Down hole I.P. surveys using 5m and 20m electrode spacings were attempted on each hole.

4.2.2. Results Received

- 4.2.2.1. Geophysics-Ground Magnetics (Refer to Plan No. AO-504-0129 and Appendix I):
Four lines on the grid were checked by a second survey. Line 4,280N, resurveyed between 5,000E and 5,300E and line

4,700N resurveyed between 4,700N and 5,000E, were found to be almost identical to the original survey. Line 4,340N was resurveyed between 4,430E and 5,000E and returned a much smoother profile with a higher peak value than the original survey. Line 4,640N was resurveyed between 4,400E and 4,920E. The two profiles were very similar in form but the second survey was smoother than the original.

Interpretation of the total survey indicated 5 anomalies.

- No. 1 Lying between line 4,280N at about 4,650E and line 4,160N at about 4,690E with an amplitude of +350nT.
This feature approximates to a dyke-like body. The northern end of it has been drilled by DDH STP 217 (see E.Z. report No. 133 - E.L. 4/73 1979/80). The southern end was computer modelled and on line 4,160N suggested multiple bodies as the source (at least 4). The main anomaly could be fitted to a dipping dyke centred on 4,690E with a susceptibility of 0.0027, a thickness of 53m, a depth of 46.5m, striking 28° A.M.G. and dipping 10° west.
- No. 2 Centred on line 4,280N at about 5,050E with an amplitude of +300nT.
This approximates a dyke like body. It coincides with an I.P. anomaly (see Cominco 1976 - Progress Report on E.L. 4/73 for 6 months ending 6.3.'76 by D.C. Simpson). The anomaly is situated within the Farrell Slates and was modelled using a thin dyke model. It approximates to a vertically

dipping dyke at a depth of 30m and striking 22° (A.M.G.). For an assumed magnetic susceptibility of 0.005 the thickness is 20m. A more sophisticated computer modelling of the anomaly produced a very similar result. For a susceptibility of 0.0045 the best fit was for a 22m thick dyke at a depth of 30m, striking 18° A.M.G. with a 95° east dip centred on 5,045E.

- No. 3 Centred on line 4,340N at about 4,680E with an amplitude of +400nT. This appears to be an offshoot from anomaly No. 1, or alternatively the anomaly 1 'dyke' may bend into anomaly 3. This anomaly returned the highest readings on the grid. The anomaly was modelled on a sphere for a first approximation of depth and size. An approximate fit was obtained for a magnetic sphere, centred at a depth of 190m below 4,720E. For an assumed magnetic susceptibility of 0.005 the sphere has a radius of 100m. A reappraisal of the anomaly suggested it was due to multiple bodies. The main one was modelled on a dipping dyke centred on 4,680E. For a susceptibility of 0.0055 the best fit was for a 55m thick dyke at a depth of 20m, striking 28° A.M.G. with a 30° west dip.

- No. 4 Centred on line 4,280N between about 5,150E and 5,250E with an amplitude of +500nT. This anomaly is very noisy and sits on the interpreted eastern contact of the Farrell Slates with the Eastern Volcanics.

Due to the noisy data the anomaly was not computer modelled. A smoothed anomaly profile was modelled as a sphere for a first approximation of depth and size of body. For an assumed susceptibility of 0.005 a sphere of radius 75m is centred at a depth of 120m below 5,190E.

- No. 5 Centred on line 4,640N at about 4,740E with an amplitude of +100nT. This anomaly lies along strike from anomaly No. 1, i.e. close to the Mt. Black Volcanics/Farrell Slates contact. It can be modelled on a dyke centred on 4,740E with a susceptibility of 0.0018, a thickness of 30m, a depth of 46m, striking 18° A.M.G. with a dip of 10° west.

4.2.2.2. Diamond Drilling - STP 220 (Refer to Plan No. A1-526-0022 and Appendix II)

Geology:

The hole intersected a sequence of black shale, volcanoclastic siltstone and greywacke of the Farrell Slates over its entire length. The units appear to be interbedded with no structural breaks of significance being observed. Graded bedding in a number of units in the sequence indicates a west facing for the Farrell Slates in this vicinity and core angles indicate a steep ($65-75^{\circ}$) westerly dip.

Much of the hole was mineralised to a minor degree. The black slates contained up to 10% pyrite (often associated with quartz/carbonate alteration) which

had locally been altered to pyrrhotite and appears to have been responsible for the noisy ground magnetic responses obtained from the surface survey. The mineralised slates are probably also responsible for the surface I.P. and E.M. responses obtained from earlier surveys.

One zone of black slate between 137.9m and 140.7m was considerably brecciated and cut by siderite veining. A small band of Farrell type Pb/Zn mineralisation between 138.0 and 138.7m analysed 3.25% Pb, 3.2% Zn, 4850 ppm Cu, 81 g/t Ag and 1500 ppm Sn, which were the highest values of all these elements in the hole.

The volcanoclastic siltstones and greywackes were mineralised to a lesser degree and contained only minor pyrite and pyrrhotite.

Alteration throughout the hole was superficial and mainly controlled within the less competent black shales. The main alteration zones were 8.1m-13.8m and 137.9-151.2m where carbonate (siderite) and quartz predominate and the sulphides have recrystallised on cleavage planes. The rocks are pervasively cleaved and weakly sericitised.

Geochemistry:

Values obtained from split core and chip samples of core from STP 220 appear consistent with the mineralisation observed. Values for gold and silver are low throughout the hole, gold reaching a maximum of

0.064 g/t and silver reaching 81.0 g/t between 138.0 and 138.7m. The remaining silver assays were all below 10 g/t with background being about 1.0 g/t. Tin also reached peaks of 1500 ppm between 138.0 and 138.7m (which appears to correlate well with mineralisation in a surface costean which analysed 950 ppm Sn) and 580 ppm between 8.0 and 8.7m.

Pb, Zn and Cu values remained low throughout the hole but peaking at 138.0-138.7m with values of 3.25%, 3.2% and 4850 ppm respectively. The mineralisation was within a small band of massive galena and sphalerite hosted by black slate and similar to Farrell type mineralisation.

Minor disseminated sphalerite in greywacke between 251.5 and 256.8m was responsible for a chip sample analysing 1.8% Zn. Above background Ag results were also recorded from this zone.

Geophysics:

Down hole I.P. was attempted at 5m and 20m intervals but failed because of interference from a 66,000 volt power line which passes over the collar of the hole. Only a few readings were obtained.

A magnetic susceptibility survey of the core was completed. Readings were taken at 0.2m intervals and then averaged over 1.0m intervals to obtain the plot shown on the summary sheet. Two weak zones of magnetic susceptibility were outlined by the survey.

The first zone between 37.0 and 78.0m consists of very low responses from pyrrhotite in black slate. This correlates well with a surface magnetic anomaly of 250γ which occurs just east of the 5,000E baseline although the response from the core appears much quieter than the surface response.

The second zone occurs between 202m and 255m in pyrrhotitic interbedded black slate, volcanoclastic siltstone, siltstone and greywacke. This zone also correlates well with an extremely noisy surface magnetic response but again is much quieter.

4.2.2.3. Diamond Drilling - STP 221 (refer to Plan No. A1-526-0021 and Appendix II)

Geology:

The hole intersected 11.5m of fluvio-glacial overburden. Between 11.5m and 107.5m there is an andesitic lithic tuff with minor lavas. There is a sheared contact zone from 107.5 to 122.7m consisting of heavily cleaved volcanics, slates and volcanoclastic sediments. Below the shear zone from 122.7m to the end of the hole at 203.3m are Farrell Group volcanoclastic greywackes and siltstones.

Between 33.7 and 39.5m the hole intersected stringers and veins of massive pyrrhotite and arsenopyrite mineralisation associated with pyrite. Minor pyrite and pyrrhotite veins occur in the following intervals:-

11.5-15.0m, 28.8-33.7m, 39.5-53.1m, 57.3-71.0m, 118.0-119.4m, 132.0-135.6m and 151.2-173.2m. Minor arsenopyrite occurs as fragments and veins between 54.3 and 57.3m.

Geochemistry:

The maximum Sn assay from the hole is:
38.8-39.5m; 0.7m at 3,950 ppm Sn

This comes from a group of the two highest values which give:

37.9-39.5m; 1.6m at 3,300 ppm Sn

This comes from a zone of near massive pyrrhotite-pyrite-arsenopyrite mineralisation associated with quartz and chlorite veins. All other Sn assays are below 660 ppm with the majority of values below 100 ppm.

The highest Au value (A.A.S.) is:-

51.8-52.8m; 1.0m at 2.08 ppm Au

Between 48.8 and 59.1m there occur values between 0.3 and 0.7 ppm Au. All these elevated Au values are associated with thin veins of pyrrhotite, pyrite and arsenopyrite. Most of the remaining Au values are less than 0.1 ppm Au.

Elevated Ag, Cu and As values occur between 28.8 and 39.5m associated with the zone of maximum sulphide concentration and quartz-chlorite alteration to give an intersection of:

28.8-39.5m; 10.7m at 1,825 ppm Cu;

19 ppm Ag; 4.2% As

This zone contains highest values of 3,400 ppm Cu, 43 ppm Ag and 13.0% As.

Pb and Zn values are generally fairly low but peak towards the base of the above zone and immediately below it with a highest assay of

41.8-42.8m; 1.0m at 760 ppm Pb;
3650 ppm Zn.

The only other assay interval of note comes from a zone of quartz veins carrying pyrite and pyrrhotite in the Farrell Slates:

166.8-167.8m; 1.0m at 930 ppm Pb;
1050 ppm Zn; 2200 ppm Cu;
23.5 ppm Ag and 1.0% As.

Geophysics:

Results from a down hole I.P. survey show good correlation between resistivity, magnetic susceptibility and the presence of sulphides. Resistivity lows occur between 35 and 40m, 48 and 56m and 150 and 172m. The lows correspond to zones of pyrrhotite and pyrite.

4.2.2.4. Diamond Drilling - STP 231 (Refer to Plan No. A1-526-0023 and Appendix II)

Geology:

The hole intersected 19.4m of glacial overburden. From 19.4 to 140.1m the hole intersected intermediate volcanics showing zones of brecciation and intense fracturing, especially below 99.7m. This is associated with silicification, quartz and minor carbonate veining and chloritisation. From 140.1m to the base of the hole at 150.6m it intersected what was originally believed to be a cleaved chloritic tuffaceous greywacke. Subse-

quent thin section examination identified this unit as an intermediate intrusive (see Appendix III C.M.S. Report 81/7/52).

The hole is extensively mineralised between 42.0 and 88.0m with pyrrhotite, pyrite and arsenopyrite in thin veins. The two most intensely mineralised sections lie between 53.1 and 58.3m and between 78.3 and 88.0m where the sulphides are associated with minor fluorite in tension cracks, and as crosscutting veins in silicified and chloritised volcanics.

Geochemistry:

The most notable feature of the geochemical analyses are the extremely high As values which reach a maximum of 17.0% from a 100m vein between 53.8 and 53.9m. This occurs within a zone of strong As and weak Cu and Ag mineralisation, viz: 53.8-58.3m; 4.5m at 2150 ppm Cu; 8.5 ppm Ag; 6.0% As.

Sn mineralisation is generally low but reaches a maximum of 5600 ppm between 78.3 and 78.8m and is associated with 9.8% As; 0.75 ppm Au and 1150 ppm Cu. This comes from a zone which assays: 77.3-79.5m; 2.2m at 3045 ppm Sn. This comes from strongly silicified tuff containing stringer and vein arsenopyrite, pyrite, pyrrhotite and chalcopyrite with minor fluorite. Total sulphides are about 20%.

Apart from the above mentioned 0.75 ppm Au and a 0.38 ppm Au associated with an arsenopyrite vein between 85.2 and 85.5m, Au values are almost all very low.

Pb and Zn values are generally very low but reach a maximum of 1000 ppm Pb and 5550 ppm Zn between 80.5 and 81.5m, which is just beneath the zone of maximum Sn assays.

Geophysics:

Magnetic susceptibility values show peaks between 53 and 58m up to 6×10^{-3} c.g.s. units. These correspond with the zones of maximum sulphide development. The first zone fits well with the location of the computer modelled dyke from anomaly 1 (see 4.2.2.1. above) but the thickness is considerably less than the 53m suggested by the model. The down hole I.P. was only minimally successful. The hole was blocked at 115m which prevented surveying to the bottom of the hole. Also in the areas of maximum sulphide concentration readings were largely unobtainable making an interpretation of the results impossible.

5. CONCLUSIONS

5.1. Eastern Volcanics

All the workings inspected reveal a consistent style of mineralisation. They all appear to be small structurally located veins, infilling fractures and small breccia zones.

Although some may contain high base metal grades, none appears to have any significant size. It would appear that this belt of mineralisation in the Eastern Volcanics lacks any potential for significant development. Turley's Workings was the most westerly inspected and is the only one which lies in the Farrell Slates. It is also the only one to return a significant Sn assay. It tends to reinforce the view that the only significant mineralisation likely to be encountered in the Sterling Valley area is Sn associated with the Farrell Slates and their contact with the Mt. Black Volcanics.

5.2. Western Volcanics

A large proportion of the Western Volcanics lies hidden under a cover of glacial till on the floor of the Sterling River valley. This has resulted in a dearth of surface geological and geochemical information and has led to a reliance on geophysical techniques for generating potential drill targets. The ground magnetic survey generated several anomalies which, after modelling, were considered worthy of drilling. It is significant that the 60m infill lines added considerably to the definition of the anomalies and location of peak values. Each of the three drill holes completed appears to have successfully intersected zones of mineralisation in the positions indicated by the magnetic modelling. In each case however the measured magnetic susceptibility of the core appears insufficient to explain the magnitude of the ground magnetic anomalies. Remanent magnetism may be a possible explanation for this.

The drill holes completed could be considered technical successes only, although some doubts exist as to whether STP 231 effectively penetrated the contact with Farrell Slates. Only weak Sn mineralisation was intersected in each hole and in each case appears to be associated with breccia zones and fracturing. STP 220, which was the only

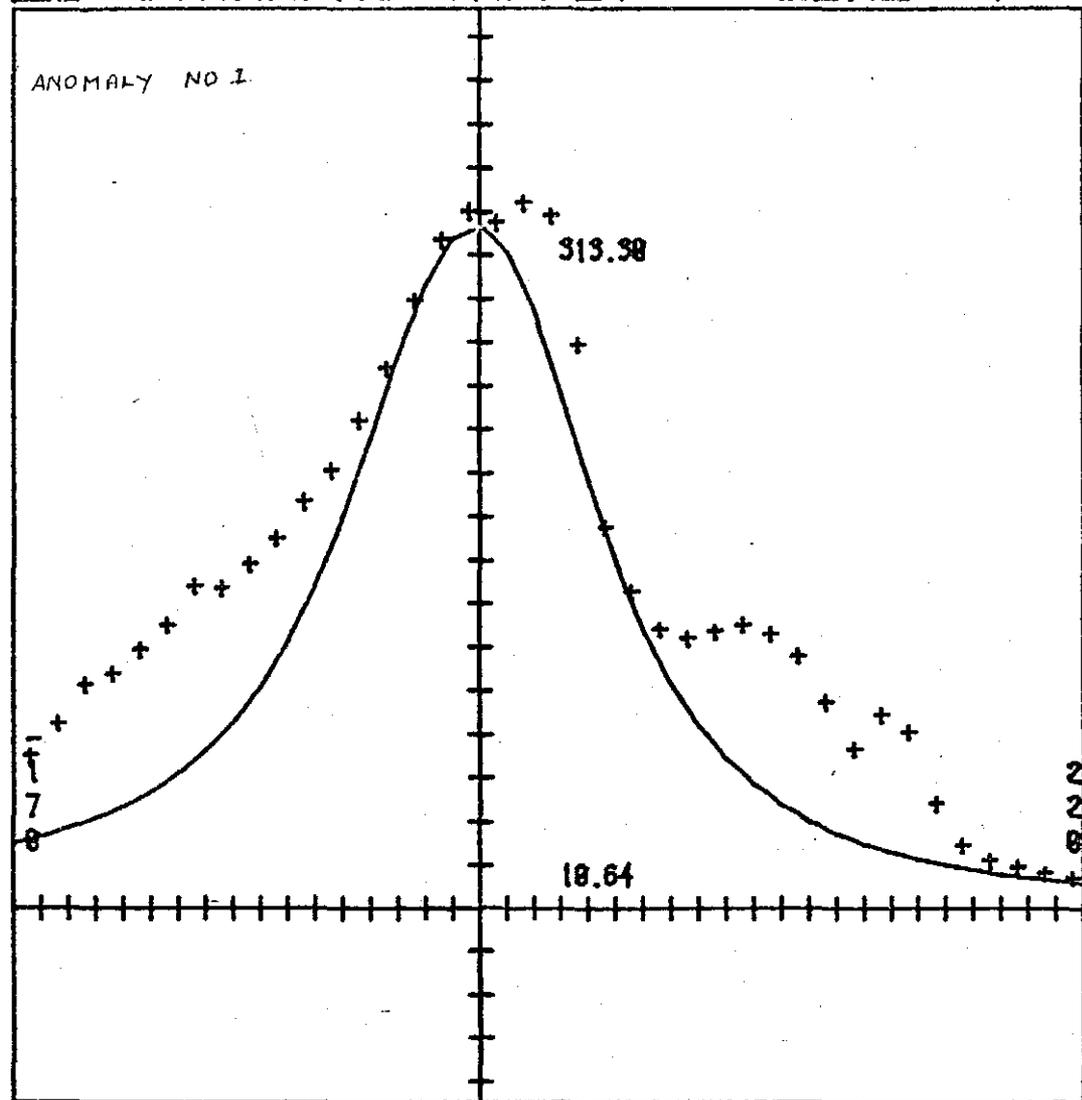
significant test of the Farrell Slates, failed to intersect any carbonate horizons which could be potential replacement host rocks for Renison style Sn mineralisation. This does not preclude their possible occurrence elsewhere in the sediment unit as such horizons are frequently lensoid. However the results of exploration to date indicate that if significant Sn mineralisation does occur in the area it is more likely to be associated with breccia zones. The contact zone between the Mt. Black Volcanics and the Farrell Slates, which is interpreted as the northward extension of the Henty Fault Zone, seems to be the most prospective area for this style of mineralisation. All the drill intersections to date are relatively shallow, especially STP 221 which lies only 34m below surface. The high As and associated weak Cu mineralisation which characterises the intersections suggests that the holes to date have intersected a relatively low-temperature hydrothermal assemblage. Significant Sn mineralisation should be associated with a higher temperature zone within the system and therefore deeper drilling below the present intersections may be indicated.

