457001

GEOPEKO

A DIVISION OF PEKO-WALLSEND OPERATIONS LIMITED

E.L. 1/77 ROCKY CAPE - GOURLAYS CREEK PROSPECT

PROGRESS REPORT

JANUARY 1 to JUNE 30, 1983

R.J. PERRING
DEVONPORT
AUGUST, 1983

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1. INTRODUCTION

The Gourlays Creek Prospect is centred on AMG 5372000N 337000E, and lies at the southwest corner of E.L. 1/77 - Rocky Cape, two kilometres north of the Granville Harbour settlement on the west coast of Tasmania (see figure 1). E.L. 1/77 is held by CRA Exploration in joint venture with Geopeko.

The Vincent's Copper Prospect is the only old working within the Gourlays Creek Grid. Waterhouse (1915) reported an 8½ft band of ore consisting of magnetite, hematite, pyrite and quartz enclosed conformably in slates and sandstones.

The Gourlays Creek Prospect (previously termed Granville West) has been reported on previously by Porter (1980), and Heithersay (1982).

This report details all work undertaken by Geopeko on the Gourlays Creek Grid between the 1st January and 30th June, 1983.

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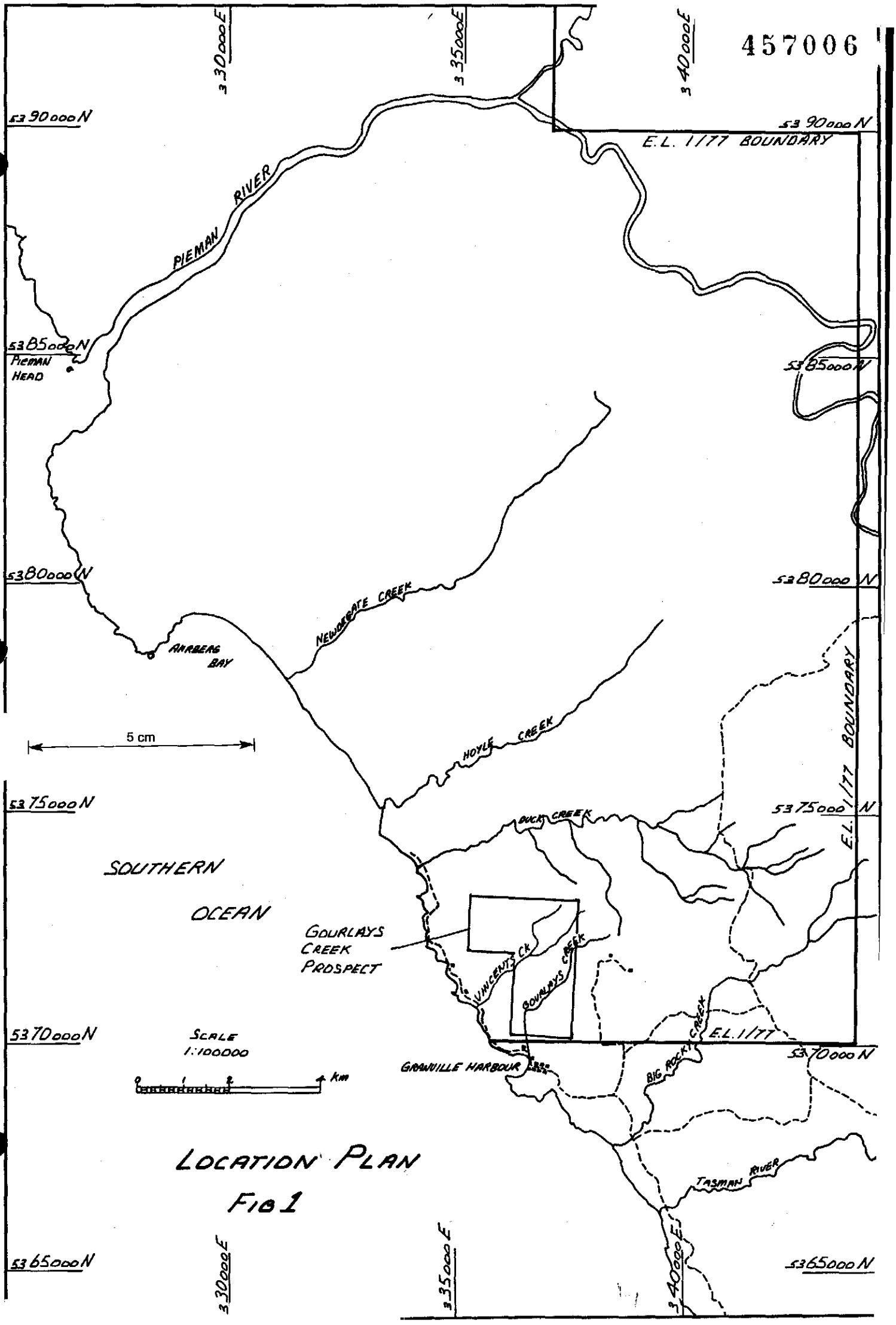
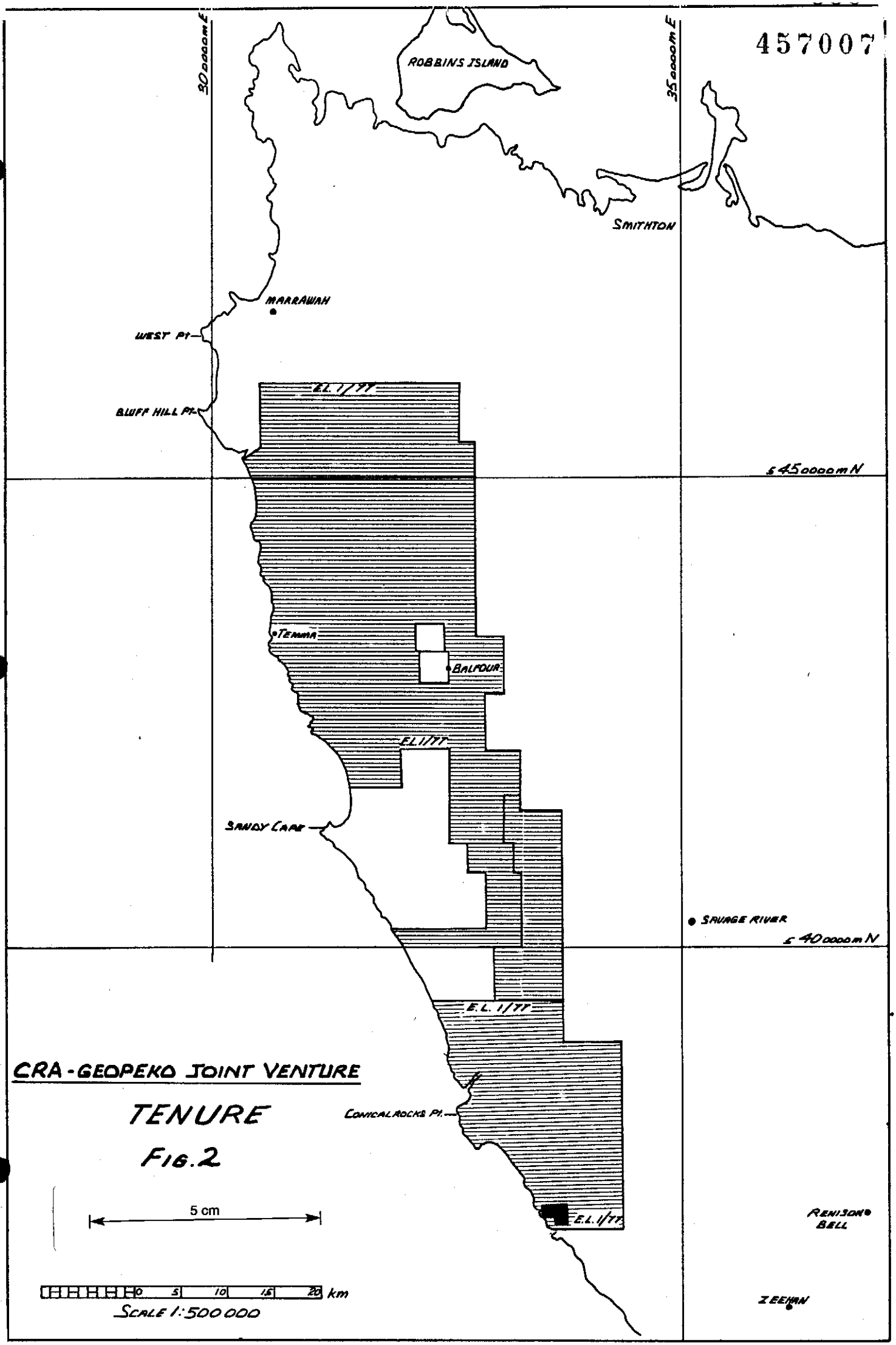


LOCATION PLAN

FIG 1



CRA - GEOPEKO JOINT VENTURE

TENURE

FIG. 2

2. SUMMARY

The Gourlays Creek Prospect lies in the southwest corner of E.L. 1/77 which is held by CRA Exploration in joint venture with Geopeko.

The lead into the Gourlays Creek area was by way of field investigation of an aeromagnetic anomaly which falls within the Upper Proterozoic Oonah Formation.

Results of exploration are summarized in figure 3. Details of exploration are given for the three areas, Gourlays Creek-West (NW sheet area), 'Central Window' (NE sheet area), and 'Southern Window' (SE sheet area).

Gourlays Creek-West

a) Within the grid area the dominant lithologies are chloritic mica schists, quartzites, and calcareous siltstones of Oonah Formation. Tertiary basalts outcrop along the eastern margin of the grid. Almost half of all outcropping rocks of the Oonah Formation contain magnetite mostly in veins.

b) All grid lines were surveyed for total magnetic intensity. The magnetic anomaly defined was attributed to magnetite in veins with Cu, Pb and Zn geochemistry at or below 10ppm, and Sn geochemistry below 5ppm.

c) C horizon soil sampling was undertaken on lines 200E, 600E and 1000E. No significant Cu, Pb, Zn, Ag, Fe, As, Sn or W geochemistry was encountered.

Gourlays Creek West

CARBONATE SEQUENCE
Potential host for replacement deposit

Drainage
Pan Concentrate
2500 ppm Sn

magnetite veins
in quartzite

Pyritic quartzite
980 ppm Sn

2 metre thick
massive pyrite lens

Tremolitic
carbonate

VINCENTS
COPPER PROSPECT

massive magnetite
20% pyrite

Massive magnetite

1 metre thick lens
massive magnetite
421 ppm Ag.
2.33% Pb.
9.30% Zn.

pyrite chlorite
tourmaline quartzite
983 ppm Sn.

Float of pyritic (40%)
quartzite 4100 ppm Sn

Calcsilicate horiz
soil sample ASSAYED
535 ppm Sn.

Sulphide Gossan
3350 ppm Pb
222 ppm Ag

quartz tremolite
diopside hornfels

ANOMALOUS TIN
DRAINAGE GEOCHEMISTRY

massive
magnetite

Massive
tremolite

Gourlays Creek
"Southern Window"

Panned concentrate
drainage sample
1670 ppm Sn.

Panned concentrate
drainage sample
3540 ppm Sn

Coarse Gold
in Stream

ANOMALOUS TIN
DRAINAGE GEOCHEMISTRY

Stingray Bay

E.L. 1/77 BOUNDARY

Granville
Harbour

LEGEND:

TERTIARY
- T76 basalt 19-10
- Ts sand gravel 19-6

ORDOVICIAN
- O conglomerates, sandstones siltstones, carbonates 19-18

CAMBRIAN OR LATE PROTEROZOIC
- PrO OONAH QUARTZITES – quartzites black shales, carbonates 19-50

INTRUSIVE ROCKS

DEVONIAN
- Dg Heemskirk Granite 19-14

5 cm

457009

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E.L. 1/77 ROCKY CAPE TAS

GOURLAYS CREEK PROSPECT

SUMMARY OF RESULTS

Scale 1:10,000

Fig 3

Gourlays Creek "Central Window'

a) The Oonah Formation is exposed through a window in the Tertiary basalt. The sequence is dominantly quartzose which dips to the northeast at between 60^{o} and 80^{o}.

b) The dominant character of the magnetics is attributable to a series of conformable massive and banded magnetite lodes between one and two metres thick.

c) Two different styles of pyrite mineralization have been located;
   i) Disseminated and vein style pyrite with siliceous quartzites
   ii) Massive, possibly bedded pyrite associated with the massive magnetite lodes

   The former carry tin values from 0.07to 0.4%, while the latter is associated with minor copper mineralization but negligible tin.

d) Two horizons of calcsilicate hornfels have been located. Preliminary C horizon soil geochemistry has shown the eastern calcsilicate hornfels horizon to carry anomalous tin peaking at 535ppm Sn.

e) Three strongly chargeable and conductive zones trending parallel to stratigrpahy have been defined by dipole-dipole IP.

Gourlays Creek 'Southern Window'

Field investigations in this area are at an early stage with only drainage sampling, stream bed mapping and surveying of all grid lines for total magnetic intensity completed. Only the magnetic data for this area is presented.

3. RECOMMENDATIONS

Gourlays Creek-West

No further work should be undertaken on the Gourlays Creek-West grid for the following reasons.

a) The cause of the magnetic anomaly has been explained by outcropping vein magnetite within quartzites of the Oonah Formation which gives weak Cu, Pb, Zn, Sn and W geochemistry.

b) There is no magnetic anomaly over the carbonate horizon, the only potential host for a tin replacement deposit within the grid area.

c) The carbonate is unaltered indicating skarn forming processes were not operative in this vicinity.

d) There are no significant tin or tungsten soil anomalies.

Gourlays Creek 'Central Window'

Recommendations have been detailed in Section 6.4. In summary they are:

a) Drill DDH A (also see appendix V, and plan 14) to gain information on styles of pyrite and magnetite mineralization.

b) Use only the Jacro rig to obtain samples for soil geochemistry.

c) Drill a hole into IP trend C defined by Sumpton, which appears to be coincident with a sub outcropping calcsilicate horizon. Use magnetics to select the site along this trend (horizon).

d) Extend grid lines to the west by 400 metres to further investigate the calcsilicate hornfels in this vicinity.

Gourlays Creek 'Southern Window'

The following program is proposed:

a) Geological mapping of the grid area and remapping of stream-bed geology relative to the new grid.

b) A dipole-dipole IP survey on lines 10600N, 10400N, 10200N, 10000N, 9800N, and 9600N.

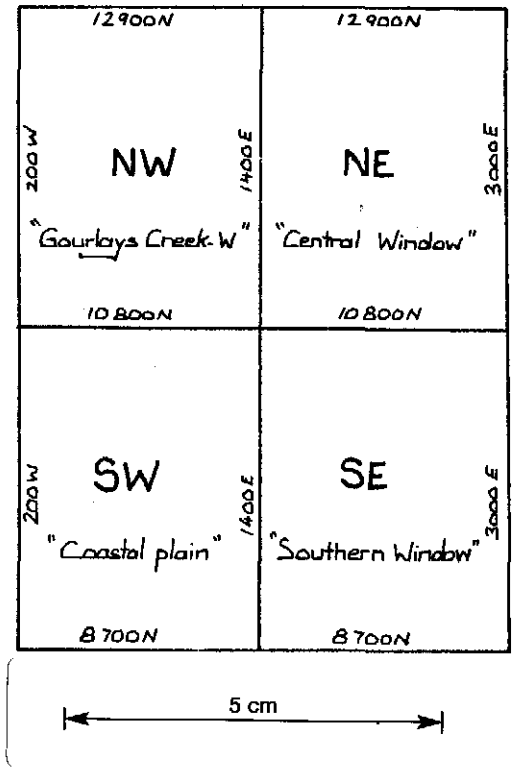
c) A trial power hand auger soil geochemical survey on lines 10600N, 10200N, and 9800N to determine the effectiveness of the sampling method.

4. GOURLAYS CREEK - GENERAL

4.1. Introduction

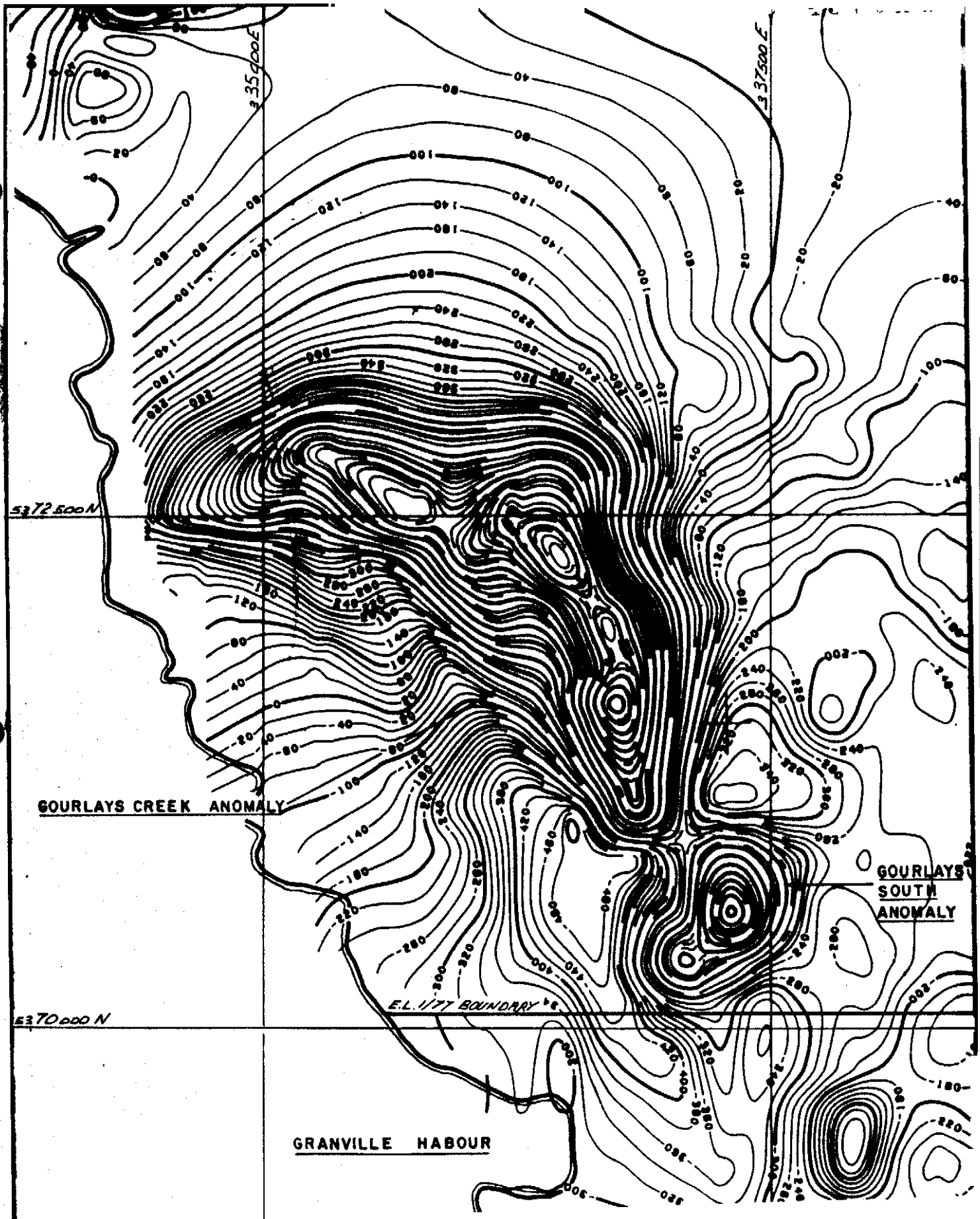
The lead into the Gourlays Creek area was by way of field investigation of a 2000nT aeromagnetic anomaly first defined in a survey flown for Rio Australian Exploration in 1956. The area was again covered as part of a more detailed survey, flown by Austirex in September 1981 for the Joint Venture. The Gourlays Creek aeromagnetic anomaly is shown in figure 4.

The prospect has been divided into four areas for the purpose of reporting procedures and results.



Gourlays Creek Prospect 1:2500 sheet index

The NW sheet covers an area known as Gourlays Creek-West, the NE sheet covers the "Central window" area, and the SE sheet covers the "Southern window" area. No field work has been undertaken in the area covered by the SW sheet.



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E.L. 1/77 ROCKY CAPE
GOURLAYS CREEK
AEROMAGNETIC ANOMALY
SCALE 1:25000 FIG 4

5 cm

4.2 Geological setting

The Gourlays Creek magnetic anomaly falls within the Upper Proterozoic sediments of the Oonah Formation. The dominant lithology is a fine grained grey-green quartzite sometimes with diopside, tremolite and biotite constituting up to 8% of the rock. Mica schists, calcareous siltstones, calcsilicate hornfels, and banded iron formations constitute approximately 20% of the sequence.

An Ordovician-Silurian sequence comprised of conglomerates, sandstones, siltstones, and carbonates rests unconformably on the Oonah Formation in the Gourlays Creek - West area (see plan 1). A complete section through this sequence is exposed along the coast adjacent to the grid.

The Devonian Heemskirk Granite is thought to occur at relatively shallow depths beneath the Gourlays Creek sequence, and outcrops in the 'southern window'.

Tertiary basalt covers 30% of the gridded area. Vincents and Gourlays Creeks have eroded through the basalt exposing the Oonah Formation through two windows, the 'Central" and 'Southern' windows.

4.3. Exploration techniques

(i) Gridding

A plan of the complete Gourlays Creek grid is described relative to shown in figure 5. The portion of the grid south of line 10800N was cut and pegged in March 1983 and makes use of a number of Lands Department survey points to give accuracy. The base line has an orientation of 8°02'50"T, was surveyed using a theodolite and has been tied into the Australian Metric Grid. Crosslines were turned off at right angles to the base line also using a theodolite, cut with a chain saw, and pegged at 50 metre intervals using site poles to keep the lines straight.

The portion of the grid north of line 10800N was pegged relative to a base line surveyed with a compass in 1981. Line of site was not used to keep the base line straight, and the accuracy of the base line and cross lines which were also turned off with a compass is unkown. The base line is known to have an orientation of approximately 006°T, and should be surveyed with a theodolite to determine its accuracy.

(ii) Geology

Geological mapping in the Gourlays Creek - West area involved the logging of Jacro and power auger cuttings, and field plotting of outcrop along grid lines and streams.

In the 'central window' the three 1981 grid lines (lines 10800N, 11200N, and 11600N) and surrounding areas were mapped and all streams and outcrop in the streams mapped relative to these three lines which are 400 metres apart. Subsequently the grid was infilled with lines 100 metres apart. There will be small discrepancies in the plotting of the geology relative to the new 1983 lines.

GN (AMG)

TN MN

200 E 600 E 1000 E 1400 E 1600 E 1800 E 2000 E 2200 E 2400 E 2600 E 12000 N

11600N

11400N

11200N

11000N

10800N

BASE LINE 008°T APPROX

1981 GRID
1983 GRID

400E 600E 800E 1000E 1200E 1400E 1600E 1800E 2000E 2200E 2400E 2600E 2800E 3000E

A.M.G. 337095E
5371450N
GOVERNMENT SURVEY

10600N

10400N

10200N

10000N

9800N

9600N.

BASE LINE EXACT 8° 02'30" T

1981 GRID

BASE LINE SURVEYED USING A COMPASS.
EAST-WEST LINES TURNED OFF USING
A COMPASS.

1983 GRID

BASELINE SURVEYED USING A THEODOLITE.
EAST-WEST LINES TURNED OFF USING A
THEODOLITE.

5 cm

GOURLAY'S CREEK

GRID PLAN

SCALE 1:10,000

Fig. 5

The only geological mapping undertaken in the 'southern window' has been along the major streams. These streams and the geology have been plotted relative to an old Geopeko grid and will not be presented in this report. The 'southern window' grid has yet to be mapped. There appears to be sufficient scattered outcrops to determine the geology of this area with some accuracy.

(iii) Geochemistry

a) Soil samples were taken at intervals varying from 12.5 metres to 50 metres along six lines on the Gourlays Creek grid (see figure 6). A Jacro power auger mounted on a Bombardier was used in the Gourlays Creek - West area to penetrate the recent sand cover which was up to 19 metres thick and take a C horizon soil sample. A comparison was made between Jacro sampling and power hand auger sampling in the 'central window' on line 11200N between 2000E and 2400E. This involved bulldozing of the line sampled to provide access for the Bombardier. Figure 7 gives a comparison of results. The power hand auger penetrated to a maximum depth of 1.5 metres and generally gave a B horizon sample. The Jacro augered down until it hit rock and gave a good C horizon sample. Tin assays increased from below 20ppm Sn for the power hand auger sample up to 535ppm Sn for the Jacro sample taken near the same site.

The -80 mesh fraction of soil samples were analysed for Cu, Pb, Zn, Ag, Fe and Bi (all by A.A.S.), Sn and W (by X.R.F.), and As (by hydride generation - A.A.S.). Analytical results are given in Appendix 1.

b) Rock chip samples were taken in the course of mapping and analysed for Cu, Pb, Zn, Ag, Fe, As, Bi, Au, Sn and W. Assay results are given in Appendix II.

