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ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

West Coast Mines

MT. BLACK EXPLORATION LICENCE 1/62

Report on Work Undertaken

30th June, 1979 - 30th June, 1980

OPEN FILE

Geological Department

Report No. 134

J.H.A. Mill

I.R. McDonald

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80-1468

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May, 1980

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"A report on an E.I.P. Gradient Array Reconnaissance Survey, Dobsons Creek, near Rosebery, Tasmania, on behalf of Electrolytic Zinc Company of Australasia Limited."

April, 1980

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"A report on additional E.I.P. Gradient and Dipole-Dipole detail, Dobsons Creek, near Rosebery, Tasmania on behalf of the Electrolytic Zinc Company of Australasia Limited."

July, 1980

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SUMMARY OF EXPLORATION ACTIVITY 30.6.'79 - 30.6.'80

Mt. Sale

Follow-up work continued on gradient array I.P. anomalies located by the reconnaissance survey of 1978/79. A bulldozed 4 wheel drive track was extended from Cutty Sark to the area of the Langdon Mine and the grid was remapped. Two further grids were mapped on Mt. Black and a diamond drill hole (MRP 212) was completed on the Murchison River Grid. The hole intersected 6.9m of pyrrhotite mineralisation assaying 2700 ppm Sn.

Farm Creek

Two I.P. anomalies located by the reconnaissance survery of 1979 were detailed with geological mapping, soil sampling and further I.P.. No mineralisation was detected.

Mt. Murchison

Following track cutting, a helicopter supported reconnaissance stream sediment sampling and geological mapping programme was completed in this isolated area. While anomalous stream values were obtained for both Pb and Zn, the geology (mainly granite and intrusive rhyolite) is not favourable for Rosebery type mineralisation.

Stitt

A major reconnaissance exploration programme was undertaken in the Stitt area. A grid of 52.44km was cut, mapped, soil sampled and surveyed with dipole and pole-dipole I.P.. Two I.P. anomalies of primary/secondary interest and one soil geochemical anomaly of primary interest were located, as well as numerous other secondary and tertiary responses. A small amount of stream sampling and mapping was completed.

One of the I.P. anomalies has been detailed with 5.78km of gridding, geological mapping, soil sampling and dipole-dipole and gradient array I.P.. No economic mineralisation was located. The other anomalies remain to be detailed.

Natone - Colebrook Hill

A grid totalling 12.05km was established over the Colebrook Mine (Cu) workings. The grid was mapped and soil sampled. Attempts at I.P. (both dipole-dipole and gradient array) failed because of high ground conductivity. In line vertical and horizontal loop E.M. surveys and a ground magnetic survey have been completed. Highly encouraging Sn soil geochemistry values (up to 720 ppm) have been obtained. These are associated with a noisy E.M. and magnetic signature over contact metasomatised sediments.

White Spur - Dobsons Creek

The old Dobsons Greek Grid was repegged and surveyed with gradient array I.P.. A total of 31,500ft of intermediate lines were cut and surveyed with gradient array I.P.. A number of excellent anomalies were recorded which were subsequently detailed with 100ft and 200ft dipole-dipole I.P.. Geophysically anomalous zones and the intermediate lines were soil sampled. Some Pb/Zn soil geochemistry anomalies show excellent correlation with the I.P..

White Spur - Jones Creek

Two diamond drill holes (JCP 211 - 342.5m and JCP 216 - 149m) were completed to test coincident I.P./soil geochemistry anomalies. The holes intersected minor Pb/Zn mineralisation associated with tuffaceous sediments and shales.

1.0 INTRODUCTION

This report covers work on Exploration Licence 1/62 by E.Z. personnel between June 30th, 1979 and June 30th, 1980.

The work is carried out on behalf of a Joint Venture between E.Z. and Getty Oil Development Co. Ltd., which was initiated at the beginning of April, 1978 and signed on 17th November, 1978.

For the purposes of the Joint Venture the area includes E.L. 1/62 but excludes all E.Z. owned mining leases and an area of 2km^2 adjoining the mining leases in the Bobadil area. Mining leases owned by E.Z. over the Farrell Mine area are also excluded for all minerals except tin. A description of E.L. 1/62 can be found in E.Z. Report No. 131, Appendix 1.

2.0 ABBREVIATIONS.

Standard symbols and terminology used on geological plans can be found on Plate 1 - Geological Legend for Geological Mapping.

3.0 EXPLORATION PHILOSOPHY

The primary target for exploration within E.L. 1/62 is Pb/Zn/Cu deposits of the Rosebery type. The deposit is considered to be a classic stratabound, volcanogenic orebody deposited in a subaqueous environment but directly related to acid volcanism. Similar deposits to Rosebery which occur over a 20km strike length of the Mt. Read Volcanics are Que River (Pb/Zn/Cu), Chester (Fe), Koonya (Pb/Zn/Cu), Hercules (Pb/Zn/Cu), Jupiter (Pb/Zn/Cu) and Ring P.A. (Pb/Zn/Cu). Other deposits of suspected volcanogenic origin also occur in the region.

Tin deposits of the Renison/Cleveland type (carbonate replacement type) and the Queen Hill type (fracture controlled type) also represent a major

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target in the Rosebery Group and Crimson Creek Formation of the Natone area, along the western flank of E.L. 1/62. A similar environment exists in the Sterling Valley/Tullah area where tin mineralisation have been found to be localised in fracture zones within the Mt. Black Volcanics and the Farrell Slates.

Another target in the Farrell Slates of the Tullah area is Pb/Ag deposits of the New North Farrell type. While the origin of this type of occurrence is still in dispute (Cambrian Volcanogenic or Devonian hydrothermal replacement) and their tonnage prospects small (probably <1,000,000 tonnes) their high grade compact nature makes them a worthy target.

A real exploration challenge is presented by the variable fluvioglacial cover in the Sterling Valley-Tullah area. This cover has prevented exploration in the past and thus the bedrock still has significant potential for both Farrell type Pb/Ag and tin orebodies.

4.0 PREVIOUS EXPLORATION

Between 1962 and 1971 very little was done by E.Z. to assess the potential of E.L. 1/62. The only attempt at a regional assessment was the Natone Valley Induced Polarisation Survey covered by E.Z. Report 85. Other investigations in the area have been attempts at proving continuations of ore in small prospects discovered in the late 1890's and early 1900's. These prospects occur mainly on the E.Z. held mining leases. The E.Z. Report No. 74 "Colebrook Prospect" is the only work pertinant to the present exploration of E.L. 1/62. E.Z. Report No. 105 "Ore Localisation and Potential for Rosebery and Hercules type Orebodies in Mount Black Exploration Licence" by R.L. Brathwaite made a regional assessment outlining the Primrose Pyroclastics as the main target and setting out the features of importance in assessing the area.

A stream sediment geochemical survey was initiated in 1969 and was completed, in areas accessable by two days walk, by April, 1971.

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Since 1971 all work completed on E.L. 1/62 has been documented in the following reports:-

1.	E.Z. Report No. 108	Report on Exploration in E.L. 1/62 Mt. Black during 1971-72. D. Reinhardt
2.	E.Z. Report No. 110	Report on Exploration in E.L. 1/62 Mt. Black during 1972-73. D. Reinhardt
3.	E.Z. Report No. 117	Report on Exploration of E.L. 1/62 Mt. Black during 1973-74. R.E. Williams
4.	E.Z. Report No. 124	Progress Report on Exploration of E.L. 1/62 (Mt. Black) during 1974-75. R.E. Williams
5.	E.Z. Report No. 131	Mt. Black Exploration Licence 1/62 - Work undertaken to 30th June, 1979. J.H.A. Mill

Work on individual grids within E.L. 1/62 is documented in the following reports:-

1.	E.Z. Report No. 112	Exploration of the South Hercules Area, 1973. A.H. Throop
2.	E.Z. Report No. 116	Geological Work Done at Hercules Mine and North Hercules in 1972-74. A.H. Throop.
3.	E.Z. Report No. 120	Geological Work done at Hercules Mine and West Hercules in January, 1975. C.G. Stone

5.0 WORK COMPLETED

5.1. Mt. Sale Area

5.1.1. PREVIOUS WORK

During the previous field season a grid totalling 32.8km of east-west grid lines at 1km north-south spacings was cut over Mt. Black and Mt. Sale. The grid was geologic-

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ally mapped, soil sampled and surveyed with gradient array I.P.. On this reconnaissance survey, ten areas were selected for detailed follow-up. A detailed description of the work completed and the results obtained from work over these 10 grids can be found in E.Z. Report No. 131 - pp 18-29. Further work was completed on four of the 10 detail grids during the 1979-80 field season. This work is discussed below.

5.1.2. WORK COMPLETED 1979-80

1. An unnamed grid (Area 1 Grid origin 5,378,000N 379,300E E.Z. Report 131) was geologically mapped.

2. An unnamed grid (Area 7 Grid origin 5,376,000N 382,500E E.Z. Report 131) was geologically mapped.

3. Langdons Area (Area 9 Grid origin 5,379,000N 380,500E E.Z. Report 131). The track to Langdons Area was partly rerouted to improve access and was then extended 1.5km over the Langdon Mine Workings. Two drill sites were prepared against the eventuality that two I.P. anomalies, detailed during 1978-79, be drilled. The entire detail grid was remapped.

4. The Murchison River Grid (Area 10 Grid origin 5,376,000N 384,000E E.Z. Report 131) was surveyed with ground magnetics at 20m intervals and a drill site prepared on line 5,375,300N 384,510E. DDH MRP 212 was completed at 293.5m and tested a coincident I.P./ground magnetic response under fluvioglacial overburden.

5.1.3. DISCUSSION OF RESULTS

1. Grid Area 1. (Grid Origin 5,378,000N 379,300E)
Again, sparce outcrop on the two grid lines mapped made geological interpretation difficult. The rocks mapped consist mainly of dacitic ash-flow crystal vitric tuffs

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and minor flow banded dacites. An apparent geological anomaly exists where original mapping has shown the rocks to be rhyolitic and follow-up mapping suggests they are dacitic in composition. A few samples will be submitted for thin section description to resolve this discrepancy.

Apart from trace pyrite and arsenopyrite observed on line 5,378,100N at 379,300E no mineralisation was observed.

2. Grid Area 7 (Grid Origin 5,376,000N 382,500E)
Sparce outcrop on the grid revealed that the rocks consisted mainly of porphyritic dacites with local dacitic, lithic vitric tuffs and minor hornblende (?) rich dacitic intrusives. The frequency of tuffaceous units increased north of line 5,376,000N. Apart from a cleaved, pyritic ? porphyritic rhyolite mapped on line 5,376,000N no mineralisation was observed.

3. Langdon Mine Grid (Refer 1:10,000 Geology Sheet 5 A0-525-0004)
The grid was remapped, when an orientation mapping exercise recognised the presence of sub-aerial and possibly sub-aqueous ash-fall tuffs which had previously been mapped as porphyritic, rhyolitic lavas.

Remapping revealed that much of the grid (about 60%) consisted of fine grained, rhyolitic, crystal vitric tuffs which showed broad uncontorted compositional banding, typical of ash-fall tuffs. Locally the tuffs were slumped suggesting that some, at least, were reworked and sub-aqueous. Much of the rest of the grid was over massive uniform siliceous porphyritic rhyolite which was locally slightly pyritic.

The rhyolitic tuffs and flows appear to have been intruded by a fine grained, chloritic mafic dyke in the vicinity of the Langdon Mine. The significance of the proximity of the dyke, which was poorly outcropping, to the mineralisation is not known.

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A thin, discontinuous band of greywacke, siltstone, shale and tuffaceous sediments occurs 350m east of the Langdon Mine. The band strikes north-north-west and dips steeply west. Facings indicate that the unit is not overturned.

An adit and shaft have been excavated into the sediments and dump material indicates that they are pyritic. No other mineralisation was observed although a grab sample of dump material analysed 850 ppm Pb and 1650 ppm Zn.

Two drill sites were constructed to allow diamond drilling of an I.P. anomaly located on line 5,378,900N at 380,290E, which was thought to be associated with Langdon type mineralisation and an I.P. anomaly located on line 5,379,100N at 380,660E which was associated with the pyritic sediments mentioned above. Subsequently it was decided not to diamond drill the anomalies at present.

4. Murchison River Grid (Grid Origin 5,376,000N 384,000E)
The Murchison River Grid covers approximately 1.0km^2 of mainly glacial covered ground near the Murchison River. A survey of the grid subsequently proved it to be 100m west of the pegged co-ordinates. The grid has been plotted according to the most up to date survey information.

A detailed gradient array/dipole-dipole survey (see Appendix VI, E.Z. Report 131) over the grid during the 1978-79 field season defined the contact between the Mt. Black Volcanics and the Farrell Slates and also located a discrete response immediately to the west of the Mt. Black Volcanics/Farrell Slate contact.

A ground magnetometer survey, using a Geoex G 816 Proton Magnetometer was conducted over the grid. Readings were taken at 20m intervals on lines 100m apart.

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The survey was extended to cover the northern part of the Sterling Valley Grid where readings were taken at 30m intervals on 120m spaced lines. The data were contoured and plotted at 1:10,000 scale (refer to 1:10,000 Ground Magnetics Plan Ref. No. AO-525-0072).

The magnetic response over the I.P. anomaly mentioned above was low in magnitude (20γ) and almost indescernable from the background noise. In general the background was considerably noisier than obtained from a survey by Cominco in 1976 on E.L. 4/73, just south of the Murchison River Grid. If background is taken to be 62,350γ then the best responses occur on the eastern edge of the grid where anomalies of up to 150γ exist, under glacial debris, close to the volcanics/slate contact.

DDH MRP 212 (Refer to DDH MRP 212 Summary Sheet Ref. No A1-504-0083, Appendix 1 C.M.S. Reports 80/1/7 & 80/2/17 and Appendix 12)

DDH MRP 212 was collared at grid co-ordinates 5,375,300N 384,510E and was completed at 293.5m.

The hole was designed to test an I.P. anomaly mentioned above, which corresponded to a subtle ground magnetic anomaly (possibly noise) of 30γ. No soil geochemistry or geological data was available as the bedrock was completely covered by fluvioglacial material.

The hole intersected 182.4m of fine grained trachy-andesite tuffs, lavas of the Mt. Black Volcanics before passing through a fault zone between 182.4m and 186.2m into greywacke, siltstone and shale of the Farrell Group.

The Mt. Black Volcanics consisted of porphyritic sodic trachytes, porphyritic andesites (intrusive?) and predominant trachytic vitric crystal tuff locally showing slump structures and other signs of sub-aqueous deposition.

The rocks are variably chloritised, albitised and locally infiltrated by carbonate. Fander (C.M.S. Report 80/1/7) suggests this is probably deuteric alteration which predates the shearing. The volcanics become silicified below 164.0m and are almost completely replaced by silica at 182.4m.

The Farrell Group is represented by greywackes, siltstones and variably carbonaceous shales which are locally dolomitic. The main clastic component is subangular quartz with subordinate muscovite flakes and poorly defined shale fragments. Based on this assemblage, together with evidence from DDH STP 217, 1.0km to the south in E.L. 4/73, a bimodal origin for the sediments can be postulated. They appear to have been derived from both the Eastern Volcanics and the Pre-Cambrian Tynennan Block.

Mineralisation

Diamond drill hole MRP 212 intersected 2.0m of faulted material between 189.2m and 191.2m averaging 5500 ppm Sn within a zone of 6.9m between 187.5m and 194.4m averaging 2650 ppm Sn. The tin occurs as cassiterite (20 - 200μ, mean 75μ), associated with pyrite, pyrrhotite, marcasite, arsenopyrite and sparce grains of stannite and chalcopyrite. Gangue minerals include chlorite, tourmaline, sideritic carbonate, fluorite and quartz. Weak tin mineralisation was also intersected between 44.75 and 45.5m where up to 1150 ppm Sn was obtained from a sulphide zone which mineragraphic examination suggested was a typical hydrothermal assemblage of arsenopyrite, pyrite and chalcopyrite.

A narrow band of remobilised epigenetic Pb/Zn mineralisation between 163.7 and 164.0m analysed 2.6% Pb, 15% Zn, 51.5 ppm Ag and 1.15 ppm Au.

A magnetic susceptability survey of the core produced extremely noisy results and a very high background, however, a resurvey with another instrument proved most of the core to be non-susceptable. Two small responses were obtained over the zones of tin mineralisation where pyrrhotite is slightly more common.

5.1.4. CONCLUSIONS

Detailed mapping, soil sampling and I.P. over grid areas 1 and 7 have not revealed the sources of the I.P. anomalies located by the reconnaissance survey. The low soil geochemical values and unfavourable geology suggest that the responses are probably caused by barren sulphides (pyrite/pyrrhotite etc) and/or formational changes between rock units of differing mafic content. The eastern most anomaly on the Langdon Grid (Area 9) also falls into this category. The western I.P. anomaly on the Langdon Grid is obviously caused by the pyritic sediments which were observed in the area. Despite the weak rock geochemical response from this unit, the sediments represent a potential host horizon for Rosebery type mineralisation and should be thoroughly investigated.

On the Murchison River Grid, diamond drill hole MRP 212 has intersected significant tin mineralisation hosted in the Mt. Black Volcanics and the fault between the Mt. Black Volcanics and the Farrell Group. Further drilling to the south (DDH STP 217) on E.L. 4/73 has intersected similar style mineralisation.

The tin mineralisation appears to be associated with arsenopyrite and pyrrhotite in or near zones of intense fracturing and is clearly epigenetic. Most of the area is covered by a thick layer of Pleistocene-Recent fluvioglacial material.

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More diamond drilling is required to assess the potential of the bedrock for structurally controlled tin deposits. Coincident I.P./Magnetic anomalies would be obvious targets for a diamond drilling programme. Dolomitic horizons in the Farrell Group would also make excellent targets once they had been defined beneath the glacials.

5.2. Farm Creek Area

5.2.1. INTRODUCTION

During the 1978-79 field season three east-west grid lines at 1km north south spacings were cut in the Farm Creek area. The lines were mapped, soil sampled and surveyed with dipole- dipole I.P.. While no geochemical anomalies were located, two dipole-dipole anomalies located at 5,383,500N/382,700E and 5,381,500N/385,500E were considered worthy of further work.

Complete descriptions of this work can be found in E.Z. Report No. 131 "Mt. Black Exploration Licence E.L. 1/62 - Work Undertaken to 30th June, 1979".

5.2.2. WORK COMPLETED 1979-80

(refer to 1:50,000 plan "Work Completed 30.6.'79 - 30.6.'80" Ref. No. A2-504-0126)

A total of 3.44km of grid was cut to follow-up the two I.P. anomalies mentioned above. East-west lines averaging 0.9km were cut 100m north and south of the areas of interest. The lines were mapped, soil sampled at 20m intervals and surveyed with 40m dipole-dipole I.P.. The anomalies on lines 5,383,500N and 5,381,500N were also surveyed with 40m dipole-dipole I.P..

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5.2.3. GEOLOGY

(refer to 1:10,000 Geology Sheets 5 & 6 Ref. No's AO-525-0004 & 0005 and Appendix 1 - C.M.S. Report No. 80/3/21)

Mapping of the grid centred at 5,383,500N/382,700E revealed a sequence of quartz trachytes (trachy-andesites) and minor rhyolites, some of which are considered, on thin section evidence, to be intrusive. Other rocks include rhyolitic agglomerate and ignimbrite and a thin fine-grained mafic dyke. East of 382,650E the grid is extensively covered by glacial debris and only one outcrop, andesitic flow breccia (Cowan), was observed on line 5,383,600N.

Alteration mapped in the field consisted of minor chlorit-isation, quartz and carbonate veining and the rocks were generally massive and uncleaved. The alteration is consistant with normal alteration within the Mt. Read Volcanics.

Minor pyrite and magnetite mineralisation (up to 1.0%) was observed associated with an andesitic lava flow breccia on line 5,383,600N at 382,870E and magnetite (up to 1.0%) was observed in a porphyritic quartz trachyte on line 5,383,400N at 382,370E. No mineralisation was observed in those rocks corresponding to the I.P. anomalies which occurred in a mostly glacial covered area.

Mapping on the second grid centred on line 5,381,500N at 385,500E revealed a sequence of massive fine to medium grained trachytic lavas and minor rhyolitic ash-flows and fine grained mafic intrusives. Parts of the eastern side of the grid were obscured by glacial debris. The rocks are locally weakly cleaved and show minor chloritisation and quartz veining typical of the Mt. Read Volcanics. On line 5,381,400N the rocks were extensively kaolinized.

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No mineralisation was observed that would explain the I.P. anomalies.

5.2.4. SOIL GEOCHEMISTRY

(refer to 1:10,000 Contoured Soil Geochemistry plans AO-525-0032 Pb; AO-525-0031 Zn; AO-525-0030 Cu and Appendix 2 - Soil Geochemistry Data Sheets)

Both follow-up grids were soil and litter sampled at 20m intervals. The samples were submitted to Analabs (Aust.) Pty. Ltd., and analysed for Pb, Zn, Cu, Fe and Mn by A.A.S..

Sampling of the grid centred at 5,383,500N 382,700E produced very low values for Pb, Zn and Cu. Maximum values of 50 ppm Pb, 105 ppm Zn and 20 ppm Cu were recorded from inside the licence area. While these values are not considered anomalous it should be noted that the area over the I.P. anomalies, on lines 5,383,400N and 5,383,500N, is glacial covered and soil sampling would probably not be effective. Sampling on line 5,383,600N is probably effective west of 383,900E and thus the anomaly on that line can be inferred to have no geochemical signature.

Sampling of the grid centred on line 5,381,500N at 385,500E revealed no anomalous values for Pb, Zn or Cu. Maximum values were 40 ppm Pb, 105 ppm Zn and 10 ppm Cu.

The I.P. responses occur on line 5,381,400N over weathered trachytic flows but are obscured by soil cover on line 5,381,500N and by glacials on line 5,381,600N. Thus, on line 5,381,400N at least it appears that the cause of the I.P. anomaly does not give any soil geochemical response.

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5.2.5. GEOPHYSICS

(refer to 1:10,000 Induced Polarisation Sheets 5 & 6, AO-525-0037 & 0054 and also Appendix 3 Pseudo-sections)

Both of the 100m dipole-dipole reconnaissance anomalies were detailed with 40m dipole-dipole I.P.. The anomaly on line 5,383,500N was checked on lines 100m north and south. On line 5,383,600N the response was seen as a shallow source between 382,740E and 382,780E.
The anomaly was detailed as a more subtle broad source on line 5,383,500N between 382,680E and 382,800E and as a similar response on line 5,383,400N between 382,640E and 383,720E where glacial cover may have affected the resolution of the technique.

The anomaly on line 5,381,500N was detailed in a similar fashion. There were no significant responses recorded on line 5,381,600N except two readings from N=1 which are probably located within the glacial overburden. The original anomaly on line 5,381,500N also recorded a high reading from N=1 between 385,540E and 385,580E. At this point the background changes from $\pm$ 15mv/v chargeability, $\pm$ 7000 ohm-m resistivity in the west to $\pm$ 8mv/v chargeability, $\pm$ 2000 ohm-m in the east. On line 5,385,400N a subtle double peak anomaly occurs between 385,580E and 385,660E. The backgrounds vary in a similar fashion to those on line 5,381,500N.

5.2.6. CONCLUSIONS

Both I.P. anomalies from the reconnaissance survey were located by the detailed survey and traced north and south although the northern extension of the anomaly on line 5,381,500N is tenuous. No mineralisation was observed in the field and the soil geochemistry gave no anomalous responses within the licence area. The anomaly on line 5,381,500N appears to be a response to a rock change where rocks of different physical properties straddle the

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gridded area. Mineralisation may, however, be obscured by the glacial and soil cover on line 5,381,500N and 5,381,600N. The anomaly on line 5,383,500N remains unexplained. Much of the zone is buried beneath glacial debris of unknown thickness. The soil sampling almost certainly did not adequately test the I.P. anomaly, except perhaps, on line 5,383,600N where no response was gained.

5.3. Stitt Area

5.3.1. INTRODUCTION

The Stitt area is defined by the Murchison Highway to the north, Mt. Murchison to the east, Mt. Read to the south and the Rosebery Mine Leases to the west. The area covers most of the drainage basin of the Stitt River.

Access is provided by the "Stitt Access Track" which joins the Murchison Highway near the top of Mt. Black, the Mt. Read Telecom Road, the powerlines from Rosebery to Tullah and Queenstown, and roads on the mining leases adjacent to the Stitt area. The old tram line to Howards Mill provides limited walking track access.

During the 1978-79 field season a 2km 4 wheel drive access track was constructed from the powerline between Rosebery and Tullah, south into the Stitt area. All access in the area, including powerlines and roads, was mapped at 1:5,000 photo scale (refer to E.Z. Geological Dept. Report No. 131). A major exploration programme was conducted in the Stitt Area during the 1979-80 field season.

5.3.2. WORK COMPLETED 1979-80

(refer to 1:50,000 "Work Completed 30.6.'79 - 30.6 '80" A2-504-0126)

A total of 52.44km of reconnaissance east-west grid lines were cut at 0.5km north-south spacings between 5,366,000mN and 5,372,523mN. Approximately 4.5km of walking tracks were cut to provide access between grid lines.

Fixing of origins of grid lines has been accomplished, where possible, from cultural features i.e. roads and powerlines. The origins were surveyed using known trig points for control. When pegging was completed it was noted that in some cases, pegged distance did not agree with the known distance on the ground. In such cases the lines have been adjusted on the 1:5,000 and 1:10,000 plans to comply with cultural features, the position of which is expected to be accurate.

All grid lines were pegged at 20m horizontal intervals and were soil sampled to nominal 'C' horizon. Leaf litter samples have been taken over the grid in a further effort to test this method as a relevant exploration tool in Western Tasmania.

The lines were geologically mapped at 1:2,500 scale and the geology has been plotted at 1:5,000 and 1:10,000 scales.

Reconnaissance time domain dipole-dipole I.P., using 100m electrode spacings, was run over every second line of the grid. A total of 29.44km of grid was tested using this technique. This method, while giving reliable results, was found to be slow, cumbersome and therefore expensive. Consequently it was decided to use the quicker pole-dipole method, also using 100m

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electrode spacings, over the remainder of the grid. This method, while quicker than the dipole-dipole technique, lacks the symmetry of dipole-dipole, thus making results slightly more difficult to interpret. This drawback, however, was more than compensated by the time and cost savings.

During the course of mapping a band of green "shale" was located on line 5,372,000N, just east of the Stitt track between 382,800E and 383,000E. A follow-up grid totalling 5.78m of east-west lines was cut at 100m north-south intervals between 5,371,600N and 5,372,400N to test the area of interest. Refer to Section 5.4. for details.

A start was made on a stream sediment mapping and sampling programme with 2km of stream (The Sterling River) being geologically mapped and sampled.

5.3.3. GEOLOGY

(refer to 1:10,000 Geological Plan Sheets 7 & 9 Ref. No's AD-525-0006 & 0013 & Appendix 1 - C.M.S. Reports 79/12/20, 80/2/22 & 80/3/21)

The rocks of the Stitt area are classified according to a tentative stratigraphic column set out below:

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Age	Name	Rock Types
Recent	5.	Reworked glacial deposits.
Pleistocene	4.	Unsorted glacial debris.
Ordovician	3. Owen Conglomerate.	Massive pink conglomerate & quartzite.
Cambrian	2. Mt. Read Volcanics	Rhyolitic, andesitic & trachytic lavas & pyroclastics. Local small basaltic & granophyric intrusives.
	1. Farrell Group?	Slates, greywackes & xenotuff, acid-intermediate pyroclastics.

1. Farrell Group?

The Group outcrops in a 400m wide band between the Ordovician Owen Conglomerate on Mt. Murchison and the Mt. Read Volcanics to the west. The contact between

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the Farrell Group? and the Mt. Read Volcanics is inferred to be faulted (the Henty Fault?) while the contact between the Farrell Group? and the Owen Conglomerate is probably an unconformity, although faulting along this contact (as at the MacIntosh Damsite) may have occurred.

The rocks of this unit consist of extensively cleaved xenotuffs (C.M.S. Report 80/2/22), quartz rich rhyolites and rhyolitic tuffs, dacitic ashflows and lithic tuffs and subordinate slate, greywacke and schist in the north. The dominant rock type is an extensively cleaved xenotuff which contains fragments of rhyolite, siltstone, quartz and Pre-Cambrian quartzite. The unit is probably subaqueous.

The cleavage within the unit is similar to that seen in the Farrell Slates to the north and is in marked contrast to the poorly cleaved Mt. Read Volcanics to the west. This suggests that the unit is older than the Mt. Read Volcanics. The fragment component suggests a source of detritus from the east. Scree from the Owen Conglomerate extensively covers the area and obscures much of the outcrop. No mineralisation was observed in the field although a soil geochemistry anomaly was detected on line 5,369,500N over the xenotuff sequence.

2. <u>The Mt. Read Volcanics</u>

These are the dominant rocks of the Stitt area underlying 95% of the gridded area. They are separated from the Farrell Group by a fault (the Hentry Fault?) and are locally intruded by thin, pervasive basaltic dyke swarms and larger granophyric bodies.

Much of the area consists of porphyritic rocks of dacite, andesite, trachy andesite and rhyolite composition. In general, the more intermediate rocks predominate.

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Field identification of many of these rocks based on textural patterns on weathered surfaces suggests a pyroclastic origin. Thin section descriptions infer that many of the rocks are flows (lavas) rather than pyroclastics as no primary pyroclastic features (shards, fiamme etc) were observed. In general mapping has followed field evidence although the problem remains essentially unresolved.

Apart from one small outcrop of reworked intermediate tuff on line 5,370,500N at 382,670E (sample No. 29968 C.M.S. Report 80/2/22) and a similar thin (5m wide) band on the Stitt Track, no sedimentary rocks of subaqueous origin were observed in the area. Locally, sheared fine grained primary tuffs resemble sediments, however, later petrological work proved this assumption to be erroneous. In general the volcanics were massive, poorly cleaved and, apart from the pervasive regional metamorphism, unaltered.

The volcanics were variously intruded by fine grained basaltic dykes (up to 10m wide). In the southern Stitt area on lines 5,366,500N and 5,367,000N, granophyres up to 160m wide have intruded the pile. No significant alteration occurs around the contacts.

Apart from minor disseminated pyrite within the volcanics and associated quartz veining and magnetite within the rhyolitic flows, no mineralisation was observed in the Stitt area.

Alteration observed in thin section descriptions consists of chlorite, sericite, epidote and albite which is consistant with alteration patterns observed in the field. Locally, around faults, shearing and chloritisation is intense but otherwise no distinct alteration zones were observed other than the regional pattern.

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It is felt that much more work is required to define and interpret alteration patterns within the Stitt area. The structure of the Stitt area is complex and not fully understood. The pile consists of a mass of volcanics with no obvious marker horizons on which to base an interpretation. It is felt that the major rock units trend north-south although there is considerable variation along strike, as would be expected in a massive pile of this nature. A study of air photo lineaments has revealed a number of linear and cuvulinear features some of which appear to correspond to rock boundaries and may represent faults.

In summary the rocks of the Stitt area appear to represent a massive sequence of sub-aerial lavas and pyroclastics (based on the lack of sedimentary bands) which accumulated rapidly during the Cambrian. The sequence is very similar to the rocks mapped on Mt. Sale.

3. Owen Conglomerate

This unit forms the craggy tors of Mt. Murchison on the eastern side of the Stitt area. It consists of pink massive siliceous conglomerates and sandstones composed mainly of pre-Cambrian detritus and appears to lie unconformably upon the Farrell Group, the Mt. Read Volcanics and the Murchison Granite in the Murchison Valley.

Glacial deposits derived from the Owen Conglomerate and scree from Mt. Murchison often obscure the underlying bedrock.

4 & 5. Pleistocene - Recent Glacials & Fluvioglacials

During the Pleistocene extensive glaciation occurred in Tasmania resulting in the deposition of unsorted glacial debris such as the deposits at Boco and on the flanks of

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Mt. Read. Extensive lake deposits were also formed as suggested by the reworked material infilling the lower Stitt Valley where rounded and sorted deposits of gravel and varved clays occur.

5.3.4. GEOCHEMISTRY

(refer to 1:10,000 Soil Geochemistry Contour Sheets 7 & 9 for Pb, Zn, Cu - Sheet 7 No's A0-525-0026,-0027,-0025 & Sheet 9 No's A0-525-0059,-0060,-0061 & Appendix 2 - Soil Geochemistry Data Sheets)

1. Soil Geochemsitry

Soil samples were collected at 20m horizontal intervals over the entire grid. Marshall (see Appendix 3 E.Z. Report No. 131) recommended that 'B' horizon would give optimum results for soil sampling, however, it was felt that due to the poor development of 'B' horizon soils on the West Coast and the highly variable soil profile in general, that results would be more consistant if 'C' horizon soils were sampled. Thus samplers were instructed to attempt to auger to 'C' horizon although in many cases this was impossible because of scree from steep hillsides or glacial debris.

The soils were sent to Analabs (W.A.) Pty. Ltd. for analysis for Pb, Zn, Cu, Fe and Mn by A.A.S. after perchloric/nitric digestion. Results were plotted on 1:5000 plans and Pb, Zn and Cu values were contoured. The contours were then photo reduced to 1:10,000 scale and plotted for interpretation purposes.

A brief statistical analysis of soil data from the Stitt reconnaissance grid gave the following results:

Element	Average ppm	Standard Deviation ppm
Pb	21	30
Zn	30	35
Cu	10	20

In line with the above information contour intervals of 50, 100, 200, 500 and 1,000 ppm were chosen for each element.

Zinc shows the greatest distribution over the Stitt grid compared to the relatively poorly distributed Pb and Cu (cf White Spur - Dobsons Creek Grid where Pb shows the greatest distribution with Zn and Cu apparently being leached and Natone - Colebrook Hill Grid where Cu shows the greatest distribution).

A number of soil geochemical anomalies have been outlined by the soil sampling programme over the reconnaissance grid. These are listed in the table below.

ZONES CONTAINING 200+ ppm Pb, Zn and Cu

Line	Eastings	Elements	Range in ppm	Geology	Comments
5,372,523	382,960-383,160	Zn Pb	80-395 <235	acid & intermediate tuff acid lava	IP anomaly. Slope changes, possibly hydromorphic
5,372,000	382,980-383,190	Zn	75-285	intermediate tuff	IP anomaly
5,371,000	381,520-381,610	Zn(+Pb+Cu)	50-360	"	part of N-S belt
	381,870-381,930	Pb	150-250	"	in a swamp
	382,460-382,800	Zn	55-240	intermediate + acid tuff	long easterly slope
5,370,500	380,120-380,170	Zn	70-220	intermediate tuff	25° slope
	381,650-381,730	Zn	65-295	"	possibly hydromorphic
5,370,000	382,930-382,970	Cu	95-370	"	35° northerly slope
5,369,500	382,650-382,700	Pb,Zn,Cu	105-1350	rhyolitic xeno-tuff	end of line. 30° slope
5,369,000	381,560-381,650	Pb,Zn,Cu	50-290	dacitic tuff	Stitt Gorge cliff
5,367,000	378,370-378,570	Pb,Zn	35-210	acid dacitic tuff	long <20° slope
5,366,500	378,510-378,710	Pb	30-315	acid+intermediate tuff	30° slopes
	378,950-379,030	Pb,Zn	35-315	acid tuff, lava & intrusive	highest slope change 20° to 15°
5,366,000	377,470-377,630	Pb	45-325	rhyodacitic tuff	long 6-8° slope
	377,900	Pb	450	rhyodacitic tuff	spot anomaly

Ironically, the best anomaly occurs at the end of the least accessable line (5,369,500N) half way up the side of Mt. Murchison at 382,700E. The anomaly appears to be insitu (i.e. it is not hydromorphic) and has peak values of 635 ppm Pb, 1350 ppm Zn and 105 ppm Cu in soils derived from feldspathic pyroclastic grit/conglomerate (not exposed) which may be stratigraphically equivalent to the acid volcanics observed north and west of Mt. Murchison and lying stratigraphically beneath or equivalent to the Farrell Slates. This anomaly has not been surveyed with I.P.

With the exception of a Zn anomaly on line 5,372,000N at 383,980E-383,190E which was coincident with a dipole-dipole I.P. anomaly, no anomalies have been checked in the field.

2. Litter Geochemistry (Refer to Appendix 2 Litter Geochemistry data sheets)

There is ample evidence to suggest that organic material will tend to reflect anomalous sub-soil geochemical values. On the advice of N.J. Marshall, all lines of the Stitt Reconnaissance and Follow-up Grids were sampled for leaf litter as well as soils. The samples were collected at 20m intervals but were submitted for analysis at 60m intervals only to Analabs (Aust) Pty. Ltd. in Western Australia. The analytical technique is outlined in Appendix 3 of E.Z. Report 131.

Visual inspection of the litter sample results has not revealed any definite trends when compared to the soil sample results. This may be because only one outstanding soil anomaly was located in the area. A complete line of litter samples has been submitted for the line covering this anomaly (5,369,500N) but results have not yet been received.

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3. Stream Geochemistry (refer to Appendix 2 - Stream Geochemistry data sheets)

On advice of N.J. Marshall, the programme of stream sediment sampling was to collect -80 mesh sediments at fairly close intervals, nominally 250m apart. This programme was to be supplemented with the collection of Mn and Fe coated pebbles wherever they occurred within streams.

To date analysis of soluble (reactive) stream sediment coating in stream pebbles has not been adopted in Australia although it has been recently used in North America.

On the West Coast of Tasmania the humic acid rich waters in swift flowing streams tend to be oxidised, precipitating Fe and Mn, together with any trace elements in solution, onto any convenient surface (namely pebbles and shingles) subsequently analysis of coatings should thus reflect the amount of metal in ground water entering the stream.

To date stream sediment and Fe/Mn coated pebble sampling is incomplete with approximately 2km of the Sterling River, and 1.7km of streams crossing line 5,372,523N sampled. This programme is to be continued at a later stage.

To date no anomalous values have been obtained.

5.3.5. GEOPHYSICS

(refer to 1:10,000 Geophysical Plans - Induced Polarisation Sheets 7 & 9 AO-525-0024, -0058 & Appendix 4)

North of the Stitt Grid (e.g. Mt. Sale) previous reconnaissance geophysics involved gradient array I.P. at 1km north-south spacings. Generally this method lacked

resolution of depth with a tendancy to pick up anomalous shallow zones. Dipole-dipole I.P. allows greater penetration at depth (particularly important in glacial covered terrain) although it tends to be a slower process than gradient array I.P.. For this reason 100m dipole-dipole I.P. was conducted over the Stitt Grid from 5,372,000N to 5,366,000N on 1km north-south spacings. This method proved slow, cumbersome and more costly than expected because of the time required to move equipment from one site to another. Consequently pole-dipole I.P. was adopted for line 5,366,500N to 5,372,523N at 1km north-south spacings.

The results of the I.P. survey produced three anomalies of primary/secondary interest, two anomalies of secondary interest, one of secondary/tertiary interest, three of tertiary interest and two unclassified.

A summary of anomalies is listed in the table below:

SUMMARY OF I.P. ANOMALIES, STITT GRID

Line	Easting	Source	Depth(m)	Geology	Interest
5,372,523	383,150	average disseminated	100-150	acid & intermediate tuff	unclassified
5,372,000	382,800-383,000	weak "	<100	acid & intermediate tuff & lava	primary/ secondary
5,371,500	383,050	narrow disseminated	<100	sheared intermediate tuff	unclassified
5,371,000	380,100-380,400	shallow disseminated	100	intermediate tuff	secondary/ tertiary
	382,600-382,800	minor	100	"	tertiary
	383,200-383,600	coarse grained	<100	intermediate & acid tuffs	primary/ secondary
5,370,500	379,450	minor disseminated	100	intermediate tuff	tertiary
5,370,000	380,100	"real inspite of powerline"	150	acid tuff	secondary/ primary
	380,700-381,100	disseminated	<100	acid & intermediate tuff	tertiary
	381,450	"	200	glacials over intermediate tuff	secondary
	381,600-381,800	weakly chargeable	<100	"	"

To date only one anomaly has been detailed. That anomaly was on line 5,372,000N between 383,800E and 383,000E and was allocated a primary/secondary interest category. It was associated with a strongly cleaved fine grained chloritic rock, thought to be a sediment and elevated zinc soil geochemistry (up to 285 ppm).

The other anomalies recorded in the table above will be detailed but at a later date as they are generally not supported by high geochemistry or favourable geology.

5.3.6. CONCLUSIONS

Geological mapping of the Stitt area has revealed a massive pile of pyroclastics and lavas ranging in composition from rhyolitic to andesitic. The pile has been locally intruded by small granophyres and thin basaltic dykes. Only two occurrences of thin, discontinuous reworked tuff units were noted. The presence of many welded ash-flow units, the massive nature of the volcanics and the lack of sedimentary units together suggests that the pile was probably sub-aerial during its formation.

Only one significant soil geochemical anomaly was noted. This occurred on the eastern end of line 5,369,500N over rhyolitic xenotuffs. The anomaly has not been detailed and was not surveyed with I.P.. Other soil anomalies in the Stitt area appear to be of secondary interest only but will be checked in the future.

The I.P. survey revealed no anomalies of primary significance and only two of primary/secondary significance. One of these has been detailed and appears to have been caused by pyrite and fine grained mafic minerals in a shear zone within andesitic-trachy andesitic lavas and pyroclastics.

The other anomalies have not been detailed but will be checked in the future.

Because of the poor responses to the geophysical and geochemical surveys carried out in the Stitt area and the massive, unprospective nature of the volcanic pile it is easy to assume that the area is unprospective and does not warrant a second look. However, large tracts of ground are covered with scree, swamp and glacial overburdern which will almost certainly obscure the geochemistry and blur the I.P.. Each I.P. anomaly and geochemical response should be carefully checked in the field to establish the source of the anomalism and its aerial extent because these subtle anomalies may represent the tips (or keels) of mineralised haloes which usually surround volcanogenic orebodies of the Rosebery Type. Careful mapping of alteration around these responses may reveal vital clues to define whether the responses are significant or just caused by minor uneconomic mineralisation.

5.4. Stitt Follow-up Grid

5.4.1. INTRODUCTION

A primary/secondary dipole-dipole I.P. anomaly located on line 5,372,000N between 382,800E and 383,000E was selected for follow-up work. The anomaly was over sheared fine grained chloritic "shale" and was coincident with a Zn soil geochemical anomaly of 285 ppm.

5.4.2. WORK COMPLETED 1979-80

A follow-up grid consisting of 8 grid lines totalling 5.64km at 100m north south spacings and centred on line 5,372,000N was completed. The Sterling Valley Tram

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Line which runs north-south through the centre of the gridded area was also cut out.

All lines were pegged at 20m intervals and geologically mapped. The original anomaly was detailed with gradient array I.P. (20m potential electrodes) and lines 5,372,400N, 5,372,300N and 5,372,200N were surveyed with dipole-dipole I.P. (40m electrode spacing).

5.4.3. GEOLOGY

(refer to 1:10,000 Geological Sheet 7 Ref. No. AO-525-0006 Appendix 1 - C.M.S. reports 80/5/46)

Mapping of the detailed grid revealed that the rocks were a monotonous sequence of porphyritic andesites and trachyandesites which interfinger with pyroclastics (probably ashflows and ashflow agglomerates) of similar composition. The green cleaved chloritic "shale" originally mapped on line 5,372,000N proved to be a greenschist altered porphyritic dacite with slaty cleavage. Fine grained pyrite (up to 1%) was observed in the rock.

5.4.4. GEOCHEMISTRY

(refer to 1:10,000 Soil Geochemistry contour plans Sheet 7 for Pb, Zn & Cu Ref. No. AO-525-0026,-0027 & 0025)

Soil sampling of the follow-up grid has been completed. The samples were treated the same way as those collected from the reconnaissance grid.

For Pb and Cu, backgrounds were low and only a few isolated values rose above background. The highest Cu value was from an isolated sample which analysed only 25 ppm Pb and 140 ppm Zn. There was no evidence of significant down hill dispersion. Similarly the highest Pb assay was 235 ppm from an isolated sample

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which, however, contained 395 ppm Zn from 383,020E on line 5,372,500N. Only 9 other samples analysed more than 50 ppm for Pb, the highest being 100 ppm.

The most significant feature about the soil geochemistry of the Stitt Follow-up Grid is the elevated background for Zn.. Over half of the samples from the grid were over 50 ppm and a significant number were over 100 ppm. However, truly anomalous values were not present. Only 2 samples analysed more than 200 ppm. (One of 395 ppm mentioned above and one of 215 ppm 40m to the east.) It is suspected that the elevated Zn backgrounds are a product of the rock types on the grid rather than being caused by mineralisation.

5.4.5. GEOPHYSICS

(refer to Appendix 5 & 1:10,000 Induced Polarisation Sheet AO-525-0024)

The original reconnaissance dipole-dipole anomaly was resolved into a series of multiple sources by the gradient array survey. The most westerly source was at 382,810E and was about 8mv/v above background, and resistivity about 50% below background at 3500 ohm-m. A highly resistive ridge was centred at 382,910E. Between 382,910E and 383,200E, five shallow sources (all less than 40m deep) were detailed. None of the sources is considered significant.

The same source appears to have been detailed by the dipole-dipole I.P. on line 5,372,200N between 382,880E and 383,000E. A power line close to line 5,372,300N may have interfered with readings on that line. There were no significant responses from line 5,372,400N.

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5.4.6. CONCLUSIONS

The I.P. anomaly on line 5,372,000N can be explained adequately by observed mineralisation, the nature of the rock (fine grained, slightly pyritic, cleaved, chloritic andesite) and the wide electrode spacing used by the reconnaissance survey which was too large to differentiate the small, individual responses.

The spot Pb and Cu Soil geochemistry responses can be explained by local small scale mineralisation but the elevated Zn soil values are best explained by high Zn backgrounds within the bedrock. Local sphalerite mineralisation may be responsible for the two highest Zn values on line 5,372,500N although none was observed in the field.

The grid area does not contain any obvious mineralisation of economic potential.

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5.5. White Spur Area (Dobsons Creek)

5.5.1. INTRODUCTION & ACCESS

The Dobsons Creek part of the White Spur Area consists of a high exposed plateau on the southern flank of Mt. Read which is dissected by streams draining to the south. The northern, higher area is covered by low alpine vegetation while the valleys and southern area are covered with thick rainforest.

The gridded area is flanked by 4 wheel drive tracks which can be accessed from the Hercules Mine and the Mt. Read Road. Another 4 wheel drive track from the Mt. Read road traverses the central part of the grid and connects Howards Road to Mt. Read. Numerous logging tracks most of which are not accessable to 4 wheel drive vehicles, occur in the southern part of the gridded area.

5.5.2. PREVIOUS WORK

Rio Tinto Australia conducted a regional mapping, stream sampling exercise over the area as early as 1956-57. Their data is available to E.Z. in the form of uncontrolled map sheets and has been largely superseded by more recent work.

The first formal work conducted over this area was the establishment of an 8,000 x 4,000 ft grid with lines cut at 800ft centres during 1971-72. Fill-in lines at 200ft centres were cut over areas of anomalous soil geochemical values (refer to E.Z. Report No.108 "Exploration in E.L. 1/62 Mt. Black during 1971-72" by D. Reinhardt). The grid was geologically mapped and soil sampled at 100ft centres. A Turair survey was carried out in March, 1972. Two diamond drill holes (WSP 178 & WSP 179) were completed on line 6,600S to determine the dip of an outcropping shale unit at 850W.

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During 1972-73 (refer to E.Z. Report No 110 "Exploration in E.L. 1/62 Mt. Black During 1972-73" by D. Reinhardt) an additional 60,000ft of line cutting was carried out to extend the grid to the east. The grid was mapped and soil sampled at 100ft centres. A small Turair survey was conducted over part of the grid established during 1971-72 and a line of gradient array I.P. was conducted to test soil geochemical anomaly 'A' (see E.Z. Repot No 108) and DDH WSP 190 was drilled to test a Turair conductor.

During 1973-74 (refer to E.Z. Report No. 117 "Report on Exploration of E.L. 1/62 Mt. Black during 1973-74" by R.E. Williams) DDH WSP 191 was drilled to intersect a turam anomaly considered to be related to turair conductor No. 7.

Only limited work of a regional nature has been carried out on the grid since 1974.

5.5.3. WORK COMPLETED

(Refer to 1:50,000 scale "Work Completed Plan No AO-525-0126)

Pegs were replaced on the 800ft spaced lines of the Dobsons Creek Grid between line 00S and 8,000S. The base line was extended 800ft south and line 8,800S was cut and pegged. Subsequently intermediate lines were cut between line 8,800S and 2,400S, east of the 00W base line. A total of 44,600ft of line was cut. Lines 8,000S and 7,200S, found to be overgrown, were recut. Line 4,000S was extended 2,600ft west to position a current electrode for the gradient array I.P. survey.

All lines were surveyed with time domain gradient array I.P. and anomalies were detailed with 200ft and/or 100ft dipole-dipole time domain I.P. on the original 800ft spaced grid.

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All new line was soil sampled at 100ft intervals.
Old line was resampled over newly outlined I.P. anomalies
A total of 64,800ft of line was sampled.

Limited mapping of tracks was carried out in the southern portion of the grid.

5.5.4. GEOLOGY
(refer to 1:10,000 Geological Plan AO-525-0013)

The geological interpretation of D. Reinhardt and R. Williams, from work conducted between 1971 and 1975, continues as the accepted interpretation for the area.

The following description of geology is extracted from E.Z. Report No. 108:-
'It appears that a major anticline is present in the footwall of the Hercules Mine and on line 00 between 1W and 5W the sequence footwall schists-slate-coarse pyroclastic breccia indicates that the western limb of the anticline has parts of the Hercules Horizon preserved. This anticlinal structure trends approximately 240° grid and the footwall rocks continue until at least 4,000S.'

South of line 4,000S pyritic black shales and tuffaceous sediments occur as thin lensoid bodies associated with vitric tuff, crystal tuffs and coarse agglomeratic units. Shallow dips in the area indicate that the sequence is folded in an open style.

The general style of previous mapping and the lack of structural information which can be obtained off old E.Z. work means that a satifactory geological interpretation of the area cannot be made using current information. While rock types have been differentiated on a broad scale,

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no attempt at identifying phenocrystal phases, grain sizes or alteration types has been made. Further geological input in the Dobsons Creek area will be necessary to trace the Hercules Host Rock horizon into the area.

5.5.5. GEOCHEMISTRY

(refer to 1:10,000 Soil Geochemistry Contour Plans AO-525-0059, 0060 and 0061 and Appendix 2.)

Soil samples were taken at 100ft intervals over all new lines and over I.P. anomalies on the old lines. Samples were taken from nominal 'C' horizon and analysed for Pb, Zn, Cu, Fe and Mn by A.A.S. after perchloric/nitric acid leach by Analabs of Perth. The data were plotted on 1:5,000 plans and contoured. Contour intervals of 50, 100, 200, 500 and 1,000 have been used for all three elements based on statistical analysis in the Stitt area. The contours were then photo reduced and plotted on 1:10,000 plans.

In general, background levels of the new sampling were slightly higher than those of the old sampling for both Pb, Zn and Cu. This is probably because of the slightly different analytical techniques used. Anomalous areas for the three elements from both generations of sampling showed good correlation.

Of the three elements Pb, Zn and Cu, Pb shows the greatest range and distribution with values up to 1500 ppm. Zn anomalies usually coincide with Pb anomalies but are of much lower amplitude, except for one value of 1560 ppm, while copper is almost completely dispersed with only nine samples analysing more than 50 ppm (95 ppm maximum). Thus the relative mobility of these three elements in this environment is indicated by the sampling.

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Two anomalous zones were noted for lead.

Zone A which trends north-east from 2500E on line 8400S to 3800E on line 6400S. Values range up to 1500 ppm at 2200E on line 8400S but generally fall between 100 and 200 ppm. The lead anomaly is co-incident with a zinc anomaly of lower magnitude and coincides with dark grey cleaved shales, pyritic black slates, greywackes and minor vitric and crystal lithic tuffs.

Zone B occurs in the north-west corner of the Dobsons Creek grid where a number of disjointed Pb anomalies of up to 1500 ppm occur. Zinc values are typically low (maximum 340ppm) and spotty in distribution. Copper does not appear to be anomalous.

The anomalies lie on a sequence of rhyolitic crystal tuffs, shales and tuffaceous sediments 1.0km south of the Hercules Mine workings and close to the inferred position of the Hercules host rock horizon. They straddle the boundary between the Hercules-Rosebery Mine Leases and E.L. 1/62.

The overall high, exposed nature of the Dobsons Creek area and associated high rainfall may have resulted in excess leaching of the soils, thus surpressing the soil geochemistry, particularly in areas of alpine type vegetation.

5.5.6. GEOPHYSICS

(Refer to 1:10,000 Induced Polarisation Sheet 9 No AO-525-0058 & Appendices 6 & 7)

The entire grid has been surveyed with time domain, gradient array I.P., using a potential electrode spacing of 100ft and a current electrode spacing of 20,000ft with electrodes being placed at 7025W and 12975E on line 4000S.

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Selected areas were resurveyed with 100ft and 200ft time domain dipole-dipole I.P. in an attempt to gain extra information on the depth of the gradient anomalies.

Resistivity and chargeability data from the gradient array survey have been plotted as contours at 1:5,000 scale and the chargeability data photo reduced to 1:10,000 scale. A physical property plan at 1:5,000 scale has also been produced. The dipole-dipole data has been presented as standard pseudo-sections. The positions of the dipole-dipole spreads are indicated on the 1:10,000 plan Ref. No. AO-525-0058.

The gradient array survey located 90 significant responses which have been categorised as primary, secondary and tertiary by the contractor in Appendices 6 and 7. The dipole-dipole data confirmed the interest of all significant gradient array anomalies tested and showed their depths to be shallower than the depths indicated by the reconnaissance survey. A summary of each dipole-dipole survey is tabulated in Appendix 7.

Those anomalies considered by the contractor to be of particular geological interest include a high chargeability/low resistivity section within the southern central zone south of line 6800S and centred at about 2500E on that line. This zone corresponds to the Pb/Zn soil geochemical anomaly 'A' (referred to in Section 5.5.5.) which is associated with pyritic black shales, tuffaceous greywackes and minor vitric tuffs.

Other anomalies whose geophysical interest is enhanced by geological merit include moderate zones at 1725E on line 3200S and line 4000S at 2900E among others. These two anomalies occur over massive crystal tuffs to the south of the Hercules Mine. Their geochemical expression is low, however, their stratigraphical

position, interpreted to be within the Hercules host rock horizon, enhances their favourability as primary targets.

The gradient array data has proved to be an excellent mapping aid in the Dobsons Creek area. It has defined three distinct north-south trending zones which appear to have been offset by an west-north-west trending fault, on or close to, line 3600S. The offset is about 300-600ft north-block-west. The western zone is characterised by high chargeability backgrounds of 32-46 mv/v associated with resistivities of between 400-600 ohm-metres Within this zone there are many significant increases in the chargeability level. The central zone typically consists of chargeability backgrounds of 24 mv/v and resistivity backgrounds of 2500 ohm-metres. Some significant anomalies occur within this zone including the highly chargeable wedge over soil geochemical anomaly 'A' mentioned above. The eastern zone contains chargeability backgrounds of 16 mv/v and resistivity backgrounds of 10,000 ohm-metres $\pm$ 3000 ohm-metres. There are few significant anomalies within this section.

5.5.7. CONCLUSIONS

The Dobsons Creek area contains both encouraging soil geochemistry and coincident I.P. anomalies. It also contains a belt of rocks interpreted to be the Hercules host rock horizon. The area has been mapped in 1972 by Reinhardt et al but this work is now recognised as inadequate for our purposes. Further geological mapping is required, especially over I.P. anomalies, to define the structure and stratigraphy of the area. The Hercules host rock horizon probably represents one of the prime geological targets on the West Coast of Tasmania. Therefore an attempt should be made to trace the Hercules host rock horizon, south from the Hercules Mine area into the Dobsons Creek area to provide additional information.

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Once mapping is completed diamond drilling of I.P. and/or geochemical targets enhanced by favourable geology is recommended.

5.6. White Spur (Jones Creek)

5.6.1. INTRODUCTION

The Jones Creek Grid forms the second part of the White Spur area and lies to the east of the Dobsons Creek Grid. The area is confined to the east and south by the boudaries of E.L. 1/62, and on the north by the Rosebery-Hercules Mine Leases and the Stitt area. Access to the area is by the 4 wheel drive track from Mt. Read to Howards Road mentioned in Section 5.5.1. above, and by logging tracks running north off the Howards Road. Most of the grid is covered in thick rainforest.

5.6.2. PREVIOUS WORK

The Jones Creek Grid was originally cut during 1973/74 and was known as the Dallwitz Grid. Geochemical soil sampling and geological mapping were carried out in the 1973/74 and 1974/75 field seasons. (Refer to E.Z. Reports No. 117 "Exploration in E.L. 1/62 Mt. Black 1973/74" and No. 124 "Exploration in E.L. 1/62 Mt. Black 1974/75" both by R.E. Williams.) In the 1978/79 field season the grid was recut and both gradient array and dipole-dipole E.I.P. surveys were carried out. (Refer to E.Z. Report No. 131 "Mt. Black E.L. 1/62 Work undertaken to 30th June, 1979" by J.H.A. Mill.) This survey delineated two anomalies considered worthy of drilling, located at 5600S, 900E and 6400S, 1590E (local grid co-ordinates).

5.6.3. WORK COMPLETED

(refer to 1:50,000 scale Work Completed plan A2-504-0126)

All work in the period under review was associated with drilling the two geophysical targets defined the previous year. Access and drill site were bulldozed for the first hole at 5600S, 370E and DDH JCP 211 commenced drilling at -70° on a grid east azimuth on 26th July, 1979. The hole was completed at 342.6m on 20th August, 1979. Construction of access to the second hole had to be delayed due to a combination of locally steep slopes and adverse winter weather. Construction of an access track and a drill site at 6400S, 1760E was completed during January, 1980. JCP 216 commenced drilling on 6th March, 1980 at -50° on a grid west azimuth and was completed at 149.2m on 11th March, 1980.

Down-hole pole-dipole E.I.P. was run on each hole upon completion of drilling. On JCP 211 electrode spacings of 2.5m, 5m and 20m were used. On JCP 216 electrode spacings of 5m and 20m were used.

5.6.4. DRILLING

DDH JCP 211. (refer to Diamond Drill Hole Log - Appendix 12, & Plan A1-507-0034 "Specifications & Summary of Results from Exploration Diamond Drill Hole JCP 211" Ref. No. AC-507-0034)

The hole intersected a thick sequence of acid pyroclastics of largely ash-flow origin, with interbedded bands of siltstone and shale. Petrographic descriptions of the rocks encountered are contained in C.M.S. report 79/9/47 in Appendix 1. Mineralisation was present as trace to 1% pyrite in the volcanics, and up to 3% combined pyrite-pyrrhotite-sphalerite-galena associated with thin carbonate veins in the sedimentary units. A syngenetic/diagenetic origin for the sulphides was inferred from sample 28375

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in C.M.S. report 79/9/47. Maximum values of 2700 ppm Pb and 6450 ppm Zn were obtained from a 5m chip sample from 280m to 285m depth.

DDH JCP 216 (Refer to Diamond Drill Hole Log - Appendix 12, & Plan A1-504-0103 "Specifications & Summary of Results from Exploration Diamond Drill Hole JCP 216)

The hole intersected a series of dacitic tuffs of probable ash-flow origin and minor intermediate tuff and lava. Interbedded with these are reworked sub-aqueous tuffs and tuffaceous sediments which contain minor sulphide mineralisation. Petrographic descriptions of the rock types encountered are given in C.M.S. report 80/3/21 in Appendix 1. Sulphides comprise pyrite, pyrrhotite and sphalerite with a bedded distribution and concentration in silty layers. Minor remobilisation of sulphides occurs in thin dolomitic veinlets (refer to sample 29738 in C.M.S. report 80/3/21). Maximum values of 1950 ppm Pb, 6250 ppm Zn and 3.5 ppm Ag were obtained from a 5m chip sample between 75m and 80m.

5.6.5. GEOPHYSICS

The down-hole I.P. in JCP 211 successfully outlined all the shale units in the hole with responses similar to those of the surface I.P. survey, and suggested that the source of the surface I.P. response had been conclusively tested. Comparison of the 5m and 20m spaced electrode profiles did not indicate the presence of any more intense mineralisation within the shales adjacent to the hole.

In JCP 216 the down-hole I.P. defined two zones of anomalous chargeability coincident with bands of tuffaceous sediment centred at 67m and 97m. The down-hole anomalies of 15-20 mv/v above background correlate with the surface I.P. anomaly and suggest that this hole also

has conclusively tested the surface I.P. response. Comparison of the 5m and 20m profiles did not indicate any more intense adjacent mineralisation.

5.6.6. CONCLUSIONS

Both boreholes drilled similar sequences containing sediments and reworked tuffs indicating sub-aqueous conditions within extensive acid pyroclastic activity. The sediments contain syngenetic bedded sulphides with weak base metal values. The rocks suggest an environment favourable for Rosebery type mineralisation. However, no significant mineralisation was intersected. Apart from the mineralisation, the most obvious differences from the Rosebery situation are a much poorer development of alteration assemblages, and no development of strongly schistose zones. These holes tested the most highly rated E.I.P. responses on the Jones Creek Grid. This implies that the remainder of the grid is unlikely to contain any better targets, at least in the relatively near-surface zones.

5.7. Mt. Murchison

5.7.1. INTRODUCTION

The Mt. Murchison area is that portion of the Mt. Black E.L. 1/62 which lies east of the Mt. Murchison ridges. It is bounded on the north by E.L. 4/73, on the east by E.L. 2/78 and on the south by E.L. 9/66. Thick rainforest covers the entire area which totals about 7km^2. Drainage is overall easterly from the Mt. Murchison ridges into the Murchison River. Prior to 1980 no exploration had been carried out and there was no access into the area. The closest point of access was the H.E.C. damsite in the Murchison Gorge some 2.5km north of the E.L. boundary. A road from Henty Camp to Anthony Creek, 2.0km south east of the area was inaccessable to 4 wheel drive vehicles.

5.7.2. WORK COMPLETED

(refer to 1:50,000 scale Work Completed Plan A2-504-0126)

1. Line Cutting

An access walking track to the Mt. Murchison area, totalling 4km in length, was cut via creeks and compass bearings from the Murchison Gorge Damsite to a point at 5,369,650N; 387,350E, where a helicopter landing site and a campsite were cut. From the campsite a further 6.4km of line and 5.9km of creek were cut to provide access across the area.

2. Geological Mapping

7.2km of line and 15.7km of creeks were mapped. 31 rock samples were collected and 5 of these were sent to C.M.S. for thin sectioning and petrographic description. The results are contained in C.M.S. report 80/3/21 in Appendix 1. 25 of the samples were analysed for Pb, Zn, Cu, Fe, Mn by A.A.S. after a nitric/perchloric acid leach.

3. Geochemical Sampling

The creek and line mapping generated 163 bulk stream sediments, and 42 manganese oxide coated pebble samples. The stream sediments were seived to -80 mesh and analysed for Pb, Zn, Cu, Fe, Mn, Co by A.A.S. after nitric/perchloric acid leach, and for Sn by A.A.S. after volatolisation with ammonium iodide. Manganese oxide coated pebbles were analysed for Pb, Zn, Cu, Fe, Mn, Co by A.A.S. following a cold hydroxylamine leach. Data sheets for all samples are contained in Appendix 2.

5.7.3. GEOLOGY

(refer to 1:10,000 Geological Sheets 8 & 10 Ref. No A0-525-0055 & A0-525-0101)

The outcrop of Murchison Granite was shown to be much more extensive than previously thought. The granite is typically a hornblende-biotite-adamellite as per

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sample 29654 described in C.M.S. report 80/2/22 in Appendix 1. The granites are associated with porphyritic intrusive rhyolites which are most abundant around the contact of the granite south of 5,368,000N. Petrographic description of a very similar rock from outside the area under discussion showed it to be an altered and stressed granite of medium to deep seated intrusion. The porphyritic appearance and finer grained groundmass were the result of irregular zones of granulation followed by recrystalisation of a fine grained albite cement and a strong sericite and chlorite alteration. It is very possible then that the intrusive rhyolites of the Mt. Murchison area merely represent tectonised zones within the granite. As most of these rocks occur on the margins of the granite they may reflect a forceful mode of emplacement of the granite.

The country rocks intruded by the granite are restricted to a fringe around its eastern and southern contacts. The western contact, north of 5,369,000N is formed by the unconformable overlap of the Owen Conglomerate. The country rocks comprise a sequence of steep to west dipping sediments and acid volcanics. They are generally cleaved which may reflect shearing movements along the Tynnan Fault which bounds the Pre-Cambrian massif to the east. Although not mapped in this programme, the fault contact trends parallel to the E.L. boundary some 600m to the east. The most easterly unit mapped comprises siltstones and shales which outcrop at 387,900E between 5,368,400N and 5,368,800N. These strike slightly east of north and dip west at 60°-70°. A petrographic description of a typical example is given by sample 29652 in C.M.S. report 80/2/22 in Appendix 1. These sediments are overlain by predominantly acid pyroclastics. A small zone of intermediate tuff was mapped at 5,368,400N 387,700E. In the north of the area around 5,369,500N

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387,400E, the rocks have a strong tectonic fabric and outcrop as quartz-feldspar-sericite-phyllites. These have been developed from either acid tuffs or lavas. In the south around 5,367,500N the rocks have been identified in thin section as rhyolitic welded ignimbrites. The relevant petrographic descriptions for samples 35210 and 35219 are contained in C.M.S. report 80/3/21 in Appendix 1.

At 5,367,800N 387,200E, a thoroughly deformed and altered sediment was mapped. A petrographic description is given for sample 35216 in C.M.S. report 80/3/21 in Appendix 1. The sediment lies apparently within the outcrop of the intrusive rhyolites. It may represent a xenolith or a roof pendant, but probably indicates that the contact relationships of the granite are much more complex than the limited outcrop suggests.

5.7.4. GEOCHEMISTRY

(refer to Stream Geochemistry Plans AO-525-0089 & -0091 and Appendix 2 - Stream Geochemistry Data Sheets)

Analysis of the results gave averages of 100 ppm Pb and 80 ppm Zn, and standard deviations of 94 ppm for Pb and 104 ppm Zn. Accordingly, values in excess of 200 ppm for Pb and Zn were regarded as weakly anomalous, and values in excess of 300 ppm as significantly anomalous. Values for Cu and Sn were very low throughout, being mainly below detection limits. Only 8 of the 163 samples gave a Cu response with a highest value of 35 ppm, and only 15 samples gave a Sn response with a highest value of 7 ppm. The very low Cu response is most probably a reflection of the bedrock geochemistry. Rock samples analysed from the area contained generally less than 30 ppm Cu with a highest value of 60 ppm Cu. The very low levels may be enhanced by acid ground-waters leaching Cu and rapidly transporting it out of the system.

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The programme turned up several anomalous samples in Pb and Zn. Most of these are single sample anomalies and many are single element anomalies. Three catchment areas appear to be more consistently anomalous.

1. Two small southerly draining streams centred at 5,370,000N 386,800E are anomalous in both Pb and Zn.

2. Two north-easterly draining streams centred at 5,369,300N 386,500E of which one is anomalous in Pb and Zn with a distinct Pb trail and the other is weakly anomalous in Zn.

3. One stream is weakly anomalous in Pb for its entire length from 5,368,600N 387,000E to 5,369,650N 387,250E.

Almost all anomalous samples are also high in Mn and Co so some degree of scavenging would be suspected. This is particularly true of the most anomalous catchment No. 1 above.

Only 42 manganese oxide coated pebbles were collected compared with the 163 stream sediments so direct comparison of the results is difficult. However, there appears to be little correlation between coincident manganese pebbles and -80 mesh stream sediments. The pebbles show greater variability in Zn than in Pb as might be expected from the greater mobility of Zn. The best correlation seems to be between anomalous Zn in pebbles and weakly anomalous Pb in sediments. The anomalous catchment No.1 above is in no way anomalous in manganese oxide pebble results. The other catchments, No's 2 & 3 have insufficient pebble samples to draw any comparisons.

The geology mapped in each of the above mentioned catchments is entirely Murchison Granite.

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5.7.5. CONCLUSIONS

The geology of the Mt. Murchison area, being composed largely of granite and sub-aerial ignimbrites, does not present an encouraging environment for mineralisation of the Rosebery type. The eastern most sediment units, largely because of their position adjacent to the Pre-Cambrian block, may be the stratigraphic equivalents of the lowermost Cambrian, Success Creek Formation. However, sampling in this area failed to find any anomalies.

The anomalous samples recorded in the survey are difficult to explain in view of the underlying geology. Manganese oxide scavenging may have enhanced some samples but it is unlikely to explain them all. The most likely source of base metal anomalies in a predominantly granitic terrain would be small mineralised shears and small late stage vein concentrations.

The Mt. Murchison area represents the most comprehensive collection of manganese oxide coated pebbles available to date and affords some assessment of their effectiveness. As mentioned in 5.7.4. above, the correlation between pebbles and -80 mesh stream sediments is not good. Conventional bulk stream sediments are a well tried and tested method of drainage sampling. If it can be assumed that the -80 mesh stream sediments are an effective means of sampling in this area, then the manganese oxide pebble samples would appear to be ineffective. Another draw-back which limits the effectiveness of pebble samples is that although it is possible to collect a bulk stream sediment in almost every situation, in many sample sites suitable pebbles do not occur due to lack of the necessary conditions for the formation of the manganese oxide coatings. The principal benefit claimed for manganese pebble

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collection is that they are capable of detecting anomalous situations much further from the source than conventional stream sediments. The technique may have application in low-density regional drainage sampling, but for the detailed sampling situations carried out in the Mt. Black E.L. they would appear to be ineffective and superfluous.

5.8. Natone - Colebrook Hill

5.8.1. INTRODUCTION

The Natone area forms the western margin of E.L. 1/62 south of the Pieman River. The eastern boundary is nominally defined as the contact between the Primrose Pyroclastics and the sediments of the Rosebery Group. For logistic purposes the area has been divided into two sections along the line of the old Northeast Dundas Tramway. This report is concerned with the northern section known as Colebrook Hill.

The area is composed largely of Cambrian sedimentary rocks and is known to be sporadically mineralised with the old Colebrook Hill copper mine being the most significant. Further to the south the Athenic and Olympic tin workings and the lead-barite occurrences at the Lynton mine are also significant indicators of the variety of mineralisation present. The Natone area is considered to have potential for Renison Bell style replacement tin deposits and for distal stratabound base metal deposits.

Access to the northern part of the area is reasonable with the Murchison Highway passing across the northern edge, and the Rosebery-Williamsford road running down the eastern side. A 4 wheel drive track has been bulldozed from the Williamsford road up to the trig point on Colebrook Hill. The Northeast Dundas Tramway is now navigable only on foot.

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5.8.2. PREVIOUS WORK

A report entitled "Review of Exploration in the Natone Area, Mt. Black E.L. 1/62" compiled by G. Drake gives a comprehensive account of work to date in this area. (This report is presented in Appendix 13.) Only brief mention will be given here to activities specific to the Colebrook Hill section of the Natone area.

The Colebrook Hill mine workings were mapped and sampled during 1956/57 and the results are contained in E.Z. file 51/15 "A Geological Report on the Colebrook Prospect" by I.S. Gregory, June 1958. This report concluded that the ore was concentrated in small wall-rock replacements running off east-west controlling fractures, and that the mine contained only one significant stoping block of 12,000 tonnes containing 1.2% Cu. This report seems to have largely overlooked the potential for Sn mineralisation. Only three samples were submitted for Sn analysis. Two gossans assayed at 0.02% Sn and 0.05% Sn and the one sulphide sample assayed at 0.12% Sn. During 1972/73 the Colebrook Grid (south of the Colebrook workings) was cut, consisting of 15 lines, 250m apart and 1,000m long. These were mapped, soil sampled for Cu, Pb, Zn, Ni, Sn and covered with fluxgate ground magnetics. (Refer to E.Z. report 110 "Exploration in E.L. 1/62 Mt. Black during 1972/73" by D. Reinhardt.) This report also pays little attention to the Sn potential of the area and also does not even present the Sn soil results which all lie in the 0.02% - 0.09% (200 - 900 ppm) range. The high values may be due to the analytical technique used which was not mentioned in the report.

The area has had a somewhat patchwork coverage by several airborne geophysical surveys. In 1972 a Turair survey detected a weak Field Strength Ratio anomaly lying over the Colebrook workings. A 1975 Input survey found its strongest conductor running from Colebrook Hill north

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to the Pieman River. Aeromagnetics were flown in conjunction with the 1972 Turair and the 1975 Input surveys, and again in 1978 as part of a larger coverage to the north. The Colebrook Hill zone shows as a positive anomaly in a complex pattern which suggests possible sinestral east-west faulting in the region of 5,372,000N.

5.8.3. DATA COMPILATION

G.Drake of Getty Oil Development Co. Ltd., compiled a report entitled "Review of Exploration in the Natone area Mt. Black E.L. 1/62" (see Appendix 13). This report documents all previous exploration activities, describes the old mine workings and mineral occurrences and puts forward proposals for future exploration.

5.8.4. GRIDDING 1979-1980

The present grid was cut in two phases. Initially 5 lines, 100m apart, lying between 5,371,600N and 5,372,000N, were cut for a total of 4,500m. These lines covered the old Colebrook workings and were designed to follow-up the airborne E.M. conductors identified there. The grid was then enlarged to cover 8 lines, 200m apart, lying between 5,371,200N and 5,372,600N, totalling a further 7,520m. The western ends of these lines were joined by a walking track of 1,400m., and the creek forming the eastern termination of the grid was cut for approximately 1,200m to the edge of the Rosebery Golf Course. This gave a total of 12,020m of line and 2,600m of walking track cut. The grid was pegged at 20m slope-corrected intervals.

5.8.5. GEOLOGY

(refer to 1:10,000 scale Geological Plans A0-525-0006,-0109)

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Only two main rock units occur on the grid. An ultrabasic unit outcrops fairly well on the western side of the grid. It ranges from a serpentinite to a pyroxenite in composition and is characterised by very high magnetite contents, which in places, can be greater that 10%. The remainder of the area comprises a suite of labile tuffaceous sediments of turbidite facies. These range from shales to sandstones in grainsize, with bands of different grainsize intimately interbedded. Outcrop is good near the top of the Colebrook Ridge, due in part to the old workings which have exposed sections in the open pits. On the slopes, however, outcrop is poor with variably oxidised sediment float predominating. Scree slopes from old dumps are also common and help to confuse the outcrop pattern. The sediments show sporadic metasomatic alteration with actinolite, biotite, phologopite and tourmaline being the principal alteration minerals. (Refer to C.M.S. reports 80/4/14 and 80/5/46 in Appendix 1 for petrological descriptions.) The extent of the alteration is difficult to gauge due to the uneven distribution of outcrop and the problem of how far floaters may have moved in the very steep terrain, but it is certainly very prominant around the old workings. The sediments strike generally north to north-west, and near the ridge top have vertical dips. Limitations of outcrop prevented widespread collection of structural data, but there are some indications that strikes are more variable and dips flatter away from the crest of the ridge.

The mineralisation exposed in old workings ranges from near massive to stringer sulphides in a generally chloritic gangue, through to scattered disseminated sulphides in altered sediments. The sulphides are predominantly pyrrhotite with pyrite, arsenopyrite and chalcopyrite. Strong fractures can be seen in most of the workings examined, but the degree to which they may control

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sulphide distribution is not clear at present.

5.8.6. GEOCHEMISTRY

(refer to 1:10,000 Contour Plans for Cu, Pb, Zn, Sn & As No's AO-525-0025, -0026, -0027, -0071, -0125, -0126, -0127, -0128, -0129, -0130)

Nominal 'C' horizon soil samples were collected at 20m intervals on the grid, and the -80 mesh fraction analysed for Cu, Pb, Zn, Fe, Mn, As, Ni Co, Cr by A.A.S. after nitric/perchloric leach and for Sn by A.A.S. after volatolisation with ammonium iodide (see Appendix 2 for Sample Data Sheets).

Ni, Co, Cr, especially Cr, outline the ultrabasic unit very well and define its contacts on lines 5,371,600N and 5,371,700N where outcrop is non existant. Otherwise the results for these elements are fairly low and flat.

Pb values are generally low. A weak anomaly trends along the eastern contact of the ultrabasic and a weak anomaly trends down the eastern margin of the grid and may be related to the creek which forms the eastern termination of the grid. The old workings are marked by a very small and weak Pb concentration.

Zn values are generally low to moderate with rare isolated higher values reaching a maximum of 600 ppm. No strong trends are displayed by Zn, but the ultrabasic is typified by higher Zn values, and there is a faint suggestion that Zn is relatively concentrated on the spurs and depleted in the drainage channels. The crest of the Colebrook Ridge and the old workings, however, are marked by very low Zn values. This may be a result of hydromorphic redistribution of Zn downslope from the ridge crest.

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Sn, As, Cu values are all generally high and show reasonable correlation with one another. All three are highly anomalous around the old workings and show strong contamination dispersed down a drainage course running north-east from about 5,371,600N 375,000E to 5,372,000N 375,350E. Cu and As also show some down-slope contamination from the workings on the opposite side of the ridge to the southwest. All three elements show a weak to moderate anomaly trending along the eastern contact of the ultrabasic north of line 5,371,900N. As follows the contact as far south as 5,371,600N. All three elements show two parallel anomalies trending approximately along 375,000E and 375,250E between 5,372,600N and 5,372,000N. The latter anomaly runs into the north-easterly downstream contamination from the old workings, but as it trends along slope to the north it is difficult to explain it all by contamination. Coincident strong Sn and As anomalies and a weak Cu anomaly are centred on lines 5,371,700N and 5,371,800N at approximately 374,700E to 374,800E, with high values of 720 ppm Sn, 4100 ppm As, and 620 ppm Cu. These anomalies are not continuous with high values round the old workings and so cannot easily be explained by contamination. West of the ultrabasic there is a weak Sn anomaly trending north-south between 5,371,800N and 5,372,400N.

Fe values are universally and uncharacteristically high, averaging about 10% over the entire grid. It is hard to explain but must relate to original high contents of ferromagnesian minerals, and possibly iron sulphides, of the bedrock.

5.8.7. GEOPHYSICS

1. Dipole-Dipole E.I.P. (refer to Appendix 8 "Geoterrex Report 85-1195")

Geoterrex were contracted to cover the original 5 grid

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lines with dipole-dipole E.I.P. using a 40m electrode spacing. The survey was largely unsuccessful with readings being obtained on only 3 lines, and then somewhat sporadically. The lack of success was attributed to extremely high conductivities near surface giving poor signal resolution and preventing readings at the deeper levels. The survey indicated the several possible anomalous zones shown in the following table.

Line No.	Easting	Comments
5,372,000N	374,800->920	High chargeability (M), low to moderate resistivity (σ)
5,372,000N	375,100	High M; low σ
5,372,000N	375,140->260	High M; low σ
5,371,900N	374,940	High M; low σ
5,371,900N	375,100	High M; low σ
5,371,800N	374,880	High M; low σ
5,371,800N	375,060	High M; low σ
5,371,800N	375,300	Low σ

Scintrex were then contracted to run E.I.P. on the grid. They attempted dipole-dipole on line 5,371,800N and achieved a similar result to Geoterrex but with even fewer readings. (Refer to Appendix 9 - Dipole-Dipole pseudo-section Colebrook Hill.)

2. Gradient Array E.I.P. (refer to Appendix 9 Gradient Array profiles Colebrook Hill)

In the hope that the larger currents employed in gradient array E.I.P. might overcome the high conductivity effects, Scintrex were contracted to run a survey over the extended grid. This technique met with no better success than the dipole-dipole method. Results were obtained on the western end of the grid lines and within these sections

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readings were frequently unobtainable. On line 5,371,800N, which was the current electrode line, no readings were obtained at all. The ultrabasic rocks are cherateristed by erratic chargeability and low resistivity on the three southern-most lines. All other results are largely meaningless due to lack of readings.

3. Magnetics (refer to Appendix 10 - Magnetic Profiles Colebrook Hill Grid and to 1:10,000 Magnetic Contour Plans AO-525-0072 and -0131)

The grid was covered with a proton precession magnetometer (readings every 10m), and a second magnetometer used as a continuous base station being read every two minutes. The results indicate that noise from near surface influences is very high. The ultrabasic rocks stand out as a pronounced magnetic high, as would be expected from their high magnetic contents. There appears to be reasonable correlation between magnetic response and the anomalies suggested by the inadequate dipole-dipole E.I.P.. There also appears to be a magnetic high coincident with the strong Sn, As soil anomaly at 5,371,700N 374,750E. However, the magnetics are so noisy it would be possible to find "anomalies" all over the grid. Perhaps the most significant feature of the magnetic profiles lies in a comparison of the responses east and west of the ultrabasic unit. To the west values are fairly steady at around 61,900 nT to 62,100nT. East of the ultrabasic values fluctuate dramatically with an average around 62,700 nT indicating that perhaps the entire grid to the east is magnetically anomalous. The interpretive problem lies in deciding whether this anomalism is due solely to a number of small near surface magnetic bodies causing large fluctuations in reading as the instrument passes over the positive and negative poles of each body,

or whether these sources are part of, or off-shoots from, a larger deeper seated magnetic body which is causing the rise in general magnetic signature from 60,000 nT to 67,000nT.

4. E.M. (refer to Appendix 11 - Vertical Loop E.M. Profiles Colebrook Hill)

E.M. techniques were tried in an attempt to overcome the conductivity problems experienced by electrical methods. A horizontal loop E.M. survey, using McPhar V.H.E.M. equipment was started but abandoned when it was discovered that the equipment was malfunctioning. On return of the equipment, the advice from the hire contractor, Geoex, was that a vertical loop system would suffer less slope effects in the very steep terrain of Colebrook Hill. Also, because of the dense rain-forest cover, an in-line configuration was the only one possible. Orientation was run on line 5,371,600N using transmitter-receiver separations of 20m, 40m and 60m and reading on both low (600 hz) and high (2400 hz) frequencies. As a result the entire grid was covered by in-line vertical loop E.M. with a transmitter-receiver separation of 40m using low frequency. The profiles appear very noisy and identification of truely anomalous zones is difficult. Coincident anomalous features detected in the E.I.P. and magnetic surveys appear to be reflected in the E.M. However, these are not necessarily the most prominant E.M. features and could easily be interpreted as background noise. Overall the E.M. results seem to confirm the magnetic picture of numerous near surface sources. In view of the highly active magnetic signature of the grid, it is quite possible that a large component of the E.M. response could be due to high magnetic permeabilities in the underlying rocks. In rocks of high magnetic permeability the E.M. primary field, as well as inducing secondary currents in any conductor, also induces an oscillating magnetisation intensity

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in the conductor. The oscillating magnetic field due to this intensity induces an e.m.f. in the receiver coil which therefore detects a net field which is the sum of the fields due to any secondary electric currents in a conductor and to the magnetisation intensity in it. This effect will create apparent E.M. anomalies in highly magnetic non-conductors such as the ultrabasic rocks on the west of the grid, and will distort and possibly displace E.M. anomalies due to magnetic conductors such as pyrrhotite bodies.

5.8.8. CONCLUSIONS

The Colebrook Hill Grid shows distinct potential for replacement style Sn mineralisation. There is anomalous Sn in the soils. The rocks show metasomatic alteration features which are associated with other replacement deposits such as Renison Bell. The sediments either side of the ultrabasic unit appear to belong to two separate geochemical and geophysical regimes. It is possible that they are two separate structural blocks lying either side of a fault which is now obscured by later ultrabasic intrusion. It seems reasonable that such an intrusive would exploit any lines of weakness present. Furthermore, the concentration of Pb, Zn, Cu, As and Sn along the eastern contact of the ultrabasic could be indicative of a permeable channel structure which has allowed the introduction of metals, particularly Cu, As and Sn into the system. Geophysically the area is highly active, with conductivities so high that massive sulphides are indicated, and magnetic signatures indicating that these sulphides must be rich in pyrrhotite.

That mineralisation is present is undenyable. The geochemical and geophysical parameters are favourable. Geologically there is evidence for a potential feeder structure, and the old Colebrook workings show all the

features of being pyrrhotite replacement style mineralisation. The only negative factor is the apparent lack of a suitable replacement horizon such as a carbonate bed or an open breccia zone. If an analogy may be drawn with the Cleveland Mine, then the absence of carbonates at the surface is not a serious factor, as in that mine the sulphide lode systems have effectively replaced all the host horizons. Remnant limestones have been found in only one location underground. The problem remaining at Colebrook is whether any further mineralisation will be of the same small scale fracture type, or whether there is a larger body of significant mineralisation waiting to be discovered. It seems unlikely that this will be resolved other than by diamond drilling some of the best combinations of geological, geochemical and geophysical targets.

The remainder of the Natone area should be progressively explored along the same pattern as the present grid, with mapping, soil geochemistry, ground magnetics and E.M. being carried out on southerly extensions to the present grid. In view of the failures of E.I.P., electrical methods are not recommended for future grid lines. In areas where grid lines are spaced further apart stream sediments sampling should also be undertaken.

5.9. General

5.9.1. 1:50,000 SCALE COMPILATION

As part of their involvement as Joint Venture Partners with Mt. Lyell and E.Z., Getty Oil instigated certain data compilation exercises on the West Coast belt between Strahan and Que River. The various studies are to be compiled at 1:50,000 scale and a special plan format has

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been drawn to act as a base for the compilations. Topographic bases at 1:50,000 have been prepared by Getty and are available. Technical and Field Surveys Pty. Ltd., were contracted to compile a plan presentation and card file index of all known mineral occurrences in the study area. The data were compiled from Mines Department open file records and from a comprehensive listing prepared by G. Drake of Getty from E.Z. and Mt. Lyell company files. This presentation is essentially complete and requires only final checking for accuracy of data. A start has been made on compilation of geological data. A special legend for 1:50,000 scale geology presentation has been drawn up. The programme calls for the production of a fact geology plan and an interpretive bedrock geology plan, with separate compilations showing distribution of glacial cover, structural interpretations, alteration assemblages, geochemical data and geophysical data.

5.9.2. LANDSAT STUDIES

Technical and Field Surveys Pty. Ltd., were contracted to produce a lineament study of the West Coast Landsat imeges. Two lineament bases were produced at 1:100,000 scale. These were small scale lineaments, of which approximately 2,500 were identified, and large scale, image-wide, lineaments. Various statistical treatments of these lineaments were undertaken in an attempt to identify populations and trends. A report on the project has been written but final plan presentation on the standard 1:50,000 scale format remains to be produced.

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6.0 RECOMMENDATIONS FOR FURTHER WORK

6.1. Mt. Sale

1. It is recommended that small test pits be sunk over reconnaissance gradient array I.P. anomalies, which have been detailed by grids origined at 5,378,000N 379,300E and 5,376,000N 382,500E. The pits would test the soil profile for transported overburden (glacial or scree) which may have obscured the bedrock geochemical response. They are also to test for barren sulphides (pyrrhotite, pyrite etc) which may have caused the I.P. anomaly. I.P. anomalies on other grids should also be test pitted.

2. Mapping of the Langdons Grid (Area 9 - Grid Origin 5,379,000N 380,500E) has revealed the presence of a thin band of tuffaceous sediments, which, though not particularly geochemically anomalous, indicates a favourable host horizon for possible Rosebery type orebodies. This horizon should be traced north, into the Pieman River with further gridding, soil sampling and geological mapping. Induced Polarisation would be an extremely useful tool for tracing the band under glacial cover. Geochemical anomalies should be closely investigated and coincident I.P./soil geochemistry anomalies should be drilled if felt necessary.

3. Murchison River Grid (Area 10 Grid Origin 5,376,000N 384,000E) offers excellent potential for tin deposits of the structurally controlled type and possibly of the carbonate replacement type. Two diamond drill holes (MRP 212 on E.L. 1/62 and STP 217 on E.L. 4/73) have intersected encouraging mineralisation (maximum 2m at 0.55% Sn in MRP 212) and further low grade tin mineralisation was intersected in DDH STP 218 on E.L. 4/73.

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The mineralisation is almost entirely buried beneath fluvioglacial material thus obscuring the geology and rendering soil geochemistry useless.

It is recommended that the Murchison River Grid be extended to the north and east to the Tullah Town Boundary and most of the fluvioglacial overburden covering the contact between the Mt. Black Volcanics and the Farrell Slates. The grid should be surveyed with ground magnetics at 10m intervals in order to map out magnetic zones which may be related to pyrrhotite which in turn appears to be related to tin mineralisation. The use of dipole-dipole I.P. over magnetic anomalies would help differentiate between wide, mafic dykes and narrow sulphide zones and indicate the depth of the sources.

Soil sampling and mapping of isolated areas where outcrop exists is necessary to aquire as much geological input as possible.

A structural interpretation of aerial photographs may help define favourable fault zones which could control tin mineralisation.

Diamond drilling of coincident magnetic and I.P. anomalies beneath glacial overburden is recommended.

All work should be completed before 1983 when the Bastyan Dam is due to commence filling.

6.2. Farm Creek

In the absence of encouraging results from the detailed work carried out this past field season the only work recommended is test pitting, as outlined for two unnamed grids at Mt. Sale.

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6.3. Stitt

The soil geochemical anomaly located on the eastern end of line 5,369,500N should be detailed with further gridding, mapping, soil geochemistry and I.P.. The aim of the work is to define the extent and style of the mineralisation and to determine the potential of the rocks for economic mineral deposits.

The remaining 10 I.P. anomalies which remain to be examined should be gridded with single lines 100m north and south of the original anomaly. Follow-up work should include further I.P. and soil geochemistry.

Selected soil geochemical anomalies (those with multiple Pb over 200 ppm) should be detailed in the same way.

The stream sediment sampling/mapping programme should be completed.

6.4. Stitt Follow-up Grid

No further work is recommended for the Stitt Follow-up Grid.

6.5. White Spur (Dobsons Creek)

It is recommended that all geochemically and geophysically anomalous areas of this grid, and track access in the area, be remapped. Simultaneously, a geological mapping programme should be attempted to trace the Hercules Host Rock Horizon south from Hercules Mine, into the area.

Induced polarisation anomalies, with or without coincident soil geochemical anomalies, particularly where they are associated with Hercules type stratigraphy should be considered favourable targets for drilling.

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Targets which appear to have potential on present information are listed below:-

Line	Easting	Comments
3200 S	1725 E	Excellent I.P., rhyolitic tuff host. No geochemical response.
4000 S	2900 E	As above.
7200 S 8800 S	2000 E 3500E	Excellent I.P. respnse, grey-wackes, black shales and minor tuff. Soil geochem-istry Pb <1500 ppm Zn <1560 ppm.

The possibility that the soil profile in this area may be leached of base metal values and thus not provide a meaningful indication of mineralisation should not be overlooked. A small programme of soil augering over known mineralisation in the area is recommended to resolve this problem.

6.6. White Spur (Jones Creek)

Further work in this area must depend on a better understanding of the total environment, or await a new technique which may better define target zones.

6.7. Mt. Murchison

In view of the high density of stream sampling already undertaken in this area it seems unlikely that further drainage sampling would achieve any better definition of anomalies. If any further work is done in the area it should take the form of grid soil sampling and mapping of the anomalous catchment areas, with reconnaissance I.P. spreads over any soil anomalies encountered.

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6.8. Natone

It is recommended that the present Colebrook Hill Grid be extended southwards. Lines should be cut 200m apart between 5,371,000N and 5,370,000N, and 1000m apart between 5,369,500N and 5,359,500N. The lines should be geologically mapped, soil sampled, and covered with proton precession ground magnetics. The grid lines should also be used to access creeks in the area for stream sediment sampling. An attempt should be made to locate as many of the old workings in the area as possible and investigate styles of mineralisation.

On the Colebrook Hill Grid the old workings should be sampled in detail to define the Sn content of the mineralisation. Construction of access and diamond drill pads will be undertaken but may prove difficult in the very steep terrain.

APPENDIX 1.

C.M.S. Reports

79/9/47
80/1/7
80/2/17
80/2/22
80/4/14
80/5/46
80/3/21
79/12/20

19 OCT 1979

Central Mineralogical Services

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Mr. D.K. Brock
Manager, West Coast Mines
Electrolytic Zinc Co. of
Australasia Ltd.
P.O. Box 21
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17th October, 1979

REPORT CMS 79/9/47

YOUR REFERENCE:	Order No. 900056
DATE RECEIVED:	28th September, 1979
SAMPLE NOS.:	T 28369 - T 28376, T 28378
SUBMITTED BY:	D.K. Brock
WORK REQUESTED:	Petrology

JCP 2/11.

for H.W. Fander, M. Sc.

REPORT CMS 79/9/47

Petrological Descriptions JCP211

T 28369 (T.S. 29461) K-stain positive.
51 m This sericitic, mildly sheared pelitic sediment is best interpreted as a subaqueous tuff, although the evidence is partly negative.

The rock consists essentially of orientated sericite and microcrystalline, quartzofeldspathic material. Sparse silt- to fine-sand-sized clastic alkali feldspar particles are present, but there are no tangible detrital features (e.g. rounded particles, heavy mineral grains, detrital mica flakes). Fine silt-sized, devitrified shards are pervasive and represent the main clastic component. These features show little evidence of abrasion and it is on this basis thatthe rock is considered as a primary pyroclastic deposit rather than re-worked.

The rock is weakly laminated on a sub- to millimetric scale. There is evidence of two phases of incipient shearing at low angles to the bedding traces. Sericite has developed as a partial degradation of feldspathic material (devitrified shards and interstitial pelitic ashy material).

T 28370 (T.S. 29462) K-stain positive.
71.8 m. This is an altered and sheared rhyolitic tuff, reasonably interpreted as a flow- or autobrecciated ignimbrite.

Texturally, the rock consists largely of randomly sized (to 1 cm+), irregular to angular lithic clasts, partly moulded onto one another and typically showing vague pyroclastic textures. Fine-scale flow-banding, eutaxitic structures and accessory quartz and alkali feldspar crystals/crystal fragments are semi-ubiquitous, although partly obliterated by devitrification alteration and shearing effects. There is no tangible matrix phase as is typical of autobrecciated pyroclastics and lavas. A few clasts are Fe-pigmented. Traces of magnetite and leucoxenised opaques are accessory primary constituents. There are no xenolithic sediment clasts in the area sectioned.

Alteration features comprise pervasive sericitisation, semi-pervasive development of carbonate (calcite), accessory chlorite, and traces of fine-grained pyrite. Sparse stressed quartz-calcite veinlets are present. In common with T 28369, there is evidence of re-shearing.

T 28371 (T.S. 29463) K-stain negative.
122.9m. This is a weakly xenolithic acid tuff with similarities to 28370. In contrast, it is of (inferred)dacitic composition and has a more homogeneous fabric, reflecting only one phase of shearing.

Lithic-vitric-crystal tuff.

The rock can be classified as a lithic-vitric-crystal tuff and was probably ignimbritic with a relict ?eutaxitic structure, enhanced by a relatively marked slaty cleavage. Sheared/flattened lithic clasts range up to a few millimetres diameter, but probably graded into lapilli dimensions (i.e. > 10 mm) originally. Some of these features show pyroclastic textures analogous to those in the previous specimen and reflect partial autobrecciation. A few are pumiceous. Albitised feldspar crystal fragments are little more than an accessory component. Vague relict microshard textures are semi-pervasive in the matrix. Sparse xenoliths consist of sericitic, slightly silty shale. Accessory leucoxenised opaques are relatively common.

A few clasts (?and interclast cavities) are preferentially chloritised and featureless. The main alteration effect is sericitisation with accessory calcite, more or less pervasive microcrystalline albite, and traces of pyrite. Shearing postdates the bulk of alteration. Pyrite is partly concentrated into thin films or stringers along the slaty cleavage. Coarser grains show incipient pressure shadows containing very fine-grained ?tetrahedrite (± galena).

T 28372 (T.S. 29464) K-stain negative.
DCP 211 185.3m This is an altered and sheared dacitic lithic-vitric-crystal tuff, very similar and evidently closely related to 28371. In comparison, it is finer and slightly more even-grained and has a more prominent feldspathic crystal component. In other respects, the two rocks are near-identical in terms of relict primary and secondary (i.e. alteration, tectonic fabric) features.

The relict fabric is suggestive of an ignimbritic mode of origin. This tends to be reinforced by the presence of a few clasts with relict eutaxitic microstructures. As such, a subaerial origin is considered likely, although this conclusion is tentative due to obliteration of the bulk of finer textural detail.

Minor traces of Fe-sulphide (?marcasite) are present. This phase is locally partly rimmed with ultrafine films of sphalerite.

T 28373 (T.S. 29465) K-stain negative.
DCP 211 218-7m This is a mildly re-sheared, low-grade metapelite, laminated on a sub- to millimetric scale and essentially a silty shale with thin, slightly silty shale partings.

The clastic component comprises angular to subangular quartz with accessory white mica flakes and (sericitised) feldspar. These are embedded in sericite with closely intergrown cryptocrystalline quartz. Fine-grained dolomite is pervasive and tends to be concentrated into

the relatively silty bands. Accessory carbonaceous matter is partly re-organised into crude flakes in response to the incipient metamorphism.

The rock carries 2-3 % Fe-sulphide as fine particles and crude microscopic lenses of pyrrhotite orientated along a crenulation cleavage at a low angle to the primary slaty cleavage, which parallels bedding. Traces occur (with carbonaceous matter) healing thin micro-faults subparallel to the crenulation cleavage and there are rare late-stage discordant films of pyrite.

Close examination of the thin-section reveals no tangible tuffaceous features.

T 28374 (T.S. 29466) K-stain negative.
This is a devitrified, altered and sheared, weakly xenolithic dacitic lithic-vitric-crystal tuff, similar to 28371 and particularly 28372. A probable ignimbritic origin is inferred and major features require little special comment. The sparse xenoliths consist of slightly silty, sericitic shale, closely analogous to those in 28371, but essentially absent from 28372. Sparse accessory quartz crystal fragments are present.

Alteration comprises mainly relatively marked sericitisation (largely pale green hydromuscovite) with accessory Mg-chlorite and carbonate (calcite). Sericite and carbonate were introduced in part on irregular, pretectonic veinlets. There are occasional post-tectonic microfaults, roughly normal to the slaty cleavage. These displace sporadic spongy pyrite aggregates and lenses.

T 28375 (T.S. 29467) K-stain negative.
This is an incipiently re-sheared, low-grade metapelite, essentially similar to 28373. The rock is laminated on a submillimetric scale and is an argillaceous (sericitic), dolomitic, weakly carbonaceous siltstone "grading" into silty shale with thin shaly partings throughout.

The clastic component comprises splintery to angular and subangular quartzofeldspathic material with minor accessory white mica flakes. In contrast to 28373, the quartzofeldspathic component is clearly volcanically derived, with recognisable shard fragments and weakly abraded feldspar laths, such that this rock has a certain re-worked tuffaceous character.

Fine-grained Fe-sulphide (mainly pyrrhotite, but locally pyritised) is a pervasive accessory phase, closely analogous to that in the previous specimen. Locally, this is accompanied by very fine-grained, cloudy, dark brown sphalerite, and both phases are of syngenetic-diagenetic character.

The white, subovoid carbonate aggregates (hand specimen) consist of schistose, fine-grained calcite with thin pressure shadow fringes of quartz and traces of Fe-sulphide. These aggregates are clearly pre-tectonic and may represent boudinaged lenses, bedding plane veins or, alternately, diagenetic concretions.

T 28376 (T.S. 29468) K-stain weakly positive.
This is a mildly altered and incipiently sheared porphyritic rhyodacite or, more specifically, an "orthoclase dacite" (i.e. a dacite with accessory K-feldspar). It consists essentially of disseminated oligoclase phenocrysts and glomerophenocrysts (to 2 mm) in a weakly, but pervasively sericite-stained, microcrystalline, quartzofeldspathic groundmass. K-feldspar is an accessory in the groundmass, but is absent as phenocrysts (similarly quartz). Microtextures indicate the groundmass was partly vitric initially.

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Accessory leucoxenised opaques are present and chlorite is an accessory alteration phase. Despite the fine-grained, partly vitric nature of this rock, an even distribution of phenocrysts and a lack of definite extrusive features suggest a minor intrusive origin.

T 28378 (T.S. 29469) K-stain negative.
This is a devitrified and mildly altered porphyritic dacite, similar to 28376, but devoid of accessory K-feldspar.

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Phenocrysts comprise evenly disseminated, moderately clustered oligoclase, partly calcitised and albitised oligoclase (mean 350 μ, glomerophenocrysts to 2 mm), and extremely rare microphenocrystal grains of quartz. These are embedded in a weakly, but pervasively chlorite-stained groundmass of felsitic to cryptocrystalline, quartzofeldspathic material, variably flow-banded and incipiently perlitic. Accessories comprise leucoxenised opaques, rare grains of apatite and rare, completely chloritised, microphenocrystal grains of ?hornblende. The main contrast with 28376 lies in the relatively vitric nature of the original groundmass and, no doubt, reflects chilling. This and the even distribution of phenocrysts tend to confirm an intrusive origin.

This rock has been mildly stressed. Chlorite was introduced along thin, semi-continuous intersecting fractures and shear-zones, but also pervades the incipient perlitic cracks. Calcite is an accessory alteration phase and minor traces of pyrite are present.

D. Cowan, B. Sc.

058080

Mt Black
MRP 212.

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18th January, 1980

REPORT CMS 80/1/7

YOUR REFERENCE:	Order No. 900093
DATE RECEIVED:	8th January, 1980
SAMPLE NOS.:	T 29705 - T 29708 ✓
SUBMITTED BY:	I. McDonald
WORK REQUESTED:	Petrology/Mineralogy

H.W. Fander, M. Sc.

CENTRAL MINERALOGICAL SERVICES PTY. LTD.

Date 18th January, 1980

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

IDENTIFICATION MRP 212
T 29705 27.5 m
Sheared Porphyritic Sodic Trachyte

Job No. CMS 80/1/7 Date Received: 8.1.1980

Reference Order No. 900093

Sample No. T 29705

Nature of Sample: D.D. Core

DESCRIPTION **SECTION No.** 30629

a. Hand Specimen:

Green-grey, sheared porphyritic rock.

K-feldspar stain test negative.

b. Microscopic:

This is a sheared, chloritised volcanic rock and there is some uncertainty about its composition; however, the available evidence suggests that it was a porphyritic sodic trachyte, perhaps verging on a rhyolite (but see below). Shearing has destroyed ground-mass textures and thus it is not known whether the rock was intrusive or extrusive, but there is little or no evidence to support a pyroclastic origin; in fact, it seems unlikely.

The rock consists of a high proportion (50-60 %) of quite well-formed phenocrysts of fairly extensively sericitised, but clearly identifiable albite; these are set in a fine-grained, schistose groundmass of chlorite and interstitial, ?secondary quartz; there are parallel streaks of leucoxene, derived from magnetite or ilmenite (i.e. primary accessory components). Secondary fine-grained, deuteric carbonate occurs throughout.

The albite crystals are regarded as primary; quartz phenocrysts are absent. The chlorite in the groundmass could be derived from a primary ferromagnesian mineral, but might have formed deuterically (before shearing).

Other interpretations are possible for this rock, but are speculative in the absence of less-altered material.

H.W. Fander, M. Sc.

CENTRAL MINERALOGICAL SERVICES PTY. LTD.

Date 18th January, 1980

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

IDENTIFICATION MRP 212
T 29706 4.2m
Altered Porphyritic Andesite

Job No. CMS 80/1/7 Date Received: 8.1.1980

Reference Order No. 900093

Sample No. T 29706

Nature of Sample: D.D. Core

DESCRIPTION **SECTION No.** 30630

a. Hand Specimen:

Greenish, fine-grained rock with patches or veins of coarse K-feldspar (K-stain test positive).

b. Microscopic:

This is interpreted as a porphyritic andesite; the rock is pervasively deuterically altered and is fractured, but not sheared. Thus, its fabric is reasonably well-preserved and indicates that the rock was a lava, or even a minor intrusive, but not a pyroclastic.

The rock is composed dominantly of small, randomly orientated laths of oligoclase set in a cloudy mass of fine chlorite and zoisite-epidote with leucoxenised fine opaques; there are scattered small phenocrysts of albite. Primary quartz is absent. The secondary minerals in the groundmass represent ferromagnesian minerals (hornblende/pyroxene). Despite the occurrence of albite phenocrysts (not abundant in any case), it can reasonably be inferred that the rock was intermediate to basic rather than acid to intermediate.

Wide veins of K-feldspar cut the rock; they are bordered by albite crystals, are fractured and infiltrated by chlorite and carbonate; albite and chlorite veinlets also cut the rock, and there are isolated quartz veinlets.

The inferred composition of the rock differs from that suggested for T 29705; the fabric also differs, and shearing is absent.

H.W. Fander, M. Sc.

058083

CENTRAL MINERALOGICAL SERVICES PTY. LTD.

Date 18th January, 1980

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

IDENTIFICATION MRP 212
T 29707 45.4
Sulphides

Job No. CMS 80/1/7 Date Received: 8.1.1980

Reference Order No. 900093

Sample No. T 29707

Nature of Sample: D.D. Core

DESCRIPTION **SECTION No.** 30631

a. Hand Specimen:

Massive, vuggy sulphides, mainly arsenopyrite, and quartz crystals.

b. Microscopic:

The sample was examined in polished section only, as per request.

The dominant sulphide is arsenopyrite, as very well-formed, generally coarse crystals, containing inclusions of several other sulphides and of gangue. Pyrite occurs as rather spongy and occasional well-formed crystals, adjacent to,and also within, arsenopyrite; partly oxidised chalcopyrite, with chalcocite/digenite rims, forms small inclusions (< 100 µ) in pyrite.

The arsenopyrite crystals often have a core zone of inclusions, of sphalerite, chalcopyrite, and galena; these inclusions range from 5 µ to 250 µ in size and most are < 100 µ. Isolated pyrrhotite inclusions are present, and rare ?tetrahedrite occurs at the junction of sphalerite and arsenopyrite. A single inclusion of possible ?stannite was seen, but was < 10 µ in size and thus its identity could not be confirmed.

The sulphide assemblage is typical of hydrothermal (mesothermal) genesis,without the usual hallmarks of volcanogenic sulphides.

H.W. Fander, M. Sc.

CENTRAL MINERALOGICAL SERVICES PTY. LTD.

Date 18th January, 1980

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

IDENTIFICATION MRP 212
T 29708 133.4
Vitric-Crystal Tuff

Job No. CM S 80/1/7 Date Received: 8.1.1980

Reference Order No. 900093

Sample No. T 29708

Nature of Sample: D.D. Core

DESCRIPTION **SECTION No.** 30632

a. Hand Specimen:

Grey, fine-grained, uniform rock.

K-stain test negative.

b. Microscopic:

This is a banded, altered, fine-grained vitric-crystal tuff; it appears to have been subaqueously deposited, and shows slump-structures and other pre-consolidation features.

The rock consists of alternating finer and coarser layers; the fine layers are principally composed of altered shards and fine splinters, with scattered small crystal-fragments. The coarser layers consist mainly of crystal-fragments of altered ?albite in a fine, poorly-defined matrix of altered ash, and the layers merge into one another. The finer layers show good small-scale bedding-lineation and, in places, this lineation is interrupted, with adjacent blocks showing changes of direction; this is typical of intraformational deformation and brecciation of an unlithified or partly lithified sediment.

Networks of chlorite, quartz and albite veinlets occur; a few of these carry ultrafine pyrite and minor traces of sphalerite. This vein-system, possibly of diagenetic formation, is cut by younger quartz-carbonate veins.

The tuff is believed to be broadly trachytic/andesitic in composition.

H.W. Fander, M. Sc.

058085

Mt. Black.

MRP 212

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3rd March, 1980

REPORT CMS 80/2/17

YOUR REFERENCE:	Order No. 900122
DATE RECEIVED:	22nd February, 1980
SAMPLE NOS.:	29732 - 29735 ✓
SUBMITTED BY:	I.R. McDonald
WORK REQUESTED:	Petrology

for

H.W. Fander, M. Sc.

DDH MRP 212

REPORT CMS 80/2/17

Petrological Descriptions

29732
187.0m

(T.S. 30975) K-stain negative.
This is a thoroughly deformed and moderately altered quartz-sericite phyllite. The rock consists largely of microcrystalline quartz with subordinate sericite largely concentrated into sporadic contorted foliae and is incipiently carbonaceous. An early phase of silicification is evident in deformed veinlets and irregular zones of optically clear quartz with patchy relict (recr-ystallized) comb-structures. Relict features indicate a bedded to finely laminated "pelitic" sedimentary facies. Sparse recrystallized fine sand-sized clastic quartz grains are present. Relict microscale streaky textures are semi-pervasive and are reasonably interpreted as (silicified) micro-shards. Overall, the evidencesuggests a subaqueous vitric tuff or, alternately, an impure chert with a vitric pelitic ash component. The distinction is tenuous and rather academic.

A phase of semi-brittle deformation, producing a breccia-like fabric, postdates the incipient greenschist metamorphism and is healed with irregular aggregates of Mg-Fe chlorite and quartz. These are intersected by sporadic, semi-continuous, essentially unstressed veins (to 2 mm wide) of sideritic carbonate with disseminated euhedral quartz crystals, a little Mg-chlorite, disseminated colour-zoned (but generally green) schorl, rare patches of fluorite, and thinly disseminated pyrite.

29733
189.6

(T.S. 30976) K-stain negative.
This rock is an extensively tourmalinised, mineralised and thoroughly deformed psammopelite. Relict features indicate a quartzose fine sandstone/siltstone with intercalated bands of silty shale and weakly argillaceous orthoquartzite, bedded on a fine millimetric scale and variably carbonaceous.

Sporadic patches of chlorite-stained kaolin-illite represent relics of the clay fraction. Elsewhere, this is pervasively replaced by fine to ultrafine green schorl, often virtually submicroscopic in terms of grainsize and thus poorly resolved optically. Associated are irregular, crudely vein-like zones of schorl impregnated with disseminated to locally more or less massive films of sulphide. These features, and the rock as a whole, are deformed by frequent random chloritic fractures with partial degradation of the metasomatic tourmaline to chloritic clay aggregates. Sparse patches and discontinuous veinlets of fluorite and cloudy, partly oxidised sideritic carbonate have developed at a late stage and the alteration pattern is very similar to that in 29732.

Pyrite is the major sulphide phase and occurs in two generations with variably fractured, granulated and incipiently recrystallized, sub- to euhedral grains (to 750 μ), and granular aggregates interspersed with fine-grained, lamellar intergrowths with marcasite, which represent a late replacement of pyrrhotite. Subordinate, partly granulated arsenopyrite accompanies the pyrite. Sporadic blebs (to 150μ) of stannite occur interstitially to pyrite and pyritised pyrrhotite and are typically mantled with microscopic films of chalcopyrite. Partly granulated cassiterite particles (50μ - 1 mm, mean 150-200 μ) are of similar distribution to, but rarely in contact with, stannite. Rare microscopic particles (< 20 μ) of galena occur as inclusions in pyrite.

29734
190.9

(T.S., P.S. 30977) K-stain negative.
This rock is very similar and closely related to 29733 in terms of relict primary and secondary features. In contrast, the sediment is relatively homogeneous, "grading" from a variably argillaceous, fine-grained orthoquartzite to a silty, fine- to medium-grained (i.e. poorly sorted) quartz sandstone with conspicuous clastic muscovite. The matrix phase is sericite and microcrystalline quartz, with the sericite progressively replaced by ultrafine schorl and dravite. Occasional thin pelitic partings are present and are similarly partly tourmalinised. The rock is weakly carbonaceous.

Sulphides are disseminated in patchy discontinuous films of millimetric proportions associated with irregular veinlets of tourmaline. These features predate a late phase of stress and, in common with 29733, the tourmaline is partly degraded. Late, fine-grained impregnations of sideritic carbonate are disseminated throughout, partly in association with stressed, discontinuous quartz veinlets.

The sulphide assemblage is very similar to that in 29733, but deformation-effects are less marked. Pyrite is fractured, but only locally granulated. Arsenopyrite is virtually absent and stannite and chalcopyrite were seen only as isolated, microscopic (max. 30 μ stannite, 75 μ chalcopyrite) blebs. Pyrrhotite persists as scattered relict patches up to a few hundred microns diameter, but is elsewhere pyritised and/or partly corroded/replaced by siderite. Cassiterite is relatively conspicuous as 20-200 μ, mean 75 μ, particles. These are disseminated throughout the sulphide films (although only rarely in contact with pyrite) and schorl aggregates with a crudely banded distribution overall.

DDH MRP212.

29735 (T.S. 30978) K-stain negative.
226.5 This is a dolomitic psammopelite} "grading" from a fine sandy siltstone to silty fine sandstone.

cb. rock.

The framework is weakly bedded, mainly in respect of a dimensional orientation of clastic particles, and comprises around 60 % of the rock. Angular to subangular quartz is the main clastic component (approx. 60 %) with subordinate muscovite flakes (30 %) and poorly defined shale pellets (10 %). These are accompanied by a sparse detrital heavy mineral assemblage of leucoxenic semi-opaques, rare tourmaline and very rare zircon.

The matrix consists of weakly recrystallized, incipiently chlorite-stained illite-hydromuscovite and microcrystalline dolomite in varying proportions. The carbonate has a semi-banded distribution and is of diagenetic origin, developing partly by replacement of the argillaceous matrix and shale pellets. Locally, dolomite is weakly stained with very fine particles of authigenic albite.

The rock is weakly carbonaceous and includes thinly disseminated pyrite of recrystallized, syngenetic character. Incipient carbonate veining has developed. There are no metasomatic alteration effects.

D. Cowan, B. Sc.

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14th March, 1980

REPORT CMS 80/2/22

YOUR REFERENCE: Order No. 900126

DATE RECEIVED: 28th February, 1980

SAMPLE NOS.: 29927, 29928, 29934, 29938, 29943, 29944, 29950, 29951, 29954, 29955, 29962, 29968, 29969, 29652, 29654, 29658, 29659, 29660, 29661

SUBMITTED BY: D.K. Brock

WORK REQUESTED: Petrology

H.W. Fander, M. Sc.

REPORT CMS 80/2/22

Notes:

In view of the generally similar nature of many of these rocks, brief descriptions were prepared in tabulated form. These summarise data from stereobinocular and petrological microscopic examination and results of K-staining tests on related offcuts.

As usual, igneous rocks are named on the basis of relict compositional and textural features, with particular emphasis on the phenocrystal phases and the groundmass/matrix. Those rocks with tentative classification are indicated by inverted commas. As is typical of the Mount Read Volcanics, contrasts between the various intermediate (as against rhyolitic) phases are rather subtle and perhaps undue weight is put upon the phenocrystal Na-Ca feldspar and its alteration pattern, which is often the only guide to primary composition.

The bulk of the volcanics can be interpreted as lavas. Several rocks have a pseudo-fragmental appearance in hand specimen, reflecting shearing and/or primary cognate xenolithic features. Trachyandesites are relatively abundant and may represent a local variation on the trachytic-quartz trachytic facies comprising the bulk of recent suites. These trends appear to be subregional within the Mount Read complex. Dacites predominate in some areas, but rhyolites (in the broad sense) appear strictly subordinate.

Specimen 29661 was not examined in polished section as only minor traces of pyrite were detected in the thin-section. Stereobinocular examination of the concordant fluorite veins indicates sparse ultrafine chalcopyrite films on cleavages and microfractures in fluorite.

In ~~29960~~ 29660, the sulphide assemblage (in approximate order of abundance) comprises an- to subhedral pyrite (to 75 μ), galena (max. 60 μ, mean 15-20 μ), sphalerite (sim. galena) and chalcopyrite, with very rare associated blebs (to 25 μ) of tetrahedrite. The bulk occurs as discrete to loosely clustered particles included in marginal zones of the fluorite aggregates. Chalcopyrite and, to a lesser extent, pyrite are partly mobilised into discontinuous films, a few microns in width, penetrating cleavage traces and microfractures in the fluorite. The paragenesis is low-temperature hydrothermal, but pretectonic fluorite is accompanied by minor traces of secondary muscovite and phlogopite.

D. Cowan, B. Sc.

058091

Sample No.				Central Mineralogical Services
K-Stain	Classification - Composition	Fabric	Accessories	Comments
29927 STITT 5307500N 379610E K-Negative (T.S. 31020)	Porphyritic "Andesite". Albitised/chlorite- and epidote, feldspar laths, phenocrysts; minor chloritised?pyroxene laths with interstitial chlorite, epidote, microcrystalline albite.	Phenocrysts to 1 mm. Sheared andesitic fabric with fine lenses of chlorite (altered mesostasis).	Leucoxenised primary opaques, rare magnetite. Trace oxidised pretectonic pyrite.	Small-scale chlorite lenses represent sheared, altered mesostasis. No tangible pyroclastic features. Distinct relict andesitic fabric.
29928 STITT K-Positive 5305500N 379640E	Porphyritic "Quartz Trachyandesite". Sericitised plagioclase, subordinate chloritised amphibole, biotite and ?pyroxene phenocrysts in sericite-stained felsitic quartzofeldspathic groundmass.	Phenocrysts to 1.7 mm, weakly clustered. Incipiently sheared "andesitic" fabric.	Primary magnetite, apatite. Minor sphene after Ti-opaques. Traces secondary biotite.	A felsic intermediate facies (alkali andesite-monzonite). Probably a minor intrusive, but with chilled groundmass. Only accessory quartz.
29934 STITT K-Positive. 5308500N 379270E	Hybrid Tuff Lava. Pinkish clasts in chlorite-stained matrix lava. Both with epidote-stained/albite pseudomorphed clustered plagioclase phenocrysts, microfelsitic groundmass.	Irregular to angular and lenticular clasts to 1 cm+. Weak flow fabric. Phenocrysts to 2 mm.	Leucoxenised primary opaques and minor trace apatite.	Clasts relatively potassic, with gradational contacts. Hybrid clastic lava (felsic andesite/trachyandesite). Possible vent facies.
29938 STITT K-Positive 5308500N 379550E	Porphyritic Trachyandesite. Epidote- and carbonate-stained/albitised plagioclase and rare carbonated ?amphibole phenocrysts in sericite-stained microperlitic felsitic groundmass.	Phenocrysts mean 500μ, weakly clustered, weakly flow-orientated.	Primary magnetite. Minor secondary Fe-Mg chlorite.	Plagioclase evidently relatively basic originally (hence trachyandesite as against trachyte). A weakly flow-textured glassy porphyritic lava.
29943 STITT K-Positive 5305500N 380473E	Porphyritic "Rhyolite". Heavily sericitised ?albite, sparse corroded quartz, occasional phlogopitised and chloritised/epidotised ?amphibole phenocrysts in chlorite/sericite-stained microfelsite.	Phenocrysts to 2 mm, weakly clustered/orientated. Groundmass streaky.	Sparse leucoxenised opaques.	Probably strictly rhyodacitic. Streaky groundmass, but devoid of fragmental features. Fine chlorite in groundmass partly after biotite alteration.
29944 STITT K-Positive 5308500N 380492E	Porphyritic Rhyolite. Incipiently sericite-stained albite and sparse quartz phenocrysts in sericite-stained, weakly sheared, felsitic groundmass with recrystallized quartz spherulites.	Phenocrysts to 1.5 mm, weakly clustered. Faint fragmental fabric reflects shearing.	Semi-pervasive cloudy epidote on perlitic microfractures. Disseminated primary magnetite.	Essentially similar to 29943. Weakly amygdaloidal (quartz, minor epidote) and devoid of tangible primary pyroclastic features.
29950 STITT K-Negative 5309500N 379195E	Porphyritic Dacite. Weakly sericitised oligoclase (near albite) and disseminated corroded quartz phenocrysts in thoroughly sericite-stained microcrystalline quartzofeldspathic groundmass.	Feldspar phenocrysts to 1.5 mm, weakly clustered. Mildly sheared, weakly xenolithic.	Minor chlorite (in part after primary ?biotite phenocrysts). Disseminated primary magnetite.	Verges on a sodic rhyolite. Sparse cognate xenoliths (trend tuff lava). No tangible pyroclastic features. Quartz possibly xenocrystal in part.
29951 STITT K-Negative 5309500N 379210E	Porphyritic Dacite. Weakly sericite-stained oligoclase (near albite) phenocrysts in sericite-stained microgranular to microlitic groundmass.	Feldspar phenocrysts mean 500μ to 1.5 mm, weakly clustered. Mildly sheared.	Minor chlorite (sim. 29950) and carbonate. Disseminated magnetite, rare quartz microphenocrysts.	Very similar to 29950, but with slightly coarser groundmass and almost devoid of phenocrystal quartz and non-xenolithic.
29954 STITT K-Positive 5309500N 380790E	Porphyritic Trachyandesite. Epidote-stained/albite-pseudomorphed plagioclase phenocrysts, disseminated quartz-epidote amygdales in finely perlitic felsitic alkali groundmass with albite microlites.	Phenocrysts to 2 mm, variably clustered. Amygdales mean 500 μ. Weakly sheared.	Rare chloritised amphibole phenocrysts. Primary magnetite, leucoxenised ?ilmenite, trace apatite.	Some similarities with 29938, but abundant, relatively coarse, evenly disseminated plagioclase phenocrysts suggest minor intrusive origin. Patchy Fe-staining.

052892

Sample No. / K Stain	Classification - Composition	Fabric	Accessories	Central Mineralogical Services Comments
29955 JTITT K-Positive 5369500N 380850E	Porphyritic Trachyandesite. Epidotised/albitised plagioclase phenocrysts, clusters; disseminated quartz amygdales in coarsely perlitic felsitic alkali groundmass stained with chloritised biotite.	Phenocrysts to 1.5 mm, clusters to 3.5 mm. Amygdales mean 250 μ. Weakly sheared.	Disseminated magnetite, leucoxenised ilmenite, rare apatite. Sparse, partly oxidised pyrite (to 400μ).	Very similar to 29954. Frequent phenocrystal clusters may be cognate xenocrystal in part. Relatively marked biotitic alteration of groundmass.
29962 JTITT K-Positive 5369500N 381375E	Porphyritic Trachyandesite. Epidotised/albitised plagioclase phenocrysts, sparse xenoliths in chlorite- and sericite-stained microcrystalline felsic groundmass. Frequent quartz-epidote amygdales.	Phenocrysts mean 350μ, amygdales to 2 mm. Strongly sheared.	Disseminated oxidised magnetite and leucoxeni semi-opaques, rare apatite.	Xenoliths sheared into lenses, but of ccognate character (sim. 29955, 54). Fragmental appearance reflects shearing. No tangible pyroclastic features.
29968 JTITT K-Negative. 5370500N 382670E	Dacitic Tuff. Angular to subround, weakly sericitised, silt- to fine sand-sized plagioclase, rare lava clasts in chlorite-sericite matrix. Occasional disrupted labile pelitic interbeds.	Vague relict ?abraded shard textures in sand fraction. Slumped, moderately sheared.	Rare clastic quartz and leucoxenised opaques. Minor relict biotite (chloritised).	Fabric suggests a weakly turbiditic, subaqueous facies (tuffwacke/reworked tuff), but fine detail obliterated by alteration and slaty cleavage.
29969 JTITT K-Positive 5370500N 383160E	Rhyolitic Xenotuff. Fine sand- to grit-sized angular quartz, pelitic rock fragments, subordinate alkali (K) feldspar and lava (rhyolite) clasts. Sheared quartz-sericite matrix.	Poorly sorted, Incipiently bedded, strongly sheared. Relict embayed margins in quartz.	Clastic magnetite and rare clastic mica flakes (muscovite, degraded biotite).	Finer detail obliterated by shearing, but clearly proximal lithic-crystal tuff with subordinate non-pyroclastic component. Probably subaqueous.
29652 Shitt Ck Mt. Murchison K-Negative 5368400N 387855	Tuffaceous Pelite. Sericitic quartzose silty shale with silty interbeds of angular to subround quartz, minor sericitised ?abraded shards, sparse muscovite in sericite matrix.	Slumped, incipiently sheared. Scattered quartz with relict embayed margins.	Minor clastic biotite (sericitised), leucoxeni semi-opaques. Traces carbonaceous matter.	Essentially a weakly carbonaceous, cquartzose silty shale with a minor reworked acid tuffaceous component. Weakly Fe-stained, but devoid of sulphides.
29654 Mt. Murchison K-Positive 5368400N 387625E	Hornblende-Biotite-Adamellite. Orthoclase-microperthite and heavily sericitised ?oligoclase in near-equant proportions. Subordinate dark green hornblende, extensively chloritised dark brown biotite, quartz.	Prismatic plagioclase, amphibole, biotite in granitic quartz, orthoclase. Mean grainsize 1.5mm.	Primary magnetite and traces apatite, sphene. Minor secondary epidote and traces oxidised pyrite.	Abundant ferromags. suggest differentiation from diorite-monzonite facies. Sericite is pale green hydromuscovite and orthoclase pink. Incipiently stressed
29658 NPP213 71.30m K-Negative	Rhyolitic Ignimbrite. Sericitised/weakly carbonated feldspar and slightly subordinate quartz crystals/fragments; sericitised/chloritised lithicclasts in sericitised shardy matrix.	Poorly sorted with contorted flow-fabric. Mildly sheared. Late calcite veins.	Disseminated leucoxenised opaques and very rare apatite.	Lithic clasts include lava and pyroclastic types (vitric, vitric-crystal tuff, pumice). Gross fabric typical of flow-brecciated ignimbrite.
29659 NPP213 121.50m K-Negative	Arkosic Sandstone. Framework angular to subround oligoclase-albite and slightly subordinate quartz. Rare sericitised ?rhyolite clasts. Quartz-feldspar-sericite cement.	Poorly to moderately sorted, weakly bedded, incipiently stressed. Irregular aggregates, ~~veins, quartz, calcite,~~ chlorite.	Leucoxenised clastic opaques.	Medium- to coarse--grained. Clastic feldspar mildly sericitised/carbonated. Authigenic overgrowth cement with intergranular sericite. "Granitic" source.

Central Mineralogical Services

Sample No. / K-stain	Classification - Composition	Fabric	Accessories	Comments
29660 NPP214 69m K-Positive	Arkosic Sandstone. Framework variably sericitised alkali feldspar, angular to subround quartz, subordinate pelitic rock fragments, mica flakes. Matrix chlorite and sericite.	Weakly bedded silty fine sandstone. Fluorite veins, lenses (to 5 mm wide) throughout.	Clastic leucoxenic semi-opaques. Minor fine sulphide with fluorite. Carbonaceous.	Minor reworked tuffaceous component. Fluorite predates incipient shearing. Sulphides in < 100μ disseminations aroun margins of fluorite and in microfilms.
29661 NPP213 929m K-Negative (T.S. 31038)	Arkosic Psammopelite. Angular to subround (sericitised) feldspar, slightly subordinate quartz with carbonate-stained sericite matrix. Interbeds of carbonaceous silty quartzofeldspathic shale.	Weakly turbiditic, incipiently sheared. Patchy concordant veins fluorite (sim. 660).	Clastic leucoxenic semi-opaques, muscovite flakes, rare magnetite. Minor trace pyrite in fluorite.	Distinct, variably abraded tuffaceous component, particularly "volcanic" quartz, but subordinate to granitic material (feldspar, sim. 29659).

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28th April, 1980

REPORT CMS 80/4/14

YOUR REFERENCE:	Order No. 900141
DATE RECEIVED:	16th April, 1980
SAMPLE NOS.:	23088, 23089, 23090
SUBMITTED BY:	J. Mill
WORK REQUESTED:	Petrology

NAPONE - COLEBROOK HILL SEDIMENTS.

for

H.W. Fander, M. Sc.

REPORT CMS 80/4/14

Petrological Descriptions

23088

5371800N
375060E
Colebrook Hill

(T.S. 31396)
This is an altered labile pelite, ranging from a fine sandy siltstone to silty shale. The rock is somewhat turbidite-like and can be classified essentially as a finegrained tuffaceous greywacke or subaqueous tuff (the distinction is tenuous and academic). There are similarities with the more labile (tuffaceous) facies of the Crimson Creek Formation.

Finer clastic particles are poorly resolved, but the sand-sized grains are mainly splintery to angular feldspar (albitised plagioc ase, minor K-feldspar) and microcrystalline felsic-intermediate lava clasts with relatively minor angular quartz. The silt-sized component, in part at least, comprises mildly abraded microshards and the finer ("shaly") bands may represent pelitic ashy material.

Alteration is of contact-metasomatic character, with more or less pervasive development of extremely fine-grained biotite and green ?tremolite-actinolite (too fine for positive optical determination). Minor chlorite develepes as a late alteration of the mica.

The dark colouration (hand specimen) is a reflection of pervasive ultrafine carbonaceous matter and is enhanced by thinly, but more or less pervasively, disseminated extremely fine clastic opaques and by the dark metasomatic mica. The proportion of carbonaceous matter is thus difficult to estimate, although it comprises at least a few percent and conceivably up to 5 % of the rock. Rare ultrafine Fe-sulphide particles are present, but these would be insignificant in terms of I.P. response.

20389

5371800N
375140E
Colebrook Hill

(T.S. 31397)
This is a phlogopitised, slightly sandy pelite, essentially similar to 20388. As previously, there is little to choose between a subaqueous tuff and a tuffaceous greywacke. However, this rock contains relatively clearly defined microscopic shards with little evidence of abrasion and these tend to confirm a primary pyroclastic mode of origin.

General features require little special comment. In comparison with 20388, this rock is weakly laminated and very incipiently graded on a sub- to millimetric scale. Fine silt-sized clastic opaques comprise 2-10 % of the predominantly silt-sized clastic material and are partly recognisable as magnetite and ilmenite (the rock is weakly magnetic).

058096

There is no detectable carbonaceous matter.

This rock is characterised by pervasive, extremely fine-grained, slightly titaniferous metasomatic phlogopite. Discontinuous mica veins range up to 750 μ in width and include disseminations of fine-grained schorl, sphene and sporadic grains and thin films of pyrrhotite. Total sulphide content is << 1 %.

23090 (T.S. 31398)

5371 800N
375 335 E
Calabrook Hill.

This is a slightly coarser-grained, turbidite-like subaqueous tuff with submillimetric-scale, slumped, incipiently graded and transcurrent bedding structures. Sizing is in the silt to fine sand range and more homogeneous than in 23088 and 23089. Clastic components are virtually identical to those in the associated sediments, but with a relative abundance of (altered) feldspar. Leucoxenic TiO_2 is more or less pervasive and represents degraded clastic opaques. In common with 23089, there is no detectable carbonaceous matter. Minor traces of limonite replace sparse fine-grained sulphide disseminations (<< 1 %, probably pyrrhotite).

Alteration, in this case, is marked by pervasive development of very fine-grained tremolite-actinolite. This replaces the original matrix, marginally corrodes/replaces the clastic framework, and forms sporadic thin straight-walled veinlets.

Again, there are similarities with contact-metasomatised Crimson Creek Formation sediments forming host rocks to some of the N.W. Tasmanian Sn-deposits. Sn assays would be warranted.

D. Cowan, B.Sc.

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11th June, 1980

REPORT CMS 80/5/46

YOUR REFERENCE:	Order No. 900164
DATE RECEIVED:	26th May, 1980
SAMPLE NOS.:	31 samples
SUBMITTED BY:	J. Mill
WORK REQUESTED:	Petrology

H.W. Fander, M. Sc.

REPORT CMS 80/5/46

Notes:

Some discrepancies are evident between the sample numbers listed on the submission sheet and the samples received. This relates particularly to the rock samples (hand specimens). Samples were described in the order shown on the submission sheet.

Three broad groupings are evident:

Group 1 comprises the drill cores and can be categorised as variably veined and mineralised intermediate to acid volcanics with a minor tuffaceous sediment component. There are analogies with the Mount Read Volcanics, but the more significant alteration is of (mesothermal) hydrothermal character, typically as veins.

Relationships are somewhat confused by a late (post-vein) phase of deformation but, generally, veins postdate typical low-grade (greenschist) fabrics. This is consistent with a (?Devonian) "granitic" vein assemblage and this tends to be confirmed by mineralogical similarities with, for example, the Zeehan, Renison and Cleveland situations. Cassiterite is present (similarly stannite), but appears to be of restricted occurrence.

Group 2 comprises the Colebrook Hill specimens (35232, 35238) which are contact-metamorphosed/metasomatised labile, turbiditic sediments. These rocks could be correlated with the tuffaceous greywackes of the Crimson Creek Formation. Alteration can be compared with the pervasive contact-metasomatic (as distinct from vein-) effects at Renison and Cleveland.

Group 3 comprises the hand specimens and, with a few minor exceptions, is representative of a monotonous sequence of porphyritic andesites and trachyandesites. Variations are both minor and rather subtle in this sequence which is of distinctly intermediate character.

These rocks are porphyritic in plagioclase (albitised, with conspicuous epidote, evidently originally quite calcic, probably andesine-labradorite), subordinate ferromagnesian silicates (largely pyroxene, but at least minor amphibole), and may include (trachyandesites) alkali feldspar either as altered phenocrysts or in the microcrystalline groundmass. Primary microtextures are partly obliterated by low-grade regional metamorphic fabrics, but it is clear that many of these rocks had glassy groundmasses. Several show relict perlitic structures and deformational effects may give these a mesoscopic fragmental appearance.

The primary accessory assemblage, particularly rare but ubiquitous smokey apatite, suggests correlation with the Mount Read Volcanics. This suite then reflects a characteristic of M.R.V., that the volcanics from a particular "sub-domain" tend to exhibit a fairly narrow compositional range, although the volcanics as a whole are rather diverse (thus, locally andesitic, elsewhere dacitic, trachytic or (rarely) distinctly rhyolitic). Nonetheless, the very narrow range of composition and fabric reflected here is unusual.

D. Cowan, B. Sc.

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Petrological Descriptions

T 29797 (T.S. 31960) K-stain positive.

STP 217
51·1 m

This is an altered and moderately stressed, medium-grained marginal or minor intrusive. Primary composition is obscured by alteration of plagioclase, but the rock is of intermediate character and considered as an orthoclase-microdiorite (i.e. dioritic with accessory K-feldspar, trend monzonitic).

Main components are random, slightly felted, saussurite-stained, albitised plagioclase laths (mean 250x750μ) and a pervasive felsic mesostasis of microcrystalline (weakly micropegmatitic) albite and K-feldspar. Subordinate chloritised-epidotised, granular to microlathic ferromags (probably amphibole, shapes are poorly diagnostic) occur interstitially to the altered plagioclase laths, and weakly leucoxenised, primary accessory Ti-magnetite is disseminated throughout. The rock is weakly amygdaloidal (quartz-Mg-chlorite aggregates to 500μ) and is weakly veined quartz, albite and epidote. Minor traces of pyrite are present. Stress is reflected in deformed feldspar laths, localised zones of incipient granulation and postdates the sporadic veins (to 1 mm).

T 29798 (T.S. 31961) K-stain negative.

STP 217
87·1 m

This rock is very similar and clearly closely related to 29797. A minor intrusive origin is inferred. The main contrast lies in relatively finer modal sizing and in the style of alteration.

Saussurite-stained, albitised plagioclase laths are texturally near-identical to those in the previous specimen, but relatively unevenly sized, with a mean diameter about 150μ. Subordinate, completely chloritised, indeterminate ferromagnesian laths are interstitial, and leucoxenised Ti-magnetite is disseminated throughout. The mesostasis is pervasively chloritised and was probably glassy originally, in contrast to the microcrystalline felsic mesostasis in 29797 (consistent with the slower cooling, relatively coarser sizing of that phase). Sparse quartz (± chlorite) amygdales are present.

Carbonate (impure calcite) is an accessory alteration phase partly concentrated in crosscutting, semi-continuous veinlets. These include disseminated films of Fe-sulphide (?pyritised pyrrhotite) and predate a mild, late phase of stress.

T 36708 (T.S., P.S. 31962) K-stain negative.
This is a resheared quartz-sericite phyllite representing a greenschist-altered psammopelite. The rock is weakly carbonaceous and "grades" subtly from fine to medium sandy silty shale to argillaceous siltstone/fine to medium silty sandstone.

STP 217
184.4m

Splintery to angular and subangular quartz is the main clastic component, with thinly disseminated silicified felsitic "rhyolitic" lava clasts, and clastic muscovite flakes. Sporadic silicified fragmented shards are evident and much clastic quartz is of mildly abraded volcanic character. Overall, the rock has a fairly marked reworked rhyolitic tuffaceous aspect.

The pelitic component comprises sericite and microcrystalline quartz in varying proportions. Subordinate, rather patchy chlorite is present and was partly introduced with quartz in irregular, discontinuous to semi-continuous veins (to 2 mm wide) and films. These features predate a late secondary cleavage, with associated crenulation and disharmonic microfolds, and include frequent disseminations, fine-grained aggregates (to 1 mm) and discontinuous microfilms of pyrrhotite with minor traces of chalcopyrite (blebs to 40 μ, fine films), and rare, weakly granulated grains (to 60 μ) of arsenopyrite. Pyrrhotite is weakly altered to secondary pyrite.

T 36705 (T.S. 31963) K-stain positive.
This is an extensively altered and sheared tuff of felsic intermediate affinities. The relict fabric is characteristic of a lithic-vitric tuff with a minor (feldspar) crystal component, but much finer detail has been obliterated. Lithic clasts are of lapilli to agglomerate dimensions (lapilli tuff or agglomerate tuff).

STP 217
147.4m

Lava clasts are typically thoroughly sericitised, chlorite- and carbonate-stained feldspathic types with subvitric groundmasses. A few are strongly quartz-amygdaloidal, but phenocrystal quartz is absent. Similarly, the sparse crystal component is exclusively (sericitised) feldspar. The matrix is relatively strongly altered to a sericite-chlorite phyllite with relics of microcrystalline, quartzofeldspathic material (devitrified ash). Faint relict shard textures persist in places and there is vague evidence of flow-brecciation in sporadic, extensively flattened clasts with vitric-tuffaceous microtextures. Problematically, these features are strongly enhanced by shearing.

The pervasive sericite is a pale green hydromuscovite which, together with chlorite, imparts the dark green colouration (hand specimen). Accessory alteration carbonate (ankeritic) and minor quartz are present, partly in sheared, discontinuous, crosscutting veinlets (± chlorite). This rock is weakly impregnated with small (mean 150 μ)

spongy clots of red (moderate Fe-) sphalerite. Minor galena, chalcopyrite, pyrrhotite and pyrite are associated. Sulphides predate the shearing and were introduced (in part at least) with the carbonate-quartz-chlorite veining. Thus, there are similarities with 29798 and 36708.

T 36707 (T.S. 31964) K-stain negative.
This is a thoroughly altered and sheared porphyritic to glomeroporphyritic lava of leucoandesitic to dacitic affinities.

STP217
163.1

The phenocrysts (mean 350μ, clusters to 1.5 mm) are sericite- and calcite-stained, albitised plagioclase. These are embedded in an altered groundmass with relict (albitised) plagioclase laths (mean 30μ) in a completely chloritised, ?glassy mesostasis. Fine to ultrafine leucoxenised opaques are common throughout. Despite the porphyritic nature of this rock there are textural similarities with T29797 and 29798, and a minor intrusive origin could be considered.

The pervasive fine chlorite is orientated and shearing is most marked in sporadic concordant foliae of semi-massive chlorite. Discontinuous sheared, fine-grained veins of quartz, albite and carbonate occur sporadically (white in hand specimen). These include extremely rare microscopic particles of ?chalcopyrite.

T 36706 (T.S., P.S. 31966) K-stain very weakly positive.
This altered, veined and mineralised rock has been sheared to the extent that primary features are largely obliterated. However, sufficient relics persist to identify it as primarily a porphyritic dacite (or leucoandesite, the distinction is academic), essentially similar to T 36707, but slightly finer-grained. The main features are disseminated discrete to clustered, sericitised-albitised plagioclase phenocrysts (to 600μ, clusters to 2 mm) and a thoroughly chloritised groundmass with patchy albitised or elsewhere sericite-pseudomorphed feldspar microlaths. The relict fabric is closely analogous to that of T 36707. By inference, there are similarities with T 29797 and 29798.

STP217
155.1m

Sporadic irregular to conformable, variably continuous veins of quartz, ankeritic carbonate, fine-grained hydromuscovite and Mg-chlorite predate the tectonic cleavage. These features range from around 200μ to several millimetres in width and include the bulk of sulphides as disseminated grains and semi-massive aggregates.

The sulphide assemblage comprises mainly an- to euhedral arsenopyrite with subordinate, similarly-textured, closely intergrown pyrite. Individual grains range up to a few millimetres diameter and both phases are microfractured and locally weakly granulated.

Relatively minor pyrrhotite is associated and is of intergranular habit. Chalcopyrite occurs sporadically, partly as intergranular patches (to 150μ) and as micro-inclusions in pyrite and arsenopyrite, but more typically in microscopic films (with a little pyrrhotite) healing the microfractures. Rare galena blebs (mean 15μ) are included in pyrite. In one small area (500μ diameter) several blebs of bismuth were observed as inclusions (mean 20μ) in arsenopyrite and pyrite with occasional coarser patches (to 100μ) in adjacent gangue. Bismuth is extensively corroded and replaced by bismuthinite.

There is no detectable cassiterite. Overall, the assemblage is of mesothermal character with analogies to, for instance, the minor veins at Renison and Cleveland.

T 29800 (T.S., P.S. 31967) K-stain negative.

STP 217
104·25

This is a thoroughly chloritised, quartz-veined and mineralised intermediate (?andesitic) volcanic with a lithic fragmental fabric that is rather poorly resolved in thin-section, but is reminiscent of a tuff lava rather than a strictly pyroclastic phase.

Chloritisation is both relatively marked and pervasive, such that much of the area sectioned is a rather featurless, fine-grained chlorite phyllite. The faint lithic clasts are outlined by variations in more or less pervasive leucoxene-staining, with flattened, angular to subangular shapes up to several millimetres diameter. These features, and the chloritised matrix phase, include sparsely disseminated quartz pseudomorphs after feldspar phenocrysts (mean 250-300μ), disseminated leucoxenised accessory Ti-magnetite and flaky ilmenite and occasional silicified-chloritised relics of felsitic-textured (devitrified) groundmass. That is, the matrix phase appears to have been compositionally and texturally similar to the clasts (hence tuff lava).

Ankeritic carbonate is an accessory alteration phase, and chlorite aggregates include rare, fine-grained clots of green tourmaline. Weakly stressed, concordant to irregular quartz veins occur sporadically. These include accessory patches of chlorite, fluorite, carbonate, minor hydromuscovite, rare green schorl, disseminated to semi-massive sulphide aggregates, and range up to 2 cm in width. The paragenesis is similar to the veins in T 36706. These veins predate at least some shearing and their relatively unstressed nature probably reflects the relatively incompetent chloritised host rock.

The sulphide assemblage is closely analogous to that of T36706. Pyrrhotite predominates in coarse-grained aggregates, included single and clustered, sub- to euhedral grains of arsenopyrite (often skeletal, pyrrhotite cores) and occasional pyrite euhedra, locally fine-grained and clustered with intergranular chalcopyrite. Rare blebs of bismuthinite with included corroded bismuth are analogous to those in T 36706 (i.e. partly included in arsenopyrite (or pyrrhotite), elsewhere in gangue proximal to, or in contact with, pyrrhotite).

Rare coarse blebs (to 300μ) of chalcopyrite occur intergranular to pyrrhotite and along pyrrhotite-gangue contacts. The latter type are locally mantled with microscopic films of stannite. A single 15x25μ ovoid bleb of gold was observed in pyrrhotite. There is no detectable cassiterite.

T 20799 (T.S., P.S. 31968) K-stain negative.

STP 217

100·45 m

This is a moderately stressed, locally granulated, banded quartz-tourmaline-sulphide rock and is representative of the veins/replacements in, for example, T 36706 and 29800. In this case, there is no textural evidence of a metasomatised volcanic, at least in the area sectioned, and this tends to be confirmed by stereobinocular examination of the offcuts.

The specimen includes a zone of semi-massive, fine-grained pyrrhotite with disseminated arsenopyrite. This zone is quartz-gangued with accessory fine muscovite and traces of sideritic carbonate. There is a fairly sharp, but irregular, contact with the adjacent zone consisting essentially of mildly stressed, fine- to medium-grained, an- to subhedral quartz with intergranular, finegrained aggregates of green schorl and sporadic patches of fluorite (to 2 mm+) clouded with tourmaline inclusions. A 1 mm to 3.5 mm wide band of massive, ultrafine, weakly schistose schorl lies adjacent to the contact. Elsewhere, banding is defined partly by the distribution of variably granulated sulphides.

Granulation is locally evident in quartz, with angular particles defined by clouds of included microvacuoles overgrown by clear quartz in optical continuity. Elsewhere, fractures are healed with films of fluorite and sideritic carbonate or, locally, asbestiform schorl.

Cassiterite is sparsely disseminated throughout this rock as 20-100μ diameter (mean 50-60μ) grains, variably included in quartz or fluorite or intergranular to sulphides. This phase is also locally granulated.

The sulphide assemblage comprises mainly pyrrhotite (microfractured in part, elsewhere mosaic-textured, recrystallized) and abundant, variably granulated arsenopyrite. Accessories include pyrite, chalcopyrite and relatively conspicuous stannite. Trace constituents are bismuth and bismuthinite.

Where relatively undeformed, the fabric is closely analogous to that of T 29800 and reflects a medium-grained, semi-massive to disseminated mesothermal vein-type paragenesis.

T 35232

5372 S 10N
375 995 E
COLEBROOK HILL

(T.S. 31969) K-stain negative.
This rock is a thoroughly deformed and extensively tourmalinised, turbiditic labile clastic sediment. Relict features are consistent with a variably argillaceous, quartzofeldspathic siltstone laminated on a sub- to millimetric scale with weak, but semi-pervasive, graded bedding and with occasional bands of quartzose fine sandstone. Finer primary details have been obliterated by weak hornfelsing, recrystallization and pervasive tourmalinisation, but general features are consistent with a (intermediate) tuffaceous greywacke/reworked tuff. There are similarities with the labile (tuffaceous) turbidites in the Crimson Creek Formation. This correlation tends to be confirmed by abundant leucoxenised/oxidised clastic opaques.

Deformation is marked, with the more competent (siltstone/fine sandstone) zones disharmonically folded, and more finely laminated, relatively pelitic zones thoroughly crenulated, segmented and microfractured. Much fracturing postdates hornfelsing and alteration, and there is evidence of two phases of deformation (early semi-plastic folding (slumping) followed by hornfelsing/metasomatism and late brittle fracturing).

Tourmaline is fine- to ultrafine-grained green schorl and is pervasive throughout, although distinctly concentrated in the finer (pelitic) bands where it developed by replacement of the primary clay fraction. Minor quartz-schorl veining is evident and these features are displaced by the later microfractures. Rare pyrite cubes are represented by semi-pseudomorphous patches (to 2 mm) of limonite and partly degraded jarosite.

There is no detectable cassiterite. However, minor traces may be masked by the pervasive degraded leucoxenic opaques. Thus, assay for Sn would be warranted.

T 35238 (T.S.31970) K-stain negative.
This is a contact-metasomatised tuffaceous greywacke and is fairly typical of the more labile Crimson Creek facies.

5371638N
375100E
Coldwater Hill

The relict framework is poorly sorted in the silt to fine sand range, with sporadic medium sand-sized "megaclasts". Faint bedding is marked by dimensional orientation parallelled by very incipient grading. Many clasts are altered beyond recognition, but less altered types are clearly recognisable as angular, microcrystalline intermediate lava clasts (andesitic-trachytic) with subordinate feldspar. Quartz is an accessory component, and fine silt-sized clastic opaques are pervasive throughout.

The matrix is completely replaced by very fine random actinolite. This phase also pervades the framework by progressive replacement of the lava clasts and feldspar grains. Minor actinolite veining is evident and the metasomatic amphibole is incipiently altered by late, pseudomorphous chlorite. Opaques are partly replaced by cloudy, microcrystalline sphene.

This rock includes minor traces of pyrrhotite (partly pyritised), but is devoid of detectable cassiterite. Possibly, minor traces are masked by sphene (the optical distinctionis problematical at very fine sizings and the situation is further complicated by occurrences, in similar situations, of stanniferous sphene).

29828 (T.S. 31971) K-stain positive.
This is a sericitic phyllite derived from a pelitic tuff.

5372800N
388490E
Stag Valley
Sophia R.

Main constituents are orientated sericite and closely intergrown, ultrafine quartzofeldspathic material with subtle variations defining submillimetric-to microscopic-scale, lenticular to planar laminations. Much of this material is featureless, but vague relict, microshard-like textures persist in places and tend to confirm a devitrified altered and sheared pelitic ash interpretation.

Silt-to medium sand-sized clasts are more or less evenly disseminated throughout, comprising around 10-20 % of the rock. Poorly defined microfelsitic lava clasts are accompanied by subangular to rounded quartz and minor sericitised indeterminate feldspar. A few quartz grains are clearly primary volcanic crystal types, but the bulk indicate at least incipient abrasion. Accessories include occasional rounded zircons of detrital character, minor clastic opaques, traces of carbonaceous matter and rare oxidised pyrite grains with quartz (± chlorite) pressure shadows.

Overall, this rock is best interpreted as a rhyolitic xenotuff (i.e. a tuff with subordinate, non-pyroclastic components). Rocks of this type tend to grade laterally into tuffaceous psammopelites.

29831

5 372 450 N
311510 E
Sterling Valley

(T.S. 31972) K-stain positive.
This is a thoroughly altered and sheared rhyolitic lithic-vitric-crystal tuff.

Pyroclasts are extensively flattened along the slaty cleavage, but originally graded up to lapilli dimensions (1-3 cm) in a poorly sorted, generally sand-grade facies. Main components are quartz and alkali feldspar crystals/crystal fragments, with subordinate, but relatively coarse, clasts of porphyritic rhyolite, rhyolitic pitchstone and minor rhyolitic vitric-crystal tuff. Together, these comprise around 50 % of the rock in a matrix of semi-massive sericite with subordinate, closely intergrown, crypto- to microcrystalline quartzofeldspathic material.

Faint relict shard textures are evident in the sheared and weakly crenulated sericitic matrix. Accessories include thinly disseminated c astic grains of apatite, opaques and zircon. Patchy dark green biotite occurs in discontinuous foliae and in pressure shadows and this is consistent with mid-greenschist facies metamorphism.

Much finer detail has been obliterated and any interpretation of the mode of deposition is speculative due to the marked shearing effects.

29861

5 372 195 N
385 420 E
Trib of Munch. River
Sterling Valley

(T.S., P.S. 31973) K-stain virtually negative.
This is a pervasively sericitised and weakly mineralised porphyritic biotite "rhyolite". The fabric is reminiscent of a minor intrusive, but this should be confirmed from field evidence.

Phenocrysts areabundant, comprising around 40 % of the rock, with completely sericitised indeterminate feldspar (mean 750μ) accompanied by subordinate stressed quartz of corroded inverted beta habit and sparse leucoxene-stained sericite pseudomorphs after biotite flakes. These are evenly disseminated throughout an even-grained granular (mean 50μ) groundmass of quartz and sericitised feldspar in roughly equal proportions. Accessories include minor apatite, zircon and leucoxenised opaques.

Sporadic crosscutting, weakly schistose sericite veinlets arepresent. These are postdated and locally displaced by later fractures extensively healed with incipiently stressed quartz with accessory chlorite and disseminated aggregates of pyrite, pale sphalerite, and subordinate galena. The host rock is weakly pyritised and chloritised marginal to these veins which range in width from <1 to 2.5 mm.

29870

5371900N
382402E
Still follow-up Grid

(T.S. 31974) K-stain virtually negative.
This is a thoroughly altered lava, reasonably interpreted as a porphyritic andesite.

Frequent plagioclase phenocrysts are represented by pseudomorphous aggregates (to 1.8 mm) of epidote and albite. Slightly subordinate pyroxene phenocrysts are pseudomorphed bymassive granular epidote. Minor phenocrystal amphibole is represented by semi-pseudomorphous epidote-actinolite aggregates.The altered groundmass consists of microcrystalline/weakly directed plagioclase aggregates pervasively stained with microgranular epidote and ultrafine acicular tremolite-actinolite. Relict features comprise a perlitic devitrification structure and a microscale flow-banding which are variably obliterated by a weak, but penetrative, slaty cleavage.

Minor leucoxenised opaques and rare grains of apatite arepresent. Apatite is the typical smokey variety, characteristic of the Mount Read Volcanics.

29876

5371900N
382586E
Still follow-up Grid

(T.S. 31975) K-stain positive.
This altered porphyritic lava is eseentially similar to 29870. In contrast, it is relatively alkaline and relatively devoid of ferromags. General features are consistent with a porphyritic trachyandesite.

The phenocrystal assemblage comprises epidote-stained, albitised plagioclase (to 2 mm), subordinate, relatively fine alkali feldspar (pseudomorphed by clear albite, with accessory K-feldspar), and relatively minor, sheared, epidote-stained chlorite aggregates after ?amphibole. These are evenly disseminated throughout a chlorite-stained, partly recrystallized/directed, microcrystalline, feldspathic groundmass with patchy relict ?albite microlites embedded in felsitic, anhedral K-feldspar.

Afaint relict microscale flow-banding is enhanced by the slaty cleavage. Accessories include relatively abundant leucoxenised opaques and traces of apatite. Chlorite is in part "retrograde" after biotite, but the assemblage is slightly lower grade than that in 29870 (biotite as against tremolite-actinolite).

29877

5371900N
382607E
Still follow up Grid

(T.S. 31976) K-stain positive.
This rock is closely related to 29870 and 29876 and the petrology is essentially a composite of that described above. The rock can be classified as an altered and sheared porphyritic trachyandesite, but appears slightly less alkaline than 29876.

Epidote-albite-pseudomorphed plagioclase phenocrysts are relatively abundant and tend to form glomerophenocrystal clusters (to 4 mm). Subordinate ferromagnesian phenocrysts are represented by epidote aggregates (pyroxene) and sporadic sheared epidote-stained chlorite lenses (?amphibole). Accessories include albitised alkali microphenocrysts, leucoxenised opaques and rare smokey apatite. The altered groundmass is closely analogous to that of 29876, but is relatively chloritic with a more pronounced slaty cleavage. As previously, chlorite, in part at least, represents retrogressed biotite.

This rock is weakly cognate xenolithic. Sparse, irregular veins of albite and chlorite transect altered plagioclase, but are weakly stressed and locally schistose. Rare oxidised pyrite grains are present.

29880

5371900N
382 701E

(T.S. 31977) K-stain positive.
This is an altered porphyritic trachyandesite and is closely related to the previous examples (29870, 29876, 29877). The main contrast is a rather incipient slaty cleavage.

Stott Follow-up aid

The phenocrystal assemblage comprises epidote-stained, albite-pseudomorphed plagioclase (mean 750μ, weakly clustered) with subordinate, uralitised pyroxene (mean 500μ) and rare albitised alkali feldspar. These are enclosed in a felsic groundmass with random to incipiently subtrachytic plagioclase microlites embedded in felsitic anhedral K-feldspar. Accessories are magnetite, leucoxenised opaques and rare apatite.

The groundmass is weakly but pervasively stained with ultrafine cloudy epidote and acicular tremolite-actinolite. Patchy chlorite occurs as a late replacement of uralitic actinolite; this rock is weakly stressed, but lacks a penetrative slaty cleavage.

29882

5371900N
382 785E

(T.S. 31978) K-stain negative.
This altered porphyritic andesite is very similar to 29870, the main contrast lying in a relative paucity of altered ferromags and a very incipient slaty cleavage.

Stott Follow-up aid.

Frequent epidote-albite-pseudomorphed plagioclase phenocrysts have a mean diameter about 1.2 mm. The subordinate ferromagnesian phenocrysts are represented by epidote (pyroxene) and weakly schistose quartz-tremolite-epidote aggregates (?amphibole). These are accompanied by sparse quartz-albite semi-pseudomorphs of microphenocrystal alkali feldspar (trend trachyandesite).

The groundmass consists of microcrystalline/incipiently directed plagioclase pervasively stained with ultrafine acicular tremolite-actinolite. Cloudy microcrystalline epidote is also pervasive along perlitic devitrification cracks. This structure is relatively well preserved due to the incipient nature of the tectonic cleavage.

Accessories are typical leucoxenised opaques (Ti-magnetite) and rare apatite.

29886 (T.S. 31980) K-stain weakly positive.
This is a relatively strongly sheared porphyritic andesite (trend trachyandesite, sim. 29882) with a somewhat fragmented perlitic devitrification structuregiving the rock a misleading fragmental appearance.

5 381 800 N
382 330 E
Still follows-up Grid

General features are closely analogous to those of the associated andesites to the extent that little special comment is warranted. In comparison, however, the phenocrysts are relatively abundant and fine-grained (plagioclase, mean 300-400μ). Feldspar is typically altered (albitised-epidotised) and the subordinate ferromags pervasively chloritised with the replacive aggregates drawn out into discontinuous foliae.

The groundmass comprises recrystallized and distinctly directed microcrystalline feldspar with weak, but pervasive, chlorite-staining, partly controlled by the (deformed) perlitic structure. Accessories are typical. Stressed, conformable quartz-albite veining is evident locally.

29887 (T.S. 31981) K-stain positive.
This is a fairly typical altered and moderately sheared porphyritic trachyandesite.

5 381 800 N
382 355 E
Still follows-up Grid

The phenocrystal assemblage comprises typical epidote-albite-pseudomorphed plagioclase (to 1.5 mm), relatively very minor epidotised ?pyroxene and very thinly disseminated albitised microphenocrystal alkali feldspar. The groundmass consists of weakly re-orientated plagioclase microlites embedded in felsitic anhedral K-feldspar and is weakly but pervasively chlorite- and epidote-stained. A faint relict perlitic devitrification structure is outlined in sheared microscopic chlorite films. Accessories are typical with variably leucoxenised Ti-magnetite accompanied by very rare cloudy apatite.

Chlorite forms pressure shadows adjacent to the relict phenocrysts. There is no real evidence of degraded (chloritised) biotite in contrast to some of the associated rocks. Minor traces of oxidised pyrite are present.

29890

5 371 800 N
382 480 E
Stll Follow-up Cmd

(T.S. 31982) K-stain positive.
This is a relatively strongly sheared, but otherwise fairly typical porphyritic trachyandesite. The phenocrystal assemblage comprises abundant altered plagioclase, relatively minor epidote-stained/uralitised ferromags and rare albitised microphenocrystal alkali feldspar. The groundmass is relatively recrystallized and directed microcrystalline feldspar and is quite strongly chloritic (in part after ultrafine tremolite-actinolite). Uralitic amphibole is similarly partly chloritised.

Accessories are typical. There is little to distinguish this rock from the associated specimens.

29896

5 371 800 N
382 860 E
Stll Follow-up Cmd

(T.S. 31983) K-stain positive.
This altered and moderately sheared porphyritic trachyandesite is semi-characterised by relatively conspicuous altered phenocrystal ferromags.

Frequent plagioclase phenocrysts (mean 750μ, clusters to 2.5 mm) are represented, in this case, by distinctly saussurite-stained albitic pseudomorphs (with clinozoisite, chloritised tremolite-actinolite). The subordinate phenocrystal pyroxene (± amphibole) is represented by semi-pseudomorphous aggregates (mean 500μ) of pale, weakly chloritised uralitic tremolite-actinolite with accessory epidote-clinozoisite. There is no evidence of phenocrystal alkali feldspar.

The groundmass comprises ultrafine granular/weakly directed feldspar pervasively stained with extremely fine acicular tremolite-actinolite (partly chloritised) and, to a lesser degree, with cloudy, microcrystalline epidote. Accessories include magnetite, leucoxenised opaques and rare, characteristically cloudy, apatite.

29900

5 371 700 N
382 445 E
Stll Follow-up Cmd

(T.S. 31984) K-stain virtually negative.
An altered porphyritic andesite, this rock includes thinly disseminated quartz-albite-pseudomorphed alkali feldspar microphenocrysts and thus trends towards a trachyandesite.

Epidote is relatively conspicuous and is a pale brown variety, probably incipiently manganiferous. It occurs with subordinate albite pseudomorphing discrete to clustered plagioclase phenocrysts and stains tremolite aggregates which semi-pseudomorph subordinate phenocrystal pyroxene. Epidote also accompanies tremolite as an alteration of sporadic microdioritic cognate xenoliths of millimetric proportions.

The groundmass is weakly, but pervasively tremolite-stained, microcrystalline to microlitic plagioclase. An incipient slaty cleavage parallels a weak flow-fabric.

38501

5371700N
382455E
Soil Follow up Grid

(T.S. 31985) K-stain positive.
This trachyandesite has a somewhat fragmental appearance, but is considered as a xenolithic porphyritic lava on relict textural grounds.

Relatively abundant, discrete to clustered, typically altered plagioclase phenocrysts and sporadic altered cognate xenoliths (to 3.5 mm) are present, but ferromags are represented only by rare, vaguely pseudomorphous chlorite aggregates. Accessories include magnetite, leucoxenised opaques, apatite and thinly disseminated, albitised alkali feldspar phenocrysts (max. 500μ). Together, these features comprise about 40 % of the area sectioned.

The groundmass is pervasively, strongly chlorite-stained and subvitric with a semi-pervasive, very fine-scale perlitic structure, somewhat deformed and fragmented by a weak slaty cleavage. This enhances the fragmental appearance of the rock. However, there are no definite pyroclastic features.

38511

5371600N
382395E
Soil follow-up Grid

(T.S. 31986) K-stain positive.
This rock can be closely compared texturally with 29886 and represents a relatively sheared perlitic porphyritic trachyandesite. The rock is weakly cognate xenolithic and, by inference, there are similarities with 38501. That is, it has a mesoscopic fragmental appearance enhanced by the slaty cleavage. As previously, however, there are no definite pyroclastic features.

The phenocrystal assemblage is typical, with abundant altered (epidotised, albitised) plagioclase, relatively minor epidotised ferromags and sparse silicified-albitised alkali feldspar. Together with the sparse similarly altered cognate xenoliths, these features comprise 40-50 % of the rock. The enclosing pseudofragmental matrix consists of pervasively chlorite-stained, microcrystalline/directed feldspar, with the deformed relict perlitic structure outlined in a flattened network of chlorite films.

Rare oxidised pyrite euhedra accompany the otherwise typical accessory assemblage.

38528

5372300N
382610E
Soil Follow up Grid

(T.S. 31987) K-stain weakly positive.
This is a relatively strongly epidotised, but in other respects typical, porphyritic trachyandesite.

In common with the associated specimens, the rock contains abundant phenocrysts (so-called andesitic fabric) with typically altered plagioclase (mean 750μ) accompanied by subordinate uralitic tremolite-actinolite and epidote pseudomorphs after pyroxene. Occasional, similarly altered microdioritic cognate xenoliths are present. As usual, the groundmass consists essentially of microcrystalline (mean 10μ) feldspar, and the primary accessory assemblage consists of magnetite, leucoxenised opaques and rare smokey apatite.

The groundmass is perlitic-microtextured and is characterised by marked epidotisation. The epidote is cloudy, microcrystalline with a mean grainsize about 5μ andpreferentially replaces the perlite"cells". This rock has a very incipient tectonic fabric and this probably reflects its relatively competent, strongly epidotised nature.

38529 (T.S. 31988) K-stain positive.

S 372300N
382710E
Slitt Follow-up Grid.

This relatively sheared porphyritic trachyandesite is weakly quartz-microamygdaloidal. It carries sporadic lava clasts (to 1.5 mm) in addition to cognate xenolithic microdiorite fragments and thus trends towards a tuff lava. A deformed, fine-scale perlitic devitrification structure is evident and, in common with 29886, 38501 and 38511, the fabric is somewhat pseudofragmental in response to shearing.

The phenocrystal assemblage and accessories are typical and require no special comment. Feldspar phenocrysts are altered to epidote-stained albite-pseudomorphs (150μ- 1.5 mm) and pyroxene to uralitic amphibole aggregates. Thinly disseminated clear albite grains probably represent inverted albitised sanidine, but shapes in this case are not particularly diagnostic.

The altered groundmass contains ?albite microlites embedded in felsitic anhedral K-feldspar and is pervasively stained with ultrafine cloudy epidote and (orientated) chlorite. Minor traces of pyritised pyrrhotite are associated with late conformable fractures.

29878 (T.S. 31989) K-stain virtually negative.

S371900N
382630E
Slitt Follow-up Grid

This altered and sheared porphyritic andesite can be contrasted with the associated specimens in being devoid of recognisable altered ferromags. Thus, it can be classified as a leuco-andesite.

Abundant plagioclase phenocrysts are represented by albite-epidote aggregates (mean 500μ) with minor accessory quartz. These are more or less evenly disseminated throughout a chlorite-stained, weakly directed, microgranular, feldspathic groundmass with a faint relict perlitic devitrification structure.

Chloritised tremolite-actinolite is a minor accessory alteration phase. Sheared, irregular veinlets of quartz and albite occur sporadically.

29885 (T.S. 31990) K-stain positive.

5371900N 383005E Stett follow-up Grid.

This relatively sheared porphyritic trachyandesite is weakly cognate xenolithic and somewhat pseudofragmental with analogies to 29886, 38501, 38511 and 38529. In thin-section, this is reflected in vaguely shard-like textures in a flattened, perlitic-textured groundmass.

The phenocrystal assemblage is normal, but with relatively abundant stressed, microgranular quartz pseudomorphs of alkali feldspar (sanidine-anorthoclase) and weakly chloritised uralite-pseudomorphed pyroxene (± amphibole). The rock is weakly quartz-amygdaloidal. Cognate xenoliths are altered microdioritic types and range up to 3 mm diameter.

The sheared, microcrystalline perlitic groundmass is thoroughly stained with microschistose, near-isotropic Mg-chlorite. Accessories comprise the ubiquitous magnetite, leucoxenised opaques and rare apatite.

29873 (T.S. 31991) K-stain positive.

5371900N 382510E Stett Follow-up Grid

This is a weakly cognate xenolithic porphyritic trachyandesite. General features are closely analogous to the associated specimens and require little special comment. Accessories are typical. The groundmass consists of pervasively chlorite- and weakly epidote-stained microcrystalline feldspar, weakly recrystallized and directed in response to greenschist metamorphism. A faint relict perlitic structure is evident locally, but is non-pervasive.

Epidote is relatively abundant as a pseudomorphous replacement of phenocrysts. It occurs with albite after plagioclase (mean 1 mm), but is accompanied only by minor traces of uralitic amphibole, where pseudomorphing the subordinate ferromags. Subradiating, semi-fibrous epidote infills sparse vesicles. These aggregates are partly fragmented by the slaty cleavage.

38515 (T.S. 31992) K-stain weakly positive.

5371600N 382541E Stett Follow-up Grid.

This rock is rather similar to 29873 and is similarly classified as an altered and sheared porphyritic trachyandesite.

Epidotised-albitised, prismatic, discrete to weakly clustered plagioclase phenocrysts are abundant and are sized in the 250μ - 1.5 mm range. Subordinate phenocrystal pyroxene is pseudomorphed by epidote, and occasional epidote aggregates with thin albite selvedges appear to represent accessory phenocrystal sanidine-anorthoclase on the basis of shape. Sparse microdioritic cognate xenoliths are similarly epidotised and albitised, but may include a little chloritised uralitic amphibole.

The groundmass is pervasively chlorite-stained with subordinate cloudy, microcrystalline epidote and consists essentially of microcrystalline/weakly directed feldspar. The ubiquitous magnetite, leucoxenised opaques and rare smokey apatite complete the relict primary assemblage. Minor traces of fine-grained, partly oxidised pyrite are present.

D. Cowan, B. Sc.

MGR
ACCT
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31st March, 1980

REPORT CMS 80/3/21

YOUR REFERENCE: Order No. 900128

DATE RECEIVED: 18th March, 1980

SAMPLE NOS.: T - 29668, 29667, 29976, 29977, 29981, 29801, 29803, 29809, 29810, 29812, 29813, 29814, 35201, 35210, 35216, 35219, 29736, 29737, 29738, 29739, 29740

SUBMITTED BY: G. Illff, A. Mollison, I. McDonald

WORK REQUESTED: Petrology

for

H.W. Fander, M. Sc.

REPORT CMS 80/3/21

Petrological Descriptions

T 29668 (T.S. 31156) K-stain positive.
This is an extensively sericitised and mildly sheared rhyolitic fragmental, considered as a vitric-crystal tuff, although the former presence of shards is more inferred than established over much of the area sectioned.

NP8 2/4
139 m

Crystals, crystal fragments and clusters (fragmented glomerophenocrysts) comprise up to 50 % of the rock, are poorly sorted in the 100μ - 5 mm range, show a weakly banded distribution and are largely alkali feldspar (inverted exsolved sanidine-anorthoclase, subordinate albite) with subordinate quartz. These features are accompanied by sparse rhyolitic lithic clasts (to 2.5 mm, microporphyritic lava, rare fragmental types) in a pervasively sericite-stained, microcrystalline, quartzofeldspathic matrix with patchy, very vague, relict microshard textures. There is evidence of a contorted and weakly fragmented flow fabric. These features are enhanced by the weak slaty cleavage, but are reminiscent of an autobrecciated, ignimbritic mode of origin.

Chlorite and cloudy carbonate are minor accessory alteration phases. Rare, very fine-grained clots of pretectonic pyrite are present. Much of the sericite is a pale green illite-hydromuscovite.

T 29667 (T.S. 31157) K-stain positive.
Despite its fragmental appearance in hand specimen, this rock can only be classified as a porphyritic rhyolite. The fragmental aspect reflects an early phase of veining and is enhanced by shearing.

Sterling Valley
Long John Ck.
5374190N 385870E

Relict features comprise frequent coarse, variably resorbed and embayed quartz phenocrysts (to 4 mm) and accessory alkali (K-) feldspar phenocrysts in a devitrified felsic groundmass with minor accessory apatite (typical Mount Read Volcanic-type apatite, clouded with ultrafine inclusions). The groundmass exhibits a sheared perlitic structure and has been silicified. The abundant, relatively coarse and evenly disseminated phenocrysts indicate a probable minor intrusive origin.

Feldspar phenocrysts are extensively sericitised and chloritised. Perlitic cracks are outlined by sheared films of chlorite and sericitic hydromuscovite. Frequent discontinuous sheared veinlets of quartz, Mg-chlorite (or locally pale green phlogopite and sericite) include disseminated epidote and pyrite.

Pyrite occurs as an- to subhedral grains up to 1 mm diameter, often marginally oxidised and locally completely replaced by limonite. Sparse microscopic, bleb-like inclusions of pyrrhotite are present, and pyrite is frequently accompanied by pressure shadow zones of quartz and chlorite.

Sub- to euhedral magnetite (to 600 μ) is disseminated throughout the rock. This tends to be concentrated in the sheared veins (along with fragmented phenocrystal quartz), but is relict primary in origin.

T 29976

5368 500N
380 930E
STITT

(T.S. 31158) K-stain negative.
This is a porphyritic dacite with a weakly clastic fabric (i.e. strictly a tuff lava), enhanced by differential alteration.