APPENDIX I

Computer Modelling of Ground Magnetic Anomalies.

TOTAL MAGNETIC INTENSITY
PROFILE

LINE:- STERLING VALLEY LINE 4160N



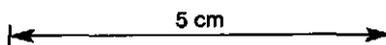
+ FIELD DATA

GETTY OIL DEV. CO.

$K=0.0027$ $T_0=62000$ $t=53$ $Z=46.5$ $D=100$ $I_0=72$ $S=10$ $g=20nT / DIV$

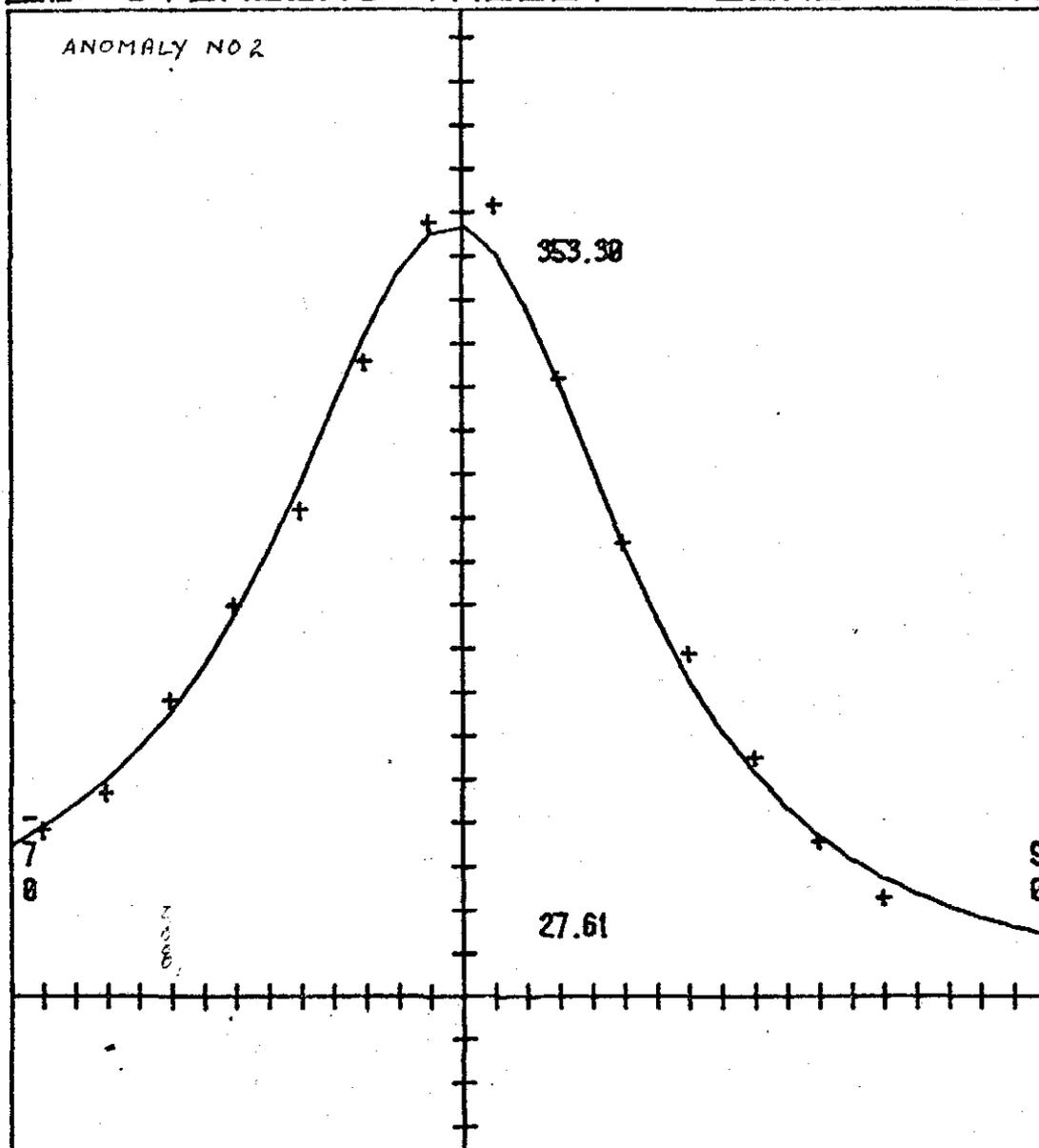
Anomaly caused by multiple bodies (at least four).
Main anomaly modelled with dipping dyke model, dyke centred
on ~~42~~ 4690 E. Parameters as shown:

- Susceptibility = 0.0027
- Total field = 62000
- Thickness = 53m
- Depth = 46.5m
- Dip = 100°
- Strike = 10°
- Inclination = 72°



TOTAL MAGNETIC INTENSITY
PROFILE

LINE:- STERLING VALLEY LINE 4280N



+ FIELD DATA

GETTY OIL DEV. CO.

 $K=0.0045$ $T_0=62000$ $t=22$ $Z=30$ $D=95$ $I_0=-72$ $S=1.0E-4$ $g=20nT / DIV$

Modelled using dipping dyke centred on 5045 E

Susceptibility = 0.0045

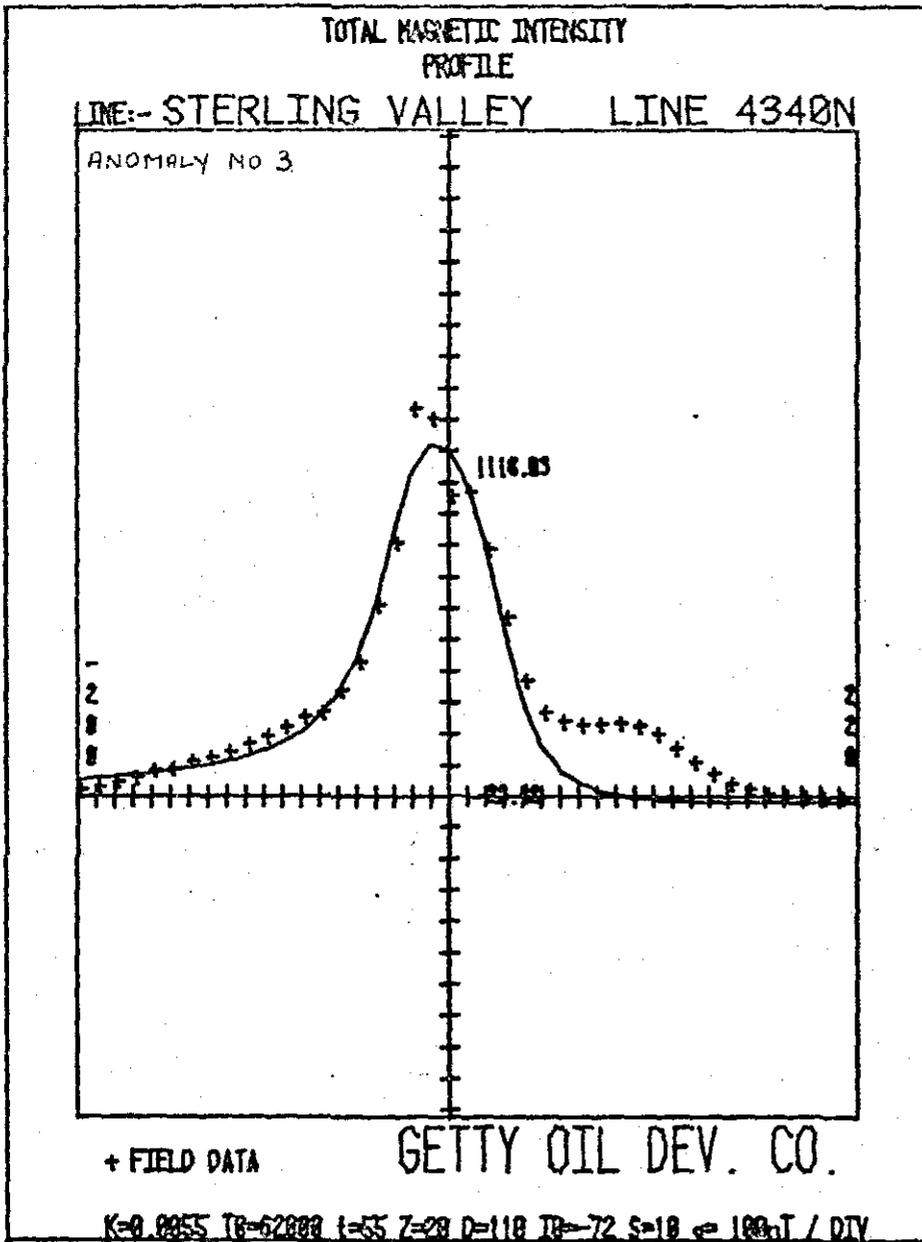
Total Field = 62000

Thickness = 22 m

Depth = 30 m

Dip = 95° Strike = 0°

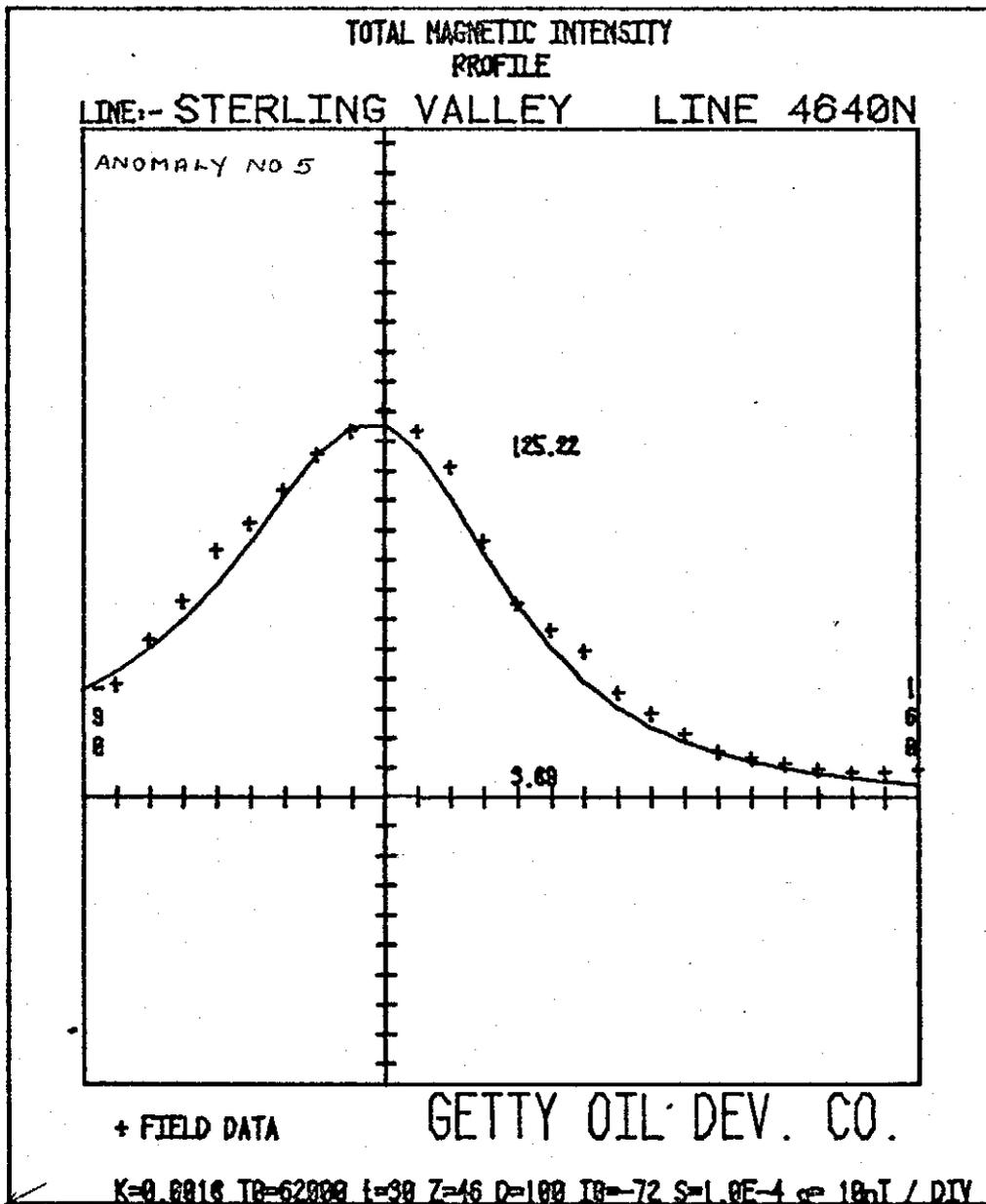
5 cm



Observed anomaly due to multiple bodies, main one modelled with dipping dyke centred on 4680 E having the parameters.

- Susceptibility = 0.0055
- Total Field = 62000
- Thickness = 55 m
- depth = 20 m
- Dip = 110° ie 70° W
- Strike = 10°

5 cm



Modelled with dipping dyke centred on 4740 E.

Parameters:

Susceptibility = 0.0018

Total Field = 62000

Thickness = 30 m

Depth = 46 m

Dip = 100°

Strike = 0°

5 cm

APPENDIX II

Diamond Drill Hole Logs

STP 220

STP 221

STP 231

DIAMOND DRILL CORE RECORD

LOCATION	Sterling Valley E.L. 4/73	Depth (M)	Direction	Dip.	Depth (M)	Direction	Dip.	COLLAR DiP.	-60°	TOTAL DEPTH	268.8m
OBJECTIVE	To test coincident ground magnetic, I.P. & V.H.E.M. anomalies	91.8	141.5°	-46°	208.8	93°	-26°	DIRECTION	108°(A.M.G.)	HOLE SIZE HQ	0-11.7m NQ 11.7-72m
RESULT	Anomalies were due to minor pyrrhotite & pyrite associated with black slate	121.8	237.5°	-44°	239.0	96.5°	-22°	R.L.	178M	COMMENCED	BQ 72-268.8m
		157.8	147.5°	-41°	261.8	95°	-21°	COORDINATES	4275N 5000E	COMPLETED	8.11.80
			234°	-41°				St. Valley Grid (5,374,200mN 384,625mE)		LOGGED BY A. Mollison/J. Mill	

* azimuth readings affected by pyrrhotite

Depth (M)		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA (ppm)							CORE REC'D		
FROM	TO							Sample Length	Pb	Zn	Cu	Ag-g/t	Au-g/t	Sn	As	RUN	SHORT
0	#8	Fluvio-glacial overburden.															
8	13.8	Black Slate - Dk gry-black cleaved contorted pyritic slate. Minor carbonate & quartz veining occurs parallel to and cross cutting cleavage. A soft pale green mineral (probably chlorite) occurs associated with these quartz carbonate veins. Leaching of carbonata is extensive. Core angles 13.8 -65° to long core axis. Contact with underlying tuffaceous unit is conformable, with a tuff cleft 2 in shale immediately above contact giving a possible west facing.	Pyrite occurs as blebs, cubes & veins up to 10% averaging 1-2%. Mineralisation is strongest in association with quartz/carbonate veining 8.0m-8.7m and 13.6m-13.8m	38363	8.0	8.7	Sc	0.7	75	50	100	0.3	0.008	580	190	0	8.0
				364	8.7	13.6	Chip	4.9	75	130	140	1.0		X	90	8.7	0.1
				365	13.6	13.8	Sc	0.2	100	100	125	0.5	X	84	650	9	0.3
																9.4	
																10.8	
																11.7	
																12.85	0
																14.1	0.15
																16.8	0.1
																19.8	0.1
																22.8	
																25.8	
13.8	24.5	Volcaniclastic Siltstone - Ple grey-green grey moderately cleaved fg volcaniclastic siltstone. Rounded amorphous fragments up to 5cm in diameter in a pale green chloritic? matrix suggest local brecciation. (Thin section taken at m Sample No)	Trace disseminated & stringer pyrite <1%	38366	13.8	17	Chip	3.2	75	110	20	1.0		X	15	28.8	0.2
				367	17	21	"	4.0	60	195	10	0.3		X	4	31.8	0.4
				368	21	24.5	"	3.5	45	100	5	1.0		X	4	34.8	0.1
																37.8	0.1
																39.8	0.3
																42.9	0.1
																45.5	0.3
																48.7	
24.5	29.9	Black Slate - Similar to 8.0m-13.8m but with minor thin silty laminations between 28.8m and 29.9m. Local thin <0.5cm veins of quartz siderite? carbonate, chlorite containing minor pyrite locally leached. Bottom contact appears gradational	Moderately pyritic, as veins parallel to cleavage av 1-2% Core angles: bedding to long core axis 24.9m -60° 29.9m -60°	38369	24.5	29.9	Chip	5.4	130	225	80	1.0		400	65	51.8	
																58	
																61.1	
																64.8	
																67.8	
																72	
																73.8	
																76.8	
																79.8	
29.9	32.6	Volcaniclastic siltstone/greywacke - Similar to 13.8-24.5m with thin black slate band 31.2-31.7m. Below 31.7m, this unit becomes rapidly coarser down hole with elongate shale clasts up to 10cm dia (long axis) & smaller rounded volcanic fragments of quartz porphyry. No appreciable veining. Bed appears to be graded giving west facing.	Diss pyrite + 1%	38370	29.9	32.6	Chip	2.7	75	150	35	1.0		X	31	82.8	0.2
																85.8	
																88.8	0.1
																90.9	0.1
																93.9	
																97	
																100.1	
																103.2	
																105.4	