Gourlays Creek West

Gourlays Creek Northern Window

Gourlays Creek Southern Window

Stingray Bay

Granville Harbour

E.L. 1/77 Boundary

5373000N

5372000N

5371000N

5370000N

334000E

335000E

336000E

5 cm

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E.L. 1/77 ROCKYCAPE TAS

GOURLAYS CREEK PROSPECT

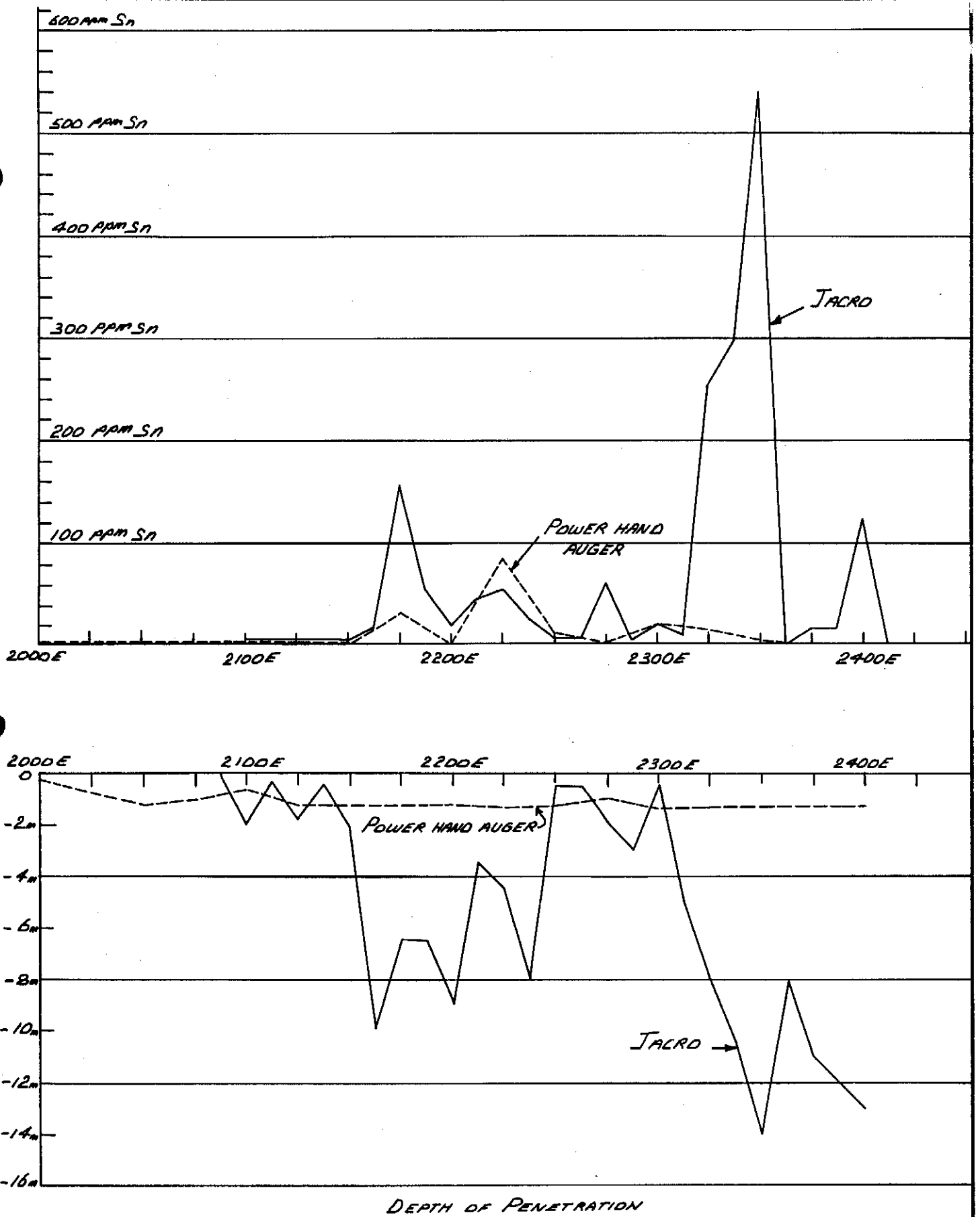
SOIL SAMPLE SURVEY

——— Jacro sample

– – – – Hand power auger sample

Scale 1:10,000

Fig. 6



COMPARISON OF TIN ASSAYS FROM SAMPLES TAKEN WITH A JACRO RIG AND THOSE WITH A POWER HAND AUGER

LINE 11200N

TIN SOIL GEOCHEMISTRY

FIG 7

c) Drainage samples were taken at intervals of less than 200 metres along streams and at all junctions. At each site two samples were taken; a panned concentrate sample and a stream sediment sample. Approximately 400g of fine sediment was taken and the -80 mesh fraction analysed for Cu, Pb, Zn, Ag, Fe, As, Sn, and W. A panned concentrate sample was obtained by panning 8 kilograms of unseived gravel down to give a heavy mineral concentrate weighing approximately 30 grams. This concentrate was pulped and analysed for Sn and W. All concentrates were inspected visually for Au. Assay results are given in Appendix II.

(iv) Geophysics

a) All grid lines were surveyed for total magnetic intensity using a Geometrics G816 magnetometer. The Gourlays Creek West grid lines were read at 12.5 metre intervals, the 'central window' grid at 5 metre intervals, and the 'southern window' at 10 metre intervals. Line profiles have been prepared and the data contoured for the 'central and southern windows'.

b) A dipole-dipole induced polarization and resistivity survey was undertaken on six grid lines over the 'central window' (see figure 8). A Sintrex IPR-8 instrument was used in the survey with a Huntec 2.5kw transmitter and a dipole spacing of 50 metres. All data has been plotted in pseudo-section form.

Gourlays Creek West

Gourlay's Creek "Southern Window"

Stingray Bay

Granville Harbour

E.L. 1/77 BOUNDARY

5372000N

5373000N

5371000N

5370000N

3340000E

3350000E

5 cm

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E.L. 1/77 ROCKYCAPE TAS

GOURLAYS CREEK PROSPECT

I.P. SURUEY COUERAGE

Scale 1:10,000

Fig. 8

4570022 U21

5. GOURLAYS CREEK-WEST

5.1 Geology

Outcrop over the grid is sparse and about half of the geological information has come from the logging of auger cuttings, and comparing these lithologies with the lithologies observed along the coast (which occupies a relative grid position of 350W). The coastal section shown on plan 2 has been projected into a grid position of 100W.

Both the Oonah Formation and a sequence of Ordovician sediments are exposed along the coast adjacent to the grid. The Oonah Formation is comprised of an interbedded sequence of quartzites, siltstones, and carbonates which dip steeply to the north, and are strongly cleaved. The base of the Ordovician sequence is marked by a hematitic pebble conglomerate which unconformably overlies the Oonah Formation. The Ordovician sequence is comprised of carbonates, marls, sandstones and conglomerates which young to the north and dip to the north at between 45^{o} and 75^{o}.

Within the grid area the dominant lithologies are chloritic mica schists, quartzites and calcareous siltstones of the Oonah Formation (see plan 2). Tertiary basalts outcrop on a plateau along the eastern margin of the grid. Almost half of all outcropping rocks of the Oonah Formation contain magnetite mostly in irregular veins up to 1cm thick, and rarely as fine grained disseminations. No Ordovician rocks outcrop within the grid area.

5.2 Geophysics

Four north-south trending grid lines 400 metres apart were surveyed for total magnetic intensity, and line profiles plotted (see plan 3). An anomaly was defined, generally conformable with the geology, varying from 100 to 200 metres wide, and at its strongest (5000nT) on line 1000E. The anomaly is probably caused by magnetite in veins within rocks of the Oonah Formation.

5.3 Geochemistry

Soil sampling was undertaken on lines 200E, 600E, and 1000E (see plan 4). Results of tin soil geochemistry have been plotted on plan 5. Three power hand auger samples from line 600E assayed 73ppm, 77ppm and 85ppm Sn, however when these sites were resampled to obtain a better sample, the samples assayed less than 5ppm Sn. Two Jacro samples from the northern end of line 600E assayed 50ppm Sn. Generally base metal assays ranged from 5ppm to 380ppm Cu, 5ppm to 820ppm Pb, and 10ppm to 310ppm Zn. A sample of chloritic micaceous quartzite from 200E 12075N assayed 135ppm Cu, 820ppm Pb and 260ppm Zn.

Two rock chip samples were taken of quartzite which contained approximately 10% vein magnetite. Cu, Pb and Zn assayed at or below 10ppm, and Sn below 5ppm.

5.4 Conclusions and Recommendations

No further work should be undertaken on the Gourlays Creek West grid for the following reasons.

a) The cause of the magnetic anomaly has been explained by vein magnetite within quartzites of the Oonah Formation. This magnetite has weak Cu, Pb, Zn, Sn, W and Au geochemistry.

b) There is no magnetic anomaly over the carbonate horizon, the only potential host for a tin replacement deposit within the grid area.

c) The carbonate is unaltered indicating skarn forming processes were not active in this locality.

d) There are no significant tin or tungsten soil anomalies.

6. GOURLAYS CREEK "CENTRAL WINDOW"

6.1 Geology

Vincents Creek has eroded through the Tertiary basalt cover to expose a variable sequence of Oonah Formation rocks (see plan 6). The sequence is dominantly quartzose which dips to the northeast at between 60^{o} and 80^{o}. The schistose lithologies exhibit a distinct crenulation cleavage striking approximately east-west, crenulating a northeast trending cleavage which is subparallel to parallel with bedding.

The variable character of the sequence is evident from the following list of lithologies encountered to date.

-grey green massive quartzites
-tourmaline bearing metaquartzite
-laminated quartzites
-calcareous quartzites
-tremolite-diopside bearing quartzites
-fine grained quartzites/cherts
-quartz biotite hornfels
-tremolite diopside hornfels
-banded quartz tremolite hornfels
-calcareous siltstones
-tremolitic carbonates
-mica schists
-quartz magnetite mica schists
-micaceous siltstones

The dominant character of the 'central window' magnetics is attributable to conformable massive and banded magnetite lodes commonly between one and two metres thick. H.W. Fander (see appendix IV) interprets the banded type as metamorphosed banded iron formation of essentially chemical origin. The banding is believed to reflect primary compositional layering.

Four different outcropping magnetite lodes have been located to date with the following rock chip geochemistry.

Element	Lowest assay	Highest assay	Average
Cu	95ppm	205ppm	144ppm
Pb	5ppm	40ppm	21ppm
Zn	30ppm	195ppm	96ppm
Fe	39.5%	52.5%	47%
Mo	1ppm	20ppm	7ppm
Bi	all (5ppm		
Au	(8ppb	30ppb	15ppb
Sn	(5ppm	52ppm	28ppm
W	(10ppm	28ppm	16ppm

Magnetite is also known to occur as fine disseminations within quartzites, as bands within mica schist, and interbedded with pyrite in massive lodes.

Three different styles of pyrite mineralization have been located.

a) Disseminations constituting up to 5% of the grey green siliceous quartzites.

b) In one locality as a two metre thick well bedded lode, 15 metres stratigraphically above (?) a massive magnetite lode. This occurrence is possibly the sulphide facies of a banded iron formation, and therefore syngenetic, however this has not been proven. Fander observed scatteredsmall pyrrhotite and rare chalcopyrite inclusions with the pyrite, and thought the presence of pyrrhotite favoured an epigenetic hydrothermal mode of formation.

A sample from this locality (11275N 2060E) assayed 85ppm Cu, 5ppm Pb, 40ppm Zn, 0.5ppm Ag, 2.0ppm Mo, 10ppm Bi, 270ppm As, (5ppm Sn, and 15ppm W.

c) As a vein style of mineralization. This is the only style of pyrite mineralization located to date carrying significantly anomalous tin.

A sample from 11200N 1810E described by Fander as a tourmaline bearing metaquartzite (see appendix IV, KR 12741 and KR 12744) containing approximately 40% pyrite in veins assayed 15ppm Cu, 5ppm Pb, 15ppm Zn, 46ppm As, 983ppm Sn and 12ppm W. The tourmaline alteration and pyrite mineralization may have eminated from a shallow granite intrusion.

A sample of float from 11235N 2035E described by Fander as a pyritized metaquartzite assayed 400ppm Cu, 30ppm Pb, 25ppm Zn, 16ppm Ag, 300ppm As, 0.41% Sn, and 30ppm W. Fander concluded the sulphides were introduced after metamorphism, and are replasive. Cassiterite aggregates less than 5 microns in size are intergrown with the pyrite.

Outcrop of pyritized metaquartzite from 11225N 2075E assayed 60ppm Cu, 40ppm Pb, 30ppm Zn, 4ppm Ag, 200ppm As, 715ppm Sn, and (10ppm W. This outcrop may be the source of the float sample discussed above.

A calcsilicate hornfelshorizon has been identified in the eastern section of the sequence adjacent to the most eastern magnetite lode. If the magnetite and sulphide lodes prove to be facies variants of a banded iron formation the calcsilicate hornfels may represent the carbonate facies of the formation. There may be other carbonates in the sequence not yet located. Because the massive magnetite lodes dominate the magnetics, a pyrrhotite replacement deposit within the carbonate horizon (s) will be difficult to isolate using magnetics.

The calcsilicate horizon was traversed by a trial Jacro soil sample survey on line 11200N and gave anomalous arsenic, tin, and silver geochemistry (see figure 10). This horizon may be reflected by the relatively weak magnetic anomaly on the eastern flank of the strong anomaly caused by magnetite centred on 2275E (see figure 9), and by trend C in Sumptons interpretation of the IP data (see plan 15, appendix IV).

Calcsilicate mineralogies have been observed in the southwest corner of the grid, an area worthy of further investigations.

6.2 Geophysics

Results of the Total Magnetic Intensity and IP surveys are discussed by J. Sumpton in appendix IV. Sumpton summarizes the major IP anomalies and anomaly trends as follows:

The electrical data set is dominated by three major features.

a) Sets of northwest-southeast trending anomalies labelled on plan 15 as Trends A,B, and C.

b) A zone of high chargeability centred around 11200N 2000E and also evident on the diagonal line.

c) The effect of overlying Tertiary Basalt, particularly on apparent resistivity.

The total magnetic intensity contour map (see plan 8) is dominated by the strong response due to two parallel strongly magnetic zones. To judge from their magnetic character and from observations of outcrop, each of these zones has as its source relatively narrow bands of material containing abundant magnetite. Both these magnetic 'horizons' strike approximately northwest, thus implying a more or less stratabound source. (Sumpton, 1983)

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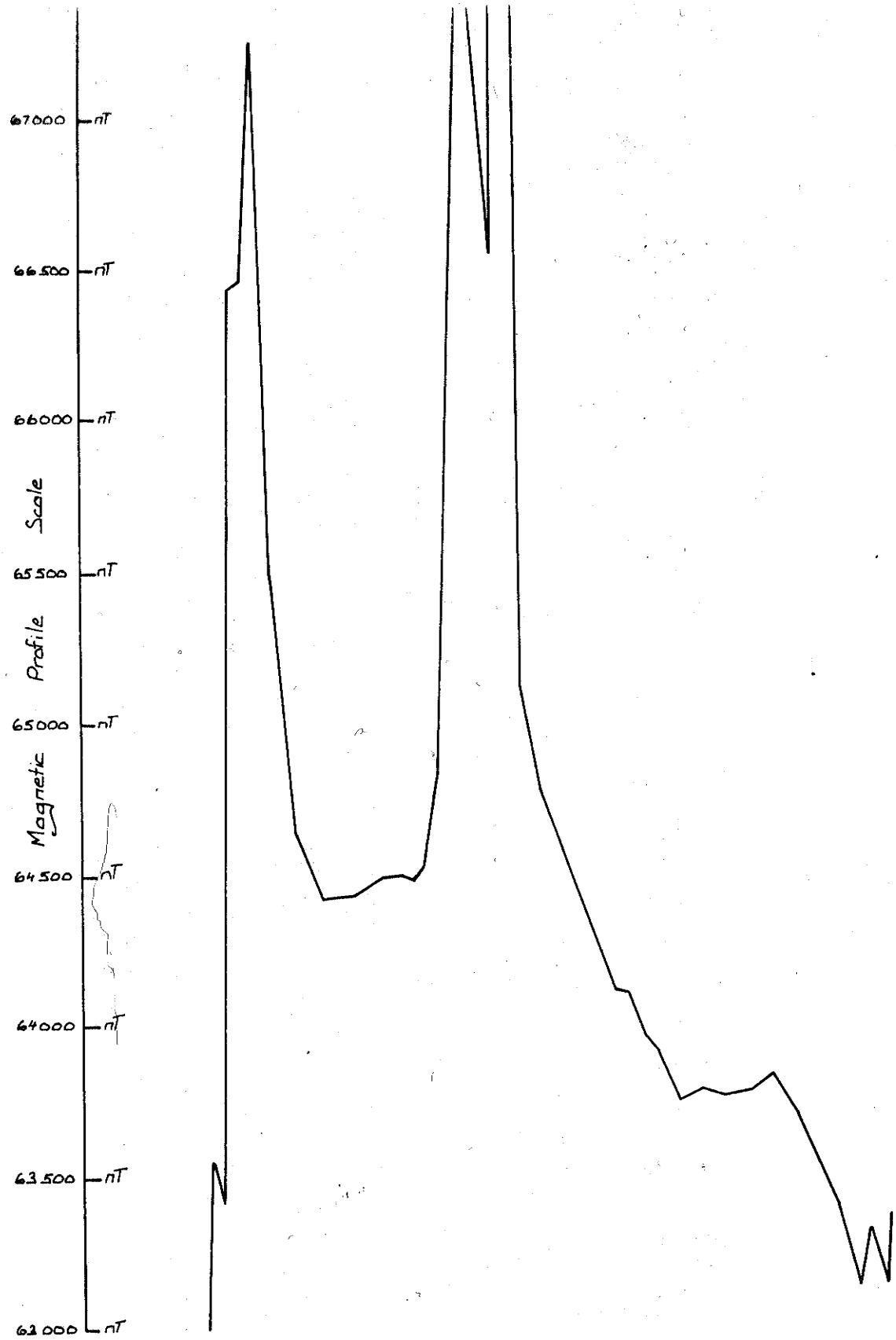
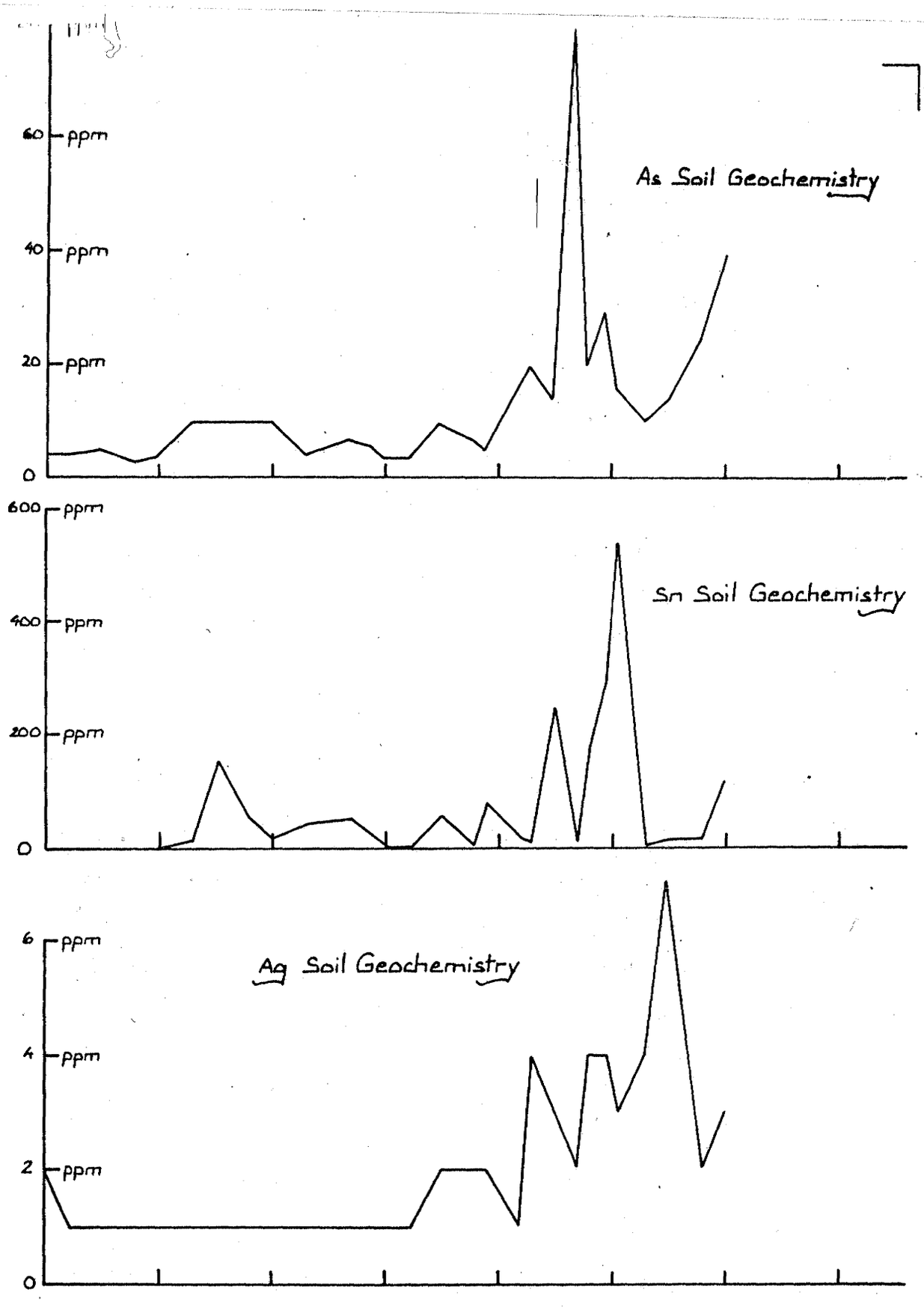


T.M.I Profiles

5 cm

Fig 9,

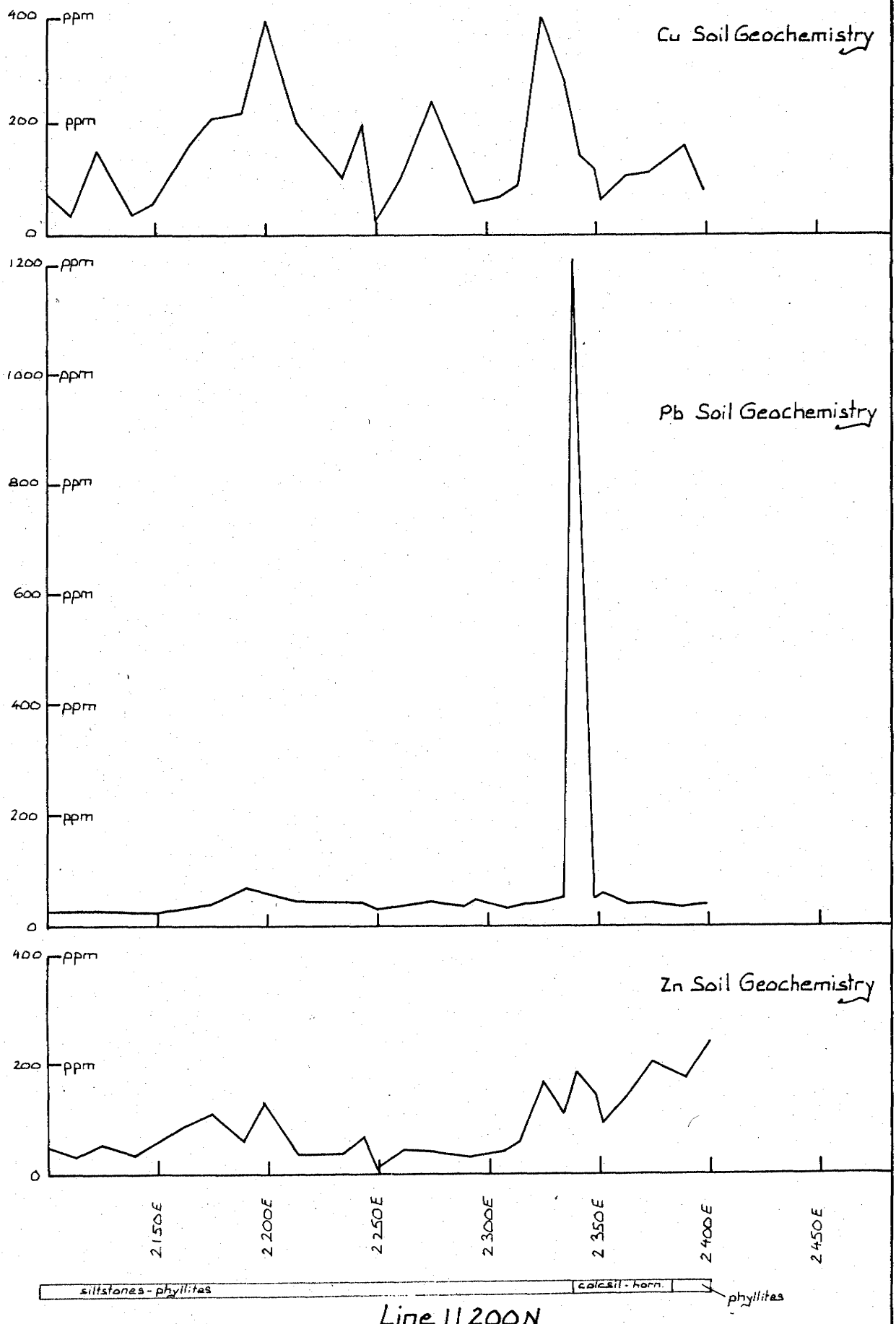
457031



As, Sn, Ag,

5 cm

Fig 10,



Line 11 200N

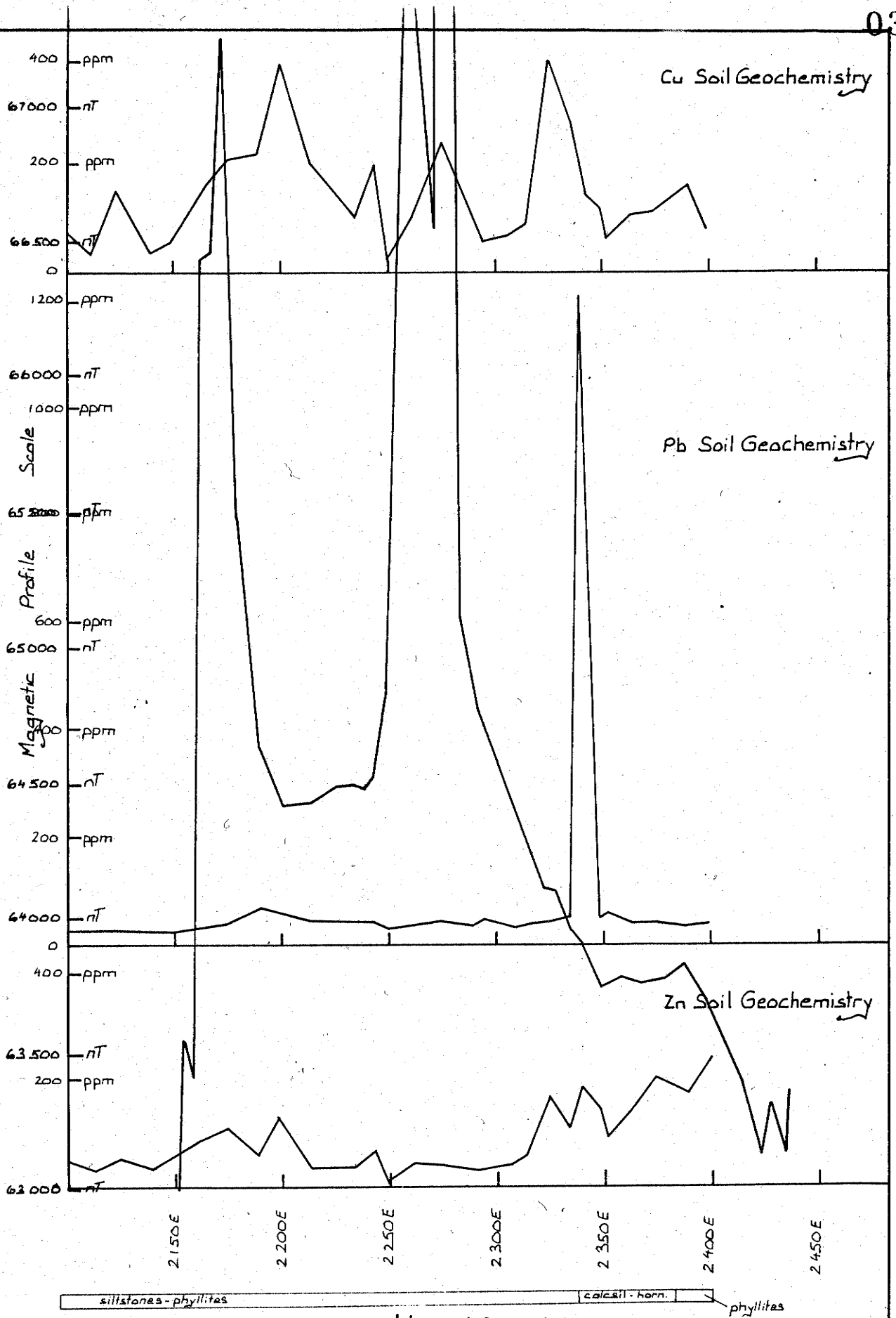
C-Horizon Soil Geochemistry

Cu, Pb, Zn,

5 cm

Fig 11.