Relict primary features are fairly homogeneous, the rock consisting essentially of weakly clustered oligoclase (near albite) phenocrysts (mean 350 μ, max. 1.8 mm) in a weakly sheared/partly recrystallized, microcrystalline, quartzofeldspathic groundmass with sparse accessory opaques and leucoxenic semi-opaques.

Vague angular to irregular clasts (< 1 - 5 mm+) are outlined by subtle variations in groundmass microtexture. These features are closely packed and partly moulded onto one another. The sparse matrix phase is texturally near-identical to the clasts.

Clasts are preferentially weakly sericitised and silicified. In contrast, the matrix is weakly, but pervasively, stained with Fe-Mg chlorite (dark green-grey in hand specimen), with relatively minor associated quartz and sericite. Alteration is pretectonic and its differential nature probably reflects subtle variations in composition.

T 29977

5 368 500N
381 067E
STITT

(T.S. 31159) K-stain positive.
This is a devitrified, mildly altered and weakly sheared porphyritic lava of felsic intermediate ("quartz-trachytic") character.

Discrete to weakly clustered feldspar phenocrysts (250 μ - 1.5 mm, clusters to 2.5 mm) are disseminated throughout and consist of variably saussurite-stained/partly albitised oligoclase. These features are accompanied by sparse epidote-chlorite-carbonate-semi-pseudomorphed ferromagnesian phenocrysts (?hornblende, biotite) and quartz-chlorite-epidote amygdales (mean 250 μ). The groundmass consists of pervasively sericite- and weakly chlorite-stained felsitic alkali feldspar with accessory quartz, fine-grained magnetite and minor leucoxenised opaques.

Sparse lava clasts (max. 500 μ) are present, and the rock trends towards a tuff lava. An incipient slaty cleavage parallels a faint relict flow-fabric. General features are consistent with an extrusive lava.

T 29981

5368 500 N
381 505 E
STITT

(T.S. 31160) K-stain very weakly positive.
This is an altered lava flow breccia of andesitic affinities. It consists essentially of a randomly sized assortment of angular to subangular lava clasts (1 mm - 1 cm+), partly moulded onto one another and elsewhere with a secondary interclast matrix. Clasts show a dimensional preferred orientation reflecting flow, and weakly enhanced by an incipient tectonic fabric.

Textures are reasonably homogeneous, typically with altered feldspar (epidote-stained, albitised) and subordinate ferromagnesian (epidotised pyroxene, amphibole) phenocrysts in a similar altered microcrystalline, feldspathic groundmass. Some carry random to orientated (trachytic) feldspar microlites and the majority are at least weaklyamygdaloidal. A few are weakly K-feldspathic ("trachyandesitic").

The alteration assemblage comprises albite and epidote with accessory quartz and chlorite. This forms the sparse matrix, infills vesicles, replaces phenocrysts and locally forms discontinuous veins (weakly sheared).

T 29801

5372 000 N
382 910 E

STITT

(T.S. 31161) K-stain negative.
This rock is a greenschist-altered porphyritic dacite, consisting essentially of altered, discrete to clustered plagioclase phenocrysts in a pervasively chlorite-stained and mildly sheared, microcrystalline, quartzofeldspathic groundmass.

Phenocrystal plagioclase has altered to sericite- and weakly chlorite-stained albite pseudomorphs, and is partly fragmented by the slaty cleavage, with glomerophenocrysts segmented into crude lenticular bands. Phenocrystal quartz is absent, but this rock includes rare leucoxene-stained, chloritised ferromags (?amphibole) and rare grains of apatite of phenocrystal habit.

The slaty cleavage intersects a weak relict flow-fabric at a low angle and crenulates sparse quartz-albite veinlets. Leucoxenised accessory opaques are evenly disseminated throughout the rock.

T 29803 (T.S. 31162) K-stain positive.
This is a weakly altered and mildly stressed porphyritic quartz trachyte with similarities to T 29977. As previously, the term quartz trachyte is used to denote a felsic intermediate (as against rhyolitic) phase. Quartz is present in no more than accessory amounts and is restricted to the groundmass.

5 383 400N
382 370E
FARM CREEK

Plagioclase phenocrysts (incipiently saussuritised oligoclase-albite) are evenly disseminated as single (to 1.2 mm) to weakly clustered prismatic grains, accompanied by sparse, completely chloritised ferromag. phenocrysts. These are enclosed in an incipiently recrystallized groundmass of felsitic alkali feldspar, enclosing disseminated random albite microliths and minor interstitial quartz. Accessories include leucoxenised opaques, relatively minor magnetite and rare apatite. Sparse amygdales (to 750 μ) consist of quartz, Fe-Mg chlorite and radiating acicular epidote in varying proportions.

This rock lacks extrusive features and may represent a minor intrusive phase.

T 29809 (T.S. 31163) K-stain positive.
This rock is closely related to 29803 and 29977 in terms of relict primary and secondary features, and is similarly classified as a porphyritic quartz trachyte.

5 383 600N
382 685E
FARM CREEK

Feldspar phenocrysts are slightly more abundant and slightly coarser than in the previous specimens, but otherwise similar, comprising weakly clustered, incipiently saussurite-stained prismatic oligoclase (near albite). These are accompanied by sparse chlorite-stained epidote pseudomorphs of phenocrystal ferromags and occasional quartz-epidote-chlorite amygdales in a typical weakly recrystallized, chlorite- and weakly epidote-stained felsitic alkali feldspar with minor accessory quartz, traces of magnetite, leucoxenised opaques and rare apatite.

This rock contains rare feldspathic xenoliths of cognate character. Correlation with 29803 and 29977 tends to be enhanced by the alteration epidote which occurs partly as radiating, chlorite-stained, acicular particles.

T 29810 (T.S. 31164) K-stain positive.
This is an altered, but essentially unstressed, porphyritic quartz trachyte or trachyandesite. The fabric is near-identical to that of 29803, 29977 and 29809, but slightly coarser-grained, and even more consistent with a minor intrusive phase.

5383600N
382720E
FARM CREEK

Weakly clustered plagioclase phenocrysts (mean 500 μ) are pseudomorphed by calcite-stained albite and appear to have been relatively calcic initially (?andesine). Sparse chloritised ferromagnesian microphenocrysts (?pyroxene) are present. The groundmass comprises incipiently recrystallized felsitic alkali feldspar patches, with minor, closely intergrown, similarly-textured quartz, and included albite microlites. The rock is weakly amygdaloidal (to 1.5 mm, quartz, carbonate, minor chlorite) and is weakly, but pervasively, chlorite-stained. Epidote is a minor accessory alteration product, and magnetite, leucoxenised opaques and rare apatite are primary accessories.

An intrusive origin is inferred from the evenly disseminated phenocrysts, a lack of definite extrusive features, and tends to be confirmed by the textural consistency of these four closely related specimens.

T 29812

5 383000N
382 635E
FARM CREEK

(T.S. 31165) K-stain positive.
This is a devitrified, moderately sericitised, but unstressed, porphyritic biotite rhyolite. This rock has a distinctly intrusive fabric and conceivably represents a siliceous differentiate of 29803 etc.

The disseminated phenocrysts (to 3 mm) are mainly marginally embayed inverted beta quartz with subordinate, weakly sericitised, slightly titaniferous phlogopitic biotite and completely sericitised feldspar (evidently plagioclase on basis of pseudomorphed zoning). The groundmass comprises pervasively sericite-stained felsitic quartzofeldspathic material with a fine-scale perlitic structure. Accessories comprise leucoxenised/oxidised opaques. Rare quartz amygdales (max. 300 μ) are present.

Quartz and sericitised feldspar phenocrysts tend to be mantled with thin selvedges of K-feldspar. This feature is common in granophyres and tends to confirm an intrusive origin, otherwise inferred from the evenly disseminated, relatively coarse phenocrysts.

T 29813

5 383600N
382 870E
FARM CREEK

(T.S. 31166) K-stain positive.
This rock is devitrified and moderately altered and is a flow- or autobrecciated ignimbrite of quartz-trachytic (or quartz-poor rhyolitic) affinities. Texturally, it can be classified as a lithic-vitric-crystal tuff, with the lithic clasts (to 7.5 mm) texturally near-identical to the matrix.

The crystal component comprises disseminated prismatic and fragmented alkali feldspar (albite, inverted sanidine-anorthoclase) and rare ferromags, completely replaced by cloudy epidote; quartz is absent.

Lithic clasts are angular to irregular and include sporadic feldspar crystals/crystal fragments in a devitrified, shardy matrix. Elsewhere, a contorted/partly fragmented, eutaxitic microstructure is semi-pervasive in weakly, but pervasively, sericite-stained felsitic quartzofeldspathic material.

Fine cloudy epidote and chlorite are accessory alteration phases. The alteration pattern is similar to that in 29803 etc. The rock is weakly stressed.

T 29814

5 383600N
392950E
FARM CREEK

(T.S. 31167) K-stain weakly positive.
This is an altered lava flow breccia of andesitic-trachyandesitic character. Of the associated specimens, it appears most closely related to 29981.

The rock consists of angular to irregular, poorly sorted clasts (< 1 mm - 1 cm+), generally closely moulded onto one another and with poorly defined margins partly obliterated by alteration. These features are reasonably homogeneous with disseminated epidotised-albitised plagioclase and sparse epidotised-chloritised ferromagnesian (amphibole, ?pyroxene) phenocrysts in a variably epidote-stained microcrystalline feldspathic groundmass. The groundmass may be micro-amygdaloidal, and in some clasts is alkaline (accessory K-feldspar revealed only by staining). Accessories include frequent leucoxenised opaques (rare relics are the lustrous black features, probably Ti-magnetite) and rare apatite (typical smokey).

Sporadic coarse amygdales and interclast cavities are filled with chalcedony, partly recrystallized to microcrystalline quartz. These features are sized to 5 mm and shapes, in places, are not unlike those of corroded phenocrystal quartz.

T 35201

5 371500N
386500E

STERLING VALLEY
MURCHISON RIVER

(T.S. 31168) K-stain weakly positive.
This is an altered and stressed "granite" and represents a medium- to deep-seated intrusive phase. The vaguely fragmental character (hand specimen) is secondary, a reflection of irregular zones of granulation and relatively marked alteration.

The relict fabric is essentially even-grained (mean 1-1.5 mm) and granitic. Feldspars are prismatic and quartz-intergranular. Finer details of composition are obliterated by marked sericitisation, but zoned plagioclase (either oligoclase or albite on basis of relict twinning) was accompanied by subordinate K-feldspar. Accessory biotite is represented by contorted clots of leucoxene-stained chlorite. Typical smokey apatite is a minor accessory constituent and provides a petrogenetic link with the Mount Read Volcanics.

The rock is variably stressed and fractured. Microfractures are healed with films of chlorite and albite. More extensively deformed (granulated) zones are marked by semi-pervasive development of a marginally corrosive, fine-grained albite cement.

T 35210

5 367 815 N
386 680 E
Mt Murchison

(T.S. 31169) K-stain positive.
This is a pervasively sericitised porphyritic and weakly clastic rhyolite. Finer details have been obliterated by alteration and relatively marked shearing, and there is little to choose between a lava and a thoroughly welded (and thus lava-like) ignimbritic mode of origin. The distinction is academic in that an extrusive origin is considered likely.

Frequent stressed and partly fragmented quartz "phenocrysts" (100 μ - 2 mm) are accompanied by lenses of sericite, representing completely altered and sheared feldspar grains. These are embedded in a more or less massive, sericitic matrix with sporadic, poorly defined (sericitised/flattened) lithic clasts (to 1.5 mm) and a weak relict flow banding.

Quartz is of phenocrystal habit (embayed margins, partly bipyramidal) and the fragmentation is an in-situ phenomenon. Phenocrysts, overall, are rather evenly disseminated and this gives the rock a distinct lava-like character. However, very vague, shard-like features persist in pressure shadow zones, marginal to quartz grains and rock clasts, and in some of the poorly defined lithic clasts. These features tend to confirm a thoroughly welded ignimbrite interpretation.

Adularia, albite, chlorite and carbonate are accessory alteration phases. These were introduced partly in pretectonic, discontinuous veins and microfracture healings.

T35216

5,367,825 N
387 205 E
Mt Murchison

(T.S. 31170) K-stain negative.
This is a greenschist metapsammite, clearly an argillaceous orthoquartzite. The rock is of distinctly detrital character and devoid of pyroclastic or volcanomict features.

The relict framework is poorly to moderately sorted in the silt to fine sand range, with sporadic medium-sand-sized grains. Detritus is almost entirely quartz with (somewhat flattened) angular to well rounded shapes. Bedding is variably relict on a sub- to millimetric scale, defined in part by the distribution of detrital heavy mineral particles (zircon, opaques, leucoxenic semi-opaques, rare tourmaline) and by sporadic crude argillaceous partings, and is intersected by the tectonic cleavage at low to intermediate angles. The stressed/partly recrystallized cement consists of quartz with accessory sericite.

Patchy hematite-staining is evident in argillaceous zones. The hematite is largely degraded to limonite, but appears to be late- or post-tectonic.

T 35219 (T.S. 31171) K-stain positive.
This is a thoroughly altered and sheared rhyolite, texturally similar to 35216 and evidently closely related. The main contrast lies in the alteration pattern.

5367475N
367045E
Mt Murchison

Relict features comprise disseminated, heavily stressed quartz and heavily altered feldspars of phenocrystal habit in a flow- and compositionally banded, microcrystalline, quartzofeldspathic matrix. Vague streaky, eutaxitic-like microtextures persist in places and tend to confirm an ignimbritic mode of origin, although enhanced in part by the tectonic cleavage. Sheared lithiclasts are present, but are no more than a minor accessory component, and the rock is reasonably classified as a vitric-crystal tuff.

Alteration is characterised by marked epidotisation. The epidote is cloudy, generally microgranular and of semi-banded distribution, paralleling (and thus controlled) by) the primary compositional banding. This phase is postdated by a crosscutting, discontinuous set of sheared veins (to 2 mm)of quartz with patchy adularia and accessory chlorite.

T 29736 (T.S. 31172) K-stain negative.
This is a vitric-crystal tuff of dacitic character and considered as subaqueous in mode of deposition.

JCP 216
24·0m

The main constituents are devitrified, microscopic shards (mean 20 μ) and subordinate albitised/weakly calcite-stained plagioclase crystals/crystal fragments, which are sized in the silt to fine sand range with a few coarser particles. Feldspar grains are of weakly bedded distribution, forming up to 15-20 % of the sediment which is faintly laminated on a millimetric scale, shows some evidence of slumping and is locally incipiently graded.

Clastic quartz, apatite and rare muscovite flakes are minor accessory constituents, and very fine leucoxenic semi-opaques are pervasive. Shards appear to be mildly abraded and a few feldspar and quartz grains have subrounded outlines suggestive of mild reworking (similarly apatite).

The rock is pervasively sericite-stained and has a weak slaty cleavage intersecting bedding at a low angle. Minor quartz veining, with accessory carbonate, is evident and predates the tectonic fabric.

058125

T 29737 (T.S. 31173) K-stain negative.
This is an altered and sheared dacitic lithic-vitric-crystal tuff. Finer details have been largely obliterated and there is little to choose between subaqueous and subaerial modes of origin.

JCP216.
50.3m

Pyroclasts are very poorly sorted with flattened angular lava clasts to 3 mm diameter (and originally coarser), accompanied by sporadic sand-sized feldspar crystals/crystal fragments (calcite-stained, albitised) in a pervasively sericite-stained, microcrystalline, feldspathic matrix with faint relict microshard textures (mean 10-20 μ). These latter features persist only in chlorite-stained, sericitic pressure shadow areas and are obliterated elsewhere by the slaty cleavage. Lithic clasts are mainly feldspar-porphyritic lava, but there are a few clasts with faint vitric tuff textures and a few are clearly pumiceous despite marked (and somewhat preferential) silicification. These features suggest, but do not necessarily confirm, a subaerial origin.

Minor carbonate (dolomite) veining is evident and predates some shearing (i.e. pre- or early syntectonic). These veins range up to 750 μ in width, with incipient displacements along the cleavage planes. They include extremely rare subhedral sphalerite crystals (max. 500 μ) and locally spongy blebs of ?tetrahedrite.

T 29738 (T.S. 31174) K-stain negative.
This is a low-grade sericitic metapelite, essentially a shale with thin, silty interbeds. The rock has a vague, weakly tuffaceous or volcanomict character, and inclusions disseminated, weakly remobilised sulphide of syngenetic character. Relict sedimentary features indicate subaqueous deposition.

JCP 216
73.6m.

The shale consists of near-massive, orientated sericite with thinly disseminated, silt-sized relict clastic quartz grains and rare clastic muscovite flakes. The subordinate silty interbeds range from 250 μ to 1.5 mm in width and tend to be concentrated into zones up to 5 mm wide. These contain relatively abundant clastic quartz, accessory degraded feldspar and traces of muscovite in addition to frequent leucoxenic semi-opaques (partly concentrated into "microplacers"). The matrix is largely sericite, but some bands are distinctly dolomitic. A few bands include traces of tourmaline of authigenic character. Clastic quartz and feldspar grains often show characteristic splintery shapes, typical of devitrified/mildly abraded microshards.

The sediment is broadly folded, with an approximately axial slaty cleavage. Sulphides comprise around 0.5 to 10 % of the area sectioned and are of distinctly bedded distribution with concentrations in the silt beds. Typical are thin "spindles" and microlenses of pyrrhotite (partly pyritised), orientated along the slaty cleavage planes. Accessory, and locally conspicuous, red (moderate Fe-) sphalerite occurs in microscopic blebs (mean 30-35 μ, max. 150x750 μ), similarly partly re-orientated, but with an even more distinctly bedded distribution. Minor traces are further mobilised into thin, semi-continuous dolomite veinlets, subparallel to the slaty cleavage.

T 29739 (T.S. 31175) K-stain weakly positive.
This is a thoroughly altered and relatively strongly sheared porphyritic lava or, more likely, a minor intrusive. Primary compositional details are largely obliterated by the relict fabric which is distinctly andesitic, and two phenocrystal feldspar phases were present in the absence of quartz. On this basis, the rock appears to be of trachyandesitic affinities.

Altered and sheared phenocrysts are abundant, comprising 30-40 % of the area sectioned and sized in the 100 μ - 2 mm range. Approximately half of these are completely chloritised, ferromagnesian types (amphibole, pyroxene, on basis of crude pseudomorphous shapes), and the remainder are sericitised and carbonated (± albitised) feldspars (major plagioclase, minor K-feldspar). These are embedded in a similarly and thoroughly altered groundmass, with vague relict textures indicative of feldspar and subordinate ferromagnesian silicate laths (mean about 50 μ). Leucoxenised accessory opaques are evenly disseminated throughout and, with the medium-grained groundmass, tend toconfirm an intrusive origin ("porphyritic" orthoclase microdiorite or micromonzonite).

One zone in the area sectioned is devoid of altered phenocrysts and appears to represent a cognate xenolith. Cloudy epidote is a minor accessory alteration phase. Late (but sheared) carbonate veinlets occur sporadically. These intersect discontinuous films of chlorite with extremely rare sulphide blebs (chalcopyrite and ?pyrite).

T 29740 (T.S. 31176) K-stain negative.
This is a low-grade tuffaceous metapelite, essentially similar to T 29738. The rock is of subaqueous character, but, in contrast to the previous specimen, is only incipiently mineralised.

The area sectioned comprises essentially a sericitic shale (or slate), weakly laminated with a minor clastic component of silt-sized quartz, minor degraded feldspar and disseminated, mildly abraded microshards (slm. T 29738), concentrated into bands of millimetric widths and partly slumped. Clastic leucoxenic semi-opaques are an accessory constituent, and are partly concentrated into spongy "microplacers". The rock is incipiently dolomitic. Bedding is variably contorted marginal to pretectonic, irregular, vein-like zones of quartz and dolomite, but is elsewhere essentially paralleled by the slaty cleavage. Rare pyrite crystals are associated with the silty bands, and thin, discontinuous films of pyrite heal late (post-tectonic) microfractures.

D. Cowan, B. Sc.

058128

Recd 27/12/79 1 copy 137
1 copy Mt Blanche Petrology

Central Mineralogical Services

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Mr. D.K. Brock
Manager, West Coast Mines
Electrolytic Zinc Co. of
Australasia Ltd.
P.O. Box 21
ROSEBERY / TAS. 7470

21st December, 1979

REPORT CMS 79/12/20
REPORT CMS 79/12/36

YOUR REFERENCE:	Order No. 900077 Order No. 900078
DATE RECEIVED:	11th December, 1979 13th December, 1979
SAMPLE NOS.:	29904, 29905 32087 – not included
SUBMITTED BY:	G. Iliff J. Mill
WORK REQUESTED:	Petrology

for
H.W. Fander, M. Sc.

REPORT CMS 79/12/20

Petrological Descriptions

29904 (T.S. 30303) K-stain positive.
This is a fairly typical granophyre, i.e. a rock of essentially granitic composition with a micrographic (or micropegmatitic) groundmass. There is evidence that this rock represents a felsic differentiate of a more basic intrusive phase and this tends to confirm it as an extension of the quartz diorite.

5367000N
376 360E
Stitt

Frequent weakly, but pervasively sericitised phenocrystal laths (300 μ - 1.2 mm) are present with a weak tendency to clustering and an incipient flow orientation. These are accompanied by sporadic, similarly clustered, marginally resorbed inverted beta quartz phenocrysts (mean 1 mm), and by occasional, completely chloritised, microphenocrystal "ferromags" (biotite ± amphibole, mean 250-300 μ). The groundmass consists of micropegmatitic quartz-albite intergrowths, interspersed with coarser subhedral albite laths (mean 150 μ). Accessory K-feldspar is present along with frequent, partly leucoxenised grains of Ti-magnetite. The groundmass is weakly sericite- and chlorite-stained. The rock has been incipiently stressed and chlorite-muscovite veins occur sporadically.

Overall, the rock is of alkali granitic composition, but is relatively quartz-deficient (trend quartz-microsyenite). The abundant opaques (and microphenocrystal ferromags), however, suggest a basic to intermediate association.

As is typical in granophyres, phenocrysts tend to be mantled with micropegmatite. Thus, the feldspar is poorly resolved in hand specimen. The "rounded" quartz reflects partial resorbtion.

29905 (T.S. 30304) K-stain weakly positive.
This rock is clearly closely related to 29904 and can be classified as a porphyritic quartz microsyenite. In comparison, it is slightly deficient in quartz (largely restricted to the groundmass, sparse microphenocrysts) and carries a slight relative abundance of K-feldspar.

5367 000N
376,350 N
Stitt

The fabric is essentially similar to 29904. In contrast, however, micropegmatite is only incipiently developed (a reflection of the deficiency in quartz) and glomerophenocrystal aggregates of albite laths are both relatively coarse and abundant. These features are sized up to 4 mm diameter and occur interspersed with finer-grained groundmass, thus causing the vague fragmental appearance in hand specimen.

Accessories comprise completely chloritised microphenocrystal ferromags and more or less completely leucoxenised Ti-magnetite. Sericitic alteration of feldspar is relatively marked and pervasive and incipient stress effects are evident.

D. Cowan, B. Sc.

058130

APPENDIX 2

Soil Geochemistry Data Sheets - Stitt, Farm Creek, Colebrook Hill and Dobsons Creek

Litter Geochemistry Data Sheets - Stitt, Farm Creek & Colebrook Hill

Stream Geochemistry Data Sheets - Stitt & Mt. Murchison

0058131

Mn 7C

PROJECT: MT BLACK. STITT * GRID *

CO-ORDINATES: LINE: 5,371,000N (9) FROM: 382,100E TO: 381,800E

SAMPLED BY: M.G.

MATERIAL: Soil

DATE: 14-8-79

DEPTH: C HORIZON

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/(-)	Pb p	Zn p	Cu p	Fe %	Mn	DESCRIPTION
25932	371,000	382,100	20'	15	10	10	4.30	35	CSKFB
33		380		10	5	10	1.40	20	CSKF
34		060		40	85	25	2.2 %	360	CSKF
35		040		10	10	10	1.80	60	CSKF
36		020		45	120	20	3.0 %	505	CSKF
37		382,000		30	30	20	1.2 %	200	CSKF
38		381,980		10	10	10	2.00	60	CSKF
39		960		10	5	10	900	50	CSKF
40		940		30	30	10	1.2 %	175	CSKF
41		920		160	25	15	2700	100	CSKF
42		900		150	25	15	3100	100	CSKF
43		880		250	30	15	4900	105	CS
44		860		40	20	10	3600	120	CSKF
45		840		50	20	10	3700	60	CS
46		820		20	15	10	2700	90	CS
25947		381,800		30	65	10	1.8 %	325	CSKF

05813

Mn

7C

PROJECT: MT BLACK

* STITT GRID.

CO-ORDINATES — LINE: 5371000N (14) — FROM: 384 000 E — TO: 383 520 E

SAMPLED BY: MG.

DATE: 21/8/79

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK Nº

SHEET Nº

JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb PPM	Zn PPM	Cu PPM	Fe %	Mn PPM	DESCRIPTION
25948	5371000	384000	20m						C S R F
49		383980							C S R F
50		9960							C S R F
51		9940							C S R F T
52		9920							C S R F
53		9900							C S R F
54		9880							C S R F T
55		9860							C S R F
56		9840		15	10	10	9.50	25	C S R F O
57		9820		15	15	10	2.35	20	C S O
58		9800		25	15	15	3.60	35	C S R F
59		7860		25	20	15	4.40	40	C S R F O
60		7860		35	25	20	7.50	50	C S R F
61		7840		65	45	25	1.10 %	105	C S R F
62		7820		55	30	20	5.90	30	C S R F T
63		7800		75	70	45	3.2 %	740	C S R F
64		6580		25	40	15	1.2 %	95	C S R F
65		6660		15	30	15	5.90	50	C S R F
66		6640		10	10	15	9.50	25	C S R F O
67		6620		15	10	10	9.50	25	C S R F
68		6600		25	20	10	3.00	25	C S R F
69		5860		15	15	15	2.80	25	C S R F
70		5600		10	10	10	1.20	15	C S
71		5540		15	20	10	2.90	35	C S R F
25972	5388520	5520		5	15	10	1.50	20	C S R F

Mns Blem respugged & Sampled on Foot.

05813

Mw 7C

PROJECT: Mt BLACK

* STITT GRID

CO-ORDINATES
LINE: 5 371 000 N (13)
FROM: 383 500 E
TO: 383 020 E

SAMPLED BY: MG

DATE: 21/8/79

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES (N) S	(E) W	INTERVAL +/-	Pb	ZN	Co	Fe	MN.	DESCRIPTION
25973	371000	383500	20	15	15	15	2600	20	CSRF
74		4800		20	20	10	6150	175	CS
75		4600		15	10	10	640	5	CSRF
76		4400		10	5	10	560	10	CSRF
77		4200		35	20	10	12500	135	CRFOT
78		4000		15	5	10	790	60	CSRF
79		3800		10	10	10	3050	45	CSRF
80		3600		35	25	10	3150	80	CSRFO
81		3400		10	5	10	285	X	CSRF
82		3200		10	5	10	380	X	CSRF
83		3000		10	5	10	625	X	CSRF
84		2800		5	5	10	545	5	CSRF
85		2600		15	60	10	1.8 %	330	CSRF
86		2400		10	30	10	2900	30	CS
87		2200		25	25	10	3350	30	CSRF
88		2000		5	15	10	2100	15	CSRF
89		1800		15	35	10	6650	55	CSRF
90		1600		65	100	15	1.6 %	5300	CSRF
91		1400		65	125	15	2.4 %	2700	CSRF
92		1200		30	55	15	1.0 %	245	CSRF
93		1000		35	50	10	1.5 %	260	CSRF
94		0800		125	60	15	3.4 %	5150	CS
95		0600		60	25	20	2350	2115	CSO
96		0400		15	15	10	1650	25	CSRF
25997		3830200		10	15	10	1450	20	CSRFO

058134

4

Mn 7c

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt BLACK	LINE: 5 371 000 N (12)	MG	SOIL	SHEET Nº
* STITT GRID	FROM: 383 000 E	DATE 21/8/79	DEPTH CHORIZON	JOB Nº
	TO: 382 960 E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	PbP	ZnP	CuP	FeP	MnP	DESCRIPTION
25998	371000	383000	20	15	5	10	800	5	CSRF
99		382980		15	10	10	2400	10	CSRF
26000		382960		75	30	10	5950	55	CSRF

058133

5

Mn 7C

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt BLACK STITT GRID	LINE: 5 371 000 N (15)	MG & NM	SOIL	SHEET No
	FROM: 384 040 E	DATE: 27/9/79	DEPTH: CHORIZON.	JOB No
	TO: 383 860 E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb %	Zn %	Cu %	Fe %	Mn	DESCRIPTION
27027	371,000	384,040	20	10	5	X	950	15	CSRF
28		020		15	10	X	600	20	CSO
29		000		65	40	X	6300	50	CS
30		383,980		80	30	5	2650	50	CSO
31		960		25	10	X	3000	60	CSRF
32		940		30	10	X	950	20	CSO
33		920		25	15	5	710	95	CSRFO
34		900		15	5	15	610	30	CSRF
35		880		15	5	X	520	30	CS
27036		383,860		35	15	5	1000	25	CSRFO

058136

PROJECT: Mt BLACK

* STITT GRID.

CO-ORDINATES
LINE: 5,371,000 N (11)
FROM: 382,940 E
TO: 382,460 E.

SAMPLED BY: MG

DATE: 21/8/79 // 23/8/79.

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK Nº

SHEET Nº

JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL	Pb P	Zn P	Cu P	Fe P	Mn P	DESCRIPTION
27201	371000	382940	20	10	5	10	200	X	CS
02		920		20	15	10	5050	105	CSRF
03		900		20	20	10	3350	40	CSRF
04		880		10	10	10	740	5	CSRF
05		860		35	50	10	2940	140	CSRF
06		840		25	35	10	2160	60	CS
07		820		45	45	15	3180	90	CS RF
08		800		35	65	10	3160	220	CSRF
09		780		30	70	15	3170	260	CS RF
10		760		40	70	15	4150	145	CS RF
11		740		45	100	15	5120	325	CSRF
12		720		35	125	20	4110	345	CSRF
13		700		40	130	20	4170	540	CSRF
14		680		40	110	15	4150	505	CSRF
15		660		75	170	15	4250	820	CS RF
16		640		25	120	15	4400	560	CSRF
17		620		55	100	15	3400	1250	CSRF
18		600		45	115	15	4160	645	CSRF
19		580		45	155	20	5150	625	CSRF
20		560		40	100	15	4300	370	CSRF
21		540		65	205	15	5001	635	CSRF
22		520		40	80	20	3550	405	CSRF
23		500		25	85	10	4150	425	CSRF
24		480		40	240	15	4950	1350	CSRF
27225		460		45	55	15	2150	210	CS RF

058137

Mn 7c

PROJECT: MT BLACK
STITT GRID.

CO-ORDINATES
LINE: 5 311 COON (10)
FROM: 382 440E
TO: 382 120E

SAMPLED BY: MG.
DATE: 23/5/79

MATERIAL: SOIL.
DEPTH: C. HORIZON.

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL + / −	Pb P	Zn P	Cu P	Fe P	Mn.	DESCRIPTION
27226	37100	3824 40	20m	20	40	10	3.65%	135	CSRF
227		420		5	75	10	3.65%	355	CSRF
228		400		15	25	10	1.55%	215	CSRF
229		380		15	35	10	2.65%	200	CSRF
230		360		25	15	10	1.15%	115	CSRF
231		340		15	15	10	2.35%	115	CSRF
232		320		25	60	15	1.70%	315	CSRF
233		300		20	20	10	1.15%	40	CSRF
234		280		15	40	15	1.20%	130	CSRF
235		260		15	70	15	3.55%	205	CSRF
236		240		25	110	20	5.00%	390	CSO
237		220		25	100	15	3.45%	415	CSRF
238		200		20	65	15	3.30%	225	CSRF
239		180		20	130	15	4.00%	370	CSRFHO
240		160		20	35	10	1.30%	110	CSRF
241		140		15	50	10	1.85%	255	CSRF
27242		3821 120		20	65	10	2.70%	230	CSRF

058138 8

Mn

7C

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt Black	LINE: 5 371 000 N (8)	MG	Soil	SHEET Nº
Stitt Grid.	FROM: 381 780E	DATE	DEPTH	JOB Nº
	TO: 381 460E.	23/8/79	C. HORIZON.	

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	INTERVAL +/(-)	Pb P	Zn P	Cu P	Fe P	Mn.	DESCRIPTION
27243	371,000	381 780	20m	15	25	10	6650	155	CSRF
44		381 760		10	10	10	2400	40	CSRF
45		740		10	10	10	1650	45	CSRF
46		720		25	20	10	6250	135	CSRF
47		700		10	10	10	5650	85	CSRF
48		680		15	15	10	1.00%	80	CS
49		660		20	30	10	1.45%	80	CSRF
50		640		15	40	10	1.45%	70	CSRF
51		620		15	45	10	2.45%	190	CSRF
52		600		15	360	75	7.45%	1650	CSRF
53		580		20	190	40	6.85%	880	CSRF
54		560		25	70	30	5.45%	370	CSRF
55		540		10	55	5	4.00%	205	CSRF
56		520		50	50	5	5.05%	140	CSRF
57		500		20	30	5	3.60%	100	CS
58		480		30	40	10	5.35%	80	CO
27259		381,460		10	10	x	1.60%	65	CS

058139

PROJECT: Mt Black

STATT GRID.

CO-ORDINATES — LINE: 5 372 000 N (4) — FROM: 381 340E — TO: 381 320E

SAMPLED BY: NM

DATE: 24/8/79

MATERIAL: Soil

DEPTH: C. HORIZON.

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb PPM	Zn PPM	Cu PPM	Fe %	Mn PPM	DESCRIPTION
27260	372000	381340	20	5	10	X	2.05	20	CSRF
261		360		10	5	X	2.95	25	CS
262		380		10	10	X	2.15	20	CSRF
263		400		10	10	5	1.50	15	C
264		420		10	15	5	1.85	25	CS
265		440		15	30	10	2.60%	230	CSRF
266		460		10	90	10	6.60%	670	CSRF
267		480		10	50	X	2.65%	250	CSRF
268		500		20	20	5	3.85	125	C
269		520		10	10	X	3.15	30	CSRF
270		540		15	15	X	2.15	30	CS
271		560		15	35	5	2.60%	155	CSRF
272		580		20	15	X	4.15	45	CSRF
273		600		15	25	X	4.15%	140	CSRF
274		620		20	95	5	4.65%	500	CSRF
275		640		25	50	5	4.40%	155	CS
276		660		15	75	5	4.40%	230	CRF
277		680		15	70	5	6.50%	295	CRF
278		700		15	30	5	2.25%	175	CSRF
279		720		10	30	5	3.25%	130	CRF
280		740		15	35	X	2.15%	180	CSRF
281		760		20	60	10	5.00%	305	CRF
282		780		15	30	5	2.35%	125	CSO
283		800		10	15	5	1.15%	90	C
27284	372000	381820		15	15	X	3.70	75	CSRFO

058140

Hw 7C

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt Black Stitt Grid.	LINE: 5372000N (5)	WM	Soil.	SHEET Nº
	FROM: 381,840E	DATE: 24/8/79	DEPTH: C. Horizon.	JOB Nº
	TO: 382,140E.			

SAMPLE NUMBER	CO-ORDINATES (N)/S	CO-ORDINATES (E)/W	INTERVAL (+)/-	PbP	ZNP	CuP	FeP	MN.	DESCRIPTION
27285	372000	381,840	20	10	20	X	1.55%	115	CSRF
86		860		15	20	X	1.15%	110	CSO
87		880		10	15	X	1.55%	140	CSRF
88		900		10	10	X	7200	100	CSRF
89		920		50	15	X	4750	80	CSRF
90		940		20	15	X	4500	115	CSRF
91		960		15	10	X	6750	90	CSRF
92		980		10	10	10	1.5%	155	CSRF
93		382000		10	X	5	1.0%	135	CS
94		020		10	10	10	1.5%	135	CSRF
95		040		10	10	10	5600	105	CSRF
96		060		15	75	15	7.2%	440	CS
97		080		15	65	10	3.9%	510	CSRF
98		100		10	10	10	1.6%	95	CS
99		120		10	10	10	1.8%	115	CSO
27300		382,140		20	20	10	2.1%	155	CSO

05814

PROJECT: MT BLACK
STITT GRID.

CO-ORDINATES
LINE: 5 372 000 N (6)
FROM: 382 160 E
TO: 382 640 E

SAMPLED BY: WM.
DATE: 24/8/79

MATERIAL: SOIL
DEPTH: C. HORIZON.

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb P	Zn V	Cu P	Fe P	Mo	DESCRIPTION
27401	372000	382160	20m	10	5	10	1.0%	1	C S R F
02		180		20	40	20	4.4%	2	C S
03		200		20	25	15	3.2%	2	C S R F
04		220		10	X	10	3.5	0	C S R F
05		240		10	X	10	5.0	1	C S R F
06		260		5	X	10	4.3	1	C S R F
07		280		10	X	10	5.8	1	C S R F
08		300		10	5	10	4.9	1	C S R F
09		320		10	10	10	6.5	1	C S R F
10		340		10	10	10	1.2%	1	C S R F
11		360		20	10	10	2.6%	1	C S
12		380		10	25	10	2.1%	1	C S R F
13		400		15	X	10	7.0	1	C S R F
14		420		10	5	5	1.2%	1	C S R F
15		440		10	X	10	7.0	1	C S R F
16		460		10	X	10	3.3	1	C S R F
17		480		15	5	10	9.0	1	C S R F
18		500		10	5	10	1.0%	1	C S
19		520		15	15	10	3.1%	2	C S R F
20		540		15	50	10	4.7%	3	C S
21		560		20	45	10	4.4%	2	C R F
22		580		20	45	15	4.4%	3	C S R F
23		600		20	105	15	5.3%	1	C S
24		620		20	40	15	4.2%	4	C S
27425	S82640			15	65	15	5.6%	3	C S

058142 12

Au 7c

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt Black Stitt Grid	LINE: 5 372 000 N (7)	WM	Soil	SHEET Nº
	FROM: 382660E	DATE: 24/6/79	DEPTH: C. Horizon	JOB Nº
	TO:			

SAMPLE NUMBER	CO-ORDINATES (N)/S	CO-ORDINATES (E)/W	INTERVAL (+)/-	Pb P	Zn P	Cu P	Fe P	Mn	DESCRIPTION
27426	372000	382660	20m	25	80	15	5.7%	565	CSRF
27		680		15	45	15	4.9%	660	CSRF
28		700		20	70	20	4.9%	2150	CSRF
29		720		15	40	10	7.0%	235	CSRF
30		740		25	85	10	5.6%	500	CRF

05814313

Mn 7C 9B

PROJECT: Mt Black

Stitt Grid.

CO-ORDINATES
LINE: 5 370 000 N (8)
FROM: 381 300 E
TO: 381 740 E

SAMPLED BY: JWM

DATE: 27/8/79

MATERIAL: Soil

DEPTH: 'C' HORIZON.

BOOK No.

SHEET No.

JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe %	Mn P	DESCRIPTION
27431	370000	381300	20m	40	40	15	3.50%	190	CSRF
32		320		10	55	5	4.10%	375	C
33		340		40	60	10	5.00%	270	CSRF
34		360		45	70	10	3.70%	150	CSRF
35		380		15	90	5	4.00%	4100	CSRF
36		400		10	30	5	1.40%	175	CSRF
37		420		20	25	X	6300	65	CSRF
38		440		10	15	X	2300	60	CSRF
39		460		5	15	X	1500	50	CSRF
40		480		15	10	X	1000	35	CSRF
41		500		X	10	X	800	35	CSRF
42		520		5	5	X	600	30	CSRF
43		540		10	10	X	1400	35	CSRFO
44		560		15	10	X	1400	55	CSRF
45		580		15	10	X	1100	35	CSRF
46		600		5	10	X	1500	40	CSRFO
47		620		10	10	X	1350	30	CSRF
48		640		5	10	X	2150	40	CSRF
49		660		10	15	X	3300	45	CSRF
50		680		10	10	X	2000	50	CSO
51		700		X	10	X	1050	30	CSRF
52		720		X	10	X	1700	35	CSRF
53		740		5	10	X	1500	40	CSRF
54		760		X	10	X	900	30	CSRF
27455	380000	380		X	5	X	2850	115	CSRF

14

058144

Mn

7C
9B

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black. Stitt Grid.	LINE: 5370 000 N (9)	WM	SOIL	SHEET No
	FROM: 381,800E	DATE	DEPTH	JOB No
	TO: 382 280E	27/8/78	C HORIZON	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe P	Mn	DESCRIPTION
27456	370,000	381,800	20m	20	35	5	1.25%	60	CSRF
57		820		25	60	10	4.25%	125	CSRF
58		840		5	15	X	4100	45	CSRFO
59		860		30	65	10	2.90%	95	CS
60		880		20	30	X	6500	50	CS
61		900		15	30	5	1.20%	80	CSRF
62		920		10	10	X	1950	30	CSRF
63		940		10	10	X	5000	60	CS
64		960		5	10	X	1650	25	CSRF
65		980		60	60	X	2.60%	185	CSRF
66		382,000		40	20	X	1.45%	25	CS
67		020		130	105	5	4.85%	420	CSRF
68		040		105	60	5	4.50%	220	CS
69		060		130	130	20	6.75%	460	CRF
70		080		160	125	20	7.85%	465	CSRF
71		100		125	165	25	8.60%	415	CRF
72		120		60	35	10	2.0%	75	CSRFO
73		140		40	205	10	2.2%	190	CS
74		160		10	10	X	1050	10	CSRFO
75		180		10	10	X	700	15	CS
76		200		35	10	X	600	10	CRFO
77		220		15	10	X	1350	15	CSRF
78		240		55	80	X	5.4%	180	CSRF
79		260		10	15	X	1200	10	CSRF
27480		382280		25	10	X	670	15	CSRF

05814

Mn 7C 9B

PROJECT: M1 BLACK.

STITT GRID.

CO-ORDINATES
LINE: 5370000 N (10)
FROM: 382 300E
TO: 382 540E.

SAMPLED BY: WM

DATE: 27/6/79

MATERIAL: SOIL

DEPTH: C HORIZON.

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe P	Mn	DESCRIPTION
27481	37000	382 300	20m	55	100	X	700	100	CSRF
82		320		30	100	X	480	200	CSRF
83		340		35	100	X	650	100	CSRF
84		360		45	150	X	475	100	CSRF
85		380		65	100	X	310	100	CS
86		400		45	100	X	470	150	CSRF
87		420		170	300	X	2000	300	CSRF
88		440		150	150	X	475	100	CSRF
89		460		150	100	X	280	100	CSRF
90		480		40	100	X	520	150	CS
91		500		55	100	X	520	150	CSRF
92		520		30	100	X	600	250	CSRF
27493	37000	382 540		40	100	X	535	300	CSRF

058146

16

Mn 7C

TRACE	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black	LINE: 5371000N (7)	WM + MG	Soil	SHEET No
Stitt Grid.	FROM: 381 440E	DATE: 28/8/79.	DEPTH: C. Horizon.	JOB No
	TO: 381 320E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/⊖	Pb	Zn	Cu P	Fe P	Mn	DESCRIPTION
27494	371000	381 440	20	15	15	x	2.3%	95	CSRF
95		420		35	25	x	1.70%	140	CSRF
96		400		40	30	x	4.0%	160	CSRF
97		380		35	35	S	3.1%	170	CS
98		360		20	35	x	1.9%	130	CSRF
99		340		15	30	x	2.0%	150	CRF
27500	371000	381 320		20	20	x	1.0%	130	CSRF

058147

PROJECT: Mt Black

Stitt Grid.

CO-ORDINATES
LINE: 5 371 000 N (6)
FROM: 381 300 E
TO: 380 820 E

SAMPLED BY: Wilson & MG.
DATE: 28/8/79

MATERIAL: Soil
DEPTH: C. Horizon.

BOX #:
SHEET #:
JOB #:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb P	Zn P	Cu P	Fe P	Mn	DESCRIPTION
27701	371000	381300	20	25	15		3.8%	90	C S R F
02		1280		10	10		2.7%	70	C S R F O
03		2600		30	30		2.4%	120	C S R F
04		2140		20	20		1.0%	120	C S R F O
05		2220		25	20		4.5%	120	C S O
06		2300		25	15		5.8%	125	C S O
07		1540		45	20		1.0%	130	C S
08		1660		60	30		2.0%	175	C S R F
09		1420		10	25		5.6%	140	C S R F
10		1300		45	100		1.8%	230	C S R F
11		1180		25	40		1.4%	95	C S
12		0980		50	30		5.0%	135	C S R F O
13		0660		45	40		5.7%	85	C S
14		0440		50	20		3.9%	80	C S R F
15		0220		25	35		5.6%	85	C S R F
16		0000		110	15		2.6%	25	C S R F
17	380	9680		30	10		2.4%	55	C S R F
18		9460		55	40		1.4%	240	C S R F O
19		9240		25	10		2.5%	30	C S R F
20		9020		30	10		2.0%	50	C S R F O
21		8800		100	35		1.3%	110	C S O
22		8580		55	130	10	3.4%	520	C S R F
23		8360		20	15	X	3.4%	25	C S R F
24		8140		25	65	15	3.5%	210	C S R F
27725	371000	380820	20	15	10	X	1.7%	20	C S R F

058148 18

Mn 7C

PROJECT: Mt Black Stitt Grid.	CO-ORDINATES LINE: 5371000 N (5) FROM: 380,800 E TO: 380,320 E	SAMPLED BY: Wm Hag	MATERIAL: Soil	BOOK Nº	
		DATE: 28/8/79	DEPTH: C Horizon	SHEET Nº	
				JOB Nº	

SAMPLE NUMBER	CO-ORDINATES (N/S)	CO-ORDINATES (E/W)	INTERVAL +/(-)	Pb P	Zn P	Cu P	Fe P	Mn	DESCRIPTION
27726	371000	380800	2 Um	25	5	X	6000	25	CSRF
27		780		35	130	5	3.55%	370	CSRF
28		760		30	15	X	2100	55	CSRFO
29		740		35	65	5	1.50%	140	C
30		720		10	20	X	1.25%	80	CSRF
31		700		20	95	5	2.00%	355	CSRF
32		680		20	65	5	1.35%	170	CSRF
33		660		20	60	5	1.85%	210	CSRF
34		640		30	95	5	1.65%	265	CSRF
35		620		60	115	20	2.05%	340	CSRF
36		600		30	20	10	4100	85	CSRF
37		580		25	10	X	1900	35	CSRF
38		560		25	10	X	2200	30	CSRFO
39		540		5	15	X	2300	15	CSRF
40		520		5	5	X	1600	5	CSRF
41		500		110	30	5	1650	30	CO NO C Horiz
42		480		X	X	X	1950	20	CRF
43		460		5	10	X	2500	45	CSRF
44		440		5	10	X	1.35%	25	CSRF
45		420		10	15	X	1.65%	55	CS
46		400		10	20	X	1.50%	65	CSRF
47		380		65	130	10	3.00%	840	CSRF
48		360		20	40	5	2.35%	75	CS
49		340		15	10	5	1.35%	20	CRF
27750	371000	380320		25	20	5	2.70%	35	CSRF

05814 9

7C
7D

PROJECT: Mt BLACK STITT GRID

CO-ORDINATES
LINE: 5 371 000 N (4)
FROM: 380 300 E
TO: 379 820E

SAMPLED BY: WMH MG

DATE: 28/8/79

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/−	Pb P	Zn P	Cu P	Fe P	Mn	DESCRIPTION
27251	371 000	380 300	20m	60	90	25	4.05%	145	CSRF
52		280		20	15	5	2.95%	35	CSRF
53		260		15	15	5	2.10%	20	CSRF
54		240		10	20	5	2.25%	40	CSRF
55		220		20	35	10	5.90%	65	CS
56		200		20	25	X	3.80%	70	CSRF
57		180		25	30	5	5.35%	85	CS
58		160		40	30	5	4.00%	80	CS
59		140		30	35	5	4.25%	120	RF
60		120		25	20	X	3.10%	65	CS
61		100		20	25	X	3.25%	80	CSRF
62		080		35	40	5	5.00%	140	CSRF
63		060		35	50	5	2.90%	150	CSRF
64		040		45	40	5	4.70%	120	CSRF
65		020		10	20	X	1.80%	140	CSRF
66	380 000			5	10	X	2.85%	50	CSRF
67	379 980			15	10	X	2.90%	45	CSRF
68		960		20	10	X	2.70%	50	CSRF
69		940		10	10	X	4.00%	85	CSRF
70		930		15	10	X	3.15%	65	CSRF
71		900		10	10	X	3.50%	25	CS
72		880		20	20	5	1.20%	90	CSRF
73		860		5	15	X	1.80%	85	CSRF
74		840		15	5	X	1.85%	30	CSRF
27275	379 820			20	10	X	1.45%	70	CSRF

Mn 7D

PROJECT: MT BLACK STITT GRID.

CO-ORDINATES
LINE: 5 371 000 N (3)
FROM: 379 800 E
TO: 379 460E

SAMPLED BY: NIMINC P
DATE: 28/5/79

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb	Zn	Cu	P	FeP	Mn	DESCRIPTION
27726	371,000	379,800	20	15	15	1	X	3150	25	CSRF
727		780		10	10		X	3300	100	CSRF
728		760		10	10		X	2600	55	CSRF
729		740		15	10		X	2250	50	CSRF
730		720		15	15		X	1.80%	40	CSRF
731		700		40	30		5	1.62%	340	CS
732		680		15	10		X	0.15%	45	CS
733		660		10	10		X	4200	45	CSRF
734		640		10	15		X	3750	50	CSRF
735		620		15	15		X	3.00%	50	CSRF
736		600		30	15		X	2.50%	50	CSRF
737		580		25	20		X	5000	55	CSRF
738		560		25	15		X	4550	55	CSRF
739		540		20	10		X	3800	50	CSRF
740		520		20	15		X	4200	50	CSRF
741		500		20	20		X	4850	50	CSRF
742		480		20	20		5	1.15%	55	CSRF
27743		379,460		10	15		X	7800	20	CSRF

058151

21

Mn 70

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt Black Stitt Grid	LINE: 5312000N (3)	WM + MG	Soil	SHEET Nº
	FROM: 381 320E	DATE: 6/9/79	DEPTH: C HORIZON	JOB Nº
	TO: 381 000 E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	PbP	ZnP	CuP	FeP	Mn.	DESCRIPTION
27984	312000	381320	20m	10	10	10	3650	75	CSRF
85		300		10	5	10	3750	20	CSRF
86		280		5	5	X	5250	40	CSRF
87		260		5	10	X	2250	15	CSRF
88		240		10	10	X	2700	20	CSRFO
89		220		25	15	5	8500	45	CSRFO
90		200		5	10	X	1.05%	30	CSRF
91		180		10	10	X	1.45%	60	CSRF
92		160		5	10	X	6050	45	CSRF
93		140		10	5	X	9000	75	CSRF
94		120		10	5	X	1.00%	35	CSRF
95		100		15	35	20	6.25%	170	CSRF
96		080		15	15	5	4.00%	70	CSRF
97		060		5	20	10	1.45%	45	CSRF
98		040		5	X	X	850	X	CSRF
99		020		10	5	X	3000	15	CSRF
28000		381000		5	X	X	2750	20	CSRF

058152 22

Mn 70

PROJECT: Mt Black Stitt Grid.

CO-ORDINATES
LINE: 5 372 000 N (2)
FROM: 380 960 E
TO: 380 500 E

SAMPLED BY: WM.

DATE: 6/9/79

MATERIAL: Soil

DEPTH: C Horizon.

BOOK N°

SHEET N°

VOL N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe ppm	Mn ppm	DESCRIPTION
28001	372,000	380,980	20m	10	X	X	16000	10	CSRFO
02		960		5	5	X	20000	40	CSRF
03		940		20	15	X	26500	20	CSRF NO C HORIZ.
04		920		5	5	X	40000	15	CSRF
05		900		5	X	X	17000	10	CSRF
06		880		5	5	X	13000	10	CSRF
07		860		5	X	X	10000	5	CSRF
08		840		10	10	5	90000	50	CSRF
09		820		15	25	5	24200 ppm	60	CRF
10		800		15	40	5	34000 ppm	240	CSRF
11		780		15	15	X	24400 ppm	105	CSRF
12		760		15	10	X	35000	20	CSRF
13		740		5	10	X	63000	50	CSRF
14		720		10	10	X	14055 ppm	75	CSRF
15		700		10	10	X	14455 ppm	65	CSRF
16		680		15	10	X	14805 ppm	40	CSRF
17		660		15	25	X	32555 ppm	110	CSRF
18		640		20	25	5	64555 ppm	95	CSRF
19		620		15	15	5	95000	55	CSRF
20		600		25	20	5	25555 ppm	110	CS
21		580		35	35	10	24605 ppm	190	CS
22		560		25	25	X	35557	70	CSRF
23		540		15	25	X	37025	95	CSO
24		520		15	65	5	44955 ppm	170	CSRF
28025	372,000	380,500		15	15	X	46855 ppm	35	CS

058155 23

Mh 7C

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black Stitt Grid	LINE: 5 372000 N (1)	NM	Soil	SHEET No
	FROM: 380480E	DATE: 6/9/79	DEPTH: C HORIZON	JOB No
	TO: 380 300E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppb	Zn ppb	Cu ppb	Fe ppb	Mn	DESCRIPTION
28026	372,000	380,480	20m	10	5	X	1.40%	10	CSRF
27		460		15	X	X	3850	X	CSRF
28		440		10	X	X	2100	5	CSRF
29		420		15	10	X	2050	10	CSRF
30		400		5	X	X	1950	X	CSRF
31		380		5	X	X	1800	X	CSRF
32		360		5	5	X	1350	X	CSRF
33		340		10	10	X	1450	5	CSRF
34		320		5	X	X	1100	15	CSRF
28035		380,300		10	X	X	950	15	CSRF

24

058154

Mn 7D

PROJECT: Mt BLACK STITT GRID.

CO-ORDINATES
LINE: S 371 000N (1)
FROM: 379040E
TO: 378600E

SAMPLED BY: WM
DATE: 17/10/79

MATERIAL: SOIL
DEPTH: CHORIZON.

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Dbl	Znp	Cup	Fep	Mn	DESCRIPTION
28036	371,000	379040	20m						CS
31				NO SAMPLE TAKEN					
32		379000		15	20	15	120%	75	CSRF
33		378960		15	25	20	425%	95	C
40		940		15	45	15	660%	210	CSRF
41		920		10	25	5	220%	100	C
42		900		25	60	20	445%	225	CSRF
43		880		5	25	5	270%	75	C
44		860		5	25	X	9500	55	CSD
45		840		5	40	10	445%	85	CRF
46		820		15	55	5	640%	100	CSRF
47		800		15	25	5	105%	40	C
48		780		20	25	X	5300	45	CSRF
49		760		15	20	X	3750	50	SCRF
50		740		10	15	X	2750	45	CSRF
51		720		5	10	X	1300	25	CSRF
52		700		5	20	X	2500	40	CSRF
53		680		10	25	X	2300	35	CSRF
54		660		10	25	X	2250	35	CSD
55		640		10	25	X	1350	30	SCRF
56		620		10	15	5	1700	30	CSRFO
57		600		5	15	X	1800	30	CSRF
28058		378		5	10	X	1750	30	CSRFO

26

058155

Mn 7C 98

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black Stitt Grid.	LINE: 5,370,000 N (7)	WM.	Soil	SHEET No
	FROM: 381280E	DATE 18/10/79	DEPTH C Horizon.	JOB No
	TO: 380800E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	P.b.P	Z.N.P	C.U.P	F.e.P	M.N.	DESCRIPTION
28059	370,000	381280	20	30	65	15	4.15%	230	C
60		260		35	70	15	3.80%	500	CS
61		240		25	75	30	4.55%	370	C
62		220		45	70	110	3.85%	235	CSRF
63		200		20	90	15	4.05%	810	C
64		180		15	65	10	3.85%	460	CSRF
65		160		45	75	15	3.75%	545	C
66		140		25	105	10	4.15%	645	CSRF
67		120		30	65	10	4.10%	490	CRF
68		100		50	75	15	4.25%	1750	CS
69		080		55	80	15	5.10%	2900	CRF
70		060		45	85	15	4.45%	1150	CSRF
71		040		35	70	15	3.45%	160	C
72		020		25	50	10	2.00%	275	CSRF
73		000		35	60	25	2.05%	155	C
74		380980		25	50	5	4.25%	140	CSRF
75		960		20	55	5	3.45%	185	C
76		940		25	60	15	3.00%	200	CSRF
77		920		35	55	20	3.00%	560	CO
78		900		50	50	20	2.85%	210	CSRF
79		880		30	95	45	4.70%	745	CRF
80		860		45	100	45	3.45%	1400	CSRF
81		840		20	60	10	3.05%	1250	CO
82		820		15	160	30	5.30%	950	CSRF
28083		380800		20	70	15	3.40%	415	CSRF

26

058156

PROJECT: Mt BLACK

STITT GRID.

CO-ORDINATES

LINE: 5370000N (6)

FROM: 380750E

TO: 380460E

SAMPLED BY: WM.

DATE: 15/10/79

MATERIAL: SOIL

DEPTH: B HORIZON.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
2 80 84	37 0000	380 780	20m	20	75	20	4.00%	205	CRF
85		760		25	110	15	4.65%	730	CSRF
86		740		20	60	10	3.30%	800	CS
87		720		35	65	X	2.45%	185	CSRF
88		700		25	120	35	4.15%	590	CSO
89		680		15	60	15	4.10%	225	C
90		660		35	105	20	4.60%	800	C
91		640		35	150	15	4.20%	1000	CSRF
92		620		45	105	15	3.45%	900	C
93		600		55	110	10	3.75%	260	CSRF
94		580		35	75	10	5.00%	1100	CSRFO
95		560		25	55	10	3.05%	330	CSRF
96		540		30	50	15	2.85%	180	CSO
97		520		25	35	10	2.45%	180	C
98		500		20	45	5	2.80%	150	CSO
99		480		35	40	15	1.50%	135	CSO
2 81 00		380 460		15	25	5	1.40%	100	CSO

27

0581S

Hm 7D

PROJECT: M1 BLACK

STITT GRID.

CO-ORDINATES
LINE: 5 371000N (2)
FROM: 379440E
TO: 379660E

SAMPLED BY: WM.

DATE: 17/10/79

MATERIAL: SOIL

DEPTH: C HORIZON.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb.P	Zn.P	Cu.P	Fe.P	Mn.	DESCRIPTION
28581	371000	379440	20m	5	20	X	6400	60	CSRF
82		420		5	15	X	2800	35	CSRF
83		400		5	15	X	2550	20	CSRF
84		380		5	20	X	6100	30	CSRF
85		360		5	15	X	7550	20	C
86		340		10	10	X	5150	10	CSRF
87		320		5	15	X	6500	15	CS
88		300		5	15	X	3650	10	CSRF
89		280		5	10	X	5860	10	CS
90		260		5	10	X	3560	10	CSRF
91		240		5	10	X	1950	10	CSRF
92		220		5	10	X	850	10	CSRF
93		200		5	10	X	1100	10	CSRF
94		180		10	5	X	1350	15	CSRF
95		160		5	10	X	2400	30	CSRF
96		140		5	10	X	2450	30	CSRF
97		120		5	10	X	1200	35	CSRF
98		100		10	10	X	1200	25	CSRF
99		080		5	10	X	800	20	SCRF
28600		379660		60	55	10	2850	40	CSD

20

Mn 7D 7C 9A 9B

058158

PROJECT: MH BLACK. STITT GRID.

CO-ORDINATES
LINE: 5 370 000 N. (S)
FROM: 380 440E
TO: 379 960E

SAMPLED BY: WM
DATE: 18/10/79

MATERIAL: SOIL
DEPTH: C HORIZON.

BOOK No.
SHEET No.
JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +Θ	P.b. ppm	Zn ppm	Cu ppm	Fe. %	Mn ppm	DESCRIPTION
28901	370 000	380 440	20m	15	35	10	2.00%	105	CSRF
02		420		15	30	5	1.35%	160	CS
03		400		5	15	5	3900	40	CSRF
04		380		5	20	5	1800	30	CSO
05		360		10	15	X	1700	30	CSRFO
06		340		5	15	5	1400	25	CS
07		320		10	15	5	1250	35	CSRF
08		300		5	10	X	800	25	CS
09		280		5	10	X	950	20	CSRF
10		260		5	15	X	850	20	CSRF
11		240		10	15	10	1400	30	CSRFO
12		220		25	40	15	4.20%	60	CS
13		200		55	75	190	2.20%	145	CSRFO
14		180		20	50	20	1.10%	110	SCRF
15		160		10	15	5	1000	25	SCRF
16		140		10	20	5	3350	35	CSRF
17		120		5	15	5	1050	25	SCRF
18		100		10	20	5	2000	40	CS
19		080		10	15	5	1750	40	SCRF
20		060		5	20	5	3600	50	CSRF
21		040		5	15	20	1000	35	CSRFO
22		020		10	20	C5	1150	35	CSO
23	370	000		45	45	60	8000	135	CSO
24	379	980		15	25	5	6200	75	CSO
25	379	960		5	15	5	1000	35	SCRA

29

058159

Mn 7D 9A

PROJECT: Mt BLACK STITT GRID

CO-ORDINATES
LINE: 5 370000N (1)
FROM: 378260E
TO: 378740E

SAMPLED BY: WM.
DATE: 22/10/79

MATERIAL: SOIL
DEPTH: B HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
284263	7000	378260	20m	5	20	X	2.10	45	CSRF
264	7020			10	25	X	2.25	55	SCRF
265	7040			5	20	X	1.95	40	CSRF
266	7060			20	100	10	1.80%	600	CSRF
267	7080			15	30	5	7.30	130	CSRFO
268	7100			10	30	5	4.45	65	SCRF
269	7120			10	20	X	5.45	50	CS
270	7140			5	30	5	1.65%	55	CSRF
271	7160			5	15	10	2.20	35	C
272	7180			5	15	5	1.55	25	CSRFO
273	7200			10	60	15	1.70%	415	CSRF
274	7220			10	25	5	1.10%	60	CSRF
275	7240			15	15	5	2.30	35	SCRF
276	7260			15	25	25	2.35	40	CSO
277	7280			15	15	15	3.40	30	SCRF
278	7300			45	40	100	1.35	30	CO
279	7320			15	10	5	.95	20	CSRF
280	7340			10	15	5	1.00	20	CSO
281	7360			20	15	5	1.15	25	SCRF
282	7380			15	10	25	.90	20	CSRFO
283	7400			10	10	5	.80	20	CSRF
284	7420			20	30	35	1.10	30	CSO
285	7440			5	10	X	1.70	15	CSRF
286	7460			5	15	15	.85	25	CSRF
287	7480	378740		10	15	X	2.85	35	SCRF

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78

30

058160

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9A

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black Stitt Grid.	LINE: 5 370000N (2)	WM	Soil	SHEET No
	FROM: 378760E	DATE: 22/10/79	DEPTH: Chorron.	JOB No
	TO: 379240E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	P.b.p	Z.N.p	C.u.p	F.e.p	M.N.	DESCRIPTION
28951	370000	378760	20	15	20	5	3550	55	SCRF
52		780		20	35	45	1.30%	65	CSRF
53		800		5	20	10	3050	30	CSRF
54		820		45	25	90	1600	30	CO
55		840		25	25	X	1400	30	CSRFO
56		860		10	20	10	2450	45	CSRA
57		880		25	75	20	1.90%	175	CSRA
58		900		10	20	10	2850	40	CSRF
59		920		15	45	15	3.05%	75	CSRA
60		940		20	20	X	2600	45	CS
61		960		20	25	20	3100	45	CSRFO
62		980		30	25	5	3350	50	CSRF
63		379000		55	60	40	2250	35	CO
64		020		15	25	5	3000	45	CSRF
65		040		15	25	10	3450	40	CSRF
66		060		15	20	5	1450	20	CSO
67		080		15	25	X	2950	35	CSRF
68		100		15	20	5	2200	30	CO
69		120		5	25	5	1500	25	CSRF
70		140		5	20	15	1000	25	CSO
71		160		25	30	15	1000	25	CSO
72		180		10	5	X	820	15	SCRF
73		200		5	10	X	800	15	SCRF
74		220		10	5	X	900	15	CSRF
28975		379240		5	5	5	1650	15	SCRF

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058161

PROJECT: NH BLACK
STITT GRID.

CO-ORDINATES
LINE: S 370 000 N (3)
FROM: 379260E
TO: 379740E

SAMPLED BY: NM
DATE: 22/10/79

MATERIAL: SOIL
DEPTH: C HORIZON.

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	INTERVAL	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
28976	370,000	379260	20	10	5	5	2.10	25	CS
977		280		5	5	5	2.10	15	CSRFO
978		300		10	15	145	3.55	15	SCRF
979		320		20	25	65	2.05	25	CSRFO
980		340		15	5	5	2.45	70	CO
981		360		20	15	10	5.25	95	CSRF
982		380		5	10	X	2.60	100	CS
983		400		25	20	15	1.90	85	CSO
984		420		5	10	5	1.60	50	CSRF
985		440		5	10	5	2.20	30	CSO
986		460		10	10	5	7.55	170	SCRF
987		480		35	25	45	2.35%	60	C
988		500		30	15	5	3.95	100	CS
989		520		25	15	5	2.20	115	CSO
990		540		10	15	X	3.50	105	CSRF
991		560		10	15	X	3.25	55	CSRF
992		580		10	20	5	1.95%	70	C
993		600		5	10	5	1.10	20	SCRF
994		620		5	10	X	1.20	20	CSRF
995		640		5	10	5	1.00	20	SCRFO
996		660		10	10	10	0.85	25	CSO
997		680		85	50	25	1.05	30	CO
998		700		10	5	5	0.40	10	CS
999		720		25	20	15	1.35	15	CO
29000	379	740		10	10	X	0.85	25	C

32

058162

Mn

7D
9A

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black Stitt Grid	LINE: 5 370 000 N (4)	WM	Soil	SHEET No
	FROM: 379 760 E	DATE: 22/10/79	DEPTH: C Horizon.	JOB No
	TO: 379 940 E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	P.b P	Z.N.P	C.u.P	F.e.P	M.N.	DESCRIPTION
29101	370000	379760	20	10	15	5	1750	30	SCRF
02		780		5	15	5	5650	30	CRF
03		800		60	30	70	6800	45	CO
04		820		25	25	5	2050	100	SCRF
05		840		15	10	5	2000	50	CSO
06		860		10	10	5	1800	50	CSRF
07		880		15	15	10	1950	50	SCRF
08		900		15	35	5	5050	85	CS
09		920		10	10	5	2350	35	SCRF
29110		379940		5	10	X	1950	30	SCRF

33

058163

Mm 7C 9C

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt BLACK STITT GRID.	LINE: 5 370 000 N (11)	WM	SOIL	SHEET No
	FROM: 383040 E	DATE: 23/10/79	DEPTH: C HORIZON.	JOB No
	TO: 382560E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	P.b.p	Z.N.p	C.u.p	F.e.p	M.N.	DESCRIPTION
29111	370,000	383040	20m	35	45	5	1.30%	1.30%	CS (No "C")
12		020		10	5	30	1050	200	CSRF
13		000		10	10	10	1250	90	CSRF
14		382980		10	5	5	950	20	CSRF
15		960		25	15	95	3100	55	CSRF
16		940		55	25	370	2150	105	CSRF
17		920		20	30	35	7400	50	CSRF
18		900		25	80	80	1.10%	70	CSRF
19		880		15	50	15	7050	55	CSRFO
20		860		25	55	10	1.10%	50	CSO
21		840		25	80	60	2.10%	60	CSRF
22		820		25	85	15	2.60%	50	CSRF
23		800		30	100	25	3.65%	70	CSO
24		780		25	60	10	1.10%	40	CSRF
25		760		15	50	5	9500	35	C
26		740		15	90	15	2.35%	45	CS
27		720		15	30	10	5400	30	CSO
28		700		5	20	10	2900	20	CSRF
29		680		10	20	5	1350	50	SCRF
30		660		10	15	10	1050	25	CSO
31		640		40	20	60	1450	40	CSO
32		620		55	30	20	1300	35	CSO
33		600		15	20	10	1400	35	CSO
34		580		10	20	5	800	45	CSO
29135		382560		5	15	5	850	30	CSO

34

058164

Mn

✓ 9A

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
mt BLACK STITT GRID.	LINE: 5369 000 N (4)	WM.	SOIL	SHEET No
	FROM: 378 520 E	DATE: 30/10/79	DEPTH: C HORIZON	JOB No
	TO: 378 360 E			

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	INTERVAL +/-	Pb ppb	Zn ppb	Cu ppb	Fe P	Mn	DESCRIPTION
29192	369,000	378520	20	5	10	x	3000	60	CSO
93		500		5	10	x	1750	50	CSO
94		480		5	15	x	3000	195	CSRF
95		460		5	10	x	2200	65	CSRFO
96		440		5	20	5	2100	55	CSRF
97		420		5	10	x	1650	50	CSO
98		400		5	10	x	1500	45	CSRF
99		380		5	10	x	2000	50	CSO
29200		378360		5	10	x	1800	40	CSO

058165

35

Mn

✓ 9A

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT BLACK STITT GRID.	LINE: 5,369,000N [3]	WM	SOIL	SHEET No
	FROM: 378,340E.	DATE	DEPTH	JOB No
	TO: 378,000E	30-10-79	C. HORIZON.	

SAMPLE NUMBER	CO-ORDINATES (N)/S	CO-ORDINATES (E)/W	INTERVAL (E)	Pb	Zn	Cu	Fe %	Mn	DESCRIPTION
293			20"						
29301	369,000	378,340		5	10	x	1250	30	CSRF
02		320		5	5	x	1150	30	CSRF
03		300		20	30	15	9000	40	CSO
04		280		15	20	5	3500	45	CSRF
05		260		45	15	5	3400	45	CSRFO
06		240		60	45	15	2.2%	115	CO
07		220		15	20	10	1.25%	85	CSRF
08		200		15	45	15	3.3%	180	CO
09		180		5	10	x	2100	35	CSRF
10		160		5	10	x	2800	35	CSO
11		140		5	15	x	3800	60	CSORF
12		120		5	20	x	5900	60	CO
13		100		5	15	5	3900	65	CSRF
14		80		10	15	5	2900	80	CSO
15		60		10	10	x	1200	25	CSRF
16		40		15	20	5	1100	20	CSO
17		20		25	25	10	1.4%	65	CSO
29318		378,000		25	55	15	1.65%	430	CSO

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058166

PROJECT: MT. BLACK.
STITT GRID.

CO-ORDINATES
LINE: 5,364,000N. (2)
FROM: 377,980E.
TO: 377,500E.

SAMPLED BY: W.M.
DATE: 30-10-74.

MATERIAL: SOIL.
DEPTH: C-Horizon.

JOB No:
SHEET No:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
29319	3690000	377980	20	20	45	15	4.2	1850	CSRF
320		9600		20	45	15	3.2	695	CO
321		9400		30	50	25	2.5	1900	CS
322		9200		15	25	10	1.4	120	CSO
323		9000		35	20	10	1.5	60	CSRF
324		8800		10	20	10	6.3	245	SCRF
325		8600		115	60	15	1.52	5750	CSO
326		8400		55	50	10	6.7	2400	CSORF
327		8200		15	15	5	2.1	800	CSRF
328		8000		15	10	5	3.4	650	CSO
329		7800		25	20	5	3.4	1900	CSRFO
330		7600		15	10	X	1.5	550	CSO
331		7400		20	15	5	2.1	800	CSO
332		7200		10	15	5	1.1	450	C
333		7000		25	25	5	2.1	800	CSRF
334		6800		25	20	5	2.6	500	CSRF
335		6600		45	45	15	5.2	2000	CSORF
336		6400		10	10	X	3.1	500	CO
337		6200		15	10	5	1.8	250	CSO
338		6000		10	10	X	1.7	350	CSRF
339		5800		5	10	X	2.0	300	CSRF
340		5600		5	10	X	3.5	700	CRF
341		5400		15	12	X	4.0	750	CSRF
342		5200		25	15	5	2.8	350	CSO
29343	3685400	377500		15	10	5	1.2	350	CSRF

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05816

PROJECT: MT. BLACK
STITT GRID.

CO-ORDINATES
LINE: 5,369,000N. (11)
FROM: 377,480E.
TO: 377,360E.

SAMPLED BY: W.M.
DATE: 30-10-79.

MATERIAL: SOIL.
DEPTH: C HORIZON

SAMPLE NUMBER	CO-ORDINATES ⓝ/S	CO-ORDINATES Ⓔ/W	Interval +/⊖	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
29346	369000	377480	20	5	10	X	1.60	2145	C O
29345		377460		5	10	X	2.10	330	C S R F
29344		377440		5	10	X	2.50	300	C S R F
29347		377420		5	15	X	3.30	500	C S R F
29348		377400		10	15	X	2.00	350	C
29349		377380		5	10	X	1.45	200	C S R F
29350		377360		5	10	X	1.65	250	C S R F

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058168

Mn

PROJECT: MT. BLACK

STITT GRID

CO-ORDINATES

LINE: 5,371,500 N (S)

FROM: 382,160 E

TO: 382,640E

SAMPLED BY: B.M.

DATE: 7/12/79

MATERIAL: Soil

DEPTH: C. HORIZON.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb ppm	Zn ppm	Cu	Fe %	Mn ppm	DESCRIPTION
30371	371,500 N	382,160 E	20	20	40	5	3.45%	225	CSR
72		180		15	20	X	1.50	120	COS
73		200		20	25	X	1.55%	215	CR
74		220		20	25	5	2.85%	135	COS
75		240		20	35	5	3.85%	405	CRO
76		260		5	5	X	6800	100	CO
77		280		20	20	5	3.20%	175	CRS
78		300		25	35	15	4.65%	245	CR
79		320		10	10	X	1.95%	30	CO
80		340		15	45	5	8.00%	240	CRSO
81		360		10	10	5	6850	95	CRO
82		380		25	30	20	3.05%	225	CRS
83		400		45	20	10	2.90%	155	COS
84		420		25	35	10	4.15%	115	CRO
85		440		25	25	10	3.60%	260	CR
86		460		25	25	10	4.50%	140	CR
87		480		35	30	10	3.45%	110	CR
88		500		40	55	10	4.80%	485	CRO
89		520		25	25	10	4.45%	130	CS
90		540		20	15	5	1.65%	225	CR
91		560		15	15	5	1.60%	235	C
92		580		35	55	10	4.25%	240	CS
93		600		45	50	10	3.25%	150	CO
94		620		15	130	10	4.80%	615	CR
30395		3826 40		25	90	10	6.25%	430	CR

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058169

PROJECT: MT. BLACK

SITT GRID.

CO-ORDINATES
LINE: 5,371,500N (61)
FROM: 382,660 E
TO: 382,740E

SAMPLED BY: B.M.

DATE: 7/12/79

MATERIAL: SOIL

DEPTH: C. HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Mo ppm	Zn ppm	Co ppm	Mn ppm	DESCRIPTION
30396	371,500	382660	20	20	155	15	615	CR
397		6800		15	130	10	810	CR
398		7000		30	100	10	390	CSR
399		7120		25	110	70	395	CR
30400		382740		25	110	10	365	CR

40

058170

Mn 7C

SHEET: MT. BLACK	CO-ORDINATES LINE: 5,371,500N (7)	SAMPLED BY: B.M.	MATERIAL: Soil	BOOK No.
STITT GRID.	FROM: 382,760 E	DATE: 7/12/79.	DEPTH: C. HORIZON	SHEET No.
	TO: 383,240E.			JOB No.

SAMPLE NUMBER	CO-ORDINATES Ⓝ/S	Ⓔ/W	Interval Ⓝ/-	Pb P	Zn P	Cu P	Fe P	Zn	DESCRIPTION
30740	371,500	382,760	20	30	105	10	6.25%	345	CSR
41		780		25	105	10	5.85%	310	CR
42		800		20	45	5	3.05%	110	CR
43		820		25	70	5	5.20%	215	CR
44		840		20	85	10	5.55%	210	C
45		860		15	40	10	2.95%	120	CRO
46		880		20	55	10	4.20%	120	C
47		900		30	125	5	4.40%	255	CO
48		920		30	70	10	4.15%	135	CO
49		940		35	85	10	5.35%	130	C
50		960		30	65	10	4.55%	135	CR
51		980		20	175	25	6.60%	530	CR
52		383,000		25	125	5	2.95%	340	CS
53		020		5	10	x	4400	30	CSOR
54		040		5	15	5	3100	50	RCSO
55		060		50	70	35	5.65%	220	CS
56		080		10	15	5	8000	80	COSR POSSIBLE CONTAM
57		100		5	10	x	1350	15	SCO POSSIBLE CONTAM NO CHR
58		120		20	10	5	2800	30	SOC POSSIBLE CONTAM NO CHR
59		140		15	20	x	800	135	SCR POSSIBLE CONTAM NO CHR
60		160		15	15	10	2850	20	SCRO POSSIBLE CONTAM NO CHR
61		180		5	5	5	575	10	SR
62		200		15	10	x	950	20	NO C HORIZON B HORIZON SCOR
63		220		5	5	5	640	10	SRC NO C HORIZON
30764		383,240		5	5	x	795	10	SR NO C HORIZON

4

050171

Mn 7C

GRID: AH BLACK SCOTT GRID.

CO-ORDINATES LINE: 5 371 500N (8) FROM: 383 260E TO: 383 360E.

SAMPLED BY: WM.

DATE: 7/12/79.

MATERIAL: SOIL

DEPTH: CHORIZON.

SAMPLE NUMBER	CO-ORDINATES (N)S	(E)W	Interval (+)-	Pb P	Zn P	Cu P	Fe P	Mn	DESCRIPTION
30765	371500	383260	20m	5	5	5	225	10	*SOC
66		280		5	5	10	335	10	*S
67		300		5	5	X	850	15	*S
68		320		5	5	X	550	15	*SCRF
69		340		5	5	5	230	10	*SRFCO
30770		383360		5	5	X	545	10	*S

NB *: NO 'C' horizon

Mn 7C

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black. Stitt Grid.	LINE: 5 370 500 N. (11) FROM: 381 880 E. TO: 382 360 E.	Jacques Sayers. DATE 23/12/79.	Soil. DEPTH C Horizon.	SHEET No JOB No

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (+)/-	P Pb	P Zn	Cu P	Fe P	Mn	DESCRIPTION
30771	370500	381850	20m	15	45	x	2.80%	150	CRA
72		900		10	20	x	6700	30	CS
73		920		10	25	x	6400	105	CRAS
74		940		15	5	x	950	20	SRA
75		960		15	15	x	1600	20	CSRA
76		980		15	30	x	5850	80	CRA
77		382000		20	160	5	3.90%	735	CRA
78		020		15	35	5	5450	70	COS
79		040		20	40	x	1.35%	130	CORA
80		060		20	15	x	1950	35	CO
81		080		10	10	x	1200	15	CRAS
82		100		20	60	x	2.55%	200	CRA
83		120		25	40	5	1.20%	170	CS
84		140		15	65	x	1.25%	230	CRA
85		160		35	120	5	2.50%	450	CRAO
86		180		20	55	x	7000	150	CRAS
87		200		5	20	x	570	15	RASC
88		220		10	10	x	405	20	SRACO
89		240		10	15	x	1050	40	RAOS
90		260		15	15	x	4650	70	*RA
91		280		55	20	x	1.10%	20	*SCO
92		300		20	5	x	405	160	*OS
93		320		30	65	5	1.70%	20	CSRA
94		340		20	10	x	1750	35	CS
30795		382360		15	15	5	1530	5	SRA

NB: * - no 'C' horizon

05 173 43

Mn 7C

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
mt B.	LINE: 5 370 500 N	J.S. (12)	SOIL	SHEET No
STITT	FROM: 382 380 E	DATE 13/12/79	DEPTH C HORIZON	JOB No
	TO: 382 460 E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	ρ Pb	ρ Zn	Cu ρ	Fe ρ	Mn	DESCRIPTION
30796	370500	382380		80	5	5	570	15	SRF
97		400		15	5	5	275	10	RFS
98		420		10	5	x	215	15	*SCO
99		440		10	x	5	225	10	RFS
30800		382460		20	10	5	1350	35	*OS

NB: * - no C horizon

05814

4

11m

7a

AREA: Mt BLACK

STITT GRID

CO-ORDINATES
LINE: 5 372 523 N (6)
FROM: 382 000 E
TO: 382 480 E

SAMPLED BY: Jacques + Bruce
DATE: 14/12/79

MATERIAL: Soil
DEPTH: C HORIZON

SAMPLE NUMBER	CO-ORDINATES E/S	E/W	Interval E/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
31001	372523	382000	20m	25	5	5	2.40	50	CS
002		020		30	15	5	2.25	110	CRFO
003		040		25	10	5	2.25	130	CO
004		060		15	10	x	3.50	75	~~CO~~ NO C
005		080		15	5	x	4.85	100	CRF
006		100		25	20	20	3.40	160	GRF
007		120		30	20	10	1.80	410	CRFO
008		140		20	10	x	5.80	80	CO
009		160		40	25	5	4.00	95	CO
010		180		25	10	x	1.05	90	CSRFO
011		200		30	85	10	2.10	435	CSRF
012		220		20	45	15	1.85	365	RFCS
013		240		25	35	25	3.80	250	CRFO
014		260		25	40	25	2.85	345	CRF
015		280		30	20	15	1.65	135	CORF
016		300		25	35	10	2.80	310	COSRF
017		320		80	45	60	3.75	415	CRFO
018		340		40	50	75	3.20	400	NO C HORIZON
019		360		20	45	45	4.65	330	C
020		380		35	60	25	5.20	390	CRF
021		400		35	45	50	5.10	370	CRFO
022		420		70	55	60	3.65	650	CRFO
023		440		25	35	75	4.45	220	CRF
024		460		35	40	50	4.55	375	CRF
025		480		30	55	80	5.85	530	CRF

Wetted

45

058175

PROJECT: Mt BLACK
STUDY GRID.

CO-ORDINATES
LINE: 5 372 523 N (71)
FROM: 382 500 E
TO: 382 800 E

SAMPLED BY: Jacques & Bruce
DATE: 14/12/79

MATERIAL: SOIL
DEPTH: C HORIZON

SAMPLE NUMBER	CO-ORDINATES E/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe P	Mn	DESCRIPTION
31026	372523	382500	20m	30	50	80	5.50%	1000	C R F
27		5200		15	30	25	3.80%	190	C
28		5400		10	10	5	2.45%	130	C
29		5600		20	10	10	1.45%	130	C O R F S
30		5800		10	5	5	4300	100	NO C HORIZ.
31		6000		50	20	15	4300	100	NO C HORIZ.
32		6200		10	10	5	9500	100	C S
33		6400		25	30	10	2.00%	270	C S R F
34		6600		25	15	10	7500	200	NO C HORIZ.
35		6800		25	15	10	6150	120	NO C HORIZ.
36		7000		20	10	15	3.75%	600	C
37		7200		30	45	35	4.30%	750	C R F
38		7400		20	45	30	4.65%	500	C R F.
39		7600		25	40	25	4.55%	320	C S R F
40		7800		15	45	10	3.25%	210	C S
31041		382,500		20	65	10	3.65%	295	C S R F

46

058176

Mn 7c

PROJECT: MT. Black

Stitt Grid.

CO-ORDINATES

LINE: 5,372,523N (91)

FROM: 383,600E

TO: 383,120E

SAMPLED BY: B.M.

DATE: 14/12/79.

MATERIAL: Soil

DEPTH: C. Horizion

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	V Cu	Fe P	Mn	DESCRIPTION
31042	37523	38360	20m	35	110	50	5.80%	550	CR
43		5800		30	180	45	6.80%	530	CR
44		5600		25	155	30	2.40%	750	CR
45		5400		25	75	20	6.50%	285	C
46		5200		25	95	25	6.10%	410	CR
47		5000		45	165	30	2.50%	420	CR
48		4800		45	90	50	6.15%	270	CR
49		4600		25	60	20	5.00%	245	CR
50		4400		25	95	30	5.05%	530	CSR
51		4200		30	190	75	5.65%	1200	CR
52		4000		10	60	20	4.20%	385	CS
53		3800		20	85	45	6.00%	390	CR
54		3600		10	35	55	5.20%	380	CSR
55		3400		15	100	10	5.30%	490	CR
56		3200		5	80	55	4.55%	450	CR
57		3000		10	90	10	5.60%	400	CS
58		2800		25	130	55	6.40%	550	CR
59		2600		25	45	55	4.50%	155	CRO
60		2400		25	60	55	4.50%	250	CS
61		2200		10	40	X	4.00%	120	CR
62		2000		15	25	X	2.20%	200	CRO
63		1800		5	20	X	2.85%	140	CR
64		1600		20	110	55	4.40%	490	CR
65		1400		20	120	X	5.40%	650	CR
31066		3821200		20	85	X	5.60%	450	CR

058177 47

Mn

PROJECT: MT. Black

Stitt Grid.

CO-ORDINATES
LINE: 5,372,523N (81)
FROM: 383,100E.
TO: 382,820E.

SAMPLED BY: B.M.

DATE: 19/12/79.

MATERIAL: SOIL

DEPTH: C. Horizon

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval ÷10	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
3106737	2,523	383,100	20	25	135	55	5.25	1650	C O R
68		080		25	155	110	5.65	3900	C R
69		060		15	215	110	5.85	1250	C R C
70		040		35	115	110	4.40	2500	C R
71		020		25	395	55	5.05	5000	C R
72		000		35	115	55	5.30	470	C S
73		382,980		35	120	55	6.40	1250	C O R
74		960		25	80	55	3.25	1400	C R
75		940		15	30	55	3.00	425	C O S R
76		920		25	65	X	4.75	350	C R
77		900		15	10	X	1.10	120	C R
78		880		5	5	X	1.50	50	C
79		860		5	15	X	2.15	80	C
80		840		10	60	X	5.05	215	C R
3108 1		382,820		10	40	X	3.95	280	C R

058178 48

Mn 76

PROJECT: Mt. Black

STITT GRID.

CO-ORDINATES
LINE: 5,372,523 N. (41)
FROM: 381,600 E
TO: 381,360 E

SAMPLED BY: B.M.

DATE: 19/12/79

MATERIAL: Soil

DEPTH: C. Horizon

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe P	Mn	FIELD PRINT
31201	37525	381600	20	10	15	5	55571	30	CR
02		5800		5	10	X	15071	45	CRSO
03		5600		5	15	X	69700	55	CORI
04		5400		5	15	5	26000	45	SCRI
05		5200		5	10	X	4300	15	SROCI
06		5000		X	10	X	6050	10	CRIO
07		4800		5	5	X	37000	45	SRIC
08		4600		5	5	X	10000	20	SCRI
09		4400		5	20	X	14254	60	CRI
10		4200		X	5	X	27500	30	CRO
11		4000		X	5	X	17502	30	CSRO
12		3800		5	5	X	10051	40	CR
31213		381360		X	5	X	62000	65	CRO

058179 49

Mn 7C

PROJECT: MT. BLACK STITT GRID.	CO-ORDINATES LINE: 5,370,500 N (14) FROM: 383,120E TO: 382,640E	SAMPLED BY: B.M.	MATERIAL: Soil	DOCT No	
		DATE: 20/12/79	DEPTH: C. Horizion	SHEET No	
				JOB No	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe P	Mn		DESCRIPTION
31214	370500	383120	20	5	15	X	1650	25	No C Horizion	RCO
15		100		5	15	X	3550	35		CO
16		080		X	25	X	2750	30		SRO
17		060		45	35	5	2900	40	No C Horizion	COS
18		040		10	65	X	1057	70		CR
19		020		55	25	5	4000	60	No C Horizion B Horizion	CROS
20		000		40	15	X	3400	105	No C Horizion B Horizion	COR
21		383980		15	30	X	4800	50		CSR
22		960		10	10	X	1100	30	No C Horizion B Horizion	SCRO
23		940		10	10	X	795	30		RSOC
24		920		5	10	X	775	20		RSC
25		900		30	35	5	950	280	No C Horizion B Horizion	SORC
26		880		15	10	X	545	20		COS
27		860		5	10	5	475	20	No C Horizion A Horizion	CSO
28		840		10	10	X	600	20	No C Horizion B Horizion	SCRO
29		820		5	5	X	415	20		SOC
30		800		5	5	X	430	20		RSC
31		780		5	5	X	270	20		SCO
32		760		10	5	X	300	30	No C Horizion B Horizion	COS
33		740		5	5	X	225	15		RC
34		720		5	10	X	140	10		SR
35		700		5	5	X	395	20		SRC
36		680		25	140	10	4457	380		CR
37		660		20	30	X	3900	45	No C Horizion B Horizion	SCRO
31238		382640		5	5	X	575	20		RSC

058180 50

Mn

PROJECT: MT. BLACK STITT GRID	CO-ORDINATES LINE: 5,370,500N (131) FROM: 382,620E TO: 382,480E			SAMPLED BY: R.M.			MATERIAL: Soil				BOOK No. / SHEET No. / JOB No.
				DATE: 20/12/79			DEPTH: Chorizon				
SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/0	Pb P	Zn P	Cu P	Fe P	Mn			DESCRIPTION
31239	370,500	382,620	20	5	5	X	245	15			SCO
40		600		5	10	X	395	15			SRCO
41		580		5	5	X	390	15			RS
42		560		10	10	X	2400	40			CR
43		540		15	5	X	560	20			RS
44		520		5	5	X	395	15			RS
45		500		5	5	X	535	20			CSR
31246		382,480		15	10	X	325	30			SRO

058181 51

Mn

Ni

AREA: MT. BLACK

STITT GRID

CO-ORDINATES
LINE: 5,370,500 N (10)
FROM: 381,860 E
TO: 381,380 E

SAMPLED BY: B.M.
DATE: 20/12/79

MATERIAL: Soil
DEPTH: c Horizon.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/(-)	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	FIELD STUDIES
31247	7 0 5 0 0 N	3 8 1 8 6 0 E	20 M	10	5	X	2.8	120	CR
48		8 4 0		10	5	X	1.3	30	CO
49		8 2 0		5	5	X	2.8	40	CSR
50		8 0 0		30	30	5	1.4	210	COR
51		7 8 0		15	20	X	1.1	190	CR
52		7 6 0		20	30	X	1.3	130	CSO
53		7 4 0		30	90	10	4.7	300	CR
54		7 2 0		25	85	10	5.1	240	CA
55		7 0 0		20	90	5	4.1	280	C
56		6 8 0		95	45	10	1.9	260	CRO
57		6 6 0		25	65	5	2.8	220	CRO
58		6 4 0		45	275	5	4.1	1000	CR
59		6 2 0		40	170	5	3.8	220	CSA
60		6 0 0		45	140	5	3.2	365	CA
61		5 8 0		40	70	5	3.6	220	C
62		5 6 0		25	20	5	2.0	160	CR
63		5 4 0		30	55	5	2.9	260	CRO
64		5 2 0		30	35	5	1.8	290	CRO
65		5 0 0		40	25	5	1.7	220	CR
66		4 8 0		30	30	5	2.3	200	CA
67		4 6 0		25	10	5	1.0	175	CSA
68		4 4 0		25	35	5	2.2	245	CR
69		4 2 0		15	5	5	4.7	105	CR
70		4 0 0		30	5	5	4.9	120	CO
71	3 8 1 3 8 0			30	45	10	1.6	380	COA

Continued

No chromite observed in soil

058182 52

Mn 7C

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT BLACK. STITT GRID	LINE: 5,370,500 N (9) FROM: 381,360 E TO: 381,000 E	B.N. DATE 20/12/79	Soil DEPTH C. Horizion	SHEET No JOB No

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	ZN P	Cu P	Fe P	Mn	DESCRIPTION
31272	379500	381,360	20	10	10	x	3100		SCO
73		340		5	15	5	1.70%		CSR
74		320		15	40	5	3.15%		CR
75		300		25	50	15	3.50%		CR
76		280		20	20	5	2.75%		CR
77		260		15	15	5	1.85%		CR
78		240		15	10	5	7400		CR
79		220		80	30	10	2.25%		Not Horizon Alluvium COR
80		200		10	20	5	1.95%		CR
81		180		25	40	5	3.25%		COR
82		160		30	40	5	3.00%		COS
83		140		30	75	10	5.20%		CR
84		120		30	70	20	4.05%		CR
85		100		30	95	15	4.80%		CR
86		080		20	55	10	3.70%		CR
87		060		30	65	10	*410%		CR
88		040		25	60	10	4.70%		CR
89		020		15	45	5	3.70%		CR
31290		381,000		25	50	5	3.45%		CR

*4.10%

058183

AREA: MT. BLACK STITT GRID

CO-ORDINATES
LINE: 5,372,000N (10)
FROM: 383,500E
TO: 383,320E

SAMPLED BY: C.B.
DATE: 21/12/79

MATERIAL: SOIL
DEPTH: C. HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
31201	372,000	383,500	20	5	5	X	14000		SR
02		480		5	5	X	18500		SR
03		460		5	5	X	9500		SR
04		440		5	5	X	4555		SOR
05		420		10	15	X	23000		SR
06		400		5	10	X	22000		SR
07		380		5	5	X	12500		SOR
08		360		5	10	X	13500		SORC
09		340		25	30	55	20571		SRC
31300		383320		20	30	55	47500		SCRO

058184

54

AREA: MT BLACK

STITT GRID

CO-ORDINATES

LINE: 5378 000N (9)

FROM: 383, 300E

TO: 382, 800E

SAMPLED BY: G.D

DATE: 21/12/78

MATERIAL: Soil

DEPTH: C-Horizon

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL + /E	Pb ppm	Zn ppm	Cu ppm	ppm Fe %	Mn	DESCRIPTION
31L4C1	37XC	CC3S3BCC	25	15	50	10	4400	1900	CR
C2				5	15	X	1200	750	CR
C3				15	160	15	3700	4450	CR
C4				15	5	X	1550	300	CRC
C5				X	10	X	5100	500	CRS
C6				5	5	X	1950	300	SRCI
C7				50	160	40	1000	2200	CDR
C8				20	285	170	1050	4300	C
C9				X	10	5	5950	550	CIN
10				15	70	50	2500	4000	CRC
11				30	85	5	3450	2450	RSC
12				35	170	X	10950	5150	C
13				30	100	5	6500	2350	CIR
14				15	25	X	3700	1200	C
15				20	10	10	2400	850	CIC
16				35	120	X	7100	3650	CRS
17				15	55	X	4100	3150	CR
18				20	70	X	4500	4550	CIR
19				20	40	10	9500	1400	CD
20				20	15	X	4050	700	CD
21				25	95	5	2750	11000	RCOSI
22				35	80	5	2650	12000	RSCOI
23				25	40	10	5650	7500	SRCI
24				10	105	20	2900	5000	SCRI
25				25	145	15	3100	9000	SCDRI

058185

55

Mn

70

SHEET	Mt Block Slitt Grid.	CO-ORDINATES LINE:	5,372,000N (8)	SAMPLED BY	G.B.	MATERIAL	Soil				
		FROM:	382,800E	DATE	21/12/79	DEPTH	C. Horizon				
		TO:	382,760								

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe %	Mn	DESCRIPTION
31426	372,000	382,800	28	15	60	5	4.25%	345	CRO
21		780		15	30	5	3.60%	180	COK
31428		382,760		15	55	5	3.90%	290	CR

058186 56

Mn 70

PROJECT: Mt BLACK
STITT GRID.

CO-ORDINATES
LINE: 5 370500N (1)
FROM: 378150E
TO: 375600E

SAMPLED BY: MG + Jacques.
DATE: 28/12/79.

MATERIAL: SOIL
DEPTH: C HORIZON.

SAMPLE NUMBER	CO-ORDINATES E/S	E/W	±/-	P Pb	P Zn	P Cu	P Fe %	Mn	DESCRIPTION
31429	310500	378150	20m	145	80	30	1.0	260	C
30		2 00		65	30	10	1.2	60	C RFC
31		220		30	15	5	0.5	30	RF SC
32		240		20	10	5	0.3	30	RF SC C
33		260		30	15	5	0.7	40	C RF
34		280		25	25	10	0.9	50	SRFO
35		300		110	110	10	1.05 %	80	CSO
36		320		1200	60	60	1.80 %	1200	CRFSO
37		340		260	175	45	0.9 %	290	C
38		360		100	245	20	1.3 %	300	CO
39		380		55	40	20	2 %	50	C
40		400		30	15	5	0.3	30	SRFO
41		420		10	10	5	0.7	30	SRFOC
42		440		10	15	5	0.8	30	SRFO
43		460		5	10	5	0.8	25	SCRFO
44		480		5	10	5	0.5	15	CSRF
45		500		5	10	5	0.8	20	SCRF
46		520		5	5	5	0.5	15	SRF
47		540		5	10	5	0.2	15	CRF
48		560		10	15	10	0.5 %	30	C
49		580		15	20	5	0.5 %	30	C
50		600		15	25	10	0.5 %	30	CO
51		620		15	45	20	0.6 %	95	CRFO
52		640		25	35	5	0.7	50	SRFC
31453		376600		5	45	10	1.25 %	70	CSRFO

05818 57

Mn 7D

AREA: Mt Black → Still GRID.

CO-ORDINATES
LINE: 5 370 500 N (2)
FROM: 378650 E
TO: 378900 E.

SAMPLED BY: MC / Jacques.
DATE: 28/12/79.

MATERIAL: Soil
DEPTH: C HORIZON.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	P	Pb	P	Zn	P	Cu	P	Fe %	Mn	Rock Types
31454	370500	378680			20		50		10	1·40		110	C
55		7600			25		55		30	2·75		105	CSRFO
56		7200			15		40		5	7·70		105	SRF
57		7440			20		65		25	3·45		130	CO
58		7600			15		15		5	1·50		30	RFCSI
59		7800			5		10		X	2·40		15	CRFO
60		8000			10		10		5	2·40		15	CSRF
61		8200			5		10		5	2·15		15	SCRFI
62		8400			5		10		5	2·15		20	CRFSI
63		8560							MC	SAMPLE TAKEN.			
64		8600			10		30		10	1·55		90	SCRFO
31465		3285/8900			10		30		10	2·25		40	CRF

058188 58

Mn

STAGE: MT. BLACK Stitt Grid	CO-ORDINATES LINE: 5 371 500N (4) FROM: 382 140E TO: 381 660E			SAMPLED BY: B.M.?			MATERIAL: Soil				
				DATE: 21/12/79			DEPTH: C. Horizon				
SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval +/-	Pb	Zn	Cu	Fe	Mn			DESCRIPTION
31501	371500	382140	20	5	5	x	280	30			CO
02		120		5	5	x	495	30			CORS
03		100		x	x	x	435	30			CR
04		080		5	x	x	550	25			COR
05		060		x	x	x	1000	30			CSR
06		040		15	5	x	4950	110			CO
07		020		10	5	x	7900	120			CR
08		000		15	20	x	3.35%	170			CR
09		381980		20	20	x	2.10%	160			COR
10		960		20	10	5	4500	100			COS
11		940		25	30	5	3.35%	175			CR
12		920		30	30	5	3.00%	230			
13		900		20	45	5	2.55%	715			CO
14		880		20	40	x	2.45%	170			CO
15		860		25	55	10	2.75%	550			CO
16		840		20	40	x	1.65%	1100			CS
17		820		10	5	x	2950	70			COR
18		800		10	10	x	3750	70			CSC
19		780		10	5	40	3700	90			COR
20		760		5	25	170	3.00%	190			C
21		740		5	55	5	2.20%	300			CR
22		720		25	15	15	5850	90			COS
23		700		30	50	5	5.00%	1950			CO
24		680		55	35	10	1.45%	140			CSO
31525		381660		40	30	5	1.40%	195			COR

058189 59

Mn 7C

PROJECT: MT. BLACK STITT GRID.	CO-ORDINATES LINE: 5,371,500N (3) FROM: 381,640E TO: 301,160E	SAMPLED BY: B.M. J.S.	MATERIAL: Soil	DEPTH: C. Horizon							
SAMPLE NUMBER	CO-ORDINATES (E/S)	(E/W)	Interval +/-	Pb P	Zn P	Cu P	Fe P	Mn			DESCRIPTION
31526	371500	381640	2	30	20	5	2.85%	115			COS
27		620		25	25	5	2.10%	150			CRO
28		600		20	25	5	1.30%	125			CSR
29		580		5	5	5	7000	95			CRO
30		560		20	45	5	4.15%	135			C
31		540		5	10	5	4050	35			CRO
32		520		10	15	5	1.70%	70			CS
33		500		15	25	5	1.10%	155			CRO
34		480		25	115	10	2.35%	560		Contam Nec. Horizon	SOR
35		460		10	75	10	2.20%	395			RCS
36		440		20	130	25	2.45%	410			C
37		420		35	50	10	7.75%	195			CSO
38		400		5	5	X	2450	45			CRO
39		380		5	5	5	3850	55			COR
40		360		15	25	5	1.80%	170			CRS
41		340		25	15	5	1.05%	175			CO
42		320		10	10	5	9500	155		[illegible]	CSO
43		300		5	5	X	4450	85			CO
44		280		5	5	X	4100	100			CR
45		260		20	20	5	9000	210		Contam	CC
46		240		25	20	5	1.15%	140		Nec. [illegible]	CRS
47		220		20	20	10	3.10%	160			CR
48		200		5	5	5	5000	100		[illegible]	COS
49		180		10	10	5	6500	65			CR
31550		381160		5	5	X	1750	35			CRS

058190 60

Mn 76

PROJECT: M.T. BLACK STITT GRID.	CO-ORDINATES LINE: 5,371,500N (2) FROM: 381,140E TO: 380,760	SAMPLED BY: J.S.	MATERIAL: Soil								
		DATE: 21/12/79.	DEPTH: C. Horizon								
SAMPLE NUMBER	CO-ORDINATES ℄/S	℄/W	Interval +/⊖	PbP	PZn	PCu		PFe	Mn		DESCRIPTION
31551	371500	381140	20	5	5	X		3700	35		CR
52		120		X	5	X		1800	35		CRS
53		100		5	5	X		3750	55		CO
54		080		5	5	X		2300	50		CS
55		060		5	10	5		1.40%	65		CR
56		040		20	20	5		9000	50		C
57		020		10	10	X		5200	35		CCR
58		000		10	10	5		5250	35		CRS
59		380980		10	35	5		3.35%	650		CR
60		960		5	35	5		2.60%	50		CR
61		940		5	25	5		2.25%	95		CR
62		920		5	40	5		1.50%	55		CR
63		900		20	20	X		28%	40		CO
64		880		10	10	X		6750	50		CS
65		860		5	10	X		1.4%	40		CRO
66		840		5	10	X		3250	25		COS
67		820		10	10	X		1.45%	45		CR
68		800		5	10	X		3750	55		CRS
69		780		15	15	X		3.05%	65		CR
31570		380760		25	25	X		3.25%	50		CRS
		380740		NO SAMPLE TAKEN.							

058191

Mn 70.

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No.
MA BLACK STITT GRID.	LINE: 5 370 500N (5)	WM + G.B.	SOIL	SHEET No.
	FROM: 379 940E	DATE	DEPTH	JOB No.
	TO: 379 ~~[illegible]~~ 379 460E	28/12/79	C HORIZON.	

SAMPLE NUMBER	CO-ORDINATES C/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	P Cu	P Fe	Mn		DESCRIPTION
31571	370500	379940	20	5	20	5	4500	60		CRO
72		920		15	75	35	1.70%	130		CRO
73		900		5	35	5	7750	170		CR
74		379880		5	15	X	4000	45	contam	SRC
75		860		10	25	5	8000	85		CR
76		840		5	15	10	5850	50	Nat Horizon B only	RSC contam
77		820		5	20	5	7200	80		CSR
78		800		10	30	X	7550	80	contam	CRS
79		780		10	25	X	1.15%	60		CCR
80		760		10	15	50	8000	70	contam	RC
81		740		5	15	5	5150	50	contam	RS
82		720		X	5	5	2450	40		CR
83		700		X	10	X	4200	35		CR
84		680		X	5	X	2250	35	contam Nat Horizon	CRS [illegible]
85		660		X	5	5	2050	35		CRS
86		640		X	5	X	1750	30		CRS
87		620		X	5	20	1700	30		SCR
88		600		45	30	30	2050	40	Nat Horizon [illegible]	CC
89		580		5	10	5	2050	35		SR
90		560		X	10	5	2050	30	poss contam	CSRO
91		540		5	5	10	1450	30	poss contam	SRC
92		520		X	5	5	1250	30	poss contam	SRC
93		500		10	20	10	1050	60	[illegible]	CO
94		480		5	X	5	1150	30		CR
31595		379460		5	5	5	2450	40		RSC

038192 62

Hm 7D.

AREA: MT BLACK STITT GRID

CO-ORDINATES
LINE: 5 370.500N (4)
FROM: 379.440E
TO: 379.360E

SAMPLED BY: B.M.
DATE: 28/12/79

MATERIAL: SOIL
DEPTH: C Horizon

SAMPLE NUMBER	CO-ORDINATES E/S	CO-ORDINATES E/W	Interval + (E)	P Pb	P Zn	P Cu	P	Fe	Mg	DESCRIPTION
31593	70500	37944E	20E	X	X	X	1	2	30	R
94		44E		X	X	5	1	5	30	R S
95		40E		X	X	X	1	4	30	R S
96		38E		X	X	5	1	0	30	R S
31600		37936E		X	X	X	1	3	40	R S

058193

63

Mn 70

PROJECT: MT. BLACK

Stitt GRID

CO-ORDINATES

LINE: 5,372,523N (5)

FROM: 381,980E

TO: 381 620

SAMPLED BY: B.M.

DATE: 19/12/79

MATERIAL: SOIL

DEPTH: C. Horizon.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe %	Mn P	DESCRIPTION
31683	12523	381980	20M	10	15	X	1.6	140	C O R
84		9600		5	5	X	3.0	60	C R O
85		9400		5	5	X	3.3	70	C S O R
86		9200		5	5	X	3.5	80	C R O
87		9000		15	5	X	3.5	80	C R O
88		8800		25	15	S	2.3	135	C S R O
89		8600		10	15	X	2.1	120	C
90		8400		5	5	X	0.75	45	C R O
91		8200		5	5	X	1.0	20	C S O
92		8000		5	10	X	1.8	20	R S C
93		7800		X	5	X	3.6	30	C R
94		7600		5	10	X	0.5	15	S C O
95		7400		5	15	S	3.3	30	C S O
96		7200		5	15	X	1.6	50	C R O
97		7000		10	20	S	1.9	70	C S O
98		6800		5	15	X	0.7	15	C O
99		6600		5	10	S	6.7	50	C O R
31700		6400		5	5	X	5.9	15	C S O
		381620		5	5	X	1.4	20	C R

058194

64

SHEET	MT. BLACK STITT GRID.	CO-ORDINATES LINE:	5,370,500N. (3)	SAMPLED BY	B.M.	MATERIAL	SOIL				
		FROM:	379,340E.	DATE	28/12/79	DEPTH	C. Horizion				
		TO:	378,920E.								

SAMPLE NUMBER	CO-ORDINATES C/S	C/W	Interval +/⊖	Pb ppd	Zn ppd	Cu ppd	Fe ppd	Mn		DESCRIPTION
32001	370500	379340	20M	5	5	x	280	30		CO
02		320		5	5	x	495	30	[illegible]	CO
03		300		x	x	x	435	30		RCS
04		280		5	x	x	550	25		CRSC
05		260		x	x	x	1000	30		CRS
06		240		5	5	x	1100	20		CRS
07		220		5	5	x	1400	30		CR
08		200		5	x	x	1200	20		CR
09		180		5	5	x	600	20		CRCO
10		160		5	5	x	355	20		CRS
11		140		5	5	x	485	25		CRCO
12		120		5	5	x	690	30		CROS
13		100		5	5	x	245	20		CRS
14		080		5	x	x	615	20		CROS
15		060		5	5	x	1200	30		CRSO
16		040		20	15	5	1.5%	40		CR
17		020		20	20	5	1.5%	70		CR
18		000		10	15	x	1.0%	50		CRO
19		379980		10	15	x	6600	30		CR
20		960		10	15	x	1.05%	40		CRO
21		940		5	20	x	2.00%	40		CR
32022		378920		x	20	x	1.15%	35		CR
							[illegible]	30		

058195

65

Mn

7070

PROJECT: MT. BLACK STITT GRID.	CO-ORDINATES LINE: 5,370,500N (6) FROM: 379,940E TO: 380,420E	SAMPLED BY: B.M.	DATE: 31/12/79	MATERIAL: Soil	DEPTH: C Horizion

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (+)/-	Pb ppm	Zn ppm	Cu ppm	Fe ppm	Mn	DESCRIPTION
32023	370500	379940	20	5	25	x	7700	130	CRS
24		960		5	20	x	4500	90	CR
25		980		10	35	x	7600	110	CR
26		380,000		10	45	x	1.1%	140	CR
27		020		10	25	x	7000	85	CR
28		040		10	35	x	1.05%	110	CR
29		060		5	10	x	3650	70	CR
30		080		5	15	x	3250	80	CRS
31		100		10	35	x	6850	250	CR
32		120		5	15	x	4100	65	CR
33		140		5	10	x	2300	45	CR
34		160		10	30	x	1.4%	150	CRO
35		180		5	15	x	1.3%	90	CRO
36		200		5	15	5	1.1%	80	RC
37		220		25	35	5	1.6%	160	CR
38		240		5	25	x	2.4%	125	CR
39		260		10	35	x	1.9%	200	CR
40		280		15	35	5	1.9%	150	CR
41		300		10	25	x	1.3%	260	CR
42		320		15	75	15	2.05%	430	CR
43		340		30	45	10	1.6%	790	COR
44		360		25	20	5	1.2%	110	COR
45		380		15	25	5	1.3%	130	CR
46		400		35	10	10	8000	70	No C Horizion COR
32047		380,420		30	10	5	5000	65	No C Horizion COR

058196

66

Mn

SHEET: MT. BLACK STITT GRID	CO-ORDINATES LINE: 5,370,500N (7) FROM: 380,460E TO: 380,920E	SAMPLED BY: B.M.	MATERIAL: SOIL								
		DATE: 31/12/79	DEPTH: C. Horizion								
SAMPLE NUMBER	CO-ORDINATES N/S	E/W	Interval +/-	Pb	Zn	Cu	Fe	Mn			DESCRIPTION
32048	370,500	380,460	20	30	25	5	2.05%	100			CR
49		460		25	20	x	1.85%	80			CR
50		480		15	15	x	1.55%	80			CR
51		500		45	70	10	1.50%	320			CSR
52		520		40	220	15	3.1%	490		Poss Contam	CR
53		540		55	200	15	2.75%	430			CR
54		560		25	40	5	1.9%	150			CR
55		580		25	40	5	1.7%	125			CR
56		600		15	20	5	1000	65			CR
57		620		10	x	x	1550	65			SC
58		640		5	x	x	300	60			CSR
59		660		x	x	x	225	40			SC
60		680		x	x	x	275	50			SC
61		700		10	15	x	1.7%	70			CR
62		720		20	90	5	2.9%	180			CR
63		740		10	140	5	1.6%	325			CR
64		760		15	120	x	2.3%	420			CR
65		780		5	5	x	1450	25			CRC
66		800		20	80	5	2.4%	320			CR
67		820		30	150	10	2.8%	1000			CR
68		840		35	100	10	2.3%	315			CR
69		860		15	80	5	2.05%	230			CR
70		880		10	25	10	1.7%	75			CR
71		900		15	25	x	2.2%	120			CR
32072		380,920		20	60	15	2.5%	500			CR

058197

67

Mn

SHEET	MT. BLACK	CO-ORDINATES		SAMPLED BY		MATERIAL							
	STITT GRID	LINE:	5,370,500N (8)	B.M.		SOIL							
		FROM:	380,940E	DATE		DEPTH							
		TO:	380,980E	31/12/79		C. Horizon							
SAMPLE NUMBER	CO-ORDINATES (R)/S	(E)/W	Interval (+)/-	Pb	Zn	Cu	Fe	Mn					DESCRIPTION
32073	370,500	380,940	20	25	60	15	2.6%	530					CR
74		960		30	40	10	2.4%	275					CRO
32075		380,960		25	45	5	2.35%	265					CR

058198

68

7c

Mn

PROJECT: MT. BLACK STITT GRID	CO-ORDINATES LINE: 5,372,523N (2) FROM: 381,160E TO: 380,680E	SAMPLED BY: G.G.	DATE: 3/1/80	MATERIAL: SOIL	DEPTH: C-Horizion
BOOK No.	SHEET No.	JOB No.			

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval +/(-)	Cu ρ	Pb ρ	Zn ρ	Fe ρ	Mn		DESCRIPTION
32076	372523	381160	20	5	20	30	3.35%	135		CR
77		140		5	20	20	1.95%	60		CR
78		120		5	10	15	9000	50		CR
79		100		5	5	5	4750	25	NO C-HORIZON	RC
80		080		x	5	5	2950	20		CSR
81		060		25	45	40	2.60%	520		CRO
82		040		10	25	35	4.00%	135		CR
83		020		5	20	40	3.90%	380		CR
84		000		5	20	20	3.30%	120		CR
85		380980		10	20	40	4.50%	900		C
86		960		10	25	45	3.70%	900		CR
87		940		15	35	40	3.75%	800		CR
88		920		10	35	20	2.05%	135		CR
89		900		10	30	15	1.25%	65	NO C-HORIZON	COR
90		880		20	40	45	2.85%	640	NO C-HORIZON	CO
91		860		20	40	30	3.55%	435	NO C-HORIZON	COR
92		840		20	35	40	3.65%	300		COR
93		820		15	35	55	3.00%	1050		CR
94		800		25	30	70	4.05%	170	NO C-HORIZON NO A-HORIZON	CR C-HORIZON CONTAINS
95		780		15	45	85	3.45%	310	C-HORIZON CONTAINS	CR
96		760		10	40	40	2.75%	150		COR
97		740		10	25	60	3.40%	160		CR
98		720		10	20	50	3.20%	1[illegible]0		CR
99		700		5	20	15	2.00%	90		CR
32100		380680		10	40	45	2.05%	220		CR

058199

AREA: MT. BLACK

STITT GRID

CO-ORDINATES
LINE: 5,372,523N (3)
FROM: 381, 340E
TO: 321, 180E

SAMPLED BY: G.B.

DATE: 3/1/80

MATERIAL: SOIL

DEPTH: C-Horizon

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/(E)	Cu ppm	Pb ppm	Zn ppm	Fe %	Mn ppm	DESCRIPTION
321902	372520	381340	20	10	25	45	2.35%	370	CR
903		320		X	10	10	1.30%	115	CR
904		300		X	10	5	1.30%	110	CR
905		280		10	25	40	4.55%	185	CR
906		260		5	10	10	6900	90	CR/O
907		240		5	10	5	3650	50	C/OR
908		220		10	25	15	5500	75	CR
909		200		5	15	10	6000	35	CR
321910		381180		20	15	20	1.45%	85	C/OR

R

7C

Mn

058200

PROJECT: Mt Black. Stitt Grid.

CO-ORDINATES
LINE: 5 372 523 N. (1)
FROM: 360 660 E.
TO: [redacted] E 360 520 E.

SAMPLED BY: Geoff Bezell
DATE: 8/1/80.

MATERIAL: Soil.
DEPTH: C HORIZON.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu ppm	Pb ppm	Zn ppm	Fe %	Mn.	SAMPLE TYPE
32401	372 523	360 660	20m	15	75	110	2.55%	3550	C RF
02		640		10	30	40	2.60%	185	C RF
03		620		10	30	45	1.60%	615	C RF
04		600		5	30	30	1.25%	325	C RF
05		580		5	15	25	1.75%	100	C RF
06		560		5	10	25	1.95%	120	C RF
32407		540		5	30	45	2.00%	550	C RF
32408		520		10	70	95	2.25%	255	SC RF

058201

(Missing 380,740E. : No sample taken)

Mn 70

PROJECT: MT. BLACK STITT GRID.

CO-ORDINATES: LINE: 5,371,500N (1) FROM: 380,720E. TO: 380,300E

SAMPLED BY: G. B.

DATE: 8/1/80.

MATERIAL: SOIL SAMPLES

DEPTH: C HORIZON.

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
325 24	37150	38072	20	10	20	5	1.37	710	C O
25		700	20	10	5	5	2750	335	S C O
26		680	20	5	X	5	1000	220	S R F O
27		660	20	X	X	X	2850	115	S R F
28		640	20	5	5	X	900	330	C R F S O
29		620	20	10	15	X	850	330	C O R F
30		600	20	X	5	5	900	110	C O R F
31		580	20	X	X	X	3400	110	R F S C
32		560	20	5	X	5	1350	110	R F S C O
33		540	20	X	X	5	1050	110	C S O R F
34		520	20	5	5	X	3450	330	C S R F
35		500	20	X	10	X	1500	225	S R F
36		480	20	5	45	5	5950	1195	S C R F
37		460	20	5	10	5	2050	330	C S O R F
38		440	20	10	10	5	190	445	C O
39		420	20	15	10	5	4750	330	C R F O
40		400	20	20	10	10	5500	555	S C O
41		380	20	10	5	X	3350	115	S C R F O
42		360	20	X	5	5	3250	110	* C R F S
43		340	20	5	X	5	3400	115	* O C
44		320	20	5	15	5	575	115	* R F C S
45		300	20	5	5	5	4250	335	R F C S

N.B. * No C Horizon

058202

72

98

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK STITT GRID.	LINE: 5,369,500N (7)	J. SAYERS.	SOIL SAMPLES	SHEET Nº
	FROM: 380,840E.	DATE 24/1/80.	DEPTH C HORIZON	JOB Nº
	TO: 381,320E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL O/-	Pb P	Zn P	Cu P	Fe P	Mn		DESCRIPTION
32852	369500	380840	20	25	15	5	5150	85		OSRFC
53		860	20	15	20	5	6750	85		CSORF
54		880	20	40	50	10	1.1%	610	B HORIZON	CSO
55		900	20	25	30	10	5100	465	A HORIZON	RFOS
56		920	20	15	10	5	2350	80		CRFSO
57		940	20	35	25	15	4150	110		OCS
58		960	20	15	10	5	6050	105		CSRF
59		980	20	20	30	5	1.05%	235		COS
60		381000	20	15	125	10	2.3%	425		CRFS
61		020	20	35	40	10	1.45%	125		CRFOS
62		040	20	30	20	5	1.5%	90		CSO
63		060	20	15	10	5	4350	80		CRFS
64		080	20	10	20	5	1.3%	130		CRF
65		100	20	40	120	20	2.9%	660	B HORIZON	CRFOS
66		120	20	45	90	15	2.5%	670		CO
67		140	20	45	85	15	2.3%	740		CRFO
68		160	20	35	40	5	1.85%	255		CSRF
69		180	20	45	50	15	2.3%	240		CORF
70		200	20	45	45	15	2.65%	210		CO
71		220	20	65	35	30	5250	70		CORF
72		240	20	75	85	35	1.85%	2050		CO
73		260	20	35	30	20	8000	120		COSRF
74		280	20	35	40	20	1.3%	160	B HORIZON	CO
75		300	20	45	50	30	2650	75	A HORIZON	CO
76		320	20	20	50	10	2.45%	420		CORF

058203

73

98

PROJECT: MT. BLACK. STITT GRID

CO-ORDINATES
LINE: 5,369,500N (8)
FROM: 381,340
TO:

SAMPLED BY: J - SAYERS.

DATE: 24/1/80

MATERIAL: SOIL SAMPLES.

DEPTH: C. HORIZON.

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb P	Zn P	Cu P	Fe %	Mn P	DESCRIPTION
32877	369500	381340	20	40	40	15	2.35	235	CRFO
78		360	20	15	55	15	2.95	265	CRF
79		380	20	20	40	20	2.40	195	COARF
80		400	20	25	55	15	3.10	265	CORF
81		420	20	25	35	15	2.55	180	CO
82		440	20	25	50	15	3.05	320	CRFO
83		460	20	25	80	30	3.80	430	CRF
84		480	20	30	55	25	3.60	350	CRA
85		500	20	30	60	20	3.20	250	CORF
86		520	20	20	115	15	2.95	480	CRFO
87		540	20	20	160	15	3.95	620	CRF
88		560	20	40	90	20	3.20	710	COS
89		580	20	20	50	20	3.00	170	CO
90		600	20	50	65	25	3.05	260	COS
91		620	20	55	85	15	3.55	200	C
92		640	20	70	10	5	2.05	50	CRA
93		660	20	15	35	5	1.85	100	CRF

058204

74

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black (Still Grid)	LINE: 5,369,500 N (12)	? C. Mashava	Soil	SHEET No
	FROM: 382,700E	DATE: 30-1-80	DEPTH: C. Horizon	JOB No
	TO: 382,580E			

SAMPLE NUMBER	CO-ORDINATES (N)/S	CO-ORDINATES (E)/W	Interval +/(-)	Pb	PZn	CuP	PFe	Mn		DESCRIPTION
32894	369,500	382,700	20	635	1350	105	1059	180	B Horizon	CC
95		680		250	450	40	3800	60	B Horizon	CC
96		660		105	160	15	1700	20		CORF
97		640		35	30	5	800	15	B Horizon	CORF
98		620		35	50	5	1250	15		COS
99		600		15	10	X	1000	5		CO
32900		580		10	10	X	1600	5	Contamination	CORF

058205

75

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No.
Mt Black Stitt Grid.	LINE: 5 369 500N. (11)	Caiphas: Mashava.	Soil	SHEET No.
	FROM: 382 560E.	DATE: 30/1/80	DEPTH: C Horizon.	JOB No.
	TO: 382 080E.			

SAMPLE NUMBER	CO-ORDINATES (N)/S	CO-ORDINATES (E)/W	INTERVAL +/-	Pb P	Zn P	Cu P	Fe P	Mn	DESCRIPTION
33601	369,500	382,560	20	10	10	X	1000	5	*CO
02		540		5	10	X	1350	5	SRFC
03		520		5	10	5	1350	15	CRFS
04		500		X	10	X	1100	5	CS
05		480		X	5	X	750	5	CSO
06		460		X	10	X	1050	5	*COS
07		440		10	25	5	750	5	*OC
08		420		10	15	X	1550	15	SCRF
09		400		5	10	X	900	10	CSO
10		380		X	5	X	750	10	CSRF
11		360		5	5	X	300	5	CRFO
12		340		5	10	X	850	15	COS
13		320		10	10	X	800	10	SRFC
14		300		10	10	X	1400	15	SCRF
15		280		15	10	X	1150	15	CSRF
16		260		20	10	X	1500	15	SC
17		240		20	10	X	1350	15	SCRF
18		220		25	10	X	900	15	*CO
19		200		30	10	X	700	15	CO
20		180		15	15	X	2200	15	CS
21		160		30	15	X	2250	15	*CO
22		140		40	35	X	620	10	CSRFO
23		120		25	20	X	3250	20	CRF
24		100		25	25	X	3300	20	CRF
33625		382080		25	10	X	850	10	SCO

NB: * - NO C HORIZON.

058206

76

PROJECT: Mt BLACK

STUTT GRID.

CO-ORDINATES
LINE: 5 369 500N. (10)
FROM: 382 060E
TO:

SAMPLED BY: C.M.

DATE: 30/1/80.

MATERIAL: SOIL

DEPTH: C HORIZON.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
33626	369,500	382,060	20m	15	10	X	550	15	CS
27		040		20	10	X	580	20	C
28		020		25	10	X	570	20	* COFS
29		000		20	10	X	1100	20	CSO
30		361 950		25	15	X	1050	20	CSRFI
31		960		30	5	X	640	5	COS
32		940		30	10	X	665	15	CO
33633		361 920		5	10	X	660	20	CSO

NB: * - NO C HORIZON.

058207

77

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT BLACK STITT GRID.	LINE: 5 369 500 N (6)	MG	SOIL	SHEET No
	FROM: 380 820E.	DATE	DEPTH	JOB No
	TO: 380 340E.	31/1/80	C HORIZON.	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb P	P Zn	Cu P	P Fe	Mn	DESCRIPTION
33634	369500	380820	20m	35	30	5	1.55%	160	CO
35		800		55	60	10	1.90%	2100	*CSO
36		780		45	95	5	2.15%	565	CRFO
37		760		45	20	5	2550	75	COS
38		740		15	10	5	2500	20	CRFO
39		720		25	20	5	2.50%	80	COS
40		700		20	10	5	5000	55	CO
41		680		20	10	X	4150	70	CRFO
42		660		15	5	X	455	20	CO
43		640		55	55	5	1.30%	710	CRFO
44		620		60	35	5	1.35%	205	CRF
45		600		40	20	5	6400	95	CRFO
46		580		15	5	X	1700	45	C
47		560		25	15	X	1.25%	55	CRFO
48		540		75	130	20	2.70%	190	CRF
49		520		60	30	5	1.90%	125	CRF
50		500		45	60	5	2.65%	175	CRF
51		480		25	30	5	3.35%	115	CRFO
52		460		35	70	5	2.70%	315	CRF
53		440		15	10	X	1.30%	90	CO
54		420		25	25	X	1.35%	140	CRF
55		400		15	10	X	3350	75	CO
56		380		40	15	5	6350	80	CRF
57		360		40	15	5	3150	95	CORF
58		380340		10	10	X	1950	40	CS

NB * - NO C HORIZON.

058208

78

PROJECT: STITT GRID. MH BLACK.	CO-ORDINATES LINE: 5369500N (5) FROM: 380320E TO: 379840E.	SAMPLED BY: MG / L.S. / WM.	MATERIAL: SOIL	BOOK No.	SHEET No.
		DATE: 31/1/80 – 4/2/80.	DEPTH: C HORIZON.	JOB No.	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	PPb	PZnP	PCuP	PFeP	Mn	DESCRIPTION
33659	369,500	380,320	20m	20	10	X	2450	55	CRFO
60		300		20	10	X	3100	75	CO
61		280		35	85	X	1.00%	145	C
62		260		30	40	X	9000	120	CRF
63		240		20	5	X	425	25	*CORF
64		220		15	5	X	1100	40	CO
65		200		15	5	X	1500	35	CS
66		180		40	40	5	7000	105	*CO
67		160		40	35	15	2200	85	*CO
68		140		30	30	5	5350	305	*CO
69		120		15	5	X	2800	40	CO
70		100		15	5	X	800	15	CRF
71		080		10	5	X	640	15	CRF
72		060		5	5	X	730	20	CS
73		040		5	5	5	720	15	CO
74		020		5	5	X	850	15	CRFO
75		000		5	X	X	500	15	C
76		379980		5	10	5	3750	55	RFC
77		960		5	X	5	520	15	CO
78		940		5	5	5	565	5	CO
79		920		5	5	5	1600	15	RFSC
80		900		5	5	5	1900	25	SCRF
81		880		5	X	X	2250	15	CRFO
82		860		5	X	15	1100	15	SC
33683		379840		5	X	20	2500	25	CSRF

NB *: NO 'C' HORIZON.

058209

PROJECT: Mt Black. Stitt Grid.

CO-ORDINATES — LINE: 5 369 500 N. (4) — FROM: 379 820E. — TO: 379 500 E.

SAMPLED BY: Wm

DATE: 4/2/80.

MATERIAL: Soil

DEPTH: C Horizon.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	PbP	ZnP	CuP	FeP	MnP	DESCRIPTION
33685	369 500	379 820	20m	10	10	X	3950	50	CRF
35		800		5	X	10	3200	30	CSRF
86		780		X	10	35	495	15	CMA
87		760		5	X	5	7300	50	CRFS
88		740		10	5	X	1850	30	CRFO
89		720		5	5	5	4350	35	CRFSO
90		700		5	X	X	4450	70	RFF
91		680		5	X	30	850	20	CSRFO
92		660		5	5	10	1350	20	CRFS
93		640		5	5	5	4150	45	CRFS
94		620		5	X	X	4200	60	RFC
95		600		5	5	5	3350	30	RFCS
96		580		5	5	10	2300	25	CSRF
97		560		5	5	25	4100	40	*RFCS
98		540		5	5	5	3700	30	RFCS
99		520		10	5	40	3850	35	*RFCS
33700		379 500		5	X	X	5100	45	CRF

NR

*: NO C HORIZON

058210

80

PROJECT: Mt Black (Soil + Grid)

CO-ORDINATES
LINE: 5369 SOON (3)
FROM: 374 480 E.
TO: 379 000 E.

SAMPLED BY: NM

DATE: 4/2/80

MATERIAL: Soil

DEPTH: C HORIZON.

SAMPLE NUMBER	CO-ORDINATES @/S	CO-ORDINATES @/W	Interval +/@	Pb P	Zn P	Cu P	Fe %	Mn P	DESCRIPTION
33801	369500	374800	20m	5	5	5	5000	45	C S
02		460		5	5	5	2350	60	C R F
03		440		5	5	5	1800	45	R F C S
04		420		5	5	5	1650	40	C R F
05		400		5	5	5	2400	25	C R F S
06		380		10	20	10	3650	60	C R F
07		360		5	5	5	3350	15	C R F
08		340		5	5	5	5350	30	C R F
09		320		5	20	5	6450	75	R F
10		300		5	10	5	5250	30	C
11		280		X	5	5	4200	20	C S R F
12		260		X	5	5	2950	15	C R F
13		240		5	5	5	2300	30	R F C S
14		220		5	10	5	3750	20	R F C
15		200		5	5	5	3250	30	R F S C
16		180		5	5	5	1850	75	C
17		160		X	5	5	3100	55	C R F S
18		140		5	5	5	1600	85	C
19		120		10	10	5	4200	50	R F S C
20		100		5	5	5	1400	30	R F C
21		080		10	10	5	3300	60	R F S C
22		060		5	5	5	1300	25	R F S C
23		040		10	10	5	2050	25	S C R F
24		020		5	5	5	1050	15	S C R F
33825		000		5	5	5	3650	45	C S

058211

81

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mount Black. Stitt Grid.	LINE: 5369500 N (2)	WM	Soil	SHEET No
	FROM: 378980 E	DATE	DEPTH	VOL No
	TO: 378,840 E	4/2/80	C Horizon.	

SAMPLE NUMBER	CO-ORDINATES (R)/S	CO-ORDINATES (R)/W	Interval +(-)	PLP	PZn	PCu	PFe	Mn	DESCRIPTION
33826	369,500	378,980	20m	10	10	5	6600	55	CRF
27		960		5	5	5	1700	30	CS
28		940		5	5	5	1750	25	RFSC
29		920		5	5	5	1250	20	RFCS
30		900		5	5	5	1950	20	CS
31		880		5	10	5	3300	30	RFCS
32		860		5	5	5	2600	25	CRF
33833		378,840		X	X	5	2600	20	SSRF

0582 12

82

PROJECT: Mt Black

Stitt Grid.

CO-ORDINATES

LINE: S 369 500 N. (1)

FROM: 375 540E

TO: 378 820E.

SAMPLED BY: MM + BM

DATE: 13/3/80

MATERIAL: Soil

DEPTH: C Horizon.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe P	Mn	DESCRIPTION
33834	369 500	375 540	20m	10	25	80	5000 %	105	RFKS
35		560		5	5	10	1250 %	45	RFKS
36		580		5	X	5	4550	35	RFKS
37		600		10	X	10	1650	10	RFKS
38		620		5	X	X	650	5	RFKS
39		640		5	X	10	1800	10	RFKS
40		660		5	X	15	5650	50	RFKS
41		680		5	X	5	5900	30	RFKS
42		700		5	X	X	4450	15	RFKS
43		720		5	X	X	1300	10	RFKS
44		740		10	5	X	350	15	RFKS
45		760		5	X	5	4300	15	RFKS
46		780		5	X	5	7150	25	RFKS
47		800		5	Y	5	3300	15	RFKS
33848		375 820		5	5	X	4050	25	RFKS

058213
83

PROJECT: MT. BLACK Stiff Grid	CO-ORDINATES LINE: 5,369,500N (9) FROM: 381,680 E TO: 381,900 E	SAMPLED BY: MG & ES	MATERIAL: SOIL	BOOK No.	
		DATE: 8/4/80	DEPTH: C. HORIZON	SHEET No.	
				JOB No.	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval G/-	Pbp	Zmp	Cmp	Fep	Mn		DESCRIPTION
34894	369500	381680	20	45	125	125	620%	230	Possible contam	CSO
95		700		5	x	x	605	15	Possible contam	CSRA
96		720		10	x	x	520	15		CSRA
97		740		5	x	x	1050	25		CSRA
98		760		15	x	x	675	20		SRFCO
99		780		10	x	x	615	15		RFCS
34900		800		10	x	x	475	10		CSRFO
35301		820		5	x	x	1600	30		SRFC
02		840		5	x	x	1150	30		CSRA
03		860		5	x	x	850	15		CRFS
04		880		10	x	x	1000	20		CRFS
35305		381900		5	x	x	475	15		CRFS

NEW BOOK

058214

Mn

9A

MOUNT OPPOSITE TO WHITE.

STITT GRID.

CO-ORDINATES
LINE: 5 369 000 N (S)
FROM: 379 020 E
TO: 378 540 E

SAMPLED BY: WM.
DATE: 30/10/79

MATERIAL: SOIL
DEPTH: C HORIZON.

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/E	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn	DESCRIPTION
29167	369 000	379 020	20M	5	15	X	5.8	75	SCRF
68		000		10	15	5	5.2	135	CSRF
69		378 980		5	20	5	8.0	95	CSRFO
70		960		5	20	5	7.1	145	CSRF
71		940		5	15	X	4.7	80	SCRF
72		920		5	15	X	2.9	60	CSRF
73		900		5	15	5	3.0	110	CSRFO
74		880		5	15	X	3.6	40	CSRF
75		860		25	25	10	2.3	70	CSO
76		840		5	15	X	1.7	30	CSRF
77		820		5	5	X	2.6	50	CSRF
78		800		5	10	X	1.9	45	CSRF
79		780		5	10	X	2.1	45	CSO
80		760		5	10	X	2.6	45	C
81		740		5	10	X	5.2	55	CSRF
82		720		5	10	X	2.5	35	CSO
83		700		5	15	5	8.0	55	CSRF
84		680		5	15	5	2.1	40	CSO
85		660		20	30	5	1.55%	180	CSRF
86		640		20	35	10	5.4%	120	C
87		620		10	30	10	6.3%	85	CSC
88		600		15	25	5	2.4%	70	CSCO
89		580		10	25	5	1.5%	75	CCSS
90		560		5	20	5	8.0	90	CCSS
29191	378 540			5	15	5	7.5	60	C

98

Mn 9A

058215

PROJECT: MT BLACK STITT GRID.	CO-ORDINATES LINE: 5,369,000N FROM: 379,300E TO: 379,040E	SAMPLED BY: M.G.	DATE: 31/12/79	MATERIAL: SOIL	DEPTH: C. HORIZION	BOOK No.	SHEET No.	JOB No.	

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval +/(−)	P Pb	Zn P	Cu P	Fe P	Mn		DESCRIPTION
32101	369,000	379300	20	15	10	x	4400	60		CRO
02		280		15	5	x	3300	70		COS
03		260		10	35	x	2.3%	170		CRS
04		240		5	5	x	4400	50		CR
05		220		25	30	5	9500	130	contam	CSRO
06		200		10	15	x	5650	60	NO C HORIZION CONTAM	SORC
07		180		5	5	x	1100	25		SRC
08		160		10	15	x	950	30	contam	SO
09		140		5	5	x	1050	30		CR
10		120		10	15	x	1950	35		CRS
11		100		5	15	x	2200	40	contam	SRC
12		080		x	5	x	290	30	ATTRIZION NO CHANGE	CROS
13		060		x	10	x	480	35		COSR
32114		379040		x	5	x	1350	50		SCRO

87

058216

Mn

9A

PROJECT: MT BLACK SCITT GRID.

CO-ORDINATES LINE: 5 369 000 N (6)

FROM: 379 500E

TO: 379 320 E

SAMPLED BY: MG.

DATE: 31/12/79.

MATERIAL: SOIL

DEPTH: C HORIZON.

ROCK No.

SHEET No.

JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	ppm Pb	ppm Zn	ppm Cu	ppm Fe	ppm Mn	DESCRIPTION
31491	369000	379500	20m	X	10	X	1950	20	CRF
92		480		6	35	X	1.25%	110	CRF
93		460		15	20	X	1.8%	115	CRF
94		440		5	5	X	3600	40	RFC
95		420		X	X	X	640	20	CORFA
96		400		X	10	X	3000	30	CRFASD
97		380		5	10	X	1350	50	CORF
98		360		5	X	X	1050	35	COCRF
99		340		5	X	X	890	40	CRF
31500		379 320		20	5	X	2500	60	OC

88

058217

Mn 91

PROJECT: Mt Black. Stitt Grid.

CO-ORDINATES
LINE: 5369000N (71)
FROM: 350000E
TO: 379520E

SAMPLED BY: MG + Co:
DATE: 31/12/79. LAST DAY OF THE 70's YAHOOOO...

MATERIAL: Soil
DEPTH: C HORIZON.

SOC. No:
SHEET No:
JOB No:

SAMPLE NUMBER	CO-ORDINATES (N)S	(E)W	Interval	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
31466	3690000	3800000		5	10	X	4.50	15	SCRFO
67		3797980		10	10	X	3.65	15	*CO
68		9960		5	5	X	6.30	15	SCRFO
69		9940		X	10	X	9.00	15	CRFS
70		9920		X	5	X	1.00	20	SORF
71		9900		5	5	X	10.00	20	CRFS
72		9880		5	5	X	12.50	20	CSORF
73		9860		10	20	X	18.50	30	CSRF
74		9840		15	15	X	12.00	30	CCQRF
75		9820		45	25	X	9.50	20	*CO
76		9800		5	5	X	17.50	50	SORF
77		7880		5	15	X	17.00	45	CRFO
78		7860		10	10	X	13.00	55	CORF
79		7840		5	5	X	8.50	25	CRFO
80		7820		5	5	X	6.00	25	CORF
81		7800		5	5	X	14.50	25	CRFSO
82		6880		5	5	X	9.30	30	CO
83		6860		5	5	X	19.50	40	CRFSO
84		6840		10	40	X	1.05%	205	CRF
85		6820		20	10	X	21.50	30	CRFOS
86		6800		20	15	X	28.00	380	*CORFS
87		5880		10	10	X	32.00	60	CRF
88		5860		5	5	X	23.50	40	*COS
89		5840		5	20	X	1.15%	60	CORF
31490		3795520		5	5	X	16.50	20	SOC

NB *: NO CHORIZON.

89

058218

Mn 9/8

PROJECT: MT. BLACK	CO-ORDINATES LINE: 5,369,000N (8)	SAMPLED BY: B.M.	MATERIAL: SOIL
STITT GRID	FROM: 380,040E	DATE: 2/1/80	DEPTH: C. Horizon
	TO: 380,020E		

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/(-)	Cu ppb	Pb ppb	Zn ppb	Fe ppb	Mn		DESCRIPTION
32190	369,000	380,040	20	X	5	5	3200	15	[illegible]	CRS
32191		380,020		X	5	X	2100	20	[illegible]	SRC

90

Mn TB

058219

SHEET: MT. BLACK

STITT GRID

CO-ORDINATES
LINE: S,369,000N (9)
FROM: 380,540E
TO: 380,060E

SAMPLED BY: B.M.

DATE: 2/1/80

MATERIAL: SOIL

DEPTH: C Horizion

BOOK No.
SHEET No.
JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Cu ppm	Pb ppm	Zn ppm	Fe ppm	Mn		DESCRIPTION
32165	369,000	380,540	20	35	135	70	3.80%			CR
66		520		60	65	60	5.55%			C
67		500		45	50	55	4.30%			CR
68		480		15	30	30	2.65%			CRO
69		460		5	10	20	1.85%			CR
70		440		10	20	25	2.20%		Loss contam	CSRO
71		420		10	10	30	3.05%			CRS
72		400		5	10	10	1.25%			CR
73		380		X	10	5	3650			COR
74		360		X	10	5	4150			CS
75		340		X	5	5	7650			CR
76		320		X	5	5	7550			CR
77		300		X	5	15	8500			CR
78		280		X	5	10	6200			CR
79		260		X	5	20	1.50%			CR
80		240		X	10	5	5700			CSR
81		220		X	10	10	7600			COR
82		200		X	5	5	7600			CR
83		180		X	5	5	7200			CR
84		160		X	10	5	3050			COS
85		140		X	X	5	2400			CR
86		120		X	5	5	5650			SOCR
87		100		X	10	X	3200			CR
88		080		X	10	5	2100			COSR
32169		380060		X	5	5	2.35%		Contam	RSC

9b

058220

Mn

9B

PROJECT: MT. BLACK STITT GRID	CO-ORDINATES LINE: 5,369,000N (10) FROM: 381,040E TO: 380,560E	SAMPLED BY: B.M	DATE: 2/1/80	MATERIAL: SOIL	DEPTH: C. HORIZON
BOOK No	SHEET No	JOB No			

SAMPLE NUMBER	CO-ORDINATES (N/S)	CO-ORDINATES (E/W)	Interval +/-	Cu	Pb	Zn	Fe	Mn		DESCRIPTION
32140	369000	381040	0	10	10	30	3300	25	No C Horizon B Horizon	COR
41		020		x	10	15	1.35%	70	No C Horizon B Horizon	COR
42		000		5	30	20	3050	20	No C Horizon B Horizon	COR
43		380980		x	10	10	5150	55		CSR
44		960		10	55	30	1.05%	55	No C Horizon B Horizon	CO
45		940		10	20	50	2.35%	225		CR
46		920		10	30	45	2.65%	200		CRO
47		900		10	25	35	2.40%	155		CR
48		880		10	20	60	2.05%	215		CRO
49		860		x	5	10	7500	60		CR
50		840		5	10	25	2.65%	255	No C Horizon B Horizon	CO
51		820		10	40	25	8000	45		CR
52		800		10	20	20	2.35%	90		COR
53		780		15	35	60	3.70%	185		C
54		760		15	55	30	1.45%	95	No C Horizon B Horizon	COS
55		740		45	45	95	3.55%	575	Contam	CR
56		720		20	30	90	3.60%	265		CRS
57		700		10	35	45	2.50%	115		CR
58		680		10	25	30	3.95%	85		COR
59		660		10	45	20	2.10%	200		CR
60		640		15	65	35	8500	105	No C Horizon B Horizon	COR
61		620		50	130	100	5.05%	1250		CR
62		600		15	40	25	4000	75	No C Horizon B Horizon	CO
63		580		10	20	35	2.25%	145		CR
32164		380560		25	85	50	2.55%	135		CO

058221

(Missing 381560E No Sample taken)

Mn 98

AREA: MT BLACK

STITT GRID.

CO-ORDINATES
LINE: 5,369,000 N (11)
FROM: 381 540 E
TO: 381 060 E

SAMPLED BY: B.M.

DATE: 2/1/80

MATERIAL: SOIL

DEPTH: C. Horizon

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Cu ppm	Pb ppm	Zn ppm	Fe %	Mn ppm	DESCRIPTION
32115369000		381540	20	10	50	75	3.05		COR
116		538		10	40	35	3.10		CO
117		536		10	15	25	2.40		CR
118		534		15	20	65	4.95		CR
119		532		15	20	125	6.60		CR
120		530		20	15	95	2.00		CR
121		528		25	25	60	5.30		CR
122		526		30	20	90	6.35		CR
123		524		10	20	25	3.55		CR
124		522		10	35	25	1.40		COR
125		520		95	40	60	2.45		CR
126		518		20	15	65	5.95		CR
127		516		10	15	80	5.15		CR
128		514		10	25	60	5.35		CR
129		512		20	30	120	6.25		CR
130		510		10	35	30	4.25		COR
131		508		15	90	60	3.45		CR
132		506		20	60	60	4.50		COSIR
33		504		25	35	105	4.90		CR
134		502		5	20	15	2.20		CR
135		500		X	15	15	2.25		CR
136		498		5	15	15	1.60	Rock contam	CR
137		496		5	15	55	5.20		CR
138		494		X	10	55	1.25		CR
32139		492		X	15	10	7.00	Rock contam	CR

93

058222

Mn ✓ 98

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black. Stitt Grid.	LINE: 5369000 N (13)	WM.	Soil	SHEET No
	FROM: 382080 E	DATE: 29/10/79	DEPTH: Chorizon.	JOB No
	TO: 382180 E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppb	Zn ppb	Cu ppb	Fe %	Mn	DESCRIPTION
29161	369000	382080	20	5	25	5	1350	40	CSO
62		100		5	20	5	1500	35	SCRF
63		120		15	20	5	1300	40	CSRFO
64		140		5	15	5	1500	30	SCRF
65		160		15	25	5	2.5%	70	CSRFO
66		382180		5	10	x	5500	35	SCRFOG

94

058223

Mn ✓ 98

PROJECT	CO-ORDINATES (GOOD ONE, THIS)	SAMPLED BY	MATERIAL	BOOK No
Mt BLACK	LINE: 5 369 000 N. (12)	WM.	SOIL	SHEET No
STITT GRID.	FROM: 381 580E.	DATE 29/10/79	DEPTH C HORIZON	JOB No
	TO: 382 060E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL	Pb ppm	Zn ppm	Cu ppm	Fe ppm	Mn	DESCRIPTION
29136	369,000	381,580	20m	175	115	290	2.5%	250	CSO
37		600		65	55	260	8000	115	CSO
38		620		70	50	55	2.45%	110	CO
39		640		55	65	85	4.4%	160	C
40		660		10	30	15	9000	50	CS
41		680		15	40	20	1.65%	80	CSRF
42		700		35	40	60	4.3%	240	C
43		720		45	60	50	2.3%	120	CSO
44		740		15	30	5	3700	80	CSO
45		760		5	35	5	2500	50	CSRF
46		780		35	50	10	1.05%	95	CSRFO
47		800		15	65	10	1.35%	125	CSRF
48		820		15	50	45	6800	75	CSO
49		840		5	60	25	1800	60	CS
50		860		15	95	20	1.2%	190	CSO
51		880		5	15	10	1200	25	CSO
52		900		5	15	5	1100	30	CSRF
53		920		10	20	10	1600	55	CSO
54		940		5	15	5	2000	40	CSRF
55		960		5	15	5	1500	25	SCRF
56		980		5	20	5	1500	25	CSRF
57		382000		10	20	5	1900	40	SCRF
58		020		5	35	5	4400	50	CSRF
59		040		5	15	X	1200	20	CS
60		382060		5	20	X	1600	25	CSRF

95

058224

Mn ✓ 93

PROJECT: MT. BLACK.

STITT. GRID.

CO-ORDINATES
LINE: 5,369,000N. (14)
FROM: 382,460.
TO: 382,200.

SAMPLED BY: W.M.

DATE: 31-10/79.

MATERIAL: Soil.

DEPTH: C. Horizon.

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES ⓝ/S	CO-ORDINATES Ⓔ/W	Interval +/⊖	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn	DESCRIPTION
29376	36900	382460	20	5	5	5	5.6	910	CSRF
377		4400		5	X	X	4.4	5	CSRF
378		4200		5	5	X	5.0	5	CSO
379		4000		5	10	5	3.8	5	CSO
380		3800		• 5	25	15	4.8	15	CO
381		3600		5	15	5	5.7	15	CSO
382		3400		30	30	15	6.3	20	CSO
383		3200		5	5	5	3.8	5	CSO
384		3000		20	15	10	4.5	10	CSO
385		2800		5	5	X	3.9	10	CSO
386		2600		5	5	10	1.4	5	CSO
387		2400		5	5	15	1.9	10	CSRF
388		2200		5	5	5	6.6	5	CSRF
38900	36900	382200		15	15	30	4.4	20	CO

96

058225

Mn ✓ 9B

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK. STITT GRID.	LINE: 5,369,000N. (15) FROM: 382,960E. TO: 382,480E.	W. M.	SOIL.	SHEET No
		DATE: 31-10-79.	DEPTH: C. Horizon.	JOB No

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	PL	Zn	Cu	Fe	Mn	DESCRIPTION
29351	369,000	382,960	20	10	10	X	1050	15	CSRF
52		940		5	10	X	900	10	CSRF
53		920		5	5	X	900	20	CSRF
54		900		10	10	X	1300	20	CSRF
55		880		5	10	X	1350	25	CSRF
56		860		5	5	X	1850	15	CSO
57		840		5	10	X	1100	20	CS
58		820		5	10	X	950	15	CS
59		800		5	10	X	900	10	CSRF
60		780		5	5	X	630	15	CSO
61		760		10	10	X	1300	40	CO
62		740		10	15	X	1150	25	CSO
63		720		5	10	X	1000	15	CSO
64		700		5	5	X	750	10	CSRF
65		680		5	10	X	615	20	CSO
66		660		5	10	5	1100	10	CSO
67		640		5	10	X	1000	5	C
68		620		5	10	X	1200	5	CS
69		600		5	10	X	900	5	CS
70		580		5	10	15	680	10	(No C. Horizon) CSO
71		560		15	15	30	690	15	(No C. Horizon) CSO
72		540		5	5	5	610	5	(No C. Horizon) CS
73		520		5	10	X	900	5	CSRF
74		500		5	10	X	670	10	CS
29375		382,480		15	10	10	850	10	CSO

058226.

9A

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK NO.
MT BLACK Stitt Grid	LINE: 5.368500 (1)	B.M.	SOIL	SHEET NO.
	FROM: 5.378420	DATE 18/3/80	DEPTH C. HORIZON	JOB NO.
	TO: 378360			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe P	Mn	DESCRIPTION
34101	368500	378420	20	5	5	X	1300	50	CSORF
102		378400		X	5	X	3300	65	CRFSO
103		378380		5	10	5	4100	80	CRFSO
34104		378360		5	5	X	2550	75	CRFSO

058227

PROJECT: MT. BLACK Stiff GRID

CO-ORDINATES — LINE: 5,368 500 N (Z)
FROM: 378,460 E
TO: 378,444 E

SAMPLED BY: BM. E.S. MG
DATE: 18/3/80

MATERIAL: SOIL
DEPTH: C. HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	P Pb	Zn P	Cu P	Fe P	Mn	DESCRIPTION
33812	368500	378460	20	S	X	X	11500	35	CIRASOI
33900		240		X	X	X	15500	35	CSAPOI

99

058228

9A

PROJECT: MT BLACK Shtt GRID

CO-ORDINATES LINE: 5.368500N (3)

FROM: 378.960

TO: 378.480

SAMPLED BY: BM.E.SMG

DATE: 18/3/80

MATERIAL: SOIC

DEPTH: C HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Increm +/-	Pb P	Zn P	Cu P	Fe P	Mn.	DESCRIPTION
338	368500	378960	20	5	10	X	2300	20	CISO
339		378740		5	10	X	5100	30	CRIFSO
340		378520		5	10	X	7500	25	CFS
341		378300		5	10	X	4250	30	CFSRF
342		378080		5	10	X	1.05%	480	CRASO
343		377860		15	30	5	4300	200	RFISC
344		377640		10	10	X	1.10%	3200	RCBIO
345		377420		30	75	5	19500	35	SRFC
346		377200		5	X	X	33500	40	CRIFSI
347		376980		5	5	X	17500	25	RFSC
348		376760		10	X	X	47000	20	CRF
349		376540		10	10	5	26000	25	RFSO
350		376320		15	5	X	23500	25	CRIFSO
351		376100		5	5	X	1.85%	75	CRF
352		375880		10	25	5	1.40%	65	CSRF
353		375660		10	15	5	66000	50	RFCSI
354		375440		10	10	5	2.45%	1.25%	*CSO
355		375220		55	50	10	47000	100	CSIRF
356		375000		15	15	5	40000	75	CSIO
357		374780		5	10	X	25000	40	CSRF
358		374560		10	5	X	20500	50	CSO
359		374340		5	X	X	27500	55	CRFS
360		374120		5	5	X	31000	60	CRFSO
361		373900		5	X	X	16500	30	CSIRFI
362		373680		5	X	X	7200	30	CSO

* B HORIZON ONLY

100

058229

9A

PROJECT: MT. BLACK Stitt Grid

CO-ORDINATES LINE: 5,368.500N (4)
FROM: 379,460E
TO: 378,440E

SAMPLED BY: B.M M.G. ES.
DATE: 18/3/80

MATERIAL: SOIL
DEPTH: C. HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
3738649	368500	379460	20m	5	25	X	1.20%	100	CSRO
50		440		5	10	X	5950	80	CRFAS
51		420		5	05	X	4050	60	CRFAS
52		400		5	05	X	2500	90	CSRFI
53		380		5	10	20	1.25%	85	CS
54		360		25	25	05	1.50%	110	GRFOI
55		340		20	25	X	1.70%	110	C
56		320		15	15	X	1.05%	95	CRFS
57		300		25	25	05	2.50%	220	RFCSIO
58		280		20	25	X	2.10%	80	CSO
59		260		05	X	X	2400	40	CSRFI
60		240		10	10	05	7650	80	CSRFIO
61		220		15	20	X	2750	105	RFISC
62		200		10	10	X	1.30%	55	CRFISO
63		180		30	35	05	3.75%	1.35%	CSIO
64		160		20	35	05	3.00%	1.20	CRFIO
65		140		10	05	X	8500	90	CSRF
66		120		10	05	X	5550	25	CRFISO
67		100		05	20	X	1.60%	70	CSRFO
68		080		25	05	X	5250	30	CRFISO
69		060		15	X	X	1900	15	CSO
70		040		05	X	X	1650	10	CRFS
71		020		05	X	05	3600	80	RFCIS
72	379000			05	X	10	5000	30	CRFSO
3738673	378980			05	X	10	7900	35	CSRFI

058230

9A

PROJECT: MT. BLACK Stitt Grid

CO-ORDINATES
LINE: 5,368.500N (5)
FROM: 379.480 E
TO: 379960

SAMPLED BY: BM ES. MG

DATE: 19/3/80

MATERIAL: SOIL

DEPTH: C HORIZON

SAMPLE NUMBER	N/S	E/W	ELEVATION +/-	Pb P	Zn P	Cu P	Fe P	Mn.	DESCRIPTION
34105	36850	37948	20	5	5	25	2150	40	CRFSI
106		9500		5	10	5	4350	50	RFCSO
107		9520		5	5	5	1350	35	SRFSIO
108		9540		X	5	X	5550	55	RFICSI
109		9560		5	5	5	2950	45	* CISI
110		9580		5	X	X	1550	20	GRFSIO
111		9600		5	X	X	3200	35	CSIRFI
112		9620		5	5	5	1100%	45	RFSCI
113		9640		5	5	5	5000	30	CRFSI
114		9660		5	5	5	4200	20	RFCSI
115		9680		5	5	5	4350	30	GRFSI
116		9700		10	X	X	1600	30	CRFSIO
117		9720		5	X	X	4550	25	SRFIC
118		9740		5	10	X	8000	45	CSIRFI
114		9760		20	40	10	3100%	180	CSCI
120		9780		50	60	X	1050%	60	CRFISO
121		9800		10	5	X	3600	30	CRFSI
122		9820		10	5	5	2550	40	CRFSI
123		9840		10	5	5	6350	30	CRFISO
124		9860		30	5	X	1950	40	CSRFO
125		9880		5	5	X	6100	20	CSO
126		9900		5	X	X	1950	30	GRFSO
127		9920		5	X	X	3200	10	SRFCO
128		9940		10	X	X	2750	10	RFISCI
129	36850	37960		5	X	X	2150	10	SRFCI

* NO C HORIZON

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058231.

9B

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK Stiff Grid	LINE: 5,368,500 N (6)	B.M. ES. M.G	SOIL	SHEET No
	FROM: 379980 E	DATE: 19/3/80	DEPTH: C. HORIZON	JOB No
	TO: 380,460 E			

SAMPLE NUMBER	CO-ORDINATES (N)/S	CO-ORDINATES (E)/W	Bottom (+)/-	P Pb	Zn P	Cu P	Fe P	Mn	DESCRIPTION
34130	368500	379980	20	25	5	x	4250	20	CRFS
31		380000		5	10	5	1.10%	35	CS
32		020		5	35	10	2.75%	95	CRFS
33		040		5	20	5	1.50%	90	CSRF
34		060		10	20	5	9000	120	RFSC
35		080		10	x	x	2650	45	CSRF
36		100		5	x	x	2100	25	CRFSO
37		120		5	15	x	7400	65	CSRF
38		140		20	100	15	1.40%	1500	RFSC
39		160		20	25	10	1.25%	115	CRFO
40		180		15	20	10	1.00%	120	RFCS
41		200		5	5	x	6550	55	CSRP
42		220		5	10	x	1.35%	120	RFSC
43		240		5	15	x	1.20%	65	RFCS
44		260		5	15	5	1.40%	110	RFCS
45		280		10	25	5	2.80%	100	CSO
46		300		10	30	10	3.95%	115	CSRP
47		320		20	20	5	1.95%	80	CO
48		340		5	x	x	4650	40	CRFSO
49		360		10	x	x	1300	35	CO
50		380		5	x	x	2650	20	CRFSO
51		400		10	x	x	2350	110	CSO
52		420		10	x	x	1800	55	CSO
53		440		5	x	x	2250	20	SCRFO
34154		380460		5	x	x	4050	20	RFCSO

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058232

9B

PROJECT: MT. BLACK Stiff Grid.

CO-ORDINATES
LINE: 5,368,500 N (71)
FROM: 380,480
TO: 380,960

SAMPLED BY: MG. ES BM

DATE: 19/3/80

MATERIAL: SOIL

DEPTH: C. HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe P	Mn.	DESCRIPTION
34155	26850	38048		5	10	X	1.75%	150	CRFS
1156		4800		5	X	X	2900	25	RFSC
1157		4820		5	5	X	3300	25	RFSCO
1158		4840		5	5	X	2950	30	CRFSO
1159		4860		5	X	X	900	10	CSO
1160		4880		10	X	X	1100	15	CRFSO
1161		4900		5	5	5	1.45%	130	CRFSI
1162		4920		10	40	5	4150	280	CRFSI
1163		4940		20	20	5	2.20%	105	CSO
1164		4960		20	10	X	1.20%	105	RFSC
1165		4980		15	15	5	5250	55	CSO
1166		5000		5	10	X	2.20%	70	CRFS
1167		5020		10	20	5	1.80%	130	CRFS
1168		5040		15	35	5	1.60%	210	CSO
1169		5060		10	5	X	4350	50	CRFSO
1170		5080		45	95	X	4.10%	400	CRFSI
1171		5100		30	65	5	4.00%	200	CO
1172		5120		15	65	X	2.55%	220	CSRI
1173		5140		20	60	5	3.30%	230	CO
1174		5160		10	60	10	3.30%	210	CRS
1175		5180		5	20	X	1.40%	80	CSO
1176		5200		10	5	X	2900	25	CSO
1177		5220		5	5	X	3000	30	CSRI
1178		5240		10	5	X	6000	35	CSRO
34179		38096		10	80	35	5.40%	460	CRO

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058233

98

PROJECT: MT. BLACK Stiff Grid.

CO-ORDINATES
LINE: 5,368,500N (8)
FROM: 380,480
TO: 381,380

SAMPLED BY: M.G ES BM

MATERIAL: SOIL

DATE: 19/3/80

DEPTH: C. HORIZON

SAMPLE NUMBER	CO-ORDINATES (N/S)	CO-ORDINATES (E/W)	E/-	Pb P	Zn P	Cu P	Fe %	Mn.	DESCRIPTION
3418	36850	38048		10	15	X	1.40	75	CRS
3419		38100		10	15	X	1.25	100	CRS
3420		0220		5	40	10	2.35	190	CSA
3421		0440		5	35	5	2.25	80	CRS
3422		0660		10	25	10	2.85	85	CS
3423		0880		10	25	5	2.75	90	GRSOI
3424		1100		15	25	5	2.50	80	CSRO
3425		1320		5	30	X	2.30	65	CS
3426		1540		10	140	40	6.10	680	RSC
3427		1760		10	40	25	2.45	90	CO
3428		1980		15	65	10	7.00	440	CSR
3429		2200		10	65	10	3.35	290	C
3430		2220		30	35	20	3.85	380	SCRF
3431		2440		10	5	X	4.85	665	CSO
3432		2660		5	X	X	4.05	445	QS
3433		2880		10	65	5	6.35	160	CO
3434		3100		15	45	20	3.00	110	CO
3435		3320		5	10	5	6.80	160	CRS
3436		3540		10	25	5	2.50	555	RSC
3437		3760		20	45	10	2.95	220	CRSO
3438		3980		15	50	15	3.20	100	CRS
3439		4200							
3440		4420							
3441		4640							
3442		4860							
3443		5080							

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058234

98

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK Stitt GRID	LINE: 5,368,500N (9)	MM·BM	SOIL	SHEET No
	FROM: 381,400 E	DATE 20/3/80	DEPTH C-HORIZON	JOB No
	TO:			

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (+)/-	Pb P	Zn P	Cu P	Fe P	Mn		DESCRIPTION
34301	368500	381400	20	25	40	20	4.80%	90		CRS
02		420		15	25	10	2.45%	50		CS
03		440		20	55	15	4.00%	100		CRSO
04		460		15	30	10	3.20%	55		CRO
05		480		10	15	10	2.05%	50		CRS
06		500		15	65	10	2.40%	270		CR
07		520		20	85	10	3.60%	360		CRS
08		540		20	50	10	2.90%	300		RSC
09		560		15	25	5	2.20%	80		CS
10		580		15	50	10	3.75%	170		CSO
11		600		25	30	5	2.35%	180		CS
12		620		65	50	10	5.45%	530	POSSIBLE CONTAM *	SRC
13		640		60	45	X	1.15%	95		CRS
14		660		40	35	5	1.35%	80		SRC
15		680		40	30	5	9000	75	POSSIBLE CONTAM *	CRSO
16		700		35	30	5	6500	65	CONTAM *	SRC
17		720		70	50	15	1.35%	85	CONTAM *	CRS
18		740		60	35	5	7200	60	"	SCRO
19		760		25	45	10	1.85%	80		CRS
20		780		20	40	10	2450	30		CSO
21		800		130	30	20	3950	40	"A" HORIZON ONLY *	CO
22		820		40	20	5	3250	25		CSO
23		840		40	15	5	3250	25	"A" HORIZON ONLY *	CO
24		860		15	25	5	6200	30		RSC
34325		581880		20	25	X	3800	45		CSRO

106

058235

9B

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK Stitt GRID	LINE: 5,368500N (10)	MM. BM	SOIL	SHEET No
	FROM: 381,900	DATE: 20/3/80	DEPTH: C. HORIZON	JOB No
	TO: 382,140			

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	INTERVAL (+)/-	P Pb	Zn P	Cu P	Fe P	Mn		DESCRIPTION
34326	368500	381900		30	15	x	2200	50		CSRO
27		381920		40	20	5	3850	30	B HORIZON ONLY *	CSRO
28		381940		30	25	5	4150	30	B HORIZON ONLY	CRSO
29		381960		35	20	5	3100	25	B HORIZON ONLY *	CSRO
30		381980		30	20	5	2300	25		CSRO
31		382000		15	25	5	3200	25	A HORIZON ONLY *	COSR
32		382020		10	20	x	4000	25		CRSO
33		382040		40	20	5	3650	55		CSRO
34		382060		60	45	10	5500	45	B HORIZON ONLY *	CSRO
35		382080		10	10	x	3800	20	B HORIZON ONLY *	CRSO
36		382100		5	10	x	3800	20	B HORIZON ONLY	CSRO
37		382120		5	25	x	5450	30		CRSO
34338		382140		75	30	10	3100	15		CSRO

058236

107

Duplicate

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT BLACK STITT GRID	LINE: 5,368,000N (1) FROM: 377,920 E TO: 377,660 E	M.G. + G.B.	SOIL	SHEET No
		DATE: 6/12/79	DEPTH: C. Horizon	JOB No

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
30726	368,000	377,920	20	60	95	25	2.45%	240	CRS (Poss. contam.)
27		900		65	105	20	1.85%	245	CSR
28		880		60	50	10	1.90%	100	CSO
29		860		45	30	5	1.50%	60	CRSO
30		840		45	55	10	3.35%	315	RCSO
31		820		15	35	5	2.60%	75	CSR
32		800		15	40	5	1.35%	120	CSR (Poss. contam.)
33		780		NO SAMPLE TAKEN					
34		760		175	25	5	6850	55	CSLO
35		740		35	40	10	2.35%	195	CSOR (Poss. contam.)
36		720		35	35	10	1.25%	225	CSO
37		700		5	20	10	8000	85	CSO
38		680		25	65	55	2.05%	360	CSRO (Poss. contam.)
30739		377,660		15	30	35	1.35%	135	CSLO

058237

108

Mn.

9A

PROJECT: Mt Black. Stitt Grid.

CO-ORDINATES: LINE: 5365000N (1) FROM: 377920E. TO: 377660E.

SAMPLED BY: MG + G.B.

DATE: 6/12/79.

MATERIAL: Soil

DEPTH: C Horizon.

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
30726	368,000	377,920	20m	60	95	25	2.95%	240	CRFS
27		900		65	105	20	1.85%	245	CSRF
28		880		60	50	10	1.90%	100	CSO
29		860		45	30	5	1.50%	60	CRFSO
30		840		45	55	10	3.35%	315	RFCSO
31		820		15	35	5	2.60%	75	CSRF
32		800		15	40	5	1.35%	120	CSRF
33		780		—	—	10	Sample Taken		
34		760		175	25	5	6.85%	55	CSO
35		740		35	40	10	2.35%	195	CSORF
36		720		35	35	10	1.25%	225	COS
37		700		5	20	10	.80%	55	CSO
38		680		25	65	55	2.05%	360	CSORF
30739		377,660		15	30	35	1.35%	135	CSO

~~058238~~

109

Duplicate

PROJECT: Mt BLACK. STITT GRID.

CO-ORDINATES
LINE: 5 365 000 N (2)
FROM: 378 400E
TO: 377 960E

SAMPLED BY: MG + GS.
DATE: 6/12/79

MATERIAL: SOIL
DEPTH: C HORIZON.

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval +/(-)	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
307 C1				NO	SAMPLE	TAKEN			
C2	365,000	378,400	20m	105	220	10	4.25%	950	OSRC
C3		380		100	190	10	3.65%	665	OCSR
C4		360		10	250	x	4450	146	ORSC
C5		340		25	400	x	1.10%	90	CSLSOR
C6		320		25	350	x	1.05%	100	RSCSL
C7		300		45	110	10	2.00%	250	RSC
C8		280		20	400	5	5450	205	COSLSR
C9		260		10	350	x	8500	115	CRGSO
C10		240		5	400	x	8500	75	CSSLOR
C11		220		5	200	x	3800	60	CSLSO
C12		200		5	200	x	3250	55	SCRSLO
C13		180		5	250	x	3750	70	GCSLR
C14		160		5	550	5	8000	150	RSCSL
C15		140		5	250	x	3350	80	CSG
C16		120		20	300	5	1500	165	OCS
C17		100		5	250	x	3750	70	RCSOSL
C18		080		30	800	10	1.95%	105	COS
C19		060		5	400	5	6900	90	CSO
C20		040		20	800	10	2.05%	165	CSGO
C21		020		5	300	x	4250	95	SCR
C22		000		5	250	x	3250	105	RSCO
C23		377,980		5	250	x	2850	100	RSC
C24		960		5	350	x	5000	110	RSCO
307 C25				NO	SAMPLE	TAKEN			

058239

110

Sample taken: 378,420E, see sheet (3)

Mn

9A

TABLE	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt BLACK STITT GRID.	LINE: 5368000N. (2)	MG. + Geoff B.	SOIL	SHEET Nº
	FROM: 378420E	DATE: 6/12/79.	DEPTH: C HORIZON.	JOB Nº
	TO: 377940E.			

SAMPLE NUMBER	CO-ORDINATES (N)/S	CO-ORDINATES (E)/W	Interval +/⊖	P Pb	P Zn	P Cu				DESCRIPTION
30701	368,000	378,420	20m				NO SAMPLE TAKEN			
02		400		105	220	10		425%	9500	SCRFO
03		380		100	190	10		365%	665	CSRFO
04		360		10	25	X		4450	145	SCRFO
05		340		25	40	X		110%	90	CSRFO
06		320		25	35	X		105%	100	RFSC
07		300		45	110	10		200%	250	RFSC
08		280		20	40	5		5450	205	COSRF
09		260		10	35	X		8500	115	CRFSO
10		240		5	40	X		8500	75	CSRFO
11		220		5	20	X		3800	60	CSO
12		200		5	20	X		3250	55	SCRFO
13		180		5	25	X		3750	70	RFCSO
14		160		5	55	5		8000	150	RFSC
15		140		5	25	X		3350	50	CSRF
16		120		20	30	5		1500	1650	OCS
17		100		5	25	X		3750	70	RFCSO
18		080		30	80	10		195%	105	COS
19		060		5	40	5		6900	90	CSO
20		040		20	80	10		205%	165	CSORF
21		020		5	30	X		4250	95	SCRF
22		000		5	25	X		3250	105	RFSCO
23		377980		5	25	X		2850	100	RFCS
24		960		5	35	X		5000	110	RFSCO
30725		377940					NO Sample taken			

058240

Mn

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt BLACK STITT GRID.	LINE: 5 368 000 N (3)	WM	SOIL	SHEET No
	FROM: 378 520 E	DATE	DEPTH	JOB No
	TO: 378 420 E	30/11/79	C HORIZON.	

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (+)/(−)	Pltd Pb	Pltd Zn	Pltd Cu	Fe P	Mn	DESCRIPTION
29495	368000	378520	20	15	10	10	1950	60	CO
96		500		25	25	10	7800	70	SCRF
97		480		20	25	15	4750	75	CS
98		460		20	20	10	4150	120	CSO
99		440		20	20	10	3150	50	SCRF
29500		378420		115	60	20	1.65%	2650	CSO

058241

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PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt BLACK STITT GRID.	LINE: 5 365 000 N (4)	WM	SOIL	SHEET No
	FROM: 379,020E	DATE: 30/11/79	DEPTH: C HORIZON.	JOB No
	TO: 378,540E			

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval ±0	Pltd. Pb	Pltd. Zn	Pltd. Cu	Fe P	Mn	DESCRIPTION
29470	368,000	379,020	20	5	15	5	2950	20	C
71		000		5	25	5	2750	20	CO
72		378,980		5	25	5	5650	25	CSRF
73		960		5	10	5	2150	15	CSRF
74		940		5	10	5	1950	20	CSRF
75		920		5	10	5	2450	30	CSO
76		900		10	10	5	3400	20	CRF
77		880		5	15	10	3950	30	CO
78		860		10	15	10	6450	15	CS
79		840		15	20	5	3450	20	CO
80		820		10	30	10	1.00%	55	CRF
81		800		15	30	10	1.75%	50	CO
82		780		5	30	5	1.55%	40	CRF
83		760		10	25	10	1.20%	35	C
84		740		15	35	15	1.30%	40	CSRF
85		720		20	35	5	1.05%	35	C
86		700		5	10	X	1350	10	CSO
87		680		10	5	X	1850	10	SCRF
88		660		10	15	X	1600	35	SCRF
89		640		15	20	X	5250	50	CRFO
90		620		5	5	X	850	30	SCRF
91		600		5	5	X	1100	25	SCRF
92		580		10	5	X	1750	30	CSORF
93		560		10	5	X	2450	40	CSRF
29494		378,540		10	125	10	2.15%	6200	SCRF

058242

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Mn / 9A

PROJECT: MH BLACK
STITT GRID.