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										ASSAY DATA						
Core No.	Depth (m)	Description	Sample No.	Depth (m)	Grade (%)	Chip (%)	Fe (%)	Cu (%)	Zn (%)	Pb (%)	Ag (%)	Other	Depth (m)	Grade (%)	Other	
80.7	83.7	<u>Black Slate -</u> Predominantly massive black cleaved slate locally laminated with fg siltstone. Thin volcanoclastic siltstone/greywacke interbeds occur at 37.3-37.4m, 44.9-44.95m, 53.15-53.3m, 59.5-59.7m, 67.0-67.8m, 68.1-68.2m. Bed at 67.0-67.8m appears graded (facing up-hole). Unaltered. Pervasive thin (<0.5cm) siderite veins & larger quartz/carbonate/chlorite veins occur at 45.4-45.5m, 56.9-57.2m, 60.8-61.3m, 78.5-80.7m. Fracture zones occur at 39.3-39.8m, 42.95-43.45m, 59.9-61.3m Core Angles = bedding to long core axis - 37.6m - 70° 61.5m - 70° 49.5m - 60° 53.3m - 55° 68.2m - 50° 81.7m - 45° 71.0m - 45°	38371	32.6	37.6	Chip	5.0	40	135	135	0.5	X	60	108.5		
		Dissem fg pyrite 32.6-41.8m	372	37.6	41.8	"	4.2	265	335	120	1.5	X	60	111.6		
		Dissem pyrite/pyrrhotite occur in veins 1.8-45.5m.	373	41.8	45.5	"	3.7	120	165	140	1.0	X	44	112.8		
		Minor pyrrhotite occurs as ultra fg dissemin in slate 45.5-47.4m	374	45.5	47.4	"	1.9	110	170	95	1.0	X	18	115.8		
		Tr pyrite 47.4-51.8m	375	47.4	51.8	"	4.4	35	950	100	0.5	X	51	118.8		
		Pyrite & pyrrhotite in veins ± 1% 51.8-52.3m	376	51.8	52.3	"	0.5	85	210	125	1.0	X	24	121.8		
		Minor pyrite 52.3-56.9m	377	52.3	56.9	"	4.6	95	250	95	X	X	49	124.8		
		Tr cpy 53.2 associated with quartz/chlorite vein	378	56.9	61.3	"	4.4	65	115	95	1.0	X	35	127.8		
		56.9-61.3m vein pyrite + pyrrhotite ± 1-2% associated with thin quartz/carbonate veins & dissemin in rock matrix	379	61.3	66.3	"	5.0	100	520	100	1.5	X	39	130.8		
		61.3-63.2m trace pyrite in fg & agglomerates. 63.2-80.7m pyrite as minor veinlets and dissemin <1-2% with trace pyrrhotite as veinlets & blebs. Pyrrhotite also occurs rarely as micro-veinlets & grains in the shale matrix.	38380	66.3	71.3	"	5.0	65	130	80	0.5	X	46	133.8		
			381	71.3	76.3	"	5.0	55	130	120	0.5	X	60	136.8		
			382	76.3	80.7	"	4.4	90	230	115	0.5	8	43	139.8		
														142.8		
														145.8		
														148.8		
														154.8	0.3	
														157.8	0.1	
														160.8	0.1	
														163.8		
														205.8		
80.7	83.10	<u>Interbedded Black Slate & Volcaniclastic Greywacke</u> Predominantly black slate with approximately 30-40% volcanoclastic siltstone & greywacke in laminations & interbeds from 2mm - 20cm wide. Minor siderite occurs as blebs and veins up to 0.5cm wide. Minor quartz veins also occur with veins up to 3cm wide.	38383	80.7	83.1	Chip	2.4	125	690	60	0.5	X	25	208.8		
		Minor pyrite as veinlets & blebs up to 3mm wide with trace pyrrhotite veinlets & blebs												211.8		
														214.8		
														217.8		
														220.8		
														223.8		
														226.8		
														229.8		
														232.8		
														235.8		
83.10	126.4	<u>Volcaniclastic siltstone-greywacke</u> Unit grades progressively from a siltstone at 83.1 downhole to a greywacke composed of: 30% rounded quartz grains up to 4mm dia. & 10% black slate fragments up to 4cm across in a grey silty matrix. 83.1-84.6 Grey volcanoclastic siltstone 84.6-86.6 Ple green grey cleaved volcanoclastic siltstone. Weakly sericitised. Minor siderite vns <1cm wide												241.8		
														244.8		
														247.8		
														250.8		
														253.8		
														256.8		
														259.8		
														262.8		
														265.8		
														268.8		
														EDH		

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Depth (M)		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA (ppm)							CORE REC'D	
FROM	TO							Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Sn	As	RUN
		<p>117.2-126.4 Grey greywacke. Composed of rounded quartz grains up to 4mm dia & black slate clasts of irregular shape up to 4cm long in a silty matrix. Fine siderite occur locally through this unit with subordinated quartz associated.</p> <p>NOTE: Size of clasts grades up hole from coarse to fine through whole of unit.</p>														
126.4	129.5	<p><u>Interbedded black slate & volcaniclastic greywacke/conglomerate</u> The unit grades from massive black slate to pure volcaniclastic greywacke through a series of interbeds from 1mm to 3cm wide. The volcanoclastic conglomerate at the (base?) of the unit is composed of a) quartz-phyric rhyolite b) volcaniclastic siltstone and c) black slate fragments, all up to 4cm long. Occasional fine carbonate vns occur making less than 1% of the core volume. Angle - bedding to long core axis 129.2 - 60°</p>	<p>Minor vns & dissem of pyrite & subordinate pyrrhotite occur along fractures & also throughout the unit. Total sulphide content is less than 1% core volume.</p>	38399	126.4	129.5	Chip	3.1	80	180	40	0.5		X	450	
129.5	136.6	<p><u>Grey volcaniclastic greywacke</u> Unit is composed of rounded quartz grains and occasional shale fragments in a grey silty matrix. Interbedding with black slate occurs on both contacts on the core. Occasional irregular carbonate (siderite) vns occur throughout. Quartz is associated in minor amounts with these vns.</p>	<p>Trace blebs of pyrite & sphalerite occur with the sphalerite localised between 135.5 & 136.6m</p>	38400	129.5	133	Chip	3.5	113	225	15	0.5		X	32	
				35448	133	137	"	4.0	70	150	15	0.5		X	35	
				35449	137	138	Split	1.0	300	425	45	X		X	40	
136.6	137.9	<p><u>Slumped & interbedded greywacke & black slate.</u> Clasts or interbeds of slate are contained within the volcaniclastic greywacke. At 137.1 the greywacke is slumped downhole into the black slate. This gives a facing, uphole.</p>	<p>Minor vnlets & dissem of pyrite occur in this unit.</p>													
137.9	157.5	<p><u>Black Slate</u> 137.9-139 Black Slate with frequent siderite vns upto 2cm wide making up 10-20% of the core volume.</p>														

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Depth (M)		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA (ppm)							CORE REC'D		
FROM	TO							Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Sn	As	RUN	SHORT
		137.9-139 cont. Quartz, chlorite alteration is also common (approx 20% of the core volume). Core Angles - bedding to long core axis 132.0 - 65° 152.8 - 70° 156.4 - 60°	Vns of pyrite with galena & chalcopyrite occur in association with the quartz siderite and chlorite alteration. Av total sulphides are 10-20%	38450	138	138.7	Split	0.7	3.25%	3.2%	4850	81.0	X	1500	2000		
				452	138.7	139.7	"	1.0	4550	8200	1250	10.0	X	380	380		
				453	139.7	140.7	"	1.0	1850	2100	180	3.0	X	640	190		
				454	140.7	141.7	"	1.0	350	280	100	1.5	X	360	110		
				455	141.7	142.7	"	1.0	210	145	85	0.5	X	X	110		
				456	142.7	143.7	"	0.4	90	75	80	0.5	X	X	110		
		139-151.2 Black Slate - frequent fine siderite vns upto 1cm wide ave 1-2mm approx 10% of the core volume. Quartz-chlorite vns common usually assoc with siderite.	Pyrite occurs as vns & blebs up to 1cm wide upto 20% core volume eg 136.9m ave 1-2%. Rare pyrrhotite & a sphalerite vn occurs with pyrite at 150.0m.	457	143.1	148.8	Chip	0.7	70	250	135	1.0	X	X	90		
				458	148.8	151.2	"	2.4	240	740	100	2.0	X	X	550		
				459	151.2	157.5	"	6.3	125	900	100	1.5	X	X	230		
				35499	148.8	149.8	Split										
				35500	149.8	150.8	"										
		151.2-157.5 Black slate containing minor fine siderite vns. Cleaved bands occur through this unit.	Trace pyrite occurs in assoc with the siderite vns.														
157.5	162.4	Interbedded black slate & volcaniclastic greywacke Quartz vns upto 30cm wide cut this contact zone between slate & greywacke. Chlorite is associated with the quartz. Ang. - bedding to long core axis 156.6 - 70°	Trace pyrite & pyrrhotite occur as vns & blebs through this unit.	35460	157.5	162.5	Chip	5.0	65	175	70	0.5	X	360			
				461	162.5	167.5	"	5.0	70	115	15	1.0	X	15			
162.4	171.9	Pale grey volcaniclastic greywacke Siderite & quartz occur in sparse vns upto 1cm wide throughout the unit. There is weak chlorite alteration through the unit.	Trace pyrite	462	167.5	171.9	"	4.4	145	100	10	1.0	X	8			
				463	171.9	175.5	"	3.6	85	325	30	1.0	X	19			
				464	175.5	180.3	"	4.8	45	530	60	1.0	X	65			
171.9	180.3	Interbedded black slate & minor volcaniclastic siltstone Unit is strongly quartz vned with assoc chlorite in the vns & on vn margins. Siderite is also common but subordinate to quartz. Ang. - bedding to long core axis 172.9 - 80° 179.6 - 85°	Minor pyrite & pyrrhotite occur through the unit as blebs & vlets.														
180.3	211.5	Pale green grey volcaniclastic siltstone Grades downhole from fg siltstone to greywacke with large black slate clasts upto 4cm wide. Ang. - bedding to long core axis 189.8 - 75° 209.7 - 75°	Weekly pyritic <1%	35465	180.3	185.3	Chip	5.0	515	480	15	1.5	X	24			
				466	185.3	190.3	"	5.0	100	200	10	0.5	X	27			
				467	190.3	195.3	"	5.0	125	290	10	0.5	X	11			
				468	195.3	200.3	"	5.0	740	205	10	1.5	X	27			
				469	200.3	205.3	"	5.0	215	275	15	1.0	X	37			
211.5	212.0	Conglomerate Lt-dk grey cleaved polymictic conglomerate consisting of elongate rounded-subrounded shales & rhyolite fragments upto 15cm	Minor dissem pyrite & thin vns along cleavage : faces <1%	35470	205.3	211.5	"	6.2	150	110	15	1.0	X	22			
				471	211.5	212.0	Split	0.5	65	115	35	X	X	X	30		

800035

Depth (M)		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA (ppm)						CORE REC'D			
FROM	TO							Sample Length	Pt	Zn	Cu	Ag - g/t	Au - g/t	Sn	As	RUN	SHORT
260.7	268.8	cont. fragments & one interbed of laminated volcaniclastic siltstone between 262.8 & 265.1		35496	260.7	262.8	Chip	2.1	140	1300	95	2.0		X	42		
				497	262.8	265.1	"	2.3	2850	750	20	1.5		X	7		
				498	265.1	268.8	"	3.7	60	90	85	6.5		X	35		
		NOTE: Fe & Mn also analysed - refer to analytical form.															

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Sample No.	From	To	Core Rec'd	Sample Length	Pb	Zn	Cu	Assay Ag	Data Au	per Sn	ppm As	Fe%	Mn
38363S	8.0	8.7	0.6	0.7	75	50	100	0.3	0.008	580	190	2.20	185
364C	8.7	13.6	4.5	4.9	75	130	140	1.0		X	90	3.35	1050
365S	13.6	13.8	0.2	0.2	100	100	125	0.5	X	84	650	2.75	3250
366C	13.8	17	3.05	3.2	75	110	20	1.0		X	15	1.80	1000
367C	17	21	3.9	4	60	195	10	0.3		X	4	0.93	900
368C	21	24.5	3.5	3.5	45	100	5	1.0		X	4	0.79	230
369C	24.5	29.9	5.2	5.4	130	225	80	1.0		400	65	4.35	1300
38370C	29.9	32.6	2.3	2.7	75	150	35	1.0		X	31	2.90	1350
371C	32.6	37.6	4.8	5	40	135	135	0.5		X	60	5.70	6850
372C	37.6	41.8	3.9	4.2	265	335	120	1.5		X	60	5.0	3900
373C	41.8	45.5	3.3	3.7	120	165	140	1.0		X	44	4.75	3200
374C	45.5	47.4	1.9	1.9	110	170	95	1.0		X	18	4.30	1700
375C	47.4	51.8	4.4	4.4	35	950	100	0.5		X	51	4.75	2150
376C	51.8	52.3	0.5	0.5	85	210	125	1.0		X	24	4.40	3450
377C	52.3	56.9	4.6	4.6	95	250	95	X		X	40	4.45	1850
378C	56.9	61.3	4.4	4.4	65	115	95	1.0		X	35	4.10	1700
379C	61.3	66.3	5.0	5.0	100	520	100	1.5		X	39	4.80	3000
38380	66.3	71.3	5.0	5.0	65	130	80	0.5		X	46	4.25	2850
381C	71.3	76.3	5.0	5.0	55	130	120	0.5		X	60	5.75	1950
382C	76.3	80.7	4.4	4.4	90	230	115	0.5		8	43	5.40	2050
383C	80.7	83.1	2.2	2.4	125	690	60	0.5		X	25	2.95	1450
384C	83.1	88.1	4.9	5.0	85	220	10	0.5		X	6	0.78	560
385S	88.1	89.2	1.1	1.1	425	220	25	X	X	425	25	0.87	800
386S	89.2	90.2	0.9	1.0	220	125	60	3.0	0.032	220	4000	1.95	3150
387C	90.2	94.7	4.5	4.5	60	45	105	1.0		X	3800	2.60	345
388S	94.7	95.8	1.1	1.1	340	100	305	7.5	0.064	14	2.2%	1.55	530
389S	95.7	96.0	0.3	0.3	40	40	95	0.5	X	10	650	3.00	375
38390S	96.0	96.25	0.25	0.25	50	70	2750	6.0	X	X	150	2.30	1500
391C	96.25	97.1	0.85	0.85									
392C	97.1	106.5	9.4	9.4	170	175	400	1.5	SAMPLE LOST	2	250	2.10	1700
393S	106.5	107.5	1.0	1.0	80	95	85	0.5	X	58	150	2.80	2400
394S	107.5	108.5	1.0	1.0	105	105	25	X	X	12	65	2.65	1850
395C	108.5	113.5	5.0	5.0	100	310	30	1.5		X	50	1.10	1350
396C	113.5	118.5	5.0	5.0	80	220	15	0.5		X	55	0.95	695
397C	118.5	122.5	4.0	4.0	45	135	15	0.5		4	14	1.15	465
398C	122.5	126.4	4.0	4.0	40	80	15	0.5		X	35	1.55	730
399C	126.4	129.5	3.1	3.1	80	180	40	0.5		X	450	3.55	1200
38400C	129.5	133	3.5	3.5	113	225	15	0.5		X	32	1.20	1000

80039

Sample No.	From	To	Core Rec'd	Sample Length	Pb	Zn	Assay Cu	Data Ag	per Au	ppm Sn	As	Fe%	Mn
35448C	133	137	4.0	4.0	70	150	15	0.5		X	35	1.36	1200
449S	137	138	1.0	1.0	300	425	45	X		X	40	2.65	2350
38450S	138	138.7	0.7	0.7	3.25%	3.2%	4850	81.0	X	1500	2000	0.98	1.85%
452S	138.7	139.7	1.0	1.0	4550	8200	1250	10.0	X	380	380	1.95	5700
453S	139.7	140.7	1.0	1.0	1850	2100	180	3.0	X	640	190	1.95	5250
454S	140.7	141.7	1.0	1.0	350	280	100	1.5	X	360	110	2.10	5350
455S	141.7	142.7	1.0	1.0	210	145	85	0.5	X	X	110	3.75	3650
456S	142.7	143.1	0.4	0.4	90	75	80	0.5	X	X	110	2.75	2800
457C	143.1	148.8	0.7	0.7	70	250	135	1.0		X	90	4.15	1950
458C	148.8	151.2	2.2	2.4	240	740	100	2.0		X	550	5.25	1650
459C	151.2	157.2	6.1	6.3	125	900	100	1.5		X	230	4.50	1150
35460C	157.5	162.5	4.9	5.0	65	175	70	0.5		X	360	4.15	1950
461C	162.5	167.5	5.0	5.0	70	115	15	1.0		X	15	1.85	690
462C	167.5	171.9	4.4	4.4	145	100	10	1.0		X	8	1.85	730
463C	171.9	175.5	3.6	3.6	85	325	30	1.0		X	19	2.15	850
464C	175.5	180.3	4.8	4.8	45	530	60	1.0		X	65	3.25	1200
465C	180.3	185.3	5.0	5.0	515	480	15	1.5		X	24	0.95	465
466C	185.3	190.3	5.0	5.0	100	200	10	0.5		X	27	0.53	330
467C	190.3	195.3	5.0	5.0	125	290	10	0.5		X	11	0.65	380
468C	195.3	200.3	5.0	5.0	740	205	10	1.5		X	27	0.59	255
469C	200.3	205.3	5.0	5.0	215	275	15	1.0		X	37	0.67	235
35470C	205.3	211.5	6.2	6.2	150	110	15	1.0		X	22	1.10	480
471S	211.5	212.0	0.5	0.5	65	115	35	X	X	X	30	1.05	220
472S	212.0	213.0	1.0	1.0	40	145	65	X	X	X	32	2.45	800
473S	213.0	214.0	1.0	1.0	30	135	60	X	X	X	26	3.0	710
474S	214.0	215.0	1.0	1.0	35	110	50	X	X	X	50	2.35	255
475S	215.0	216.0	1.0	1.0	85	415	65	X	X	X	36	2.40	620
476S	216.0	217.0	1.0	1.0	135	175	55	X	X	X	50	2.75	305
477S	217.0	218.0	1.0	1.0	340	690	70	X	X	X	46	2.40	650
478S	218.0	219.0	1.0	1.0	255	290	65	X	X	X	43	2.75	440
479S	219.0	220.0	1.0	1.0	75	100	50	X	X	X	50	2.20	515
35480S	220.0	220.5	0.5	0.5	60	100	50	X	X	X	35	2.60	735
481S	220.5	220.8	0.3	0.3	15	50	20	X	X	X	15	1.30	620
482S	220.8	221.8	1.0	1.0	10	40	25	0.5	X	X	20	1.45	450
483S	221.8	222.3	0.5	0.5	10	30	50	X	X	X	9	2.00	565
484C	222.3	227.7	5.4	5.4	40	115	10	0.5		X	9	0.56	285
485C	227.7	229.1	1.4	1.4	40	65	90	0.5		X	28	3.20	1000
486C	229.1	232.0	2.9	2.9	55	115	115	1.0		X	360	5.00	2950
487C	232	233.7	1.7	1.7	80	85	90	1.5		X	41	4.15	4450
488C	233.7	235.8	2.1	2.1	80	190	55	1.0		X	17	2.85	1700
489C	235.8	240.8	5.0	5.0	55	85	25	0.5		X	21	1.90	720