457032



Line 11 200N

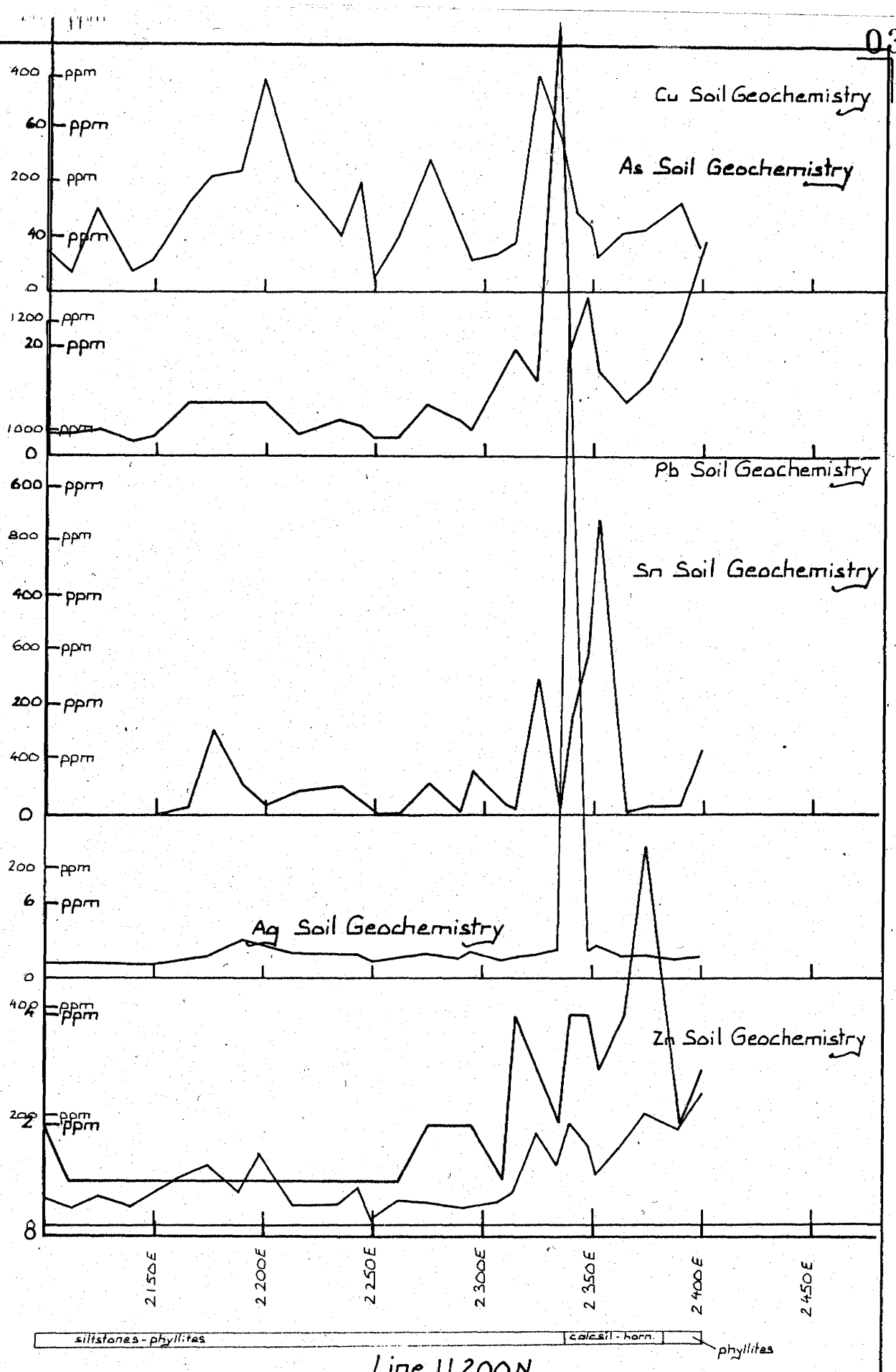
C-Horizon Soil Geochemistry

Cu, Pb, Zn, ... T.M.I Profiles

5 cm

Fig 9, Fig 11.

457032



Line 11200N

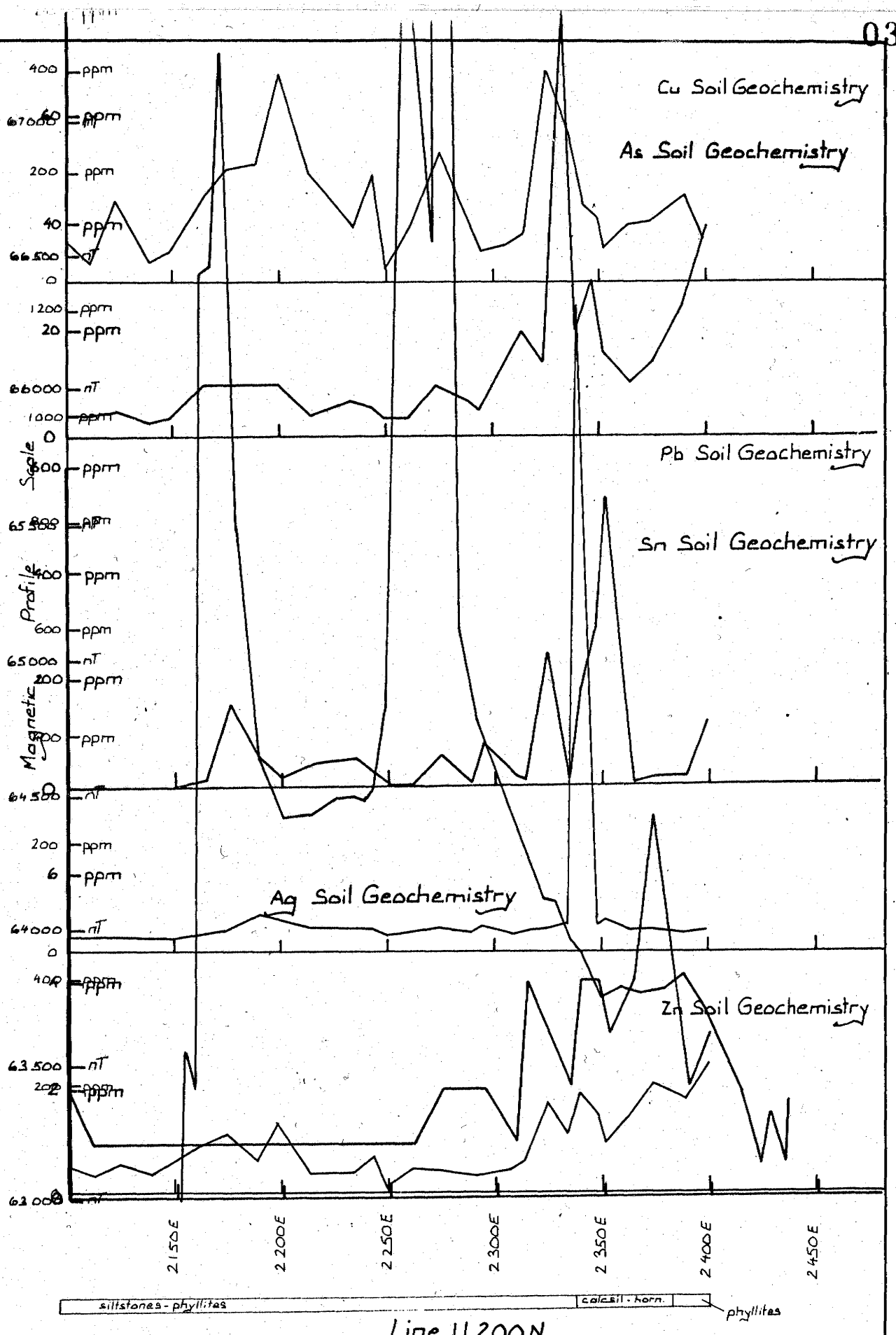
C-Horizon Soil Geochemistry

Cu, Pb, Zn, As, Sn, Ag,

5 cm

Fig 10, Fig 11.

457032



Line 11200N

C-Horizon Soil Geochemistry

Cu, Pb, Zn, As, Sn, Ag, T.M.I Profiles

5 cm

Fig 9, Fig 10, Fig 11.

6.3 Geochemistry

Hand power auger samples were taken along lines 11600N, 11200N, and 10800N. The range of assays obtained are listed below:

Element	Lowest Assay	Highest Assay
Cu	10ppm	425ppm
Pb	5ppm	30ppm
Zn	20ppm	505ppm
Ag	(0.5ppm	0.5ppm
Fe	1.35%	17.5%
As	(1ppm	20ppm
Mo	(0.5ppm	1.5ppm
Sn	(0.5ppm	85ppm
W	(10ppm	25ppm

A trial Jacro soil sampling program was undertaken on line 11200N between 2100E and 2400E. The results of tin geochemistry from both surveys are given on plan 17.

There were no samples anomalous in tin on line 11600N, however only B horizon samples could be taken with the power hand auger and it is suspected the soil is transported having washed and slumped in from the basalt hills to the north.

Only one sample from line 10800N gave anomalous tin (49ppm Sn at 1600E). This tin may have come from Tertiary sand under the basalt or possibly from mineralization associated with the calcsilicate rocks in this vicinity. This area is worthy of follow-up. Most of this line falls over basalt, however it is suspected the basalt is probably only about 10 metres thick and very weathered and the Jacro rig may be able to penetrate this basalt and sample the underlying Oonah rocks. A number of samples from line 11200N gave anomalous tin geochemistry. The calcsilicate horizon intersected in the Jacro holes between 2340 E and 2375 E assayed up to 535ppm Sn.

6.4 Conclusions and Recommendations

Results from the 'central window' have been encouraging. The IP survey points to abundant sulphide in the rocks and rock chip sampling to date has shown that the disseminated and vein style pyrite mineralization carries up to 0.41% tin. Two calcsilicate horizons have been identified, one in the southwest corner of the grid and a northwest trending horizon in the eastern part of the sequence, both a potential host for skarn or replacement mineralization.

The following recommendations are made for the 'central window'.

a) Drill DDH A. This drill hole has been designed to give maximum information on the style of pyrite, pyrrhotite and magnetite mineralization occuring with the 'central window'. The hole will help define a relationship between the style or type of mineralization and the occurrence of tin and give information to aid a more accurate interpretation of IP and magnetic data. This information would also be valueable in planning the geochemical soil sampling program. The complete proposal is given in appendix V (see plan 18).

b) Use only the Jacro rig to obtain samples for soil geochemistry. The Jacro will give reliable rock or C horizon soil samples, enhance anomalies by taking a better sample, and give relatively fresh rock chips to aid mapping.

c) Drill a hole into IP trend C defined by Sumpton, which is coincident with a calcsilicate horizon. Total magnetic intensity should be used to look for relatively weak magnetic anomalies along this horizon which may reflect pyrrhotite mineralization. A detailed reconnaissance magnetic survey should be undertaken across the calcsilicate horizon (trend C) with a line spacing of 20 metres to facilitate identification of such anomalies.

d) Extend grid lines from 10800N to 11400N to the west by 400 metres, map and survey for magnetics, to further investigate the calcsilicate hornfels in this vicinity.

7. GOURLAYS CREEK 'SOUTHERN WINDOW'

Field investigations are at an early stage with only geological mapping of streams, drainage sampling, and surveying of all grid lines for total magnetic intensity completed. Line profiles and contours of total magnetic intensity are given on plans 19 and 20 respectively.

The geology of the streams was mapped relative to a grid now superseded and is not presented in this report.

The following program is proposed for the 'Southern Window'.

a) Geological mapping of the grid and remapping of stream-bed geology relative to the new grid.

b) Dipole-dipole IP survey on lines 10600N, 10400N, 10200N, 10000N, 9800N, and 9600N. Tracks will have to be cut to give access for the bombardier.

c) A trial power hand auger soil geochemical survey on lines 10600N, 10200N, 9800N to determine effectiveness of the sampling method. Soils may prove to be relatively shallow and therefore power hand auger sampling suitable for obtaining a C horizon sample.

REFERENCES

Heithersay, P., Sumpton, J.D., 1982:
Progress Report E.L. 1/77 Granville East and Gourlays Creek Prospects. Geopeko Company Report.

Porter, T.M., 1980:
E.L. 1/77 Rocky Cape Northwest Tasmania - Progress Report January 1 to December 31, 1979. CRA Exploration Company Report.

APPENDIX 1

SOIL SAMPLE LEDGER SHEETS

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE No. 1177 Sample numbers 23005 - 23027 Collected by K. SHERRY Sheet no. 1

Area / Prospect GOWLAY'S CREEK Date MAY 1983

Map / Photo reference Analysed by A.L.S - BRISBANE DPO no. 30444

A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %									Grid ref	Geological Observations
	ss * oc f s	fl	wl	al	co	ca	pH		Cu	Pb	Zn	Ag	Fe %	As	Bi	Sn	W		
		o/c sample type ***																	
TS		s sample type ****																	
23005		ALL JACRO SAMPLES							80	40	230	3	15·1	40	<5	120	<10	11205N 2400E	dark red-brown clay
23006									160	35	170	2	6·80	25	<5	15	<10	11201N 2390E	dark grey mica schist / phyllite
23007									110	40	200	7	15·0	14	<5	15	<10	11202N 2375E	calcsilicate hornfels
23008									105	35	140	4	17·5	10	<5	<5	<10	11202N 2365E	black chert (calcsil horn)
23009									60	55	85	3	4·90	16	<5	535	20	11202N 2353E	calcsilicate hornfels
23010									120	40	150	4	10·0	30	<5	295	10	11210N 2348E	phyllite / calcareous siltstone
23011									150	0·12	190	4	11·1	20	<5	175	10	11212N 2340E	calcareous siltstone / calcsil hornfels?
23012									270	50	105	2	8·10	80	<5	10	20	11225N 2335E	dark grey phyllite
23013									400	40	170	3	9·90	14	10	250	<10	11227N 2325E	
23014									90	40	55	4	6·60	20	5	10	10	11225N 2315E	dark grey phyllite
23015									75	30	40	1	2·74	16	<5	20	10	11220N 2310E	dark grey-green quartzite - siltstone
23016									55	45	30	2	6·60	5	10	80	10	11215N 2295E	white quartzose siltstone
23017									85	35	30	2	2·84	7	5	5	10	11202N 2290E	dark grey quartz mica schist / phyllite
23018									240	45	40	2	5·60	10	<5	60	<10	11202N 2275E	green quartzose siltstone
23019									100	35	40	<1	2·82	4	<5	5	<10	11201N 2262E	yellow green phyllite / siltstone
23020									15	25	10	<1	1·32	4	<5	5	30	11202N 2250E	quartzose siltstone
23021									195	40	65	<1	3·28	6	<5	25	10	11202N 2244E	micaceous siltstone / phyllite.
23022									95	40	35	<1	6·80	7	<5	55	10	11202N 2235E	yellow-brown clay - siltstone
23023									200	40	30	1	15·2	4	<5	45	20	11203N 2215E	green - brown clay - siltstone
23024									390	65	130	1	8·10	10	<5	20	10	11202N 2200E	brown clay - siltstone
23025									220	70	60	<1	4·60	10	<5	55	10	11201N 2190E	grey-green phyllite
23026									210	40	110	1	8·20	10	<5	155	<10	11202N 2176E	yellow-brown clay - siltstone
23027									155	35	95	1	7·80	10	<5	15	<10	11201N 2165E	green phyllite.

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wl = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE No. 1/77 Sample numbers 23028 - 23032 Collected by K. SHERRY Sheet no. 2 039

Area / Prospect GOURLAY'S CREEK Date MAY 1983

Map / Photo reference Analysed by A.L.S. - BRISBANE DPO no. 30444

A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
	ss * oc f s	fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Fe %	As	Bi	Sn	W			
		o/c sample type ***																		
TS		s sample type ****																		
23028		ALL JACRO SAMPLES							55	25	50	<1	6·40	4	<5	<5	<10		11203N 2150E	green silty loam – altered siltstone
23029									30	25	30	<1	4·60	3	<5	<5	30		11202N 2140E	vein qtz frags in brown loam
23030									155	30	55	1	7·30	5	10	<5	<10		11203N 2125E	altered green micaceous phyllite/siltstone
23031									30	25	30	<1	5·50	4	<5	<5	20		11202N 2112E	altered green quartzite
23032									75	25	50	2	5·30	4	5	<5	10		11205N 2100E	mm phyllite / mica schist

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** S[illegible] A[illegible] C[illegible]

45040

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

040

Tenement name... R●●Y CAPE ... No. 1/77 ... Sample numbers TS20795 ● TS20773 ... Collected by D. Robertson / K. Wood ... Sh●● no. 1

Area / Prospect... GOURLAYS CREEK.

Date 17th March 1983

Map / Photo reference... PIEMAN 1:100,000 ... Analysed by... ANALABS PERTH ... DPO no... 30437

A 02143

Sample No. TS	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type *** / s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Fe %	As	Mo	Sn	W	Grid ref LINE 1000E	Geological Observations
20751	S	P	1·6m							100	10	25	X	6·15	12	0·5	X	11	11900N	bn. silt.
20752	S	P	1·2m							5	10	70	X	1·25	3	X	X	X	11875N	bn. silt.
20753	S	P	1·0m							X	X	10	X	0.34	X	X	X	24	11850N	fg. bn qtzt
20754	S	P	1·6m							5	10	15	X	0·28	X	X	X	X	11825N	
20755	S	P	1·6m							25	10	40	X	2·60	6	X	X	X	11800N	bn. silt.
20756	S	P	1·2m							70	10	10	X	5·00	11	X	X	18	11775N	
20757	S	P	1·6m							55	X	85	X	3·55	3	X	9	X	11750N	
20758	S	P	1·2m							70	10	50	X	4·35	4	X	X	X	11725N	
20759	S	P	1·0m							X	X	15	X	1·80	X	X	X	X	11700N	
20760	S	P	1·6m							5	X	35	X	4·35	3	X	11	X	11675N	
20761	S	P	1·0m							X	X	15	X	0·25	X	0·5	X	X	11650N	
20762	S	P	1·2m							45	5	85	X	11·0	3	X	X	X	11625N	
20763	S	P	1·2m							20	5	95	X	5·25	1	X	11	X	11600N	
20764	S	P	1·4m							20	X	25	0·5	0·99	X	X	X	X	LINE 600E 12000N	gn. mic. qtzt.
20765	S	P	0·7m							X	X	15	X	1·40	2	X	X	28	11975N	gn py mic qtzt
20766	S	P	1·6m							5	5	15	X	0·30	X	X	X	X	11950N	gn mic schist
20767	S	P	1·6m							10	5	20	X	0·39	X	0·5	77	X	11925N	f ggn qtzt
20768	S	P	1·5m							20	X	40	0·5	0·75	X	X	85	X	11900N	gn mica schist/qtzt
20769	S	P	1·6m							X	5	20	X	1·95	X	X	X	X	11875N	gn mica schist
20770	S	P	1·6m							5	5	10	X	0·13	X	X	X	X	11850N	gn mica schist
20771	S	P	1·0m							20	5	15	X	1·70	X	0·5	3	X	11825N	gn mica schist
20772	S	P	1·6m							10	10	25	X	0·55	X	2·5	73	X	11800N	bn mica schist
20773	S	P	1·6m							10	X	10	X	0.47	X	2·0	X	X	11775N	gn silt

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2 P POWER AUGER J JACRO

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

041

Tenement name ROCKY CAPE No. 1/77 Sample numbers TS 20774 to TS 20780 Collected by D. Robertson / K. Wood Sheet no. 2

Area / Prospect GOURLAYS CREEK Date 17th March 1983

Map / Photo reference PIEMAN 1:100,000 Analysed by ANALABS COOEE DPO no. 30437

A 02143

Sample No. TS	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Cu	Pb	Zn	Ag	Fe %	As	Mo	Sn	W	Grid ref LINE 600E	Geological Observations
											Metal content ppm or %										
20774	S	P	1.6m								20	5	20	0.5	1.05	7	1.0	X	X	11750 N	bn mica schist
20775	S	P	0.8m								10	X	15	X	1.35	X	X	X	17	11725N	gn mica schist
20776	S	P	0.7m								5	10	10	0.5	0.82	X	X	X	X	11700N	fg bn mic qtzt
20777	S	P	1.6m								10	X	15	X	0.47	3	0.5	X	X	11675N	gn - gy silt
20778	S	P	1.6m								5	5	10	X	0.79	3	1.0	X	X	11650N	fggn - gy qtzt/silt
20779	S	P	1.6m								5	5	15	X	0.87	3	X	X	X	11625N	fggn - gy qtzt
20780	S	P	1.6m								5	5	10	X	0.36	1	1.0	X	X	11600N	bn qtzt/silt

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2 P POWER AUGER T JACRO

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Sr contains [illegible]

4520 E

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE No. 1/77 Sample numbers TS 23001 to TS 23023 Collected by D. Robertson Sheet no. 3

Area / Prospect GOURLAYS CREEK Date 10th May 1983

Map / Photo reference PIEMAN 1:100,000 Analysed by A.L.S. BRISBANE DPO no. 30444

A 02143

Sample No. TS	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Cu	Pb	Zn	Ag	Fe %	As	Bi	Sn	W	Grid ref LINE 200E	Geological Observations
								Metal content ppm or %													
23001	S	J	11m								15	20	15	2	2·30	9	<5	<5	20	11600N	gy-gn fg qtzt
23002	S	J	9m								10	20	10	1	1·98	7	<5	<5	10	11625N	bn mic silt
23003	S	J	14m								20	20	30	2	3·54	12	<5	<5	20	11650N	gy gn fg gy qtzt/silt
23004	S	J	14m								25	25	20	2	1·60	10	<5	<5	30	11675N	bn fg qtzt silt
23005	S	J	13m								80	40	230	3	15·1	40	<5	120	<10	11200N 2400E	
23006	S	J	12m								160	35	170	2	6·80	25	<5	15	<10	11200N 2387·5E	
23007	S	J	11m								110	40	200	7	15·0	14	<5	15	<10	11200N 2375N	
23008	S	J	8m								105	35	140	4	17·5	10	<5	<5	<10	11200N 2362·5E	
23009	S	J	14m								60	55	85	3	4·9	16	<5	535	20	11200N 2350E	
23010	S	J	10·5m								120	40	150	4	10·0	30	<5	295	10	11210N 2342E	
23011	S	J	7m								150	1200	190	4	11·1	20	<5	175	10	11215N 2334E	
23012	S	J	4m								270	50	105	2	8·10	80	<5	10	20	11220N 2326E	
23013	S	J	8m								400	40	170	3	9·90	14	10	250	<10	11225N 2318E	
23014	S	J	5m								90	40	55	4	6·60	20	5	10	10	11220N 2310E	
23015	S	J	0·5m								75	30	40	1	2·74	16	<5	20	10	11220N 2302E	
23016	S	J	3m								55	45	30	2	6·60	5	10	80	10	11215N 2294E	
23017	S	J	3m								85	35	30	2	2·84	7	5	5	10	11200N 2287·5E	
23018	S	J	2m								240	45	40	2	5·60	10	<5	60	<10	11200N 2275E	
23019	S	J	0·5m								100	35	40	<1	2·82	4	<5	5	<10	11200N 2262·5E	
23020	S	J	0·5m								15	25	10	<1	1·32	4	<5	5	30	11200N 2250E	
23021	S	J	8m								195	40	65	<1	3·28	6	<5	25	10	11200N 2237·5E	
23022	S	J	4·5m								95	40	35	<1	6·80	7	<5	55	10	11200N 2225E	
23023	S	J	3·5m								200	40	30	1	15·2	4	<5	45	20	11200N 2212·5E	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

P POWER AUGER J JACRO

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name [redacted]KY CAPE No. 1/77 Sample numbers TS 23024 [redacted] 23046 Collected by R. Outram Sh[redacted]no. 4