CO-ORDINATES
LINE: 5 368 000 N (5)
FROM: 379 520 E
TO: 379 040 E.

SAMPLED BY: NM.
DATE: 30/11/79

MATERIAL: SOIL
DEPTH: C HORIZON.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Hdd. Pb	Hdd. Zn	Hdd. Cu	Fe%	Mn	DESCRIPTION
29445	368 000	379 520	20m	5	30	5	1.55%	50	CSRF
46		500		10	25	5	1900	15	CSRF
47		480		5	10	X	1850	15	CSRFO
48		460		5	20	X	9500	30	CSRF
49		440		25	30	10	2.15%	40	C
50		420		10	35	10	2.30%	35	CSRF
51		400		40	25	15	1.85%	60	CO
52		380		15	40	10	2.65%	70	CSRF
53		360		5	5	X	2000	20	CSRF
54		340		5	20	5	7650	40	SCRF
55		320		5	20	X	6200	20	RSRF
56		300		5	25	5	1.10%	25	RSRF
57		280		10	25	5	4250	130	CSRF
58		260		5	20	X	3500	20	CSRF
59		240		5	35	5	9500	35	CSRF
60		220		5	10	10	2650	15	CS
61		200		5	20	15	4850	25	CRF
62		180		5	15	10	2500	25	CO
63		160		5	15	5	2950	35	C
64		140		5	15	5	2500	15	CRFO
65		120		5	10	5	2050	15	CO
66		100		5	15	5	4800	15	CSRF
67		080		5	15	5	3750	20	CSO
68		060		5	10	5	4250	25	CO
29469	379 040			5	15	5	4250	25	CS

058243

Mn

9A

PROJECT: Mt Black — Stitt Grid.

CO-ORDINATES — LINE: 5 367 500 N (1) — FROM: 377 780 E. — TO: 377 560 E.

SAMPLED BY: Jacquis Sayers. — DATE: 9/1/80

MATERIAL: ~~Leached~~ Soil — DEPTH: C HORIZON

ROCK Nº / SHEET Nº / JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval ÷10	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
32801	367500	377750	20	30	60	10	3.75	1100	CRF
02		760		15	30	10	1.11	550	CRF
03		740		25	40	10	1.49	730	CRF
04		720		25	150	10	4.46	5110	CRF
05		700		20	40	10	4.40	1600	CRF
06		680		10	40	5	2.02	660	CRF
07		660		15	20	10	6.85	330	CRF
08		640		5	25	5	1.95	445	C
09		620		5	20	5	7.00	555	CRF
10		600		5	10	5	2.60	550	* C O
11		580		25	25	15	4.70	550	* C O
32812		377560		5	30	15	5.20	330	CRF

NB * : NO "C" HORIZON.

058244

115

Mn

9A

PROJECT: Mt Black

Stitt Grid.

CO-ORDINATES
LINE: 6 367 500N. (2)
FROM: 377 850E.
TO: 377 900E.

SAMPLED BY: Jacques Sayers.

DATE: 9/1/80.

MATERIAL: Soil

DEPTH: C Horizon.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	ppm Pb	ppm Zn	ppm Cu	Fe %	Mn ppm	FIELD STUDIES
32596	367,500	377,850	20m	15	25	5	4.20	50	CRA
97		860		20	30	5	5.20	60	CRA
98		840		15	30	5	7.70	60	CRA
99		820		25	40	5	1.14	80	CRA
32600		377,800		105	35	5	1.17	55	C.

116

058245

Mn

9A

PROJECT: Mt Black. Stitt Grid.

CO-ORDINATES
LINE: 5367.500N (3)
FROM: 376.350E.
TO: 377.900E.

SAMPLED BY: Jacques Sayers.

DATE: 9/1/80.

MATERIAL: Soil.

DEPTH: C Horizon.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
32571	367,500	378,350	20	10	15	5	1.55	70	CORF
72		350		15	40	10	1.12	215	CO
73		340		10	15	5	2100	75	CRF
74		320		15	20	5	2200	90	CRFO
75		300		15	40	10	1.15	340	CRF
76		280		10	30	5	1800	110	CO
77		260		10	20	10	1600	130	CRF
78		240		35	25	15	1500	45	OC
79		220		15	35	10	1.06	100	CRF
80		200		10	20	5	1.01	55	CRFO
81		180		15	15	5	1600	40	CRF
82		160		10	20	5	9000	60	CO
83		140		10	20	5	6100	65	CRF
84		120		10	15	5	3100	30	CO
85		100		5	15	5	1600	30	CRF
86		080		10	20	5	2600	95	CORF
87		060		10	15	5	1950	25	CRF
88		040		30	60	15	1.35	175	CRFO
89		020		10	15	5	2800	100	CRF
90		000		5	20	5	4500	80	CRF
91	377,900	360		5	10	5	1550	40	CRF
92		340		25	30	5	6300	600	CRFO
93		320		15	30	10	1.01	75	CRF
94		300		10	35	5	1.06	85	CRF
32595		280		10	30	10	1.01	65	CRF

058246

Mn

SHEET	Mt Black Stiff Grid.
CO-ORDINATES	LINE: 5 367 500 N. (4) FROM: 378 880 E TO: 378 400 E.
SAMPLED BY	Jacques Sayers.
DATE	9/1/80.
MATERIAL	Soil.
DEPTH	Chorizon.
EQUIP. No.	
SHEET No.	
JOB No.	

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval +/(-)	P Pb	Zn P	Cu P	Fe P	Mn	DESCRIPTION
32546	367500	378880	20m	5	15	5	6500	35	CRF
47		860		5	15	5	2000	30	CRF
48		840		5	15	5	3250	20	CRF
49		820		5	15	5	1950	20	CRF
50		800		X	20	5	4400	160	CRF
51		780		5	20	5	4300	130	CRF
52		760		35	50	10	8.5%	2.2	CS
53		740		10	25	10	7900	3000	CRF
54		720		5	15	5	5200	140	CRF
55		700		10	30	5	7600	390	CRF
56		680		30	100	20	1.3%	230	CRF
57		660		125	120	10	2.1%	6600	C
58		640		25	50	5	1.1%	1850	CRFO
59		620		155	90	10	1.8	1.05	CO
60		600		25	90	10	1.6	1050	CRF
61		580		30	20	5	5200	1750	CORF
62		560		25	40	5	1.7	580	C
63		540		15	20	10	1.2	810	CRF
64		520		10	25	5	1.3	4200	CO
65		500		15	30	30	1.5	1700	CRF
66		480		25	95	15	2.0	1800	C
67		460		35	50	5	2.3	2300	CRF
68		440		15	30	10	1.7	270	CORF
69		420		10	20	10	5400	650	CRF
32570		378400		10	20	5	2900	95	CORF

118

058247

9A

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK STITT GRID	LINE: 5,367,500N (5)	B. McQ.	SOIL SAMPLES	SHEET No
	FROM: 379,160 E.	DATE	DEPTH	JOB No
	TO: 379,900E.	22/1/80.	C HORIZON	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval (F)	PbP	ZnP	CuP	FeP	Mn	DESCRIPTION
32838	367500	379160	20	20	20	5	5350	20	CRF
39		140	20	10	10	5	2700	20	CRF
40		120	20	10	10	5	5700	30	CRF
41		100	20	15	10	5	2750	40	CORF
42		080	20	35	130	5	880%	600	CRF
43		060	20	15	15	5	1.0%	60	CRF
44		040	20	15	20	5	1.0%	40	CRF
45		020	20	15	20	5	1.0%	65	RFC
46		379000	20	15	15	5	6950	45	CRF
47		378980	20	15	15	5	5450	30	CORF
48		960	20	10	10	5	4400	30	RFC
49		940	20	10	10	5	3450	15	CO
50		920	20	20	10	5	3200	30	CRF
51		900	20	20	5	5	1350	15	C

119

058248

14

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK. STITT GRID	LINE: 5,367,500N (6)	B. McQ.	SOIL. SAMPLES.	SHEET Nº
	FROM: 379660 E.	DATE	DEPTH	JOB Nº
	TO: 379,180 E	22/1/80	C HORIZON	

SAMPLE NUMBER	CO-ORDINATES (R)/S	(E)/W	Interval (F)	Pb P	Zn P	Cu P	Fe P	Mn		DESCRIPTION
32813	367500	379660	20	25	10	5	1850	35		CO
14		640	20	15	10	5	2650	75		CS
15		620	20	20	10	5	4100	45		CRFO
16		600	20	10	x	5	1650	40		CRF
17		580	20	15	5	25	2800	30		CRF
18		560	20	20	105	25	52%	535		CRF
19		540	20	30	80	75	305%	430		CREO
20		520	20	25	85	45	37%	410	B HORIZON	CREO
21		500	20	20	10	10	1000	10	A HORIZON	OC
22		480	20	10	5	5	2400	20		CRF
23		460	20	25	20	15	9000	480		CORF
24		440	20	20	30	10	1.45%	4950		CRF
25		420	20	10	15	5	5500	40		CRF
26		400	20	10	30	5	1.35%	55		CRF
27		380	20	15	15	5	3550	50		CO
28		360	20	15	20	5	6150	45		CRF
29		340	20	15	20	5	4200	40		CO
30		320	20	25	20	5	6450	40		CRF
31		300	20	25	25	5	8500	35		CRFO
32		280	20	20	15	5	5850	400		CRF
33		260	20	20	10	5	2050	30		C
34		240	20	15	20	5	5850	20		CRF
35		220	20	10	10	5	3400	25		CRFO
36		200	20	10	30	5	1350	40		CRF
37		180	20	20	25	5	7800	25		C

120

058249

Mn

5,367,000N 9A

PROJECT: Mt BLACK

STITT GRID.

CO-ORDINATES
LINE: 5,367,000 N (1)
FROM: 377,580 E
TO: 378,060 E.

SAMPLED BY: B.M.

DATE: 6/12/79.

MATERIAL: Soil

DEPTH: C. Horizon.

BOOK No.
SHEET No.
JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval Q/-	Pltd. Pb	Pltd. Zn	Pltd. Cu	Fe P	Mn		DESCRIPTION
30301	367,000	377,580	20 M	15	30	10	4250	120		CSR
02		600		20	15	10	1850	20		CS
03		620		15	25	5	5350	180		CRS
04		640		25	25	10	1.05%	30		CS
05		660		55	255	45	10%	570		CRS
06		680		25	20	10	2600	25		CSR
07		700		25	40	10	3850	40		CRSO
08		720		25	20	10	2800	25		CSR
09		740		15	30	10	6350	55		CRS
10		760		195	90	20	1.25%	360		CSO
11		780		15	25	5	5450	50		CSR
12		800		25	25	10	3350	70		CSR
13		820		145	80	10	3.8%	4.55%	NO C HORIZON Removed B Horizon	CSO
14		840		130	85	5	4.7%	3.00%		CO
15		860		180	145	10	5.35%	5.4%		CRSO
16		880		465	435	10	6.05%	9.5%	NO C Horizon B Horizon	CO
17		900		135	175	10	4.25%	3.5%		CSO
18		920		160	215	10	3.85%	6.00%	NO C Horizon B Horizon	CSR
19		940		205	95	10	1.85%	1.25%		CSRO
20		960		95	65	15	1.00%	900		CO
21		980		60	170	10	3.35%	2350		COS
22		378,000		115	125	15	2.05%	2400	Poss contact	CSO
23		020		55	90	10	2.25%	1150		CSRO
24		040		55	105	10	1.55%	2400	Poss contact	CO
30325		378,060		135	140	20	2.75%	1.50%	Poss contact NO C Horizon B Horizon	CSOR

121

058250

Mn

94

PROJECT: MT. BLACK

STITT GRID.

CO-ORDINATES
LINE: 5,367,000N (2)
FROM: 378,080E
TO: 378,560E

SAMPLED BY: B.M.

DATE: 6/12/79.

MATERIAL: SOIL.

DEPTH: C. HORIZON

BOOK No.
SHEET No.
JOB No.

SAMPLE NUMBER	CO-ORDINATES ⊕/S	CO-ORDINATES ⊕/W	Interval ⊕/-	Pb	Zn	Cu	P Fe	Mn		DESCRIPTION
30326	367,000	378080	20	100	70	20	2.65%	470		CSO
27		100		100	110	20	6.20%	750		COS
28		120		95	95	20	4.90%	1000		C
29		140		195	75	20	5.65%	6350		COS
30		160		115	110	25	6.53%	630		CSR
31		180		30	25	5	1.05%	610	[illegible]	CROS
32		200		30	65	20	2.75%	2150	[illegible]	CSR
33		220		20	20	10	1.15%	135		CRSO
34		240		15	5	5	1600	85		CSR
35		260		10	5	5	1700	70		CRSO
36		280		20	20	10	1.25%	350		CSR
37		300		10	5	5	800	75		COS
38		320		40	10	5	5350	205		CSO
39		340		80	50	15	2.15%	1600		CSOR
40		360		85	40	15	9500	2250		CS
41		380		55	120	30	3.00%	5600		CRS
42		400		40	100	20	2.7%	3950		CRS
43		420		55	100	20	3.65%	5350		CSR
44		440		75	75	20	3.05%	5300	[illegible]	SRC
45		460		210	50	15	1.8%	4650	[illegible]	COS
46		480		100	80	15	3.85%	4650		CRS
47		500		35	45	5	1.60%	2.75%	[illegible]	CSR
48		520		125	140	20	2.85%	1.30%	[illegible]	CS
49		540		100	90	20	3.35%	9000		CSOR
30350		378560		15	20	X	4850	100		CS

058251

122

Repeated: 378,880-960 E

Mn

PROJECT: MT BLACK. STITT GRID.			CO-ORDINATES LINE: 5,367,000N (3) FROM: 378,580 E TO: 378,960 E			SAMPLED BY: B.M.			MATERIAL: Soil		BOOK No. / SHEET No. / JOB No.
						DATE: 6/12/79			DEPTH: C. HORIZON.		
SAMPLE NUMBER	CO-ORDINATES ⊙/S	⊙/W	Interval ⊙/-	Pltd. Pb	Pltd. Zn	Pltd. Cu	P Fe	Mn			DESCRIPTION
30351	367,000	378,580	20	45	35	5	2.05%	1000			CSOR
52		600		15	20	5	4750	70			CSR
53		620		75	50	15	6000	800			COS
54		640		5	15	X	3550	30			CRS
55		660		10	15	X	3350	80			COS
56		680		20	20	5	4000	185			CSR
57		700		115	20	20	2150	800		NO C HORIZON	COS
58		720		10	15	X	2150	25			CRS
59		740		5	20	X	4450	55			COS
60		760		100	45	20	3050	410		NO C HORIZON A HORIZON	CO
61		780		45	35	5	1.80%	335			COS
62		800		35	30	5	1.10%	80			C
63		820		15	35	5	1.40%	130			CSO
64		840		35	20	X	2250	265			CS
65		860		30	15	5	1900	100		NO C HORIZON A & B HORIZON	COS
66		880		15	15	X	1400	25			CSR
67		900		15	10	X	1100	30			COSR
68		920		5	10	X	2100	20			CSR
69		940		5	15	X	2750	15			CSO
30370		378960		20	20	X	3150	40			CRS

058252

123

Repeated: 378,880-960E

Mn

9A

SHEET	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black Stitt Grid.	LINE: 5 367 000N (4) FROM: 379 320 E TO: 378 880 E	Geoff Bissel. DATE 7/1/80.	Soil DEPTH C HORIZON.	SHEET No JOB No

SAMPLE NUMBER	CO-ORDINATES C/S	CO-ORDINATES C/W	Interval +/-	P Pb	Zn P	Cu P	Fe P	Mn	DESCRIPTION
32501	367,000	379,320	20	x	10	x	5150	15	CRF
02		300		x	10	x	2250	15	CSORF
03		280		10	15	x	9500	345	CRF
04		260		10	15	x	8500	15	COSRF
05		240		10	25	x	1.3%	40	C
06		220		15	15	10	4100	70	CORFS
07		200		15	15	10	2550	45	CO
08		180		20	10	10	2850	35	CSRFO
09		160		5	5	5	2500	15	CO
10		140		x	5	10	2250	30	CORFS
11		120		15	10	10	2850	15	CRFO
12		100		5	20	5	3700	20	CORF
13		080		5	15	10	5200	25	CRFO
14		060		x	15	5	6900	20	CRFO
15		040		5	5	10	1700	15	CO
16		020		x	5	5	3050	25	CO
17		000		x	35	10	6700	20	CRF
18		378,980		5	15	10	4450	35	CRF
19		960		10	15	5	2.05%	25	CRFO
20		940		5	30	5	3050	30	C
21		920		15	10	x	2250	15	CRFO
22		900		x	5	x	4950	25	CO
32523		378,880		5	15	x	1.30%	40	CRF

058253

124

Mn

9A

SHEET: Mt Black Stitt Grid.	CO-ORDINATES LINE: 5367000N. (5) FROM: 379460E TO: 379340E.	SAMPLED BY: G. Bessel	MATERIAL: Soil		
		DATE: 7/1/80.	DEPTH: C Horizon.		

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval ± 10	P Pb	Zn P	Cu P	Fe P	Mn	DESCRIPTION
32494	367000	379460	20m	x	10	x	3400	35	CRFO
95		440		10	15	x	1025	25	CS
96		420		5	5	x	1450	15	CRFO
97		400		x	10	x	3200	15	CORF
98		380		10	5	x	1350	15	OCRF
99		360		5	5	x	1400	15	OC
32500		379340		x	10	x	2100	15	CRFO

125

058254

Mn 9A

PROJECT: Mt Black Stict Grid.	CO-ORDINATES LINE: 5366 500N. (1) FROM: 377,760E. TO: 378,240E.			SAMPLED BY: C.M.		MATERIAL: Soil				
				DATE: 4/1/80.		DEPTH: C HORIZON.				
SAMPLE NUMBER	CO-ORDINATES N/S	E/W	Interval N/-	Cu ℓ	Pb ℓ	Zn ℓ	Fe ℓ	Mn.		DESCRIPTION
32409	366,500	377,760	20m	X	30	15	3750			SRFC
10		780		X	25	10	3050			*CRFSO
11		800		X	25	20	3650			*CSRF
12		820		X	30	10	2750			*CRFO
13		840		X	15	10	2800			*CRFO
14		860		X	25	25	6200			*CRF
15		880		X	15	10	3000			*CRF
16		900		X	10	10	2750			*CRFOS
17		920		X	10	10	2500			*CSRFO
18		940		X	10	10	1750			*CORF
19		960		X	20	10	3200			*CRFO
20		980		X	15	10	3400			*SCRFO
21		378,000		X	20	35	5800			*SCRFO
22		020		X	10	10	3400			*SCRFO
23		040		X	35	30	8500			SRFCO
24		060		X	10	15	5200			*CRFSO
25		080		X	10	15	8050			*CRFO
26		100		X	10	10	3100			*CRFO
27		120		X	10	10	3150			*CRFO
28		140		X	10	15	4250			CORFS
29		160		X	20	15	4150			CRFO
30		180		X	15	10	2550			CRFO
31		200		X	15	15	6700			CRF
32		220		15	200	35	2400			OC
32433		378240		5	30	10	3000			*RFOC

NB * : No. 'C' HORIZON.

126

058255

Mn 91

AREA: MH BLACK

SCITT GRID.

CO-ORDINATES
LINE: 5 366 500 N (2)
FROM: 378 260 E
TO: 378 740 E.

SAMPLED BY: C.M.

DATE: 4/1/80.

MATERIAL: SOIL

DEPTH: C HORIZON.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Cu ppm	Pb ppm	Zn ppm	Fe %	Mn ppm	DESCRIPTION
32434	366,500	378,260		10	35	55	7500	5300	CRFO
35		280		5	65	25	3500	165	*OC
36		300		X	40	30	1550	460	*CORFS
37		320		10	20	15	9000	290	*CORF
38		340		10	95	50	5.5%	1170 ppm	CRFS
39		360		40	200	105	3.60%	1130 ppm	*CO
40		380		X	20	10	4750	135	*CRF
41		400		30	120	70	5500	1300	*CO
42		420		10	55	25	2400	400	*CO
43		440		5	25	25	8000	135	C
44		460		X	25	15	1900	450	CORF
45		480		X	20	10	3.5%	55	CORF
46		500		10	35	25	4200	655	*CORF
47		520		10	90	20	4650	6000	*CRFO
48		540		10	30	10	1200	260	*CORF
49		560		15	65	25	4.35%	340	*CO
50		580		10	85	30	1750	1650	*CORFC
51		600		20	80	30	3.50%	2300	*ORFC
52		620		10	105	45	3.55%	1180 ppm	CORF
53		640		X	30	45	1.05%	65	C
54		660		10	315	100	3.20%	9000	CO
55		680		X	20	05	3650	90	CRFOS
56		700		5	25	15	6550	125	*CO
57		720		5	40	15	3300	75	*ORFC
32456		740		5	20	25	5250	30	*CRF

NB: *: NO 'C' HORIZON.

058256

127

378,880 reported

Mn 91

AREA: Mt Black. Stitt Grid.

CO-ORDINATES
LINE: 5366 500N. (3)
FROM: 375760E
TO: 375580E.

SAMPLED BY: C.M.
DATE: 4/1/80.

MATERIAL: Soil
DEPTH: C HORIZON.

SAMPLE NUMBER	CO-ORDINATES ⓝ/S	ⓔ/W	ⓔ/-	Cu ppm	Pb ppm	Zn ppm	Fe %	Mn ppm	
32459	366500	375760	20m	15	120	75	2.50	265	* CO
60		750		5	45	35	7.50	50	* CO
61		500		x	35	20	4.50	30	* CRFO
62		820		x	20	25	8.00	70	* RFC
63		540		5	25	25	7.00	40	* CO
64		560		x	15	15	3.50	10	* CRFO
32465		375580		x	10	10	3.45	10	* CRF

NB * : NO C HORIZON.

058257

128

378,880 repeated.

Mn

9A

CODE: MH BLACK STITT GRID.	CO-ORDINATES LINE: 5 366 500 N. (4) FROM: 378,920 E. TO: 378,880 E.	SAMPLED BY: G. BESSEL.	MATERIAL: SOIL	BOOK No.	
		DATE: 7/1/80.	DEPTH: C HORIZON.	SHEET No.	
				JOB No.	

SAMPLE NUMBER	CO-ORDINATES ①/S	CO-ORDINATES ②/W	Interval +/⊖	Pb P	Zn P	Cu P	Fe P	Mn	DESCRIPTION
32491	366,500	378,920	20	15	20	x	5150	40	CORF
92		900		15	15	x	4150	25	CRF
32493		378,880		5	20	x	4100	25	CORF

058258

129

Mn

9A

PROJECT: Mt Black.

STITT GRID.

CO-ORDINATES
LINE: 5 366 500 N. (5)
FROM: 379,420E.
TO: 378,940E.

SAMPLED BY: G. BESSEL.
DATE: 7/1/80.

MATERIAL: SOIL
DEPTH: C HORIZON.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
32466	366,500	379,420	20m	15	15	10	3.50	15	CORF
67		400		15	15	5	4.85	25	CSRFO
68		380		10	5	X	3.15	25	CRFO
69		360		30	10	5	1.35	30	*COS
70		340		60	60	10	1.50	35	*CO
71		320		15	40	5	2.85	140	*CO
72		300		20	20	X	3.50	15	CRFO
73		280		15	20	X	2.35	15	*CORFS
74		260		40	20	5	2.05	250	*CORF
75		240		10	10	X	2.00	20	CORFS
76		220		5	5	X	2.65	20	CO
77		200		35	10	5	2.60	30	*CORF
78		150		5	10	X	2.90	15	CSRF
79		160		25	20	X	3.80	50	RFSCO
80		140		25	15	15	2.00	35	*CORF
81		120		95	25	15	2.50	60	*OCSRF
82		100		5	30	X	3.50	15	RFS
83		080		X	20	X	4.00	20	RFSO
84		060		5	15	X	4.05	15	SRFO
85		040		10	20	X	1.90	35	SOC
86		020	20	5	90	5	7.1	46	SRFO
87	372	000		50	35	X	2.2	3050	*CO
88	378	980	30	15	250	10	4.35	3	*CORF
89		960		65	45	X	1.65	900	CRFS
32490	378	940		20	25	X	1.05	80	CRFO

AB

*: NO CHORIZON.

058259

-30

Mn

PROJECT: MT. BLACK STITT GRID.

CO-ORDINATES
LINE: 5,366,000N. (1)
FROM: 377,100E.
TO: 377,300E.

SAMPLED BY: W.M.

DATE: 1-11-79

MATERIAL: Soil

DEPTH: C. Horizon

BOOK No.

SHEET No.

JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
29390	366,000	377,100	20m	5	25	5	4.50	170	SCRF
391		120		5	15	5	2.65	45	CSRF
392		140		40	25	5	4.85	105	C
393		160		20	25	15	6.30	85	CS
394		180		10	25	5	6.30	45	SCRFO
395		200		25	20	5	4.30	50	CS
396		220		25	20	5	5.40	35	CSNF
397		240		25	30	5	1.1%	45	CSRF
398		260		15	25	35	3.40	40	CSO
399		280		10	15	X	2.60	25	CSO
29400		377,300		10	20	10	2.30	30	CSRF

058260

131

Mn

✓ 94

PROJECT	Mt Black
	Stitt Grid
CO-ORDINATES	LINE: 5,366,000 N (2)
	FROM: 377,320 E
	TO: 377,800 E
SAMPLED BY	Wm
DATE	1/11/79
MATERIAL	Soil
DEPTH	C Horizon
BOEY No	
SHEET No	
JOB No	

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (+)/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn	DESCRIPTION
22764	366,000	377,320	20	5	20	X	900	10	SCRF
65		340		55	30	5	3600	35	CSO
66		360		15	20	5	3150	15	CSRF
67		380		25	20	25	2900	15	CS
68		400		15	15	5	4600	10	CSRF
69		420		25	25	5	4600	20	CS
70		440		45	25	5	4200	20	CS
71		460		45	25	5	4500	25	CS
72		480		75	25	X	4300	20	CS
73		500		185	45	5	4600	40	CSO
74		520		205	30	5	4300	35	CSO
75		540		325	20	5	2350	35	SCRF
76		560		110	30	5	4250	30	CSO
77		580		45	20	5	2700	25	CSRF
78		600		120	35	20	4600	35	CSRF
79		620		105	30	5	3000	35	SCRF
80		640		35	65	5	1.0%	65	CS
81		660		45	30	15	4350	40	CSRF
82		680		35	35	5	7200	30	CSRF
83		700		15	25	15	6600	35	CSRF
84		720		5	115	5	3.7%	265	SCRF
85		740		25	165	55	9.0%	600	CSRF
86		760		15	80	35	2.15%	355	CS
87		780		10	35	40	9000	95	SCRF
22788		377800		10	25	20	4250	35	CSRF

058261

132

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PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt BLACK STITT GRID.	LINE: 5,366,000N (3)	WM	SOIL	SHEET No
	FROM: 377,820E	DATE	DEPTH	JOB No
	TO: 378,040E	1/11/79	C HORIZON.	

SAMPLE NUMBER	CO-ORDINATES ⊕/S	CO-ORDINATES ⊕/W	Interval ⊕/-	Pb mfd	Zn mfd	Cu mfd	Fe %	Mn	DESCRIPTION
22789	366,000	377,820	20	10	20	20	4000	25	SCRF
90		840		35	20	15	3800	35	CSRF
91		860		65	70	20	1.85%	175	CSRF
92		880		20	30	15	4800	55	CSRF
93		900		450	135	40	1.35%	90	CS
94		920		40	40	25	5700	45	CSRF
95		940		25	35	10	6000	40	CSRF
96		960		15	40	5	5000	40	SCRF
97		980		15	135	10	3.7%	615	CSRF
98		378000		10	55	10	1.7%	175	CSRF
99		020		5	35	15	1.35%	295	SCRF
22800	366,000	378,040		15	30	25	6900	40	SCRF

058262

133

Missing. 378,220 -

280 F

Mn

✓ 98

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK. STITT GRID.	LINE: 5,366,000N. (4) FROM: 378,060 E. TO: 378,200 E.	W.M.	SOIL.	SHEET No
		DATE: 2-11-79.	DEPTH: C. Horizon.	JOB No

SAMPLE NUMBER	CO-ORDINATES R/S	CO-ORDINATES E/W	Interval +/-	Pb ppb	Zn ppb	Cu ppb	Fe %	Mn	DESCRIPTION
26693	366,000	378,060	20 m	15	30	10	8000	45	SCAF
94		080		10	20	5	4200	35	CSAF
95		100		10	85	30	1.5%	315	SCRF
96		120		10	25	15	5400	60	SCRF
97		140		15	35	30	3700	50	CSRF
98		160		35	30	10	7700	225	CSO
99		180		5	25	5	6300	65	CSRFO
26700		378,200		10	25	10	7500	60	CSRF

058263

134

Mn 9A

PROJECT: MT BLACK STITT GRID.

CO-ORDINATES
LINE: 5,366,000N (5)
FROM: 378,220E
TO: 378,280E

SAMPLED BY: WM
DATE: 11-2-79.

MATERIAL: SOIL
DEPTH: C. HORIZON.

SAMPLE NUMBER	CO-ORDINATES (N/S)	CO-ORDINATES (E/W)	INTERVAL (+)/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
26911	366,000	378,220	25	5	26	10	6.50	60	C SR/A
91 2		290		5	40	15	1.21	100	C S
91 3		260		5	65	10	1.41	335	C SR/A
91 4		280		5	80	30	2.01	415	C SR/F

058264

135

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SAMPLE	MH BLACK STITT GRID.	CO-ORDINATES LINE: 5,366,000 N (6) FROM: 378,300 E TO: 378,780 E	SAMPLED BY: WM.	MATERIAL: SOIL	BOOK No.
			DATE: 2/11/79	DEPTH: C HORIZON.	SHEET No.
					JOB No.

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (+)/-	Pb ppd	Zn ppd	Cu ppd	Fe %	Mn	DESCRIPTION
29401	366,000	378,300	20	5	55	10	1.4%	240	CSRF
02		320		10	110	25	3.1%	590	CSRF
03		340		10	15	5	4900	45	CSRF
04		360		15	20	20	5200	45	CSRF
05		380		20	25	20	1.35%	120	SCRF
06		400		15	45	10	1.6%	310	CSRF
07		420		5	20	20	1.5%	90	SCRF
08		440		5	20	30	6100	70	CSRFa
09		460		5	15	10	4000	55	SCRF
10		480		10	25	10	1.5%	60	SCRF
11		500		15	15	20	6300	25	SCRF
12		520		10	15	35	5600	25	CSRF
13		540		5	15	5	6300	25	CSRF
14		560		5	15	10	9000	30	CSRF
15		580		15	80	50	5.1%	240	CSRF
16		600		10	20	15	6300	25	CSRF
17		620		5	15	5	5000	15	CSRF
18		640		10	15	5	5500	25	CS
19		660		10	15	5	3700	30	CSRF
20		680		10	15	5	3500	25	CS
21		700		5	15	5	3700	55	SCRF
22		720		5	20	5	4600	50	CSRF
23		740		15	20	5	5100	45	SCRF
24		760		5	20	5	4100	25	SCRF
29425		378,780		20	25	10	8500	35	CSRF

058265

136

Mn

✓ mA

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black Stitt Grid.	LINE: 5,366,000 N (7)	WM	Soil	SHEET No
	FROM: 378,800 E	DATE	DEPTH	JOB No
	TO: 379,160 E	2/11/79	C HORIZON	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval O/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn	DESCRIPTION
29426	366,000	378800	20m	20	20	10	7000	30	CSO
27		820		20	20	5	3300	15	CSORF
28		840		15	30	5	5300	25	SCRF
29		860		20	25	10	4600	35	CSRFO
30		880		45	40	25	6200	70	CSO
31		900		5	25	5	4100	30	CSRA
32		920		35	35	5	6300	35	CSO
33		940		20	45	10	7900	50	SCRF
34		960		15	40	5	5400	25	SCRF
35		980		35	30	10	4900	25	CSRF
36		379000		30	55	25	1.7%	55	CSRF
37		020		25	25	5	5900	25	CSRFO
38		040		5	30	5	8000	20	CS
39		060		10	30	10	6600	25	SCRF
40		080		45	40	25	1.05%	170	CO
41		100		25	20	10	6600	65	CSRFO
42		120		45	20	15	4250	60	SCRFO
43		140		45	20	10	2500	45	CSRFO
29444	366,000	379,160		40	80	20	2.25%	155	CSRFO

058266

137

PROJECT: MT BLACK STITT EXT GRID

CO-ORDINATES — LINE: 5,372,400N; FROM: 383,220E; TO: 382,740E

SAMPLED BY: ES

DATE: 7/5/80

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK Nº / SHEET Nº / JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
3771	37240	38220	20	25	95	15	4.90	390	C C R F
72		2200		25	125	40	7.90	1800	C S R F
73		1800		5	20	16	5.40	400	C S R F
74		1600		5	45	10	4.00	260	C S R F
75		1400		35	90	20	4.40	1300	C R F
76		1200		30	115	10	5.60	630	C S R F
77		1000		35	105	15	4.80	1600	B Horizon C S R F O
78		0800		50	100	20	4.90	630	C S R F O
79		0600		20	80	20	5.00	370	C S R F O
80		0400		30	85	15	4.50	450	B Horizon C S R F O
81		0200		20	115	20		2100	C S R F
82		38300		20	120	10	5.20	800	C S R F
83		38100		15	85	15	4.80	800	C S O R F
84		0960		45	170	30	5.40	4300	B Horizon C S R F
85		0940		60	65	20	4.30	800	B Horizon C S O
86		0720		45	45	15	5.30		C S R F
87		0500		30	95	15	4.60	1150	C S R F
66		0880		30	50	10	4.60	560	C S R F
87		0660		55	55	20	3.70	850	B Horizon C S R F O
90		0440		50	45	15	3.90	620	B Horizon C S R F
91		0220		45	30	35	1.70	100	A Horizon S O
92		0000		35	50	20	4.50	320	B Horizon C S O R F
93		37820		10	50	10	3.90	280	C S R F
94		37600		30	40	15	4.20	210	C S R F
3795		37400		35	55	15	3.90	290	C S R F

058267

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK N°
MT BLACK STITT EXT	LINE: 5,372,600N FROM: 382,720E TO: 382,520E	ES.	SOIL	SHEET N° JOB N°
		DATE 7/5/80	DEPTH C HORIZON	

	SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +10	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm		DESCRIPTION
	37596	37940	38270		45	30	25	2.60%	90	B Horizon	CSRFO
	97		7100		35	50	25	4.00%	280		CSRF
	98		6800		35	60	20	3.00%	260	A Horizon	CO
	99		6600		25	35	30	2.20%	55	B Horizon	CO
*	37600		6400		30	30	10	1.40%	90	B Horizon	CSRFO
*	36101		6200		20	25	10	3.20%	180		CS
	02		6000		15	10	5	7.30%	115		CSRF
	03		5800		10	5	5	1.90%	55		CO
	04		5600		5	5	5	3.20%	105		CSRFO
	05		5400		80	95	75	3.40%	415	A Horizon	CO
	36106	38252	0		20	10	30	3.40%	110	B Horizon	CSO

058268

139

PROJECT: MT. BLACK Stitt EXT

CO-ORDINATES
LINE: 5,372,300 N
FROM: 383,280 E
TO: 382,800 E

SAMPLED BY: ES.

DATE: 6.5.80

MATERIAL: SOIC

DEPTH: C. HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES (N/S)	CO-ORDINATES (E/W)	Interval + (-)	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
37535	372300	383280	20	25	105	10	6.60%	320	CSRF
36		382600		35	85	15	4.20%	350	CSRF
37		382400		30	105	20	5.40%	460	CRS
38		382200		40	105	20	4.50%	900	B Horizon CSRF
39		382000		35	135	15	5.40%	600	CRFS
40		381800		30	55	10	4.10%	680	CRFS
41		381600		15	70	10	5.40%	310	CSRF
42		381400		5	40	10	4.00%	135	CS
43		381200		10	70	15	5.10%	310	CSRF
44		381000		15	110	15	5.40%	500	CSRF
45		380800		15	105	15	5.00%	730	CSRF
46		380600		20	160	30	4.60%	2600	CS
47		380400		15	75	15	5.40%	750	CSRF
48		380200		15	110	20	6.40%	1600	CSRF
49		383000		20	160	35	5.00%	860	B Horizon CRFOS
50		382960		20	115	35	6.30%	1100	CSRF
51		382760		20	90	40	6.80%	320	CSRFO
52		382740		30	60	50	6.00%	270	CSRF
53		382520		20	105	60	7.00%	520	CRFSO
54		382300		25	75	10	4.90%	340	CRF
55		382080		20	20	5	3.80%	130	CSRF
56		381860		25	35	10	3.60%	330	CSRF
57		381640		30	40	10	4.60%	190	CSRF
58		381420		40	40	10	4.20%	280	CSRF
37557		382800		5	40	10	4.30%	190	CSRF

058269

140

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK Stiff est	LINE: 5,372,300 N FROM: 382,780 E TO: 382,580 E	E.S.	SOIL	SHEET Nº
		DATE: 6,5,80	DEPTH: C HORIZON	JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ρ	Zn ρ	Cu ρ	Fe ρ	Mn		DESCRIPTION
37560	372300	382780	20	30	60	10	4.10%	250		CRFS
61		760		40	55	10	3.70%	1650		CSRF
62		740		30	45	10	5.00%	260	[illegible]	CSRF
63		720		50	40	15	3.90%	640	B Horizon	CSRF
64		700		30	40	15	3.80%	560		CSRF
65		680		20	40	20	6.00%	340	A Horizon	CO
66		660		10	40	10	4.10%	800		CSRF
67		640		20	25	20	2.90%	160	B Horizon	CSORF
68		620		15	45	15	4.60%	290		CORFS
69		600		25	30	10	4.40%	200		CRF
37570		382580		30	30	5	4.30%	340		CSRF

058270

14

PROJECT: MT BLACK Stitext

CO-ORDINATES — LINE: 5,372,200N; FROM: 383,200E; TO: 382,720E

SAMPLED BY: ES.

DATE: 6/5/80

MATERIAL: SOIL

DEPTH: C. HORIZON

BOOK Nº

SHEET Nº

JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Increm. +/0	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
37501	372200	383200	20	20	80	15	4.20%	500	MFC
02		1800		15	150	30	5.60%	2600	C
03		1600		20	160	30	5.10%	3100	C
04		1400		15	70	30	5.70%	440	CSRF
05		1200		20	90	25	6.20%	340	CSRF
06		1000		100	70	20	4.70%	340	CORFS
07		0800		30	50	10	3.30%	390	CRS
08		0600		15	50	15	3.90%	250	CSRF
09		0400		10	35	10	3.90%	125	C
10		0200		10	35	10	4.30%	120	CRFS
11	383000			25	40	15	5.10%	155	CO
12	382980			10	50	10	3.70%	160	CSRF
13		9600		5	40	10	4.00%	195	CSRF
14		9400		5	120	15	4.10%	2100	CSRF
15		9200		15	120	50	4.70%	570	CSRF
16		9000		20	120	20	4.90%	270	CS
17		8800		15	70	20	5.00%	280	CSRF
18		8600		20	55	10	5.10%	325	CSRF
19		8400		20	45	10	4.20%	300	CSRF
20		8200		20	60	15	4.00%	280	B Horizon CRFO
21		8000		20	35	20	2.10%	175	B Horizon CO
22		7800		20	60	20	4.10%	300	B Horizon CORF
23		7600		20	55	25	4.10%	240	CSORF
24		7400		25	80	10	4.50%	1100	CSRF
27525	382720			20	60	10	4.10%	550	CS

058271

142

PROJECT: MT. BLACK Stat ext

CO-ORDINATES
LINE: 5,372,200 N
FROM: 382,700 E
TO: 382,540 E

SAMPLED BY: ES.

DATE: 6.5.80

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
37526	37220 N	382700	20'	15	70	10	4.20 %	700	C S R F
27		680		15	85	15	4.50 %	1500	C S R F
28		660		30	70	20	3.40 %	700	B Horizon C
29		640		15	55	25	4.40 %	840	C R S
30		620		30	25	30	2.80 %	90	B Horizon C F O
31		600		30	20	10	1.50 %	80	B Horizon C O
32		580		15	25	10	2.80 %	150	C S R F
33		560		70	25	5	1.90 %	140	B Horizon C O S R F
37534		382540		5	15	5	4.80 %	80	B Horizon C R F S O

058272

143

PROJECT: MT. BLACK

STITT EXTENSION GRID

CO-ORDINATES
LINE: 5372100N
FROM: 383080E
TO: 382600E

SAMPLED BY: E.S.

DATE: 5/5/80

MATERIAL: SOIL

DEPTH: C HORZION

BOOK #
SHEET #
JOB #

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Increm. + (-)	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
35866	372100N	383080E	20	30	35	10	3.20%	100	C R F S
67		0960		25	50	10	4.40%	150	C R F
68		0940		70	90	70	2.30%	950	C C
69		0920		25	140	240	6.10%	670	C
70		382000		20	115	30	3.80%	620	R F S C
71		381980		15	35	10	4.20%	125	C R F
72		4960		10	30	5	2.40%	120	C S R F
73		4940		25	70	65	4.10%	550	R F C O S
74		4920		10	15	10	2.40%	75	C
75		4900		20	15	5	4.80%	65	C R F
76		4880		10	65	10	4.80%	380	R F S C
77		4860		10	30	35	3.40%	120	C
78		4840		20	25	25	3.60%	180	C S R F
79		4820		15	25	25	3.80%	120	C
80		4800		15	45	20	4.10%	210	R F S C
81		4780		20	25	40	4.10%	90	C
82		4760		20	55	20	6.30%	320	C
83		4740		10	60	15	6.10%	250	C
84		4720		15	55	15	4.70%	410	R F S C
85		4700		15	55	25	4.50%	360	C S R F
86		4680		30	70	30	4.40%	360	C S R F O
87		4660		15	65	20	4.60%	310	C R F S O
86		4640		10	70	20	4.90%	1000	R F S C
89		4620		20	50	20	4.30%	440	B HORIZION R F C
35890	372100N	382600E		30	40	45	3.50%	260	A HORIZION R F O C

CONT.
CONT
CONT
A HORIZION
B HORIZION
A HORIZION

058273

PROJECT: MT. BLACK

STITT EXTENSION GRID

CO-ORDINATES
LINE: 5372100N
FROM: 382580E
TO: 382500E

SAMPLED BY: E.S.

DATE: 5/5/80

MATERIAL: SOIL

DEPTH: C HORZION

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
35891	372100	382580	20	25	30	10	2.70%	140	C
9 2		560		15	25	5	4.10%	260	RFC
9 3		540		5	10	35	1.70%	80	B HORZION CO
9 4		520		10	10	30	6400	85	COARSE
9 5	372100	382500		10	15	5	1.40%	160	A HORZION DRY CC

058274

PROJECT: MT BLACK Shift ext

CO-ORDINATES
LINE: 5,371,900N
FROM: 383,040E
TO: 382,560E

SAMPLED BY: ES.PH
DATE: 1/5/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Increm.	Ag P	Zn P	Cu P	Fe P	Mn	DESCRIPTION
33362	371900	383040	20	30	70	10	4.50%	410	B HORIZON C AFSO
63		0220		20	35	5	2.40%	160	C SRF
64		0000		20	60	10	3.60%	200	C SRF
65		382980		15	35	5	3.60%	180	C SRF
66		9660		15	60	10	3.30%	160	C S
67		9440		20	25	5	4.00%	125	C S
68		9220		20	60	10	4.00%	175	C S O
69		9000		20	65	10	4.50%	235	C S RF
70		8880		15	30	5	1.80%	220	B HORIZON C O
71		8660		15	5	X	3.90	80	C
72		8440		40	90	20	2.30%	470	B HORIZON C S RF O
73		8220		15	115	5	3.30%	310	C S
74		8000		15	25	15	3.70%	100	C RFS
75		7780		15	15	5	7.00%	100	C S RFO
76		7560		5	90	10	4.50%	350	CONTAM C S RF
77		7340		5	90	10	4.00%	380	B HORIZON C S RF O
78		7120		5	70	15	3.40%	290	C S O
79		7000		15	95	15	4.00%	360	C S
80		6780		5	40	5	2.40%	165	C S
81		6560		15	95	5	4.00%	340	C S RF
82		6340		20	60	20	5.50%	350	C S
83		6120		15	55	10	4.00%	240	C S RF
84		6000		5	80	15	6.50%	270	C S
85		5780		15	60	10	6.80%	230	C O
33386		382560		10	75	10	5.90%	400	C S RF

058275

146

PROJECT: MT. BLACK Stitt ext.

CO-ORDINATES
LINE: 5,371,900 N
FROM: 382,540 E
TO: 382,340 E

SAMPLED BY: ES. P.H

DATE: 1 5 80

MATERIAL: SOIL

DEPTN: C HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval +/-	Pb P	Zn P	Cu P	Fe %	Mn	DESCRIPTION
33387	371900	382540	20	5	40	X	5.00%	190	C
88		5200		10	20	5	3.50%	165	C
89		5000		15	25	5	2.90%	130	C
90		4800		30	55	10	4.50%	240	C SO
91		4600		30	35	55	4.70%	210	C
92		4400		15	20	10	4.00%	120	C
93		4200		15	35	5	4.40%	130	C
94		4000		15	20	5	2.30%	115	B HORIZON C SO
95		3800		15	35	5	3.20%	195	C SO
96		3600		5	15	X	8.00%	115	C S
33397		382340		5	5	X	2.60%	60	B HORIZON C O

147

058276

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK Stitt ext	LINE: 5,371,800N FROM: 383040 E TO: 382,560 E	ES. PH DATE 28/4/80	SOIL DEPTH C HORIZON	SHEET Nº JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn	Cu	Fe	Mn		DESCRIPTION
35829	371800	383040	20	20	35	20	3.90%	90		CSRFO
30		020		30	55	15	3.70%	400		CSRFO
31		000		5	20	X	1.60%	65		CSRF
32		382980		10	35	5	2.60%	80		CS
33		960		20	25	5	2.60%	80		CS
34		940		30	30	10	2.90%	120		CS
35		920		30	25	5	2.60%	105		CS
36		900		20	20	5	3.30%	90		CSRFO
37		880		15	20	5	2.00%	125	B HORIZON	CSORF
38		860		5	25	5	3.50%	85		CSRFO
39		840		10	15	5	4200	65	B HORIZON	CSRFO
40		820		15	20	5	2.10%	70		CRFSO
41		800		5	20	5	1.30%	80		CSO
42		780		20	10	X	4200	40	B HORIZON	CSO
43		760		10	105	5	5.60%	580		CRFS
44		740		50	60	45	6.40%	420		CSRF
45		720		30	45	40	5.90%	190		CSRFO
46		700		30	225	65	8.90%	1600	CONAM	CSRF
47		680		25	25	10	2.70%	130		CSRF
48		660		60	70	20	3.10%	380	B HORIZON	CSRFO
49		640		10	70	10	3.10%	280		CO
50		620		20	70	10	4.50%	420	B HORIZON	CSRFO
51		600		10	50	5	4.20%	290		CS
52		580		10	35	5	4.10%	230		CS
35853		382560		5	30	5	4.90%	165		C

148

058277

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK Stitt ext	LINE: 5,371,800	ES. PH	SOIL	SHEET Nº
	FROM: 382,540	DATE: 28/4/80	DEPTH: C-HORIZON	JOB Nº
	TO: 382,320			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe ppm	Mn ppm		DESCRIPTION
35854	371800	382540	20	5	60	15	5.50%	640		OGSC
55		520		5	45	10	4.60%	300		CSRFO
56		500		5	20	5	3.60%	160	B HORIZON	CSRF
57		480		20	15	10	3.00%	95		CS
58		460		40	25	10	3.40%	130	B HORIZON	CS
59		440		40	30	20	3.60%	180		CS
60		420		30	25	10	3.50%	140		CS
61		400		40	25	10	2.40%	240		CSRFO
62		380		30	35	10	4.20%	140		COSRF
63		360		20	10	70	4.50%	85		CSRFO
64		340		5	30	10	3.60%	260		CSRFO
35865		382320		30	10	5	4300	60		CRFSO

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149

058278

PROJECT: MT. BLACK STITT EXTENSION GRID

CO-ORDINATES
LINE: 5371700N (Z)
FROM: 383060E
TO: 382560

SAMPLED BY: M.G.
DATE: 16/4/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval /10	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
35549	371700	383060	20	20	70	15	1.1	160	CONT. B HORIZON C R F S
550		0400		25	40	20	3.2	100	C S
551		0200		15	45	15	2.0	125	C
552		363000		20	55	20	5.2	120	C S
553		382980		10	95	45	7.1	200	C
554		9600		25	75	75	5.5	320	C R F S
555		9400		20	55	15	6.0	140	C R F
556		9200		10	55	10	3.3	160	C R F S
557		9000		20	80	10	5.2	370	C R F S
558		8800		10	20	5	2.5	70	C S R F
559		8600		10	25	5	2.6	100	C R F O
560		8400		10	25	10	3.1	110	C
35561		8200		20	35	10	5.0	95	C
562		8000		45	30	5	4.7	160	C S R F
563		7800		5	35	5	3.2	140	C S R F
564		7600		5	15	x	1.6	70	C S
565		7400		10	45	5	4.3	205	C R F
566		7200		5	55	10	6.2	260	C R F S
567		7000		5	115	25	5.6	320	C R F S
568		6800		10	175	40	5.3	580	CONT. C R F S
569		6600		20	165	20	4.4	1150	CONT. R F S C
570		6400		45	75	70	5.0	540	B HORIZON C S R F
571		6200		15	95	55	5.0	1700	C R F S
572		6000		10	20	x	1.2	110	C S R F
35573	371700	382560		10	55	5	2.8	900	C

150

058279

PROJECT: MT. BLACK STITT EXTENSION GRID

CO-ORDINATES
LINE: 5371700 N (1)
FROM: 382560 E
TO: 382240 E

SAMPLED BY: M. G.
DATE: 16/4/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
35574	371700	382560	20	20	50	10	4.3%	285	C S R F
75		5540		5	30	10	3.9%	175	C R F
76		5520		10	60	5	3.9%	310	C S R F
77		5500		15	25	10	3.5%	130	C O
78		4480		30	40	5	3.7%	155	C S R F
79		4460		10	35	5	3.6%	250	C R F O
80		4440		5	35	10	4.8%	165	C S R F
81		4420		5	45	25	5.2%	260	C O S
82		4400		35	40	15	2.8%	240	B HORIZON C R F O S
83		3880		5	80	20	5.7%	360	C R F
84		3860		5	20	10	1.2%	130	C S R F O
85		3840		15	45	25	3.8%	315	B HORIZON C O
86		3820		5	35	15	4.4%	170	C S R F
87		3800		65	55	55	1.3%	160	B HORIZON C O
88		2880		15	20	10	1.1%	80	C S R F
89		2860		15	10	5	.500	55	C
35590	371700	382240		5	15	5	1.0%	55	CONT. C S R F

058280

PROJECT: MT. BLACK STITT EXTENSION GRID

CO-ORDINATES — LINE: 5371600 N. (2) — FROM: 382720 E. — TO: 383020 E.

SAMPLED BY: M.G.

DATE: 16/4/80

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK Nº / SHEET Nº / JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
35533	37160	03627	20	15	90	20	5.2%	680	CRFO
34		7400		15	95	15	5.6%	470	CRFS
35		7600		30	180	25	4.3%	1350	CONT. B HORIZON RF SC
36		7800		40	55	20	4.4%	250	CRFS
37		8000		25	75	10	5.1%	260	CRFS
38		8200		5	25	5	2.7%	65	CSRF
39		8400		15	50	10	3.7%	145	CRFS
40		8600		15	55	25	4.6%	105	CS
41		8800		30	55	15	4.0%	315	CRFS
42		9000		10	15	X	1.7%	50	CRF
43		9200		5	10	5	7100	40	CO
44		9400		20	45	45	5.3%	105	CSRF
45		9600		15	15	5	8500	80	CSRF
46		9800		75	35	30	2.4%	105	B HORIZON CRFSO
47	38200	00		90	115	25	2.4%	1000	CONT CSRF
35546	37160	03830	20	5	10	X	1500	50	CSRF

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058281

PROJECT: MT BLACK

STITT EXTENSION GRID

CO-ORDINATES
LINE: 5371600N. 111
FROM: 382220 E
TO: 382700 E.

SAMPLED BY: M.G.

DATE: 16/4/80

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL	Cu ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
35508	3716003822200		20	10	15	5	1.2%	110	ASS CONT RFCS
09		2400		5	10	5	3.3%	40	CS
10		2600		10	10	5	1.8%	60	CRFS
11		2800		10	25	5	2.5%	100	CS
12		3000		15	35	10	3.8%	100	CSRF
13		3200		20	35	15	4.1%	160	C
14		3400		20	45	30	4.4%	330	SCRF
15		3600		25	125	45	3.9%	345	CRF
16		3800		70	65	50	2.0%	675	CONT BHORIZON CSRF
17		4000		35	20	30	1.5%	225	CONT BHORIZON CSRF
18		4200		15	25	10	3.0%	75	CRF
19		4400		15	35	15	3.8%	130	C
20		4600		20	20	25	3.5%	120	CRFS
21		4600		20	35	10	3.9%	220	CRF
22		5000		20	15	5	1.3%	85	CSREO
23		5200		35	25	15	2.0%	130	BHORIZON CO
24		5400		30	65	35	3.4%	200	CRFS
25		5600		25	75	60	2.4%	300	BHORIZON COS
26		5800		15	150	10	5.6%	605	CRFSO
27		6000		15	90	35	2.4%	445	CORF
28		6260		35	95	25	3.1%	685	CONT BHORIZON OBRFS
29		6400		32	85	35	3.2%	600	CONT BHORIZON CRFS
30		6600		25	120	40	5.4%	1150	CRF
31		6800		15	120	50	6.7%	750	C RF
35532	3717003822700			25	175	25	5.5%	1850	CONT CRFSO

153

058282

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
FARM CREEK	LINE: 5,383,600N (1)	ES. MGGI	SOIC	SHEET No
	FROM: 382,700E	DATE: 24/3/80	DEPTH: C-HORIZON	JOB No
	TO: 382280E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval + (-)	Pb ρ	Zn ρ	Cu ρ	Fe ρ	Mn	DESCRIPTION
38364	383600	382700	20	15	10	5	2250	30	B HORIZON CORP
65		680		10	15	5	2150	15	B HORIZON CO
66		660		10	5	5	1850	15	CRSO
67		640		5	X	X	1.10%	40	SCRF
68		620		10	25	5	4.85%	180	COS
69		600		15	20	5	8.00%	140	C
70		580		15	20	5	7.55%	190	C
71		560		10	25	5	12.00%	165	CS
72		540		5	5	X	1.95%	45	CSRF
73		520		15	25	X	9000	95	CSRF
74		500		25	25	5	1.80%	190	RQSC
75		480		5	5	X	4200	25	SCR
76		460		5	X	X	2550	20	CSRF
77		440		5	5	X	3050	20	CSRO
78		420		5	X	X	490	15	CSR
79		400		10	X	X	455	5	CSO
80		380		5	5	X	3700	20	CRFSO
81		360		5	X	X	1050	10	SCR
82		340		5	5	X	1300	15	CSRF
83		320		5	X	X	1300	20	CSRF
84		300		5	X	X	1650	20	CSRF
38385		382280		375	570	15	1.20%	230	CONTAM. CSRC

154

058283

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK NO.
MT. BLACK FARM CREEK GRID	LINE: 5,383,600N (2) FROM: 383200E TO: 382,620E	ES MG. GT.	SOIL	SHEET NO.
		DATE: 24/3/80	DEPTH: C. HORIZON	JOB NO.

SAMPLE NUMBER	CO-ORDINATES (N)'S	(E)/W	Interval + (-)	Pb P	Zn P	Cu P	Fe P	Mn		DESCRIPTION
34339	383600	383200	20	5	10	5	1200	30		RFCS
40		383180		5	5	X	685	25	NO C HORIZON *	CS
41		383160		5	X	X	735	20		RFSC
42		383140		X	X	X	1350	20		CSR
43		383120		5	X	X	680	25		RCS
44		383100		5	X	5	850	20		CSR
45		383080		5	X	X	430	15		CSRFO
46		383060		5	X	10	505	20		CSR
47		383040		10	X	X	545	20		CSO
48		383020		5	X	X	800	15	B HORIZON *	CSRF
49		383000		5	X	X	330	15	Possible SEN DAM *	CSR
50		382980		5	X	X	415	20	B HORIZON *	CO
51		382960		5	X	X	330	15		CSR
52		382940		5	X	X	410	15	B HORIZON *	CS
53		382920		5	X	X	530	15		CRFS
54		382900		5	X	X	1100	20		CSP
55		382880		50	105	20	2000	35		SCR
56		382860		30	50	10	4550	115		CSRF
57		382840		20	20	5	1150	20		CSRO
58		382820		5	5	X	900	20		CSO
59		382800		5	10	X	1000	20		SCRF
60		382780		15	25	5	4930	105		CSRF
61		382760		10	5	X	1150	30		CSRF
62		382740		20	25	5	2650	25		CRPS
63		382720		5	5	X	3450	25		SC

SS

058284

7

PROJECT: MT. BLACK
FARM CREEK LINES

CO-ORDINATES
LINE: 5353500N
FROM: 385080E
TO: 384600E

SAMPLED BY: PD 9 JACQUES THE LUMBERJACK
DATE: 9.9.79

MATERIAL: SOIL
DEPTH: C HORIZON.

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/	CO-ORDINATES E/	Interval +/-	Pb	Zn	Cu	Ag	Fe	DESCRIPTION
204201	3835000	3850800	20	x	110	x	x	5800	CS
202		60		x	110	x	x	4750	CS
203		40		x	5	x	x	2450	CS
204		20		x	5	x	x	3700	CS
205		3850000		x	5	x	x	2000	CS
206		3849800		x	5	x	x	2150	CS
207		60		x	10	x	x	2250	CS
208		40		x	5	x	x	1700	CS
209		20		x	5	20	x	3850	CS
204210		3849000		5	15	5	x	18000	CS
211		3848800		5	10	5	x	5450	CS
212		60		5	15	5	x	4850	CS
213		40		x	5	5	x	11000	CS
214		20		x	15	5	x	19500	CS
215		3848000		15	20	5	x	9000	CS
216		3847800		x	10	x	x	21500	CS
217		60		x	10	x	x	22000	CS
218		40		x	5	x	x	17500	CS
219		20		x	15	x	x	7600	CS
204220		3847000		10	20	5	x	13500	CS
221		3846800		5	5	x	x	6400	CS
222		60		x	5	x	x	14000	CS
223		410		x	5	x	x	11000	SC
224		20		x	5	x	x	7150	CS
204225		3846000		x	5	x	x	8000	CS

951

058285

PROJECT: MT. BLACK

FARM CREEK LINES

CO-ORDINATES
LINE: S 383 500N
FROM: 384580E
TO: 384 100E

SAMPLED BY: PD + JACQUES.
DATE: 9.2.79.

MATERIAL: SOIL
DEPTH: C HORIZON

BOCK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Ag	Fe	DESCRIPTION
204260	383500	384580	-20	x	15	x	x	1050	C
27		560		x	10	x	x	1000	C S
28		540		x	5	x	x	745	C S
29		520		x	10	x	x	1100	C S
20430		384500		x	5	x	x	950	C S
31		384480		x	5	x	x	600	C S
32		460		x	5	x	x	260	O C
33		440		x	5	x	x	300	C
34		420		x	5	x	x	470	C
35		384400		x	5	x	x	3900	C S O
36		384380		x	10	x	x	500	C S
37		360		5	10	x	x	1300	C O
38		340		x	20	x	x	1200	O K
39		320		x	5	x	x	370	C S S
204400		384306		x	5	x	x	325	C
41		384280		x	10	x	x	950	C S
42		260		x	5	x	x	1500	C
43		240		x	5	x	x	650	C S
44		220		x	5	x	x	500	O C
45		384200		x	5	x	x	1150	C S
46		384180		x	5	x	x	685	C
47		160		x	5	x	x	740	C S O
48		140		x	10	x	x	1650	C
49		120		x	10	x	x	585	C
204500		384100		75	5	x	x	1100	C S

057

058286

5

AREA: MT. BLACK

FARM CREEK LINES

CO-ORDINATES
LINE: 5383500N
FROM: 384080E
TO: 383900E

SAMPLED BY: P.D.A. JACQUES

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb	Zn	Cu	Ag	Fe	DESCRIPTION
204510	3835000	3840800	-20	10	10	5	x	1450	CSO
204511		3840600		10	5	x	x	400	CS
204512		3840400		5	5	x	x	950	CS
204513		3840200		5	10	x	x	3050	CS
204514		3840000		5	10	x	x	1000	CS
204515		3839800		x	10	x	x	1500	CO
204516		3839600		x	5	x	x	655	CS
204517		3839400		x	5	x	x	220	C
204518		3839200		x	5	x	x	1150	CS
204519		3839000		x	5	x	x	2050	CS

058287

PROJECT: MT. BLACK.
FARM CREEK GRID

CO-ORDINATES
LINE: S 383 500N
FROM: 383 880E
TO: 383 580E

SAMPLED BY: BILL.M.& JACQUES
DATE: 12.2.79

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Ag	Fe	DESCRIPTION
20461	383500	383880	-20	x	5	x	x	5750	CSO
62		8860		x	5	x	x	7600	CS
63		8840		x	5	x	x	6100	CS
64		8820		x	5	x	x	12500	CS
65		383800		x	25	x	x	14500	CSO
66		7880		x	5	x	x	11500	CSO
67		7860		x	5	x	x	2850	CS
68		7840		x	5	x	x	1950	CS
69		7820		x	5	x	x	11650	CS
70		383700		x	10	x	x	67500	CO
71		6880		x	10	x	x	39500	CS
72		6860		25	15	5	^	55000	CS
73		6840		10	15	5	x	21500	CSO
74		6820		10	60	*	x	51000	SCG
75		383600		5	5	5	x	13500	CS
20476		383580		5	10	5	x	12500	CS

1081 1090

159

058288

3

PROJECT: MT BLACK / FARM CREEK

CO-ORDINATES
LINE: 5 383 500N
FROM: 383 420 E
TO: 383 580 E

SAMPLED BY: PD & J.L.

DATE: 9 - 2 - 79

MATERIAL: SOIL

DEPTH: "C" HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Inaccuracy +/-	Pb	Zn	Cu	Ag	Fe	DESCRIPTION
20392	383500	383420	20	5	40	5	x	17000	CS
393		40		10	20	5	x	7500	CS
394		60		x	5	x	x	13000	CS
395		80		x	5	x	x	27800	CS
396		500		x	10	x	x	18000	CS
397		20		5	20	x	x	2950	CS
398		40		10	55	x	x	4950	CS
399		60		5	10	x	x	2200	SC
20400		580		x	10	x	x	22500	CS

160

058289

2

PROJECT: MT BLACK FARM CREEK

CO-ORDINATES
LINE: 5 383 500N
FROM: 382 920E
TO: 383 400 E

SAMPLED BY: PP & J.L.

DATE: 8-2-79

MATERIAL: SOIL

DEPTH: "C" HORIZON

BOOK Nº

SHEET Nº

JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb	Zn	Cu	Ag	Fe	DESCRIPTION
20367	383500	382920	20	X	5	X	X	680	CS
C8		40		X	5	X	X	360	CS
69		60		5	5	5	X	230	CSG
20370		80		5	X	X	X	485	CSG
71	383000			5	X	X	X	590	CS
72		20		5	X	X	X	395	CSG
73		40		5	X	X	X	600	CSG
74		60		5	X	X	X	555	CS
75		80		X	X	X	X	640	CSG
76	383100			1	X	X	X	4000	S
77		20		X	X	X	X	580	CS
78		40		X	X	X	X	595	CS
79		60		X	X	X	X	400	CSG
20380		80		X	X	X	X	480	CSG
81	383200			X	X	X	X	610	CS
82		20		X	X	X	X	570	CS
83		40		X	X	X	X	430	CSG
84		60		X	X	X	X	380	CS
85		80		X	X	X	X	215	CS
86	383300			X	X	X	X	220	CS
87		20		X	X	X	X	305	CS
88		40		X	X	X	X	390	CS
89		60	30	X	5	X	X	8000	CSG
20390		80		X	10	5	X	1150	CS
91	383400			X	15	5	X	9000	CS

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058290

PROJECT: MT BLACK / FARM CREEK

CO-ORDINATES
LINE: 5 383 500 N
FROM: 382 420 E
TO: 382 900 E

SAMPLED BY: R.D. & J.L.
DATE: 9-2-79

MATERIAL: SOIL
DEPTH: "C" HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	+/-	Pb	Zn	Cu	Ag	Fe	DESCRIPTION
20342	383500	382420	20	20	30	x	x	5400	CS.
43		440		25	30	x	x	6500	C
44		460		15	50	10	x	6900	C
45		480		25	45	x	x	4800	C
46		500		5	10	x	x	3900	C
47		520		5	10	x	x	1300	CO
48		40		5	5	x	x	2000	CS
49		60		5	10	x	x	1550	C
50		80		x	5	x	x	460	CO
51	382600			x	5	x	x	530	C
52		20		x	5	x	x	1100	CS
53		40		x	5	x	x	560	CS
54		60		x	10	x	x	1700	C
55		80		x	10	x	x	1000	C
56	382700			10	10	x	x	7450	CO
57		20		15	25	x	x	1050	CO
58		40		x	5	x	x	375	SC
59		60		5	5	x	x	330	SC
20360		80		10	5	x	x	315	C
61	382800			5	15	x	x	8200	C
62		20		5	10	x	x	335	CS
63		60		5	10	x	x	360	C
64		60		x	10	x	x	3710	CS
65		80		x	5	x	x	520	C
66	382900			x	5	x	x	450	CS

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058291

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK FARM CREEK	LINE: 5,383,400N (3)	ES, MG GI	SOIL	SHEET No
	FROM: 383,040 E	DATE: 25/3/80	DEPTH: C- HORIZON	JOB No
	TO: 383,180E			

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	INTERVAL (+)/-	Pb P	Zn P	Cu P	Fe P	Mn		DESCRIPTION
34626	383400	383040	20	5	x	x	350	10		CSRFD
27		060		5	x	x	365	5		CRFS
28		080		5	x	x	330	5		RFCS
29		100		5	x	x	530	10		RFSC
30		120		5	x	x	480	10	corrm	CRFS
31		140		15	x	x	1900	15		RFCSD
32		160		5	x	x	565	5		RFCS
34633		383180		10	x	x	570	10		CSRF

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058292

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK FARM. CREEK	LINE: 5,383,400N (2)	MG, ES, GI	SOIL	SHEET No
	FROM: 382,540 E	DATE: 24/3/80	DEPTH: C. HORIZON	JOB No
	TO: 383,020 E			

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (+)/-	Pb P	Zn P	Cu P	Fe P	Mn	DESCRIPTION
34601	383400	382540	20	5	X	X	1300	10	CSO
02		560		5	X	X	1500	20	CS
03		580		5	X	X	500	10	CSO
04		600		5	X	X	685	10	CPSO
05		620		X	X	X	455	5	CSR
06		640		5	X	X	1150	10	CPS
07		660		X	X	X	570	5	CO
08		680		X	X	X	1250	10	CRFSO
09		700		5	X	X	950	5	CSRA
10		720		10	X	X	1050	25	CRFS
11		740		10	X	X	1000	35	CSRF
12		760		15	X	X	800	15	CRFS
13		780		10	X	X	850	15	CSO
14		800		15	X	X	2000	30	CSO
15		820		10	X	X	650	15	CRFS
16		840		5	X	X	450	10	CRFOS
17		860		5	X	X	525	10	CRFSO
18		880		5	X	X	1100	10	CRFS
19		900		5	X	X	1100	10	CRS
20		920		10	X	X	1900	10	CRFS
21		940		5	X	X	610	10	CRFOS
22		960							NO SAMPLE TAKEN
23		980		5	X	X	465	10	CRFS
24		383000		10	X	X	700	15	CRFS
34625		383020		10	X	X	420	10	RFSC

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058293

PROJECT: FARM CREEK

CO-ORDINATES
LINE: 5,383,400N (11)
FROM: 382,240E
TO: 382 520 E.

SAMPLED BY: ESMG.GT
DATE: 24/3/80

MATERIAL: SOIL
DEPTH: C. HORIZON

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (+)/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
343856	383400	382240	20	10	X	X	1.35	220	CO
857		260		X	X	X	.80	80	CSR
858		280		5	X	X	.51	20	CRBS
859		300		5	X	X	.52	15	CRAS
910		320		5	X	X	2.00	15	CSO
911		340		X	X	X	.35	5	CSRO
912		360		5	X	X	.26	15	CRS
913		380		10	X	X	.36	20	CSR
914		400		X	X	X	1.50	10	CO
915		420		5	X	X	2.00	15	CSRO
916		440		5	X	X	3.40	30	CSO
917		460		15	10	X	6.55	30	SROC
918		480		5	X	X	2.95	15	CSRO
919		500		5	X	X	1.25	10	CSRO
344000	382520			5	X	X	1.10	10	CR

058294

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PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT BLACK FARM CREEK	LINE: 5 382 500N	W.M. RPD	SOIL	SHEET Nº
	FROM: ~~387 040 E~~ 386,920 E	DATE: 1-2-79	DEPTH: "C" HORIZON	JOB Nº
	TO: ~~386 560 E~~ 386,440 E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES AS PLOTTED	Interval +/-	Pb	Zn	Cu	Ag	Fe			AS TAGGED	DESCRIPTION
20215	382500	386920	20	5	20	5	x	490		320	387,040	CO
20216		900		5	15	5	x	2300		386,700	020	CSO
17		880		20	20	5	x	2200		680	387,000	CSO
18		60		5	5	5	x	1450		60	180	CSO
19		40		10	5	5	x	2650		40	960	CS
20220		20		10	5	5	x	1900		20	940	CS
21		800		5	5	5	x	290		386,800	920	CSO
22		80		5	5	5	x	415		80	386,900	CS
23		60		5	5	5	x	1150		60	880	CSO
24		40		10	5	5	x	1000		40	860	CSO
25		20		5	5	5	x	1050		20	840	OCS
26		700		5	5	5	x	355		386,700	820	CS
27		80		5	5	5	x	795		80	386,800	CS
28		60		5	5	5	x	1050		60	780	CS
29		40		5	5	5	x	1550		40	760	CO
20230		20		10	15	5	x	2250		20	740	CS
31		600		10	10	5	x	9000		386,600	720	CSO
32		80		5	5	5	x	1650		580	386,700	CS
33		60		5	10	5	x	10500		560	680	CSO
34		40		5	10	5	x	8250		540	660	C
35		20		10	10	5	x	3550		520	640	CSO
36		500		15	20	5	x	2100		500	620	CSO
37		80		5	10	5	x	1800		480	386,600	CSO
38		60		40	20	10	x	2550		460	580	CSO
39		440		10	10	5	x	1750		386,440	560	CO

058295

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PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT BLACK FARM CREEK	LINE: 5382 500N	W.M. & PD	SOIL	SHEET Nº
	FROM: ~~386 590 E~~ 386,420E	DATE: 1-2-79	DEPTH: "C" HORIZON	JOB Nº
	TO: ~~386 040 E~~ 385,940E			

SAMPLE NUMBER	CO-ORDINATES N/E	CO-ORDINATES AS PLOTTED	INTERVAL +/-	Pb	Zn	Cu	Ag	Fe	AS TAGGED	DESCRIPTION
20240	382500	386420	20	10	10	5	x	1750	40	CS
41		400		10	10	5	x	750	20	CSO
42		80		5	5	5	x	350	386,500	CS
43		60		5	5	5	x	585	80	CS
44		40		5	5	5	x	380	60	CS
45		20		5	5	5	x	1450	40	CS
46		300		5	5	5	x	1200	20	CS
47		80		5	5	5	x	315	386,400	CS
48		60		10	5	5	x	700	80	CS
49		40		15	15	5	x	6700	60	CS
50		20		15	20	5	x	6450	40	CS
51		200		5	5	5	x	2500	20	CS
52		80		5	5	5	x	700	300	C
53		60		5	10	5	x	11500	80	CS
54		40		10	15	5	x	15000	60	CS
55		20		5	30	5	x	16000	40	CS
56		100		15	25	5	x	18000	20	CS
57		80		10	5	5	x	3350	386,200	CS
58		60		5	5	5	x	800	80 ← Pegging error	CSO
59		40		5	5	5	x	1100	40	CSO
60		20		5	5	5	x	250	20	CSO
61		386000		5	5	5	x	400	386,100	CSO
62		80		5	5	5	x	250	80	CSO
63		60		5	5	5	x	215	60	CSO
64		385940		5	5	5	x	155	386,040	CS

058296

PROJECT: MT BLACK / FARM CREEK

CO-ORDINATES — LINE: 5 382 SOON; FROM: 386 920 E; TO: 385 940 E

SAMPLED BY: WM. REID

DATE: 1 - 2 - 79

MATERIAL: SOIL

DEPTH: "C" HORIZON.

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES EAS. PLOTTED	INTERVAL +/-	Pb	Zn	Cu	Ag	Fe	AS TAGGED	DESCRIPTION
202655	382500	385920		5	5	5	x	235	386,920	CSOIL
656		900		x	5	5	x	325	386,900	CSOIL
657		880		x	5	5	x	275	385,880	CSOIL
658		860		5	5	5	x	235	860	CSOIL
659		840		5	5	x	x	230	840	CSOIL
202710		820		x	5	x	x	585	820	CSOIL
711	385800			5	10	5	x	955	800	CSOIL
712		880		5	5	x	x	735	385880	CSOIL
713		860		10	5	5	x	370	860	CSOIL
714	385740			5	5	5	x	330	385,840	CSOIL

058297

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PROJECT: MT BLACK / FARM CREEK

CO-ORDINATES
LINE: 5 382 500 N
FROM: ~~385520~~ E 385,420 E
TO: ~~385520~~ E 385,720E.

SAMPLED BY: RD & WMR JL.

DATE: 5 - 2 - 77

MATERIAL: SOIL

DEPTH: "C" HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES AS* RATED	Interval +/-	Pb	Zn	Cu	Ag	Fe	AS TAGGED.	DESCRIPTION
203263	382500	385420	20	10	30	5	x	20000	385,420	CS
27		440		25	20	5	x	4850	440	CO
28		460		25	15	5	x	1550	460	CO
29		480		x	10	5	x	770	480	CS
203730		500		x	10	5	x	665	385,500	CS
31		520		x	10	x	x	2000	520	OC
32		540		x	10	x	x	1100	540	CS
33		560		x	10	x	x	1050	560	CS
34		580		x	10	x	x	980	580	CS
35		600		x	10	x	x	1500	385,600	CSO
36		620		x	15	x	x	705	620	OS
37		640		x	10	x	x	410	640	CS
38		660		x	10	x	x	400	660	CSO
39		680		x	15	^	x	380	680	CC
203840		385700		x	5	x	x	375	385,700	CSO
3841		720		5	10	x	x	540	720	CS

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058298

MT. BLACK FARM CREEK LINES	CO-ORDINATES LINE: 5382500N	SAMPLED BY: P.D. WM. & J.P.	MATERIAL: SOIL	BOOK Nº	
	FROM: ~~385 020E~~ 384,920 E	DATE: 5-2-79	DEPTH: CHORIZON	SHEET Nº	
	TO: ~~385 500~~ 385,400 E			JOB Nº	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W AS PLOTTED	INTERVAL +/-	Pb	Zn	Cu	Ag	Fe	AS PLOTTED (100 metres)	DESCRIPTION
20301	82500N	384920	+20	x	10	x	x	950	385,020 E	CS
02		940		x	10	x	x	850	385,40	CS
03		960		x	10	x	x	700	60	CSO
04		980		x	10	x	x	1600	80	C
05		385000		x	5	x	x	680	385,100	CS
06		020		x	10	x	x	2150	20	CS
07		040		x	10	x	x	930	40	CS
08		060		5	5	x	x	1050	60	CS
09		080		5	5	x	x	500	80	CS
20310		385100		x	10	x	x	1550	385,200	CS
11		120		x	10	x	x	475	20	CS
12		140		10	10	x	x	700	40	CS
13		160		x	10	x	x	1200	60	CS
14		180		x	10	x	x	800	385,280	CO
15		385200		15	45	x	x	1050	300	CO
16		220		40	45	5	x	10500	20	CO
17		240		35	70	10	x	1550	40	CO
18		260		35	45	10	x	2000	60	CO
19		280		35	40	10	x	3850	80	CO
20		385300		5	15	5	x	6050	385,400	CO
21		320		65	45	10	x	1900	20	CO
22		340		40	35	5	x	10500	40	CO
23		360		25	45	5	x	51500	60	C
24		380		20	35	5	x	20000	80	CO
20325		385400		25	55	5	x	34000	385,500	CO

058299

170

PROJECT: MT BLACK / FARM CREEK

CO-ORDINATES — LINE: 5 382 500 N — FROM: ~~384 500 E~~ 384,900E — TO: ~~384,900 E~~ 384,900 E

SAMPLED BY: WM

DATE: 5-2-79

MATERIAL: Soil

DEPTH: 'C' HORIZON

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W AS PLOTTED	Interval +/-	Pb	Zn	Cu	Ag	Fe	AS TAGGED	DESCRIPTION
202 75	382500	384400	20	5	5	x	x	1600	384 500 E	CS
76		20		"	5	"	"	620	1520 E	CS
77		40		x	5	x	x	285	540	CS
78		60		5	5	"	"	525	560	CS
79		80		x	5	"	"	320	580	CS
202 80		384500		5	5	5	x	490	384 600 E	CS
81		20		5	5	x	x	250	620	CS
82		40		15	20	x	x	1750	640	CS0
83		60		5	5	x	x	1200	660	CS
84		80		10	5	5	x	2150	680	CS0
85		384600		15	5	5	x	2750	384 700 E	CS0
86		20		30	5	5	x	1150	20	CS
87		40		10	5	5	x	1850	40	CS
88		60		5	5	5	x	1750	60	CS
89		80		x	10	x	x	1600	80	SC
202 90		384700		x	15	x	x	950	384 800 E	CS
91		20		x	5	x	x	1650	20	CS
92		40		x	50	x	x	5250	40	CS
93		60		x	50	x	x	4100	60	CS
94		80		x	20	x	x	690	80	C
95		384800		10	55	x	x	6500	384,900 E	CS
96		20		x	15	x	x	3100	20	CS
97		40		x	25	x	x	5800	40	CS
98		60		x	5	x	x	800	60	CS
99		80		x	5	x	x	350	80	CS
	300	384900 AS PLOTTED		x	10	x	x	950	385,000E	CS

058300

Plotted

PROJECT: Mt Black / Farm Creek

CO-ORDINATES
LINE: 5381600N
FROM: 385600E
TO: 385 8800E

SAMPLED BY: MC
DATE: 4/19/79

MATERIAL: Soil
DEPTH: C Horizon

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27969	3816000	3856000	20m	10	40	20	10.5%	60	CS
70		6200		5	15	5	4.75%	70	CSRF
71		6400		5	10	5	5250	40	CS
72		6600		15	20	5	1.85%	90	CSO
73		6800		15	20	5	1.20%	70	CSRFO
74		7000		10	X	X	420	5	CSRFO
75		7200		10	5	5	635	10	CSO
76		7400		10	5	X	355	X	CSRF
77		7600		10	25	5	4600	210	CSRF
78		7800		40	50	10	2550	215	CSO
79		8000		5	5	X	1200	30	CS
80		8200		5	15	X	3850	50	CSRFO
81		8400		15	25	5	2.55%	85	CSRF
82		8600		15	15	10	6300	50	CSRFO
27983		3858800		15	35	5	2.10%	310	CSO

172

058301

Plotted

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt Black Farm Creek	LINE: 5381600 N	MG	Soil	SHEET Nº
	FROM: 385 100 E	DATE: 4/8/79	DEPTH: C Horizon.	JOB Nº
	TO: 385 580 E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27944	381600	385100	2 m	10	30	X	3.60%	105	CSRF
45		120		5	25	X	5.00%	105	CSRF
46		140		5	35	X	5.00%	300	CSRF
47		160		15	45	X	6.25%	150	CSRF
48		180		10	25	X	1.45%	650	CSRF
49		200		15	35	X	4.80%	245	CSRFO
50		220		10	25	X	2.50%	110	CRFO
51		240		15	40	5	4.35%	310	CSRF
52		260		20	50	5	4.50%	1000	CSRF
53		280		15	20	10	4.15%	110	CSRFO
54		300		15	40	5	5.10%	170	C
55		320		25	35	10	4.90%	410	CSRF
56		340		25	55	10	5.15%	430	CSRF
57		360		25	35	10	5.25%	140	CSRF
58		380		20	35	10	5.05%	150	CSRF
59		400		30	25	5	3.60%	90	CS
60		420		15	15	5	2.70%	60	CSRF
61		440		5	X	5	1600	25	CSRFO
62		460		10	25	5	1.40%	80	CSRF
63		480		5	X	X	3300	70	CSRF
64		500		5	X	5	525	30	CSRF
65		520		5	10	5	1.00%	30	CS
66		540		10	10	5	1.10%	40	CSRF
67		560		5	10	5	3500	25	C
27968		385580		30	35	10	2.95%	110	CS

173

058302

6

PROJECT: Mt Black. Farm Creek. Grid.

CO-ORDINATES
LINE: 5381500N.
FROM: 386,980E.
TO: 386,720E.

SAMPLED BY: PD WM.

DATE: 30-1-79.

MATERIAL: Soil Samples.

DEPTH: C. Horizon.

BOOK No
SHEET No
JOB No

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb	Zn	Cu	Ag	Fe	DESCRIPTION
20087	381,500	386980	20	15	10	5	x	1850	CS
20088		386960		5	5	5	x	1250	CS
89		386940		5	25	5	x	485	CS
90		386920		5	5	5	x	360	SC
91		386900		10	10	5	x	240	CS
92		386880		5	x	5	x	265	SC
93		386860		5	10	5	x	360	CSO
94		386840		5	15	5	x	175	CS
95		386820		5	10	5	x	255	CS
96		386800		5	10	5	x	950	CSO
97		386780		5	5	5	x	200	CS
98		386760		5	5	5	x	300	CS
99		386740		5	5	5	x	155	CSG
100		386720		20	20	5	x	700	CS

174

058303

5

PROJECT: Mt BLACK
farm Creek Grid.

CO-ORDINATES
LINE: 5,381,500N.
FROM: 386,700E.
TO: 386,220E.

SAMPLED BY: PD. WM

DATE: 30-1-79

MATERIAL: Soil Samples

DEPTH: C. Horizon

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Ag	Fe	DESCRIPTION
201	381,500	386700	20	25	25	5	x	12 00	CS
02		386680		5	5	5	x	3 75	CS
03		386660		5	5	5	x	3 35	CS
04		386640		5	5	5	x	2 95	CS
05		386620		5	10	5	x	4 50	CS
06		386600		5	10	5	x	2 90	CS
07		386580		5	5	5	x	3 60	CS
08		386560		5	10	5	x	4 00	CS
09		386540		5	10	5	x	3 70	CS
110		386520		5	10	5	x	2 45	CS
11		386500		5	5	5	x	2 80	CS
12		386480		5	15	5	x	7 05	CS
13		386460		5	15	5	x	8 75	CS
14		386440		5	5	5	x	2 90	CS
15		386420		5	5	5	x	3 40	CS
16		386400		5	10	5	x	2 75	CS
17		386380		5	5	5	x	3 15	CS
18		386360		5	10	5	x	3 35	CS
19		386340		5	10	5	x	2 85	CS
120		386320		5	5	5	x	2 15	CS
21		386300		5	5	5	x	2 90	CS
22		386280		5	5	5	x	1 60	CS
23		386260		5	5	5	x	2 30	CS
24		386240		5	5	5	x	6 40	CS
25		386220		5	5	5	x	8 80	CS

175

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058304

PROJECT: MT BLACK, Farm Creek.

CO-ORDINATES — LINE: 5,381,500N; FROM: 386,200E.; TO: 385,720E

SAMPLED BY: PD x WM

DATE: 30-1-79. 31-1-79.

MATERIAL: Soil Samples

DEPTH: C. HORIZON.

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb	Zn	Cu	Ag	Fe	DESCRIPTION
201260	381500	386200	20	5	5	5	x	800	CS
261		1800		15	30	5	x	1400	CS
262		1600		5	5	5	x	1400	CS
263		1400		5	10	5	x	900	CS
264		1200		10	30	5	x	880	CS
265		1000		5	10	5	x	1300	CS
266		0800		5	10	5	x	1350	CS
267		0600		5	5	5	x	1250	CS
268		0400		5	15	5	x	1600	CS
269		0200		5	10	5	x	1150	CS
270		0000		5	40	5	x	1500	CS
271		385980		5	15	5	x	1750	CS
272		385960		10	15	10	x	4800	CS
273		385940		5	15	5	x	2800	CS
201740		385920		5	45	10	x	2750	CS
741		385900		5	15	5	x	2450	CS
742		385880		5	15	5	x	2150	CS
743		385860		5	40	5	x	1750	CS
744		385840		5	45	5	x	2300	CS
745		385820		5	10	5	x	3300	CS
746		385800		5	25	5	x	1550	CS
747		385780		5	20	5	x	1800	CS
748		385760		5	5	5	x	430	CS
749		385740		5	15	5	x	4950	CS
750		385720		5	5	5	x	290	CS

176

058305

3

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK Farm Creek.	LINE: 5,381,500 N. FROM: 385,700 E. TO: 385,220 E.	PD & WM.	Soil samples.	SHEET Nº
		DATE: 31-1-79.	DEPTH: C. HORIZON.	JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL	Pb	Zn	Cu	Ag		DESCRIPTION
20151	381,500	385700	20	5	5	5	x	595	CS
52		385680		5	10	5	x	700	CS
53		385660		5	5	5	x	545	CS
54		385640		5	5	5	x	500	CS
55		385620		5	10	5	x	1550	CS
56		385600		5	10	5	x	1500	CS
57		385580		5	5	5	x	535	CS
58		385560		5	5	5	x	215	CS
59		385540		5	5	5	x	755	CS
60		385520		5	5	5	x	645	CS
61		385500		5	5	5	x	3750	CS
62		385480		5	30	5	x	35000	C
63		385460		15	30	5	x	30500	C
64		385440		10	30	5	x	21000	C
65		385420		5	35	5	x	33500	C
66		385400		10	30	5	x	4100	C
67		385380		10	20	5	x	6250	CO
68		385360		25	30	10	x	6100	OC
69		385340		25	35	10	x	9500	C
20170		385320		25	30	5	x	14000	C
71		385300		25	30	5	x	22500	C
72		385280		25	20	5	x	21000	CS
73		385260		5	5	5	x	355	CS
74		385240		5	5	5	x	4100	CS
75		385220		25	30	20	x	9500	CS

058306

PROJECT: MT BLACK / FARM CREEK.

CO-ORDINATES
LINE: 5,381,500.N.
FROM: 385,200.E
TO: 384,720.E.

SAMPLED BY: PD & WM.

DATE: 31-1-79.

MATERIAL: SOIL SAMPLE

DEPTH: C. HORIZON

BOOK No.
SHEET No.
JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	known	Pb	Zn	Cu	Ag	Fe	DESCRIPTION
2017	381,500	385200	20	20	10	5	x	6300	
78		385180		25	45	5	x	13500	
78		385160		40	55	5	x	15000	
79		385140		30	35	10	x	12500	
80		385120		15	15	5	x	11000	
81		385100		15	35	10	x	15000	
82		385080		25	30	30	x	27000	
83		385060		35	30	15	x	7500	
84		385040		25	15	10	x	9000	
85		385020		15	20	5	x	18500	
86		385000		20	10	5	x	22500	
87		384980		30	15	5	x	4150	
88		384960		15	15	5	x	22000	
89		384940		20	10	5	x	13500	
90		384920		5	5	5	x	1950	
91		384900		5	5	5	x	1750	
92		384880		10	10	5	x	10500	
93		384860		20	80	15	x	7300	
94		384840		15	10	5	x	5150	
95		384820		15	5	5	x	1900	
96		384800		35	95	10	x	23500	
97		384780		15	5	5	x	520	
98		384760		25	35	25	x	32000	
99		384740		15	10	5	x	1450	
2020		384720		10	5	5	x	375	

178

058307

PROJECT: MT BLACK FARM CREEK

CO-ORDINATES
LINE: 5,381,500 N.
FROM: 384,700 E
TO: 384,440 E.

SAMPLED BY: WMcRD
DATE: 31/1/79

MATERIAL: SOIL Sample
DEPTH: C HORIZON

BOCV N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb	Zn	Cu	Ag	Fe	DESCRIPTION
20201	381,500	384700	20	10	10	5	x	1150	
202		384680		10	5	5	x	1050	
203		384660		5	x	5	x	535	
204		384640		10	x	5	x	580	
205		384620		10	5	5	x	530	
206		384600		10	x	5	x	470	
207		384580		30	5	5	x	1300	
208		384560		30	25	15	x	1200	
209		384540		5	5	5	x	1100	
210		384520		25	35	15	x	3450	
211		384500		10	15	5	x	1950	
212		384480		5	5	5	x	2400	
213		384460		5	5	5	x	485	
214		384440		5	5	5	x	500	

179

058308

Plotted

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
** Mt BLACK ** FARM CREEK GRID. **	LINE: 5 381 400 N	MG	SOIL	SHEET Nº
	FROM: 385 880 E	DATE: 3/9/79	DEPTH: C HORIZON.	JOB Nº
	TO:			

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	INTERVAL +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27794	381400	385880	20	5	10	X	6600	30	CS
95		860		5	30	X	7700	430	CSRF NOC
96		840		5	35	X	1.15%	160	CSRF NOC
97		820		5	5	X	1750	40	CSRFO
98		800		5	15	X	1.30%	80	CSRF
99	381400	385780		5	X	X	525	20	CSRFO
27800	NO SAMPLE TAKEN DUE TO LOST BAG								

186

058309

Plotted

PROJECT: MT BLACK FARM CREEK.

CO-ORDINATES — LINE: 5381400N; FROM: 385 760E; TO: 385 280E.

SAMPLED BY: MG

DATE: 3/9/79

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK Nº

SHEET Nº

JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27901	3814400	385 760	20	5	5	X	290	15	C S R F
02		740		5	5	X	870	15	C S R F
03		720		X	X	X	285	20	C S R F
04		700		5	X	X	320	20	C S R F
05		680		10	15	X	2750	35	C S R F
06		660		5	X	X	380	35	C S R F
07		640		5	10	X	2300	30	C S R F
08		620		5	10	X	2950	35	C S R F
09		600		X	5	X	1050	25	C S R F
10		580		X	X	X	305	20	C S
11		560		5	15	X	690	60	C S R F
12		540		5	X	X	1050	55	C S R F
13		520		5	10	X	1450	50	C S R F
14		500		5	5	X	1800	30	C S R F
15		480		5	5	X	950	15	C S R F
16		460		10	30	X	2.95%	165	C S R F
17		440		5	40	X	3.15%	170	C R F
18		420		5	45	X	3.45%	90	C S
19		400		5	25	X	3.35%	65	C R F
20		380		5	15	5	1.95%	30	C S R F O
21		360		10	30	5	3.05%	55	C S R F
22		340		10	15	5	2.30%	70	C S R F O
23		320		15	25	5	2.15%	200	C R F
24		300		10	15	5	2400	50	C S R F
25	3852	280		10	20	10	1750	65	C S R F

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058310

Plotted

PROJECT: Mt Black / Farm Creek

CO-ORDINATES
LINE: 5381 400N
FROM: 385 260 E
TO: 385 100 E

SAMPLED BY: MG.
DATE: 3/9/79

MATERIAL: Soil
DEPTH: C Horizon

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27926	3811400	3855260	20m	5	55	5	1.00%	20	CSRF
27		2440		X	25	5	1.10%	75	CSRF
28		2220		5	15	5	2.30%	35	CSRF
29		2000		5	30	5	1.15%	50	CSRF
30		1810		X	5	X	800	20	CSF
31		1600		5	5	X	450	15	CSRF
32		1400		5	25	X	1.10%	45	CSRF
33		1200		X	25	5	6600	80	CSRF
27934		3851100		5	20	X	1900	45	CSRF

182

058311

Plotted

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt BLACK	LINE: 385 500 E	MG	SOIL	SHEET Nº
FARM CREEK.	FROM: 5 381 420 N	DATE 3/9/79	DEPTH C HORIZON	JOB Nº
	TO: S 381 580 N.			

SAMPLE NUMBER	CO-ORDINATES (R)/S	CO-ORDINATES (F)/W	Interval (+)/-	Pb	Zn	Cu	Fe	Mn.	DESCRIPTION
27935	381,420	385500	20m	5	5	X	8000	40	CSRF
36	440			15	35	5	4.70%	200	CSRF
37	460			5	35	X	3.75%	100	CRF
38	480			10	35	5	7.95%	170	CSRF
39	500			5	5	X	4400	100	CSRFO
40	520			45	105	X	1250	46	CSRF
41	540			15	35	5	2.65%	45	CS
42	560			5	35	X	3.45%	65	CS
27943	381,580	385,500		X	10	X	2150	20	CSRF

183

058312

PROJECT: MT. BLACK
COLEBROOK HILL GRID

CO-ORDINATES
LINE: 5372600 N (3)
FROM: 375320 E
TO: 374840 E

SAMPLED BY: M.G.
DATE: 15/5/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/(-)	Pb P	Zn P	Cu P	Fe % P	Mn P	Sn P	As P	Cr P	Ni P	Co	DESCRIPTION
360001	372600	375320	20	40	70	85	11.00	120	8	54	190	35	20	C Contact
002		375300		30	70	75	6.75	195	10	38	170	40	20	C O
003		375280		10	50	125	7.05	220	8	34	55	45	20	C R F O
004		375260		20	85	270	7.70	280	20	50	45	70	30	C R F O
005		375240		25	130	350	9.50	665	68	76	80	110	40	C Contam.
006		375220		20	100	240	11.00	655	54	620	175	90	30	C R F Contam.
007		375200		20	185	260	11.00	1000	54	520	120	85	30	C R F Contam.
008		375180		20	55	100	10.00	295	13	100	170	35	20	C O
009		375160		15	70	145	9.50	860	12	48	210	60	25	C
010		375140		15	90	140	12.00	260	11	34	170	85	30	C R F S Contam.
011		375120		20	105	125	14.00	280	12	32	220	90	30	C R F
012		375100		20	65	85	11.00	190	11	46	170	55	25	C O Contam.
013		375080		15	75	95	8.00	1150	46	420	160	50	25	C R F O S
014		375060		30	70	160	11.00	2000	36	400	170	40	30	C R F S
015		375040		30	50	150	11.00	695	40	450	205	40	25	C S R F
016		375020		30	50	175	12.00	195	60	660	250	40	20	C S R F O
017		375000		50	55	295	12.00	1140	74	660	240	45	20	C R F S O
018		374980		55	60	250	11.00	185	66	880	215	35	20	C R F O
019		374960		50	70	425	11.00	775	70	1120	225	35	20	C S O R F
020		374940		50	60	305	11.00	190	40	700	250	45	20	C S O R F
021		374920		45	60	300	11.00	190	62	320	155	50	20	C R F O
022		374900		50	50	280	11.00	150	42	660	95	30	20	C R F O
023		374880		15	60	200	10.00	150	40	440	90	50	20	C R F O Contam.
024		374860		30	80	155	5.35	215	48	390	70	55	20	C O R F Contam.
025	372600	374840		20	50	295	11.00	130	66	2800	100	35	20	C O

058313

184

PROJECT: MT BLACK

COLE BROOK HILL GRID

CO-ORDINATES
LINE: 5372600N (?)
FROM: 574820E
TO: 574340E

SAMPLED BY: M-G.
DATE: 15/5/80

MATERIAL: SOIL
DEPTH: CHORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb P	Zn P	Cu P	Fe % P	Mn	Sn P	As P	Cr P	Ni P	Co	DESCRIPTION
360261	372600S	374620	20	35	60	265	6.60	160	36	1700	115	40	20	C R F O
27		8000		50	55	330	10.00	170	74	4200	140	35	20	C R F S Ch H
28		7800		570	65	425	7.00	120	68	1040	155	40	20	C R F S
29		7600		15	35	25	2.15	55	34	100	1750	20	10	C S
30		7400		x	30	5	0.20	30	30	25	2100	x	10	C S R F
31		7200		20	30	55	6.45	60	38	260	560	20	15	C
32		7000		5	45	250	14.00	155	10	124	425	40	20	C S
33		6800		10	30	160	7.35	75	7	52	270	20	15	C R F S O
34		6600		x	70	20	1.70	70	10	46	9500	130	25	C S R F
35		6400		x	180	20	2.75	145	17	38	27000	255	55	C R F S
36		6200		x	150	5	7.30	45	18	84	12000	320	30	C R F S
37		6000		25	580	10	20.00	900	4	42	41000	260	200	C C B Harrison
38		5800		10	70	30	4.80	95	12	275	3200	80	25	C R F O S
39		5600		30	45	60	4.50	120	16	250	510	20	10	C R F S B Harrison
40		5400		10	65	260	8.50	115	20	1750	490	45	20	C C
41		5200		15	45	245	12.00	150	14	920	440	35	25	C R F
42		5000		10	40	170	12.00	125	16	640	500	35	20	C R F
43		4600		5	40	230	13.00	150	18	600	380	50	25	C R F Graham
44		4600		20	60	125	10.00	230	19	500	275	50	25	C R F O
45		4400		10	50	105	10.00	240	10	540	270	45	20	C R F O
46		4200		10	35	90	9.00	195	12	640	230	25	20	C R F
47		4000		10	55	160	10.00	595	26	520	430	30	20	C R F
48		3800		20	60	145	10.00	790	26	400	300	50	20	C R F
49		7600		15	75	200	11.00	570	42	380	190	90	30	C R F O
360503	372600S	374320		20	60	155	12.00	300	24	290	265	50	25	C R F Graham

185

058314

PROJECT: MT. BLACK
COLEBROOK HILL GRID

CO-ORDINATES
LINE: 5372600N (11)
FROM: 374320E
TO: 374200E

SAMPLED BY: M-G.
DATE: 15/5/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb P	Zn P	Cu P	P Fe %	Mg	Sn P	As P	Cr P	Ni P	Co	DESCRIPTION
36051	72600	374320	20	15	65	165	13·00	300	27	240	225	40	25	C RE
52		300		10	60	200	12·00	240	30	300	210	55	30	R E C
53		280		10	85	145	11·00	950	32	150	165	60	30	C S R F O
54		260		15	80	130	7·75	730	34	185	125	65	30	C R F S
55		240		20	85	150	10·00	620	30	155	165	50	30	C R F S
56		220		10	70	215	11·00	250	42	220	170	70	30	C R F Colour
36057	72600	374200		5	70	85	12·00	230	28	100	215	40	20	C R F Q Colour

058315.

186

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK N°
MT BLACK COLEBROOK HILL	LINE: 5,372,400N	BM·ES	SOIL	SHEET N°
	FROM: 375,280E	DATE 23/5/80	DEPTH C HORIZON	JOB N°
	TO: 374,800E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Increm. +10	Pb P	Zn P	P Cu	Fe %	Mn	Cu P	Co	Ni P	Sn	As	DESCRIPTION
36418	372400	375280	20	20	85	255	4·8%	775	165	40	80	60	760	CRF
19		2600		35	90	300	11·5%	785	170	30	70	80	680	CRFS
20		2400		35	95	255	11·0%	1650	170	35	75	64	900	CRO
21		2200		35	95	265	12·5%	790	180	30	75	64	760	CS
22		2000		35	80	185	10·5%	1250	170	25	65	68	760	CFO
23		1800		20	65	140	12·0%	250	220	30	80	16	100	CSRF
24		1600		25	70	240	3·9%	320	230	25	70	17	1040	CSO
25		1400			x	115	7·0%	530	165	50	155	7	20	CRS
26		1200		35	60	170	11·0%	280	200	20	55	35	280	CRS
27		1000		35	60	205	11·0%	1350	210	30	55	63	1160	CRS
28		0800		30	65	210	8·5%	2950	210	30	55	56	1040	CRF
29		0600		35	90	290	11·0%	1500	190	30	65	60	1160	CRS
30		0400		45	80	230	10·0%	1900	230	35	50	50	1320	CRS
31		0200		25	100	205	11·0%	495	360	25	95	56	720	CRS
32	375000			20	75	160	10·5%	635	270	20	85	53	840	CSR
33		9800		30	60	95	10·0%	430	230	15	45	54	490	CS
34		9600		20	70	150	12·5%	1500	240	25	40	52	720	CRS
35		9400		20	65	95	9·5%	900	200	25	45	54	B Horizon	CS
36		9200		5	90	200	9·5%	780	210	26	60	47	580	CRFSO
37		9000		10	95	240	11·0%	1300	245	30	70	62	1550	CRFS
38		8800		50	80	240	14·0%	800	245	30	45	132	3900	CRFSO
39		8600		35	140	175	7·8%	4150	175	65	65	48	B Horizon	CRFSO
40		8400		65	110	410	13·5%	1250	185	35	55	100	2400	CRS
41		8200		55	110	320	11·0%	4050	165	35	50	12	B Horizon	CRO
36442	374800			55	80	565	17·0%	1200	240	30	35	118	6000	CRFS

058316

187

PROJECT: MT. BLACK / COLEBROOK HILL

CO-ORDINATES — LINE: 5,372,400N; FROM: 37[illegible]780 E; TO: 37[illegible]300 E

SAMPLED BY: BM. ES

DATE: 23/5/80

MATERIAL: SOIC

DEPTH: CHORIZON

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Incrm.	Pb P	Zn P	Cu P	Fe P	Mn	Cr P	Co	Ni P	Sn P	As P	DESCRIPTION
36443	372900	37[illegible]780	20	55	75	650	12.0%	1150	220	35	45	52	200	CRFS
44		760		45	85	345	14.5%	1050	350	30	45	72	200	CRFS
45		740		55	130	110	10.5%	1600	26000	90	565	32	CONTAM	CSRF
46		720		5	280	25	8.2%	1700	1.3%	195	620	x	CONTAM	CRFS
47		700		5	235	100	11.0%	1950	9500	170	600	x	230	CRFS
48		680		20	195	55	12.5%	6100	8000	270	785	x	BH[illegible]	CRFO
49		660		5	160	50	4.2%	330	8000	50	220	2	170	CRFS
50		640		5	130	175	6.1%	1.3%	48000	175	555	2	200	CRFSO
51		620		5	90	30	11.5%	3200	44000	100	315	4	310	CRSO
52		600		x	140	10	10.0%	5700	66000	240	380	4	[illegible]5	CRS
53		580		x	125	5	5.1%	655	62000	60	260	3	80	CRFS
54		560		x	180	15	3.55%	275	1.0%	40	330	2	60	CRS
55		540		x	135	320	4.85%	6300	45000	125	320	2	230	CSRF
56		520		x	225	160	10.5%	420	1.0%	45	11150	2	250	CRS
57		500		70	255	155	8.1%	4400	700	25	90	9	BH[illegible]250	COS
58		480		15	45	160	11.0%	1000	800	20	95	6	320	CRFO
59		460		15	30	130	9.0%	265	660	20	50	24	240	CRF
60		440		15	35	100	5.65%	305	400	15	40	12	BH[illegible]260	CO
61		420		x	30	105	7.15%	180	390	20	65	24	260	CRS
62		400		x	50	240	14.0%	250	270	25	80	22	260	CRFS
63		380		x	115	145	12.0%	565	120	35	145	56	92	CRFS
64		360		x	105	85	12.0%	430	150	30	85	52	100	CRFS
65		340		5	80	95	11.0%	380	155	25	70	60	68	CRSO
66		320		20	65	170	9.0%	430	140	30	60	56	160	CRFSO
367	37[illegible]300			2.5	85	75	7.6%	280	130	20	55	32	96	CSRF

058317

188

PROJECT: MT. BLACK COLEBROOK HILL

CO-ORDINATES
LINE: 5,372,400N
FROM: 374,280 E
TO: 374,240 E

SAMPLED BY: BM.ES
DATE: 23/5/80

MATERIAL: SOIL
DEPTH: C. HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	Cr ppm	Co ppm	Ni ppm	Sn ppm	As ppm	DESCRIPTION
36468	372400	374280	20	40	105	80	9.5%	490	145	35	70	36	94	C SOIL
69		260		35	55	65	8.0%	195	165	20	45	27	140	C SOIL
36470		374240		30	55	160	12.0%	220	190	25	70	32	86	C RIFT

058318

189

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT BLACK COLEBROOK HILL GRID	LINE: 5,372,200N FROM: 375,260 E TO: 374,780 E	BM. ES PH DATE 19/5/80	SOIL DEPTH C. HORIZON	SHEET Nº JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe P	Mn	Cr P	Co	Ni P	Sn P	As P	DESCRIPTION
36058	372200	375260	20	30	65	200	12%	615	180	30	65	52	680	CSO
59		240		25	60	170	12%	750	185	30	50	60	720	CS
60		220		30	50	170	13%	330	210	25	50	66	640	CRFSO
61		200		10	115	200	11%	1700	95	50	110	35	330	CSRF
62		180		10	110	150	10.5%	2300	80	55	100	36	112	CRFO
63		160		15	65	215	11.0%	555	110	35	80	22	580	CRFS
64		140		30	50	190	12.0%	430	195	25	45	76	800	CRFSO
65		120		20	70	100	8.5%	435	95	30	75	40	150	CSRF
66		100		35	90	305	13.0%	465	175	30	95	52	800	CRFS
67		080		30	55	175	12.0%	240	245	25	60	66	1280	CSRF
68		060		25	90	145	9.0%	570	110	30	80	44	500	CRF
69		040		40	90	340	11.5%	590	190	30	70	54	1040	CRFS
70		020		45	90	540	12.0%	750	160	30	80	92	1000	CRFS
71		000		50	80	345	12.5%	560	170	20	65	88	B HORIZON 1120	CSRF
72		374980		45	55	510	12.0%	755	135	30	55	128	1240	CRFS
73		960		90	65	400	11.5%	1100	145	25	50	72	B HORIZON 1900	CSRFO
74		940		40	95	235	11.0%	2050	175	40	70	49	840	CRF
75		920		40	80	180	9.5%	1800	145	30	50	50	B HORIZON 680	CRFSO
76		900		25	80	130	8.5%	1600	160	25	70	40	450	CSRF
77		880		15	115	145	9.0%	1150	110	35	100	30	190	CSRF
78		860		45	70	240	10.5%	445	210	30	70	42	680	COS
79		840		100	60	360	11.5%	360	290	25	55	100	B HORIZON	CRFO
80		820		80	50	340	12.0%	260	130	20	35	200	B HORIZON	CORF
81		800		75	85	255	9.0%	650	370	30	135	20	B HORIZON	CSRFO
36082		374780		70	140	200	8.0%	1000	1000	45	160	26	720	CRF

058319

190

PROJECT: MT. BLACK
COLEBROOK HILL GRID

CO-ORDINATES
LINE: 5,372,200 N
FROM: 374,760 E
TO: 374,420 E

SAMPLED BY: BM. ES. P.H.
DATE: 19/5/80

MATERIAL: SOIL
DEPTH: C. HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/(-)	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	Cr ppm	Co ppm	Ni ppm	Sn ppm	As ppm	DESCRIPTION
36083	372200	374760	20	40	245	55	9.0%	8200	4300	215	1550		4	CRFO
84		740		30	260	30	11.0%	950	1.9%	135	1100		X	CRS
85		720		20	440	20	21.0%	1550	2.95%	285	1600		X	CRFS
86		700		20	380	15	15.0%	2350	3.1%	275	1000		X	CRFSO
87		680		5	155	10	7.25%	1700	1.2%	120	360		X	CSRF
88		660		5	160	10	5.3%	1900	7500	105	360		X	CRFS
89		640		10	355	15	10.0%	4050	2.5%	305	700		X	CORFS
90		620		X	150	20	5.0%	500	1.0%	70	350		X	CSRF
91		600		20	290	20	7.9%	2650	1.7%	130	225		X	CSRF
92		580		5	540	40	12.0%	3750	3.5%	370	605		X	CRFSO
93		560		30	480	15	14.0%	1050	4.3%	200	685		X	CRFSO
94		540		10	380	10	10.5%	650	3.6%	160	380		X	CRFSO
95		520		55	280	15	11.0%	3100	1.55%	230	1050		X	CRFO
96		500		10	400	20	12.5%	1750	3.1%	300	1000		X	CRFSO
97		480		X	220	15	4.2%	1050	1.6%	130	390		X	RFSC
98		460		15	55	30	8000	90	2300	20	65		X	CO
99		440		5	10	25	1.5%	95	950	10	45	14	-	CRFS
36100		37440		5	25	450	13.0%	115	3200	15	50		B	CRFS

058320

191

PROJECT: MT BLACK COLEBROOK HILL GRID

CO-ORDINATES
LINE: 5,372,200N
FROM: 374,400E
TO: 374,260E

SAMPLED BY: P.H. ES. B.M.

DATE: 19/5/80

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES (N)S	(E)W	Interval (E)	Pb P	Zn P	Cu P	Fe P	Mn P	Cu P	Co P	Ni P	Sn P	As P	DESCRIPTION
36601	372200	374400	20	25	60	170	11.0%	105	620	25	100	26	160	RFSC
02		380		x	10	10	2400	50	125	5	5	56	6	CRFS
03		360		x	x	5	1200	25	100	5	x	24	4	RFSC
04		340		x	5	5	950	30	120	5	x	132	8	ESRF
05		320		x	x	5	600	25	95	x	x	70	2	RFSC
06		300		x	65	5	1100	25	65	x	x	56	3	CRFS
07		280		x	5	5	600	30	65	x	5	54	6	SRFC
36608	374260			x	x	5	1600	65	45	5	x	54	14	CRFSO

058321

192

PROJECT: MT. BLACK COLEBROOK HILL

CO-ORDINATES
LITHO: 5,372,000N
FROM: 375400
TO: 375580

SAMPLED BY: ES BM
DATE: 23/5/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe P	Mn	Co	Ni P	Sn P	As P	DESCRIPTION
36471	372000	375420	20	65	125	265	11.5%	1000	280	95	50	56	CRF
72		420		100	135	890	14.5%	2900	165	85	60	66	54 CRF
73		440		55	100	480	13.0%	5110	180	35	80	42	102 CSRF
74		460		25	90	175	11.0%	770	190	30	60	22	60 CRF
75		480		30	130	150	10.0%	2000	210	40	95	10	190 CSRF
76		500		30	115	170	11.5%	800	140	35	65	21	180 CRF
77		520		75	350	455	14.5%	2000	100	45	105	48	300 CRFS
78		540		125	160	255	16.0%	470	170	35	65	110	60 CRFS
79		560		65	160	205	14.0%	530	120	45	115	17	185 CRFS
36480	375980			50	150	175	12.0%	540	100	45	175	12	65 CRFS

193

058322

28C, 7D

PROJECT: MT. BLACK COLEBROOK	CO-ORDINATES LINE: 5,37200N FROM: 375380E TO: 374900E	SAMPLED BY: M.G ES. MM	MATERIAL: SOIL	BOOK No.	
		DATE: 26/3/80	DEPTH: C-HORIZON	SHEET No.	
				JOB No.	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +B	P Pb	Zn P	Cu P	Cr P	Fe % P	Mn	Ni P	As P	Sn P	Co	DESCRIPTION
34634	372000	375380	20	35	75	435	190	9.75	700	75	1160	40	35	RFCS
35		360		40	180	2000	125	11.70	5000	125	800	53	210	CRFS
36		340		15	75	1150	120	10.50	1350	140	600	12	80	CRFS
37		320		30	100	465	170	8.00	1350	120	290	14	80	SCRF
38		300		20	70	385	155	8.50	480	150	340	18	60	CORF
39		280		20	55	480	170	9.00	760	125	500	10	45	CSRF
40		260		35	50	560	135	9.75	560	95	280	9	35	CS
41		240		15	50	520	105	8.50	750	100	540	6	45	SRFC
42		220		15	50	455	150	9.00	350	90	600	4	30	CO
43		200		5	50	460	130	9.00	330	95	630	4	35	SRFC
44		180		25	50	395	150	8.25	560	90	340	1	50	C
45		160		25	75	520	170	9.75	890	115	630	4	40	CRFS
46		140		5	80	250	210	9.75	1250	110	440	2	40	CRFS
47		120		15	70	200	220	8.75	620	125	300	4	35	CRFS
48		100		5	75	235	235	9.75	820	140	320	4	30	CRF
49		080		25	100	250	270	9.25	840	120	240	2	25	RFCS
50		060		5	75	150	240	9.25	490	120	61	7	20	CRFS
51		040		10	50	125	190	13.00	280	95	60	8	15	RFSC
52		020		5	75	205	160	8.50	500	105	350	14	25	CRFS
53		375000		5	60	245	180	8.50	280	70	600	12	25	CRFS
54		374980		55	75	290	215	9.50	310	50	1650	22	30	CO B HORIZON
55		960		50	75	355	205	10.20	380	65	1700	24	20	CRFS
56		940		55	50	215	125	8.50	480	30	3200	50	20	CORF B HORIZ
57		920		45	60	170	185	9.00	1650	60	1400	16	30	RFCS
34658		374900		5	60	190	175	8.75	1050	60	1200	6	25	COS

194

058323

286

PROJECT: MT. BLACK COLEBROOK

CO-ORDINATES LINE: 5,372,000N

FROM: 374880 E

TO: 374660 E

SAMPLED BY: M.G. ES RM

DATE: 26/3/80

MATERIAL: SOIL

DEPTH: C. HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Pb P	Zn P	Cu P	Cr P	P Fe %	Mn	Ni P	As P	Sn P	Co	DESCRIPTION
34659	37200	374880	25	75	130	200	8.00	1250	65	680	4	40	RFKS
60		86	30	80	130	185	800	480	65	580	20	50	RFA
61		840	30	110	95	140	750	1000	70	400	22	130	SCRFA
62		820	35	140	145	155	700	1250	100	700	40	145	SCRFA
63		800	80	120	695	260	9.75	660	85	2200	48	130	SRFA
64		780	20	80	125	1100	650	350	205	560	8	140	C
65		760	160	215	240	2950	800	1150	225	1000	16	60	RFCS
66		740	130	120	180	6600	12.30	1100	800	700	8	135	CRFA
67		720	70	165	80	7300	725	4400	385	460	16	115	RFSC
68		700	30	320	20	16%	1400	13000	1550	50	2	340	CRFA B-H
69		680	70	395	20	20%	1650	7800	1550	34	x	390	CSRFA B-H
34670	37660		20	135	5	3600	975	3600	1200	13	x	220	RFCA B-H

058324

195

PROJECT: MT. BLACK

COLEBROOK HILL GRID

CO-ORDINATES
LINE: 5372000N
FROM: 374 220 E
TO: 374 640 E

SAMPLED BY: M.G. ES. M.M.

DATE: 21/5/80

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb P	Zn P	Cu P	Fe P	Mn	Cr P	Co	Ni P	Sn P	As P	DESCRIPTION
366093	372000	374220	20	10	90	185	11.0%	270	250	35	120	20	120	C R F
10		240		5	110	120	9.5%	330	515	40	205	CONT	155	A F S C
11		260		30	45	32.5	10.5%	370	190	20	75	40	50	C R F S
12		280		35	50	215	10.0%	370	230	10	60	16	38	C A F S C
13		300		60	65	270	11.0%	505	190	15	60	58	32	C A F
14		320		30	90	95	6.8%	800	1650	55	350	8	210	A F S C
15		340		30	45	110	6.7%	205	750	20	120	10	340	A F S C
16		360		10	50	130	6.1%	280	480	25	170	5	340	A F S C
17		380		30	45	85	6.7%	120	1900	10	100	4	18	C R F S
18		400		X	350	110	3.45%	325	2.65%	75	190	2	14	A F S C
19		420		5	265	10	9.5%	1750	2.25%	270	470	X	18	C A F S
20		440		5	360	110	12.0%	600	4.2%	180	900	B HORIZON	A F S C	
21		460		5	375	110	2.10%	750	3.9%	290	2600	X	17	C A F S
22		480		5	250	5	16.0%	1550	2.3%	330	2300	B HORIZON	O R F C	
23		500		45	235	5	17.0%	3650	1.9%	400	2100	B HORIZON	C R F S O Ra	
24		520		70	140	10	10.0%	3250	9500	335	1650	A HORIZON	O C	
25		540		X	115	5	3.9%	550	8500	90	220	X	22	R F C S
26		560		30	205	15	10.0%	4300	1.4%	160	700	X	52	C R F S
27		580		10	130	20	8.0%	1000	8500	95	530	X	18	R F C S
28		600		20	180	5	7.5%	4600	1.1%	315	680	X	20	C R F S
29		620		20	130	5	8.0%	2250	8500	190	470	X	9	C R F
366300	372000	374640		25	305	5	10.5%	2100	2.2%	220	640	A HORIZON	A F O C	

196

058325

28C, 7D

PROJECT: MT. BLACK COLEBROOK

CO-ORDINATES
LINE: 5,371,900 N
FROM: 375,380 E
TO: 374,960 E

SAMPLED BY: MGES MM.

DATE: 26/3/80

MATERIAL: SOIL

DEPTH: C. HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/(-)	Pb ppm	Zn ppm	Cu ppm	CR ppm	Fe %	Mn ppm	Ni ppm	As ppm	Sn ppm	Co ppm	DESCRIPTION
346 86	371900	375380	20	45	75	465	185	12.20	1750	75	760	26	55	CSRFI
87		376 0		60	75	690	140	16.50	4400	60	9200	56	160	RFCSI
88		374 0		50	60	1700	140	20.70	1800	60	7400	56	205	RFCSI
89		372 0		50	95	730	140	12.20	3500	105	1000	44	85	C
90		370 0		35	50	1100	210	13.70	3400	45	7200	40	140	CSRFI
91		368 0		80	75	645	155	9.50	1650	70	860	21	55	CRFI
92		366 0		55	60	305	135	10.20	1500	95	640	8	35	CSRFI
93		364 0		25	75	325	180	9.75	1050	85	440	2	45	CRFI
96		362 0		30	60	335	120	9.50	680	90	520	8	45	CRFSI
95		360 0		35	55	455	115	9.25	460	80	480	6	45	CRFO
96		358 0		40	55	410	130	8.50	450	60	390	4	35	CRFSO
97		356 0		30	35	290	125	10.20	380	60	450	5	30	CRFO
98		354 0		65	55	310	190	9.75	670	80	190	x	40	CRFSI
99		352 0		30	50	760	120	10.00	360	85	250	5	35	CSRFI
347 00	371900	375100		45	45	455	120	8.25	1150	55	680	4	25	CRFSI
* 348 01		350 0		50	55	450	145	9.00	1900	65	380	6	50	CRFI
02		348 0		50	50	410	170	8.25	740	55	270	x	25	CSRFI
03		346 0		50	50	145	210	9.50	580	60	500	3	25	CSRFO
04		344 0		75	50	190	280	9.50	500	80	315	8	30	CRFS
05		342 0		65	70	395	270	10.20	500	95	280	15	40	CRFI
06		340 0		65	45	240	245	10.70	370	55	580	18	25	CRFS
348 07		338 0		90	65	215	255	11.50	410	50	1360	72	30	CRFS

197

058326

AREA: MT. BLACK
COLEBROOK

CO-ORDINATES
LINE: 5,371,900 N
FROM: 374,660 E
TO: 375,140E 374,940E

SAMPLED BY: MG-FS
DATE: 26/3/80

MATERIAL: SOIL
DEPTH: C. HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	CR P	Fe %	Mn	Ni P	As P	Sn P	CO	DESCRIPTION
946	5371900	374660	20	110	55	130	1000	5.25	370	85	1600	4	25	C RFO B1
72		680		200	300	350	1100	10.50	850	225	3800	40	40	C RFS
73		700		115	130	460	370	9.00	550	120	4800	42	35	C RFSD
74		720		125	165	370	250	9.25	530	65	3300	29	30	C RFSC
75		740		300	185	380	NO SAMPLE	14.20	400	NO SAMPLE	6800	68	NO SAMPLE	C RFSB1
76		760		405	65	450	130	7.75	360	25	2200	150	15	C RFDFS
77		780		260	90	250	1250	19.00	310	35	2800	76	25	C RFO
78		800		115	250	175	130	6.75	1100	60	820	26	30	C RFS
79		820		50	145	550	160	7.00	640	90	580	102	30	C RFS
810		840		30	70	85	130	6.50	1100	45	520	20	20	C RFOC B1
811		860		45	60	80	150	9.00	880	45	620	34	25	C RFS
812		880		50	130	135	135	9.25	2560	70	440	24	30	C RFS
813		900		110	55	160	110	7.75	1450	35	880	32	25	C O B1
814		920		130	95	330	230	11.70	1800	56	1400	64	30	C SRA
815		940		95	70	210	250	14.50	540	45	2600	136	30	C

198

058327

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK COLEBROOK	LINE: 5371800 N FROM: 375640 E TO: 375500 E	P.H.	SOIL	SHEET Nº
		DATE 26/5/80	DEPTH CHORIZON	JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval + (-)	Pb P	Zn P	Cu P	Fe P	Mn	Ag	Co	P Ni	Sn P	As P	DESCRIPTION
36937	371800	375640	20	30	45	20	1.3%	230	20	15	15	CONT	A	HORIZON CO
38		620		15	50	25	3.75%	160	80	10	30		3	8 CRF
39		600		85	500	130	11.0%	2600	90	70	20		2	10 CRFS
40		560		70	175	110	11.0%	1650	145	45	85		56	25 CRF
41		560		60	130	80	10.5%	1550	175	45	100		19	6 CRFS
42		540		35	95	65	11.0%	1200	140	35	60		4	7 CRFO
43		520		40	105	90	11.5%	570	105	35	55		5	7 CRFS
36944	371800	375500		50	80	65	13.5%	460	130	35	70		4	8 CRFS

058328.

PROJECT: MT BLACK COLEBROOK

CO-ORDINATES: LING: 5,371,800 N; FROM: 375,480 E; TO: 375,000

SAMPLED BY: ES . MM

DATE: 1.4.80

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Cr ppm	Fe %	Mn ppm	Ni ppm	As ppm	Sb ppm	Co ppm	DESCRIPTION
34866	371800	375480	20	30	75	130	200	1.30	800	75	68	16	45	RSC
67		4660		35	75	140	205	1.25	330	80	70	12	35	CR
68		4640		35	140	130	120	1.17	2100	120	110	18	70	CRS
69		4620		40	130	170	145	1.15	2000	110	70	15	80	CSR
70		4600		30	130	170	115	1.32	3100	105	72	14	90	CRS
71		3880		60	120	145	195	1.05	4200	100	114	17	70	ERS
72		3860		35	75	495	160	1.07	3300	60	1140	52	55	CRS
73		3840		40	140	1300	150	1.35	2300	60	1480	64	40	CR
74		3820		35	70	675	160	1.12	2150	50	1360	46	50	CR
75		3800		15	65	900	105	0.975	950	60	940	32	30	CR
76		2880		25	80	950	150	1.27	11000	65	1320	112	130	CRS
77		2860		15	135	1900	70	1.90	11000	200	2650	600	230	CRS
78		2840		5	105	1050	95	1.00	2700	100	560	54	70	CR
79		2820		15	35	580	50	2.15	740	35	960	26	30	CKS B HORIZON
80		2800		40	65	1900	85	1.00	1200	40	1300	28	35	CRO A HORIZON
81		1880		5	55	265	105	0.650	540	95	390	14	30	CR B HORIZON
82		1860		5	45	265	130	0.700	390	80	460	10	30	CRO B HORIZON
83		1840		5	40	145	110	0.750	230	55	300	16	25	CO B HORIZON
84		1820		30	50	260	100	0.750	330	55	370	20	25	CRO A HORIZON
85		1800		5	25	305	140	0.825	120	45	790	13	20	CO B HORIZON
86		0880		10	20	70	105	0.875	90	40	540	12	20	CO
87		0860		10	40	410	90	1.00	310	45	880	7	25	CR A HORIZON
88		0840		10	35	95	105	1.00	250	60	540	12	25	CO B HORIZON
89		0820		10	70	235	140	0.750	1100	95	165	10	45	ERS
34890	375000			5	95	155	240	1.02	1150	105	200	10	35	CRS

200

058329

28C

PROJECT: MT BLACK COLEBROOK

CO-ORDINATES
LINE: 5,371,800N
FROM: 374,980 E
TO: 374,940 E

SAMPLED BY: ES. MM

DATE: 1.4.80

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/E	P	Pb	Zn P	Cu P	CR P	Fe% P	Mn	Ni P	As P	Sn P	Co	DESCRIPTION
34891	37180 0	37480			5	65	180	175	8.00	1600	80	195	5	40	CR
92		760			10	55	235	230	11.70	2150	80	132	10	50	CRS
34893		920			10	75	125	205	8.50	4400	60	100	8	40	CO

201

058330

PROJECT: MT. BLACK COLEBROOK

CO-ORDINATES
LINE: 5,371,800 N
FROM: 374 540 E
TO: 374,920 E

SAMPLED BY: MG. ES.

DATE: 9/4/80

MATERIAL: SOIL.

DEPTH: C HORIZON

SAMPLE NUMBER	CO-ORDINATES E/S	CO-ORDINATES N/W	Interval +/-	Pb P	Zn P	Cu P	Cr P	Fe % P	Mn P	Ni P	As P	Sn P	Co	DESCRIPTION
35348	371800	374540	20	15	40	20	2000	2.7	100	45	265	55	10	CS RFA
349		560		45	120	80	8000	8.0	220	120	560	82	35	C R AS
350		580		130	180	190	11000	9.4	690	75	1480	56	25	C R AO SI
351		600		50	90	130	3500	8.3	450	45	600	116	15	C R AS SI
352		620		50	120	150	2800	8.0	1300	70	500	56	25	O RF CS SI
353		640		35	140	180	2650	9.2	2000	85	540	43	35	C RF S SI
354		660		35	130	210	2400	9.0	1950	80	480	60	30	C RF S SI
355		680		30	120	170	2500	8.5	765	75	220	60	25	C S RF
356		700		35	135	235	2200	9.0	670	80	380	63	25	C S RF BH
357		720		50	125	125	1400	7.5	1350	65	450	40	25	S C I B HORIZON
358		740		35	120	100	1750	7.5	2000	60	580	92	20	C R AS O
359		760		35	95	120	2100	8.8	900	65	780	54	25	C S O
360		780		115	130	110	1600	7.3	695	50	680	36	20	S R F C O BH
361		800		35	100	136	1600	7.0	950	65	820	68	20	C S O R F
362		820		35	90	170	2100	8.4	360	65	1200	66	20	S R F C O
363		840		55	80	180	1110	7.0	670	45	4100	43	10	C S BH
364		860		80	80	150	1050	8.7	550	30	1160	256	15	C R F O BH
365		880		80	90	140	1000	11.6	1600	25	840	180	20	C S O
366		900		30	100	130	2500	9.0	2300	65	410	46	35	C S R F BH
35367	371800	374920		25	85	160	1650	8.7	2600	65	136	50	30	C S R F O BH

* BH - B HORIZON

058331

202

PROJECT: MT. BLACK
COLE BROOK HILL GRID

CO-ORDINATES
LINE: 5371800N
FROM: 374570E
TO: 374160E

SAMPLED BY: M.G. E.S. M.M.
DATE: 21/5/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Datum +(-)	Pb P	Zn P	Cu P	Fe P	Mn	Ag P	Co	Ni P	Sn P	As P	DESCRIPTION
36611	37180	37452	20	20	40	20	2.0%	150	3000	10	40	08	290	CRF
32		500		X	50	15	3.0%	140	3700	10	55	47	210	RFSC
33		480		X	80	10	1.25%	160	6000	15	100	46	220	CRF
34		460		25	25	15	500	70	500	5	20	BEDROCK		RC
35		440		5	80	15	1.1%	100	5300	10	95	30	66	CRF
36		420		40	110	30	5.0%	320	9000	40	425	CONTE	740	RFSC
37		400		290	135	80	15.5%	285	7300	80	750	24	620	CRF
38		380		30	85	15	1.45%	150	7000	20	70	CONT	128	RFCS
39		360		X	230	20	6.0%	650	1.9%	100	450	2	54	CRF
40		340		25	240	20	10.5%	8250	1.5%	5445	950	2	72	RFSC
41		320		45	70	125	7.5%	170	12000	20	90	43	640	CRFO
42		300		20	35	15	1.7%	110	1000	5	25	46	210	RFSC
43		280		65	130	230	11.5%	460	11000	40	220	60	760	CRFS
44		260		40	70	70	8.0%	310	3000	70	70	42	295	RFSC
45		240		40	165	220	12.0%	470	5500	55	270	40	280	RFC
46		220		10	40	20	6.3%	130	800	15	90	28	640	RFSC
47		200		10	90	105	12.0%	290	1950	30	165	24	640	CRF
48		180		20	55	60	11.0%	125	800	15	125	27	310	RFSC
36649	37180	37416		45	105	10	11.0%	90	350	30	270	X	28	C

203

058332

D

AREA: MT. BLACK COLEBROOK

CO-ORDINATES
LINE: 5,371,700N
FROM: 375,480 E
TO: 375,100 E

SAMPLED BY: M.G. ES.

DATE: 8/4/80

MATERIAL: SOIL

DEPTH: C. HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb P	Zn P	Cu P	Cr P	P	Fe %	Mn	Ni P	As P	Sn P	Co	DESCRIPTION
35328	371700	375480	20	70	130	70	90	140		400	80	16	46		30 CRFS
29		460		10	60	60	95	80		715	80	58	18		40 RFCOS
30		440		70	110	100	300	118		800	95	54	18		35 CS RA
31		420		35	80	100	215	119		1300	80	82	19		30 CS
32		400		25	130	130	145	118		2600	90	66	16		70 CS RF
33		380		35	100	90	135	93		650	70	38	13		30 CS RH
34		360		30	105	110	MISSING	117		575	MISSING	68	12	MISSING	CS RA
*35		340		30	130	120	165	113		2550	75	63	16		40 CRAFS
36		320		15	170	160	160	122		2500	100	53	50		65 CRFS
37		300		25	95	250	105	96		1550	50	240	46		30 CSD
38		280		35	90	350	150	106		8350	60	250	35		30 SCRF
39		260		25	105	310	150	80		1300	85	160	29		50 RFCSBH
40		240		15	100	950	200	101		2200	75	720	44		65 CSRFBH
41		220		30	120	1100	125	123		2900	50	1950	51		60 CSRFBH
42		200		30	150	590	200	98		1800	75	960	16		50 CSRAFBH
43		180		50	85	520	170	104		1800	65	810	27		35 CRSI BH
44		160		35	65	900	130	128		1600	40	1600	66		30 CSRFI
45		140		15	50	640	150	144		3200	55	2700	66		25 CRFS COARSE
46		122		10	50	290	170	78		4400	50	1900	12		15 SIRF
47	371700	375100		20	60	280	70	60		270	40	195	x		20 CRO AHorizon
*35A							140				80				40

* TWO RESULTS FOR NO 35335 (CR Ni CO)

204

058333

PROJECT: MT BLACK COLEBROOK

CO-ORDINATES
LINE: 5,371,700N
FROM: 375,020 E
TO: 375,100E

SAMPLED BY: BM. ES

DATE: 28/3/80

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	CR ppm	Fe %	Mn ppm	Ni ppm	As ppm	Sn ppm	Co ppm	DESCRIPTION
34861	371700	375020	20	5	85	140	120	950	310	55	760	4	20	CRF
62		40		10	80	90	85	750	240	25	780	6	15	CO
63		60		5	15	215	65	750	150	30	250	4	20	CRS
64		80		5	35	105	110	1100	200	35	350	5	25	CRFO
65		375100		10	40	220	110	650	320	45	500	4	25	CC

205

058334

282

AREA: MT. BLACK

COLEBROOK

CO-ORDINATES
LINE: 5371700N
FROM: 374520E
TO: 375000E

SAMPLED BY: B.M. M.G.

DATE: 28/3/80

MATERIAL: SOIL

DEPTH: C HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Extra E/-	Pb ppm	Zn ppm	Cu ppm	Cr ppm	Fe %	Mn ppm	Ni ppm	As ppm	Sn ppm	Co ppm	DESCRIPTION
34636	37	7400	37	50	55	215	500	10.50	1700	70	600	56	25	CS
37	54	00		10	70	295	280	10.00	2000	65	620	89	25	CRFS
38	56	00		5	50	115	160	7.50	2100	35	370	77	15	CRSb
39	58	00		15	75	300	205	9.25	4600	25	490	77	30	CAS
40	60	00		20	100	275	215	9.00	3050	70	540	69	40	CRFS
41	62	00		60	85	220	175	8.75	2000	60	520	59	40	CRO
42	64	00		65	145	325	150	12.00	1900	80	620	77	50	RFCS
43	66	00		55	65	245	185	11.20	6800	45	1000	22	25	C
44	68	00		75	70	220	155	9.75	3100	40	660	70	20	CRFOS
45	70	00		120	65	255	150	9.75	4900	45	680	188	20	CRSOBH
46	72	00		100	55	360	170	13.70	4100	50	1160	720	25	CRFIS
47	74	00		165	120	620	155	11.50	12000	60	1120	360	30	CRS
48	76	00		235	100	465	125	14.70	10000	35	2200	488	30	CRFOSBH
49	78	00		50	195	445	185	12.10	16500	105	1120	152	50	CRFSI
50	80	00		5	250	315	130	10.10	10500	125	440	69	35	CRFIS
51	62	00		30	150	450	145	10.70	13500	70	680	56	35	CRFIS
52	64	00		40	160	300	170	10.00	11500	75	440	46	40	CRFO
53	66	00		35	85	230	190	9.25	15500	65	420	56	35	CRFIS
54	68	00		10	95	145	160	8.50	5900	90	260	19	30	CRFIS
55	90	00		5	75	165	235	5.75	5200	100	220	19	40	CRFSO
56	92	00		20	75	130	160	8.00	7400	90	116	5	30	CR
57	94	00		15	80	245	160	8.75	15500	85	132	18	45	CRF
58	96	00		5	80	110	145	7.75	12000	75	90	8	40	CRFOBH
59	98	00		20	70	110	115	6.75	10000	60	152	5	30	CRFO
34837	37	5000		10	50	85	115	8.00	5100	55	240	4	25	CO BH

206

058335

PROJECT: MT BLACK
COLE BROOK HILL GRID

CO-ORDINATES
LINE: 5371600 N
FROM: 375540 E
TO: 375620 E

SAMPLED BY: P.H. B.M.
DATE: 29/5/80

MATERIAL: SOIL
DEPTH: CHORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb P	Zn P	Cu P	Fe P	Mn	Ca P	Co	Ni P	Sn P	As P	DESCRIPTION
36932	371600 N	375540 E	20	45	115	135	1.35%	2900	220	55	90	7	16	CRFS
33		5560		70	190	155	1.30%	2200	120	105	100	6	20	CRS
34		5580		115	170	165	1.20%	2000	170	75	90	6	28	CRFS
35		6000		70	100	100	1.40%	3250	190	70	80	8	27	CRF
36932	371600 N	375620 E		70	150	90	1.15%	1850	110	75	90	CONTD	24	CRFS

207

058336

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK COLEBROOK HILL	LINE: 5,371,600N FROM: 375100 E TO: 375520E	MG. MM. PH DATE 9/4/80	SOIL DEPTH C. HORIZON	SHEET No JOB No

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	INTERVAL (+)/-	Pb P	Zn P	Cu P	Cr P	Fe % P	Mn	Ni P	As P	Sn. P	Co	DESCRIPTION
35306	371600	375100	20	25	70	1000	95	10.60	3200	35	4000	230	65	CSRF BH
07		120		20	60	190	125	8.60	375	60	600	36	25	CSO BH
08		140		15	75	690	140	8.4	370	90	410	46	30	CSRF BH
09		160		25	70	260	120	10.2	850	60	285	31	25	ORFCS BH
10		180		20	105	120	115	9.0	2000	60	84	12	30	SCRFO BH
11		200		20	75	200	105	8.7	780	50	250	32	25	CRFOS BH
12		220		20	105	300	100	9.5	900	70	270	31	40	CSRF
13		240		20	155	250	110	9.6	1000	100	94	40	55	CSO
14		260		30	150	170	130	10.0	1000	85	34	24	50	CRFS
15		280		35	190	190	150	10.2	1350	120	100	12	65	CSRFO
16		300		15	150	130	145	10.5	1700	90	48	9	50	CSRF
17		320		35	145	110	120	8.4	1200	80	42	6	45	RFSC BH
18		340		5	190	100	90	10.5	770	120	15	7	60	CRFS
19		360		5	160	140	100	10.9	1100	95	12	28	55	CRFO
20		380		5	170	110	110	11.2	900	120	15	5	80	CRFSO
21		400		90	250	315	105	25.5	1500	95	62	11	40	RFOCS
22		420		10	85	170	95	14.5	620	80	56	5	35	CSRF
23		440		5	140	130	100	12.4	1550	130	20	1	65	RFCS
24		460		115	160	140	90	10.3	1650	85	40	3	50	CSRF
25		480		60	100	150	125	11.5	3200	75	140	92	55	CSRF
26		500		65	135	250	150	14.0	3400	110	79	32	100	CRFS
35327		375520		40	130	200	105	13.0	2700	110	57	24	90	CCS

*(BH - B. HORIZON)

208

058337

PROJECT: Mt. BLACK COLE BROOK HILL GRID.	CO-ORDINATES LINE: 5371600 N. FROM: 375060 E. TO: 375100 E.	SAMPLED BY: M.G. B.M. DATE: 27/3/80	MATERIAL: SOIL DEPTH: C HORIZON	BOOK No. SHEET No. JOB No.	

SAMPLE NUMBER	CO-ORDINATES (N)/S	CO-ORDINATES (E)/W	Interval (+)/-	Pb P	Zn P	Cu P	CR P	Fe % P	Mn	As P	Sn P	Ni P	Co	DESCRIPTION
34833	371600	375060	20	135	195	2400	30	25.50	1050	5600	100	25	40	CO RF
34		080		30	75	650	130	11.70	5900	3200	46	35	65	CO RF PH
34835	371600	375100		20	75	900	85	10.50	2250	4400	54	35	50	CO RF PH

209

058338

28C, 7D

PROJECT: MT. BLACK

COLE BROOK HILL GRID

CO-ORDINATES
LINE: 5371600N.
FROM: 374560 E.
TO: 375040E

SAMPLED BY
MG: B.M.

DATE
27/3/80

MATERIAL
SOIL

DEPTH
C HORIZON

SAMPLE NUMBER	CO-ORDINATES E/S	CO-ORDINATES N/W	Interval +/-	Pb P	Zn P	Cu P	CRP	Fe %	Mn	As P	Sn P	P SNI	Co	DESCRIPTION
B34808	374160	375400	20	65	75	180	270	9.25	330	260	28	175	25C	RC BH
809		5800		45	75	255	300	8.50	1000	240	24	110	70C	RFS BH
810		6000		45	90	260	260	11.00	520	270	16	120	60C	AFI BH
811		6200		60	75	195	206	9.25	1150	225	12	90	55C	AFI BH
812		6400		60	85	205	220	9.50	1250	300	30	80	50C	RFD
813		6600		45	90	140	230	8.25	1600	195	20	80	45C	RFIOS
814		6800		45	120	165	200	8.25	740	140	32	100	40C	AFS
815		7000		70	130	145	155	8.25	1400	210	42	85	50C	RFD
816		7200		35	130	135	180	10.70	1750	240	40	105	65C	AF
817		7400		45	140	195	150	10.20	1100	250	75	120	50C	RFS
818		7600		45	105	195	175	8.50	880	300	44	85	40C	D BH
819		7800		65	130	275	155	9.00	2100	540	78	70	45C	AF
820		8000		35	105	175	155	8.00	2050	460	45	65	45C	AF
821		8200		30	80	135	135	7.25	1050	220	28	60	35C	BH
822		8400		30	50	155	130	8.75	700	350	12	55	30C	RFS
823		8600		40	50	180	155	9.75	880	530	10	80	35C	RF BH
824		6800		45	45	150	125	8.50	440	440	8	45	30C	RF BH
825		9000		35	45	345	130	10.00	370	670	14	60	30C	RE S
826		9200		35	45	285	130	10.50	550	1320	14	60	30C	RFO BH
827		9400		30	55	315	105	10.00	520	1906	14	30	25C	RE
828		9600		25	45	1550	115	10.20	360	3600	12	40	30C	RFO BH
829		9800		25	55	900	110	11.70	480	5000	44	25	30C	D BH
830	375000	0000		30	80	435	105	12.50	4700	1120	74	30	55C	D BH
831		0200		65	90	3600	80	15.20	2750	3400	280 CONT.	30	130C	D BH
				140	100	1550	35	8.25	4000	4000	250	10	15C	D BH

+ BH (B HORIZON)

211

058339

PROJECT: MT BLACK

COLEBROOK HILL GRID

CO-ORDINATES
LINE: 5371600N
FROM: 374160E
TO: 374540E

SAMPLED BY: B.M: P.H.

DATE: 26/5/80

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe P	Mn	Ag P	Co	Ni P	Sn P	As P	DESCRIPTION
36481	3716000	374160	20	60	105	65	11.5%	95	250	25	130	4	340	
82		180		140	115	120	14.0%	355	210	35	140	Poss Cont	60	C RFS
83		200		30	60	165	6.9%	240	290	30	75	Cont	160	C O
84		220		25	50	235	9.0%	185	200	25	55	Cont	260	C ORF
85		240		10	60	140	6.85%	185	215	20	50	Cont B Horizon	240	C ORFS
86		260		30	55	50	5.35%	90	130	30	240	Cont X	20	C S
87		280		20	60	160	9.0%	170	250	20	75	16	180	C ORF
88		300		20	60	110	11.5%	155	290	20	60	16	225	C ORF
89		320		20	60	85	9.0%	160	290	15	45	14	165	C AFS
90		340		15	35	80	9.5%	95	300	15	40	24	200	C OS
91		360		20	40	100	12.5%	130	285	20	45	22	245	C S
92		380		15	40	70	9.0%	150	310	15	40	30	155	C RFS
93		400		30	25	25	1.4%	70	75	10	5	N A Horizon	260	C O
94		420		65	60	150	10.0%	240	320	20	50	Cont B	490	C RFS
95		440		25	15	15	1.1%	85	190	5	5	42	88	C OS
96		460		70	170	115	7.5%	265	1600	25	80	Cont B/C Horizon	290	C RFO
97		480		70	350	145	10.0%	330	4000	55	250	Cont B Horizon	260	C OS
98		500		110	295	525	10.0%	400	1100	50	50	Cont B	540	C RFSO
99		520		85	380	240	9.0%	1200	4200	75	300	Cont B Horizon	240	C OS
36500	3716000	374540		115	600	510	23.0%	335	5400	190	745	Cont B	880	C RFSO

212

058340

PROJECT: MT. BLACK
COLEBROOK HILL GRID

CO-ORDINATES
LITHE: 5371400 N
FROM: 375320 E
TO: 375560 E

SAMPLED BY: M.G.
DATE: 29/5/80

MATERIAL: SOIL
DEPTH: CHORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb P	Zn P	Cu P	Fe %	Mn	Cu P	Co	Ni P	Sn P	As P	DESCRIPTION
36240	37140	37532	20	25	70	105	11.0%	750	95	35	65	2	21	RFSOC
41		3340		190	85	80	10.5%	505	55	30	50	X	34	CGAS
42		3360		45	115	95	13.0%	1350	90	45	100	X	22	RFCS
43		3380		25	75	80	13.0%	1600	100	55	90	2	11	CRFS
44		4000		20	115	70	13.0%	1150	80	50	90	5	14	RFSC
45		4200		25	105	80	12.0%	1600	85	65	95	10	15	CSRF
46		4400		20	110	80	12.0%	1850	90	55	100	6	12	RFC
47		4600		30	120	95	12.5%	2850	110	70	105	10	24	CRF
48		4800		30	95	90	12.0%	1850	90	50	70	4	18	RFSC
49		5000		40	60	60	14.0%	345	135	25	65	6	30	CRFS
50		5200		30	90	145	12.5%	1350	70	40	90	8	58	RFC
51		5400		50	200	125	10.0%	1200	80	50	110	5	46	RFS
36252	37140	37556	0	170	220	145	12.5%	9050	140	70	150	26	52	RFSC

058341

213

PROJECT: MT. BLACK
COLEBROOK HILL GRID

CO-ORDINATES
LINE: 5371400N
FROM: 374820E
TO: 375300E

SAMPLED BY: M.G. M.M. ES
DATE: 29/5/80

MATERIAL: SOIL
DEPTH: CHORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	INTERVAL (+)/-	Pb P	Zn P	Mo Cu P	Fe P	Mn	Cr P	Co	Ni P	Sn P	Ag P	DESCRIPTION
36215	371400	374820	20	5	35	195	10.5%	250	400	30	110	12	170	CSRF
216		8440		10	55	320	10.5%	370	220	40	125	16	190	RFSOC
217		8660		20	50	305	11.0%	790	190	40	105	25	440	CRFS
218		8880		35	120	640	11.0%	525	180	35	105	26	540	RFSC
219		9100		20	70	670	11.0%	800	230	50	105	32	840	CRFS
220		9320		25	75	765	11.0%	1450	150	75	115	24	1550	CRFS
221		9540		30	80	510	11.5%	1500	190	50	100	40	640	CRFS
222		9760		30	75	255	10.0%	2200	130	50	95	26	600	CRFC
223		9980		30	110	315	12.0%	1900	125	60	105	10	340	CRF
224	375000			20	85	240	12.0%	720	90	45	115	18	HORIZON	RFSC
225		0220		5	120	90	12.0%	1150	95	65	120	16	420	CRFS
226		0440		20	80	115	10.0%	1350	95	35	65	18	HORIZON	CO
227		0660		35	60	125	10.0%	525	90	35	60	16	210	SFC
228		0880		25	100	75	10.0%	1150	90	45	65	8	720	RFSOC
229		1100		20	60	55	10.0%	560	90	30	45	8	360	CSRFO
230		1320		25	80	175	11.0%	1100	110	40	80	22	190	RFOC
231		1540		20	100	135	11.5%	3300	130	50	80	10	700	CRFS
232		1760		40	125	115	12.0%	1150	120	40	80	4	350	RFC
233		1980		35	70	90	13.0%	1800	200	35	110	6	240	CRFO
234		2200		25	70	80	10.0%	2400	85	40	50	5	640	RFSOC
235		2420		25	45	55	7.5%	1000	75	25	50	4	340	CSRFO
236		2640		20	50	95	10.5%	1200	90	30	50	3	310	SC
237		2860		30	140	155	11.0%	1350	70	60	80	8	150	CRFS
238		2880		50	90	75	12.0%	1050	85	40	65	6	120	RFSC
36239	371400	375300		35	95	105	9.5%	1500	90	40	60	2	220	CRFS

058342

214

PROJECT: MT BLACK
COLEBROOK HILL GRID

CO-ORDINATES
LINE: 5371400 N
FROM: 374660 E
TO: 374800 E

SAMPLED BY: M.G.

DATE: 23/5/80

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES (N/S)	CO-ORDINATES (E/W)	Interval (+/-)	Pb P	Zn P	Cu P	Fe P	Mn	Cu P	Co	Ni P	Sn P	As P	DESCRIPTION
36924	371400	374660	20	x	60	110	100%	140	110	15	80	2	12	SCRF
25		374680		x	55	95	105%	145	160	15	70	8	32	CS
26		374700		x	130	100	135%	170	120	40	120	CONT	32	CRF
27		374720		x	90	160	100%	560	125	35	110	6	40	CSRF
28		374740		x	90	105	100%	605	100	30	115	4	60	CSRF
29		374760		x	50	190	100%	300	120	20	70	18	100	C
30		374780		x	60	255	90%	340	70	25	105	6	92	CRF
36931	371400	374800		25	45	130	77%	225	170	25	80	CONT	112	CSO

215

058343

PROJECT: MT. BLACK
COLEBROOK HILL

CO-ORDINATES
LINE: 5371400N
FROM: 374160E
TO: 374640E

SAMPLED BY: M.G.
DATE: 23/5/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe P	Mn	Cu V	Co	Ni P	Sn P	As P	DESCRIPTION
36699	37140	0374160	20	X	40	90	7.2%	175	205	20	65	4	26	CRF
36700		180		X	45	80	6.3%	150	205	20	90	X	22	CSRF
36901		200		X	36	45	5.6%	145	120	10	80	X	30	CSRF
02		220		5	35	55	7.6%	145	165	15	80	X	22	CRFS
03		240		5	55	75	7.5%	215	215	20	100	X	28	CORF
04		260		X	75	70	8.0%	400	195	30	130	X	42	CRFS
05		280		10	115	150	10.0%	280	2200	55	445	9	96	CSRF
06		300		10	100	65	6.7%	340	1800	35	170	5	54	CRFS
07		320		10	140	35	4.8%	335	7500	45	230	14	66	CRFS
08		340		5	125	20	4.25%	1250	4850	75	320	10	18	CRFS
09		360		10	145	15	4.9%	1250	7000	75	340	8	34	CSRFO
10		380		5	155	20	5.35%	1000	8000	90	310	4	38	CRFS
11		400		X	250	75	6.0%	390	150	60	590	5	86	CSRFO
12		420		40	260	130	7.3%	2200	4000	235	900	48	205	CRFS
13		440		65	170	30	7.2%	4500	8000	370	570	1	R HORIZON	CRFOS
14		460		15	180	40	6.7%	440	1.0%	65	500	16	42	CSRF
15		480		10	330	20	1.9.0%	5600	2.4%	375	1650	8	HORIZON	CORFS
16		500		5	210	70	1.8.0%	5400	8000	345	1600	3	15	CRFS
17		520		15	220	35	1.2.5%	6100	1.05%	165	1300	4	124	CORF
18		540		5	130	150	1.2.5%	2100	5300	75	600	25	47	CRFS
19		560		X	55	185	1.0.5%	165	850	20	110	16	400	CRFSO
20		580		5	50	70	8.2%	180	150	20	65	8	48	CSRF
21		600		5	45	55	5.7%	105	120	10	50	X	20	CS
22		620		5	60	60	9.5%	220	80	15	70	44	34	CRF
36923	37140	0374640		5	100	75	10.5%	210	285	20	90	16	38	CSO

058344

216

PROJECT: Mt. BLACK
COLE BROOK HILL GRID

CO-ORDINATES
LINE: 5371200N
FROM: 375620E
TO: 375120E

SAMPLED BY: M.G.
DATE: 26/5/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb P	Zn P	Cu P	Fe P	Mn	Co P	Co	Ni P	Sn P	As P	DESCRIPTION
36253	371200	375620	20	95	70	70	1.50%	1450	1350	20	65	4	42	C A F
54		600		30	120	125	1.35%	2500	2600	70	125	x	10	R F C
55		580		55	190	130	1.20%	1350	1900	50	150	x	36	C R F
56		560		30	95	120	1.25%	1000	3900	40	185	4	50	R F C
57		540		15	90	65	1.20%	2150	1050	50	60	6	17	C R F S
58		520		25	90	70	1.10%	2900	1450	50	50	x	8	R F C
59		500		25	170	105	1.20%	2400	1100	50	105	x	7	C R F S
60		480		35	80	100	1.25%	3700	1600	65	90	x	14	R F S C
61		460		15	85	70	1.20%	3850	1500	55	60	x	9	C R F S
62		440		20	100	65	1.35%	2300	1150	55	90	2	9	R F S C
63		420		65	135	175	1.15%	2200	950	70	65	x	46	C R F S
64		400		15	75	55	1.20%	1150	850	55	80	B HORIZON	5	R F O C
65		380		15	90	50	5.0%	1000	1100	45	70	x	4	C R F
66		360		30	70	45	1.15%	4550	1150	35	50	B HORIZON	14	R F O C
67		340		15	80	50	1.30%	5300	1150	35	55	x	6	C R F S
68		320		10	90	50	1.30%	4650	1250	35	70	x	4	R F S C
69		300		15	100	55	1.00%	1050	1000	30	50	x	4	C R F S
70		280		5	60	40	1.00%	5650	900	25	30	1	6	R F C
71		260		45	190	85	1.35%	3900	950	80	60	x	6	C R F S
72		240		35	130	80	1.35%	3700	1000	50	45	x	7	C R F
73		220		135	205	110	1.60%	3400	950	285	100	CONT x	8	C S
74		200		75	125	60	1.25%	1250	1000	50	50	7	57	R F S C
75		180		140	235	95	2.00%	1750	950	170	70	x	8	C R F S
76		160		90	140	65	1.50%	7200	1050	45	50	3	30	R F S C
36253	371200	375620	20	70	105	85	1.25%	1000	1100	40	55	x	17	C R F S
54		600		50	130	85	1.20%	7350	800	35	90	1	18	R F C

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

058345

217

PROJECT: Mt. BLACK COLEBROOK HILL GRID

CO-ORDINATES LINE: 5371200N FROM: 375100E TO: 374620E

SAMPLED BY: M.G.

DATE: 23/5/80

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK Nº

SHEET Nº

JOB Nº

SAMPLE NUMBER	CO-ORDINATES (N/S)	CO-ORDINATES (E/W)	Interval	Pb P	Zn P	Cu P	Fe %	Mn	Cr P	Co	Ni P	Sb P	As P	DESCRIPTION
36650	37120	37510	20	30	60	45	1.35%	8400	180	90	65	52	100	CRFS
51		0800		135	70	105	1.15%	3950	220	100	80	NS	104	CO
52		0600		60	85	130	1.35%	2300	160	65	115	14	150	CRFS
53		0400		55	90	205	1.80%	2600	210	90	105	18	260	CORFS
54		0200		30	65	135	1.10%	3800	130	55	70	23	94	KFCS
55		37500		55	70	125	1.05%	1300	155	50	105	10	112	CSRFO
56		37490		35	60	120	1.10%	800	195	35	100	8	70	CSKF
57		4600		65	100	140	1.25%	1500	145	50	95	6	80	CRFS
58		4400		50	155	165	1.20%	1400	120	50	115	16	104	CRF
59		4200		35	165	115	1.20%	2000	110	65	125	22	58	CRF
60		4000		25	55	215	1.45%	1100	50	90	100	2	40	RFO
61		3880		40	75	160	1.35%	590	130	35	85	12	140	CRF
62		3860		60	65	95	1.15%	305	105	20	60	16	60	CRF
63		3840		25	70	115	1.10%	575	115	30	60	30	68	CRFS
64		3820		30	95	135	1.05%	2600	100	45	80	16	70	CRF
65		3800		20	65	105	1.05%	380	130	25	70	9	62	CRFSO
66		3780		35	90	150	1.00%	2700	95	35	65	8	86	CRF
67		3760		20	75	110	0.95%	265	110	25	120	20	42	CRFSO
68		3740		15	60	75	0.85%	380	80	25	65	12	11	CRFS
69		3720		200	225	60	0.65%	200	55	20	45	5	28	COSRF
70		3700		55	270	100	1.05%	150	35	25	80	3	36	CRF
71		3660		55	115	95	0.95%	195	85	15	65	12	53	CRFSO
72		3660		20	70	50	0.63%	240	75	20	40	6	38	CAFS
73		3640		25	100	55	0.75%	200	75	20	60	4	27	COS
74	37120	37460	20	35	150	50	0.75%	215	105	20	65	4	22	CRFS

058346

218

PROJECT: MT. BLACK
COLEBROOK HILL GRID

CO-ORDINATES
LINE: 5371200N
FROM: 374600E
TO: 374140E

SAMPLED BY: M.G.
DATE: 23/5/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval ÷10	Pb P	Zn P	Cu P	Fe P	Mn	Cu P	Co	Ni P	Sb P	As P	DESCRIPTION
36675	71200	37460	20	50	155	80	10.0%	190	100	25	90		4	42 CRF
76				55	150	45	5.25%	215	85	15	55		5	24 CRF
77		5600		55	120	150	8.1%	245	175	25	200		3	142 CKFS
78		5440		45	180	155	10.5%	1600	80	90	145		4	62 CRFS
79		5280		25	120	160	11.0%	435	170	40	210		4	65 CKFS
80		5000		35	105	140	11.5%	665	285	40	160		3	128 CKFS
81		4880		x	45	10	5.7%	950	1500	25	110		2	62 RFCS
82		4660		x	60	5	6.75	70	3000	15	50		8	4 CSRF
83		4440		x	80	5	3.6%	105	4500	30	215		3	17 C
84		4220		40	185	15	10.0%	2900	7200	300	555		2	26 CSRF
85		4000		15	195	15	10.5%	120	7300	510	1550		x	24 CRFS
86		3810		x	180	10	4.3%	1300	6000	130	500		6	12 CKFS
87		3610		165	250	35	6.9%	4000	8000	220	1000		16	46 CRFS
88		3440		45	185	35	11.5%	1250	6800	1180	950		6	22 CSRF
89		3220		5	55	40	7.6%	160	520	25	130		4	30 CRFO
90		3000		10	35	40	6.1%	105	520	20	85		2	36 CSRF
91		2810		x	35	40	5.8%	85	280	10	90		x	32 COS
92		2610		x	65	55	7.45%	130	255	10	140		4	36 CSRF
93		2440		x	40	55	7.15%	90	215	10	90		6	22 C
94		2220		x	35	55	7.2%	65	180	10	80		6	23 CSRF
95		2000		x	30	55	5.35%	65	145	15	75		7	21 CSRFO
96		1810		x	35	45	5.8%	65	135	10	70		2	20 CRF
97		1600		x	30	50	5.25%	70	155	10	75		3	27 CRFO
36698	71200	37410		x	45	65	6.6%	155	155	15	75		x	32 CSRF

058347

219

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK DOBSONS CREEK GRID	LINE: 2800 S FROM: 3600 E TO: 1200 E	P.H. B.M DATE: 2/5/80	SOIL DEPTH: C HORIZON	SHEET Nº JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/(S)	CO-ORDINATES E/W	INTERVAL +/(-)	CU ρ	PB ρ	ZN ρ	FE	MN		DESCRIPTION
37801	2800	3600	100	10	35	130	238	200	CONT	CRFS
02		35		10	60	95	179	250		CRF
03		34		10	50	30	129	160		CRFO
04		33		5	30	20	2200	105		CRFS
05		32		X	25	20	4500	70		CRFS
06		31		X	100	15	2300	200		CRFS
07		30		5	65	45	3700	230	CONT	CRFS
08		29		5	50	10	3600	120		CRFS
09		28		10	45	25	5200	180		CSRF
10		27		15	40	45	3300	145		SCRF
11		26		10	25	25	4600	150	CONT	SRFC
12		25		10	35	30	3400	120	CONT	CSRF
37813	2800	2400		5	30	15	2100	45	CONT	CSRF
14		23		5	40	15	2500	45		CRFSC
15		22		10	40	20	3200	55		CSRF
16		21		5	20	20	3800	65		CSRFO
17		20		5	25	20	3300	55		CS
18		19		5	30	20	2900	50	CONT	CSRF
19		18		X	15	15	1500	40		CSRF
20		17		X	10	10	1150	35		CRFS
21		16		5	15	15	1700	50		CRFS
22		15		5	40	20	1500	155	B HORIZON	CORF
23		14		5	50	45	1400	60	B HORIZON	CO
24		13		5	460	45	1250	25	CONT	CRFS
37825	2800	1200		5	130	20	1000	20		CSRFO

058348

220

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT BLACK DOBSONS CREEK GRID	LINE: 2800S FROM: 1100E TO: 00E	P.H. BM.	SOIL	SHEET Nº
		DATE: 2/5/80	DEPTH: CHORIZON	JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL N/E	CU P	PB P	ZN P	FE	MN		DESCRIPTION
37826	2800	1100	100	5	90	15	1500	35	B HORIZON	CORE
27		10		5	70	30	1400	30		RFCS
28		09		15	150	40	1700	30	B HORIZON	CSRFO
29		08		10	160	40	1400	15	B HORIZON	CORE
30		07		5	80	40	1050	10	B HORIZON	COS
31		06		5	40	25	1100	10		CRFSO
32		05		X	30	10	850	10		CRFO
33		04		X	60	25	1150	10		CRFS
34		03		5	130	40	7000	80		CRFS
35		02		5	135	20	65[illegible]	40		CO
36		01		[illegible]	125	50	15%	95		CSRF
37837	2600	0000		10	180	40	11%	75		CRFS

058349

2221

PROJECT: MT BLACK DOBSONS CREEK

CO-ORDINATES LINE: 3200S FROM: 900E TO: 3000E

SAMPLED BY: ES BM

DATE: 30/5/80

MATERIAL: SOIC

DEPTH: C HORIZON

BOOK Nº

SHEET Nº

JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Increm. +/-	Pb ppm	Zn ppm	Cu ppm	Fe	Mn	DESCRIPTION
36501	3200	700	100	75	50	5	10.5%	85	RFSC
02		1000		60	15	5	1800	15	RFSC
03		1100		65	10	x	1700	20	RFSC
04		1200		35	10	5	1.4%	40	RFSC
05		1300		10	10	5	2300	30	RFSC
06		1400		15	15	45	2050	30	RFSC
07		1500		x	20	5	4400	60	RFSC
08		1600		5	15	5	3100	30	RFSC
09		1700		x	15	5	3150	40	RFSC
10		1800		x	15	5	4100	55	RFSC
11		1900		x	15	5	4000	60	RFSC
12		2000		5	10	15	3100	45	RFSC
13		2100		25	15	35	3150	420	RFSC
14		2200		35	15	10	3200	70	RFSC
15		2300		80	70	60	7800	185	CONTAM RFSC
16		2400		60	20	20	9550	345	RFSC
17		2500		15	10	20	3100	115	RFSC
18		2600		x	15	20	2950	140	RFSC
19		2700		25	20	20	4100	170	RFSC
20		2800		35	20	30	3950	190	RFSC
21		2900		80	35	20	7200	505	RFSC
36522		3000		200	20	50	1.75%	195	RFSC

222

058350

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT BLACK DOBSONS CREEK GRID	LINE: 3600S FROM: 2800E TO: 3600E	BM-ES-PH DATE: 10/5/80	SOIL DEPTH: C. HORIZON	SHEET Nº JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/(S)	CO-ORDINATES (E)/W	Interval (+)/-	CU ♀	PB ♀	ZN ♀	FE	MN	DESCRIPTION
37778	3600	2800	100	10	20	15	2100	120	CGRFO
79		2900		5	20	15	2100	130	CO
80		3000		10	20	20	2700	150	CSRF
81		3100		20	50	20	2500	150	CSRFO
82		3200		20	25	25	2800	200	CSRFO
83		3300		25	40	25	4100	380	CSRFO
84		3400		5	60	20	2100	110	CSRFO
85		3500		5	20	15	1000	25	CSRF
37786		3600		5	30	15	1500	50	CSRF

223

058351

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK DOBSONS CREEK GRID	LINE: 3600S	P.H. B.M	SOIL	SHEET Nº
	FROM: 00E	DATE: 2/5/80	DEPTH: CHORIZON	JOB Nº
	TO: 2400E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval O/m	Cu P	Pb P	P2N	Fe	Mn		DESCRIPTION
37838	3600	0000	100	5	15	25	3700	60		C
39		01		10	60	25	3000	60	BHORIZON	CRFO
40		02		5	30	25	3400	65		CRFS
41		03		5	20	15	2500	45		CRFO
42		04		5	40	15	2500	50		CRF
43		05		5	40	40	3700	80		CRF
44		06		5	70	40	4300	70		CRF
45		07		5	50	20	2000	35		CRFS
46		08		5	15	15	2000	40	BHORIZON	CS
47		09		5	15	20	2400	45	BHORIZON	CRFO
37848		1000		5	5	10	1450	20		CS
49		11		5	5	15	2300	70		C
50		12		x	5	10	950	10		CSORF
51		13		5	5	10	1350	15		CRFS
52		14		5	5	10	1700	20		CRFSO
53		15		5	5	15	2000	30		CRFS
54		16		5	5	35	20%	15%		CRF
55		17		5	5	20	3800	110		CRF
56		18		5	5	10	2100	40		CRF
57		19		5	5	10	2250	40		CRFS
58		20		5	5	25	3800	75		CRF
59		21		10	5	25	3400	65		CRFS
60		22		5	5	10	2300	40		CSRF
61		23		5	20	15	2400	55	BHORIZON	CO
37862	3600	2400		5	30	10	2400	45		CSRF

224

058352

PROJECT: MT. BLACK
DOBSON'S CREEK

CO-ORDINATES
LINE: 4000S
FROM: 400E
TO: 2000E

SAMPLED BY: ES. BM
DATE: 30/5/80

MATERIAL: SOIC
DEPTH: C. HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb P	Zn P	CuP	Fe	Mn	DESCRIPTION
36523	4000	4100		X	10	20	21500	25	RFSC
24		4000		X	10	20	38500	35	RFSC
25		3900		X	5	20	19600	15	RFSC
26		3800		X	10	20	20500	20	RFSC
27		3700		X	10	20	17000	25	RFSC
28		3600		20	10	20	20000	55	RFSC
29		3500		20	20	20	41500	115	RFSC
30		3400		X	20	20	29600	85	RFSC
31		3300		X	10	20	27000	80	RFSC
32		3200		20	20	20	36500	105	RFSC
33		3100		20	20	20	37000	95	RFSC
34		3000		30	10	20	23500	95	RFSC
35		2900		130	10	20	18000	90	RFSC
36		2800		30	20	20	37500	160	RFSC
37		2700		60	30	20	35500	105	RFSC
38		2600		30	20	20	25000	45	RFSC
39		2500		15	20	20	1.15%	395	RFSC
40		2400		5	35	10	59500	45	RFSC
41		2300		10	10	20	32000	40	RFSC
42		2200		10	20	20	36000	105	RFSC
43		2100		15	10	20	32000	40	RFSC
36544		2000		10	20	20	46500	70	RFSC

PEAT/SWAMP

B HORIZON

CREEK CONTAM

CREEK CONTAM

225

058353

PROJECT: MT BLACK
DOBSONS CREEK

CO-ORDINATES
LINE: 4000 S
FROM: 00 E
TO: 1900 E

SAMPLED BY: P.H - M.M.
DATE: 30/5/80

MATERIAL: SOIL
DEPTH: CHORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Traverse +/-	Pb ppm	Zn ppm	Cu ppm	Fe	Mn	DESCRIPTION
36365	4000	0000	100S	30	20	5	5100	70	RFCS
366		01		35	20	30	6000	70	SCO
367		02		25	15	10	3100	50	CRFS
368		03		40	15	5	3150	45	CO
369		04		15	10	5	2500	45	CORF
370		05		15	10	5	3300	60	CRF
371		06		15	10	x	3200	55	CRFS
372		07		50	15	x	4300	50	RFSC
373		08		380	25	5	9350	60	CRFS
374		09		20	15	5	2950	70	COS
375		10		20	10	x	2000	25	CRFSO
376		11		25	15	x	3050	30	RFCS
377		12		120	20	x	5500	2600	CSRF
378		13		50	15	x	2650	60	CRFS
379		14		15	20	x	4400	120	RFSC
380		15		x	15	x	1900	20	CRFO
381		16		25	20	5	3750	25	CRFSO
382		17		5	10	x	2500	20	CRFSO
383		18		x	20	5	6000	60	RFCS
36384	4000	1900		5	20	5	1110	75	RFCS

CONT

226

058354

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt BLACK. DOBSONS CREEK	LINE: 4400S FROM: 3700E TO: 1300E	BM. ESPH DATE: 10/5/80	SOIL DEPTH: C HORIZON	SHEET Nº JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/(S)	CO-ORDINATES (E)/W	Interval +/(−)	CU Q	PB Q	ZN Q	F.E.	M.N.		DESCRIPTION
37740		3700	100	20	30	15	2000	105		CSRF
41		3600		5	15	15	2000	70		CSRFO
42		3500		10	30	25	3600	15		CSRFO
43		3400		20	45	20	2400	100		CSO
44		3300		5	45	20	2500	80		CSRFO
45		3200		5	40	20	2900	40		CSRFO
46		3100		10	50	25	2800	110		CSRFO
47		3000		5	60	15	3200	540	CREEK CONTAM	CSO
48		2900		45	50	20	2100	45		CSRFO
49		2800		10	30	15	2400	45		CSO
50		2700		5	35	20	2300	35		CSRFO
51		2600		X	20	20	2900	40		CS
52		2500		5	25	20	3300	35		CSRF
53		2400		10	50	20	3500	35	CREEK CONTAM	CSRF
54		2300		5	40	25	4900	1000		CSRF
55		2200		5	20	10	2000	15		CSRF
56		2100		10	20	25	3900	55		CSRF
57		2000		5	20	20	3000	40		CSRF
58		1900		X	40	10	1500	15		CSRF
59		1800		15	60	20	1250	10		CSO
60		1700		X	40	10	1300	10		CSRF
61		1600		20	10	20	2000	20		CSRF
62		1500		X	15	15	2000	20		CSRF
63		1400		5	5	15	2200	25		CO
37764		1300		X	15	10	1900	25	CREEK CONTAM	CSRF

227

058355

PROJECT: MT. BLACK
DOBSON'S CREEK GRID

CO-ORDINATES
LINE: 4400S
FROM: 1200 E
TO: 00 E

SAMPLED BY: BM. ES. P.H.
DATE: 10/5/80

MATERIAL: SOIL
DEPTH: C. HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N(S)	CO-ORDINATES E/W	INTERVAL +(-)	CU PPM	PB PPM	ZN PPM	FE	MN	DESCRIPTION
37765	4400	1200	100	X	25	15	31 00	35	C O
66		1100		20	120	35	24 00	40	C S R F O
67		1000		5	20	25	23 00	30	C S O
68		900		40	100	30	40 00	65	C S R F
69		800		5	80	25	22 00	40	C S R F
70		700		20	70	70	29 00	55	C S R F
71		600		15	170	45	32 00	50	C S R F
72		500		10	50	10	23 00	45	C S R F
73		400		10	15	10	37 00	55	C S R F
74		300		5	5	15	28 00	55	C S R F O
75		200		10	5	20	42 00	50	C S
76		100		5	5	10	27 00	55	C S R F
37777		00		5	5	20	30 00	45	C S R F

228

058356

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK DOBSON'S CREEK	LINE: 4800S	P.H. M.M.	SOIL	SHEET Nº
	FROM: 3200E	DATE: 30/5/80	DEPTH: C HORIZON	JOB Nº
	TO: 700E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe	Mn		DESCRIPTION
36339	4800	3200	100	35	20	X	4700	165		RFSC
40		31		X	15	5	4300	100		RFSC
41		30		X	20	X	5400	120		CRFS
42		29		5	25	5	1057	200		CRFS
43		28		5	10	X	3500	135		CRFS
44		27		30	30	25	6850	70	CONT	CSRF
45		26		5	10	15	3800	65		CRFS
46		25		5	20	15	5650	70		CRFS
47		2400		20	10	15	4000	50		CSRF
48		23		5	10	15	6750	65		RFSC
49		22		X	10	15	4100	35		RFCS
50		21		X	10	15	3700	30		CRFS
51		20		X	10	10	4950	30		CSRF
52		19		X	10	10	3250	25		CRFS
53		1800		5	10	10	1750	5		CSRF
54		17		X	10	10	3850	40		CSRF
55		16		X	10	15	3950	35		CSRF
56		15		X	5	15	2500	20		RFSC
57		14		X	10	10	2050	20		CRFO
58		13		X	10	10	2150	25		CRF
59		12		45	15	X	2200	70		CRFSO
60		11		50	15	5	3600	20		CRFS
61		1000		40	15	5	2300	30		CRFS
62		0900		25	15	5	3650	55		CSRF
36363	4800	0800		20	25	60	1500	20		CRFS
64		700								CSRF
				150	20	10	3450	45		

2209

058357

PROJECT: MT. BLACK
DOBSONS CREEK GRID

CO-ORDINATES
LINE: 5200S
FROM: 2500 E
TO: 3000 E

SAMPLED BY: BM. ES PH
DATE: 10.5.80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	E/W	Interval +/-	CU PPM	PB PPM	ZN PPM	FE %	MN PPM	DESCRIPTION
3774	5200	2500	100	5	25	10	2.60	50	CSRFO
375		2600		5	30	10	2.40	70	CSRO
376		2700		5	50	10	2.40	65	CSORF
377		2800		5	15	25	3.80	95	CSRF
378		2900		10	20	15	3.30	60	CSRF
3779		3000		10	15	20	7.00	145	CSRP

230

058358

PROJECT: MT. BLACK
DOBSONS CREEK GRID

CO-ORDINATES
LINE: 5200 S
FROM: 00E
TO: 2400E

SAMPLED BY: BM. ES. PH
DATE: 10/5/80

MATERIAL: SOIL
DEPTH: C. HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	+/-	CU P	PB P	ZN P	FE	MN	DESCRIPTION
37	5200	00	+	5	20	25	2400	35	CSRF
38		100		5	15	15	2900	40	CSRF
39		200		10	20	20	2600	35	CSRF
40		300		10	30	15	2700	50	CSRF
41		400		5	20	15	2900	50	CSRF
42		500		10	10	20	6400	100	CSRF
43		600		10	10	25	5600	80	CSRF
44		700		10	15	25	4100	50	CSRF
45		800		5	25	45	2400	35	CSRF
46		900		15	25	45	2600	30	CSRF
47		1000		10	35	35	2400	35	CSRF
48		1100		10	60	20	3800	30	CSRF
49		1200		5	30	20	2000	25	CSRF
50		1300		5	10	15	2200	30	CSRF
51		1400		10	30	15	2100	70	CSRF
52		1500		5	20	15	2900	30	CSRF
53		1600		5	20	15	2900	30	CSRF
54		1700		5	25	10	3000	30	CSRF
55		1800		5	15	10	3200	70	CSRF
56		1900		5	25	15	3400	55	CSRF
57		2000		10	35	20	3900	125	CSRF
58		2100		10	35	40	3100	140	CSRF
59		2200		20	45	20	3700	130	CSRF
60		2300		5	30	10	2200	70	CSRF
61		2400		5	30	10	2500	65	CSRF

EXCESS CONTAM

CONTAM

231

058359

PROJECT: MT BLACK
DOBSON'S CREEK GRID

CO-ORDINATES
LINE: 5600S
FROM: 2500E
TO: 800E

SAMPLED BY: M.G.
DATE: 29/5/80

MATERIAL: SOIL
DEPTH: CHORIZON

BOOK #
SHEET #
JOB #

SAMPLE NUMBER	N/S	E/W	Pb ppm	Zn ppm	Cu ppm	Fe	Mn	DESCRIPTION
36983	2500	2500	15	25	20	29000	120	OSKRF
84		24	35	20	20	50000	165	OCSKF
85		23	20	15	20	52500	175	CRFSO
86		22	30	20	20	65000	130	KFCSO
87		21	35	20	20	53500	225	CRFSO
88		20	30	15	20	43500	215	CSRFO
89		1900	15	10	15	38000	280	CRF S
90		18	20	50	20	56500	70	CSRF
91		17	5	20	15	65000	85	RFCS
92		16	15	15	15	44500	100	CQS
93		15	15	20	20	48000	85	RFCS
94		1400	15	20	15	40500	60	RFSC
95		13	15	20	15	41500	55	CRFSO
96		12	10	15	10	30000	40	CRFS
97		11	15	10	10	30000	40	CSRFO
98		10	15	20	20	113%	30	C
99		9	15	10	10	19500	20	CRFSO
37000		800	30	20	20	34000	35	RFSCO
								CRFSO
36301	2500	700	5	20	15	55000	55	

232

058360

PROJECT: MT. BLACK
DOBSONS CREEK GRID

CO-ORDINATES
LINE: 6000S
FROM: 2500E
TO: 3600E

SAMPLED BY: E.S. M.G.
DATE: 16/5/80

MATERIAL: SOIL
DEPTH: C. HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Mo P	Zn P	Cu P	Co	Fe	Mn	Sn	As	Cr	Ni	DESCRIPTION
36196	6000	2500	100	10	15	5	x	26500	110	x	6	5	x	QSRFO
197		2600		15	20	10	x	25500	115	x	5	20	x	CSRFO
198		2700		5	20	5	x	27500	80	1	4	5	x	CSRF
199		2800		50	25	15	x	26500	195	1	6	10	x	CSRFO Blue
36200		2900		5	15	5	x	23000	140	1	4	10	x	RFSC
36201		3000		25	15	5	x	30000	205	x	2	10	x	RFSCO
202		3100		15	20	15	x	43500	170	2	8	60	x	RFSCO
203		3200		20	25	5	x	42000	165	2	2	10	x	RFSOL
204		3300		5	15	5	x	31500	165	3	2	10	x	RFSC
205		3400		x	15	5	x	35000	50	1	2	10	x	RFSCO
206		3500		x	15	10	x	42000	80	1	x	10	x	RFSC
36207		3600		5	20	5	x	41000	100	1	4	5	x	RFSC
208				20	15	5	x	31000	65	x	2	10	x	RFSC Cream

233

058361

PROJECT: MT. BLACK DOBSONS CREEK

CO-ORDINATES LINE: 6000S FROM: OC N TO: 240C E

SAMPLED BY: ES. MG

DATE: 16/5/80

MATERIAL: SOIC

DEPTH: C-HORIZON

BOOK Nº

SHEET Nº

JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Co ppm	Fe %	Mn ppm	Sn ppm	As ppm	Cr ppm	Ni ppm	DESCRIPTION
36171	6000	000	100	65	105	10	5	1.20%	130	1	5	x	15	CSRF
172		100		30	25	5	x	2400	30	x	4	x	x	RFSC
173		200		250	30	5	x	2600	40	x	6	x	x	CRFS C
174		300		10	15	5	x	3600	40	x	4	x	x	CSRF
175		400		10	15	5	x	3000	45	1	3	x	x	CSRF
176		500		15	15	5	x	2600	20	1	3	x	x	CSRF
177		600		10	10	x	x	1500	15	1	x	x	x	CSRFO
178		700		10	25	30	x	4200	50	1	2	x	x	CSRFO Bur.
179		800		10	30	10	x	2400	25	2	2	x	x	CSRFO
180		900		10	10	10	x	4350	15	x	4	5	x	CRF
181		1000		25	25	10	x	1.10%	30	2	6	10	x	CSRF
182		1100		15	15	5	x	2900	25	x	3	x	x	CSRF
183		1200		25	15	5	x	2600	20	x	4	x	x	CSRFO
184		1300		20	15	x	x	2450	35	1	6	x	x	CSRF
185		1400		15	15	5	x	2600	40	x	16	x	x	CSRFO
186		1500		40	25	10	x	4250	55	1	4	10	x	CSRFO
187		1600		10	15	5	x	2750	35	1	6	5	x	CSRFO
188		1700		25	20	5	x	3200	40	x	3	x	x	CSRF
189		1800		20	15	5	x	2450	30	x	2	x	x	CSRF
190		1900		10	15	5	x	2550	40	x	5	x	x	CSFS
191		2000		15	25	5	x	3400	30	1	8	x	x	CSRF
192		2100		5	15	5	x	2700	35	1	4	x	x	CSRF
193		2200		10	20	5	x	2400	30	1	2	5	x	CSRF
194		2300		5	15	5	x	2950	30	x	x	5	x	CSRFO
36195		2400		20	15	5	x	2150	70	1	x	5	x	CSRFO

234

058362

PROJECT: MT. BLACK
DOBSONS CREEK GRID.