800040

Sample Number	From	To	Core Rec'd	Sample Length	Pb	Zn	Assay Cu	Data Ag	per Au	ppm Sn	As	Fe%	Mn
35490C	240.8	244.7	3.9	3.9	50	80	25	0.5		X	9	1.95	1300
491C	244.7	246.8	2.1	2.1	45	105	90	1.0		X	41	4.35	1550
492C	246.8	247.7	0.9	0.9	51	165	100	1.0		X	36	4.45	675
493C	247.7	251.5	3.8	3.8	765	740	110	2.0		X	62	4.75	1750
494C	251.5	256.8	5.3	5.3	3850	1.8%	205	9.0		X	70	4.60	1300
496C	260.7	262.8	2.1	2.1	140	1300	95	2.0		X	42	1.80	2550
497C	262.8	265.1	2.3	2.3	2850	750	20	1.5		X	7	3.60	3350
498C	265.1	268.8	3.7	3.7	60	90	85	6.5		X	35	0.59	350

CORE ANGLES

256.6m	68°
259.5m	60°
264.9m	86°

LOCATION	Sterling Valley Grid	Footage	Direction	Dip.	Footage	Direction	Dip.	COLLAR DIP.	-60°	TOTAL DEPTH	203.3
OBJECTIVE	To test two ground magnetic anomalies and an I.P. anomaly	79.6	184° mag	56.5°				DIRECTION	64° mag 76½ A.M.G.	HOLE SIZE HQ	- 11.7 NQ - 59.6
RESULT	Hole intersected massive vein pyrrhotite/arsenopyrite mineralisation between 31.6 and 39.5m. No economic tin mineralisation.	109.8	199° "	55°				R.L.	176m	COMMENCED	8Q - 203.3
		178.8	214° "	38°				COORDINATES	4320N, 4635E	COMPLETED	23.12.80
		203.0	148° "						Sterling Valley Grid	LOGGED BY	A. Mollison

FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA (ppm)								CORE REC'D	
FROM	TO							Temp Length	Pt	Zn	Cu	Ag - g/t	Au - g/t	Sn	As	RUN	SHORT
0	11.5	<u>Fluvio-glacial Overburden</u>		40501	10.5	11.5	Split	1.0	70	295	480	1.0	0.284	310	1.0%	0	Poor
				502	11.5	12.5	"	1.0	X	175	100	X	X	410	1600	10.5	Rec'd
10.5	23.5	<u>Green Andesite</u> Green fine grained locally quartz phyric andesitic lava. Minor quartz veining occurs between 11.5 & 15.0m. Small amounts of chlorite are associated with the larger quartz veins and siderite occurs as rare small veins. Small quartz veins occur through the rest of the unit.	11.5-15.0 Minor pyrite occurs in association with quartz veins, as veins and blebs. Arsenopyrite occurs with pyrite in a 4cm wide quartz vein at 11.5m.	503	12.5	13.5	"	1.0	10	245	250	X	X	220	2100	12	0.2
				5604	13.5	14.5	"	1.0	X	290	130	X	0.040	20	65	13.8	0.1
				505	14.5	15.0	"	0.5	470	1150	205	1.5	X	520	1700	16.1	0.1
				506	15.0	16.0	"	1.0	75	405	60	0.5	X	40	40	18.1	0.1
				507	16.0	18.0	Chip	2.0	X	250	35	X	X	40	60	19.8	0.2
				508	18.0	22.0	"	4.0	X	240	25	0.5	X	30	75	21.5	0.2
			15.0-23.5 Trace disseminated pyrite	509	22.0	26.0	"	4.0	X	180	40	0.5	X	3	50	22.8	0.1
				50610	26.0	27.0	Split	1.0	X	160	15	X	X	4	14	25.8	-
				511	27.0	28.0	"	1.0	X	190	20	X	X	4	20	28.8	0.1
				512	28.0	28.8	"	0.8	5	260	205	1.5	X	20	28	30.8	1.5
23.5	28.8	Agglomerate - composed of angular, fine grained & quartz phyric rhyolite fragments up to 4cm diam. in a green matrix. Between 24.1m & 25.5m the core is silicified & carbonatised (sideritic). Elsewhere quartz veins up to 1cm are common with minor fine siderite veins.	No visible sulphides 23.5-28.8m	513	28.8	30.8	"	2.0	110	150	1500	8.5	X	15	9000	31.8	0.7
				514	30.8	31.6	"	0.8	1400	240	1500	43.0	X	85	3700	34.7	0.1
				515	31.6	32.6	"	1.0	5	205	730	4.5	0.032	35	3000	37.8	-
				516	32.6	33.15	"	0.55	135	165	1350	28.5	0.412	25	3.2%	40.8	-
				517	33.15	33.7	"	0.55	5	115	650	6.5	0.032	60	8000	43.8	-
				518	33.7	34.7	"	1.0	365	55	2250	42.0	0.048	40	10%	46.8	-
				40520	34.7	35.2	"	0.5	90	180	1300	10.0	0.072	120	4.5%	49.8	-
				521	35.2	35.5	"	0.3	75	3350	2550	11.0	0.024	70	1.5%	52.8	-
28.8	31.6	Highly cleaved pyritic andesite	Pyrite pebbles in core tray up to 1 cm diameter.	522	35.5	35.8	"	0.3	60	135	1800	14.0	0.112	100	7000	55.8	-
				523	35.8	36.8	"	1.0	155	2500	2250	19.0	0.072	460	13%	58.8	-
				524	36.8	37.8	"	1.0	335	235	3400	40.0	0.240	30	3.5%	59.6	-
31.6	33.7	Green fine grained andesite - minor quartz veins.	Minor veins of pyrite, pyrrhotite & arsenopyrite up to 2cm wide & 10% core volume	525	37.8	38.8	"	0.9	35	70	3050	10.0	0.152	2650	8.8%	61.8	-
				526	38.8	39.5	"	0.7	15	85	1300	4.5	0.288	3950	4.3%	67.8	-
				527	39.5	40.0	"	0.5	440	1300	90	0.5	0.024	45	2500	70.8	-
				528	40.0	40.8	"	0.8	635	1550	205	2.0	0.016	50	6000	73.8	-
33.7	39.5	Stringers & veins of pyrrhotite, arsenopyrite & pyrite in a silicified, chloritised fine grained andesitic matrix. Quartz with chlorite veins comprises up to 70% of the core volume e.g. 37.8-39.5m	Stringers & veins of pyrrhotite occur with subordinate arsenopyrite & pyrite veins & blebs. Total sulphides up to 100% core volume average -60%	529	40.8	41.8	"	0.0	300	740	115	1.5	X	40	45	76.8	-
				40530	41.8	42.8	"	1.0	760	3650	300	3.0	X	70	40	79.8	-
				531	42.8	43.8	"	1.0	140	510	100	1.0		Zn	55	81.8	-
				532	43.8	44.8	"	1.0	80	410	215	1.5	0.120	40	55	82.8	-
				533	44.8	45.8	"	1.0	80	455	220	1.5	0.080	50	230	85.8	-
				534	45.8	46.8	"	1.0	145	265	295	2.0	0.083	50	4500	88.8	-
39.5	107.5	<u>Lithic Vitric Tuff</u>		535	46.8	47.8	"	1.0	235	1250	250	2.5	0.083	70	2000	91.8	-
				536	47.8	48.8	"	1.0	240	1265	140	0.5	X	50	45	94.8	-
39.5	69.6	Lithic vitric tuff to agglomerate grades from fine grained vitric tuff with rare small lithic fragments to agglomerate from 39.5-67.6m. It is difficult to determine whether unit is an irregularly banded tuff or agglomerate below this point	39.5-53.1 Minor veins of pyrrhotite & pyrite with occas. arsenopyrite veins. Trace sphalerite occurs as blebs.	537	48.8	49.8	"	1.0	30	245	205	X	0.296	10	1300	97.8	-
				538	49.8	50.8	"	1.0	185	410	155	1.0	0.352	35	1600	100.8	-
				539	50.8	51.8	"	1.0	30	175	230	X	0.456	25	200		

800041

FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA							CORE REC'D																						
FROM	TO							Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Sn	As	RUN	SHORT																				
122.7	203.3	<p><u>Volcaniclastic Greywacke & siltstone:</u> grainsize grades from fine siltstone to greywacke with minor shale beds. Good grading occurs at 190.1 where shale grades down hole into greywacke & is overlain by slumped greywacke indicating a west facing. However, grading is generally irregular. Minor fine carbonate veins (calcite & siderite?) occur pervasively throughout the unit. They represent less than 5% of the core volume. Quartz veins occur locally throughout the unit e.g. 133.8m, 133.5m, 166.9m, 171.2m, 171.5m, 178.8-179.0m & 180.0-180.9m. Veins are up to 20cm wide. However, total percentage of core volume is less than 1%. Weak chlorite alteration occurs locally usually in association with quartz.</p> <p>Bedding to long core axis angles are:</p> <table border="0"> <tr><td>131.4</td><td>65°</td><td>175.3</td><td>65°</td></tr> <tr><td>138.9</td><td>70°</td><td>179.2</td><td>70°</td></tr> <tr><td>151.4</td><td>50°</td><td>186.1</td><td>65°</td></tr> <tr><td>159.5</td><td>50°</td><td>188.7</td><td>85°</td></tr> <tr><td>171.2</td><td>60°</td><td>198.8</td><td>75°</td></tr> </table>	131.4	65°	175.3	65°	138.9	70°	179.2	70°	151.4	50°	186.1	65°	159.5	50°	188.7	85°	171.2	60°	198.8	75°	<p>122.7-132 Trace pyrite</p> <p>132-135.6 Minor veined pyrrhotite & trace pyrite as vns up to 2cm wide av 2mm wide. Approx. 5% core volume</p> <p>135.6-141.4 Trace pyrrhotite & pyrite as veins & disseminations less than 1% core volume.</p> <p>141.4-151.2 Trace pyrite</p> <p>151.2-173.2 Minor pyrrhotite & pyrite as veins & dissem. Veins up to 4cm wide occur at 166.0m, 166.8m-166.9m, 169.7-169.8, 171m, 171.3-171.5m & 172.5m av total sulphides 1-2% core volume Pyrrhotite veins are generally assoc. with quartz.</p> <p>173.2-203.3 Trace pyrite & pyrrhotite as disseminations.</p>	40585	154.8	159.8	Chip	5.0	70	325	130	0.5	0.032	44	110		
131.4	65°		175.3	65°																																	
138.9	70°		179.2	70°																																	
151.4	50°		186.1	65°																																	
159.5	50°		188.7	85°																																	
171.2	60°		198.8	75°																																	
					586	159.8	164.8	"	5.0	145	210	400	10.0	0.04	44	4000																					
					587	164.8	165.8	Split	1.0	30	85	245	1.0	0.016	38	2000																					
					588	165.8	166.8	"	1.0	210	490	260	2.5	0.024	38	110																					
					589	166.8	167.8	"	1.0	930	1050	2200	23.5	0.072	34	1.0%																					
					40590	167.8	172.8	Chip	5.0	50	105	260	0.5	0.016	46	5500																					
					591	172.8	177.8	"	5.0	15	90	55	X	X	38	110																					
					592	177.8	182.8	"	5.0	55	90	30	X	0.016	64	42																					
					593	182.8	187.8	"	5.0	305	340	25	0.5	0.032	120	38																					
					594	187.8	192.8	"	5.0	90	315	35	0.5	0.008	38	56																					
					595	192.8	197.8	"	5.0	15	125	50	X	0.016	52	52																					
					596	197.8	201.8	"	4.0	30	100	35	0.5	0.016	52	40																					
				597	201.8	203.0	"	1.2	80	230	35	X	0.016	64	17																						

NOTE: Fe and Mn were assayed and results are available.