Area / Prospect GOURLAYS CREEK Date 25th May 1983

Map / Photo reference PIEMAN 1:100,000 Analysed by A.M.S. BRISBANE DPO no 30444 / 30446

A 02143

Sample No. TS	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Fe %	As	Bi	Sn	W	Grid ref	Geological Observations
23024	S	J	9m								390	65	130	1	8·10	10	<5	20	10	11200N 2200E	
23025	S	J	6·5m								220	70	60	<1	4·60	10	<5	55	10	11200N 2187·5E	
23026	S	J	6·5m								210	40	110	1	8·20	10	<5	155	<10	11200N 2175E	
23027	S	J	10m								155	35	95	1	7·80	10	<5	15	<10	11200N 2162·5E	
23028	S	J	2m								55	25	50	<1	6·40	4	<5	<5	10	11200N 2150E	
23029	S	J	0·4m								30	25	30	<1	4·60	3	<5	<5	30	11200N 2137·5E	
23030	S	J	1·8m								155	30	55	1	7·30	5	10	<5	<10	11200N 2125E	
23031	S	J	0·3m								30	25	30	<1	5·50	4	<5	<5	20	11200N 2112·5E	
23032	S	J	2·0m								75	25	50	2	5·30	4	5	<5	10	11200N 2100E	
23033	S	J	4m								20	25	30	2	2·64	<20	<5	<5	10	LINE 600E 11600N	bn qtzt/silt
23034	S	J	6m								20	20	25	1	1·24	20	<5	10	20	11625N	fg gn - gy qtzt
23035	S	J	5m								30	20	30	1	2·47	40	<5	10	10	11650N	fg gn - gy qtzt/silt
23036	S	J	4m								20	20	30	1	2·53	<20	<5	5	10	11675N	gn - gy silt
23037	S	J	1m								15	15	20	1	2·86	<20	<5	<5	<10	11700N	fg bn mic qtzt
23038	S	J	1·5m								70	50	25	2	2·52	<20	<5	<5	10	11725N	gn micq schist
23039	S	J	3m								10	25	40	2	1·81	<20	<5	<5	<10	11750N	bn mica schist
23040	S	J	5m								10	15	20	1	2·24	<20	<5	<5	<10	11775N	gn silt
23041	S	J	3m								10	20	25	2	2·01	20	5	<5	10	11800N	bn mica schist
23042	S	J	2m								20	20	30	1	2·80	<20	<5	<5	<10	11825N	gn mica schist
23043	S	J	10m								140	25	50	3	5·80	20	5	<5	<10	11850N	gn mica schist
23044	S	J	4m								90	25	30	2	3·65	20	<5	<5	10	11875N	gn mica schist
23045	S	J	5m								20	40	20	2	1·69	<20	<5	<5	10	11900N	gn mica schist/qtzt
23046	S	J	4m								280	45	40	3	3·02	80	<5	<5	10	11925N	fg gn qtzt

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

P POWER AUGER J JACRO

**** S

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name [redacted]Y CAPE No. 1/77 Sample numbers TS 23[redacted] to TS23070 Collected by R. Outram Sh[redacted]no. 5

Area / Prospect GOURLAYS CREEK Date 25th May 1983

Map / Photo reference PIEMAN 1:100,000 Analysed by A.L.S. BRISBANE DPO no 30446

A 02143

Sample No. TS	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Fe %	As	Bi	Sn	W	Grid ref	Geological Observations
																				LINE 600E	
23047	S	J	4m								20	20	20	2	5·50	20	<5	<5	10	11950N	gn mic schist
23048	S	J	2m								45	15	15	1	1·76	<20	<5	<5	150	11975N	gn py mic qtzt
23049	S	J	2·8m								105	20	20	1	3·45	<20	<5	<5	10	12000N	gn mic qtzt
23050	S	J	3m								280	20	20	2	7·70	<20	<5	<5	<10	12025N	qtzt schist gn mic
23051	S	J	2m								380	15	15	1	1·76	<20	<5	<5	10	12050N	gn py qtzt schist
23052	S	J	2m								320	20	20	2	3·63	20	5	<5	<10	12075N	gn py qtzt/schist
23053	S	J	2·5m								250	25	30	2	4·70	20	5	<5	<10	12100N	gn py qtzt/schist
23054	S	J	2m								30	25	40	2	7·30	20	5	<5	<10	12125N	fg gn py qtzt
23055	S	J	3·2m								35	25	20	1	3·84	220	<5	<5	<10	12150N	fg gn qtzt
23056	S	J	2m								90	30	25	2	3·18	20	<5	5	10	12175N	gn mica schist
23057	S	J	2m								130	20	40	2	8·00	<20	<5	<5	20	12200N	gn mica schist
23058	S	J	10m								30	45	180	2	12·1	40	<5	<5	<10	12225N	gn mica schist
23059	S	J	5·5m								30	220	250	3	1·52	20	<5	<5	<10	12250N	gy gn silt (weakly magnetic)
23060	S	J	2m								25	135	310	3	0·68	<20	5	<5	<10	12275N	wh carb
23061	S	J	2·5m								25	200	290	2	0·80	20	<5	<5	<10	13300N	wh carb
23062	S	J	1·5m								40	35	95	1	0·46	<20	<5	10	90	12325N	wh carb
23063	S	J	2m								35	30	55	1	0·91	20	<5	50	10	13350N	
23064	S	J	2m								30	85	120	2	2·40	20	<5	50	10	13375N	gn silt
23065	S	J	3·5m								30	30	65	1	2·45	20	<5	<5	<10	13400N	gn silt
																				LINE 200E	
23066	S	J	4m								25	30	100	4	3·30	<20	<5	<5	<10	12400N	fg gn silt
23067	S	J	2·8m								20	25	45	1	1·37	<20	<5	5	30	12375N	fg wh qtzt
23068	S	J	5m								40	70	90	1	2·14	<20	<5	<5	<10	12350N	gy calcareous silt
23069	S	J	5m								30	35	85	2	3·11	<20	<5	<5	<10	12325N	gy calcareous silt
23070	S	J	5m								10	20	25	<1	1·00	20	<5	10	20	12300N	gy silt

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length) P POWER AUGER J JACRO

**** S [illegible]

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name [redacted]KY CAPE No. 1/77 Sample numbers TS 23071 to TS 23089 Collected by B. Outram Sheet no. 6

Area / Prospect GOURLAYS CREEK Date 26th May 1983

Map / Photo reference PIEMAN 1:10,000 Analysed by A.L.S. BRISBANE DPO no. 30446

A 02143

Sample No. TS	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Fe %	As	Bi	Sn	W	Grid ref LWE 2005	Geological Observations
23071	S	J	7m								35	30	75	2	6·20	20	<5	5	10	12275N	gy gn silt
23072	S	J	8m								30	30	55	1	2·32	20	<5	<5	10	12250N	gy fg qtzt
23073	S	J	9m								20	20	45	1	1·63	20	<5	<5	20	12225N	gn fg qtzt
23074	S	J	8m								25	25	50	<1	0·95	<20	<5	<5	10	12200N	gn fg py qtzt
23075	S	J	10m								25	65	150	2	1·10	20	<5	<5	10	12175N	fg gy carb
23076	S	J	9·5m								20	45	50	2	1·29	40	<5	<5	<10	12150N	fg wh carb
23077	S	J	7m								20	40	30	3	0·85	<20	5	<5	<10	12125N	gy gn mic qtzt
23078	S	J	6m								20	40	25	2	0·64	<20	<5	<5	<10	12100N	
23079	S	J	8m								135	820	260	2	6·60	20	<5	<5	10	12075N	dk gy mic qtzt
23080	S	J	10·5m								45	25	80	2	8·40	<20	<5	<5	<10	12050N	dk gy mic qtzt
23081	S	J	17m								20	30	35	2	2·67	20	<5	10	20	12025N	dk gy mica schist
23082	S	J	16m								–	–	–	–	–	–	–	–	–	12000N	NOT SAMPLED - SAND mica schist
23083	S	J	19m								15	10	10	<1	0·55	<20	<5	<5	20	11925N	SAND (tertiary)
23084	S	J	10m								–	–	–	–	–	–	–	–	–	11950N	NOT SAMPLED - SAND. (tertiary)
23085	S	J	8m								40	20	30	2	8·50	<20	10	<5	<10	11925N	
23086	S	J	7m								45	10	20	3	0·63	<20	<5	<5	20	11900N	bn fg mic qtzt
23087	S	J	6m								30	20	80	2	8·50	<20	<5	<5	<10	11875N	gy py (mggt) fg qtzt
23088	S	J	19m								75	25	20	1	2·70	<20	<5	<5	30	11800N	gy gn phy phyllite
23089	S	J	17m								15	15	15	1	0·94	<20	<5	<5	10	11725N	bn fg qtzt/silt

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil [illegible] or hole or pit depth m A B or C horizon

P POWER AUGER J JACRO

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

046

Tenement name.....ROY CAPE..... No. 1/77... Sample numbers TS23501 TS23523 Collected by D. Robertson / K. Wood Sheet no. 7

Area / Prospect.....GOURLAYS CREEK.....

Date 14th March 1983

Map / Photo reference.....

Analysed by ANALABS COOEE DPO no. 30437

A 02143

Sample No. TS	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Cu	Pb	Zn	Ag	Fe %	As	Mo	Sn	W	Grid ref LINE 1000N	Geological Observations
23501	S	P	1·2								50	25	45	X	4·35	7	X	49	X	1600E	
02	S	P	0·9								35	10	55	X	3·05	5	X	X	X	1625E	
03	S	P	1·2								55	10	75	0·5	4·75	3	X	X	12	1650E	
04	S	P	1·2								85	15	130	X	12·5	X	X	X	X	1675E	
05	S	P	1·2								65	20	120	X	13·0	2	X	X	X	1700E	
06	S	P	1·2								65	10	145	0·5	12·0	2	0·5	X	X	1750E	
07	S	P	1·2								70	20	155	X	10·5	4	X	X	X	1800E	
08	S	P	0·8								65	20	100	X	11·5	X	X	X	X	1850E	
09	S	P	1·2								60	15	90	X	11·0	1	X	X	X	1900E	
10	S	P	0·5								50	25	85	X	8·65	1	X	X	11	1950E	
11	S	P	1·2								70	25	95	X	13·0	2	X	X	X	2000E	
12	S	P	1·2								80	20	95	X	16·5	X	X	X	X	2050E	
13	S	P	1·2								95	15	85	X	16·0	5	X	X	X	2100E	
14	S	P	1·2								110	20	115	X	14·5	X	X	X	X	2150E	
15	S	P	0·2								105	15	125	X	13·5	X	X	X	X	2200E	
16	S	P	1·2								95	15	90	X	13·5	X	X	X	13	2250E	
17	S	P	1·2								105	5	110	X	13·0	X	X	X	X	2300E	
18	S	P	0·9								75	10	75	X	12·0	1	X	X	X	2350E	
19	S	P	1·2								70	15	70	X	11·5	2	X	X	X	2375E	
20	S	P	1·2								75	20	70	X	13·5	5	X	X	X	2400E	
21	S	P	1·2								75	15	85	X	13·5	2	X	X	X	2425E	
22	S	P	1·2								75	15	65	X	13·5	2	X	X	X	2450E	
23	S	P	1·2								110	25	145	X	3·35	X	X	7	X	2475E	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Sample from A B or C horizon

P POWER AUGER J JACRO

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name.....ROCKY CAPE..... No. 1/77.. Sample numbers..TS 235[illegible] to TS 23546.... Collected by..D. Robertson / K. Wood..... Sh[illegible]no. 8.....

Area / Prospect.....GOURLAYS CREEK..... Date..14th March 1983.

Map / Photo reference..... Analysed by..ANALABS PERTH..... DPO no.....30437.....

A 02143

Sample No. TS	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Cu	Pb	Zn	Ag	Fe %	As	Mo	Sn	W	Grid ref LINE 1200N	Geological Observations
235 24	S	P	1·2m								90	25	80	X	8·90	X	X	X	X	2500E	
25	S	P	1·2m								120	25	65	0·5	4·95	20	X	3	X	2525E	
26	S	P	1·2m								60	20	45	X	7·45	4	0·5	X	X	2550E	
27	S	P	1·2m								60	20	55	X	11·5	3	X	3	X	2575E	
28	S	P	1·2m								55	20	50	X	9·90	2	X	X	X	2600E	
29	S	P	1·2m								80	15	100	X	14·5	1	0·5	X	X	LINE 1200N 2600E	
30	S	P	1·2m								60	15	70	X	12·0	1	0·5	X	X	2575E	
31	S	P	1·2m								45	25	50	X	17·5	5	X	X	X	2550E	
32	S	P	1·0m								45	20	45	X	11·5	3	0·5	X	X	2525E	
33	S	P	1·2m								40	20	45	X	11·5	4	X	X	X	2500E	
34	S	P	1·2m								35	25	40	X	7·50	4	X	X	X	2475E	
35	S	P	1·2m								45	20	45	X	8·95	8	X	X	X	2450E	
36	S	P	1·2m								50	20	50	X	8·45	2	X	X	X	2425E	
37	S	P	1·2m								50	25	45	X	9·10	2	0·5	X	10	2400E	
38	S	P	1·2m								70	15	60	X	12·0	3	X	X	X	2375E	
39	S	P	1·2m								45	15	45	X	10·0	3	X	4	X	2350E	
40	S	P	1·2m								55	25	45	X	6·55	18	0·5	14	X	2325E	
41	S	P	1·3m								305	20	75	X	3·85	10	X	20	X	2300E	
42	S	P	0·9m								150	20	50	X	4·70	11	X	X	10	2275E	
43	S	P	1·2m								130	30	45	0·5	2·75	X	X	10	X	2250E	
44	S	P	1·3m								105	20	45	0·5	6·75	3	X	85	X	2225E	
45	S	P	1·2m								35	15	35	X	7·05	X	X	X	X	2200E	
46	S	P	1·2m								100	15	70	X	10·5	X	0·5	33	X	2175E	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2 P POWER AUGER J JACRO

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** [illegible]

4 of 4 0480

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE No. 1/77 Sample numbers TS 23547 to TS 23569 Collected by D. Robertson / K. Wood Sheet no. 9 048

Area / Prospect GOURLAYS CREEK Date 14th March 1983

Map / Photo reference A 02143 Analysed by ANALABS COOEE DPO no. 30437

Sample No. TS	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type *** / s sample type ****	Carbon	Cu	Pb	Zn	Ag	Fe %	As	Mo	Sn	W	Grid ref LINE 11200N	Geological Observations
23547	S	P	1·2							10	10	30	0·5	6·00	3	1·0	X	25	2150E	
48	S	P	1·2							40	15	35	X	9·40	1	0·5	X	X	2125E	
49	S	P	0·6							10	5	30	X	2·95	1	0·5	X	X	2100E	
50	S	P	1·0							215	10	30	X	6·20	16	1·0	X	X	2075E	
51	S	P	1·2							205	20	40	X	8·65	5	0·5	X	X	2050E	
52	S	P	0·8							170	20	25	0·5	7·90	4	1·0	X	X	2025E	
53	S	P	0·3							70	15	20	X	6·15	3	1·5	X	X	2000E	
54	S	P	1·0							160	15	25	X	7·55	6	1·5	X	X	1975E	
55	S	P	1·0							210	10	35	X	2·75	2	0·5	X	X	1950E	
56	S	P	0·9							250	25	80	X	5·80	4	1·5	X	X	1925E	
57	S	P	0·8							425	15	20	X	3·40	2	X	X	X	1900E	
58	S	P	1·4							25	5	35	0·5	1·35	X	X	X	X	1875E	
59	S	P	1·4							15	10	70	X	2·50	X	X	X	X	1850E	
60	S	P	1·3							45	20	50	X	6·70	1	X	X	X	1825E	
61	S	P	0·6							25	25	25	X	5·45	4	0·5	X	X	1800E	
62	S	P	1·0							105	15	55	X	4·80	1	X	5	14	1775E	
63	S	P	1·0							75	20	75	X	12·5	2	X	X	X	1750E	
64	S	P	1·0							50	20	70	X	10·5	2	X	X	X	1725E	
65	S	P	1·2							70	20	95	X	11·5	2	X	X	X	1700E	
66	S	P	1·2							50	25	65	X	11·5	2	X	X	X	1675E	
67	S	P	1·2							70	15	75	X	12·5	2	X	X	12	1650E	
68	S	P	1·2							55	15	70	X	11·5	1	X	3	14	LINE 11800N / 1800E	
69	S	P	1·2							45	15	60	X	9·80	2	X	X	X	1825E	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

P POWER AUGER J JACRO

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE No. 1/77 Sample numbers TS 23570 to TS 23592 Collected by D. Robertson / K. Wood Sheet no. 10

Area / Prospect GOURLAYS CREEK Date 14th March 1983

Map / Photo reference Analysed by ANALABS COOEE DPO no. 30437

A 02143

Sample No.	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Cu	Pb	Zn	Ag	Fe %	As	Mo	Sn	W	Grid ref LINE 11600N	Geological Observations
TS											Metal content ppm or %										
23570	S	P	1·2								50	10	60	X	11·0	2	X	X	X	1850E	
71	S	P	1·2								65	10	70	X	11·0	X	X	X	X	1875E	
72	S	P	1·2								60	10	60	X	11·5	3	X	X	X	1900E	
73	S	P	1·2								65	10	75	X	11·5	1	X	X	X	1925E	
74	S	P	1·2								45	15	50	X	8·70	1	X	X	X	1950E	
75	S	P	1·2								35	15	40	X	7·75	3	X	X	X	1975E	
76	S	P	1·2								20	10	20	X	3·15	X	X	X	X	2000E	
77	S	P	1·2								95	5	160	X	6·85	2	X	X	X	2025E	
78	S	P	1·2								35	5	45	X	1·80	2	X	X	X	2050E	
79	S	P	1·2								55	10	75	X	12·5	2	X	X	X	2075E	
80	S	P	1·2								25	10	35	X	4·25	1	X	X	X	2100E	
81	S	P	1·2								75	10	80	X	12·0	X	X	X	X	2125E	
82	S	P	1·2								65	15	505	X	5·40	3	X	X	X	2150E	
83	S	P	1·2								65	5	220	X	13·0	1	X	X	16	2175E	
84	S	P	1·2								60	15	95	X	6·80	X	X	X	X	2200E	
85	S	P	1·6								40	10	55	0·5	7·60	2	X	X	X	LINE 1000E 12300N	
86	S	P	1·6								30	10	60	X	2·25	X	X	X	X	12275N	
87	S	P	1·6								5	5	15	X	0·21	X	X	X	X	12250N	
88	S	P	1·6								40	15	80	X	1·45	X	X	24	X	12225N	
89	S	P	1·6								35	15	90	0·5	4·20	3	X	12	X	12200N	
90	S	P	1·6								45	15	80	X	8·35	X	X	X	X	12175N	
91	S	P	1·6								90	5	25	X	0·74	7	1·0	X	X	12150N	
92	S	P	1·2								9800	15	50	0·5	0·58	82	1·5	22	X	12125N	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length) P POWER AUGER J JACRO

**** Soil sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE No. 1/77 Sample numbers TS 23593 to TS 23600 Collected by D. Robertson / K. Wood Sheet no. 11 050

Area / Prospect GOWLAYS CREEK Date 14th March 1983

Map / Photo reference Analysed by ANALABS COOKE DPO no. 30437

A 02143

Sample No. TS	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Fe %	As	Mo	Sn	W	Grid ref LINE/1000E	Geological Observations
		o/c sample type ***																	
		s sample type ****																	
23593	S	P	1·2						15	X	10	0·5	0·18	12	0·5	X	X	12100N	
94	S	P	1·6						5	X	10	X	0·23	X	0·5	X	X	12075N	
95	S	P	1·6						5	X	15	X	0·21	X	1·0	X	X	12050N	
96	S	P	1·6						5	5	15	X	0·27	X	1·0	X	X	12025N	
97	S	P	1·6						5	X	15	X	0·39	X	1·5	X	X	12000N	
98	S	P	1·6						5	X	10	X	0·16	X	1·5	X	X	11975N	
99	S	P	1·6						35	5	15	X	0·25	X	1·0	X	X	11950N	
23600	S	P	1·6						20	10	10	X	0·21	X	0·5	X	X	11925N	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length) P POWER AUGER J JACRO

**** Soil sample type au er hole or pit depth m A B or C horizon

APPENDIX II

ROCK CHIP SAMPLE LEDGER SHEETS

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

052

Tenement name ROCKY CAPE No. 1/77 Sample numbers KR5513 – KR5535 Collected by R. T. PERRING Sheet no. 1

Area / Prospect GOURLAYS CREEK Date 26-2-83 to 11-3-83

Map / Photo reference Analysed by ANALABS - SAREE DPO no. 30436

A 02143

Sample No. KR	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type *** / s sample type ****	Fe %	Cu	Pb	Zn	Ag	Mo	Bi	Au	As	Sn	W	Grid ref	Geological Observations
										Metal content ppm											
5513	oc								12·5	10	5	95	X	7·0	10	X	13	8	X	COAST CARB	pyrite-hematite-magnetite B.I.F.
14	oc								0·89	1250	X	35	X	12·5	X	0·03	5	12	X	CANNILLE HARBOUR	pyrite bands in qtz biot horn (15m from granite)
15	f								2·15	60	3350	330	222	5·5	X	0·01	20	103	X	11235N 2175E	calcareous siltstone / calcareous gossan
16	oc								4·90	15	5	45	2·5	2·0	X	X	1	X	X	11212N 2100SE	pyritic qtz biot chlorite hornfels
17	oc								3·50	70	X	35	0·5	15·0	X	X	14	X	X	11200N 1950E	pyritic grey fg sil quartzite
18	oc								3·35	15	5	15	X	3·5	X	0·01	46	983	12	11200N 1810E	pyritic (40%) tour. chl. " quartzite
19	oc								3·35	15	X	15	X	29·5	X	X	17	X	X	12010N 1175E	diss pyrite in fg gy quartzite
20	f								15·5	115	X	25	X	23·5	X	X	6	8	16	11920N 1005E	magnetite bands in brown phyllite
21	oc								2·60	10	X	10	X	4·0	10	X	X	X	X	12000N 700E	magnetite veins in fg quartzite
22	oc								4·00	5	X	10	X	3·0	X	X	X	X	X	11995N 680E	magnetite veins in quartzite
23	oc								4·95	30	X	15	0·5	11·0	X	X	2	X	X	12018N 330E	3% pyrite in grey fg quartzite
24	oc								3·50	15	X	80	X	2·0	X	X	1	49	X	10800N 1620E	tremolite-diopside quartzite
25	oc								3·00	5	X	60	X	0·5	X	X	6	88	X	10840N 1590E	siliceous tremolite-diopside quartzite
26	oc								6·60	10	X	25	X	3·5	X	X	16	X	X	11000N 1620E	magnetite-pyrite (3%) fg grey quartzite
27	oc								1·25	15	X	15	X	12·5	10	X	4	72	X	11150N 1775E	qtz-tour veining in brown quartzite
28	f								0·95	4500	10	15	15·0	6·0	X	X	110	1410	X	11235N 2035E	50% pyrite in fg grey quartzite
29	oc								9·85	1700	10	40	3·0	11·5	X	X	61	930	15	11225N 2075E	50% pyrite in gy fg quartzite, tour veining
30	oc								4·25	135	10	10	1·0	6·5	X	X	290	X	X	11275N 2060E	banded pyrite (90%) – magnetite (10%) lens
31	oc								5·75	85	5	40	0·5	2·0	10	X	270	X	15	11275N 2060E	massive pyrite (2 metre thick lens)
32	oc								9·70	105	5	105	X	1·0	X	X	7	7	X	11470N 2100E	tremolitic calcareous siltstone
33	oc								51·5	150	5	70	X	1·0	X	0·03	210	30	28	11205N 2085E	massive magnetite
34	oc								7·05	100	X	30	X	5·0	10	X	17	146	14	11205N 2085E	qtz vein containing 3% magnetite
35	oc								52·5	205	5	90	X	2·0	X	X	24	52	28	11205N 2085E	gossanous massive magnetite

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** S[illegible] h m A B or C horizon

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name [redacted]CKY CAPE No. 1/77 Sample numbers KR553[redacted] to KR5550 Collected by R.J. PERRINE Sh[redacted] no. 2

Area / Prospect GOURLAYS CREEK KR6116 to KR6120 Date 11-3-83 to 23-3-83

Map / Photo reference Analysed by ANALABS COOEE DPO no 30436/30438

A 02143

Sample No. KR	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type *** / s sample type ****	Fe %	Cu	Pb	Zn	Ag	Mo	Bi	Au	As	Sn	W	Grid ref	Geological Observations
5536	oc								52·5	170	X	55	X	1·0	30	X	17	15	10	11205N 2085E	massive magnetite
37	oc								2·50	2000	2·33%	1·31%	421	5·0	X	X	190	161	X	11250N 2190E	grey siliceous hematitic (5%) quartzite
38	oc							X	39·5	95	40	195	X	6·0	X	X	20	24	X	11255N 2200E	banded quartz-hematite-magnetite rock
39	oc								1·65	515	45	90	X	2·5	X	X	5	45	X	11280N 2225E	native Cu and malachite ons laminated quartzite
40	oc								4·25	45	30	95	X	0·5	X	0·03	12	137	X	11300N 2265E	calcsilicate ?
41	oc								1·15	30	5	10	X	18·5	X	0·02	2	X	X	12225N 405E	semilithified well sorted mg Tertiary sand
42	oc								3·45	5	15	65	X	0·5	X	0·02	4	74	X	10250N 2460E	massive tremolite
43	oc								8·10	50	X	125	X	X	X	0·02	X	X	X	10900N 1835E	Tertiary volcanic
44	oc								1·15	10	X	80	X	7·5	60	0·03	3	11	28	9960N 2040E	greisen 10% feld 10% musc 80% qtz minor tour
45	f								31·5	170	X	60	X	6·0	X	0·03	X	4	X	10240N 2260E	quartzite, 70% of which replaced by magnetite, qv
46	oc								53·5	55	10	90	X	X	X	0·02	19	210	15	10275N 2275E	massive magnetite
47	oc								5·15	415	5	55	X	5·5	X	0·02	11	27	X	10275N 2275E	pyrite-magnetite quartz biotite hornfels/quartzite
48	f								31·0	45	X	80	X	6·5	10	0·04	19	X	X	10300N 2275E	banded quartz magnetite (80%) rock
49	oc								29·0	2050	5	100	X	6·0	X	0·03	3	X	X	10335N 2395E	banded quartz magnetite (70%) rock
50	oc								2·10	10	5	80	X	3·0	X	0·02	56	85	X	10450N 2435E	altered qtz mica schist (serpentine?)
6116	oc								46·0	5	5	1950	X	2·5	X	0·02	470	X	23	10250N 2480E	Tertiary ironstone
17	f								1·85	15	X	25	X	22·5	X	0·03	58	X	X	9975N 2260E	vein quartz from creek
18	f								0·85	10	X	5	X	15·5	X	0·07	2	X	X	9975N 2260E	vein quartz from creek
19	oc								17·5	330	X	50	X	6·0	X	0·03	12	X	13	9915N 2415E	limonitic calcareous siltstone
20	oc								7·20	175	X	45	X	6·5	X	0·02	13	62	10	9700N 2390E	banded magnetic green pyritic quartzite