CO-ORDINATES
LINE: 6400 S
FROM: 3100E
TO: 3800E 4200E

SAMPLED BY: MG.
DATE: 29/5/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval E/-	Pb ppm	Zn ppm	Cu ppm	Fe	Mn	DESCRIPTION
36327	6400	3100	100E	5	10	X	43500	65	CRFS
328		3200		20	10	X	29600	50	CRFSO
329		3300		30	10	X	33500	50	CO
330		3400		170	20	5	28000	50	CRFOS
331		3500		30	10	X	23000	35	CRFS
332		3600		40	15	X	27500	45	CRFS
333		3700		15	10	X	34000	60	CRFO
334		3800		190	20	X	28000	45	RFCSO
335		3900		60	20	5	31500	45	CO
336		4000		35	15	X	29500	10	CRFS
337		4100		20	10	X	36500	80	COSRF
36338	6400	4200		10	10	X	28500	70	RFCS

058363

235

PROJECT: MT. BLACK
DOBSON'S CREEK GRID

CO-ORDINATES
LINE: 6400S
FROM: 600E
TO: 3000E

SAMPLED BY: M.G.
DATE: 29/5/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N(S)	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Fe	Mn	DESCRIPTION
36302	6400	0600	100'	15	15	15	4650	35	CRFS
03		700		20	15	15	3300	35	CRFSO
04		800		90	20	20	3150	40	CRFS
05		900		60	20	20	1.2%	25	CRFS
06		1000		60	50	25	3.6%	65	C
07		1100		55	10	15	3300	15	CORFS
08		1200		45	10	15	2800	15	CRFSO
09		1300		110	10	25	3250	15	CRFSC
10		1400		30	10	15	3500	40	CRFSC
11		1500		10	10	15	6550	90	CC
12		1600		40	20	15	6400	40	CRF
13		1700		30	15	20	2350	30	CRS
14		1800		60	20	20	3800	65	CRF
15		1900		20	10	20	2950	35	CRFSO
16		2000		45	20	20	4600	60	CRFS
17		2100		10	10	15	3050	35	CRFS
18		2200		20	10	20	4150	40	CORF
19		2300		30	25	10	4100	55	CRFSO
20		2400		70	10	10	3450	40	CRFSO
21		2500		60	15	15	1.95%	1100	CRFSO
22		2600		25	10	x	4000	90	CC
23		2700		10	10	x	2950	145	CSO
24		2800		10	15	5	4650	150	RFCSO
25		2900		35	20	5	4150	80	CRFSO
36326	6400	3000		10	10	5	3650	85	RFCS

236

058364

PROJECT: Mt. BLACK
DOBSONS CREEK GRID

CO-ORDINATES
LINE: 6800 S
FROM: 4200E
TO: 1800E

SAMPLED BY: BM.
DATE: 5/5/80

MATERIAL: SOIL
DEPTH: C HORZION

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu P	Pb P	Zn P	Fe	Mn	DESCRIPTION
37866	6800	4200	100	10	90	65	1.8%	175	CONT B HORZION CRFS
67		4100		5	90	25	2200	30	COS
68		4000		5	260	60	2700	40	CRFS
69		3900		5	15	30	4600	50	REFS
70		4800		5	15	10	1800	25	2RFS
71		7000		5	10	15	2400	30	CSRF
72		6900		10	70	20	1900	25	CSRF
73		5000		5	40	10	1500	20	CSORF
74		4000		X	25	10	1600	15	COS
75		3000		10	90	50	2200	20	CRFS
76		2000		X	130	5	1600	20	CQS
77		1000		5	110	10	1600	20	CRFSO
78		2000		10	165	10	2500	40	CONT CORF
79		9000		5	50	5	1150	35	CONT CRFOS
80		8000		5	30	10	2050	65	CSRFU
81		7000		5	50	5	3050	105	CONT CRFS
82		6000		5	70	X	1400	20	CONT COS
83		5000		5	170	5	1450	15	CRFS
84		4000		5	35	20	2350	35	CRFS
85		3000		X	25	10	2650	40	CONT CRFS
86		2000		X	80	30	22%	90	E
87		1000		5	215	20	4.2%	95	CS
88		1000		X	80	20	2.5%	75	CRFS
89		9000		X	40	15	1.4%	60	CONT CRFS
37890		1800		X	65	15	1.3%	65	CONT CS

237

058365

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK	LINE: 6800S	BM	SOIL	SHEET Nº
DOBSONS CREEK GRID	FROM: 1700E	DATE 5/5/80	DEPTH CHORZION	JOB Nº
	TO: 00E			

SAMPLE NUMBER	CO-ORDINATES N/(S)	CO-ORDINATES (E)/W	Interval +/(-) Ft	Cu P	Pb P	Zn P	Fe	Mn		DESCRIPTION
37891	6800	1700	100	x	60	10	10%	50		CSO
92		1600		x	80	10	2300	20	CONT	COS
93		1500		x	75	10	2250	25		CRFS
94		1400		x	85	10	1650	10		CRFSO
95		1300		x	70	5	1750	10		CRFS
96		1200		5	90	x	2350	15		CO
97		1100		x	80	10	2000	10	CONT	CRFS
98		1000		5	100	25	28%	30		CO
99		900		5	75	x	1600	20		CSO
37900	6800	800		x	95	10	1750	25		CRFSO
37701	6800	700		90	40	25	4200	60		CRFSO
02		600		x	20	20	2400	30	CONT	CSO
03		500		5	40	25	2400	35		CRFS
04		400		x	40	30	2200	25		COS
05		300		5	30	30	3600	55		CRFS
06		200		5	35	65	5200	65		CSRF
07		100		5	30	60	16%	70		CSRF
37708	6800	00		5	45	40	2500	30		CSRF

238

058366

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK DOBSONS CREEK GRID	LINE: 7200S FROM: 3300E TO: 3900E	M. M. P.H. ES	SOIL	SHEET Nº
		DATE: 27/5/80	DEPTH: C HORIZON	JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval G/-	Pb P	Zn P	Cu P	Fe	Mn	DESCRIPTION
36976	7200	3300	100	225	60	30	425%	105	CRFS
77		34		260	60	40	46%	135	CRF
78		35		250	20	30	8000	45	CRF
79		36		50	20	20	115%	45	CRFS
80		37		70	10	20	2450	25	CRFO
81		38		170	15	20	3600	30	B HORIZON CORF
36982	7200	3900		165	30	20	3150	35	CRFS

239

058367

AREA: MT. BLACK DOBSONS CREEK GRID	CO-ORDINATES LINE: 7200S FROM: 800E TO: 3200E	SAMPLED BY: M.M. P.H. E.S. DATE: 27/5/80	MATERIAL: SOIL DEPTH: C HORIZON	BOOK Nº SHEET Nº JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	E/W	Interval +/-	Pb P	Zn P	Cu P	Fe	Mn	DESCRIPTION
3695 1	7200	600	100	30	20	20	3750	20	C R F S O
5 2		9		30	20	20	2600	20	C O
5 3		10		40	15	20	2350	15	C R F S
5 4		11		115	90	25	1.75%	625	C S O
5 5		12		60	30	20	1.4%	55	C cont
5 6		13		40	15	20	2800	15	C O S R F
5 7		14		15	20	20	4450	35	R F C S
5 8		15		40	15	20	3400	20	C O R F S
5 9		16		35	10	20	4160	35	R F S C
6 0		17		10	10	20	2650	25	C O S R F
6 1		18		70	20	20	3150	40	C R F S
6 2		19		25	10	20	3500	40	C S R F
6 3		20		25	10	20	2250	30	C O
6 4		21		25	20	20	3900	40	C S R F
6 5		22		85	50	20	1.85%	2250	C cont R F
6 6		23		50	10	20	2400	15	C O
6 7		24		45	10	20	1.1%	55	C R F
6 8		25		50	20	20	9000	35	C R F S
6 9		26		30	10	30	2250	20	C
7 0		27		50	40	20	4.2%	1000	C R F
7 1		28		80	20	30	3800	30	C S R F
7 2		29		80	25	20	4650	70	C R F S O
7 3		30		40	15	20	2450	40	C R F S
7 4		31		170	25	20	1.8%	35	C O R F
3697 5	7200	3200		385	40	25	3.25%	55	

240

058368

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK DOBSONS CREEK GRID	LINE: 7600S FROM: 4500E TO: 3200E	B.M DATE 13/5/80	SOIL DEPTH C HORIZON	SHEET Nº JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/(S)	CO-ORDINATES (E)/W	INTERVAL +/(-)	Pb	Zn	Cu	Co.	Fe	Mn	Sn	As	Cr	Ni	DESCRIPTION
37787	7600	4500	100	150	30	x	5	2700	10	5	6	x	10	CSRF
88		4400		15	25	x	5	1750	20	4	3	x	10	CSRF
89		4300		5	35	x	5	1650	10	4	7	x	10	CSRF
90		4200		20	65	5	5	3350	45	4	4	x	10	CSRF
91		4100		5	15	x	1	1250	10	1	4	x	10	CSRF
92		4000		10	20	x	1	1200	10	1	4	x	10	CSRF
93		3900		10	20	x	1	1650	10	1	4	x	10	CRFS Bhorg
94		3800		10	15	x	1	1000	5	1	3	x	10	CSRFO
95		3700		20	15	x	1	1300	10	1	3	x	5	CRFSO
96		3600		60	45	40	5	4000	180	1	6	15	75	CO Bhorgon.
97		3500		120	75	20	10	3.10%	150	1	36	30	30	CRFOS [illegible]
98		3400		90	75	15	10	2.95%	130	1	19	35	45	CSRF
99		3300		95	75	30	15	3.45%	135	1	25	40	100	C
37800	7600	3200		170	85	35	5	4.20%	130	1	50	60	30	CO Bhorgon.

note due to a tagging error the above co-ord's have been changed (connected) [illegible] 13/5/80

241

058369

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK DOBSON'S CREEK GRID	LINE: 7600 S FROM: 3100 E TO: 700 E	B.M.	SOIL	SHEET Nº
		DATE: 13/5/80	DEPTH: C HORIZON	JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb P	Zn P	Cu P	Co	Fe	Mn	Sn	As	Cr	Ni	DESCRIPTION
36107	7600	3100	100	200	180	85	25	6.10%	300	4	54	45	50	C R F S Cont.
08		3000		60	70	45	15	5.00%	170	5	20	45	25	C O S Bhorgon
09		2900		10	35	10	5	1.65%	65	6	4	20	5	C Cordon
10		2800		15	40	10	5	2.65%	105	5	4	25	15	O R F S Cordon
11		2700		15	45	10	5	2.75%	110	4	6	25	15	C Cordon
12		2600		15	40	15	5	2.85%	95	4	5	35	10	O R F S C Cordon
13		2500		90	60	25	5	2.90%	100	7	25	15	10	C R F S Bhorgon
14		2400		65	35	10	x	5800	30	4	12	15	x	C R F S C
15		2300		75	25	5	x	5650	20	10	11	5	x	R F S C
16		2200		210	95	10	x	4.00%	50	2	44	x	x	R F S C
17		2100		60	20	x	x	2150	20	5	4	x	x	S R F C O
~~18~~					no Sample taken									
19		2000		100	30	50	x	3300	45	12	8	x	5	C R F S O
20		19		25	40	5	NA	2100	10	NA	NA	NA	NA	O C S Bhorgon
21		18		15	65	5	x	2200	45	20	3	x	x	R F S C
22		17		40	30	5	x	2150	10	40	10	x	x	C R F S
23		16		160	40	x	x	1650	20	2	10	x	x	C R F S
24		15		30	15	x	x	800	15	2	6	x	5	C R F
25		14		130	30	5	x	1.80%	20	1	26	15	10	S C Cordon
26		13		45	20	x	x	4150	10	4	9	10	10	C S R F O
27		12		25	15	x	x	1550	10	x	16	15	10	C S O
28		11		25	20	x	x	1100	10	x	2	5	10	C S R F O
29		10		20	25	x	x	950	35	x	4	5	5	C S R F O
30		09		30	55	x	x	1.30%	25	x	10	x	10	C R F
36131	7600	0800		x	20	x	5	2650	25	1	4	10	5	R F S C

242

058370

PROJECT: Mt. BLACK
DOBSON'S CREEK GRID

CO-ORDINATES
LINE: 7600S
FROM: 700E
TO: 00E

SAMPLED BY: B M.
DATE: 13/5/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb ppm	Zn ppm	Cu ppm	Co ppm	Fe %	Mn ppm	Sn ppm	As ppm	Cr ppm	Ni ppm	DESCRIPTION
36132	7600	0700	100ft.	X	25	X	5	2.9	40	X	X	5	S	C S R F
33		600		X	25	X	5	3.4	30	1	2	20	10	K S R F O
34		500		5	15	X	A	3.4	40	X	2	A	A	C S A F
35		400		X	15	X	A	2.5	20	A	3	A	A	C S R F O
36		300		X	20	5	10	2.7	10	A	2	30	A	C S R F
37		200		X	15	X	A	2.4	20	A	2	A	A	C S O
38		100		X	20	X	5	5.5	50	A	4	A	S	C R F
36139	7600	00		X	25	X	A	3.1	35	A	4	A	A	C O

243

058371

PROJECT: MT. BLACK
DOBSONS CREEK GRID

CO-ORDINATES
LINE: 8000 S
FROM: 3600 E
TO: 1500 E

SAMPLED BY: M.M. P.H. E.S.
DATE: 27/5/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe	Mn	DESCRIPTION
36279	8000	3600	100'	60	30	20	7900	30	CRF
80		35		55	40	20	1.65%	30	CORF
81		34		90	40	20	7100	40	CSRFO
82		33		50	30	25	1.6%	55	CORFS
83		32		95	60	40	3.6%	150	CRFS
84		31		80	60	40	2.55%	105	CO
85		30		45	30	30	2.65%	90	CO
86		29		60	50	40	3.80%	125	CO
87		28		35	65	50	6.3%	310	CRF
88		27		110	70	45	2.85%	150	COS
89		26		70	80	40	4.0%	120	CS
90		25		100	80	50	5.75%	170	COS
91		24		75	90	55	8.0%	220	CRF
92		23		70	60	30	4.9%	110	COS
93		22		400	30	25	9000	20	CSRFO
94		21		65	45	30	6000	80	CSRFO
95		20		50	15	20	3750	20	RFCS
96		19		55	20	20	4650	30	CRFSO
97		18		75	10	10	3850	25	RFSC
98		17		105	15	20	2600	20	CRFSO
99		16		115	25	20	1.95%	50	CRFS
36300	8000	1500		1110	30	20	1.95%	25	CS

CONT
CONT B HORIZON
CONT
CONT
CONT

244

058372

PROJECT: MT. BLACK

DOBSONS CREEK GRID

CO-ORDINATES
LINE: 8000 S
FROM: 1400 E
TO: 900 E

SAMPLED BY: MM. P.H. E.S.

DATE: 27/5/80

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe	Mn	DESCRIPTION
36945	8000	1400	100'	130	25	30	3.65%	15	CRFS
46		1300		140	35	40	4.65%	30	CO
47		1200		75	25	20	2.5%	20	CSO
48		1100		30	30	30	3.35%	30	CO
49		1000		540	30	20	5.40%	10	CRFSO
36950	8000	900		25	60	30	1.35%	35	CRFS

245

058373

PROJECT: MT. BLACK DOBSON'S CREEK

CO-ORDINATES LINE: 8400S FROM: 5300 E TO: 4800 E

SAMPLED BY: MG ES BM

DATE: 16/5/80

MATERIAL: SOIL

DEPTH: C HORIZON

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb ppm	Bi ppm	Cu ppm	Co	Fe	Mn	Sn	As	Cr	Ni		DESCRIPTION
36209	8400	5300	100	25	20	5	x	15000	30	x	6	15		x	CRFSO
10		5200		20	15	5	x	1900	40	x	5	15		x	CRFSO
11		5100		x	10	x	5	1300	15	x	6	10		5	CRFSO
12		5000		35	65	x	5	2600	10	x	5	10		10	CRFSO
13		4900		10	35	x	x	1900	10	x	7	5		10	CRFSO
36214		4800		5	10	10	x	2050	10	x	10	15		5	CRFSO

058374

246

PROJECT: MT. BLACK DOBSONS CREEK

CO-ORDINATES LINE: 8400S | FROM: 3100E | TO: 4700E

SAMPLED BY: BM. MG ES

DATE: 16/5/80

MATERIAL: SOIL

DEPTH: C. HORIZON

BOOK Nº | SHEET Nº | JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Co	Fe	Mn	Sn	As	Cr	Ni	DESCRIPTION
36401	8400	3100	100	X	35	20	10	8500 %	130	X	16	30	20	CSRF broken.
02		3200		5	20	X	5	1.50 %	60	X	12	15	10	C
03		3300		X	20	X	5	1.05 %	25	X	14	10	10	CSRF
04		3400		5	15	X	X	4450	10	X	8	10	10	CSRFO
05		3500		X	15	X	5	1.20 %	10	X	18	5	10	COS
06		3600		5	20	X	X	2300	10	1	8	X	5	CO
07		3700		X	20	X	X	2600	15	X	5	X	10	CS
08		3800		5	20	X	5	2300	15	2	8	10	5	CS
09		3700		10	20	X	5	10000	20	X	6	10	10	CSO
10		4000		5	20	X	5	2500	20	1	8	5	10	CSORF
11		4100		5	25	X	5	4050	30	1	16	X	10	COS
12		4200		5	25	X	X	5000	30	2	16	X	10	CSORF
13		4300		5	25	X	5	5000	20	2	28	X	10	CS
14		4400		X	20	X	X	2150	15	2	8	X	10	CSO
15		4500		20	20	X	5	2150	20	5	6	X	10	CSORF
16		4600		100	60	X	10	5100	50	4	10	X	10	CS
* 36417		4700		25	65	X	X	2900	15	2	5	X	10	C

058375

PROJECT: MT. BLACK
DOBSON'S CREEK GRID

CO-ORDINATES
LINE: 8400 S
FROM: 2500 E
TO: 3000 E

SAMPLED BY: BM
DATE: 13/5/80

MATERIAL: SOIL
DEPTH: C HORIZON

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Co ppm	Fe %	Mn ppm	Sn	As ppm	Cr ppm	Ni ppm	DESCRIPTION
36165	8400	2500	100	310	160	35	10	5.40%	80	K	12	30	30	RESC
66		26		210	165	40	20	4.85%	125	K	10	30	40	CRF
67		27		280	95	25	10	4.10%	85	K	9	35	25	RESC
68		28		290	145	30	10	4.15%	95	K	8	16	30	CSRF
69		29		290	190	40	15	5.20%	140	K	12	25	40	SCRF
36170	8400	3000		30	55	20	10	3.00%	140	K	9	45	30	SCRF

252077

248

058376

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK	LINE: 8400 S	B. M.	SOIL	SHEET Nº
DOBSON'S CREEK GRID	FROM: 00 E	DATE: 13/5/80	DEPTH: C HORION	JOB Nº
	TO: 2400 E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval G	Pb P	Zn P	Cu P	Co	Fe	Mn	Sn	As	G	Ni	DESCRIPTION
36140	8400	00	100	x	10	x	5	2150	10	x	2	x	x	CS
41		100		x	20	x	x	3000	10	1	2	x	5	CS
42		200		x	15	x	x	1950	10	x	x	x	5	CSRFO Bhor
43		300		x	20	x	5	6150	15	x	6	x	10	COS
44		400		x	35	15	10	1.05%	40	x	10	5	15	COS
45		5		20	60	30	10	1.65%	60	1	14	10	20	CORFS Contam
46		6		5	15	x	5	3950	5	x	11	10	10	C
47		7		x	15	x	x	3400	10	x	14	10	10	CRFS
48		8		10	15	x	x	2350	10	x	7	5	10	CSO Contam
49		9		x	20	x	5	1.00%	10	2	15	10	15	CSRF
50		1000		x	80	20	15	3.05%	95	2	6	20	65	CRF
51		11		5	55	10	10	2.20%	40	1	10	15	30	C
52		12		60	45	20	10	4.75%	55	x	27	30	20	CO Bhorgon
53		13		45	20	5	10	2.40%	10	x	32	10	10	COS
54		14		25	15	x	x	2350	10	x	4	5	10	RFC Contam
55		15		x	5	x	x	2200	15	x	2	15	5	COSRF Part B horgon
56		16		x	25	x	x	4700	30	1	3	x	x	CORF B horgon
57		17		45	75	10	x	3100	230	2	47	x	5	CO A horgon
58		18		x	15	x	x	2550	30	15	4	x	x	CSRF
59		19		x	30	x	x	2550	25	x	3	x	x	CRFOS
60		2000		x	15	x	x	3200	35	x	3	x	x	RFCS
61		21		x	25	x	5	2050	10	x	4	x	x	RFCSO
62		22		1500	60	10	6	7600	45	x	6	5	10	CRF Contam
63		23		310	525	45	20	5.90%	230	x	12	15	70	RFCS
36164	8400	2400		370	145	35	10	4.65%	80	x	14	50	20	C

249

058377

NOTE: This is the FIRST 8400S LINE The second 'official' line has also been sampled.

PROJECT: MT. BLACK DOBSON'S CK EXT.

CO-ORDINATES
LINE: 8400S
FROM: 1200E
TO: 00 EW

SAMPLED BY: MG.

DATE: 17/4/80

MATERIAL: SOIL

DEPTH: C. HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +10	Pb ppm	Zn ppm	Cu ppm	Fe	Mn ppm	DESCRIPTION
35816	8400	1200	100	30	25	10	1.9%	30	C
17		1100		25	45	10	2.0%	70	CRF
18		1000		35	25	20	9500	30	CRFO
19		900		25	20	25	5450	25	CO Powder
20		800		30	20	10	1.0%	20	CSI
21		700		5	20	5	3400	15	CSI
22		600		10	15	5	4150	25	C
23		500		5	10	10	1900	30	CSI
24		400		10	15	10	2200	35	CRFSI
25		300		15	20	5	1.1%	50	CSI
26		200		10	15	5	3250	25	B HORIZON CSI
27		100		25	15	10	2650	20	CSIRF
35828	8400	00		15	15	15	2500	25	CSI

250

058378

NOTE: FIRST LINE bearing NE from 8400N 800E, Line has been cut on correct bearing and is being sampled too.

PROJECT: MT BLACK
DOBSON'S CK EXT.

CO-ORDINATES
LINE: 8400S
FROM: 3700E
TO: 3300E

SAMPLED BY: MG. ES.
DATE: 17/4/80

MATERIAL: SOIC
DEPTH: C - HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval E	Pb ppm	Zn ppm	Cu ppm	Fe	Mn	DESCRIPTION
35571	8400	3700	100	85	20	5	3.5%	900	CRA
72		3600		65	40	4	9.0%	900	COS
73		3500		35	15	1	2.9%	900	CRA
74		3400		70	40	5	1.3%	2200	CRFS
75		3300		50	105	5	5.1%	2200	CRFS
76		3200		80	35	2	2.5%	600	CA
77		3100		60	55	6	3.0%	1100	CO
78		3000		50	55	2	2.3%	1100	CRFO
79		2900		90	50	5	2.9%	1100	CSRA
35600		2800		40	40	5	1.5%	1100	CO
*35801		2700		30	25	1	1.7%	1100	CO
02		2600		60	150	2	5.3%	1100	CORF
03		2500		35	85	6	4.2%	1100	COS
04		2400		85	90	4	4.0%	1100	CO
05		2300		35	100	3	4.5%	1100	CRF
06		2200		05	10	1	3.9%	900	CORA
07		2100		55	15	1	4.0%	900	CRFA
08		2000		55	15	1	2.2%	900	RFAS
09		1900		55	25	1	2.6%	900	RFSC
10		1800		55	25	1	1.6%	900	CSO
11		1700		55	25	2	6.1%	900	RFC
12		1600		50	55	1	2.6%	900	CRFS
13		1500		50	55	1	4.1%	900	RFC
14		1400		55	15	1	4.1%	900	CRA
35815	8400	1300		65	85	4	4.0%	900	CRF

251

058379

PROJECT: MT BLACK
DOBSONS CK grid.

CO-ORDINATES
LINE: 8800S
FROM: 2,200E
TO: 100E

SAMPLED BY: MG ES.
DATE: 15/4/80

MATERIAL: SOIL
DEPTH: C. HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe	Mn	DESCRIPTION
35368	8800	2200	100	75	45	X	1.50%	10	CS
9		2100		40	10	55	2.50%	40	RFSC
70		2000		30	10	55	1.35%	20	DSC
71		1900		20	10	55	1.45%	15	RFSC
72		1800		35	15	55	1.70%	15	DSC
73		1700		25	10	55	2.00%	20	RFFS
74		1600		30	10	55	1.75%	20	DRFSC
75		1500		30	15	10	3.00%	30	CRIA
76		1400		60	25	15	1.45%	30	CS
77		1300		45	80	40	.55%	35	CRIFS
78		1200		35	60	45	.50%	70	RFSC
79		1100		45	35	10	.20%	30	CRIA
35280		1000		85	60	95	.20%	50	CDCSI
81		900		50	70	30	.55%	70	CRIF
82		800		65	15	10	.20%	30	CDCSI
83		700		55	25	20	.28%	35	CRIA
84		600		70	45	15	.30%	50	CSI
85		500		55	70	25	.32%	70	CRIA
86		400		40	20	10	.10%	60	BHDSC
87		300		25	25	10	.12%	45	CRFS
88		200		45	35	45	.44%	120	RFCS
35389		100		20	10	5	2.00%	40	CRIA

2552

058380

PROJECT: MT. BLACK
DOBSON'S CK GRID

CO-ORDINATES
LINE: 8800S
FROM: 00W
TO: 1700W

SAMPLED BY: M.G. ES
DATE: 15/4/80

MATERIAL: SOIC
DEPTH: C. HORIZON

SAMPLE NUMBER	CO-ORDINATES N/S	E/W	⊙/-	Pb ppm	Zn ppm	Cu ppm	Fe %	Mn ppm	DESCRIPTION
35900	8800	00	100	10	115	25	2.80	775	CRFOS
901		100		20	115	22	2.70	345	CSO
902		200		20	120	22	1.85	550	ORFSC
903		300		20	110	35	2.15	625	CRF
904		400		20	115	45	3.60	555	RFSC
905		500		20	140	10	1.60	1050	CRFS
906		600		15	85	50	1.40	400	OSC
907		700		30	110	10	1.60	355	CRA
908		800		25	110	50	1.30	355	OSC
909		900		125	115	10	3.30	550	SRFC
35910		1000		5	110	55	2.00	440	RFSC
*35911		1100		40	70	55	1.15	1575	OSC
912		1200		10	115	55	2.40	660	CRFSO
913		1300		15	120	55	2.00	775	ORFSC
914		1400		60	115	10	3.05	645	contam CSRF
915		1500		50	115	10	3.15	640	contam ORFSC
916		1600		10	115	55	1.55	640	contam CRFS
35917		1700		30	115	55	2.45	640	contam RFOC

253

058381

AREA: MT BLACK

STITT GRID

CO-ORDINATES
LINE: 5,372,523 N (1)
FROM: 380, R40E
TO: 380, 720E

SAMPLED BY: G.B.

DATE: 3/1/80

MATERIAL: Litter

DEPTH: N/A

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Cu	Pb	Zn	Fe	Mn
31	372	840	10					
32		820						
33		800		10	30	40	1150	205
34		780						
35		760						
36		740		15	20	60	660	760
37		720						
38		700						
39		660		15	30	100	290	540
40		660						
41		640						
42		620		15	15	80	1400	550
43		600						
44		580						
45		560		10	15	85	1300	540
46		540						
47		520		10	10	60	1750	1000

254

058382

PROJECT: MT BLACK

SILT GRID

CO-ORDINATES

LINE: 5,372,523N (2)

FROM: 381,340E

TO: 380,860E

SAMPLED BY: G.B.

DATE: 3/1/80

MATERIAL: Litter

DEPTH: N/A.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Cu	Pb	Zn	Fe	Mn
3230601	372523	381340	20m	10	30	85	3.5%	715
02		320						
03		300						
04		280		20	40	70	2350	520
05		260						
06		240						
07		220		10	45	80	1%	410
08		200						
09		180						
10		160		10	45	90	1150	1050
11		140						
12		120						
13		100		10	20	60	1150	520
14		080						
15		060						
16		040		15	45	90	4450	300
17		020						
18		000						
19	372523	381000		10	35	75	1.1%	630
20		980						
21		960						
22		940						
23		920		15	35	70	9000	1100
24		900						
25		880						
26		860		15	60	85	8000	830

255

058383

AREA: Mt Black Stitt.

CO-ORDINATES
LINE: 5 372 523 N (3)
FROM: 381 480 E
TO: 381 360 E

SAMPLED BY: WM + Students.

DATE: 19/12/79.

MATERIAL: leaf litter

DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval E
1	372 523	381 480	20
49		460	
50		440	
51		420	
52		400	
53		380	
54		360	

2856

058384

AREA: Mt Black

Stitt Grid.

CO-ORDINATES
LINE: 5 372 523 N (4)
FROM: 381 980 E
TO: 381 500E.

SAMPLED BY: WM + Students.

DATE: 19/12/79.

MATERIAL: leaf litter

DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval = 20m
381123	372523	381980	
124		960	
125		940	
126		920	
127		900	
128		880	
129		860	
130		840	
131		820	
132		800	
133		780	
134		760	
135		740	
136		720	
137		700	
138		680	
139		660	
140		640	
141		620	
142		600	
143		580	
144		560	
145		540	
146		520	
147		500	

257

058385

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black Stitt Grid.	LINE: 5 372 523 N (5)	Jacques + Bruce	leaf litter	SHEET No
	FROM: 382000E	DATE	DEPTH	JOB No
	TO: 382 480E.	14/12/79.	leaf litter	

SAMPLE NUMBER	CO-ORDINATES ⊕/S	CO-ORDINATES ⊕/W	INTERVAL ⊕/-	DESCRIPTION
30642	372523	382000	20	
43		020		
44		040		
45		060		
46		080		
47		100		
48		120		
49		140		
50		160		
51		180		
52		200		
53		220		
54		240		
55		260		
56		280		
57		300		
58		320		
59		340		
60		360		
61		380		
62		400		
63		420		
64		440		
65		460		
30666		382480		

2358

058386

AREA: Mt Black

Stitt Grid.

CO-ORDINATES
LINE: 5 372 523 N (6)
FROM: 382 500 E
TO: 382 800 E.

SAMPLED BY: Jacques & Bruce

DATE: 14/12/79.

MATERIAL: leaf litter

DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	E/W	Interval +/-
30667	372 523	382 500	20m
668		520	
669		540	
670		560	
671		580	
672		600	
673		620	
674		640	
675		660	
676		680	
677		700	
678		720	
679		740	
680		760	
681		780	
30682		382 800	

259

058387

AREA: Mt Black — Stitt Grid

CO-ORDINATES
LINE: S 372 523 N (7)
FROM: 383 240 E
TO: 382 820 E

SAMPLED BY: Bm + Students.

DATE: 19/12/79.

MATERIAL: leaf litter

DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval
31101	372523	383240	20
02		2200	
03		2000	
04		1800	
05		1600	
06		1400	
07		1200	
08		1000	
09		0800	
10		0600	
11		0400	
12		0200	
13		0000	
14		3829800	
15		9600	
16		9400	
17		9200	
18		9000	
19		8800	
20		8600	
21		8400	
31122		382820	

260

058388

PROJECT: MH BLACK STITT GRID.	CO-ORDINATES LINE: 5 372 523 N (8). FROM: 383 600E TO: 383 260E.	SAMPLED BY: NM + STUDENTS. DATE: 19/12/79.	MATERIAL: Leaf Litter DEPTH: Leaf Litter	BOOK No. SHEET No. JOB No. DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-
30683	372,523	383,600	20
84		580	
85		560	
86		540	
87		520	
88		500	
89		480	
90		460	
91		440	
92		420	
93		400	
94		380	
95		360	
96		340	
97		320	
98		300	
99		280	
30700		383,260	

261

058389

PROJECT: Mt Black
Stitt Grid.

CO-ORDINATES
LINE: 5372000N (1)
FROM: 380 320E
TO: 380 300E

SAMPLED BY: WJM

DATE: 6/9/79

MATERIAL: leaf litter

DEPTH: leaf litter

ROCK No:

SHEET No:

JOB No:

DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL	Pb.	Zn.	Cu.	Fe.	Mn.
27814	372000N	380 300E	20	25	65	15	1050	1550
27815		380 280E		20	40	10	1050	410

262

058390

PROJECT: Mt Black Stitt Grid.

CO-ORDINATES — LINE: S 372 000 N (2) | FROM: 380 820E | TO: 380 340E

SAMPLED BY: WM

DATE: 6/9/79

MATERIAL: leaf litter

DEPTH: leaf litter

BOOK N°

SHEET N°

JOB N°

DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL	Pb	Zn	Cu	Fe	Mn
27849	372 000	380 820	20	30	175	40	405	1300
50		800		25	75	20	1300	900
51		780						
52		760						
53		740		25	80	20	850	1000
54		720						
55		700						
56		680		25	100	20	8000	1050
57		660						
58		640						
59		620		15	95	15	2000	1350
60		600						
61		580						
62		560		25	70	15	2600	710
63		540						
64		520						
65		480		20	65	15	1000	615
66		460						
67		440						
68		420		15	50	20	900	950
69		400						
70		380						
71		360		15	60	15	1050	1250
72		340						
27873	372 000	380 320						

263

058391

PROJECT: Mt Black — Stitt Grid

CO-ORDINATES — LINE: 5372000 N (3) — FROM: 381 320 E — TO: 380 840 E

SAMPLED BY: WM

DATE: 6/9/79

MATERIAL: leaf litter

DEPTH: leaf litter

BOOK N°

SHEET N°

JOB N°

DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	P.b.	Z.N.	C.u.	F.e.	M.N.
27824	372000	381320	20	40	155	30	900	480
25		300						
26		280						
27		260						
28		240		35	130	50	690	1300
29		220						
30		200						
31		180		10	70	50	850	455
32		160						
33		140						
34		120		60	120	40	900	570
35		100						
36		080						
37		060		40	100	35	565	245
38		040						
39		020						
40		381000		35	90	35	480	750
41		380980						
42		960						
43		940		60	110	35	650	340
44		920						
45		900						
46		880		35	110	30	400	950
47		860						
27848		380640						

264

058392

PROJECT: Mt Black.

Stitt Grid.

CO-ORDINATES
LINE: 5 372 000 N (4)
FROM: 381 340 E
TO: 381 820 E

SAMPLED BY: wm
DATE: 25/8/79.

MATERIAL: leaf litter
DEPTH: leaf litter

BODY N°
SHEET N°
GRID N°
DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Increment +/-	Pb.	Zn.	Cu.	Fe.	Mn.
27 30 01	372 000	381 340	20m	25	110	5	570	395
02		360		25	50	5	800	180
03		380						
04		400		25	50	5	800	180
05		420						
06		440						
07		460		30	90	10	715	360
08		480						
09		500						
10		520		25	70	5	640	335
11		540						
12		560						
13		580		20	80	5	320	600
14		600						
15		620						
16		640		25	70	5	600	1000
17		660						
18		680						
19		700		40	60	5	1150	525
20		720						
21		740						
22		760		30	75	5	1200	1100
23		780						
24		800						
27 32 25	381 820			70	80	10	470	1450

265

058393

PROJECT: Mt Black. Stitt Grid	CO-ORDINATES LINE: 5 372 000N (5) FROM: 381 840 E TO: 382 320 E	SAMPLED BY: wm DATE: 25/8/79	MATERIAL: leaf litter DEPTH: leaf litter
			BOOK No / SHEET No / JOB No

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (+)/-	Pb	Zn	Cu		Fe	Mn	DESCRIPTION
27326	372000	381840	20							
27		860								
28		880		30	80	10	655	655	1450	
29		900								
30		920								
31		940		25	70	5		330	1050	
32		960								
33		980								
34		382000		15	105	5		450	1150	
35		020								
36		040								
37		060		20	60	5		355	640	
38		080								
39		100								
40		120		20	70	5		485	270	
41		140								
42		160								
43		180		25	60	5		470	785	
44		200								
45		220								
46		240		20	80	5		480	735	
47		260								
48		280								
49		300		25	80	5		350	595	
27350		382320								

266

058394

PROJECT: Mount Very Dark.

Stitt Grid.

CO-ORDINATES
LINE: 5 372 000 N (61)
FROM: 382 340 E
TO: 382 740 E

SAMPLED BY: NM
DATE: 25/8/79.

MATERIAL: leaf litter
DEPTH: leaf litter

BOOK No.
SHEET No.
JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	E/W	Increment +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
37351	372000N	382340	20						
52		360		20	50	5	1650	575	
53		380							
54		400							
55		420		20	35	5	550	1400	
56		440							
57		460							
58		480		20	50	5	620	550	
59		500							
60		520							
61		540		20	40	5	8000	525	
62		560							
63		580							
64		600		20	70	5	2550	490	
65		620							
66		640							
67		660		15	60	5	9000	600	
68		680							
69		700							
70		720		15	90	5	1150	625	
37371		382140							

267

058395

AREA: Mt Black.

Stitt Grid.

CO-ORDINATES

LINE: 5 372 000 N (7)

FROM: 383 000 E

TO: 382 760 E

SAMPLED BY: Geof Bessel

DATE: 21/12/79.

MATERIAL: leaf litter

DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES (N) S	(E) W	Interval E
31356	372 000	383 000	20
58		382 980	
59		960	
60		940	
61		920	
62		900	
63		880	
64		860	
65		840	
66		820	
67		800	
68		780	
31369		382 760	

268

058396

SHEET	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black. Stitt Grid	LINE: 5 372000 N (8)	Geoff Bessel	leaf litter	SHEET No
	FROM: 383500 E	DATE	DEPTH	JOB No
	TO: 383,020 E	21/12/79	leaf litter	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval + E	DESCRIPTION
31332	372,000	383,500	20	
33		480		
34		460		
35		440		
36		420		
37		400		
38		380		
39		360		
40		340		
41		320		
42		300		
43		280		
44		260		
45		240		
46		220		
47		200		
48		180		
49		160		
50		140		
51		120		
52		100		
53		080		
54		060		
55		040		
31356		383020		

269

058397

AREA: Mt Black. Stitt Grid.

CO-ORDINATES
LINE: 5371500N. (1)
FROM: 380 720E
TO: 380 300E

SAMPLED BY: G. Bessel.
DATE: 8/1/80

MATERIAL: leaf litter
DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Cu	Pb	Zn	Fe	Mn
32631	37150	3807200	20m	15	20	80	575	330
32		7000						
33		6800						
34		6600		10	20	80	245	310
35		6400						
36		6200						
37		6000		15	15	50	130	640
38		5800						
39		5600						
40		5400		15	15	85	120	360
41		5200						
42		5000						
43		4800		10	25	60	490	690
44		4600						
45		4400						
46		4200		10	20	85	355	325
47		4000						
48		3800						
49		3600		10	15	55	165	1000
50		3400						
51		3200						
52		3000		15	25	70	200	130

270

058398

SHEET	Mt Black Stitt Grid.	CO-ORDINATES		SAMPLED BY	MATERIAL	BOOK No
		LINE: 5 371 500N (2)		WM	leaf litter	SHEET No
		FROM: 381 140E		DATE	DEPTH	JOB No
		TO: 380 760E		21/12/79	leaf litter	

SAMPLE NUMBER	CO-ORDINATES Ø/S	CO-ORDINATES Ø/W	Interval +/Ø	DESCRIPTION
31651	371500	381140	20	
52		120		
53		100		
54		080		
55		060		
56		040		
57		020		
58		381000		
59		380980		
60		960		
61		940		
62		920		
63		900		
64		880		
65		860		
66		840		
67		820		
68		800		
69		780		
31670		380760		

27

058399

PROJECT: Mt Black Stitt Grid.

CO-ORDINATES
LINE: 5 371 500N (3)
FROM: 381 640E
TO: 381 160E

SAMPLED BY: WM
DATE: 21/12/79

MATERIAL: leaf litter
DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +10	Cu	Pb	Zn	Fe	Mn
31626	371500	381640	20					
27		620						
28		600						
29		580						
30		560						
31		540						
32		520						
33		500						
34		480						
35		460						
36		440						
37		420						
38		400						
39		380						
40		360						
41		340						
42		320						
43		300						
44		280						
45		260		10	145	40	800	450
46		240		N/S	N/S	N/S		
47		220						
48		200		15	15	60	1150	1500
49		180						
31650	371500	381160						

272

058400

SHEET	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black Stitt Grid.	LINE: 5 371 500 N (4)	wm	~~Soil~~ leaf litter	SHEET No
	FROM: 382 140 E	DATE	DEPTH	JOB No
	TO: 381 660 E	21/12/79	~~2~~ leaf litter	

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	INTERVAL +/(-)	DESCRIPTION
31601	371500	382140	20m	
02		120		
03		100		
04		080		
05		060		
06		040		
07		020		
08		000		
09		381980		
10		960		
11		940		
12		920		
13		900		
14		880		
15		860		
16		840		
17		820		
18		800		
19		780		
20		760		
21		740		
22		720		
23		700		
24		680		
31625		381660		

273

058401

AREA: Mt Black — Stitt Grid.

CO-ORDINATES
LINE: 5371 500N (S)
FROM: 382 160E
TO: 382 640E

SAMPLED BY: WM.
DATE: 7/12/79.

MATERIAL: leaf litter
DEPTH: leaf litter

ROCK No.
SHEET No.
JOB No.
DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Fe	Mn
30840	371 500	382 160	20	15	90	15	3450	900
41		180						
42		200						
43		220		25	60	10	2500	525
44		240						
45		260						
46		280		25	95	10	850	500
47		300						
48		320						
49		340		20	70	10	410	440
50		360						
51		380						
52		400		15	45	10	295	335
53		420						
54		440						
55		460		15	70	15	2650	360
56		480						
57		500						
58		520		10	55	15	3700	745
59		540						
60		560						
61		580		25	55	20	1000	210
62		600						
63		620						
30864		640		20	55	15	1600	605

274

058402

PROJECT: Mt Black

Stitt Grid.

CO-ORDINATES
LINE: 5 371 500 N (6)
FROM: 382 660 E
TO:

SAMPLED BY: WM.

DATE: 7/12/79

MATERIAL: leaf litter

DEPTH: leaf litter

BOX No.

SHEET No.

JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
30865	37 1500	382 660	20						
66		680							
67		700		15	50	10	1550	645	
68		720							
69		740							
70		760		20	100	20	9750	950	
71		780							
72		800							
73		820		20	50	15	2300	600	
74		840							
75		860							
76		880		5	45	10	2750	395	
77		900							
78		920							
79		940		25	70	20	4600	335	
80		960							
81		980							
82	3830	000		20	75	30	2750	760	
83		020							
84		040							
85		060		25	120	20	6050	1800	
86		080							
87		100							
88		120		35	50	15	715	1200	
89	3830	140							

275

058403

PROJECT: MT BLACK

SITE/GRID

CO-ORDINATES
LINE: 5,371,500N. (7)
FROM: 383,160E.
TO: 383,360E.

SAMPLED BY: B.M.
DATE: 7/12/79.

MATERIAL: Leaf Litter
DEPTH: Leaf Litter.

BOC / Nº
SHEET Nº
JOB Nº
DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval E/-	Pb	Zn	Cu	Fe	Mn
30890	371,500	383,160	28					
91		180		10	60	10	300	1700
92		200						
93		220						
94		240		20	70	10	685	610
95		260						
96		280						
97		300		15	75	10	555	2200
98		320						
99		340						
30900	383	360		20	50	5	900	4200

276

058404

PROJECT: M1 BLACK

* STITT GRID.

CO-ORDINATES — LINE: 5,371,000 N (10) — FROM: 382,760E — TO: 382,280E

SAMPLED BY: MG

DATE: 23/6/79

MATERIAL: LEAF LITTER.

DEPTH: LEAF LITTER.

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES E/S	CO-ORDINATES E/W	Increm. ÷10	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27151	371000	382760	20	20	75	20	40400	1150	
52		7400		15	40	10	3650	460	
53		7200		20	45	40	1550	900	
54		7000		20	95	45	11900	1250	
55		6800		25	50	10	34000	670	
56		6600		25	60	15	42000	1400	
57		6400		75	80	70	42500	1050	
58		6200		30	40	5	80000	695	
59		6000		20	70	55	16500	1250	
60		5800		15	90	45	31500	1000	
61		5600		20	50	10	8550	1000	
62		5400		40	85	85	1 3%	1300	
63		5200		30	80	65	69000	1450	
64		5000		30	95	10	1 0.5%	655	
65		4800		15	70	65	48500	630	
66		4600		30	105	80	18000	500	
67		4400		20	60	5	8500	770	
68		4200							
69		4000							
70		3800		45	55	10	9000	710	
71		3600		30	50	20	1 1%	410	
72		3400							
73		3200		15	60	5	8000	305	
74		3000							
75	371000	382280							

277

058405

SHEET: MH Black. Stitt Grid.

CO-ORDINATES — LINE: 5 370 000 N (11) — FROM: 381 660 E — TO: 382 360 E

SAMPLED BY: W.M.

DATE: 27/8/79

MATERIAL: leaf litter

DEPTH: leaf litter

BODY No.

SHEET No.

JOB No.

SAMPLE NUMBER	CO-ORDINATES ⊕/S	⊕/W	⊕/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27501	370000	381660	20	10	50	5	300	305	
02		9 00							
03		9 20							
04		9 40		10	45	5	400	1300	
05		9 60							
06		9 80							
07		382000		5	40	10	850	770	
08		0 20		15	60	35	390	1050	
09		0 40		15	55	25	585	740	
10		0 60		10	40	10	5900	1050	
11		0 80		15	65	45	1200	950	
12		1 00		25	85	55	1500	1050	
13		1 20		10	35	5	850	755	
14		1 40		20	105	45	550	2000	
15		1 60		10	65	35	1550	400	
16		1 80		10	50	5	535	1850	
17		2 00		20	60	25	850	490	
18		2 20							
19		2 40		10	20	5	465	375	
20		2 60							
21		2 40							
22		3 00		10	85	5	535	1000	
23		3 20							
24		3 40							
27525		382360		10	30	5	590	420	

278

058406

PROJECT: Mt Black. STITTGRD.

CO-ORDINATES — LINE: 5 369 500N. (11) FROM: 382 700E. TO: 382 220E.

SAMPLED BY: Caiphas Mashawa.

DATE: 30/1/80.

MATERIAL: leaf litter

DEPTH: leaf litter

BOOK N°

SHEET N°

JOB N°

DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +10	Pb	Zn	Cu	Fe	Mn
33701	369500	382700	20	25	15	15	430	85
02		680		45	55	40	1000	265
03		660		15	35	40	245	520
04		640		5	105	10	430	605
05		620		5	65	20	850	635
06		600		40	50	25	540	410
07		580		10	65	15	850	455
08		560		20	35	10	545	185
09		540		10	90	15	365	690
10		520		25	105	20	1150	1100
11		500		10	65	25	335	275
12		480		15	50	15	515	725
13		460		10	60	10	525	505
14		440		10	90	10	375	2805
15		420		25	75	15	220	2710
16		400		15	35	10	345	365
17		380		15	145	15	535	440
18		360		20	55	15	485	510
19		340		20	140	10	625	1080
20		320		10	50	15	535	480
21		300						
22		280		10	45	15	1000	360
23		260						
24		240						
33725	369500	382220		20	135	15	515	480

279

058407

PROJECT: Mt Black. Stitt Grid.

CO-ORDINATES — LINE: 5369000 N (12) — FROM: 381580 E — TO: 382060 E

SAMPLED BY: WM

DATE: 29/10/79

MATERIAL: leaf litter

DEPTH: leaf litter

BOOK N°

SHEET N°

JOB N°

DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb ppm	Zn ppm	Cu ppm	Fe	Mn
29069	369000	381580	20m	5	50	5	3700	2950
70		600						
71		620						
72		640		10	40	15	3850	4150
73		660		20	55	25	4000	5000
74		680		10	55	60	1650	2750
75		700		15	50	25	6700	9000
76		720		15	70	40	1600	4650
77		740		20	80	60	3900	4000
78		760		10	55	10	1400	5600
79		780		25	65	20	1600	5050
80		800		30	55	50	4550	7100
81		820		5	35	10	3400	4000
82		840		20	65	25	3700	6800
83		860		15	70	25	5400	5700
84		880		5	30	5	4500	3550
85		900		40	55	15	9000	3650
86		920						
87		940		20	100	20	6700	17000
88		960						
89		980						
90		000		25	60	30	5400	10500
91	382	020						
92		040						
29093		060		10	55	10	9500	5150

280

058408

PROJECT: Mt. Black. Stitt Grid	CO-ORDINATES LINE: 5,369 000N(M)	SAMPLED BY: B M.	MATERIAL: Leaf Litter
	FROM: 381 540 E	DATE: 2/1/80	DEPTH: Leaf Litter
	TO: 381 060 E		

SAMPLE NUMBER	CO-ORDINATES (N)/S	CO-ORDINATES (E)/W	Interval +/-	Co	Pb	Zn	Fe	Mn
32226	369000	381540	20	10	10	55	1150	340
27		520		30	15	55	500	175
28		500		20	10	50	2500	570
29		480		15	15	50	980	370
30		460		55	20	120	30%	720
31		440		25	10	75	3550	325
32		420		10	15	40	260	255
33		400		25	10	55	7200	455
34		380		35	15	105	900	550
35		360		10	10	40	350	310
36		340		65	15	80	1050	625
37		320		35	15	75	4050	695
38		300		15	5	40	480	360
39		280		10	5	60	1750	340
40		260		50	20	85	17%	790
41		240		5	5	35	1100	670
42		220		40	20	75	1650	780
43		200		20	15	55	900	305
44		180		10	15	60	6550	400
45		160		30	20	45	1950	305
46		140		45	10	65	1000	245
47		120		10	15	45	1750	475
48		100		30	45	65	900	695
49		080						
32250		381060		10	20	40	820	390

281

058409

PROJECT: MT BLACK STITT GRID. MT. REID

CO-ORDINATES
LINE: 5,366,500N (11)
FROM: 378,140E
TO: 378,620E

SAMPLED BY: EM
DATE: 4/11/80

MATERIAL: litter
DEPTH: N/A

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (+)/-	Cu	Pb	Zn	Fe	Mn
34848	36650	37810	20m	10	25	55	720	1200
49		1600						
50		1800						
51		2000		15	25	80	455	3200
52		2200						
53		2400						
54		2600		10	10	90	170	950
55		2800						
56		3000						
57		3200		10	15	50	265	2250
58		3400		25	40	70	2850	3550
59		3600		35	25	85	480	2350
60		3800		15	60	50	1050	1650
61		4000		20	35	45	265	1150
62		4200		35	30	50	545	1750
63		4400		20	20	45	370	900
64		4600		25	20	40	620	2400
65		4800		30	30	45	950	1850
66		5000		10	30	30	235	950
67		5200		25	60	45	200	725
68		5400		10	45	50	850	1800
69		5600		15	35	35	300	2200
70		5800		15	60	40	1200	1250
71		6000		15	20	35	1250	1800
72		6200		15	30	30	285	900

282

058410

WELL MT BLACK LEASE
STITT GRID
MT REID

CO-ORDINATES
LINE: 5,366,500N (2)
FROM: 378,640E
TO: 378,880E

SAMPLED BY EN

DATE 4/1/80

MATERIAL Litter

DEPTH N/A

SAMPLE NUMBER	CO-ORDINATES E	CO-ORDINATES N	Interval (+)/-	Cu	Pb	Zn	Fe	Mn
32373	378640	366500	A	35	105	90	2700	1250
74	660			30	65	50	1400	1000
75	680							
76	700			10	30	105	270	1500
77	720			10	45	70	1700	1300
78	740			20	20	35	230	650
79	760			10	20	40	160	1100
80	780			35	55	80	1350	2500
81	800			25	65	40	1100	950
82	820							
83	840							
84	860							
85	880							
~~86~~								

283

058411

AREA: MT BLACK LEASE STITT GRID. MT. REID

CO-ORDINATES
LINE: 5,366,500 N (4)
FROM: 379,420 E
TO: 379,140 E

SAMPLED BY: G.B.

DATE: 7/1/80

MATERIAL: Litter

DEPTH: N/A

SAMPLE NUMBER	CO-ORDINATES (N/S)	CO-ORDINATES (E/W)	Interval +/-	Co	Pb	Zn	Fe	Mn
32386	36500	37940	20	15	25	40	480	540
387		400		30	30	35	850	1750
388		380		40	20	45	850	545
389		360		5	5	25	100	520
390		340		50	15	50	1700	1150
391		320		35	5	30	305	625
392		300		5	10	15	140	930
393		280		35	30	35	800	210
394		260		50	30	40	2350	1550
395		240		15	30	25	330	305
396		220		75	20	65	1050	680
397		200		60	40	65	1850	505
398		180		15	55	40	1550	630
399		160		45	50	55	6850	525
32400		140		55	45	75	1600	850

284

058412

PROJECT: Mt Black Stitt Grid

CO-ORDINATES
LINE: 5,371,000 N (1)
FROM: 378 940 E
TO: 378 600 E.

SAMPLED BY: wm.
DATE: 17/10/79

MATERIAL: leaf litter
DEPTH: leaf litter

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL ·10	Pb.	Zn.	Cu.	Fe.	Mn.	DESCRIPTION
28674	371,000	378 940	20	35	80	10	875	1100	
75		920							
76		900							
77		880		25	30	15	1000	515	
78		860							
79		840							
80		820		30	70	10	900	525	
81		800							
82		780							
83		760		25	60	10	595	1550	
84		740							
85		720							
86		700		25	105	15	950	615	
87		680							
88		660							
89		640		20	105	10	1400	665	
90		620							
28691	371,000	378 600		15	20	5	545	345	

285

058413

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black Stitt Grid.	LINE: 5 371 000 N (2)	Wm	leaf litter	SHEET No
	FROM: 379 440E	DATE	DEPTH	JOB No
	TO: 378 960E	17/10/79	leaf litter	

SAMPLE NUMBER	CO-ORDINATES G/S	CO-ORDINATES G/W	Interval +/B	P.h.	Z.N.	C.U.	F.e.	M.N.	DESCRIPTION
28649	371,000	379440	20	20	45	5	540	610	
50		420							
51		400							
52		380		20	55	5	385	375	
53		360							
54		340							
55		320		40	35	5	645	440	
56		300							
57		280							
58		260		25	55	5	540	415	
59		240							
60		220							
61		200		20	35	5	2300	430	
62		180							
63		160							
64		140		30	65	5	580	465	
65		120							
66		100							
67		080		25	55	5	850	665	
68		060							
69		040							
70				NO SAMPLE TAKEN					
71		000		25	65	5	505	620	
72		378980							
28673		378960							

286

058414

PROJECT: Mt Black
Stitt Grid.

CO-ORDINATES
LINE: 5371000N (3)
FROM: 379940E
TO: 379460E

SAMPLED BY: wm + mg.
DATE: 28/8/79

MATERIAL: leaf litter
DEPTH: leaf litter

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +10	Pb.	Zn.	Cu.	Fe.	Mn.	DESCRIPTION
27676	371000	379940		10	65	45	320	1700	
77		920							
78		900							
79		880		25	65	40	950	1100	
80		860							
81		840							
82		820		25	80	35	490	1950	
83		800							
84		780							
85		760		30	120	40	540	450	
86		740							
87		720							
88		700		30	140	60	4300	1450	
89		680							
90		660							
91		640		40	140	55	1650	770	
92		620							
93		600							
94		580		30	145	45	570	850	
95		560							
96		540							
97		520		20	90	30	800	435	
98		500							
99		480							
27700		379460		20	65	35	420	385	

287

058415

PROJECT: Mt Black

Stitt Grid.

CO-ORDINATES
LINE: 5 371 000 N (4)
FROM: 380 440E
TO: 379 960E

SAMPLED BY: WM + MG.

DATE: 28/8/79

MATERIAL: leaf litter

DEPTH: leaf litter

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	F.b.	Z.N.	C.u.	F.e.	M.N.	DESCRIPTION
27651	371000	380 440	20						
52		420		25	115	60	545	670	
53		400							
54		380							
55		360		30	80	45	2500	470	
56		340							
57		320							
58		300		25	75	50	2700	950	
59		280							
60		260							
61		240		25	155	70	1600	520	
62		220							
63		200							
64		180		20	85	50	4300	245	
65		160							
66		140							
67		120		25	95	65	4100	360	
68		100							
69		080							
70		060		30	100	50	1700	900	
71		040							
72		020							
73	380000			20	90	40	260	535	
74	379980								
27675	379960								

288

058416

PROJECT: Mt Black Stitt Grid.

CO-ORDINATES — LINE: 5 371 000 N (5) — FROM: 380 940 E — TO: 380 460 E

SAMPLED BY: WM + MG

DATE: 28/8/79

MATERIAL: leaf litter

DEPTH: leaf litter

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	P.b.	Z.N.	C.U.	F.e.	M.N.	DESCRIPTION
27620	371000	380940	20						
21		920							
28		900		15	145	45	470	1950	
29		880							
30		860							
31		840		25	100	40	790	370	
32		820							
33		800							
34		780		20	90	30	450	420	
35		760							
36		740							
37		720		35	115	25	570	230	
38		700							
39		680							
40		660		10	135	30	690	1300	
41		640							
42		620							
43		600		35	90	35	520	405	
44		580							
45		560							
46		540		25	185	55	365	2450	
47		520							
48		500							
49		480		25	90	25	240	450	
27650	371000	380460							

828

058417

PROJECT: Mt Black
Stitt Grid.

CO-ORDINATES
LINE: 5 371 000 N (6)
FROM: 381 440 E
TO: 380 960 E

SAMPLED BY: NM & MG.
DATE: 28/8/79

MATERIAL: leaf litter
DEPTH: leaf litter

BOOK N°
SHEET N°
JOB N°
DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +10	Pb.	Zn.	Cu.	Fe.	Mn.
27601	371000	381440	20	10	95	35	4150	800
02		420						
03		400						
04		380		20	100	40	3200	950
05		360						
06		340						
07		320		25	95	35	750	11100
08		300						
09		280						
10		260		20	70	25	680	650
11		240						
12		220						
13		200		45	115	50	1450	340
14		180						
15		160						
16		140		25	100	55	700	880
17		120						
18		100						
19		080		15	100	40	325	410
20		060						
21		040						
22		020		25	95	50	1900	450
23	368	000						
24	368	980						
27625	368	960		30	130	50	950	1250

058418

290

PROJECT: Mt Black

* Stitt Grid.

CO-ORDINATES

LINE: 5371000N (7)

FROM: 381780E

TO: 381460E

SAMPLED BY: MG

DATE: 23/8/79

MATERIAL: LEAF LITTER

DEPTH: LEAF LITTER.

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +10	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27184	371000	381780	20	15	60	10	850	415	
85		760							
86		740							
87		720		20	70	5	345	1100	
88		700							
89		680							
90		660		25	70	10	1800	305	
91		640							
92		620							
93		600		15	65	5	1400	590	
94		580							
95		560							
96		540		25	50	5	950	425	
97		520							
98		500							
99		480		25	55	10	3500	710	
27200		381460		15	55	5	675	595	

201

058419

PROJECT: MT BLACK. STITT GRID.

CO-ORDINATES
LINE: 5,371,000 N. (8)
FROM: 382,100 E.
TO: 381,800 E.

SAMPLED BY: M.G.
DATE: 14-8-79.

MATERIAL: LITTER
DEPTH: LITTER.

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	INTERVAL + (-)	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
25673	371000	382100	20	5	50	5	800	950	
74	"	0800							
75	"	0600							
76	"	0400		10	70	10	620	2100	
77	"	0200							
78	"	382000							
79	"	381980		10	100	5	490	800	
80	"	960							
81	"	940							
82	"	920		5	145	5	720	3450	
83	"	900							
84	"	880							
85	"	860		20	90	15	1050	1300	
86	"	840							
87	"	820							
25688	"	381800		20	70	10	695	1000	

292

058420

PROJECT: Mt Black
* Stitt Grid.

CO-ORDINATES
LINE: 5 371 000 N (9)
FROM: 362 260 E
TO: 362 120 E

SAMPLED BY: MG.
DATE: 23/8/79

MATERIAL: LEAF LITTER
DEPTH: LEAF LITTER

BOOK Nº
SHEET Nº
JOB Nº
DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Fe	Mn
27176	371000	362260	20	20	50	10	1950	410
77		240						
78		220						
79		200		20	40	5	1700	665
80		180						
81		160						
82		140		15	30	5	720	495
27183		362120						

293

058421

PROJECT: Mt Black * Stitt Grid

CO-ORDINATES — LINE: S 371 000 N (11) — FROM: 383 260 E — TO: 382 780 E

SAMPLED BY: MG

DATE: 21/6/79 – 23/6/79.

MATERIAL: LEAF LITTER

DEPTH: LEAF LITTER

BOOK N° / SHEET N° / JOB N°

DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES (N) S	(E) W	Interval	Pb	Zn	Cu	Fe	Mn.
27126	371000	383260	20					
27		2400						
28		2220		25	60	5	3850	1500
29		2000						
30		1860						
31		1660		15	40	10	1750	1050
32		1440						
33		1220						
34		1000		30	50	5	1410%	1400
35		0860						
36		0660						
37		0440		25	50	5	1150	2000
38		0220						
39	363000							
40	382980			25	40	5	3750	1900
41		9760						
42		9540						
43		9320		15	50	10	630	1200
44		9000						
45		8800						
46		8600		20	45	5	365	210
47		8340		15	50	5	650	490
48		8200		20	50	5	1600	435
49		8000		20	30	5	2850	460
27150	382780			25	100	30	3950	1750

294

058422

PROJECT: Mt Black

* Stitt Grid.

CO-ORDINATES — LINE: 5371 000 N (12) — FROM: 383 760 E — TO: 383 280 E

SAMPLED BY: MG

DATE: 21/8/79

MATERIAL: LEAF LITTER

DEPTH: LEAF LITTER

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27101	37 1000	38 3760	20	25	55	10	1800	1600	
02		7440							
03		7220							
04		7000		35	50	15	6550	1400	
05		6880							
06		6660							
07		6440		20	50	10	1100	2500	
08		6220							
09		6000							
10		5880		40	55	5	430	700	
11		5660							
12		5440							
13		5220		20	55	5	1400	2050	
14		5000							
15		4880							
16		4660		20	65	5	300	1300	
17		4440							
18		4220							
19		4000		30	50	5	1300	3100	
20		3880							
21		3660							
22		3440		15	50	5	635	2250	
23		3220							
24		3000							
25	38 3220			25	35	5	1650	900	

295

058423

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt BLACK	LINE: 5371000 N (14)	MG.	LEAF LITTER	SHEET Nº
* STITT GRID.	FROM: 384 000 E	DATE: 21/8/79	DEPTH: LEAF LITTER.	JOB Nº
	TO: 383 780 E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval + / −	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
25689	371000	384000	20						
90	NOT PLOTTED	383980							
91		960		5	45	10	620	3700	
92		940							
93		920							
94		900		10	60	10	850	2200	
95		880							
96		860							
97		840		10	30	10	1350	715	
98		820							
99		800							
25700		383780		10	75	10	320	1150	

LITTER ~~[illegible]~~ INFORMATION

CO ORDINATES INCORRECT SEE MARK OR BILL?

OK

was been mapped & Sampled [illegible]

296

058424

PROJECT: MT BLACK. STITT GRID.

CO-ORDINATES
LINE: 5371000N (15)
FROM: 384040E
TO: 383860E.

SAMPLED BY: MG.

DATE: 27/9/79.

MATERIAL: leaf litter

DEPTH: leaf litter.

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval + / E	Pb.	Zn.	Cu	Fe.	Mn	DESCRIPTION
26068	371000	384040	20m	15	60	15	300	1850	
69		384020							
70		384000		65	49	20	4000	170	
71		383980							
72		383960							
73		383940		15	39	15	430	1450	
74		383920							
75		383900							
76		383860		20	85	50	1450	1650	
26077		383860		25	100	40	415	1650	
~~78~~									

297

058425

SUBJECT: MH BLACK STITT GRID.	CO-ORDINATES LINE: 5 370500N (1) FROM: 378180E TO: 378660E			SAMPLED BY: MG + Jacques.		MATERIAL: leaf litter			BOOK No. / SHEET No. / JOB No.
				DATE: 28/12/79		DEPTH: leaf litter			
SAMPLE NUMBER	CO-ORDINATES C/S	C/W	Interval C/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
31370	370500	378180	20	15	55	20	505	1000	
71		200		8					
72		220							
73		240		NO SAMPLE TAKEN.					
74		260		5	60	20	675	1000	
75		280							
76		300							
77		320		45	50	10	420	1000	
78		340							
79		360							
80		380		20	45	20	800	190	
81		400							
82		420							
83		440		25	85	20	345	1300	
84		460							
85		480							
86		500		10	60	10	680	345	
87		520							
88		540							
89		560		30	55	15	610	350	
90		580							
91		600							
92		620		20	80	15	480	400	
93		640							
31394		378660							

298

058426

SHEET	Mt Black Stitt Grid.	CO-ORDINATES LINE: 5 370500N (2) FROM: 378 680E TO: 378 780E	SAMPLED BY: MG + Jacques. DATE:	MATERIAL: leaf litter DEPTH: leaf litter	BOOK No. SHEET No. JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval ⊙/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
31395	370500	378650	20m	20	45	10	5900	900	
96		700							
97		720							
98		740		15	45	15	590	470	
99		760							
31400		378780		10	75	15	1950	800	

299

058427

AREA: Mt Black Stitt Grid.

CO-ORDINATES
LINE: 5 370 500N (3)
FROM: 378 800E
TO: 378 900E.

SAMPLED BY: MG.
DATE: 28/12/79

MATERIAL: leaf litter
DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Fe	Mn
31671	370500	378800	20	10	60	10	1850	385
72		820						
73		840						
74		860		15	50	10	620	720
75		880						
31676		900		30	35	10	1100	175

300

058428

AREA: Mt. Black Still Grid

CO-ORDINATES
LINE: 5 370 500N (4)
FROM: 378 940E
TO: 378 920E

SAMPLED BY: BM

DATE: 28/12/79

MATERIAL: Leaf Litter

DEPTH: Leaf Litter

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval +/-	Pb	Zn	Cu	Fe	Mn
31851	37050	37840	20					
31852		37892		20	70	10	240	345

301

058429

PROJECT: Mt Black Still Grid

CO-ORDINATES
LINE: 5 370 500 N(S)
FROM: 379 420 E
TO: 378 960 E

SAMPLED BY: RM
DATE: 28-12-79

MATERIAL: Leaf litter
DEPTH: Leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Fe	Mn
3182	370500	379440	20					
27		420						
28		400		20	55	15	1350	270
29		380						
30		360						
31		340		15	35	15	800	485
32		320						
33		300						
34		280		15	30	10	1100	365
35		260						
36		240						
37		220		15	30	10	660	365
38		200						
39		180						
40		160		15	75	5	470	430
41		140						
42		120						
43		100		20	85	15	350	470
44		080						
45		060						
46		040		20	10	10	430	175
47		020						
48	379000							
49		980		30	80	10	320	315
50	378960							

302

058430

SUBJECT: Mt Black Still Grid		CO-ORDINATES LINE: 5 370 500 N (6) FROM: 379 940 E TO: 379 460 E				SAMPLED BY: B.M		MATERIAL: Leaf liffer			BOOK No
						DATE: 28-12-79		DEPTH: Leaf litter			SHEET No
SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval +/(-)	Pb	Zn	Cu		Fe	Mn		JOB No
31801	370500	379940		20	175	20		1200	1300		DESCRIPTION
02		920									
03		900									
04		880		5	40	10		330	1450		
05		860									
06		840									
07		820		25	110	10		1350	1500		
08		800									
09		780									
10		760		15	55	5		1200	585		
11		740									
12		720									
13		700		15	75	10		2000	575		
14		680									
15		660									
16		640		15	45	25		2400	265		
17		620									
18		600									
19		580		10	90	10		1000	600		
20		560									
21		540									
22		520		30	110	15		1350	1200		
23		500									
24		480									
31825		379460		20	40	15		625	300		

303

058431

AREA: Mt. Black Still Grid

CO-ORDINATES
LINE: 5 370 500N (7)
FROM: 379 940E
TO: 380 400E

SAMPLED BY: BM
DATE: 31/12/79

MATERIAL: Leaf Litter
DEPTH: Leaf Litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Fe	Mn
31853	370	0940	20	15	50	20	295	700
54		960						
55		980						
56		380 0000		20	75	10	255	590
57		0020						
58		0040						
59		0060		20	60	10	1500	690
60		0080						
61		0100						
62		0120		20	55	10	1500	800
63		0140						
64		0160						
65		0180		25	60	10	2600	725
66		0200						
67		0220						
68		0240		25	80	10	2750	900
69		0260						
70		0280						
71		0300		25	50	5	1000	2000
72		0320						
73		0340						
74		0360		5	40	10	695	900
75		0380						
31876		380 0400						

304

058432

AREA: Mt. Black Still Grid

CO-ORDINATES
LINE: 5 370 500N (S)
FROM: 380 420 E
TO: 380 880 E

SAMPLED BY: BM
DATE: 31-12-79

MATERIAL: Leaf Litter
DEPTH: Leaf Litter

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval +/(-)	Pb	Zn	Cu	Fe	Mn
31822	370	420	20	5	50	10	235	570
28		440						
29		460						
30		480		5	80	10	260	1000
31		500						
32		520						
33		540		15	90	5	1500	1500
34		560						
35		580						
36		600		15	50	10	950	490
37		620						
38		640						
39		660		20	50	5	240	435
40		680						
41		700						
42		720		30	55	5	4100	360
43		740						
44		760						
45		780		15	85	5	215	750
46		800						
47		820						
48		840		15	60	5	210	640
49		860						
31900		880		20	50	6	245	530

305

058433

AREA: MT BLACK

STITT GRID

CO-ORDINATES
LINE: 5,370,500N (9)
FROM: 380,900E
TO: 380,980E

SAMPLED BY: Bill

DATE: 31/12/79

MATERIAL: LITTER

DEPTH: N/A

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Fe	Mn	DESCRIPTION
32301	37050	38900	20m	10	10	65	2450	660	
02		9200							
03		9440							
04		9600		15	10	90	1650	1100	
05		9800							

306

058434

SITE: Mt Black

STITT GRID.

CO-ORDINATES
LINE: 5 370 500 N (10)
FROM: 351,100 E
TO: 351,000 E

SAMPLED BY: WM

DATE: 20/12/79.

MATERIAL: leaf litter

DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval E
31326	370500	351100	20
327		350	
328		360	
329		340	
330		320	
33131		351000	
332			
333			
334			

367

058435

SHEET	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black Stitt Grid.	LINE: 5 370 500 N (11)	WM	leaf litter	SHEET No
	FROM: 381 600	DATE	DEPTH	JOB No
	TO: 381 120	20/12/79	leaf litter	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	DESCRIPTION
31301	370,500	381,600	20	
02		580		
03		560		
04		540		
05		520		
06		500		
07		480		
08		460		
09		440		
10		420		
11		400		
12		380		
13		360		
14		340		
15		320		
16		300		
17		280		
18		260		
19		240		
20		220		
21		200		
22		180		
23		160		
24		140		
31325		381,120		

308

058436

AREA: Mt Black Stitt.

CO-ORDINATES
LINE: 5 370 SOON (12)
FROM: 381 860E
TO: 381 620E

SAMPLED BY: WM & STUDENTS

DATE: 20/12/79

MATERIAL: leaf litter

DEPTH: leaf litter

BOOK N°

SHEET N°

DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-
888	370 500	381 860	20m
889		840	
890		820	
891		800	
892		780	
893		760	
894		740	
895		720	
896		700	
897		680	
898		660	
899		640	
900		620	

309

058437

PROJECT: Mt Black

Stitt Grid.

CO-ORDINATES
LINE: S 370 500N (13)
FROM: 361 850E
TO: 382 360E

SAMPLED BY: Jacques + Bruce

DATE: 13/12/79

MATERIAL: LEAF LITTER

DEPTH: LEAF LITTER

BOOK N°

SHEET N°

JOB N°

DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES ⓝ/S	Ⓔ/W	Interval ⊙/-
306 1 2	370 500	361 850	20m
1 3		900	
1 4		920	
1 5		940	
1 6		960	
1 7		980	
1 8		382 000	
1 9		020	
2 0		040	
2 1		060	
2 2		080	
2 3		100	
2 4		120	
2 5		140	
2 6		160	
2 7		180	
2 8		200	
2 9		220	
3 0		240	
3 1		260	
3 2		280	
3 3		300	
3 4		320	
3 5		340	
306 3 6		360	

310

058438

PROJECT: MT BLACK STITT

CO-ORDINATES
LINE: 5 370 500 N (14)
FROM: 382 380 E
TO: 382 460 E

SAMPLED BY: J.S. + B. McQ.

DATE: 13/12/79

MATERIAL: Leaf Litter

DEPTH: Leaf Litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-
30637	370500	382360	20m
38		400	
39		420	
40		440	
30641		382460	

311

058439

SHEET	Mt Black Stitt.	CO-ORDINATES		SAMPLED BY	MATERIAL	BOOK No
		LINE:	5370500N (15)	WM + STUDENTS	leaf litter	SHEET No
		FROM:	382,620 E	DATE	DEPTH	JOB No
		TO:	382,480 E	20/12/79	leaf litter	

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval +/(-)	DESCRIPTION
31180	370500	382,620	20	
81		600		
82		580		
83		560		
84		540		
85		520		
86		500		
31187		382,480		

312

058440

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black Stitt.	LINE: 5 370 500N (16)	WM + Students.	leaf litter	SHEET No
	FROM: 383 120E	DATE	DEPTH	JOB No
	TO: 382 640E	20/12/79.	leaf litter	

SAMPLE NUMBER	CO-ORDINATES Ⓝ/S	CO-ORDINATES Ⓔ/W	Interval +/⊖	DESCRIPTION
31155	370500	383120	20	
56		100		
57		080		
58		060		
59		040		
60		020		
61		000		
62		382980		
63		960		
64		940		
65		920		
66		900		
67		880		
68		860		
69		840		
70		820		
71		800		
72		780		
73		760		
74		740		
75		720		
76		700		
77		680		
78		660		
31179		382640		

313

058441

PROJECT: Mt Black. Stitt Grid.

CO-ORDINATES
LINE: 5370000 N (1) & (5)
FROM: 380 100 E to 379960
to 378260 to 378580 E

SAMPLED BY: WM
DATE: 18/10/79

MATERIAL: leaf litter
DEPTH: leaf litter

BOOK N°
SHEET N°
JOB N°
DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb	Zn	Cu	Fe	Mn
28851	3700000	380 100	20m					
52		080		25	90	5	900	1500
53		060						
54		040						
55		020		25	80	5	515	1100
56		000						
57		379980						
58		379960		25	55	10	425	575
59	3700000	378260		20	35	10	1250	205
60		280						
61		300						
62		320		20	65	5	900	2150
63		340						
64		360						
65		380		20	50	10	2250	545
66		400						
67		420						
68		440		25	40	15	505	80
69		460						
70		480						
71		500		40	60	10	685	320
72		520						
73		540						
74		562		25	55	5	435	150
28875		378680						

314

058442

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt Black Stitt Grid.	LINE: 5370000 N (2)	WM	leaf litter	SHEET Nº
	FROM: 378600 E	DATE 18/10/79	DEPTH leaf litter	JOB Nº
	TO: 379080 E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval ⊕/⊖	P.b.	Z.N.	C.u.	F.e.	M.N.	DESCRIPTION
28876	370,000	378600	20						
77		620		15	35	5	900	180	
78		640							
79		660							
80		680		35	100	10	485	540	
81		700							
82		720							
83		740		30	70	15	900	900	
84		760							
85		780							
86		800		35	65	10	830	380	
87		820							
88		840							
89		860		25	40	10	2450	330	
90		880							
91		900							
92		920		20	45	10	1300	540	
93		940							
94		960							
95		980		5	45	10	475	825	
96		379000							
97		020							
98		040		5	65	10	515	1200	
99		060							
28900		379080							

315

058468

PROJECT: Mt Black Stitt Grid.

CO-ORDINATES — LINE: 5 370 000 N (31) — FROM: 379 100E — TO: 379 580E

SAMPLED BY: WM

DATE: 22/10/79

MATERIAL: leaf litter

DEPTH: leaf litter

BOOK N°

SHEET N°

JOB N°

DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (E)/-	Pb	Zn	Cu	Fe	Mn
29001	370 000	379 100	20m	5	85	10	850	645
02		120						
03		140						
04		160		20	40	10	725	450
05		180						
06		200						
07		220		5	55	10	565	425
08		240						
09		260						
10		280		10	30	10	1900	200
11		300						
12		320						
13		340		5	65	15	635	565
14		360						
15		380						
16		400		5	80	10	460	625
17		420						
18		440						
19		460		5	40	5	1400	225
20		480						
21		500						
22		520		5	60	5	465	405
23		540						
24		560						
25		580		15	45	5	1.15%	315

316

058444

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black Still Grid	LINE: 5 370000 N (4)	NM	leaf litter	SHEET No
	FROM: 379 600E	DATE	DEPTH	JOB No
	TO: 379 940E	22/10/79.	leaf litter	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	P.b.	Z.N.	C.U.	Fe.	M.N.	DESCRIPTION
29026	370,000	379600	20%						
27		620							
28		640		15	65	5	480	335	
29		660							
30		680							
31		700		5	25	10	600	245	
32		720							
33		740							
34		760		15	70	10	570	435	
35		780							
36		800							
37		820		5	50	10	4750	360	
38		840							
39		860							
40		880		5	60	10	615	800	
41		900							
42		920							
29043		379,940		10	85	15	950	800	

317

058445

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt Black	LINE: 5 370 000 N (6)	WM.	leaf litter	SHEET Nº
Stitt Grid.	FROM: 380 600 E	DATE: 18/10/79.	DEPTH: leaf litter	JOB Nº
	TO: 380 120 E			

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval +/(-)	P.b.	Z.N.	C.u.	F.e.	M.N.	DESCRIPTION
28826	370000	380600	20						
27		580							
28		560		20	60	10	765	1300	
29		540							
30		520							
31		500		35	55	10	2850	440	
32		480							
33		460							
34		440		25	55	5	850	1150	
35		420							
36		400							
37		380		25	70	5	800	1350	
38		360							
39		340							
40		320		15	45	5	375	390	
41		300							
42		280							
43		260		35	55	15	850	365	
44		240							
45		220							
46		200		10	30	5	1000	420	
47		180							
48		160							
49		140		40	55	10	1200	180	
28850		380120							

318

058446

PROJECT: MT BLACK STITT GRID.

CO-ORDINATES
LINE: 5 370 000 N (7)
FROM: 381 100 E
TO: 380 620 E

SAMPLED BY: WM.
DATE: 18/10/79

MATERIAL: leaf litter
DEPTH: leaf litter

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval F/O	Pb.	Zn.	Cu.	Fe.	Mn.	DESCRIPTION
28801	370000	381100	20	25	55	10	6100	900	
02		0080							
03		0060							
04		0040		25	55	10	7400	745	
05		0020							
06		0000							
07		380980		20	35	10	1200	690	
08		0960							
09		0940							
10		0920		20	45	10	1100	1400	
11		0900							
12		0880							
13		0860		20	35	5	1800	800	
14		0840							
15		0820							
16		0800		25	55	10	100%	1150	
17		0780							
18		0760							
19		0740		20	50	15	3500	950	
20		0720							
21		0700							
22		0680		25	75	10	2200	1150	
23		0660							
24		0640							
28825	370000	380620		20	40	10	735	850	

319

058447

PROJECT: Mt Black Stitt Grid.

CO-ORDINATES
LINE: S 370 000 N (B)
FROM: 381 280 E
TO: 381 120 E

SAMPLED BY: AM

DATE: 18/10/79

MATERIAL: leaf litter

DEPTH: leaf litter

BOOK Nº

SHEET Nº

JOB Nº

SAMPLE NUMBER	CO-ORDINATES (N) S	(E) W	Interval +10	P.b.	Z.N.	C.u.	F.e.	M.N.	DESCRIPTION
28692	370000	381280	20	25	50	110	3150	8500	
93		260							
94		240							
95		220		20	40	110	2050	13000	
96		200							
97		180							
98		160		20	45	110	2500	13500	
99		140							
28700		381120							

320

058448

PROJECT: Mt Black

STITT GRID.

CO-ORDINATES
LINE: 5370,000 N (9)
FROM: 381 300 E
TO: 381 780 E

SAMPLED BY: WM.

DATE: 27/8/79

MATERIAL: leaf litter

DESCRIPTION: leaf litter

SOCV N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES (N) S	(E) W	+/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27372	370000	381500	20m	15	45	5	405	4050	
73		3200							
74		3400							
75		3600		10	40	5	8000	395	
76		3800							
77		4000							
78		4200		10	35	5	430	390	
79		4400							
80		4600							
81		4800		15	35	5	465	570	
82		5000							
83		5200							
84		5400		10	55	5	1050	700	
85		5600							
86		5800							
87		6000		10	90	5	2000	10000	
88		6200							
89		6400							
90		6600		10	60	5	500	520	
91		6800							
92		7000							
93		7200		10	50	5	1500	1100	
94		7400							
95		7600							
27396	381	7800		15	30	15	590	295	

321

058449

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black Stitt Grid.	LINE: 5370000 N (10)	wm	leaf litter	SHEET No
	FROM: 381 800 E	DATE	DEPTH	JOB No
	TO: 381 860 E	27/8/79	leaf litter	

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (+)/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27397	370000	381800	20m						
98		820							
99		840		10	60	5	850	420	
27400		381860							

322

058450

AREA: Mt Black

STITT GRID.

CO-ORDINATES
LINE: 5 370 000 N
FROM: 382 360 E
TO: 382 540 E.

SAMPLED BY: WM. 12

DATE: 27/8/79

MATERIAL: leaf litter

DEPTH: leaf litter

BODY N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Increm. +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27526	370000	382360	20m						
27		400							
28		420		5	30	5	405	785	
29		440							
30		460							
31		480		15	100	10	475	1700	
32		500							
33		520							
27534		382540		10	105	5	585	760	

323

058451

PROJECT: MH Black

Stitt Grid.

CO-ORDINATES
LINE: 5 370 000 N. (13)
FROM: 383 040E
TO: 382 560E

SAMPLED BY: wm
DATE: 23/10/79

MATERIAL: leaf litter
DEPTH: leaf litter

BOOK N°
SHEET N°
JOB N°
DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval ×10	P.b.	Z.N.	C.u.	F.e.	M.N.
2904	370 000	383 040	20m	10	70	5	525	3050
45		020						
46		000						
47		382 980		35	35	5	1750	1450
48		960						
49		940						
50		920		15	40	5	1000	360
51		900						
52		880						
53		860		5	55	10	7100	120
54		840						
55		820						
56		800		10	55	5	640	315
57		780						
58		760						
59		740		5	65	15	8350	470
60		720						
61		700						
62		680		5	55	5	1250	365
63		660						
64		640						
65		620		5	100	5	575	900
66		600						
67		580						
2968		382 560		10	35	5	325	570

324

058452

PROJECT: Mt BLACK

STITT GRID.

CO-ORDINATES

LINE: 5369 500 N (1)

FROM: 378 540 E

TO: 378 820 E.

SAMPLED BY: BM + MM

DATE: 13/3/80.

MATERIAL: LEAF LITTER

DEPTH: LEAF LITTER.

SAMPLE NUMBER	CO-ORDINATES (N) S	(E) W	(Y) -	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
33941	3695000	3786540	22m	15	25	5	2750	270	
42		560							
43		580							
44		600		40	45	10	1000	520	
45		620							
46		640							
47		660		20	35	10	485	390	
48		680							
49		700							
50		720		15	10	10	1560	380	
51		740							
52		760							
53		780		5	20	5	1250	2000	
54		800							
33955		3788320		10	45	5	470	1600	

325

058453

PROJECT: Mt Black
STITT GRID.

CO-ORDINATES
LINE: 5 369 500 N (2)
FROM: 379 120 E.
TO: 378 840 E

SAMPLED BY: NM

DATE: 4/2/80

MATERIAL: leaf litter

DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Fe	Mn
337126	369 500	379 120	20m					
27		100						
28		080		10	5	90	800	1850
29		060						
30		040						
31		020		10	25	55	1050	1400
32		000						
33	378 980							
34		960		20	35	45	1050	1000
35		940						
36		920						
37		900		15	5	35	2900	555
38		880						
39		860						
337140	378 840			15	10	35	2250	800

326

058454

PROJECT: Mt Black. Skitt Grid

CO-ORDINATES
LINE: 5369500N (3)
FROM: 379620E.
TO: 379140E.

SAMPLED BY: WM.

DATE: 4/2/80

MATERIAL: leaf litter

DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Cu	Pb	Zn	Fe	Mn	DESCRIPTION
339001	5369500	379620	20m	10	5	25	730	1500	
02		600							
03		580							
04		560		15	15	50	3250	2550	
05		540							
06		520							
07		500		10	15	75	950	1550	
08		480							
09		460							
10		440		10	15	65	950	440	
11		420							
12		400							
13		380		10	5	45	1050	220	
14		360							
15		340							
16		320		10	20	100	900	445	
17		300							
18		280							
19		260		10	15	145	665	530	
20		240							
21		220							
22		200		10	10	40	1950	1450	
23		180							
24		160							
339025		379140		10	25	95	1150	2150	

327

058455

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOX No
Mt Black Stitt Grid.	LINE: 5369500N (4)	WM	leaf litter	SIZE No
	FROM: 379850E.	DATE	DEPTH	JOB No
	TO: 379640E	4/2/80	leaf litter	

SAMPLE NUMBER	CO-ORDINATES C/S	C/W	Interval +/-	Cu	Pb	Zn	Fe	Mn	DESCRIPTION
33788	369500	379860	20	15	20	40	2050	75	
89		860							
90		840							
91		820		15	5	25	1510	130	
92		800							
93		780							
94		760		10	5	25	1400	145	
95		740							
96		720							
97		700		10	20	45	550	650	
98		680							
99		660							
33800		379640		15	15	30	4100	575	

328

058456

AREA: Mt BLACK. STITT GRID.

CO-ORDINATES
LINE: 5 369 500 N. (5)
FROM: 380 & 320 E
TO: 379 900 E

SAMPLED BY: MG.
DATE: 31/1/80

MATERIAL: leaf litter
SOIL: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Au ppb	Cu	Pb	Zn	Fe	Mn	DESCRIPTION
33766	369,500 N	380 320 E	20						
67		300							
68		280		15	15	120	1750	395	
69		260							
70		240							
71		220		15	10	45	560	655	
72		200							
73		180							
74		160		10	10	20	575	1500	
75		140							
76		120							
77		100		15	15	30	900	1000	
78		080							
79		060							
80		040		10	10	25	1250	225	
81		020							
82		000							
83		980		10	5	40	415	215	
84		960							
85		940							
86		920		10	X	20	580	210	
33767	379,900 E			15	25	45	1550	320	

329

058457

PROJECT: Mt Black Stitgrid.

CO-ORDINATES
LINE: S 369 500N. (6)
FROM: 350 820E.
TO: 350 340E.

SAMPLED BY: MG.

DATE: 31/1/80.

MATERIAL: leaf litter

DEPTH: leaf litter

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval ·10	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
33741	369500	350820	20m	15	70	15	2250	1000	
42		8600							
43		7800							
44		7600		25	60	10	1450	400	
45		7400							
46		7200							
47		7000		25	60	15	2000	555	
48		6800							
49		6600							
50		6400		30	85	15	1550	660	
51		6200							
52		6000							
53		5800		35	55	10	495	655	
54		5600							
55		5400							
56		5200		25	55	20	4200	545	
57		5000							
58		4800							
59		4600		10	50	20	630	820	
60		4400							
61		4200							
62		4000		15	35	15	3400	380	
63		3800							
64		3600							
65		3400		10	55	10	560	900	

330

058458

PROJECT: MT. BLACK STITT GRID

CO-ORDINATES LINE: 5,369,500N (7) FROM: 380,840E TO: 381,320E

SAMPLED BY: J SAYERS.

DATE: 24/1/80.

MATERIAL: LITTER.

DEPTH: N/A.

BOOK No.

SHEET No.

JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL (m)	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
32759	369500	380840	20m	15	60	15	1200		
760		8600							
761		8800							
762		9000		35	60	15	675		
763		9200							
764		9400							
765		9600		20	80	20	2250		
766		9800							
767		381000							
768		0200		40	65	20	1900		
769		0400							
770		0600							
771		0800		20	65	15	5350		
772		1000							
773		1200							
774		1400		20	50	15	2300		
775		1600							
776		1800							
777		2000		30	40	15	4250		
778		2200							
779		2400							
780		2600		25	65	25	7100		
781		2800							
782		3000							
783		3200		25	45	15	2850		

331

058459

PROJECT: MT BLACK STITT GRID.

CO-ORDINATES
LINE: 5,369,500N (81)
FROM: 380,340E
TO: 380,660E

SAMPLED BY: J. SAYERS.

MATERIAL: Litter

DATE: 24/1/80

DEPTH: N/A.

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL (C)/-	DESCRIPTION	Pb	Zn	Cu	Fe	Mn
32784	369500	3340	20'						
85		3600							
86		3800			20	50	15	1750	530
87		4000							
88		4200							
89		4400			20	50	15	1950	1600
90		4600							
91		4800							
92		5000			15	35	15	900	745
93		5200							
94		5400							
95		5600			15	75	10	800	950
96		5800							
97		6000							
98		6200			20	50	15	2650	680
99		6400							
32800		6600			15	65	20	1850	345

332

058460

PROJECT: MT. BLACK Silt GRID

CO-ORDINATES LINE #: 5,369,500N (9)
FROM: 381,680E
TO: 381,900E

SAMPLED BY: E.S. M.G.

DATE: 8/4/80

MATERIAL: LITTER

DEPTH:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval + / -
34901	5369500	381680	20
02		381700	
03		381720	
04		381740	
05		381760	
06		381780	
07		381800	
08		381820	
09		381840	
10		381860	
11		381880	
34912		381900	

333

058461

PROJECT: Mt Black. Stitt Grid

CO-ORDINATES — LINE: 5 369 500N. (10) — FROM: 382 200E. — TO: 381 920E

SAMPLED BY: C.M.

DATE: 30/1/80.

MATERIAL: leaf litter

DEPTH: leaf litter

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL ÷10	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
33726	369,500	382,200	20						
27		1,180							
28		1160		20	30	15	1250	600	
29		1140							
30		1120							
31		1100		20	50	20	1400	235	
32		1080							
33		1060							
34		1040		15	75	10	280	245	
35		1020							
36		382,000							
37		381,980							
38		1960							
39		1940							
33740		381,920		35	50	10	640	1000	

334

058462

PROJECT: MT. BLACK

STITT GRID.

CO-ORDINATES
LINE: 5,364,000 N. (1)
FROM: 377,480E.
TO: 377,360E.

SAMPLED BY: W.M.

DATE: 30-10-74.

MATERIAL: Leaf Litter.

DEPTH: Leaf Litter.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe	Mn
29278	369000	377480	20					
279		4600		15	30	5	3600	410
280		4400						
281		4200						
282		4000		5	35	10	3800	210
283		3800						
29284		377360		15	55	10	2500	195

335

058463

PROJECT: MT. BLACK.

STITT GRID.

CO-ORDINATES
LINE: 5,369,000N. (2)
FROM: 377,980 E.
TO: 377,500 E.

SAMPLED BY: W.M.

DATE: 30-10-79

MATERIAL: Leaf Litter

DEPTH: Leaf Litter

BOOK No.

SHEET No.

JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Increm. +/-	Pb ppm	Zn ppm	Cu ppm	Fe	Mn	DESCRIPTION
29253	6900	377980	20 M						
54		9600							
55		9400		25	45	10	2150	1900	
56		9200							
57		9000							
58		8800		25	50	10	2900	1350	
59		8600							
60		8400							
61		8200		30	60	10	1950	1350	
62		8000							
63		7800							
64		7600		35	55	15	950	1150	
65		7400							
66		7200							
67		7000		5	30	15	4250	415	
68		6800							
69		6600							
70		6400		5	30	5	1650	390	
71		6200							
72		6000			20	35		145	
73		5800		10	[illegible]	[illegible]	2700	[illegible]	
74		5600							
75		5400							
76		5200		10	35	10	1700	1350	
29277		377500							

336

058464

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK STITT GRID.	LINE: 5,369,000 N. (3) FROM: 378,020 E. TO: 378,000 E.	W. M.	Leaf Litter	SHEET Nº
		DATE: 30-10-79.	DEPTH: Leaf Litter.	JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb ppb	Zn ppb	Cu ppb	Fe	Mn	DESCRIPTION
29251	369,000	378020	20 M						
29252	369,000	378000		20	55	10	1150	2700	

337

058465

PROJECT: MT. BLACK. STITT. GRID.

CO-ORDINATES
LINE: 5,369,000 N. (4)
FROM: 378,520 E.
TO: 378,040

SAMPLED BY: W. M.

DATE: 30-10-74.

MATERIAL: Leaf Litter.

DEPTH: Leaf Litter.

BOOK No.
SHEET No.
JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe	Mn	DESCRIPTION
29226	369,000	378,520	20 m						
227		500							
228		480		25	35	10	2700	435	
229		460							
230		440							
231		420		20	25	5	4200	135	
232		400							
233		380							
234		360		15	50	5	1950	525	
235		340							
236		320							
237		300		20	35	10	1950	330	
238		280							
239		260							
240		240		20	115	10	600	1500	
241		220							
242		200							
243		180		10	85	5	590	2150	
244		160							
245		140							
246		120		20	65	10	1000	260	
247		100							
248		80							
249		60		15	30	5	700	630	
250	368,940	378,040							

338

058466

PROJECT: MT. BLACK. STITT GRID

CO-ORDINATES
LINE: 5,369,000N (5)
FROM: 379,020E
TO: 378 540.

SAMPLED BY: W.M.

DATE: 30-10-79

MATERIAL: Leaf Litter

DEPTH: Leaf Litter

ROCK N°

SHEET N°

JOB N°

DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb ppm	Zn ppm	Cu ppm	Fe	Mn
29201	369,000	379,020	20	20	85	10	1200	4000
29202		378,000						
29203		378,980						
04		960		15	60	10	1100	1400
05		940						
06		920						
07		900		20	45	5	2300	2200
08		880						
09		860						
10		840		15	35	15	700	475
11		820						
12		800						
13		780		20	60	10	600	605
14		760						
15		740						
16		720		20	40	10	500	240
17		700						
18		680						
19		660		20	30	10	5300	605
20		640						
21		620						
22		600		10	30	5	4700	425
23		580						
24		560						
29225	369,000	378,540		25	30	10	2300	230

339

058467

AREA: Mt Black

Stiff Grid

CO-ORDINATES
LINE: 5,369,000N (6)
FROM: 379,520E
TO: 379,040E

SAMPLED BY: M.G

DATE: 21/12/79

MATERIAL: Leaf Litter

DEPTH: Leaf Litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval ÷10	Cu	Pb	Zn	Fe	Mn
322015	69000	37952	28	10	25	80	1000	2050
02								
03								
04				10	20	40	1700	215
05								
06								
07				10	25	50	740	280
08								
09								
10				10	10	50	220	1050
11								
12								
13				10	15	75	240	405
14								
15								
16				10	20	80	340	1000
17								
18								
19				10	10	30	165	315
20								
21								
22				10	15	40	1600	420
23								
24								
25	37900	37940		10	25	50	1300	900

340

058468

AREA: Mt Black

Stitt Grid.

CO-ORDINATES
LINE: 5 369 000 N (71)
FROM: 350,000 E.
TO: 379,540 E.

SAMPLED BY: MG.

DATE: 31/12/79.

MATERIAL: leaf litter

DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval ×10	Cu	Pb	Zn	Fe	Mn
31	369,000	350,000	20	20	40	50	465	410
78		379,980						
79		960						
80		940		15	15	60	505	460
81		920						
82		900						
83		880		25	25	50	1350	710
84		860						
85		840						
86		820		10	10	40	180	470
87		800						
88		780						
89		760		15	10	35	225	550
90		740						
91		720						
92		700		10	10	40	225	560
93		680						
94		660						
95		640						
96		620						
97		600						
98		580						
99		560						
320	370,000	540						

341

058469

AREA: MT BLACK

STITT GRID

CO-ORDINATES

LINE: 5,369,000N (81)

FROM: 380,000E

TO:

SAMPLED BY: MG, JS + GB

DATE: 31/12/79

MATERIAL: litter

DEPTH: N/A

SAMPLE NUMBER	CO-ORDINATES (N) S	(E) W	Interval 20m
3167	5369000	3800000	
78		3799800	
79		9600	
80		9400	
81		9200	
82		9000	
83		8800	
84		8600	
85		8400	
86		8200	
87		8000	
88		7800	
89		7600	
90		7400	
91		7200	
92		7000	
93		6800	
94		6600	
95		6400	
96		6200	
97		6000	
98		5800	
99		5600	
3200		5400	

342

058470

STREET: Mt Black Stitt Grid.

CO-ORDINATES
LINE: 5 369 000 N (9)
FROM: 380 540 E
TO: 380 060 E

SAMPLED BY: BM
DATE: 2/1/80

MATERIAL: Leaf litter
DEPTH: Leaf litter

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval ÷10	Co	Pb	Zn	Fe	Mn
32760	369000	380540	6					
61		520		15	10	55	880	1300
62		500						
63		480						
64		460		10	15	50	1120	900
65		440						
66		420						
67		400		15	20	45	1750	1200
68		380						
69		360						
70		340		15	10	60	280	700
71		320						
72		300						
73		280		20	15	60	550	710
74		260						
75		240						
76		220		15	15	10	530	550
77		200						
78		180						
79		160		15	20	70	360	360
80		140						
81		120						
82		100		10	10	50	400	365
83		080		15	30	90	540	1100
32300		380060						

343

058471

SHEET	Mt. Black Stitt Grid	CO-ORDINATES LINE: 5 369 000 N (10) FROM: 381 040 E TO: 380 560 E	SAMPLED BY B.M. DATE 2/1/80	MATERIAL Leaf Litter DEPTH Leaf Litter	BOOK No. SHEET No. JOB No.

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval +/(-)	Cu	Pb	Zn	Fe	Mn	DESCRIPTION
32251	369000	381040	20						
52		020							
53		000		5	20	50	1000	380	
54		380980							
55		960							
56		940		10	15	55	1200	520	
57		920							
58		900							
59		880		15	20	35	2400	325	
60		860							
61		840							
62		820		15	10	70	1050	750	
63		800							
64		780							
65		760		10	10	55	275	490	
66		740							
67		720							
68		700		10	10	45	365	670	
69		680							
70		660							
71		640		15	25	50	360	410	
72		620							
73		600							
74		580		10	15	90	360	2350	
75		380560							

344

058472

PROJECT: Mt Black Stitt Grid.

CO-ORDINATES
LINE: S 369 000N (13)
FROM: 382 080 E
TO: 382 180E

SAMPLED BY: wm
DATE: 29/10/79

MATERIAL: leaf litter
DEPTH: leaf litter

BOOK N°
SHEET N°
JOB N°
DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES (N)S	(E)W	Interval (+)/-	Pb ppm	Zn ppm	Cu ppm	Fe	Mn
29094	369,000	382 080	20m					
95		100						
96		120		15	50	10	5200	1100
97		140						
98		160						
99		382 180		15	25	10	4850	315
29100				NO SAMPLE TAKEN				

345

058473

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK. STITT GRID.	LINE: 5,369,000N. (14) FROM: 382,460 E. TO: 382,200 E.	W: M.	Leaf Litter	SHEET No
		DATE: 31-10-79	DEPTH: Leaf. Litter	JOB No

SAMPLE NUMBER	CO-ORDINATES (N)/S	CO-ORDINATES (E)/W	Interval +/⊖	Pb ppb	Zn ppb	Cu ppb	Fe	Mn	DESCRIPTION
26679	369,000	382,460	20						
80		440							
81		420		25	25	10	950	1000	
82		400							
83		380							
84		360		20	50	10	800	350	
85		340							
86		320							
87		300		15	35	10	400	420	
88		280							
89		260							
90		240		25	25	10	2700	185	
91		220		~~25~~	~~25~~				
26692		382,200		20	20	5	5900	120	

058474

346

PROJECT: MT. BLACK.

STITT GRID

CO-ORDINATES
LING: 5,369,000N. (15)
FROM: 382,960E.
TO: 382,480E.

SAMPLED BY: W.M.

DATE: 31-10-79.

MATERIAL: Leaf Litter.

DEPTH: Leaf Litter.

BOOK No.

SHEET No.

JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb PPM	Zn PPM	Cu PPM	Fe	Mn	DESCRIPTION
26540	6900	3829600	20	85	145	115	1200	520	
55	9400								
56	9200								
57	9000			35	20	30	1900	70	
58	8800								
59	8600								
60	8400			35	20	10	1500	60	
61	8200								
62	8000								
63	7800			65	15	15	635	80	
64	7600								
65	7400								
66	7200			25	25	10	900	125	
67	7000								
68	6800								
69	6600			35	15	10	2250	50	
70	6400								
71	6200								
72	6000			40	15	10	2650	70	
73	5800								
74	5600								
75	5400			35	15	5	800	45	
76	5200								
77	5000								
26780	8800	3824800		25	30	10	900	330	

347

058475

PROJECT: MT. BLACK SHITGRD

CO-ORDINATES
LINE: 5,368 500N (1)
FROM: 378 560E
TO: 378 360E

SAMPLED BY: E.S. MG. BM

DATE: 18/3/80

MATERIAL: LEAF LITTER

DEPTH:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Incem -10	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
340 01	368500	378560	20	35	35	10	2150	890	
002		378540							
003		378520							
004		378500		35	45	10	1450	730	
005		378460							
006		378460							
007		378440		45	45	15	1500	1200	
008		378420							
009		378400							
010		378380		25	30	5	1200	3500	
340 011		378360							

348

058476

PROJECT: MT BLACK STITT GRID

CO-ORDINATES
LINE: 5368500N (2)
FROM: 378960 E.
TO: 378580 E

SAMPLED BY: ES196. BM.

DATE: 18/3/80

MATERIAL: LEAF LITTER

DEPTH: LEAF LITTER

SAMPLE NUMBER	CO-ORDINATES (N/S)	(E/W)	Interval (+)	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
3998	5368500	378960	20m						
82		9440							
83		9200		20	55	10	3150	900	
84		9000							
85		8800							
86		8600		5	50	5	850	1350	
87		8400							
88		8200							
89		8000		15	60	5	1750	350	
90		7800							
91		7600							
92		7400		50	45	10	800	500	
93		7200							
94		7000							
95		6800		20	25	5	1750	410	
96		6600							
97		6400							
98		6200		30	40	5	1550	830	
99		6000							
4000		5800		25	40	5	1750	1150	

349

058477

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK Stiff GRID	LINE: 538500N (3)	MG.ES.BM	LEAF LITTER	SHEET No
	FROM: 379460 E	DATE 18/3/80	DEPTH LEAF LITTER	JOB No
	TO: 378980 E			

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
33956	368500	379460		20	70	10	1000	1200	
57		440							
58		420							
59		400		15	70	10	660	1200	
60		380							
61		360							
62		340		15	40	5	395	710	
63		320							
64		300							
65		280		20	40	10	1050	560	
66		260							
67		240							
68		220		10	45	5	850	1050	
69		200							
70		180							
71		160		20	30	10	6450	950	
72		140							
73		120							
74		100		20	75	10	380	370	
75		080							
76		060							
77		040		15	50	10	1100	1000	
78		020							
79		000							
80		378980		10	45	5	675	590	

350

058478

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK Stitt Grid	LINE: 5368500 N (4)	E.S.MG.BM	LEAF LITTER	SHEET No
	FROM: 379480 E	DATE 19/3/80	DEPTH —	JOB No
	TO: 379960 E			

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (+)/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
34012	368500	379480	20m						
13		500		30	60	10	1500	1150	
14		520							
15		540							
16		560		30	50	20	900	1150	
17		580							
18		600							
19		620		40	65	15	1050	660	
20		640							
21		660							
22		680		30	70	10	1150	1650	
23		700							
24		720							
25		740		10	20	5	1200	530	
26		760							
27		780							
28		800		30	80	15	2000	1000	
29		820							
30		840							
31		860		30	65	10	460	1900	
32		880							
33		900							
34		920		25	80	5	950	1900	
35		940							
36		379960							

351

058479

PROJECT: MT. BLACK Stiff Grid

CO-ORDINATES
LINE: 5,368,500 151
FROM: 379,980 E
TO: 380,460 E.

SAMPLED BY: ES. BY MG
DATE: 19/3/80

MATERIAL: LEAF LITTER.
DEPTH: Leaf litter

SAMPLE NUMBER	CO-ORDINATES (N) S	(E) W	Interval (+)/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
340337	368500	379780	20	30	50	10	2250	490	
340338		380000							
340339		380200							
340340		379900		30	35	5	675	700	
340341		380060							
340342		380080							
340343		380100		40	50	10	1400	1400	
340344		380120							
340345		380140							
340346		380160		25	45	10	1400	800	
340347		380180							
340348		380200							
340349		380220		25	70	10	1200	950	
340350		380240							
340351		380260							
340352		380280		15	35	10	1350	1050	
340353		380300							
340354		380320							
340355		380340		15	40	20	2850	1800	
340356		380360							
340357		380380							
340358		380400		15	100	10	800	2300	
340359		380420							
340360		380440							
340361	368500	380460		30	50	15	1350	2050	

352

058480

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK Stiff Grid	LINE: 5,368,500 N (6)	ES. BM. MG	LEAF LITTER	SHEET No
	FROM: 380,480 E	DATE 19/3/80	DEPTH	JOB No
	TO: 380,960			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
34062	368500	380480	20						
63		500							
64		520		25	30	15	2150	1400	
65		540							
66		560							
67		580		15	70	10	575	1150	
68		600							
69		620							
70		640		10	170	5	1800	1200	
71		660							
72		680							
73		700		10	85	5	1600	1250	
74		720							
75		740							
76		760		5	25	5	1500	3400	
77		780							
78		800							
79		820		10	25	10	2100	1560	
80		840							
81		860							
82		880		5	45	10	1050	600	
83		900							
84		920							
85		940		20	60	15	1000	1000	
86		380960							

353

058481

PROJECT: STITT GRID

CO-ORDINATES
LINE: 5,368,500 N (7)
FROM: 380,980 E
TO: 381,240 E

SAMPLED BY: E.G. B.M. M.G.

DATE: 19/3/80

MATERIAL: LEAF LITTER

DEPTH: —

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	(+)/-	Pb	Zn	Cu	Fe	Mn.	DESCRIPTION
3408 7	368500	380980							
1088		381000				15	2900	680	
1089		381020							
1090		381040							
1091		381060				15	4400	900	
1092		381080							
1093		381100							
0946		381120				10	2300	360	
1095		381140							
0947		381160							
0948		381180				10	2.15%	850	
1098		381200							
0949		381220							
3411010		381240				20	3000	450	

354

058482

PROJECT: MT. BLACK Stitt Grid

CO-ORDINATES
LINE: 5,368,500N (8)
FROM: 381,260 E
TO: 381,740 E

SAMPLED BY: MM. BM.

DATE: 20/3/80

MATERIAL: LEAF LITTER

DEPTH:

SAMPLE NUMBER	CO-ORDINATES (N) S	(E) W	Interval (0)/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
34201	5368500	381260	20m	25	35	10	1750	620	
02		280							
03		300							
04		320		15	40	25	1200	370	
05		340							
06		360							
07		380		25	30	20	2400	700	
08		400							
09		420							
10		440		20	30	20	2700	800	
11		460							
12		480							
13		500		10	35	20	4350	650	
14		520							
15		540							
16		560		15	35	20	3150	440	
17		580							
18		600							
19		620		10	55	10	4600	1150	
20		640							
21		660							
22		680		5	15	5	2600	1150	
23		700							
24		720							
34225		381740		5	80	20	1150	1000	

355

058483

PROJECT: MT. BLACK
Stitt GRID

CO-ORDINATES
LINE: 6,368,500 N
FROM: 381,760 E
TO: 382,140 E

SAMPLED BY: MM. BM
DATE: 20/3/80

MATERIAL: LEAF LITTER
DEPTH:

BOOK No.
SHEET No.
JOB No.

SAMPLE NUMBER	CO-ORDINATES (N) S	(E) W	Interval (+)/-	Pb	Zn	Cu	Fe	Mn.	DESCRIPTION
342267	6,368,500	381760	20m	~~55~~					
27		381780							
28		381800		10	40	10	1050	610	
29		381820							
30		381840							
31		381860		15	40	10	900	570	
32		381880							
33		381900							
34		381920		15	40	10	1050	820	
35		381940							
36		381960							
37		381980		15	20	5	655	450	
38		382000							
39		382020							
40		382040		10	50	5	1400	900	
41		382060							
42		382080							
43		382100		25	15	10	675	170	
44		382120							
45		382140		20	15	10	665	200	

356

058484

PROJECT: MH BLACK STITT GRD.

CO-ORDINATES: LINE: 5 368 000 N (1) FROM: 377 920 E TO: 377 660 E.

SAMPLED BY: M6+68.

DATE: 6/12/79.

MATERIAL: leaf litter.

DEPTH: leaf litter.

BOOK No.

SHEET No.

JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +Ø	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
30826	368000	377920	20	10	70	10	380	3100	
27		900							
28		850							
29		860		25	50	10	800	505	
30		840							
31		820							
32		800		15	45	20	2150	525	
33				NO SAMPLE TAKEN.					
34		760							
35		740							
36		720		20	40	10	2050	950	
37		700							
38		680							
30839		377660		25	50	30	2250	265	

357

058485

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
Mt Black. Stitt Grid.	LINE: 5,368,000N (2)	MG + GB.	Leaf Litter	SHEET No
	FROM: 378400E	DATE: 6/12/79	DEPTH: leaf litter	JOB No
	TO: 377940E			

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +E	Pb	Zn	Cu	Fe	Zn	DESCRIPTION
30801				NO SAMPLE TAKEN					
02	368,000	378,400	20	20	100	15	950	2250	
03		350							
04		360							
05		340		25	60	20	1650	1650	
06		320							
07		300							
08		280		25	50	20	850	1250	
09		260							
10		240							
11		220		10	30	15	265	1400	
12		200							
13		180							
14		160		15	35	20	2350	650	
15		140							
16		120							
17		100		20	50	15	950	1050	
18		080							
19		060							
20		040		20	50	15	950	1100	
21		020							
22		000							
23		377,980		15	40	10	1800	700	
24		960							
30825		377940							

358

058486

AREA: MT BLACK
STIT GRID

CO-ORDINATES
LINE: 5,368,000 N (3)
FROM: 378,520 E
TO: 378,420 E

SAMPLED BY: WM
DATE: 30/11/79

MATERIAL: LEAF LITTER
DEPTH: LEAF LITTER

SAMPLE NUMBER	CO-ORDINATES ⓝ/S	CO-ORDINATES Ⓔ/W	Interval +/Ⓔ	Pb	Zn	Cu	Fe	Mn
30ZS1	5368000	378520	20m					
30ZS2		378500		50	70	25	2650	1200
30ZS3		378480						
30ZS4		378460						
30ZS5		378440		30	35	20	5300	1350
30ZS6		378420						

358

058487

LOCALE: MT BLACK STITT GRID

CO-ORDINATES
LINE: 5,368,000N (4)
FROM: 379,020 E
TO: 378,540 E

SAMPLED BY: WM

DATE: 30/11/79

MATERIAL: LEAF LITTER

DEPTH: LEAF LITTER

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/0	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
302261	368000	379020	20m						
302271		379000							
302281		378980		20	40	20	700	140	
302291		378960							
302301		378940							
302311		378920		20	60	15	1050	245	
302321		378900							
302331		378880							
302341		378860		15	55	10	1400	355	
302351		378840							
302361		378820							
302371		378800		20	60	20	520	405	
302381		378780							
302391		378760							
302401		378740		35	65	30	4900	1700	
302411		378720							
302421		378700							
302431		378680		15	65	20	850	1800	
302441		378660							
302451		378640							
302461		378620		30	70	25	1300	1600	
302471		378600							
302481		378580							
302491		378560		20	155	15	1000	1200	
302501		378540							

360

058488

PROJECT: Mt BLACK
STITT GRID.

CO-ORDINATES
LINE: 5 365 000N (5)
FROM: 379,520E
TO: 379,040E

SAMPLED BY: WM
DATE: 30/11/79

MATERIAL: * LEAF LITTER
DEPTH: LEAF LITTER.

SAMPLE NUMBER	CO-ORDINATES (N) S	(E) W	INTERVAL 20	Pb	Zn	Co	Fe	Mn
30201	365,000	379,520		15	65	15	800	685
30202		379,500						21
30203		379,480			6			
30204		379,460		15	50	15	1250	285
30205		379,440						
30206		379,420						
30207		379,400		25	60	10	505	425
30208		379,380						
30209		379,360						
30210		379,340		20	50	10	1300	460
30211		379,320						
30212		379,300						
30213		379,280		15	10	15	500	650
30214		379,260						
30215		379,240						
30216		379,220		25	60	30	2000	250
30217		379,200						
30218		379,180						
30219		379,160		15	95	15	1350	530
30220		379,140						
30221		379,120						
30222		379,100		30	105	40	640	140
30223		379,080						
30224		379,060						
30225		379,040		25	90	15	420	335

361

058489

PROJECT: Mt Black — Stitt Grid.

CO-ORDINATES — LINE: 5 367 500N. (1) — FROM: 377 920E. — TO: 377 560E.

SAMPLED BY: Jacques Sayers. — DATE: 9/1/80.

MATERIAL: leaf litter — DEPTH: leaf litter

ROCK No. — SHEET No. — JOB No. — DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb	Zn	Cu	Fe	Mn
32701	367500	377920	20m	5	25	10	3900	570
02		900						
03		880						
04		860		15	70	10	370	1200
05		840						
06		820						
07		800		5	35	10	1145	1900
08		780						
09		760						
10		740		5	35	15	1175	950
11		720						
12		700						
13		680		10	40	20	1050	1200
14		660						
15		640						
16		620		5	50	15	295	1500
17		600						
18		580						
32719	377560			15	65	20	1350	530

362

058490

PROJECT: MH Black

Stitt Grid.

CO-ORDINATES
LINE: 5 367 500N. (2)
FROM: 378,380E.
TO: 377,940E

SAMPLED BY: Jacques Sayers.
DATE: 9/1/80.

MATERIAL: leaf litter
DEPTH: leaf litter

ROCK Nº
SHEET Nº
JOB Nº
DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb	Zn	Cu	Fe	Mn
32678	367500	378380	20m					
79		360						
80		340		15	50	15	245	820
81		320						
82		300						
83		280		20	40	20	210	1100
84		260						
85		240						
86		220		15	40	15	325	660
87		200						
88		180						
89		160		15	50	15	1300	710
90		140						
91		120						
92		100		XX	55	10	155	1150
93		080						
94		060						
95		040		15	40	20	1550	740
96		020						
97		000						
98	377980			5	40	15	325	900
99		960						
32700	377940							

363

058491

STUDIES: Mt Black Stitt Grid

CO-ORDINATES
LINE: 5 367 500N (3)
FROM: 378, 550E
TO: 378, 400E.

SAMPLED BY: Jacques Sayers
DATE: 9/1/80

MATERIAL: leaf litter
DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb	Zn	Cu	Fe	Mn
32653	367,500	378	850	20m	10	40	15	1250	1200
54			860					
55			840					
56			820		15	30	15	200	1300
57			800					
58			780					
59			760		10	50	10	950	3400
60			740					
61			720					
62			700		5	50	10	105	1250
63			680					
64			660					
65			640		10	60	10	475	1800
66			620					
67			600					
68			580		15	45	20	110	1450
69			560					
70			540					
71			520		5	60	15	275	2500
72			500					
73			480					
74			460		15	55	15	3600	2400
75			440					
76			420					
32677		378	400		10	40	15	165	1900

364

058492

PROJECT: MT BLACK. STITT GRID

CO-ORDINATES
LINE: 5,367,500N (4)
FROM: 379,160E
TO: 378,900E

SAMPLED BY: BILL.

DATE: 22/1/80

MATERIAL: Litter.

DEPTH: N/A.

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
3274 45	367500	379160	20m						
46		140							
47		120		10	20	10	605	375	
48		100							
49		080							
50		060		20	50	10	670	2350	
51		040							
52		020							
53	379000			20	35	10	560	900	
54	378980								
55		960							
56		940		25	50	30	1550	585	
57		920							
58		900		15	55	20	615	1850	

365

058493

PROJECT: MT BLACK STITT GRID

CO-ORDINATES
LINE: 5 367 500N (S)
FROM: 379 660E
TO: 379 180E

SAMPLED BY: BILL

DATE: 22/1/80

MATERIAL: Litter

DEPTH: Litter

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL + (-)	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
32720	36 75 00	37 96 00	20m	20	95	10	1050	1700	
21		6400							
22		6200							
23		6000		25	50	10	800	1400	
24		5800							
25		5600							
26		5400		20	60	15	1750	950	
27		5200							
28		5000							
29		4800		25	40	10	1000	655	
30		4600							
31		4400							
32		4200		5	50	10	1050	695	
33		4000							
34		3800							
35		3600		20	45	15	3650	1000	
36		3400							
37		3200		25	55	15	1000	800	
38		3000		25	35	15	1750	1100	
39		2800							
40		2600							
41		2400		15	60	15	480	2900	
42		2200							
43		2000							
44		1800		20	40	15	1250	850	

366

058494

PROJECT: MT BLACK STITT GRID

CO-ORDINATES: LINE: 5,367,000 N (1) FROM: 377,880 E TO: 378,360 E

SAMPLED BY: WM

DATE: 6/12/79

MATERIAL: LEAF LITTER

DEPTH: LEAF LITTER

BOOK No:

SHEET No:

JOB No:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval E/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
30257	367000	377880	20	20	80	15	1.36%	780	
30258		377900							
30259		377920							
30260		377940		35	40	15	1700	1800	
30261		377960							
30262		377980							
30263		378000		15	90	15	520	1900	
30264		378020							
30265		378040							
30266		378060		20	35	25	700	700	
30267		378080							
30268		378100							
30269		378120		15	70	20	1400	2650	
30270		378140							
30271		378160							
30272		378180		25	50	20	1200	1500	
30273		378200							
30274		378220							
30275		378240		25	35	40	2100	1600	
30276		378260							
30277		378280							
30278		378300		15	60	30	950	2200	
30279		378320							
30280		378340							
30281		378360		15	50	25	420	3100	

367

058495

PROJECT: MT BLACK
STATT GRID

CO-ORDINATES
LINE: 5,367,000 N (Z)
FROM: 378,380 E
TO: 378,740 E

SAMPLED BY: WM
DATE: 6/12/79

MATERIAL: LEAF LITTER
DEPTH: LEAF LITTER

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Fe	Zn	DESCRIPTION
30282	367000	378380	20						
30283		378400							
30284		378420		25	80	35	3950	2250	
30285		378440							
30286		378460							
30287		378480		20	45	20	435	1200	
30288		378500							
30289		378520							
30290		378540		35	60	40	1700	1600	
30291		378560							
30292		378580							
30293		378600		25	40	25	1150	700	
30294		378620							
30295		378640							
30296		378660		15	80	25	395	3150	
30297		378680							
30298		378700							
30299		378720		25	45	20	1000	1650	
30300		378740		15	40	30	850	655	

368

058496

PROJECT: MT BLACK STTT GRID

CO-ORDINATES — LINE: 5,367,000 N (3) — FROM: 378,760 E — TO: 378,960 E

SAMPLED BY: WM.

DATE: 6/12/79

MATERIAL: LEAF LITTER

DEPTH: LEAF LITTER

ROCK N°

SHEET N°

DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES (N) S	(E) W	INTERVAL (O)/-	Pb	Zn	Cu	Fe	Mn
30601	367000	378760	20m	20	30	20	3900	635
30602		378780						
30603		378800						
30604		378820		30	50	20	1200	1100
30605		378840						
30606		378860						
30607		378880		55	65	20	1500	1150
30608		378900						
30609		378920						
30610		378940		20	35	10	850	365
30611		378960		25	50	15	850	540

369

058497

AREA: Mt Black Stitt Grid.

CO-ORDINATES
LINE: 5367 000N. (4)
FROM: 378 960E.
TO: 378 860E.

SAMPLED BY: G. Bessel.
DATE: 7/1/80.

MATERIAL: leaf litter
DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Cu	Pb	Zn	Fe	Mn
32626	367 000	378 960					
27		940					
28		920	20	15	30	235	1120
29		900					
32630		378 860	15	20	35	400	575

370

058498

AREA: Mt Black

Stitt Grid.

CO-ORDINATES
LINE: 5 367000N. (5)
FROM: 379 460E.
TO: 378,960E

SAMPLED BY: G. Bessel.

DATE: 7/1/80.

MATERIAL: leaf litter

DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Intervals /10	Cu	Pb	Zn	Fe	Mn
S26601	367000	379460	22m	10	20	70	220	660
02		440						
03		420						
04		400		10	5	80	360	800
05		380						
06		360						
07		340		10	10	40	195	420
08		320						
09		300						
10		280		15	15	80	380	2200
11		260						
12		240						
13		220		15	15	55	1500	2250
14		200						
15		180						
16		160		15	25	40	570	850
17		140						
18		120						
19		100		10	15	25	290	1800
20		080						
21		060						
22		040		10	10	30	310	680
23		020						
24		000						
S26625	378980			20	20	35	335	410

371

058499

PROJECT: Mt Black. Stitt Grid.

CO-ORDINATES
LINE: 5 366 000N. (2)
FROM: 377 420E.
TO: 377 860E.

SAMPLED BY: LIM

DATE: 1/11/79.

MATERIAL: leaf litter

DEPTH: leaf litter

BOOK No.

SHEET No.

JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	DESCRIPTION
26078	366,000	377 420	20m	
79		440		
80		460		
81		480		
82		500		
83		520		
84		540		
85		560		
86		580		
87		600		
88		620		
89		640		
90		660		
91		680		
92		700		
93		720		
94		740		
95		760	—	NO SAMPLES TAKEN.
96		780	—	
97		800	—	
98		820	—	
99		840	—	
26100		377 860	—	

372

058500

PROJECT: MT. BLACK STITT

CO-ORDINATES
LINE: 5366000N (31)
FROM: 377760E
TO: 377860E

SAMPLED BY: M.G.

DATE: 1/11/79

MATERIAL: LEAF LITTER

DEPTH: LEAF LITTER.

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES (N/S)	(E/W)	INTERVAL (+/-)	DESCRIPTION
26095	3660003	77760	20	NO SAMPLES TAKEN
96		7780		
97		8000		
98		8220		
99		8440		
26100	3660003	77860		NO SAMPLES TAKEN

373

058501

PROJECT: Mt Black
Farm Creek Grid.

CO-ORDINATES
LINE: 385 500 E
FROM: 5381420N
TO: 5381580N

SAMPLED BY: MG.
DATE: 3/9/79

MATERIAL: leaf litter
DEPTH: leaf litter

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27575	3814200	385500	20						
576	4460								
577	4600			5	95	5	1050	950	
578	4800								
579	5000								
580	5200			5	45	10	1800	405	
581	5400								
582	5600								
27583	3815800			5	30	5	2550	535	
	16								

374

058502

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK FARM CREEK	LINE: 5,383,600N FROM: 383,200E TO: 382,720E	MG. ES. GI	LEAF LITTER	SHEET No
		DATE: 24/3/80	DEPTH: —	JOB No

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (+/-)	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
34246	383600	383200	20	10	50	25	1450	120	
47		180							
48		160							
49		140		10	40	55	1550	195	
50		120							
51		100							
52		080		10	25	20	445	105	
53		060							
54		040							
55		020		15	30	50	2600	40	
56		383000							
57		382980							
58		382960							
59		940		20	55	60	2650	275	
60		920							
61		900							
62		880		5	35	20	900	175	
63		860							
64		840							
65		820		5	30	50	1000	380	
66		800							
67		780							
68		760		5	20	20	620	305	
69		740							
34270		382720							

375

058503

PROJECT: Mt Black / Farm Creek

CO-ORDINATES — LINE: 5,383,600N — FROM: 382,700 E — TO: 382,280E

SAMPLED BY: MG ES GT

DATE: 29/3/80

MATERIAL: LEAF LITTER

DEPTH:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
3421	38 36 00	382 700 E	80	5	30	40	1600	360	
22		680							
23		660							
24		640		5	20	20	1000	210	
25		620							
26		600							
27		580		5	20	30	4350	235	
28		560							
29		540							
30		520		5	30	15	1650	460	
31		500							
32		480							
33		460		5	20	30	2850	125	
34		440							
35		420							
36		400		6	30	20	1100	135	
37		380							
38		360							
39		340		5	20	20	1950	385	
40		320							
41		300							
3442	38 22 80			45	170	20	1500	1400	

376

058504

PROJECT: MT. BLACK FARM CREEK	CO-ORDINATES LINE: S 383.400 N	SAMPLED BY: MG: ES.	MATERIAL: LEAF LITTER.	BOOK No.	
	FROM: 382.900 E	DATE: 25/3/80	DEPTH: —	SHEET No.	
	TO: 383.180 E			JOB No.	

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (+)/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
34520	383400	382900	20			~~20~~			
27		920							
28		940		5	30	20	900	145	
* 29		960							
30		980							
31		383000		10	15	30	2500	485	
32		383020							
33		040							
34		060		5	20	25	2250	95	
35		080							
36		100							
37		120		5	30	30	1250	850	
38		140							
39		160							
34540		383180		15	25	20	1200	185	

* NO SAMPLE TAKEN

377

058505

PROJECT: MT. BLACK
FARM CREEK

CO-ORDINATES
LINE: 5,383,400 N
FROM: 382,400 E
TO: 382,800 E

SAMPLED BY: MG/ES
DATE: 24/3/80

MATERIAL: LEAF LITTER
DEPTH:

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Elevation (+)/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
345 01	38340	38240	20	5	20	20	1050	555	
02		420							
03		440							
04		460		10	20	15	900	1350	
05		480							
06		500							
07		520		10	25	40	3500	790	
08		540							
09		560							
10		580		10	30	25	2300	460	
11		600							
12		620							
13		640		15	20	20	2250	1300	
14		660							
15		680							
16		700		10	20	25	950	200	
17		720							
18		740							
19		760		5	25	40	1800	595	
20		780							
21		800							
22		820		10	20	25	1100	365	
23		840							
24		860							
345 25	38340	38825		5	10	20	1000	25	

378

058506

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BODY No.
MT. BLACK FARM CREEK	LINE: 5,383,400N FROM: 382,240 E TO: 382,380 E	MG ES GI DATE: 24/3/80	CLAY LATER DEPTH	SHEET No. JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
34243	383400	382240	20	5	30	20	660	440	
44		260							
45		280							
46		300		5	25	20	600	275	
47		320							
48		340							
49		360		5	20	30	1250	400	
34300		382380							

379

058507

PROJECT: Mt Black
Farm Creek Grid

CO-ORDINATES
LINE: 5381600N
FROM: 385440E
TO: 385880E

SAMPLED BY: MG
DATE: 4/9/79

MATERIAL: leaf litter
DEPTH: leaf litter

BOOK No.
SHEET No.
JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Inserval +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27801	381600	385440	20	5	55	35	460	440	
02		460							
03		480							
04		500		15	85	80	900	720	
05		520							
06		540							
07		560		5	75	50	290	900	
08		580							
09		600							
10		620		10	75	55	430	400	
11		640							
12		660							
13		680		5	85	50	450	1000	
14		700							
15		720							
16		740		5	90	40	230	1300	
17		760							
18		780							
19		800		5	55	40	300	280	
20		820							
21		840							
22		860		35	130	45	490	350	
27823		385880		10	75	35	1800	720	

380

058508

PROJECT: Mt Black
Farm Creek Grid.

CO-ORDINATES
LINE: 5381 600N
FROM: 385 100E
TO: 385 420E

SAMPLED BY: MG.
DATE: 4/9/79

MATERIAL: leaf litter
DEPTH: leaf litter

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	P.b.	Z.N.	C.u.	Fe	M.N.	DESCRIPTION
27584	381 600	385 100	20	5	65	50	700	790	
85		120							
86		140							
87		160		5	70	45	1000	1300	
88		180							
89		200							
90		220		5	50	35	1200	1000	
91		240							
92		260							
93		280		5	50	40	2650	480	
94		300							
95		320							
96		340		5	55	55	850	940	
97		360							
98		380							
99		400							
27600		385 420		5	60	50	8000	330	

381

058509

PROJECT: Mt Black

* Farm Creek Grid.

CO-ORDINATES
LINE: 5 381 400 N
FROM: 385 380 E
TO: 385 100 E

SAMPLED BY: MG.

DATE: 3/9/79

MATERIAL: leaf litter

DEPTH: leaf litter

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27560	381,400	385,380	20						
61		360							
62		340		5	20	5	800	375	
63		320							
64		300							
65		280		5	30	10	830	470	
66		260							
67		240							
68		220		10	25	10	3850	780	
69		200							
70		160							
71		160		5	30	5	695	555	
72		140							
73		120							
27574		385,100		5	50	5	775	1700	

382

058510

PROJECT: Mt Black
** Farm Creek Grid.

CO-ORDINATES
LINE: 5381400 N
FROM: 385 880 E
TO: 385 400 E

SAMPLED BY: MG.
DATE: 3/9/79

MATERIAL: leaf litter
DEPTH: leaf litter

BOX #
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
27535	3814000	385880	20m						
36		860		10	30	5	470	735	
37		840							
38		820		5	30	5	365	555	
39		800							
40		780							
41		760		5	30	5	545	370	
42		740							
43		720							
44		700		10	40	5	575	460	
45		680							
46		660							
47		640		10	35	5	560	170	
48		620							
49		600							
50		580		5	40	5	450	480	
51		560							
52		540							
53		520		5	25	5	635	1000	
54		500							
55		480							
56		460							
57		440							
58		420							
27559		385400		5	30	5	1050	380	

383

058511

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK NO.
MT. BLACK COLEBROOK	LINE: 5,372,000 N FROM: 575,380 E TO: 574,900 E	MG, ES, MM DATE: 26/3/80	LEAF CITTER DEPTH:	SHEET NO. VOL. NO.

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval +/-	Pb	Zn	Cu	Fe	Mn	OBSERVATION
34541	372000	575380	20	15	50	55	6800	615	
42		360							
43		340							
44		320		15	40	35	2700	470	
45		300							
46		280							
47		260		15	50	30	1000	285	
48		240							
49		220							
50		200		10	55	60	1.60%	560	
51		180							
52		160							
53		140		15	60	30	6400	330	
54		120							
55		100							
56		080		10	50	40	7250	280	
57		060							
58		040							
59		020		10	45	25	3850	250	
60		575000							
61		574980							
62		960		5	65	20	3900	385	
63		940							
64		920							
34565		574900		15	50	25	2.70%	680	

384

058512

PROJECT: MT BLACK COCKBROOK

CO-ORDINATES
LINE: 5,372000 N
FROM: 574,880 E
TO: 574 660 E

SAMPLED BY: M.G. ES. MM.
DATE: 26/3/80

MATERIAL: LITTER
DEPTH:

SAMPLE NUMBER	CO-ORDINATES (N/S)	CO-ORDINATES (E/W)	Interval +/(-)	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
34566	372000	574880	20						
67		8860							
68		8840		10	50	30	2000	2100	
69		8820							
70		8800							
71		7880		15	40	30	1900	2000	
72		7860							
73		7840							
74		7820		15	40	15	3600	1050	
75		7800							
76		8780							
34577	372000	574660		10	50	10	2850	455	

385

058513

PROJECT: MT. BLACK

COLEBROOK HILL GRID

CO-ORDINATES
LINE: 5371900 N.
FROM: 375380 E.
TO: 375240 E.

SAMPLED BY: M.G. E.S. M.M.

DATE: 26/3/80

MATERIAL: LITTER.

DEPTH:

BOOK N°:

SHEET N°:

PAGE N°:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval ÷10	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
34593	371900	375380	20	15	145	80	5.70%	1100	
9416		360							
9515		340							
9616		320		20	70	45	4550	1150	
9717		300							
9818		280							
9919		260		10	45	70	1.80%	585	
34601	371900	375240							

0585514

386

PROJECT: Mt. Black — Colebrook Hill

CO-ORDINATES — LINE: 5 371 900N; FROM: 375 220E.; TO: 374 960E.

SAMPLED BY: MG

DATE: 26/3/80

MATERIAL: leaf litter

DEPTH: leaf litter

BOOK Nº

SHEET Nº

JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Increm. +/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
34701	371900	375220	20				1.60%		
02		200		10	40	85	1.60%	315	
03		180							
04		160							
05		140		15	40	40	1.90%	490	
06		120							
07		100							
08		080		20	50	180	3.60%	950	
09		060							
10		040							
11		020		10	30	10	2250	265	
12		000							
13	374960								
34714	374960			15	50	40	8000	305	

387

058515

AREA: Mt BLACK

COLE BROOK HILL GRID

CO-ORDINATES
LINE: 5371900N
FROM: 374660E
TO: 374940E

SAMPLED BY: M.G. E.S. M.M.
DATE: 26/3/80

MATERIAL: LF LITTER
DEPTH:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Au	Pb	Zn	Cu	Fe	Mn
345788	371900	374660	20	10	50	40	1050	1200
789		6680						
790		7000						
791		7120		40	95	105	3300	740
792		7140						
793		7600						
794		7780		20	70	55	3400	400
795		8000						
796		8220						
797		8440		10	65	20	2150	550
798		8660						
345899		8880						
900		9000		5	90	20	1450	695
901		9220						
345923	371900	374940						

388

058514

TITLE: MT. BLACK COLEBROOK

CO-ORDINATES
LINE: 5,371,800 N
FROM: 375,480 E
TO: 375,000 E

SAMPLED BY: MM:ES

DATE: 1/4/80

MATERIAL: LEAF LITTER

DEPTH:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
74	371800	375480	5	30	20	1950	660	
75		4460						
76		4440						
77		4420	5	40	30	1200	1100	
78		4400						
79		3380						
80		3360	5	50	75	2300	1700	
81		3340						
82		3320						
83		3300	5	40	95	1500	800	
84		2280						
85		2260						
86		2240	5	55	70	1200	565	
87		2220						
88		2200						
89		1180	5	40	40	2000	245	
90		1160						
91		1140						
92		1120	10	55	55	7600	250	
93		1100						
94		1080						
95		1060	5	30	30	3200	150	
96		1040						
97		1020						
98		1000	5	60	30	1950	560	

058517

AREA: Mt Black. Colebrook Hill

CO-ORDINATES
LINE: 5,371,800N
FROM: 376980 E
TO: 376940 E

SAMPLED BY: MM. ES.
DATE: 1.14.80

MATERIAL: LEAF CUTTER
DEPTH: —

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
34798	371.800	376980	20						
799		960							
34800		376940		5	45	20	605	1050	

390

058518

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK COLEBROOK HILL	LINE: 5371800N	MG. MM. P.H.	LITTER	SHEET No
	FROM: 374540 E	DATE	DEPTH	JOB No
	TO: 374920 E	9/14/80		

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	DESCRIPTION
34955	371800	374540	20	
56		560		
57		580		
58		600		
59		620		
60		640		
61		660		
62		680		
63		700		
64		720		
65		740		
66		760		
67		780		
68		800		
69		820		
70		840		
71		860		
72		880		
73		900		
34974	371800	374920		

39

058519

PROJECT: MT. BLACK
COLE BROOK HILL

CO-ORDINATES
LINE: 537100N
FROM: 375 480 E
TO: 375 100E

SAMPLED BY: MG. MM. P.H.
DATE: 9/4/80

MATERIAL: LITTER.
DEPTH:

BOOK N°
SHEET N°
JOB N°
DESCRIPTION

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval ÷10
349352	371700	375480	20
349356		4460	
357		4440	
358		4420	
359		4400	
360		3880	
361		3860	
362		3840	
363		3820	
364		3800	
365		2780	
366		2760	
367		2740	
368		2720	
369		2700	
370		1680	
371		1660	
372		1640	
373		1620	
349543	371700	375100	
371700	375100		

392

058520

PROJECT: MT. BLACK COLEBROOK

CO-ORDINATES
LINE: 5,371,700N
FROM: 375,020E
TO: 375,100E

SAMPLED BY: BM ES

DATE: 28/3/80

MATERIAL: LEAF CUTTER

DEPTH: leaf litter

SAMPLE NUMBER	CO-ORDINATES (N/S)	(E/W)	±	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
34768	371700	375020	20						
769		040							
770		060		20	70	110	1.10%	525	
771		080							
34772		375100		10	50	40	2.80%	435	

393

058521

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK Colebrook	LINE: 5,371,700 N FROM: 374 520 E TO: 375,000 E	B.M. ES DATE 28/3/80	LEAF LITTER DEPTH —	SHEET No JOB No

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	Interval (G)/-	Pb	Zn	Cu	Fe	Mn	DESCRIPTION
34743	371700	374520	20	25	80	20	1100	440	
44		540							
45		560							
46		580		20	80	35	3.90%	1600	
47		600							
48		620							
49		640		35	80	60	2.00%	1500	
50		660							
51		680							
52		700		30	90	20	2400	1650	
53		720							
54		740							
55		760		10	50	20	850	675	
56		780							
57		800							
58		820		5	120	85	2.30%	1400	
59		840							
60		860							
61		880		10	80	75	6.00%	650	
62		900							
63		920							
64		940		5	50	40	3900	485	
65		960							
66		980							
34767		375000		10	55	45	2.20%	530	

394

058522

PROJECT: MT BLACK COLEBROOK

CO-ORDINATES
LTNG: 5371600N
FROM: 375100E
TO: 375520

SAMPLED BY: MG MM PH
DATE: 9/8/80

MATERIAL: CUTTER
DEPTH

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-
34913	371600	375100	20
14		120	
15		140	
16		160	
17		180	
18		200	
19		220	
20		240	
21		260	
22		280	
23		300	
24		320	
25		340	
26		360	
27		380	
28		400	
29		420	
30		440	
31		460	
32		480	
33		500	
34938	371600	375520	

395

058523

PROJECT: MT-BLACK COLERROOK

CO-ORDINATES
LITTLE: 5,371,600N
FROM: 375060 E
TO: 375,100 E

SAMPLED BY: MG.
DATE: 27/3/80

MATERIAL: COAL CUTTER
DEPTH:

SAMPLE NUMBER	CO-ORDINATES (N)S	(E)W	Interval (U)/-	Pb	Zn	Cu	Fe	Mn.
34703	371600	375000	20					
34704		375080						
34705		375100		15	50	35	850	1000

396

058524

PROJECT: MT. BLACK

COLE BROOK-HILL GRID

COORDINATES
LINE: 5371600 N.
FROM: 374560 E.
TO: 375040 E.

SAMPLED BY: M.C.

DATE: 27/3/80

MATERIAL: LITTER

DEPTH:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval	Pb	Zn	Cu	Fe	Mn
347153	71600	374560	20	15	65	20	1600	1700
16		580						
17		600						
18		620		20	60	15	685	1350
19		640						
20		660						
21		680		15	75	20	1250	1350
22		700						
23		720						
24		740		20	55	20	1000	625
25		760						
26		760						
27		800		60	160	95	5%0	1350
28		820						
29		840						
30		860		35	60	85	4%0	625
31		880						
32		900						
33		920		25	60	60	1%0	475
34		940						
35		960						
36		980		25	100	200	2%0	480
37		000						
38		020						
39	371600	040		25	100	60	2600	1600

397

058525

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK	LINE:	PK	STREAM SEDIMENT PEBBLES	SHEET Nº
	FROM:	DATE	DEPTH ANALYSIS: AAS. foll.	JOB Nº
	TO:	MARCH-APRIL 1979	old hydrofluoric/hydrochloric leach	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Co	Mn	Fe	DESCRIPTION
22706	376080	381245		1	<2	1	15	2400	420	
11	" 060	" 600		<1	<2	1	7	9000	20	
14	" 230	" 785		<1	<2	1	4	2400	95	
52	376050	381595		1	<2	3	<1	200	115	
57				<1	<2	17	7	5000	56	
58				2	<2	8	4	600	140	
59				1	<2	36	4	1500	95	
60				<1	<2	2	9	4000	125	
61				<1	<2	2	3	9000	15	
62				<1	<2	2	12	3000	300	
63				<1	<2	3	10	9000	10	

398

058526

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK	LINE:	PK	STREAM SEDS. +80#	SHEET Nº
	FROM:	DATE	DEPTH ANALYSIS: AAS, fall	JOB Nº
	TO:	APRIL 1979	cold hydroxylamine/hydrochloric leach	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Co	Mn	Fe%	DESCRIPTION
22747	5376105	383250		<1	<2	1	<1	120	128	
48	" 095	383390		<1	<2	2	<1	190	100	
49	" 095	" 555		1	<2	1	<1	10	212	
50	5378000	795		1	<2	1	<1	10	124	
51	5376050	381595		<1	<2	3	4	620	192	
52	" 050	" 595								
53	" 500	381470		<1	<2	<1	<1	80	168	
54	5377900	380930		<1	<2	1	<1	90	196	
55	5378100	380962		<1	<2	<1	<1	40	112	

399

058527

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
	LINE:	P. Komyshan	STREAM SED. -80#	SHEET Nº
	FROM:	DATE	~~DATA~~ ANALYSIS:	JOB Nº
	TO:	April 1979	AAS fall. $HClO_4/HNO_3$ leach	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Co	Mn	Fe%	DESCRIPTION
22747	5376105	383450		10	40	30	<5	420	2.30	
2 48	" 095	" 390		10	<20	50	10	720	2.10	
" 69	" 095	" 555		<2	<20	20	10	100	1.30	
22750	5378000	383795		10	<20	20	<5	<5	0.18	
51	5376050	" 1595		10	<20	50	10	540	1.90	
52	" "	" "								
53	" 500	" 1470		20	20	40	10	320	3.90	
54	5377900	" 0930		10	<20	20	10	400	1.16	
55	5378100	" 0962		10	<20	20	10	100	1.20	

058528

400

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK	LINE:	P.K.	STREAM SEDS +80#	SHEET Nº
	FROM:	DATE	ANALYSIS: AAS Hall	
	TO:	APRIL 1979	cold hydroxylamine/hydrochloric lead	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Co	Mn	Fe%	DESCRIPTION
22723	53 79150	380605		<1	<2	<1	<1	370	172	
24	53 77000	383580		<1	<2	<1	<1	420	88	
25	"	383410		<1	<2	<1	<1	40	80	
26	"	" 390		<1	<2	5	1	400	192	
27	"	" 230		<1	<2	<1	1	200	112	
28	"	382995		1	<2	3	9	1300	172	
29	"	" 615		<1	<2	4	1	1200	96	
30	53 76930	" 735		<1	<2	1	2	410	120	
31	" 940	" 735		<1	<2	<1	1	1300	20	
32	" 845	" 860		<1	<2	<1	2	590	112	
33	" 735	" 975		<1	<2	2	1	330	88	
34	" 650	383055		<1	<2	<1	2	180	76	
35	" 645	" 055		<1	<2	<1	2	540	156	
36	" 560	" 160		<1	<2	<1	3	270	104	
37	" 505	" 300		<1	<2	<1	<1	180	100	
38	" 435	" 400		<1	<2	<1	<1	300	116	
39	" 305	382130		<1	<2	<1	2	280	164	
40	" 260	" 255		<1	<2	<1	<1	180	132	
41	" 260	" 420		<1	<2	<1	2	370	180	
42	" 210	" 570		<1	<2	1	<1	390	152	
43	" 165	" 700		<1	<2	3	3	380	144	
44	" 135	" 840		<1	<2	<1	1	220	140	
45	" 110	" 990		<1	<2	2	3	170	132	
46	" 105	383110		<1	<2	2	1	270	160	
47	" 105	" 250		<1	<2	1	<1	120	128	

401

058529

PROJECT

CO-ORDINATES
LINE :
FROM :
TO :

SAMPLED BY: P. Komyshan.

DATE: April 1979.

MATERIAL: STREAM SED -80#

~~DEPTH~~ ANALYSIS: AAS fall $HClO_4/HNO_3$ leach

BOOK Nº
SHEET Nº
JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Co	Mn	Fe %	DESCRIPTION
22723	379150	380605		10	40	160	<5	80	1.20	
4	377000	383580		<2	20	30	10	100	1.20	
5	" "	383410		<2	20	50	10	230	2.20	
6	" "	" 390		10	<20	50	10	260	1.74	
7	" "	" 230		10	<20	50	10	260	1.70	
8		2995		10	<20	50	<5	560	2.00	
9	" "	" 675		<2	<20	100	10	3800	2.20	
30	376930	" 735		<2	<20	30	<5	520	1.30	
31	" 940	" 735		<2	20	60	<5	2000	1.78	
32	" 845	" 860		<2	40	40	10	820	1.54	
33	" 735	" 975		10	<20	40	10	720	1.62	
34	" 650	383055		10	<20	30	<5	280	1.10	
35	" 645	" 055		<2	20	20	<5	200	1.60	
36	" 560	" 160		<2	<20	30	<5	320	1.30	
37	" 505	" 300		<2	20	30	<5	300	1.20	
38	" 435	" 400		10	<20	40	10	420	1.20	
39	" 305	382130		10	<20	30	10	660	2.30	
40	" 260	" 255		<2	<20	40	<5	640	2.00	
41	" 260	" 420		<2	<20	30	<5	480	1.86	
42	" 210	" 570		10	<20	40	<5	480	2.00	
43	" 165	" 700		10	<20	40	10	640	2.10	
44	" 135	" 840		<2	20	40	<5	600	2.10	
45	" 110	" 990		<2	20	50	10	840	2.30	
46	" 105	383110		10	<20	40	10	540	1.98	
47	" 105	" 250		10	40	30	<5	420	2.30	

058530

402

PROJECT: MT BLACK

CO-ORDINATES — LINE: — FROM: — TO:

SAMPLED BY: PK

DATE: MARCH - APRIL 1979

MATERIAL: STREAM SEDS +80 ℳ

DESCRIPTION: Fraction: HNO3 soll. Cold Hydroxylamine/Hydrochloric Leach

BOOK Nº

SHEET Nº

SAMPLE NUMBER	CO-ORDINATES N/(S)	CO-ORDINATES E/W	+/-	Cu	Pb	Zn	Co	Mn	Fe %
22701	3738950	3804850		<1	<2	<1	<1	210	.52
2	" 8950	" 5250		<1	<2	4	<1	340	.72
3	" 9650	" 5100		1	<2	<1	1	410	.52
4	3766000	" 9700		1	<2	<1	<1	110	.216
5	" 0850	3811800		1	<2	<1	<1	110	.248
6	" 0800	" 2450							
7	" 0500	" 3300		<1	<2	<1	<1	170	.352
8	" 0550	" 3500		<1	<2	<1	<1	80	.280
9	" 0600	" 3900		<1	<2	<1	<1	30	.400
22710	" 0300	" 5300		<1	<2	1	<1	60	.292
11	" 0600	" 6000							
12	" 1100	" 6650		<1	<2	<1	1	470	.176
13	" 1700	" 7200		<1	<2	<1	<1	140	.140
14	" 2300	" 7850							
15	" 2450	" 8400		<1	<2	<1	<1	230	.152
16	" 2900	" 9800		<1	<2	<1	<1	260	.160
17	" 0200	" 9000		<1	<2	3	<1	540	.152
18	3765995	" 3400		<1	<2	<1	<1	60	.72
19	3787410	3801700		<1	<2	<1	<1	110	.116
20	" 7400	" 2800		<1	14	<1	<1	390	.216
21	3790000	" 2750		<1	<2	<1	2	180	.180
22	3790400	" 4100		<1	2	<1	<1	120	.148

058531

403

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MT. BLACK	LINE:	P K	STREAM SED. -80#	SHEET Nº
	FROM:	DATE	DEPTH ANALYSIS	JOB Nº
	TO:	MARCH - APRIL 1979	AAS fall $HClO_4$/HNO_3 leach	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Co	Mn	Fe %	DESCRIPTION
22701	373895	380485		10	20	100	20	520	1.86	
2	" "	" 525		10	60	100	<5	1000	2.10	
3	" 965	" 510		10	40	110	10	1200	2.20	
4	376,000	" 970		<2	<20	10	<5	60	1.58	
5	" 085	381,180		10	<20	20	<5	40	1.26	
6	" 080	" 245								
7	" 050	" 330		10	20	20	20	180	2.02	
8	" 050	" 350		10	<20	20	<5	180	1.86	
9	" 060	" 390		<2	<20	10	<5	60	1.10	
22710	" 030	" 530		<2	<20	20	<5	140	1.64	
11	" 060	" 600								
12	" 110	" 665		10	40	40	20	3000	2.40	
13	" 170	" 720		<2	40	40	10	980	2.30	
14	" 230	" 785								
15	" 245	" 840		<2	40	30	<5	1600	2.30	
16	" 290	" 980		10	<20	30	10	1000	2.10	
17	" 020	" 900		<2	20	20	<5	40	0.52	
18	375,995	" 340		<2	40	50	10	580	1.80	
19	378,740	380,170		<2	20	30	10	540	2.20	
20	" 740	" 280		30	2900	30	<5	40	.66	
21	379,000	" 275		10	20	10	<5	220	0.74	
22	379040	" 410		10	200	60	10	1350	1.76	

058532

404

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
	LINE:	PK & WM.	STREAM SEDS +80#	SHEET Nº
	FROM:	DATE	DEPTH ANALYSIS: AAS fall	NOD Nº
	TO:		cold hydroxylamine hydrochloric leach	

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Co	Mn	Fe%	DESCRIPTION
22688	375840	382900		<1	<2	4	1	770	72	
9	" 920	383130		<1	<2	<1	1	380	40	
22690	" 940	" 145		<1	<2	1	4	250	72	
1	" 980	" 410		<1	<2	3	1	340	112	
2	" 790	382500		<1	<2	<1	<1	10	4	
3	" 925	" 500		<1	<2	<1	1	210	320	
4	" 926	" 500		<1	<2	<1	<1	10	112	
5	372955	381510		<1	<2	5	1	350	44	
6	373620	380080		<1	<2	<1	<1	250	60	
7	" 775	" 185		<1	<2	<1	<1	380	80	
8	" 860	" 295		<1	<2	<1	<1	370	88	
9	" 940	" 350		<1	<2	<1	<1	470	112	
22700	" 890	" 390		<1	<2	<1	<1	260	60	

405

058533.

OFFICE

CO-ORDINATES
LINE :
FROM :
TO :

SAMPLED BY P.K. & W.M.

DATE

MATERIAL STREAM SEDS -80#

DEPTH

ANALYSIS : AAS. Soil. $HClO_4/HNO_3$ leach

BOOK N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Co	Mn	Fe%	DESCRIPTION
22688	37840	38290		10	<20	40	10	680	1.84	
9	920	3130		10	20	70	<5	1750	2.40	
22690	940	145		10	40	40	<5	780	1.92	
1	980	410		<2	<20	50	10	600	1.98	
2	790	2500		<2	<20	20	5	60	0.96	
3	925	2500		10	20	110	<5	180	1.34	
4	926	2500		10	<20	20	<5	80	1.24	
5	37295	38150		10	20	40	10	700	1.46	
6	37360	38008		10	40	80	<5	2000	2.20	
7	775	185		10	40	100	<5	1750	3.30	
8	860	295		20	80	110	20	2850	2.80	
9	940	350		<2	80	50	<5	2250	1.80	
22700	990	390		20	60	150	20	1450	2.70	

406

058534

PROJECT: MT. BLACK

CO-ORDINATES — LINE: — FROM: — TO:

SAMPLED BY: PK & WM

DATE: 13/3/79 + 19/3/79

MATERIAL: STREAM SEDS +80#

DEPTH: BUNKERS, ARS, hill cl

BOOK Nº

SHEET Nº

JOB Nº: 106

DESCRIPTION: Rock

Nº	SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Known +/-	Pb	Zn	Cu	Mn	Fe %
	22664	3713400	3821620		1	<2	2	1	150	52
	65	" 4700	" 6455		<1	<2	2	<1	10	20
	66	" 6000	" 7200		<1	<2	1	<1	10	8
	67	" 6000	" 7255		<1	<2	2	3	540	68
	68	" 6055	" 8700		<1	<2	6	<1	1160	72
	69	" 6255	3830800		<1	<2	3	1	120	20
	22670	" 6355	" 1055		1	<2	7	2	1000	80
	71	" 6660	" 2000		<1	<2	8	2	60	60
	72	" 6800	" 2055		<1	<2	6	2	70	118
	73	" 7200	" 2355		<1	<2	3	<1	1190	64
	74	" 7700	" 2955		<1	<2	11	3	710	64
	75	" 7000	" 3105		<1	<2	3	3	700	40
	76	" 5355	" 3155		<1	<2	10	4	730	48
	22677	3715000	3821360		<1	<2	1	<1	280	64
	78	" 0000	" 3155		<1	<2	2	<1	110	40
	79	" 1400	" 2900		<1	<2	2	2	550	52
	22680	" 3000	" 3455		<1	<2	1	<1	210	44
	81	" 3100	" 3500		<1	<2	2	<1	360	36
	82	" 4155	" 4350		<1	<2	<1	<1	270	36
	83	" 5500	" 5100		<1	<2	7	2	630	40
	84	" 5900	" 5300		<1	<2	1	<1	440	68
	85	" 6555	" 6100		<1	<2	2	<1	460	56
	86	" 6755	" 6300		<1	<2	2	<1	450	80
	87	" 7700	" 7600		<1	<2	2	<1	310	48

407

058535

PROJECT	MIT BLACK	CO-ORDINATES LINE: FROM: TO:	SAMPLED BY PK & WM	MATERIAL STREAM SEDS. -80#	BOOK No
			DATE 13/3/79 & 14/3/79	~~DRAFT~~ ANALYSIS: AAS fall. $HClO_4/HNO_3$ leach	SHEET No
					JOB No

SAMPLE NUMBER	CO-ORDINATES N/M	CO-ORDINATES E/M	INTERVAL +/-	Cu	Pb	Zn	Co	Mn	Fe %	DESCRIPTION
22664	373490	382620		<2	<20	20	10	40	0.22	
5	" 470	" 645		20	<20	10	<5	40	0.16	
6	" 600	" 720		<2	<20	10	<5	220	0.32	
7	" 600	" 725		<2	320	120	1200	14.3%	4.60	MnWAD
8	" 605	" 870		10	40	30	<5	1250	0.96	
9	" 625	3,080		10	<20	40	<5	880	1.20	
22670	" 635	" 105		20	<20	110	10	1100	2.60	
1	" 660	" 200		20	40	80	<5	680	1.66	
2	" 680	" 205		20	<20	130	20	700	3.00	
3	" 720	" 235		20	20	70	<5	660	2.10	
4	" 770	" 295		10	20	60	<5	860	2.20	
5	" 700	" 310		10	20	90	20	900	2.70	
6	" 535	" 315		50	100	210	20	1100	4.00	
22677	375000	382350		10	<20	40	<5	420	1.56	
8	000	" 315		10	20	40	10	840	1.74	
9	" 160	" 290		<2	<20	50	10	860	1.92	
22680	" 300	" 345		<2	20	60	10	1450	2.20	
1	" 310	" 350		20	20	80	10	580	2.00	
2	" 415	" 450		10	20	40	<5	620	1.74	
3	" 550	" 510		10	20	70	<5	1150	2.20	
4	590	" 530		10	<20	20	<5	480	1.12	
5	" 655	" 610		20	<20	40	10	600	1.76	
6	675	620		10	<20	40	<5	780	1.36	
7	770	760		20	<20	40	<5	800	2.10	

058536

408

PROJECT: MT. BLACK

CO-ORDINATES — LINE: — FROM: — TO:

SAMPLED BY: PK

DATE: 10/3/79

MATERIAL: STREAM SEDS +80#

ANALYSIS: AAS hot cold hydroxylamine/hydrochloric

BOOK #:

SHEET #:

ROAD/#: Black

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	DESCRIPTION	Cu	Pb	Zn	Co	Mn	Fe %
22646	37 47 50	38 10 20			1	<2	2	1	700	80
45	" 74 5	" 05 50			<1	<2	<1	3	610	88
46	" 75 0	" 20 5			<1	<2	3	<1	570	56
47	" 78 0	" 4 95			<1	<2	1	<1	460	92
48	" 77 0	" 4 85			<1	<2	11	<1	1000	88
49	" 75 0	" 4 50			<1	<2	2	1	580	61
50	" 75 0	" 4 80			<1	<2	2	<1	370	52
51	" 80 5	" 6 65			1	<2	1	2	510	44
52	" 8 20	" 7 30			1	<2	1	2	320	68
53	" 82 5	" 7 55			<1	<2	2	<1	250	56
54	" 81 0	" 8 00			<1	<2	<1	<1	30	36
55	" 81 0	" 8 10			<1	<2	2	2	400	24
56	" 82 5	" 8 50			<1	<2	2	<1	70	52
57	" 80 0	" 8 80			<1	<2	4	5	690	56
58	" 82 0	38 20 65			<1	<2	3	<1	390	40
59	37 48 20	38 20 85			<1	<2	2	3	220	52
22660	" 86 0	" 1 60			<1	<2	<1	<1	10	56
61	" 87 0	" 2 10			<1	<2	4	3	830	64
62	" 85 0	" 2 45			<1	<2	3	2	1600	120
63	" 82 5	" 2 50			1	<2	1	9	25000	4

409

058537

PROJECT: MT BLACK

CO-ORDINATES — LINE: — FROM: — TO:

SAMPLED BY: PK

DATE: 10/31/79 MARCH 1979

MATERIAL: STREAM SEDS. -80#

~~DETN~~ ANALYSIS: AAS full. $HClO_4/HNO_3$ leach

BODY N° — SHEET N° — JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	E/W	Interval +/-	Cu	Pb	Zn	Co	Mn	Fe %	DESCRIPTION
22644	37 47 50	38 10 20		110	20	50	10	1850	1·34	
45	" 7 45	" 05 0		<2	<20	40	10	1400	1·80	
46	" 7 50	" 20 5		<2	40	50	20	6500	2·70	
47	" 7 80	" 40 5		10	40	60	20	6000	2·40	
48	" 7 10	" 48 5		10	40	120	20	1850	2·60	
49	" 7 50	" 45 0		10	60	100	20	1200	2·60	
50	" 7 50	" 40 0		10	20	60	10	3850	2·80	
1	" 8 05	" 66 5		10	40	80	10	3500	2·20	
2	" 8 20	" 73 0		10	20	40	10	260	1·24	
3	" 8 25	" 75 5		<2	20	50	10	520	1·86	
4	" 9 10	" 80 0		10	20	50	10	140	1·60	
5	" 8 10	" 84 0		10	20	30	20	1250	2·30	
6	" 8 25	" 85 0		10	<20	10	10	140	1·36	
7	" 8 00	" 88 0		<2	<20	10	10	620	1·76	
8	" 8 20	38 20 65		10	40	70	10	1200	2·20	
9	37 48 20	38 20 85		10	20	50	<5	800	2·00	
22660	" 8 60	" 16 0		<2	<20	10	10	40	0·50	
1	" 8 70	" 21 0		10	40	60	10	2500	2·40	
2	" 8 50	" 24 5		10	40	80	10	2300	2·40	
3	" 8 25	" 25 0		10	20	40	10	960	2·00	

058538

plotted

PROJECT: Mt Black

CO-ORDINATES — LINE: FROM: TO:

SAMPLED BY: MC

DATE: OCTOBER '79

MATERIAL: STREAM SEDIMENTS

DEPTH:

BOOK N°: SHEET N°: JOB N°:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Cu (ppm)	Pb (ppm)	Zn (ppm)	Co (ppm)	Mn (ppm)	Fe (ppm)	LOCALITY	DESCRIPTION
28401	37890	38060		<10	100	40	10	400	14.8%	LANGDONS	SS
02	890	060		<10	85	45	10	790	14.0%		SS
03	890	155		<10	65	45	15	300	1.70%		SS
04		155		<10	100	80	15	760	1.75%		SS
05		155		<10	85	40	10	640	1.20%		SS
06		290		<10	250	120	5	1160	1.04%		SS
07		290		<10	8000	2100	15	31100	2.50%		SS
08		270		<10	10000	2600	5	30000	2.50%		SS
09		505		<10	130	35	5	80	0.76%		SS
10		505		<10	70	40	5	65	0.70%		SS
11	37900	38070		<10	40	35	5	45	0.36%		SS
12		790		<10	20	30	<5	40	0.24%		SS
13		570		<10	20	20	<5	30	0.22%		SS
14		500		<10	20	30	<5	30	0.30%		SS
15		300		<10	200	320	5	55	0.64%		SS
16		300		<10	240	240	5	80	0.70%		SS
17		300		<10	180	300	<5	50	0.55%		SS
18		280		<10	50	30	5	470	1.00%		SS
19		280		<10	55	30	5	400	1.30%		SS
20		280		<10	50	20	5	300	0.98%		SS
21	37910	38070		<10	160	70	10	800	1.04%		SS
22		390		<10	250	70	15	780	1.30%		SS
23		390		<10	80	55	<5	380	0.66%		SS
24		580		<10	20	15	<5	40	0.36%		SS
28425	37910	38060		<10	40	75	<5	90	0.35%		SS

~~TO BE PLOTTED LATER~~

058539

plotted

PROJECT: Mt BLACK.

CO-ORDINATES — LINE: — FROM: — TO:

SAMPLED BY: MG.

DATE: October '79

MATERIAL: STREAM SEDIMENTS

DEPTH:

BOOK No. — SHEET No. — JOB No.