800043

Sample No	From	To	Core Rec'd	Sample Length	Pb	Zn	Cu	Ag	Au	Sn	As	Fe%	Mn
40501S	10.5	11.5	0.8	1.0	70	295	480	1.0	0.284	310	1.0%	20.0	3150
502S	11.5	12.5	1.0	1.0	X	175	100	X	X	410	1600	19.0	2850
503S	12.5	13.5	0.9	1.0	10	245	250	X	X	220	2100	15.0	3100
504S	13.5	14.5	1.0	1.0	X	290	130	X	0.040	20	65	7.25	2950
505S	14.5	15.0	0.5	0.5	47C	1150	205	1.5	X	520	1700	17.2	4150
506S	15.0	16.0	0.9	1.0	75	405	60	0.5	X	40	40	11.0	2450
507C	16.0	18.0	1.9	2.0	X	250	35	X	X	40	60	11.0	2400
508C	18.0	22.0	3.6	4.0	X	240	25	0.5	X	30	75	7.4	1650
509C	22.0	26.0	3.9	4.0	X	180	40	0.5	X	3	50	6.50	1950
40510S	26.0	27.0	1.0	1.0	X	160	15	X	X	4	14	4.60	1100
511S	27.0	28.0	0.9	1.0	X	190	20	X	X	4	20	4.5	1500
512S	28.0	28.8	0.8	0.8	5	260	205	1.5	X	20	28	12.5	1850
513S	28.8	30.8	0.5	2.0	110	150	1500	8.5	X	15	9000	18.0	320
514S	30.8	31.6	0.2	0.8	1400	240	1500	43.0	X	85	3700	27.0	645
515S	31.6	32.6	0.9	1.0	5	205	730	4.5	0.032	35	3000	20.0	1900
516S	32.6	33.15	0.55	0.55	135	165	1350	28.5	0.412	25	3.2%	24.5	1450
517S	33.15	33.7	0.55	0.55	5	115	650	6.5	0.032	60	8000	15.0	1300
518S	33.7	34.7	0.9	1.0	365	55	2250	42.0	0.048	40	10%	35.0	285
40520S	34.7	35.2	0.5	0.5	90	180	1300	10.0	0.072	120	4.5%	26.5	1050
521S	35.2	35.5	0.3	0.3	75	3350	2550	11.0	0.024	70	1.5%	37.0	675
522S	35.5	35.8	0.3	0.3	60	135	1800	14.0	0.112	100	7000	19.5	530
523S	35.8	36.8	1.0	1.0	155	2500	2250	19.0	0.072	460	13%	36.5	545
524S	36.8	37.8	1.0	1.0	335	235	3400	40.0	0.240	30	3.5%	35.0	465
525S	37.8	38.8	1.0	1.0	35	70	3050	10.0	0.152	2650	8.8%	15.0	450
526S	38.8	39.5	0.7	0.7	15	85	1300	4.5	0.288	3950	4.3%	14.0	900
527S	39.5	40.0	0.5	0.5	440	1300	90	0.5	0.024	45	2500	16.5	2000
528S	40.0	40.8	0.8	0.8	635	1550	205	2.0	0.016	50	6000	14.0	3050
529	40.8	41.8	1.0	1.0	300	740	115	1.5	X	40	45	9.75	2950
40530S	41.8	42.8	1.0	1.0	760	3650	300	3.0	X	70	40	10.5	2800
531S	42.8	43.8	1.0	1.0	140	510	100	1.0	X	20	55	12.0	3500
532S	43.8	44.8	1.0	1.0	80	410	215	1.5	0.120	40	55	13.5	2850
533S	44.8	45.8	1.0	1.0	80	455	220	1.5	0.080	50	230	12.0	2350
534S	45.8	46.8	1.0	1.0	145	265	295	2.0	0.083	50	4500	12.5	2700
535	46.8	47.8	1.0	1.0	235	1250	250	2.5	0.083	70	2000	11.5	2600
536S	47.8	48.8	1.0	1.0	240	1265	140	0.5	X	50	45	9.60	3100
537S	48.8	49.8	1.0	1.0	30	245	205	X	0.296	10	1300	11.0	2250
538S	49.8	50.8	1.0	1.0	185	410	155	1.0	0.352	35	1600	12.5	2650
539S	50.8	51.8	1.0	1.0	30	175	230	X	0.456	25	200	7.50	2200
40540S	51.8	52.8	1.0	1.0	40	140	250	X	2.08	15	70	6.7	1850
541S	52.8	53.8	1.0	1.0	3	150	80	X	0.016	28	20	6.25	2550
542S	53.8	54.4	0.6	0.6	75	185	65	0.5	X	36	20	5.9	1800
543S	54.4	54.8	0.4	0.4	20	150	35	0.5	X	X	22	4.75	1500
544S	54.8	55.8	1.0	1.0	5	145	70	X	X	4	25	3.90	1300
545C	55.8	57.1	1.3	1.3	10	185	145	X	X	30	20	6.0	2000
546C	57.1	58.1	1.0	1.0	25	140	290	0.5	0.512	110	47	8.0	2000
547S	58.1	59.1	1.0	1.0	25	325	220	0.5	0.704	40	47	8.25	2350
548S	59.1	59.6	0.5	0.5	20	150	230	X	0.104	60	47	9.0	1850
549C	59.6	64.6	5.0	5.0	20	175	70	1.0	X	34	550	8.10	1950
40550S	64.6	65.6	1.0	1.0	10	105	225	X	X	10	17	5.70	1450
551S	65.6	66.6	1.0	1.0	40	140	355	1.5	0.176	660	8000	7.55	2100
552S	66.6	67.6	1.0	1.0	175	340	65	0.5	X	80	200	6.05	3400
553C	67.6	72.6	5.0	5.0	70	460	215	1.5	X	88	350	8.0	2350
554C	72.6	77.0	4.4	4.4	35	170	125	0.5	X	110	220	9.0	2600
555C	77.0	82.0	5.0	5.0	10	130	55	X	X	33	10	5.35	1700
556C	82.0	87.0	5.0	5.0	10	120	30	X	X	72	10	5.15	1400
557C	87.0	92.0	5.0	5.0	15	105	45	X	X	60	8	4.55	1850
558C	92.0	97.0	5.0	5.0	80	200	125	X	X	66	12	7.70	3250
559C	97.0	102.0	5.0	5.0	45	155	20	X	X	62	50	6.50	1700
40560C	102.0	107.0	4.9	5.0	40	125	20	X	X	200	3300	5.50	1850
561S	107.0	108.0	0.9	1.0	195	360	16	X	X	54	10	4.30	2900
562S	108.0	109.0	0.9	1.0	15	95	10	0.5	X	40	7	3.60	1500
563S	109.0	110.0	0.9	1.0	X	110	5	X	X	42	7	4.40	1300
564S	110.0	112.8	0.2	2.8	40	175	15	X	X	110	39	4.60	1450
565S	112.8	113.65	.05	0.85	30	150	10	0.5	0.032	64	12	3.20	2600
566S	113.65	114.5	0.15	0.85	115	1000	15	X	X	64	56	2.50	2500
567S	114.5	115.5	0.4	1.0	350	640	20	1.0	0.032	84	100	4.0	2950
568S	115.5	116.5	0.7	1.0	45	200	30	0.5	0.024	74	70	6.0	2850
569S	116.5	117.5	0.8	1.0	40	170	15	X	X	60	210	5.25	3450
40570S	117.5	118.5	0.7	1.0	30	160	90	X	0.016	88	55	7.4	2700
571S	118.5	119.5	0.7	1.0	60	115	695	3.0	0.016	38	1.3%	9.5	1050
572S	119.5	120.5	0.8	1.0	20	40	150	0.5	X	48	140	3.7	700
573S	120.5	121.5	0.9	1.0	100	230	50	0.5	X	58	47	4.27	1200
574S	121.5	122.5	0.5	1.0	70	125	185	0.5	0.04	58	39	6.10	1850
575S	122.5	123.5	0.8	1.0	20	50	20	X	0.008	52	30	2.4	1350
576S	123.5	124.5	0.9	1.0	20	40	10	X	0.016	56	30	2.05	950
577C	124.5	129.5	4.9	5.0	25	50	15	X	0.016	68	25	2.33	800
578C	129.5	132.8	3.2	3.3	15	45	20	X	0.032	60	25	2.8	750
579S	132.8	133.8	1.0	1.0	15	50	480	1.0	0.04	44	10	15.5	790
40580S	133.8	134.8	1.0	1.0	25	35	250	0.5	0.024	46	35	7.6	600
581C	134.8	139.8	5.0	5.0	30	50	80	0.5	0.008	44	180	5.56	700
582C	139.8	144.8	5.0	5.0	55	100	25	0.5	0.008	48	27	2.80	950
583C	144.8	149.8	5.0	5.0	15	65	20	X	0.008	62	27	2.3	630
584C	149.8	154.8	5.0	5.0	50	80	140	0.5	0.016	36	3900	5.5	660
585C	154.8	159.8	5.0	5.0	70	325	130	0.5	0.032	44	110	4.2	900
586C	159.8	164.8	5.0	5.0	145	210	400	10.0	0.04	44	4000	7.8	850
587S	164.8	165.8	1.0	1.0	30	85	245	1.0	0.016	38	2000	5.7	750
588S	165.8	166.8	0.9	1.0	210	490	260	2.5	0.024	38	110	13.5	1000
589	166.8	167.8	1.0	1.0	930	1050	2200	23.5	0.072	34	1.0%	13.5	950
40590C	167.8	172.8	4.9	5.0	50	105	260	0.5	0.016	46	5500	6.1	950
591C	172.8	177.8	5.0	5.0	15	90	55	X	X	38	110	3.8	800
592C	177.8	182.8	5.0	5.0	55	90	30	X	0.016	64	42	3.2	1500
593	182.8	187.8	5.0	5.0	305	340	25	0.5	0.032	120	38	3.46	2150
594C	187.8	192.8	5.0	5.0	90	315	35	0.5	0.008	38	56	3.9	8000
595C	192.8	197.8	5.0	5.0	15	125	50	X	0.016	52	52	2.7	1550
596C	197.8	201.8	4.0	4.0	30	100	35	0.5	0.016	52	40	2.56	1000
597C	201.8	203.0	1.2	1.2	80	230	35	X	0.016	64	17	2.16	625

LOCATION	Sterling Valley E.L. 4/73	Footage	Direction	Dip.	Footage	Direction	Dip.	COLLAR DP.	-60°	TOTAL DEPTH	150.6m
OBJECTIVE	To test a ground magnetic anomaly and the Henty Fault zone for Sn mineralisation				60m	110°	-56°	DIRECTION	108° AMG	HOLE SIZE	HQ 19m NQ 54.1 BQ 150
RESULT					90m	111.5°	-55°	R.L.	175.4m	COMMENCED	24th May, 1981
					120m	110°	-52°	COORDINATES	4160N 4625E grid	COMPLETED	7th June, 1981
					150m	109°	-50.5°	5,374,266.8N	384,216.3E AMG	LOGGED BY	J. Mill

METRE		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA							CORE REC'D	
FROM	TO							Sample Length	Pb%	Zn%	Cu%	Ag - g/t	Au - g/t	Fe%	RUN	SHORT
0	19.4	Glacial Overburden Large pebbles of Owen Conglomerate, schist & intermediate tuffs mixed with gravel & sand	NVM												0	
															19.4	11.3
															19.8	-
															20.8	0.4
															34.5	-
19.4	42.0	Weathered Intermediate Volcanics Org-brown fg weathered volcanics. Well fractured, manganese & limonite stained. Texture is largely destroyed by weathering but occasionally porphyritic texture is observed suggestive of porphyritic lava. Greenish chlorite occurs after 36.1 with associated mottled appearance suggestive of porphyritic tuff.	19.4-42 NVM, however presence of much manganese & iron staining may indicate the former presence of weathered sulphides. No boxworks were evident.												36.3	0.4
															38	0.7
															41	-
															43.3	1.7
															71.8	-
															74	0.3
															96.8	-
															97.1	0.1
															102.7	-
															103.4	0.3
															104.2	-
42.0	56.2	Trachytic tuff. Ple grn-gry fg vitric crystal tuff containing rare chloritic fragments upto 1cm long (fiamme?) Strongly cleaved & fractured 42.0-52.9. Chloritic throughout. Silica chl alteration occurs below 53.1m associated with vein sulphides.	42-53.1 NVM 53.1-56.2 Vein arsenopyrite, pyrite with minor pyrite & pyrrhotite associated with silica chlorite vein inc massive arsenopyrite vein 53.8-53.9												105.1	0.6
															106.4	-
															106.8	0.1
															107.7	-
															108.4	0.1
															128.4	-
															129.3	0.3
															130.1	-
56.2	58.3	Silicified Tuff White-ple gry completely silicified tuff, cherty containing stringer & vein arsenopyrite, pyrite, pyrrhotite & chalcopyrite in a gangue of silica chl & minor purple fluorite. Total sulphides ± 20%	See also rock description: Sulphides occur as f-cg aggregates in tension cracks of the silica & as crosscutting veins upto 10cm wide.												132.3	0.7
															150.6	-
															EOH	-
58.3	78.3	Intermediate Lithic Crystal Vitric Tuff: Greenish gry f-mg tuff with fragments of fg vitric tuff & porphyritic lava upto 2cm diam - elongated parallel to cleavage. Local thin (2cm) white barren quartz veins	Minor pyrrhotite/pyrite & arsenopyrite as thin veins (<1cm thick) <20% total sulphides.													

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METRE		ROCK DESCRIPTION	MINERALISATION	Sample No	From	To	Core Rec'd	Sample Length	Pb	Zn	Assay Data per ppm								RE REC'D	
FROM	TO										Cu	Ag	Mn	Fe%	As	Sn	Au	N	SHORT	
78.3	79.5	Silicified Tuff: Similar to 56.2-58.3	Similar to 56.2-58.3	Sample No's prefixed S are split core sample G are grind core samples C are chip core samples																
79.5	89.6	Intermediate Tuff: Gryish-grn fg porphyritic tuff locally slightly laminated suggesting air fall origins. Chloritised & locally silicified throughout. Locally fractured. Core "bedding" angles:- 85.7m 40° 86.3m 40°	Minor pyrrhotite/arsenopyrite associated with silicified zones. Mineralised veins occur at: 81.2 Carbonate & sphalerite (<1cm) 82.2-82.3 Arsenopy ± 20% 84.6-84.7 Pyrrhotite assoc with silicification ± 50% 87.5-87.7 Pyrite/pyrrhotite assoc with silicification ± 15% 88.0 "	39379C	13.3	15.0	0.70	1.70	70	275	30	X	940	3.4	46	X	N.A.			
				39380C	15.0	20.0	2.1	5.0	70	220	65	X	2250	4.6	920	8	"			
				381C	20.0	25.0	4.7	5.0	35	210	170	X	1000	5.5	1000	X	"			
				382C	25.0	30.0	5.0	5.0	20	170	255	X	1100	5.5	70	X	"			
				383C	30.0	35.0	4.9	5.0	1000	270	455	0.5	1200	5.2	220	X	"			
				384C	35.0	40.0	4.0	5.0	230	360	245	X	1200	4.4	340	X	"			
				385C	40.0	45.0	3.3	5.0	35	280	60	X	1700	5.9	35	X	"			
				386C	45.0	50.0	5.0	5.0	10	185	105	X	1400	6.0	32	X	"			
				387C	50.0	53.0	3.0	3.0	45	250	25	X	1300	6.8	30	X	"			
				39264S	52.1	53.1	1.0	1.0	190	170	45	X	1850	6.7	170	20	0.008			
				265S	53.1	53.8	0.7	0.7	100	180	140	1	1350	6.7	1500	X	0.016			
				266S	53.8	53.9	0.09	0.1	235	80	850	9.5	550	11.0	17.0%	17	0.008			
				267S	53.9	54.9	1.0	1.0	90	110	735	8.5	1150	6.6	4.0%	X	0.216			
				268S	54.9	55.6	0.7	0.7	75	115	450	2.0	1200	7.2	1600	130	0.024			
				269S	55.6	56.2	0.6	0.6	95	285	1750	11.0	1200	9.7	3.8%	X	0.024			
				39270S	56.2	56.7	0.5	0.5	200	2000	2250	20.0	780	9.1	15.0%	160	0.276			
				271S	56.7	57.2	0.5	0.5	65	70	2500	6.0	595	12.5	8.5%	22	X			
				272S	57.2	57.7	0.5	0.5	60	40	2200	4.0	275	11.0	3.8%	10	X			
				273S	57.7	58.3	0.6	0.6	75	190	6750	10.0	465	7.2	8.1%	600	0.436			
				274S	58.3	59.3	1.0	1.0	35	105	130	0.5	1500	6.2	900	520	0.008			
			Almost unmineralised Tr Py & Po	39389C	55.0	60.0	5.0	5.0	65	185	2500	7.5	850	10.7	3.9%	5	N.A.			
				39390C	60.0	65.0	5.0	5.0	170	835	140	X	1550	6.3	900	20	"			
				391C	65.0	70.0	5.0	5.0	45	260	70	X	1200	5.7	680	X	"			
				392G	70.0	75.0	4.7	5.0	35	750	75	X	1500	6.1	1000	20	"			
99.7	99.9	Breccia/Silica Zone: Containing brecciated volcanics in a ground mass of silica/chlorite, fluorite. Minor sulphides	+ 10% sulphides of arsenopyrite pyrite & tr cpy	39275S	77.3	78.3	1.0	1.0	10	190	75	0.5	2250	8.0	700	1800	0.032			
				276S	78.3	78.8	0.5	0.5	60	70	1150	3.0	660	5.8	9.8%	5600	0.744			
				277S	78.8	79.5	0.7	0.7	50	100	2150	4.5	1400	7.3	2800	3000	0.104			
				278S	79.5	80.5	1.0	1.0	190	1400	155	1.0	2050	7.1	2900	180	0.080			
				279S	80.5	81.5	1.0	1.0	1000	5550	60	2.0	4300	5.8	600	20	0.032			
				39280S	81.5	82.2	0.7	0.7	575	2450	80	2.0	3150	6.6	1600	4	X			
99.9	127.8	Intermediate Pyroclastics: Mid gry siliceous broken & leached pyroclastics. Cleaved & slightly bedded in places. The texture is almost completely destroyed by shearing but locally a porphyritic texture is observed. Fragments of buff coloured rhyolite occur throughout & thus the unit is comparable with 89.6-99.7	99.9-127.8 NVM Cleavage 105.5 50° 112.5 55° 122.4 35° 136.8 60°	281S	82.2	82.6	0.4	0.4	175	710	225	2.5	1250	5.7	4200	10	0.008			
				282S	82.6	83.6	1.0	1.0	360	815	140	2.5	1450	6.6	230	2	0.024			
				283S	83.6	84.6	1.0	1.0	75	370	120	1.0	1400	6.2	500	8	0.016			
				284S	84.6	85.2	0.6	0.6	70	100	160	0.5	1450	6.0	4900	6	0.016			
				285S	85.2	85.5	0.3	0.3	140	155	170	5.5	520	7.8	9.0%	6	0.376			
				286S	85.5	86.5	1.0	1.0	30	285	20	0.5	1750	4.7	1600	X	0.032			
				287S	86.5	87.5	1.0	1.0	35	170	15	0.5	1450	4.75	70	46	0.016			
				288S	87.5	88.0	0.5	0.5	30	175	390	1.0	2250	8.9	90	28	0.024			
				289S	88.0	89.0	1.0	1.0	35	160	15	1.0	1500	4.4	70	X	X			
				39395G	85.0	90.5	5.0	5.0	35	210	155	X	1250	7.3	3500	12	N.A.			
				396G	90.0	95.0	5.0	5.0	60	140	20	X	1800	3.9	12	X	"			
				397C	95.0	100.0	4.9	5.0	30	270	50	X	3550	7.4	620	42	"			
				398C	100.0	105.0	4.1	5.0	60	540	15	X	1250	5.8	18	X	"			
				399C	105.0	110.0	4.5	5.0	25	405	5	X	1000	4.4	54	X	"			
				39400C	110.0	115.0	5.0	5.0	25	175	X	X	1000	5.4	61	X	"			
				41851C	115.0	120.0	5.0	5.0	15	160	20	X	1400	5.2	37	X	"			
				852C	120.0	125.0	5.0	5.0	35	175	55	X	2000	7.3	31	X	"			
				853C	125.0	130.0	4.7	5.0	5	145	X	X	1050	5.4	20	X	"			
				854C	130.0	135.0	4.3	5.0	35	160	5	X	960	4.9	16	X	"			
				855C	135.0	140.0	5.0	5.0	25	205	30	X	1400	5.2	69	X	"			
				856C	140.0	145.0	5.0	5.0	SAMPLE LOST											
				857C	145.0	150.6	5.0	5.6	100	465	5	X	3900	8.7	27	X	"			
127.8	133.8	Fault Zone: Gryish gry porphyritic andesitic tuff brecciated silicified & leached	NVM																	

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FOOTAGE		ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA							CORE REC'D		
FROM	TO							Sample Length	Pb%	Zn%	Cu%	Ag - g/t	Au - g/t	Fe%	RUN	SHORT	
133.8	140.1	Intermediate Pyroclastics: Gry broken faulted fg porphyritic crystal vitric tuff. Intensely fractured Locally silicified - minor buff carbonate veins	NVM														
140.1	150.6 EOH	Chloritic Tuffaceous Greywacke: Olive grn (dk) fg greywacke. Cleaved with no recognisable bedding. Minor white carbonate veining. Broken but much less so than 99.9-140.1m	NVM														
		<p><i>Thin Section Descriptions</i></p> <p>39290 55.0m 39291 58.1m 39292 149.8m</p> <p>See CMS Report 8/7/52</p>															

800047

APPENDIX III

C.M.S. Report No. 81/7/52.

REPORT CMS 81/7/52Petrological Descriptions39290

STP 231

55.0 m

(T.S. 37966)

This is an altered and mildly sheared, porphyry-textured, intermediate-acid ("dacitic") igneous rock with little to choose between extrusive and minor intrusive modes of origin.

The rock consists essentially of frequent albitised and weakly chlorite-sericite-stained plagioclase phenocrysts (250 μ to 1mm, weakly clustered) in an altered groundmass of albitised feldspar microlaths (mean 40 μ) with a pervasive chlorite mesostasis and frequent leucoxenised fine accessory opaques. A vague relict flow-banding is evident, but finer details are obliterated by a weak slaty cleavage. Chlorite is partly retrogressive after tectonic biotite, indicating mid-greenschist metamorphism.

Traces of pyrrhotite occur as disseminated fine particles and discontinuous films associated with sporadic veinlets of quartz and albite. These features predate the chloritisation and are of pre-tectonic character.

39291

STP 231

58.1 m

(T.S., P.S. 37967)

This is an altered and fluorite-schorl-quartz-veined sediment with disseminated cassiterite and sulphides.