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type ___ (state depth m A B or C horizon

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name [redacted]EY CAPE No. 1/77 Sample numbers KR 12737 to KR 13744 Collected by R.T. PERRING Sh[redacted]no. 3 054

Area / Prospect GOURLAYS CREEK. Date 12-5-83

Map / Photo reference ..... Analysed by A.A.S. BRISBANE DPO no. K669

A 02143

Sample No. KR	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	Carbon	Cu	Pb	Zn	Ag	Bi	As	Au	Sn	W	Mo	Grid ref	Geological Observations
		o/c sample type ***																		
		s sample type ****						ppb												
12739	oc								40	40	60	5	<5	130	20	10	<10		11275N 2060E	banded massive pyrite (85%) geothite (15%) rock
40	oc								80	35	50	4	<5	180	20	<5	<10		11275N 2060E	banded massive pyrite-magnetite rock
41	oc								20	20	10	<1	<5	45	<3	500	30		11200N 1810E	blue-black altered metaquartzite
42	cf								4000	30	25	16	<5	300	20	4100	30		11235N 2035E	50% pyrite in fg gy quartzite
43	oc								225	100	35	7	<5	430	75	15	20		11275N 2060E	massive pyrite
44	oc							Au	30	10	15	1	<5	65	3	395	10		11200N 1810E	pyritic quartzite
12789	oc							30	125	35	30	4	<5	<20		<5	<10	20	11300N 1940E	banded magnetite (90%) pyrite (10%) rock
90	oc							15	60	40	30	4	5	200		715	<10	30	11225N 2075E	pyritic (vein, 20%) quartzite

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type au er hole or pit depth m A B or C horizon

4510 05 S

APPENDIX III

DRAINAGE SAMPLE LEDGER SHEETS

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE No. 1/77 Sample numbers 10201 - 10223 Collected by R.J. PERRING Sh[illegible] no. 1

Area / Prospect GOURLAY'S CREEK Date MARCH 1983

Map / Photo reference Analysed by ANALABS - COOEE DPO no. 30431/30439

A 02143

Sample No. TD	Type ss * oc f s	ss channel ** fl	wi	al	co	ca	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Mo	[illegible]	Au	Sn	W	Fe	Grid ref	Geological Observations
10201	pc																	160	X		10800N 1570E	GOOD SITE
10202	pc																	150	X		11010N 1620E	GOOD SITE
10203	pc																	470	X		11160N 1790E	GOOD SITE
10204	pc																	410	X		11190N 1810E	MEDIUM SITE
10205	pc																	210	X		11190N 1840E	GOOD SITE
10206	pc																	1100	X		11190N 1910E	MEDIUM SITE
10207	pc																	340	X		11180N 1920E	GOOD SITE
10208	pc																	80	X		11220N 2080E	GOOD SITE
10209	pc																	160	X		11320N 2070E	50m downstream from Vinc Cu Prospect. GOOD SITE.
10210	pc																	25	X		11560N 2110E	MEDIUM/POOR SITE
10211	pc																	180	X		11560N 2090E	POOR TO MEDIUM SITE
10212	pc																	220	X		11220N 2080E	GOOD SITE. 10m below mass mag unit.
10213	pc																	160	X		11220N 2090E	GOOD SITE
10214	pc																	1550	X		11210N 2090E	GOOD SITE
10215	pc																	55	X		11240N 2240E	GOOD SITE
10216	pc																	122	X		12230N 400E	MEDIUM SITE
10217	pc																	40	X		12225N 610E	POOR SITE. FINE SAND
10218	pc																	2550	X		12110N 1000E	GOOD SITE
10219	pc																	123	X		11740N 1000E	GOOD SITE
10220	pc																	408	X		12180N 610E	MEDIUM SITE
10221	pc																	282	24		9950N 2040E	GOOD SITE
10222	pc																	632	20		10050N 2110E	GOOD SITE
10223	pc																	723	11		10060N 2110E	GOOD SITE

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2 SS - 80 mesh p.c. - panned concentrate

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

* sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

Tenement name ROCKY CAPE No. 1/77 Sample numbers 10224 - 10223 Collected by R.J. PERRING Sheet no. 2

Area / Prospect GOURLAYS CREEK 10251 - 10262 Date MARCH 1983

Map / Photo reference Analysed by ANALABS - COOEE DPO no. 30439/30431

A 02143

Sample No. TD	Type ss * oc f s	ss channel ** fl	wi	al	co	cs	pH	o/c sample type ***	s sample type ****	Carbon	Metal content ppm or % Cu	Pb	Zn	Ag	Fe %	As	Sn	W	Au	Grid ref	Geological Observations
10224	pc																69	X		10170N 2360E	GOOD SITE
10225	pc																852	X		10190N 2250E	GOOD SITE
10226	pc																953	X		10350N 2310E	GOOD SITE
10227	pc																132	X		10490N 2470E	GOOD SITE. TERT. GRAVELS
10228	pc																1740	X		10230N 2470E	GOOD SITE
10229	pc																3620	123	6·87	9970N 2260E	GOOD SITE
10230	pc																243	30	0·65	9920N 2430E	MEDIUM SITE
10231	pc																397	24		9740N 2450E	GOOD SITE
10232	pc																376	11		9670N 2290E	GOOD SITE
10233	pc																206	X		9690N 2160E	GOOD SITE
10234	pc																635	21		9830N 2040E	GOOD SITE
10251	SS										35	10	100	X	3·65	1	30	X		10800N 1570E	
10252	SS										25	X	50	0·5	2·10	1	15	X		11010N 1620E	
10253	SS										20	X	45	0·5	1·65	X	25	X		11160N 1790E	
10254	SS										15	X	55	X	2·15	2	30	X		11190N 1810E	
10255	SS										25	X	55	X	2·40	X	20	X		11190N 1840E	
10256	SS										15	X	30	0·5	9700	X	X	X		11190N 1910E	
10257	SS										35	X	95	X	4·30	1	40	X		11180N 1920E	
10258	SS										30	X	75	X	3·70	1	25	X		11220N 2080E	
10259	SS										45	X	90	X	4·45	1	45	X		11320N 2070E	
10260	SS										30	X	115	X	5·45	X	10	X		11560N 2110E	
10261	SS										25	X	115	X	3·40	1	170	X		11560N 2090E	
10262	SS										30	X	85	X	2·45	1	55	X		11220N 2080E	

* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2 SS - 80 mesh pc - panned concentrate

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** Soil sample type auger hole or pit depth m A, B or C horizon

C.R.A. EXPLORATION . GEOCHEMICAL SAMPLE LEDGER

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Tenement name ROCKY CAPE No. 1177 Sample numbers 10263 - 10284 Collected by R.J. PERRING Sheet no. 3

Area / Prospect GORLAY'S CREEK Date MARCH 1983

Map / Photo reference Analysed by ANALABS - COOEE DPO no 30431/30439

A 02143

Sample No.	Type	ss channel **						Carbon	Metal content ppm or %										Grid ref	Geological Observations
	ss * oc f s	fl	wi	al	co	ca	pH		Cu	Pb	Zn	Ag	Fe %	As	Sn	W	Au			
		o/c sample type ***																		
TD		s sample type ****																		
10263	ss								30	5	85	x	3·25	2	15	x			11220N 2090E	
10264	ss								25	x	60	x	1·55	1	55	x			11210N 2090E	
10265	ss								25	5	90	x	3·30	1	30	x			11290N 2240E	
10266	ss								5	x	35	x	6450	3	97	x			12230N 400E	
10267	ss								5	x	10	0·5	2700	1	6	x			12225N 610E	
10268	ss								15	x	100	x	1·30	x	164	x			12110N 1000E	
10269	ss								5	x	30	x	8700	1	12	x			11740N 1000E	
10270	ss								5	x	100	x	8650	x	149	x			12180N 610E	
10271	ss								20	x	55	x	2·50	1	23	x			9950N 2040E	
10272	ss								10	x	15	x	7700	x	10	x			10050N 2110E	
10273	ss								25	5	65	x	2·80	1	57	x			10060N 2110E	
10274	ss								35	x	85	x	5·60	5	8	x			10170N 2260E	
10275	ss								25	x	85	x	3·50	2	34	x			10170N 2250E	
10276	ss								20	5	100	x	1·70	2	61	x			10350N 2310E	
10277	ss								25	x	100	x	4·85	7	61	x			10490N 2470E	
10278	ss								35	5	85	x	5·60	6	15	x			10230N 2470E	
10279	ss								10	x	45	x	6550	1	x	x	x		9970N 2260E	
10280	ss								5	x	15	x	6850	x	x	x	x		9920N 2430E	
10281	ss								10	x	45	x	1·55	x	51	x			9740N 2450E	
10282	ss								10	x	30	x	9250	x	34	x			9670N 2290E	
10283	ss								5	x	25	x	8100	x	10	x			9690N 2160E	
10284	ss								5	x	15	x	4700	x	3	x			9830N 2040E	

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* Sample type ss = stream sediment oc = outcrop f = float s = soil

** Stream sed. sample description fl = flow m3/sec wi = width m al = alluvial co = colluvial ca = catchment km2 SS - 80 mesh pc - panned concentrate

*** Outcrop sample type gs = grab sample rc = rock chip (state interval & length) cs = channel sample (state length)

**** S

APPENDIX IV

GOURLAYS CREEK IP

by

J.D. SUMPTON

060

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD.

INTER-OFFICE MEMO

TO: R.R. LARGE

DATE: 6-7-83

FROM: J.D.H. SUMPTON

COPIES TO: R. Duffin
R. Perring

SUBJECT: GOURLAYS CREEK IP

All the IP data from the recently completed survey at Gourlays Creek is now to hand. A summary of the major anomalies and anomaly trends follows:

The electrical data set is dominated by three major features.

a. Sets of North-West/South-East trending anomalies labelled on the attached diagram as Trends A, B and C.

b. A zone of high chargeability centred around 11200N, 2000E and also evident on the "diagonal" line.

c. The effect of overlying tertiary basalts, particularly on apparent resistivity.

Trends A and B are coincident with a linear magnetic high, and therefore the source of these anomalies are in close juxtaposition to, or composite with the source of the magnetic anomalies.

The interpreted depth to top of source is also consistant between the magnetic intensity anomaly and chargeability, for example on line 11300N both the magnetic and chargeability anomalies imply a very shallow source, whilst on 11000N the anomalies are consistant with bodies buried at around 50m depth. On line 11300N (around 1950E) massive magnetite with upto 20 percent pyrite has been observed in outcrop, and it is very likely that this is the source of both the magnetic and chargeability anomalies on this line. Such a mixture of magnetite with pyrite could well be the source of the other anomalies which constitute these trends. The northernmost anomaly of trend A is under basalt, but the anomaly appears to have a sub basalt source.

Trend C is a series of well developed, deep sourced chargeability anomalies. Robert Perring has observed what he considers to be a calc-silicate horizon coincident with the surface projection of the interpreted source of this anomaly on line 11300N. This is of course most encouraging as it implies that this horizon carries sulphides at depth. These anomalies lie on the eastern flank of a strong linear magnetic anomaly and themselves are coincident with a minor "shoulder" on this anomaly which implies the sulphide causing the anomaly is likely to be pyrrhotite. Magnetic anomalies due to pyrrhotite would of course be of much lower intensity than those due to adjacent magnetite.

The broad chargeability zone represented on line 11200N, from about 1900E to 2150E and also present on the diagonal line is likely to be an area of disseminated to massive sulphides, and interpretation which is supported by disseminated pyrite seen in outcrop in this area. An area of more intense chargeability with a related low resistivity zone is evident at around 11200N, 1975E. This area is particularly significant as tin has been found associated with these sulphides.

The tertiary basalt shows a resistivity response characterised by a largely homogeneous or layered pattern of moderate resistivity. Chargeabilities are low. Although this might imply poor depth penetration within the basalt, I consider that strong deep sourced anomalies which constitute extensions of trends A and C can be resolved within the basalt. There are however some chargeability anomalies which lie along the basalt contact, and are possibly related to it. Possibly in this catagory is the broad chargeable zone on line 11400N, where the evidence suggests that the basalt contact sub parallels this line to the north, however if this is not the case then this zone could be another broad area of disseminated sulphide similiar to that discussed earlier. The basalt contact marked on the interpretation diagram comes entirely from resistivity evidence, however for the most part it is in good agreement with mapped geology.

In general the area has abundant sulphides (and magnetite) in a variety of forms, all contributing to the complexity of the electrical picture. What I have said above and have drawn on the diagram is an oversimplificiation, however it may serve as a guide until improved geological (drilling) control proves its inaccuracy.

Regards,

John Sumpton

JOHN SUMPTON
Geophysicist.

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD.

INTER-OFFICE MEMO

TO: R.R.LARGE DATE: 15-8-83

FROM: J. SUMPTON COPIES TO: R.Perring

SUBJECT: GOURLAYS CREEK TOTAL MAGNETIC INTENSITY - "CENTRAL WINDOW'

The total magnetic intensity contour map of this area of the Gourlays Creek prospect is dominated by the response due to two parallel strongly magnetic zones. To judge from their magnetic character and from observations of outcrop, each of these zones has as its source relatively narrow bands of material containing abundant magnetite. Both these magnetic 'horizons' strike approximately north west, thus implying a more or less stratabound source.

The profiles reveal magnetic intensities in excess of 70000nT (background is around 62000nT) reflecting the magnetite rich composition and shallow depths of the magnetic sources. Although the erratic and near surface nature of the magnetic sources precludes reliable quantitative modelling of these profiles, both magnetic zones appear to be of the order of 25m to 50m wide and to vary in depth to top from outcropping to about 50m.

The total magnetic intensity profile from line 10800N, the southermost line, varies from the above described pattern as it cannot be easily resolved into two parallel zones and the magnetic anomaly is of higher intensity than those to the north. A considerably greater thickness of magnetic material is implied, possibly to the extent the two magnetic horizons have merged.

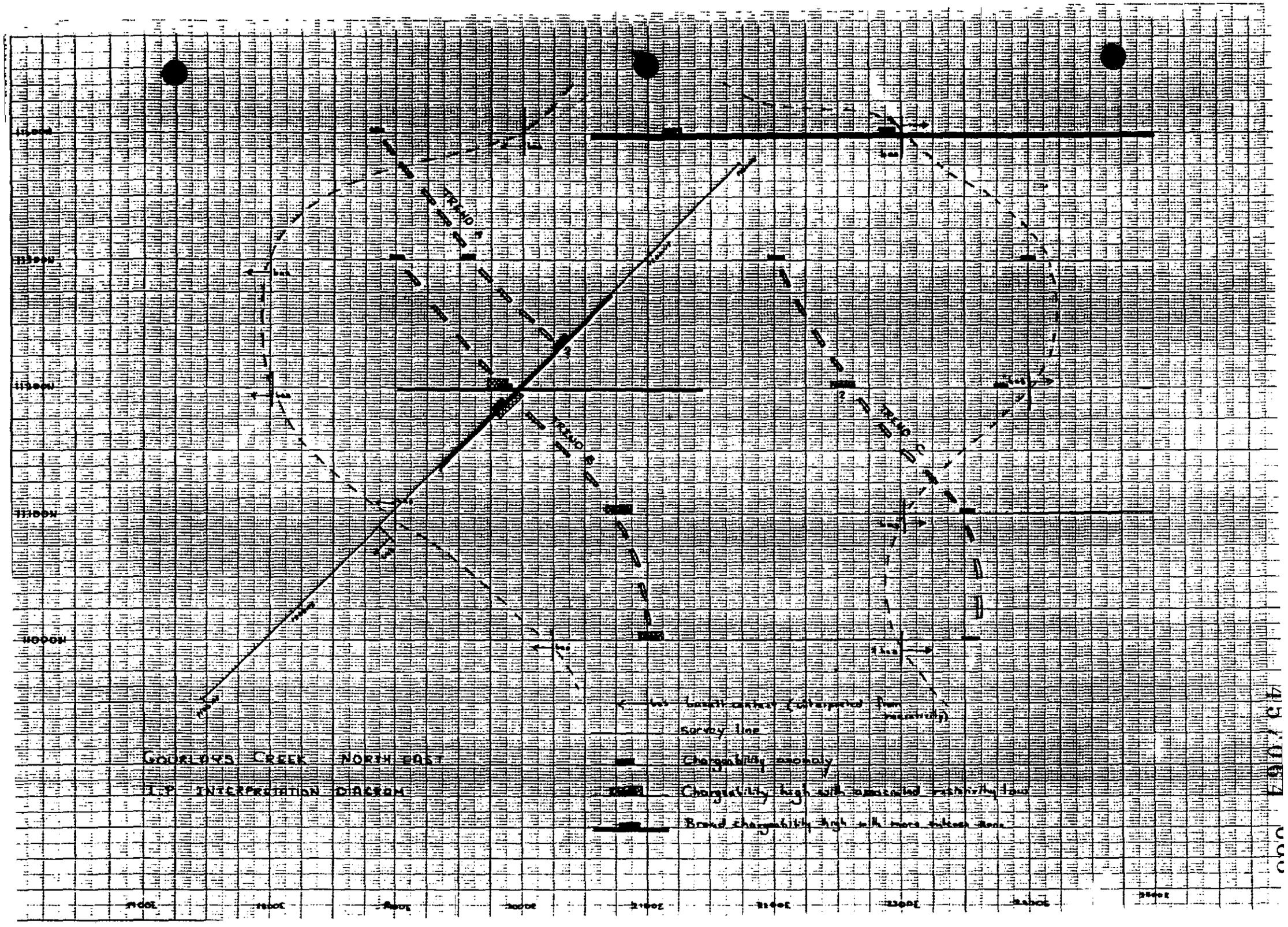
The Tertiary Basalt in the area of the central window is (unusually) non magnetic, and has no detectable affect on the magnetic profiles.

As these magnetic anomalies are attributable to near surface magnetite, they are intense and it would be difficult to resolve any much weaker response due to a pyrrhotite source. This is likely to be the case even if high concentrations of pyrrhotite are present.

Regards,

John Sumpton.

JOHN SUMPTON.
Geophysicist.



GOURLEYS CREEK NORTH EAST

I.P. INTERPRETATION DIAGRAM

Fig. 24

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Appendix V

457065

GEOPEKO
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INTER-OFFICE MEMO

TO: R.R.LARGE DATE: 14-7-83

FROM: R.J. PERRING COPIES TO:

SUBJECT: PROPOSED DRILL HOLE ON THE GOURLAYS CREEK PROSPECT

Co ordinates:	On the diagonal line at 1500NE
Azimuth:	238°M
Dip:	-50°
Depth:	200 metres

This drill hole has been designed to give maximum information on the styles of pyrite, pyrrhotite and magnetite mineralization occuring within the 'central window' at Gourlays Creek. The hole will help define a relationship between the style or type of mineralization and the occurrence of tin and give information to aid a more accurate interpretation of IP and magnetic data.

The hole has been sited to give a section through part of the Gourlays Creek sequence which is known, from outcrop, to host massive pyrite mineralization (2 metres thick), massive magnetite mineralization (1 metre thick), zones of disseminated pyrite and possibly pyrrhotite mineralization, and zones of vein style pyrite mineralization which have assayed up to 0.41%Sn. The hole will also drill into a 20000nT magnetic anomaly and across and IP chargeable trend with associated low resistivities.

The hole is not designed to test our strongest or best looking IP anomaly, or strongest magnetic anomaly. These occur on other lines under areas of little or no outcrop where we have no geological control on siting drill holes without first 'calibrating' the data.

Three holes have been budgeted to be completed within the next six months on the Gourlays Creek Prospect. It is important to drill this hole as soon as possible to give time to thoroughly investigate the core and plan the subsequent work programme.

Regards,

R.PERRING
Geologist.

APPENDIX VI

REPORTS FROM THE CENTRAL MINERALOGICAL SERVICES

Central Mineralogical Services

39 Beulah Road
Norwood, S.A. 5067
Telephone 42 5659

Mr. B. Perring
Geologist
Geopeko Ltd.
P.O. Box 598
DEVONPORT / TAS. 7310

2nd June, 1983

REPORT CMS 83/5/30

YOUR REFERENCE:	Order No. TA 1304 (C.R.A. Exploration Pty. Ltd.)
DATE RECEIVED:	23rd May, 1983
SAMPLE NOS.:	3 Samples
SUBMITTED BY:	B. Perring
WORK REQUESTED:	Petrology

H.W. Fander, M. Sc.

Copy & Invoice to:
The Chief Geologist
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
ROSNY PARK / TAS. 7018

REPORT CMS 83/5/30

Three rock samples were received for petrological and mineralogical examination; thin-sections were prepared of all samples, and polished sections were also prepared of 12739 and 12744, to study the sulphides; no magnetite was detected.

12739 (T.S., P.S. 45969) GOURLAYS CREEK 11275N 2060E
This is a banded sulphide rock, consisting dominantly of alternating bands of pyrite and goethite; the goethite contains minor fine quartz and clay minerals, and traces of ultrafine carbonate.

In polished section, it is seen that the pyrite bands consist of granular to subhedral crystals with scattered small pyrrhotite and rare chalcopyrite inclusions. The goethite has evidently formed from pyrite and contains small pyrite remnants and boxworks. There are no textures suggesting syngenetic formation, and the presence of pyrrhotite favours an epigenetic hydrothermal mode of formation. The banding is thus misleading, since it is an oxidation phenomenon probably governed by subparallel fractures, rather than a sedimentary feature.

12741 (T.S. 45970) GOURLAYS CREEK 11200N 1810E
This is a tourmaline-bearing metaquartzite, with scattered minor pyrite.

The rock consists largely of coarse interlocking quartz patches containing fine tourmaline needles, as subparallel individual crystals and swarms and matted aggregates; there are conspicuous small leucoxene/rutile pseudomorphs after sphene, and occasional patches of fresh and leached siderite; some unaltered sphene also occurs, and there are sporadic epidote crystals. A few small rounded grains of zircon are embedded in the quartz and indicate a sedimentary origin for the rock.

The pyrite crystals contain inclusions of tourmaline needles and are thus clearly of younger formation; shreds of muscovite/sericite occur in association with the pyrite, representing a younger event in which these minerals were introduced into an already metamorphosed sediment.

12744 (T.S., P.S. 45971) GOURLAYS CREEK 11200N 1810E
This is a tourmaline-metaquartzite with pyrite; it is of similar composition to 12741, though its fabric is different.

Much of the rock consists of fine streaky interlocking quartz with subparallel shreds of pale chlorite and sericite and small tourmaline needles; semi-opaque leucoxenic rutile patches are fairly common. Parts of the rock are composed of much coarser quartz with embedded swarms of matted tourmaline needles.

Pyrite crystals occur haphazardly and contain inclusions of tourmaline; thus, they have the same paragenesis as the pyrite in 12741. Examination of a polished section showed the pyrite to be featureless and devoid of other sulphides; no framboidal or other syngenetic features are present, and the pyrite in its present form is epigenetic and hydrothermal.

H.W. Fander, M. Sc.

Central Mineralogical Services

39 Beulah Road
Norwood, S.A. 5067
Telephone 42 5659

Mr. R. Perring
Geologist
Geopeko Ltd.
P.O. Box 598
DEVONPORT / TAS. 7310

6th June, 1983

REPORT CMS 83/5/35

YOUR REFERENCE:	Order No. TA 1318 C.R.A. Exploration Pty. Ltd.
DATE RECEIVED:	25th May, 1983
SAMPLE NOS.:	KR 12742
SUBMITTED BY:	R. Perring
WORK REQUESTED:	Petrology

H.W. Fander, M. Sc.

Copy & Invoice to:
Administration Officer
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
ROSNY PARK / TAS. 7018

CENTRAL MINERALOGICAL SERVICES PTY. LTD.

Date 6th June, 1983

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

IDENTIFICATION
KR 12742
Mineralised Metaquartzite

Job No. CMS 83/5/35 Date Received: 25.5.1983

Reference CRAE Order No. TA 1318

Sample No. KR 12742

Nature of Sample: Hand Specimen

DESCRIPTION **SECTION No.** 45982

a. Hand Specimen:

Grey, quartzose, pyritic rock.

b. Microscopic:

This is a metaquartzite which was pyritised, with the introduction of ultrafine cassiterite.

The host rock is featureless, consisting of small interlocking quartz grains devoid of relict textures, but full of minute inclusions of opaques and ?rutile; the quartz is stressed and the rock has a preferred fabric. The characteristics suggest that the rock is a recrystallized, stressed chert. A few poorly developed apatite crystals are scattered through the rock and were perhaps primary (i.e. a weakly phosphatic chert).

Sulphides were introduced after metamorphism, and are replacive; they are accompanied by small irregular aggregates of ultrafine cassiterite crystals, mostly < 5 μ in size, but occasionally forming needles up to 6x15 μ in size. The aggregates are intergrown with the pyrite.

The dominant sulphide is pyrite, as granular to euhedral crystals, but small irregular patches of chalcocite are present throughout, and there are traces of chalcopyrite, covellite and digenite; the secondary Cu sulphides werepresumably derived from chalcopyrite introduced with pyrite.

H.W. Fander, M. Sc.