SAMPLE NUMBER	CO-ORDINATES (N) S	(E) W	Interval +/-	Cu (ppm)	Pb (ppm)	Zn (ppm)	Co (ppm)	Mn (ppm)	Fe %	LOCALITY	DESCRIPTION
26	37 9 100	380 840		10	20	25	5	25	0.18	CAMBORNE	SS
27	1 70	1 500		10	90	50	5	400	0.70		SS
28	1 70	500		10	120	55	5	620	0.92		SS
29	1 70	500		10	130	70	10	500	0.92		SS
30	1 70	500		10	200	65	10	660	1.04		SS
31	37 8 800	380 1 60		10	60	25	5	120	1.30		SS
32		160		10	70	45	10	280	1.40		SS
33		195		10	65	40	15	840	2.50		SS
34		195		10	100	55	20	1100	3.40		SS
35		195		10	70	40	15	880	2.50		SS
36		295		10	30	30	5	55	0.70		SS
37		295		10	45	25	5	70	0.84		SS
38		810		10	20	15	5	35	0.23		SS
39	37 8 700	360 080		10	20	20	5	110	0.68		SS
40		080		10	30	20	5	80	0.60		SS
41		080		10	35	25	5	170	0.94		SS
42		080		10	20	20	5	110	0.74		SS
43		380 810		10	20	20	5	35	0.24		SS
44		360		10	30	20	5	55	0.86		SS
45		185		10	70	60	15	1600	3.00		SS
26	37 8 700	380 185		10	80	25	20	2000	3.60		SS

TO BE PLOTTED LATER

412 1/2

058540

DISTRICT: Mt Black.

CO-ORDINATES — LINE: — FROM: — TO:

SAMPLED BY: PK.

DATE: MARCH → July 1979

MATERIAL: STREAM SEDIMENTS.

DEPTH:

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Cu	Pb	Zn	Co	Mn	Fe	SIEVE	LOCATION	DESCRIPTION
22751	37605	38159		10	<20	50	10	540	1.49%	-80#	CUTTY SARK	SS
52	0550	1595		1	<2	3	<1	200	115		CUTTY SARK	Mn
53	500	470		20	20	40	10	320	3.90%		CUTTY SARK	SS
54	37900	38093		10	<20	20	10	400	1.41%		CUTTY SARK	SS
55	38100	962		10	<20	20	10	100	1.20%		CUTTY SARK	SS
SOUTH EAST 56	5200	1020							← SAMPLE LOST?		WHITE SPUR	Mn
57	6000	2090		<1	<2	17	7	5000	56		WHITE SPUR	Mn
58	6800	1650		2	<2	9	4	600	140		WHITE SPUR	Mn
59	6800	1740		1	<2	36	4	1600	95		WHITE SPUR	Mn
NORTH EAST 60	37475	38102		<1	<2	2	9	4000	125		MT BLACK	Mn
61	LOCATION UNKNOWN			<1	<2	2	3	9000	15			Mn
62	37606	53133		<1	<2	2	12	3000	300		CUTTY SARK	Mn
22763	37480	38180		<1	<2	3	10	9000	10		MT BLACK	Mn

413 2/2

058541

PROJECT: Mt Black

CO-ORDINATES — LINE: — FROM: — TO:

SAMPLED BY: PK

DATE: MARCH → July 1979

MATERIAL: STREAM SEDIMENTS

DEPTH:

BOOK Nº — SHEET Nº — JOB Nº

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Co	Fe	Mn.	SIEVE	LOCATION	DESCRIPTION
22751	37,650	38,595		<1	<2	3	4	192	620	+ 80 #	CUTTY SARK	S S
52	650	595		1	<2	3	<1	115	200		CUTTY SARK	M n
53	500	470		<1	<2	<1	<1	168	80		CUTTY SARK	S S
54	37,900	38,930		<1	<2	1	<1	196	90		CUTTY SARK	S S
55	37,800	962		<1	<2	<1	<1	112	40		CUTTY SARK	S S
*SOUTH EAST 56	5200	1020							← LOST SAMPLE?		WHITE SPUR	M n
57	6000	2090		<1	<2	17	7	56	5000		WHITE SPUR	M n
58	6800	1650		2	<2	9	4	140	600		WHITE SPUR	M n
59	6800	1740		1	<2	36	4	95	1500		WHITE SPUR	M n
*NORTH WEST 60	37,750	38,020		<1	<2	2	9	125	4000		Mt BLACK	M n
61	LOCATION UNKNOWN			<1	<2	2	3	15	9000			M n
62	37,650	38,330		<1	<2	2	12	300	3000		CUTTY SARK	M n
22763	37,800	38,850		<1	<2	3	10	10	9000		Mt BLACK	M n

H — R

414 1/2 058542

PROJECT: Mt Black.
CO-ORDINATES: LINE : FROM : TO :
SAMPLED BY: P.K.
DATE: March → July 1979.
MATERIAL: Stream Sediments
DEPTH:
GOOG N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Co	Mn	Fe	SIEVE -80#	LOCALITY	DESCRIPTION
22726	37700	38339		<2	<20	50	10	240	1.78%		Cutty Sark	SS
27	000	230		10	<20	50	10	260	1.70%		Cutty Sark	SS
28	000	38299		10	<20	50	<5	560	2.00%		Cutty Sark	SS
29	000	675		<2	<20	100	10	3800	2.20%		Cutty Sark	SS
30	36930	735		<2	<20	30	<5	520	1.30%		Cutty Sark	SS
31	940	735		<2	20	60	<5	2000	1.78%		Cutty Sark	SS
32	945	860		<2	40	40	10	820	1.54%		Cutty Sark	SS
33	735	975		10	<20	40	10	720	1.62%		Cutty Sark	SS
34	650	38305		10	<20	30	<5	280	1.10%		Cutty Sark	SS
35	645	1055		<2	20	20	<5	200	1.60%		Cutty Sark	SS
36	560	1160		<2	<20	30	<5	320	1.30%		Cutty Sark	SS
37	505	300		<2	<20	30	<5	300	1.20%		Cutty Sark	SS
38	435	400		10	<20	40	10	420	1.20%		Cutty Sark	SS
39	30538221	30		10	<20	30	10	660	2.23%		Cutty Sark	SS
40	260	255		<2	<20	40	<5	640	2.00%		Cutty Sark	SS
41	260	420		<2	<20	30	<5	480	1.86%		Cutty Sark	SS
42	210	570		10	<20	40	<5	480	2.00%		Cutty Sark	SS
43	165	700		10	<20	40	10	640	2.10%		Cutty Sark	SS
44	135	840		<2	20	40	<5	600	2.10%		Cutty Sark	SS
45	110	990		<2	20	50	10	840	2.30%		Cutty Sark	SS
46	10538311	0		10	<20	40	10	540	1.98%		Cutty Sark	SS
47	105	250		10	20	30	<5	420	2.40%		Cutty Sark	SS
48	095	390		10	<20	50	10	720	2.10%		Cutty Sark	SS
49	095	555		<2	<20	20	10	100	1.30%		Cutty Sark	SS
22750	37800	38379		10	<20	20	<5	<5	0.18%		Cutty Sark	SS

514 2/2

058543

PROJECT: MH BLACK.

CO-ORDINATES — LINE: — FROM: — TO:

SAMPLED BY: P.K.

DATE: MARCH → JULY 1979

MATERIAL: STREAM SEDIMENTS.

DEPTH:

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	+/-	Cu	Pb	Zn	Co	Fe	Mn	SIEVE	LOCALITY	DESCRIPTION
22726	37	000	38	<1	<2	4	<1	21	350		CURRY SAMP	SS
27		000		<1	<2	<1	1	112	200		CURRY SAMP	SS
28		000	382	1	<2	3	9	172	1300		CURRY SAMP	SS
29		000		<1	<2	4	1	96	1200		CURRY SAMP	SS
30	376	930		<1	<2	1	2	120	410		CURRY SAMP	SS
31		940		<1	<2	<1	1	20	1300		CURRY SAMP	SS
32		845		<1	<2	<1	2	112	590		CURRY SAMP	SS
33		735		<1	<2	2	1	88	530		CURRY SAMP	SS
34		650	383	<1	<2	<1	2	76	180		CURRY SAMP	SS
35		645		<1	<2	<1	2	156	540		CURRY SAMP	SS
36		560		<1	<2	<1	3	104	270		CURRY SAMP	SS
37		505		<1	<2	<1	<1	100	180		CURRY SAMP	SS
38		435		<1	<2	<1	<1	116	300		CURRY SAMP	SS
39		305	382	<1	<2	<1	2	164	280		CURRY SAMP	SS
40		269		<1	<2	<1	<1	132	160		CURRY SAMP	SS
41		260		<1	<2	<1	2	180	370		CURRY SAMP	SS
42		210		<1	<2	1	<1	152	390		CURRY SAMP	SS
43		165		<1	<2	3	3	144	350		CURRY SAMP	SS
44		135		<1	<2	<1	1	140	220		CURRY SAMP	SS
45		110		<1	<2	2	3	132	170		CURRY SAMP	SS
46		105	383	<1	<2	2	1	160	270		CURRY SAMP	SS
47		105		<1	<2	<1	<1	28	130		CURRY SAMP	SS
48		095		<1	<2	2	<1	100	190		CURRY SAMP	SS
49		095			<2	1	<1	212	10		CURRY SAMP	SS
22750	378	000	383	<1	<2	1	<1	124	10		CURRY SAMP	SS

416

1/2

058544

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt. Black.	LINE:	P.K:	STREAM SEDIMENTS	SHEET Nº
	FROM:	DATE	DEPTH	JOB Nº
	TO:	MARCH → JULY 1979.		

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Cu	Pb	Zn	Co	Mn	Fe	SIEVE	LOCALITY	DESCRIPTION
22701	373895	380485		10	20	100	20	520	1.86%	-80#	Mt Black	SS
02	895	525		10	60	100	<5	1000	2.10%		Mt Black	SS
03	965	510		10	40	110	10	1200	2.20%		Mt Black	SS
04	376000	380970		<2	<20	100	<5	60	1.58%		Cutty Sark	SS
05	085	381180		10	<20	20	<5	40	1.26%		Cutty Sark	SS
06	080	245		1	<2	1	15	2400	420		Cutty Sark	Min
07	065	350		10	20	20	20	180	2.00%		Cutty Sark	SS
08	050	355		10	<20	20	<5	180	1.86%		Cutty Sark	SS
09	060	390		<2	<20	10	<5	60	1.10%		Cutty Sark	SS
10	030	530		<2	<20	20	<5	140	1.64%		Cutty Sark	SS
11	040	600		<1	<2	1	7	9000	420		Cutty Sark	Min
12	110	665		10	40	40	20	3000	2.40%		Cutty Sark	SS
13	170	720		<2	40	40	10	980	2.30%		Cutty Sark	SS
14	230	785		<1	<2	1	4	2400	95		Cutty Sark	Min
15	215	840		<2	40	30	<5	1600	2.30%		Cutty Sark	SS
16	290	980		10	<20	30	10	1000	2.10%		Cutty Sark	SS
17	020	900		<2	20	20	<5	40	0.52%		Cutty Sark	SS
18	375995	540		<2	40	50	10	580	1.80%		Cutty Sark	SS
19	378740	380170		<2	20	30	10	540	2.20%		Cutty Sark	SS
20	740	280		30	2900	30	<5	40	0.66%		Cutty Sark	SS
21	379000	380275		10	20	10	<5	220	0.74%		Langdons	SS
22	040	410		10	200	60	10	1350	1.76%		Langdons	SS
23	150	605		10	40	160	<5	80	1.20%		Langdons	SS
24	377000	383580		<2	20	30	10	100	1.20%		Cutty Sark	SS
22725	377000	383410		<2	20	50	10	230	2.20%		Cutty Sark	SS

Plotted

417

2/2

058545

PROJECT: Mt Black.

CO-ORDINATES
LINE :
FROM :
TO :

SAMPLED BY: P.K.

DATE: March → July 1979

MATERIAL: Stream Sediments

DEPTH

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES E/S	CO-ORDINATES E/W	+/-	Cu	Pb	Zn	Co	Fe	Mn.	SIEVE +80 M	LOCATION	DESCRIPTION
227001	3739950	3804850		<1	<2	<1	<1	52	210		Mt Black	SS
002	39950	52500		<1	<2	4	<1	72	340		Mt Black	SS
003	39650	51000		1	<2	<1	1	52	410		Mt Black	SS
004	3760000	3809700		<1	<2	<1	<1	51	10		Cutty Sark	SS
005	39650	3811900		1	<2	<1	<1	248	10		Cutty Sark	SS
006	39800	24500		1	<2	1	15	420	2400		Cutty Sark	Mn
007	39650	35000		<1	<2	<1	<1	352	170		Cutty Sark	SS
008	39500	35550		<1	<2	<1	<1	280	80		Cutty Sark	SS
009	39600	39000		<1	<2	<1	<1	400	30		Cutty Sark	SS
010	39300	53000		<1	<2	1	<1	292	60		Cutty Sark	SS
011	39400	60000		<1	<2	1	7	420	9000		Cutty Sark	Mn
012	311000	66500		<1	<2	<1	1	176	470		Cutty Sark	SS
013	31700	72000		<1	<2	<1	<1	140	140		Cutty Sark	SS
014	32300	78500		<1	<2	1	4	95	2400		Cutty Sark	Mn
015	32450	84000		<1	<2	<1	<1	152	230		Cutty Sark	SS
016	32900	93000		<1	<2	<1	<1	160	260		Cutty Sark	SS
017	30200	90000		<1	<2	3	<1	152	540		Cutty Sark	SS
018	3759950	54000		<1	<2	<1	<1	72	60		Cutty Sark	SS
019	3768740	3801700		<1	<2	<1	<1	116	10		Cutty Sark	SS
020	32450	28000		<1	14	<1	<1	216	390		Cutty Sark	SS
021	3799000	3802750		<1	<2	<1	2	180	180		Landons	SS
022	30400	41000		<1	4	<1	<1	148	20		Landons	SS
023	31500	60500		<1	<2	<1	<1	172	370		Landons	SS
024	3770000	3835800		<1	<2	<1	<1	88	420		Cutty Sark	SS
227251	3770000	3834100		<1	<2	<1	<1	80	40		Cutty Sark	SS

418 1/2

058546

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt Black	LINE:	P.K.	STREAM SEDIMENTS.	SHEET Nº
	FROM:	DATE	DEPTH	JOB Nº
	TO:	MARCH '79		

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Co	Mn	Fe	SIEVE	LOCALITY	DESCRIPTION
22694	375925	382500		10	<20	20	<5	80	1.24%	-80#	Cutty Sark	SS
95	372995	381510		10	20	40	10	700	1.46%		Cutty Sark	SS
96	373620	380080		10	40	80	<5	2000	2.20%		Cutty Sark	SS
97	775	185		10	40	100	<5	1750	3.30%		Cutty Sark	SS
98	860	295		20	80	110	20	2850	2.80%		Cutty Sark	SS
99	940	350		<2	80	50	<5	2250	1.80%		Cutty Sark	SS
22700	373890	380390		20	60	150	20	1450	2.70%		Cutty Sark	SS

Plotted

419 2/2

058547

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
MH BLACK	LINE :	P.K.	STREAM SEDIMENTS	SHEET Nº
	FROM :	DATE	DEPTH	JOB Nº
	TO :	MARCH '79		

SAMPLE NUMBER	CO-ORDINATES (N)/S	CO-ORDINATES (E)/W	INTERVAL +/-	Cu	Pb	Zn	Co	Fe	Mn	SIEVE	LOCALITY	DESCRIPTION	
22694	375925	382500		<1	<2	<1	<1	112	10	+80#	Cutty Sark	SS	✓
95	372995	381510		<1	<2	5	1	44	350		Cutty Sark	SS	✓
96	373620	380080		<1	<2	<1	<1	60	250		Cutty Sark	SS	✓
97	775	185		<1	<2	<1	<1	80	350		Cutty Sark	SS	✓
98	860	295		<1	<2	<1	<1	88	370		Cutty Sark	SS	✓
99	940	350		<1	<2	<1	<1	112	470		Cutty Sark	SS	✓
22700	373890	380390		<1	<2	<1	<1	60	260		Cutty Sark	SS	✓

4 20 1/2

058548

PROJECT: Mt Black.

CO-ORDINATES — LINE: — FROM: — TO:

SAMPLED BY: P.K.

DATE: March '79.

MATERIAL: Stream Sediments.

DEPTH:

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES @/S	CO-ORDINATES @/W	Interval +/-	Cu	Pb	Zn	Co	Mn	Fe	SIEVE -80#	LOCALITY	DESCRIPTION
226693	37	36250	38	30	30	10	<20	40	<5	860	1.20 %		Cutty Sark	SS
70		6350			20	<20	100	10	1100	2.60 %			Cutty Sark	SS
71		6600			20	40	80	<5	660	1.66 %			Cutty Sark	SS
72		6800			20	<20	130	20	700	3.00 %			Cutty Sark	SS
73		7200			20	20	70	<5	660	2.10 %			Cutty Sark	SS
74		7700			10	20	60	<5	860	2.20 %			Cutty Sark	SS
75		7000			10	20	90	20	900	2.20 %			Cutty Sark	SS
76		5350			50	100	210	20	1700	4.00 %			Cutty Sark	SS
77	37 5000	38 23500			10	<20	50	<5	420	1.58 %			Cutty Sark	SS
78		1000			10	20	40	10	540	1.74 %			Cutty Sark	SS
79		1600			<2	<20	50	10	660	1.92 %			Cutty Sark	SS
80		3000			<2	20	60	10	1450	2.20 %			Cutty Sark	SS
81		3100			20	20	80	10	580	2.00 %			Cutty Sark	SS
82		4150			10	<20	40	<5	620	1.74 %			Cutty Sark	SS
83		5510			10	20	70	<5	1150	2.20 %			Cutty Sark	SS
84		5900			10	<20	20	<5	460	1.12 %			Cutty Sark	SS
85		6555			20	<20	40	10	600	1.76 %			Cutty Sark	SS
86		6750			10	<20	40	<5	750	1.36 %			Cutty Sark	SS
87		7700			20	<20	40	<5	800	2.10 %			Cutty Sark	SS
88		8400			10	<20	40	10	660	1.84 %			Cutty Sark	SS
89		9200	38 31300		10	20	70	<5	1750	2.40 %			Cutty Sark	SS
90		9400			10	40	40	<5	750	1.92 %			Cutty Sark	SS
91		9800			<2	<20	50	10	600	1.98 %			Cutty Sark	SS
92	37 5790	38 25500			<2	<20	20	<5	60	0.96 %			Cutty Sark	SS
226937	59	25300	38	25	00	10	<20	10	<5	180	1.34 %		Cutty Sark	SS

2/2

058549

PROJECT: Mt Black.

CO-ORDINATES
LINE:
FROM:
TO:

SAMPLED BY: P.K.
DATE: March '79

MATERIAL: Stream Sediments.
DEPTH:

600' N°
SHEET N°
JOB N°

SAMPLE NUMBER	CO-ORDINATES (N) S	(E) W	Increm. +/-	Cu	Pb	Zn	Co	Fe	Mn	SIEVE +80 #	LOCALITY	DESCRIPTION	Plotted
22669	37 3625	38 3080		<1	<2	3	1	20	420		Cuttybank	SS	✓
70	6350	1050		1	<2	7	2	60	1000		Cuttybank	SS	✓
71	6600	2000		<1	<2	8	2	64	670		Cuttybank	SS	✓
72	6850	2050		<1	<2	6	2	48	790		Cuttybank	SS	✓
73	7200	2350		<1	<2	3	<1	64	490		Cuttybank	SS	✓
74	7750	2950		<1	<2	4	3	64	740		Cuttybank	SS	✓
75	7000	3100		<1	<2	3	3	40	700		Cuttybank	SS	✓
76	5350	3150		<1	<2	10	4	48	730		Cuttybank	SS	✓
77	37 5000	38 3250		<1	<2	1	<1	23	200		Cuttybank	SS	✓
78	0000	3150		<1	<2	2	<1	40	410		Cuttybank	SS	✓
79	1600	2900		<1	<2	2	2	52	550		Cuttybank	SS	✓
80	3000	3450		<1	<2	1	<1	44	310		Cuttybank	SS	✓
81	3100	3500		<1	<2	2	<1	36	360		Cuttybank	SS	✓
82	4150	4500		1	<2	<1	<1	36	270		Cuttybank	SS	✓
83	5500	5100		<1	<2	2	2	40	620		Cuttybank	SS	✓
84	5900	5300		<1	<2	1	<1	68	440		Cuttybank	SS	✓
85	6550	6100		<1	<2	2	<1	56	460		Cuttybank	SS	✓
86	6750	6200		<1	<2	2	<1	60	450		Cuttybank	SS	✓
87	7700	7600		<1	<2	2	<1	48	310		Cuttybank	SS	✓
88	8400	9000		<1	<2	4	1	72	770		Cuttybank	SS	✓
89	9200	38 3130		<1	<2	<1	1	40	350		Cuttybank	SS	✓
90	9400	1450		<1	<2	1	4	72	250		Cuttybank	SS	✓
91	9800	4100		<1	<2	3	1	112	340		Cuttybank	SS	✓
92	7900	38 2500		<1	<2	<1	<1	4	10		Cuttybank	SS	✓
22693	37 5925	38 2500		<1	<2	<1	1	320	210		Cuttybank	SS	✓

422 1/2 058550

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK Nº
Mt Black.	LINE:	P.K.	STREAM SEDIMENTS	SHEET Nº
	FROM:	DATE	DEPTH	JOB Nº
	TO:	March 1/79		

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Cu	Pb	Zn	Co	Mn	Fe	SIEVE	LOCALITY	DESCRIPTION
22644	374750	381020		10	20	30	10	1850	1.34%	-80#	Cutty Sark	SS
45	745	050		<2	<20	40	10	1400	1.80%		Cutty Sark	SS
46	750	205		<2	40	50	20	6500	2.70%		Cutty Sark	SS
47	780	405		10	40	60	20	6000	2.40%		Cutty Sark	SS
48	770	485		10	40	120	20	1850	2.60%		Cutty Sark	SS
49	750	450		10	60	100	20	1200	2.60%		Cutty Sark	SS
50	750	480		10	20	60	10	3850	2.80%		Cutty Sark	SS
51	805	665		10	40	80	10	3500	2.20%		Cutty Sark	SS
52	820	730		10	20	40	10	260	1.24%		Cutty Sark	SS
53	825	755		<2	20	50	10	520	1.86%		Cutty Sark	SS
54	810	800		10	20	50	10	140	1.60%		Cutty Sark	SS
55	810	840		10	20	30	20	1250	2.30%		Cutty Sark	SS
56	825	850		10	<20	10	10	140	1.36%		Cutty Sark	SS
57	800	880		<2	<20	10	10	620	1.76%		Cutty Sark	SS
58	820	382065		10	40	70	10	1200	2.20%		Cutty Sark	SS
59	820	085		10	20	50	<5	800	2.00%		Cutty Sark	SS
60	860	160		<2	<20	10	10	30	0.50%		Cutty Sark	SS
61	870	210		10	40	60	10	2500	2.40%		Cutty Sark	SS
62	850	245		10	40	80	10	2300	2.40%		Cutty Sark	SS
63	825	250		10	20	40	10	900	2.00%		Cutty Sark	SS
64	373490	382620		<2	<20	20	10	40	0.22%		Cutty Sark	SS
65	470	645		20	<20	10	<5	40	0.16%		Cutty Sark	SS
66	600	720		<2	<20	10	<5	220	0.32%		Cutty Sark	SS
67	600	725		<2	320	120	1200	14.3%	4.60%		Cutty Sark	SS
22668	373605	382870		10	40	30	<5	1250	0.96%		Cutty Sark	SS

Plotted

423

2/2

058551

PROJECT: Mt Black.

CO-ORDINATES — LINE: — FROM: — TO:

SAMPLED BY: P.K.

DATE: March 1979.

MATERIAL: Stream Sediments.

DEPTH:

BOOK N°

SHEET N°

JOB N°

SAMPLE NUMBER	CO-ORDINATES (N)/S	(E)/W	+/-	Cu	Pb	Zn	Co	Fe	Mn	SIEVE +80#	LOCALITY	DESCRIPTION	
22644	37475	38102		1	<2	2	1	80	700		Cathy Stream		SS
45	745	0510		<1	<2	<1	3	88	610		Cathy Stream		SS
46	750	205		<1	<2	3	<1	56	570		Cathy Stream		SS
47	740	405		<1	<2	1	<1	92	460		Cathy Stream		SS
48	770	485		<1	<2	4	<1	88	1000		Cathy Stream		SS
49	750	450		<1	<2	2	1	64	580		Cathy Stream		SS
50	750	480		<1	<2	2	<1	52	370		Cathy Stream		SS
51	805	665		1	<2	1	2	44	510		Cathy Stream		SS
52	820	730		1	<2	1	2	68	320		Cathy Stream		SS
53	825	755		<1	<2	2	<1	56	250		Cathy Stream		SS
54	810	800		<1	<2	<1	<1	36	30		Cathy Stream		SS
55	810	840		<1	<2	2	2	24	400		Cathy Stream		SS
56	825	850		<1	<2	2	<1	52	70		Cathy Stream		SS
57	800	880		<1	<2	4	5	56	690		Cathy Stream		SS
58	820	3462065		<1	<2	3	<1	40	390		Cathy Stream		SS
59	820	085		<1	<2	2	3	52	220		Cathy Stream		SS
60	860	160		<1	<2	<1	<1	30	10		Cathy Stream		SS
61	870	210		<1	<2	4	3	64	830		Cathy Stream		SS
62	850	245		<1	<2	3	2	120	1600		Cathy Stream		SS
63	825	250		1	<2	<1	9	42	50000		Cathy Stream		SS
64	37349	3826 20		1	<2	2	1	52	150		Cathy Stream		SS
65	470	645		<1	<2	3	<1	24	10		Cathy Stream		SS
66	600	720		<1	<2	1	<1	8	10		Cathy Stream		SS
67	600	725		<1	<2	3	3	68	540		Cathy Stream		SS
22668	37360	3826 70		<1	<2	6	<1	72	1600		Cathy Stream		SS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

424

058552

PROJECT: MT. BLACK. EAST MURCHISON.

CO-ORDINATES
LINE:
FROM:
TO:

SAMPLED BY: J. MILL, A. MOLLISON, I. McDONALD.

DATE: FEB. 1980

MATERIAL: Manganese Coated Pebbles From Drainage channels

DEPTH:

BOX No.
SHEET No.
JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	INTERVAL +/-	Cu	Pb	Zn	Mn %	Fe %	Co	DESCRIPTION
35002	369300	387730		<10	<20	45	3.7 %	0.16 %	140	
35015	368460	387860		<10	<20	45	7.3 %	0.01 %	60	
35017	368460	387875		<10	30	20	3.8 %	0.08 %	60	
35029	369150	387660		<10	35	55	3.3 %	0.19 %	130	
35031	368900	387630		<10	65	50	1.4 %	0.20 %	75	
34	368675	387600		<10	35	20	5.9 %	0.15 %	240	
37	368525	387595		<10	30	20	7.9 %	0.03 %	90	
40	368665	387050		<10	30	170	4.2 %	0.10 %	60	
42	368900	387095		<10	30	110	2.3 %	0.12 %	80	
44	369095	387175		SAMPLE MISSING			%	%		
47	369340	387185		<10	40	70	3.3 %	0.14 %	65	
50	369635	387240		<10	35	70	6.8 %	0.04 %	85	
52	369640	387225		<10	60	95	4.5 %	0.07 %	45	
54	369565	387140		<10	35	130	6.6 %	0.03 %	40	
56	369590	387135		<10	20	150	0.11 %	0.24 %	45	
59	369535	387120		<10	40	190	1.6 %	0.10 %	35	
61	369545	387110		<10	35	90	3.4 %	0.27 %	40	
63	369610	386970		<10	35	50	7.4 %	0.02 %	35	
65	369630	386975		<10	35	85	6.8 %	0.03 %	55	
67	369680	386945		<10	65	75	3.5 %	0.15 %	75	
69	369700	386946		<10	30	65	8.0 %	<0.01 %	10	
71	369860	386850		<10	50	100	5.0 %	0.06 %	55	
73	369870	386870		<10	25	120	5.0 %	0.11 %	90	
77	369525	386765		<10	180	55	4.8 %	0.08 %	75	
35080	369900	386805		<10	40	125	7.6 %	0.01 %	25	

425

058553

PROJECT: MT. BLANCH. EAST MURCHISON.

CO-ORDINATES: LINE: FROM: TO:

SAMPLED BY: J HILL, B. MORRISON, T. McDONALD

DATE: FEB. 1980

MATERIAL: Manganese Coated Pebbles From Drainage channels.

DEPTH:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	+/-	Cu	Pb	Zn	Mn%	Fe%	Co	DESCRIPTION
35082	369890	386790		<10	280	40	2.4%	0.17%	160	
84	369905	386685		<10	130	50	1.9%	0.12%	130	
87	369855	386370		<10	210	10	0.50%	0.17%	75	
89	370015	386765		<10	30	75	6.5%	0.05%	30	
91	370015	386790		<10	30	30	7.6%	0.02%	30	
35093	370200	386745		<10	30	110	6.7%	0.04%	10	
35105				<10	35	65	3.9%	0.18%	230	See Sterling Valley Shale.
110				<10	35	15	2.1%	0.43%	120	
116	369950	387730		<10	30	80	7.0%	0.03%	30	
118	369970	387765		<10	250	40	7.6%	0.03%	55	
120	369935	387740		<10	40	540	2.5%	0.06%	50	
136	369175	388455		<10	30	100	11.7%	0.01%	30	
140	369305	386285		<10	130	25	6.2%	0.05%	75	
35146	369530	387240		<10	50	110	1.8%	0.20%	50	
34426	367646	387356		<10	30	15	7.3%	0.06%	75	
4295	367705	387325		<10	45	15	5.0%	0.14%	110	
431	367790	387275		<10	40	15	6.6%	0.12%	180	
433	367795	387285		<10	40	10	8.3%	0.03%	110	
34435	368020	387325		<10	40	210	9.0%	0.02%	70	

426

058554

PROJECT: STERLING VALLEY
EAST MURCHISON AREA.

CO-ORDINATES
LINE:
FROM:
TO:

SAMPLED BY: J. HILL. & B STOKICH.

DATE: FEB. 1980

MATERIAL: Manganese Pebbles from Drainage channels.

DEPTH

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	known +/-	Cu	Pb	Zn	Mn%	Fe%	Co	DESCRIPTION
35105	37081 0	38759 0		210	35	65	39%	0.18%	230	
35110	37064 5	38774 0		210	35	15	21%	0.43%	120	

427

058555

PROJECT: STERLING VALLEY
EAST MURCHISON AREA.

CO-ORDINATES
LINE:
FROM:
TO:

SAMPLED BY: J. MILL. & G STORICH.

DATE: FEB. 1980

MATERIAL: Manganese Pebbles from Drainage Channels

DEPTH:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Mn%	Fe%	Co	DESCRIPTION
35105	37081	03875	90	410	35	65	39%	0.18%	230	
35110	37064	03877	40	210	35	15	21%	0.43%	120	

428

058556

(ss) Plotted

8 10

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

GEOCHEMICAL DATA SHEET

PROJECT: Mt. BLACK.
LOCALITY: EAST MURCHISON.
MATERIAL: STREAM SEDIMENTS -80#
SAMPLED BY: I McDONALD P. HOWARD
DATE 10-4-80

Line
FROM:
TO:

SAMPLE NUMBER	CO-ORDINATES N	CO-ORDINATES E	Pb	Zn	Cu	Fe %	Mn	Sn	Sample Type	Soil Parameters: Depth	Soil Parameters: Colour	Sample Composition: Rock Frags	Sample Composition: Sand	Sample Composition: Clay	Sample Composition: Organic Matter	Local Geology: Outcrop or Float	Local Geology: Outcrop or Float	Stream Parameters: Sediment Contamination	Stream Parameters: Order	Stream Parameters: Width	Stream Parameters: Direction
P 35153	369800	387240	<10	30	<10	0.30	140		3 D				64			OGR		/	420	E	
P 54	369940	387145	30	25	<10	0.10	190		4 D				622					/	410	S	
P 55	370090	387035	40	100	10	1.90	1900		2 D			2	611					/	415	SW	
P 56	370220	386920	35	110	15	2.00	470		6 D			1	72			FGD		/	420	S	
P 57	370280	386890	150	130	<10	2.50	5700		6 D				73			FGD		/	415	SSW	
P 59	370365	386820	240	250	20	3.20	1200		7 D				541					/	410	S	
P 60	370480	386730	10	45	<10	0.70	220		4 D				631					/	430	ENE	
P 61	370620	386630	20	45	<10	1.50	810		3 D				721					/	420	NE	
P 35163	370790	386410	20	60	15	0.50	330		3 D			3	52					/	415	NNW	
35158	370280	386890	1200	400	<10	540	>10000		6 M							FGD		/	415	SSW	

THIS IS A Mn pebble sample ANALYSED BY NITIC-PERCHLORIC IN ERROR ∴ RESULTS MEAN INGLESS

Dont Plot 35158

429

058557

(SS) Plotted

8.

Electrolytic Zinc Co. of A'asia Ltd.
Ansberg, Tas.

GEOCHEMICAL DATA SHEET

PROJECT: STERLING VALLEY MATERIAL: Stream sediments.
LOCALITY: TRIBS. OF SOPHIA RIVER SAMPLED BY: G.I.

Line
FROM:
TO:
DATE 27,28 · 3.80

SAMPLE NUMBER	CO-ORDINATES N	CO-ORDINATES E	Pb	Zn	Cu	Fe %	Mn	Sn	Sample Type	Soil Parameters: Depth	Soil Parameters: Colour	Sample Composition: Rock Frags	Sample Composition: Sand	Sample Composition: Clay	Sample Composition: Organic Matter	Local Geology: Outcrop or Float	Local Geology: Outcrop or Float	Stream Parameters: Stream Contamination	Stream Parameters: Order	Stream Parameters: Width	Stream Parameters: Direction
P33538	374570	388780	30	50	15	0.90	120	4										B	3	3	N
P33539	374410	388810	<10	30	15	0.45	80	4										B	4	0.5	NW
P33540	374410	338795	15	25	<10	0.45	35	4										B	3	3	N
P33541	374310	388800	10	30	<10	0.40	75	6										B	3	2	N
P33542	374090	388555	<10	10	<10	<0.10	<10	3											4	1	NNW
P33543	374025	388880	<10	10	10	<0.10	20	6											4	0.5	N
P33544	374030	388895	25	20	<10	0.15	30	4											4	1	NNW
P33545	373995	388905	<10	15	<10	<0.10	10	2											4	0.3	N
P33546	373990	388925	<10	10	<10	0.10	10	2											4	0.3	NW
P33547	374460	388605	10	10	10	0.10	100	4										B	2	3	N
P33548	374240	388605	10	15	<10	0.15	20	36											2	4	N
P33549	374070	388670	20	15	<10	0.20	95	31											2	4	N
P33550	374095	388535	15	10	<10	0.20	40	7											4	0.4	NE
P33551	374185	388540	10	20	10	0.10	30	16											4	.5	NE
P33552	374020	388745	25	15	<10	0.15	50	18											3	2	NW
P33553	374020	388720	10	20	10	0.25	100	20											2	4	N
P33554	373815	388630	15	25	<10	0.55	120	12											2	4	N
P33555	373770	388625	10	26	10	0.15	35	4											4	0.3	NW
P33556	373675	388590	20	25	<10	1.50	3000	4											4	0.3	NW
P33557	373600	388560	<10	15	10	0.10	140	1											2	4	N
P33558	373350	388565	<10	20	<10	0.30	100	x											4	0.3	NW
P33559	373350	388545	<10	20	10	0.30	140	30											2	4	N
P33560	373100	388515	<10	15	<10	0.15	15	4											2	4	N
P33561	373060	388540	<10	15	10	0.25	40	x											4	0.3	NW
P33562	372970	388525	<10	20	<10	0.10	85	x											4	0.3	NW

430

058558

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

GEOCHEMICAL DATA SHEET

Line
FROM:
TO:

PROJECT: STERLING VALLEY. MATERIAL: Stream Sediments

LOCALITY: TRIB. of Sophia River. W. side, Murchison River, S of Damsite. SAMPLED BY: G.J. DATE 28, 31, 1-3-80 1, 10-4-80

SAMPLE NUMBER	CO-ORDINATES N	CO-ORDINATES E	Pb	Zn	Cu	Fe %	Mn	Sn	Sample Type	Soil Parameters: Depth	Soil Parameters: Colour	Sample Composition: Rock Frags	Sample Composition: Sand	Sample Composition: Clay	Sample Composition: Organic Matter	Local Geology: Outcrop or Float	Local Geology: Outcrop or Float	Stream Parameters: Stream Contamination	Stream Parameters: Order	Stream Parameters: Width	Stream Parameters: Direction
33563	372825	388500	<10	15	<10	0.85	160	12											2	4	N
33564	373775	388455	<10	20	10	<0.10	<10	x											4	0.5	E
33565	372705	388515	10	15	<10	0.15	80	4											4	1	W
33566	372695	388495	<10	10	<10	0.25	160	26											2	4	N
33567	372690	388515	25	10	10	0.25	65	x											4	0.3	W
33568	372680	388490	10	20	10	0.30	170	32											2	4	N
33569	372440	388485	110	40	10	0.50	270	6											3	2	NE
33570	372430	388505	15	25	10	0.30	160	18											3	2	N
33571	372440	388515	25	15	15	0.20	170	22											2	3	NW
33572	373340	386950	170	180	15	2.50	>10000	x											4	0.5	S
33573	373240	386935	<10	20	10	0.50	250	x											3	2.5	SE
33574	373410	386890	<10	25	<10	0.20	90	x											4	0.5	SE
33575	373420	386910	<10	<10	<10	0.15	65	x											3	2.5	S
33576	373490	386920	<10	25	<10	0.10	35	x											3	2	S
33577	373580	386905	<10	15	<10	0.30	55	x											4	0.5	SE
33578	373590	386925	20	25	10	0.20	35	x											3	2	S
33579	373710	386905	35	20	<10	0.20	40	x											4	0.5	SE
33580	373700	386920	<10	15	<10	0.45	85	2											4	1	S
33581	373180	387040	<10	30	<10	0.45	410	x											2	3	SSE
33582	372965	386825	20	20	<10	0.10	55	x											3	2.5	SSE
33583	373095	386800	10	15	<10	<0.10	35	x											4	1	S
33584	373240	386660	<10	15	<10	0.15	30	6											4	1	SE
33585	372760	386730	70	65	10	1.00	2200	3											2	3	E
33586	372755	386615	<10	20	<10	0.10	50	x											4	0.5	N
33587	372765	386600	35	25	<10	0.10	270	4											2	3	E

058559

(SS) Plotted

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

GEOCHEMICAL DATA SHEET

Line
FROM:
TO:

PROJECT: STERLING VALLEY
MATERIAL: Stream sediments
LOCALITY: Port + Onzo Creeks
SAMPLED BY: G.F
DATE 10,11,14·4·80
12·4·80

Soil Parameters | Sample Composition | Local Geology | Stream parameters

SAMPLE NUMBER	CO-ORDINATES N	CO-ORDINATES E	Pb	Zn	Cu	Fe%	Mn	P	Sn	Sample Type	Soil Parameters: Depth	Soil Parameters: Colour	Sample Composition: Rock frags	Sample Composition: Sand	Sample Composition: Clay	Sample Composition: Organic matter	Local Geology	Stream parameters: Order	Stream parameters: Width	Stream parameters: Direction
P	33588	37275	65	500	15	>10·00	>10000			1								4	0·3	N
P	33589	37275	120	70	10	0·70	4500			X								2	3	NE
P	33590	37276	10	15	<10	0·10	70			X								6	P	E
P	33591	37275	130	65	10	1·80	4000			X								4	0·2	S
P	33592	37273	<10	25	10	0·80	1500			X								4	0·2	W
P	33593	37266	70	45	10	0·90	2300			X								4	0·5	S
P	33594	37264	65	85	10	0·90	1600			X								2	3	NE
P	33595	37261	170	90	<10	1·80	4800			X								2	3	NE
P	33596	37225	<10	30	<10	0·75	1800			X								4	1	SE
P	33597	37220	10	40	<10	1·30	3700			X								4	0·5	E SE
P	33598	37217	30	65	<10	0·90	1500			X								4	1·5	E NE
P	33599	37213	50	40	<10	0·70	3000			X								2	3	NE
P	33600	37218	45	35	10	0·90	3400			X								4	0·5	E NE
P	33701	37208	180	520	10	3·90	>10000			X								4	0·5	E NE
P	33702	37193	190	110	10	1·70	7000			X								2	3	NE
P	33703	37185	<10	35	<10	0·30	1700			X								3	1·5	N
P	33704	37175	180	3200	15	>10·00	>10000			X								4	0·5	N
P	33705	37176	1000	6500	30	>10·00	>10000			X								4	0·2	S E
P	33706	37177	95	65	10	1·70	3800			2								4	0·7	S E
P	33707	37172	85	55	<10	1·80	1500			X								4	0·7	NE
P	33708	37173	110	85	10	0·85	1200			1								3	2	E
P	33709	37238	<10	20	<10	0·25	60			X								3	2	N W
P	33710	37233	15	15	<10	0·30	500			X								4	0·3	N
P	33711	37219	<10	135	10	0·45	650			X								4	0·3	N
P	33712	37218	<10	25	<10	0·40	700			X								4	1	N W

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80

432

058560

(S.S) Plotted.

Electrolytic Zinc Co. of A'asia Ltd.
Bombery, Tas.

GEOCHEMICAL DATA SHEET

PROJECT: STERLING VALLEY.
LOCALITY: MURCHISON RIVER DAM.
MATERIAL: STREAM SEDIMENTS
SAMPLED BY: A. MOLLISON

Soil Line
FROM:
TO:
DATE 24-3-80; 10-4-80; 27-3-80

Sample Number	Co-ordinates N	Co-ordinates E	Pb	Zn	Cu	Fe %	Mn	P Sn	Sample Type	Soil Parameters: Depth	Soil Parameters: Colour	Sample Composition: Rockfrags	Sample Composition: Sand	Sample Composition: Clay	Sample Composition: Organic Matter	Local Geology	Local Geology	Stream Parameters: Stream Contamination	Stream Parameters: Order	Stream Parameters: Width	Stream Parameters: Direction
P 31759	378800	387400	<10	45	<10	0.60	130	4	D												WSW
P 60	374090	387940	<10	55	<10	0.80	340	2	D												SW
P 61	374020	387980	75	90	15	1.30	1800	4	D												WSW
P 62	373850	388030	70	310	15	3.50	2400	4	D												W
P 63	373770	388010	45	85	10	0.85	2100	3	D												WNW
P 64	373430	387920	<10	25	<10	1.00	160	5	D												NW
P 65	372840	387300	<10	45	<10	0.50	900	5	D												NW
P 66	375090	388680	50	110	10	1.20	390	8	D												NNE
P 67	375070	388690	25	200	<10	0.80	330	8	D												N
P 68	374790	388760	<10	120	15	1.10	170	8	D												N
P 69	374780	388745	310	870	80	2.20	1000	9	D												NNE
P 70	374820	388770	<10	30	<10	0.40	60	2	D												NW
P 31771	374720	388540	55	410	15	1.40	870	11	D												E
P 31777	372390	387300	<10	60	<10	0.80	300	2	D												SW
P 78	372380	387330	<10	30	10	1.00	330	2	D												WSW
P 79	372115	387660	10	200	30	2.20	1700	4	D												SW
P 31780	371835	387890	60	120	10	2.50	1900	10	D												WSW
P 31781	372240	385790	340	90	25	1.20	1500	2	D										4		ENE
P 82	372220	385870	150	150	20	1.60	610	8	D										4		ENE
P 83	372200	385930	650	480	30	4.70	>10000	5	D										3		NE
P 84	372000	385760	560	400	30	3.40	>10000	4	D										3		NE
P 85	371840	385610	530	230	30	2.00	>10000	X	D										3		NE
P 86	372650	385250	<10	20	<10	0.40	190	X	D										3		NNW
P 87	372610	386730	10	20	<10	0.10	110	X	D										4		ENE
P 31788	372520	386750	15	25	<10	0.20	260	X	D										4		ENE

433

058561

(S.S.) Plotted

Electrolytic Zinc Co. of A'asia Ltd.
Rosebery, Tas.

GEOCHEMICAL DATA SHEET

PROJECT: STERLING VALLEY MATERIAL: Stream Sediments
LOCALITY: N. Side, Mt Murchison. SAMPLED BY: G.I. A.Z. Mollison
DATE: 1.8.4-80 11-6-80 - 16-4-80

Line
FROM:
TO:

SAMPLE NUMBER	CO-ORDINATES N	CO-ORDINATES E	Pb	Zn	Cu	Fe	Mn	P	Sn	Sample Type	Soil Parameters: Depth	Soil Parameters: Colour	Sample Composition: Rock Frags	Sample Composition: Sand	Sample Composition: Clay	Sample Composition: Organic Matter	Local Geology: Outcrop or Float	Local Geology: Outcrop or Float	Stream Parameters: Stream Contamination	Stream Parameters: Order	Stream Parameters: Width	Stream Parameters: Direction
35713	372145	385515	15	30	<10	0.45	85			4	D									4	0.3	W
35714	372155	385285	50	50	<10	0.45	590			X	D									3	2.5	N
35715	372045	385300	20	35	10	1.10	300			X	D									4	0.3	W
35716	371980	385310	160	60	10	1.10	920			3	D									3	1.5	NNW
31789	372290	386720	100	75	10	1.20	6000			X	D									2		NE
90	371980	386810	370	170	10	3.50	8800			X	D									3		NNW
91	371930	386790	<10	25	<10	0.15	85			X	D									3		N
92	371780	386950	110	100	<10	1.10	4400			X	D									3		NW
93	371580	387070	450	170	10	1.90	>10000			X	D									3		NNW
94	371470	387130	<10	20	<10	0.15	200			X	D									4		WNW
95	371430	387090	120	65	10	1.00	2300			X	D									4		NNW
96	372020	386810	<10	30	<10	0.30	600			5	D									4		WNW
97	371470	386650	<10	55	<10	0.60	750			2	D									4		WNW
98	371470	386630	<10	40	<10	0.50	2100			X	D									3		N
31799	371360	386660	10	40	<10	0.40	850			X	D									3		NW
31800	371360	386640	20	35	<10	0.40	840			X	D									4		NNE
5401	371150	386800	20	45	<10	0.45	780			2	D									3		NNW
5402	371160	386830	<10	35	<10	2.00	110			4	D									4		NW
5403	371610	385590	740	520	75	2.70	7300			X										4		NE
5404	371610	385600	250	95	10	2.40	10000			X										4		NW

434

058562

(SS) Plotted.

Electrolytic Zinc Co. of A'asia Ltd.
Bowberg, Tas.

GEOCHEMICAL DATA SHEET

PROJECT: STERLING VALLEY
MATERIAL: STREAM SEDIMENTS
LOCALITY: S.V. Grid area.
SAMPLED BY: A.J. MOLLISON.
DATE 24-3-80

Soil Line
FROM:
TO:

	Sample Number	Co-ordinates N	Co-ordinates E	Pb	Zn	Cu	Fe %	Mn	P	Sn	Sample Type	Soil Parameters: Depth	Soil Parameters: Colour	Sample Composition: Rock Frags	Sample Composition: Sand	Sample Composition: Clay	Sample Composition: Organic matter	Local Geology: Outcrop or Float	Local Geology: Outcrop or Float	Stream Parameters: Contamination	Stream Parameters: Order	Stream Parameters: Width	Stream Parameters: Direction
P	31772	372000	383810	25	25	<10	0.35	170		11	D										4		NW
P	73	371710	383645	10	60	10	1.40	70		4	D										2		NW
P	74	371425	383560	15	30	<10	<0.10	95		4	D										3		NW
P	75	371270	383520	25	20	<10	0.90	15		3	D										2		WNW
P	31776	371270	383360	10	20	<10	0.20	20		3	D										4		NW
P	35405	371760	385300	40	40	<10	0.10	180		x	D										3		N
P	06	371610	385290	10	25	<10	0.15	65		x	D										4		NW
P	07	371660	385030	30	65	15	1.80	590		x	D										3		W
P	08	371630	385040	15	15	<10	0.15	45		x	D										4		WNW
P	35409	371760	384910	10	45	10	0.75	160		x	D										3		NW
P	35410	371880	384570	15	55	<10	0.75	100		x	D										3		W

435

058563

AREA: MT. BLACK, EAST MURCHISON

CO-ORDINATES
LINE:
FROM:
TO:

SAMPLED BY: I. TILL, A. HOLLISON, I. McDONALD

DATE: FEB. 1980

MATERIAL: STREAM SEDIMENTS

DEPTH

SAMPLE NUMBER	N/S	E/W	+/-	Cu	Pb	Zn	Mn	Fe %	Co	Sb	DIRECTION	DESCRIPTION
35001	36930	38773		<10	65	50	1500	0.84	<5	A	340	
35003	36930	38791	5	<10	25	15	900	0.09 %	<5	A	330	
35004	36930	38801	0	<10	25	15	600	0.23 %	<5	A	340	
35005	36921	38799	0	<10	30	15	300	0.13 %	<5	A	30	
35006	36921	38798	0	<10	25	<10	700	0.17 %	<5	A	50	
35007	36900	38788	0	<10	<20	<10	450	0.06 %	<5	A	20	
35008	36895	38775	0	<10	<20	10	550	0.08 %	<5	A	345	
35009	36895	38760	0	<10	<20	15	750	0.19 %	<5	A	10	
35010	36881	38765	0	<10	<20	<10	<10	0.03 %	<5	A	245	
35011	36881	38750	0	<10	<20	<10	<20	0.05 %	<5	A	340	
35012	36863	38775	0	<10	<20	<10	100	0.05 %	<5	A	340	
35013	36862	38765	0	<10	<20	10	600	0.16 %	<5	A	40	
35014	36846	38760	0	<10	100	230	>10000	>10 %	45	A	95	
35016	36846	38775	0	<10	20	15	1100	0.26 %	<5	A	340	
35018	36834	38760	0	<10	25	10	450	0.09 %	<5	A	340	
35019	36834	38764	0	<10	25	15	700	0.11 %	<5	A	300	
35020	36834	38756	0	<10	50	20	1200	0.23 %	<5	A	335	
35021	36834	38753	0	<10	60	30	2200	0.48 %	<5	A	00	
35022	36834	38734	5	<10	45	15	2000	0.16 %	<5	A	300	
35023	36868	38738	0	<10	45	20	2100	0.16 %	<5	A	275	
35024	36904	38740	0	<10	45	20	900	0.18 %	<5	A	320	
35025	36914	38740	0	<10	90	30	1700	0.13 %	<5	A	265	
35026	36943	38737	5	<10	25	<10	1400	0.14 %	<5	A	235	
35027	36911	38755	0	<10	180	130	3200	2.20 %	25	A	50	
35028	36901	38766	0	<10	200	130	4300	3.10 %	40	A	325	

436

058564

PROJECT: MT. BLACK
EAST MURCHISON

CO-ORDINATES
LINE:
FROM:
TO:

SAMPLED BY: J Fine
R Hallison
I McDonald

DATE: FEB 1980

MATERIAL: STREAM SEDIMENTS.

DEPTH:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	+/-	Cu	Pb	Zn	Mn	Fe %	Co	Sb	DIRECTION	DESCRIPTION
350301	368900	387630		<10	120	40	2200	1.31	15		320	
302	368870	387645		<10	30	15	370	0.25	<5		300	
303	368675	387700		<10	100	60	1300	1.6	<5		60	
305	368530	387580		<10	190	75	3800	1.7	30		80	
306	368525	387595		<10	65	40	580	1.2	5		120	
308	368480	387230		25	300	200	900	0.75	<5		560	
309	368665	387050		<10	180	110	3500	1.1	15		350	
311	368900	387095		10	240	120	3700	1.8	20		340	
313	369095	387175		35	260	400	7200	5.5	50		360	
315	369100	387160		10	190	90	2800	1.7	10		70	
316	369340	387165		<10	240	85	5400	2.1	45		345	
318	369340	387170		<10	95	55	860	0.85	5		40	
319	369635	387240		<10	230	150	7000	2.6	55		20	
321	369640	387225		<10	170	120	2900	1.8	20		500	
323	369565	387140		<10	180	170	5200	2.2	25		200	
325	369590	387135		<10	55	25	380	0.33	<5		60	
327	369600	387145		<10	30	15	240	0.22	<5		150	
328	369535	387120		<10	110	150	1000	1.2	5		345	
330	369545	387110		<10	180	130	3400	2.4	20		85	
332	369611	386970		<10	180	90	1000	1.5	25		65	
334	369630	386975		<10	110	100	2500	1.6	20		160	
336	369680	386945		<10	240	130	6000	2.8	35		90	
338	369700	386945		<10	140	90	3200	1.3	20		100	
340	369860	386850		<10	200	140	7000	2.0	25		130	
350342	369870	386870		<10	360	370	10000	5.0	130		160	

437

058565

PROJECT: MT. BLACK. EAST MURCHISON.

CO-ORDINATES
LINE:
FROM:
TO:

SAMPLED BY: J. HILL, A. ALLISON, I. MCDONALD

DATE: FEB 1980

MATERIAL: STREAM SEDIMENTS.

DEPTH:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Mn	Fe	Co	Sn	Direction	DESCRIPTION
350074	370035	386915		<10	120	180	900	1.45%	10	x	130	
75	370030	386930		<10	85	90	380	1.10%	5	x	175	
76	369526	386765		<10	240	85	3900	1.40%	35	x	70	
78	369535	386760		<10	130	100	2400	1.90%	30	x	95	
79	369900	386805		<10	340	380	10000	3.80%	45	x	120	
81	369890	386790		<10	70	30	650	0.62%	10	x	80	
83	369905	386685		<10	180	45	1800	1.40%	25	x	110	
85	369890	386690		<10	60	25	350	0.85%	5	x	50	
86	369955	386370		<10	85	25	600	0.85%	5	x	55	
88	370015	386765		<10	1400	420	10000	4.20%	55	x	150	
90	370015	386790		<10	90	70	2600	0.80%	5	x	165	
350925	370200	386745		<10	420	740	10000	3.10%	75	x	135	
351015	369720	387345		<10	45	45	450	0.74%	<5	x	Worthy	
102												See Sterling Valley sheets.
103												
104												
107												
109												
112	370040	387990		<10	40	30	330	0.45%	<5	x	?	
113	370055	387985		<10	110	100	1900	1.30%	15	2	119	
115	369950	387730		<10	160	100	3200	1.80%	25	2		
117	369970	387765		<10	190	90	6700	1.90%	40	x		
119	369935	387740		<10	70	140	1400	0.72%	10	x		
121	370030	387625		<10	180	110	4000	1.70%	20	3		
122	370035	387515		<10	250	75	4400	1.80%	30	3		

438

058566

PROJECT: MT. BLACK
EAST MURCHISON.

CO-ORDINATES
LINE:
FROM:
TO:

SAMPLED BY: J. NELL, A. MOLLISON, B. McDONALD

DATE: FEB. 1980

MATERIAL: STREAM SEDIMENTS.

DEPTH:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Mn	Fe %	Co.	Sn	Direction	Description
35123	369995	387460		<10	200	440	10000	3.8 %	60			
124	369940	387420		<10	130	90	3400	1.3 %	15			
125	369855	387365		<10	60	50	350	1.0 %	<5			
126	369835	387315		<10	210	180	5500	2.7 %	40	2		
127	369765	387310		<10	140	80	2000	2.2 %	25	3		
128	369670	387255		<10	180	110	5100	1.7 %	25			
129	368665	387050		<10	270	160	2100	1.5 %	40			
131	368895	386810		<10	120	70	2000	1.2 %	25			
132	368945	386765		<10	110	90	5600	1.4 %	25			
133	368970	386710		<15	150	70	2100	0.60 %	<5			
134	369135	386505		<10	340	210	5000	1.70 %	25			
135	369175	386455		<10	160	160	2500	2.50 %	20			
139	369305	386285		<10	80	20	2000	0.32 %	10			
141	369480	386030		<10	65	30	220	0.80 %	<5			
142	369390	385810		<10	75	40	360	0.85 %	<5			
143	369530	386150		<10	75	50	1000	0.65 %	5			
144	369515	386150		<10	140	65	1400	1.3 %	5			
145	369530	386240		<10	120	70	2000	1.1 %	5			
147	369540	386640		<10	120	75	1100	1.0 %	5			
148	369580	386835		<10	170	80	2500	1.6 %	10			
149	369385	386510		<10	100	25	2300	0.62 %	15			
150	369400	386625		10	540	320	9000	2.7 %	35			
151	369420	386665		<10	150	200	900	1.4 %	10			
35152	369455	386705		<10	55	25	500	0.45 %	<5			
34416	368045	386455		<10	30	25	20	0.30 %	<5			

439

058567

PROJECT: MT. BLACK
EAST MURCHISON

CO-ORDINATES
LINE:
FROM:
TO:

SAMPLED BY: J. MILL, A. MOLLISON, I. McDONALD

DATE: FEB. 1980

MATERIAL: STREAM SEDIMENTS.

DEPTH:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Mn	Fe %	Co.	Sn	DESCRIPTION
34417	36803	38645		<10	30	25	20	0.30	<5	A	
418	36792	38633		<10	20	20	10	0.05	<5	A	
419	36814	38626		<10	<20	20	<10	<0.05	<5	A	
420	36784	38664		<10	30	15	10	0.24	<5	A	
421	36769	38686		<10	<20	15	<10	0.08	<5	A	
422	36769	38685		<10	35	20	170	0.40	<5	A	
423	36758	38690		<10	25	15	35	0.18	<5	A	
424	36756	38695		<10	20	15	50	0.35	<5	A	
425	36764	38735		<10	<20	<10	10	0.07	<5	A	
427	36769	38731		<10	80	30	1600	1.1	<5	A	
428	36770	38732		<10	20	10	90	0.18	25	A	
430	36779	38727		<10	190	80	3800	2.8	10	A	
432	36779	38728		<10	130	45	1600	1.5	15	A	
434	36802	38732		<10	120	60	2400	1.6	15	A	
435	3677	3877		<10	100	100	2100	2.5	<5	A	Mn. Pebbles.
436	36785	38706		<10	100	50	900	1.4	<5	A	
437	36746	38738		<10	<20	10	20	0.15	<5	A	
438	36746	38737		<10	55	45	600	1.6	<5	A	
439	36744	38734		<10	25	20	100	0.50	<5	A	
440	36748	38735		<10	35	25	90	0.50	<5	A	
441	36719	38730		<10	35	20	120	0.55	<5	A	
442	36732	38718		<10	<20	10	70	0.18	<5	A	
443	36752	38702		<10	<20	10	35	0.18	<5	A	
444	36743	38706		10	45	70	500	0.12		A	
445	36748	38702		<10	20	10	55	0.13	<5	X	

044

058568

PROJECT: Mt. BLACK
EAST MURCHISON

CO-ORDINATES
LINE:
FROM:
TO:

SAMPLED BY: J. HILL, A. HOLLISON, I. MCDONALD
DATE: FEB. 1980

MATERIAL: STREAM SEDIMENTS.
DEPTH:

DOC. No.
SHEET No.
JOB No.

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Mn	Fe %	Co	Sn	DESCRIPTION
344476	367625	386860		<10	<20	<10	15	0.05	<5	X	
4477	367605	386860		<10	<20	<10	20	<0.05	<5	X	
4478	367590	386825		<10	<20	<10	15	<0.05	<5	X	
4479	367575	386825		<10	<20	<10	20	<0.05	<5	X	
4480	367515	386775		<10	<20	<10	25	0.10	<5	X	
4481	367730	386860		<10	<20	<10	20	0.05	<5	X	
4482	367955	386865		<10	45	25	580	0.52	<5	X	
4483	367950	386880		<10	<20	15	75	0.24	<5	X	
4484	368090	386815		<10	<20	10	20	0.10	<5	X	
4485	368095	386830		<10	25	20	65	0.34	<5	X	
4486	368135	386795		<10	<20	<10	20	0.10	<5	X	
4487	368300	386800		<10	<20	<10	60	0.12	<5	X	
4488	368305	386815		<10	20	15	140	0.30	<5	X	
4489	368550	386845		<10	45	25	150	0.19	<5	X	
4490	368550	386860		<10	25	15	280	0.26	<5	X	
4491	368765	386725		<10	110	60	5200	1.45	35	X	
4492	368770	386840		<10	180	100	9800	2.4	80	X	
4493	368835	386745		<10	130	55	5300	1.45	35	X	
4494	368840	386730		<10	90	45	1500	1.8	25	X	
4495	369210	386895		<10	140	250	3400	2.3	35	X	
4496	369395	388020		<10	20	15	75	0.25	5	X	
4497	369400	388035		<10	<20	<10	25	0.07	<5	X	
4498	369450	388005		<10	<20	10	60	0.21	<5	X	
4499	369445	387985		<10	75	80	1500	1.8	25	X	
344700	369475	387975		<10	25	20	90	0.28	<5	X	

147

058569

PROJECT: MT. BLACK. EAST MORCHISON

CO-ORDINATES
LINE :
FROM :
TO :

SAMPLED BY: J. HILL. P. HOLLISON T. McDONNALD.

DATE: FEB. 1980.

MATERIAL: STREAM SEDIMENTS.

DEPTH

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Mn	Fe%	Co	So	DESCRIPTION
34471	369740	387905		<10	70	60	2000	1.11	15		
34472	369890	387930		<10	60	110	850	1.8%	10		
34473	369920	387740		<10	85	110	2200	0.75%	25		
34474	369920	387720		<10	75	170	1600	0.91%	10		
34475	369770	387705		<10	160	470	6200	1.4 %	55		
34476	369635	387680		<10	50	30	450	0.70%	<5		

442

058570

PROJECT: STERLING VALLEY
EAST MURCHISON AREA.

CO-ORDINATES
LINE:
FROM:
TO:

SAMPLED BY: J. MILL & E. STORICH.

DATE: FEB 1980

MATERIAL: STREAM SEDIMENTS

DEPTH:

SAMPLE NUMBER	CO-ORDINATES N/S	CO-ORDINATES E/W	Interval +/-	Cu	Pb	Zn	Mn	Fe%	Co	Sn	DESCRIPTION
35102	370940	387630		<10	110	75	1200	1.0%	15	✓	
35103	370810	387590		<10	130	90	1500	1.3%	20	✓	
35104	370870	387720		<10	140	130	2600	1.1%	25	✓	
35107	370880	387650		<10	45	20	330	0.23%	<5	✓	
35109	370645	387740		<10	60	45	450	0.70%	5	✓	

443

058571

PROJECT	CO-ORDINATES	SAMPLED BY	MATERIAL	BOOK No
MT. BLACK Stitt Grid	LINE:	M.GG.	Stream Sediments & MANGANESE Pebbles	SHEET No
	FROM:	DATE 25/1/80	DEPTH	JOB No
	TO:			

SAMPLE NUMBER	CO-ORDINATES (N)/S	CO-ORDINATES (E)/W	INTERVAL +/-	Cu	Pb	Zn	Mn	Fe	Co	SIZE	DIRECTION	DESCRIPTION
28447	372523	381860		10	50	70	230	>1.0	<5	very small	190° mag	SS
48		700		<10	35	15	140	0.78	<5	very small	175° mag	SS
49		660		<10	30	15	50	0.30	<5	very small	210° mag	SS
50		375		<10	70	80	1000	1.0	<5	LARGE	210° mag	SS
51		375		<10	20	80	34	0.11	35			MN
52		335		15	90	75	1600	>1.0	15		325° mag	SS
53		335		<10	15	80	0.90	0.14	25			MN
54		310		<10	90	80	1900	>1.0	10		230° mag	SS
55		310		<10	25	15	7.9	0.02	20			MN
56		215		<10	50	40	460	0.72	<5		220° mag	SS
57		215		<10	20	45	3.7	0.10	170			MN
58		060		<10	65	60	620	>1.0	<5		180° mag	SS
59		060		<10	15	75	1.1	0.12	45			MN
60		380660		<10	120	120	2700	>1.0	20		200° mag	SS
61		520		<10	60	40	470	>1.0	<5			SS
62		450		<10	50	70	630	>1.0	10		340° mag	SS
63		450		<10	15	75	1.3	0.25	45			MN

058572

APPENDIX 3

Pseudo-Sections of Detail Dipole-Dipole I.P. Profiles -
Farm Creek - Scintrex.

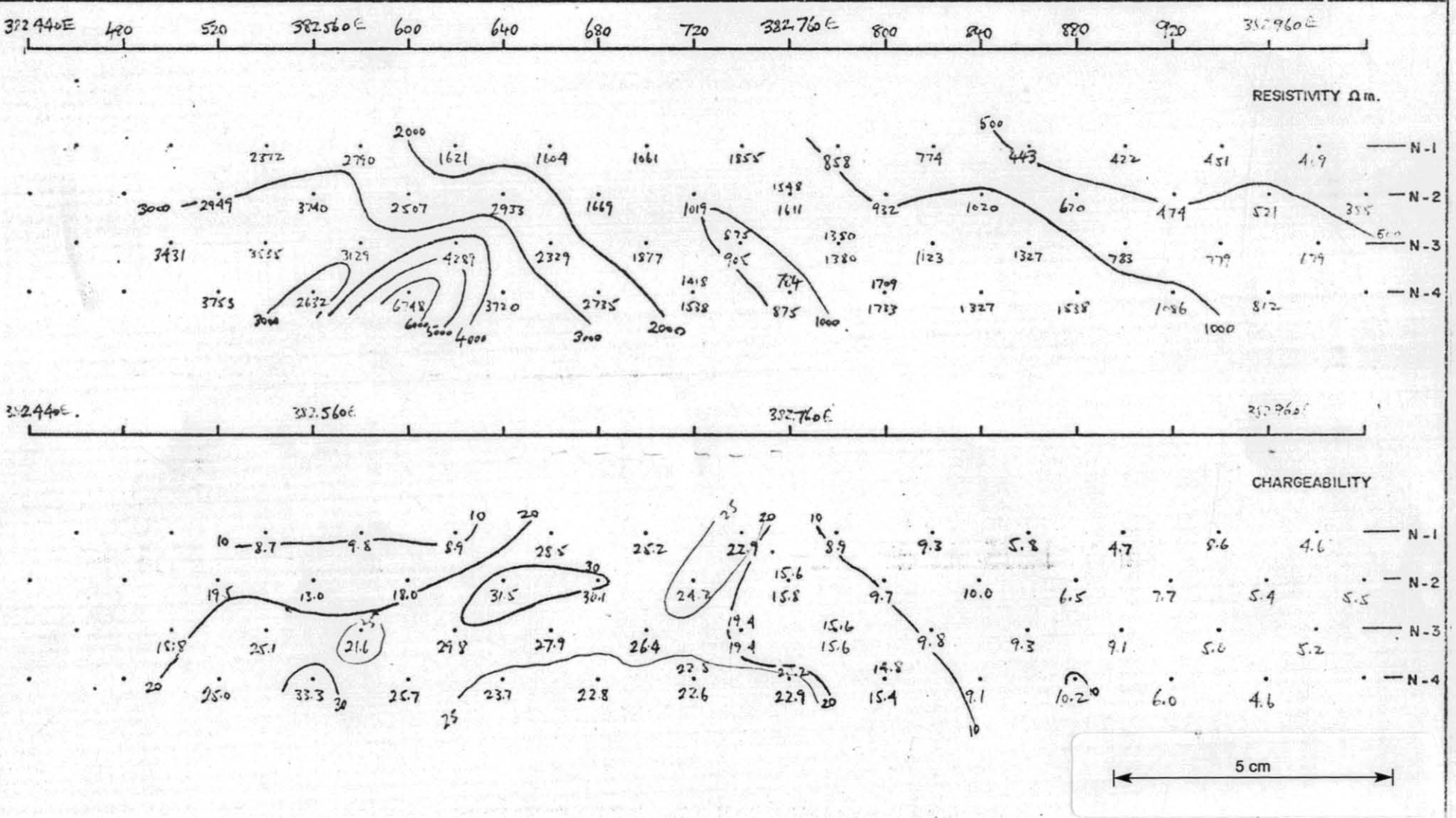
058573

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE 27/02/80		LINE No. 5383 400 N
PLOTTED BY T.T.K.		PROSPECT FARM CR.
PULSE 2 SEC	Rx. IPR 10	JOB No. TAS 075
DIPOLE SPACING 40 M		



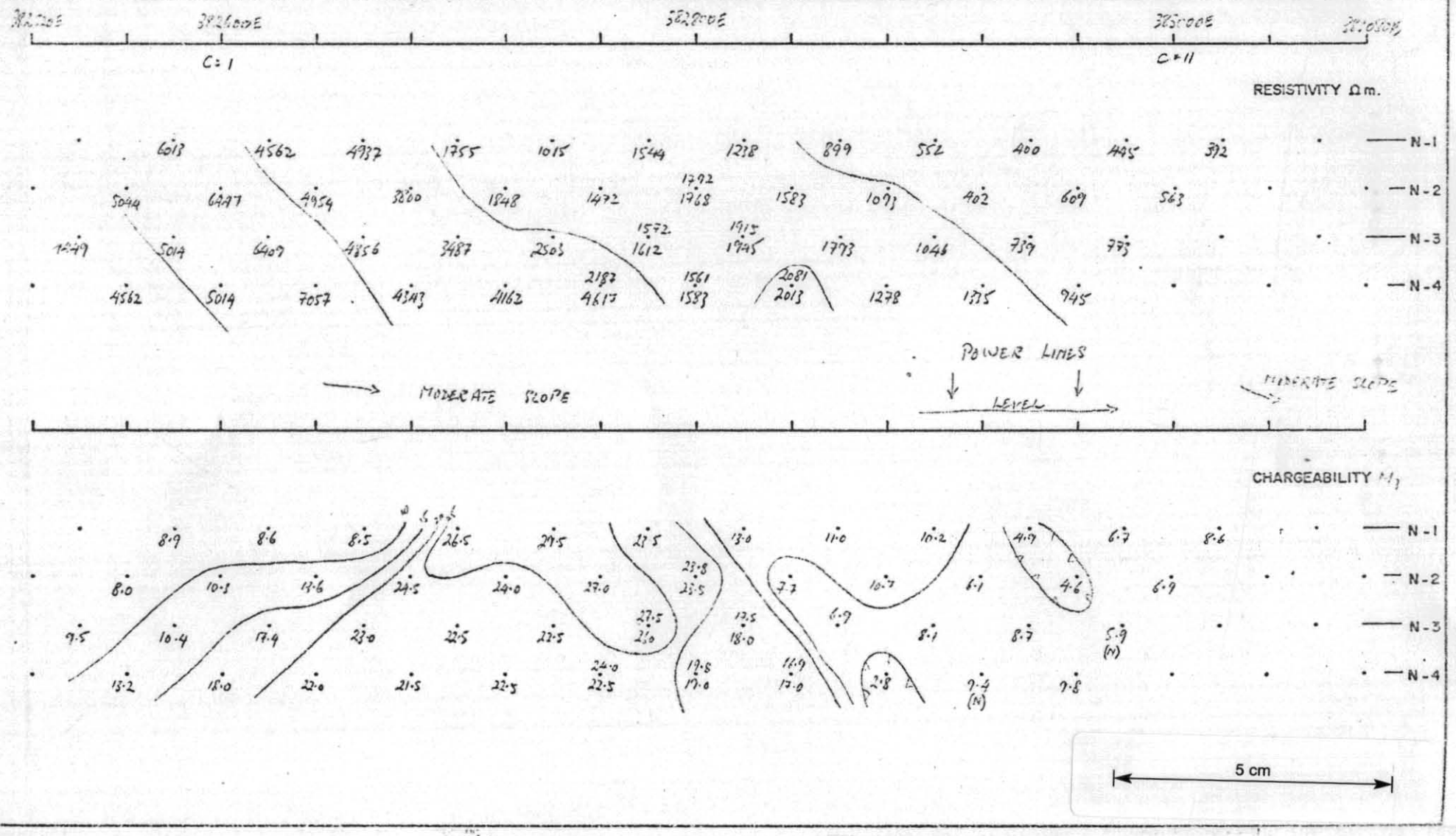
058574 2

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE	12 - 2 - 80	LINE No.	5,583,500 N
PLOTTED BY	CHB	PROSPECT	FARM CREEK
PULSE	2 Sec	Rx.	IPR 8
DIPOLE SPACING	40 m	JOB No.	T75 075



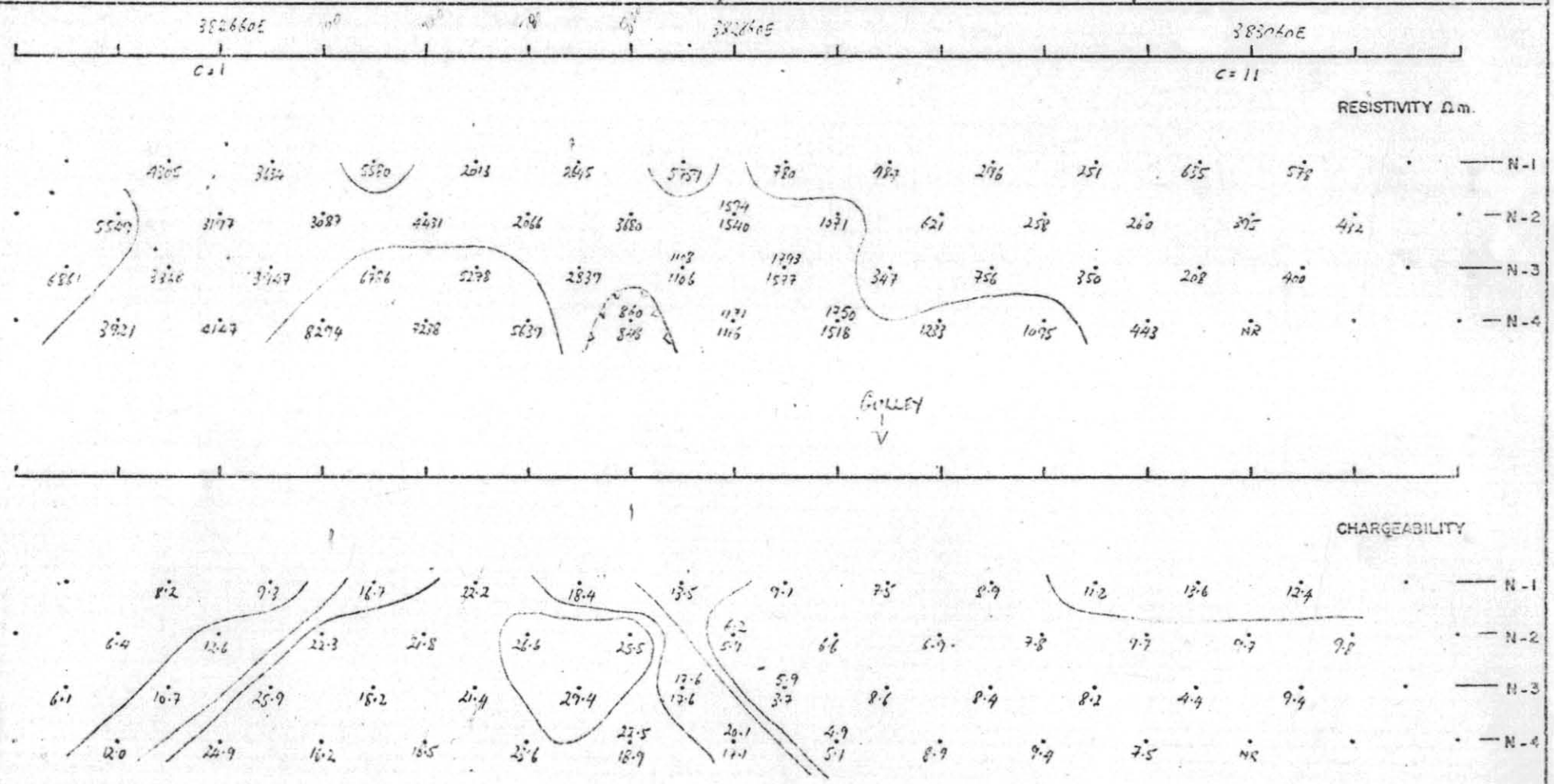
058575 3

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE	[illegible]	LINE No.	[illegible]
PLOTTED BY	[illegible]	PROSPECT	FARM CREEK
PULSE	2 Sec	Rx.	[illegible]
DIPOLE SPACING	40 m	JOB No.	TAS 075



5 cm

0588576 4

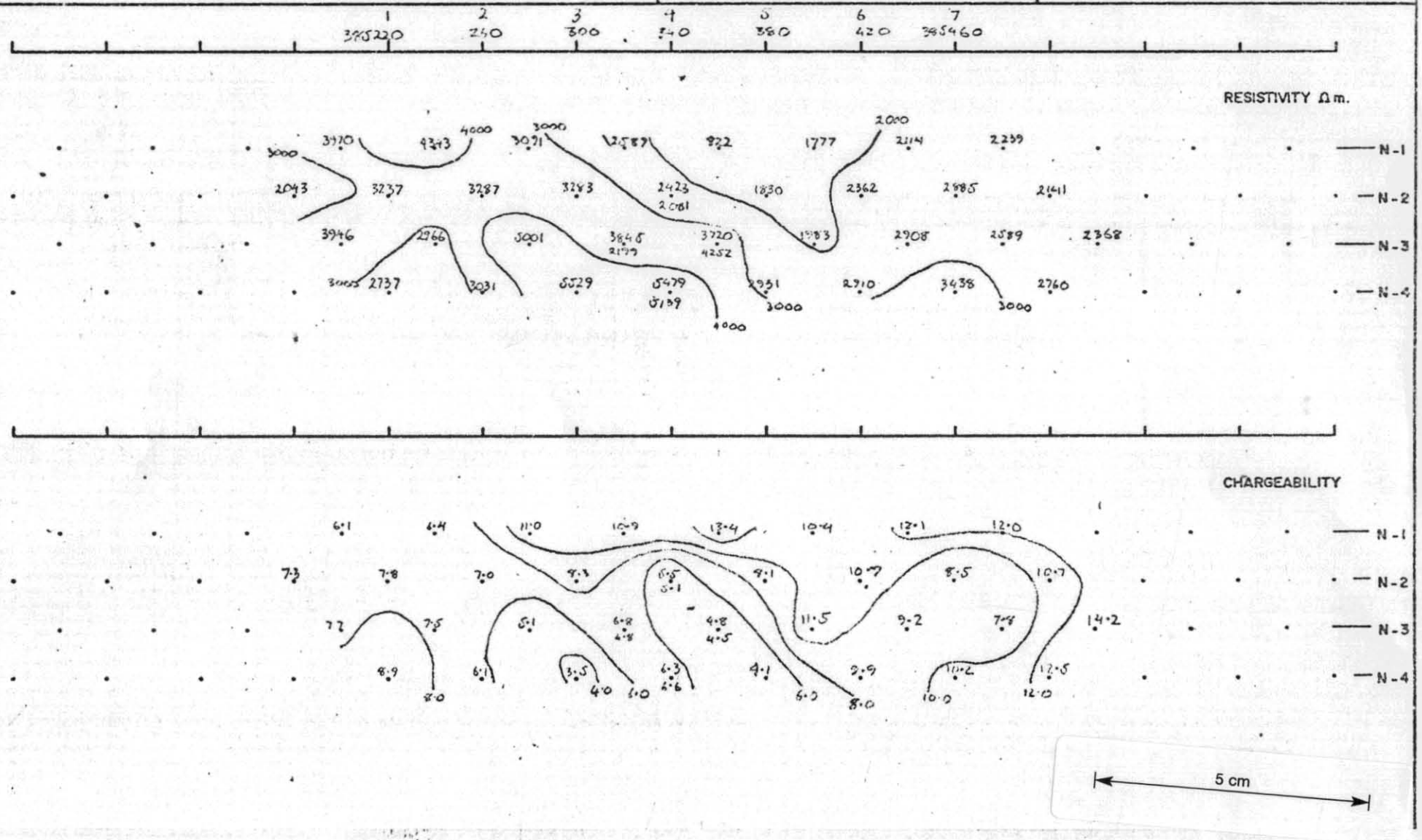
SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

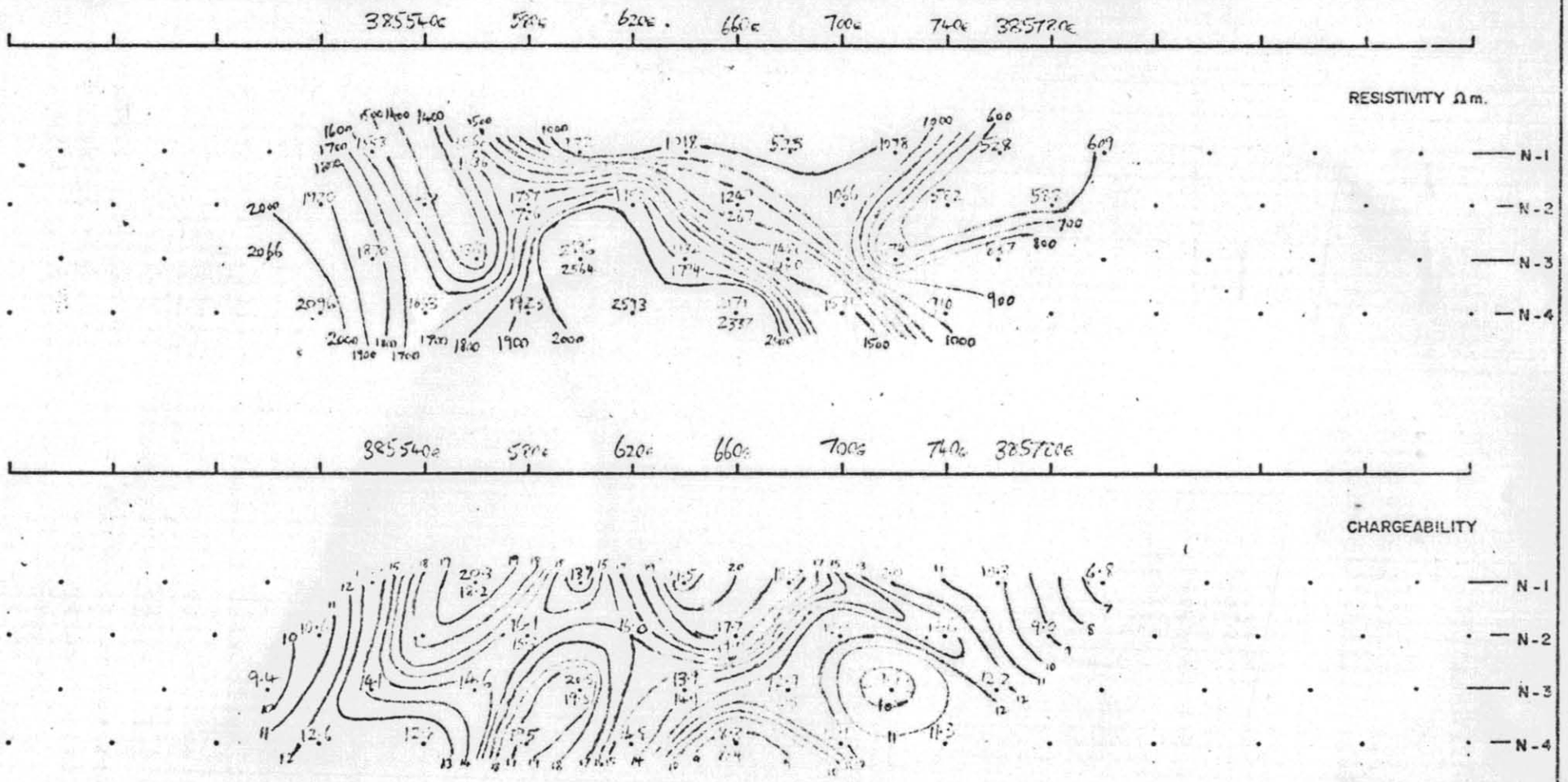
DATE	7-9-79
PLOTTED BY	T.J.S
PULSE 2 Sec	Rx.
DIPOLE SPACING	40m

LINE No.	5381 COON
PROSPECT	FARM CREEK
JOB No.	T-1057



058577 5

SCINTREX PTY. LTD. INDUCED POLARIZATION AND RESISTIVITY SURVEY DIPOLE - DIPOLE ARRAY	DATE 3/14 - 9 - 79	LINE No. 5 381 600N
	PLOTTED BY PL	PROSPECT FARM CREEK
	PULSE [illegible] Rx.	
	DIPOLE SPACING 40m	JOB No. [illegible]



5 cm

0588578 6

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE

PLOTTED BY

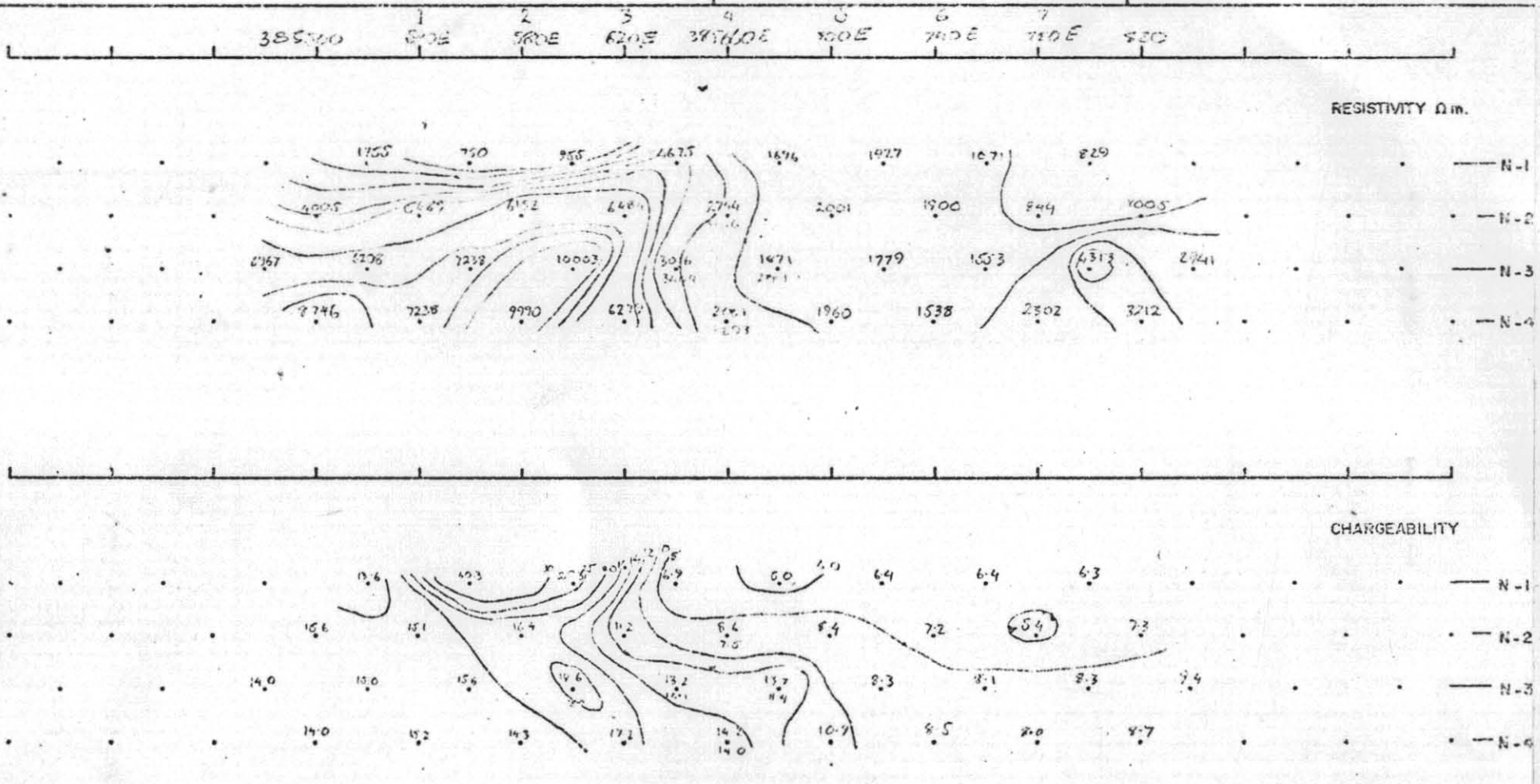
PULSE Rx.

DIPOLE SPACING

LINE No. 5381500N

PROSPECT FARM CREEK

JOB No.



058579

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

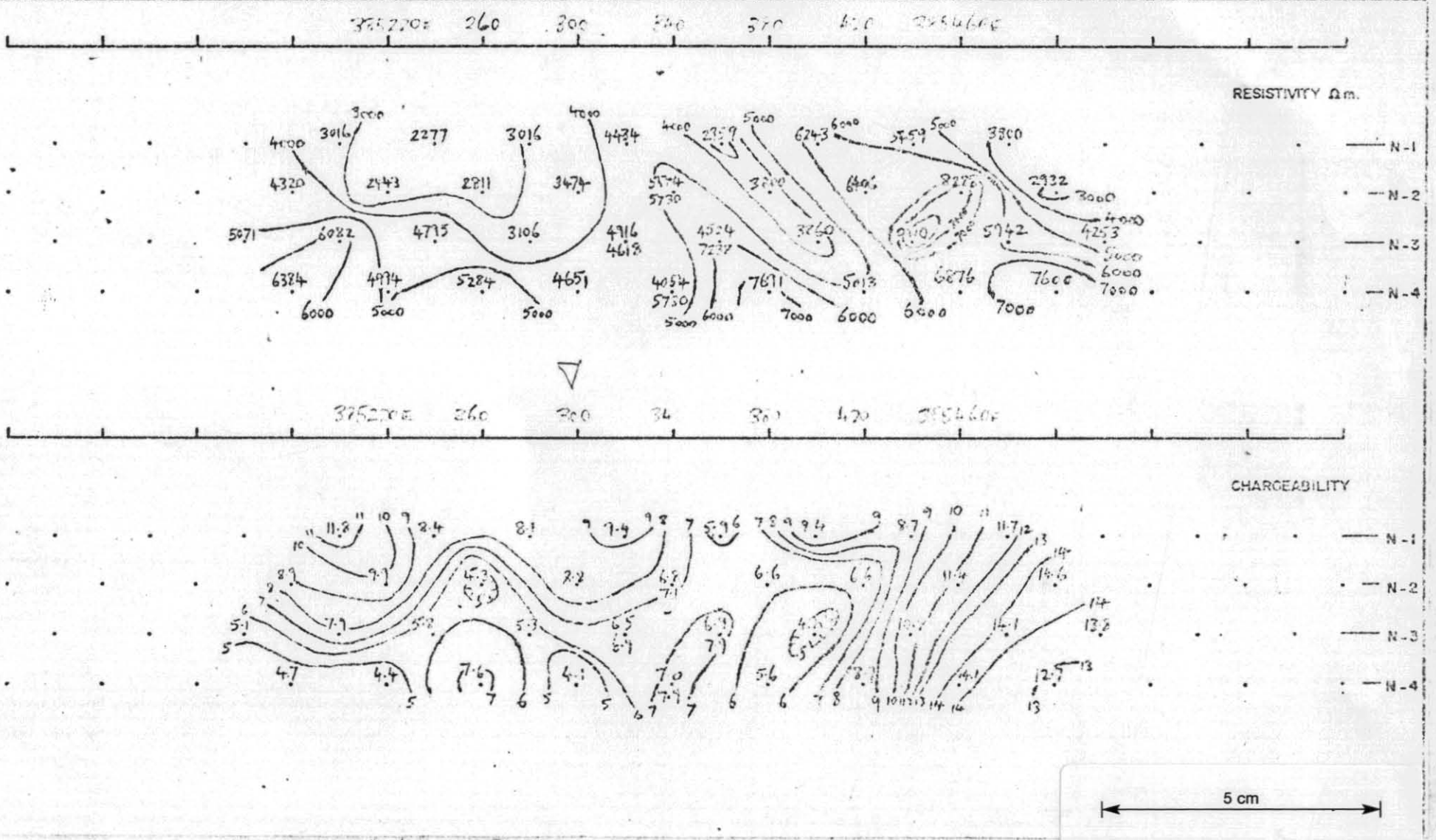
DIPOLE - DIPOLE ARRAY

DATE	
PLOTTED BY	
PULSE	Rx.
DIPOLE SPACING	40m

LINE No. 5 381 500N

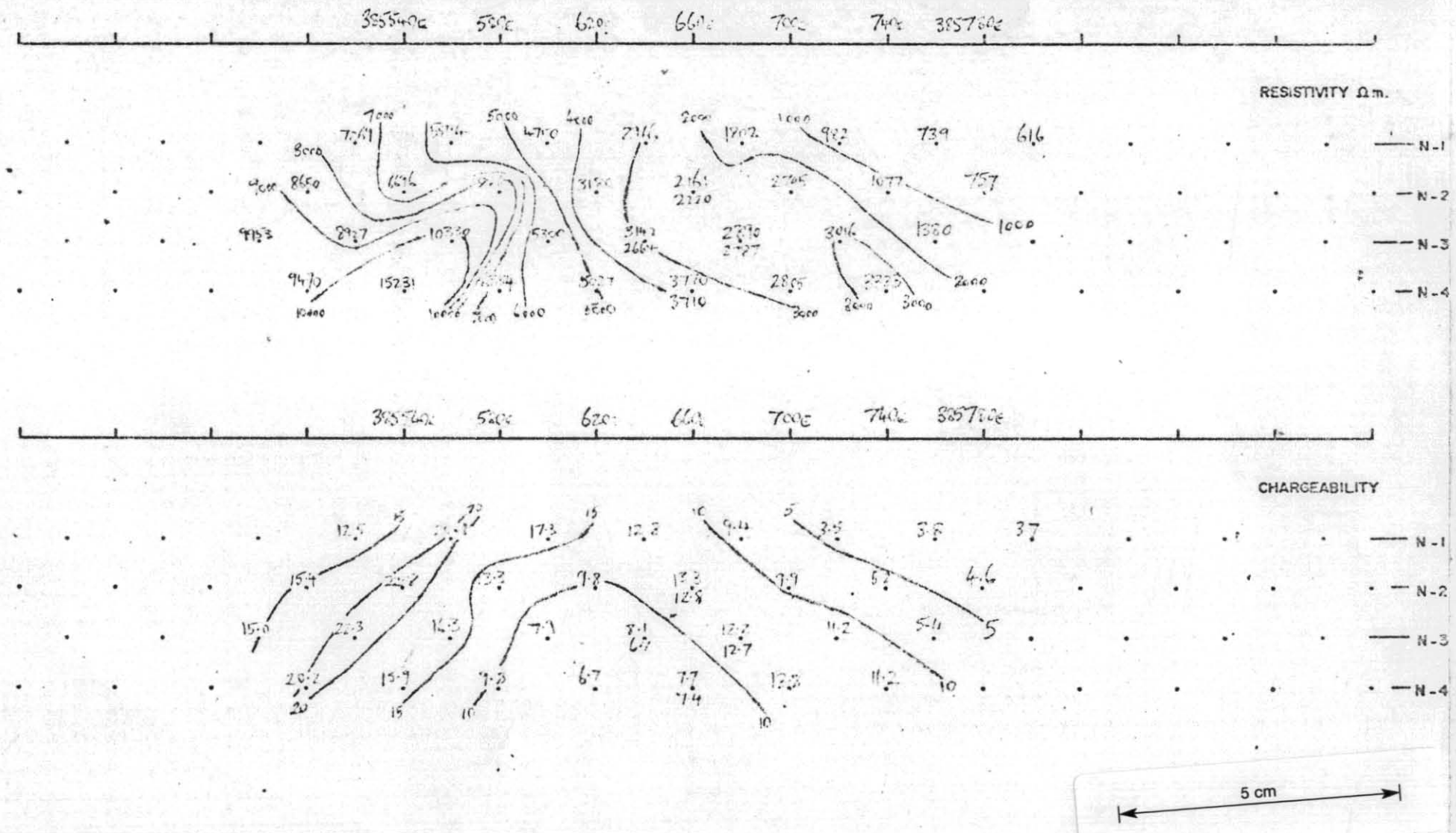
PROSPECT FARM CREEK

JOB No.



058580 8

SCINTREX PTY. LTD. INDUCED POLARIZATION AND RESISTIVITY SURVEY DIPOLE - DIPOLE ARRAY	DATE	LINE No. 5 381 400N
	PLOTTED BY IL	PROSPECT FARM CREEK
	PULSE / Rx.	
	DIPOLE SPACING	JOB No.



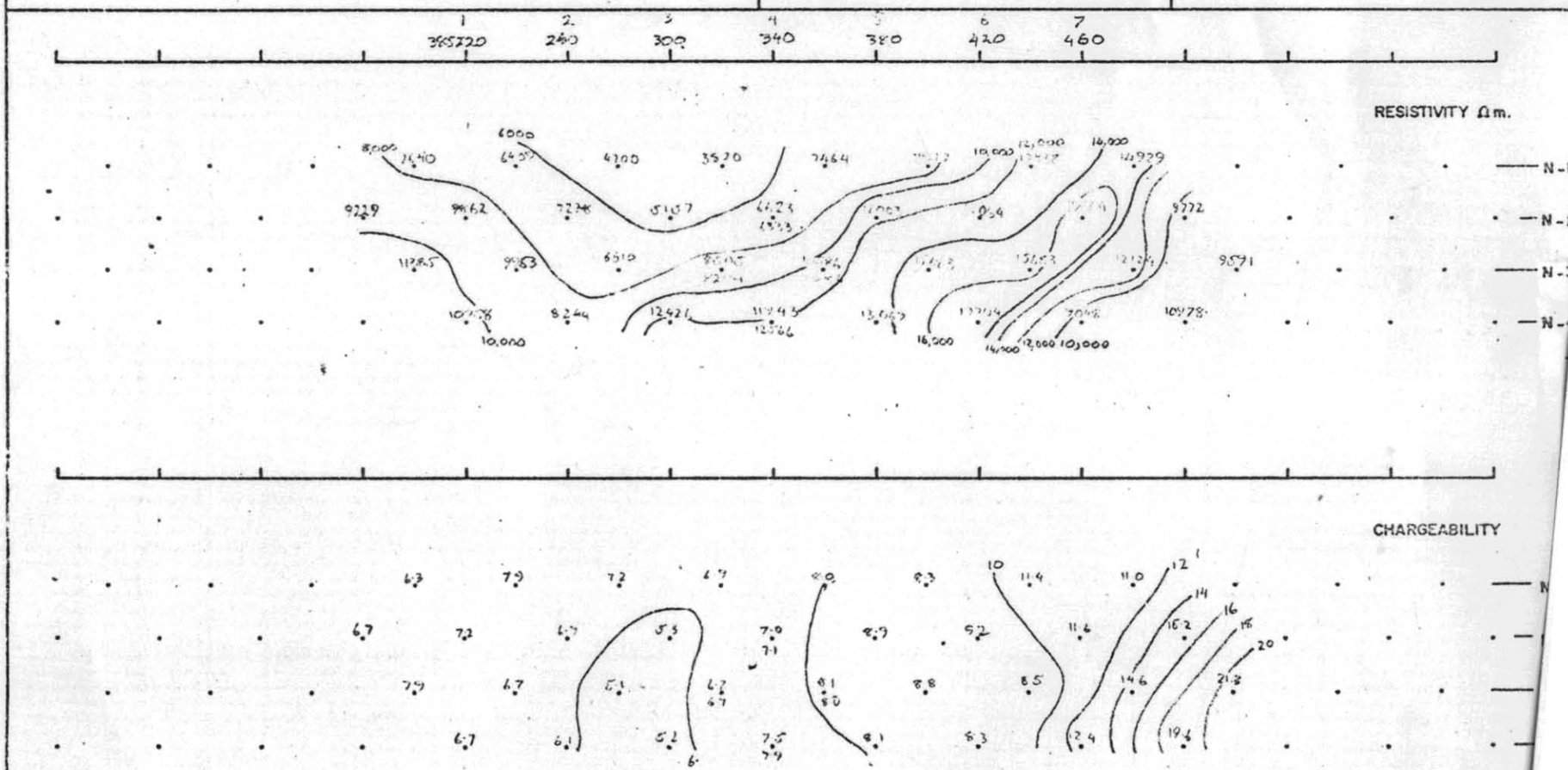
058581 9

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE	
PLOTTED BY	
PULSE	Rx.
DIPOLE SPACING	40m
LINE No.	5,381 400N
PROSPECT	FARM CREEK
JOB No.	



5 cm

058582 80-1468 4/8

D of M | CG | CC&M | D.S.A.E.
RECEIVED 19 AUG 1980
ANSWERED
DEPT OF MINES
REF. No.
Registrar
E&IL

OPEN FILE

APPENDIX 4

Scintrex Report Tas-065
"Comments on pole and dipole-dipole surveys over the Stitt Grid, near Rosebery, Tasmania on behalf of the Electrolytic Zinc Company of Australasia Limited."

May, 1980

Copy forwarded to Getty Oil direct by Scintrex.

SCINTREX

058583

COMMENTS ON
POLE AND DIPOLE-DIPOLE SURVEYS
OVER THE STITT GRID
NEAR ROSEBERY, TASMANIA
ON BEHALF OF
ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

058584

SCINTREX

PRIVATE AND CONFIDENTIAL

COMMENTS ON
POLE AND DIPOLE-DIPOLE SURVEYS
OVER THE STITT GRID
NEAR ROSEBERY, TASMANIA
ON BEHALF OF
ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

BY

A.W. HOWLAND-ROSE
MSC,DIC,AMAUSIMM,FGS.
GEOPHYSICIST

SYDNEY, N.S.W.

MAY, 1980
TAS-065

CONTENTS

Summary

Introduction Page 1

Method Page 1

Equipment Page 2

Data Presentation Page 3

Discussion of Results Page 3

Conclusions Page 14

Appendix

Data Profiles

SCINTREX PTY. LTD.

GEOPHYSICAL CONSULTANTS AND CONTRACTORS

SUMMARY

Weather hampered work intermittently over the period pole and dipole-dipole work was carried out over the Stitt grid.

Overall the results were disappointing with few significant anomalous responses being recorded. Of those defined, four are considered of primary to primary/secondary interest, seven of secondary to secondary/tertiary interest, and four of tertiary interest.

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WEST PERTH, 6005
WESTERN AUSTRALIA

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TELEX: 92353
TELEGRAMS: SCINTREX, PERTH

6 TRAMORE PLACE,
KILLARNEY HEIGHTS, 2087
N.S.W. AUSTRALIA.

TELEPHONE: 451 5367
TELEX: 26859
TELEGRAMS: SCINTREX, SYDNEY

058587

SCINTREX

COMMENTS ON
POLE AND DIPOLE-DIPOLE SURVEYS
OVER THE STITT GRID
NEAR ROSEBERY, TASMANIA
ON BEHALF OF
ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

INTRODUCTION

At the request of Mr. J. McDonald, Chief Geologist for the West Coast Mines division of the Electrolytic Zinc Company of Australasia Limited, Scintrex Pty. Ltd. carried out dipole and pole-dipole reconnaissance surveys over the Stitt grid.

These surveys were carried out over 65¼ single operator days and 11¼ double operator days between 31st October, 1979 and 29th February, 1980. The 1979 dipole-dipole surveys were under Scintrex party leader Mr. P. List, while the 1980 surveys, predominantly pole-dipole, were under party leader Mr. R. Bennett.

Mr. J. Mill, Senior Exploration Geologist, provided overall geological supervision, while the author provided geophysical direction and on-going comments.

METHOD

The initial method selected was a 100 metres dipole-dipole from n = 1 to 4, however, the slow progress caused by bad weather and distance of the survey sites from access, resulted in a change to pole-dipole in the second phase

of the survey carried out in January and February, 1980. This change, together with the improved weather resulted in much improved production.

The dipole-dipole and pole-dipole methods, together with gradient array are briefly described in the appendix. Comments are also made. With regard to this, in areas subject to noise, such as powerlines, or at times of high telluric noise, the standard 2 second timing on the IPR-8 and IPR-10 receivers was changed to a one second programme, either with single or three slices being read. All surveys were, however, carried out using a standard two second on, two second off, reverse and repeat cycle. The data for different receiver timing has been differentiated on the data profiles. The multiplication factors to convert the data to the standard 2 second 3 slice programme used are as follows:-

1 second receiver timing, single slice: 2.18

1 second receiver timing three slices : 2.00

The above assumes a 'normal' decay form, but unfortunately in most of the critical areas the decay form observed was not 'normal'.

EQUIPMENT

The equipment consisted of a Scintrex 2½ kilowatt time domain induced polarization transmitter powered variously by a 4 or 8 HP motor generator (depending on access). The primary and secondary potential fields were measured using Scintrex IPR-8 and IPR-10 receivers.

DATA PRESENTATION

The data is presented in standard pseudo-section format for both dipole-dipole and pole-dipole surveys.

On the pole-dipole data, the current dipole direction is shown in diagrammatic form. Also shown are the zones for which 1 second receiver timing was used - denoted on the pseudo-sections by bracketted data points in the case of isolated readings, and where the whole set-up was read by "R1", positioned at the array centre.

Contour presentation of the chargeability and resistivity data will be prepared and will be written up at a later date as an appendix to this report.

DISCUSSION OF THE RESULTS

Each of the pole-dipole and dipole-dipole (denoted by PD and DD) lines are separately written up below.

5,372,523N *PD - a = 100 metres, n = 1 to 4* *RAB 27-1-80*

380400E - 383500E *PPC-382100E-CPP*

The western end of this line is characterised by a systematic increase in chargeability from a "background" of 10 millivolts/volt ±1 millivolt/volt at 381800E to the end of the line at 380400E where it remains open to the west. The interpretation of this zone is that a significant source centred west of the line end at, or west of 380300E, consisting of disseminated material within a resistive source, shows a gradual decrease in percentage of disseminated sulphides (or graphite) to the east. The maximum values recorded on the western

extremity of the line was 30 millivolts/volt and showed a *slow* decay form inferring a *coarse* grain size. This anomaly is of secondary interest.

Between about 381000E and 382300E, the chargeability background remains at a low 4 to 7 millivolts/volt for the most part; shows slightly faster than normal decay forms, and high resistivity in the range 5000 ohm-metres ±2000 ohm-metres. Such conditions are generally associated with siliceous rocks having low mafic mineral content.

A small anomaly of 50% against background was recorded centred at 383150E on n = 2 to 4 close to a chargeability background change from 10 millivolts/volt(+) in west to 12 millivolts/volt(+) background change in the east. Slightly lower resistivities of 3500 to 4000 ohm-metres were recorded as against levels 50% higher to the east and west. The geophysical interest is tertiary at best.

5,372,000N *DD = a = 100 metres, n = 1 to 4* *TVS 31-10-79 &*

380200E - 383600E *T @ 380900E, 381700E, 382500E, 383300E* *8 & 11-1-79*

Chargeabilities of 35 millivolts/volt(+) were recorded centred at 380300E for ±100 metres on n = 2 to 4 inclusive, with 30 millivolts/volt readings at n = 1. The associated resistivities were a high 4000 to 5000 ohm-metres. To the east there is a *gradual* fall off to values as low as 15 millivolts/volt at 381100E(+). The source in the west is due to disseminated sulphides or graphite (or even perhaps mafic minerals) within a resistive background. The decay form is slightly faster than normal inferring a finer than normal grain size to the source, which could be formational. Notwithstanding, the higher chargeabilities of 39 millivolts/volt at 380300E are considered of secondary interest and should

be investigated further.

A relatively *low* chargeability source was located at n = 1 381350E, which produces a distinct double peak response in spite of the end overlap location. A high 31.9 millivolts/volt chargeability on the n = 4 is considered a function of this low, however, should there be any significant geochemistry in the area, this response should also be further investigated.

A significant anomaly of 38 millivolts/volt against 12 millivolts/volt(±) background was noted on n = 1 from a source estimated to lie within 100 metres of surface at 382800E-383000E. The anomaly is typically "double peak" and is associated with lower resistivity values, at least for n = 1 and 2. The anomaly is located on the *eastern* flank of the set up at 382500E, and the western flank of the set-up at 383300E gives only minimal overlap. The latter infers a source at 382900E to 383000E which is also accompanied by low resistivities with respect to background. Thus, in spite of the overlap, a source within 100 metres of surface is indicated between 382800E and 383000E. The decay form is markedly fast, (e.g. 53/38/37) and thus a finer than normal grain sized source is inferred. There is probably some degree of weak interconnection within the source as the associated resistivities are lower than background. This response is of primary to secondary interest.

The last dipole read indicates a significant source at, or just east of 383700E. That source is, however, disseminated in nature as it is associated with high 2500 ohm-metres resistivities. Surface resistivities are, however, markedly lower at less than 1000 ohm-metres between 383400E and 383600E. The low accompanying chargeabilities are interpreted as being due to an overburden

layer which is less than 100 metres thick. The anomaly located is of secondary interest.

5,371,500N *PD - a = 100 metres, n = 1 to 4* *RAB 20/23-1-80*

379600E - 383400E *PPC -* *- CPP*

With a broad increase in resistivity from 6800 ohm-metres to 15,000 ohm-metres, a low amplitude increase in polarization was recorded between 379800E and 380100E on n = 3 and 4 of 12 to 14 millivolts/volt as against a background of 8 millivolts/volt to the east and west. The source is weakly disseminated in nature, and lies at a depth of the order of 250 metres. This change could well be formational, and as such it is of tertiary interest at best. Dips may be shallow to the east at 380300E(+).

Between 380200E and about 382400E the background chargeabilities remain a low 6 to 8 millivolts/volt, while the apparent resistivity was a high 10000 to 40000 ohm-metres for the most part. As to the north, a siliceous rock low in mafic mineral content is suggested. Within this zone there are no significant anomalies.

East of about 382500E the regime changes markedly with an increase in background to about 11 millivolts/volt from this point to the end of the line at 383600E. Within this zone a number of distinct anomalies were defined. The first whose source is centred at 383050E shows a weak double peak anomaly influenced in part by the strong anomaly on the eastern end of the line. The anomaly is 17.5 millivolts/volt against a background of 13 millivolts/volt ±1 millivolt/volt and has a maximum depth to source of the order of 100 metres. High 3500 ohm-metres resistivities infer a wholly disseminated source. Of secondary interest

at best.

The most significant anomaly on this line was recorded from a source at, or to the east of 383500E. The source shows a threefold increase in chargeability to 30 millivolts/volt, while the apparent resistivities of 1489 ohm-metres (at n = 2) are about half those observed to the immediate west. The decay form is fairly normal. The maximum depth to source is less than 100 metres. The anomaly would rate of primary interest.

5,371,000N *DD - a = 100 metres, n = 1 to 4*

378900E - 383600E T @ 379200E, 379800E*, 380400E*, 381000E*, 381800E, 382500E 383300E*

**Note: The transmitter set-up locations at 379200E, 379800E, 380400E and 381000E employed a 1 second receiver timing and a single slice programme. This was necessary to reduce the noise on this line. To adjust the data to a 2 second receiver timing three slice programme, the data requires to be multiplied by the factor 2.18.*

West of about 379100E apparent resistivities of 3000 ohm-metres(±) were recorded with background chargeabilities of about 12 millivolts/volt(±). East of this point the apparent resistivities varied between 1000 and 3000 ohm-metres, while the apparent chargeability recorded was generally less than 10 millivolts/volt until 379300E was recorded. Only a single minor chargeable source was noted within these two zones. This infers a source at or in close proximity to 378800E to 378900E (±). The source lies within 100 metres of surface. Slightly lower resistivities of 1500 ohm-metres versus 3000 to 4000 ohm-metres infer slight conduction within the source, or host to the source. The interest of this anomaly is tertiary at

best.

Relative to a background of the order of 6 millivolts/volt at 379800E(+) and at 380700E(+), two anomalous zones were reduced. The most westerly was seen on n = 1 to 3 centred at 380050E(+), while the second was centred at 380450E(+) on n = 3 to 4. In addition higher than background values of 12 to 16 millivolts/volt were recorded at 380250E ±50E ±100 metres on n = 1 with markedly lower values of 2 millivolts/volt on n = 3 and 4. This is interpreted as a near surface chargeable layer within 100 metres of surface situated *between* 380100E and 380400E. The near surface chargeabilities are lower at 1700 to 2500 ohm-metres, than background (3500 ohm-metres+), thus the source is less resistive than the enclosing rocks, however, it cannot be considered conductive as such. *The form of the anomaly is reminiscent of the near surface sources defined on the Pinnacles grid.*

Between 380400E and 381600E the background chargeability remains a low 10 millivolts/volt or less, while the resistivity ranges within the range 6000 ±2000 ohm-metres. There are no significant anomalies within this zone.

East of about 381900E the background chargeability increases to 20 millivolts/volt ±4 millivolts/volt, and very minor increases in this background were noted at 382100E, 382400E and 382700E which are considered variations in background only. Within this zone a shallow weak source could be interpreted at 382700E-382800E within 100 metres of surface. The source would be disseminated and of tertiary interest only.

The only truly significant anomaly was defined between 383200E and 383600E.

Here a dramatic increase in chargeability to over 40 millivolts/volt was recorded which is allied with some of the lowest resistivities recorded, namely,150 ohm-metres. Except at 383300E where the chargeability is 44 millivolts/volt on n = 1 and indicates a source within 100 metres of surface, lower n = 1 chargeability values infer a less chargeable surface cover less than 100 metres in thickness to be present over the chargeable source. Distinctly *slow* decay forms are recorded which infer a coarse grain size to the source which is judged to be either graphite or/and sulphides. This response is of primary/secondary interest.

5,370,500N *PD - a = 100 metres, n = 1 to 4*

378400E - 383000E *PPC - 381900E - CPP*

On the western end of the line a 50% increase in chargeability was noted whose source comes within 100 metres of surface at, or west of 378400E, and is open to the west. The accompanying resistivities of 2000 to 3000 ohm-metres clearly infer the source to be disseminated in nature, and the relatively low amplitude thereof probably denotes a formational change only.

Within a background which to the east is about 8 millivolts/volt(+) and to the west, 12 millivolts/volt(+), a relatively minor source is interpreted within 100 metres of surface at 379450E(+). The 17 millivolts/volt anomaly is minor but is accompanied by a depression in resistivity by about 50% on spacings n = 1 to 3. Again the source is probably formational in origin.

There are no other significant anomalies on this line.

5,370,000N *DD - a = 100 metres, n = 1 to 4*

378600E - 383000E

The first significant anomaly was located at 380100E on n = 2 and 3 as a 2½ fold increase in apparent chargeability to 21 and 27 millivolts/volt. However, the presence of telephone and power lines may? be the cause. The decay forms are *slow* which does not suggest an artificial source. Therefore, further investigation of this response should be carried out. The source (if valid) would appear to be at a depth of the order of 150 metres(±) at 380100E, and is associated with lower 400 ohm-metres resistivities as against background of about four times this level. Therefore the source is interpreted to be coarse grained sulphide and/or graphite showing weak interconnection at a depth of 150 metres(±).

A weak n = 1 24 millivolts/volt anomaly was recorded at 380850E with supporting values to the east and west. The *form* of the resistivity suggests a chargeable near surface (100 metres ±) layer between about 380700E and 381000E. This response is of tertiary interest.

A significant, near twice background, chargeability anomaly was located on n = 3 and 4 at 382450E. Supporting readings were recorded above to the east and west. The source looks to be about 200 to 250 metres deep, however, a distortion in the pattern may occur due to the presence of a near surface source between 382500E and 382700E. These two responses are both associated with lower than background resistivity, the former 1000 ohm-metres versus 4000 ohm-metres, and the latter about 400 to 500 ohm-metres. Both sources are significant and rate secondary priority.

5,369,500N *PD - a = 100 metres, n = 1 to 4* *RAB 10/12-2-80*

378200E - 382400E *CPP (whole line)*

Between 378800E and the western end of the line at 378200E, higher background chargeabilities of 13 to 15 millivolts/volt were recorded, and to the east of this point, background values of 6 to 9 millivolts/volt were recorded to 379900E, where backgrounds again increase to 11 to 12 millivolts/volt. East of 380900E to as far as 381500E(+), background again decreases to 5 to 7 millivolts/volt. Between 381500E and 382100E backgrounds of 10 millivolts/volt were recorded. Within the entire area no significant anomalies were recorded.

Between 382300E to 382500E higher chargeabilities of 17 millivolts/volt (+1 millivolt/volt) were recorded allied to 2000 ohm-metres resistivities. The source is therefore a moderate increase in mafic minerals or very weak sulphide/graphite content.

5,369,000N *DD - a = 100 metres, n = 1 to 4* *PL 7,15/20-12-79*
RAB 16,12-1-80

378300E - 382900E

Transmitter set-up centred at 379800E is a 1 second receiver programme as is the section 381500E-382900E. To normalise to a 2 second programme multiply readings by 2.18

The western sector of the line between about 378300E and 378700E is characterised by high 6000 ohm-metres resistivities and higher than average chargeabilities of 15 +2 millivolts/volt. To the east of this zone the resistivities remain high, but the chargeabilities average a low 6 to 9 millivolts/volt until a power line

is reached at 380500E. Higher background of 13 millivolts/volt ±2 millivolts/volt were recorded in the vicinity of the power line, but these values are not sigificant even should they be due to changes in the underlying geology.

A zone of increased polarization was recorded centred at about 382000E(±). Here, at n = 1 a twice background response of 18 millivoltv/olt was defined which is interpreted to be due to a very minor source within 100 metres of surface at this point. The anomaly is not considered of significance.

A second zone of increased polarization was noted at 382550E ±50 metres from n = 1 to 4 where 20 millivolts/volt was recorded from a zone of high resistivity. A minor disseminated sulphide, graphite and/or increased mafic mineral content is the suggested source. The anomaly is not considered significant.

5,368,500N *PD - a = 100 metres, n = 1 to 4*

377900E - 382000E *CPP (whole line)*

A gradual change in background chargeability from 18 millivolts/volt in the west (378100E ±) to 8 millivolts/volt at 379000E ±200 metres, then to 11 millivolts/volt at 380000E ±100 metres was recorded before declining to low values of 8 millivolts/volt ± at 380600E ±200 metres. The line ends in higher 12 millivolts/volt ±1 millivolts/volt readings at 381800E ±200 metres. Resistivity varies between 3000 and 9000 ohm-metres for the most part.

There are no significant anomalies.

5,368,000N *DD - a = 100 metres, n = 1 to 4*

378500E - 379100E *Transmitter at 378800E*

Backgrounds vary from 8 millivolts/volt to 12 millivolts/volt while resistivities vary from 3000 to 5000 ohm-metres. There are no significant anomalies, however, two areas of increased background were noted; one at 379000E ±100 metres and the other at 378200E to 378300E. Both are wholly due to variation in background. Decay forms are faster than normal.

5,367,500N *PD - a = 100 metres, n = 1 to 4*

377600E - 379700E *CPP (whole line)*

The background overall varied between 8 millivolts/volt and 14 millivolts/volt while resistivities remained a high 6000 to 8000 ohm-metres west of 379200E. To the east they fall to half this level although no change in chargeability was noted.

There were no significant anomalies.

5,367,000N *DD - a = 100 metres, n = 1 to 4*

378400E - 379000E *Transmitter at 378700E*

Receiver timing set on 1 second three slice programme. To transfer to a standard 2 second three slice programme multiply by 2.0.

The background chargeabilities were a low 8 to 10 millivolts/volt, while the resistivity remained a high 4000 ohm-metres for the most part. There were no significant anomalies.

5,366,500N *PD - a = 100 metres, n = 1 to 4*

377800E - 379200E *CPP (whole line)*

The background chargeabilities varied about 9 millivolts/volt ±1 millivolt/volt, while resistivities remain between 4000 and 10,000 ohm-metres for the most part. No significant variations in these backgrounds were noted.

5,366,000N *DD - a = 100 metres, n = 1 to 4*

377600E - 379100E *Transmitter at 378000E, 378800E*

Note: 1 second receiver timing east of 378000E

Moderate backgrounds of 16 millivolts/volt were noted at 377600E ±150 metres, and low backgrounds of 6 to 10 millivolts/volt elsewhere. Resistivities varied between 4000 and 8000 ohm-metres. There are no significant anomalies.

CONCLUSIONS

The conclusions are presented on line and anomaly basis.

5,372,523N *(PD)*

380300E (at or west of) *Interest-Secondary+*

Chargeability 2½ to 3 times background at 30 millivolts/volt - high 7000 to 12000 resistivity - slow decay form - maximum depth 150 metres (or less) - coarse grained disseminated source suggested.

383150E *Interest-Tertiary*

Slightly lower 3500 to 4000 ohm-metres resistivity - slight 50% increase in

chargeability to 16 millivolts/volt - maximum depth to disseminated source is 100 to 150 metres - normal decay form.

5,372.000N *(DD)*

380300E ±100 metres *Interest-Secondary+*

n = 3 to 4 values of 35 millivolts/volt are associated with faster than normal decay form and 5000 ohm-metres resistivity. The finer than normal disseminated sulphides or graphite source has a maximum depth of 50 metres.

382800E - 383000E *Interest-Primary/ Secondary*

A significant source is interpreted within 100 metres of surface between 382800E and 383000E. Higher chargeability of 35 millivolts/volt allied to relatively low 1500 ohm-metres resistivities infer some weak interconnection within the chargeable source. Faster than normal decay form infers a finer than average grain size to the source.

383700E (at, Or east of) *Interest-Secondary*

A significant two to three times background anomaly was defined from a source at or east of the most easterly dipole read, namely, 383300E-800E. The source is *less* resistive than the enclosing rocks at 383650E (*n* = 2) inferring weak interconnection within the source. A lower resistivity surface layer infers an overburden of less than 70 metres thick.

5,371.500N *(PD)*

379800E - 380100E *Interest-Tertiary-*

A slight increase in chargeability from 8 millivolts/volt to 12 to 14 millivolts/

volt on n = 3 and 4 is inferred to be due to a disseminated source. Probably formational.

383050E — *Interest-Secondary/ Tertiary*

50% increase in chargeability background to 17 millivolts/volt. The source is disseminated and narrow and less than 100 metres deep. Normal decay form.

383400E (at, or east of) — *Interest-Primary*

30 millivolts/volt chargeabilities associated with lower than background resistivities of 1500 ohm-metres. Disseminated source with weak interconnection. Interpreted to be at a maximum depth of 100 metres.

5,371,000N *(DD)*

378950E ± 50 metres — *Interest-Tertiary-*

A low amplitude 14 to 16 millivolts/volt inferred double peak infers a minor disseminated source within 100 metres of surface.

380100E - 380400E — *Interest-Secondary/ Tertiary*

A shallow near surface chargeable source is inferred, with some reduction in the apparent resistivities. The maximum depth to source is 100 metres.

382600E - 382800E — *Interest-Tertiary-*

A shallow minor source inferred at about 382650E(+) is disseminated and lies within 100 metres of surface.

383200E - 383600E *Interest-Primary/ Secondary*

Significant increase in chargeability to 40 millivolts/volt was recorded on n = 2 to 4 spacings, together with a marked depression in resistivity to 200 ohm-metres and less. The decay forms were slow. The interpreted source is coarse grained graphite and/or sulphides within 100 metres of surface showing weak conduction within the source. At 383500E(±) the source comes closest to surface.

5,370,500N *(PD)*

378400E (west of) *Interest-Tertiary/ Secondary*

A 50% increase in apparent chargeability to 22 millivolts/volt and high 2000 ohm-metres(+) resistivities are considered to be formational in origin. The maximum depth to source is 100 metres.

379450E ± *Interest-Tertiary-*

A relatively minor 5 millivolts/volt above background anomaly from a source which is interpreted to lie within 100 metres of surface.

5,370,000N *(DD)*

380100E *Interest-Secondary/ Primary(?)*

Twice background chargeability readings of 21 and 27 millivolts/volt on n = 3 and 2 at 380100E are allied to a 75% depression in apparent resistivity to 400 ohm-metres. The decay forms are slow. The interpretation is of a coarse grained sulphide or graphite source at a depth of the order of 150 metres(±) which

shows weak interconnection. However, the presence of power and phone lines in the area *may?* be the cause of the anomaly in spite of the fact that it looks normal.

380700E - 381100E *Interest-Tertiary*

Higher chargeability values to twice background on n = 1 spacing together with a slight depression in moderate resistivities, suggest a near surface chargeable layer (less than 100 metres thick).

382450E ±50 metres *Interest-Secondary*

The source interpreted at 200 metres ±50 metres depth is chargeable and allied with lower resistivities of 1000 ohm-metres as against 4000 ohm-metres in background. (see also below)

382600E - 382800E *Interest-Secondary*

Moderate 22 millivolts/volt readings between 382600E and 382700E on n = 1 indicate a weakly chargeable source within 100 metres of surface (and probably less). The associated resistivities are a low 400 ohm-metres ±50 ohm-metres indicating weak conduction within the sources.

5,369,500N *(PD)* No significant anomalies

5,369,000N *(DD)* No significant anomalies

5,368,500N *(PD)* No significant anomalies

5,368,000N *(DD)* No significant anomalies.

5,367,500N *(PD)* No significant anomalies.

5,367,000N *(DD)* No significant anomalies.

5,366,500N *(PD)* No significant anomalies.

5,366,000N *(DD)* No significant anomalies.

Limited additional work has been planned as is in the process of being carried out. On completion of that work a general review of both sets of data will be made.

Respectfully submitted on behalf of:

SCINTREX PTY. LTD.

A.W. HOWLAND-ROSE, MSc, DIC, AMAusIMM, FGS.

GEOPHYSICIST

5372 - 523 N

058606

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

POLE - DIPOLE ARRAY

DATE 27-1-80

PLOTTED BY RAB

PULSE 2 Sec | Rx. IPR-10

DIPOLE SPACING 100 m

LINE No.

PROSPECT

JOB No.

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

POLE - DIPOLE ARRAY

DATE 27-1-80

PLOTTED BY RAB

PULSE 2 Sec. | Rx. IPR-10

DIPOLE SPACING 100m

RVEY

DATE 27-1-80

PLOTTED BY RAB

PULSE 2 Sec | Rx. IPR-10

DIPOLE SPACING 100 m

LINE No. 5 372 523 N

PROSPECT STLTT R

JOB No. TAS-065-Q

380400E 500 600 700 800 900 381000E 100 200 300 400 500 600 700 800 900 382000E 100 200 300 400 500 600 700 800 900 383000E 100 200 300 400 500

RESISTIVITY Ω m.

N-1

N-2

N-3

N-4

FLAT

POWER LINE CROSSING AT SHALLOW ANGLE

MODERATE

STEEP

STEEP

RIDGE TOP

CHARGEABILITY

N-1

N-2

N-3

N-4

P P C

C P P

5 cm

058607

5,372 000N

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

DATE	11-11-79
PLOTTED BY	TVS
PULSE	2 sec
Rx.	
DIPOLE SPACING	100 m

SURVEY

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

DATE	11-11-79
PLOTTED BY	TVS
PULSE	2 sec
Rx.	
DIPOLE SPACING	100 m

INTREX PTY. LTD.
CED POLARIZATION AND RESISTIVITY SURVEY
OLE - DIPOLE ARRAY

DATE	11-11-79
PLOTTED BY	TVS
PULSE	2 sec
Rx.	
DIPOLE SPACING	100 m

INTREX PTY. LTD.
CED POLARIZATION AND RESISTIVITY SURVEY
OLE - DIPOLE ARRAY

DATE	31-10-79/11-11-79
PLOTTED BY	TVS
PULSE	2 sec
Rx.	
DIPOLE SPACING	100 m

INTREX PTY. LTD.
CED POLARIZATION AND RESISTIVITY SURVEY
OLE - DIPOLE ARRAY

DATE	8-11-79
PLOTTED BY	TVS
PULSE	2 sec
Rx.	
DIPOLE SPACING	100 m

LINE No.	5,372 000 N
PROSPECT	STITT
JOB No.	TAS-065-YC

380200E 380300E 380400E 380500E 380600E 380700E 380800E 380900E 381000E 381100E 381200E 381300E 381400E 381500E 381600E 381700E 381800E 381900E 382000E 382100E 382200E 382300E 382400E 382500E 382600E 382700E 382800E 382900E 383000E 383100E 383200E 383300E 383400E 383500E 383600E

RESISTIVITY Ωm.

N-1
N-2
N-3
N-4

CHARGEABILITY

N-1
N-2
N-3
N-4

5 cm

058608

5371 500 N

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
POLE - DIPOLE ARRAY

DATE 23-1-80
PLOTTED BY RAB
PULSE 2 Sec | Rx. IPR-10
DIPOLE SPACING 100 m

LINE No.
PROSPECT
JOB No.

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
POLE - DIPOLE ARRAY

DATE 21-1-80
PLOTTED BY RAB
PULSE 2 Sec | Rx. IPR-10
DIPOLE SPACING 100 m

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
POLE - DIPOLE ARRAY

DATE 20-1-80
PLOTTED BY RAB
PULSE 2 Sec | Rx. IPR-10
DIPOLE SPACING 100 m

LINE No. 5 371 500 N
PROSPECT STITT
JOB No. TAS-065-Q

379900E 380000E 100 200 300 400 500 600 700 800 900 381000E 100 200 300 400 500 600 700 800 900 382000E 100 200 300 400 500 600 700 800 900 383000E 100 200 300 400 500

RESISTIVITY Ωm.

N-1
N-2
N-3
N-4

CHARGEABILITY

N-1
N-2
N-3
N-4

P P C P P C C P P

( ) 1 Sec. Rx Timing

5 cm

058609

5371 000N

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY
DIPOLE - DIPOLE ARRAY

DATE 20-11-79
PLOTTED BY A.J.
PULSE 2 sec | Rx.
DIPOLE SPACING 100m
LINE No.
PROSPECT
JOB No.

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY
DIPOLE - DIPOLE ARRAY

DATE 19-11-79
PLOTTED BY A.J
PULSE 2 sec | Rx.
DIPOLE SPACING 100
LINE No.
PROSPECT
JOB No.

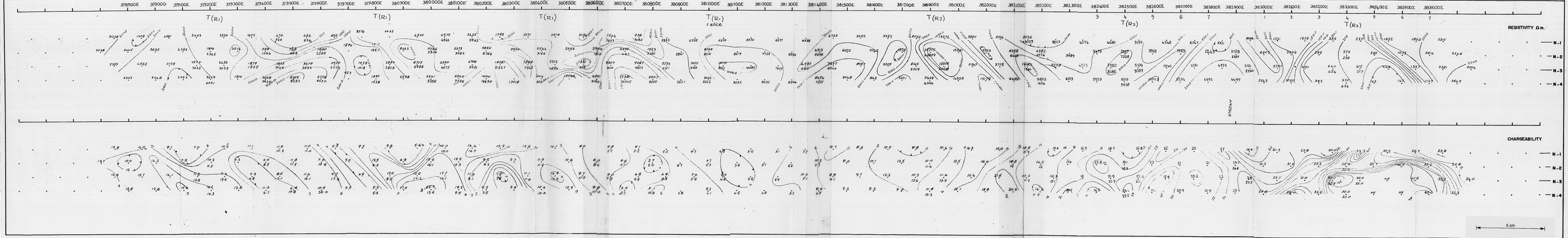
SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

DATE 13-11-79
PLOTTED BY PL
PULSE 2 Sec | Rx. 30122
DIPOLE SPACING 100 m
LINE No.
PROSPECT
JOB No.

DATE 11-11-79
PLOTTED BY R P
PULSE 2 Sec | Rx.
DIPOLE SPACING 100 m
LINE No.
PROSPECT
JOB No.

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

DATE 12-11-79
PLOTTED BY TYS
PULSE 2 Sec | Rx.
DIPOLE SPACING 100 m
LINE No. 5,371,000N
PROSPECT STITT
JOB No. TAS-065-YC



5370 500 N

058610

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
POLE - DIPOLE ARRAY

DATE 5/2/80
PLOTTED BY RAB
PULSE 2 SEC | IPR-8 (n=1&2) Rx. IPR-10 (n=3&4)
DIPOLE SPACING 100m
LINE No.
PROSPECT
JOB No.

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
POLE - DIPOLE ARRAY

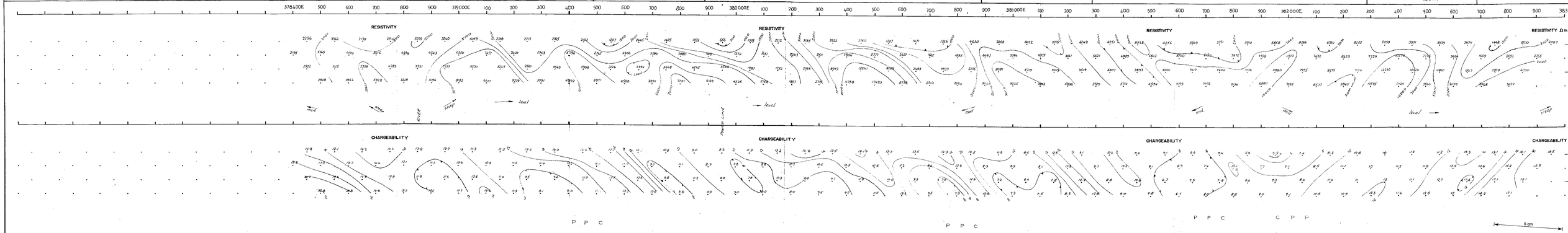
DATE 5/2/80
PLOTTED BY RAB
PULSE 2 Sec | IPR-8 Rx. IPR-10
DIPOLE SPACING 100 m
LINE No.
PROSPECT
JOB No.

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
POLE - DIPOLE ARRAY

DATE 2/2/80
PLOTTED BY T.T.K.
PULSE 2 Sec | Rx. IPR-10
DIPOLE SPACING 100 m
LINE No.
PROSPECT
JOB No.

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
POLE - DIPOLE ARRAY

DATE 2/2/80
PLOTTED BY T.T.K.
PULSE 2 SEC | Rx. IPR-10
DIPOLE SPACING 100m
LINE No. 5 370 500 N
PROSPECT STITT
JOB No. TAS-065-YC



5370,000 N

058611

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

DATE 23/24 - 11 - 79
PLOTTED BY A. J
PULSE 2 sec | Rx.
DIPOLE SPACING 100 m

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

DATE 25 - 11 - 79
PLOTTED BY A. J.
PULSE 2 sec | Rx.
DIPOLE SPACING 100 m

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

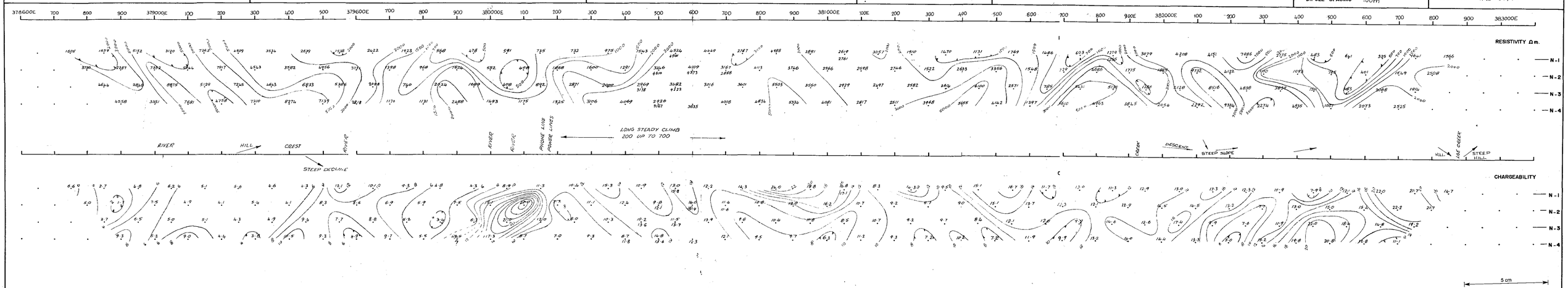
DATE 26/29 - 11 - 79
PLOTTED BY P.L.
PULSE 2 sec | Rx.
DIPOLE SPACING 100 m

LINE No.
PROSPECT
JOB No.

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

DATE 1/4-12-79
PLOTTED BY P.L.
PULSE 2 sec | Rx. 305122
DIPOLE SPACING 100m

LINE No. 5,370,000 N
PROSPECT STITT GRID
JOB No. TAS - 065 YC



058612

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
POLE - DIPOLE ARRAY

DATE 10/2/80
PLOTTED BY TTK
PULSE 2 Sec | Rx. IPR-8 (n=1&2) IPR-10 (n=3&4)
DIPOLE SPACING 100 m

LINE No.
PROSPECT
JOB No.

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
POLE - DIPOLE ARRAY

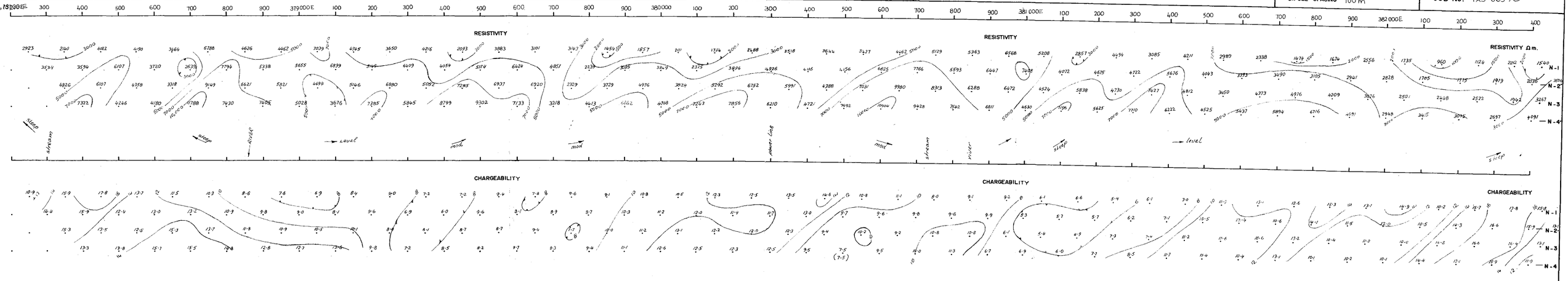
DATE 12/2/80
PLOTTED BY T.T.K.
PULSE 2 sec | Rx. IPR-8 (n=1&2) IPR-10 (n=3&4)
DIPOLE SPACING 100 m

LINE No.
PROSPECT
JOB No.

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
POLE - DIPOLE ARRAY

DATE 12/2/80
PLOTTED BY TTK
PULSE 2 Sec | Rx. IPR-8 (n=1&2) IPR-10 (n=3&4)
DIPOLE SPACING 100 m

LINE No. 5369500N
PROSPECT STITT
JOB No. TAS-065-YC



5369 500N

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

DATE 15-20/2/79
PLOTTED BY P.L.
PULSE 1 Sec Rx.
DIPOLE SPACING 100m

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

DATE 16/1/80
PLOTTED BY T.T.K.
PULSE 1 Sec Rx. IPR-10
DIPOLE SPACING 100 m

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

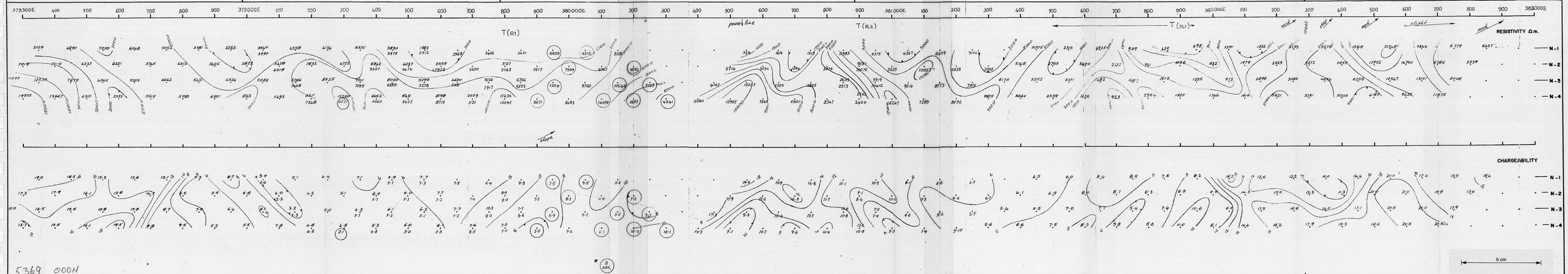
DATE 12/1/80
PLOTTED BY RAB
PULSE 2 Sec Rx. IPR-10
DIPOLE SPACING 100m

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY
DIPOLE - DIPOLE ARRAY

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

DATE 7/12/79
PLOTTED BY A.J.
PULSE 2sec Rx.
DIPOLE SPACING 100m

LINE No. 5369000 N
PROSPECT STITT
JOB No. TAS-065-YC



5369 000N

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
POLE - DIPOLE ARRAY

DATE 19-2-80
PLOTTED BY RAB
PULSE 2 Sec | IPR-8 (n=1&2) Rx. IPR2-10 (n=3&4)
DIPOLE SPACING 100m

LINE No.
PROSPECT
JOB No.

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
POLE - DIPOLE ARRAY

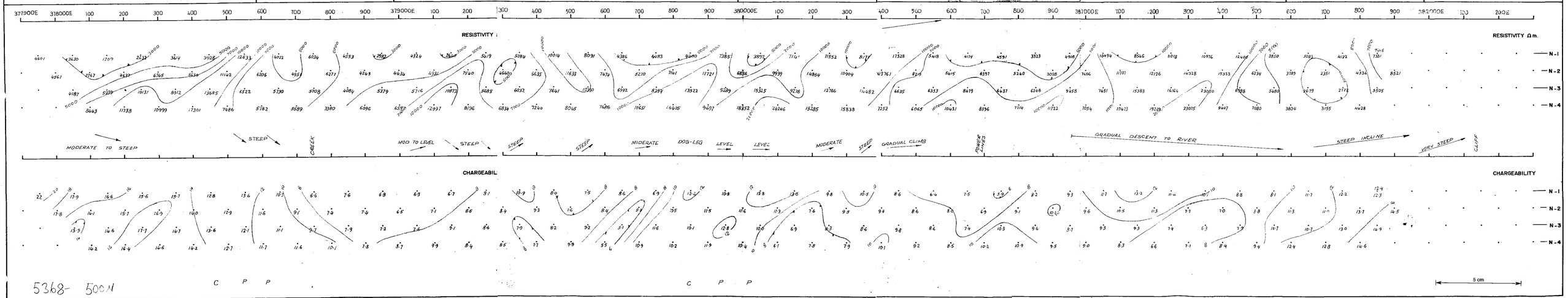
DATE 19-2-80
PLOTTED BY RAB
PULSE 2 Sec | IPR-8 (n=1&2) Rx. IPR2-10 (n=3&4)
DIPOLE SPACING 100m

DATE 23-2-80
PLOTTED BY P.L.
PULSE 2 Sec | Rx. 708103 / 305122
DIPOLE SPACING 100m

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
POLE - DIPOLE ARRAY

DATE 26-2-80
PLOTTED BY P.L.
PULSE 2 Sec | Rx. 708103 / 305122
DIPOLE SPACING 100m

LINE No. 5368500 N
PROSPECT STITT
JOB No. TAS-065-Q



5368- 500N

C P P

C P P

5 cm

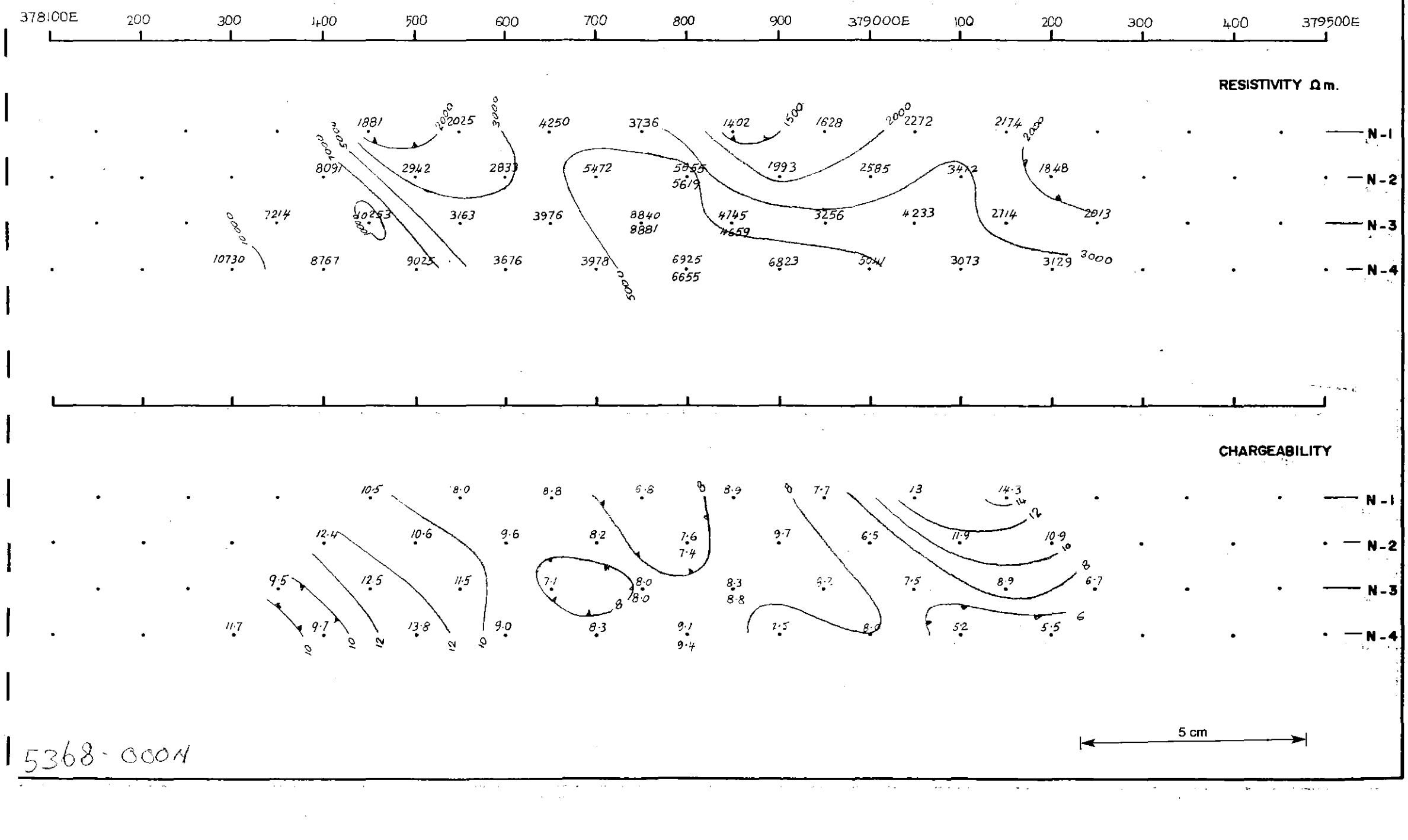
058615

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE 10-1-80		LINE No. 5,368.000 N
PLOTTED BY D.S.		PROSPECT STITT
PULSE 2 Sec	Rx. 311147	JOB No. TAS-065-YC
DIPOLE SPACING 100m		



5368-0001

058616

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

POLE - DIPOLE ARRAY

DATE 14-2-80		
PLOTTED BY RAB		
PULSE 2 Sec	Rx. 1 & 2	IPR-8
	Rx. 3 & 4	IPR-10
DIPOLE SPACING 100 m		
LINE No.		
PROSPECT STITT		
JOB No. TAS-075		

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

POLE - DIPOLE ARRAY

DATE 15-2-80		
PLOTTED BY RAB		
PULSE 2 Sec	Rx. 1 & 2	IPR 8
	Rx. 3 & 4	IPR 10
DIPOLE SPACING 100 m		
LINE No. 5,367,500 N		
PROSPECT STITT		
JOB No. TAS-065-YC		

378600E 700 800 900 379000E 100 200 300 400 500 600 700 800 900 379000E 100 200 300 400 500 600 379700E

RESISTIVITY Ω m

RESISTIVITY Ω m.

N-1 N-2 N-3 N-4

STEEP STEEP LEVEL MODERATE STEEP RIDGE STEEP MODERATE STEEP STEEP STEEP

CHARGEABILITY

CHARGEABILITY

N-1 N-2 N-3 N-4

5367 500N

5 cm

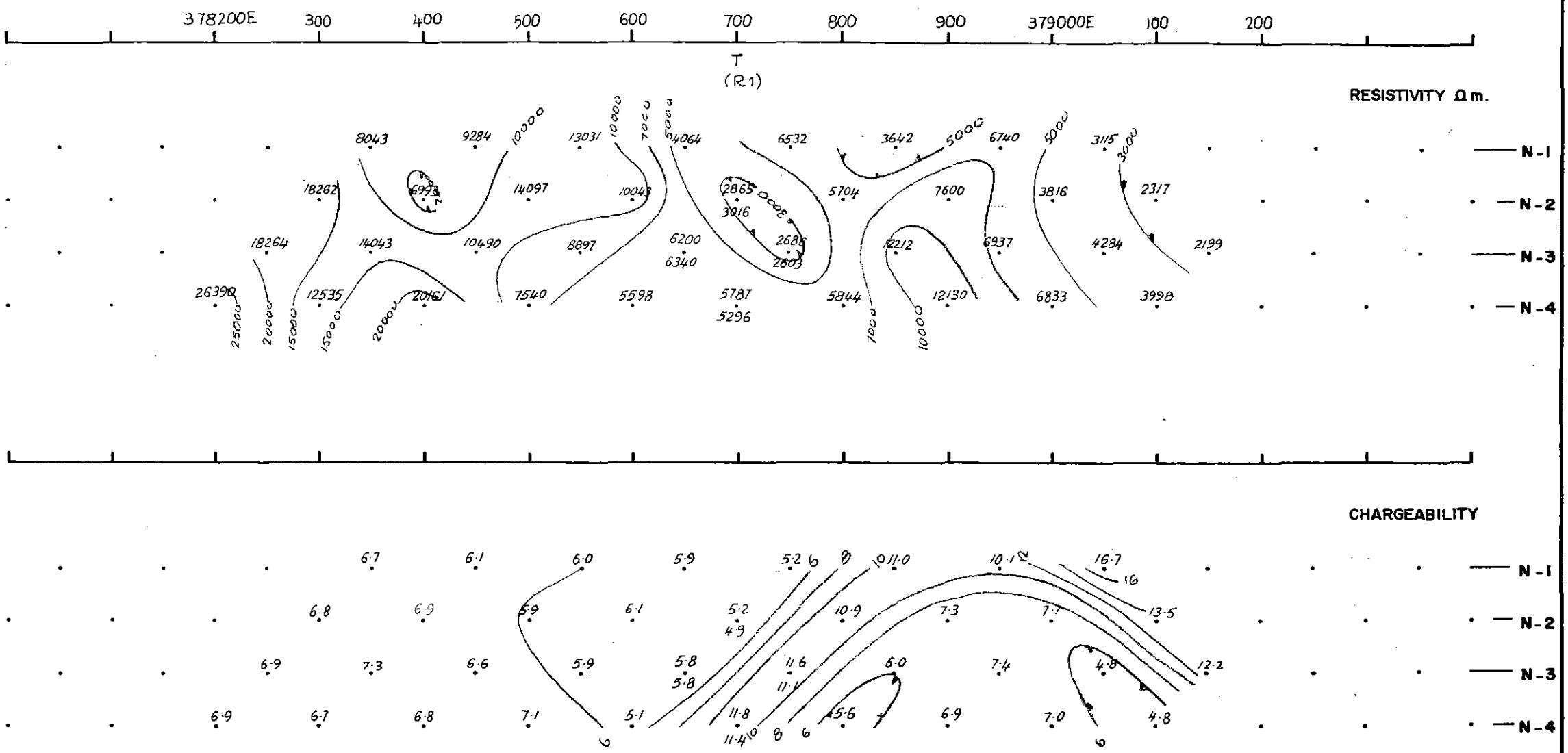
058617

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE 8-1-80		LINE No. 5,367,000N
PLOTTED BY RAB		PROSPECT STITT
PULSE 2 sec	Rx. IPR-10	JOB No. TAS-065-YC
DIPOLE SPACING 100 m		



5367 00N1

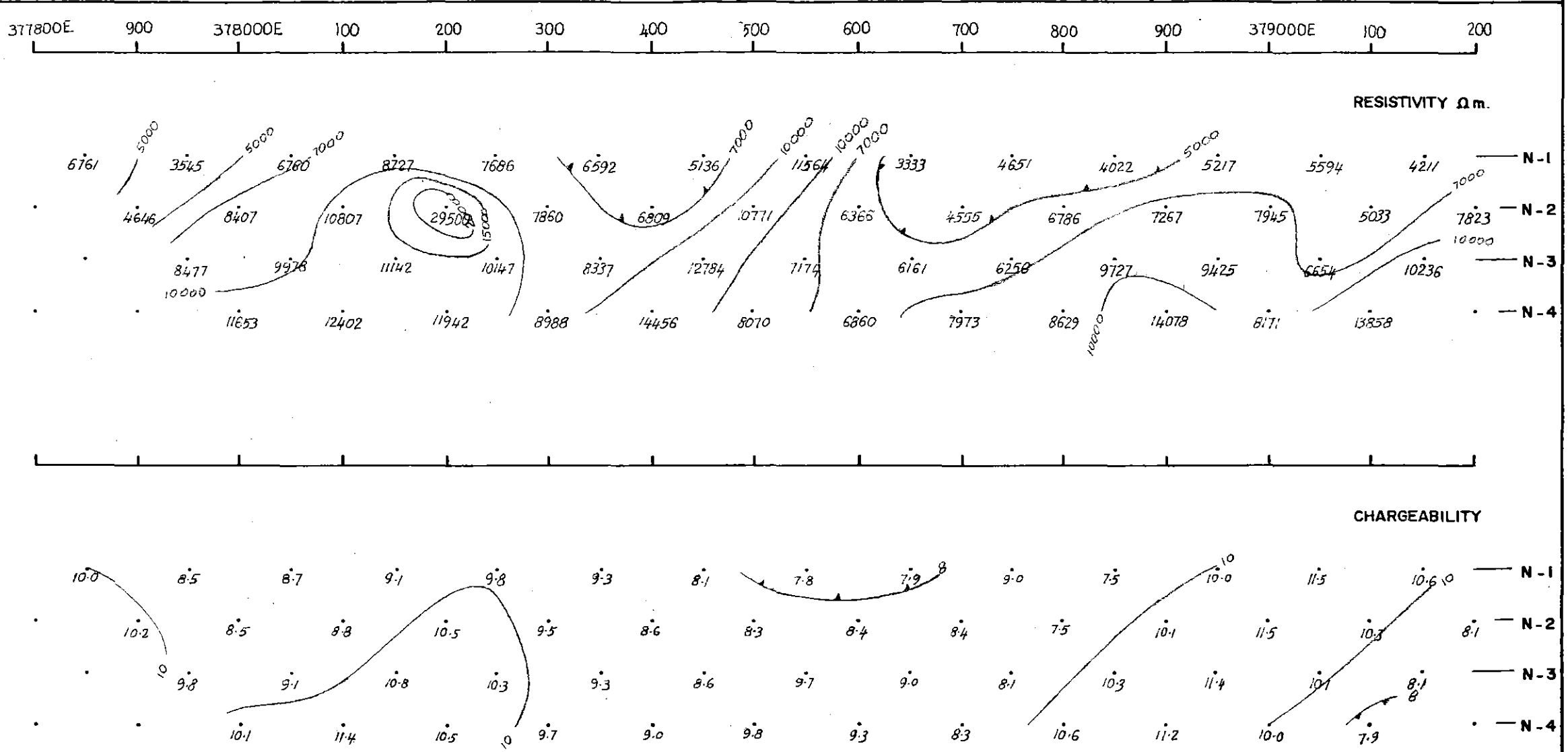
058618

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

POLE - DIPOLE ARRAY

DATE 13-2-80	LINE No. 5 366 500N
PLOTTED BY RAB	PROSPECT STITT
PULSE 2 SEC	IPR-8 (n=1&2) Rx. IPR-10 (n=3&4)
DIPOLE SPACING 100m	JOB No. TAS-065-Q



C P P

5 cm

5366-500N

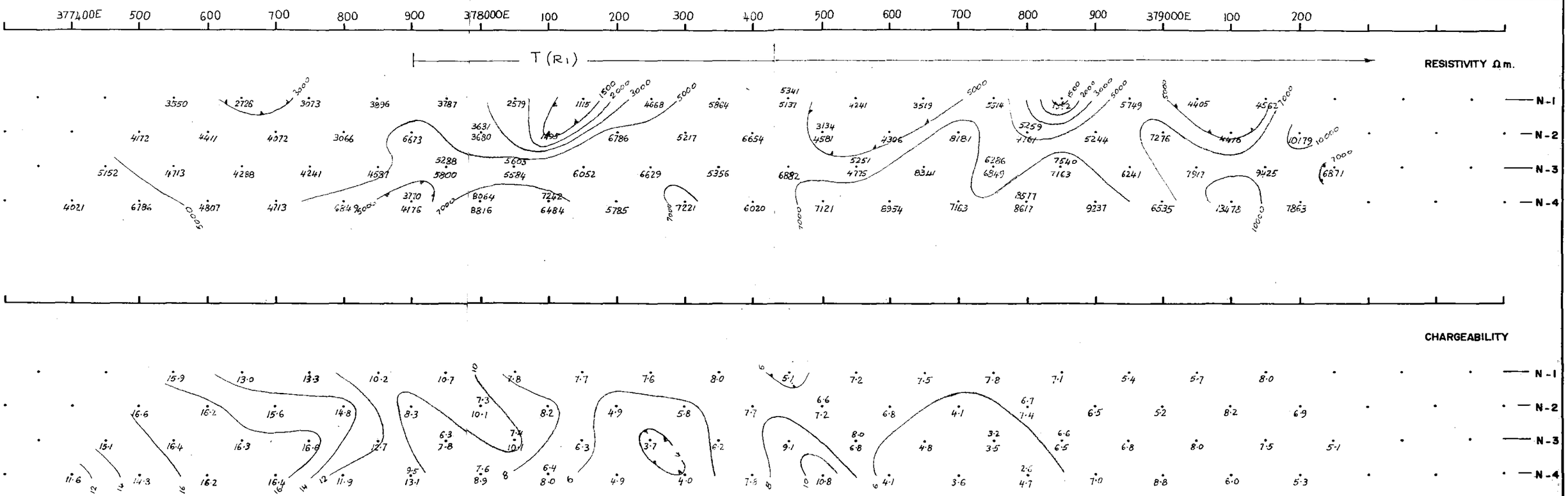
058619

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE 5-1-80	LINE No.	DATE 6-1-80	LINE No. 5 366 000 N
PLOTTED BY RAB	PROSPECT	PLOTTED BY RAB	PROSPECT STITT
PULSE 2 Sec / Rx. IPR-10		PULSE / Rx. IPR-10	
DIPOLE SPACING 100 m	JOB No.	DIPOLE SPACING 100 m	JOB No. TAS-065-Q



5366- 000N

058620

APPENDIX 5.

Pseudo-Sections of detail dipole-dipole I.P. and gradient array profile over the Stitt Follow-Up Grid.

Scintrex.

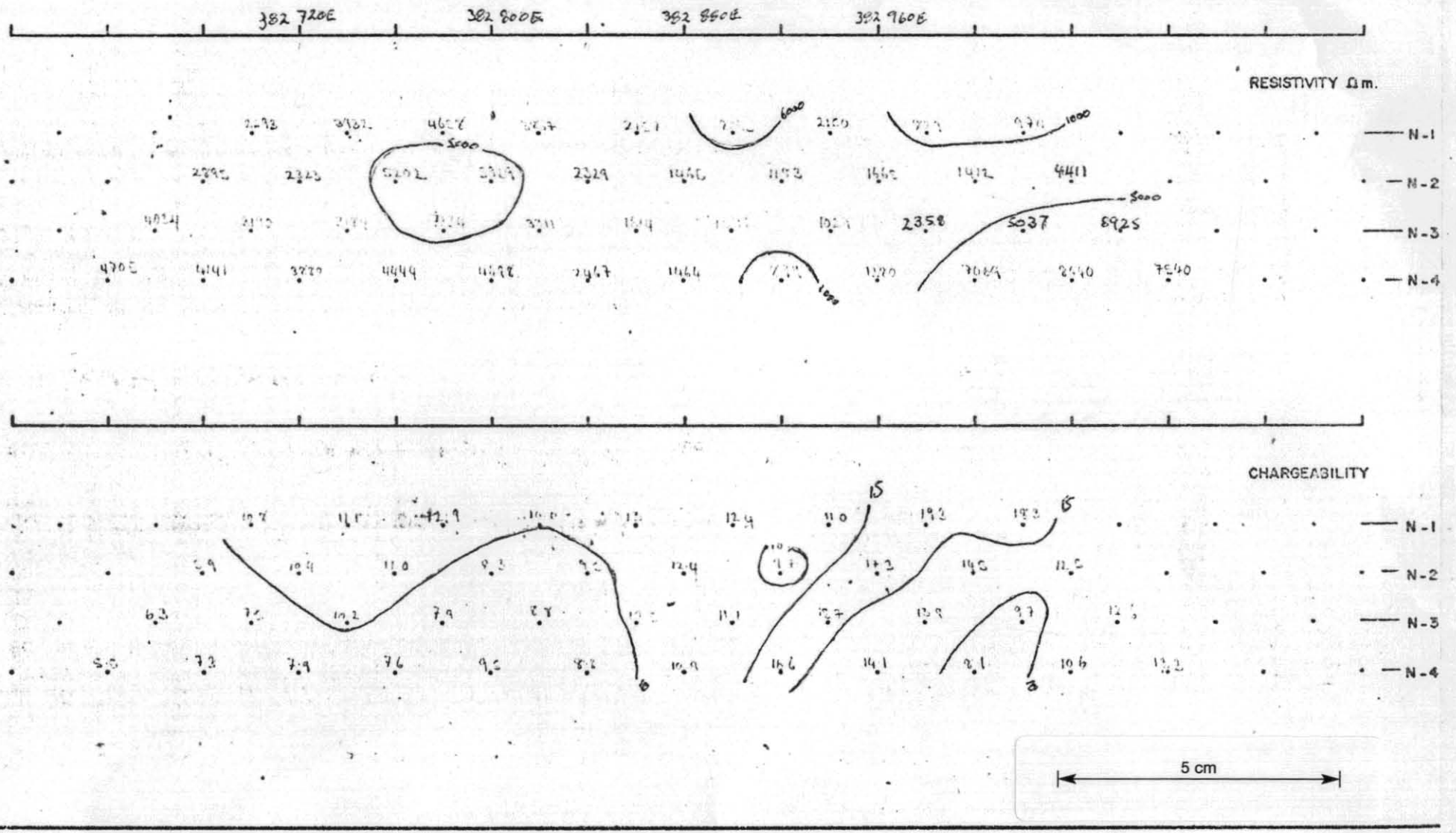
0586621

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE	LINE No. 5372 400 N
PLOTTED BY	PROSPECT STITT
PULSE	Rx.
DIPOLE SPACING	JOB No.



058622

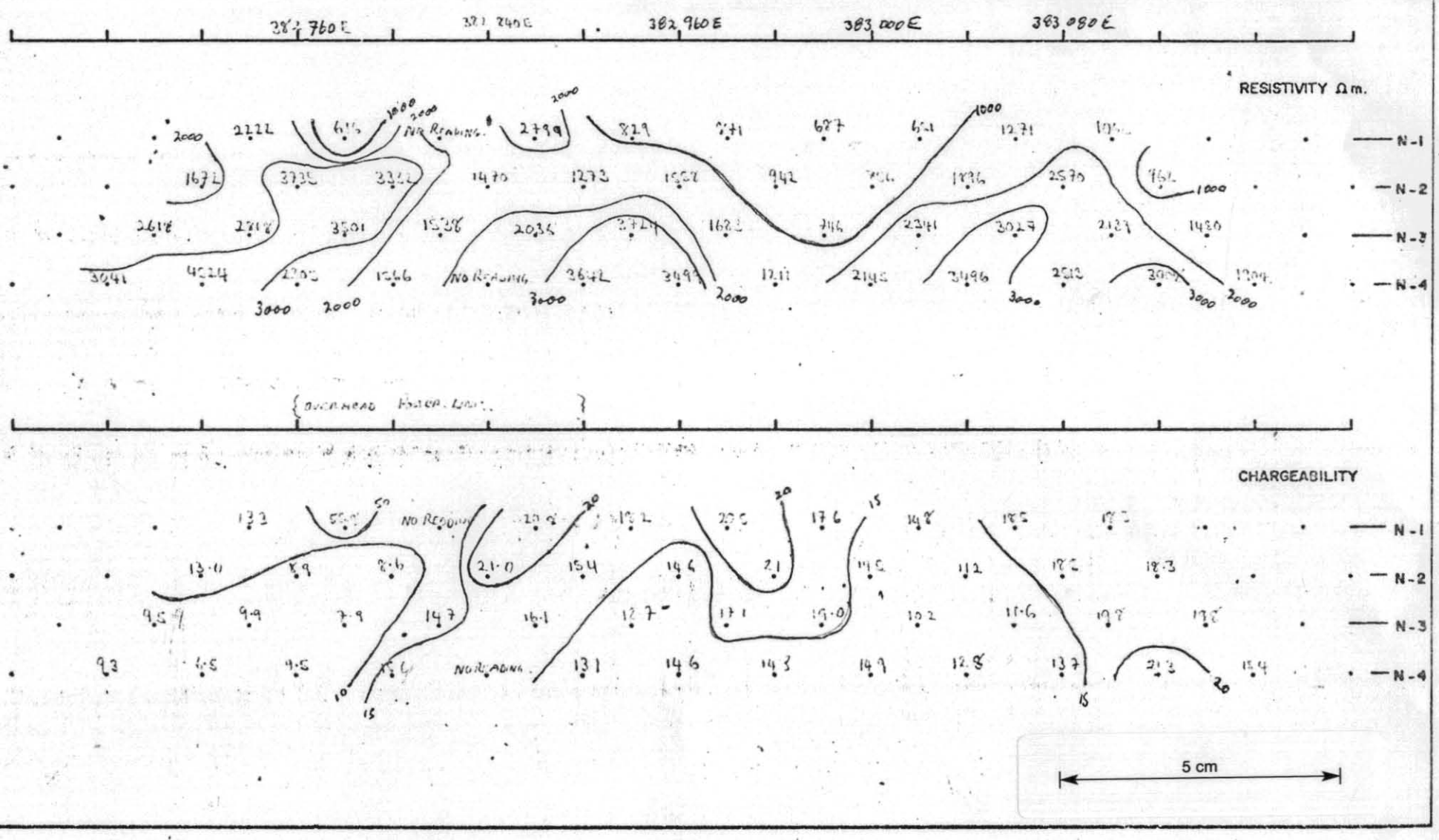
2

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE 3 5 80	LINE No. 5752 300N
PLOTTED BY [illegible]	PROSPECT Stitt
PULSE [illegible] Rx. [illegible]	JOB No. [illegible]
DIPOLE SPACING [illegible]	



058623

3

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE 5 5 80

PLOTTED BY R. F

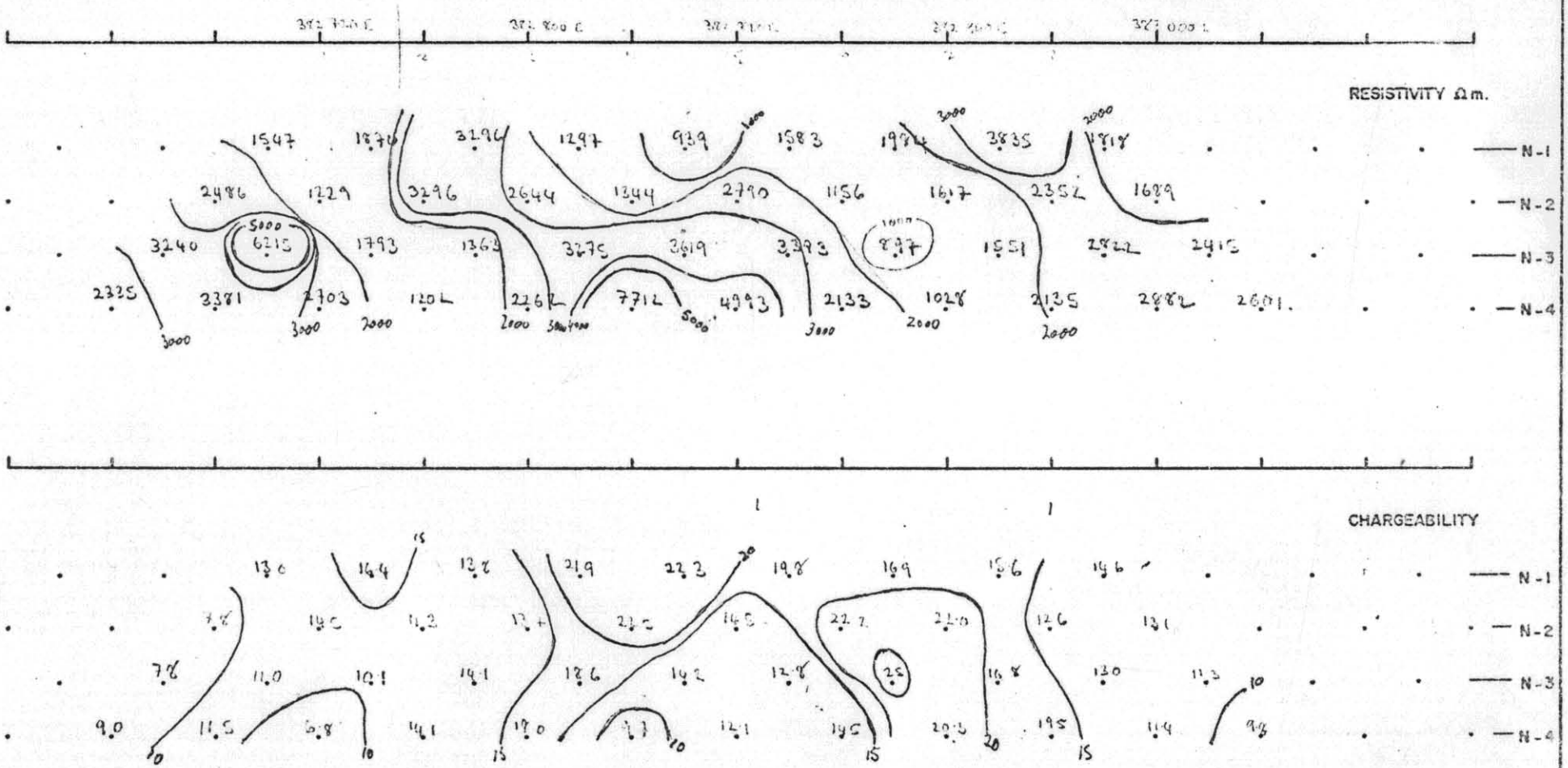
PULSE 2 SEC | Rx. 3111-47

DIPOLE SPACING 40 m.

LINE No. 5 372 200 N.