The host rock is poorly resolved optically due to marked silicification and sericitisation, but relict features are consistent with an arkosic (?tuffaceous) fine-grained psammite "grading" into a similarly arkosic pelite or pelitic ash, which has been selectively silicified. Quartz veinlets occur throughout and include disseminations of sulphide, fluorite, green schorl and minor ankeritic carbonate. Fine-grained, cloudy cassiterite (<5 - 50 μ , mean 15-20 μ) is common throughout the silicified pelite, comprising around 2-20 % of a zone approximately 4-5 mm wide marginal to the fluoritic vein.

This feature is conformable, consists largely of fluorite (colourless to mauve) with intergranular and included dark green, fine to ultrafine schorl, disseminated sulphide and quartz, and is locally mildly granulated. Alteration/mineralisation is of granitic pneumatolytic character.

Sulphides are largely restricted to the vein. The assemblages comprise predominantly clusters of fine-grained arsenopyrite and sporadic coarse blebs (to 5 mm) of chalcopyrite. Sparse pyrite is

associated with chalcopyrite, and there are traces of extensively pyritised pyrrhotite. Composite blebs (to 200 μ) of bismuth and bismuthinite are thinly disseminated throughout, and minor traces of sphalerite are present as microscopic blebs in chalcopyrite.

39292

(T.S. 37968)

This rock is similar and evidently closely related to 39290. In comparison, it has a modally coarser and relatively even-grained relict fabric which tends to confirm a minor intrusive origin.

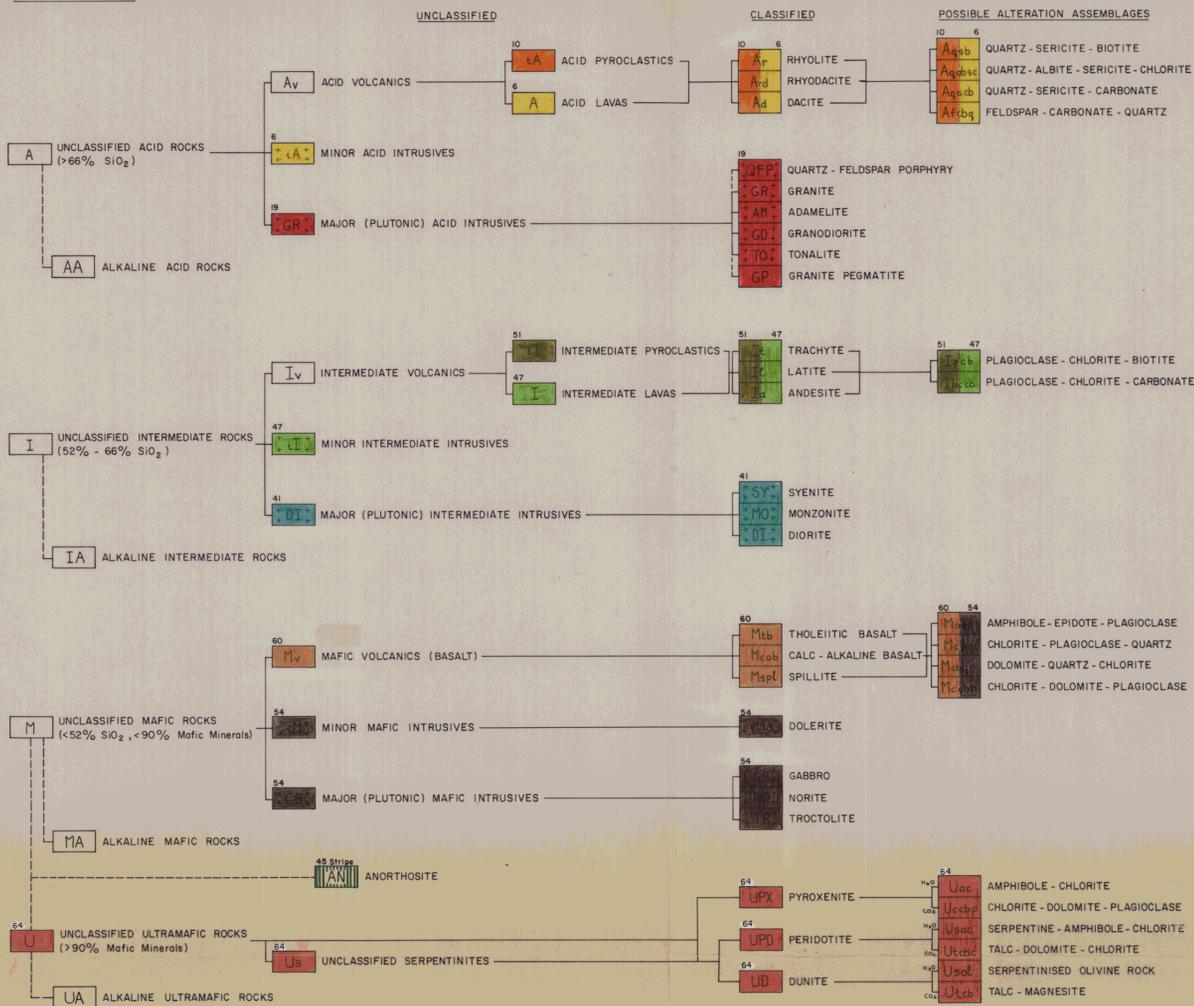
STP 231

149.8 m

The rock consists of albitised plagioclase with interstitial Mg-chlorite, conspicuous, evenly disseminated leucoxenised opaques, minor traces of sericite, and rare, stressed carbonate veinlets. The relict fabric is weakly porphyritic, but generally medium- and even-grained feldspar-lathic. Finer details are obscured by a weak tectonic overprint, but the evenly disseminated leucoxenised opaques are consistent with an intrusive. Primary composition is similarly obscured, although the rock is of altered intermediate character.

D. Cowan, B. Sc.

IGNEOUS ROCKS



IGNEOUS GRAIN SIZE

vco	VERY COARSE GRAINED	>5cm
co	COARSE GRAINED	5cm - 5mm
mg	MEDIUM GRAINED	5mm - 1mm
fg	FINE GRAINED	<1mm

STRUCTURAL AND TEXTURAL SYMBOLS

LT 908	+	MAJOR INTRUSIVES
LT 903	+	MINOR INTRUSIVES
LT 132	+	UNDIFFERENTIATED TUFF
LT 132	+	LITHIC TUFF
LT 132	+	CRYSTAL TUFF
LT 132	+	VITRIC TUFF
LT 130	+	LAPILLI TUFF
LT 970	+	PYROCLASTIC BRECCIA
LT 970	+	AGGLOMERATE
LT 191	+	ASH FLOW
LT 132/133	+	ASH FALL (AIR FALL TUFF)
LT 973	+	LAVA BOMBS
	pm	PUMICE
	fm(2)	FIAMME (LENGTH IN cms)
	a	PORPHYRITIC
	ves	AMYGDALOIDAL VESICULAR
	s	SPHERULITIC
	wld	WELDED
	rwld	REWORKED
	ac	ACICULAR
	oph	OPHTIC
	cl	CLOTS
	pg	PEGMATIC
	qey	QUARTZ EYES / AUGEN TEXTURE
	band	BANDING
	fb	FLOW BANDING
	fa	FLOW BRECCIA
	pl	PILLOWS (WITH FACING)
	chm	CHILLED MARGIN
	vns	VEINS
	bd	BEDDED
	xbd	CROSS BEDDED
	tbd	THICK BEDDED
	lbd	THIN BEDDED
	lam	LAMINATED
	gd	GRADED or DIRECTION OF DECREASING GRAIN SIZE
	lode	LODE CAST
	scf	SCOUR AND FILL
	m	MASSIVE
	sch	CLEAVED
	sch	SCHISTOSE
	sch	JOINTED
	sch	BRECCIATED (TECTONIC)
	ox	OXIDISED
	L	LATERITE
	stn	STAINING

SILICATE MINERALOGY

20	q	QUARTZ
51	k	K - FELDSPAR
17	ab	ALBITE
48	p	PLAGIOCLASE
48	am	AMPHIBOLE
64	px	PYROXENE
10	b	BIOTITE
46	c	CHLORITE
56	cb	CARBONATE
31	s	SERICITE
46	e	EPIDOTE
64	t	TALC
4	ba	BARITE
46	fs	FELDSPAR
46	hb	HORNBLende
46	sd	SIDERITE
47	to	TOURMALINE
51	ov	OLIVINE

TOPOGRAPHICAL SYMBOLS

—W—	WATER RACE
—/—/—	FENCE
—+—+—	FORMED ROAD
—+—+—	TRACK
—+—+—	RAILWAY
—+—+—	RAILWAY (ABANDONED)
—+—+—	RIVER
—+—+—	STREAM
—+—+—	LAKE
—+—+—	SWAMP
—+—+—	BUILDING
—+—+—	POWER LINE
—+—+—	TRIG. STATION
—+—+—	HILL
—+—+—	SHAFTS
—+—+—	ADIT
—+—+—	TRENCH
—+—+—	MINE OR QUARRY

ALTERATION MINERALOGY

17	a'b	ALBITISED
56	cb'd	CARBONATED
46	cd	CHLORITISED
31	cd	SERICITISED
20	sl	SILICIFIED
46	hb'd	HORNBLendeISED
47	to'd	TOURMALINEISED
27	kl'd	KAOLINISED

COLOURS

pk	PALE
dk	DARK
pk	PINK
rd	RED
org	ORANGE
yel	YELLOW
ol	OLIVE
grn	GREEN
bl	BLUE
gry	GREY
blk	BLACK
brn	BROWN
whit	WHITE
crm	CREAM
purp	PURPLE

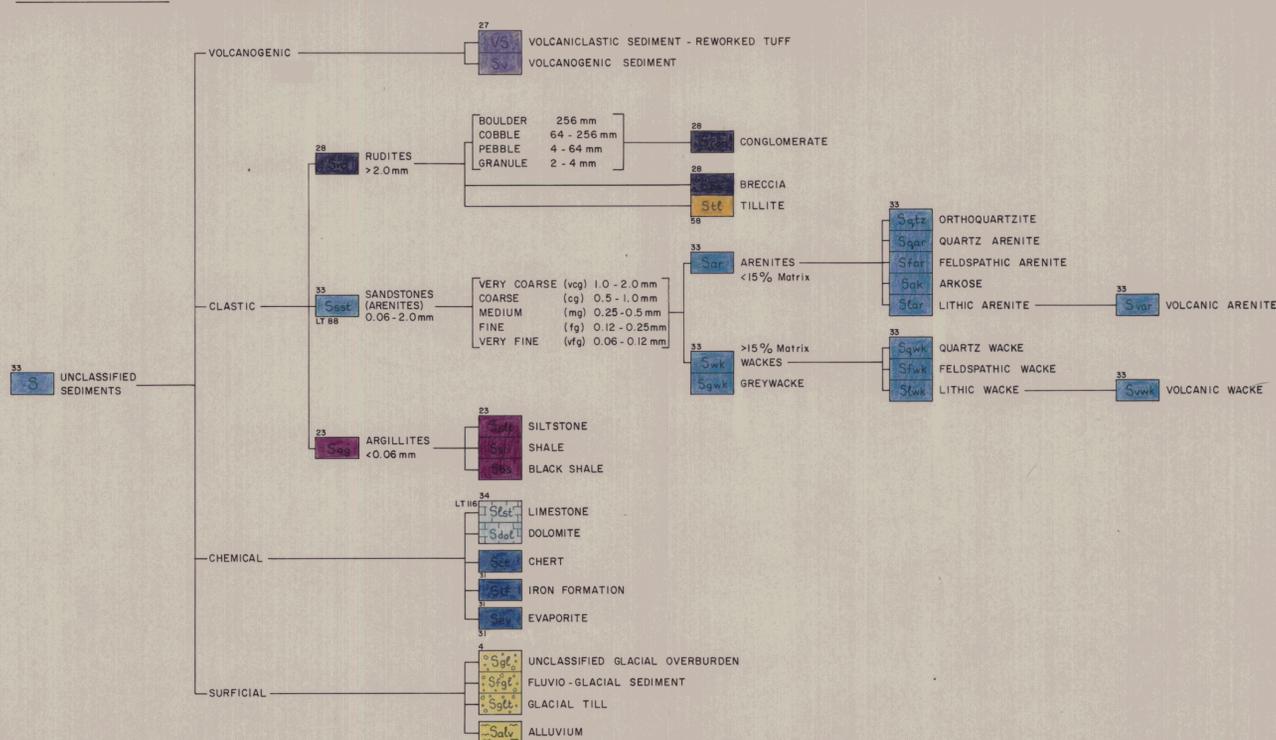
OPERATION OF LEGEND

DESCRIBING ROCK UNITS

- CAPITAL LETTER: indicates primary classification eg. S - sedimentary rocks
A - acid igneous rocks
- LOWER CASE LETTERS: indicates the following -
 - COLOURS eg. gmM: green mafic igneous rock
pk/gm A: pink fragments or phenocrysts in an acid igneous rock with a green matrix
 - STRUCTURAL or TEXTURAL FEATURES eg. xtA: crystal tuff of acid composition
xbdS: cross bedded sedimentary rock
- AS SUFFIXES: in progressive order
 - CATEGORISED eg. Ar: rhyolite, Ssh: Shale
 - MINERALOGY eg. pAr: rhyolite with feldspar phenocrysts
Aqs: quartz sericite rock of acid igneous origin
Ar'a'b: albitised rhyolite

EXAMPLE: pk/gm clvd xvt Ard ab c'd
 pk/gm: (Colours) pink crystals in a green matrix
 clvd: (Structural feature) cleaved
 xvt: (Texture) crystal vitric tuff
 A: (Primary subdivision) acid igneous rock
 rd: (Categorised) rhyodacite
 ab: (Primary mineralogy) albite phenocrysts
 c'd: (Alteration mineralogy) chloritised

SEDIMENTARY ROCKS



SULPHIDE AND OXIDE MINERALOGY

bwk	BOXWORK
sul	SULPHIDES
gos	GOSSAN
pn	PENTLANDITE
hm	HEMATITE
cc	CHALCOPITE
cy	COVELLITE
bn	BORNITE
cp	CHALCOPYRITE
sp	SPIRIT
gn	GALENA
po	PYRRHOTITE
py	PYRITE
ll	ILLMENITE
lx	LEUCOXENE
mag	MAGNETITE
lim	LIMONITE
mn	MANGANESE OXIDES
chr	CHROMITE

MINERALISATION

D155	10% DISSEMINATED
D195	10 - 20% DISSEMINATED
D165	~25% DISSEMINATED
STR	STRINGER
MAS	MASSIVE

DRILL HOLE SYMBOLS

○	DRILL HOLE - BARREN
○	DRILL HOLE - MINOR OR POSSIBLE SUB-ORE GRADE MINERALISATION
○	DRILL HOLE - SIGNIFICANT OR POSSIBLE ORE GRADE AND WIDTH
○	DRILL HOLE - FAILED TO REACH TARGET



800051

LT 132: Code Number of LETRATONE pattern
10: Number of CUMBERLAND DERWENT SERIES No. 19 Coloured Pencil

ELECTROLYTIC ZINC CO. OF ASIA, LTD.

PROJECT: TAS.

**GEOLOGICAL LEGEND
EXPLORATION**

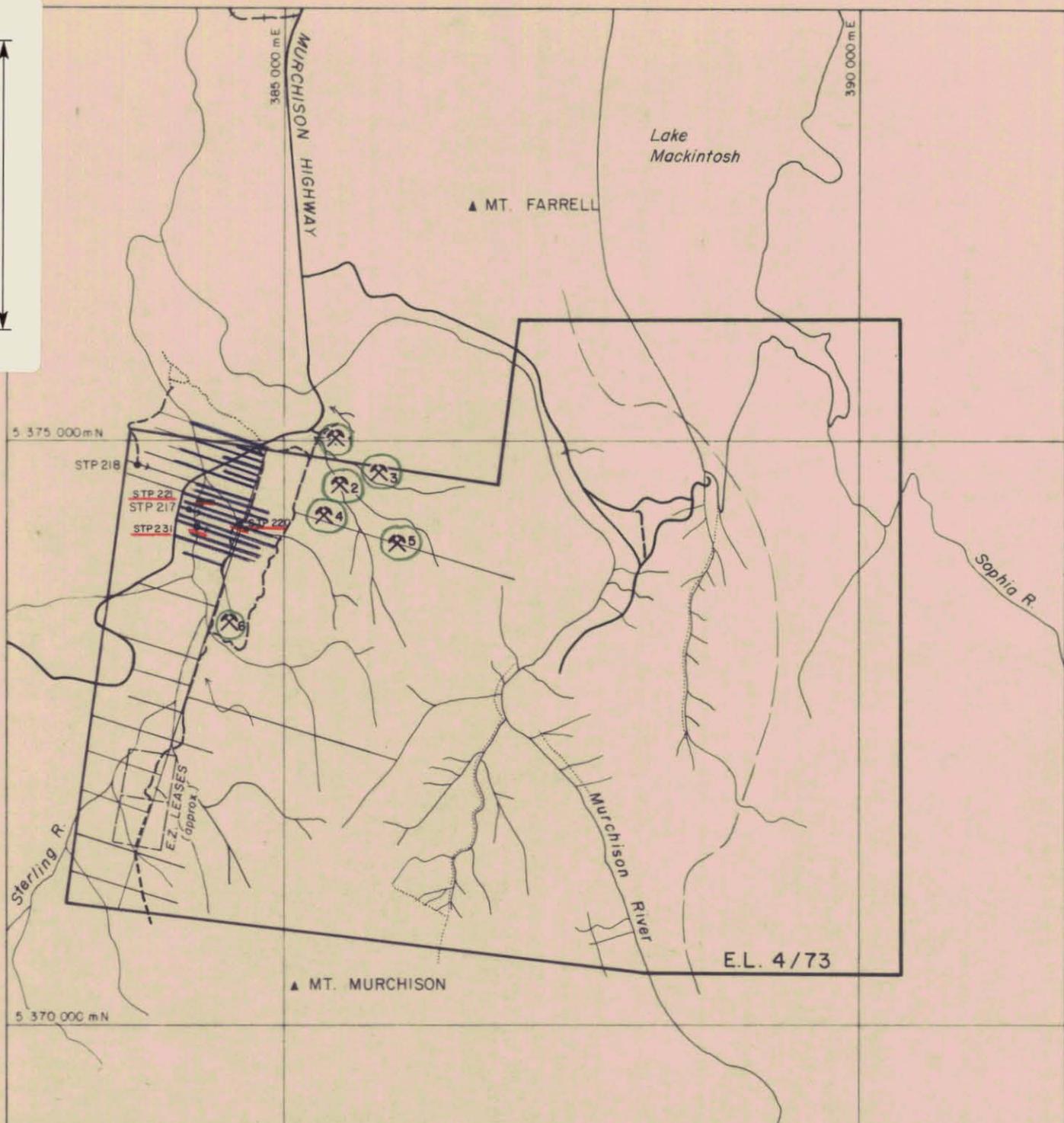
PLATE 1

SCALE:	Survey: I.R.M.	Revised:
Reference:	Date: August 1980	REF. NO.
Drawn: R.P.T.	Checked: J.R.M.D.	AI-504 - ORIGINAL

METAMORPHIC ROCKS

69 (igneous overstrip if required)
69: UNCLASSIFIED SCHISTS

5 cm



LEGEND

-  Diamond Drill Holes Completed
-  Prospect Inspected :
- 1. Thomas Blocks 2. Donoghues
- 3. Tullah Pb, Ag 4. Midson Mine
- 5. Mace' Mine 6. Turleys
-  Line I.P. Dipole - dipole
-  Line Ground Magnetics
-  Access Mapping Completed
-  Road
-  Vehicle Track Bulldozed
-  Walking Track Cut
-  Railway
-  Abandoned Tramway
-  Transmission Line
-  Grid Line

800052

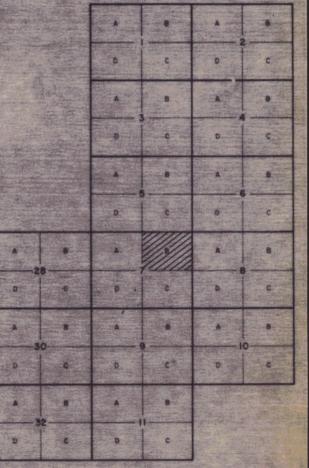
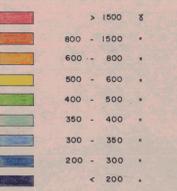
ELECTROLYTIC ZINC CO. OF ASIA, LTD.
PROJECT: STERLING VALLEY | TAS.