GOURLAYS CREEK

11235N
2035E

Sn 4100ppm
Cu 4000ppm

457071

Central Mineralogical Services

39 Beulah Road
Norwood, S.A. 5067
Telephone 42 5659

Mr. R. Perring
Geologist
Geopeko Ltd.
P.O. Box 598
DEVONPORT / TAS. 7310

28th June, 1983

REPORT CMS 83/6/29

YOUR REFERENCE:	D.P.O. No. 30450
DATE RECEIVED:	21st June, 1983
SAMPLE NOS.:	KR 12778, KR 12779
SUBMITTED BY:	R. Perring
WORK REQUESTED:	Petrology

H.W. Fander, M. Sc.

Copy & Invoice to:
Administration Officer
C.R.A. Exploration Pty. Ltd.
P.O. Box 138
ROSNY PARK / TAS. 7018

02

CENTRAL MINERALOGICAL SERVICES PTY. LTD.

Date 28th June, 1983

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

IDENTIFICATION
KR 12778, KR 12779
KR 12778 - Magnetite-Metaquartzite KR 12779 - Ironstone (?Skarn)

Job No. CMS 83/6/29 Date Received: 21.6.1983

Reference D.P.O. No. 30450

Sample No. KR 12778, KR 12779

Nature of Sample: Hand Specimens

DESCRIPTION **SECTION No.** 46320, 46321

a. Hand Specimen:

KR 12778 - Banded quartz-ironstone, strongly magnetic.

KR 12779 - Banded Hematite ironstone, very weakly magnetic.

b. Microscopic:

KR 12778 (T.S. 46320) 11270N 2210E

This rock is a magnetite-metaquartzite of simple composition; the banding is believed to reflect primary compositional layering, and the rock is regarded as a metajaspilite, i.e. a metamorphosed banded iron formation of essentially chemical sedimentary origin. There is no evidence of calc-silicates in fresh or altered form.

The rock consists of bands of fine, streaky, stressed metamorphic quartz, alternating with bands of massive, relatively coarse magnetite which is fractured and veined with goethite. There are very occasional small aggregates of iron-stained talc (probably the Fe variety, minnesotaite), and there are crosscutting goethite veins/shears. The fabric of the rock is thoroughly metamorphic and appears to be due to dynamic metamorphism. There is little, if any, evidence of thermal effects due to a large intrusive.

KR 12779 (T.S. 46321) KINGSWOOD CREEK IRONSTONE

This massive ironstone was originally composed largely of magnetite, which is now thoroughly martitised.

The present rock consists of hematite pseudomorphs after euhedral to granular magnetite, more or less closely packed, with banded fabric delineated by layers of goethite and by rows of voids. Earthy goethite is present throughout the rock and is believed to represent altered silicate minerals, possibly calc silicates. The inference is that the rock may have been a magnetite-rich skarn containing Fe-Ca silicates, but this interpretation is tentative and speculative; if correct, it suggests that this rock differed in lithology from KR 12778, as well as in the style of the metamorphism. However, a chemically formed B.I.F., consisting of iron oxides and SiO_2, could easily pass into an iron oxide-carbonate facies, which would result in a skarn.

H.W. Fander, M. Sc.

457073

Legend:

outcrop	bedding trend
geological contact	fault
unconformity	cleavage
plunge of minor syncline	vehicle track
plunge of minor anticline	building
bedding strike and dip	drill collar and number

Reference:

- Tertiary
  - Tb — basalt
  - Ts — sand, gravel
- Ordovician — O — conglomerates, sandstones siltstones, carbonates
- Cambrian or Late Proterozoic — Єuo — Oonah Quartzites — quartzites black shales, carbonates

Intrusive Rocks

- Devonian — Dg — Heemskirk Granite

GEOPEKO

84-2097.

A DIVISION OF PEKO-WALLSEND OPERATIONS LTD.

Scale 1:10000

100 0 100 200 300 400 500 600 700 800 900 1000 metres

DRAWING NO.	1
SHEET NO.	RG-41

Interpreted By:	R.J.P.
Drawn By:	R.Tog
Date:	July 83
Approved By:	
Revision By:	Date:
Revision By:	Date:
Revision By:	Date:

E.L. 1/77 ROCKY CAPE, TASMANIA

GRANVILLE AREA

GRID & GEOLOGY PLAN

1:10 000

001

FILE NO: TS1/77-GCNW-1

Note:
Coastal Section Projected 250m East

Young Direction

Sand dune

Tertiary gravel

SCALE 1:2 500

457074 BI

act	actinolite
bas	basalt
bd	band
bdd	bedded
biot	biotite
bk	black
bl	blue
brec	breccia
bn	brown
calc	calcareous
cpy	chalcopyrite
cht	chert
cl	clay
cg	coarse grained
com	common
cong.	conglomerate
cren	crenulated
diss	disseminated
dk	dark
dol	dolomite
fs	feldspar, feldspathic
fe	ferruginous
fib	fibrous
fg	fine grained.
gl	galena
gran	granite
gy	grey
gn	green
hb	hornblende
hem	hematite, hematitic.
horn	hornfels
ind	indurated
intb	interbedded
lam	laminated
lst	limestone
magt	magnetite
mal	malachite
mass	massive
mtx	matrix
mg	medium grained
mic	micaceous
mot	mottled
pbly	pebbly
plag	plagioclase
py	pyrite
po	pyrrhotite
qtz	quartz
qv	quartz vein.
qtzt	quartzite
sd	sand
sstn	sandstone
seq	sequence
sh	shale
sid	siderite
sil	siliceous
silt	siltstone
sph	sphalerite
tour	tourmaline
trem	tremolite, tremolitic
v	very
var	variable
wd	weathered
wh	white
y	yellow

- outcrop
- geological contact
- unconformity
- anticline
- syncline
- plunge of minor anticline
- plunge of minor syncline
- plunge of fold axis
- bedding, strike and dip
- jointing, strike and dip
- float
- Fault
- cleavage, strike and dip
- cleavage / crenulation cleavage
- lineation, direction and plunge
- creek
- vehicle tracks
- building
- bas auger hole cuttings
- TD1201 drainage sample
- KR 5542 rock chip sample

SHEET INDEX
Gourlays Creek
NW | NE
SW | SE

TN GN MN
6° 6·4°

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A DIVISION OF PEKO-WALLSEND OPERATIONS LTD. — DEVONPORT

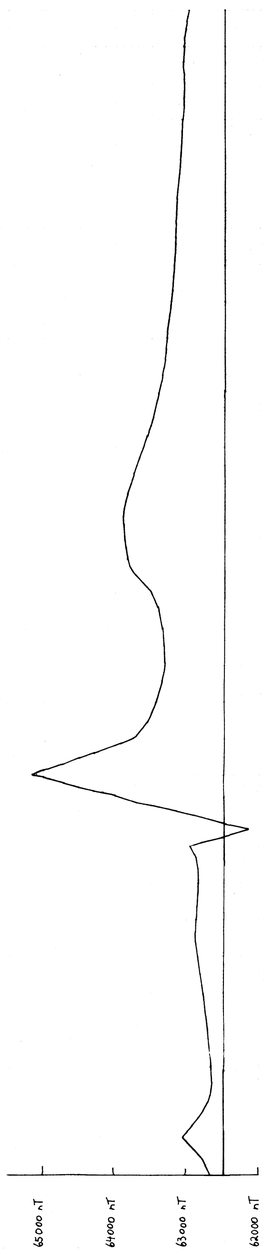
E.L. 1/77 ROCKY CAPE TASMANIA
Gourlays Creek-NW
Geological Plan
002

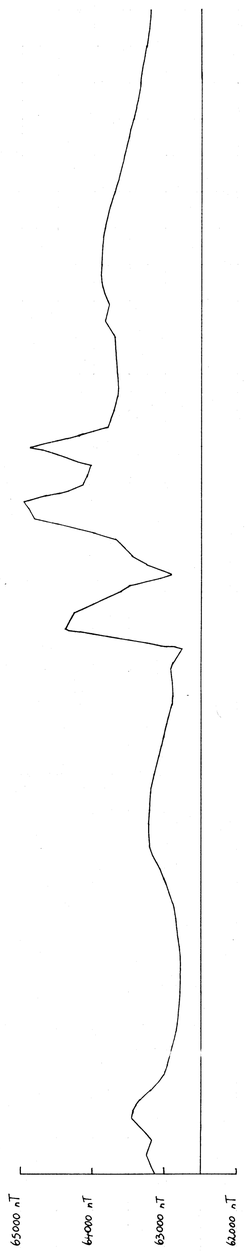
CHECKED:	SCALE: 1:2 500	DATE: July 83	REVISED:	GEO: R.J.P	DRAWN: R.Tog	SHEET: GCNW-1 PLAN: 2

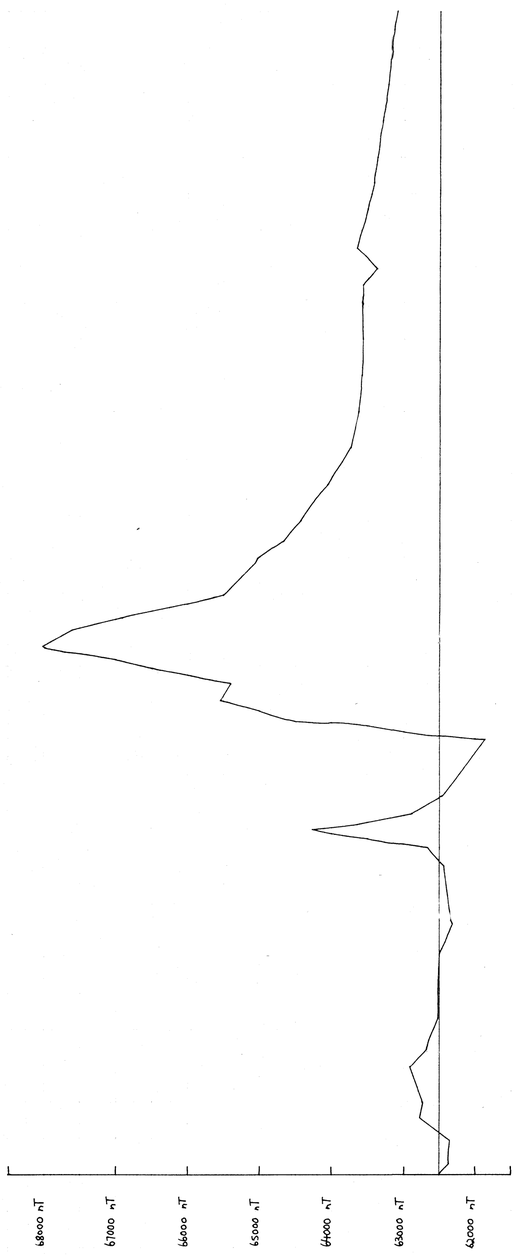
FILE NO: TS 1/77 GCNW-2

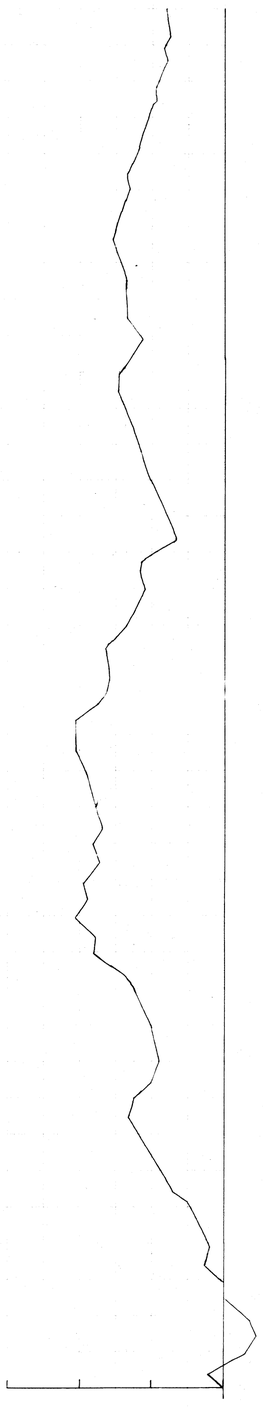
100 W | 00 E | 100 E | 200 E | 300 E | 400 E | 500 E | 600 E | 700 E | 800 E | 900 E | 1000 E | 1100 E | 1200 E | 1300 E | 1400 E

12500 N
12400 N
12300 N
12200 N
12100 N
12000 N
11900 N
11800 N
11700 N
11600 N
11500 N
11400 N
11300 N
11200 N
11100 N
11000 N
10900 N
10800 N









457075

84-2097

5 cm

GEOPEKO

A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

25 0 25 50 75 100 125 metres | Scale : 1 : 2 500 | Sheet No : GCNW-2

E.L. 1/77 ROCKY CAPE, TASMANIA

GOURLAY'S CREEK - N.W. 003

TOTAL MAGNETIC INTENSITY LINE PROFILES | PLAN 3.

DATE : MAR 83
GEOL : R.J.P.
DRAWN : R.J.W.
CHECKED :

FILE NO: TS 1177-GCNW-3

00E 100E 200E 300E 400E 500E 600E 700E 800E 900E 1000E 1100E 336000E A.M.G. 1200E 1300E 1400E

12800N 12700N 12600N 12500N 12400N 12300N 12200N 12100N 12000N 11900N 11800N 11700N 11600N 11500N 11400N 11300N 11200N 11100N 11000N 10900N 10800N

23066 23067 23068 23069 23070 23071 23072 23073 23074 23075 23076 23077 23078 23079 23080 23081 23082 23083 23084 23085 23086 23087 23088 23089 23004 23003 23002 23001

23065 23064 23063 23062 23061 23060 23059 23058 23057 23056 23055 23054 23053 23052 23051 23050 23049 20764 23048 20765 23047 20766 23046 20767 23045 20768 23044 20769 23043 20770 23042 20771 23041 20772 23040 20773 23039 20774 23038 20775 23037 20776 18587 23036 20777 23035 20778 23034 20779 23033 20780

23585 23586 23587 23588 23589 23590 23591 23592 23593 23594 23595 23596 23597 23598 23599 23600 20751 20752 20753 20754 20755 20756 20757 20758 20759 20760 20761 20762 20763

5 372 000N A.M.G.

5 372 000N A.M.G.

457076

84-2097

o Grid position
B Mole auger hole
● Power Auger (Jacro)
S Surface

23010 — sample no.
☆ — sample position

5 cm

SHEET INDEX

Gourlays Creek

NW	NE
SW	SE

TN GN MN 6° 64°

DATE : AUG 83
GEOL : R.J.P
DRAWN : M. vd S.
CHECKED :

GEOPEKO

A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

metres | Scale : 1 2500 | Plan No : 4.

GCNW-3

E.L. 1/77 ROCKY CAPE TASMANIA

GOURLAY'S CREEK - NW

Soil Sample Location Plan 004

FILE NO: TS 1/77 - GCNW-4

	0 0E	100E	200E	300E	400E	500E	600E	700E	800E	900E	1000E	1100E	336000E A.M.G. 1200E	1300E	1400E	
12800N																12800N
12700N																12700N
12600N																12600N
12500N																12500N
12400N			<5				<5									12400N
12300N			5 <5 <5 10				50 50 10 <5						x			12300N
12200N			5 <5 <5 <5				<5 <5 <5 <5						x x 24 12			12200N
12100N			<5 <5 <5 <5				5 <5 <5 <5						x x 22 x			12100N
12000N			<5 <5 10 N.R.				<5 <5 <5 <5 x						x x x x			12000N
11900N			<5 N.R. <5 <5				<5 x <5 x <5 77 <5 85						x x x x			11900N
11800N			<5 <5				<5 x <5 x <5 3 <5 73						x x x x			11800N
11700N			<5 <5				<5 x <5 x <5 x <5 x						x 9 x x			11700N
11600N			<5 <5 <5 <5				5 x 10 x 10 x <10 x						11 x x 11			11600N
11500N																11500N
11400N																11400N
11300N																11300N
11200N 5372000N A.M.G.															5372000N A.M.G.	11200N
11100N																11100N
11000N																11000N
10900N																10900N
10800N	0 0E	100E	200E	300E	400E	500E	600E	700E	800E	900E	1000E	1100E	1200E	1300E	336000E A.M.G.	10800N

457077

84-2097

o Grid position
B Mate auger hole
• Power Auger (Jacro)
B.L. Base Line

10 — Sn sample, ppm
x — Sample position

SHEET INDEX
Gourlays Creek

NW	NE
SW	SE

5 cm

TN GN MN
6°
64°

DATE : AUG 83
GEOL : R.J.P
DRAWN : M. v.d.S.
CHECKED :

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

metres | Scale : 1:2500 | Plan No : 5.

E.L. 1/77 ROCKY CAPE TASMANIA GCNW-4

GOURLAY'S CREEK - NW

Sr: ppm - C horizon soil geochemistry 005

FILE NO: TS 1/77-GCNE-1

1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

337 000E A.M.G.

12 800N
12 700N
12 600N
12 500N
12 400N
12 300N
12 200N
12 100N
12 000N
11 900N
11 800N
11 700N
11 600N
11 500N
11 400N
11 300N
11 200N
11 100N
11 000N
10 900N
10 800N

5 372 000N A.M.G.

bas.
bas. KR 12672
Tertiary sand
on to open pastback
Vincents
Tertiary sand
S1 (So?) 85° lam. mic. calc. silt
TD 10211
TD 10210
lam. mic. silt
lam. silt
KR 5532 trem. carb.
Tertiary sand
Vincents Prospect
bd. magt. py. qtz rock cpy in qv.
fg gy-gn. qtzt
basaltic soil
Access
Road
PROPOSED DDH B
TD 10215
fg gy qtzt
bn fg qtzt
gn qtzt
py. sstn
calc. silt KR 5540
fg gy qtzt
sil. fg gy qtzt
bn fg qtzt
bdd. qtz trem rock
lam. seq fg gy qtzt/bn mica silt (malachite) KR 5539
qtz magt rock
bn. mic. phyllite/qtzt
fg gy-gn lam qtzt
mass magt KR 5538
hem qtzt
calc. Siltstone KR 5537
mg gy-gn qtzt
mg gy-gn qtzt
bn. mic. silt
fg gy qtzt
fg gy-bn qtzt
TD 10219
fg lam qtzt
lam. mic. chl qtzt
gn feld qtzt
KR 12678 seq gn qtzt/phyllite
2m thick lens bdd mass py
KR 5530-31
mic. bn. silt
py gy qtzt
Sil fg gy qtzt
py hem qtzt
TD 10218
TD 10213
mic. schist
KR 5533-36 gy py
760ppm Sn
mic qtzt
mass magt
TD 10216
PROPOSED DDH A
sg mass magt
fg gy py (2% diss) qtzt
qv.
mass. magt (20% py)
gy py (2% diss) qtzt
chl mic. schist
chl mic. schist
KR 2674 fg gy py chl qtzt
KR 5518 up to 40% py
983 ppm Sn
TD 10204
TD 10205
TD 10206
TD 10208
TD 10207
TD 10217
gy py (2% diss) qtzt
gy py (3% diss) qtzt
gy sil qtzt (40% py) 4100ppm Sn
fg bn chl mic. sst
fg bn qtzt
gy-gn qtzt qtz-py veins KR 5517
cren. mic. schist
mic. qtzt
KR 5527 mic. silt/qtzt
fg gy-gn qtzt
fg gy qtzt
fg gy qtzt
fg gy py (5% diss) qtzt (magnetic)
sequence possibly overturned
mic. qtzt
fg qtzt/mic schist
fg wh qtzt
fg qtzt/chert
qtz biot horn
: qtz biot horn
biot trem horn
fg gy qtzt
trem mic schist
fg gy-gn mass qtzt
bdd seq qtzt/mic schist
qtz trem diopsidehorn
fg gy qtz mic schist
KR 12670 mic calc qtzt
blk sh
fg wh (trem) qtzt
TD 10202
qtz magt schist
Si. qtz. chl rock
qtz mic schist
lam/bdd qtzt/schist
Tert volcanics
fg gy-gn mic qtzt
lam gn mic qtzt
cren qtz mic schist
KR 12671 bn phyllite
banded gy-gn mic qtzt
fg gy-gn qtzt
337 000E A.M.G.
20cm Line

50 0 50 100 150 200 250 300 350 metres

SCALE 1 : 2 500

5 cm

457078 BI

84-2097

act	actinolite	cren	crenulated	intb	interbedded	qtzt	quartzite
bas	basalt	diss	disseminated	lam	laminated	sd	sand
bd	band	dk	dark	lst	limestone	sstn	sandstone
bdd	bedded	dol	dolomite	magt	magnetite	seq	sequence
biot	biotite	fs	feldspar,feldspathic	mal	malachite	sh	shale
bk	black	fe	ferruginous	mass	massive	sid	siderite
bl	blue	fib	fibrous	mtx	matrix	sil	siliceous
brec	breccia	fg	fine grained.	mg	medium grained	silt	siltstone
bn	brown	gl	galena	mic	micaceous	sph	sphalerite
calc	calcareous	gran	granite	mot	mottled	tour	tourmaline
cpy	chalcopyrite	gy	grey	pbly	pebbly	trem	tremolite,tremolitic
cht	chert	gn	green	plag	plagioclase	v	very
cl	clay	hb	hornblende	py	pyrite	var	variable
cg	coarse grained	hem	hematite,hematitic.	po	pyrrhotite	wd	weathered
com	common	horn	hornfels	qtz	quartz	wh	white
cong	conglomerate	ind	indurated	qv	quartz vein.	y	yellow

qtzt outcrop
geological contact
unconformity
anticline
syncline
plunge of minor anticline
plunge of minor syncline
plunge of fold axis
20° bedding, strike and dip
80° jointing, strike and dip

float
F Fault
60 cleavage, strike and dip
70 sn / 55 sn+1 cleavage crenulation cleavage
50° lineation, direction and plunge
creek
vehicle tracks
building
•bas auger hole cuttings
• TD1201 drainage sample
• KR 5542 rock chip sample

SHEET INDEX
Gourlays Creek
NW NE SW SE

TN GN MN
6° 6·4°

CHECKED:

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD. — DEVONPORT

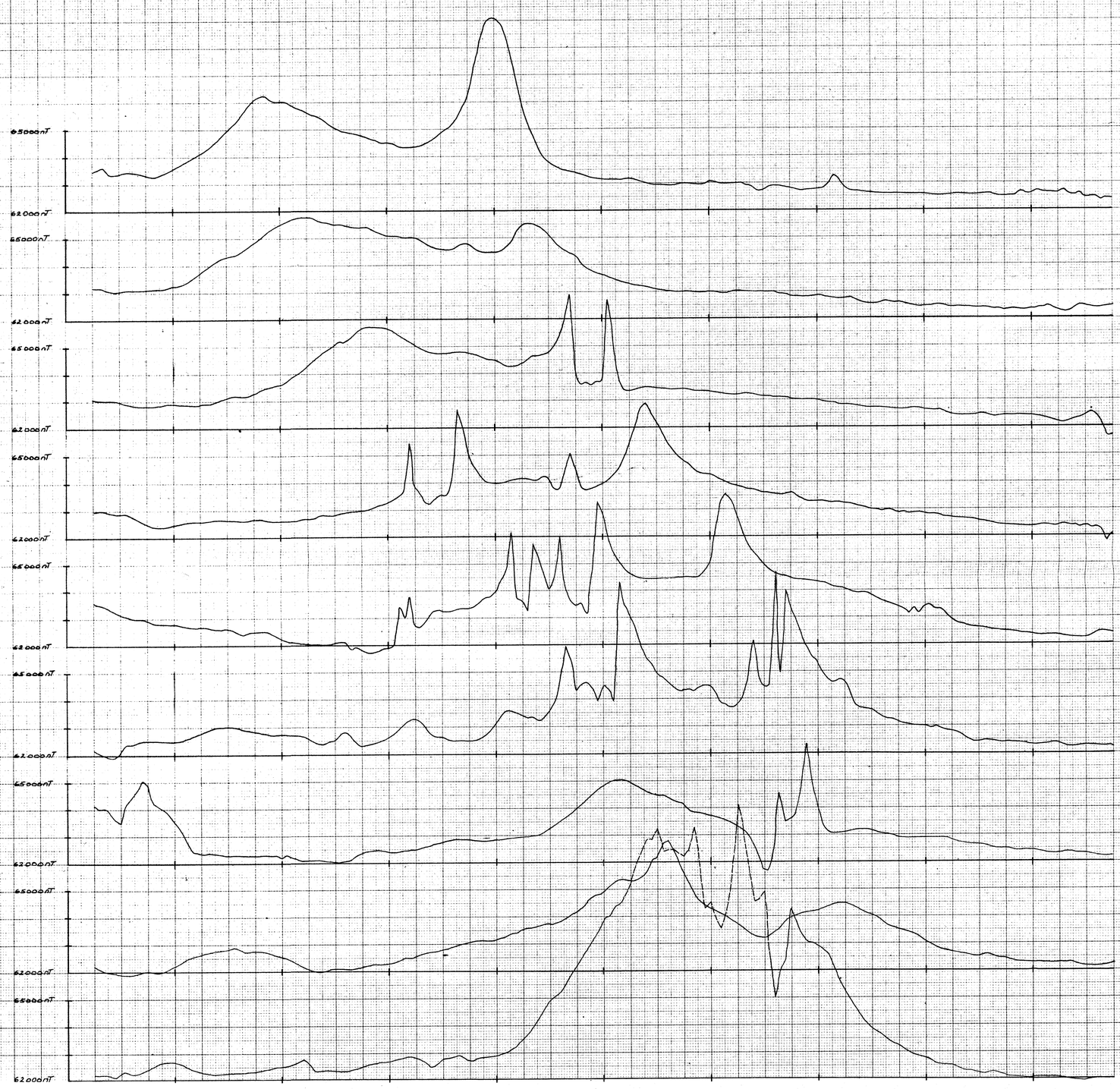
E.L. 1/77 ROCKY CAPE TASMANIA

Gourlays Creek-NE
Geological Plan

006

SCALE:	DATE:	REVISED:	GEO:	DRAWN:	SHEET: GCNE-1
	1 : 2500		R.J.P.	R.Fag	PLAN: 6

FILE NO: TS 1/77-GCNE-2



Note: Vertical Scale : 1cm = 1000nT
Instrument : G 816
Observer : T. Coff

5 cm

457079
84-2097.

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

25 0 25 50 75 100 175 metres | Scale : 1:2500 | Plan No : 7

GCNE-2.