PROSPECT STITT Rv

JOB No. TAS. 065 R



058624

4

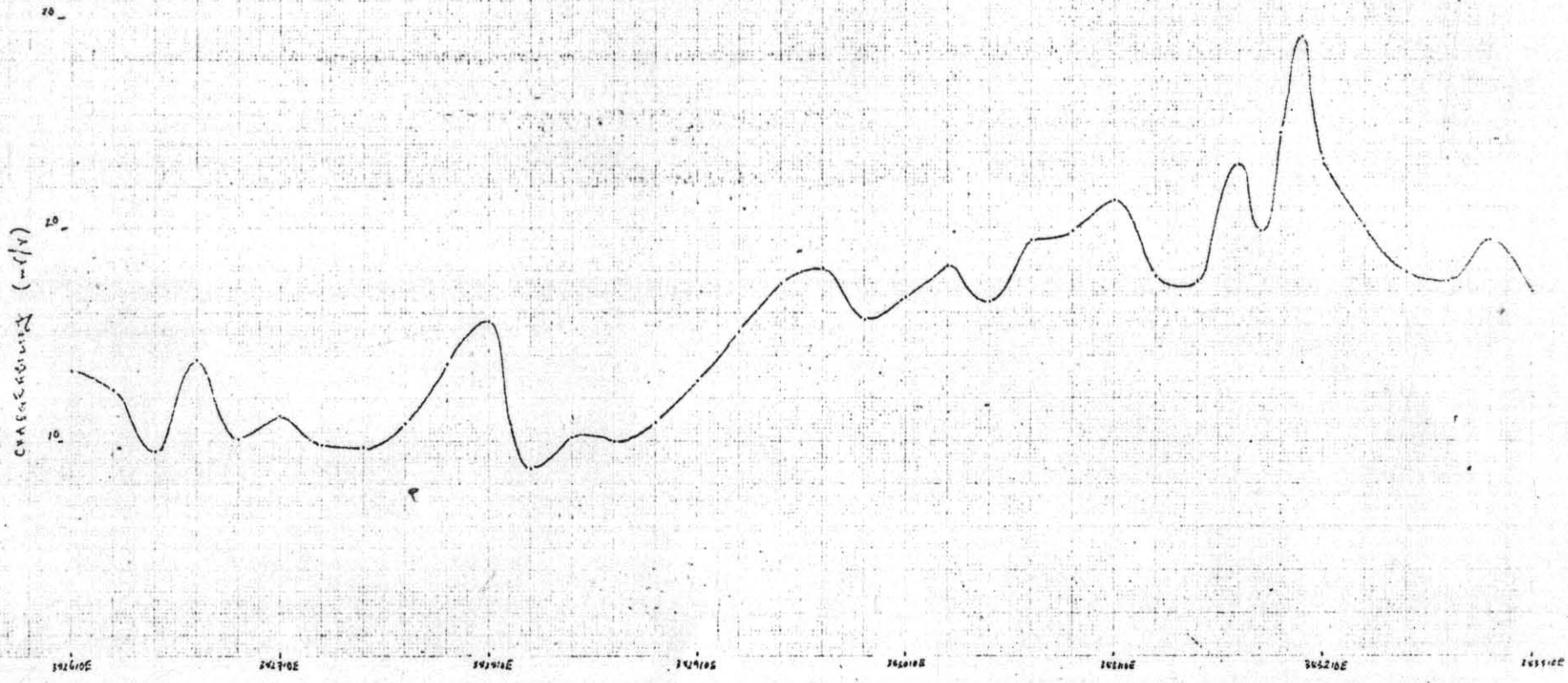
STITT GRID 4-4-80

LINE 5,372,000 N

GRADIENT ARRAY, ESP

P_1-P_2 20M

C_1-C_2 1300M.



5 cm

APPENDIX 6.

Scintrex Report Tas-065-Q

"A report on an E.I.P. Gradient Array Reconnaissance Survey, Dobsons Creek, near Rosebery, Tasmania, on behalf of the Electrolytic Zinc Company of Australasia Limited."

April, 1980

Copy forwarded to Getty Oil direct from Scintrex.

058626

SCINTREX

A REPORT ON

AN EIP GRADIENT ARRAY RECONNAISSANCE SURVEY

DOBSONS CREEK, NEAR ROSEBERY, TASMANIA

ON BEHALF OF

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

058627

SCINTREX

PRIVATE AND CONFIDENTIAL

A REPORT ON
AN EIP GRADIENT ARRAY RECONNAISSANCE SURVEY
DOBSONS CREEK, NEAR ROSEBERY, TASMANIA
ON BEHALF OF
ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

BY

A.W. HOWLAND-ROSE
MSC,DIC,AMASUIMM,FGS.
GEOPHYSICIST

SYDNEY, N.S.W.

APRIL, 1980

TAS-065Q

058628

SCINTREX

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Introduction	Page 1
Method	Page 1
Equipment	Page 1
Data Presentation	Page 2
Discussion of Results	Page 2
Conclusions	Page 20
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Appendix	
Data Profiles	

058629

SCINTREX PTY. LTD.

GEOPHYSICAL CONSULTANTS AND CONTRACTORS

SUMMARY

A gradient array reconnaissance survey carried out over the Dobsons Creek area has defined three formations each with distinct characteristics. A marked divergence in the strikes of the central and eastern formations suggests the presence of a strike fault.

A number of significant induced polarization anomalies were defined which have been recommended for 100 feet and 200 feet dipole-dipole detail to assist in their evaluation. A number of the responses defined are considered to be due to massive shale and/or sulphide sources of coarse grain, and as such are of primary geophysical interest.

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058630

SCINTREX

A REPORT ON

AN EIP GRADIENT ARRAY RECONNAISSANCE SURVEY

DOBSONS CREEK, NEAR ROSEBERY, TASMANIA

ON BEHALF OF

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

INTRODUCTION

At the request of Mr. J. McDonald, Chief Geologist for the West Coast Mines division of the Electrolytic Zinc Company of Australasia Limited, Scintrex Pty. Ltd. executed a gradient array reconnaissance electrical induced polarization survey over the Dobsons Creek grid, near Rosebery.

The work was carried out under Scintrex crew leader Mr. P. List assisted by second operator Mr. T. Kirby on some 19½ double and 3 single operator days between 25th February and 26th March, 1980. On-site supervision was provided by Mr. J. Mill, Senior Exploration Geologist.

METHOD

The method is briefly described in the attached appendix.

A 2 second on, 2 second off, reverse and repeat cycle was employed for energisation, while a 2 second receiver programme with three slices was used to monitor the energisation.

EQUIPMENT

The energisation was provided by a Scintrex 10/15 kilowatt transmitter powered by a Volkswagen motor generator. The resultant primary and secondary potential

fields were investigated using a Scintrex IPR-8 time domain receiver.

DATA PRESENTATION

The Dobson Creek grid is an imperial grid. All data profiles are plotted in feet on the scale of 1:2500. Vertical scales are 1 centimetre = 4 millivolts/volt for chargeability with resistivity being shown on a 5 centimetre log cycle.

The chargeability data and resistivity data, are at the time of writing, being contoured at the scale of 1:5000. This data will be subsequently reduced to 1:10,000 for incorporation into the regional geophysical compilation maps. When complete additional comments will be made for incorporation into this report as an appendix.

DISCUSSION OF RESULTS

The whole area was surveyed using a 20,000 feet current dipole with electrodes placed at 7025W and 12975E on line 4000S. Lines were placed at about 800 feet intervals. The potential dipole employed was 100 feet read at 50 feet intervals for the most part with some sections being read with 50 feet potential dipoles at 50 feet intervals.

Each line is discussed from north to south below. Interline correlations are suggested, however, as the interline spacing is large, these should be regarded as suggestions only.

LINE 00

The general resistivity level observed is of the order of 10000 ohm-metres while

the chargeability level was about 20 millivolts/volt. Only minor variations in this level were observed. A 10 millivolts/volt response at 3425E is accompanied by a 50% depression in apparent resistivity to 500 ohm-metres. This anomaly has a maximum depth to source (allowing for 'noise') of 200 feet. A second high, also of tertiary interest was defined at 4630E as a 35 millivolts/volt response against a 28 millivolts/volt background. Maximum depth to source is about 150 feet.

LINE 800S

The background resistivity at 10,000 ohm-metres is similar to that observed on line 00, while the chargeability background is of similar magnitude. There are no significant anomalies, however, a generally higher level was recorded at 3475E.

LINE 1600S

The resistivity background was again of the order of 10,000 ohm-metres and the chargeability 16 millivolts/volt. There were no significant anomalies, however, higher levels were defined at 3775E, 5075E and 5450E(±50 metres) which are considered variations in background.

LINE 2400S

Between 3150E and 5350E the background resistivity is of the order of 10,000 ohm-metres ±2000 ohm-metres, while the chargeability background is 14 millivolts/volt ±2 millivolts/volt. With one or two exceptions, the changes in this background are minimal. To the west, between 1500E and 3100E, the resistivity varied between 4000 ohm-metres and 20,000 ohm-metres with significant changes

between. The background chargeability is about 20 millivolts/volt and a number of significant above background anomalies are superimposed on this background.

A single zone of interest occurs within the eastern sector referred to above. This consisted of a relatively small 6 millivolts/volt anomaly against background (16 millivolts/volt) and is associated with a 75% fall in resistivity from 20,000 ohm-metres at 3800E, and 12,000 ohm-metres at 4100E, as against 4000 ohm-metres over the anomaly. While the anomaly is small, the fall in resistivity may be significant. Also, this zone *may* indicate the end of a more significant event. The maximum depth to source is of the order of 150 feet. The significance is tertiary/secondary.

Within the western zone, two significant zones were defined. The most easterly occurs between co-ordinates 2900E and 3075E, where chargeabilities reach 16 millivolts/volt above the 16 millivolts/volt background to the east. The apparent resistivity shows a decline in resistivity from 12,000 ohm-metres to the east to 4500 ohm-metres within the chargeable source. Two distinct sources at 2925E (minor) and at 3025E(major) were defined. The decay form is slightly slower than normal, indicating a coarser than average grain size. The source is disseminated or electrically discontinuous, but has weak interconnection within the source or host thereto. The anomaly is of secondary interest.

The second significant source was defined at 2550E where a 14 to 16 millivolts/volt above background anomaly was defined. A distinct resistivity miminum of about 4000 ohm-metres was defined some 60 feet east of the chargeability peak. The maximum depth to source is about 100 feet, and the decay, slow. A coarse grained source is interpreted which is of secondary(+) interest.

A relatively minor, single station response situated at 1850E of 5 millivolts/volt over the local 20 millivolts/volt background is associated with a minor fall of 25%in resistivity to 6500 ohm-metres. The maximum depth to the source is 100 feet.

LINE 3200S

A change in chargeability background between the eastern and western sections can be identified. To the west of about 3500E a background of 20 millivolts/volt was observed, on which there are a number of moderate induced polarization anomalies. To the east of that co-ordinate, the background is a lower 16 millivolts/volt $\pm$2 millivolts/volt with only minor variations in this level. The apparent resistivity in the west averaged about 7000 ohm-metres but varied from 16,000 to 2500 ohm-metres, while to the east resistivities are slightly higher on average, but still show variation. These zones correlate with similar divisions on line 2400S, save that the variation in level within the eastern section of 3200S is greater.

Within the eastern section a number of minor responses were recorded at 5500E-5600E and 5275E of about 6 millivolts/volt above background. These are considered to represent only formational changes and are therefore of tertiary interest only.

Within the western section a number of zones of secondary to tertiary interest were defined. These are summarised below.

3225E, 3300E & 3425E ..... Relatively minor 6 millivolts/volt anomalies superimposed on a 7000 ohm-metres background. These anomalies are considered

to be due to minor disseminated sulphides, graphite or mafic minerals which can be considered essentially formational, i.e. of tertiary interest only.

A disseminated source of secondary/tertiary interest was defined at 3050E. This 6 to 8 millivolts/volt anomaly has a slightly slower than normal decay form and is associated with high relative resistivities of 7000 ohm-metres. The source is interpreted as being due to disseminated sulphides, graphite or mafic minerals of coarse grain size at a maximum depth of the order of 100 feet.

A sharp 8 millivolts/volt anomaly on a 20 millivolts/volt background at 2875E is associated with a minor decrease in resistivity. The maximum depth to this source of tertiary interest is 50 feet.

A 6 millivolts/volt anomaly at 2425E is associated with 16,000 ohm-metres resistivities. The source is thus disseminated and contained within a resistive host.

At 2000E a 6 millivolts/volt anomaly superimposed on a 20 millivolts/volt background is associated with a 50% fall in resistivity. In this case the disseminated source is contained within a relatively *less* resistive host. The maximum depth to source is 100 feet.

An anomaly of primary interest was defined at 1725E. Here, 18 millivolts/volt above background is associated with a marked drop in resistivity background from about 7000 ohm-metres to 2500 ohm-metres. The source appears to be two zones in close proximity, the major one at 1725E and a second at or just east of 1650E. The maximum depth is about 130 feet in each case.

LINE 4000S

On this line the same three distinct zones were defined on a basis of background chargeability. The eastern zone is characterised by low background chargeabilities of 16 millivolts/volt while resistivity is a high 10,000 ohm-metres for most of the section.

The central section (equivalent to the western section on lines 3200S and 2400S) has a background of 24 millivolts/volt ±2 millivolts/volt and markedly lower background resistivities of about 4000 ohm-metres. A most significant anomaly was defined on the contact between these two zones at 2850E (±50 feet).

The western section, not seen on lines to the north, showed a rapid rise in chargeability level between 1100E and 600E from 24 millivolts/volt to 52 millivolts/volt. This is a major change and must be due to a significant bulk increase in graphite and/or sulphides within this sequence. The decay form observed was slow with ΔMn values of the order of +10% which infer a coarse grain size to the chargeable material. This in turn implies a *bulk* graphite and/or sulphide content of the order of 1%-3%.

A most significant induced polarization anomaly was defined at 2900E which is over 20 millivolts/volt above the backround to the east. There are two sources inferred, one at 2900E and a second at 2825E. The *form* suggests a dip to the east, and maximum depths of the order of 150 feet. The absence of any material change in the apparent resistivity data infers an essentially disseminated source, while the decay, being slightly slower than normal, infers a slightly coarser than normal grain size to the source. This anomaly is of prime geophysical interest.

A broad zone of higher chargeability was noted between 1600E and 2400E of about 6 millivolts/volt above background. This is possibly a stratigraphic equivalent of all or part of the minor highs of tertiary interest defined between about 2000E and 3500E on line 3200S.

Within the high background western section of the line, a number of distinct 'anomalies' occur. These, however, almost certainly represent greater segregations of the sulphide/graphite which is responsible for the overall background. The most significant of these highs are as follows:

At 700E a 9 millivolts/volt above 44 millivolts/volt anomaly was defined which is associated with a 50% fall in apparent resistivity to 1100 ohm-metres. Slightly slower than normal decay form suggests a coarse grain size. The maximum depth to source is about 150 feet. The anomaly is of secondary interest.

At 400E a sharp increase in chargeability of 12 millivolts/volt in the 46 millivolts/volt background was defined which is associated with a resistivity fall and contact. The source has weakly interconnected graphites and/or sulphides of slightly coarser than normal grain size at a maximum depth of the order of 75 feet. This response is of secondary interest.

A slgihtly less significant anomaly of 10 millivolts/volt was defined at 250E with no change in background resistivity of 650 ohm-metres. The weakly interconnected source has a maximum depth of the order of 100 feet.

A more substantial anomaly of 16 millivolts/volt was defined at 050E, again showing no change in the 600 ohm-metres background resistivity. A weakly

interconnected coarse grained disseminated source at a maximum depth of the order of 120 feet is the interpreted source.

A section of the line between about 100W and 2000W was not able to be read for chargeability due to capacitive and/or electromagnetic coupling between the energising cable and the potential dipole. These necessarily were within a metre or two of each other, also the lower Vp (due to the lower resistivity) over this section meant that the coupling contribution was large relative to the actual chargeability. The readings which are considered reliable are plotted, and these show significant chargeability values over this section, which is in accord with lines to the north and south. Therefore there may be a case for a pole-dipole reconnaissance survey at 200 feet spacing to clarify this section.

LINE 4800S

This line again shows three distinct sections on a basis of chargeability. The eastern section between 6000E and about 3000E shows a 15 millivolts/volt ±1 millivolts/volt background with apparent resistivities at 7000 to 18,000 ohm-metres for the most part. The central section between 2800E and 1200E is characterised by lesser resistivities of 3000 to 5000 ohm-metres, but particularly by a chargeability background of about 24 millivolts/volt. The western section between 1200E and 2000W has gradually falling resistivities from east (1000E) to west (2000W) of 1600 ohm-metres to 300 ohm-metres, inferring a greater degree of interconnection of the chargeable material which gives the high 44 millivolts/volt backgrounds.

Only one significant anomaly was defined in the eastern section. This was

centred at 5725E and consisted of a 10 millivolts/volt anomaly on a 14 millivolts/volt background. The source is interpreted as being due to average grain sized disseminated material at a maximum depth of about 160 feet. The interest is tertiary/secondary.

In the central section, higher chargeabilities between 1900E and 2900E of up to 8 millivolts/volt (±) were recorded. These are considered to be formational changes within this section.

A significant anomaly marks the boundary between the central and western sections. This consists of two peaks of about 30 millivolts/volt against the central background, (or 10 to 12 millivolts/volt above the much higher western background). The resistivity is lower, but this is related to the change in formation, rather than to these anomalies as such. The decay form is markedly slow (ΔMn = +13%) which infers a coarse grain size to the source the maximum depth of which is of the order of 180 to 200 feet.

Within the higher western background it is difficult to discern anomalies from background, as variations of 6 to 8 millivolts/volt on the high chargeability level of 46 millivolts/volt(±) are common. Three zones of some interest are:-

1900W - the local background is about 36 millivolts/volt, superimposed on which is an 18 millivolts/volt high. The resistivity has a complex pattern but is a low 300 ohm-metres, inferring some interconnection between grains. The maximum depth is of the order of 200 feet, while the decay form is markedly slow with ΔMn = +22%. The source therefore must be coarse grained. This source is considered of secondary interest.

At 1550W a 14 millivolts/volt above local background (36 millivolts/volt) anomaly was defined within 400 ohm-metres resistivities. This also shows slow decay forms (ΔMn = +16%) inferring a coarse grained (or semi-massive) graphite or sulphide source, the maximum depth of which is about 150 feet.

At 1075W a 14 millivolts/volt on 36 millivolts/volt background anomaly was defined from a source *more resistive* than the enclosing rocks. The maximum depth to source is estimated at 100 feet. The slow decay form (ΔMn = +22%) infers a coarse grained source.

LINE 5600S

This line can be divided into three distinct sections as can the lines to the immediate north and south. Ignoring the transition zone between the eastern and central sections, from 6600E to 3700E, the background remains at about 16 millivolts/volt, the central section between 3000E and 1100E is at about 32 millivolts/volt, while the western section west of 1100E is at about 40 millivolts/volt

Other than changes in background, there are few significant anomalies in the eastern and central sections. The most important of these was defined at 2050E where a 10 millivolts/volt above background anomaly from a body at least 50 feet wide and at a maximum depth of 150 feet was recorded. A slight depression in the apparent resistivity to 1500 ohm-metres from 2500 ohm-metres was noted, while the decay form was slow (ΔMn = +8%). This source is interpreted as being due to coarsely disseminated material.

The most significant anomaly on this line was located at 975E. Here, a 36

millivolts/volt anomaly above the *low* central background of 32 millivolts/volt (or 26 above the higher western background of 40 millivolts/volt) was defined which marks the contact between the central and western sections. There is a marked change in resistivity from 7000 ohm-metres at 1100E to 800 ohm-metres to the west. The interpretation is sulphides and/or graphite on the contact between two differing rock types, and at a maximum depth of 150 feet. The source is coarse grained (ΔMn = +12%).

Three other anomalies of 13 millivolts/volt, 12 millivolts/volt and 6 millivolts/volt were observed at 700E, 500E and 300E from sources which have resistivities of 1000, 400 and 200 ohm-metres respectively. The maximum depths to source were of the order of 100 feet in each case. These zones are considered segregations of the sulphide (and/or graphite) which are responsible for the high background within the western sections of this line.

In the far west two further significant anomalies were defined within the western section. The most significant was defined at 1350W and was some 20 millivolts/volt. The source has resistivities of 300 ohm-metres as against 500 ohm-metres background, while the decay form is very slow (ΔMn = +28%). The maximum indicated depth to source is about 100 to 200 feet, while the width is judged to be not less than 120 feet also. This response is considered of prime interest.

The second central source was defined between 900W and 1150W. Here, a significant 8 to 10 millivolts/volt above background response was allied to a broad depression in the resistivity from 700 ohm-metres to 400 ohm-metres. The source is broad and has a maximum depth of 150 feet, while the slow decay

(ΔMn = +10%) suggests a coarsely disseminated source This source is considered of secondary interest.

LINE 6400S

The three distinct chargeability levels recorded on lines to the north were seen here also. The eastern section is characterised by 16 millivolts/volt backgrounds, and high 10,000 (±3000) ohm-metres resistivities, and showed no significant anomalies, while the central section between about 3500E and 1100E had high chargeability backgrounds of about 28 millivolts/volt with lower resistivity backgrounds of about 1500 to 4000 ohm-metres. As usual the western section was characterised by high chargeability backgrounds of 32 millivolts/volt (±) with 400 ohm-metres resistivities.

The central section has a zone of significant anomalism between 2200E and 3150E which consists of a series of individual anomalies at 2400E, 2550E, 2650E, 2800E, 2900E, 3050E and 3100E. The latter is the most spectacular being some 20 millivolts/volt above background. Those at 2350E and 3100E are associated with material decreases in apparent resistivity. The maximum depth to source in this zone is estimated as 150 feet ±50 feet. While this zone is of secondary interest on this line, it very significantly increases in importance to the south on line 7200S, while to the north only a single significant feature was recorded (at 2000E), although the "background" was higher.

The most significant anomaly on this line was recorded at 1000E where a 40 millivolts/volt above background (central) response was recorded on the sharp resistivity contact between the central and western zones. The maximum depth to source is about 180 feet. This response is of primary interest.

A second related maximum of 16 millivolts/volt above background was recorded at 850E which is considered of secondary interest.

A number of increases in the high background are no doubt due to greater segregations in the graphite and/or sulphide "background" observed over the western section. The most notable of these were centred at 0, 150W, 450W which are considered of tertiary interest, and at 1250W, 1600W and 1750W all of which are considered of tertiary/secondary interest. All lie within 100 feet of surface.

LINE 7200S

Three sections are again discernible on line 7200S, also on a basis of chargeability, but in this case with very clear resistivity changes also. These are:-

Eastern section:- 3500E - 6700E, chargeability 16 millivolts/volt, resistivity 10,000 ±3000 ohm-metres.

Central Section:- 3500E - 1150E, chargeability 32 ±4 millivolts/volt, resistivity 2000 ohm-metres(±).

Western Section:- 1100E - 1900W, chargeability 36-40 millivolts/volt, resistivity 400 ohm-metres(±).

Each section is marked by a 20 fold(+) change in resistivity.

There are no significant anomalies in the eastern section.

The central section has two zones of significance. The most easterly was defined between 2950E and 3525E. Within this zone distinct maxima were defined at 3000E, 3250E, 3350E and 3425E of 52, 60, 40 and 40 millivolts/volt above background. Invariably the sources show much lower resistivity and are marked by slow decay forms (but not as slow as elsewhere, with ΔMn being +6%). The maximum depths are estimated at 150, 120, (?) and 170 feet respectively. Certainly these sources show some interconnection within the chargeable material and thus must be considered of prime interest.

A zone of possible "massive" sulphides and/or graphite material was defined between 2300E and 2550E. Here, the resistivities were too low to record on the large current dipole used, and are significantly less than 100 ohm-metres. The chargeability data in such circumstances is understandably unstable, however, it is over 100 millivolts/volt at 2400E where the ΔMn was about +10%. This zone is obviously one of the most significant in the area on straight geophysical signature.

On the contact between the western and central zones a most significant 24 millivolts/volt anomaly above the local 40 millivolts/volt background was observed centred at 1150E. The source lies on a contact and has a maximum depth of 150 feet. The decay form is slow (ΔMn = +10%).

To the west lesser anomalies of 12 - 16 millivolts/volt were defined between the following co-ordinates:- 400E - 050E, 200W and 950W-1400W. The resistivity within these segregations of disseminated to weakly interconnected sulphides or graphite is about 500 to 600 ohm-metres while the decay form observed was again slow (ΔMn = +6%). All are considered of tertiary/secondary interest at

best.

LINE 8000S

The three sections located on line to the north are less well defined on this profile. The western section, 1900W-1300E, is defined by lower resistivity of 1000 ohm-metres, which are significantly higher than those observed to the north in the same section. Also, the background chargeability at 28 millivolts/volt(±) is also significantly lower than observed to the north. Thus it would appear that there is a facies change along strike within the western as well as the central sections. The eastern section, as on most lines to the north, is characterised by low chargeability of 16 millivolts/volt and high resistivities of 10,000 ohm-metres ±3000 ohm-metres between 6800E and 3400E. Also, there are few significant anomalies present in this section.

The central section between 3400E and 1300E has higher resistivity than observed to the north, as well as being more variable between 250 ohm-metres and 5000 ohm-metres.

There are a number of most significant anomalies on this line. That seen on line 7200S between 3000E and 3225E was again seen on this line between about 2800E and 3400E. However, it occurs as only small multiple zones of 16 millivolts/volt on the 32 millivolts/volt background. The anomaly at 1000 ohm-metres over the eastern half of the anomaly and 300 ohm-metres over the western half are much higher than observed (on average) on line 7200S. The maximum depth to source is estimated at 100 to 200 feet. The anomaly is of secondary interest (at best) on this line.

The very low resistivity section between 2300E and 2550E on line 7200S is seen on this line as a most significant chargeability anomaly of 36 millivolts/volt at 2200E and of 28 millivolts/volt at 2350E. The apparent resistivity is high at 1600 ohm-metres and 600 ohm-metres respectively. The decay form is only slightly slower than normal (ΔMn = +5%) inferring an almost normal grain size to the source. These anomalies are considered to be of prime interest.

The contact between the central and western sections is marked by a most significant induced polarization high of some 50 millivolts/volt above the (central) background of 28 millivolts/volt. The anomaly centre is at 1325E and as the anomaly has additional inferred sources at 1500E and 1200E, the maximum depth is somewhat difficult to gauge, but is guesstimated at 200 feet. The decay form of ΔMn = +6% implies a causative grain size only slightly coarser than normal.

Over the western section four anomalous sections of 16 to 20 millivolts/volt above background at 800E($\pm$75 feet), 650E, 100E($\pm$100 feet) and 850W-950W were seen. These are considered to be due to disseminated sulphides/graphite in slightly coarser than normal form at maximum depths of about 150 feet $\pm$50 feet. All are of secondary interest at best. Decay form is very slow (ΔMn +30% to +38%), which infers an extremely coarse grain to the source.

LINE 8800S

The eastern zone is again clearly defined by high 10,000 ohm-metres resistivities and very low 16 millivolts/volt chargeabilities. The central zone whose eastern limit is 4025E, extends to 1350E where there is a significant decrease in resistivity to 500 ohm-metres from 2000 to 3000 ohm-metres seen in the central

zone. Significant sections of this line within the western section have no chargeability readings due to high noise levels. Within this zone a number of substantial induced polarization highs were recorded.

Uncharacteristically a most significant above background anomaly of 30 millivolts/volt above the 16 millivolts/volt background was found centred at 5600E accompanied by a 60% fall in resistivity to 4000 ohm-metres, while the decay form observed was just slower than normal with ΔMn being +6%. The source therefore is interpreted as being due to disseminated sulphides (or graphite) within a host slightly less conductive than the enclosing rocks. Maximum depth is about 200 feet.

The central zone is characterised by higher background chargeabilities of 36 millivolts/volt on which a number of significant local increases are seen. At 4000E and 3850E significant above background responses of 12 millivolts/volt and 14 millivolts/volt were defined within a general 1600 ohm-metres compared with 10,000 ohm-metres. The maximum depth to source is estimated at 120 feet and 180 feet respectively, while their interest is considered secondary.

A most significant response of 20 millivolts/volt was recorded at 3550E superimposed on a 36 millivolts/volt background. The associated resistivity shows a 60% fall to around 1100 ohm-metres. The decay form is only slightly slower than normal (ΔMn = +3%), inferring a disseminated source of average grain size within a host less resistive than the enclosing rocks. The anomaly is considered to be of primary to secondary interest.

Two related responses each of about 16 millivolts/volt above background were

recorded at 2900E and 2800E. These occur on high changing resistivity of 1000 ohm-metres and 1500 ohm-metres. The decay form of ΔMn = +8% is slow and thus the interpreted source is coarse grained disseminated sulphides (or graphite) on a transition between two rock types.

A notable induced polarization high of some 28-30 millivolts/volt above the high 36 millivolts/volt background was defined at 2550E which is accompanied by a marked decline in resistivity from 3000 ohm-metres to 900 ohm-metres. The decay form (ΔMn = +8%) is slow. Thus the source is interpreted as being due to coarse grained sulphides within a zone less resistive than the enclosing rocks. The maximum depth to source is assessed to be of the order of 200 feet, while the priority is primary.

On the contact between the central zones, where resistivities are 3000 ohm-metres at 1400E, and the western zone where resistivities are 400 ohm-metres at 1250E, a major anomaly of some 50 millivolts/volt was defined at 1325E. This occurs *on* the contact, and has a maximum depth to source of 180 feet. Again the ΔMn value is about +8% inferring a coarse grain size. A second lesser related source was defined at 1100E, but has no distinct change in the underlying resistivity. The former is considered of primary interest and the latter secondary.

Between 700E and 950E no chargeability readings were possible.

Between about 300E and 600E an increase in chargeability to about 64 millivolts/volt was obtained against a local 28 millivolts/volt background. There appears to be two distinct sources, one at 400E and the lesser at 550E. The maximum

depths for both are of the order of 200 feet. The decay forms are slow (ΔMn at 550E was +14%), inferring a coarser grained source. The response at 400E shows an *increase* in resistivity, inferring a resistive host to the mineralisation.

Between 250E and 1000W little meaningful data was able to be obtained.

CONCLUSIONS

1. On all lines south of 4000S three distinct sections were defined. These are designated western, central and eastern. On lines to the north of 4000S only the central and eastern sections were traversed. While the properties of these sections vary along strike, the bulk characteristics are defined below.

   Eastern Section:- A relatively low background of about 16 millivolts/volt and apparent resistivity background of 10,000 ohm-metres ±3000 ohm-metres. There are few significant anomalies above background within this section.

   Central Section:- A chargeability background which lies within the range of 24 millivolts/volt(±4 millivolts/volt) and lower resistivity backgrounds of the order of 2500 ohm-metres, but which show greater variation. In the north there are few significant anomalies within this background, but on line 7200S the most significant responses in the whole area were defined which fade rapidly to the north, and less so to the south.

   Western Section:- This zone is characterised by high chargeability backgrounds of 46 millivolts/volt ±4 millivolts/volt in the north, declining to 32 millivolts/volt ±4 millivolts/volt in the south, with significantly

lower average resistivities of 400 to 600 ohm-metres in the north increasing towards 600 to 1000 ohm-metres in the south. There are many significant increases in chargeability level within this section.

Note: These different sections will be better illustrated in a contour presentation which will be appended to this report at a later date.

2. The resistivities of the three distinct sections as stated above were from west to east, 500 ohm-metres(±), 2500 ohm-metres(+) and 10,000 ohm-metres(±). While these could be entirely representative of the bulk of the enclosing rock types, their absolute values may be influenced, at least in part, by the locations of each of the current electrodes. The western current electrode being placed in lower resistivity material, while the eastern current pole being placed in a resistive rock type. These positions are not wholly responsible for the levels observed, as there is no *progressive* change in background as the electrodes are approached, but rather *distinct levels* in each of the three sections.

3. The decay forms observed in the area are, on the whole, very slightly slower than normal, even within the background values (with ΔMn values from 0 to +5%). The anomalous responses invariably show slow to very slow decay forms, mostly in the range ΔMn = +5% to +10%, but on occasion as slow as +30%. This infers a coarse grain size to the causative material. This data is unlike most other areas surveyed recently which have shown fast to normal backgrounds, with *some* anomalous zones showing slow decay forms. (Note that three different receivers were used, so this phenomenon is not a function of receiver). Specific comments are made in the report

on ΔMn values where significant.

4. The significant anomalies are listed in tabular form below. Those of primary interest and secondary interest are strongly recommended for additional work should the sources not be positively identified by geological mapping.

Summary of Significant Anomalies

Line	Station	Anomaly/ Background	Resistivity/ Background	Maximum Depth	Decay Form	Priority
00	3425E	9/26	5000/10000	200 ft.		Tertiary
00	4630E	7/28	3500/9000	150 ft.		Tertiary
800S	No significant anomalies					
1600S	No significant anomalies					
2400S	3925E	6/16	4000/12000	150 ft.		Tertiary/ Secondary
2400S	3025E	16/16	4500/12000	75 ft	S	Secondary+
2400S	2550E	16/18	4000/10000	100 ft	S	Secondary+
2400S	1850E	5/20	6500/10000	100 ft.		Tertiary-
3200S	5600E-5500E	6/14	4000/12000	75 ft.		Tertiary-
3200S	5275E	6/4	13000/6000	150 ft.		Tertiary-
3200S	3225E	6/20	7000	50 ft.		Tertiary
3200S	3300E	6/20	7000	50 ft.		Tertiary-
3200S	3425E	6/20	7000	50 ft.		Tertiary-
3200S	3050E	8/20	7000	100 ft.		Secondary/ Tertiary
3200S	2875E	8/20	5000/7000	50 ft.		Tertiary
3200S	2425E	6/20	16000/8000	100 ft.		Tertiary

Line	Station	Anomaly/ Background	Resistivity/ Background	Maximum Depth	Decay Form	Priority
3200S	2000E	6/20	4000/7500	100 ft.		Tertiary
3200S	1725E	18/20	2500/7000	130 ft.	S	Primary
4000S	2900E	22/16	6500 (contact)	150 ft.	S	Primary
4000S	700E	9/44	1100/2200	150 ft.	S	Secondary-
4000S	400E	12/46	400/contact	75 ft.	S	Secondary-
4000S	250E	10/46	650	100 ft.	S	Secondary
4000S	050E	16/46	600	120 ft.	S	Secondary
4800S	5725E	10/14	4000	160 ft.	N/S	Secondary/ Tertiary
4800S	(1150E	30/24	3000(on change)	180 ft.		
4800S	(1000E	30/24	1200(" ")	200 ft.?	SS	Primary/ Secondary
4800S	1900W	18/36	300	200 ft.	SS	Secondary
4800S	1550W	14/36	400	150 ft.	SS	Secondary
4800S	1075W	14/36	900/500	100 ft.	SS	Secondary/ Tertiary
5600S	2050E	10/31	1500/2500	150 ft.	S	Secondary
5600S	975E	36/52	800(contact)	150 ft.	S	Primary
5600S	700E	13/40	1000	100 ft.		Tertiary
5600S	500E	12/40	400	100 ft.		Tertiary
5600S	300E	6/40	200	100 ft.		Tertiary
5600S	900W-1100W	10/40	400/700	120 ft.	SS	Secondary
5600S	1350W	20/40	300/500	150 ft.	SS	Primary
6400S	2200E-3100E	See text				Secondary
6400S	(1000E	40/32	1000(contact)	180 ft.	SS	Primary
6400S	(850E	16/44	300/400	75 ft.	S	Secondary
6400S	00	6/36	700	75 ft.		Tertiary

Line	Station	Anomaly/ Background	Resistivity/ Background	Maximum Depth	Decay Form	Priority
6400S	150W	8/36	700	75 ft.	S	Tertiary
6400S	1250W	16/36	600/400	100 ft.	S	Secondary/ Tertiary
6400S	1000W	16/36	300/400	100 ft.	S	Secondary/ Tertiary
6400S	1750W	14/36	300	100 ft.	S	Tertiary/ Secondary
7200S	3000E	52/28	1000/5000	150 ft.	S	Primary
7200S	3250E	60/28	400/5000	120 ft.	S	
7200S	3350E	40/28	1000/10000	?	S	
7200S	3425E	40/28	1000/10000	170 ft.	S	
7200S	2300E-2550E	100(?)	>100	?	S	Primary*
7200S	1150E	24/40		150 ft.		Primary-
7200S	400E-050E	16/32	500+	75 ft.	S	Secondary/ Tertiary
7200S	200W	16/32	500+	150 ft.	S	Secondary/ Tertiary
7200S	950W-1400W	16/32	500+	150 ft.	S	Secondary/ Tertiary
8000S	2800E-3400E	16/32	300-1000	100-200 ft.	S	Secondary/ Tertiary
8000S	(2200E	36/36	1600	220 ft.	S/N	Primary
8000S	(2350E	28/36	600	220 ft.	S/N	Primary
8000S	1325E	50/28	contact	200(?) ft.	S/N	Primary
8000S	800E	12/28	200	100 ft.		Tertiary
8000S	650E	16/28	400	100 ft.	SS	Tertiary
8000S	850W-950W	18/28	600	100 ft.	SS	Tertiary/ Secondary
8800S	5600E	30/16	4000/10000	180 ft.	S/N	Primary

Line	Station	Anomaly/ Background	Resistivity/ Background	Maximum Depth	Decay Form	Priority
8800S	4000E	12/36	1000/10000	120 ft.		Secondary
8800S	3850E	14/36	1600/10000	180 ft.		Secondary
8800S	3550E	20/36	1100/2500	100 ft.	S/N	Secondary/ Primary
8800S	(2900E	16/36	1000	120 ft.	S	Secondary
8800S	(2800E	16/36	1500	120 ft.	S	Secondary
8800S	2550E	28/36	900/3000	200 ft.	S	Primary
8800S	(1325E	50/26	400	180 ft.		Primary
8800S	(1100E	24/26	900	200 ft.		Secondary
8800S	400E	36/28	600	200 ft.?		Secondary
8800S	550E	24/28	2000/800	200 ft.		Secondary

RECOMMENDATIONS

It is recommended that limited dipole-dipole or pole-dipole detailed surveys be carried out on the anomalies of primary and secondary geophysical interest. The spacings recommended are:

a = 100 feet n = 1 to 4

and a = 200 feet n = 1 to 3

The reasoning is that for the most part the maximum depth to source is about 100 feet, and the width of the sources are also narrow (with some very notable exceptions). Thus *resolution* for *shallow, narrow* zones is a prime requirement in the detail. Also, as depth perception and detail of the overburden/oxidation and upper section of the source is required, a 200 feet spacing is also suggested. The two spacings could be efficiently run in conjunction with one another.

SCINTREX

Respectfully submitted on behalf of:

SCINTREX PTY. LTD.

A.W. HOWLAND-ROSE, MSc, DIC, AMAusIMM, FGS.

GEOPHYSICIST

058656

8800S

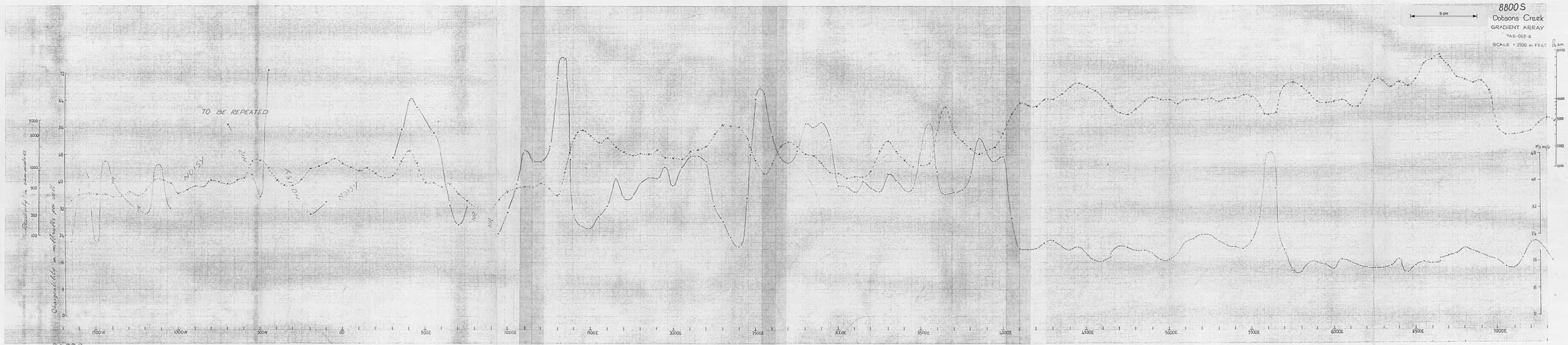
Dobsons Creek

GRADIENT ARRAY

TAS-065-G

SCALE 1:2500 in FEET

5 cm



8000S

058657

8000 S

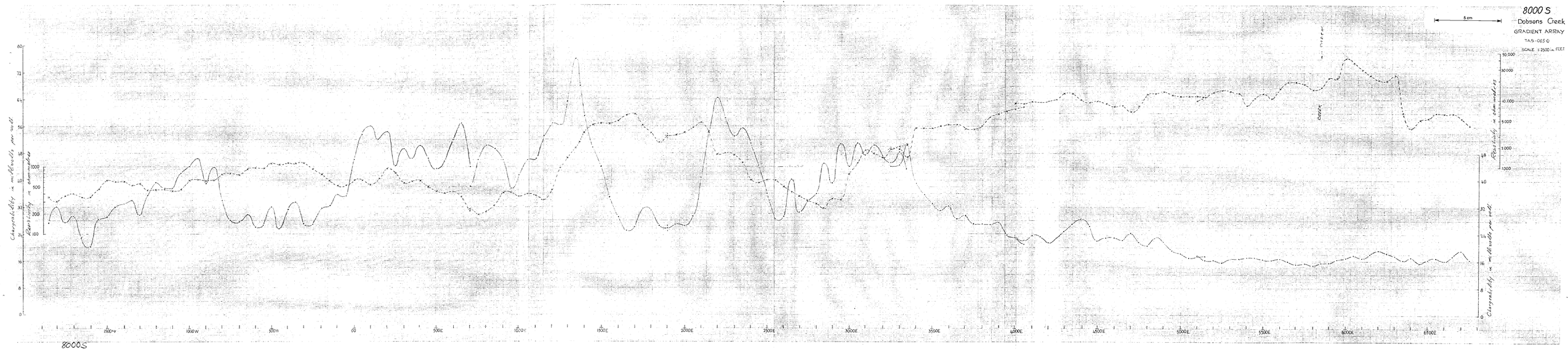
Dobsons Creek

GRADIENT ARRAY

TAS-065-Q

SCALE 1:2500 in FEET

5 cm



7200 S

058658

7200 S
Dobsons Creek
GRADIENT ARRAY
TAS-065-Q
SCALE - 1:2500 in FEET

5 cm

Resistivity in ohm-metres

Chargeability in milliseconds per volt

88
80
72

40000
20000
10000
5000
2000
1000

30
24
16
8
0

1000W 700W 400W 100W 00 500E 800E 1100E 1500E 2000E 2500E 3000E 3500E 4000E 4500E 5000E 5500E 6000E 6500E

3 signal too low to register on instrument. i.e. less than 100 ohm.

6400S

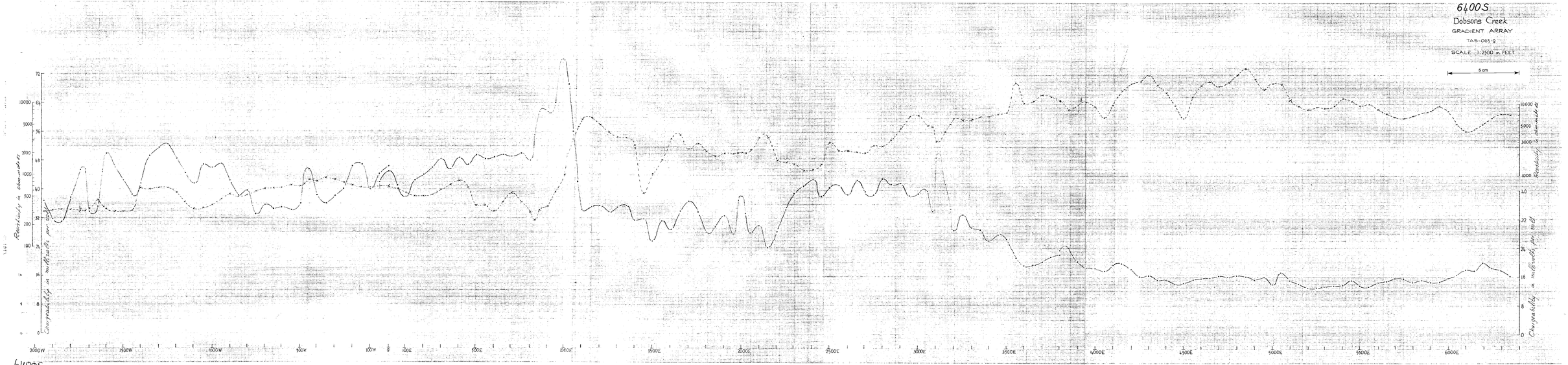
Dobsons Creek

GRADIENT ARRAY

TAS-065-9

SCALE 1:2500 in FEET

5 cm



6400S

058660

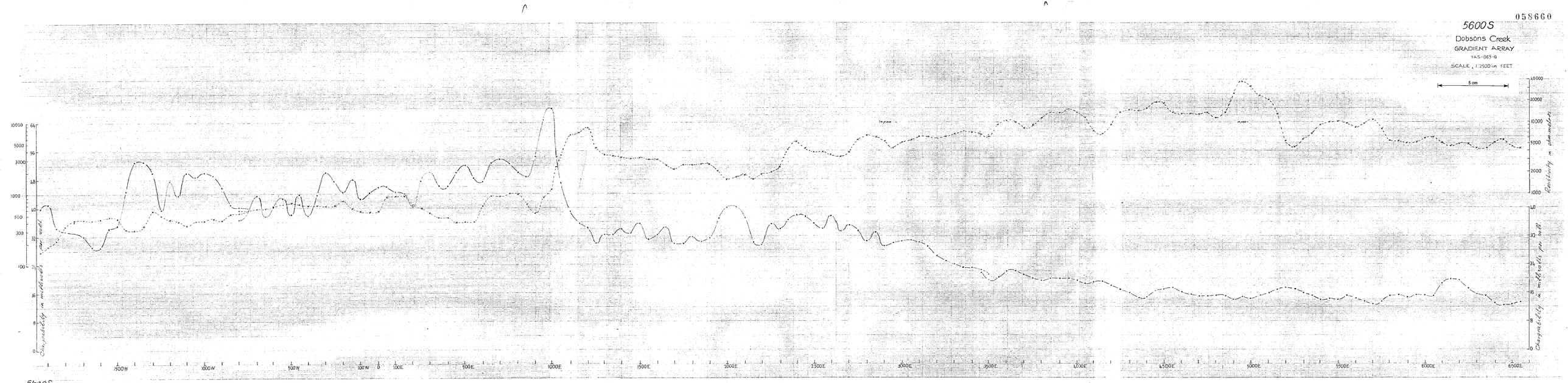
5600S

Dobsons Creek

GRADIENT ARRAY

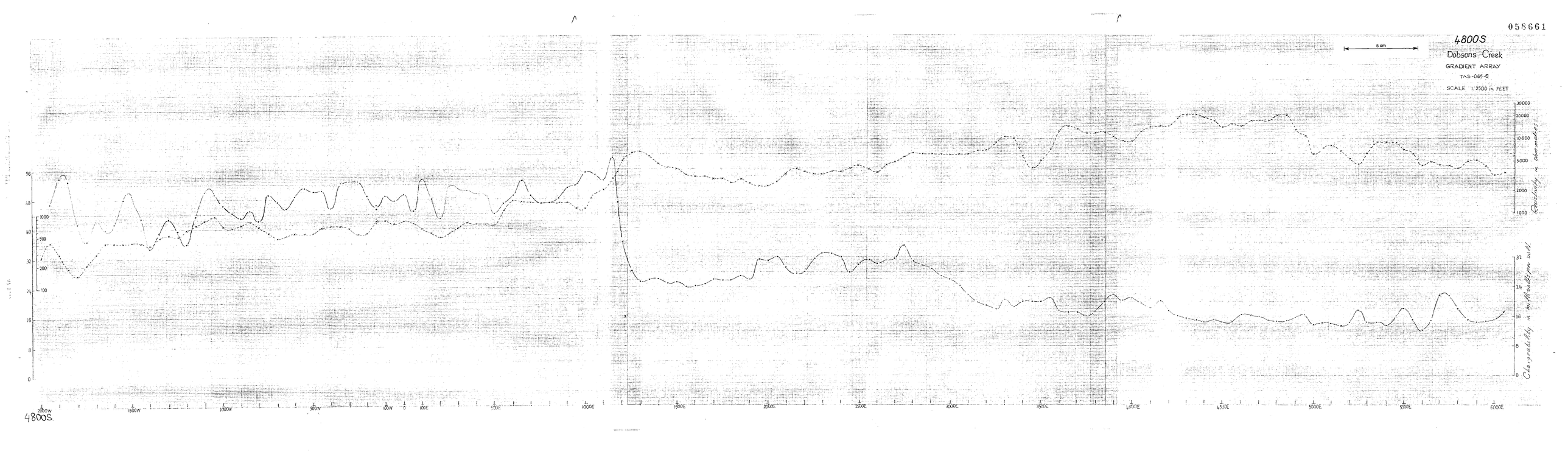
TAS-065-Q

SCALE, 1:2500 in FEET



5600S

058661


4800S
5 cm
Dobsons Creek
GRADIENT ARRAY
TAS-065-R
SCALE 1:2500 in FEET
Resistivity in ohm-metres
Chargeability in milliseconds per volt
96
48
40
32
24
16
8
0
1000
500
200
100
30000
20000
10000
5000
2000
1000
32
24
16
8
0
2000W
1500W
1000W
500W
100W
0
100E
500E
1000E
1500E
2000E
2500E
3000E
3500E
4000E
4500E
5000E
5500E
6000E
4800S

058662

5 cm

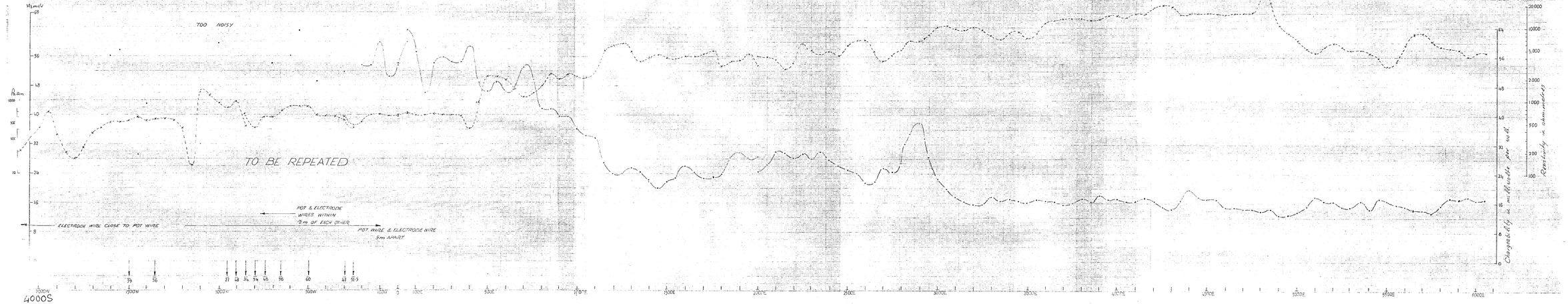
4000S

Dobsons Creek

GRADIENT ARRAY

TAS-065-Q

SCALE 1:2500 in FEET



058663

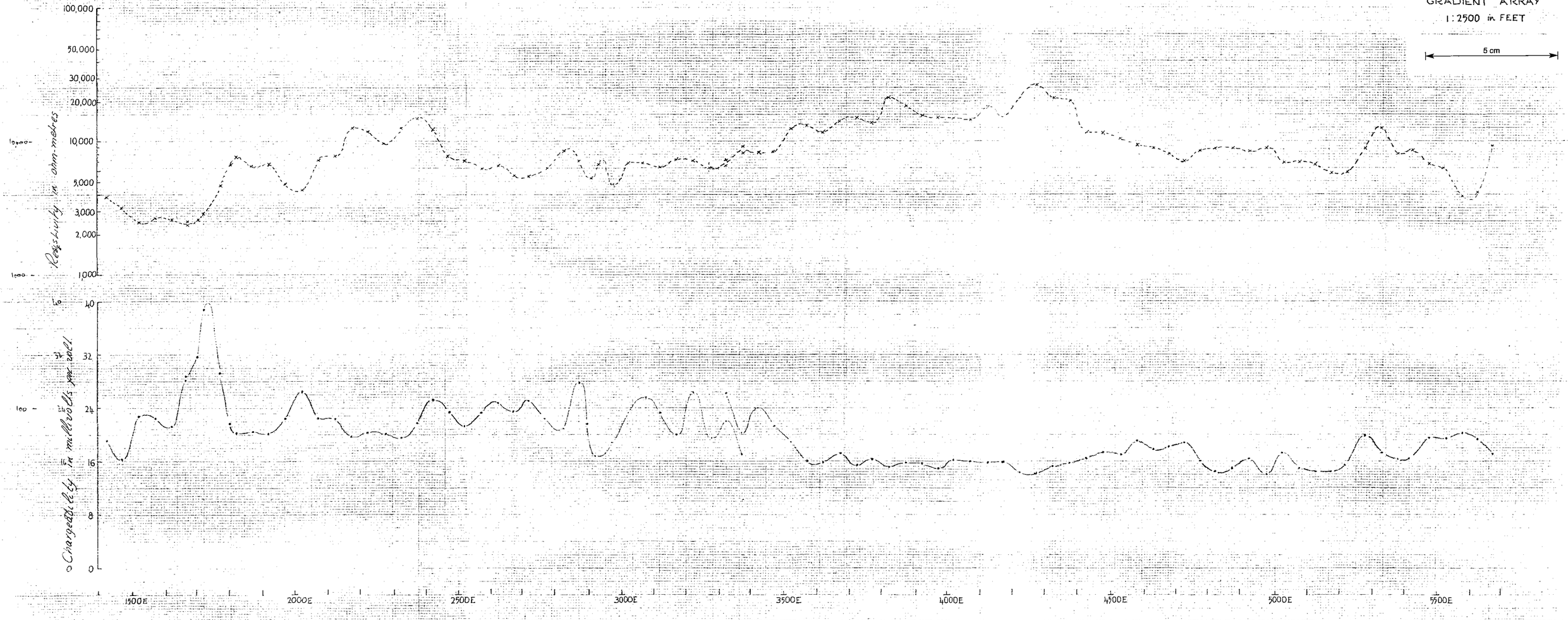
3200S

Dobson Creek

GRADIENT ARRAY

1:2500 in FEET

5 cm



3200S

058664

2400S

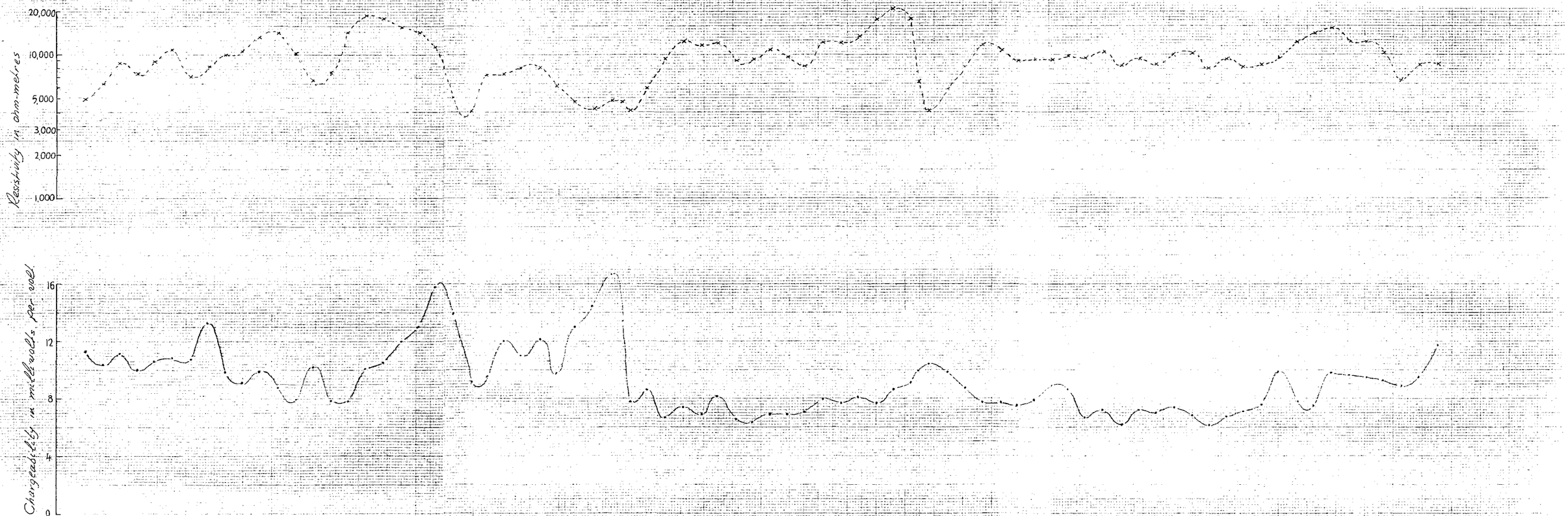
Dobsons Creek

GRADIENT ARRAY

TAS-065-G

SCALE 1:2500 in FEET

5 cm



2400S

5 cm

058665

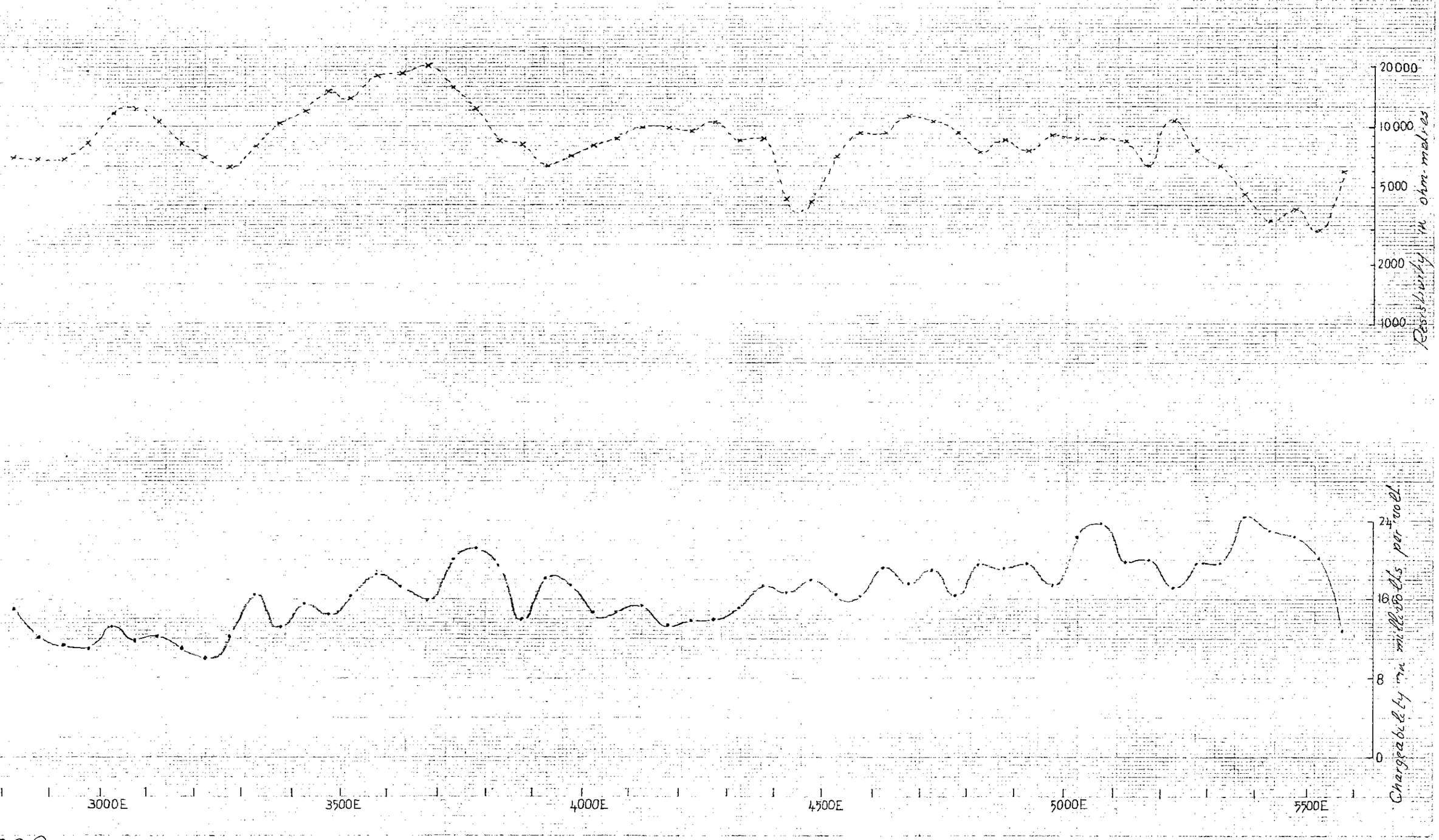
1600S

Dobsons Creek

GRADIENT ARRAY

TAS-065-Q

SCALE 1:2500 in FEET



1600S

058666

800S

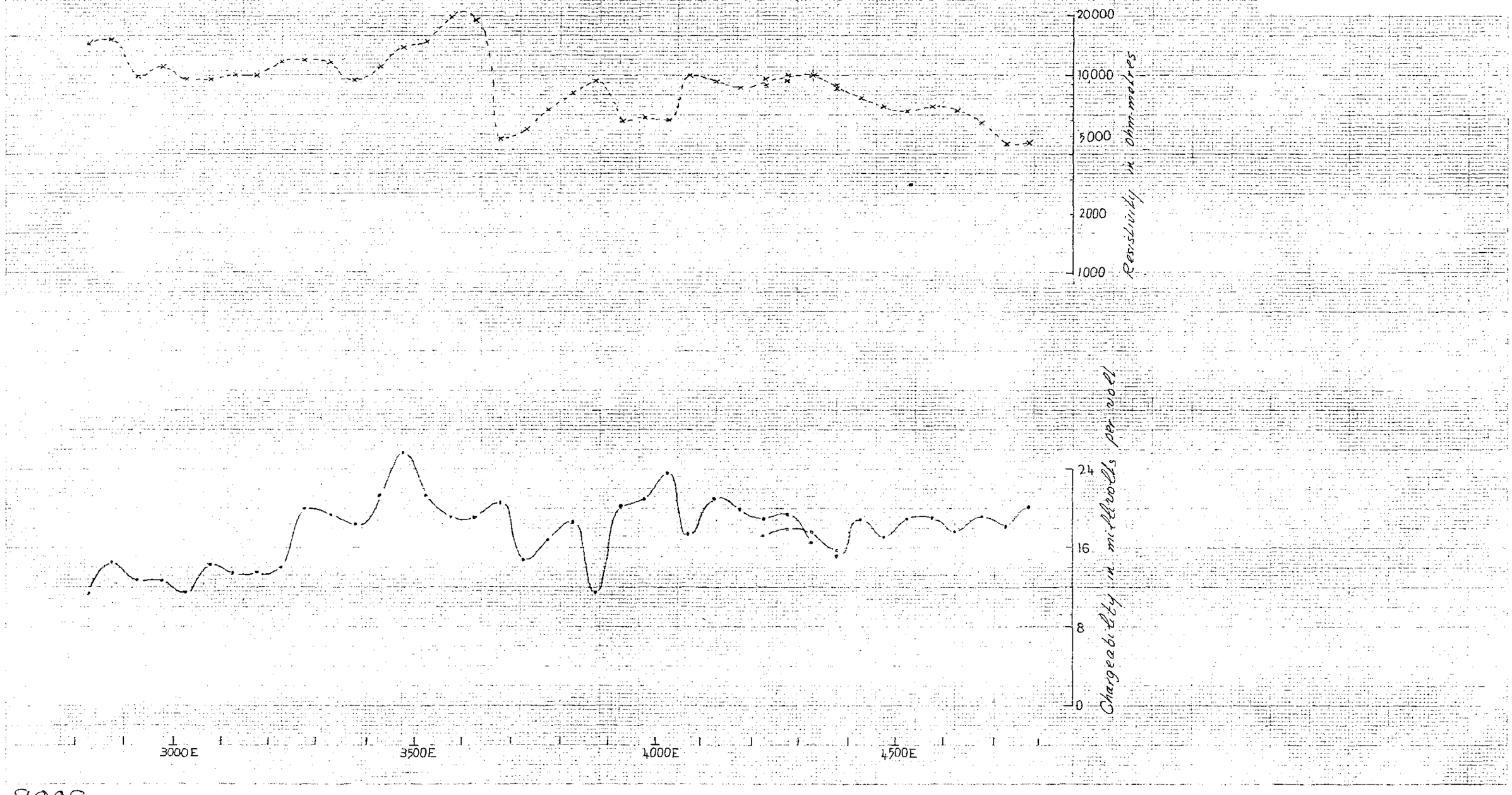
Dobsons Creek

GRADIENT ARRAY

TAS-065-Q

SCALE 1:2500 in FEET

5 cm



800S

058667

00

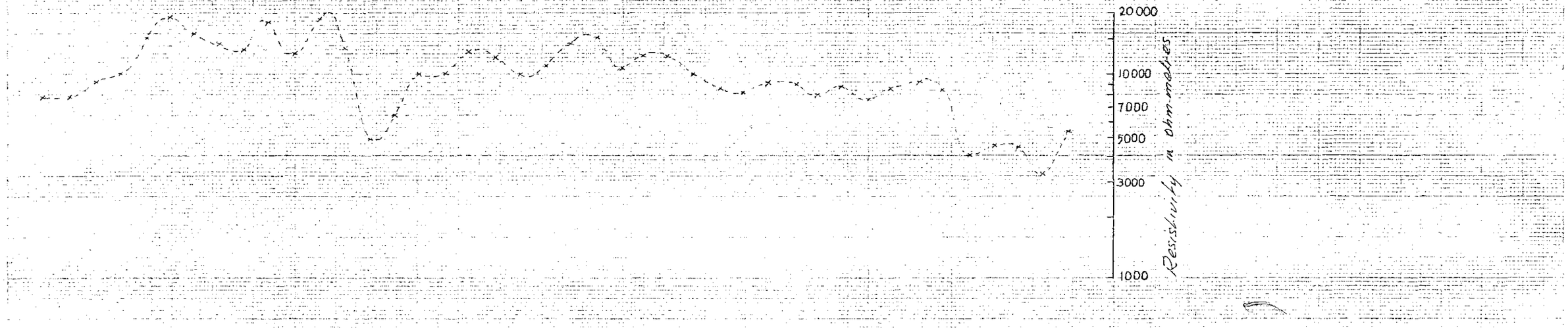
Dobsons Creek

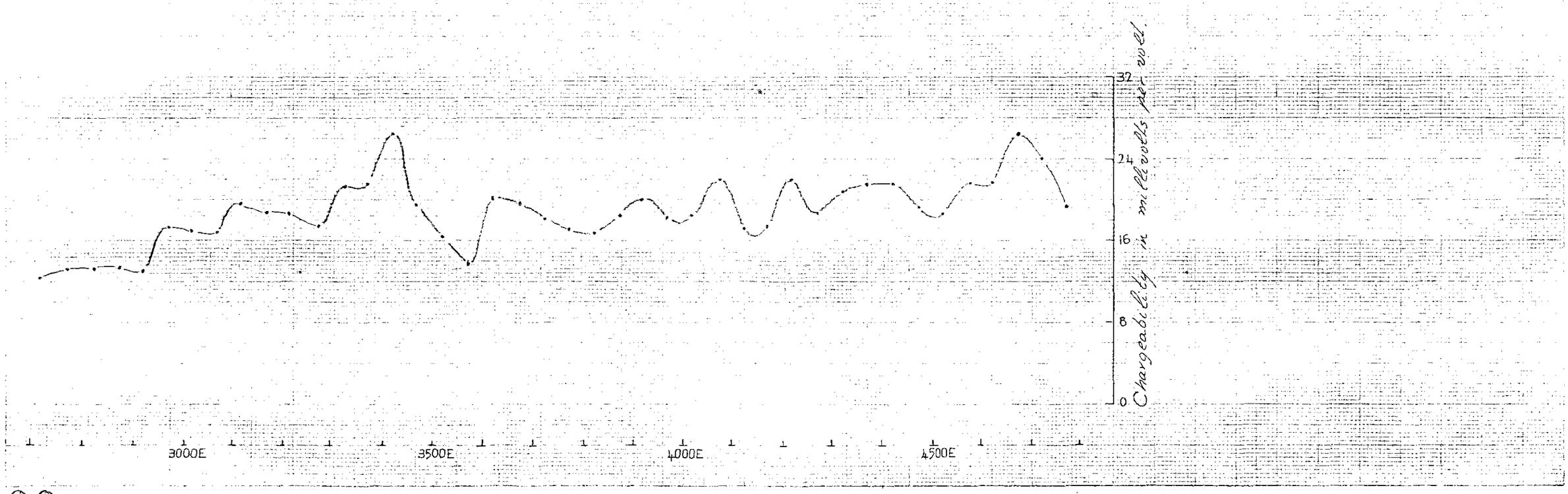
GRADIENT ARRAY

TAS-065-0

SCALE 1:2500 in FEET

5 cm





00

058668

APPENDIX 7.

Scintrex Report Tas-065-Q II

"A report on additional E.I.P. Gradient and Dipole-Dipole detail, Dobsons Creek, near Rosebery, Tasmania on behalf of the Electrolytic Zinc Company of Australasia Limited."

July, 1980

Copy forwarded to Getty Oil direct from Scintrex.

058669

SCINTREX

A REPORT ON

ADDITIONAL EIP GRADIENT AND DIPOLE-DIPOLE DETAIL

DOBSONS CREEK, NEAR ROSEBERY, TASMANIA

ON BEHALF OF

ELECTROLYTIC ZINC COMPANY AUSTRALASIA LIMITED

058670

SCINTREX

PRIVATE AND CONFIDENTIAL

A REPORT ON
ADDITIONAL EIP GRADIENT AND DIPOLE-DIPOLE DETAIL
DOBSONS CREEK, NEAR ROSEBERY, TASMANIA
ON BEHALF OF
ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

BY

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SYDNEY, N.S.W.

JULY, 1980
TAS-065QII

058671

SCINTREX

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Appendix

Data Profiles

Plate 1 - Chargeability Contour Plan

Plate 2 - Resistivity Contour Plan

Plate 3 - Interpretation Plan

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GEOPHYSICAL CONSULTANTS AND CONTRACTORS

SUMMARY

Additional gradient electrical induced polarization positioned between critical sections of Dobsons Creek has enabled a unique contour interpretation of chargeability and resistivity to be made.

Dipole-dipole detail has confirmed the interest of the significant anomalies delineated in the gradient reconnaissance survey, and has shown the majority of sources to be shallower than the 'maximum depth' estimates made from the gradient array data.

The contoured data reveals some interesting stratigraphic changes. These, together with a recommended base station controlled magnetic field survey should materially assist in the structural interpretation.

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SCINTREX

A REPORT ON
ADDITIONAL EIP GRADIENT AND DIPOLE-DIPOLE DETAIL
DOBSONS CREEK, NEAR ROSEBERY, TASMANIA
ON BEHALF OF
ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

INTRODUCTION

Following a gradient array reconnaissance survey carried out by Scintrex Pty. Ltd. in February and March, 1980, and discussed in report TAS-065Q dated April, 1980, it was decided that additional lines were required to allow a unique interline correlation to be made. Also, some limited dipole-dipole detail over selected anomalies was considered desirable to better evaluate their significance.

These surveys were carried out at the request of Mr. J. MacDonald, Chief Geologist for the West Coast Mines division of Electrolytic Zinc Company of Australasia Limited.

The gradient surveys were performed over 5½ double and 6½ single operator days and the dipole-dipole over 24.75 operator days between 27th March to 19th May, 1980. Mr. A.W. Howland-Rose,M.Sc., and Mr. G. Street,M.Sc., provided geophysical supervision, while overall direction was provided by Mr. J. Mill, Senior Exploration Geologist for West Coast Mines.

METHOD

The methods employed are briefly discussed in the attached appendix. The current dipole for the gradient array was the same as for the initial survey.

EQUIPMENT

The gradient array data was acquired with IPR-8 receivers after energisation by a 10/15 kilowatt transmitter as described in report TAS-065Q. The dipole-dipole data employed a 2½ kilowatt transmitter and various 8HP and 4HP Briggs and Stratton motor generators to power the more portable 2½ kilowatt transmitter.

DATA PRESENTATION

As per the original gradient array reconnaissance survey, the Dobsons Creek grid is an older imperial grid but has been plotted on a 1:2500 horizontal scale, with chargeability being displayed on a 1 centimetre = 4 millivolts/volt scale and resistivity on a 5 centimetre log scale.

The chargeability and resistivity data has been contoured on the revised surveyed grid at a scale of 1:5000.

The dipole-dipole data is plotted and presented in standard pseudo-section format.

DISCUSSION OF RESULTS

A - GRADIENT ARRAY FILL-IN LINES

As mentioned above, the additional lines were surveyed using the same 22,000 feet current dipole as for the original survey, with current electrodes placed at 7025W and 12975E on line 4000S.

Each additional fill-in line is discussed from north to south with additional comments on the original lines being made where necessary. References made

after the line number refer to page number of the original TAS-065Q report.

LINE 2800S 0 - 3500E

The two significant responses judged to be of secondary interest at 3025E and 2550E on line 2400S (P4), probably correlate with a broad multiple source anomaly defined between 2650E and 3100E on this line. In this case the chargeability rises about 12 millivolts/volt above the background of 16 millivolts/volt and is accompanied by resistivities of 7000 ohm-metres (±1000 ohm-metres) , which, while high, are significantly lower than observed to the immediate west. A resistive 'marker' at 2400E ±150 metres on line 2400S can be equated to a similar resistivity high at 2450E on this line. In both cases the resistivity is of the order of 17000 ohm-metres.

On the western flank of the survey line, a significant increase in chargeability from a local background of 20 millivolts/volt to 52 millivolts/volt(+) takes place at 0350E. This is associated with a fall in background resistivity east of 500E of 4000 ohm-metres to 800 ohm-metres west of 0200E, with the contact being at about 300E. The maximum depth to the chargeable source at 300E is estimated to be about 150 feet. The decay form observed over this anomaly is slow (ΔMn = 14%) which infers a coarser than normal grain size.

LINE 3600S 0100E - 3500E

Between about 2100E and 3500E the resistivity background varies about the 7000 ohm-metres level, while the chargeability background varies from 16 millivolts/volt to 24 millivolts/volt. From 2100E westwards to 900E the resistivity progressively falls to about the 3000 to 4000 ohm-metres level, with the chargeability background varying between 24 millivolts/volt and 16 millivolts/

volt.

East of 1600E there are no significant induced polarization responses which means that the significant above background anomaly located at 2900E on line 4000S (P7) from a coarse grained disseminated source at an estimated maximum depth of 150 feet does not extend across this line and is therefore of limited strike extent to the south.

Similarly, a 20 millivolts/volt response of primary interest at 1725E on line 3200S (P6) associated with a marked change in apparent resistivity is not seen on this line. The resistivity data does not suggest a precise location for the along strike location of this site on line 3600S. The anomaly is therefore limited in strike length to the north.

West of 700E the chargeability rises rapidly from 24 millivolts/volt background level to over 60 millivolts/volt at 0150E, while the apparent resistivity decreases progressively from 2000 ohm-metres to 500 ohm-metres from east to west. The source is obviously multiple with loci interpreted at 150E, 350E, 500E and 600E. Extremely slow decay forms (ΔMn = +22%) infer a very coarse grain size to the chargeable source, while the maximum inferred depths of 200 feet are almost certainly excessive due to the multiple nature of the source. These higher chargeability values are considered to be predominantly formational in origin, and are probably due to coarse grained sulphides and/or graphitic shales.

LINE 4000S

On the original survey the section of the line between 2100W and about 600E was subjected to interline capacitive and/or electromagnetic coupling between

the energising cable and the potential dipole which, west of about 500W, lay within ½ metre of each other (P9). This section was reread with the current line being diverted along line 4400S (but the same current electrodes being used).

As would be expected the resistivity data is almost identical with that read in the original survey. A marked change occurs from 2000 ohm-metres west of 350E to 500 to 600 ohm-metres east of this point. West of the contact inferred above (350E) much higher chargeabilities of 40 to 60 millivolts/volt were observed, with occasional values to higher amplitudes still. Within this high background (48 millivolts/volt) a number of individual maxima represent segregations of chargeable material.

The most easterly maximum was defined at 400E where a 20 millivolts/volt above local background response occurs from a source on or in close proximity to the inferred geological contact. The decay form is slow (ΔMn = +12%) and the maximum depth estimated at 100 feet.

The most significant group of induced polarization anomalies was defined in the west, the most significant of which was at 1850W. At this site a source less than 50 feet deep was defined whose chargeability reaches a substantial 108 millivolts/volt, some 70 millivolts/volt above background. The anomaly is accompanied by a significant decrease in apparent resistivity to 150 ohm-metres from the local background of 400 ohm-metres. The decay form is extremely slow (ΔMn = +48%), therefore the source is interpreted as weakly interconnected coarse grained sulphides and/or graphite at a maximum depth of 50 feet. The interest is primary to secondary.

To the immediate west a 28 millivolts/volt anomaly above the 40 millivolts/volt background was defined at 1950W. The source is inferred to be coarsely disseminated (slow decay form) at a maximum depth of about 50 feet. The interest is secondary at best.

To the east of the major peak at 1850W two related maxima of 24 millivolts/volt and 18 millivolts/volt above the 40 millivolts/volt background were recorded at 1600W and 1700W respectively. The background resistivity is about 400 ohm-metres, and the decay form is a slow +22% at 1600W and an extremely slow +40% at 1700W. The maximum depth is 50 feet. The interest is secondary at best.

All other responses such as those at 1100W and 1250W represent coarse grained segregations of sulphides and/or graphite within the high formational background.

LINE 4400S 0050E - 3500E

A sharp and material contact was defined at precisely 1225E. To the east thereof the background resistivity varies between 4000 and 5000 ohm-metres while to the immediate west the background is 1500 ohm-metres falling progressively to 700 ohm-metres west of 500E. The most spectacular change in regime is, however, background chargeability. To the west the level is 48 millivolts/volt (+) while to the east the level is of the order of 20 to 24 millivolts/volt. These changes correlate with more gradual changes in chargeability and similar changes in resistivity to the north on line 4000S where the contact was defined at 1100E, and to the south on line 4800S where a sharp change in chargeability at 1200E was recorded.

Within the contact zone the question of just what is anomalous arises. To the

north the chargeability shows a gradual increase from east to west, while on this line a sudden change is seen. On closer inspection, however, the marked chargeability high of 52 millivolts/volt (absolute value) could be considered to be a distinct source of 22 millivolts/volt ±6 millivolts/volt superimposed on a background midway between the two levels, estimated here at 32 millivolts/volt. The sharp fall in resistivity to the west could then be considered, in part, to be due to the source. Thus this contact chargeability anomaly may be of significance. In detail the source has an estimated maximum depth of 100 feet at 1150E and is considered to be due to an essentially disseminated source of coarser than normal grain size. This anomaly may be of secondary to primary geophysical interest.

A relatively moderate chargeability high of some 12 millivolts/volt above the 24 millivolts/volt background was defined at 2200E allied with a 30%(±) fall in resistivity to 1800 ohm-metres. The maximum depth to source is of the order of 50 feet and the decay form is slow, inferring (again) a coarse decay form to the source. This zone correlates with broadly higher values between 1800E and 2500E on line 4000S.

LINE 5200S 0050E - 3000E

As on the lines to the north and south the western and eastern sectors show a sharp contact. To the west the background resistivity was 600 to 700 ohm- metres which contrasts strongly with the 6000 ohm-metres recorded to the east of the contact at 1100E. The chargeability background to the east is a relatively low 28 millivolts/volt, and to the west a higher 40 millivolts/volt.

Unlike lines to the south, a distinct, major induced polarization anomaly occurs

on the contact between the western and eastern sectors at 1000E. Here a 30 millivolts/volt anomaly is associated with a very slight low in the resistivity change, which infers that at least part of the source has weak interconnection within it. The anomaly form suggests a maximum depth to source of the order of 120 feet, while the observed decay forms are slow (ΔMn = +10%). This anomaly is considered to be of primary interest. This response correlates with a similar major anomaly on line 5600S at 1000E (P11-12) which is also of primary interest.

A minor shoulder anomaly associated with the above primary anomaly was recorded at 800E. The chargeability anomaly is only 6 to 8 millivolts/volt however, it *may?* correlate with the second peak at 1000E on line 4800S, with the major peak at 1150E being correlated with the anomaly at 1000E/5200S.

LINE 6000S 0050E - 3600E

In common with the lines to the north and south, two distinct regimes can be recognised. The resistivity data remains between 1500 ohm-metres and 9000 ohm-metres to the east of the contact at 1050E, and varies about the 600 ohm-metres level west of it. The chargeability contact looks to be at about 1050E and the background to the east ranges from 26 millivolts/volt and 32 millivolts/volt, while to the west, the base level is 40 millivolts/volt.

The only significant induced polarization anomalies located on the 3500 feet of line surveyed are associated with the contact. The major response is some 44 millivolts/volt above the lower eastern background and is centred at 1000E in close proximity to the 'contact'. The maximum depth to source looks to be of the order of 150 feet. The decay form, while slow (ΔMn = +9%) is less slow than those observed in the western (formational?) zones on line 4000S. This

response is considered of primary interest.

A second lesser maximum also associated with the contact anomaly was recorded centred at 800E. Here a 16 millivolts/volt above the 44 millivolts/volt background was observed from rocks slightly more resistive than the rocks to the east (8000 ohm-metres) and west (5000 ohm-metres). The decay form at +10% is similar to the main anomaly. The depth to the disseminated source is estimated at 100 feet or less.

The only other feature of significance recorded was higher than background values by about 8 millivolts/volt between 2300E and 2900E which correlates with similar features on line 5600S between 1900E and 3100E and a more significant feature between 2200E and 3500E on line 6400S(P13).

LINE 6800S 0050E - 4400E

This line has a number of distinct units. The most westerly, from 0050E to 1000E, has backgrounds of 600 ohm-metres(+) with a 40 to 44 millivolts/volt chargeability background. A sharp ten fold change in resistivity occurs at 1050E, to the east of which resistivities fall gradually from 4500 ohm-metres to 1000 ohm-metres at about 3000E. Thereafter they rise gradually to reach 9000 ohm-metres(+) at 3700E after which they remain at this level.

The western ten fold change in resistivity is associated with a most significant 34 millivolts/volt above background response defined at 950E. The source is broad, of the order of 100 feet plus, and has an estimated maximum depth of the order of 200 feet (although it may be shallower than this). A small depression in resistivity to 250 ohm-metres from the local anomaly background of 450 ohm-metres.

was noted at 900E . The decay form observed within the anomaly is slow, with ΔMn values ranging from +14% to +17%. The interpreted grain size is considered to be coarse. This anomaly correlates with the twin peaks defined at 850E and 1000E on 6400S (P13) and a lesser contact anomaly defined on line 7200S at 1150E(P15).

The next series of significant anomalies between 2250E and 3400E can be divided into two groups, the most westerly between 2350E and 2600E and the other between 2850E and 3400E. These anomalies occur within a resistivity low of about 800 to 1000 ohm-metres as against 2500 ohm-metres(+) to the west, and 6000 ohm-metres to the east. These zones correlate with lesser events between about 2200E and 3500E on line 6400S (P13), and even more significant events between 2200E and 3500E on line 7200S (P15).

In detail the western anomaly shows a major 40 millivolts/volt above background response centred on line 6800S at 2400E. A second lesser peak, 32 millivolts/volt above background, was defined at 2550E. Each anomaly shows a depression of about 50% in the projected background, and the maximum depths are respectively assessed to be 200 feet and 50 feet. The observed decay forms are slow (ΔMn = +8% and +15% respectively). Since these responses are obviously the along strike expression of the major primary interest response seen to the south on line 7200S at 2550E they are also considered of primary interest.

The eastern anomaly reaches a maximum development between 2850E and 3350E where values to 46 millivolts/volt above the 20 millivolts/volt (+) background were observed. The source is multiple, with individual maxima at 2900E, 3000E, 3100E and 3200E. While the high background resistivity is depressed to 800 to 1000 ohm-metres from the backgrounds of 1200 to 2500 ohm-metres, the source

is still disseminated. Lesser anomalies on the flanks are seen as 'shoulders' at 2750E±100 feet, and at 3350E. The maximum depth to source is of the order of 100 feet on the flanks of the response and also of the source of the 'shoulder' features.

To the south this zone clearly correlates with a more significant event, with slightly lower resistivities and much higher chargeabilities centred at 3250E and extending 250 feet either side of this point. The decay forms observed within the source are slow with ΔMn ratios ranging between +4% and +10%. The source is therefore considered to be coarse grained.

LINE 7600S 0050E - 4500E

This line shows a number of distinct resistivity and chargeability features which rival the importance of those defined on line 7200S.

The western contact between the high chargeability background (40 millivolts/volt ±), low resistivity (400 ohm-metres±) section in the west, and the lower chargeability (28 millivolts/volt) background, high resistivity background (2000 to 4000 ohm-metres) section in the east, was defined at *about* 1300E. The actual transition is gradual, and extends from 300 ohm-metres at 1200E to 7000 ohm-metres at 1450E.

Within the western high chargeability background a number of segregations of chargeable material were noted at 300E, 450E, 700E, 1000E and 1150E, all of which occur in generally low resistivity background. However, on the contact a significant response of 71 millivolts/volt was defined at 1350E with a source thereunder, and a secondary source inferred at 1250E. The maximum depth to

these sources is difficult to estimate from the gradient data as they are almost certainly not sharp sided, but 150 feet or less is likely. The source is disseminated and the slow decay form (ΔMn = +10%) infers a coarse grain size.

East of 1400E the background remains a very high 5000 to 8000 ohm-metres, but with a most significant anomaly imposed thereon. A broad resistivity decline east of 2300E and west of 3250E results in resistivities below 1000 ohm-metres between 2400E and 3100E, and below 150 ohm-metres between 2800E and 2950E. Now, few chargeability readings were obtained within this section and those that were were noisy and in one instance negative. This is in part due to the extremely low potential field over this section - 0.3 millivolts per 100 feet. (Those readings that were taken show slow decay forms of up to 50%!). However, it is likely that as interconnection between grains is a major feature here, there is consequently less surface area and less chargeability. Therefore it is contended that the low chargeabilities observed underestimate the true signature of the chargeability response on this line. The calculated metal factors on this line are *greater* than those on line 7200S at 3250E, to which the anomaly is related. This anomaly is therefore considered of primary interest.

LINE 8400S 0500E - 5000E

The general resistivity form observed is intermediate between lines 8800S and 8000S.

The western contact between the high chargeability, low resistivity background and the eastern high resistivity, low chargeability background unit takes place at about 1250E $\pm$150 feet. Here a greater than ten fold increase in resistivity was observed. As observed on lines to the north and south, this transition is

marked by a significant chargeability anomaly close to the contact. In this case it reaches some 28 millivolts/volt above the 32 millivolts/volt background at 1300E. One noticeable change is that the western and eastern background chargeabilities at 28 millivolts/volt (+) and 24 millivolts/volt (+) are of significantly lesser contrast than observed to the north and south - little difference is in fact noticed. The anomaly at 1300E has a maximum depth of 120 feet, a decay form only slightly slower than normal (ΔMn = +5%), and as the 1000 ohm-metres resistivity indicates, a disseminated source.

To the west of the above a distinct gradual build up in chargeability was noted centred at 1650E. There is a distinct decrease in apparent resistivity to 1000 ohm-metres from the 3500 ohm-metres background inferring some conduction within the source, which is however coarsely disseminated (ΔMn = +12%). The maximum depth is certainly less than 120 feet. This response clearly correlates with a *very minor* one defined on line 8000S at 1750E (which is of no significance) and a much broader series of responses between 1600E and 2250E on line 8800S.

A significant chargeability response was defined on the western margin of a broad flat resistivity low defined between 2100E and 3200E which correlates to similar lows to north and south. The massive increase in chargeability to 65 millivolts/volt above background is associated with a fall in apparent resistivity from 3500 ohm-metres in the west to 1000 ohm-metres in the east (but little change on the eastern margin) which infers that the source to the chargeable material is less resistive. The observed 1000 ohm-metres value, however, still infers a disseminated source which the decay form infers to be coarse (ΔMn = +16%). This anomaly correlates with a lesser but still significant feature at 2550E on line 8800S(P19) while a lesser shoulder on this line (8400S) at 2550E correlates with a similar

feature on line 8800S at 2850E.

On the eastern margin of the broad resistivity low referred to above, a moderate 18 millivolts/volt above background response was defined at 3350E from a coarsely disseminated source (ΔMn = +7%) at an interpreted maximum depth of 120 feet. This feature probably correlates with a similar anomaly at 3500E on 8800S(P18). The interest of this response is secondary to tertiary at best.

LINE 8800S repeated between 1000W - 900E

The original survey over this section of the line was carried out using a 100 feet potential dipole, however, due to the low potential gradients on the extreme quadrant of the gradient array, difficulty was encountered in obtaining meaningful data (P20). The section was repeated using a 200 feet potential dipole.

The 200 feet potential dipole repeated the anomaly defined at 400E (P19), but with less resolution, and defined a second significant feature of 30 millivolts/volt above the 36 millivolts/volt background defined in the area. The source location is at 200E, the maximum depth no greater than 100 feet, and the source is disseminated, coarsely so as the +42% ΔMn indicates.

Other responses are not considered significant.

B - DIPOLE-DIPOLE DETAIL

A series of dipole-dipole arrays were carried out over anomalies selected by Electrolytic Zinc in order to obtain greater information about the source, and to obtain information as to the horizontal layering above the sources.

These are described in order from north to south.

LINE 3200S 1300E - 2700E a = 200 feet, n = 1 to 6

The original anomaly was described on page 6 of the first Dobsons Creek report. The interpretation of the source at 1725E was of two narrow zones in close proximity whose maximum depth in both cases was of the order of 130 feet. The anomaly occurs on a contact between 2500 ohm-metres material to the west and 6000 ohm-metres material to the east.

The dipole-dipole data shows no significant response at the 200 feet dipole used, presumably due to the narrow nature of the source.

LINE 4000S 2100E - 3900E a = 200 feet, n = 1 to 6

The original anomaly was discussed on page 7 of the first Dobsons Creek report. Two sources in close proximity (2900E and 2825E) were interpreted from a disseminated source at 150 feet depth.

The dipole-dipole data shows a strong double peak centred at 2900E with a good contrast of three fold with the enclosing material. A disseminated source at a maximum depth of less than 200 feet is confirmed.

The dipole-dipole backgrounds to east and west of 8 millivolts/volt($\pm$) and 12 millivolts/volt contrast with gradient array backgrounds of about twice this level. The reason is either layering (not much in evidence) or current dipole bias.

LINE 4800S 700E - 1300E a = 100 feet, n = 1 to 4

The array was executed to investigate the contact anomalies defined at 1150E and 1000E on line 4800S and discussed on page 10 of the original Dobsons Creek report. The maximum depths to essentially coarsely disseminated sources were judged to be of the order of 180 to 200 feet.

The dipole-dipole data shows a strong source between 1100E and 1200E of 40 millivolts/volt above background. The maximum depth is less than 60 to 70 feet below surface. Shallower spacings show significantly lesser resistivities, inferring narrow shallow less resistive sections within the disseminated zone. The interest of the source is confirmed as primary to secondary.

LINE 5600S 700E-2500E a = 100 feet, n = 1 to 4

Two anomalous zones detected on the gradient array reconnaissance survey were investigated. The most westerly at 975E was considered of primary interest and had a maximum depth estimated at 150 feet (P11-12) and the eastern maximum at 2050E has a maximum depth of 150 feet and was considered of secondary interest (P11).

The western maximum was confirmed at about 1000E as a source whose depth is less than 60 to 70 feet deep at that point. Thus the dipole-dipole data reveals a shallower source but broad. Also low associated resistivities of 120 ohm-metres on the n = 1 spacing confirmed by double peaks, indicates some conduction within the source. While a resistivity 'low' was noted at 900E on the gradient array the dipole-dipole contrast is more significant. This data confirms, if not enhances, the reconnaissance indication.

The second eastern source at 2000E is confirmed as a broad double peak of about

twice background. The maximum depth to source is less than 70 feet and the source is disseminated. Of secondary interest at best.

LINE 6400S 600E - 4000E a = 100 feet, n = 1 to 4

This section was run using dipole-dipole to investigate a number of features discussed in the original report on pages 13-14.

The western contact anomaly was defined at 1000E with a secondary peak at 850E on the gradient array reconnaissance data where the zone was considered of primary and secondary interest, and at a depth of 180 feet and 75 feet respectively. The dipole-dipole data shows a double peak anomaly whose source lies between 900E and 1100E at a maximum depth of 70 feet(+). Lower resistivities of 400 ohm-metres(+) infer generally lower resistivity within the source. The primary interest of the source is confirmed.

The dipole-dipole over the chargeability anomaly on the gradient array between 2200E and 3500E (P13) shows overall higher chargeabilities of 20 millivolts/volt or greater between 2200E and 3600E. Of significance is that between about 2300E and 3100E the layers closer to surface show lower values of 13 millivolts/volt, with n = 3 values being 20 millivolts/volt or greater. This infers chargeable material increases in significance with depth. The closest to surface response was defined at 3500E where chargeability of 30 millivolts/volt comes from a source whose maximum depth is about 70 feet. A broad disseminated zone is interpreted which increases in significance with depth and/or less chargeable surface cover.

LINE 7200S 800E - 4000E a = 100 feet, n = 1 to 4

A distinct 2 to 3 times background chargeability response was defined centred at 1250E where the maximum depth to source is assessed as being less than 70 feet. A distinct 80% fall in apparent resistivity shows weak but significant conduction to be present within the source. This confirms the primary interest of the maximum.

The low resistivity source centred at 2500E ±150 feet on the gradient data is confirmed as a target of primary geophysical interest on the dipole-dipole data. This shows extremely high chargeabilities of 90 millivolts/volt within 70 feet of surface with supporting 'double peak' and 'shoulder' effects over ±200 feet of 2550E. While low accompanying resistivities of 300 to 500 ohm-metres are seen, they are not as low as seen on the gradient data, presumably due to the more highly resolved channelling of the gradient data. Conduction within chargeable material in inferred.

The high chargeability values between 2950E and 3550E seen on the gradient data are seen on the dipole-dipole data as a broad source whose major 'double peak' response was seen between 3200E and 3500E. As with the gradient data, significantly lower resistivities (5%-10%) accompanying the increase in chargeability was noted. These zones remain of primary geophysical interest.

On an overlap between two adjacent set-ups centred at 2800E, overlap resistivity readings show significant divergence, with their associated chargeability data being within reasonable limits. The reason is considered to be due to the ten-fold change in apparent resistivity either side of 2700E.

LINE 8000S 900E - 3600E a = 100 feet, n = 1 to 4

The major contact anomaly defined on the gradient array survey at 1350E (P17) is seen as a broad double peak centred at 1400E. Slightly lower resistivities of 200 ohm-metres (+) accompany the higher chargeabilities within 100 to 150 feet of surface, while the chargeability source comes within 70 feet of surface. This data confirms the pimary interest of this anomaly.

The twin sources located at 2200E and 2350E (P17) are confirmed as being of primary interest between 2200E and 2300E on the dipole-dipole data. The source comes within 70 feet of surface and unlike the gradient array data, that source is clearly shown to have weak but significant conduction being 5% to 10% of the resistivity of the enclosing material.

The second lesser gradient maximum between 3000E and 3500E is seen here as disseminated chargeable material within 100 metres of surface, with higher surface resistivities. The eastern flank is marked by a primary interest source at 3200E of high chargeability (53 mv/v) and low resistivity (170 Ωm) extending to depth.

LINE 8800S 900E - 1700E a = 100 feet, n = 1 to 4

The dipole-dipole data shows a substantial double peak anomaly centred at 1350E. The source is interpreted as being over 100 feet wide and to have a maximum depth of the order of 70 feet. The associated resistivities at 500 ohm-metres ±250 ohm-metres, while being lower than those of the enclosing rocks, infer only weak conduction within the host rocks. The second significant gradient maximum at 1100E is masked on the dipole-dipole data by the major response at 1350E. In this case the gradient data was able to clearly resolve the two separate sources at 1100E and 1350E, while the dipole-dipole was dominated by the larger of the two.

GENERAL COMMENTS ON THE CONTOUR INTERPRETATIONS OF CHARGEABILITY AND RESISTIVITY

The area can be divided into three distinct regimes as shown on Plate 3, which represents a compilation of the major features defined on the chargeability and resistivity contour maps.

The suggestions made as to the origins of the geophysical characteristics observed are based on geophysical data only. No geological information was available at the time of writing.

The Western Zone

The characteristics of this zone are:-

1 - Apparent resistivities averaging about the 700 ohm-metres (±) level, but ranging between 150 ohm-metres and 1000 ohm-metres.

2 - High background chargeability of the order of 40 to 44 millivolts/volt, with many local increases to 60 millivolts/volt and higher within this zone.

3 - Decay forms which are always slower than normal, and within certain high chargeability zones, exceptionally slow (to +40%).

4 - The strike of individual events appears to be grid north south, parallelling the contact with the central zone south of 6000S, but north of that line, the contact veers to the north-north-east by about 25°- 30°. This is clearly seen in the chargeability data but less so in the resistivity data. The explanation for this divergence between the strike of the chargeability features and the contact is not known but an uncomformity or fault is

suggested.

5 - The high backgrounds infer a disseminated graphite and/or pyrite background within the sediments or volcanics. The slow decays infer a coarse grained source to the chargeability.

The Contact between Western and Central Zones

1 - South of lines 3600S the contact zone is marked clearly by a narrow resistive 'marker' horizon ranging up to 7000 ohm-metres(+) flanked to the west within 200 feet (+) by a resistivity low 5% to 10% of the resistivity seen in the marker horizon. The 'contact' between the western and central zones is assumed to be the inflexion between the resistivity high and low.

2 - Associated with this inflexion point on all lines between 8800S and 4400S inclusive is a significant induced polarization zone whose amplitude with respect to background falls from 40 millivolts/volt (+) in the south to 15 to 20 millivolts/volt(+) in the north. The origin of the chargeable source is coarse grained sulphide and/or graphite as inferred by the slower than normal decay forms observed.

3 - North of 4800S the contact is not distinct, and a sinistral displacement or flexure may be present on 3600S(+) as evidenced by a westerly displacement of higher resistivity and lower than expected chargeability.

Central Zone

1 - The average resistivity observed within the central zone ranges between 5000 and 7000 ohm-metres, while the average chargeabilities observed were

35 millivolts/volt(±).

2 - The inferred strike of the western section of the central zone is approximately normal to the grid lines, but in the west the strike is not too clear, although it does appear to be almost normal to the grid lines. The strike to the east within the eastern section is, however, clearly grid north south as seen from the resistivity data.

3 - Within the central zone, south of 6400S a less resistive wedge shaped section having resistivites of the order seen in the western zone, and high chargeabilities also characteristic of the western zone were observed. From the standpoint of the parameters of chargeability and resistivity, this central wedge is in all ways similar to the western zone.

The material could perhaps be a faulted inlier, a facies change or perhaps an anticlinal (or synclinal) core. The suggested axis has been marked = x = on plate 3.

4 - Within the central less resistive section a number of extremely conductive and chargeable sources are inferred which have characteristics of each separate zone having a grid north-south strike and a strike length never greater than 600 feet (±). These chargeabilities infer interconnected graphite and/or sulphides to be present in bulk concentrations of the order of 5% to 10%.

The Contact between Central and Eastern Zone

1 - While the western contact of the central zone south of 3600S is well defined, the eastern contact is not so definitely marked. This eastern margin is characterised by a change in resistivities from 5000 to 7000 ohm-metres in the west to markedly above this level, 700 to 10,000(+) ohm-metres, in the east. This change, however, cuts across the inferred strike at about 20° west (of strike). This boundary, marked "F-F-F" on plate 3, follows the 'Howards Track' south of line 4800S. Note, this boundary while being a significant feature, cannot be defined better than ±100 feet-150 feet of the marked boundary.

2 - North of 4000S a sinistral displacement of higher resistivities could be interpreted as a fold or flexure. A similar displacement in lower chargeability is also seen but is not so definite. This feature *may?* relate to a similar apparent sinistral displacement in the western boundary of the central zone.

3 - As remarked above the eastern margin is at about 20° west of the strike. This could be due to an interfingering facies change, or due to a dislocation at a shallow angle to strike. This angular displacement is considered real, for while the resistivity data in the eastern zone could be recontoured, it would not give as good an interline correlation as that shown on Plate 2.

Eastern Zone

1 - The characteristics of this zone are the very high apparent resistivities, the background being of the order of 1000 ohm-metres. There are many linear zones of higher resistivity (20,000 to 30,000 ohm-metres) which strike

grid north south.

2 - The background chargeability over this zone is remarkably uniform with 90% being within 15 millivolts/volt ±5 millivolts/volt. These characteristics indicate siliceous metamorphics or sediments low in mafic mineral content. There were no significant induced polarization anomalies recorded from this zone.

CONCLUSIONS

1 - The additional lines placed between the reconnaissance lines run earlier in 1980 have defined the strike and correlation of anomalous zones with accuracy.

The significant responses are summarised below: -

Line	Station	Anomaly/ Background	Resistivity/ Background	Maximum Depth	(ΔMn)	Priority
2800S	100E-300E	36/20	800/4000	150 feet	S(+13%)	Sy
2800S	2650E-3100E	12/16	7000/10,000	150 feet	S(+10%)	Ty
3600S	0050E-700E	to 60	600/1700	200 feet-	S(+22%)	Ty (formational)
4000S	400E	20/40	1000(contact)	100 feet	S(+12%)	Sy/Ty
4000S	1950W	28/40	400	50 feet	S(noisy)	Sy
4000S	1850W	70/40	150/400	50 feet	SS(+48%)	Sy/(Py?)
4000S	1600W)	24/40	400	50 feet	S(+22%)	Sy
4000S	1700W)	18/40	400	50 feet	SS(+40%)	Sy
4400S	1150E	20/32	1500	100 feet	S	Sy/Py?
4400S	2200E	12/24	1800/4000	50 feet	S	Ty/Sy?
5200S	1000E	30/34	1500(contact)	120 feet	S(+10%)	Py

Line	Station	Anomaly/ Background	Resistivity/ Background	Maximum Depth	(ΔMn)	Priority
6000S	1000E	44/28	1500(contact)	150 feet	S(+9%)	Py
6000S	800E	16/44	9000/8000	100 feet	S(+10%)	Sy/Ty
6800S	950E(±50')	34/38	450(contact)	200 feet		Py
6800S	2425E	40/22	800/1500	200 feet	S(+8%)	Py(G)
6800S	2525E	32/22	800/1500	50 feet	S(+15%)	Py/Sy(G)
6800S	2850E-3250E	46/22	1000+	100 feet	S(+6%+)	Sy/Py(G)
7600S	1350E	32/40	2500(contact)	150 feet	S(+10%)	Sy
7600S	2875E±75'	high	150/5000	?	S(to+50%)	Py#(G)
8400S	1300E	28/28	1000(contact)	120 feet	S(+5%)	Sy
8400S	1650E	17/28	1000/3500	120 feet-	S(+12%)	Sy/Ty
8400S	2300E	65/32	1000/5000	200 feet	S(+16%)	Py(G)
8400S	3350E	18/36	2000/1000	120 feet	S(+7%)	Sy/Ty(G)
8800S	200E	30/36	800	100 feet	SS(+42%)	Sy

Chargeability measured understates true significance.
(G) of geological significance

2 - The dipole-dipole data confirmed the interest of all significant gradient array anomalies but showed their sources to be shallower than the depths indicated by the gradient array. This is to be expected as maximum depth estimates from gradient array are influenced by the width of the source, which, with the exception of bodies which are wide in comparison with their depth, cannot be easily estimated.

Brief summaries of each of the dipole-dipole detail sections follow:

Line 3200S ..... It is concluded that the 200 feet dipole-dipole employed was

too large to define the narrow sources located on the gradient survey.

Line 4000S ..... The dipole-dipole data confirms the interest of this anomaly as a disseminated source at 2900E at a maximum depth of less than 200 feet.

Line 4800S ..... The dipole-dipole data has shown the gradient source defined at 1150E (and 1000E)to lie at much shallower depths of 60 to 70 feet than their maximum width would indicate. Also, lower resistivity in dipole-dipole data indicates some weak conduction within the source. Of primary to secondary interest.

Line 5600S ..... The chargeability anomaly defined on the gradient array reconnaissance survey at 975E is confirmed and its interest is enhanced by the dipole-dipole survey. A maximum depth of 60 to 70 feet is demonstrated and conduction within the source over a narrow width inferred. Of primary interest.

The broad disseminated source is confirmed at 2000E to 2100E. The maximum depth is about 70 feet and the geophysical interest is secondary at best.

Line 6400S ..... The primary interest of the contact anomaly at 1000E is confirmed, but the source is better resolved and lies within 70 feet of surface.

The broad response between 2200E and 3500E on the gradient array is confirmed by the dipole-dipole data. The source is disseminated covered by a less chargeable surface zone and increases in significance with depth.

A shallow individual source is confirmed at 3500E which has a disseminated origin.

Lines 7200S ..... The gradient array anomaly located at 1150E is confirmed to be of primary interest. The depth has been better resolved as being within 70 feet of surface and the source is now seen to have weak but significant conduction.

The dipole-dipole data confirms the interest of the primary target defined in the reconnaissance survey at 2500E, and if anything, enhances it. The maximum depth to source is less than 70 feet.

The major chargeability high and accompanying resistivity low between 2950E and 3500E is confirmed as of primary interest, and is demonstrated to come within 70 feet of surface.

Line 8000S ..... The primary interest chargeability anomaly located at 1350E on the gradient array is confirmed by the dipole-dipole. The depth to source is resolved to less than 70 feet, and weak conduction defined within the source.

The twin maxima at 2200E and 2350E are confirmed as being of primary interest. These sources are within 70 feet of surface and are shown to be quite conductive within the source.

The continuing higher chargeabilities to 3500E are confirmed, and are seen as being due to a source which is more disseminated, and between 2700E and

3200E are capped by a resistive chargeable layer.

Line 8800S ..... Twin peaks at 1100E and 1350E on the gradient reconnaissance survey are confirmed to be of primary geophysical interest, and are at a maximum depth of 60 to 70 feet.

3 - The 400 to 800 feet spaced lines have revealed a detailed structural picture when reviewed in contour form. The western section defined by a ten-fold plus change in resistivity has a high chargeability background with low resistivity, the central section has moderate chargeability and moderate resistivity, with a wedge shaped central section V-ing south having similar characteristics to the western section. The eastern section has very high resistivity, very low chargeability and has a grid north south trend which continues with the boundary between the central and eastern sections which is 20° west of this strike.

A base station controlled total magnetic field survey is recommended over the Dobson Creek grid to give a further key to the detailed interpretation of the structure should this be required.

4 - The induced polarization anomalies considered to be of geological interest are marked 'G' in the priority column of the anomaly summary section. Those of particular interest include the high chargeability/low resistivity section within the southern central zone, which is postulated to be the core of an anticline or syncline south of 6800S centred at *about* 2500E on that line. Other anomalies whose geophysical interest is enhanced by geological merit include the moderate zone at 1725E on line 3200S (this report page 15, original

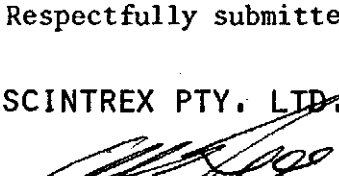
report page 6), line 4000S at 2900E (this report page 7) among others. Geological and/or geochemical input can materially alter the relative merit of the anomalies defined at Dobsons Creek which has been assigned on wholly geophysical grounds..

5 - The decay of the induced polarization responses observed in the area were invariably normal to slow on average, and other anomalous zones slow to very slow. In fact some of the slowest electrical induced polarization responses recorded anywhere were recorded on Dobsons Creek (e.g. 8800S at 200E, ΔMn = +42%, 7600S at 2875E +50%). This infers a coarse grain size for the causative material and infers a minimal surface cover over that source. From a geophysical point of view a 'coarse grain size' may mean an agglomeration of electrically interconnected finer grains (which the geologist would interpret as being fine grained) as well as single large grains.

6 - The total mileage surveyed on Dobsons Creek in the two surveys (excluding repeats) was 33 kilometres at 100 feet intervals. The work was surveyed in about 9½ single and 19½ double operator days of which the dipole-dipole detail took 24½ days to cover 14,300 feet. The author considered the gradient/dipole-dipole detail procedure was a cost effective approach in the case of Dobsons Creek.

Respectfully submitted on behalf of:

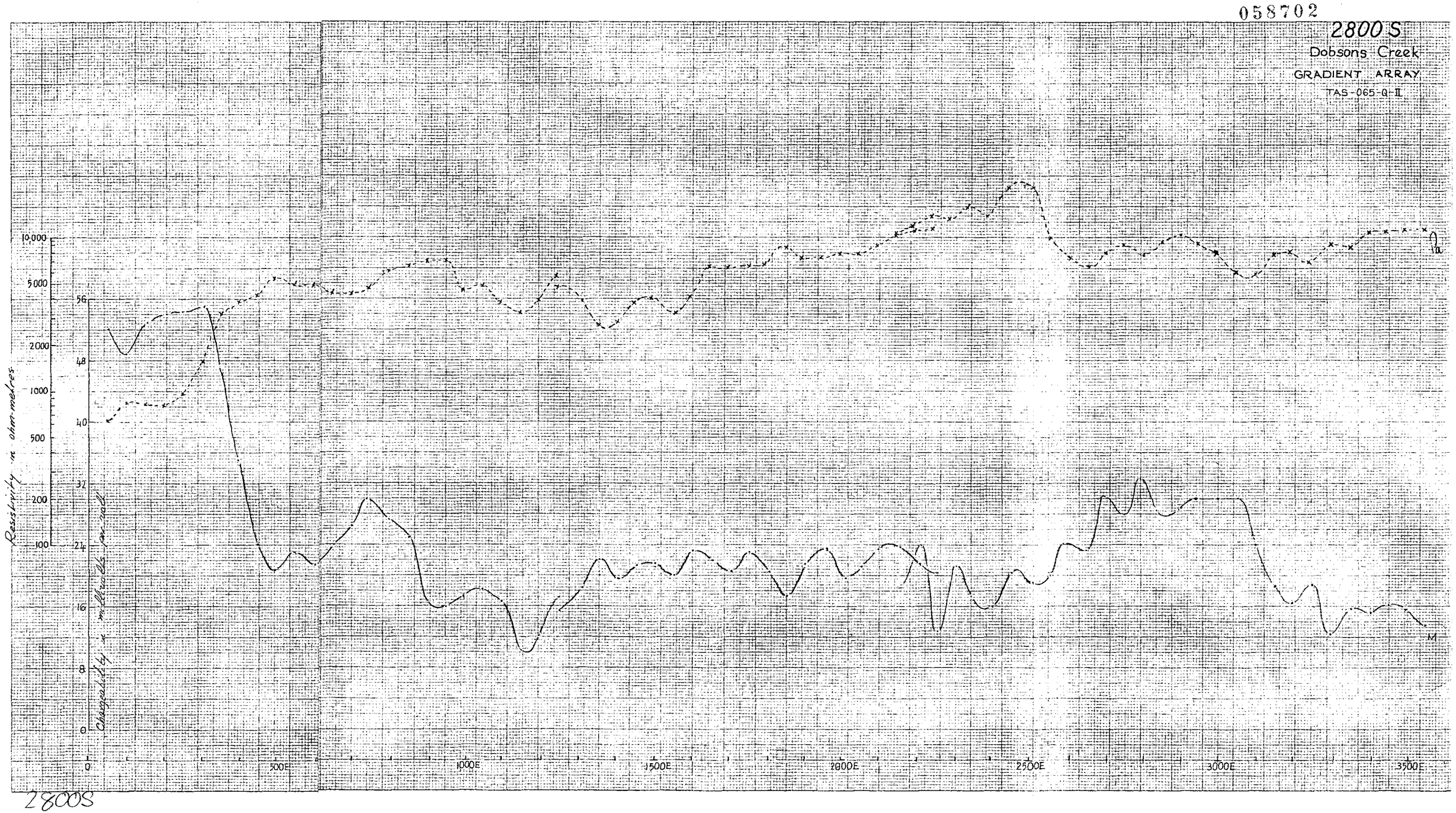
SCINTREX PTY. LTD.



A.W. HOWLAND-ROSE, MSc, DIC, AMAusIMM, FGS.

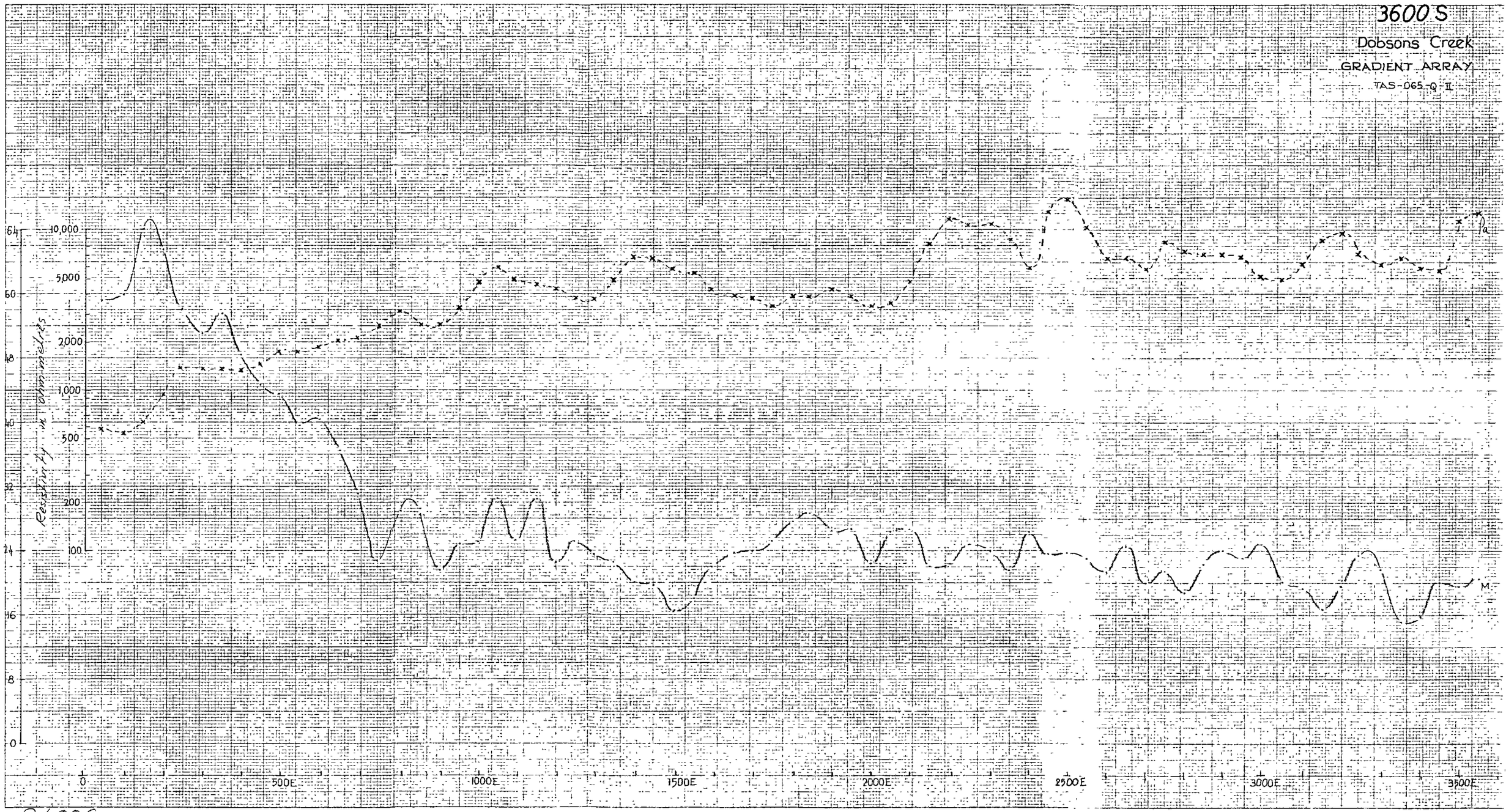
GEOPHYSICIST

058702



2800 S
Dobsons Creek
GRADIENT ARRAY
TAS-065-Q-II
Resistivity in ohm-metres
Chargeability in millivolts per volt
10,000
5000
2000
1000
500
200
100
56
48
40
32
24
16
8
0
0
500E
1000E
1500E
2000E
2500E
3000E
3500E
Pa
M
2800S

058703



3600S

058704

4000S

Dobsons Creek

GRADIENT ARRAY

TAS-065-Q-II

108·2

M

ρ_a

Chargeability in milliseconds per volt

Resistivity in ohm-metres

80
72
64
56
48
40
32
24
16
8
0

1000
500
200
100

2000W 1500W 1000W 500W 00 500E

4000S

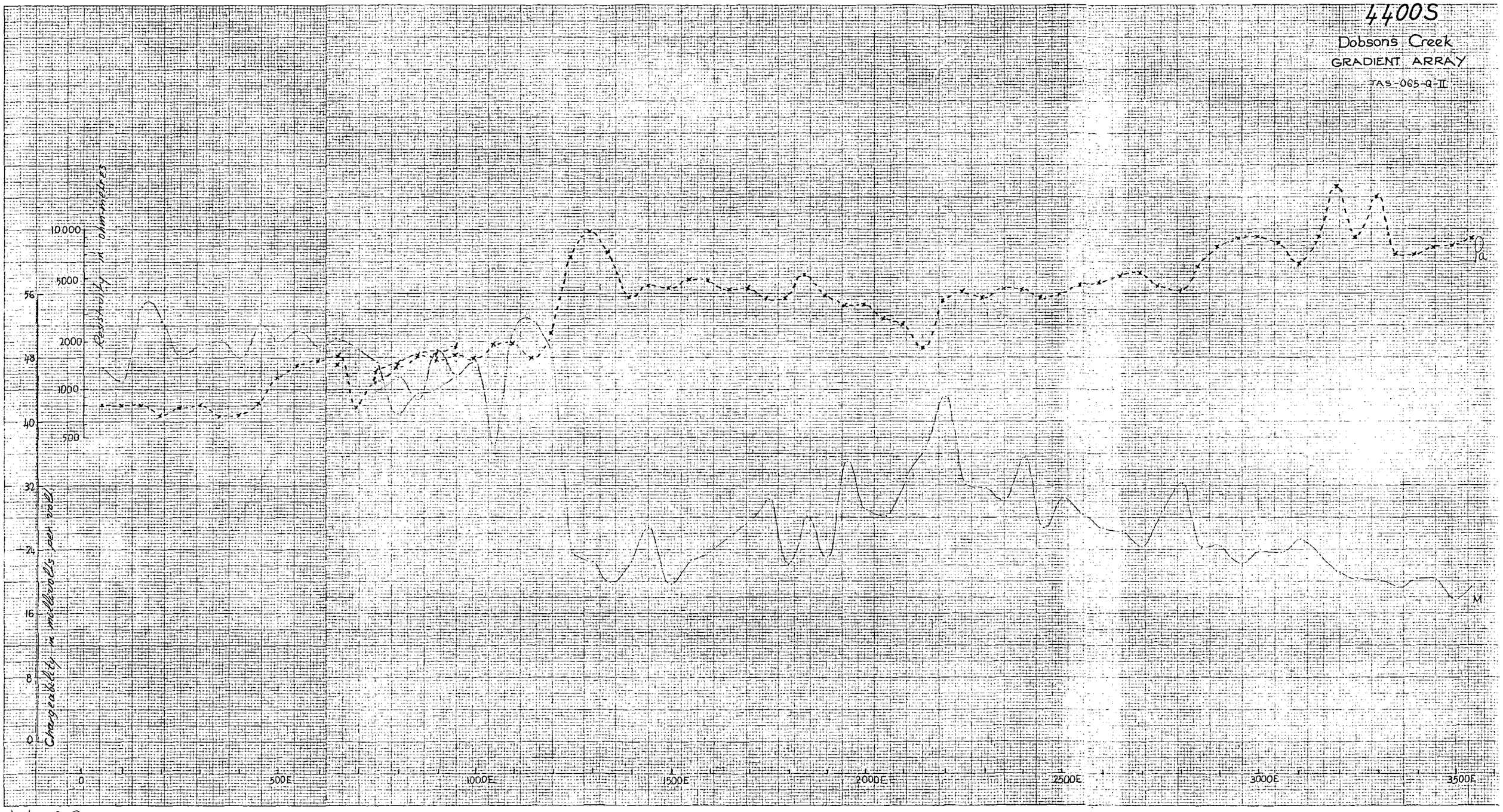
058705

4400S

Dobsons Creek

GRADIENT ARRAY

TAS-065-Q-II



4400S

058706

5200S

Dobsons Creek

GRADIENT ARRAY

TAS-065-G-II

Chargeability in milliseconds per volt

72
64
56
48
40
32
24
16
8
0

Resistivity in ohm-metres

10,000
5,000
200
1000
500
200
100

Pa

M

0
500E
1000E
1500E
2000E
2500E
3000E

5200S

058707

6000 S

Dobsons Creek

GRADIENT ARRAY

TAS-065-Q-II

Chargeability in milliseconds per volt

Chargeability in milliseconds per volt

72
64
56
48
40
32
24
16
8
0

10000
5000
2000
1000
500
200
-100

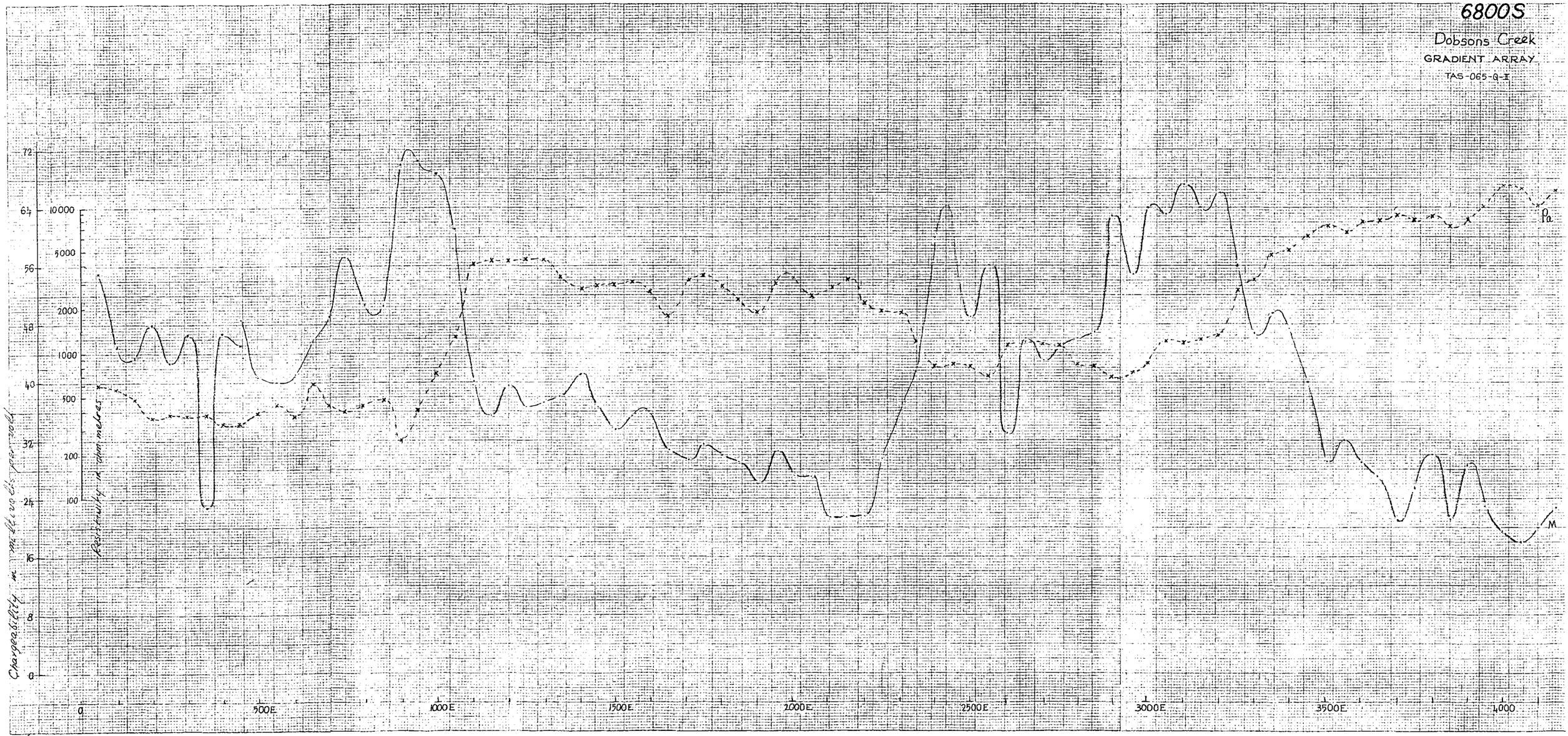
0
500E
1000E
1500E
2000E
2500E
3000E
3500E

Pa

M

6000S

058708



6800S

058709

7600S

Dobsons Creek

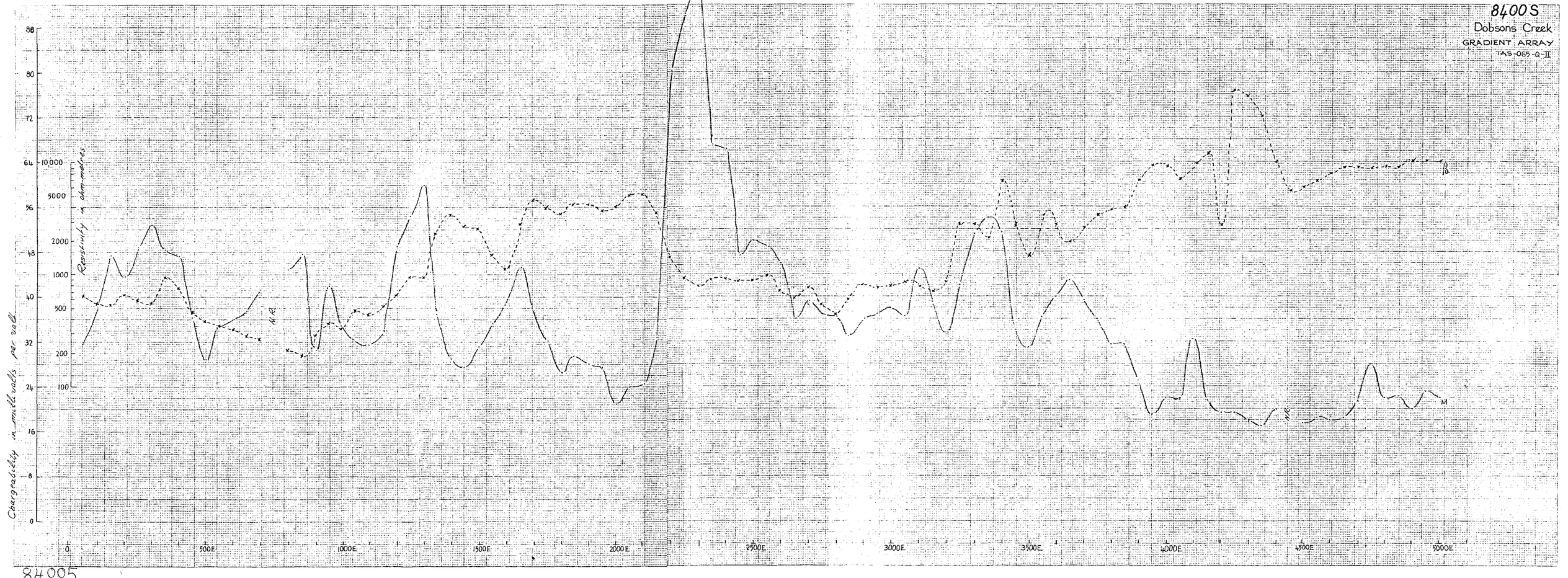
GRADIENT ARRAY

YAS-065-Q-II



7600S

058710



84005

058711

8800 S

Dobsons Creek

GRADIENT ARRAY

TAS-065-Q-II

72
64
56
48
40
32
24
16
8
0

Chargeability in milliradians per second

1000
500
200
100

M

ρ_a

1000W
500W
00
500E

8800S

058712

3200S

SCINTREX PTY. LTD.

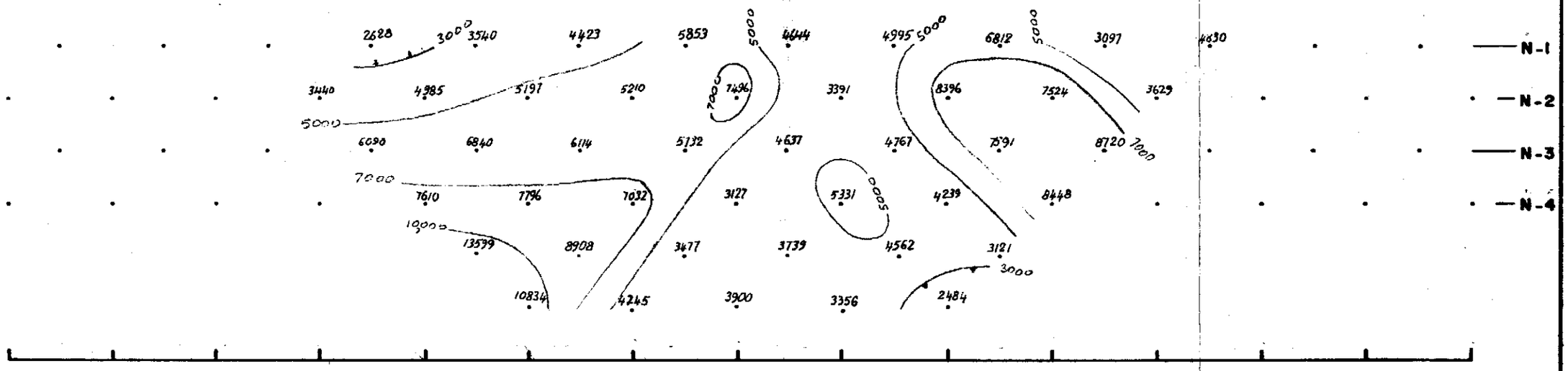
INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

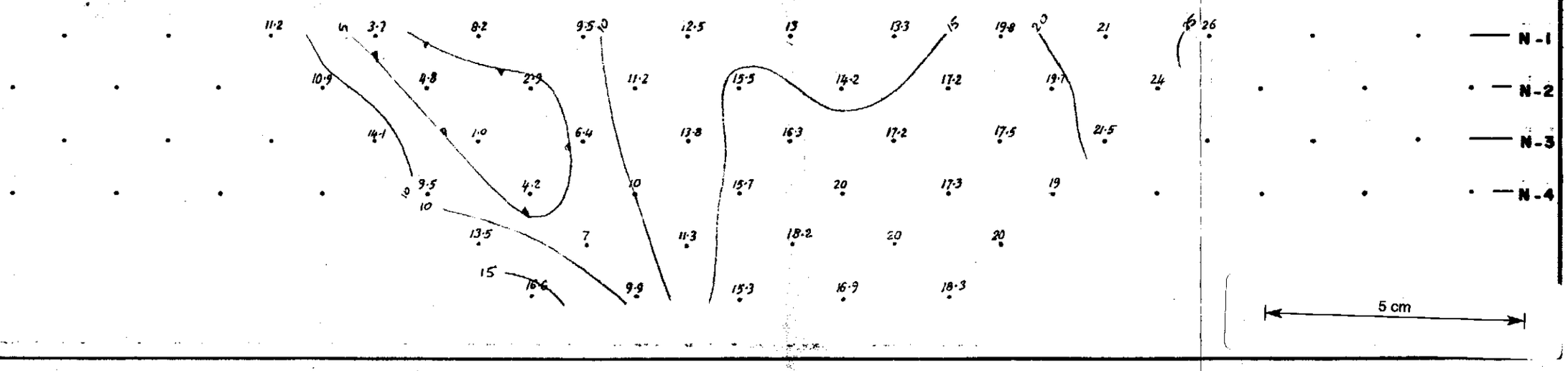
DATE 5-4-80	LINE No. 3200S
PLOTTED BY R.M	PROSPECT DOBSON CREEK
PULSE 2 sec / Rx. 311147	JOB No. TAS-065-Q
DIPOLE SPACING 200 FT	

1300E 1500E 1700E 1900E 2100E 2300E 2500E 2700E

RESISTIVITY Ω m.



CHARGEABILITY



5 cm

058713

4000S

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE 1-4-80		LINE No. 4000S
PLOTTED BY R.M.		PROSPECT DOBSONS CREEK
PULSE 2 Sec	Rx. 311147	JOB No. TAS-065-Q
DIPOLE SPACING 200 FT.		

2100E 2300E 2500E 2700E 2900E 3100E 3300E 3500E 3700E 3900E

RESISTIVITY Ω m.

N-1: 2737 2916 2865 1482 1500 2000 3000 3891 4985 5000 7000 7546 6991 7000 8633 10522 10000

N-2: 3122 4269 2822 2894 4895 5891 10869 10242 9997 10,000

N-3: 4442 3936 4644 3869 5782 7150 13124 10975

N-4: 4455 6165 5575 5004 6772 8082 13628 7000 6308 6234 7888 5490 8146 8397 6045 6076 5000 9578 6693 9080

CHARGEABILITY

N-1: 12·8 14·3 10·1 13·2 15 17·6 20 26·0 25 20 15 10 9·6 8·2 5·4 5·8

N-2: 15·2 11·1 17·6 32·0 30 11·1 22·5 9·6 5·6 7·0 15

N-3: 10·9 18·2 23·3 25 17·0 10·2 22·5 8·9 8·0

N-4: 16·5 23·0 18·8 15·5 12·0 22·6 12·4 20 23·0 18·6 11·8 19·1 13·0 23·8 16·4 18·8 5 19·0 12·1 15

5 cm

058714

4800S

SCINTREX PTY. LTD.

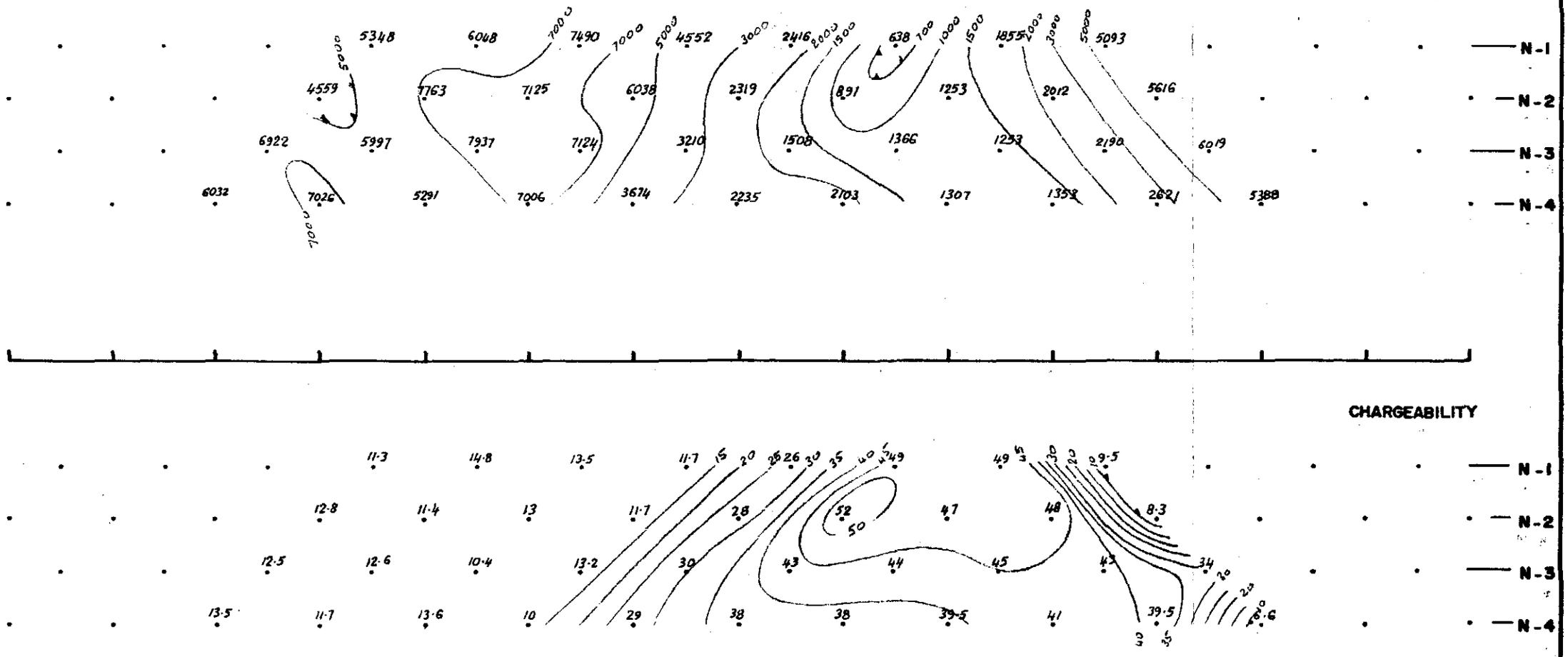
INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE 9-4-80	LINE No. 4800S
PLOTTED BY R.M.	PROSPECT DOBSONS CREEK
PULSE 2 sec / Rx. 311147	JOB No. TAS-065-Q
DIPOLE SPACING 100'	

500E 700E 900E 1100E 1300E

RESISTIVITY Ω m.



5600S

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE	12-4-80
PLOTTED BY	I.N.
PULSE	2 Sec
Rx.	311147
DIPOLE SPACING	100 FT

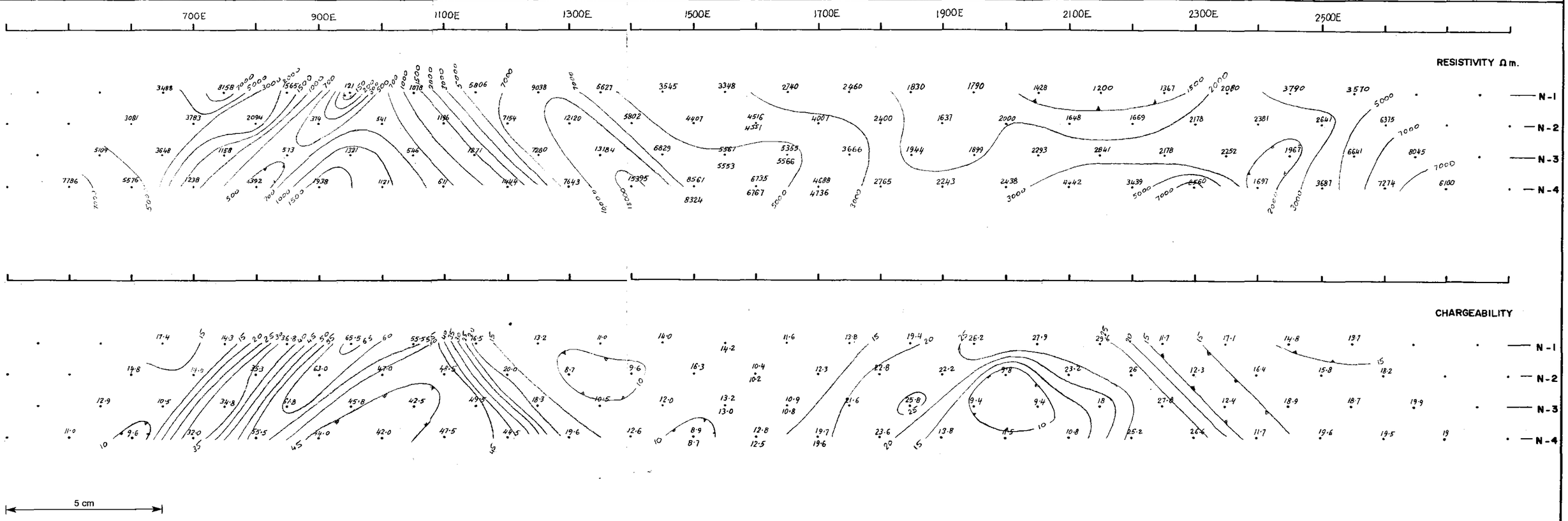
SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE	14-4-80
PLOTTED BY	R M
PULSE	2 Sec
Rx.	311147
DIPOLE SPACING	100 FT

LINE No.	5600S
PROSPECT	DOBSONS CREEK
JOB No.	TAS-065-Q



SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

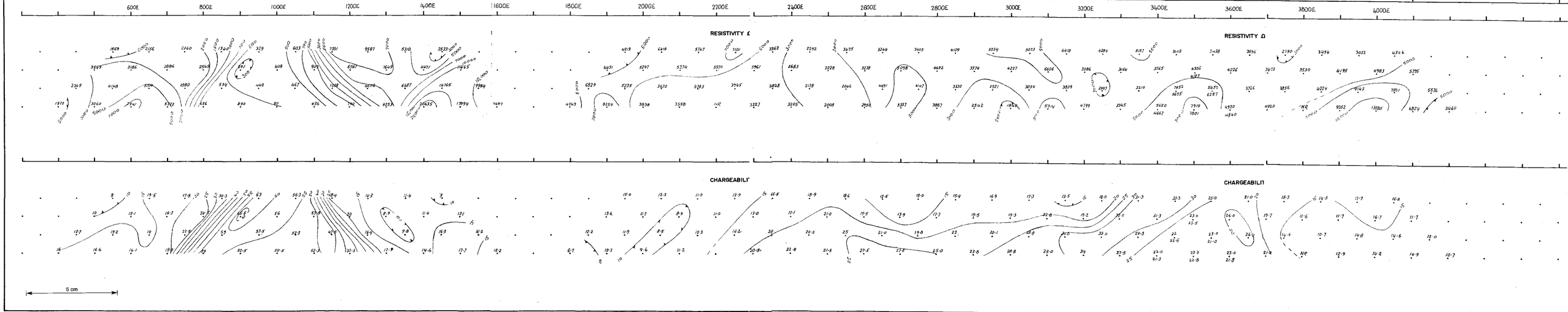
DATE	12-4-80
PLOTTED BY	R.M.
PULSE	2 Sec
Rx.	311147
DIPOLE SPACING	100 FT.
LINE No.	
PROSPECT	
JOB No.	

DATE	17-4-80
PLOTTED BY	R.M.
PULSE	2 Sec
Rx.	311147
DIPOLE SPACING	100 FT
LINE No.	
PROSPECT	
JOB No.	

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

DATE	14-4-80
PLOTTED BY	I.N.
PULSE	2 Sec
Rx.	311147
DIPOLE SPACING	100 FT.
LINE No.	
PROSPECT	
JOB No.	

DATE	17-4-80
PLOTTED BY	R.M.
PULSE	2 Sec
Rx.	311147
DIPOLE SPACING	100 FT
LINE No.	6400S
PROSPECT	DOBSONS CREEK
JOB No.	TAS-065-Q



6400S

7200S

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

DATE 23-4-80
PLOTTED BY R.M.
PULSE 2 Sec | Rx. 311147
DIPOLE SPACING 100 FT.

LINE N
PROSP
JOB N

SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

DATE 27-4-80
PLOTTED BY R.M
PULSE 2 Sec | Rx. 311147
DIPOLE SPACING 100 FT

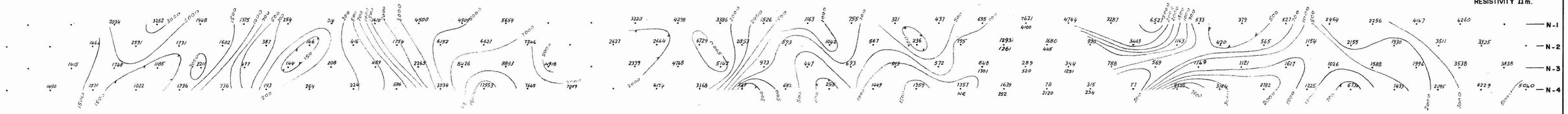
SCINTREX PTY. LTD.
INDUCED POLARIZATION AND RESISTIVITY SURVEY
DIPOLE - DIPOLE ARRAY

DATE 7-4-80
PLOTTED BY R.M
PULSE 2 Sec | Rx. 311147
DIPOLE SPACING 100 FT

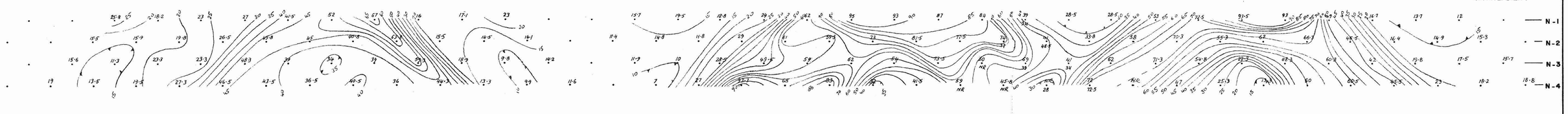
LINE No. 7200S
PROSPECT DOBSONS CREEK
JOB No. TAS-065-Q

800E 1000E 1200E 1400E 1600E 1800E 2000E 2200E 2400E 2600E 2800E 3000E 3200E 3400E 3600E 3800E 4000E

RESISTIVITY Ω m.



CHARGEABILITY



5 cm

80005

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE	20-4-80
PLOTTED BY	R.M.
PULSE	2 Sec
Rx.	311147
DIPOLE SPACING	100 FT.
LINE No.	
PROSPECT	
JOB No.	

DATE	1-5-80
PLOTTED BY	R.P.
PULSE	2 Sec
Rx.	311147
DIPOLE SPACING	100 FT.
LINE I	
PROSF	
JOB N	

SCINTREX PTY. LTD.

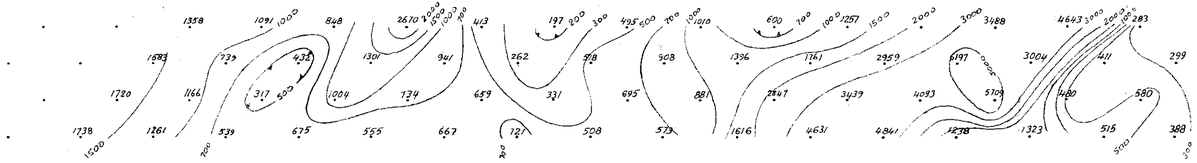
INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

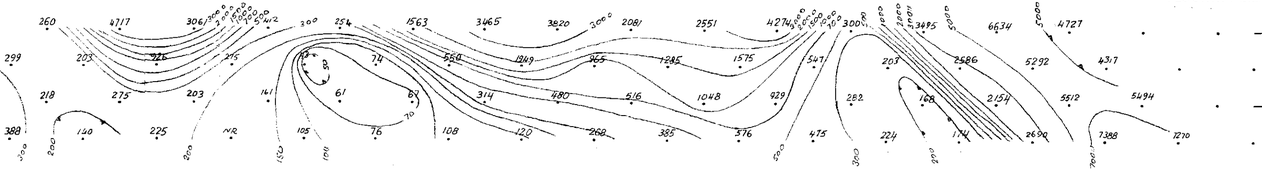
DATE	1-5-80
PLOTTED BY	R.P.
PULSE	2 Sec
Rx.	311147
DIPOLE SPACING	100'
LINE No.	8000S
PROSPECT	DOBSONS CREEK
JOB No.	TAS-065-Q

800E 1000E 1200E 1400E 1600E 1800E 2000E 2200E 2400E 2600E 2800E 3000E 3200E 3400E 3600E 3800E

RESISTIVITY

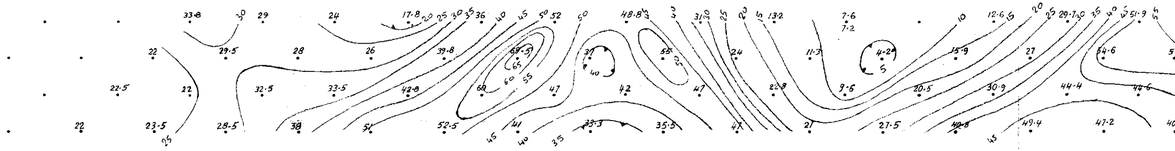


RESISTIVITY Ωm.

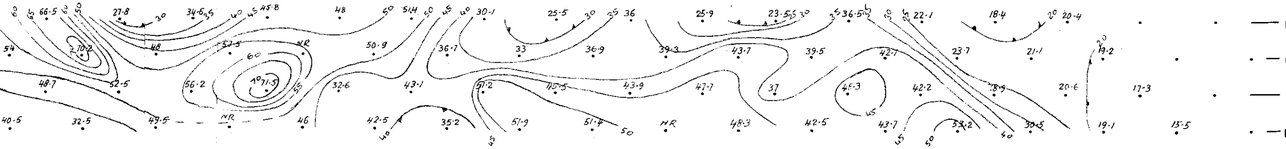


N-1
N-2
N-3
N-4

CHARGEABILITY



CHARGEABILITY



N-1
N-2
N-3
N-4

5 cm

058719

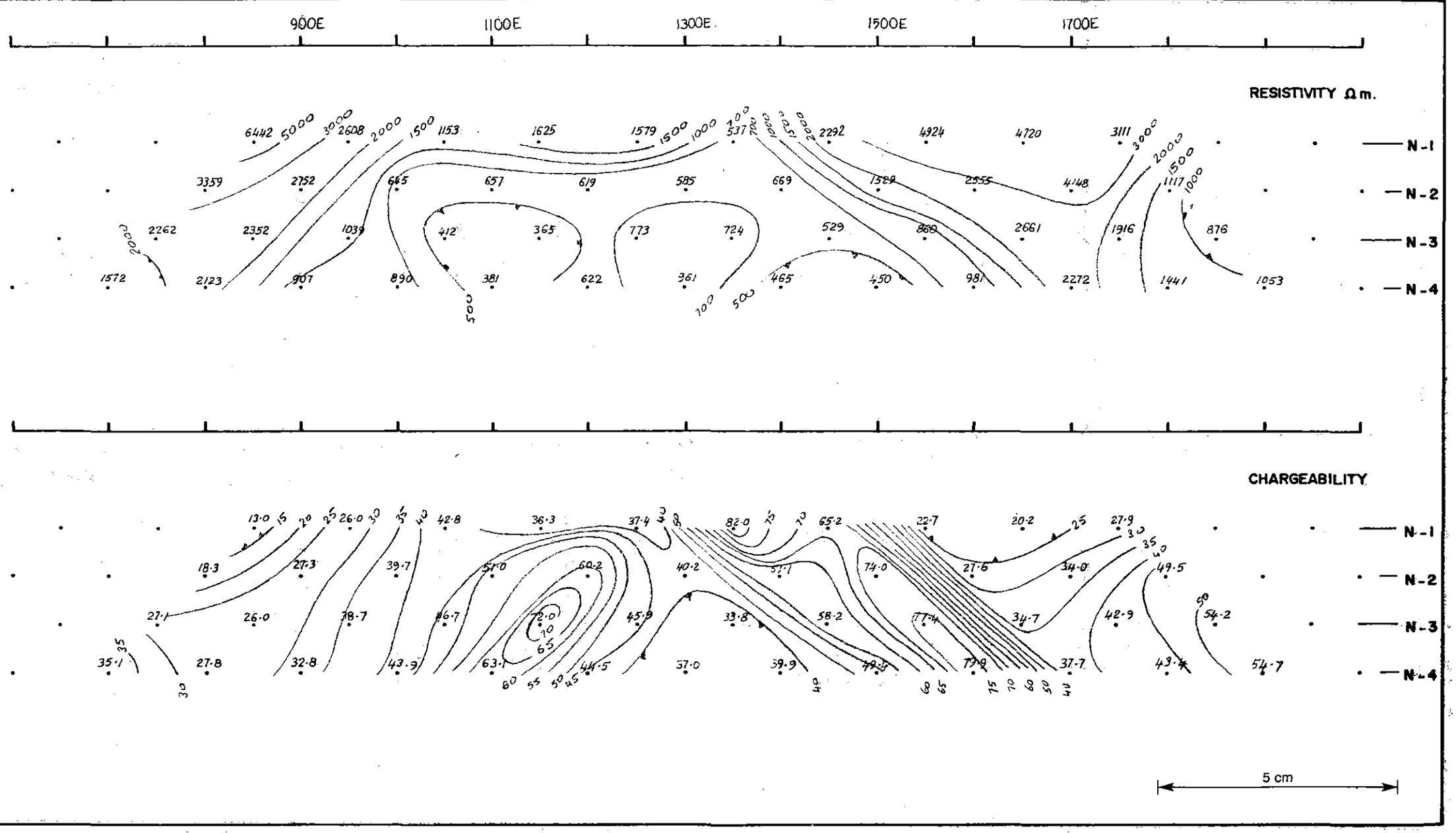
8800S

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE 17-4-80	LINE No. 8800 S
PLOTTED BY R.M.	PROSPECT DOBSONS CREEK
PULSE 2 Sec / Rx. 311147	JOB No. TAS-065-Q
DIPOLE SPACING 100'	



NOTES:

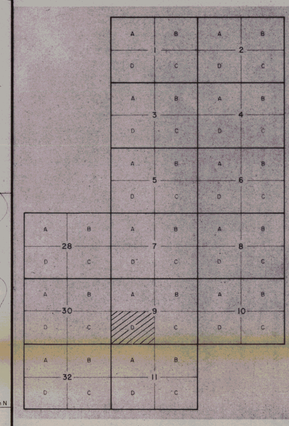
1. WHITE SPUR (Dobson's Creek Grid) Pegs on lines 005,8005,16005, etc, were replaced during 1980. Lines 28005,36005 & 44005, were cut during 1980 and accurately pegged. Pegs numbered on Howard's track have been surveyed. All pegging is East & West of Base Line marked OOW.

WHITE SPUR (DOBSON'S CREEK GRID)

E.L. 1/82

5 366 000 mN
5 365 000 mN
5 364 000 mN
5 363 000 mN
5 362 000 mN

375 000 mE
376 000 mE
377 000 mE
378 000 mE
379 000 mE
380 000 mE



5 cm

N.B. Old R.E.W. co-ordinates to be deleted 'later'

058720

ELECTROLYTIC ZINC CO. OF A/ASIA. LTD

PROJECT: MT. BLACK/ DOBSONS CREEK | TAS.

GRADIENT ARRAY E.I.P. SURVEY CHARGEABILITY CONTOUR PLAN

SURVEYED & COMPILED BY SCINTREX

MARCH 1980

Job No TAS-065-Q-II

PLATE 1.

SCALE: 1:5000	Survey: R.E.W.	Revised: May 1980
Reference:	Date: June 1979	REF. NO.
Drawn: R.P.T.	Checked:	AO - 504 - 0045

80-1448 5/8

E Z PLAN CABINET TRIM LINE

NOTES:

1. WHITE SPUR (Dobson's Creek Grid) Pegs on lines 00S, 800S, 1600S, etc, were replaced during 1980. Lines 2800S, 5600S, & 4400S were cut during 1980 and accurately pegged. Pegs numbered on Howard's track have been surveyed. All pegging is East & West of Base Line marked 00W.

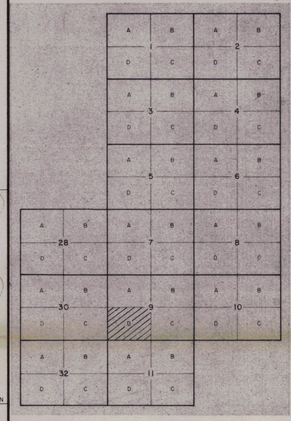
WHITE SPUR
(DOBSON'S CREEK GRID)

E.L. 1/82

E.L. 1/82

5,366 000 m N
5,365 000 m N
5,364 000 m N
5,363 000 m N
5,362 000 m N

375 000 m E
376 000 m E
377 000 m E
378 000 m E
379 000 m E
380 000 m E



5 cm

N.B. Old R.E.W. co-ordinates to be deleted 'later'

ELECTROLYTIC ZINC CO. OF A'ASIA. LTD

PROJECT: MT. BLACK/ DOBSONS CREEK | TAS.

GRADIENT ARRAY EIP SURVEY
RESISTIVITY CONTOUR PLAN

SURVEYED & COMPILED BY SCINTREX
MARCH 1980

058721

Job N° TAS-065-Q-II

PLATE 2.

SCALE: 1:5000	Survey: R.E.W	Revised: May 1980
Reference:	Date: June 1979	REF. NO.
Drawn: R.P.T.	Checked:	AO - 504 - 0045

80-1468 5/6

E.Z. PLAN CABINET TRIM LINE

Western Zone

Resistive "marker" horizon

Central Zone

Fault of facies change

Eastern Zone

377 500 mE

375 000 mE

376 000 mE

377 000 mE

378 000 mE

379 000 mE

380 000 mE

5 365 000 mN

5 364 000 mN

5 363 000 mN

1 2 3 4 5 6 28 7 8 30 A B 9 C 10 32 11

Legend

less resistive / resistive

resistive ridges

conductors

significant above background anomalies

dislocations

possible synchine or anticline axes

5 cm

ELECTROLYTIC ZINC CO. OF A'ASIA LTD.

PROJECT: MT. BLACK / DOBSONS CREEK — TAS.

GRADIENT ARRAY EIP SURVEY INTERPRETATION PLAN

SURVEYED & COMPILED BY SCINTREX

MARCH 1980

058722 Job No. TAS-065-Q-II

PLATE 3

SCALE: 1:5000

80-1468 5/5

APPENDIX 8

Geoterrex Report 85-1195
"Interpretation report on the Mt. Colebrook Prospect, near Rosebery, Tasmania for the Electrolytic Zinc Company of Australasia Limited."

May, 1980

Copy forwarded to Getty Oil direct from Geoterrex.

058724

INTERPRETATION REPORT

ON

THE MT. COLEBROOK PROSPECT

NEAR

ROSEBERRY, TASMANIA

FOR

THE ELECTROLYTIC ZINC CO. OF AUSTRALASIA.

BY

GEOTERREX PTY. LIMITED

Sydney, Australia
May, 1980.

Job No. 85-1195
K.E. Le Brocq.
Geophysicist.

058725

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	(b) Geophysical Conditions.	
IV.	PERSONNEL	7.
V.	PRODUCTION	8.
VI.	DATA PRESENTATION.	9.
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APPENDIX

Instrument Specifications - Elliot Model 15A I.P. Set.

Instrument Specifications - IPR-7 Receiver.

I. INTRODUCTION

During the period from 22nd March to 14th April, 1980, Geoterrex Pty. Limited conducted induced polarisation resistivity surveys, on behalf of the Electrolytic Zinc Company, on the Mt. Colebrook Prospect near Roseberry, Tasmania.

The nature of the survey was to investigate the possibility of mineralisation along strike or at a deeper depth than that known from old 'diggings'. To achieve this the dipole-dipole array using a dipole length of 40 metres and n - separations of n = 1 to n = 6 was employed on 100 metre spaced lines running east - west across Mt. Colebrook.

The surveys completed are part of the continued exploration of Electrolytic Zinc Company to find ore-bodies in the immediate vicinity of Roseberry to supplement the existing mining operations.

II. INDUCED POLARISATION

Instrumentation

The present induced polarisation survey was conducted using direct current, pulse-type equipment.

The I.P. transmitter employed is manufactured by Elliot Geophysical Company, Tucson, Arizona. This unit is rated at 1.5 KVA and is powered by a 2 KVA Alleco generator coupled with a 4 h.p. Briggs and Stratton motor.

The I.P. reciver used is of Newmont design and manufactured by Scintrex Limited, Ontario, Canada. This receiver operates using an integration window of 0.650 seconds duration, initiating at a time of 0.450 seconds after transmitter time off. (See figure 1.).

Data Reduction

On the Scintrex IPR-7 Newmont type receiver, the apparent chargeability, Ma, in milliseconds (millivolt seconds per volt) is read directly as the integral of the secondary voltage decay curve from 450 milliseconds to 1100 milliseconds after transmitter current cutoff and normalised with respect to primary voltage being transmitted.

$$Ma = \frac{1}{Vp} \int_{t1}^{t2} V(t)\ dt\ ]$$

Where: V(t) is the secondary voltage as a function of time in millivolts.

t_1 , t_2 are the integration limits in time.

Ma is the apparent chargeability in milliseconds and Vp is the primary voltage in volts.

The apparent resistivity is calculated for each station by noting the applied current, I, flowing through the current electrodes during the 'on' time as follows:-

$$\rho a = \frac{K.\Delta V}{I}$$

Where: (i) ρa is the apparent resistivity in ohm.m.

(ii) ΔV is the applied potential in millivolts measured by the receiver during the transmitter 'on' period.

(iii) I is the applied current measured in amperes.

and

(iv) K is a constant dependent on the array geometry.

In general:

$$K = 2\pi \frac{1}{\frac{1}{AM} - \frac{1}{AN} - \frac{1}{BM} + \frac{1}{BN}}$$

Where: (i) A and B are current electrodes

and

(ii) M and N are potential electrodes.

FIGURE

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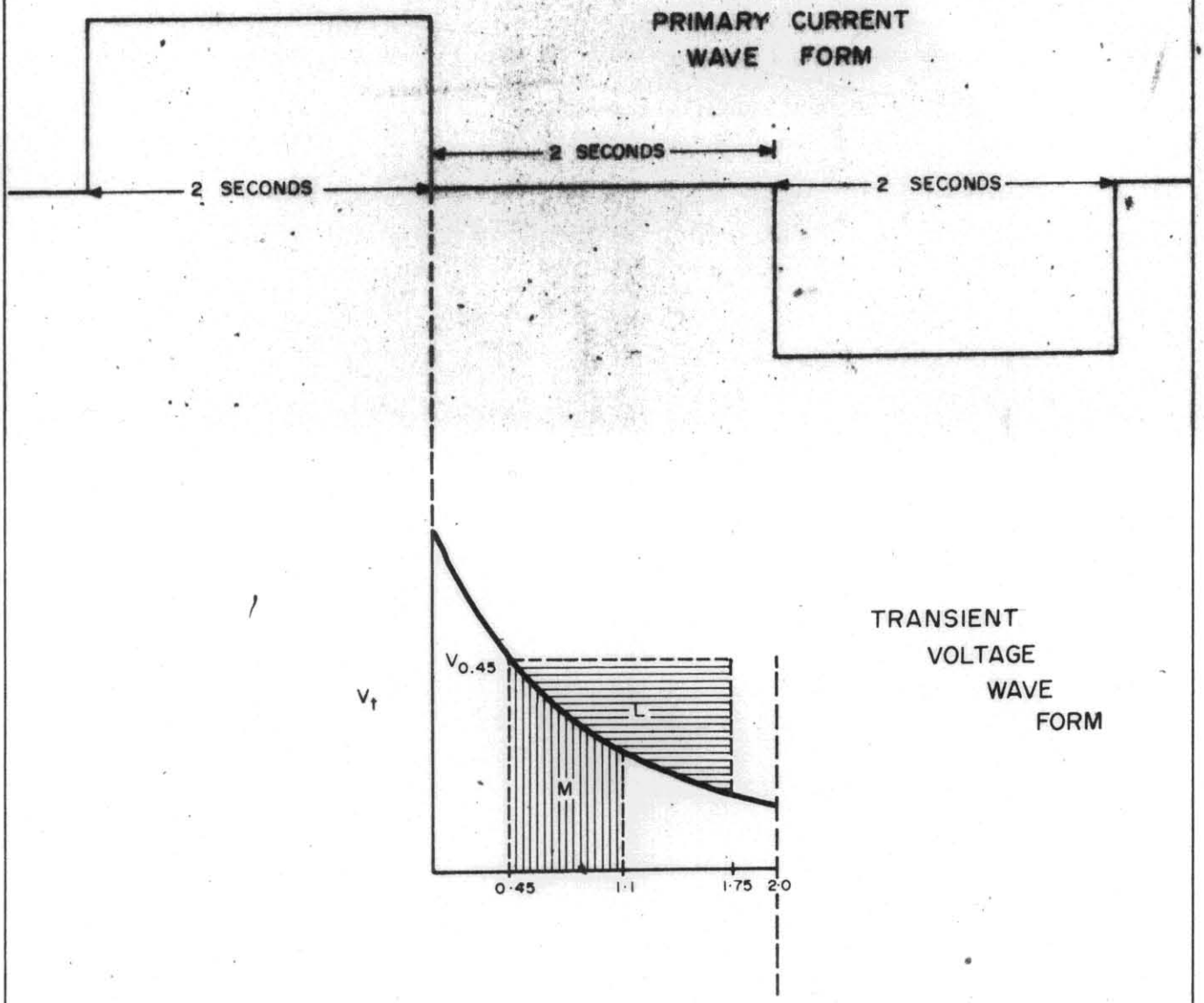

NEWMONT – TYPE TIME DOMAIN WAVE FORMS
AND QUANTITIES MEASURED

geoterrex limited
SYDNEY

III. SURVEY PROCEDURES

(a) Location & Access

The survey area is located just to the south of Roseberry township on the west coast of Tasmania and is immediately adjacent to Roseberry Golf Course, being a sharp hill which rises approximately 300 to 400 metres in elevation above the aforementioned golf course.

Access to the grid lines surveyed was for the most part reasonable although at times vehicle chains were a necessity to negotiate the steep and slippery tracks. All equipment and supplies had to be 'backpacked' the last half mile or so to the survey lines.

(b) Geophysical Conditions

Due to the 'moist' nature of Tasmanian weather conditions the ground conditions were such that more than sufficient water was available to prepare electrodes. This abundance of moisture allowed the survey to progress at a greater pace than normal by eliminating the need to carry in large amounts of water to prepare electrodes. However, the persistent nature of rain on the Tasmanian west coast also leaches 'salts' out of the surface layers and makes it impossible to obtain large ground currents due to the poor electrical contacts that can be made with the ground due to the absence of the conductive salt solutions.

Abnormal ground conditions were encountered during this survey which caused a loss in productivity and also resulted in large numbers of readings (both apparent chargeability and apparent resistivity) being unattainable. A highly conductive source (or number of sources) acted as a 'short circuit' to the secondary field and insufficient secondary voltage was available on which to obtain instrumental readings at a number of stations.

The transmitter timing was maintained at 2 seconds 'on' current time and 2 seconds 'off' current time throughout the survey.

IV. PERSONNEL

This survey was completed using a two man Geoterrex crew under the supervision of K. Le Brocq with a local man being employed as a field assistant.

The Geoterrex field crew comprised:-

P. PREVEDOROS	GEOPHYSICIST/PARTY CHIEF
P. SPRY	OPERATOR.

V. PRODUCTION

The following table lists the production statistics together with the array and spacing used:-

Mt. Colebrook Grid

Line	Array	Spacing(m)	Coverage	Remarks
5371600N	Dipole-Dipole	40m n = 1-6	-	Ground very conductive. Readings unattainable over large areas. Abandoned.
5372000N	Dipole-Dipole	40m n = 1-6	374740E-375340E	Ground conditions very conductive at depth.
5371800N	Dipole-Dipole	40m n = 1-6	374610E-375460E	Ground conditions very conductive at depth.
5371900N	Dipole-Dipole	40m n = 1.6	374740E-375300E	Ground conditions very conductive at depth.

VI. DATA PRESENTATION

The dipole-dipole lines are presented in pseudosection form of apparent chargeability and apparent resistivity at a scale of 1:4,000. The apparent chargeabilities are contoured every 5.0 milliseconds and the apparent resistivities at a logarithmic interval of 1.00, 1.50, 2.50, 4.00, 6.50 and 10.00 per cycle.

VII. DISCUSSION OF RESULTS

On all I.P. lines surveyed it is evident that a highly (or number of highly) conductive sources, which are also highly polarisable, exist in the survey area and have an apparent east-west trend.

The anomalous I.P. zones are also associated with intense 'resistivity low' zones which is indicative of sulphide mineralisation.

Due to the conductive nature of the area and the deleterious effect this has had on the definitive nature of the dipole-dipole array I.P./resistivity performed; by reducing the depth to which readings could be taken; it is difficult to even envisage the number of sources which exist.

Attempts have been made to provide a working model of the mineralisation and stratigraphy which may possibly exist, but it is felt that by using the I.P. data as it exists without precise geological control, any solution which could be modelled by computer would be at this stage too ambiguous to be of sufficient usefulness to warrant the processing costs involved.

VIII. CONCLUSIONS & RECOMMENDATIONS

The I.P./Resistivity survey has shown that a, or a number of, highly conductive polarisable sources exist with an east-west trend on the Mt. Colebrook Grid.

Due to the conductive nature of the ground and the tendency for interaction of sources using dipole-dipole the data collected by this survey method is of limited potential, without precise geological information, or some other form of control, in delineating the number of conductive sources, their attitude or thickness.

As the I.P. method has shown the sources are HIGHLY CONDUCTIVE, I feel that at this stage an Electromagnetic Ground Technique should be used to follow up the Induced Polarisation. Separated loop P.E.M. using a small loop (or a similar technique) and employing a separation of 80 metres and reading intervals of 20 metres should be effective in resolving the number of conductors which exist as well as providing their position and possibly information on their thickness and attitude.

The information derived from such a survey could then be correlated with the I.P. data and investigative drill

hole collars and attitudes could be determined so that the holes would be positioned with a much greater degree of proficiency than could possibly be hoped for at present.

A ground magnetic survey could also be invaluable in providing information on lithology or possibly in tracing the potentially 'mineralised' zones if they exhibit a magnetic signature.

Respectfully submitted,

K.E. LE BROCQ.

Geophysicist.

058739

APPENDIX

INSTRUMENT SPECIFICATIONS - Elliot Model 15A
I.P. Set.

INSTRUMENT SPECIFICATIONS - IPR-7 Receiver.

SPECIFICATIONS

Electrical Specifications

Input power: phase: single

frequency: 350 to 450 hertz

power level: 2000 VA nominally

voltage: 100 to 130 volts

Output: power 1500 watts instantaneous power during on part of cycle

load impedance: 40 to 10,000 ohms and 60 to 6000 ohms for full power output when properly match to the load.

voltage: 200 volts to 3000 volts in12 taps

output voltage accuracy: +/- 10% at full load.

current: 5 amperes maximum

Voltage/ampere characteristics as follows:-

Tap Number	Voltage	Maximum Current
1	200	5.0
2	250	5.0
3	300	5.0
4	350	4.3
5	400	3.7
6	500	3.0
7	600	2.5
8	800	1.9
9	1100	1.4
10	1500	1.0
11	2000	0.7
12	3000	0.5

Current Measurement:	Analog meter, accuracy +/-3%
Output phase:	Polarity of output indicated on front panel
Operating temperature:	ambient - 15°C to 60°C (+ 5°F to + 140°F)
Time cycle:	symmetrical period, range of quarter period, 0.5 to 10 seconds +/- 2% over temperature range factory adjustable.
Fuse data:	Low voltage circuits type 3AG 0.5 A SB
	High voltage circuits type 3AB ceramic 20A
	Fan type 3AG 0.2 A SB

Mechanical Specifications

Construction:	Epoxy painted aluminium
Ventilation:	Forced air internal fan
Connectors:	Input MS3102E-18-3P
	Output Supercon RS25GR
Dimensions:	Case height 26.7 centimeters (10.5 inches)
	Case width 40.6 centimeters (16 inches)
	Case depth 29.2 centimeters (11.5 inches)
	Weight without case 13.6 kilograms (30 pounds).
	Complete with case 20.4 kilograms (45 pounds).