WORK COMPLETED DURING
30.6.80 - 30.6.81

SCALE 1:50,000	Survey A.J.M.	Revised Mar '82
Reference:	Date: 4.8.80	REF NO
Drawn R.P.T.	Checked	A4-526-0031

NB 1 Murchison River grid / Tullah grid Scintrex 1980
 NB 2 Sterling Valley grid Scintrex 1980
 3. 1 Data also available at 1:5000 profiles & 1:10000 contours
 2. Add 62000 to obtain readings in gammas.

LEGEND - STERLING VALLEY GRID



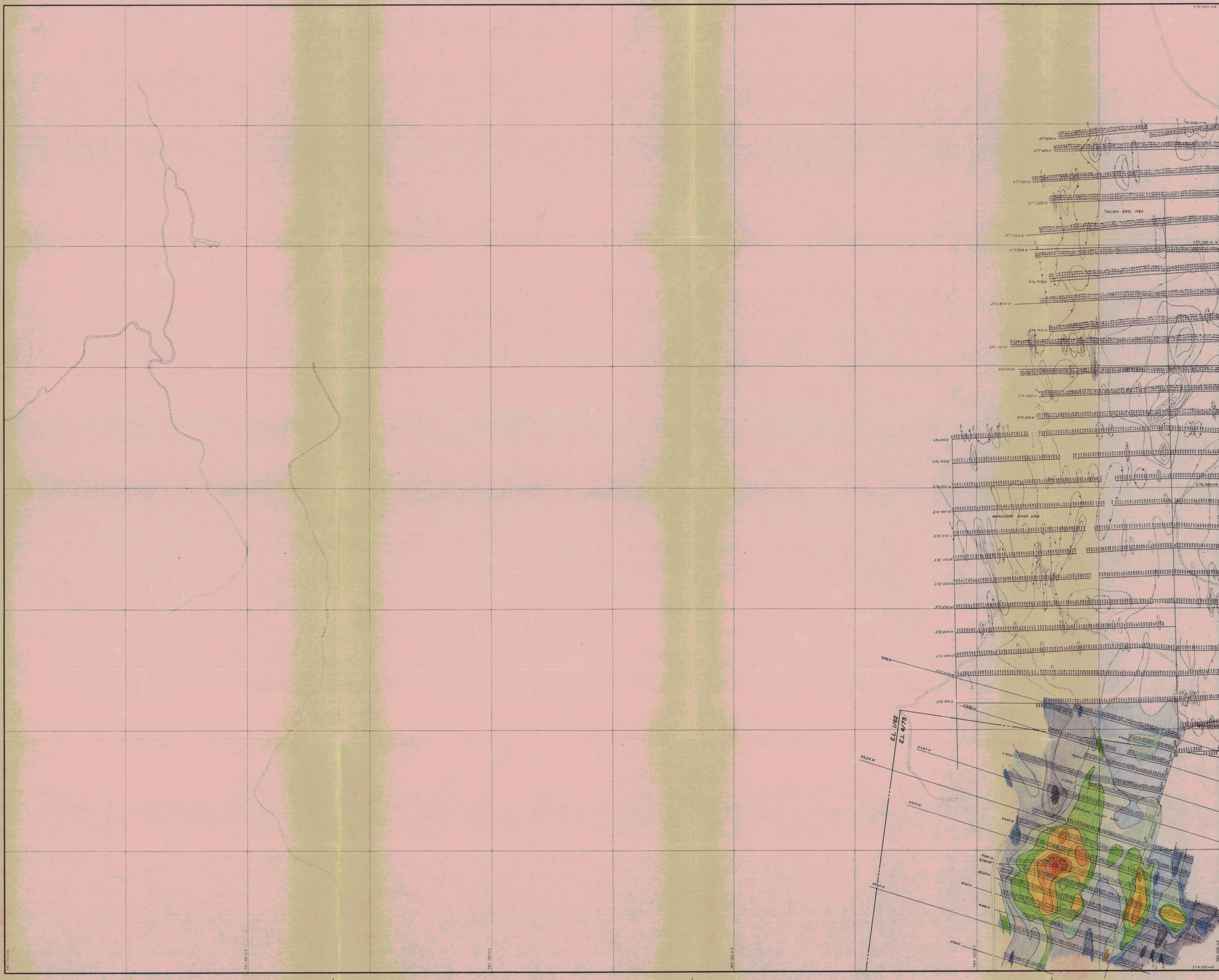
82-1736
 ELECTROLYTIC ZINC CO. OF AASIA LTD.
 PROJECT: MT. BLACK EL. 1/62 TAS.

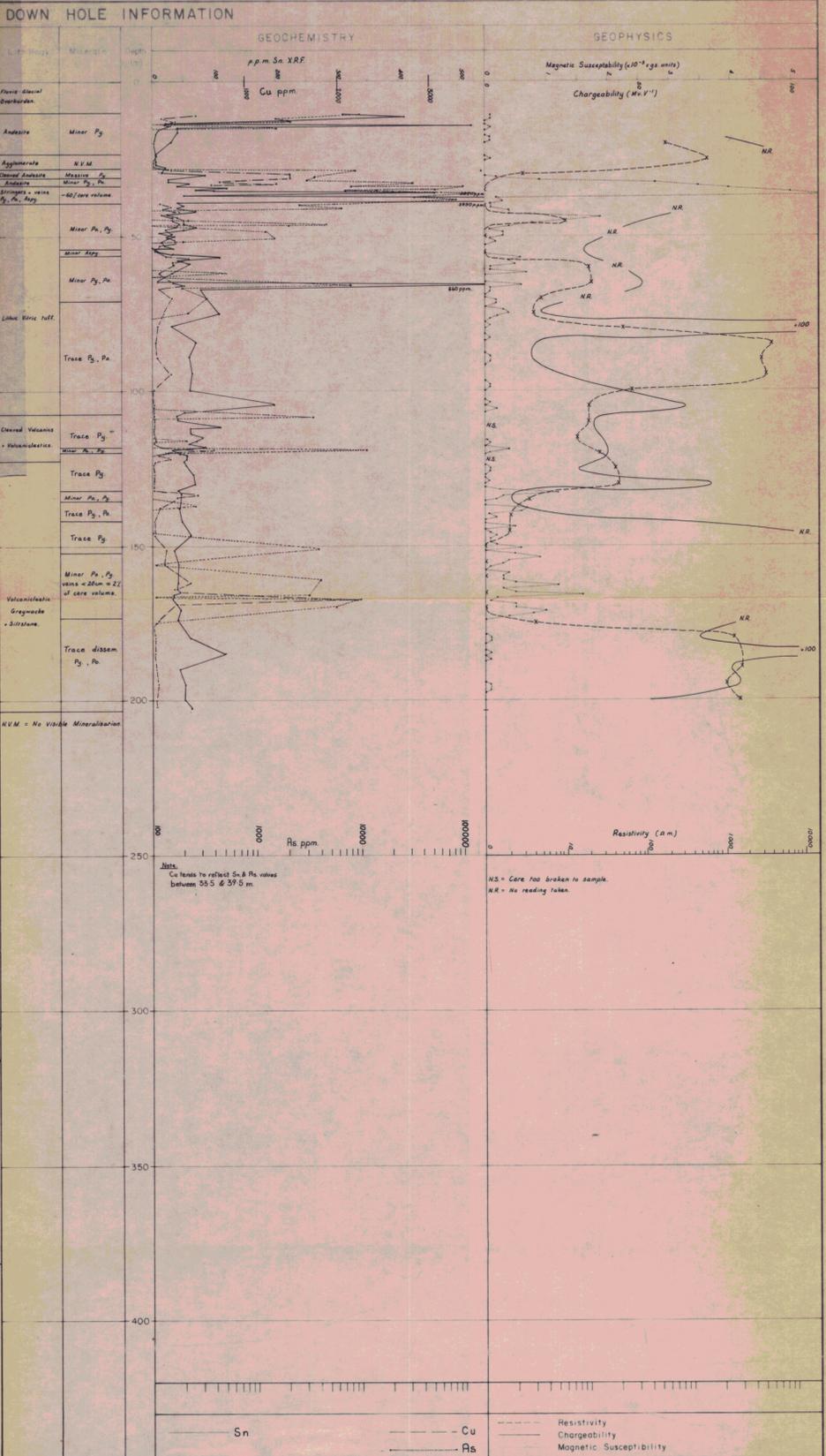
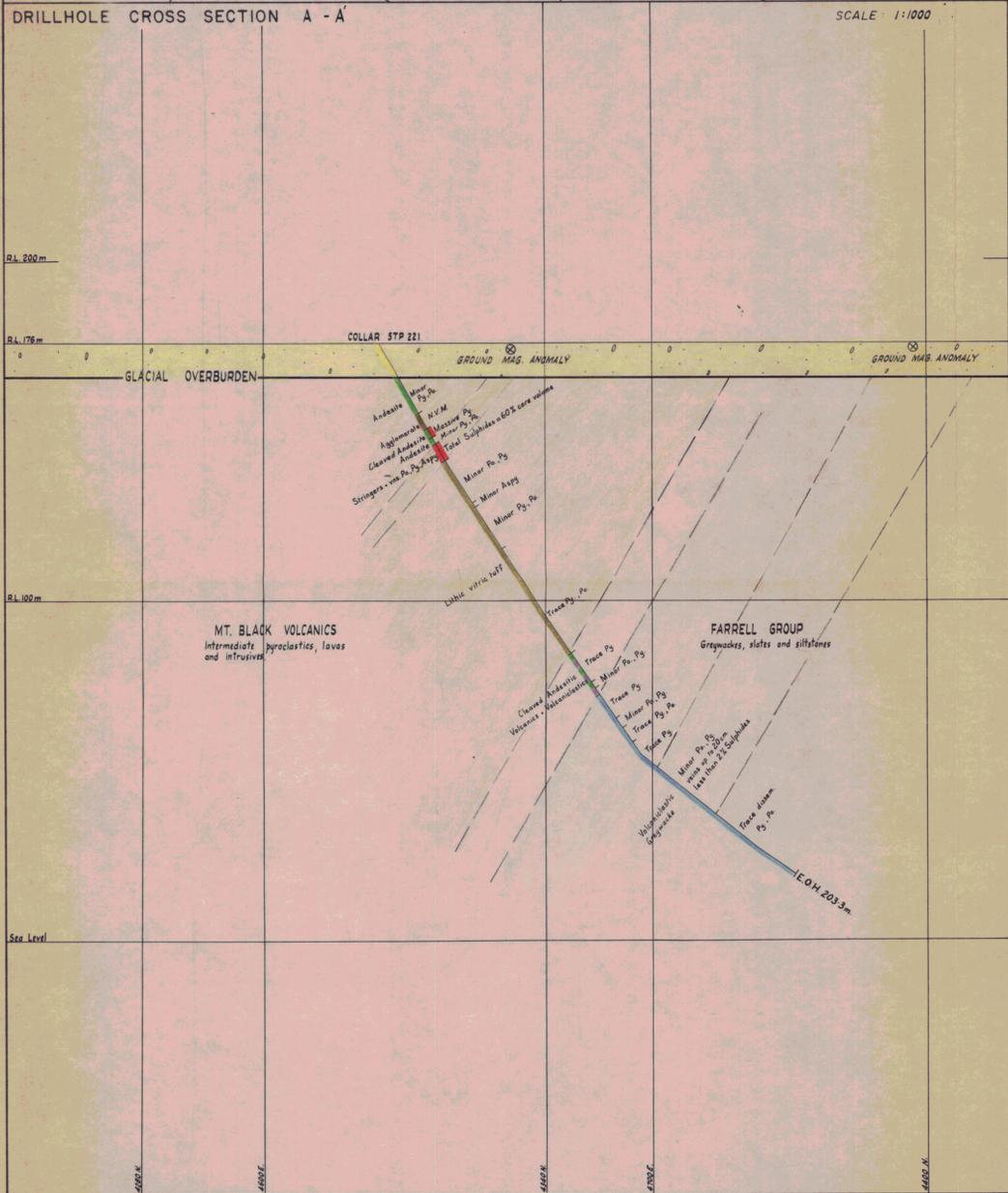
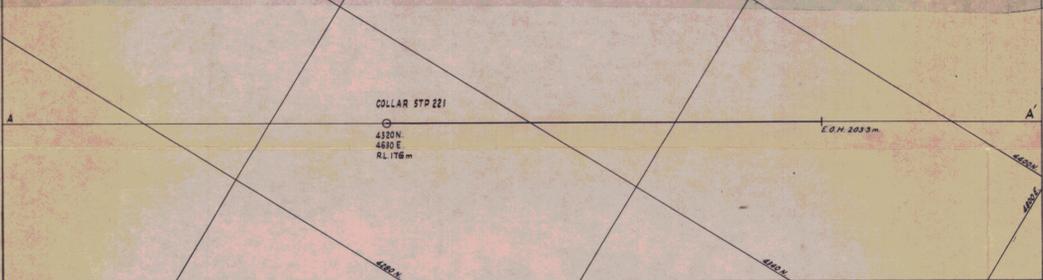
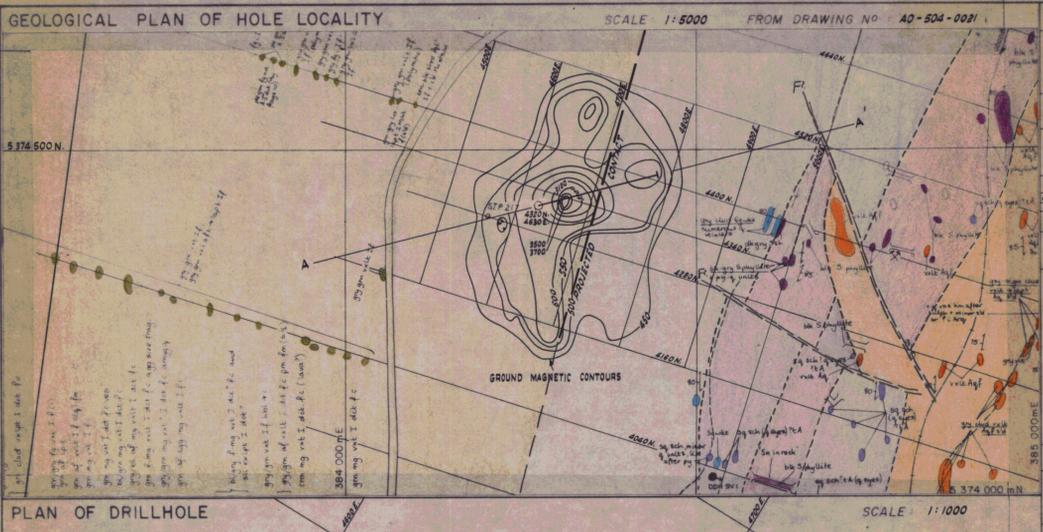
TOTAL MAGNETIC FIELD

800053



SCALE: 1:5,000 Survey: Scintrex 1980 Revised:
 Reference: Date: REF. NO.
 Drawn: R.T./R.A.H. Checked: AO 504-0129





SUMMARY OF COMPLETED HOLE				SPECIFICATIONS OF PROPOSED HOLE			
CO-ORDINATES	NORTHING	EASTING	R. L.	CO-ORDINATES	NORTHING	EASTING	R. L.
LOCAL GRID				LOCAL GRID (STERLING VALLEY)	4920	4830	176 m
A.M.G.	5 374 399 N	384 271 E	173.7 m	A.M.G.	5 374 420	384 275	176 m
AZIMUTH	DIP	TOTAL DEPTH	203.3 metres	AZIMUTH 76° A.M.G. 64° MAG.	DIP -60°	DESIGNED DEPTH	250m
COMMENCEMENT DATE	23-11-1980	COMPLETION DATE	06-12-1980	ESTIMATED COMMENCEMENT	NOVEMBER 1982		

INTERNAL SURVEY INFORMATION			ANTICIPATED GEOLOGY		
DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP
79.8 m	184° mag	-56.5°			
109.8 m	199° mag	-5.5°			
178.8 m	214° mag	-3.8°			
203.0 m	148° mag	-3.5°			

DRILLED GEOLOGY (SUMMARISED)		
DEPTH	LITHOLOGY	MINERALISATION AND SIGNIFICANT ASSAYS
0-10.5m	Fluvio-glacial overburden.	
10.5-23.3m	Green fine grained locally quartz phric andesite.	Minor Py and Pa.
23.3-28.8m	Agglomerate.	
28.8-31.6m	Highly altered pyritic andesite.	Massive Py
31.6-33.7m	Green fine grained andesite.	Minor Py, Pa
33.7-39.5m	Stringers and veins of Py, Ag, and Aspy in a silicified andesitic matrix.	Total sulphide average approximately 60% of core volume. 25% - 35% stringer in.
39.5-107.5m	Lithic vitric tuff of andesitic composition.	39.5-53.1m. Minor veins of Pa and Py. 54.3-57.3m. Minor fine grained Aspy. 57.3-71.0m. Minor Py and Pa.
107.5-122.7m	Cleaned andesitic volcanics and volcanoclastic sediments.	108.0-119.4m. Minor Py and Pa.
122.7-203.3m	Volcanoclastic siltstone and greywacke with minor shale.	132.0-155.6m. Minor veined Pa and trace Py. 151.2-173.2m. Minor Pa and Py as veins and disseminations of 2.5 core volume.