E.L. 1/77 ROCKY CAPE, TASMANIA

GOURLAYS CREEK North East 007

PROFILES OF TOTAL MAGNETIC INTENSITY

LIB BOOK NO. :
DATE : 1 June 83
GEOL : J.S.
DRAWN : R. Tag
CHECKED :

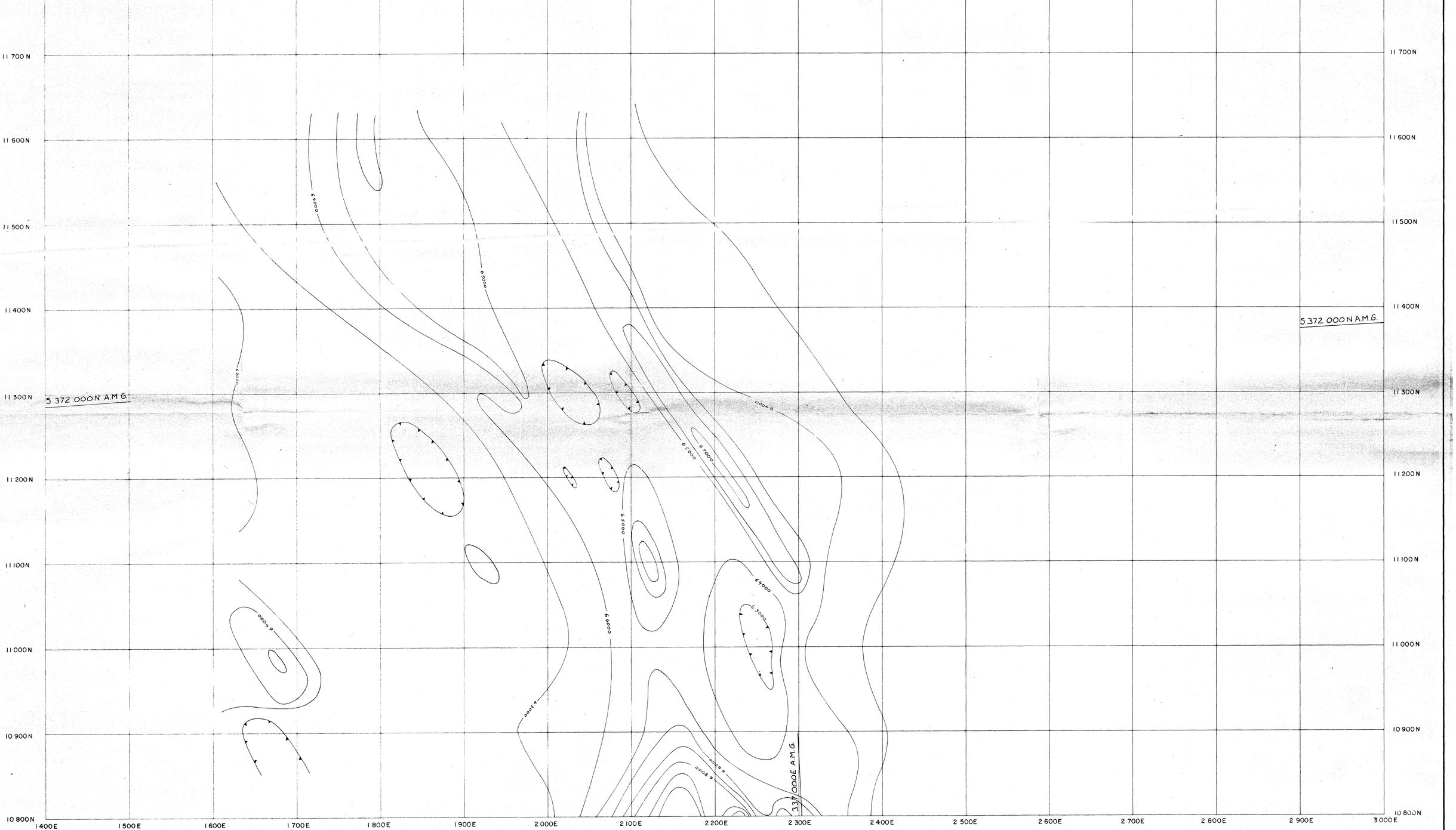
FILE NO: TS 1/77 - GCNE - 3

337 000E A.M.G.

11 700N
11 600N
11 500N
11 400N
11 300N
11 200N
11 100N
11 000N
10 900N
10 800N

5 372 000N A.M.G.

1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E



50 0 50 100 150 200 250 300 350 metres

SCALE 1 : 2 500

457080

5 cm

BI

SHEET INDEX
Gourlays Creek

NW	NE
SW	SE

INST : G 816
OBS : T.C
BASE PEG : not drift corrected
CONT. INT : 1000 nT
CHECKED : J.S

GEOPEKO 84-2097
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD. — DEVONPORT

E.L. 1/77 ROCKY CAPE, TASMANIA 008

Gourlays Creek-NE "

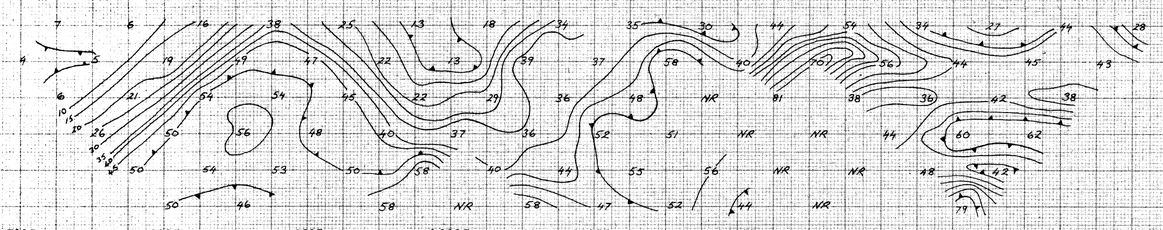
CONTOURS OF TOTAL MAGNETIC INTENSITY

SCALE	DATE	REVISED	GEO	DRAWN	SHEET / PLAN
1 : 2 500	June 83		J.S	R.Tog	SHEET: GCNE - 3 / PLAN: 8

FILE NO: TS 1/77 - GCNE - 4

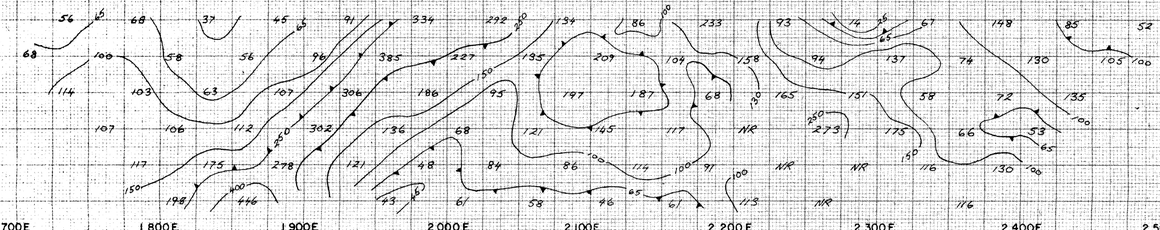
1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

Apparent Chargeability (M232) mV/V



1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

Apparent Resistivity Ohm m



1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

457081

5 cm

OBSERVER: TC	SCALE: 1:2500	CONT.INT - APPARENT CHARGEABILITY: 5mV/V
INSTRUMENT Tx: Huntec 2.5kW	DATE: May 83	CONT.INT - APPARENT RESISTIVITY: Logarithmic
INSTRUMENT Rx: Scintrex IPR-8	DIPOLE SPACING: 50m	CONT.INT - APPARENT METAL FACTOR

NOTES:
Chargeability plotted is slice with mean delay time of 910ms (M232)

DATE : July 83
GEOL : J.S.
DRAWN : R.Tog
CHECKED :

84-3097

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

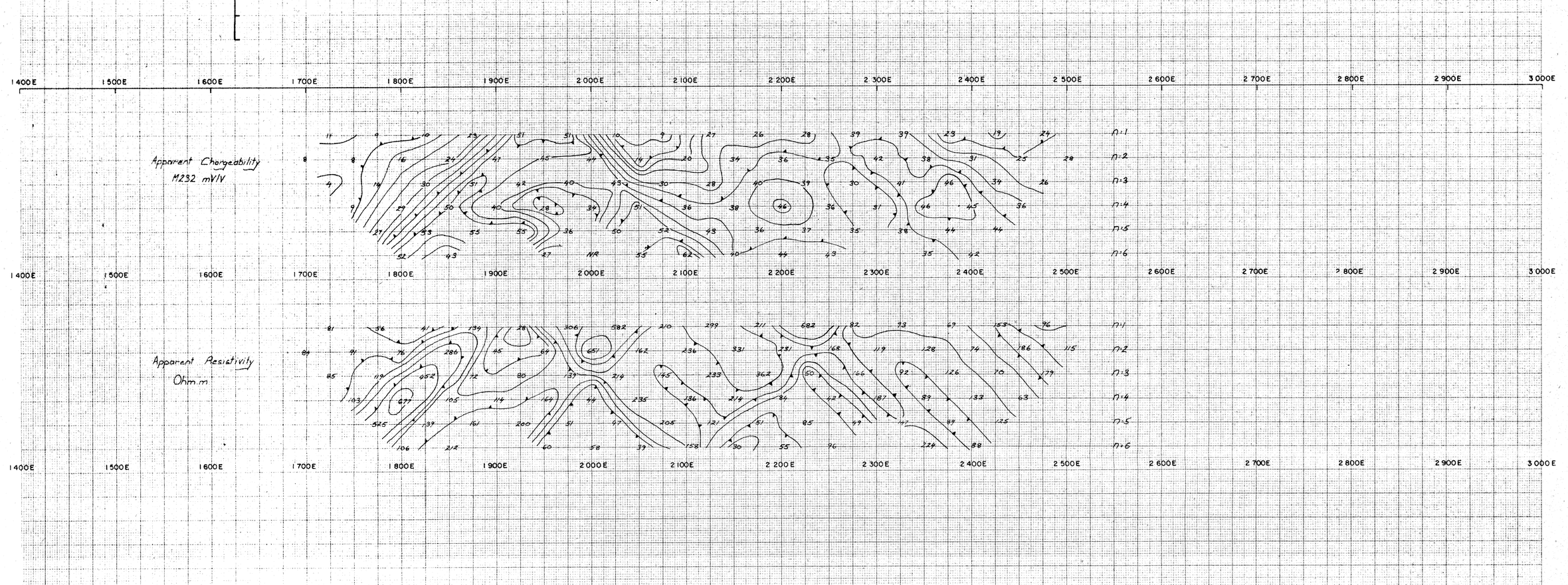
25 0 25 50 75 100 125 metres | Scale : 1:2500 | No : 9

E.L.1/77 ROCKY CAPE, TASMANIA
GOURLAYS CREEK - NE
PSEUDOSECTION OF DIPOLE - DIPOLE
I.P./RESISTIVITY
11400N

GCNE-4

009

FILE NO: TS 1/77 - GCNE - 5



457082

5 cm

OBSERVER: FC	SCALE: 1:2500	CONT INT - APPARENT CHARGEABILITY: 5mV/V
INSTRUMENT Tx: Huntec 2.5kW	DATE: May 83	CONT.INT - APPARENT RESISTIVITY: Logarithmic
INSTRUMENT Rx: Scintrex IPR-8	DIPOLE SPACING: 50m	CONT.INT - APPARENT METAL FACTOR

NOTES: Chargeability plotted is slice with mean delay time of 910ms (M232)

DATE : July 83
GEOL : J.S.
DRAWN : R.Tag
CHECKED :

84-2097.

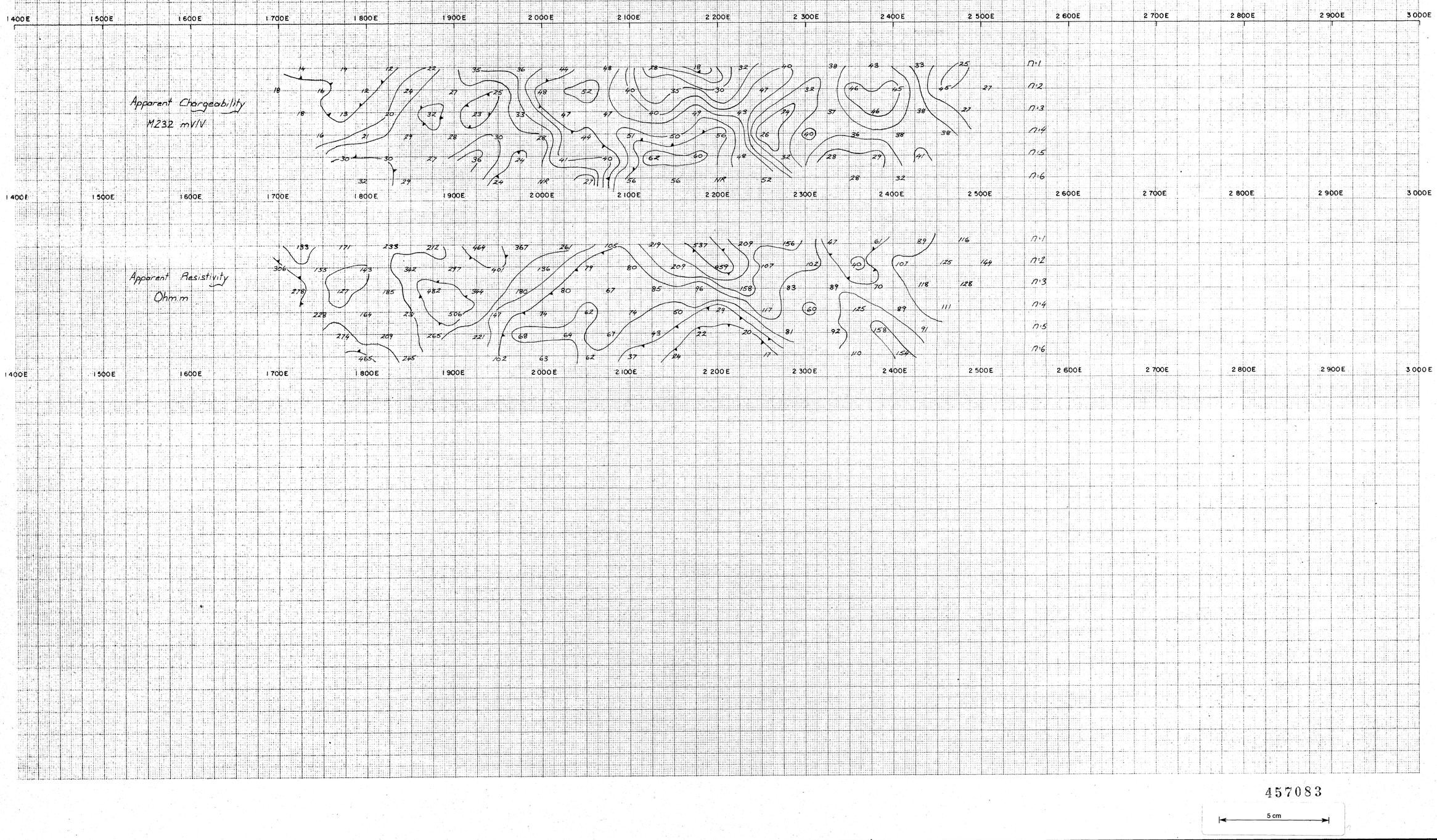
GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

25 0 25 50 75 100 125 metres | Scale : 1:2500 | No : 10

E.L.1/77 ROCKY CAPE, TASMANIA GCNE-5
GOURLAYS CREEK - NE
PSEUDOSECTION OF DIPOLE - DIPOLE
I.P./RESISTIVITY 010

11300N

FILE NO: TS 1/77-GCNE-6



457083

5 cm

OBSERVER: TC	SCALE: 1:2500	CONT.INT-APPARENT CHARGEABILITY: 5mV/V
INSTRUMENT Tx: Huntec 2.5kW	DATE: May 83	CONT.INT-APPARENT RESISTIVITY: Logarithmic
INSTRUMENT Rx: Scintrex IPR-8	DIPOLE SPACING: 50m	CONT.INT-APPARENT METAL FACTOR:

NOTES:
Chargeability plotted is slice with mean delay time of 910ms (M232)

DATE : July 83
GEOL : J.S.
DRAWN : R.Teg
CHECKED :

84-2097.

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

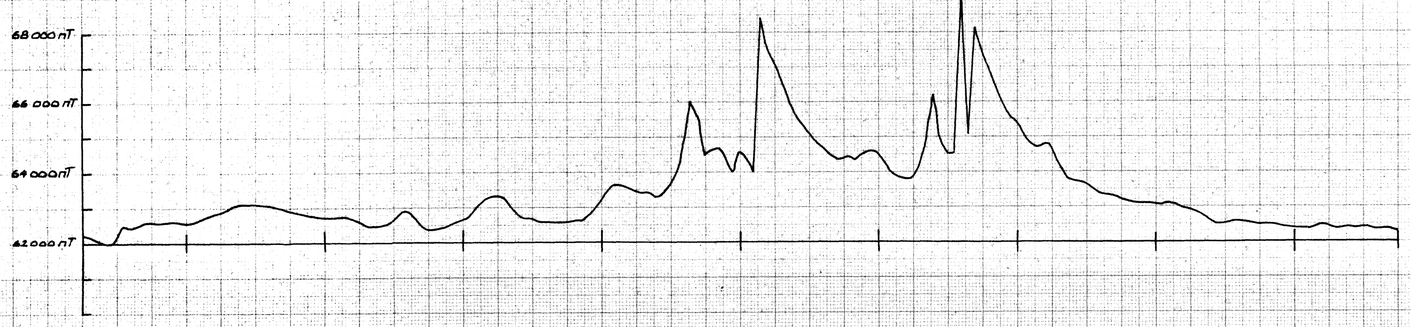
25 0 25 50 75 100 125 metres | Scale : 1:2500 | No : 11

GCNE-6

E.L.1/77 ROCKY CAPE, TASMANIA
GOURLAYS CREEK-NE
PSEUDOSECTION OF DIPOLE-DIPOLE
I.P./RESISTIVITY
11200N

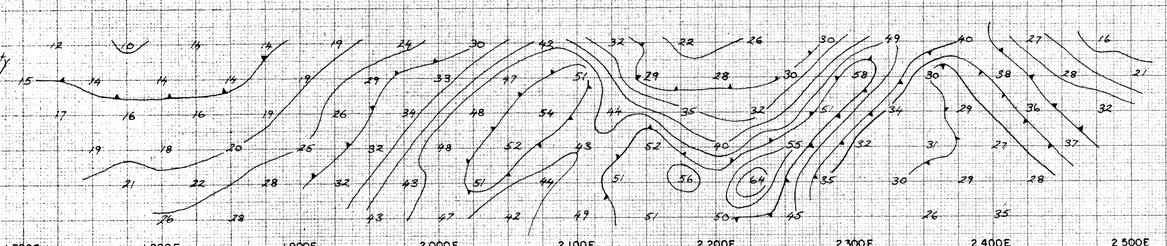
011

FILE NO: TS 1/77 - GCNE - 7



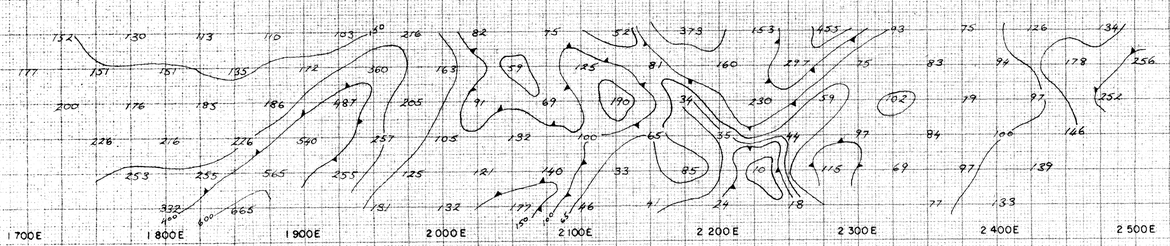
1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

Apparent Chargeability
M.M232



1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

Apparent Resistivity
Ohm m



1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

457084

5 cm

OBSERVER: TC	SCALE: 1:2500	CONT. INT - APPARENT CHARGEABILITY: 5mV/V
INSTRUMENT Tx: Huntec 2.5kW	DATE: May 83	CONT. INT - APPARENT RESISTIVITY: Logarithmic
INSTRUMENT Rx: Scintrex IPR-8	DIPOLE SPACING: 50m	CONT. INT - APPARENT METAL FACTOR
NOTES: Chargeability plotted is slice with mean delay time of 910ms (M232)		

DATE : July 83
GEOL : J.S.
DRAWN : R.Tag
CHECKED :

84-2097

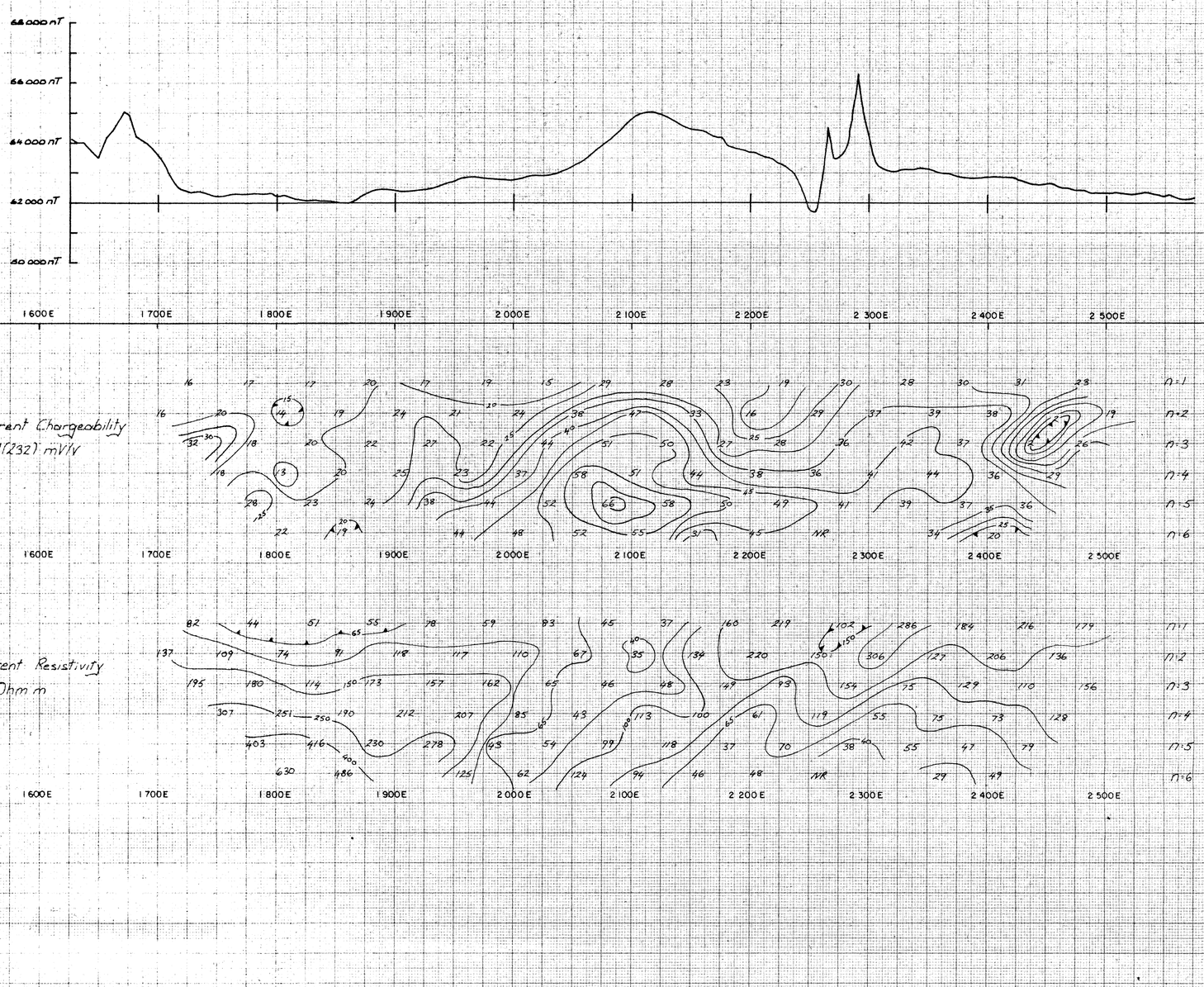
GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

25 0 25 50 75 100 125 metres | Scale : 1:2500 | No : 12 GCNE - 7

E.L.1/77 ROCKY CAPE, TASMANIA
GOURLAYS CREEK - NE
PSEUDOSECTION OF DIPOLE - DIPOLE
I.P / RESISTIVITY
1110ON

012

FILE NO: TS 1/77 - GCNE - 8



457085

5 cm

OBSERVER: TC	SCALE: 1:2500	CONT. INT - APPARENT CHARGEABILITY: 5mV/V
INSTRUMENT Tx: Huntec 2.5kW	DATE: May 83	CONT. INT - APPARENT RESISTIVITY: Logarithmic
INSTRUMENT Rx: Scintrex IPR-8	DIPOLE SPACING: 50m	CONT. INT - APPARENT METAL FACTOR

NOTES:
Chargeability plotted is slice with mean delay time of 910ms (M232)

DATE : July 83
GEOL : J. S.
DRAWN : R. Tog.
CHECKED :