RECEIVER SPECIFICATIONS

Electrical:

Primary Voltage Range:	300 microvolts to 30V accuracy +/- 3%
Input Impedence:	300 K ohms
Chargeability (M) Reading Range:	0-100 and 0-3-- milliseconds Accuracy +/- 5%
Curve Factor (L) Reading Range:	0-100 and 0-300 milliseconds Accuracy +/- 5%
Delay Time Before Integration:	0.45 seconds.
SP and VLF Noise Compensation:	Manual: +/- 1.5 millivolts Automatic: 1mV range +/- mV total 30mV range +/- 1V total
Power Supply	Internal rechargeable nickel cadmium batteries. Rated life 45 hours/charge.
Temperature Range:	-20° to 130°F (-29°C to + 55°C)
Humidity Range:	to 100% non-condensing

NOTE: A time reference signal is remotely obtained from the received primary signal to give coherent detection.

Automatic SP corrections are applied during each reading period using a memory circuit.

Mechanical:

Weight:	13½ lbs.(6.1 kg) including batteries
Dimensions:	14" x 11" x 6½" (35.5 cm x 28 cm x 16.5 cm)

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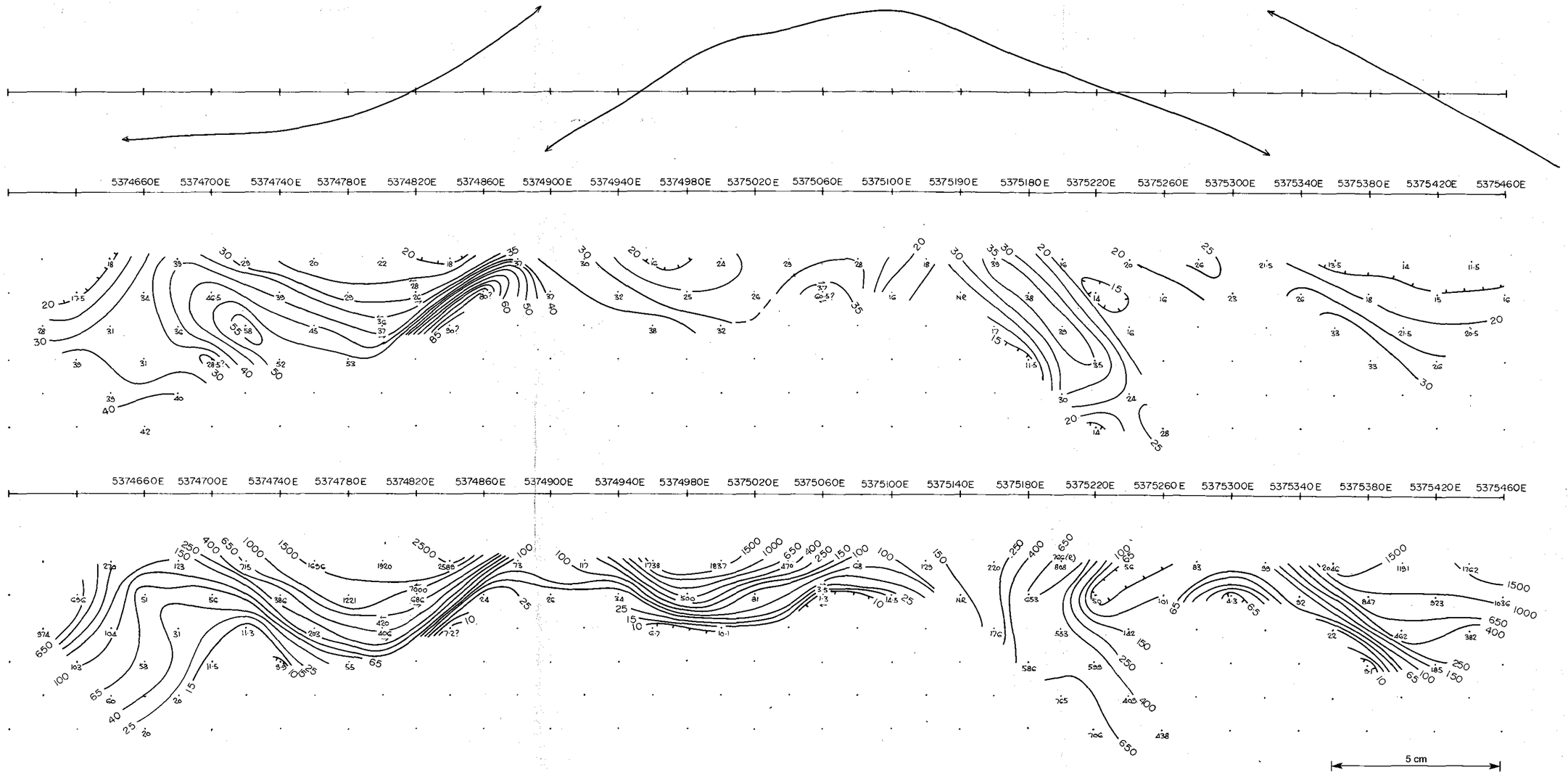


Transmitter type	Elliot 1·5 KVA
Timing sequence	2 sec on / 2 sec off
Receiver type	Scintrex IPR-7
Integration time	450 ms to 1100 ms
I.P measured over one current pulse	

SURVEYED COMPILED & DEMONSTRATED BY
geoterrex limited
SYDNEY

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA

INDUCED POLARIZATION and RESISTIVITY SURVEY

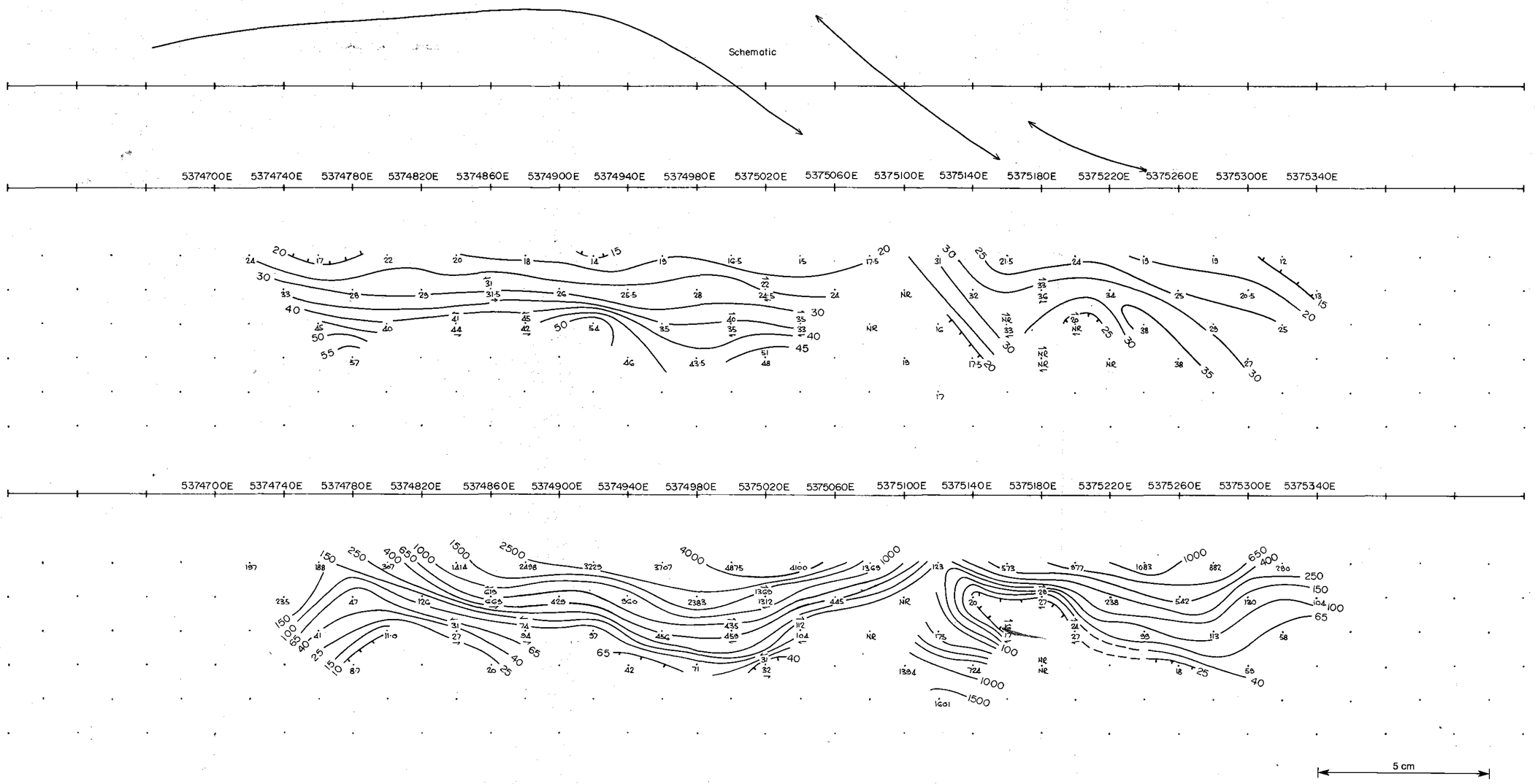
MT. COLEBROOK GRID
ROSEBERRY, TASMANIA

LINE : 5371800N

Array	Dipole - Dipole	Dipole length	40 metres
Date	March - April 1980	Job No 85-1195	Scale 1 : 4,000

5371800N

058744



Transmitter type	Elliot 1·5KVA
Timing sequence	2 sec on / 2 sec off
Receiver type	Scintrex IPR-7
Integration time	450ms to 1100ms
I.P. measured over one current pulse	

SURVEYED COMPILED & INTERPRETED BY
geoterrex limited
SYDNEY

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA

INDUCED POLARIZATION and RESISTIVITY SURVEY

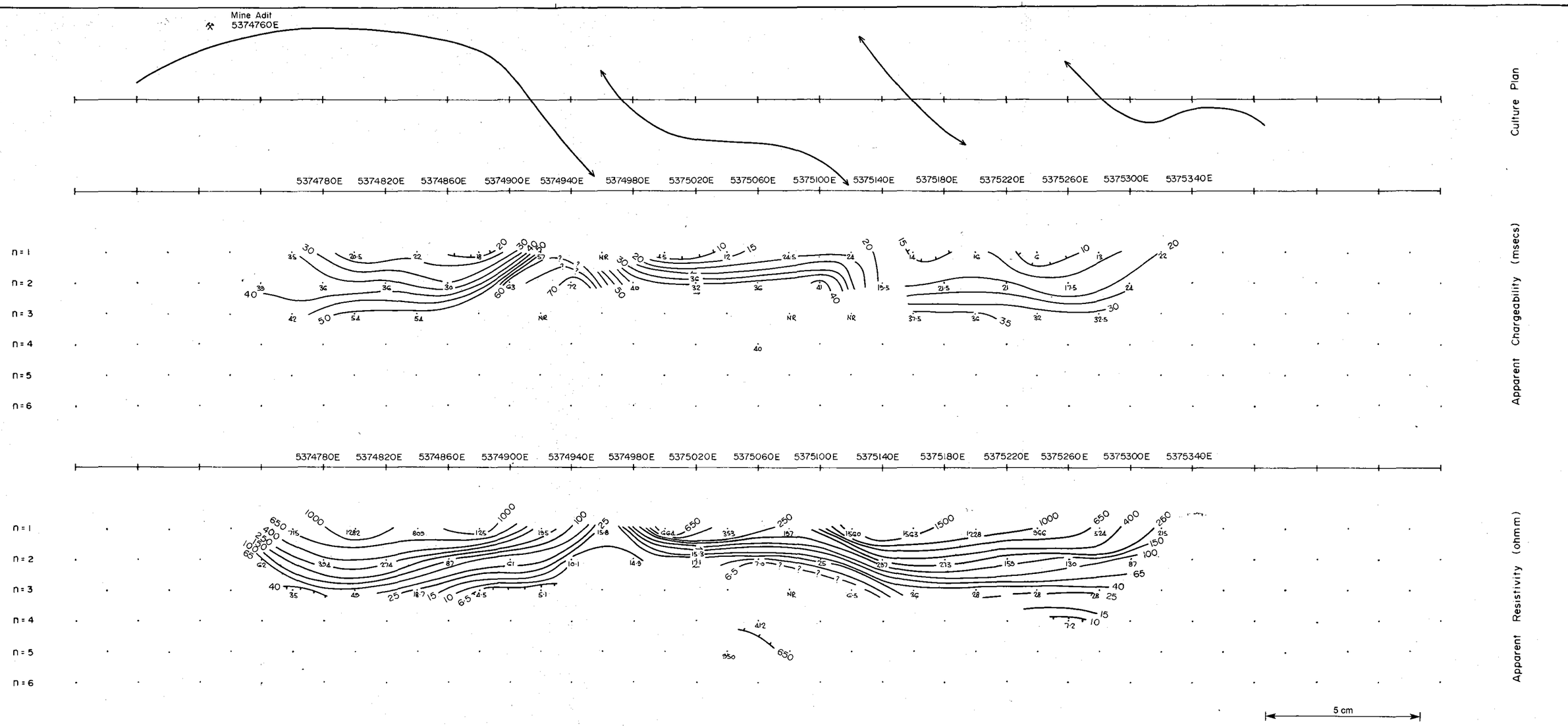
MT. COLEBROOK GRID
ROSEBERRY, TASMANIA

LINE : 5372000N

Array	Dipole - Dipole	Dipole length	40 metres
Date	April 1980	Job No 85-1195	Scale 1:4,000

5372000N

058745



Transmitter type	Elliot 1·5 KVA
Timing sequence	2 sec on / 2 sec off
Receiver type	Scintrex IPR-7
Integration time	450 ms to 1100ms
I.P. measured over one current pulse	

SURVEYED COMPILED & INTERPRETED BY
geoterrex limited
SYDNEY

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA

INDUCED POLARIZATION and RESISTIVITY SURVEY

MT. COLEBROOK GRID
ROSEBERRY, TASMANIA

LINE : 5371900 N

Array : Dipole - Dipole		Dipole length : 40metres
Date : April 1980	Job No. 85-1195	Scale : 1:4,000

5371900 N

058746

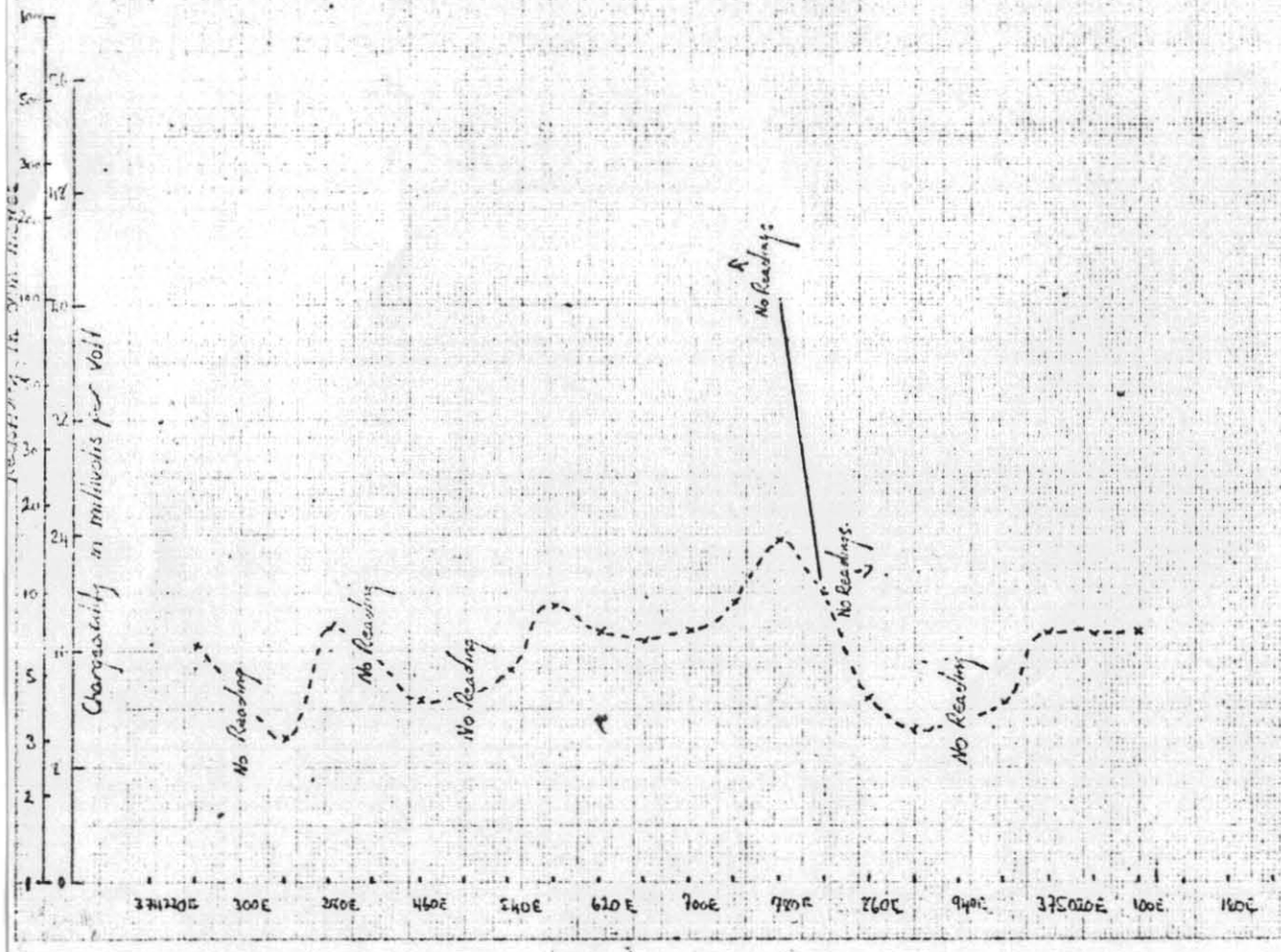
APPENDIX 9

Gradient Array Profiles and Dipole-Dipole pseudo-sections, Colebrook Hill Grid - Scintrex.

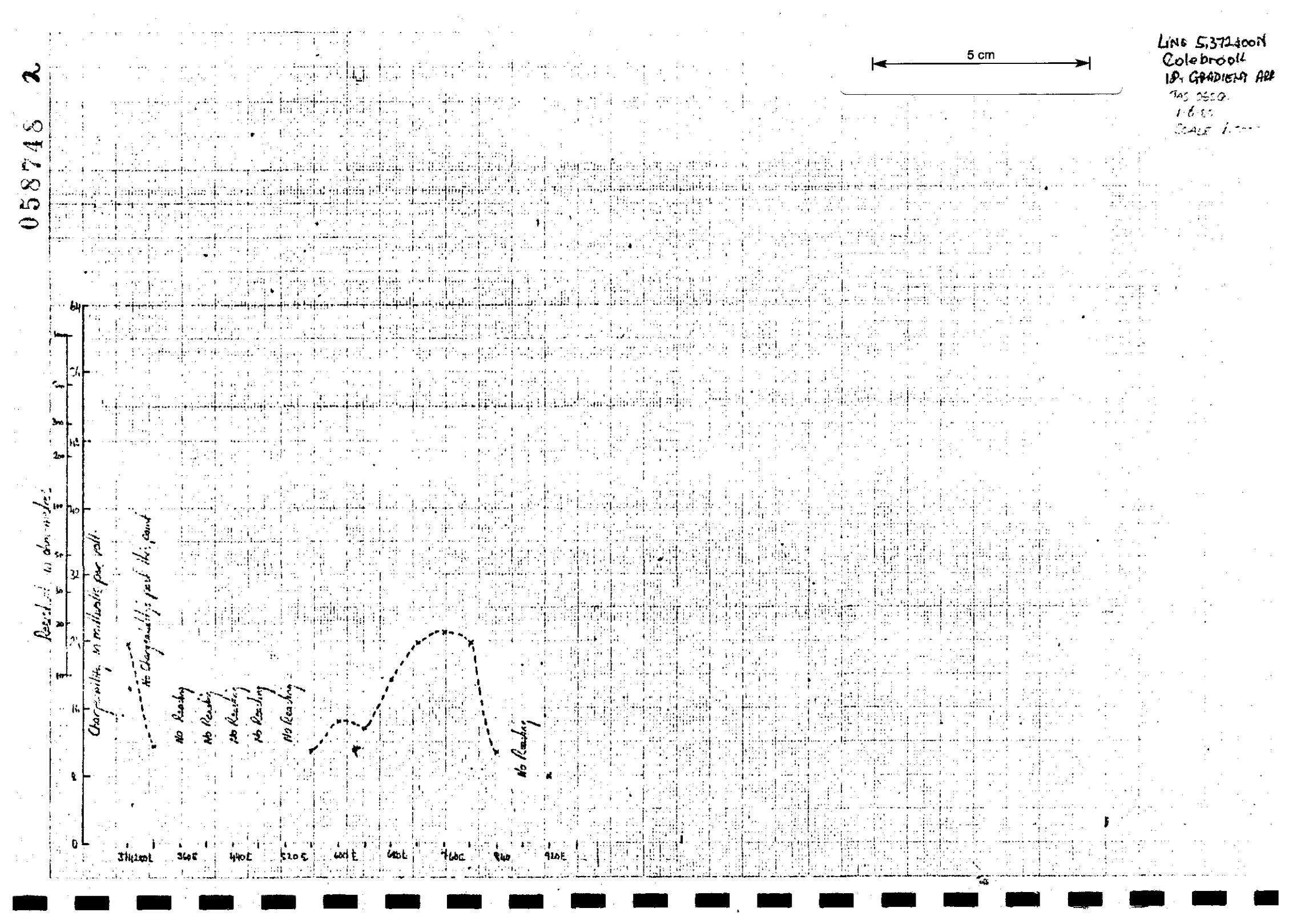
058747

5 cm

LINE 5372600N
Colebrook
UP GRADIENT ARRAY
TAS [illegible]
31 [illegible]
SCALE 1:5000



058748 2

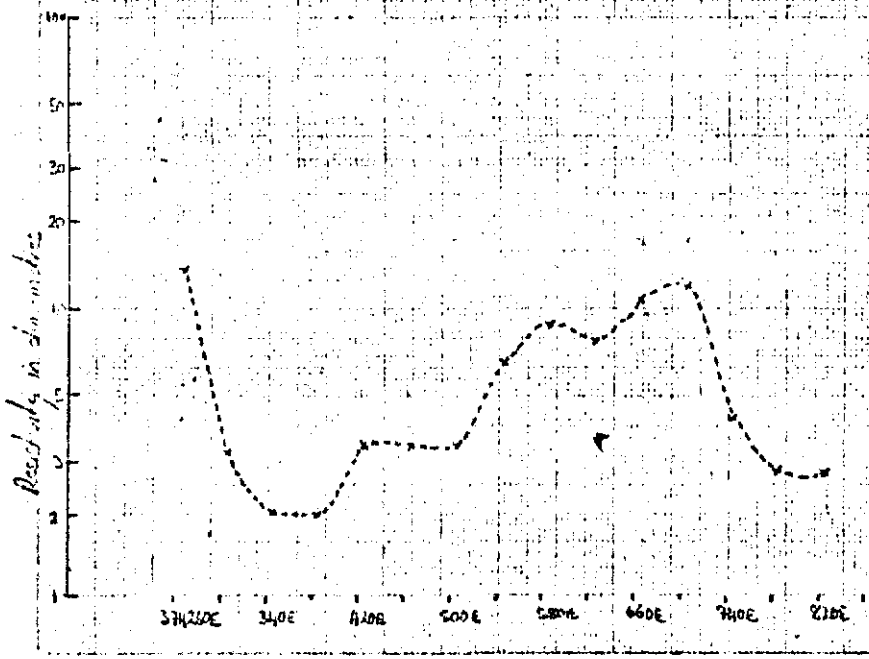


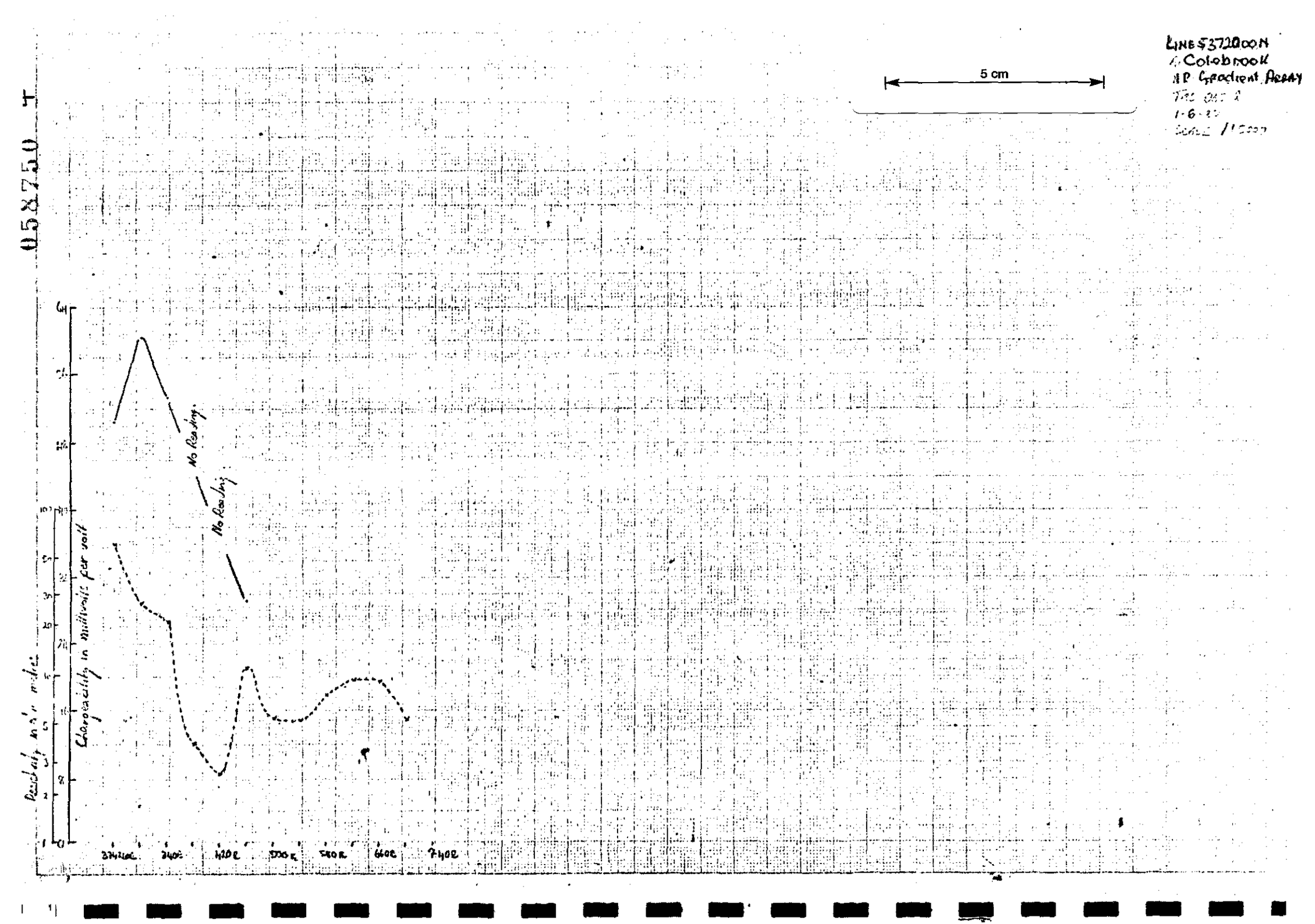
5 cm
LINE 5,372400N
Colebrook
18 GRADIENT ARR
Charge-ability in millivolts per volt
No Charge-ability past this point
No Reading
No Reading
No Reading
No Reading
No Reading
No Reading
0
8
16
24
32
40
48
64
374200E
360E
440E
520E
600E
680E
760E
840
920E

058749

LINE 5,372 200N
Colobrook
IP. GRADIENT ARRA

5 cm

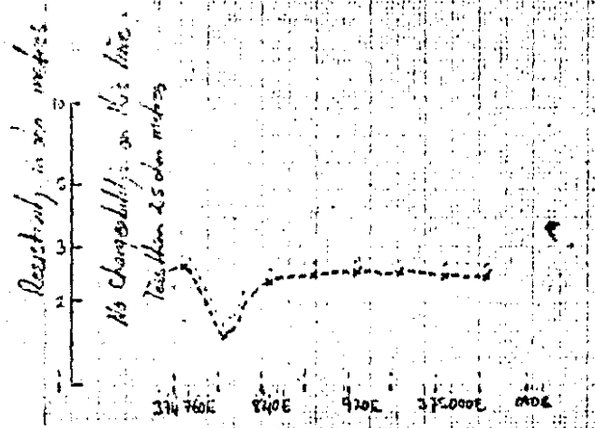


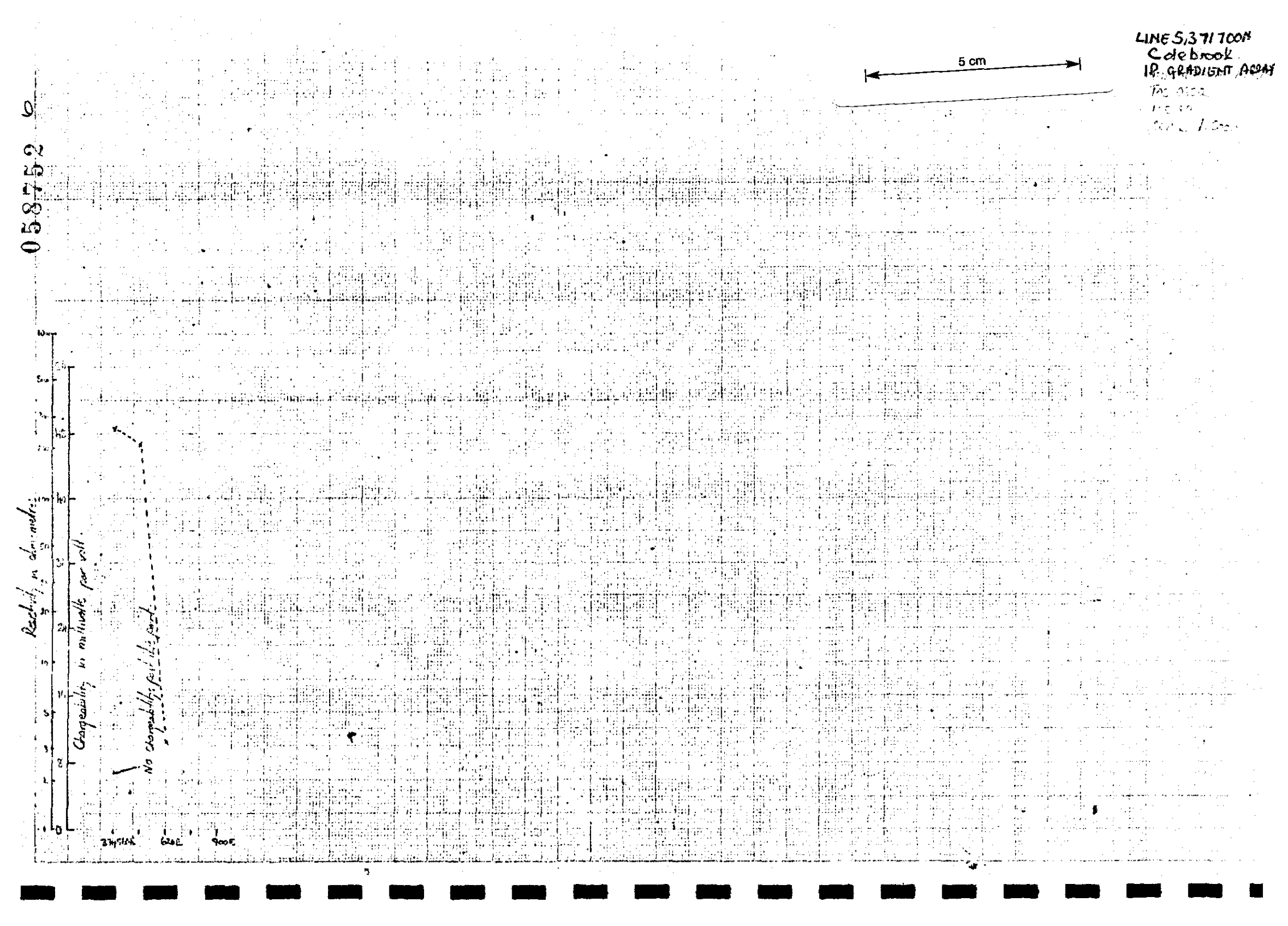

LINE 5372000N
Colebrook
IP Gradient Array
5 cm
Resistivity in ohm-metres
Chargeability in milliseconds per volt
No Reading
No Reading
240E
420E
540E
660E
740E

058751 5

Colebrook
LP GRADIENT ARRAY

5 cm

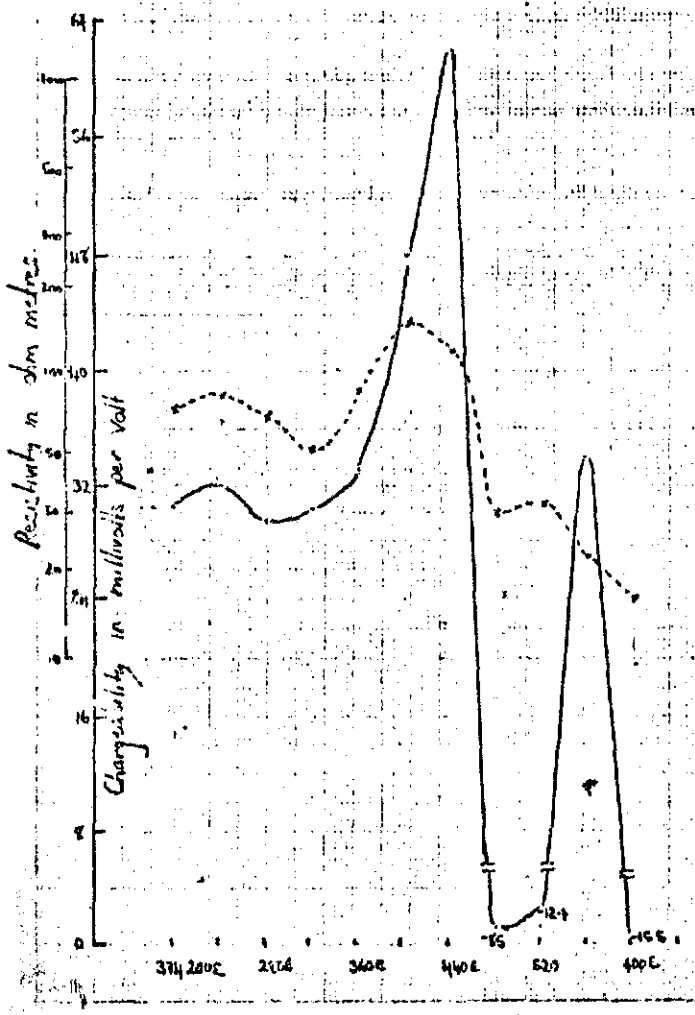




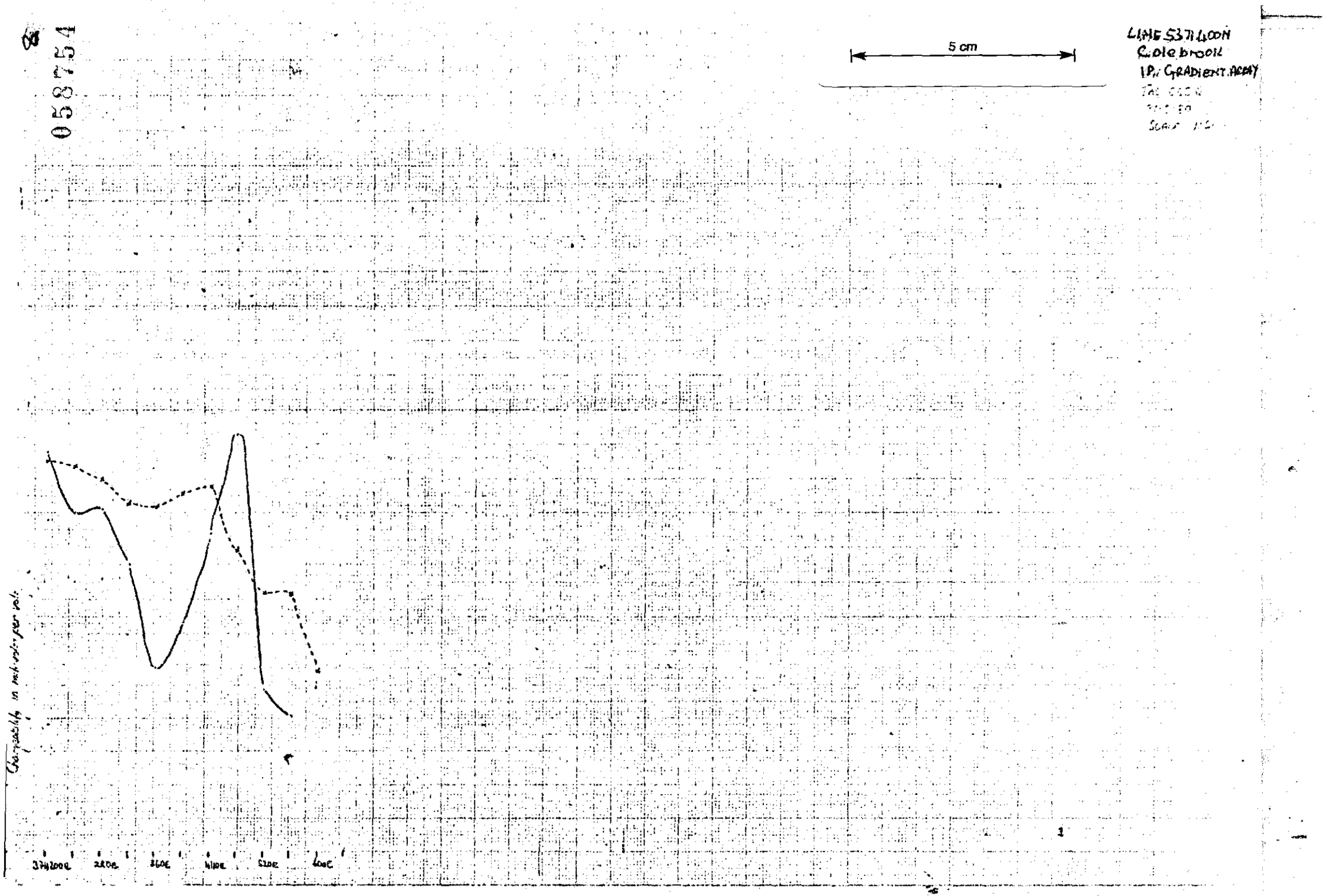
LINE 5,371700N
Colebrook
IP GRADIENT ARRAY
5 cm
058752
Resistivity in ohm-metres
Chargeability in millivolts per volt
No chargeability particle point
374500E
620E
900E

058753

LINE 5371600N
Colebrook.
IP GRADIENT ARRA
TAS 065Q
SCALE 1:5000



058754

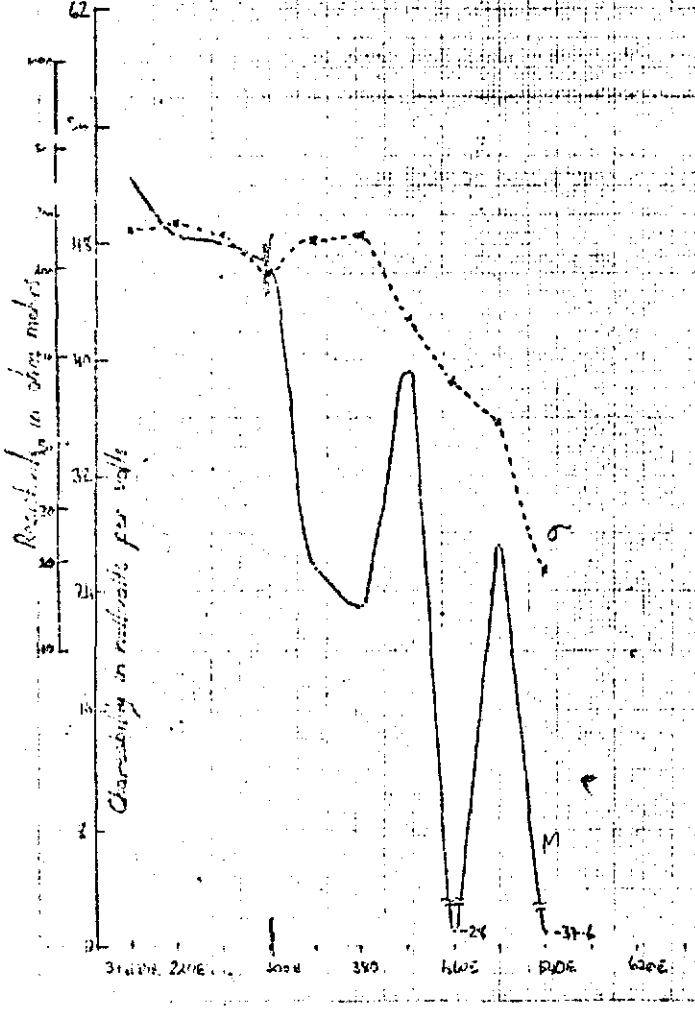

5 cm
LINE 5371400N
Colebrook
IP: GRADIENT ARRAY
Chargeability in milli-volts per volt
374200E
280E
360E
440E
520E
600E

9

058755

Line 5371 200N
AREA Colebrook
IP Gradient Array

5 cm



058756

10

SCINTREX PTY. LTD.

INDUCED POLARIZATION AND RESISTIVITY SURVEY

DIPOLE - DIPOLE ARRAY

DATE 10 5 80

PLOTTED BY R.P.

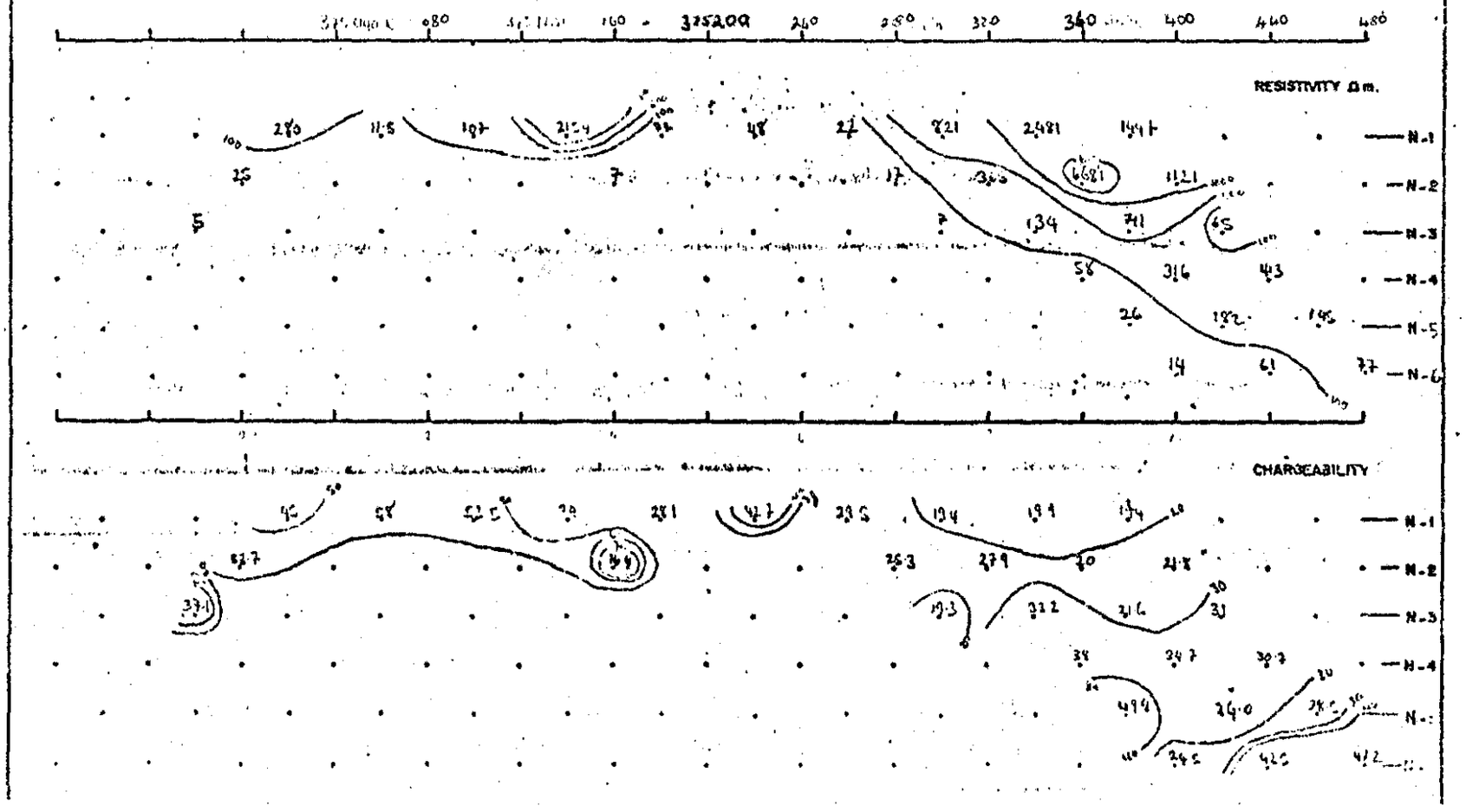
PULSE 2 sec. Rx. 790 7168

DIPOLE SPACING 40 metre

LINE No. S, 371, 800 N.

PROSPECT Coldbrook

JOB No. TAS 005

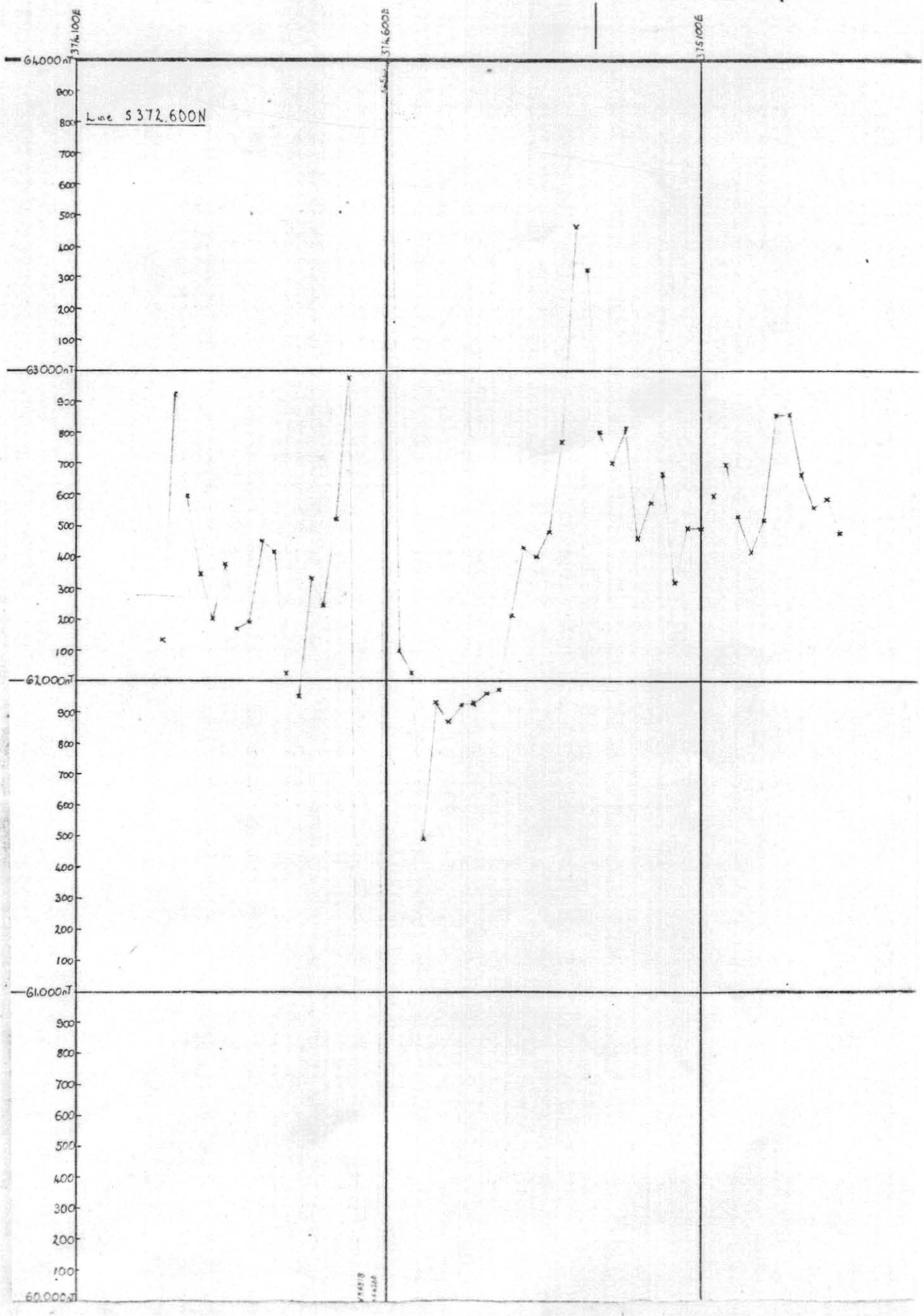


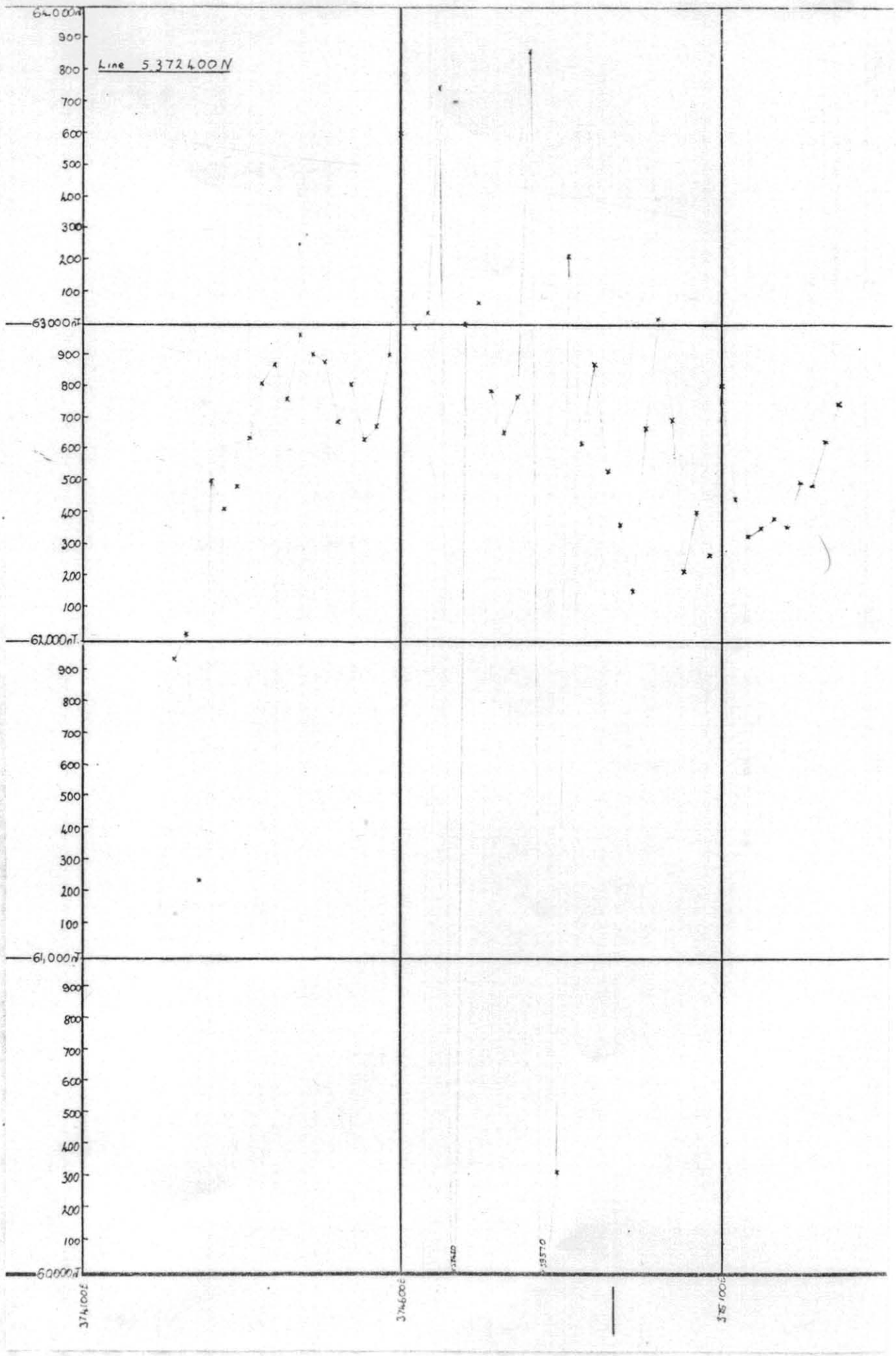
058757

APPENDIX 10.

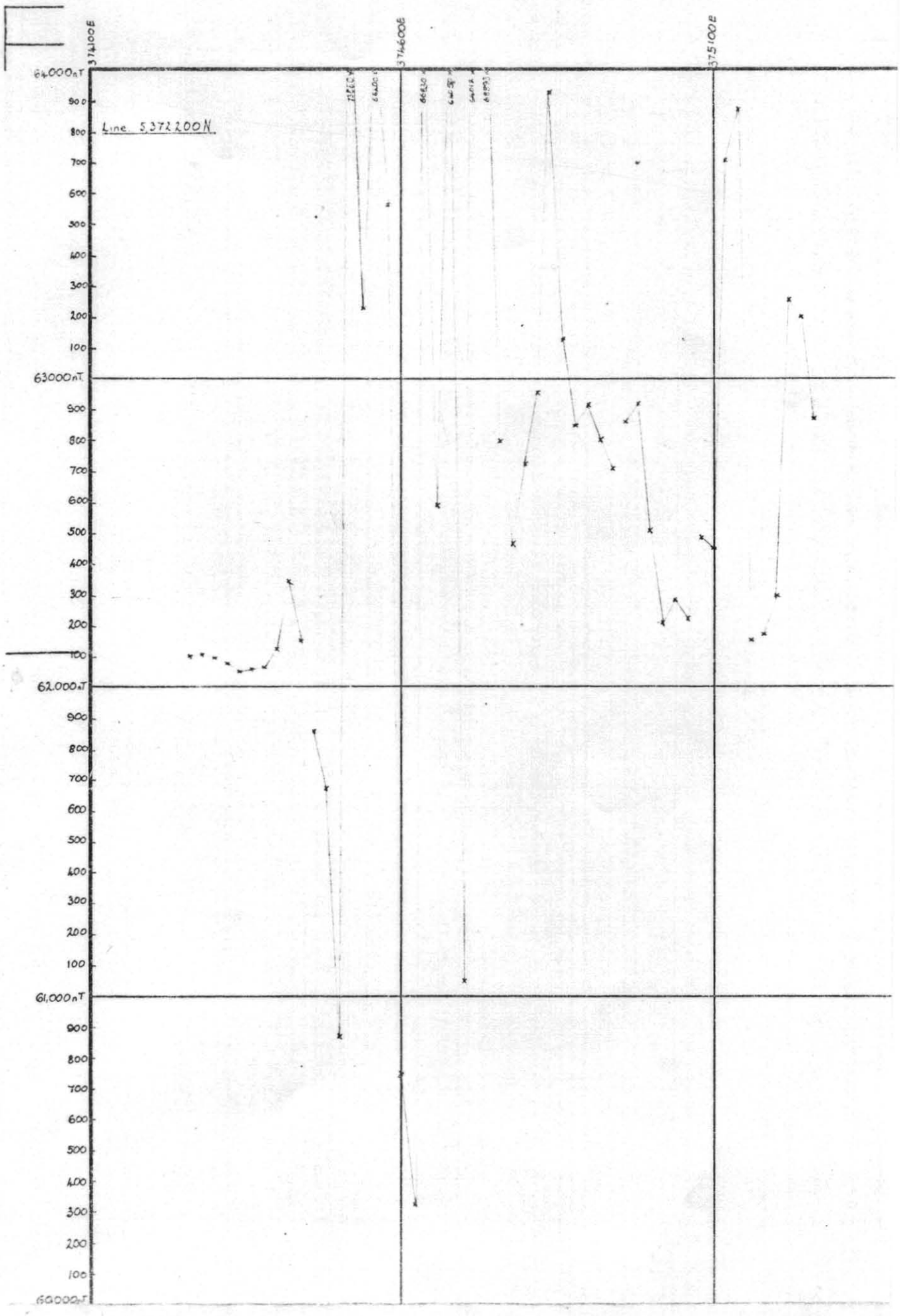
Magnetic Profiles - Colebrook Hill Grid

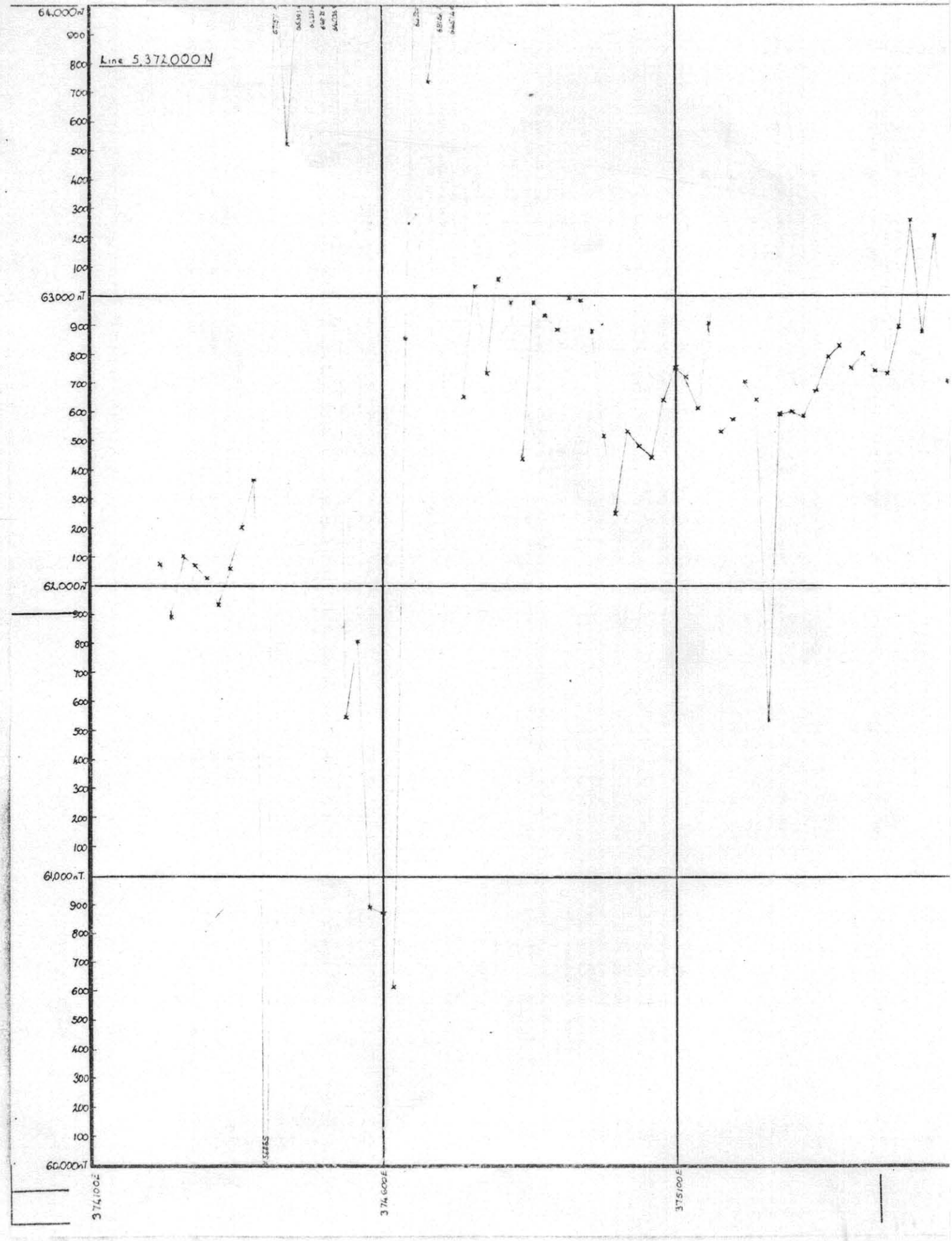
058758


374.100E
374.600E
375.100E
64,000nT
63,000nT
62,000nT
61,000nT
60,000nT
Line S 372.600N

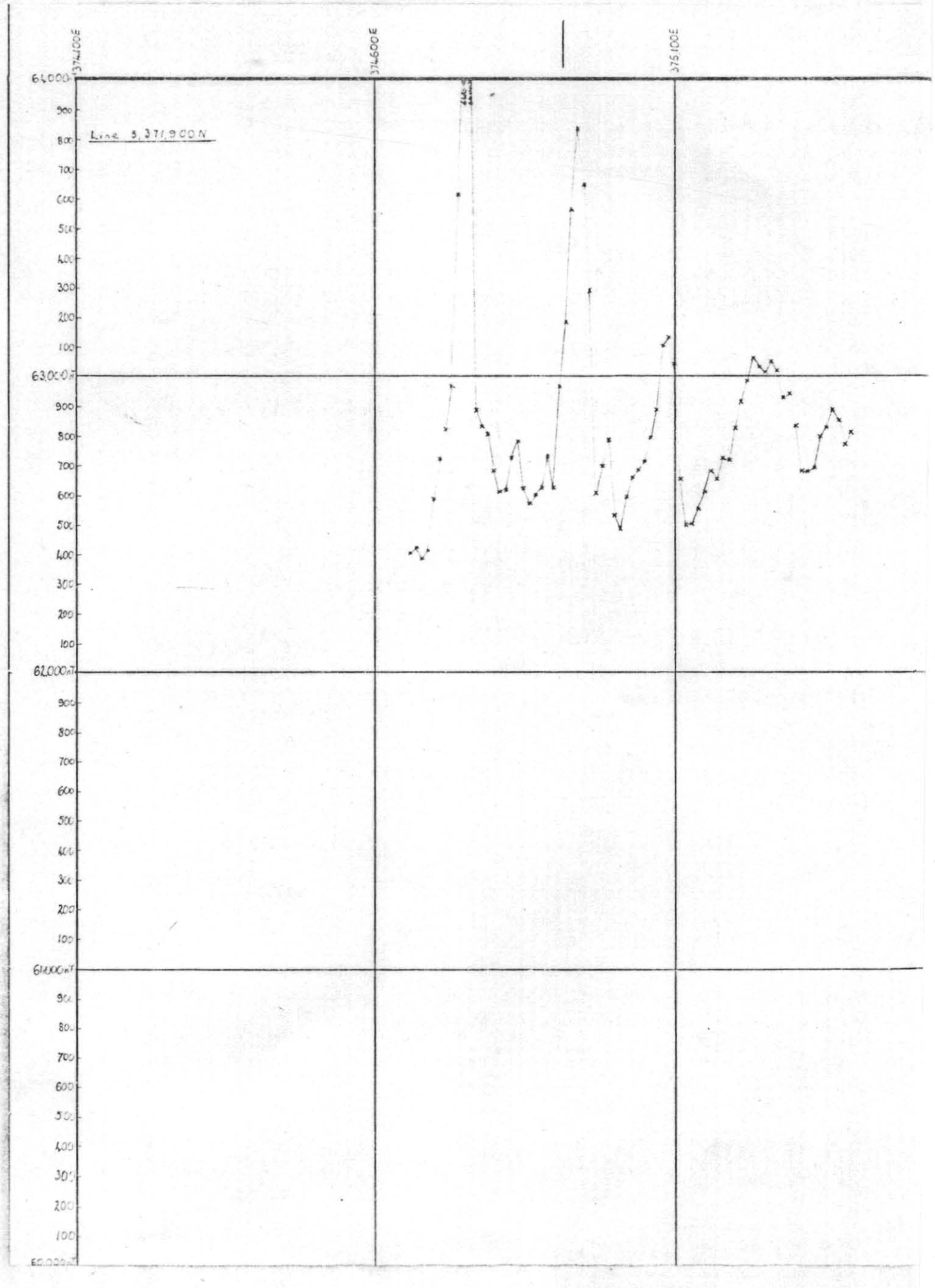

Line 5372400N
64000nT
900
800
700
600
500
400
300
200
100
63000nT
900
800
700
600
500
400
300
200
100
62000nT
900
800
700
600
500
400
300
200
100
61000nT
900
800
700
600
500
400
300
200
100
60000nT
374000E
374600E
375100E

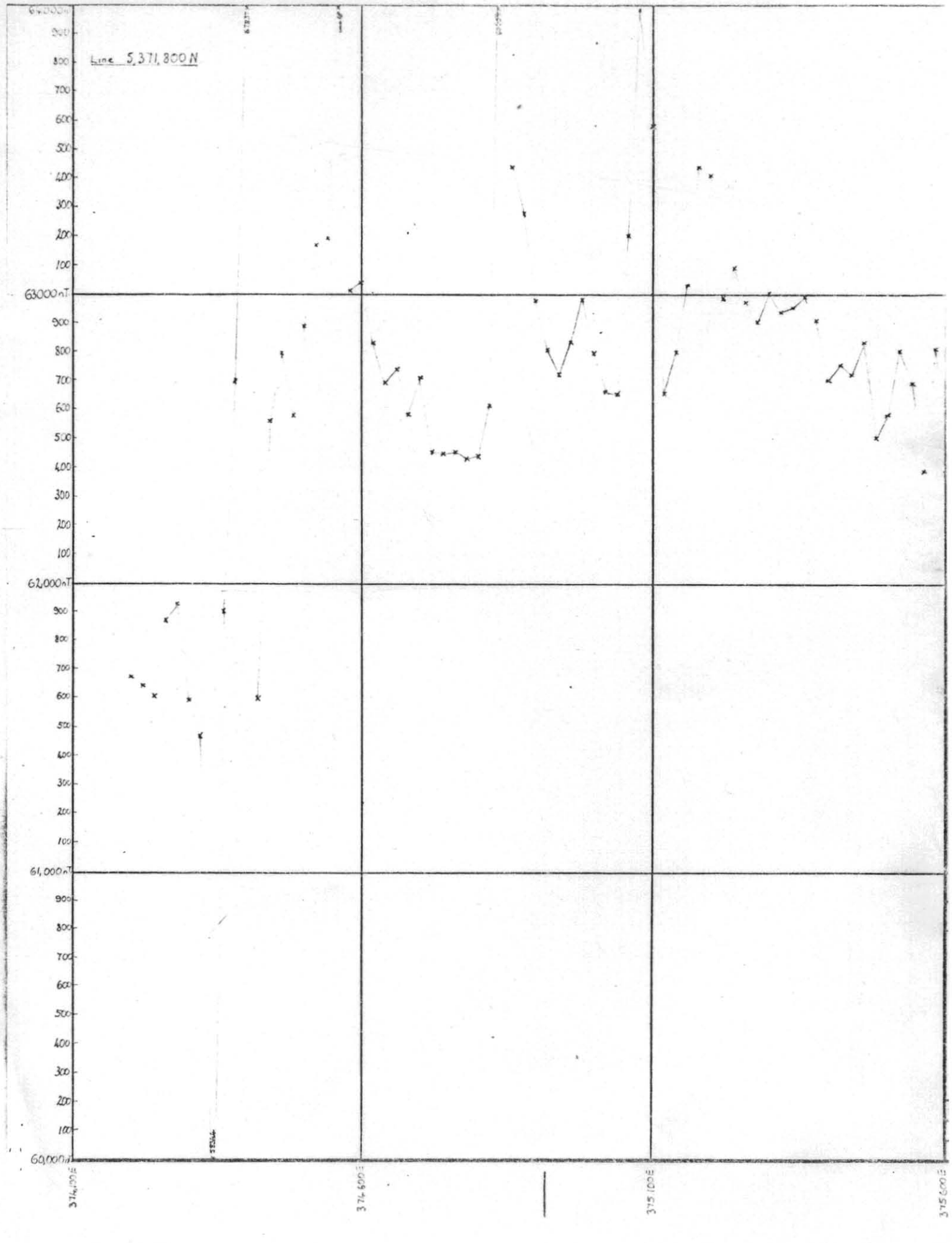
058760
3

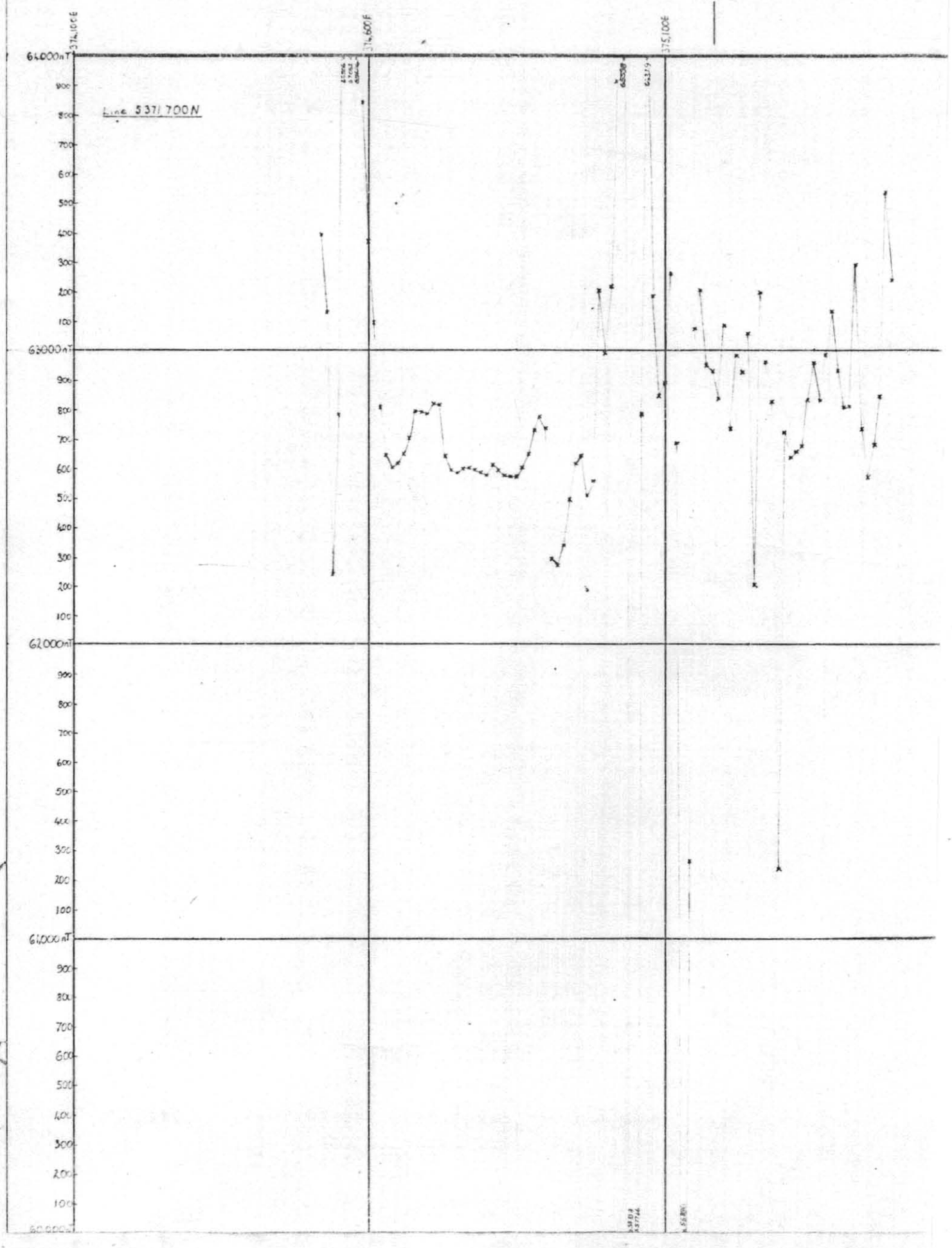

374100E
374600E
375100E
64000nT
63000nT
62000nT
61,000nT
60000nT
Line 5,372200N

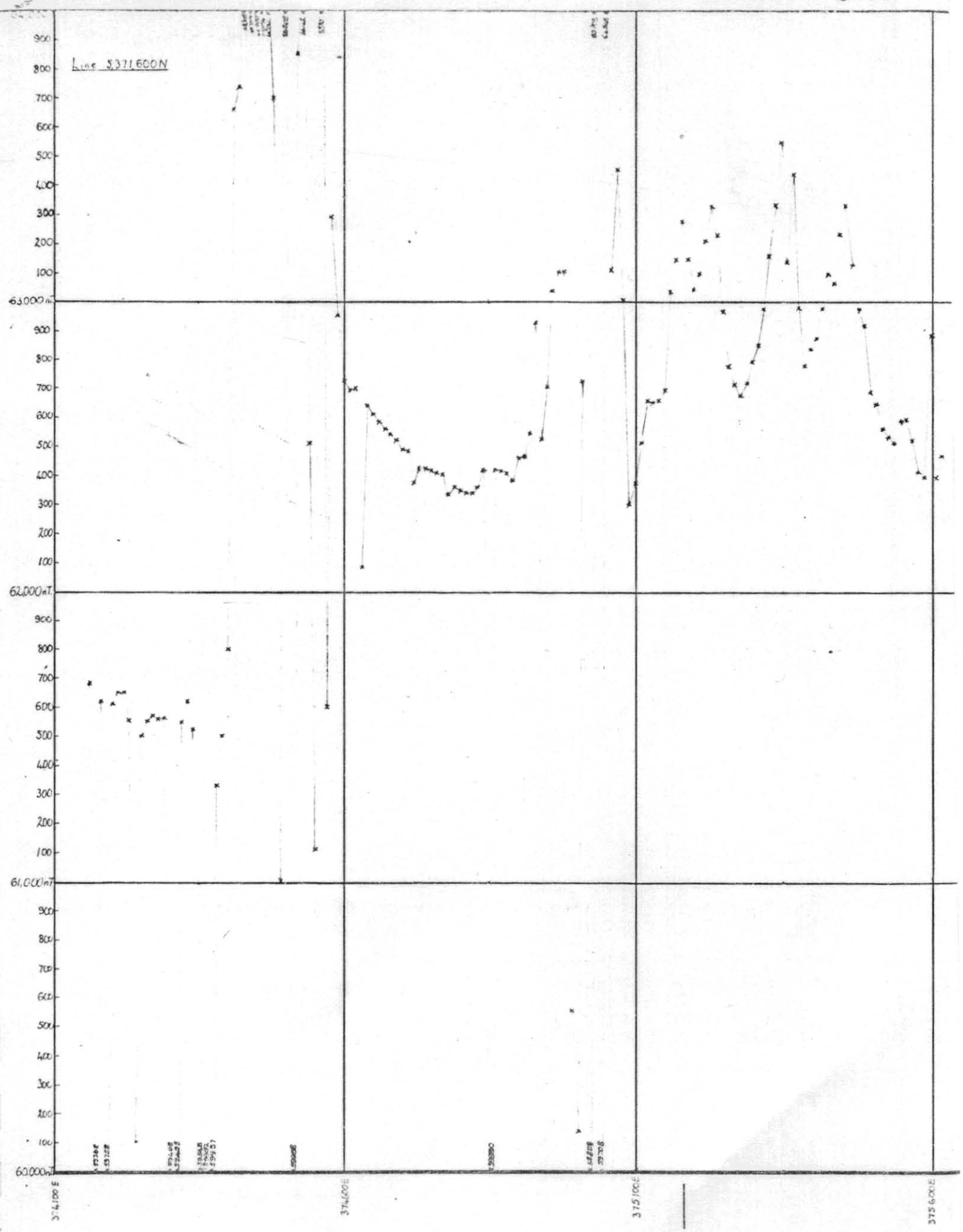

Line 5,372,000 N
64,000 nT
63,000 nT
62,000 nT
61,000 nT.
60,000 nT
374,100E
374,600E
375,100E

058762
5

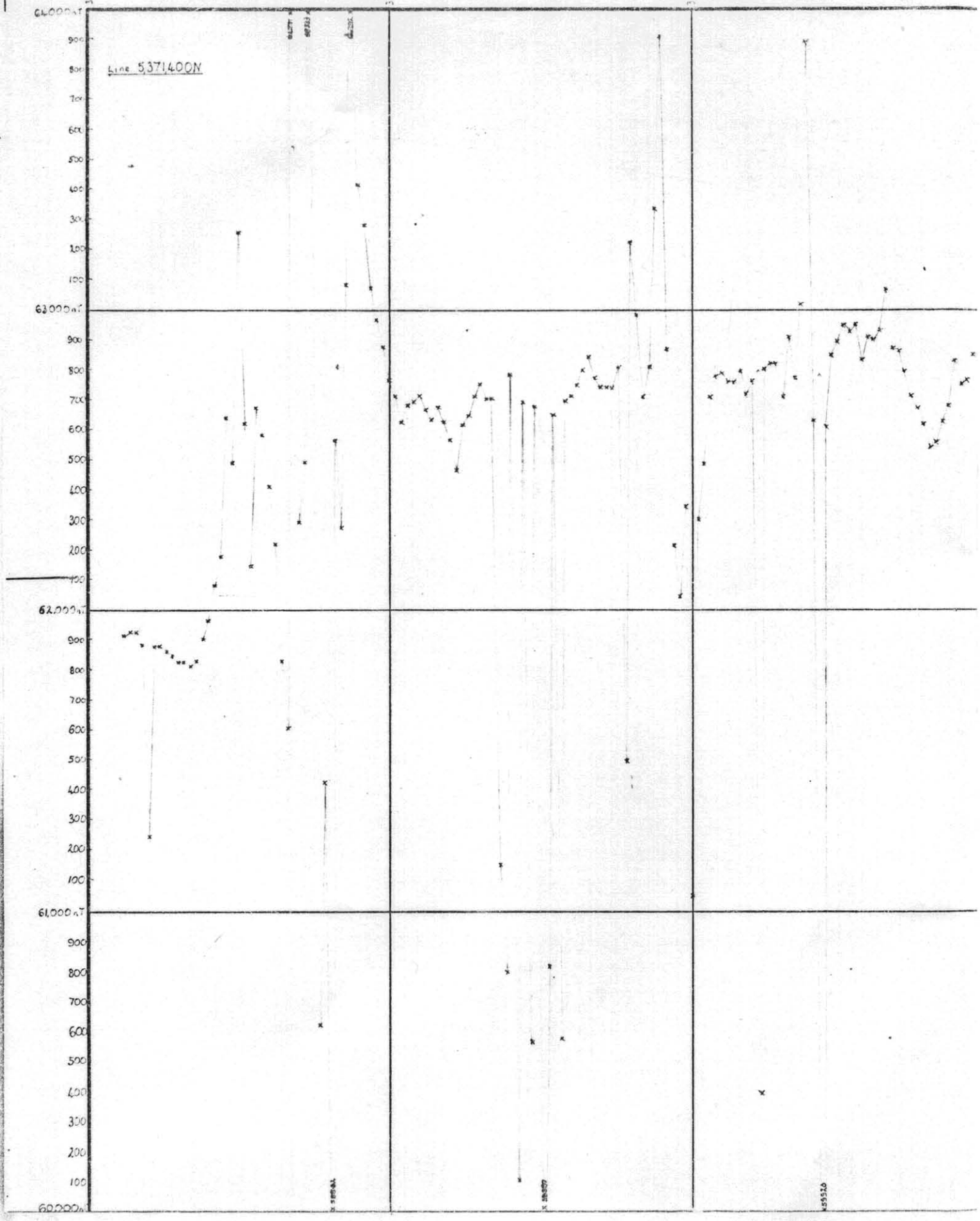

374100E
374600E
375100E
Line 5, 371,900N
64,000nT
63,000nT
62,000nT
61,000nT


Line 5,371,800N
63000nT
62,000nT
61,000nT
60,000nT
374,200E
374,600E
375,100E
375,600E

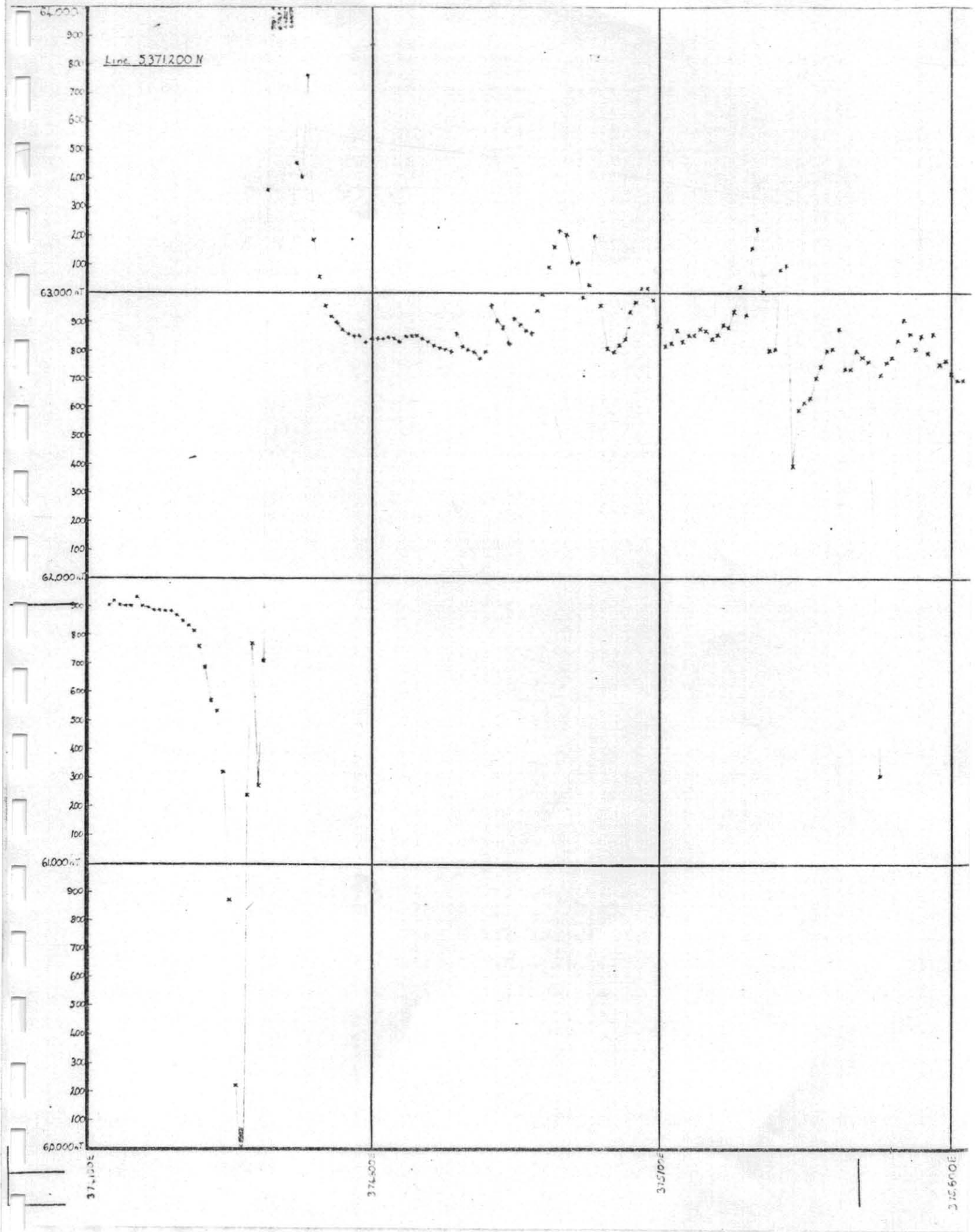

374,100E
374,600E
375,100E
64,000nT
63000nT
62,000nT
61,000nT
Line 5371 700N


Line 5371,600N
63,000nT
62,000nT
61,000nT
60,000nT
374,100E
374,600E
375,100E
375,600E

058766 9



Line 5,371,400N
64,000 nT
63,000 nT
62,000 nT
61,000 nT
60,000 nT
900
800
700
600
500
400
300
200
100


Line 5371200 N
63,000 nT
62,000 nT
61,000 nT
60,000 nT
374200E
374800E
375400E
376000E

058768

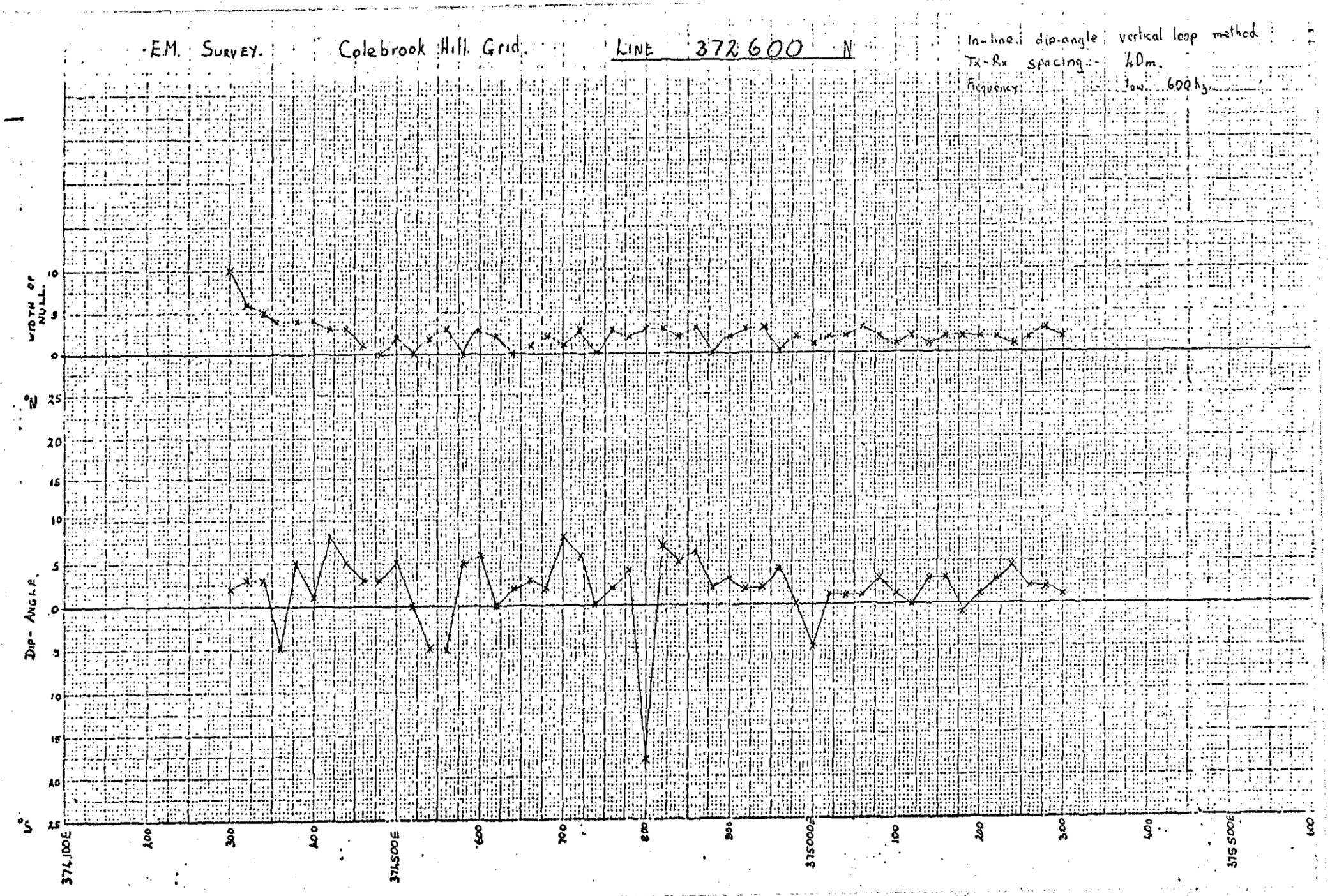
APPENDIX 11.

In line Vertical Loop E.M. Profiles - Colebrook Hill Grid.

05869

E.M. Survey. Colebrook Hill Grid. Line 372600 N

In-line dip-angle vertical loop method
Tx-Rx spacing :- 40m.
Frequency :- Low. 600 hz.

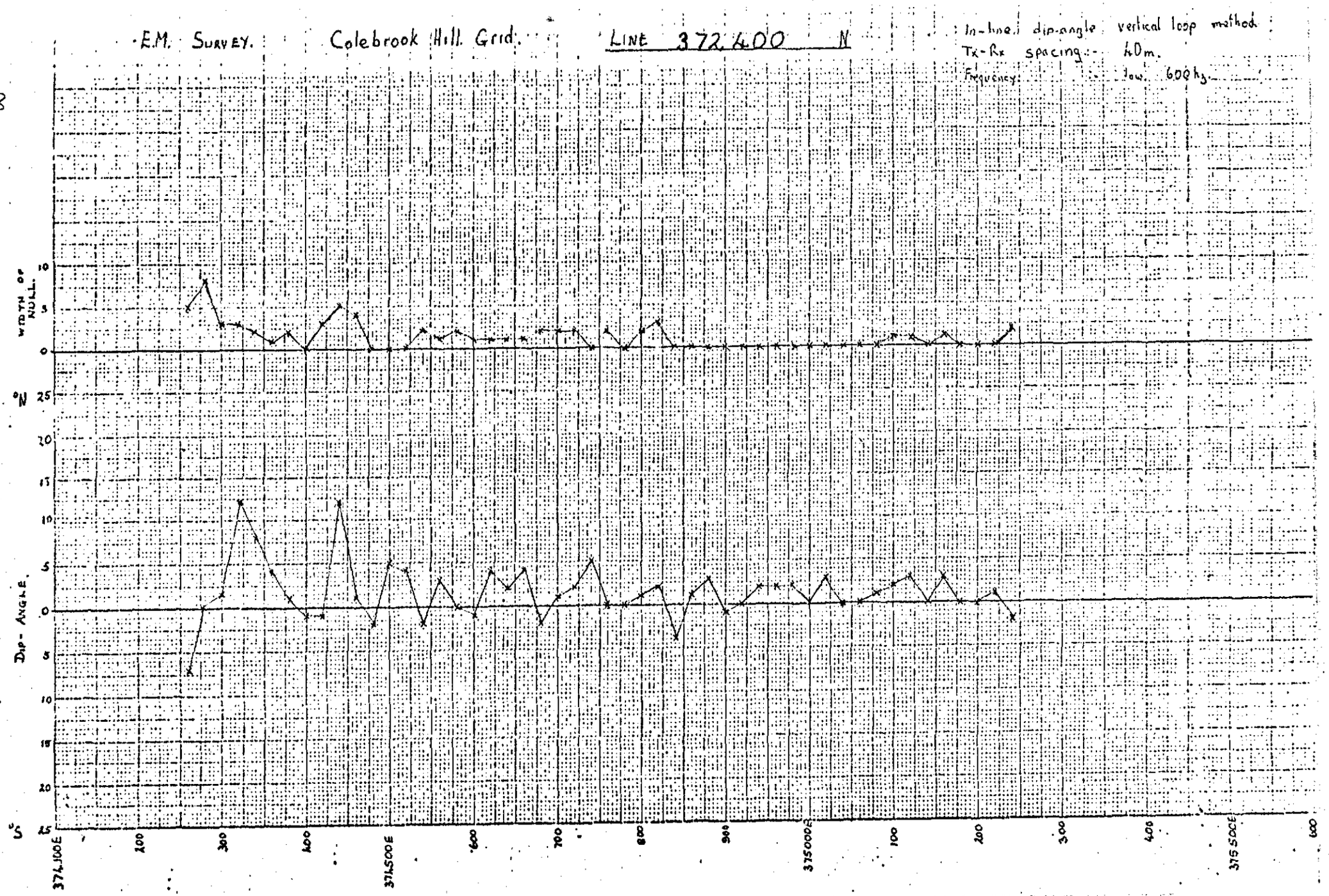


058770

2

E.M. Survey. Colebrook Hill Grid. Line 372,400 N

In-line dip-angle vertical loop method
Tx-Rx spacing:- 40m.
Frequency:- low. 600 hz.

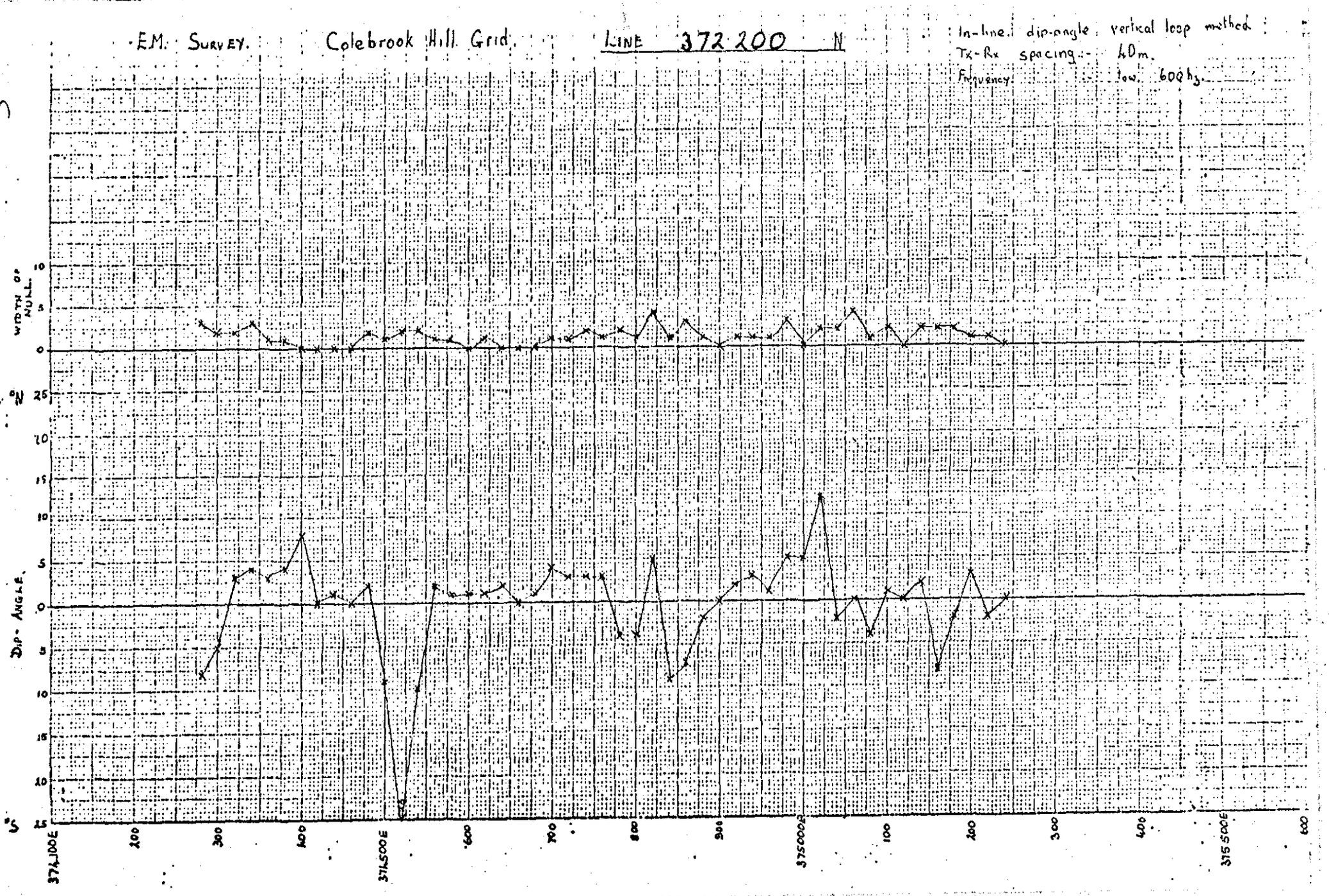


058771

3

E.M. Survey. Colebrook Hill Grid. Line 372 200 N

In-line dip-angle vertical loop method
Tx-Rx spacing :- 40m.
Frequency :- low. 600 hz.



058772

4

E.M. Survey. Colebrook Hill Grid. LINE 372,000 N

In-line dip-angle vertical loop method
Tx-Rx spacing :- 40m.
Frequency :- low. 600 hz.

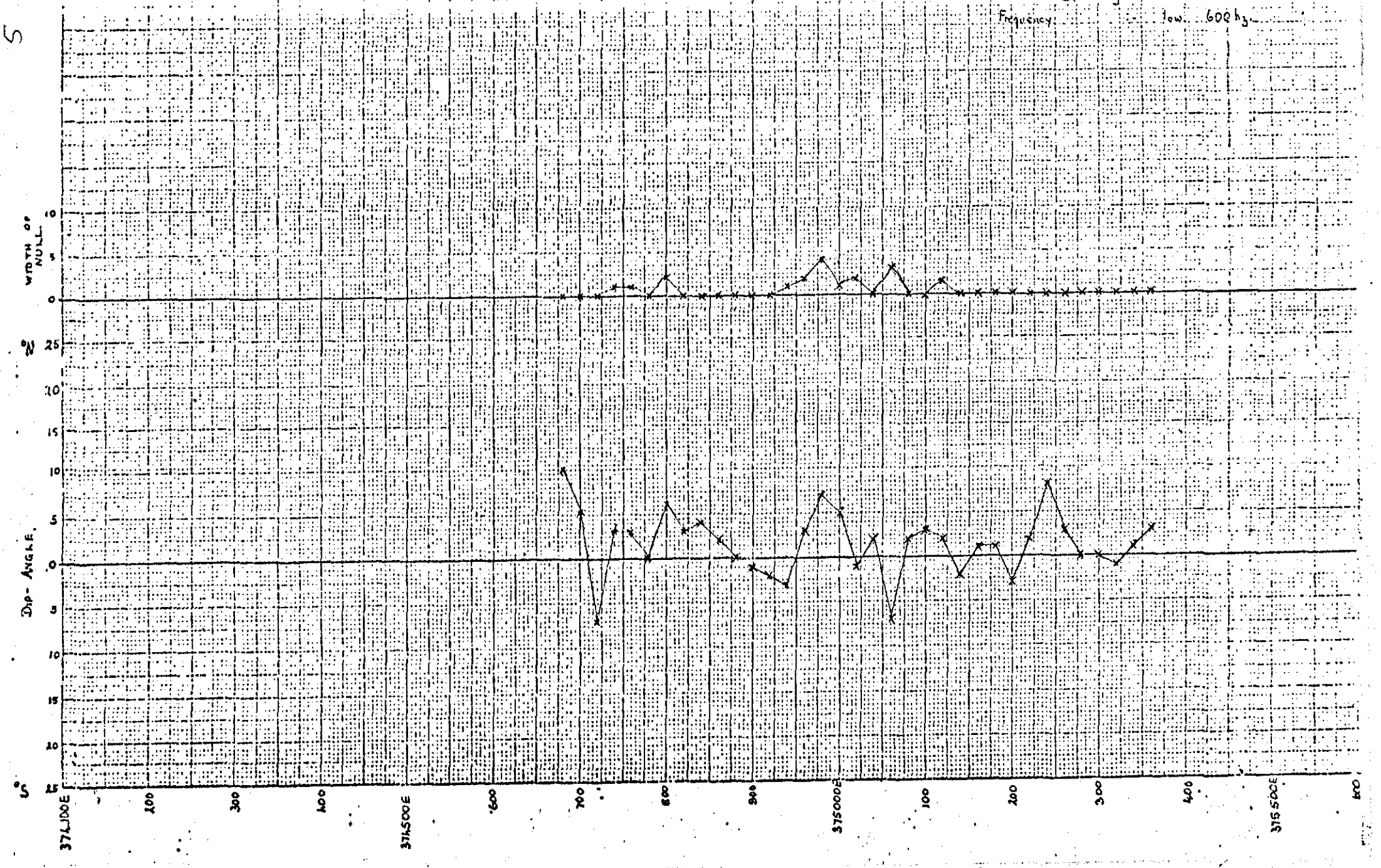


058773

5

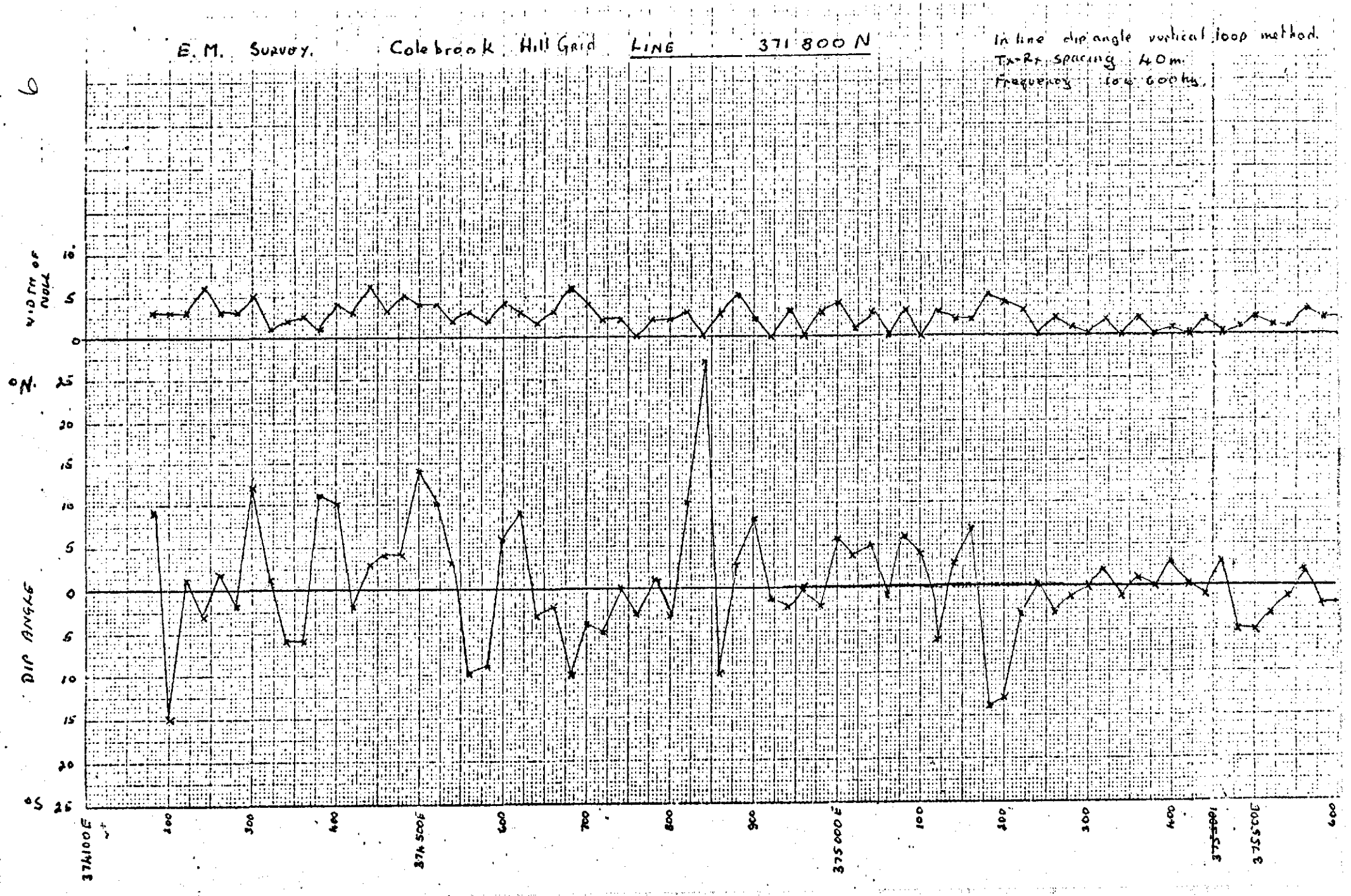
E.M. SURVEY. Colebrook Hill Grid. LINE 371 900 N

In-line dip-angle vertical loop method
Tx-Rx spacing:- 40m.
Frequency:- low 600 hz.



058774

6

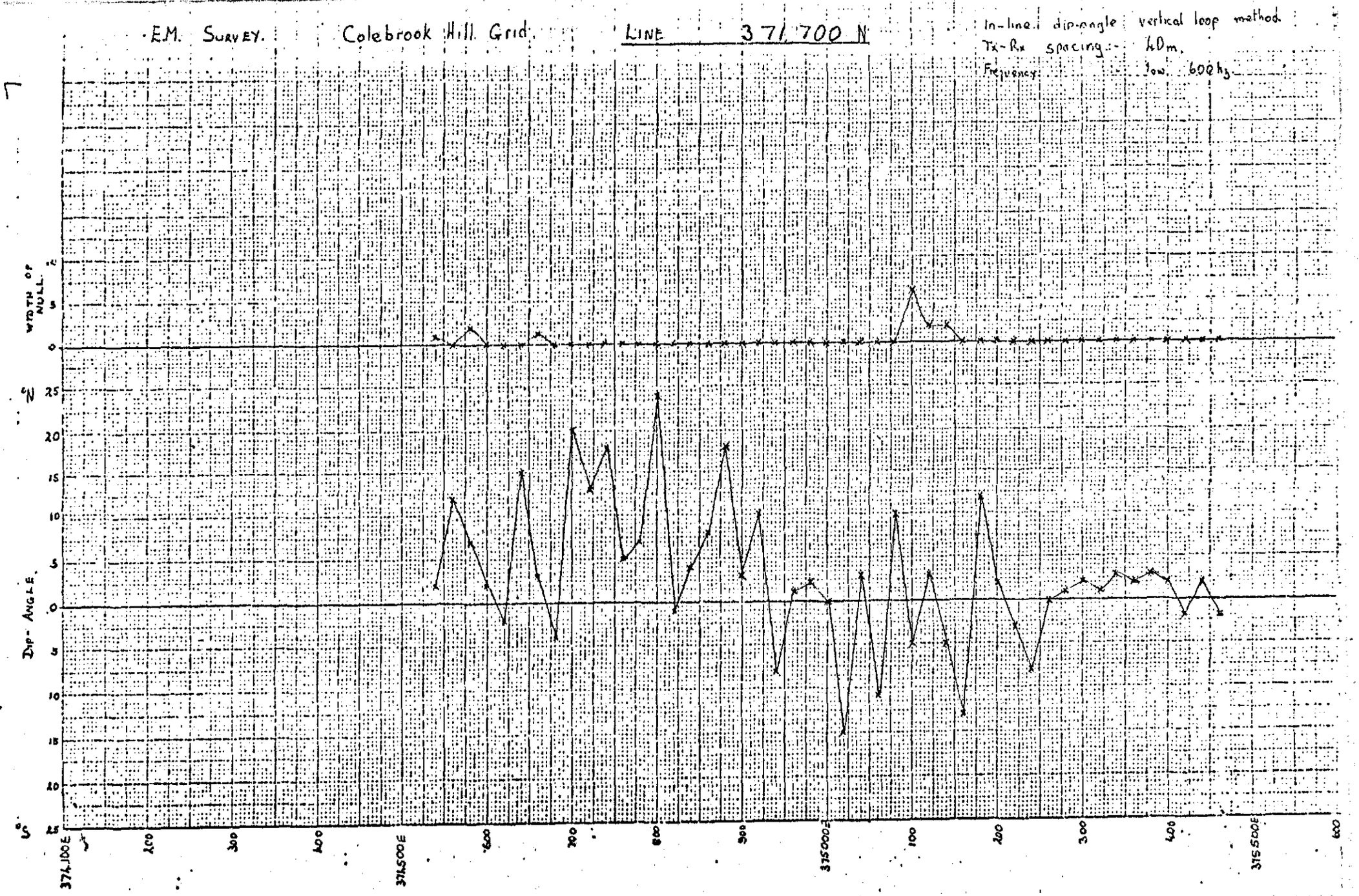


E. M. Survey. Colebrook Hill Grid LINE 371 800 N
In line dip angle vertical loop method.
Tx-Rx spacing 40m.
Frequency 10 & 600 hz.
WIDTH OF NULL
°N.
DIP ANGLE
°S
374100E
374500E
375000E
375500E

058775

E.M. Survey. Colebrook Hill Grid. LINE 37,700 N

In-line dip-angle vertical loop method
Tx-Rx spacing :- 40m.
Frequency :- low. 600 hz.

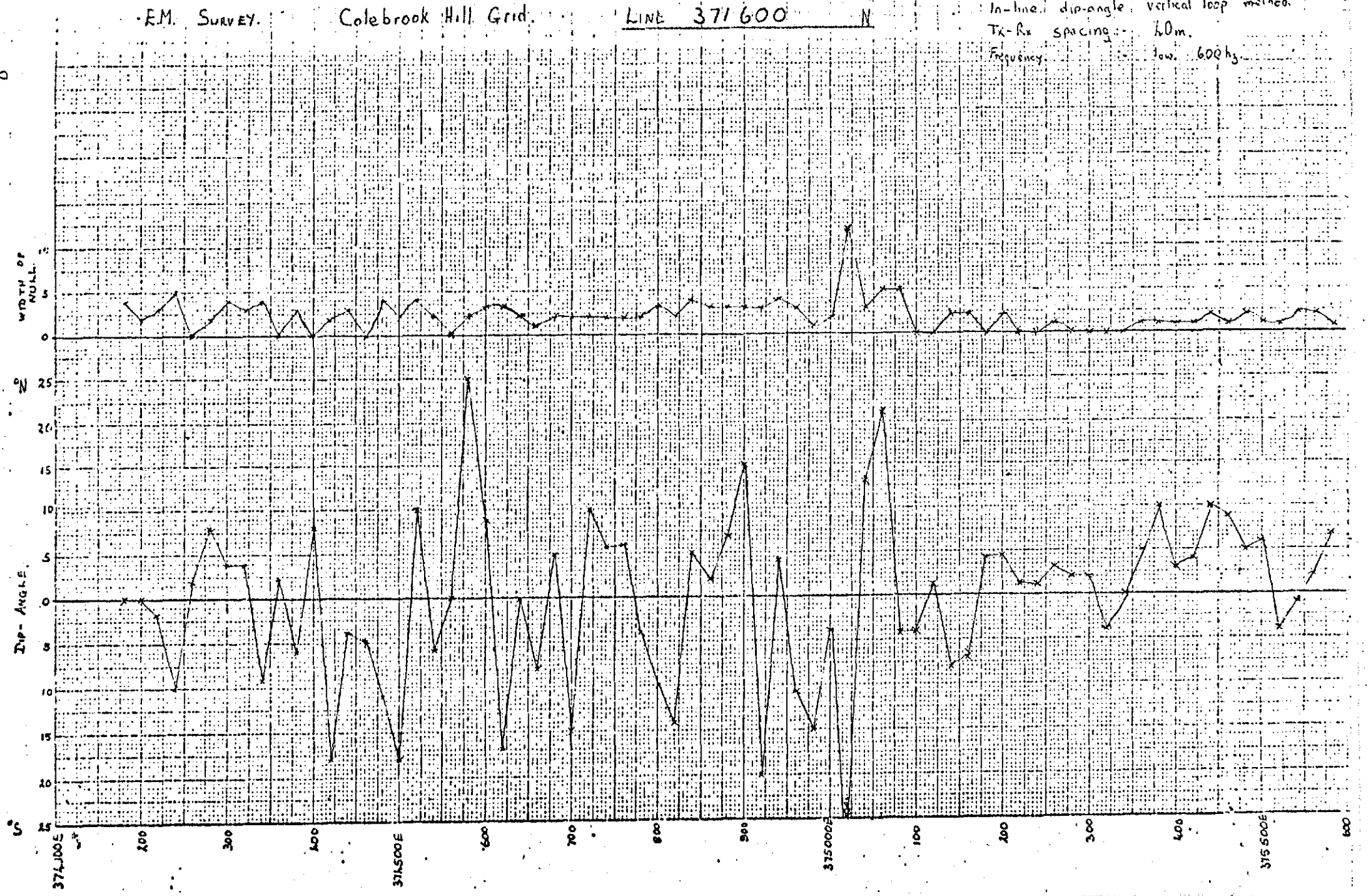


058776

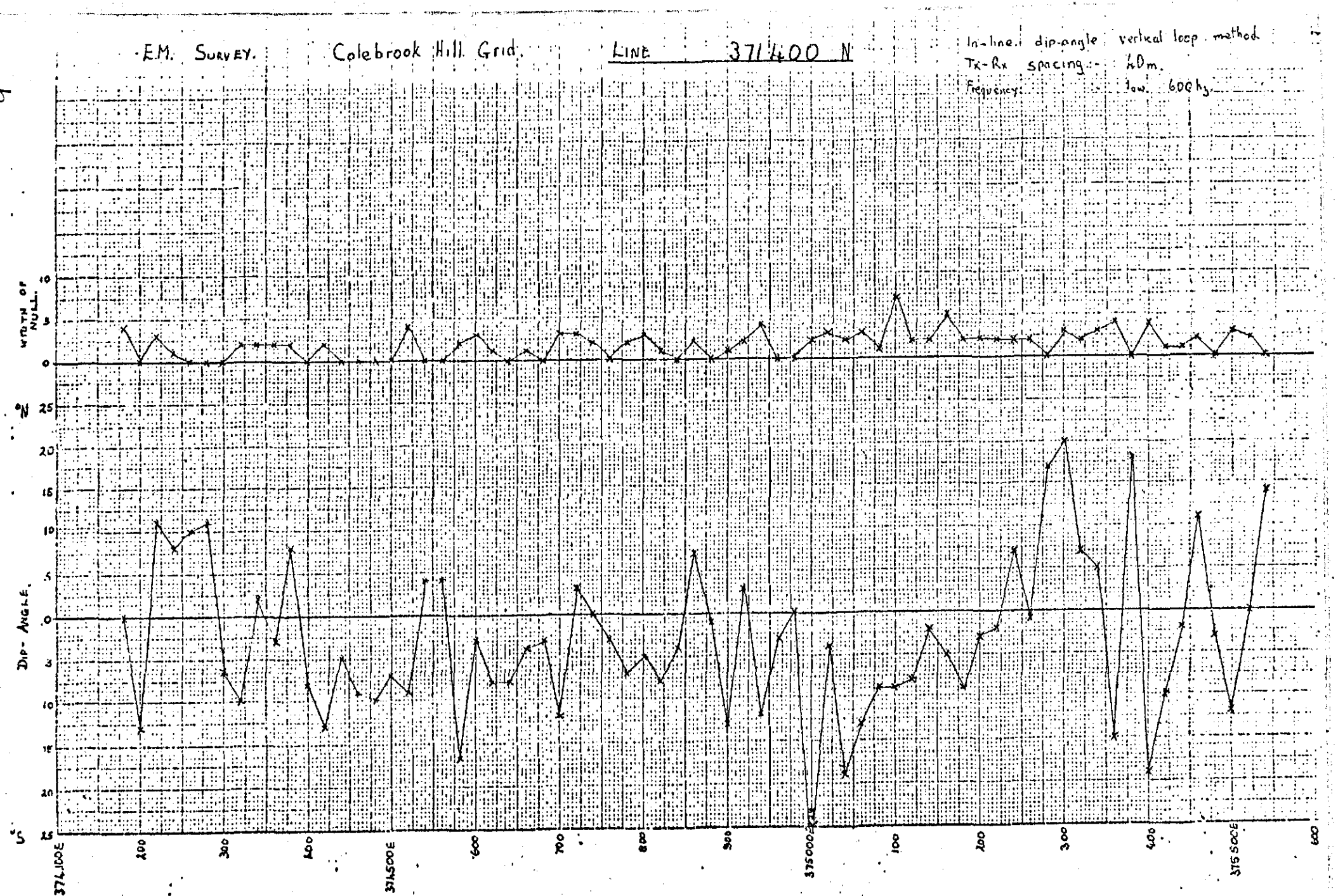
8

E.M. Survey. Colebrook Hill Grid. Line 371 600 N

In-line dip-angle vertical loop method.
Tx-Rx spacing :- 40m.
Frequency :- low. 600 hz.



058777

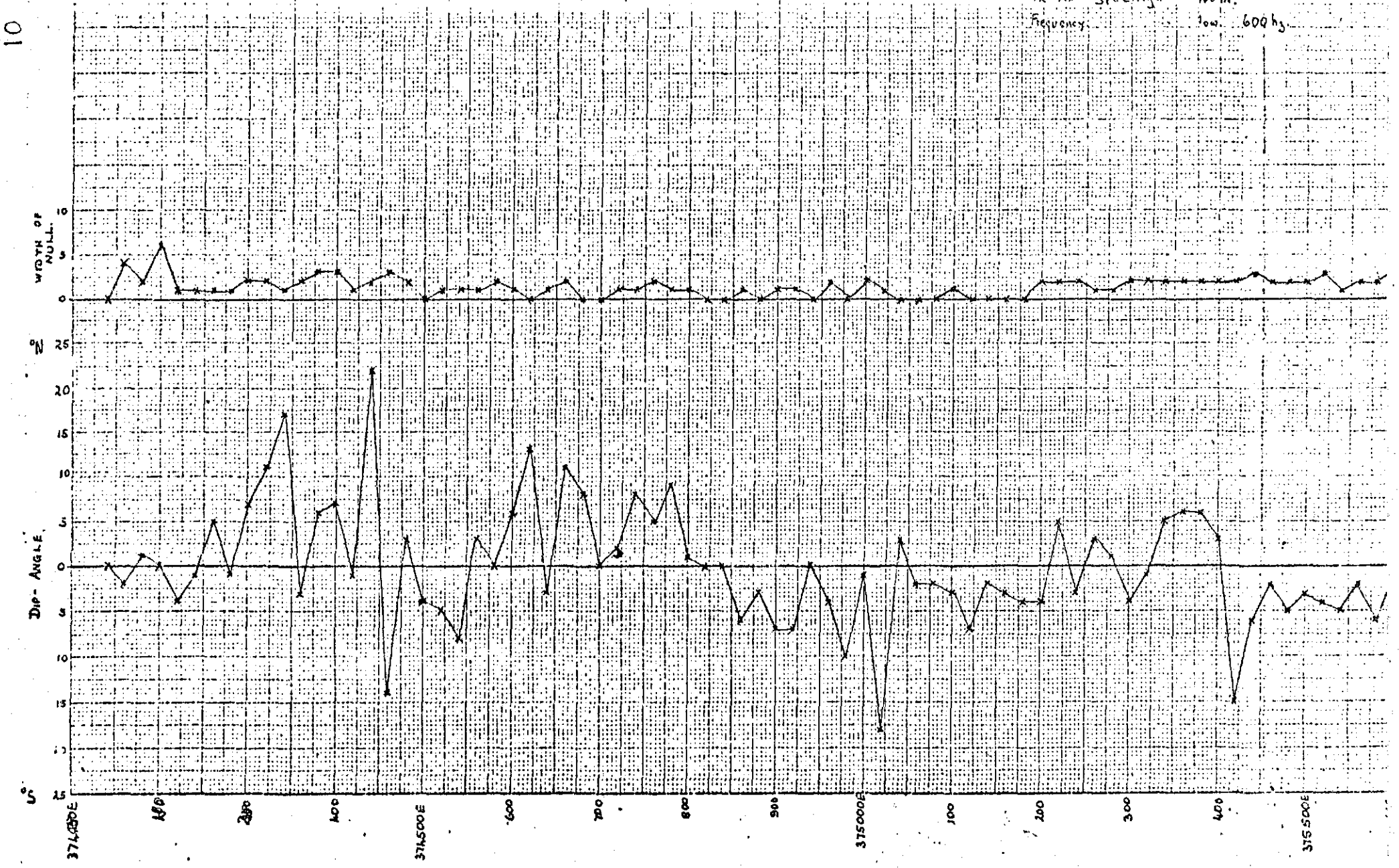

E.M. Survey. Colebrook Hill Grid. LINE 371400 N
In-line dip-angle vertical loop method
Tx-Rx spacing - 40m.
Frequency - low. 600 hz
WIDTH OF NULL
DIP-ANGLE
371000E
100
200
300
400
371500E
600
700
800
900
375000E
100
200
300
400
375500E
600

058778

10

E.M. Survey. Colebrook Hill Grid. Line 371,200 N

In-line dip-angle vertical loop method.
Tx-Rx spacing - 40m.
Frequency - low. 600 hz.



APPENDIX 12

Diamond Drill Logs	JCP 211
	MRP 212
	JCP 216

ELECTROLYTIC ZINC CO. OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. JCP 211 1 of 4

LOCATION	Mt. Black, White Spur – Jones Creek
OBJECTIVE	To test an I.P./soil geochemical anomaly
RESULT	A technical success, but no ore grade mineralisation intersected.

Depth (m)	Direction A.M.G.	Dip.
30	92°	-71.25°
60	94.5°	-70.75°
101	94.5°	-70 °
137	100.5°	-68 °
167	105°	-62
200	113°	-56.5°
221	110.5°	-51 °
242	107.5°	-43 °
299	103°	-36 °

COLLAR DIP. 70°
DIRECTION 092.5 A.M.G.
R.L. 911m
COORDINATES 5580S 370E (Dalwitz Grid)
AMG 5,364,611N 377,738E

TOTAL DEPTH 342.6m
HOLE SIZE NQ 71.2m rest BQ
COMMENCED 26.7.79
COMPLETED 20.8.79
LOGGED BY G. Iliff A.Mollison

DEPTH (m) FROM	TO	ROCK DESCRIPTION	MINERALISATION
			NOTE: Sample No's 28301 – 28353 and 28361 – 28368 are chip samples 28377 – 28396 are split core samples (excl. 28378) 28369 – 28376 and 28378 are petrological samples
0	10.6	Oxidised reworked tuff: tan, fine grained sorted tuff. Mn staining on joint faces.	
5.94	6.09	Gry-grn, fine grained dolerite intrusive.	
10.6	11.4	Gry-grn fg dolerite intrusive.	
11.4	16.9	Gry, coarse grained lithic vitric tuff with agglomerate lithic intervals. Mn stained joint faces.	
11.4	11.6	F.g. crystal vitric tuff.	
11.6	12.07	Interval of pink lithic vitric crystal tuff acidic felsic clasts.	
12.07	12.6	Grn, fg crystal vitric lithic tuff	
12.6	12.9	Interval of pink lithic vitric crystal tuff acidic felsic	
12.9	15.65	Olive grn, cleaved crystal vitric, lapilli tuff, acidic-dacitic with felsic lapilli	
15.65	16.9	Dk gry-grn cleaved crystal vitric tuff acidic-dacitic	
16.9	24.1	F.g reworked tuff, dk gry-grn, fg graded bedded vitric, lithic tuff; bedding 20°, occasional pumice frags, carbonate vnd.	
24.1	26.53	Coarse lapilli tuff; gry blotchy coarse grained lithic crystal vitric lapilli tuff, acid rhyo-dacite composition with silica feldsper carbonate & massive chlorite frags.	<1% pyrite

SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA Sample Length	Pb.	Zn.	Cu	Ag - g/t	Au - g/t	Fe%	Mn	CORE REC'D RUN	SHORT
28301	0	5		5.0	305	190	80	1.5			1100	0	–
302	5	10		5.0	20	175	90	x			1150	1.5	0.2
303	10	15		5.0	75	145	900	x			1200	2.5	0.3
304	15	20		5.0	100	180	120	x			1630	3.5	0.1
305	20	25		5.0	35	180	85	0.5			1700	5.5	0.2
306	25	30		5.0	15	90	35	x			1000	8.5	0.1
307	30	35		5.0	20	85	20	x			700	11.5	0.1
308	35	40		5.0	130	95	20	x			1300	14.5	–
309	40	45		5.0	25	150	10	x			1050	19.5	0.1
28310	45	50		5.0	20	50	20	x			1150	22.5	–
311	50	55		5.0	20	70	40	x			700	25.5	–
312	55	60		5.0	20	80	20	x			950	28.5	–
313	60	65		5.0	50	120	25	x			1000	31.5	–
314	65	70		5.0	35	65	15	x			730	34.5	–
315	70	75		5.0	15	70	15	x			950	37.5	0.2
316	75	80		5.0	25	80	15	x			900	40.5	–
317	80	85		5.0	30	100	120	x			1100	43.5	–
318	85	90		5.0	30	100	20	x			1000	46.5	–
319	90	95		5.0	15	90	15	x			1050	49.5	–
28320	95	100		5.0	35	90	35	x			680	52.5	–
321	100	105		5.0	25	85	20	x			720	55.5	–
322	105	110		5.0	15	90	60	x			670	58.5	–
323	110	115		5.0	5	100	15	x			1000	61.5	–
324	115	120		5.0	10	105	20	x			900	64.5	–
325	120	125		5.0	5	95	15	x			740	67.5	–
326	125	130		5.0	15	115	10	x			710	70.5	–
327	130	135		5.0	210	500	20	x			1050	73.5	–
328	135	140		5.0	55	150	20	x			675	76.5	–
329	140	145		5.0	110	225	20	0.5			950	79.5	–
28330	145	150		5.0	330	900	45	x			1000	82.6	–
331	150	155		5.0	10	80	15	x			680	85.6	–
332	155	160		5.0	15	70	15	x			660	88.6	–
333	160	165		5.0	10	65	10	x			780	91.6	–
334	165	170		5.0	15	50	15	x			950	94.6	–
335	170	175		5.0	15	50	10	x			1050	97.6	–
336	175	180		5.0	5	50	10	x			1200	100.6	–
337	180	185		5.0	5	50	10	x			760	103.6	–
338	185	190		5.0	130	400	10	x			750	106.6	–
339	190	195		5.0	10	55	15	x			750	109.6	–

ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. JCP 211 2 of 4

0581-1

DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm: Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	CORE REC'D: RUN	SHORT
26.53	42.7	Gry-grn f g crystal tuff, felsic composition		28340	195	200		5.0	25	50	40	x			790	112.6	–
				341	200	205		5.0	10	50	x	x			740	115.6	–
26.53	30.7	Zone: quartz veins with yellow oxidation haloes		342	205	210		5.0	10	50	x	x			760	118.6	–
				343	210	215		5.0	10	60	10	x			800	121.6	–
				344	215	220		5.0	210	410	15	x			760	124.6	–
35.2	36.85	Zone of oxidation, yellow with Mn stained joint faces.		345	220	225		5.0	145	250	10	x			1000	127.6	–
				346	225	230		5.0	10	55	10	x			950	130.6	–
				347	230	235		5.0	10	60	x	x			750	133.6	–
36.85	42.7	Zone of fine irregular qtz & carbonate vning		348	235	240		5.0	15	80	x	x			900	136.6	–
				349	240	245		5.0	15	60	x	x			700	139.6	–
				28350	245	250		5.0	5	55	x	x			1000	142.6	–
42.7	53.45	Reworked tuff; gry to gry-grn fg bedded, sorted siltstone/tuff, fine qtz veined.	T28369 Sericitic, mildly sheared pelitic sed; subaqueous tuff (51m)	351	250	255		5.0	10	55	x	x			950	145.6	–
				352	255	260		5.0	5	55	x	x			950	148.6	–
51.2		Quartz carbonate veining		353	260	265		5.0	270	790	10	x			730	151.6	–
53.2		" " "														154.6	–
																157.6	–
				28377	266	268		2.0	1050	2500	35	0.5			1600	160.6	–
53.45	55.2	Gry-grn fg crystal vitric tuff, acid felsic composition, feldspar phenocrysts		379	268	270		2.0	385	740	35	x			1150	163.6	–
				28380	270	272		2.0	370	590	55	x			1400	166.6	–
				381	272	274		2.0	365	660	40	x			980	169.6	–
55.2	104.4	Lapilli tuff; dk gry with pink frags, coarse grained crystal, vitric tuff, acid-felsic composition. Sparse brecciated qtz-chl vns elongation of frags, pink felsic frags, containing qtz phenocryste, siltstone frags end massive sulphide frags.	<1% pyrite T28370 (71.8,) altered & sheared rhyolitic tuff; flow or auto-brecciated ignimbrite	382	274	276		2.0	695	2000	30	x			855	172.6	–
				383	276	278		2.0	1300	2700	20	x			730	175.6	–
				384	278	280		2.0	60	155	25	x			870	178.6	–
				385	280	282		2.0	2850	9500	30	2.0			900	181.6	–
				386	282	284		2.0	850	2000	25	0.5			770	184.6	–
				387	284	286		2.0	2000	4950	20	1.5			710	187.6	–
				388	286	288		2.0	1950	4850	30	0.5			810	190.6	–
66		Large pink felsic, lithic frags.		389	288	290		2.0	1150	3050	30	1.0			760	193.6	–
				28390	290	292		2.0	190	320	30	x			735	196.6	–
68.4	73.7	Agglomerate zone of pink felsic lithic frags		391	292	294		2.0	45	280	30	x			590	199.6	–
				392	294	296		2.0	175	475	45	x			850	202.6	–
73.7	84.2	Zone of crystal vitric tuff with fine felsic lithic fragments		393	296	298		2.0	430	1450	45	0.5			900	205.6	–
				394	298	300		2.0	950	1800	90	1.5			1100	208.6	–
				395	300	302		2.0	30	195	50	x			1050	211.6	–
84.2	85.5	Zone of agglomerate: pink felsic lithic frags		396	302	304		2.0	15	215	15	x			1450	214.6	–
																217.6	–
85.5	89.6	Zone of crystal vitric tuff with fine felsic with fine felsic frags & brecciated qtz carbonate veins		28361	300	305		5.0	20	210	10	x			1600	220.6	–
				362	305	310		5.0	85	190	45	x			1700	223.6	–
				363	310	315		5.0	470	660	45	x			2000	226.6	–
				364	315	320		5.0	195	530	20	x			2300	229.6	–
89.6	104.4	Brecciated qtz carbonate vns dominant in crystal vitric tuff	pyrite in qtz carb veins.	365	320	325		5.0	40	320	5	x			2650	232.6	–
				366	325	330		5.0	30	150	x	x			570	235.6	–
				367	330	335		5.0	25	100	x	x			1300	238.6	–
				368	335	342.6		7.6	25	105	x	x			1500	241.6	–
																244.6	–
																247.6	–

ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. JCP 211 3 of 4

DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm: Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	CORE REC'D RUN	CORE REC'D SHORT
104.4	142.3	Light gry welded tuff; coarse grained crystal vitric welded tuff with strong elongation parallel to the core, acidic qtz-feldspar composition, lithic frags of altered siltstone & massive pyrite	Frags of massive pyrite <1% T28371 (122.9m) decitic xeno-lithic acid tuff sheared probably an ignimbrite; very fg ?tetra-hedrite ± galena													250.6	–
																253.6	–
																256.6	–
																259.6	–
																262.6	–
																265.6	–
																268.6	–
132.2	132.7	Zone of yellow stained quartz veining.														271.6	–
																274.6	–
142.3	148.2	Contact angle 20° grey siltstone inter-bedded with fine crystal vitric tuff with aragonite filled tension gashes in the siltstone.	Pyrite & pyrrhotite stratiform in stringers and in aragonite tension gashes <5%													277.6	–
																280.6	–
																283.6	–
																286.6	–
																289.6	–
143.4	144.65	Tuff band in the siltstone														292.6	–
																295.6	–
144.65	147.2	Siltstone zone with high proportion of aragonite filled tension gashes & qtz vning														298.6	–
																301.6	–
																304.6	–
148.2	217.75	Ple gry-grn speckled fg to cg bedded sch crystal, vitric, lithic tuff with pumice fragments (ashflow)	Pyrite & pyrrhotite in frags, dies & in cleavage planes <1%													307.6	–
																310.6	–
																313.6	–
																317.6	–
148.2	149.5	Gry, fg rock with complex mesoscopic sed-imentary & metamorphic textures, eg chevrons slumps, faults, cleaved, qtz, carbonate veined, rich in sericite & chlorite	Pyrite & pyrrhotite in qtz vns													320.6	–
																323.6	–
																326.6	–
																329.6	–
																332.6	–
149.5	155	Transition zone of coarsening texture; gry-grn, fg becoming coarse grained with large fiamme, some elongation of fragments	Discrete frags of massive pyrite <1%													335.6	–
																338.6	–
																341.6	–
																342.6	EOH
184.74	185.3	Shear zone with a high proportion of sericite and chlorite & lustrous slicken-siding at 15° to 30° to the axis of the core	T28372 (185.3m) alt & sheared dacitic lithic-vitric-crystal tuff; minor ?marcasite, partly rimmed with film of sphalerite														
192.	217.75	Highcarbonate content	Siderite or Mn carbonate														
205	215	Zone of large chl vitric fragments >1cm															
217.75	221.7	Siltstone ashfall: dk gry fg laminated silty ashfall with qtz-carb rich laminae & aragonite/ pyrrhotite filled tension gashes	Pyrite <1% pyrrhotite & stringer														

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ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. JCP 211 4 of 4

DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm: Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	CORE REC'D RUN	CORE REC'D SHORT
			T28373(218.7m) mildly sheared metapelite, laminated silty shale														
221.7	224.86	Reworked tuff; light gry, fg and f-mg vitric lithic tuff with carb alteration, bedded 40° to core axis.															
224.86	254.8	Felsic ashflow; ple gry coarse grained ash flow with feldspar phenocrysts containing large frags of siltstone.	Pyrite, minor disseminated & on cleavage planes <1% T28374 (230.2m) devit. alt. shrd, weakly xenolithic dacitic lithic-vitric-crystal tuff probably ignimbrite														
254.8	262.5	Reworked tuff; gry, fg bedded sorted acid tuff with minor carbonate															
262.5	303.75	Mineralised siltstone; gry laminated siltstone bedded 40° to core axis facing up hole, aragonite/pyrrhotite filled tension gashes.	pyrite & pyrrhotite stratiform in tension gashes and in stringers <5% galena & sphalerite in qtz stringers <1%														
263.7	266.2	Reworked tuff															
302.3	303.75	Zone altered by dolerite: pervasive & oolitic carbonate alteration of the siltstone, tension gashes carbonate remobilised	T28375 (287m) shrd low grade metapelite weakly carbonaceous siltstone														
303.75	322.5	Dolerite: grn mg basic igneous with about 2.5%	T28376 (325m) mildly alt & shrd porphyritic rhyodecite "orthoclase dacite" ?minor intrusive														
303.75	305.2	chilled margin containing xenoliths of siltstone. No chilled margin on lower contact.															
322.5	342.6	Pale gry mg rhyolitic ?intrusive; chilled margin against dolerite	T28378 (303.75m) intrusive devit mildly alt porphyritic dacitic														
	E.O.H.		Trace diss pyrite														

ELECTROLYTIC ZINC CO. OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. MRP 212 1 of 14

LOCATION Mt. Black E.L. 1/62 – Murchison River Grid

OBJECTIVE To test E.I.P. gradient array chargeability anomaly under glacial cover and to intersect the contact with the Farrell Slates

RESULT Intermediate volcanics overlie the Farrell Slates with a fault contact. Mineralised sediments occur on the fault contact.

Depth (m)	Direction	Dip.
49	90°	-54.5°
143	89°	-43 °
200.5	90°	-37 °
293.5	96°	-25 °

Depth (m)	Direction	Dip.
		A.M.G.

COLLAR DIP. -60°
DIRECTION 90° AMG
R.L. 170.0m
COORDINATES 375,300N/384,510E
5,375,330.6N 384,424.4E

TOTAL DEPTH 293.5m
HOLE SIZE HQ 15m; NQ 49m; BQ and
COMMENCED 12th November, 1979
COMPLETED 19th December, 1979
LOGGED BY I.R. McDonald

DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm unless specified: Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	Sn	Sample type
								Sn assays are by A.A.S. unless prefixed by px or fx									
								px assays are by pressed powder XRF									
								fx assays are by fusion XRF									
0	14.4	Glacial sediments. Pebbles & boulders of quartzite (?pre-Cambrian); Mt. Read Volcanics & Mafic Intrusives															
14.4	16.85	Grn to gry f-mg and m-cg porphyritic lithic vitric crystal intermediate tuff with feldspar phenocrysts & chloritised matrix. Ignimbrite texture is indicated by bands of alternating grainsize; bands 200-500mm wide. 15.5-16m Pink feldspars, possible albitisation		31905	15	20	5.0	5.0	25	200	5	0.5		8.3	2250	70	chip
				906	20	25	5.0	5.0	10	140	5	0.3		6.25	1850	16	"
				907	25	30	5.0	5.0	30	130	5	0.1		5.25	1300	5	"
				908	30	35	5.0	5.0	10	140	x	x		5.75	1600	2	"
				909	35	40	5.0	5.0	5	165	x	0.3		6.45	1550	1	"
				31910	40	43.3	3.30	3.30	5	180	5	0.2		6.30	1800	x	"
16.85	18.6	Grn fg massive crystal vitric intermediate tuff, strongly chloritised with minor feldspar phenocrysts, contacts gradational		911	43.3	43.8	0.5	0.5	55	245	40	1.0	x	10.0	1950	56	split
				912	43.8	44.45	0.65	0.65	125	280	80	1.0	x	7.70	2500	6	"
				913	44.45	44.75	0.30	0.30	15	165	20	x	0.10	10.00	1900	70	"
				914	44.75	45	0.13	0.25	55	170	35	1.5	0.10	13.5	2000	fx1150	"
18.6	19.4	Gry-grn f-mg porphyritic crystal vitric intermediate tuff; possible ashflow with feldspar phenocrysts & chloritised matrix 18.8-18.95 Weak breccia with qtz-carb vns & chl clots 19.1-19.4 Weak foliation at 40°	18.7 Irregular qtz vn with 5% cg pyrite. 19.1 Qtz-carb vn 10mm thick, 50° to core with 5% cg py	915	45	45.3	0.3	0.3	505	180	250	5.5	x	19.5	1500	fx 450	"
				916	45.3	45.5	0.16	0.2	435	295	615	5.0	x	16.5	290	fx 740	"
				917	45.5	46.35	0.85	0.85	40	200	160	x	0.05	12.5	2350	fx 380	"
				918	46.35	46.85	0.5	0.5	35	120	115	0.5	x	7.8	1350	fx 300	"
				919	46.85	49.1	2.25	2.25	80	355	5	0.30		5.35	1900	px 395	chip
				31920	49.1	49.8	0.7	0.7	110	230	30	x	x	4.3	2050	2	split
				921	49.8	55	5.2	5.2	35	140	x	0.1		3.8	1300	6	chip
19.4	21.5	Gry-grn fg massive crystal vitric intermediate tuff with feldspar phenocrysts & chloritised matrix. Weak qtz-carb vns. Lower contact diffuse ~30°	21.45 Qtz carb vn 5mm thick at 60°. Approx 2%fg diss py around the vein	922	55	60	5.0	5.0	30	160	5	0.5		4.3	2250	20	"
				923	60	65	5.0	5.0	45	150	x	0.3		4.5	2300	2	"
				924	65	70	5.0	5.0	x	85	10	0.1		3.05	1000	10	"
				925	70	75	5.0	5.0	5	80	x	0.1		3.1	1050	2	"
				926	75	80	5.0	5.0	100	165	10	1.2		5.10	1750	16	"
21.5	23.45	Grn gry mg porphyritic vitric crystal intermediate tuff with feldspar phenocrysts & chloritised matrix. Thin carb vns. Lower contact diffuse about 25°.	21.5-23.45 Rare diss py <1% mainly assoc with veins	927	80	85	5.0	5.0	240	170	x	0.3		3.15	1600	10	"
				928	85	87.35	2.35	2.35	340	300	10	0.2		4.0	1950	11	"
				31985	87.35	88.2	0.8	0.85	165	40	40	x	x	2.95	1500	20	split
				31986	88.2	89.1	0.7	0.9	80	125	10	x	x	1.35	900	x	"
				987	89.1	90	0.9	0.9	80	105	30	0.5	x	0.90	510	x	"
23.45	23.65	Grn fg massive vitric intermediate ?tuff. Chloritised with very cg carb rhombs. Moderate to strong foliation 35° Limonite staining on foliation surfaces. Lower contact gradational	23.45-23.65 Minor diss py <1%	988	90	90.35	0.35	0.35	45	155	5	x	x	2.65	300	x	"
				989	90.35	90.80	0.4	0.45	10	100	5	x	x	1.85	715	x	"
				31990	90.8	91	0.2	0.2	145	165	5	0.5	x	2.0	655	x	"
				991	91	91.6	0.6	0.6	140	105	5	x	0.3	1.7	500	x	"
				992	91.6	92.6	1.0	1.0	10	65	x	1.0	x	2.0	1200	x	"
				993	92.6	93.7	1.1	1.1	5	125	5	x	0.15	3.80	1200	x	"

ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. MRP 212 2 of 14

DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm unless specified: Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	Sn	Sample type
23.65	32.85	Grn-gry f-mg porphyritic intermediate tuff with feldspar phenocrysts; chloritised. Some ignimbrite texture suggested by bands of variable grainsize & porphyricity. Very *weak foliation 60-70°*															
		27.5m Sample 29705 Thin section: Sheared porphyritic sodic trachyte		31929	93.70	98.70	5.0	5.0	x	80	x	0.1		3.25	1000	x	chip
				930	98.70	102.90	4.2	4.2	60	140	x	0.1		4.8	1350	4	chip
		29.9-30.3 Qtz vn 15mm thick at 10° with mass. chlorite blebs		31994	102.9	103.4	0.5	0.5	4250	95	5	7.5	0.03	1.9	1600	x	split
		Lower contact gradational.		31931	103.4	108.4	5.0	5.0	35	70	5	0.1		3.65	2000	x	chip
				932	108.4	113.4	5.0	5.0	x	50	x	0.2		1.9	790	x	chip
32.85	34.4	Gry-grn fg massive vitric crystal intermediate tuff. Chloritised with minor feldspar phenocrysts. Thin qtz-carb vns. Lower contact diffuse ~60° with thin vns.		933	113.4	118.4	5.0	5.0	x	5	40	0.2		2.55	1250	x	chip
				934	118.4	123.4	5.0	5.0	x	90	x	x		3.80	1200	26	chip
				935	123.4	128.4	5.0	5.0	5	45	x	0.2		2.05	720	x	chip
				936	128.4	133.4	5.0	5.0	10	95	x	0.2		4.2	1350	x	chip
34.4	41.05	Gry grn f-mg porphyritic vitric crystal intermediate tuff. Chloritised with feldspar phenocrysts. Some ignimbtite texture suggested by bands of variable grainsize & porphyricity	41.0 Qtz-carb-limonite vn 3mm wide at 65° with 2% diss py in walls	937	133.4	134.3	0.9	0.9	25	220	10	0.1		6.15	1500	2	chip
				31995	134.3	134.5	0.2	0.2	365	145	1050	11.0	0.10	5.60	1300	8	split
		32.2-37.7 Weak breccia. Irregular qtz vns with chl selvidges and irregular chl laths		996	134.5	135.3	0.8	0.8	70	135	95	1.5	x	10.0	1500	7	Split
		Lower contact 50°		31938	135.3	140.3	5.0	5.0	10	85	x	x		3.7	1200	x	chip
				939	140.3	145.3	5.0	5.0	5	65	x	0.1		2.60	950	4	chip
				940	145.3	150.3	5.0	5.0	20	165	x	0.1		4.0	1200	x	chip
41.05	41.55	Gry-grn fg massive crystal vitric intermediate ?tuff chloritised with minor feldspar phenocrysts. Qtz-carb vns & irregular blebs especially between 41.4-41.55		941	150.3	155.3	5.0	5.0	x	70	x	0.1		2.55	860	x	chip
				942	155.3	160.3	5.0	5.0	x	70	x	0.1		2.35	1200	x	chip
				943	160.3	163.4	3.1	3.1	10	80	x	x		1.9	1200	x	chip
		41.2 Sample 29706 Thin Section Altered porphyritic andesite		31997	163.4	163.7	0.3	0.3	120	260	25	0.5	x	5.6	2450	x	split
				998	163.7	164.0	0.3	0.3	2.6%	15.0%	1150	51.5	1.15	9.0	1550	104	split
		Lower contact diffuse ~30°		999	164.0	164.5	0.5	0.5	1950	4700	30	3.0	x	8.5	2200	12	split
41.55	44.45	Gry-grn f-mg porphyritic lithic vitric crystal intermediate tuff. chloritised with feldspar phenocryste rarely of lapilli size Thin qtz-carb vns.		31944	164.5	169.5	5.0	5.0	x	90	x	0.1		4.1	1400	3	chip
			43.4 Qtz carb vn 40mm at 70° 5% *cg py in vns*	945	169.5	172.1	2.6	2.6	45	200	35	x		6.2	1900	4	chip
				32000	172.1	172.45	0.35	0.35	245	800	5	1.0	x	2.35	1050	x	split
		43.6-43.8 gry-grn fg mass. crystal vitric intermediate tuff. Chloritised		33001	172.45	173.0	0.55	0.55	335	750	90	2.5	x	9.5	4050	110	split
				002	173.0	173.25	0.25	0.25	85	225	5	0.5	x	2.55	1050	6	split
44.45	44.75	Gry-grn fg mass crystal vitric intermediate tuff; feldspar chl; chloritised.	Pyrite 5% as blebs & bands of disseminations & in thin qtz-carb vns	31946	173.25	176.2	2.95	2.95	x	40	x	x		1.75	1000	x	chip
				33003	176.2	176.9	0.7	0.7	25	155	x	0.5	x	0.95	515	x	split
				004	176.9	177.5	0.6	0.6	15	40	5	1.0	x	0.9	720	x	split
				005	177.5	178.5	0.75	1.0	50	150	15	0.5	x	4.9	4750	x	split

ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. MRP 212 3 of 14

DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm unless specified: Sample Length	Pb	Zn	Cu	Ag · g/t	Au · g/t	Fe%	Mn	Sn	sample type
44.75	45	As per 44.45–44.75 with strong limonite staining. Core very broken, recovery ~50% Breccia textures in some fragments.	Strong limonite staining 5–10% + 2%py dissemination3	33006	178.5	179.5	0.95	1.0	55	250	5	x	x	1.65	1550	x	split
				007	179.5	180.3	0.8	0.8	20	75	5	0.5	x	1.30	950	x	split
				008	180.3	180.6	0.3	0.3	5	105	340	0.5	x	0.70	1300	x	split
45	45.3	Gry-grn fg banded ?intermediate ?tuff. Qtz carb vns and bands sulphides	Bands of cg py assoc with qtz carb vns. Minor sphalerite & arsenopyrite. Total sulphides ~15%	009	180.6	181.5	0.7	0.9	200	355	10	0.5	x	4.55	1000	38	split
				31973	181.5	182.4	0.7	0.9	390	505	25	1.5	x	4.10	900	190	split
				974	182.4	183.3	0.4	0.9	360	800	55	4.5	0.05	7.35	1250	300	split
				975	183.3	185.0	0.15	1.7	205	900	65	2.0	x	4.9	1150	80	split
45.3	45.5	Near massive sulphides in qtz carb gangue with limonite staining. Core broken; recovery ~80%	cg py, arsenopyrite, minor chalco-	976	185.0	186.2	0.7	1.2	30	65	45	1.5	x	5.05	1050	70	split
			pyrite & ? sphalerite	977	186.2	187.5	1.3	1.3	95	50	160	2.5	x	6.35	1450	?x 300	split
			45.4 Sample 29707 Polished section: Mass.vuggy sulphides mainly arsenopyrite + minor py, chalcopyrite, chalcodite sphalerite galens +?tetrahedrite ?stannite Typical hydrothermal assemblage	978	187.5	188.2	0.7	0.7	290	135	1650	9.0	x	10.5	2250	?x2600	"
				979	188.2	189.2	1.0	1.0	50	60	320	2.0	x	7.45	2200	?x 560	"
				980	189.2	190.2	1.0	1.0	745	425	520	6.5	x	9.50	1350	?x6800	"
				981	190.2	191.2	1.0	1.0	385	105	590	7.0	x	6.9	1350	?x4300	"
				982	191.2	192.2	1.0	1.0	210	75	555	7.0	x	8.5	1150	?x2200	"
				983	192.2	193.2	1.0	1.0	85	65	650	6.5	x	9.0	1150	?x1150	"
				984	193.2	194.4	1.2	1.2	145	100	1050	7.0	x	8.5	1450	?x1450	"
45.5	46.35	Gry grn fg massive intermediate ?tuff; chloritised qtz-carb vns & clots give a weak breccia appearance. Vns are irregular & at 60°	Cg pyrite chalcopyrite, minor ?arsenopyrite ?sphalerite in vns & bands. Total sulphides ~5%	31947	194.4	200.5	6.1	6.1	80	145	50	0.5		8.5	6500	190	chip
				948	200.5	205.5	5.0	5.0	150	165	15	0.5		3.75	2050	4	"
				949	205.5	210.0	4.5	4.5	25	75	40	0.4		4.15	1650	x	"
				31950	210.0	215.0	5.0	5.0	80	100	25	0.7		3.8	1450	x	"
				951	215.0	220.0	5.0	5.0	15	30	10	0.3		2.45	1700	x	chip
46.35	47.6	Ple grn gry fg crystal vitric intermediate tuff, silicified, stockwork of qtz-carb vns.	46.35–46.85 Py in vns & bands ~5%	952	220.0	225.0	5.0	5.0	85	230	15	0.7		4.2	2450	x	chip
				953	225.0	230.0	5.0	5.0	55	75	25	0.3		3.9	1400	x	"
				954	230.0	235.0	5.0	5.0	35	75	20	0.3		3.45	1350	x	"
				955	235.0	240.0	5.0	5.0	355	390	30	0.6		4.6	2150	x	"
47.6	48.25	Gry-grn f-mg porphyritic intermediate vitric crystal lithic tuff. Feldspar phenocrysts, chloritised & silicified. Minor limonite staining qtz-carb vnlets. Lower contact grad.		956	240.0	245.0	5.0	5.0	15	30	5	0.2		1.35	530	x	"
				957	245.0	250.0	5.0	5.0	45	80	5	x		1.4	630	x	"
				958	250.0	255.0	5.0	5.0	775	100	10	1.3		1.6	625	x	"
				959	255.0	260.0	5.0	5.0	25	35	30	x		2.35	900	x	"
48.25	50.5	Gry-grn fg and f-mg weakly porphyritic intermediate lithic vitric crystal tuff feldspar – chloritised; silicified. Qtz-carb vns in irregular stockwork. Lower contact 40°	49.1 Qtz carb vn 12mm at 30° with 30% cg py	960	260.0	265.0	5.0	5.0	425	1950	30	1.5		2.75	1750	x	"
				961	265.0	270.0	5.0	5.0	140	175	15	0.1		2.1	900	x	"
			49.1–49.8 Diss py in vns <1% total	962	270.0	275.0	5.0	5.0	5	80	15	x		2.15	510	x	"
				963	275.0	280.0	5.0	5.0	15	65	20	x		3.4	1100	x	"
				964	280.0	285.0	5.0	5.0	70	125	20	x		4.25	1550	10	"
				965	285.0	290.0	5.0	5.0	190	150	20	x		3.05	770	x	"
50.5	51.2	Milky white qtz vn. Lower contact gradational	Trace py & ?chalcopyrite	966	290	293.5	3.5	3.5	50	75	10	x		2.4	900	x	"
51.2	51.8	Grn gry f-mg porphyritic intermediate lithic crystal vitric tuff; feldspar chloritised, silicified, strong qtz-carb vns decreasing downwards. Lower contact gradational.															

ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. MRP 212 4 of 14

DEPTH (m) FROM	TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm unless specified: Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	Sn	Sample type
51.8	73.3	Grn-gry f-mg porphyritic intermediate lithic crystal vitric tuff; feldspar, chloritised silicified. Thin qtz-carb vns. Variable porphyricity & degree of silicification 57.7-57.9 Strong qtz vning 64-64.9 Qtz-carb vns & blebs with limonite staining	Trace diss py especially on joint surfaces 53.2 2% py in a qtz-carb vn 53.8 Irregular qtz-carb vn with 30% cg py over 15mm limonite staining after sulphides + minor chalcopyrite														
73.3	73.8	Gry & grn-gry f-mg and mg weakly banded ?acid to intermediate vitric crystal lithic lapilli tuff. Strongly silicified; chloritised. qtz vns															
73.8	75	Gry-grn f-mg intermediate lithic vitric crystal tuff; feldspar, chloritised, silicified, strong qtz-carb vning. Some healed breccia texture. Limonite staining on vns.															
75	76.1	Gry-grn f-mg intermediate lithic vitric crystal tuff; feldspar; very strongly silicified, chloritised. Qtz-carb vns.															
76.1	77.3	Gry-grn f-mg intermediate lithic vitric crystal tuff; feldspar, chloritised silicified, Very strong qtz & qtz-carb vns															
77.3	79.1	Gry-grn f-mg intermediate lithic vitric crystal tuff; feldspar, silicified; weakly chloritised; thin qtz carb vns.															
79.1	79.9	Ple gry f-mg intermediate tuff, very strongly silicified qtz vns.															
79.9	80.9	White qtz vn with inclusions of trachytic tuff Contacts gradational.	Minor limonite staining.														
80.9	81.7	Ple gry f-mg intermediate tuff. Very strongly silicified. Qtz vns.															
81.7	87.35	Gry-grn f-mg weakly porphyritic intermediate vitric crystal tuff; feldspar, silicified, weakly chloritised, weakly carbonated. Qtz & qtz-carb vns.															

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DIAMOND DRILL CORE RECORD

HOLE No. MRP 212 5 of 14

DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm unless specified: Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	Sn	Sample type
87.35	91.6	Zone of intense qtz & qtz/carb veining. In places core is vned ?intermediate tuff; in others core is vn with tuff inclusions. Vns are sugary & vuggy with abundant limonite staining after sulphides. 87.35 – 88.20 veined tuff 88.20 – 90.00 qtz vn. recovery 66% 90.00 – 90.35 vned tuff 90.35 – 90.80 qtz vn 90.80 – 91.0 vned tuff 91.00 – 91.6 qtz vn	Limonite staining after sulphides														
91.6	93.7	Ple grn-gry fg & f-mg intermediate vitric crystal tuff; feldspar; strongly silicified weakly chloritised & carbonated. Qtz & qtz-carb vns.	Tr py on joint surfaces & limonite staining.														
93.7	102.9	Grn-gry f-mg, weakly porphyritic intermediate lithic crystal vitric tuff; feldspar; silicified, weakly chloritised, weakly carbonated. Thin qtz & qtz-carb vns 99.5 –101.2 Strong qtz & qtz-carb vning 99.7 – 99.9 Brecciated tuff frags. in a qtz vn matrix															
102.9	103.4	White qtz vn. Inclusions of ple gry-grn ?tuff, and coarse carb crystals. Contacts irregular, average 30°	Splash of cg galena near the base of the vn.														
103.4	105.3	Grn-gry f-mg porphyritic intermediate lithic vitric crystal tuff, feldspar, silicified carbonated. Qtz-carb vns lower contact irregular ~10°															
105.3	106.55	Gry-white qtz vn with inclusions of carb and of ple grn-white strongly silicified ?trachytic tuff, with chl vnlets. Lower contact irregular to sub-parallel	Scattered cg py ~1% + tr pyrrhotite														
106.55	108.45	Gry-grn f-mg porphyritic intermediate lithic vitric crystal tuff; feldspar, chl, silicified weakly carbonated. Qtz & qtz-carb vns. Lower contat 80°															
108.45	108.95	White mass. qtz vn. Lower contact diffuse 50°															

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ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. MRP 212 6 of 14

DEPTH (m) FROM	TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm unless specified: Sample Length	Pb.	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	Sn	Sample type
108.95	119.9	Gry-grn – ple gry f-mg weakly porphyritic intermediate lithic vitric crystal tuff; feldspar, strongly silicified; weakly carbd Qtz & qtz-carb vns. Degree of silicification varies from moderate up to total qtz vn. Variable grainsize in places suggests ignimbrite texture. Lower contact diffuse ~40°															
119.9	121.35	Grn-gry to pink-gry fg intermediate vitric crystal tuff; silicified. Qtz vns. Weak breccia. Weak banding near upper contact at 40°. Lower contact diffuse 60°															
121.35	123.15	Grn fg massive, intermediate lithic crystal vitric tuff. Chl, weakly silicified. Qtz & qtz carb vns. Lower contact gradational															
123.15	127.95	Gry-grn to ple gry f-mg weakly porphyritic lithic vitric crystal intermediate tuff; feldspar, strongly silicified, weakly carbd Qtz & qtz-carb vns. Silicification varies from moderate up to total qtz vn. Variable grainsize suggests ignimbrite texture 127.7 – 127.95 Moderate brecciation Lower contact 60°															
127.95	128.15	Grn-gry fg massive chert (possibly very strong silicified ?tuff) Lower contact irregular 45°.															
128.15	132.6	Gry-grn to ple gry f-mg weakly porphyritic intermediate lithic vitric crystal tuff; feldspar; strongly silicified, weakly carbonated, qtz & qtz-carb vns. Silicification varies from moderate up to total qtz vn. Variable grainsize suggests ignimbrite texture. Lower contact 60°															
132.6	134.1	Gry-grn fg irregularly banded intermediate tuff. Banding strongest 133.3-133.5 Possibly reworked tuff 133.4. Sample 29708 Thin section:- Vitric crystal tuff – trachyandesite in composition															
134.1	134.3	Gry-grn to ple gry f-mg weakly porphyritic, intermediate lithic vitric crystal tuff; feldspar, strongly silicified, weakly carbd. Qtz + Qtz-carb vns. Variable silicification															

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ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. MRP 212 7 of 14

DEPTH (m) FROM	TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm unless specified: Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	Sn	Sample type
134.1	134.3	and grainsize	134.3 –134.5 strongly chloritic breccia with 20% py & pyrrhotite 134.5–135.3 2–5% py in stringers & blebs														
134.3	135.3	Gry-grn f-mg intermediate lithic crystal vitric tuff; feldspar, chloritised silicified. Qtz vns very abundant.															
135.3	135.8	Gry-grn f-mg intermediate crystal vitric tuff; feldspar, silicified, chloritised. Qtz vns. Lower contact 50mm zone of intense silicification	Tr pyrite														
135.8	136.3	Grn fg intermediate ?crystal vitric tuff chloritised. Lower contact diffuse.															
136.3	163.4	Gry-grn f-mg and fg intermediate lithic vitric cyrstal tuff; feldspar, chloritised, silicified. Degree of silicification variable. Qtz vns common at various angles 142.75–142.9) Pink fg feldspathic ?Lithic 143.05–143.10) fragments or ?albitised 143.45–143.75) groundmass 145.00–145.15 White mass. qtz vn. Contact upper 25° lower irregular 150.90–151.10 Qtz healed breccia 154.60–161.60 Increased frequence of qtz vns 162.50–163.40 Very strong qtz vns giving a healed breccia appearance. Lower contact gradational															
163.4	163.7	Grn fg & f-mg Qtz & Qtz-carb veined, banded intermediate tuff; feldspar; chloritised silicified & carbonated.	Trace pyrite														
163.7	164.0	Grn fg chloritised, silicified & carbonated ?trachytic ?tuff. Qtz vns.	Py 10% in coarse patches & stringers fg sphalerite & galena in irreg patches & stringers														
164.0	164.5	Grn fg intermediate lithic crystal vitric tuff chloritised; weakly silicified weakly carbonated. Irregular qtz vns.	Traces py & sphalerite														
164.5	172.1	Gry-grn f-mg & fg intermediate lithic crystal vitric tuff; feldspar; chloritised, silicified. Degree of silicification is variable. Qtz vns are common at various angles. Lower contact gradational															

ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. MRP 212 8 of 14

DEPTH (m) FROM	TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm unless specified: Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	Sn	Sample type
172.1	172.45	Grn fg silicified & chloritised tuff. Very strong qtz vns & healed breccia	1% cg pyrite														
172.45	173.0	Brecciated, qtz & carb veined, strongly chloritised ?tuff	10% py as irreg blebs + minor ?pyrrhotite														
173.0	173.25	Strongly qtz veined grn fg ?tuff. Contacts all gradational															
173.25	176.2	Gry-grn fg & f-mg intermediate lithic vitric crystal tuff; feldspar, chloritised, strongly silicified. Strong qtz vns. Qtz healed breccia															
176.2	177.5	White qtz vn with inclusions of chloritic tuff. Contacts gradational.															
177.5	180.3	Ple grn-white fg intermediate ?lithic crystal vitric tuff chloritised, silicified, qtz-carb vns very strong:- in places total core is vn. Brecciated zones 177.5–178.3 Recovery 70% 178.3–178.9 Core very broken recovery 90%															
180.3	180.6	White qtz vn with inclusions of chloritic tuff.															
180.6	181.5	Ple grn silicified & chloritised ?tuff Qtz veined & brecciated. Core very broken recovery 80%. Contacts gradational	Disseminated py ~10%														
181.5	182.4	Gry and white qtz vn with chlorite inclusions Very fractured appearance. Core broken recovery 80%	181.5–187.5 Disseminated py 5–10%														
182.4	182.5	Ple grn puggy clay with siliceous fragments															
182.5	186.0	Chlorite-qtz schist. Traces of fluorite on slickensided surfaces. Core very broken 182.5–183.3 Recovery 40% 183.3–185.0 Recovery 10% only 0.2m of chips recovered from 1.7m interval 185.0–186.0 Recovery 50%															
186.0	186.20	Puggy clay with chlorite schist fragments															
186.2	187.5	Gry fg silicified tuffaceous ?siltstone Cleaved and brecciated. Folitation variable															

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ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. MRP 212 9 of 14

DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm unless specified: Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	Sn	sample type
		30–80° 187.0 Sample No. 29732 Thin Section Thoroughly deformed & altered qtz-sericite phyllite															
187.5	188.2	Brecciated silicified qtz veined ?siltstones	Pyrite & pyrrhotite ~15% total 187.8–188.1 Sulphides 40%														
188.2	194.4	Gry-grnish black qtz veined silicified siltstone & shale. Local chlorite development Banding irregular mainly 50–80° & contorted Local brecciation especially near upper contact. 189.6 Sample No 29733 Thin & polished section 190.9 " 29734 " " " Tourmalinised, mineralised & thoroughly deformed psammopelite	Sulphides 10% in contorted bands & blebs. Pyrite, pyritised pyrrhotite & arsenopyrite with minor cassiterite, chalcopyrite stannite and rare galena														
194.4	195.6	Dk gry to black shale. Banding & cleavage at 60°. Lower contact sharp 60°	2% Py in bands especially near thin quartz-carb vns														
195.6	196.4	Gry fg &f-mg massive feldspathic greywacke Thin carb vns 25mm shale band at 60° at 195.9	Traces py														
196.4	197.1	Dk gry fg shale. Banding & cleavage 70° Thin carbonate vns Contact gradational															
197.1	198.0	Gry fg and f-mg siltstone to greywacke Weak banding 60° 197.9 Possible ?cross bedding or ?slump banding. Suggests uphole is upsequence															
198.0	198.4	Dk gry shale, banding & cleavage 60° Thin carbonate vns, lower contact fairly sharp 40°															
198.4	201.9	Gry fg & f-mg greywacke, Thin carbonate vns parallel weak banding at 70° 200.8 Fracture zone 5mm wide at 25° (Possibly an original slump; would imply an up facing) Lower contact gradational with broken core															
201.9	202.9	Dk gry to black shale – weakly carbonated –															

ELECTROLYTIC ZINC CO OF A'ASIA LTD
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DIAMOND DRILL CORE RECORD

HOLE No. MRP 212. 10 of 14

DEPTH (m) FROM	TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm unless specified: Sample Length	Pb	Zn	Cu.	Ag - g/t	Au - g/t	Fe%	Mn	Sn	Sample type
		effervesces slightly with acid – Banding & cleavage 70°. Lower contact gradational	2% py in thin carbonate vns and as disseminations.														
202.9	204.7	Gry f-mg greywacke. Thin carbonate vns. 204.4–204.7 Brecciated with qtz carb vns. Contact broken core.															
204.7	207.6	Dk gry to black shale. Cleavage 60–80° Thin carbonate vns. Lower contact gradational.															
207.6	207.8	Gry f-mg greywacke. Weak banding 70°. Lower contact core broken – seems sharp 80°															
207.8	208.6	Graded bedded unit. Black shale at top grades down to gry mg greywacke with carbonate vns. Lower contact sharp 70°	1% disseminated py														
208.6	209.55	Graded bedded unit, black shale at top grades down to gry greywacke. Chloritic cleavage 80°. Banding variable 30–80° 209.3 Possible cross bedding indicates top is up Lower contact fairly sharp 70°															
209.55	210.20	Graded unit black shale at top contains 15mm bands of greywacke & grades down into greywacke at base. Lower contact sharp 55° but partly obscured by carbonate veining and microfaulting.															
210.2	211.1	Predominantly black fg shale with thin (<30mm) intercalations of greywacke. Carbonate vns & clots give breccia appearance in places. Chloritic cleavage 60–80°. Lower contact obscured by carbonate vns.	<1% Py in carbonate vns.														
211.1	211.4	Gry f-mg greywacke Carbonate vns mainly at 70° but also irreg. Chloritic cleavage weak 60–80° Lower contact sharp irregular average 50°															
211.4	212.65	Black fg shale. Moderate cleavage 60–70° Becomes more carbonate veined downwards. 211.8–211.87 Greywackes band at 70° sharp contacts Lower contact gradational through a zone of carbonate veins & clots.	Disseminated py ~1%														

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DIAMOND DRILL CORE RECORD

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DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm unless specified: Sample Length	Pb.	Zn	Cu.	Ag - g/t	Au - g/t	Fe%	Mn	Sn	Sample type
212.65	213.1	Gry mg greywacke abundant carb and qtz-carb vns and clots. Possibly healing of a breccia zone. Lower contact sharp 25°	<1% cg pyrite														
213.1	213.3	Graded unit? Black shale lies above greywacke Strongly carbonated with vns & clots Greywacke section appears brecciated. Lower contact charp 50°.	213.2 at interface of shale & greywacke; irregular blob (20mm) of cg pyrite														
213.3	214.1	Mainly black shale with irregular bands and blebby intercalations of greywacke and vns and clots of carbonate. Moderate cleavage 80°. Lower contact sharp 80°	Trace disseminated pyrite														
214.1	222.3	Gry f-mg greywacke strong carb vns & qtz-carb vns and clots, also carb matrix. Weak chloritic cleavage 80° 220.5-221.3 Intercalations of black shale with sharp upper and lower contacts at ~60° Lower contact sharp 45° on a qtz-carb vn															
222.3	223.05	Graded unit with black shale grading down into grey f-mg greywacke with thin carb vns 222.7 Irregular flame-like inclusion of shale in greywacke Lower contact gradational															
223.05	225.55	Graded unit with black shale grading down into grey f-mg greywacke which contains some thin (<30mm) bands of shale. Rare thin carb vns & carb clots. Weak banding & cleavage 70-80°. Lower contact sharp 80°	<1% disseminated pyrite														
225.55	226.75	Graded unit? Gry-black shale grades down into grey calcareous sandstone or greywacke (effervesces with acid) 225.8-225.9 Possible cross bedding indicates top is up 226.5m Sample 27935 Thin section Dolomitic sandy siltstone															
226.75	227.35	Graded unit. Black shale grades down into gry fg greywacke. Lower contact sharp 80°															
227.35	227.95	Alternating bands of black shale & greywacke with carb vns & clots. Weak to moderate chl cleavage 60-80° Lower contact sharp 85°	1% disseminated pyrite														

ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. MRP 212 12 of 14

DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm unless specified: Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	Sn	Sample type
227.95	229.8	Gry f-mg calcareous greywacke. Wk cleavage weak banding & thin carb vns all at 70° Lower contact is 100mm zone of ?slumped calcareous greywacke fragments in shale															
229.8	231.3	Black shale. Carb clots. Wk banding 80° Wk cleavage 70–80°. Lower contact sharp 80°															
231.3	235.9	Gry f-mg greywacke, wk chloritic cleavage 80° Thin irregular qtz-carb vns. Contains thin bands of black shale. Lower contact sharp 60°	<1% disseminated pyrite														
235.9	238.25	Graded unit. Dominantly black shale above, dominantly greywacke below. Thin carb vns & clots. Wk cleavage 80°. Lower contact sharp 80°	<1% disseminated pyrite														
238.25	238.75	Alternating thin bands of shale & greywacke Lower contact gradational															
238.75	239.05	Gry f-mg greywacke. Thin carb vns. Lower contact sharp 80°															
239.05	239.9	Zone of alternating irregular bands of shale and greywacke. Carb & qtz-carb vns, wk banding, and weak cleavage, all 80°. Lower contact diffuse, masked by qtz vns,															
239.9	240.4	Ple gry banded ~80° Qtz-ser-chl rock & greywacke with Chl bands & wk breccia near upper contact. Appears to be a transitional zone between upper & lower sediment sections. Lower contact gradational															
240.4	254.05	Ple gry-white calcareous siltstone qtz-ser carb. *Occasional Chl vns. Banded 80°. Moderate* cleavage 80–90° Lower contact diffuse.	Trace pyrite														
254.05	254.95	Gry f-mg greywacke with minor shale bands Lower contact sharp irregular average 80°															
254.95	256.6	Graded unit? Black shale grades quickly into gry f-mg greywacke. Moderate Chl cleavage 90° Lower contact 90°															

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ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. MRP 212 13 of 14

DEPTH (m) FROM	TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm unless specified: Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	Sn	Sample type
255.6	258.2	Zone of dominantly gry f-mg greywacke with bands of intercalated shale and thin carb vns. Contains four graded units. Wk cleavage 80-90° Lower contact sharp against qtz-carb vns at 70°															
258.2	258.6	Gry brecciated qtz-carb vned greywacke. Lower contact gradational.															
258.6	259.7	Gry fg & f-mg greywacke. Thin carb vns; wk cleavage 80-90°. Lower contact obscured by vns.															
259.7	263.3	Mainly gry fg & f-mg greywacke with intercalated shale bands up to ten graded units in the section. Thin qtz-carb vns. Wk cleavage 80-90°. Lower contact sharp 85°	*Trace disseminated pyrite*														
263.3	265.9	Graded unit. Dk gry shale grades down into gry f-mg greywacke. Wk cleavage 90° Lower contact obscured by carb vns															
265.9	266.6	Graded unit dk gry shale grades down into gry f-mg greywacke. Wk cleavage 90°															
266.6	266.85	Dk gry shale. Weak cleavage 80-90° Lower contact diffuse.	<1% disseminated pyrite														
266.85	269.3	Ple gry-white qtz-rich greywacke or possibly siltstone. Wk sericitic cleavage 80-90° 267.5-267.8 Breccia zone with Chl vnlets 267.8-269.1 Contorted banding; possible drag folds or slump folds															
269.3	271.4	Black fg shale. Wk to moderate cleavage 80-90° 270.5-270.6 Silicified & carbonated breccia zone. Lower contact diffuse.															
271.4	273.7	Gry & ple gry fg & f-mg greywackes. Wk cleavage 90°. Lower contact diffuse ~90°															
273.7	274.8	Graded unit. Black shale above greywacke. Wk cleavage 80°. Lower contact 90° on qtz-carb vns.															

ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. MRP 212 14 of 14

DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm unless specified: Sample Length	Pb.	Zn.	Cu.	Ag - g/t	Au - g/t	Fe%	Mn	Sn	Sample type
274.8	275.2	Graded unit. Black shale above greywacke. Wk cleavage 80°															
275.2	275.7	Graded unit. Black shale above greywacke Wk cleavage 80°															
275.7	276.1	Black fg shale. Lower contact carb vns.															
276.1	281.6	Gry fg & f-mg greywacke with minor shale intercalations. Carb vns & wk cleavage 80-90° 279.4-279.5 Breccia zone 281.1-281.3 Contorted banding possibly slump folds in a shale band.															
281.6	282.2	Graded unit Black fg shale grades into greywacke. Lower contact sharp 80°															
282.2	282.4	Black Shale															
282.4	282.55	Qtz-carb veined greywacke															
282.55	284.2	Mainly gry f-mg greywacke with numerous intercalations of shale & carb vns. Core very broken between 283 and 283.9. Lower contact sharp 80°															
284.2	285.65	Mainly fg black shale with intercalations of greywacke 285.1-285.3 Wk braccia zone. Lower contact sharp 80°	1-2% fg pyrite in veinlets & blebs														
285.65	286.45	Gry f-mg greywacke with thin shale lenses, qtz-carb vns 285.7-285.9 Braccia zone with carb greywacke fragments in a shale matrix Lower contact gradational															
286.45	291.25	Ple gry fg & f-mg qtz rich greywacke, possibly minor carb in the matrix. Wk sericitic cleavage 80-90°. Rare Chl veinlets & carb vns. Lower contact fairly sharp 80°															
291.25	293.2	Zone of alternating bands of dk gry shale & gry fg & f-mg greywacke, minor qtz-carb vns. Contacts generally sharp. Lower contact sharp 90°															
293.2	293.5 END OF HOLE	Dark grey fg shale.															

ELECTROLYTIC ZINC CO. OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. JCP 216 1 of 5

LOCATION	Mt. Black E.L. 1/62 – White Spur – Jones Creek
OBJECTIVE	To test an E.I.P. chargeability anomaly of twice background level.
RESULT	Weak pyrite-sphalerite mineralisation occurs in bands of tuffaceous sediments which correspond to the chargeable zones.

Depth (m)	Direction	Dip
0	270°	-50°
50		-46.5°
107		-37°
149		-23°

Depth (m)	Direction	Dip

COLLAR DIP. -50°
DIRECTION 270° True
R.L.
COORDINATES Grid 6400S 1760E

TOTAL DEPTH 149.2m
HOLE SIZE HQ 0-6, NQ 6-24, BQ 24-149.2
COMMENCED 6.3.'80
COMPLETED 11.3'80
LOGGED BY I. McDonald

DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm: Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	CORE REC'D RUN	CORE REC'D SHORT
0	3.3	No core recovered														Chips	
3.3	6.4	Pink weathering grey f-mg porphyritic lithic crystal tuff. Acid dacitic with quartz & feldspar phenocrysts & with thin (0.5-2mm) chlorite filled fractures. Very faint layering at 30° 5.7-5.9 Strongly jointed broken core with limonite staining ?after sulphides on the joints		29741	3.3	6.4	3.1	3.1	345	1050	10	0.5		3.3	1450		
				742	6.4	11.2	4.8	4.8	1250	2550	20	0.5		3.9	1300		
				743	11.2	14.2	3.0	3.0	1250	2400	20	0.5		3.75	1400		
				744	14.2	20.2	6.0	6.0	1650	3150	20	1.5		3.7	1250		
				745	20.2	25	4.8	4.8	290	2000	10	0.5		3.15%	1200		
				746	25	29.2	4.2	4.2	380	2650	10	0.5		3.1	1200		
				747	29.2	34	4.8	4.8	1000	3150	20	1.5		3.2	1050		
				748	34	40	6.0	6.0	700	2200	10	1.0		3.2	1350		
6.4	19.6	Green-grey f-mg porphyritic possible ashflow crystal vitric lithic tuff. Acid dacitic with feldspar & quartz. Chloritised & weakly carbonated with carbonate veins. Some chloritic fragments have fiamme like shapes but may be due to streaching along schistosity. Weak foliation 35-40° throughout. Lower contact gradational.		749	40	45	5.0	5.0	795	3050	15	1.5		3.55	1200		
				29750	45	50	5.0	5.0	535	1100	5	1.0		3.15	1550		
				751	50	55	5.0	5.0	390	800	5	0.5		3.2	1350		
				752	55	60	5.0	5.0	530	950	x	0.5		3.3	1800		
				753	60	65	5.0	5.0	450	1650	10	0.5		3.3	1350		
				754	65	70	5.0	5.0	270	900	10	x		2.75	1100		
				755	70	75	5.0	5.0	1750	5100	40	2.5		3.65	1600		
				756	75	80	5.0	5.0	1950	6250	25	3.5		3.2	1700		
				757	80	85	5.0	5.0	545	1650	x	1.5		2.95	1450		
				758	85	90	5.0	5.0	1200	2550	30	2.5		3.05	1150		
				759	90	95	5.0	5.0	950	2600	50	2.0		3.55	1550		
				29760	95	100	5.0	5.0	30	130	45	0.5		4.8	1950		
				761	100	105	5.0	5.0	215	435	25	x		2.5	1050		
				762	105	110	5.0	5.0	45	155	10	x		3.1	1300		
				763	110	115	5.0	5.0	10	95	50	x		3.1	1100		
				764	115	120	5.0	5.0	60	95	10	x		1.9	800		
				765	120	125	5.0	5.0	120	295	5	x		1.4	750		
				766	125	130	5.0	5.0	10	40	5	x		1.95	790		
				767	130	135	5.0	5.0	10	35	5	x		1.95	800		
				768	135	140	5.0	5.0	10	30	5	x		1.50	950		
				769	140	145	5.0	5.0	5	30	10	x		1.55	1050		
				770	145	149.2	4.2	4.2	10	30	15	x		1.35	900		
		1.2-2.5 Pink weakly oxidised 2.5-4.1 Weak-moderately oxidised with limonite staining 4.1-5.1 Strongly oxidised, core very broken with vuggy weathered-out carbonate veins & limonite staining 5.1-6 Weakly oxidised with carbonate veins & limonite staining ?after sulphides. 6.0-6.6 Becoming less porphyritic & more even grained	18.1-19.6 Traces f-g pyrite 19.5 0.5mm vein at 40° of sphalerite														
19.6	27.1	Grey-green f.g. vitric crystal tuff. Acid dacitic with feldspar, quartz & sericite. Minor quartz-carbonate veins.	19.6-21.8 Scattered fg sulphides; total 3% py in fg disseminations sp in thin veinlets Gn as smears on joint surface														

ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. JCP 216 2 of 5

DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA Sample Length	Pb	Zn.	Cu.	Ag - g/t	Au - g/t (per ppm)	Fe%	Mn	CORE REC'D RUN	CORE REC'D SHORT
		Very weak banding at 50°, Weak cleavage 35° 24.0 Sample No 29736 Thin section, see C.M.S. report 80/3/21. Lower contact diffuse about 40°	some associated with q-cb veins 24.7-25.8 Rare scattered pyrite-sphalerite associated with q-cb veins.														
27.1	27.9	Grey-green f.g weakly bedded Volcanogenic Sediment come reworked tuff. Acid dacitic composition. Weakly sericitised. Weak banding and cleavage coincident at 40° Lower contact gradational.															
27.9	28.9	Green-gry f.g. vitric crystal tuff. Acid dacitic, weakly sericitised. Thin quartz carbonate veins. Weak cleavage 45° 28.0-28.4 Limonite staining															
28.9	29.3	Green-gry f.g. weakly banded reworked tuff. Acid dacitic composition. Weak banding and cleavage coincident at 45°	28.9-29.3 2-3% disseminate Sphalerite in veinlets.														
29.3	30.3	Green-gry f.g. lithic crystal vitric tuff. Acid dacitic. Weakly chloritised & sericitised. Weak cleavage 50°															
30.3	30.5	Grey f.g. banded possibly reworked tuff Acid dacitic in composition. Silicified Quartz-carbonate veins.	30.4-30.5 Minor disseminated pyrite in quartz-carbonate veins.														
30.5	42.6	Green-gry f.g lithic crystal vitiic tuff Acid dacitic. Weakly chloritised & sericitised. Weak cleavage 35-50° 38.4-38.6 Weakly oxidised with limonite staining in veins 38.0-38.7 Quartz-carbonate veins Lower contact diffuse	30.5-46.2 Scattered patches of remobilised sulphides throughout In total <2% 31.2-32.1 2-3% Pyrite sphalerite & limonite in veins 35.7-36.4 2-3% Pyrite-sphalerite in veins & irregular patches 42.6-43.0 3-4 Pyrite-sphalerite in veinlets associated with q-cb veining 43-60 Rare scattered veinlets of pyrite sphalerite Total sulphides <<1%														

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ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. JCP 216 3 of 5

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DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm: Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	CORE REC'D RUN	CORE REC'D SHORT
42.6	57.9	Grey mottled f-mg porphyritic vitric crystal lithic tuff. Acid dacitic. Weakly chloritised and sericitised. Some fiamme like textures may indicate an ashflow origin or may be chloritised liths or devitrified glass stretched out by the prevasive cleavage at 35-45°, rare quartz-carbonate veins and carbonation of some liths 42.6-43 Quartz-carbonate veins & bracciation with limonite staining on joints 50.3 Sample 29737 Thin section (see CMS Report 80/3/21) Lower contact gradual decrease in grainsize & porphyricity														
57.9	61.1	Greenish-grey f.g. weakly porphyritic lithic vitric crystal tuff. Acid dacitic weakly chloritised. 60-60.3 Quartz-carbonate veins & weak breccia texture	60-60.3 3% pyrite in veins 60.3-69.5 Rare stringers & vein lets of pyrite & minor sphalerite.														
61.1	61.7	Green-grey mg crystal vitric lithic lapilli tuff. Acid dacitic. Feldspathic liths in an anastomosing matrix of chlorite veinlets															
61.7	66.1	Greenish grey fg weakly porphyritic lithic vitric crystal tuff. Acid dacitic weakly chloritised. Weak banding & schistosity 55°															
66.1	66.66	As per above but with rare fragments of grey shale. 66.1-66.2 Weak breccia & carbonation															
66.6	67.4	Volcanogenic sediment come reworked tuff blocks of very fg shale in a matrix of greenish grey lithic vitric crystal tuff. Acid dacitic chloritised. Some shale blocks have rounded ?slump edges, others are sharply angular. Microfaulting is common.															
67.4	68.5	Green-grey fg lithic vitric crystal tuff. Acid dacitic, weakly chloritised.															
68.5	69.5	Green-gry fg reworked tuff, acid dacitic weakly chloritised. Weak ?slump structures with v.fg tuff slumps in a slightly coarser matrix.															

ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. JCP 216 4 of 5

DEPTH (m) FROM	DEPTH (m) TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA Sample Length	Pb	Zn	Cu	Ag - g/t	Au - g/t	Fe%	Mn	CORE REC'D RUN	CORE REC'D SHORT
69.5	71.6	Green-gry fg tuff, acid decitic weakly chloritised. Quartz-carbonate veins. Three sets of veins of different ages are successively offset by one another.	69.5–72.3 1% weakly disseminated pyrite														
71.6	72.3	Greenish gry mottled f-mg porphyritic possible ashflow lithic vitric crystal tuff. Acid dacitic chloritised. Weak banding and cleavage are coincident at 60°. Lower contact irregular approx. 60°															
72.3	76.8	Grey v. fg shale, banding mainly 60°, in places irregular. 73.6 Sample 29738 Thin section (see CMS report 80/3/21)	Sulphides in total 3–4% Patchy bands & irregular veinlets of Py, Po, Sp & Gn in places upto 10%														
76.8	95.4	Green-gry f-mg porphyritic lithic vitric crystal tuff. Intermediate trachy-andesite sericitised and weakly chloritised. In places bands of ple gry silicified tuff occur. 77.5–77.9 Silicified tuff 78.3–78.7 Weakly silicified 79–79.3 " " 79.6–79.9 Silicified tuff with q-cb vns & weak brecciation 80.2–80.4 Silicified 81.1–82 Weakly silicified 82.9–83.3 " " 83.7–85 " " 89.2–89.5 Silicified 90.4–90.6 Weakly brecciated with chlorite veinlets 93–93.1 Thick carbonate veins Lower contact obscured, weak brecciated broken core.	89.2 25mm quartz vein at 30° with approx 7% cg galena														
95.4	100.8	Grey-grn fg weakly porphyritic intermediate trachy-andesite lava chloritised weakly sericitised & carbonated with irregular thin quartz-carbonate veins. Weak cleavage 50° 98.2 Sample 29739 Thin section (see CMS report 80/3/21) Lower contact sharp 55°															
100.8	101.6	Grey fg banded shale ?primary banding & cleavage coincident at 55° Lower contact sharp 55°	2% fg pyrite-sphalerite in thin (0.5mm) bands														

ELECTROLYTIC ZINC CO OF A'ASIA LTD
ROSEBERY – TASMANIA

DIAMOND DRILL CORE RECORD

HOLE No. JCP 216 5 of 5

0558 02

DEPTH (m) FROM	TO	ROCK DESCRIPTION	MINERALISATION	SAMPLE NO.	FROM	TO	CORE REC'D	ASSAY DATA per ppm Sample Length	Pb %	Zn %	Cu %	Ag - g/t	Au - g/t	Fe%	Mn	CORE REC'D RUN	SHORT
101.6	101.8	Grey mottled porphyritic reworked lithic tuff. cg liths flattened out by shearing? Strong foliation 60° Lower contact gradational															
101.8	105.9	Gry volcanogenic sediments predominantly gry fg banded shale with intercalated bands of f-mg reworked lithic tuff. Moderate to strong cleavage 60° 105.0 Sample 29740 Thin section (see CMS report 80/3/21) Lower contact interfingering? -> 105.68 Shale 105.68-105.77 Intermediate tuff 105.77-105.79 Shale 105.79-105.82 Intermediate tuff 105.82-105.9 Shale	101.8-105.9 Pyrite as fg scattered disseminations & as smears on joint surfaces Total ~2%														
105.9	109.1	Grn-gry mottled possible ashflow vitric crystal lithic tuff. Intermediate trachy-andesite, chloritised & weakly sericitised Moderate cleavage 60°. Some chlorite frags have a fiamme like texture but may be due to stretching along cleavage.															
109.1	112.7	Grn-gry fg volcanogenic shale with brecciated ?slump bands of fg gry vitric crystal acid tuff. Weak cleavage 65° Lower contact diffuse	2-3% fg pyrite diasem. in the slump zones.														
112.7	113.2	Pink/grn-gry mottled unit. Fragments of pink rhyolite occur in a fg groundmass. Possibly a lithic rhyolite lapilli tuff or possibly a poorly sorted volcanogenic sediment.															
113.2	114.3	Pink/gry-grn mottled brecciated acid rhyolite with quartz feldspar & sericite. Brecciated acid lava fragments lie in a chloritic matrix. Possibly a flow-top breccia?															
114.3	149.2	Pale pink fg massive lava, acid rhyolitic (possibly dacitic) with quartz feldspar. Weakly albitized? Weak foliation at 45° & a joint set at 25°. Irregular thin (0.5mm) chlorite veinlets occur throughout & joint surfaces are chloritic.															
END OF HOLE																	

APPENDIX 13.

"Review of Exploration in the Natone Area, Mt. Black E.L. 1/62." by Greg Drake

October, 1979

Copy forward to Getty Oil direct from G. Drake

058804

ELECTROLYTIC ZINC COMPANY OF AUSTRALASIA LIMITED

West Coast Mines

REVIEW OF EXPLORATION IN THE

NATONE AREA

MT. BLACK E.L. 1/62.

G. Drake,
Getty Oil Development
Company Limited.

October, 1979

SUMMARY

1. INTRODUCTION
2. ACCESS
3. MINING HISTORY
4. GRIDDING
5. GEOLOGICAL MAPPING
6. GEOLOGY
7. PHOTOGEOLOGY
8. GEOCHEMISTRY
   - 8.1. Stream Sediments
   - 8.2. Soils
   - 8.3. Rock Chips
9. GEOPHYSICS
   - 9.1. I.P.
   - 9.2. Airborne E-M
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   - 9.4. Ground Magnetics
10. DIAMOND DRILLING
11. EXPLORATION POTENTIAL
12. RECOMMENDED PROGRAMME AND BUDGET

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1. Descriptions of Old Mine Workings
2. I.P. Coverage - Natone Grid

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1. Location of Natone Area
2. Geological Mapping Coverage & Drill Sites
3. Interpretive Geology of the Natone Area
4. Geochemical Coverage
5. I.P. Coverage
6. Airborne E-M Coverage
7. Magnetic Coverage
8. Recommended Programme - Gridding
9. Location of Old Mines
10. Colebrook Mine Workings

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1. Detailed Phase One Programme
2. Phase Two Programme
3. Budget for Phase One
4. Budget for Phase Two
5. Unit Costs Assumed for Natone Area Budget

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SUMMARY

The Natone Area forms the western margin of the Mt. Black E.L. 1/82. It is comprised of Cambrian rocks, predominantly sedimentary, of the Crimson Creek Fm, Rosebery Group, ? Dundas Group and intrusive ultrabasics, and possibly Proterozoic rocks of the Oonah Quartzite and Slate. Numerous small Ag-Cu ("fahlore") fissure-filling deposits were worked in the vicinity of the Ring River around the turn of the century but production was small. Minor Sn-pyrite fissure veins were mined on Colebrook Ridge and copper was produced from a pyrrhotite-Cu-As metasomatic replacement deposit on Colebrook Hill.

Previous mapping and geophysical and geochemical surveys within the area were patchy and disjointed but offer encouragement for further exploration in particular areas. Some areas have received very little attention and further work is required to properly evaluate their mineral potential.

Detailed geological mapping, soil sampling and a ground magnetic survey have been carried out on a grid over the western flank of Colebrook Ridge and an I.P. survey was conducted over a grid in the Natone Creek-Williamsford area. Other exploration has been of a more regional nature and includes mapping, stream sediment sampling, airborne E-M and aeromagnetics. Two diamond drill holes tested I.P. anomalies within Rosebery Group sediments near Natone Creek. They intersected mineralised zones of 6m and 15m apparent thickness respectively containing pyrite-quartz-siderite veinlets. The 6m intersection averaged 1.9% Zn. A third diamond hole was drilled in the vicinity by the Mines Dept. for stratigraphic information.

The greatest potential of the Natone Area is for pyrrhotite-rich Sn-Cu (-As) replacement deposits analogous to Renison Bell. The Colebrook Mine represents this style of mineralisation (except for the apparent lack of tin) and E-M and aeromagnetic results suggest that there are good prospects for finding extensions of this deposit. Aeromagnetic and E-M results from the remainder of the area are not encouraging but do not negate the possibility of a viable tin deposit. The area also has potential for distal-facies stratiform volcanogenic base metal deposits and the two anomalous zones adjacent to Natone Creek deserve follow-up in this regard.

An exploration programme of two stages (no time order implied) is recommended to search for tin and base metal mineralisation. Phase One involves gridding, detailed mapping, soil and rock chip sampling, ground magnetics and an I.P. survey north and south of the Colebrook Mine. Anomalous Pb-Zn soil values associated with serpentinite near Line 6N of the Colebrook Grid require additional mapping, soil and rock chip sampling and a small I.P. survey to identify the source. Mapping, soil and rock chip sampling, ground magnetics and possibly further I.P. work are needed to follow-up the two anomalous I.P. zones near Natone Creek. $43,000-00 would be necessary for the proposed programme.

The second phase involves detailed mapping of creeks and access tracks in conjunction with a regional stream sediment sampling programme. $27,000-00 would be required for the second phase as recommended.

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1. INTRODUCTION

This study attempts to summarise and evaluate all previous mineral exploration activity within the Natone Area and to assess its mineral potential. A programme for further exploration is recommended.

The study area, hereafter referred to as the Natone Area, comprises the western margin of the Mt. Black E.L. 1/62 south of the Pieman River (Fig. 1). The area extends westwards from the aerial ropeway between Williamsford and Rosebery and west and southwest of the gridded areas of Primrose Pyroclastics to the south of Williamsford. Thus rocks of the Rosebery Group, Crimson Creek Formation, Oonah Quartzite and Slate and ?Dundas Group predominate.

Much of the area has been held under mineral lease since mineralisation was first discovered in the early 1890's. The original E.L. 1/62, extending only as far south as Moores Pimple, was taken out by E.Z. in 1962. The area south of Moores Pimple formed the eastern sector of E.L. 7/68 held by Texins Development from 1968 to February, 1974, when it was dropped. E.Z. immediately picked up this block as S.P.L. 132 but reduced it in November, 1974 to the eastern sector of 11km^2. S.P.L. 132 was incorporated into E.L. 1/62 prior to the signing of the Mt. Black 1/62 Joint Venture agreement between E.Z. and Getty Oil in April, 1978.

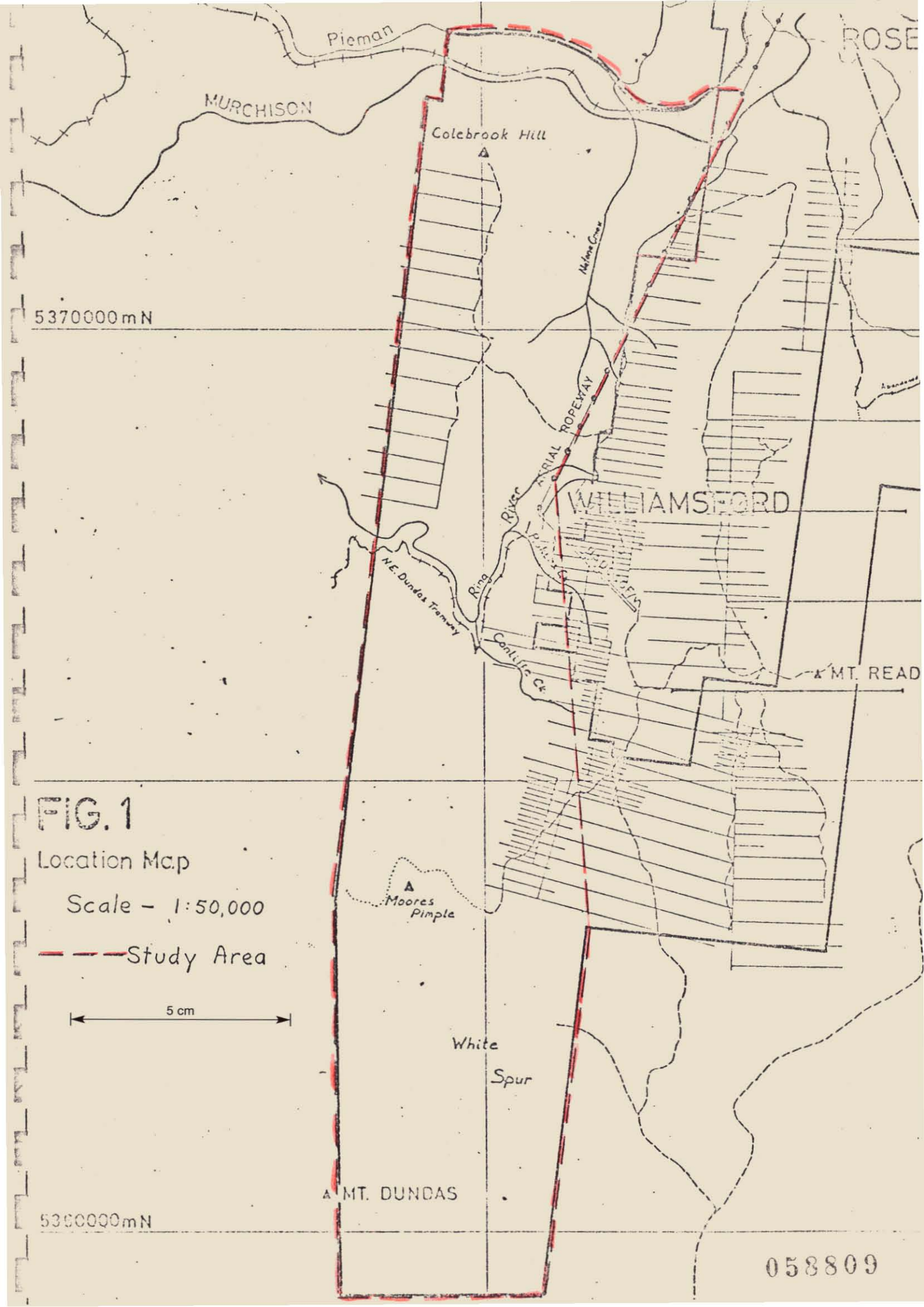
2. ACCESS

Vehicle access within the area is restricted to the Williamsford road, the tracks into drill sites near Natone Creek and on to the Colebrook Ridge, the track from Mt. Read towards Moores Pimple and logging tracks south of Moores Pimple. Because of rugged terrain and dense vegetation in most areas foot access is largely confined to the old Northeast Dundas Tramway on the south bank of the Ring River, the Moores Pimple track (east and west of Moores Pimple) and other minor old walking tracks. Creek traverses are possible.

3. MINING HISTORY

Mining activity in the Natone area dates back to the 1890's when numerous small mines were developed on silver-copper-lead veins. The mineralisation, locally referred to as "fahlore", comprised tetrahedrite-tennantite and chalcopyrite and was usually associated with pyrite and sometimes with arsenopyrite, jamesonite, galena, sphalerite and bismuthinite. The ore was worked primarily for the silver. These workings were mostly in the vicinity of the Ring River (see Fig. 9). The Fahlore Mine and the Ring River Valley Mine, both of which commenced operations in 1893, were the largest of these but production was not very great. The copper-pyrrhotite deposit on Colebrook Hill was first explored about 1896 but no great quantity of copper was mined and the workings were abandoned by 1909 although further mining was carried out between 1915 and 1917; no production is recorded.

Tin was mined from pyrite-cassiterite veins in the Olympic and Athenic workings on the western slopes of Colebrook Hill (Fig. 9). The presence of tin was first realised at the Olympic Mine in 1911 but no worthwhile ore was found and the leases were dropped after a number of years. Existing adits were


Pieman
MURCHISON
ROSE
Colebrook Hill
Melrose Creek
5370000mN
AERIAL ROPEWAY
WILLIAMSFORD
Ring River
N.E. Dundas Tramway
Conliffe Ck
MT. READ
Moores Pimple
White Spur
MT. DUNDAS
5360000mN
FIG. 1
Location Map
Scale – 1:50,000
Study Area
5 cm
058809

further developed between 1924 and 1926, and prospectors obtained small quantities of concentrates from 1934 to 1936. Total production was 7 tons of metallic tin.

Montgomery (1893b, pp 31-33) describes numerous small alluvial gold workings along the Ring River and its tributaries. Gold production was very limited, however.

Most mines in the area were abandoned by 1920 although a few have been worked spasmodically and in a minor way since then. No mining leases are held at the time of writing.

A moderately detailed account of all recorded workings within the area is given in Appendix 1. Apart from the larger mines, the locations of many workings mentioned in the literature are vague; descriptions often cite only the mineral lease number. The location of old mining leases is frequently complicated by changes in lease numbers, consolidation of leases, and repegging of mines with altered lease boundaries.

4. GRIDDING (figs. 2 and 5)

In 1960-61 the Natone Grid was cut over the Natone Creek area extending southwest of Williamsford with the aerial ropeway as a base line. The lines are 800'-2500' apart on bearings of approx. 292° and 295° (true). The pegs only just protude from the ground (pers. comment R. Williams) and the grid is severely overgrown and the base line pegs have been removed so re-establishment would be difficult if not impossible. The peg spacing is unknown, but is probably 100'. It appears that only I.P. was conducted on this grid.

In 1972-73 the Colebrook Grid comprising 15 lines bearing 280° (true) 800' apart, 2700' - 3300' long and pegged at 100' intervals was established between Colebrook Hill and Ring River. The Colebrook workings, Lynton Mine and probably also Olympic and Athenic workings lie within the gridded area. The north end of the grid extends to the western E.L. boundary but the southern lines extend up to 300m past the boundary. It should be noted also that the position of the access track is misplotted in Plates 19-24 in Reinhardt (1973) and thus results from this grid are slightly inaccurate. The grid is now overgrown and the lines are mostly difficult to locate on the access track.

Approx. 7km of trails were cut along creeks in the White Spur Creek drainage system as part of the reconnaissance exploration programme for Texins Development in 1973. These were pegged at 50'-100' intervals.

5. GEOLOGICAL MAPPING (Fig. 2)

The Geological Survey 1" to the mile (1:63,360) Zeehan Sheet published in 1962 includes the western half of the Natone Area. Lithologies are subdivided into Crimson Creek Fm., Dundas Group (unassigned), Donah Quartzite and Slate, several ultrabasic intrusives and very minor Permian glacials. The original 4" to the mile (1:15,840) fact mapping is available at the Mines Dept. but the annotations are so fine and faded that almost no useful information can be gleaned. Explanatory notes (Blissett, 1962) accompany this map.

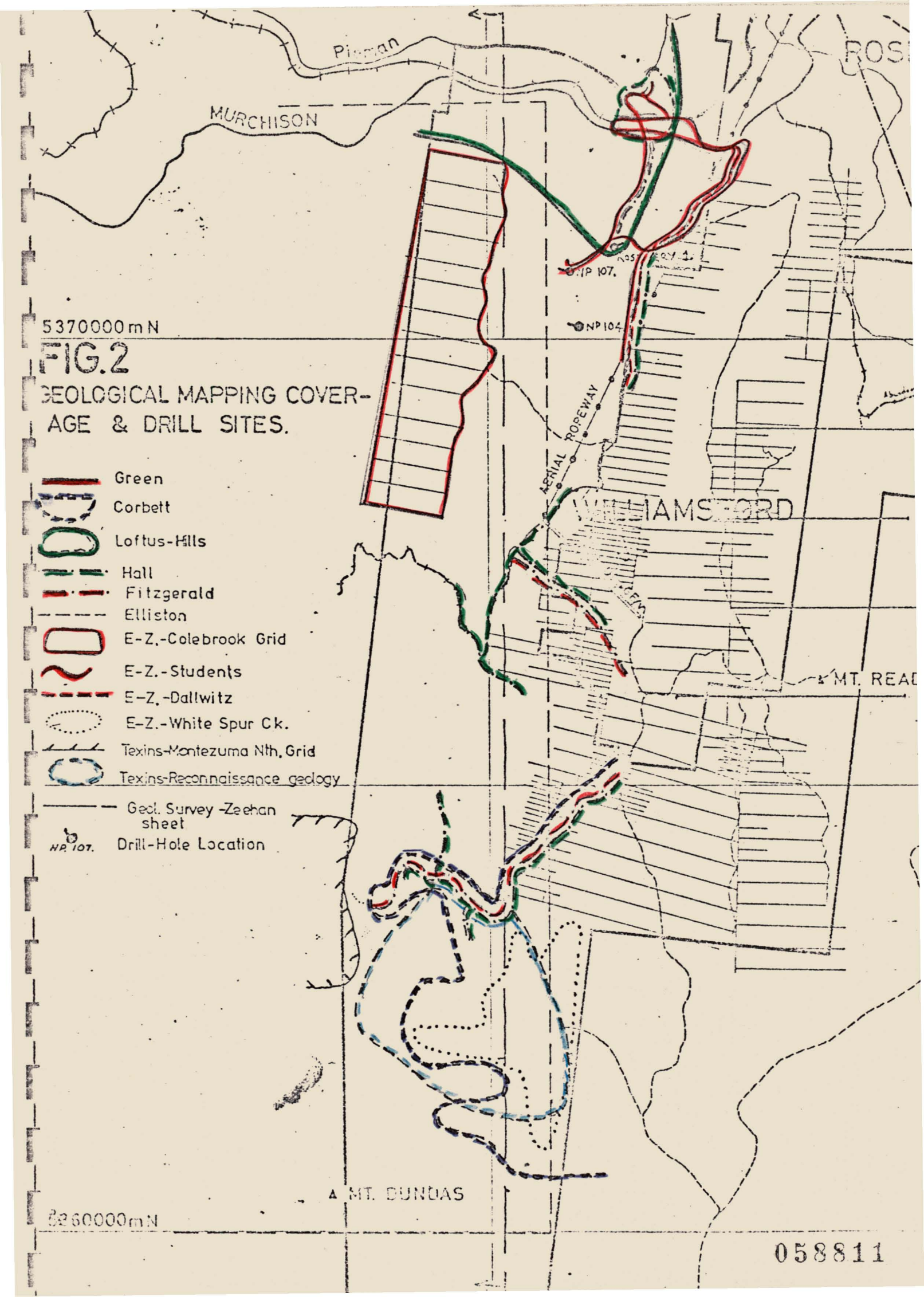


FIG.2

GEOLOGICAL MAPPING COVERAGE & DRILL SITES.

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The entire area except for that near Natone Creek lies within the 1" to the mile (1:63,360) geological plan shown in Elliston (1951, Fig. 3). This map was derived mainly from air-photo interpretation with limited ground traverses. No more-detailed record of the field mapping is held by the University of Tasmania although larger scale versions of the above map are available. Elliston seems to have been a join-the-dots fanatic; he has probably been rather over-enthusiastic in his correlations and the resultant map looks unrealistic in view of subsequent mapping efforts. Later workers, especially Blissett (1962), have cast serious doubts on much of his stratigraphic contortions. Without the fact mapping this contribution is of little value.

Four adjoining 1:1,200 plans are presented in Discala (1974) of interpretive geology of Texins Dev. Montezuma North Grid NW and west of Moores Pimple. It is based on mapping along grid lines and tracks; structural data but no outcrop geology is shown. This mapping, although interpetive and rather sparse, is useful because the area adjoins the Mt. Black E.L. and the lithologies trend into the study area.

Texins Dev. also prepared a reconnaissance geology map at 1:10,000 of the eastern sector of E.L. 7/68 covering most of the White Spur Creek drainage basin (Johnson, 1974). This map subdivides the Crimson Creek Fm. into four "groups" each of which is subdivided in the legend into 2-4 units, although these are not shown on the map. The mapping is entirely based on creek traverses (in conjunction with the stream sediment sampling). Considerable useful structural data are shown but the fold axes interpreted from these may be dubious. Comparison with Corbett's mapping (see below) along tracks in the area shows, not suprisingly, that the Texins geology is a gross simplification. Nevertheless it is useful for broad stratigraphic work.

Another Texins map entitled "Generalised Geology" shows interpretive geology within E.L. 7/68 in very sparse detail at 1:12,500 (Discala, 1974). Nearly all the area is assigned to the Dundas Group (in direct conflict with the 1970 photo-geological map which indicates Crimson Creek Fm); some structural data is shown. The map appears to have been "lifted" from the reconnaissance geology map material above.

E.Z. geologists carried out outcrop mapping at 1:5,000 along tracks in the area of White Spur Creek in 1976. This is useful mapping but some of the logging tracks are reputedly misplotted (pers. comm. K. Corbett).

K. Corbett of the Geological Survey mapped access tracks in the White Spur Creek area in 1979. This unpublished fact mapping, compiled at 1:10,000 overlaps extensively with mapping by E.Z., although he only distinguishes shales, greywacke volcanics and minor conglomerates.

The Colebrook Grid was mapped at 1:5,000 in 1973 by E.Z. geologists. There are numerous minor discrepancies betwen the outcrop and interpretive geology (Reinhardt, 1973, Plate 19) which cannot be resolved due to lack of field notes. Generally this mapping is quite adequate; the locations of numerous small workings are shown. It should be noted however, that the access track and hence the grid lines and geology are misplotted and should be rectified.

Loftus-Hills (1964) mapped the Natone Creek-Colebrook Hil area at 1:23,760 (1" to 30 chains) but the map presented is largely interpretive. Loftus-Hill et al. (1967) undertook mapping in the Natone Creek area but present only an interpretive geological sketch map at approx. 1:86,000, although moderately detaile descriptions of two traverses are given in the text.

Dallwitz (an E.Z. geologist) mapped the Emu Bay Railway near Natone Creek as well as the Williamsford road and Bakers Creek at 1:4,800 in 1946. The resultant map, which includes both factual and interpretive geology, is still valuable.

Hall (1967) presents an interpretive geological plan at 1:7,920 (10 chains to 1") based on mapping in the Natone Creek-Williamsford-Moores Pimple area. The lack of outcrop geology downgrades the usefulness of this work. The Rosebery Group is sub-divided into five units.

Outcrop mapping at 1:4,800 of the Emu Bay Railway, Pieman River and Natone Creek was undertaken by students employed by E.Z. in 1974. This mapping agrees closely with earlier mapping of the area and provides the most useful mapping of this area. Rock sample descriptions by the students (corresponding to sample locations on this map), stratigraphic assignations by C. Burton, and original field map sheets are held in E.Z. files.

Part of Natone Creek was also "fact mapped" by G. Green (of the Geol. Survey) in 1974. The outcrop geology is presented on a 1:10,000 plan showing Hercules Grid co-ordinates (imperial). The geology is very similar to other mapping of this area.

Fitzgerald (1974) mapped the Bakers Creek and Moores Pimple areas at 1:2,000 and presented a "semi-fact" geological map at approx. 1:7,850 and an interpretive map at approx. 1:5,750. This mapping agrees closely with that of Hall (1967) except that the Williamsford Volcanics are distinguished from the enclosing Westcott Argillite, and included in the Rosebery Group is a basal sedimentary unit, the Chamberlain Shale, which Hall included with the Primrose Pyroclastics.

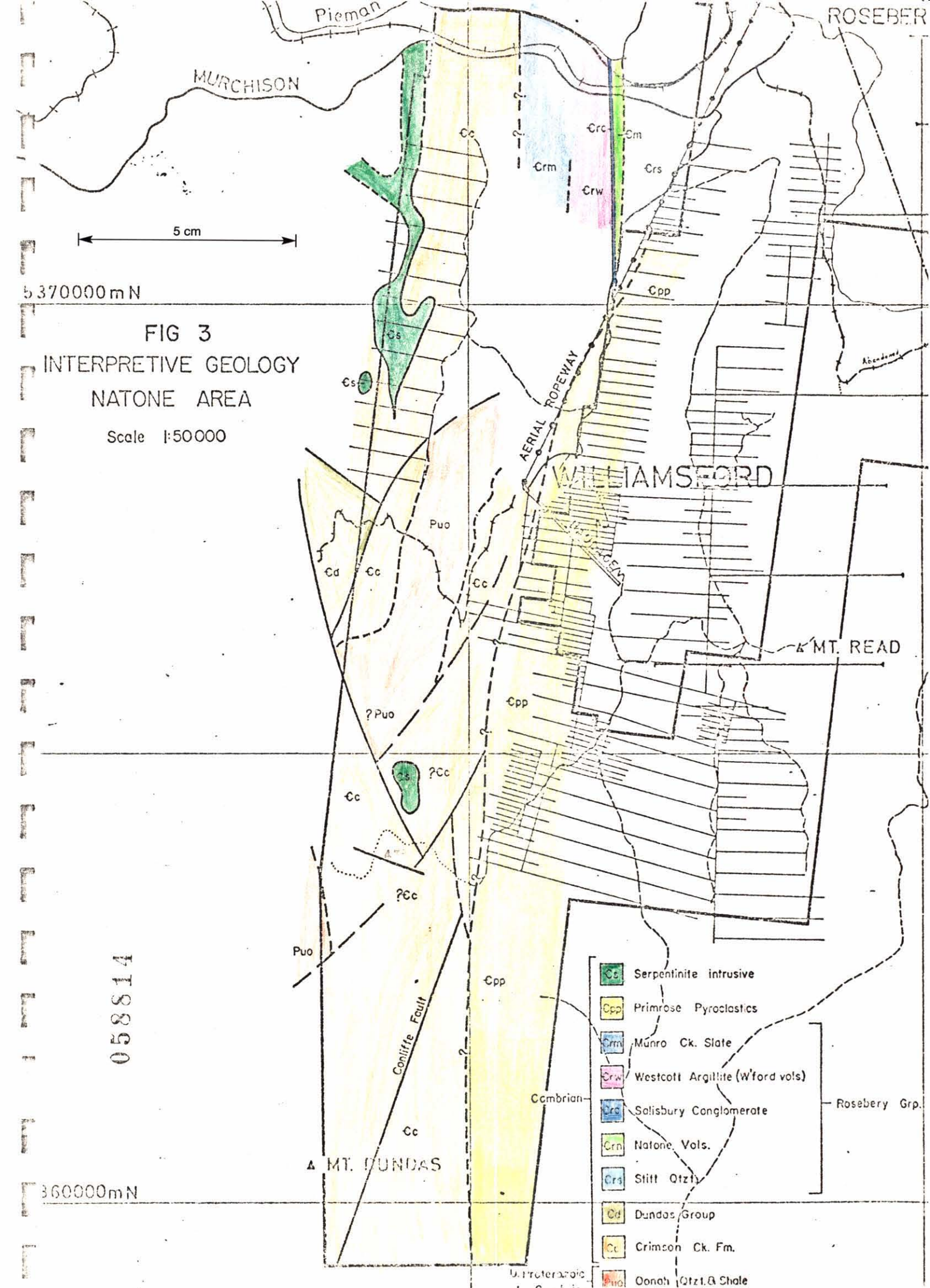
An E.Z. 1:5,000 (Sheet 5) compilation of fact mapping in the Natone Creek area appears to be based on mapping by Dallwitz and the students and thus represents the sum total of non-interpretive mapping in this area, except for Green's.

6. GEOLOGY (Fig. 3)

Because the Natone area has limited access and was not previously considered to be of prime interest, the numerous field mapping attempts tend to be fragmentary and of a regional nature. Much of the geology is interpretive and correlations are often based on relatively few, widely spaced traverses. Thus the geology of the study area is largely unresolved.

Stratigraphy is also confused but most workers recognise the Oonah Quartzite and Slate which Blissett (1962) suggests is Upper Proterozoic to Lower Cambrian. It comprises alternating quartzite, micaeous quartzite and siltstone, and hard greenish, grey or black shale. Blissett & Gulline (1961a) showed that this formation is overlain, apparently conformably, by Crimson Creek Fm., (?) Oonah Quartzite and Slate, as shown on the Zeehan Sheet, lies just north of Moores Pimple but its extension to the NNE off this sheet (west of Williamsford) has never been recorded.

Although its known distribution is somewhat vague, the Crimson Creek Fm. lies west of a line from just east of Colebrook Hill to west of Moores Pimple, and covers nearly all of the area south of Moores Pimple. Loftus-Hills (1964) mapped Crimson Creek Fm. in the Natone-Colebrook area where it has sub-vertical dips (75°W to 75°E); a west-facing in the Pieman River at 354,300E is mentioned.


Pieman
ROSEBER
MURCHISON
5 cm
5370000mN
FIG 3
INTERPRETIVE GEOLOGY
NATONE AREA
Scale 1:50000
AERIAL ROPEWAY
WILLIAMSFORD
MT. READ
MT. DUNDAS
Conliffe Fault
3660000mN
058814
Cs Serpentinite intrusive
Cpp Primrose Pyroclastics
Crm Munro Ck. Slate
Crw Westcott Argillite (W'ford vols)
Crc Salisbury Conglomerate
Crn Natone Vols.
Crs Stitt Qtzt.
Rosebery Grp.
Cambrian
Cd Dundas Group
Cc Crimson Ck. Fm.
Puo Oonah Qtzt. & Shale
Proterozoic

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Between the Rosebery Group and the Colebrook serpentinite he describes purple argillites, sandstones, greywackes, black shales, chlorite-sericite schist and laminated siltstone. The sequence further west along the river in the "Y" of the serpentinite is similar but much more deformed. He suggests a synclinorium in the Crimson Creek Fm. between Colebrook Hill and the Rosebery Group.

Blissett (1962) describes Crimson Creek Fm. flanking the inlier of Oonah Quartzite and Slate on the NE Dundas Tramway as comprising "purple, red, green and brown siltstone, dolomitic siltstone, cherty mudstone and slate and greywacke". Hall (1967) examined outcrop in the vicinity of the Ring River which he took to be Crimson Creek Fm.; the precise location is not given. Presumably it was along the NE Dundas Tramway. The lithologies there comprise purple and grey laminated and massive shales and argillites. Dips vary from steep east to steep west and he found a west-facing at one outcrop. He claims that the Crimson Creek Fm. in this area appears to conformably overlie the Rosebery Group. According to Smith (1898) a belt of "fine volcanic breccia" occurs just (?) SE of the Ring Valley Mine; this probably lies within the Crimson Creek Fm. but may be part of the Oonah Quartzite and Slate.

Blissett (1962) describes the rocks of the Crimson Creek Fm. on the Moores Pimple track between Montezuma Falls and Moores Pimple as comprising purple and fawn siltstone, shale or slate, greywacke and dolomite siltstone. "East of a line from Moores Pimple to Mt. Dundas is a considerable thickness of green and grey shale, siltstone, greywacke and greywacke conglomerate with interbedded volcanic and pyroclastic rocks which are tentatively correlated with the Crimson Creek Fm.." He claims the rocks mapped east of Mt. Dundas are similar to those he describes from the Mt. Read track just east of Moores Pimple which include "many bands of interbedded pale green and pink agglomerate or tuff". Johnson (1974) describes the geology of (?) Crimson Creek Fm. in the area of White Spur Creek. He claims the sequence youngs to the east but no supportive evidence is presented. Lithologies encountered include slates, and shales, often pyritic, siltstone, micaeous sandstone, siliceous "tuffites" containing lithic fragments, and quartzite. Johnson correlated these lithologies with those described by Campana & King (1961) at Moores Pimple; the suggestion that the rocks in both these areas are "Primrose pyroclastics and slates" is no longer accepted.

The Zeehan Sheet shows a fault-bounded block of "Dundas Group Unassigned" near the Ring River west of the Fahlore Mine and a fault-bounded block of "(?) Dundas Group Unassigned" north-east of Moores Pimple. Blissett & Guilline (1961a) suggested that the Dundas Group conformably overlies the Crimson Creek Fm.. Blissett's latter assignation is discounted however by his original field maps which show a unit of breccia-conglomerate extending north from Moores Pimple (where it is flanked by Crimson Creek Fm.) into the ultrabasic intrusive (near which it is flanked by supposed ?Dundas Group sediments) and continuing for a short distance (at least) on the north side of the intrusive. Elliston (1954) notes an occurrence of what he calls "Razorback Conglomerate" on the east side of a steep spur north of this ultrabasic. Thus the country rocks to the intrusion are the same formation as outcrops at Moores Pimple. This point is discussed further below.

Numerous workers (Finucane, 1932b; Dallwitz; E.Z. students; Mines Dept.; Hall, 1967; Loftus-Hills et al, 1967) have established a fairly definite stratigraphic sequence for the Rosebery Group in the Natone Creek area. From east to west the sequence is:-

Stitt Quartzite (550m):- white to dark grey micaeous quartzite, minor dark shales.

Natone Volcanics (150m):- Qtz-feldspar crystal tuffs, rhyolite, crystal lithic tuffs and vitric lithic tuffs.

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Salisbury Conglomerate (100m):- lithic fragments including chert, micaceous quartzite, shale, welded tuff and fine-grained sericitised volcanics in a green fuchsitic matrix; interbeds of sandstone, mudstone and minor crystal vitric and crystal lithic tuffs.

Westcott Argillite (90+m):- reddish, brown and pale green thinly bedded shales, siltstone and greywackes.

Williamsford Volcanics (60+):- altered rhyolitic tuffs and lavas (?); lies within the Westcott Argillite.

Munro Creek Slate:- grey and black shales, lesser sandstone.

Loftus-Hills et al (1967) differed from this interpretation by calling the westernmost unit (Westcott Argillite) Munro Creek Slates and Quartzites. Brathwaite (1969) however, interpreted a thinner unit of Westcott Argillite succeeded to the west by the Munro Creek Slates. Hall & Green (1967) claim that the sequence is predominantly west-dipping and west-facing but drill core from the Mines Department hole indicates consistent east facings and contact relationships show that the Natone Volcanics are younger than the Salisbury Conglomerate. This conflict in the facing of the sequence needs to be resolved.

Near Bakers Creek and the haulage terminus Hall (1967) and Brathwaite (1969) concluded that the Rosebery Group is totally represented by a unit which they correlated with the Munro Creek Slates and Quartzites (although Hall does not appear to have mapped this unit elsewhere). It comprises interbedded carbonaceous shales and slates (sometimes pyritic), siltstones, greywacke, quartzite, tuff, (?) ash and (?) pyroclastics. Fitzgerald located the contact between this unit and a feldspar crystal tuff of the Primrose Pyroclastics 600m up Bakers Creek from its junction with the Ring River. Hall placed the contact in a similar position.

Some workers have correlated the sequence in the Moores Pimple area with the Rosebery Group in the Natone Creek area. Fitzgerald modified Hall's proposed sequence by separating a volcanic unit (the Williamsford Volcanics) from the Westcott Argillite. He also included in the Rosebery Group a basal sedimentary unit (the Chamberlain Shale) which Hall had included in the Primrose Pyroclastics and concluded that the Rosebery Group conformably and transgressively overlies the Primrose Pyroclastics. This, of course, is in direct conflict with the east facing deduced for the sequence from the Mines Dept. drill hole at Natone Creek. The structure in the Moores Pimple area is uncertain. Hall found steep dips to the east and west but Fitzgerald subsequently claimed steep easterly dips only. Blissett's (1962) original observation of steep easterly dips with "minor close folding" is probably the best account. Campana & King (1963) noted cross-bedding and graded bedding in quartzite at Moores Pimple which indicated west facings.

Correlation of the sequence from Moores Pimple to the east with the Rosebery Group sequence at Natone Creek appears quite feasible despite the absence of these units and the appearance of the Munro Creek Slates and Quartzites near Williamsford. However, K. Corbett (pers. comm.), who recently mapped the Moores Pimple area, has serious reservations about such a correlation. If this correlation is accepted then Blissett's classification of the sequence on Moores Pimple as Crimson Creek Fm. must be rejected.

Several ultrabasic intrusives have been mapped within the study area. The largest of these lies on the western flank of Colebrook Hill and trends north-south. Blissett (1962) described it as a partly serpentinised pyroxenite and suggested that it may represent a branching dyke. Mapping of the Colebrook Grid showed that this serpentinite contains several pods of "coarse grained chert-dolomite rock" which appear to correspond with the petrographic description by Fander (held in E.Z. files) of dacitic tuffs with strong carbonate alteration. A small, strongly dolomitised ultrabasic intrusive has been mapped by Blissett, Hall and Fitzgerald just north of Moores Pimple. A (?) gabbroic outcrop is recorded by Hall (1967) in Natone Creek just north of where

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the track to NP 10? crosses it.

Two small areas of flat-lying tillite have been mapped within the Natone area; they are at the southern end of the Colebrook Grid and to the immediate NE of Mt. Dundas. These outcrops are thought to be part of the Permisn Zeehan Glacial Fm. (Blissett, 1962).

7. PHOTOGEOLOGY

The Natone Area is included in the 1:50,000 geological photo-interpretation done by Loxton-Hunting for E.Z. in 1978 using 1:40,000 air-photos. Because of the large scale used and consequent lack of detail, this study is of very limited use. Lithologies are sub-divided into Primrose Pyroclastics, Rosebery Group, Crimson Creek Fm., Dundas Group Unassigned and Oonah Quartzite. The Primrose Pyroclastics near Moores Pimple and further south are shown extending considerably further westwards than the currently accepted position and can be safely discounted. The Rosebery Group is not shown near Moores Pimple. It is worth noting that a possible N-plunging anticline is shown near Colebrook Hill.

The accompanying report (Loxton, Hunting & Assoc. CA 25/78) suggests that the Primrose Pyroclastics may be partially conformable with the Dundas Group and Rosebery Group, and that the Rosebery Group is partially conformable with both the Dundas Group and the Crimson Creek Fm.

A geological photo-interpretation of the area from Hercules to the south was undertaken on behalf of Texins Devel. in 1970. The resulting 1:12,500 geological plan is presented in Discala (1974), but the scale of the air photos used is not indicated in this report. A large number of faults are shown and virtually all lithological contacts are faults - very convenient and therefore rather suspect. Lithologies are sub-divided into Mt. Read Volcanics (i.e. Primrose Pyroclastics), Dundas Group Undivided, Crimson Creek Fm., and Oonah Quartzite; the Rosebery Group is not shown and has been included within the Crimson Creek Fm.. This study is useful for the faults shown.

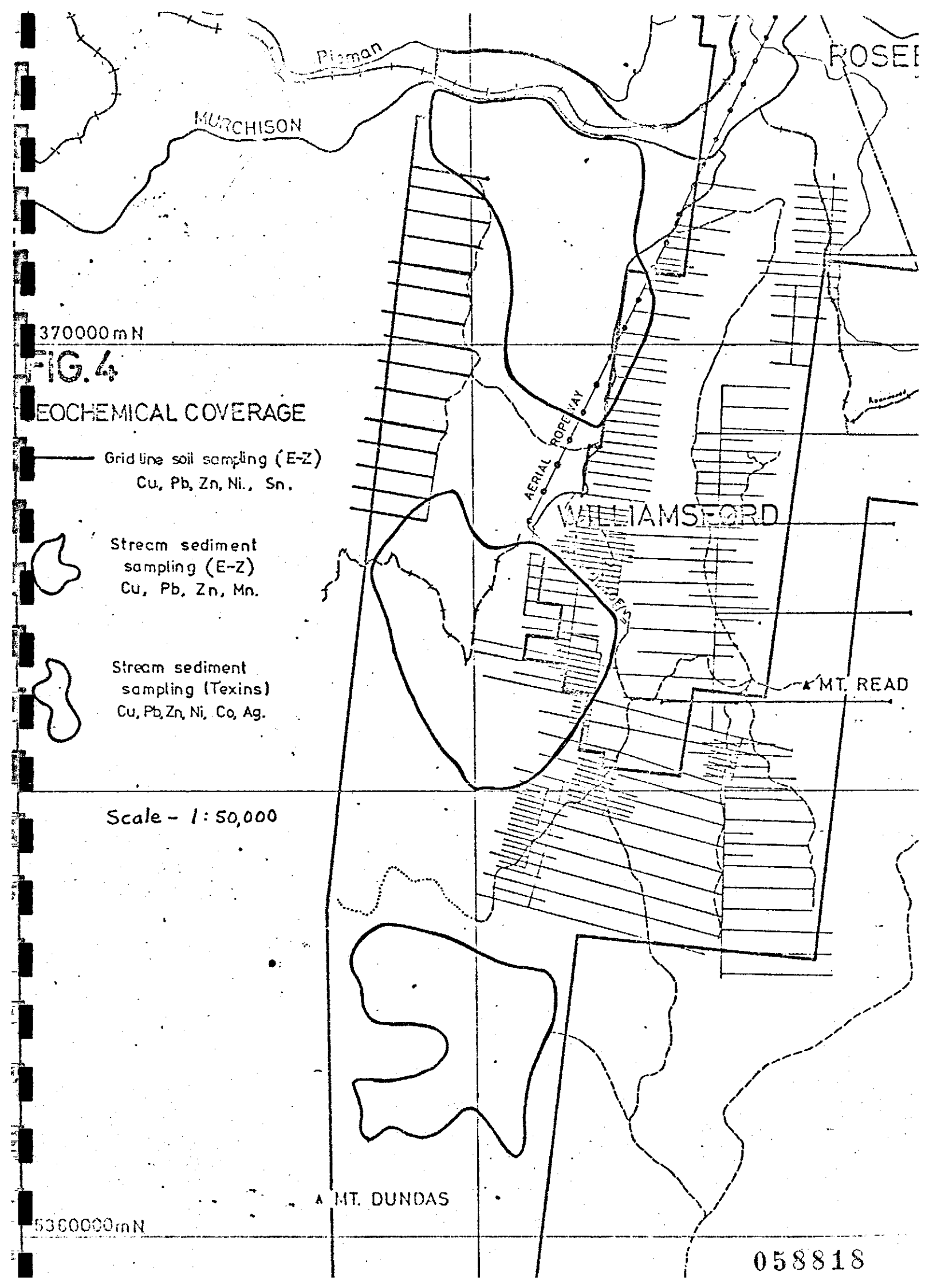
A tectonic analysis using air photos was made for Texins Devel. over the southern part of the area extending to just north of Moores Pimple (Kopp 1970). The 1:12,500 plan shows numerous faults and indicates their respective dip and sense of movement; a few fold axes are also shown.

8. GEOCHEMISTRY (Fig. 4)

8.1. STREAM SEDIMENTS

Much of the Natone Area has been covered by two geographically distinct stream sediment surveys by E.Z. and Texins Development respectively. A moderately detailed stream sediment sampling programme was conducted by E.Z. in the Natone Creek and Ring River drainage basins in 1970-71. Samples were assayed for Cu, Pb, Zn, Mn but there is no record of sampling technique or size fraction sampled. Results have since been plotted on 1:15,480 (4" to 1 mile) plans; one plan for each element. Some Mn values south of Ring River are missing.

The validity of this programme in certain areas at least, is highly dubious - many assays in the Conliffe Creek and Bakers Creek drainage basins are exceptionally anomalous in Zn and Pb and to a lesser extent Cu. Although contamination from Hercules Mine and the haulage line is


Pieman
MURCHISON
ROSE
370000 m N
FIG. 4
EOCHEMICAL COVERAGE
Grid line soil sampling (E-Z)
Cu, Pb, Zn, Ni., Sn.
Stream sediment
sampling (E-Z)
Cu, Pb, Zn, Mn.
Stream sediment
sampling (Texins)
Cu, Pb, Zn, Ni, Co, Ag.
AERIAL ROPEWAY
WILLIAMSFORD
MT. READ
Scale - 1 : 50,000
MT. DUNDAS
5360000mN

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likely in Bakers Creek and the creek to the north, this cannot explain the magnitude (up to 17% Zn) and location of many values. Slack samplers are the most probable explanation. However, careful examination of assays from other creeks indicated that sampling throughout the remainder of the survey is probably reliable.

Consistently anomalous samples from several creeks draining into Natone Creek from the east almost certainly reflect contamination from the Williamsford-Rosebery aerial ropeway. The anomalous samples furtherest upstream lie directly beneath the aerial ropeway. Anomalous Cu values are confined to one creek and appear to arise from old mine workings above the ropeway.

Anomalous Zn and Cu values occur in the creeks draining Colebrook Ridge to the east. Anomalous Cu and Zn values to the north of Colebrook Hill probably represent contamination from the Colebrook Mine. There are numerous anomalous Pb and Zn values, often coinciding, within the Ring River drainage system. Anomalous Cu values are distinctly less common, apparently reflecting a paucity of copper mineralisation. Many anomalies in Ring River drainage basin (other than in Bakers Creek and Conliffe Creek) may be due to old workings.

Mn values show no obvious pattern or relationship to Cu, Pb or Zn anomalies.

Texins Development carried out detailed stream sediment sampling in the White Spur Creek drainage basin within the eastern portion of E.L. 7/68 in 1973 (Johnson, 1974). 195 -80 mesh samples were assayed for Cu, Pb, Zn, Ag, Ni, Co and results for Cu, Pb and Zn were plotted on separate plans at 1:5,000 (not 1:10,000 as indicated by the bar scales). Background and threshold values were calculated for each element. Sampling was quite dense with samples usually taken every 50-75m. However, not all tributaries were sampled.

Copper values are low (max. 30 ppm), suggesting that this sector has little Cu mineralisation. There are numerous samples scattered throughout the area with greater than 200ppm Zn or Pb; the coincidence of Pb and Zn anomalies is marked. Although background values for Pb and Zn were calculated as 77 and 78ppm respectively, the threshold values are 310 and 365ppm. The occurrence of only a few erratic Pb and Zn values above these threshold values apparently led Discala (1974) to conclude that there are no significant anomalies in the area. The writer suggests, however, that these threshold values are high and that the better anomalies deserve follow-up work. Dispersion trains of both these elements are apparently very short (often only 100-150m), assuming that the sampling technique was consistent. Dispersion trains for Cu, Pb, Zn in Natone Creek are cosiderably longer (approx. 800m) so this problem will require attention if further stream sediment sampling is undertaken.

8.2. SOILS

C horizon soil sampling was carried out at 100' intervals over the Colebrook Grid in 1973, samples were assayed for Cu, Pb, Zn, Ni, Sn. No field notes remain so the reliability of the sampling is uncertain. The fraction assayed is not recorded. Pb, Zn, Cu, Ni results appear as Plates 21, 22, 23, 24 respectively in Reinhardt (1973). These plans are of lessened value as only broad-spaced contours are shown and individual assays are not indicated. Many anomalous Zn values and, to a lesser extent, Pb values reflect the distribution of serpentinite. High Ni values are restricted to the serpentinite. Anomalous Cu values show a

marked antipathy to serpentinite; highest values occur adjacent to and downslope from the Colebrook workings and are probably due to contamination.

The strongest Pb-Zn soil anomaly is on the western end of line 1N outside the E.L. and adjacent to some old workings. A strong Pb-Zn anomaly (up to 1,000ppm Pb, 1,200ppm Zn) approx. 1,300' wide occurs on line 6N over the serpentinite from 1,300W to 2,600W. Slightly weaker, narrower anomalies occur on adjacent lines to the north and south. It is unlikely that these anomalies are wholly due to contamination from the Lynton Mine or nearby workings and thus further work is required to determine the cause of this anomalous zone. The scattered anomalous values (up to 235ppm Cu, 255ppm Pb, 800ppm Zn) on line 00 between 00W and 1,000W warrant follow-up work, being the best anomaly not related to serpentinite.

Tin assays are virtually all in the range of 0.02-0.09% (200-900ppm) which is exceptionally high for soils (assuming there has been no consistent typing error). The higher values are mostly erratically distributed and show no apparent lithological affinity. Small clusters of higher values lie near the eastern end of line 1N, and over the serpentinite on line 4N. These warrant following-up as neither is associated with the Olympic and/or Athenic workings. The additional soil sampling recommended for the Colebrook area will provide a broad check on the validity of the Sn assays within the Colebrook Grid.

8.3. ROCK CHIPS

54 rock chip samples were taken during the Texins stream sediment survey (Johnson, 1974) and assayed for Cu, Pb and Zn. Assays are presented in Discala (1974) but no record of sample location is apparent.

9. GEOPHYSICS

9.1. I.P. (Fig. 5)

Between 1960 and 1962, McPhar carried out a dipole-dipole frequency domain I.P. survey on the Natone Grid. All lines were initially done using 400' dipoles and most anomalies were re-surveyed using 300', 200' and/or 100' dipoles. Results appear as apparent resistivity and metal factor pseudo-sections; P.F.E.'s have now been calculated. Comments by McPhar on the results are given in Hallof (1961a, 1961b and 1972).

The pseudo-sections show two distinct zones of interest. Within the Stitt Quartzite to the east of Natone Creek, extending from line 25S to line 58S is a N-S trending zone with a moderate to a strong I.P. response. This orientation is parallel to lithological strike. No further work has been done to test this anomaly.

To the west of Natone Creek, within the Westcott Argillite, is an approximately N-S trending zone of very low resistivity. It extends from line 25S to line 180S although its apparent width varies considerably. On a number of lines a weak to strong I.P. anomaly is associated with this feature. Diamond drill holes NP 104 (line 100S) and NP 107 (line 83S) tested moderate and very strong I.P. anomalies respectively from this zone. The first hole intersected 6m of 11% pyrite with minor Zn in brecciated blac shales, while NP 107 intersected 15m averaging 12% pyrite in black shales and minor sandstone. These intersections give encouragement for further work in this zone.

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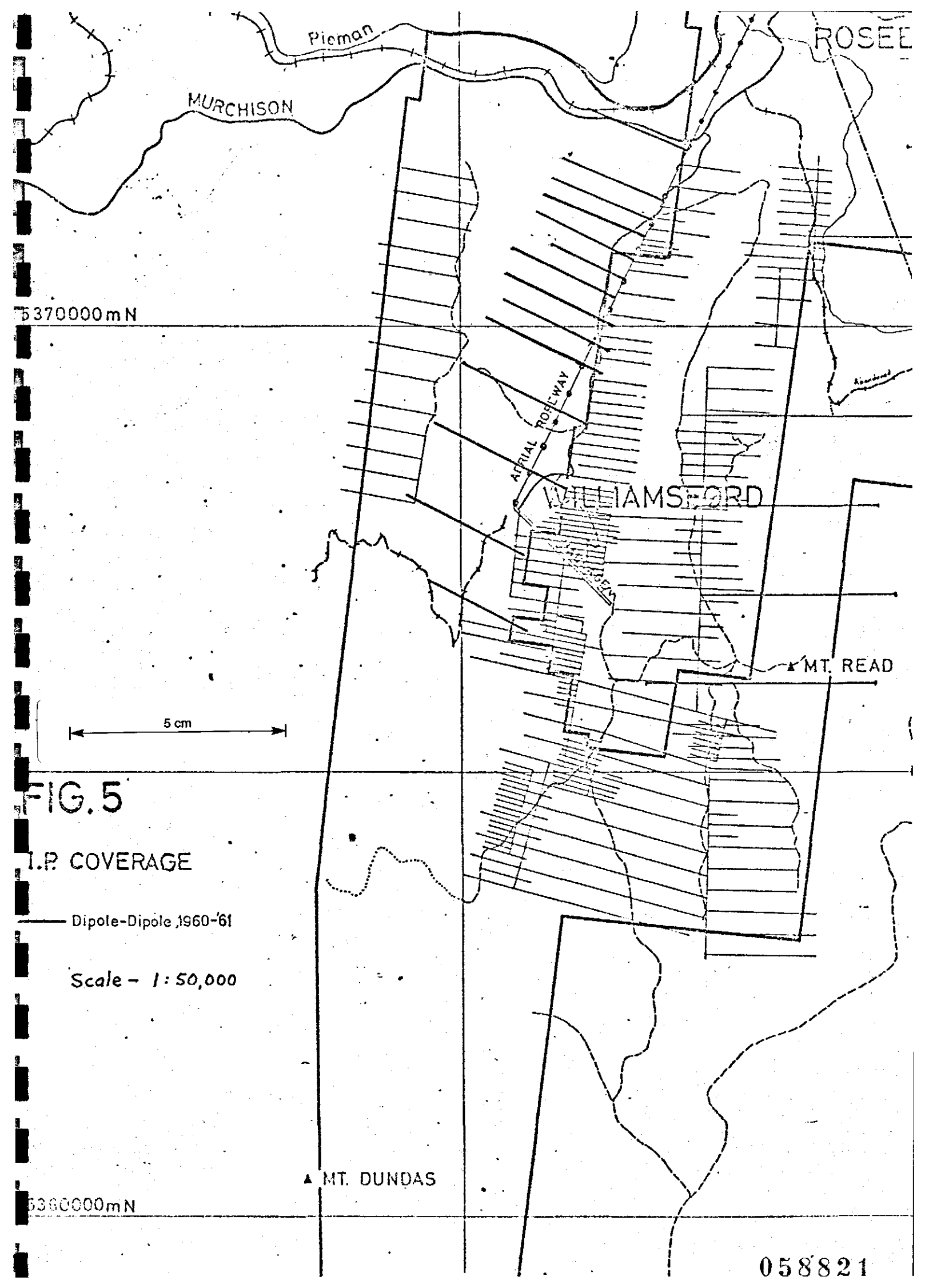
Pieman
MURCHISON
ROSEB
5370000mN
AERIAL ROPEWAY
WILLIAMSFORD
MT. READ
5 cm
MT. DUNDAS
5360000mN
T.P. COVERAGE
Dipole-Dipole 1960-'61
Scale – 1:50,000

FIG. 5

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058822

9.2. AIRBORNE E-M (Fig. 6)

A Turair survey by Seigel Associates in 1972 used a helicopter-mounted Scintrex Turair - II unit (400Hz) with an average bird terrain clearance of 45m (although it varied from 30m to greater than 150m). East-west flight lines approx. 150m apart were flown. Most of the anomalies are F.S.R. (field strength ratio). Amplitudes of the anomalous E-M responses were "very weak" and close to the noise level of the system; however, similar responses were recorded over the Hercules Mine. The results are presented in Linford (1972) and have since been replotted at 1:10,000.

Scintrex flew a helicopter-borne Turair-aeromagnetic survey for Texins Devel. in 1973 over selected areas of E.L. 7/68 including virtually all the Natone Area south of Moores Pimple (Howland-Rose, 1973). Lines were east-west and approx. 200m apart; bird height was generally 30-75m. A Scintrex Turair - II unit at 400Hz was used. The flight lines were marked on a photo-mosaic base map and hence topographic control on the 1:10,000 combined Turair-aeromagnetic plan is not particularly good. This, together with the scarcity of topographic data on this plan, precludes anomalies being positioned more accuarately than to within 100-200m.

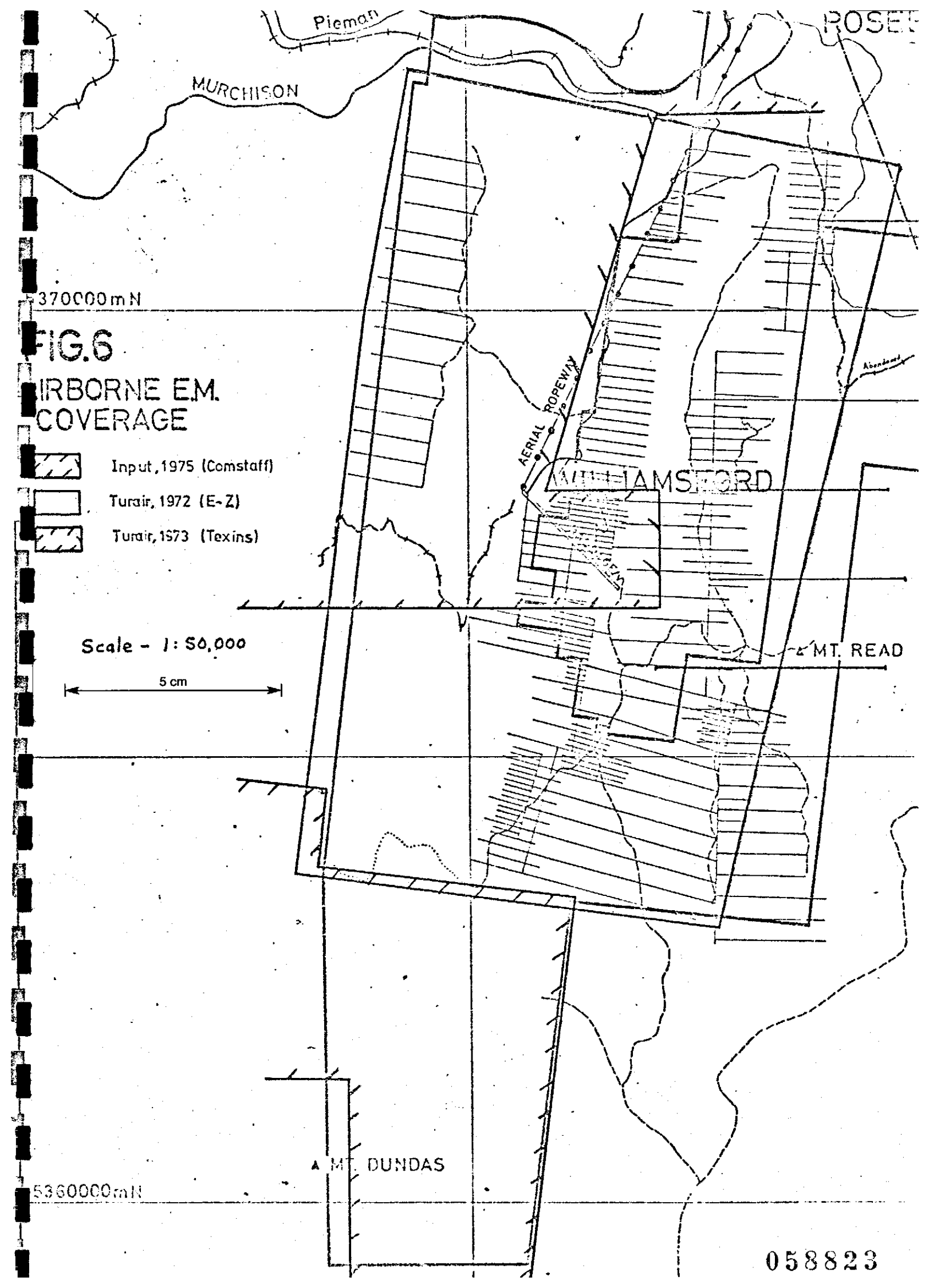
In 1975 Geoterrex carried out an INPUT E-M survey for Comstaff which covered most of the Natone Area as far south as Bakers Creek. A Barringer Mark V Input system was used. The aircraft flew east-west lines at approx. 400m spacings with a terrain clearance of 120-180m. Results and interpretation are presented in Butt, Hanse & Finney (1975), a copy of which is held by E.Z. The Natone Area lies within the two southern sheets. Flight lines were plotted on a photo-mosaic base map so topographic control is not particularly good. Anomalies have now been compiled on E.Z. 1:10,000 sheets.

Nearly all anomalies detected by the 1972 E.Z. Turair survey were very weak F.S.R. anomalies of little interest. The best anomaly, Conductor 7, is well-defined and lies just south-east of the road between Mt. Read and Moores Pimple. It appears to lie oblique to strike within an acid pyroclastic sequence and thus probably lies within the Primrose Pyroclastics (and outside the scope of this study). Linford's (1972) correlation of this anomaly with a geochemically anomalous black shale well to the west is stretching credibility.

Conductor 18, which corresponds closely to the Colebrook workings, comprises three F.S.R. and phase anomalies which all have relatively low conductivity thickness values and the conductor is therefore rated by Linford as being of "minor interest". A northwesterly strike and a length of approx. 450m is indicated. This apparent strike direction conflicts with the northerly strike suggested by the INPUT survey.

Anomaly 84 is an isolated anomaly associated with a sudden drop in bird height but it corresponds almost exactly with drill hole NP 104 which intersected 6m of 11% pyrite (and minor sphalerite). However this anomaly is unsupported on adjacent lines so its significance remains dubious. Conductor 16 is the only other anomalous zone of any interest within the Natone area; it trends north-south with a strike length of approx. 600m. It lies between Williamsford road and upper Natone Creek within Westcott Argillite and displays variable definition, phase and F.S.R. distortions and low conductivity-thickness values. It is classified as "of minor interest" but in view of this same designation for the Colebrook Mine anomaly it is worth following up.

A weak conductive axis was found to be associated with the Hercules mineralisation (Conductor 10) but most of the constituent anomalies are "poorly defined" and have "very weak amplitudes". Thus Turair is not a very effective method for locating Hercules- & Colebrook-type mineralisation. It should also be noted (and pondered) that, apart from the Colebrook Mine, there is no correlation whatever between the INPUT and Turair surveys with


Pieman
MURCHISON
370000mN
FIG.6
IRBORNE E.M.
COVERAGE
Input, 1975 (Comstaff)
Turair, 1972 (E-Z)
Turair, 1973 (Texins)
Scale - 1: 50,000
5 cm
AERIAL ROPEWAY
WILLIAMSFORD
MT. READ
MT. DUNDAS
5360000mN
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As in the Turair survey flown for E.Z. the anomalies recorded in the Texins Turair survey were generally of extremely low amplitude in both phase and ratio responses. Only three anomalies of any significance were recorded within the study area. Anomalies 11 & 11A are described by Howland - Rose (1973) as essentially phase responses and as local peaks within a band conductor; he rates them as of secondary interest. They probably occur within a sedimentary sequence of the Crimson Creek Fm. although the locality has not been mapped in any detail. Anomaly 13 lies on the E.L. boundary. It represents a minor response in both phase and field strength ratio within a banded conductor and is only rated as of secondary or tertiary interest. This anomaly lies within sediments of either the Crimson Creek Fm. or the Donah Quartzite.

The best zone of the INPUT anomalies (designated CS-10) lies along the northern end of Colebrook Ridge extending to the Pieman River and passes through the Colebrook workings. Moderate to strong 6-channel bedrock anomalies were recorded on five flight lines within the E.L. giving a minimum strike length of 2.4 km. The best response was on line 114A which passed directly over the Colebrook workings; a 350 gamma aeromagnetic anomaly offset approx. 120m west of the anomaly is almost certainly due to pyrrhotite present in this deposit. This E-M anomaly could well represent strike extensions of the Colebrook Mine mineralisation and therefore warrants detailed geochemical, geophysical and geological follow - up.

Anomalous zone CS-11 mainly comprises 5-channel anomalies on three adjacent flight lines just east of Munro Creek. Two weak 3-channel anomalies lie further to the south. This anomaly may represent part of the zone of very low resistivity on the western margin of the Natone I.P. survey.

This zone was drilled 1km approximately along strike to the south, and there comprises interbedded sandstones and black shales with pyritic veinlets and minor sphalerite. The responses on lines 116 and 117 could be partly due to the railway line and/or power lines. Although of secondary interest, this E-M anomaly requires further attention to give better definition and an explanation because of known minor base metal mineralisation along strike.

The 4-5 channels anomalies of Zone CS-9 and several 4-channel anomalies further south appear to correspond with the Colebrook serpentinite or its margins. Zone CS-2, comprising of a number of weak 2- & 3-channel anomalies and a weak 5-channel anomaly, extends from near the Fahlore and Ring Valley Mines. The anomalies on the two northernmost lines may have been stronger if the bird height had not been so great (190m and 195m). The report of serpentinite in a tunnel on Section 331-93M just north of Fahlore Mine, and the association of the anomalies with magnetic highs indicate that this zone probably reflects an ultrabasic intrusive. However, because of the proximity to known mineralisation, field checking should be carried out to confirm this interperetation.

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9.3. AEROMAGNETICS (Fig. 7)

Four separate aeromagnetic surveys have been flown over parts of the Natone area. A survey carried out by Seigel Associates in 1972 in conjunction with their Turair survey covered the Natone area as far south as Moores Pimple. Because of equipment malfunction, no magnetics were recorded for 11 of the 54 flight lines during the initial survey, but this was subsequently re-flown. A Scintrex MAP-2 proton precession magnetometer was used. Results are presented as a magnetic contour plan and a magnetic interpretation plan, both at 1:15,840 (20 chains to 1"). This data was later combined with Geoex data on E.Z. 1:10,000 sheets.

Aeromagnetics were recorded as part of the Turair survey for Texins Devel. in 1973 over the Natone area south of Moores Pimple using a Scintrex MAP-2 proton precession magnetometer. Results are combined with a Turair anomaly plan at 1:10,000 presented in Howland-Rose (1973).

Similarly, aeromagnetics were included in the INPUT survey flown by Geoterrex for Comstaff in 1975. A Geometrics Model 803 proton precession magnetometer was used.

A helicopter-borne magnetic survey was conducted by Geoex in 1978 using a Varian V4937A proton precession magnetometer. The flight lines were east-west and spaced at 250m; nominal terrain clearance of 30m was maintained. Results appear as contoured total magnetic intensity plans at 1:10,000 with a 10 gamma contour interval. There is no accompanying report. This survey covered only the northern and southern sections of the Natone area.

9.4. GROUND MAGNETICS (FIG. 7)

A ground magnetic survey using a fluxgate magnetometer was carried out over the Colebrook Grid in 1973. Readings were taken at 100' intervals. Results appear as magnetic profiles in Plate 20 in Reinhardt (1973); no base station reading is indicated. The magnetic profiles show good correlation with serpentinite indicated on the geological plan (Plate 19). The magnetics also strongly reflect pyrrhotite in the Colebrook Mine workings. Thus this method should be very useful in exploration for the Sn-pyrrhotite replacement style of mineralisation.

10. DIAMOND DRILLING (Fig. 2)

Three diamond drill holes have been drilled within the Natone area; two by E.Z. and one by the Mines Department. All are in the Natone Valley. Both E.Z. holes tested I.P. anomalies whereas the Mines Department hole was apparently for stratigraphic information.

E.Z. drilled NP 104 (bearing 306½° (true); declination -45°) at co-ords 100S 19W (Natone Grid) in 1962; total depth was 923' (218.3m). A 20' (6.0m) mineralised zone averaging 11% pyrite, 1.9% Zn and trace Cu, Pb, Ag was intersected. Assays from this interval are:

	Interval	Width (ft)	Core Recovery %	Cu%	Pb%	Zn%	Ag(oz)	Sn%	Fe%	S%
	767-773	6	94	0.13	0.1	3.8	0.8	0.03	13.4	7.7
	773-775	2	96	0.20	0.2	0.8	0.2	0.03	30.5	4.3
	775-780	5	100	0.10	0.2	0.8	0.3	0.03	15.3	6.1
	780-782	2	83	0.35	0.3	0.8	0.3	0.04	17.6	8.4
	782-787	5	40	0.10	0.1	1.6	0.1	0.03	13.0	7.2
Av.	767-787	20	81	0.14	0.2	1.9	0.4	0.03	15.9	6.9

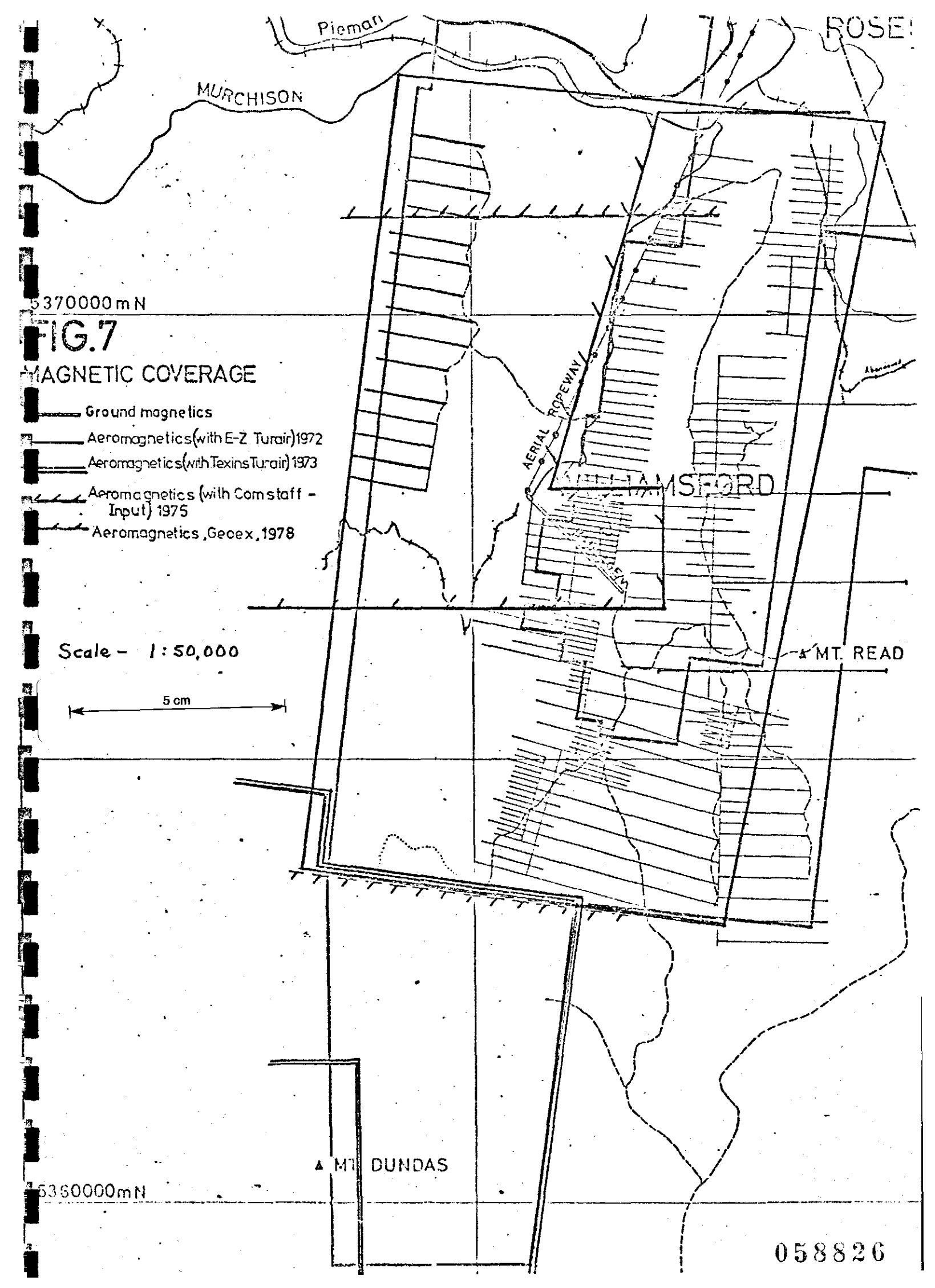

FIG.7

MAGNETIC COVERAGE

- Ground magnetics
- Aeromagnetics (with E-Z Turair) 1972
- Aeromagnetics (with Texins Turair) 1973
- Aeromagnetics (with Comstaff - Input) 1975
- Aeromagnetics, Gecex, 1978

Scale - 1 : 50,000

5 cm

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The mineralisation occurs in quartz-siderite veinlets within strongly brecciated black shales and the high Fe assays reflect the abundance of siderite. Both pyrite and pyrrhotite are present. The drill log does not clearly indicate the mode of occurrence of the sphalerite, but it probably occurs in the veinlets. Lithologies intersected by the hole are interbedded black slates and sandstone of the Westcott Argillite or Munro Creek Slates. The hole was drilled on or very close to a strong photo-lineament which follows Natone Creek; this may account for the strong brecciation.

NP 107 (bearing 289½° (true); declination -47°) was drilled at 83S, 31W in 1962-63; it had a total depth of 780' (237.7m). A 49' (15m) intersection averaged 13% pyrite with only trace Cu, Pb, Zn, Ag. Assays are:

	Interval	Width (ft)	Core Recovery %	Cu%	Pb%	Zn%	Ag(oz)	Au	Fe%	S%
	205-209	4	77	0.02	0.2	0.1	<0.1	nd	10.6	4.2
	209-222½	13½	96	0.02	0.1	0.1	<0.1	nd	18.0	11.9
	222½-228	5½	97	0.02	0.1	0.1	<0.1	nd	8.1	5.6
	228-234	6	36	0.03	0.2	0.8	<0.1	nd	20.8	13.9
	234-254	20	46	0.02	0.1	0.1	<0.1	nd	4.9	2.8
Av.	205-254	49	67	0.02	0.12	0.19	<0.1	nd	11.3	7.1

The mineralisation in this hole comprises pyrite veinlets; no mention is made of the gangue mineralogy, if any. The mineralisation occurs in a zone of black slates and minor sandstone of the Westcott Argillite or Munro Creek Slates and includes a 10' wide (apparent thickness) brecciated zone.

The Mines Department diamond drill hole, designated Rosebery 1, was collared just east of Natone Creek on the track into NP 107 (metric co-ords 5,371,062 N, 376,415E) in 1976 on a bearing of 083° (true?) and declination of -45° to a total depth of 290.16m. The hole was collared in the Westcott Argillite (dolomite sandstones and 10m apparent thickness of impure dolomite) and passed through Salisbury Conglomerate before finishing well into Natone Volcanics. A consistent east facing was noted and contact relationships indicated that the Natone Volcanics are younger than Salisbury Conglomerate. No significant mineralisation was intersected. The drill log is held in E.Z. files and the core is at the Mines Department library at Derwent Park.

The mineralised core from holes NP 104 and 107 should be re-logged with particular attention to the mode of occurrence of sphalerite in NP 104; petrographic work may be necessary to determine whether any syngenetic mineralisation i present in the black shales. Representative samples of mineralisation from both holes should be analysed for Sn. Core of the contact between Salisbury Conglomerate and Natone Volcanics in the Mines Department drill hole should be examined to check the validity of their facing interpretation.

11. EXPLORATION POTENTIAL

Lithologies within the Natone area are mostly sedimentary; minor volcanic (predominantly pyroclastic) units occur within the Rosebery Group and Crimson Creek Fm. Hence there is little likelihood of proximal volcanogenic Cu-Pb-Zn deposits occurring in the area, although distal facies deposits are a stronger possibility. The occurrence of black shales, sometimes pyritic, within the

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Rosebery Group and Crimson Creek Fm indicates that reducing conditions suitable to sulphide deposition were not uncommon. There are numerous minor sulphide deposits (mainly Ag-Cu-Pb) but these are fissure-fillings thought to be associated with Devonian granitic intrusions (Blissett, 1962). This category is unlikely to contain any deposits of sufficient tonnage for economic exploitation by E.Z.-Getty but this possibility should not be ignored.

The most attractive target within the area is the cassiterite-pyrrhotite metasomatic replacement type orebody similar to those at Renison Bell, Cleveland and Mt. Bischoff. The proximity to the Renison tinfield (3-5km) and the presence of favourable host rocks suggest that the Natone area has good potential for this type of deposit. Indeed, the Colebrook deposit is considered to be a deposit of this type (except that Sn is apparently absent). This is evidenced by the similarity of ore and gangue mineralogy to that of the above mentioned deposits, and the mineralisation occurring as replacement of calcareous/dolomitic sediments. Like Renison Bell, Cleveland and Mt. Bischoff orebodies, pyrrhotite is the dominant sulphide. Abundant axinite occurs in the Colebrook workings and its occurrence has been noted adjacent to the Renison Bell deposit, in Gormanston Creek, in the Ring River, and in the old Cornwall tin workings (Ward, 1909) so the association between axinite and tin deposits known to be in this district seems well-established. The Colebrook Mine lies 5km from the nearest quartz porphyry associated with tin mineralisation near Renison Bell. Calcareous/dolomitic sediments are known to occur within the Natone area, mainly within the Crimson Creek Fm. and 10m (apparent thickness) of impure dolomite was intersected within Westcott Argillite by the Mines Department drill hole. These lithologies may provide favourable sites for replacement orebodies where structure forms a suitable plumbing system for mineralising fluids.

Cassiterite occurring in fissure veins was mined from the Exe River workings west of Colebrook Mine just outside the E.L. boundary. A small amount of cassiterite is associated with pyrite in fissure veins at the Olympic and Athenic Mines to the immediate south and south-east of Colebrook Mine. These may represen conduits for mineralisation.

Relatively small-tonnage Sn mineralisation may also occur in a style similar to that at the Razorback Mine northwest of Mt. Oundas. Here sheared ferruginous talc (altered serpentine), partly dolomitised, contains irregular sulphide-quartz-cassiterite veins and disseminated cassiterite. Strongly dolomitised zones have been mapped within the serpentinite in the Colebrook Grid but the lack of any distinct Sn soil anomalies decreases the likelihood of such mineralisation. Previous geophysical and geochemical surveys within the study area provide patchy coverage but offer encouragement for further exploration in particular areas. Some areas have received very little attention and further work is required to properly evaluate their mineral potential.

The Natone Grid I.P. survey located two anomalous zones. Drilling established that one of these is a 6-15m (apparent thickness) zone of pyrite and pyrrhotite (aver 11-13%) in veinlets within black shales. However, 6' of 3.8% Zn was intersected in one of the holes and further work is required to assess the possibility of stratiform Zn-Pb mineralisation associated with this anomaly. This mineralisation may be of the "fahlore" type but its remoteness from known deposits of this type, lack of Cu, Pb and Ag, and its north-south trend parallel to lithological strike suggest that it could represent syngenetic mineralisation remobilised by later tectonism (most likely Tabberabberan). It may be significant that the Zn-rich intersection lies on or very close to the Natone Creek photo-lineament, and thus this lineament and its possible association with mineralisation should be given closer attention. The second I.P. anomaly is untested and remains a prime target although it may be solely due to pyritic black shales such as outcrop along strike adjacent to the Murchison Highway.

The INPUT E-M and aeromagnetic surveys suggest possible extensions of the Colebrook Mine mineralisation to the north and south. This area therefore represents the greatest potential for economic mineralisation within the whole Natone area. No significant Sn mineralisation has been reported from this mine but only three samples appear to have been assayed for Sn, one of which was distinctly anomalous. The main hope lies however, in the possibility that the deposit is zoned and that any extensions are Sn-rich.

The lack of any other strong E-M and aeromagnetic anomalies (apart from the magnetic anomaly due to the Colebrook ultrabasic) downgrades the likelihood of other massive pyrrhotite-chalcopyrite (-cassiterite?) deposits, although the efficiency of Turair surveys in detecting this style of mineralisation is open to doubt. It is also possible that any undiscovered deposits are lacking in pyrrhotite and hence have little or no magnetic expression.

12. RECOMMENDED PROGRAMME AND BUDGET

Further exploration recommended for the Natone area can be subdivided into two phases but no time order is implied. The first involves detailed follow-up of anomalies of primary interest; these include the Colebrook Mine and possible extensions to the north and south, anomalous Pb-Zn soil values associated with serpentinite near line 6N of the Colebrook Grid, and the two anomalous I.P. zones adjacent to Natone Creek. Phase two is a regional exploration programme designed to evaluate the mineral potential of the entire study area. The recommended work for these phases is detailed in Tables 1 and 2, and budgeted in Tables 3 and 4 respectively.

PHASE ONE

To adequately explore the Colebrook workings and their environs the access track will require touching up with a bulldozer. Lines 12N, 13N and 14N of the Colebrook Grid should be re-established and extended eastwards, infill lines cut (12.5N and 13.5N) and the grid extended northwards (lines 14.5N, 15N, 15.5N, 16N, 17N, 18N)(see Fig. 8.). It is recommended that imperial co-ordinates be retained for the grid extension. Detailed mapping, soil sampling (Cu, Pb, Zn, As, Sn), ground magnetics and I.P. should be conducted over all lines not already covered. (If I.P. is ineffective in detecting the mineralisation a Pulse E-M survey could be carried out instead). The Colebrook and Clifton workings should be sampled in detail for Cu, Pb, Zn, As (Co), Sn. This Colebrook work is the first priority.

To follow-up the Pb-Zn soil anomaly within the Colebrook Grid, lines 5N, 6N and 7N must be re-established and intermediate lines 5.5N and 6.5N cut. Detailed mapping and rock chip sampling (Cu, Pb, Zn, Ni, Ba), with particular attention to the Lynton Mine is needed to determine the source of the anomaly. A short I.P. survey may also be required. A ground magnetic survey and soil sampling (Cu, Pb, Zn, Ni, As, Sn) should be conducted over the intermediate lines.

Further work on the two anomalous I.P. zones near Natone Creek will be hampered by glacial cover and non-geophysical exploration over the moraine south of NP 104 would be a waste of time and money. Access tracks and creeks near the two zones should be mapped in detail and outcrops chip-sampled where appropriate. East-west (AMG) grid lines should be cut where glacial cover is not a problem and mapping, soil sampling (Cu, Pb, Zn, As) and ground magnetics carried out (see Fig. 8). Further detailed I.P. should be employed if geochemical results are encouraging. The estimated budget for the exploration proposed for Phase One is $43,000-00 (see Table 3).

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PHASE TWO

A stream sediment survey is recommended as the most effective reconnaissance technique for tin and base metal deposits (the area already having been covered by air-borne E-M and aeromagnetic surveys). A sampling density of approx 6-8 samples/km^2 will probably be necessary. Location of old workings should be taken into account when deciding sampling sites. Minus 80 mesh samples should be assayed for Cu, Pb, Zn, Mn, As, Sn. Three wide-spaced (500m) east-west grid lines will need to be cut between Moores Pimple and Ring River to allow mapping traverses across strike, and to provide access into creeks. Detailed mapping along creek traverses (in conjunction with stream sediment sampling), the NE Dundas Tramway, other unmapped access tracks, and the three proposed access grid lines should be carried out with particular attention to calcareous sediments, volcanics and black shales. Soil sampling (Cu, Pb, Zn, As, Sn?) at 25m intervals along the access grid lines is recommended. Ground magnetics should also be carried out where outcrop is poor and ultrabasics are suspected (e.g. south of Ring Valley Mine). I.P. should only be used to follow-up any soil anomalies. Ridge and spur soil sampling and/or grid soil sampling are suggested as follow-up techniques for any significant stream sediment anomalies. As part of this regional programme the Hamilton Mine should be located, sampled and evaluated. Other mines in the area will need to be accurately located to aid interpretation of the stream sediment sampling results.

The estimated budget for the regional exploration outlined as Phase Two is $27,000-00 (see Table 4).

TABLE 1 - DETAILED PHASE ONE PROGRAMME

COLEBROOK MINE

Bulldozing	Access Track				
Recutting and repegging grid lines	Line	12N	5E	-	15W
		13N	00E	-	15W
		14N	00	-	15W
Grid lines - cutting, mapping	Line	12.5N	5E	-	15W
soil sampling and ground magnetics.		13 N	8E	-	00
		13.5N	8E	-	15W
		14 N	15E	-	00
		14.5N	10E	-	15W
		15 N	10E	-	15W
		15.5N	10E	-	15W
		16 N	10E	-	15W
		17 N	10E	-	25W
		18 N	10E	-	25W
	Base Line		14N	-	18N
Mapping and rock chip sampling					
Colebrook and Clifton Mines.					
I.P.	Line	12 N	5E	-	15W
		12.5N	8E	-	15W
		13 N	8E	-	15W
		13.5N	8E	-	15W
		14 N	15E	-	15W
		14.5N	15E	-	15W
		15 N	10E	-	15W
		15.5N	10E	-	15W
		16 N	10E	-	25W
		17 N	10E	-	25W
		18 N	10E	-	25W

TABLE 1 Cont.

COLEBROOK Pb-Zn ANOMALY

Recut & repeg grid lines	Line	5 N	1W	–	25W
		6 N	6E	–	25W
		7 N	6E	–	25W
Cut grid lines, mapping, soil sampling and ground magnetics.	Line	5.5N	10W	–	25W
		6.5N	8W	–	25W
Mapping & rock chip sampling	Anomaly, esp. Lynton Mine				
I.P. (?)	Line	5 N	10W	–	25W
		5.5N	10W	–	25W
		6 N	10W	–	25W
		6.5N	8W	–	25W
		7 N	8W	–	25W

NATONE I.P. ANOMALIES

Mapping & rock chip sampling	Creeks & access tracks		
Gridding, mapping, soil sampling and ground magnetics (I.P.?)	Line	5,370,250mN	375,600-376,100mE
		5,370,500	" "
		5,370,750	" "
		5,371,000	375,600-377,100mE
	Base Line	377,100mE	5,370,250-5,371,000mN
		5,371,250	376,600-377,100mE
		5,371,500	" "
		5,371,750	" "
		5,372,000	" "
		5,372,250	" "
		5,372,500	" "
	Base Line	377,100mE	5,371,000-5,372,500mN

Relog mineraiised core in NP 104 & NP 107

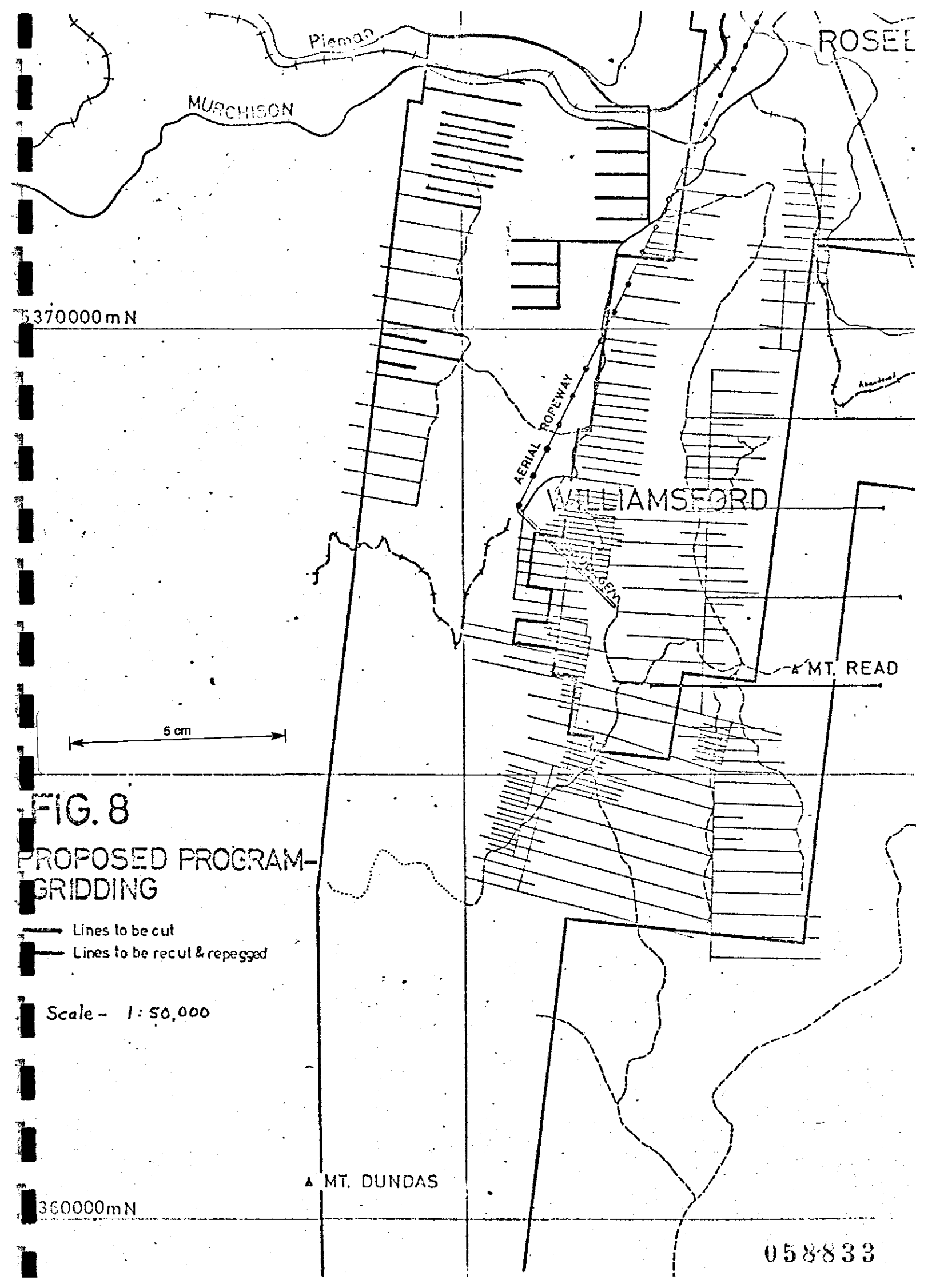

FIG. 8

PROPOSED PROGRAM-
GRIDDING

Lines to be cut

Lines to be recut & repegged

Scale - 1:50,000

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TABLE 2 - PHASE TWO PROGRAMME

Gridding, mapping, soil sampling (ground magnetics)	Lines	5,366,000mN	373,600 - 376,500mE (road)
		5,365,500mN	373,600 - 376,600mE (road)
		5,365,000mN	373,500 - 376,000mE (road)
Mapping	Creeks and unmapped access tracks.		
Stream Sediment Sampling	All creeks in area (6-8 samples/km^2)		
Locate old mines (esp. Hamilton Mine)			

TABLE 3 - BUDGET FOR PHASE ONE

	Colebrook Mine	Colebrook Pb-Zn	Natone I.P.	Total
Salaries & Wages	10,800	2,500	4,300	17,600
Bulldozing	300	-	-	300
Contract Line-cutting	3,000	350	2,400	5,750
Assaying	3,600	600	600	4,800
Petrology	200	100	100	400
I.P.	5,900	1,500?	-?	7,400
Materials	200	100	100	400
Equipment & Facilities	1,200	300	500	2,000
Indirect Charges	2,600	600	1,200	4,400
	27,800	6,050	9,200	43,050
			Say	$43,000

TABLE 4 - BUDGET FOR PHASE TWO

Salaries and Wages	14,100	
Contract Line-cutting	3,000	
Assaying	3,300	
Petrology	200	
Materials	300	
Equipment and Facilities	2,000	
Indirect Charges	4,050	
	$26,950	Say $27,000

TABLE 5

UNIT COSTS ASSUMED FOR NATONE AREA BUDGET

Geologist (& associated overheads)		$ 34,000-00/year
Field Hand " "		$ 400-00/week
I.P. (including report and all costs)		$ 600-00/line km
Contract Line Cutting (Line pegging not included)		$ 350-00/line km
Assays:- Soils		
Cu, Pb, Zn, As	(plus freight)	$ 3-00/sample
Cu, Pb, Zn, As, Sn	"	$ 6-00
Cu, Pb, Zn, As, Sn, Ni	"	$ 6-25
Cu, Pb, Zn, As, Sn, Mn	"	$ 6-25
Rocks		
Cu, Pb, Zn	"	$ 3-05/sample
Cu, Pb, Zn, Ni	"	$ 3-30
Cu, Pb, Zn, As, Sn, Co	"	$ 6-55
Stream Sediments		
Cu, Pb, Zn, As, Sn	"	$ 6-00/sample
Vehicles		$ 5,000-00/year
Bulldozer		$ 30-00/hour
Administration Costs (Project Overhead)		Equivalent to Tech. Salaries.

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APPENDIX 1 - DESCRIPTIONS OF OLD MINE WORKINGS

Colebrook Mine - Sections 236-93M, 239-93M, 216-93M (ex 3736-87M), 5364-93M; last held as 239-93M and 9127-M.

The Colebrook copper workings were developed on four parallel orebodies 3-18m wide and 170-215m long which strike ENE and dip 85° west (see Fig. 10). Pyrrhotite is the main ore mineral with lesser pyrite, arsenopyrite, marcasite and chalcopyrite, trace galena, sphalerite, tetrahedrite and rare gold (Ward, 1910). The ore occurs in an abundant gangue of axinite and actinolite and lesser calcite and quartz, which is often banded. Datolite and danburite occur rarely as cavity linings. The ore generally assays 0.5 - 3% Cu and 14 - 28 g/t Ag with rare bismuth. Systematic sampling (approx. 56 samples) of the workings on behalf of the Colebrook Prospecting Association in 1908 averaged roughly 0.9% Cu. These assays appear in E.Z. files. Montgomery (1895) records one sample assaying approx. 1% Ni and Co (combined?) and 3.1% Cu. According to Blissett (1962) the country rocks comprise purplish and grey cherty siltstone, mudstone greywacke and greywacke breccia-conglomerate. The mineralisation formed by the metasomatic replacement of calcareous or dolomitic sediments which occur near the orebodies. The walls of the orebodies are vaguely defined and the country rocks between the orebodies are also mineralised.

In a report on the workings for E.Z., Gregory (1958) concluded that the mineralisation occurs near well-developed cross-faults striking 070° and dipping 85° north along which it was introduced. The gangue zones appear to follow bedding except where cross-faulting is strong; cross-faulting truncates the orebodies at their northern end. He also noted strong silicification of the host sediments. Numerous surveyed R.L. plans and cross-sections of the working accompany this report. He found that the only significant sulphide body was 12,000 tons of approx. 1.2% Cu (15m x 15m in plan) intersected by "C-26 adit" and C tunnel. Of the three samples assayed for Sn, one sulphide sample assayed 0.12% Sn and two gossans assayed 0.02 - 0.05% Sn respectively.

Like most small deposits in the district, production was largely confined to the period from the discovery in the early 1890's to about 1910. Most of the tunnels run NE - SW diagonally through the orebodies because the lodes were erroneously thought to strike in this direction. They were later found to strike roughly ENE. The following description is largely taken from Waller (1902b).

No. 1 Orebody was exposed in No. 2 adit, B bench, two trenches and possibly in H tunnel (see Fig. 10). 170m in No. 2 adit a drive was cut northwards on 0.3m of chalcopyrite which pinched out at 10m. The same vein was driven onto the south and after 4m it widened out to 1.4m. The lode at B bench (approx. 10m above No. 2 adit) is 6m (?) wide averaged 5.9% Cu and 50 g/t Ag. Exposure in both trenches was poor in 1902. No. 1 Orebody (?) is at least 6m wide in H tunnel and averaged 1.67% Cu and 24 g/t Ag.

No. 2 Orebody was exposed in E tunnel, D open cut, 150' level east, No. 1 tunnel and D trench. The richest grades in the mine occurred in C tunnel and D open cut; the orebody is considerably wider in the tunnel than on surface. Unbiased sampling of all exposure in C tunnel and D open cut averaged 2.9% Cu and 30 g/t Ag; (this appears to conflict with sampling by Gregory, 1958, who reported a grade of 1.2% Cu for a similar ore block). 150' level east intersected 14m of ore (NB not true thickness) before penetrating 27m of virtually barren country. Part of the lode here assayed 4.8% Cu and 40 g/t Ag. According to Waller (1902b) the lode was intersected 12m into No. 1 tunnel but Smith (1898) states that the

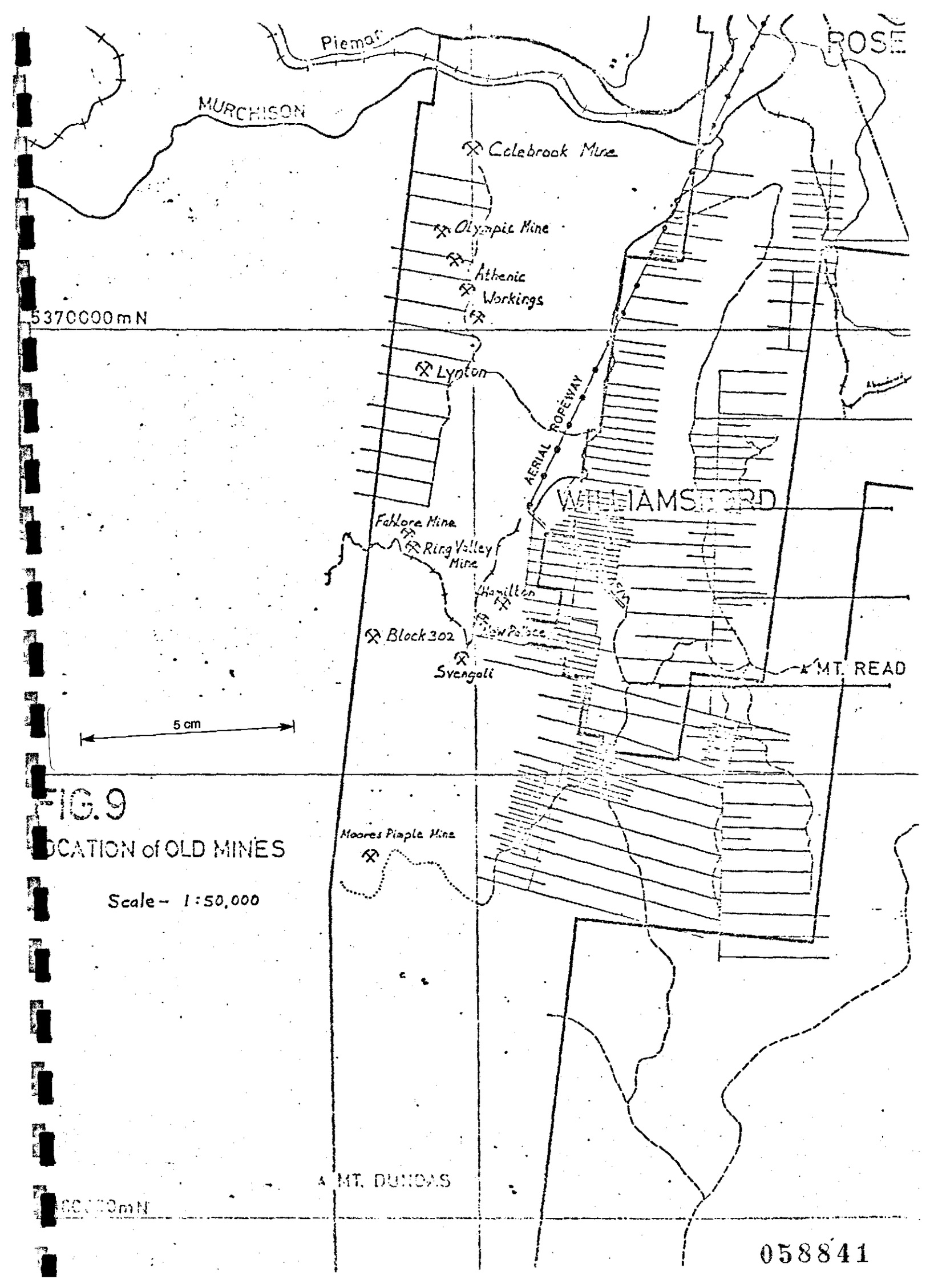

FIG. 9

LOCATION of OLD MINES

Scale – 1:50,000

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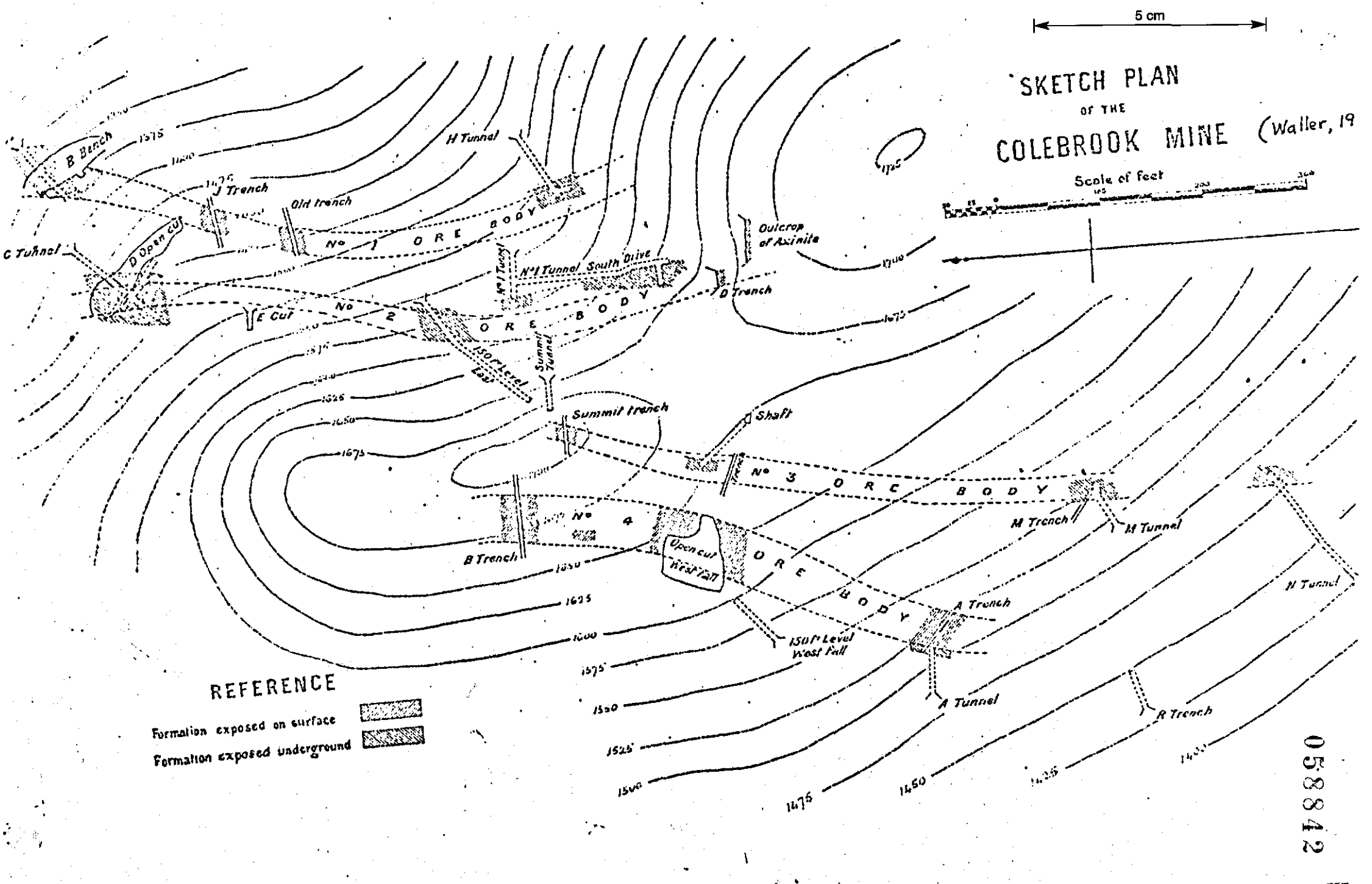
FIG. 10.



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first 9m was oxidised lode and 9-12m was "solid sulphide ore" A drive from this tunnel ran south along the eastern wall of the lode in "low-grade gossan". A short westerly cross-cut from the end of the drive failed to reach the other wall of the lode. The lode is 6m wide in D trench and averaged 3.05% Cu and 23 g/t Ag. Another cutting southeast of D trench exposed axinite with some pyrrhotite and chalcopyrite.

No. 3 Orebody was exposed in the summit trench, the cross-cut from the main shaft, M tunnel, M trench and N tunnel. In the summit trench the lode is 6m wide with another 3m of "highly-mineralised country" on either side; the whole 12m width averaged 2.16% Cu and 28 g/t Ag. M tunnel penetrated 6m of lode comprised mostly of axinite, actinolite and chalcopyrite without reaching the footwall. The lode here averaged approx. 3.4% Cu and 25 g/t Ag. The lode in N tunnel is 6m wide and completely decomposed.

No. 4 Orebody was exposed in B trench, open cut western fall, and A tunnel. The lode in B trench is 14m wide. In the open cut western fall the lode consists of axinite with minor chalcopyrite and pyrrhotite. Combined samples from B trench and the open cut averaged 3.12% Cu and 34 g/t Ag.

Two other Orebodies -the east lode and the west lode - received less attention but are similar to the four main orebodies. Five diamond drill holes totalling 283m have been drilled from No. 1 tunnel (2), No. 2 adit (1) and D open cut (2). Details appear in Waller (1902b).

Clifton Mine - Section 237-93M

This section adjoins the Colebrook sections to the south and ~~east~~ west ?. About 215m below the summit of Colebrook Hill a bench was cut along the western slope exposing a 30m width of oxidised ore similar to that at Colebrook with interbands of slate. The ore comprises axinite, pyrite, chalcopyrite and pyrrhotite and gold. 17m below the bench a tunnel bearing 160° was driven for 26m. Near the entrance a 0.6m width of gossan strikes N-S and dips to the west. The last 6m of the tunnel contained axinite and pyrrhotite with minor chalcopyrite.

Lynton Mine - Section 4734-M (ex 282-93M)

Considerable surface workings were developed on a large irregular gossan outcrop near cliffs of serpentinite in the NW of the section. A map dated 1950 in E.Z. files 51/18 shows several small workings up to 120m north of the main workings. The latter consist of a number of trenches, open cuts, pits and shallow shafts, a small adit and a main adit approx. 44m long. An unsigned letter dated 1930 in file 51/18 reports a number of pits showing disseminated galena in barite, with barite up to 2.75m wide in one place. Smith (1898) reported several veins of galena, barite and calcite up to 3" wide with an irregular strike.. The main adit is 30m vertically below these workings. It passes through serpentinite but the last 14m is in "hard" barite with trace lead. Reinhardt (1973) reports a crosscut containing 13m trace disseminated galena, pentlandite and millerite.

Great North Colebrook - Section 553-93M

This section lies close to the junction of Pieman River and Natone Creek. A high cliff of siliceous ironstone approx. 60m wide (?) outcrops on the west bank of the creek. A tunnel was driven from just above the creek 27m to the SW into this ironstone without intersecting significant mineralisation. Approx. 25m up the east bank a bench exposed a metre of conglomerate (probably Salisbury Conglomerate) containir

disseminated chalcopyrite. East-dipping slate outcrops to the east of this. In the lower end of a SE-trending trench in slate a little farther north, chalcopyrite in quartz was exposed. Brecciated conglomerate on top of the hill 36m above the creek contains minor chalcopyrite.

New West Colebrook - Section 321-93M

Trenching and several shafts had been dug in 1898 through up to 9m of colluvium into ultrabasics without finding anything of interest.

Natone Prospecting Association - Sections 81-91M and 1250-91M

A large outcrop of quartz and gossan striking 345° was reported by Montgomery (1895). A 30m adit through Fe-stained argillite cut the lode 12-15m below the surface but did not penetrate it. A lower adit had been started in 1895. Some "good" gold assays were reported.

Karlson's Lode

This lies lower down Natone Creek than the Natone P.A.'s sections. An outcrop of quartz, siderite and pyrite with minor chalcopyrite, galena and sphalerite occurs within this section.

Lewis's Section - Section 3298-43M

This section lies on Colebrook Hill. A shaft of approx. 20m was sunk beside a large N-S iron-manganese gossan but did not penetrate the base of oxidation. No mineralisation was found.

Sections 5274-M and 5275-M

These sections lie at the southern end of Colebrook Ridge. In the north of Section 5274 a shaft was sunk on a large gossan on the crest of the ridge. A similar gossan striking 335° and reputedly Sn-bearing is exposed in a cutting approx. 60m to the SW on the old Mt. Black pack-track. In the SE of this section a small Fe-stained Sn-bearing lode is exposed on the Williamsford track.

In the SE corner of Section 5275 a Sn-bearing quartz lode with minor chlorite strikes 348°. The creeks draining this portion of Colebrook Ridge carry fine tin.

Sections 6373 & 9415-M (ex 7401)

Some old workings were developed on gossanous outcrops within these sections at the head of the Exe River. Conder (1918) reported fine alluvial tin occurring in the creeks.

Svenoali Mine - Section 3275-M (ex 386-93M)

This prospect lies SW of the bridge over Conliffe Creek on the NE Dundas Tramway. In a rail cutting above Dead Man's Creek there is a 9m wide zone of irregular veins of quartz and siderite in slate. Further up the spur to the south a few trenches exposed minor gossan in iron-stained slates. To the west of the spur an adit was driven from Dead Man's Creek on a bearing of 120°. The first 3m (no further reports) comprised

black slate with small veins of siderite and minor chalcopyrite. Northeast of this and a metre above the Ring River another adit, at least 16m long, was driven to cut a similar formation outcropping approx. 60m higher up above the junction of Ring River and Conliffe Creek. Slate with small veins of siderite was encountered in the first 16m.

Hall (1967) reported two adits bearing 110° for 24m and 160° for 6m respectively.

New Palace Mine - Section 266-93M

These workings lie to the NE of the Svengali Mine. A 20m shaft was sunk and connected with a barren rise from an adit 30m below the mouth of the shaft. At 20m a drive followed the lode which comprised gossan and fahlore for 6m to the south. The rise is 48m and 170° from the adit entrance; the adit then turns east for 15m through black slate which strikes north-south and dips east. Several small oxidised veins with minor fahlore cross the adit just past the rise.

Hamilton Mine

The only known reference to this mine is on a 4" to the mile (1:15,840) North Broken Hill map (Read-Rosebery sheet) of mineral deposits where it appears as a Pb-Sb occurrence with a siderite gangue. It lies on the south side of Bakers Creek approx. 400m ENE of the New Palace Mine.

Moores Pimple Mine (Evenden Mine) - Section 10400-M (ex 8989-M, ex 299-93M)

These workings lie on the north and west slopes of Moores Pimple. They were originally known as the Evenden Mine (not to be confused with the Evenden Prospect near Fraser Creek). The country rocks are purple slate, dolomitic quartzite and chert conglomerate (Salisbury Conglomerate?) intruded by dolomitised serpentinite.

To the north a 100m adit was driven east, the last 18m being in dolomitised serpentine. At the contact at 82m a 7.5cm gossan vein with a little galena was intersected. The vein was driven on for 12m to the SSE but was only 15cm wide at the end of the drive. Twelvetrees (1901) reports a Fe-Mn gossan on surface approx. 30m south of this south drive. It has apparent thickness of 25m and strike length of 140-160m and contains pyrite & chalcopyrite and minor galena and crocoite. To the south of the northern workings Blissett (1962) reports several trenches across a dolomitic orebody comprising veinlets and blebs of pyrite and minor chalcopyrite and native copper at the junction of slate and quartzite with the chert conglomerate. This could well be the same mineralised gossan described by Twelvetrees. Reid (1925) reports the presence of zaratite (a nickel carbonate) and bulk samples assayed 0.15 - 0.25% Ni.

Hodge's Mystery Mine

This copper occurrence is shown on a 4" to the mile (1:15,840) North Broken Hill map (Tyndall sheet) of mineral deposits. It lies approx. 1700m southeast of Mt. Dundas just within the southern boundary of the E.L. The copper apparently occurs in a quartz gangue but no other details are known.

Olympic Mine - Section 9257-M (ex 4943)

The lodes lie in the SE of the section. The mineralisation in the workings occurs as quartz fault/fracture containing pyrite and cassiterite. Blissett (1962) describes

the host rocks as green and purplish cherty argillite with dark grey or brown siltstone and greywacke.

Close to the eastern boundary is a lode (No. 3 lode?) striking 350° at least 10m wide according to Ward (1911). Another lode (No. 2 lode?) which has been benched lies 20m to the west. The lode here is 45cm wide strikes 345°, dips 55°-80° east and contained an almost solid band of cassiterite 7.5 - 22.5 cm wide.

No. 1 adit was driven for 52m to the east without exposing any ore of value. No. 2 lode is exposed at the portal and was opened up in a short drive, in trenches and open cuts to the north and south over 45m. No. 3 lode was intersected 39m from the portal and was driven on for 5m but was less than 2.5cm wide. 4m along this drive is a rise from No. 2 adit level. Short drives were made to the north and south 47m from the portal.

18m vertically below these workings, to the NW and 52m lower downslope, No. 2 adit was driven for 82m bearing 078° or 085° in "altered slate". A decomposed band of rock, "supposedly a lode channel" was intersected near the entrance. At 50-55m (Ward 1911) or 55-58m (Conder, 1918) No. 2 lode, small but well-defined, was encountered; it reputedly assayed 2% Sn. A drive was made for 21m to the north but little ore was found. The lode was driven on for 30m to the SSE then SE for 9m. At 13m a 5m winze exposed rich ore 7.5 - 15cm wide. At 30m a rise to the surface was cut on ore 10-26cm wide of average grade and some ore was stoped between the rise and the winze. A larger lode (No. 3 lode) was intersected from 76-82m along the adit; drives were made to the nort and south with little success. The south drive was 30m long with several cross-cuts from it. A 15m rise connected with No. 1 adit but the lode petered out at 9m.

Just north of this adit, 20m vertically below it and 30m downslope, No. 3 adit was driven for 163m but intersected only "some promising veins of gossan". No. 1 lode was formerly exposed at the portal. Further development was carried out in existir adits between 1924 and 1926. The total reserve was 600 tons of which 500 tons was mined; metallic tin content was 7 tons (1.4%).

Rino Valley Mine - Section 4661-93M (also held as 1400-91M, 4736-93M & 3049-87M).

The lease history of these workings is obscure and is further complicated by the take-over of the adjacent Fahlore Mine by the Ring Valley Mining Co. in 1902. Both mines commenced operation in 1893 and were finally abandoned in 1914.

Three lodes occur in the NE portion of Section 1440. The main shaft of 34m was sunk on No. 2 lode and was opened out at 30m. The mineralisation here comprises pyrite with patches of fahlore and chalcopyrite. The ore pitches south, disappearing underfoot 8m along the south drive. The drive continues to 23m but the lode is virtually barren. The lode is vertical and strikes at 342°. Cross-cuts were driven east and west from the shaft. 10m from the shaft the east cross-cut intersected the No. 1 lode comprising a 1.2m band of pyrite followed by several more bands 15-20cm thick. Drives followed the lode for 37m to the north and 14m to the south but the lode was barrer except for very minor chalcopyrite with pyrite and siderite. The lode strikes at 344° and dips vertically; it apparently represents a fault/fracture-filling.

A NW cross-cut from the end of the north drive intersected the south end of a rich shoot of fahlore and chalcopyrite approximately 7m west of the drive. The first 2m of the shoot was estimated to average 150 oz/ton Ag. This shoot dips east and should intersect the "main lode" (No. 1?) lode 12m below this level.

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4m along the north drive on No. 1 lode a rise was made to the adit level. From this rise an intermediate level was driven 9m northwards. A 35cm vein comprising chalcopyrite and lesser fahlore was intersected in the last 1.5m. Further up the rise, just below the adit level, rich ore and pyrite was exposed in the north end of an underhand stope. These various exposures suggest, according to Waller (1902b) that the ore in No. 2 lode pitches north. Above the adit level ore has been mined over a strike of 30m.

No. 3 lode was intersected by the west cross-cut form the main shaft. The vein is up to 7.5m wide and contains siderite, pyrite and fahlore.

South of the main shaft, when the leases were previously held by the Rich Prospecting Association, a cut was made in the lode close to the river. On the other side of the river, just below the NE Dundas Tramway, a tunnel was driven on the lode.

Fahlore Mine - Sections 3212-87M, 3692-93M

The "main" Ring Valley lode runs north through the southern section of the Fahlore Mine; most of the workings are on this lode. The lode, which outcrops the Ring River, strikes at 350° and dips steeply west according to Montgomery (1893b) and Blissett (1962) although Waller (1902b) claims a steep easterly dip. The old mine workings lie near the SE corner of Section 3212.

A 30m shaft was sunk 15m south of the Ring River and westerly cross-cuts at 15m and 30m intersected the lode at distances of 13m and 21m respectively. At No. 1 level the lode was followed for 30m northwards and 15m southwards, and at No. 2 level for 12m northwards and 29m southwards; the lode strikes at 345° and dips west. The ore shoot pitches to the north and the fahlore mined was rich but patchy. In a river bend north of this shaft is a lode containing small veins of fahlore; it appears to pass east of the shaft.

The main tunnel (total length 189m), 107m north of this shaft, was driven northwards along a 30-60cm lode of mostly pyrite for 37m before meeting a small ore shoot containing fahlore and chalcopyrite which was stoped out. This "rise" was underneath a reserve for the proposed extension (in 1898) of the NE Dundas Tramway to Rosebery. At 81m a cross-cut 9m to the east intersected only barren slate and coarse-grained sandstone. At 82m the tunnel veers slightly eastwards for another 24m. At 88m a shoot rich in pyrite with minor chalcopyrite was intersected. 3m west of the end of the tunnel a cross-cut intersected an ore shoot which was driven onto the north and south for a total of 18m. It was stoped out to its full height of 7.6m. A winze was sunk 6.4m through the ore. In the bottom of the winze the lode comprises a 45cm width of pyrite and fahlore and 75cm of "slaty lode-matter" and pyrite. One sample from the winze taken before it was halted by water inflow bulked 5.5% Cu and 214oz/ton Ag. The drive was extended another 82m (direction not stated) without finding significant mineralisation

An intermediate tunnel 150m north of the entrance to the main tunnel followed the lode for 165m. Only pyrite was found in the first 82m. Patchy ore occurs in the floor from 82m to 100m where the lode "improved considerably" and rose above the tunnel. Stoping commenced at 94m; the leading stope extends for 38m, No. 2 stope for 34m, No. 3 for 21m, and No. 4 for 7.5m. The lode is "often very wide" in these stopes and consists mainly of pyrite with bunches and veins of fahlore up to 30cm wide. Pyrite near the fahlore contains considerable chalcopyrite. Fahlore was still present in the stopes in 1902. The lode is poor in the drive beyond the stopes.

In the north of Section 3212-93M about 150m above the river a 38m tunnel was driven westerly and intersected a pyrite-siderite lode 90-120cm wide but very poor in grade. This lode crosses the river about 120m north of the shaft.

058848

A shallow tunnel was driven through a very large gossan outcrop in the southern portion of Section 3692 but only low grade ore was intersected. A cross-cut from the intermediate tunnel to this formation was planned in 1902.

Most of the fahlore in the upper levels of the Ring Valley and Fahlore mines has been worked out and the ore at depth is complex containing fahlore, jamesonite, galena, chalcopyrite and pyrite. The table below presents the only recorded production from these mines:

	Ore (tons)	Ag (oz)	Cu (tons)	Period
Fahlore Mine	95	20,000(est)	5 (est)	1900
Ring Valley - Fahlore Mines	2,877	363,000 "	159 "	1902-14
TOTAL	2,972	383,000 "	164 "	

Section 331-93M

This section lies to the north of the Fahlore Mine. A tunnel was driven west for 76m. The approach and first 7.5m intersected gossan with minor pyrite which probably correlates to the lode in the Fahlore Mine adit 15m below. The country rock changes from slate to serpentinite at 46m. Smith (1898) refers to a 12m zone of Mn gossan with seams of rubbly quartz, presumably from within this tunnel.

Block 302: Section 8885-M (ex 302-93M)

On this section, which lies some distance south of the Ring Valley-Fahlore Mines, Smith (1898) describes a mineralised zone up to 6m wide striking SE and dipping NE. This lode was explored in trenches, open cuts and 3 adits. The country rock of slate and sandstone is impregnated with pyrite and there are several veins of solid pyrite (up to 30cm thick) with small seams of galena, jamesonite and siderite. Patches of tetrahedrite was found but the orebody is generally poorly mineralised. A tunnel was driven through altered clay, slate and sandstone but was stopped before the lode was intersected. About 26 tons of ore was mined from these workings to give 2211oz of silver and one ton of copper.

Block 291: Section 9433-M, ex 291-93M ("Orr's Section)

The lode continues SE into this section from Block 302 where a gossanous outcrop contains pyrite and minor galena in siderite. 21m below this outcrop a tunnel was driven SW and cut the lode at approx. 24m; the lode was driven on for a few feet to the NW and SE but contained siderite and no significant mineralisation. About 45m above this tunnel and roughly 60m to the SE an adit was driven for 100m along the lode. The lode near the entrance is 60cm wide and comprises siderite, lesser pyrite and arsenopyrite and minor fahlore and galena. "Good patches" of fahlore were encountered in this tunnel but the lode was generally poor. Above the tunnel the lode was trenched up a small creek to the boundary of Section 343-93M (Central Curtin-Davis) and near the boundary some good ore was obtained - 7.5 tons of 3.9% Cu and 118 oz/ton Ag, and 18 tons of "seconds" at 3.1% Cu and 72 oz/ton Ag (Smith 1898).

Central Curtin-Davis: Section 343-93M

This section lies to the south of 291-93M and appears to have later been partly or wholly incorporated into 9433-M. Smith (1898) reports a tunnel bearing 150° being driven along the lode, apparently adjacent to the workings on 291-93M. The country roc passes from sandstone and grit into contorted black slate. "In places there are small bunches of fahlore and copper pyrites, but the country is very much broken and disturbed' Montgomery (1896) described the position of the lode as about 120m east of the NW corner of 343-93M. At that time it had been traced southward for approx. 80m by cross trenche and northward into 291-93M for approx. 60m by a trench on the outcrop.

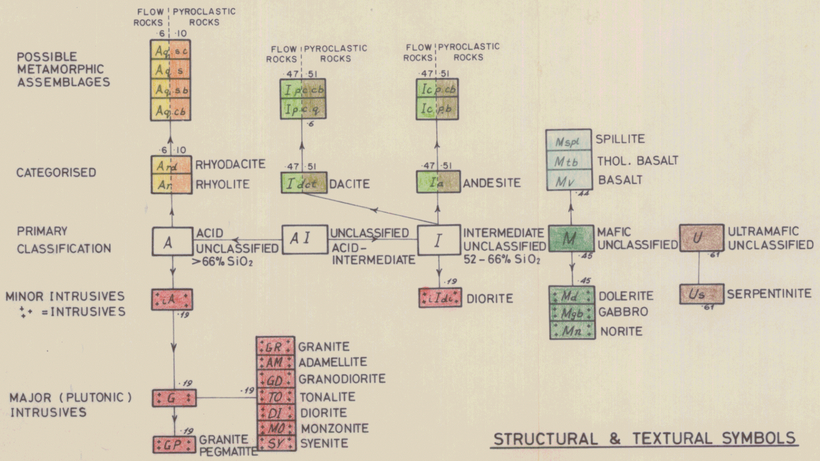
058849

APPENDIX 2

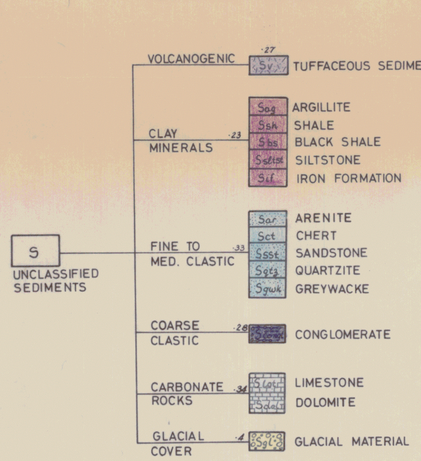
I.P. COVERAGE - NATONE GRID

Line	Dipole Spacing	Co-ords	Year	Comments
25 S	400'	39W-00	1961	
"	400'	11W-00	1961	Tramway insulated
"	300'	32W-12.5W	1961	
"	200'	31W-16W	1961	
42 S	400'	39W-00	1961	
50 S	400'	15W-00	1960	Using Natone Grid co-ords
"	400'	41W-13W	1961	" " " "
"	300'	40W-32W	1961	
"	200'	38W-28W	1961	
58 S	400'	39W-00	1961	
67 S	400'	39W-00	1961	
75 S	400'	29W-00	1961	
83 S	400'	31W-00	1961	
"	100'	41W-31.5W	1962	
92 S	400'	39W-00	1962	
100 S	400'	37W-00	1961	
"	300'	33.5W-11.5W	1961	
"	200'	30W-16W	1961	
108 S	400'	39W-00	1962	
125 S	400'	39W-00	1961	
150 S	400'	39W-00	1961	
180 S	400'	37W-20+E	1961	
"	300'	15W-18E	1961	
"	200'	12W-17E	1961	
205 S	400'	15W-30+E	1962	

IGNEOUS ROCKS



SEDIMENTARY ROCKS



STRUCTURAL SYMBOLS

- FAULT
- DEFINITE CONTACT OR OUTCROP LIMIT
- APPROXIMATE CONTACT OR RUBBLE BOUNDARY
- INTERPRETED CONTACT OR FLOAT BOUNDARY
- SCHISTOSE ZONE
- UNCONFORMITY
- BEDDING
- OVERTURNED BEDDING
- CLEAVAGE
- PRIMARY FOLIATION
- JOINTING
- PLUNGE
- FOLD AXIS PLUNGE
- FACING

STRUCTURAL & TEXTURAL SYMBOLS

- t — UNDIFERENTIATED TUFF
- lt — LITHIC TUFF
- xt — CRYSTAL TUFF
- vt — VITRIC TUFF
- lpt — LAPILLI TUFF 4-32mm.
- b — BRECCIA >32mm.
- ag — AGGLOMERATE >32mm.
- bm — BOMBS
- fm (3) — FIAMME (LENGTH IN cms.)
- pm — PUMICE
- ab — ASH FLOW
- qe / qaug — QUARTZ EYES/AUGEN TEXTURE
- pil — PILLOWS
- fb — FLOW BANDING
- fa — FLOW BRECCIA
- — LAVA
- a — AMYGDALOIDAL
- s — SPHERULITIC
- p — PORPHYRITIC
- cl — CLOTS
- Σ — ACICULAR
- opx — OPHITIC
- — CHILLED MARGIN
- pg — PEGMATIC
- vns — VEINS
- m — MASSIVE
- clvd — CLEAVED
- sch — SCHIST
- ox — OXIDISED
- — LATERITE
- bd — BEDDED
- x bd — CROSS BEDDED
- THbd — THICK BEDDED
- thbd — THIN BEDDED
- lam — LAMINATED
- gd — GRADED OR DIRECTION OF DECREASING GRAIN SIZE
- — LODE CAST
- sf — SCOUR & FILL
- ves — VESICULAR
- jtd — JOINTED
- stain — STAINING
- ash — ASH FALL

IGNEOUS GRAIN SIZE

- vcg — VERY COURSE GRAINED >5 cm
- cg — COARSE GRAINED 5cm-5mm
- mg — MEDIUM GRAINED 5mm-1mm
- fg — FINE GRAINED <1mm

SILICATE MINERALOGY

- q — QUARTZ
- k — K-FELSPAR
- ab — ALBITE
- p — PLAGIOCLASE
- a — AMPHIBOLE
- px — PYROXENE
- bi — BIOTITE
- c — CHLORITE
- cb — CARBONATE
- s — SERICITE
- e — EPIDOTE
- t — TALC
- ba — BARITE (STAEDTLER 104-10)
- f — FELSPAR
- hb — HORNBLENDE
- sd — SIDERITE

- a'b — ALBITISED
- cb'd — CARBONATED
- c'd — CHLORITISED
- s'd — SERICITISED
- si — SILICIFIED

SULPHIDE & OXIDE MINERALOGY

- bx — BOXWORK
- Sul — SULPHIDES
- gos — GOSSAN (KEB 1/4)
- pn — PENTLANDITE
- hm — HEMATITE
- cc — CHALCOCITE
- cv — COVELLITE
- bn — BORNITE
- cp — CHALCOPYRITE
- sp — SPHALERITE
- gn — GALENA
- po — PYRRHOTITE
- py — PYRITE
- il — ILLMENITE
- lx — LEUCOXENE
- mag — MAGNETITE

MINERALISATION

- DISS — 10% DISSEMINATED (STAEDTLER 104-2)
- DISS — 10-20% "
- DISS — ~25% "
- STR — STRINGER
- MAS — MASSIVE

COLOURS

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

TOPOGRAPHICAL SYMBOLS

- WATER RACE
- FENCE
- FORMED ROAD
- TRACK
- RAILWAY
- RAILWAY (ABANDONDED)
- RIVER
- STREAM
- LAKE
- SWAMP
- BUILDING
- POWERLINE
- TRIG. STATION
- BALD HILL — HILL
- SHAFTS
- ADIT
- TRENCH
- MINE OR QUARRY
- DRILL HOLE - BARREN
- DRILL HOLE - COLOUR FOR MINERALISATION
- (i) DRILL HOLE - SIGNIFICANT OR POSSIBLE ORE GRADE AND WIDTH (STAEDTLER 104-2)
- (ii) DRILL HOLE - MINOR OR POSSIBLE SUB-ORE GRADE MINERALISATION (STAEDTLER 104-10)
- DRILL HOLE - FAILED TO REACH TARGET

OPERATION OF LEGEND

DESCRIBING ROCK UNITS

1. CAPITAL LETTER - Indicates Primary Classification eg S = Sedimentary Rocks, A = Acid Igneous Rocks
2. LOWER CASE LETTERS - Indicates The Following:

2i. AS PREFIXES In Progressive Order

(a) COLOURS eg (i) grn M = Green Mafic Igneous Rock

(ii) pk/grn A = Pink Fragments or Phenocrysts in an Acid Igneous Rock with a Green Matrix

(b) STRUCTURAL OR TEXTURAL FEATURES

eg vx.t.A. = Crystal Tuff of Acid Composition

(ii) x b d.S. = Cross Bedded Sedimentary Rock

2ii. AS SUFFIXES In Progressive Order

(a) CATEGORISED. eg. (i) Ar = Rhyolite; (ii) Ssh = Shale;

(b) MINERALOGY. eg. (i) pAr.f. = Rhyolite with Felspar Phenocrysts.

(ii) Ag.s. = Quartz Sericite Rock of Acid Igneous Origin

(iii) Ar.a'b. = Albitised Rhyolite

EXAMPLE - pk/grn. clvd. x.v.t. A rd. ab. c'd.

pk/grn (Colours) - pink crystals in a green matrix; clvd (Structural Feature) - cleaved; x.v.t. (Texture) - crystal vitric tuff; A (Primary Subdivision) - acid igneous rock; rd. (Categorised) - rhyodacite; ab. (Primary Mineralogy) - albite phenocrysts; c'd. (Alteration Mineralogy) - chloritised.

·10· Colour of CUMBERLAND "DERWENT" N° 19 Pencil

ELECTROLYTIC ZINC CO. OF A'ASIA. LTD.

PROJECT: MT. BLACK | TAS.

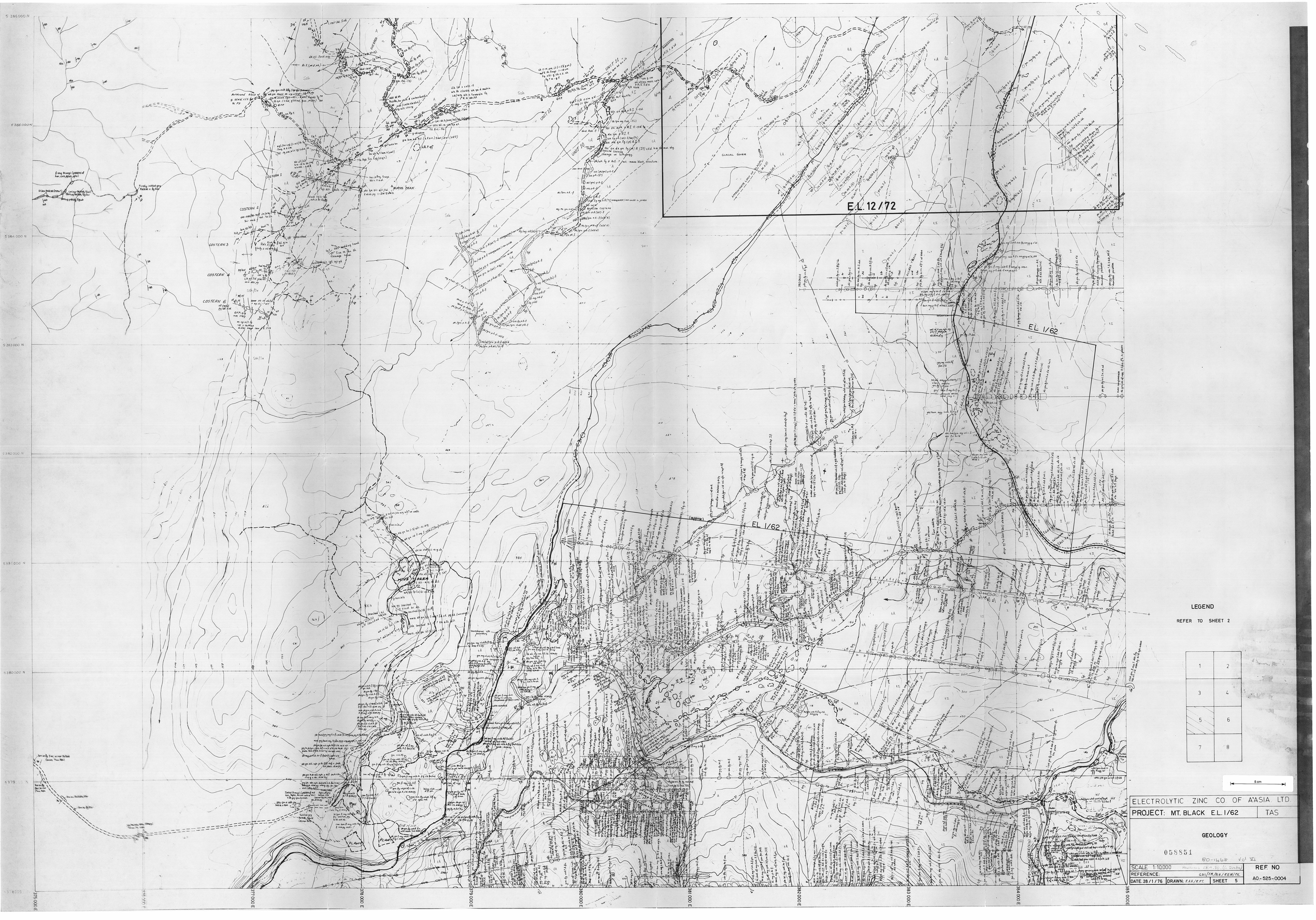
GEOLOGICAL LEGEND

FOR EXPLORATION MAPPING

80-1468 Vol VI

DATE: 10/75 | REVISED: 12/75 | REF. NO. PLATE I

058850



LEGEND

REFER TO SHEET 2

1	2
3	4
5	6
7	8

5 cm

ELECTROLYTIC ZINC CO. OF A'ASIA. LTD.

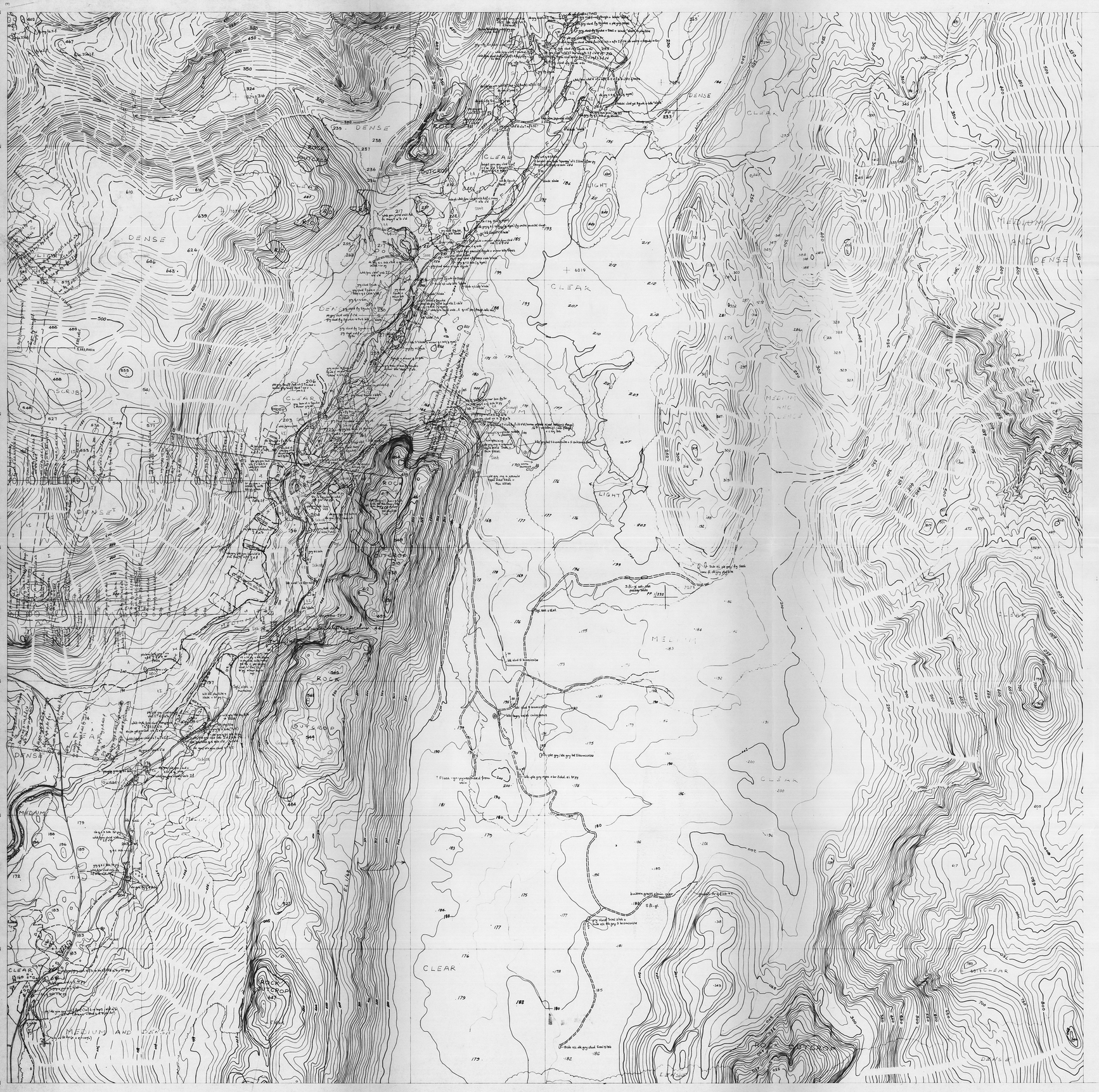
PROJECT: MT. BLACK E.L. 1/62 | TAS

GEOLOGY

058851

80-1468 Vol VI

SCALE 1:10,000	Plotted 28-4-80 (G. Drake)		REF. NO
REFERENCE:	GDI/JM/NH/REW/PK		AO-525-0004
DATE 28/1/76	DRAWN: RAH/RPT.	SHEET 5	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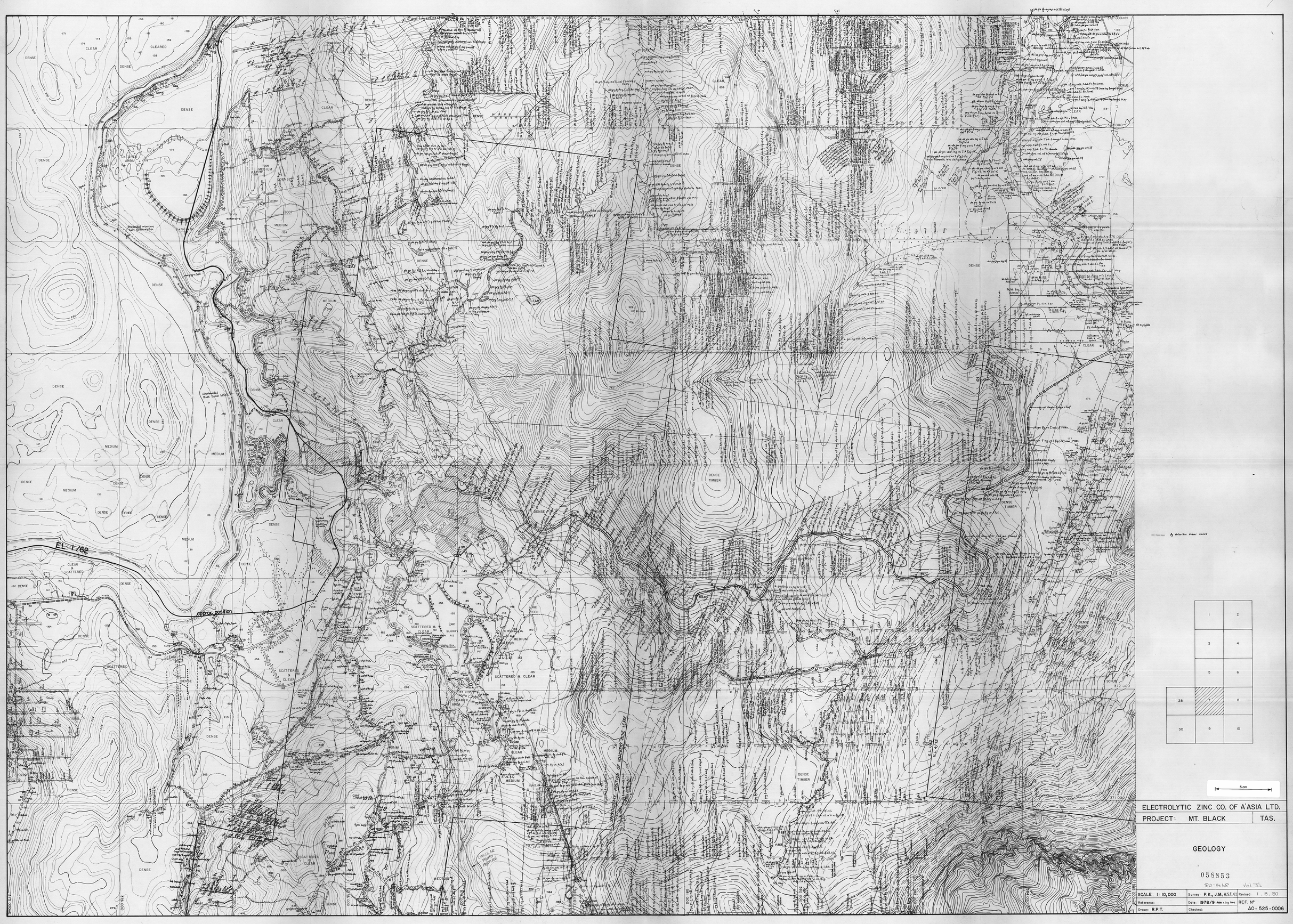
5385000 N
5384000 N
5383000 N
5382000 N
5381000 N
5380000 N
5379000 N
5378000. N
385000. E
386000
387000
388000
389000
390000
391000
392000
393000
394000
395000. E
DENSE
CLEAR
LIGHT
MEDIUM
MEDIUM AND DENSE
ROCK OUTCROP
CLEAR AND DENSE
MEDIUM AND DENSE
CLEAR AND DENSE
DENSE AND CLEAR
CLEAR AND MEDIUM
MEDIUM AND CLEAR
CLEAR AND LIGHT
LIGHT AND CLEAR
CLEAR AND MEDIUM
MEDIUM AND CLEAR



ELECTROLYTIC ZINC CO. OF A'ASIA LTD.

PROJECT: MT. BLACK | TAS.

GEOLOGY

058853

80-1468 Vol VI

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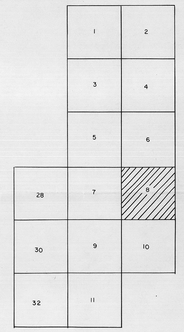

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GEOLOGY

058854

80-1168

SCALE: 1:10 000	Survey: W.F.	Revised: 1 8 70
Reference:	Date: 4/9/79	REF NO.
Drawn: R.P.T.	Checked: ?	AO - 525 - 0055

E.Z. PLAN CABINET TRIM LINE

E.L. 1/62

E.L. 1/62

1	2
3	4
5	6
28	7	8
30	9	10
32	11	

ELECTROLYTIC ZINC CO. OF A'ASIA LTD.

PROJECT : MT. BLACK | TAS.

GEOLOGY

5 cm

058855

80-1468 Vol IV

SCALE : 1 : 10,000	Survey: J.M., C.D.I.	Revised: 1. 8. 80
Reference:	Date: May 1979	REF. N°
Drawn: R.P.T.	Checked:	AO - 525 - 0013

370 000 mN

369 000 mN

368 000 mN

367 000 mN

366 000 mN

365 000 mN

364 000 mN

363 000mN

362 000mN

385 000mE

386 000 mE

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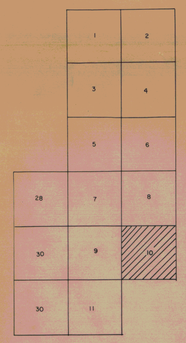
392 000 mE

393 000 mE

394 000mE

395 000mE



5 cm

ELECTROLYTIC ZINC CO. OF AASIA. LTD.

PROJECT: MT. BLACK | TAS.

GEOLOGY

058856

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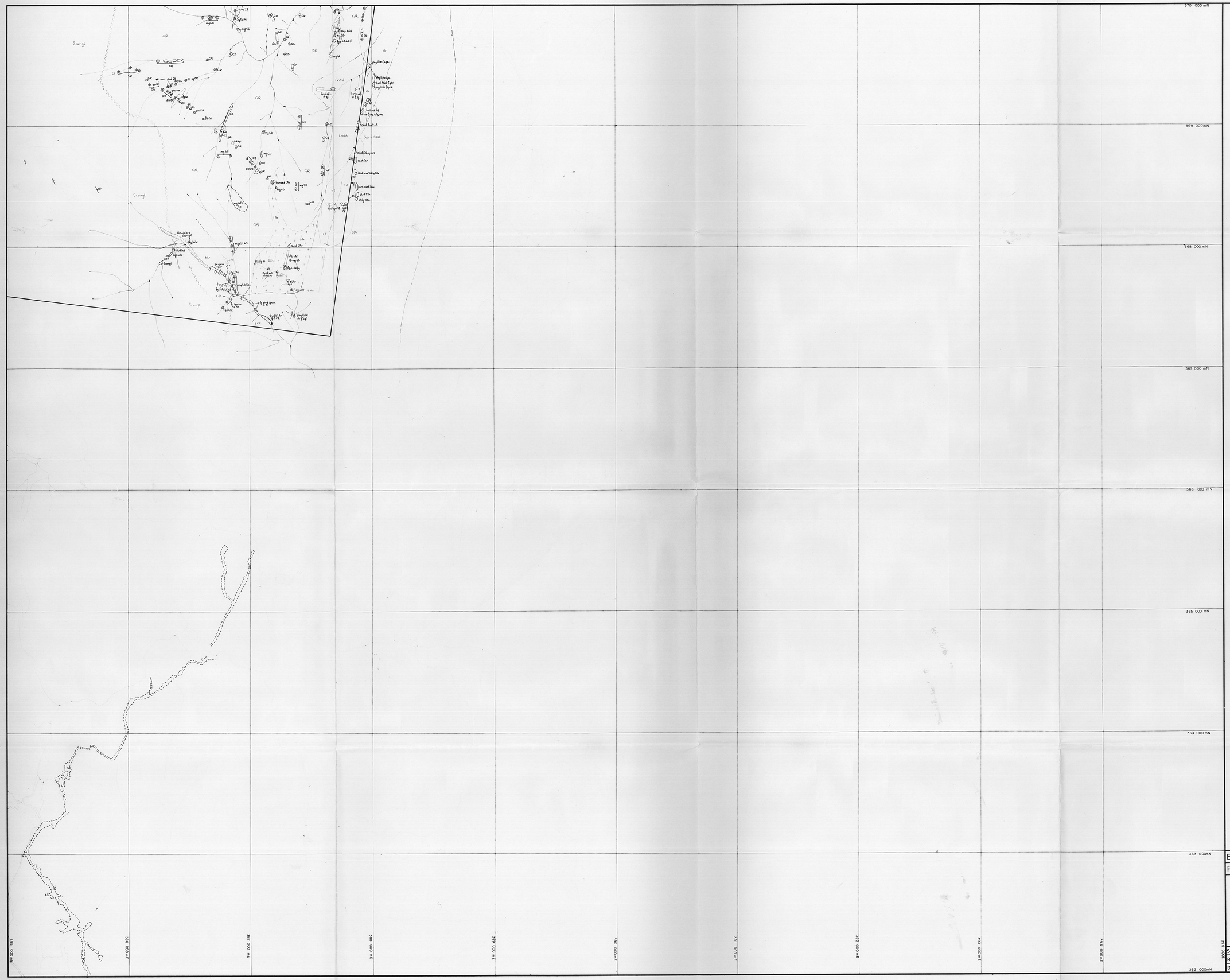
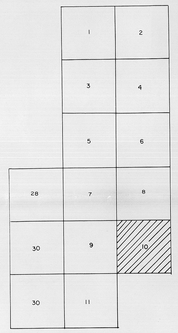
Reference:	Date 12.5.80	REF NO.
Drawn R.P.T	Checked	AO - 525 - 0101

80-1468
Vol III

E.Z. PLAN CABINET TRIM LINE

A.O. TRIM LINE





5 cm

ELECTROLYTIC ZINC CO. OF A ASIA. LTD.

PROJECT: MT. BLACK | TAS.

GEOLOGY

SCALE: 1:10 000	Survey: I.McD.	Revised: 20.5.80
Reference:	Date: 12.5.80	REF. NO.
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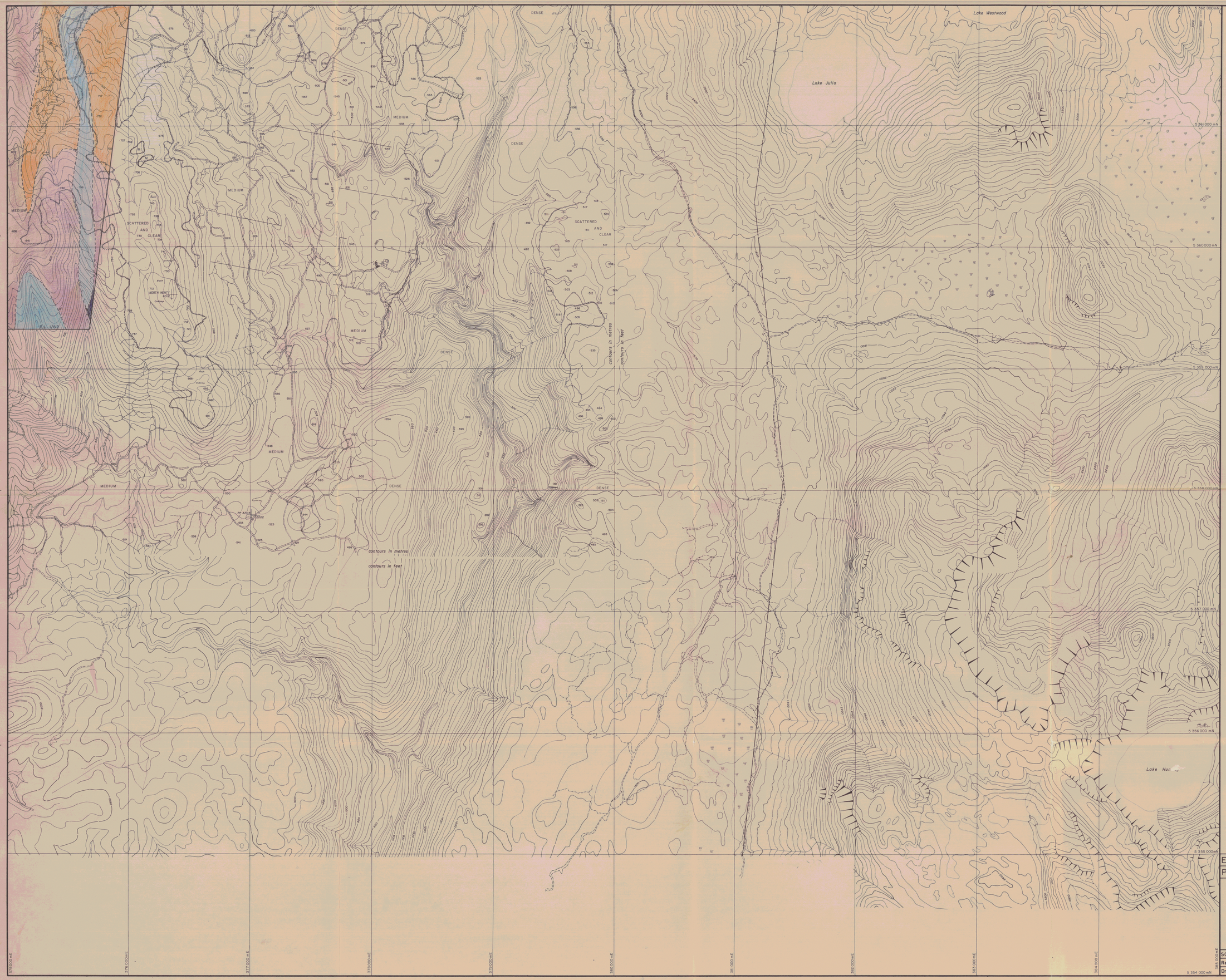
80-1460
Vol. VII

E Z PLAN CABINET TRIM LINE

A0 TRIM LINE



	1	2
	3	4
	5	6
28	7	8
30	9	10
32	11	

Vehicular Track
Walking Track
Vehicular Track (Approximate position)
Walking Track (Approximate position)

5 cm

N.B. Part of the topographic detail on this sheet is derived from photo enlarged 20 chains to the inch plans (Lands Dept.); contours in feet.

ELECTROLYTIC ZINC CO. OF A ASIA. LTD.

PROJECT: MT. BLACK E.L. 1/62 | TAS.

GEOLOGY

058857

SCALE: 1:10,000	Survey:	Revised:
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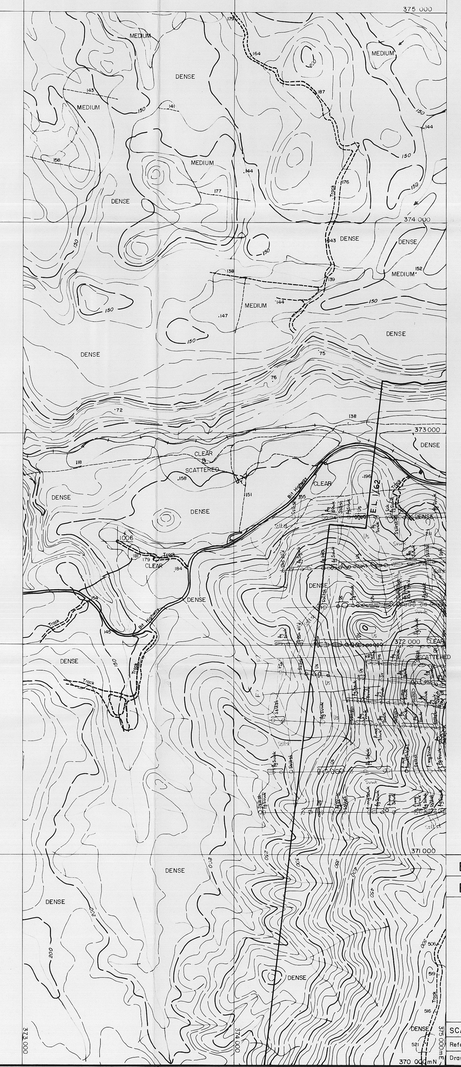


1	2		
3	4		
5	6		
28	7	8	
30	9	10	
32	11		

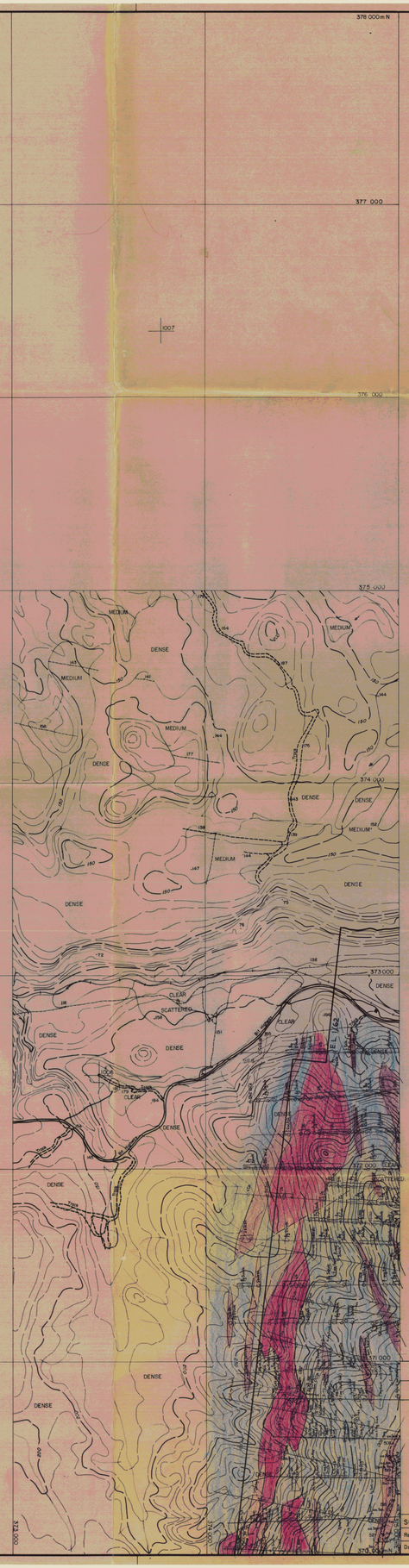
ELECTROLYTIC ZINC CO. OF A'ASIA LTD.

PROJECT: MT. BLACK — TAS.

GEOLOGY

SCALE: 1:10000	Survey:	Revised: S. 8. 80
Reference:	Date: 15. 7. 80	REF. N°
Drawn: R.P.T.	Checked:	A0 - 525 - 0109

80-1165
Vol II



28	1	2
	3	4
	5	6
	7	8
30	9	10
32	11	

ELECTROLYTIC ZINC CO. OF A'ASIA LTD.

PROJECT: MT. BLACK — TAS.

GEOLOGY

058858 80-1468 Vol II

SCALE: 1:10000	Survey:	Revised: 5.8.80
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