SAMPLE DATA		ELEMENTS DETERMINED		LAB. METHOD
SAMPLED INTERVAL	SAMPLE NUMBERS	SAMPLE TYPE		
10.5-16.0m	40501-40506	SPLIT		
16.0-26.0m	40507-40509	CHIP		
26.0-42.8m	40510-40530	SPLIT		
42.8-43.8m	40531	CHIP		
43.8-53.2m	40532-40541	SPLIT		
53.2-54.4m	40542	CHIP		
54.4-55.8m	40543-40544	SPLIT		
55.8-57.1m	40545	CHIP		
57.1-59.6m	40546-40548	SPLIT	Py, Zn, Cu, Ag, Au, As, Sn	AAS XRF
59.6-64.6m	40549	CHIP		
64.6-67.6m	40550-40552	SPLIT		
67.6-107.0m	40553-40560	CHIP		
107.0-124.5m	40561-40576	SPLIT		
124.5-132.8m	40577-40578	CHIP		
132.8-134.8m	40579-40580	SPLIT		
134.8-164.8m	40581-40586	CHIP		
164.8-167.8m	40587-40589	SPLIT		
167.8-203.3m	40590-40597	CHIP		

DESIGNED BY: A.J.M. & J.M. DATE: 18/11/1980

AIM OF HOLE: To test two ground magnetic anomalies and the Mt. Black Volcanics/Farrell Suite Contact.

NOTES: Glacial covered - no surface geochemistry.

82-1736. 800055

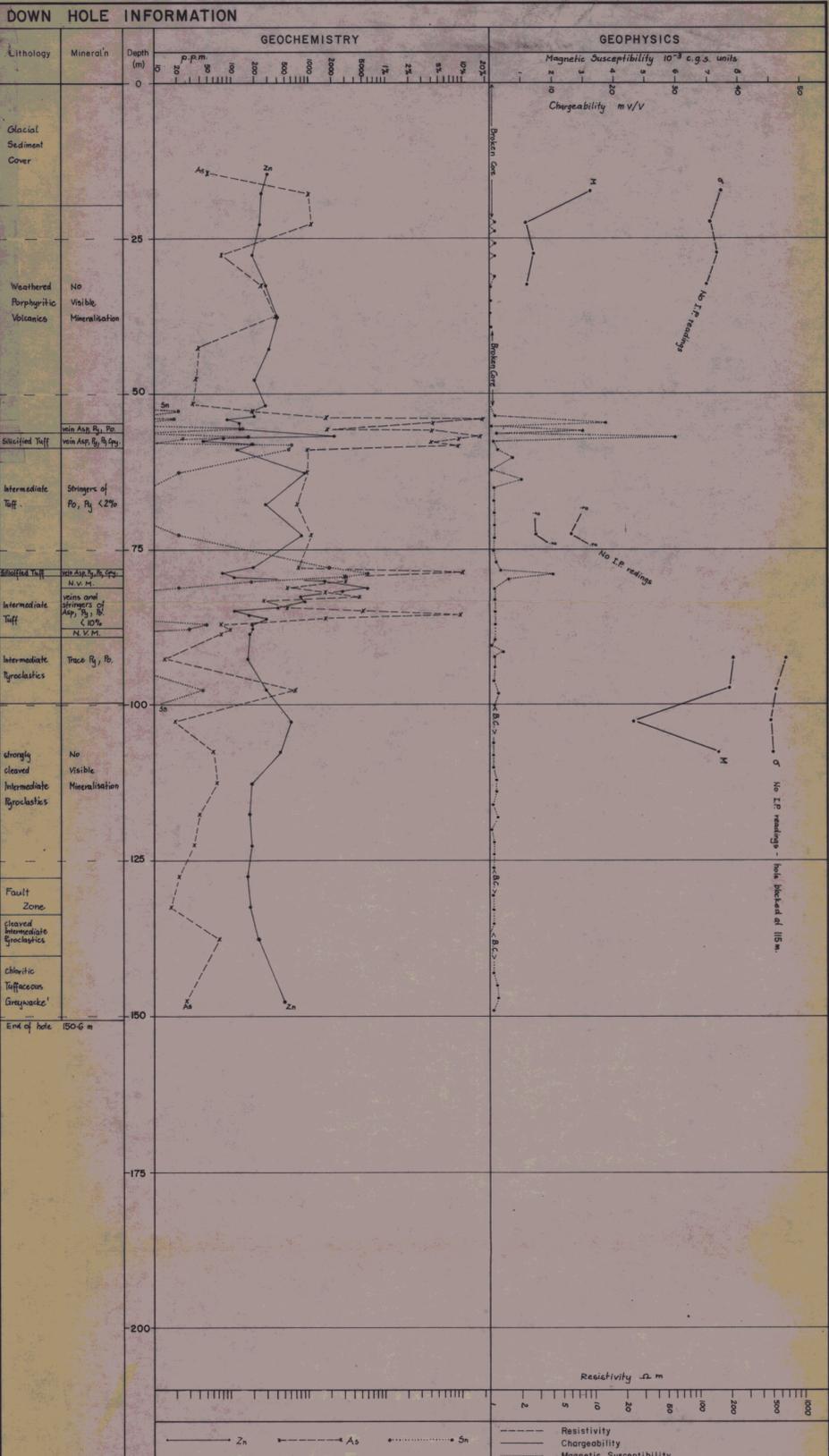
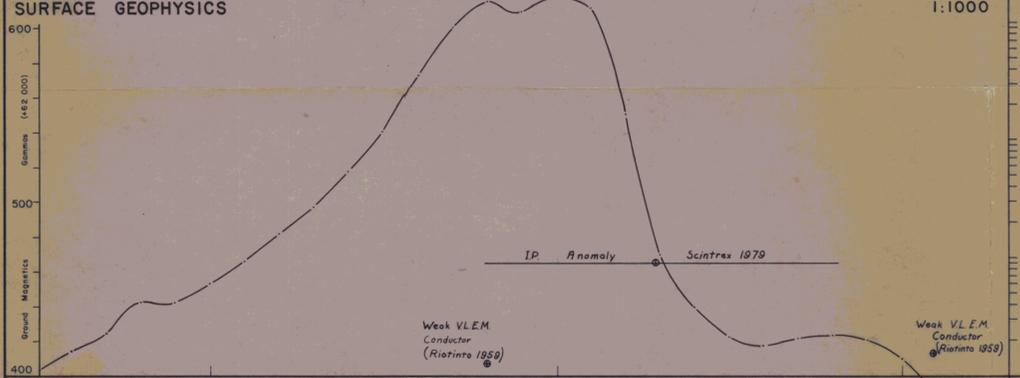
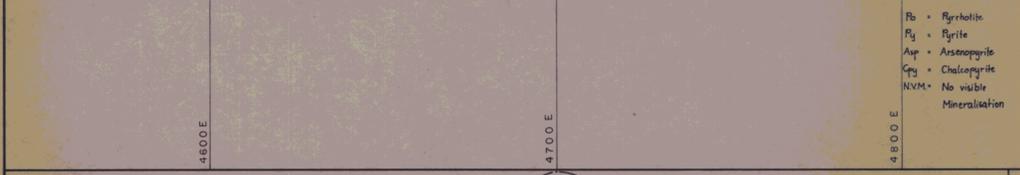
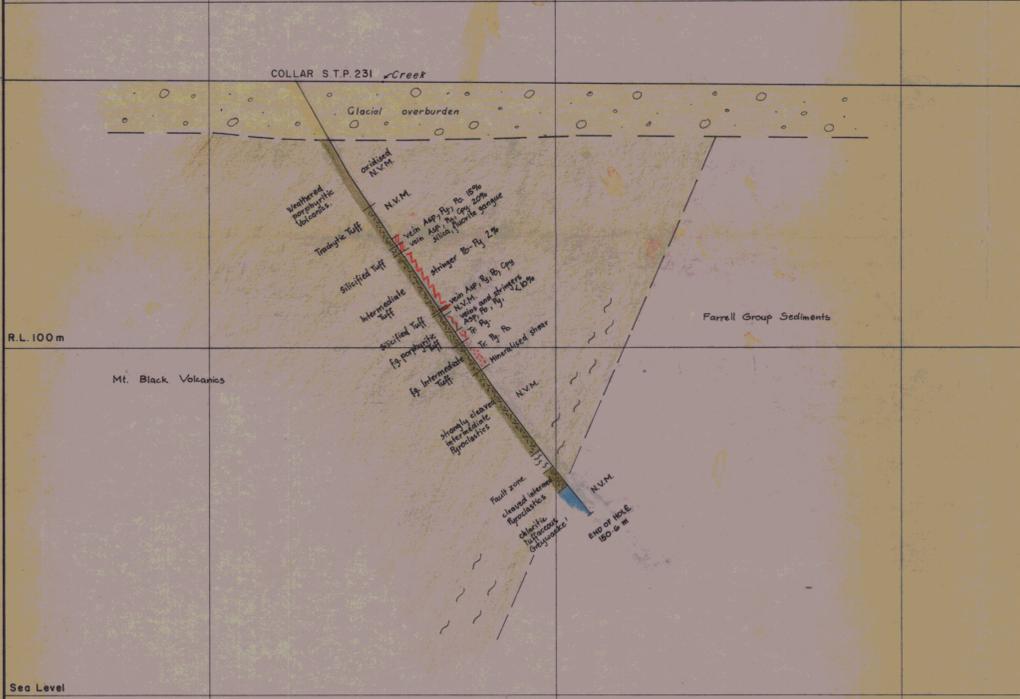
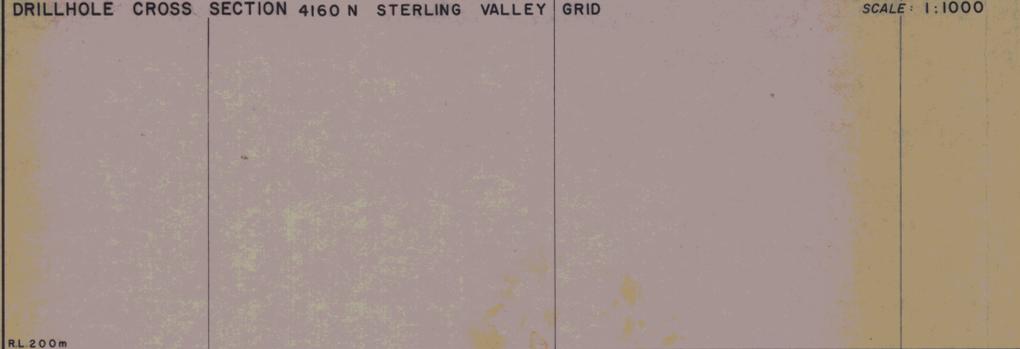
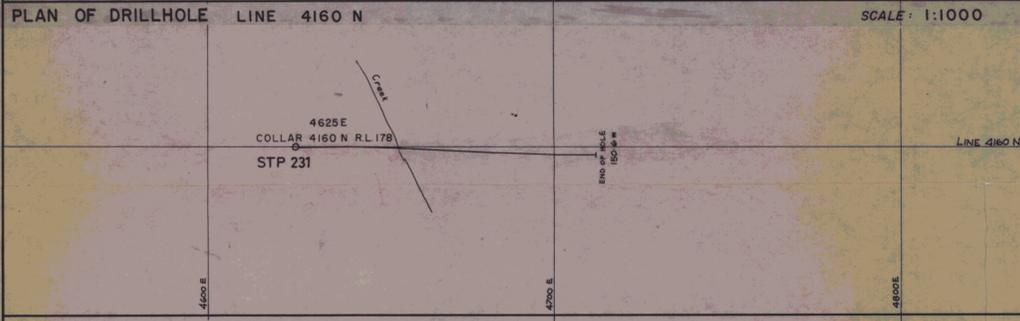
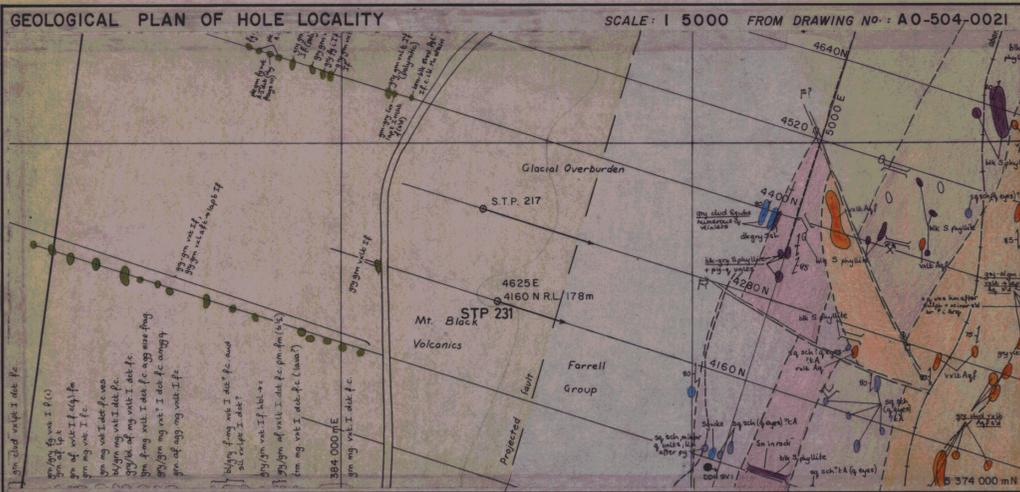
ELECTROLYTIC ZINC CO. OF ASIA LTD.

PROJECT: STERLING VALLEY E.L. 4/73 TAS.

SPECIFICATIONS AND SUMMARY OF RESULTS

EXPLORATION DIAMOND DRILL HOLE No. STP 221

SCALE: As shown Survey: J.M. Revised: REF. No. A1 526-0021



SUMMARY OF COMPLETED HOLE				SPECIFICATIONS OF PROPOSED HOLE			
CO-ORDINATES	NORTHING	EASTING	R. L.	CO-ORDINATES	NORTHING	EASTING	R. L.
LOCAL GRID	4160	4625	176.4	LOCAL GRID	4160 N	4625 E	175 m
A.M.G.	5,374,266.8	384,216.3	176.4	A.M.G.			
AZIMUTH: 108° A.M.G.	DIP: -60°	TOTAL DEPTH: 150.6		AZIMUTH: 108°	DIP: 60°	DESIGNED DEPTH: 170 m	
COMMENCEMENT DATE: 24.5.1981	COMPLETION DATE: 7.6.1981			ESTIMATED COMMENCEMENT: November 1980			

INTERNAL SURVEY INFORMATION						ANTICIPATED GEOLOGY		
DEPTH	AZIMUTH	DIP	DEPTH	AZIMUTH	DIP	DEPTH	LITHOLOGY	NATURE OF TARGET AND ANTICIPATED DEPTH
60 m	110° A.M.G.	-56°				0-88 m	Intermediate lavas, tuffs and minor intrusives of the Mt. Black Volcanics.	88m Henty Fault zone, Possible Sn/Pb mineralization
90 m	111° 5'	-55°				88 m	Fault zone	105-137m Pyrrhotite/cassiterite mineralization associated with co-incident ground magnetic and I.P. anomaly
120 m	110° 0'	-52°				88-170m	Farrell group greywackes, shales and siltstones.	
150 m	109° 0'	-50° 5'						
HOLE SIZE	FROM	TO	HOLE SIZE	FROM	TO			
HQ	0"	19 m						
NQ	19.0"	54.1"						
BQ	54.1"	150.6"						

DRILLED GEOLOGY (SUMMARISED)

DEPTH	LITHOLOGY	MINERALISATION AND SIGNIFICANT ASSAYS
0-19.4	Glacial Overburden	
19.4-140.1	Fine to medium grained intermediate Pyroclastics	
140.1-150.6	Chloritic Greywackes	

LOGGED BY:		DATE:	
82-1736		800056	
ELECTROLYTIC ZINC CO. OF ASIA LTD.			
PROJECT:		TAS.	
SPECIFICATIONS AND SUMMARY OF RESULTS			
EXPLORATION DIAMOND DRILL HOLE No. S.T.P. 231			
5 cm			

SCALE:	Survey:	Revised:
As shown	J.H.A.M.	
Reference:	Date: Nov. 1980	REF. No.
Drawn: R.T.	Checked:	A1526-0023