84-2097

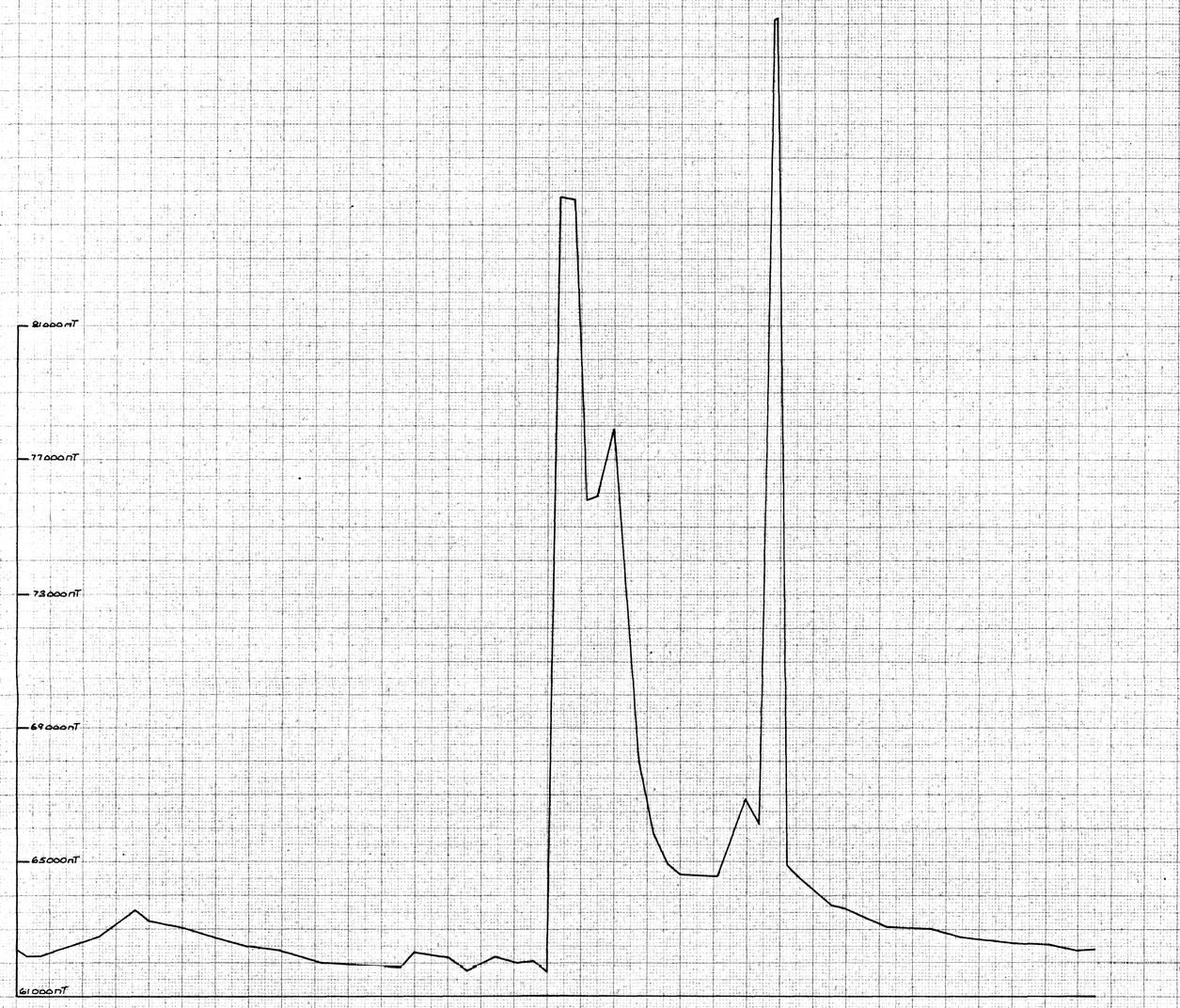
GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

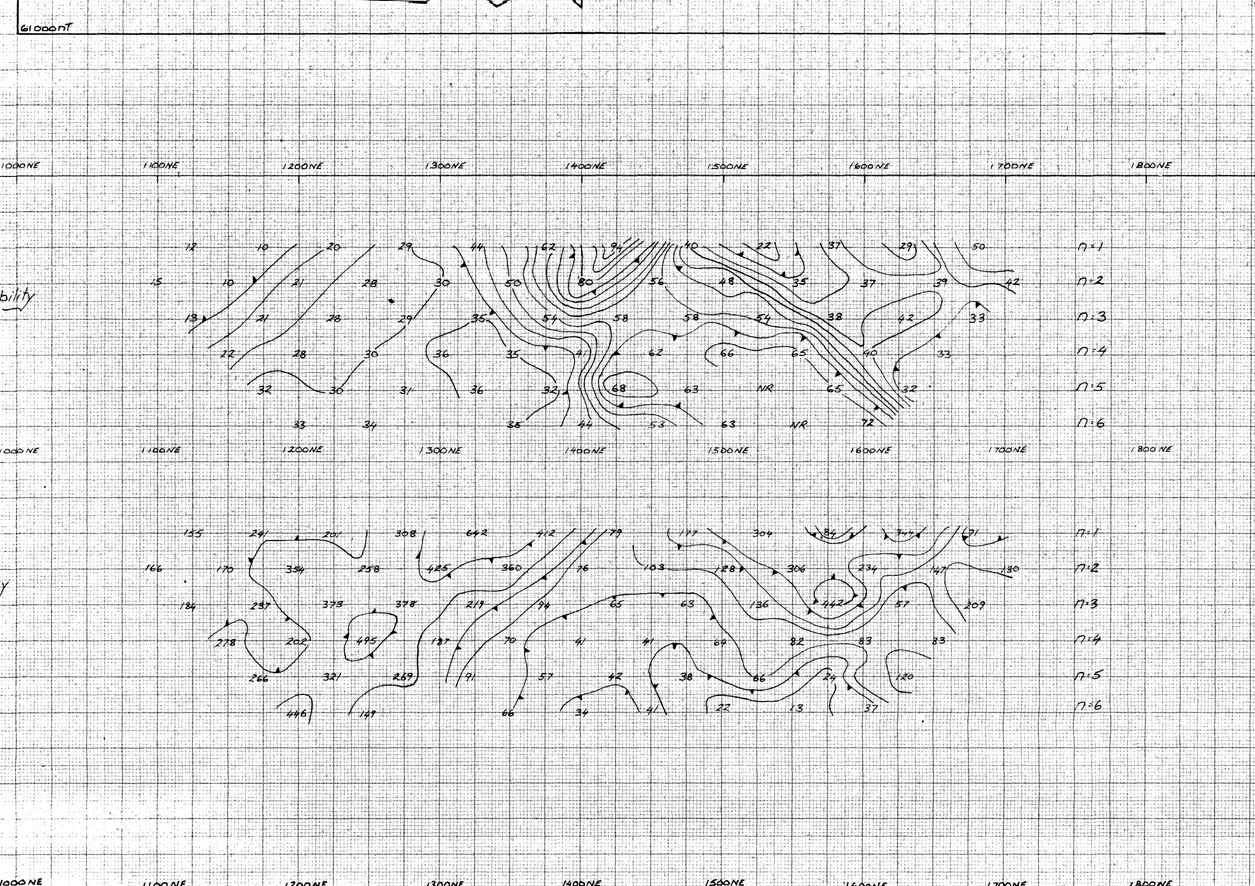
25 0 25 50 75 100 125 metres | Scale : 1:2500 | No : 13 GCNE - 8

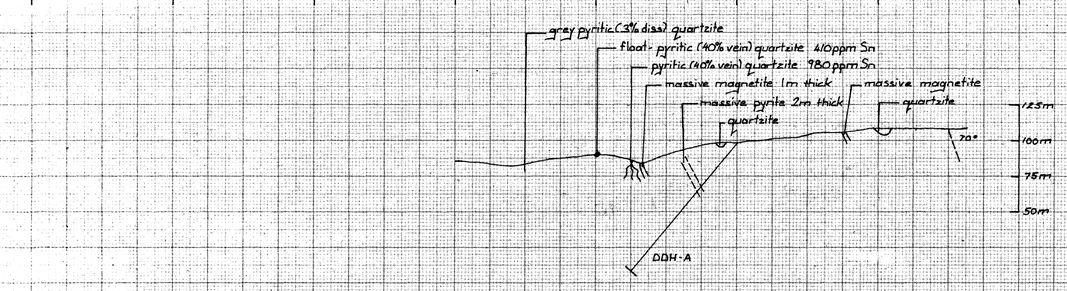
E.L. 1/77 ROCKY CAPE, TASMANIA
GOURLAYS CREEK - NE
PSEUDOSECTION OF DIPOLE - DIPOLE
I.P./RESISTIVITY
11000N

013

FILE NO: TS1/77-GCNE-9







457086

5 cm

OBSERVER: TC	SCALE: 1:2500	CONT.INT - APPARENT CHARGEABILITY: 5mV/V
INSTRUMENT Tx: Huntec 2.5kW	DATE: May 83	CONT.INT - APPARENT RESISTIVITY: Logarithmic
INSTRUMENT Rx: Scintrex IPR-8	DIPOLE SPACING: 50m	CONT.INT - APPARENT METAL FACTOR:
NOTES: Chargeability plotted is slice with mean delay time of 910ms (M232)		

DATE: July 83
GEOL: J.S.
DRAWN: R.Teg
CHECKED:

84-2097

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

25 0 25 50 75 100 125 metres | Scale: 1:2500 | No: 14

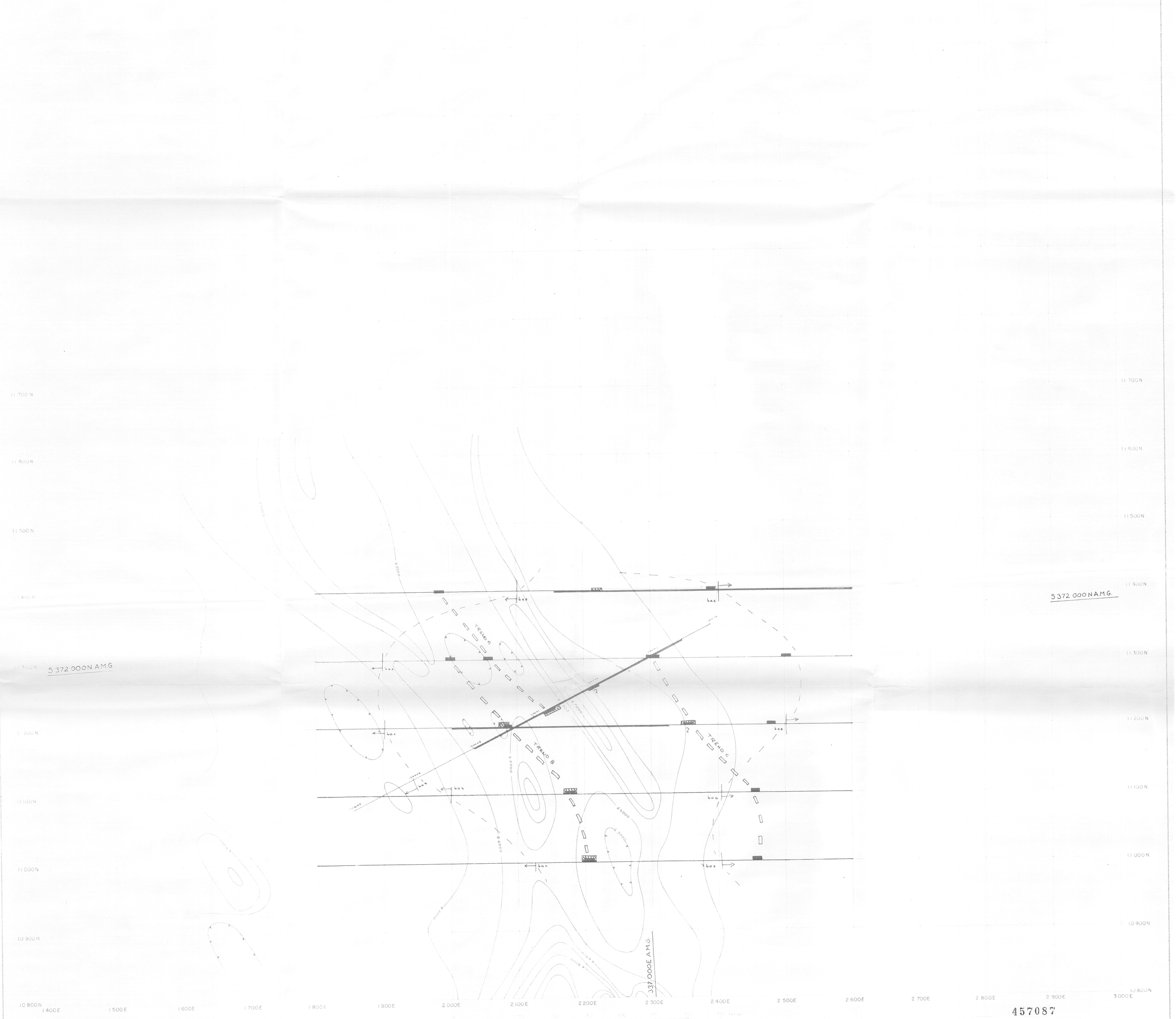
GCNE-9

E.L.1/77 ROCKY CAPE, TASMANIA
GOURLAYS CREEK - NE
PSEUDOSECTION OF DIPOLE-DIPOLE
I.P./RESISTIVITY
Diagonal Line

014

FILE NO: TS 1177-GCNE-10

337 000E A.M.G.



SCALE 1:2 500

457087

5 cm

BI

84-2097.

basalt contact (interpreted from resistivity)

survey line

chargeability anomaly

Chargeability high with associated resistivity low

Broad chargeability high with more intense zone

SHEET INDEX

Gourlays Creek

NW	NE
SW	SE

TN GN MN

5° 64°

INST: G 816

OBS: T.C.

BASE PEG: not drift corrected

CONT. INT: 1000 nT

CHECKED: JS

GEOPEKO

A DIVISION OF WEST AUSTRALIAN SEND OPERATIONS LTD. DEVONPORT

E.L. 1/77 ROCKY CAPE, TASMANIA

Gourlays Creek - NE 015

CONTOURS OF TOTAL MAGNETIC INTENSITY

I.P. Interpretation Diagram Mk. II

SCALE	DATE	REVISED	GEO	DRAWN	SHEET	PLAN
1:2 500	June 83		J.S	R.Tog	GCNE-10	15.

FILE NO: TS 1177-GCNE-11

1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 337000E A.M.G. 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

12800N 12700N 12600N 12500N 12400N 12300N 12200N 12100N 12000N 11900N 11800N 11700N 11600N 11500N 11400N 11300N 11200N 11100N 11000N 10900N 10800N

5372000N A.M.G.

23567 23566 23565 23564 23563 23562 23561 23560 23559 23558 23557 23556 23555 23554 23553 23552 23551 23550 23549 23548 23547 23546 23545 23544 23543 23542 23541 23540 23539 23538 23537 23536 23535 23534 23533 23532 23531 23530 23529

23568 23569 23570 23571 23572 23573 23574 23575 23576 23577 23578 23579 23580 23581 23582 23583 23584

23022 23031 23030 23029 23028 23027 23026 23025 23024 23023 23042 23021 23020 23019 23018 23017 23016 23015 23014 23013 23012 23011 23010 23009 23008 23007 23006 23005

337000E A.M.G.

1400E 23501 1500E 1600E 23502 23503 23504 1700E 23505 23506 1800E 23507 23508 1900E 23509 23510 2000E 23511 23512 2100E 23513 23514 2200E 23515 23516 2300E 23517 23518 23519 2400E 23520 23521 23522 2500E 23523 23524 23525 23526 2600E 23527 23528 2700E 2800E 2900E 3000E

5372000N A.M.G.

457088

5 cm

84-2097

o Grid position
Δ Male Auger hole
• Power Auger (Jacro)
B.L. Base Line

2 : 50 — number no.
Δ — sample position

SHEET INDEX
Gourlays Creek

NW	NE
SW	SE

GRID N. 5.4° MAG. N. 6°

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

metres | Scale 1:2500 | Plan No 16.

DATE AUG 83
GEOL R.J.P
DRAWN M.vdS.
CHECKED

E.L. 1/77 ROCKY CAPE TASMANIA GC.NE-11

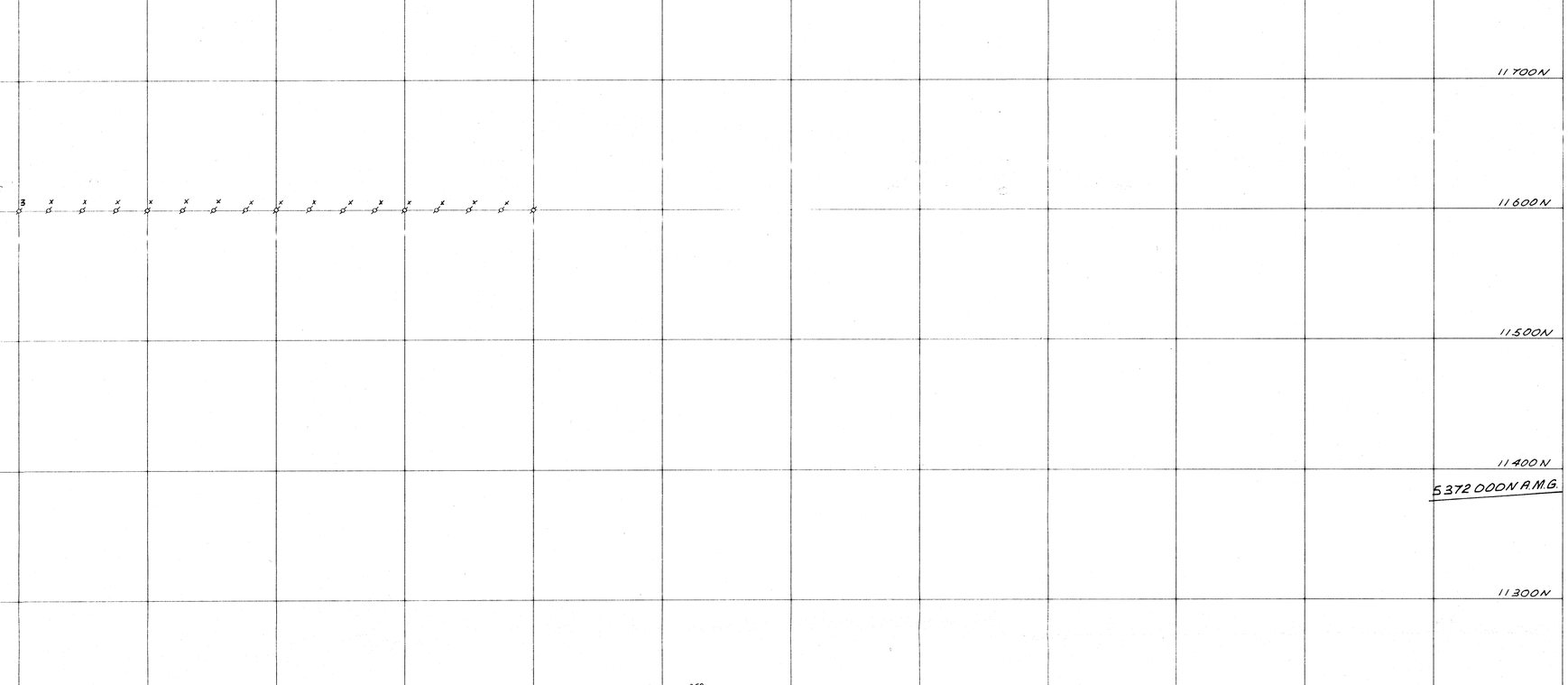
GOURLAY'S CREEK - NE 016

Soil Sample Location Plan

FILE NO: TS 1177-GCNE-12

1400E 1500E 1600E 1700E 1800E 1900E 2000E 2100E 337000E A.M.G. 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

12800N 12700N 12600N 12500N 12400N 12300N 12200N 12100N 12000N 11900N 11800N 11700N 11600N 11500N 11400N 5372000N A.M.G. 11300N 11200N 11100N 11000N 10900N 10800N



457089

5 cm

o Grid position
Ø Mole auger hole
• Power Auger (Jacro)
B.L. Base Line

10—Sn sample, ppm
Sample position

SHEET INDEX
Gourlays Creek

NW	NE
SW	SE

TN GN MN
6° 64°

DATE : Aug 83
GEOL : R.J.P
DRAWN : M vdS
CHECKED :

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

metres | Scale : 1:2500 | Plan No : 17.

E.L. 1/77 ROCKY CAPE TASMANIA

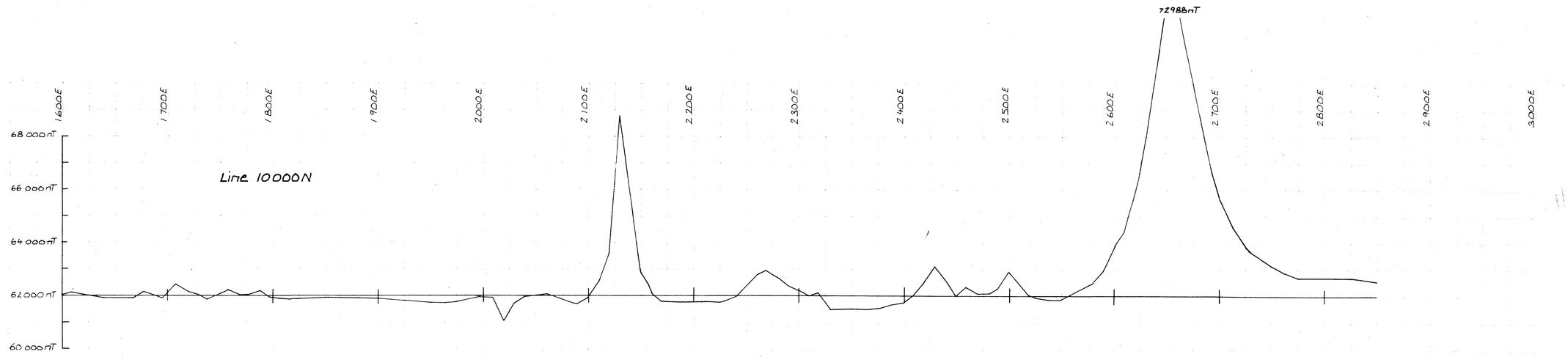
GCNE-12

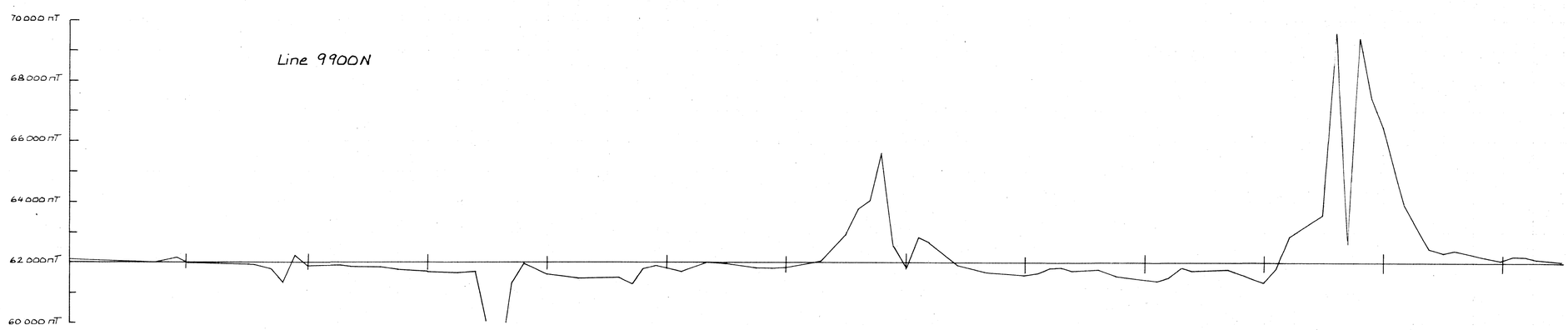
GOURLAY'S CREEK — NE

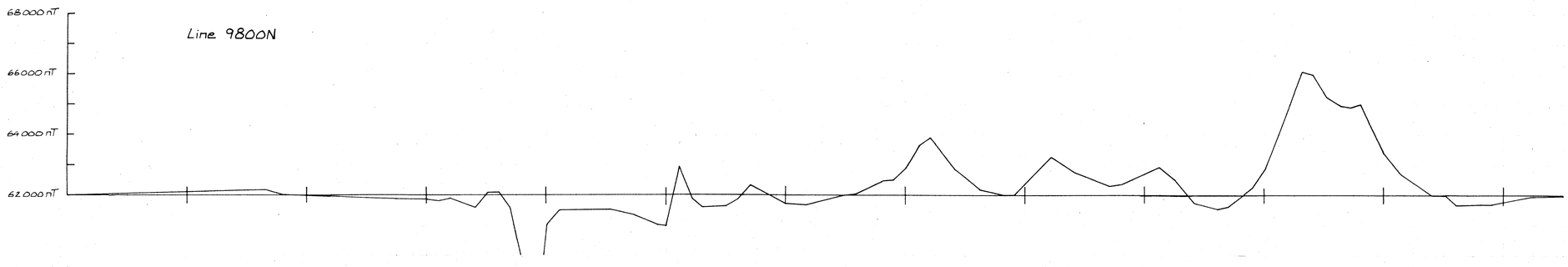
Sn ppm — C horizon soil geochemistry

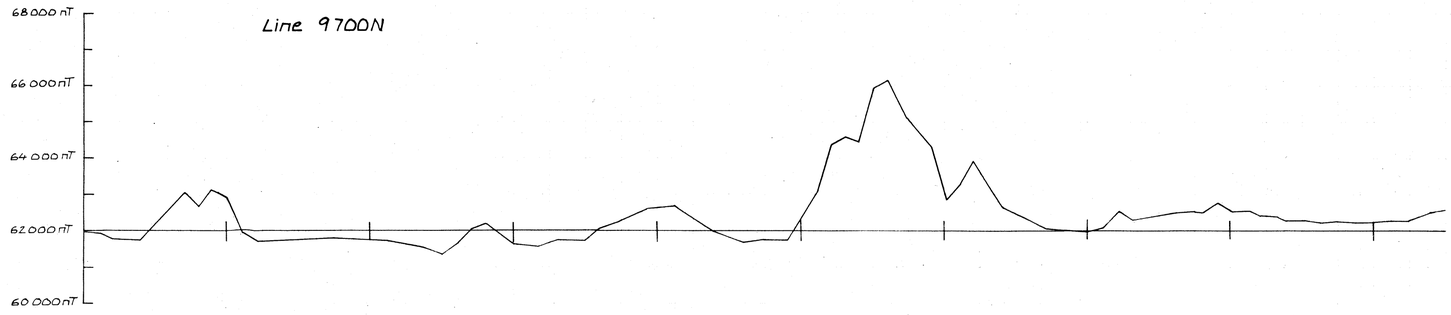
017

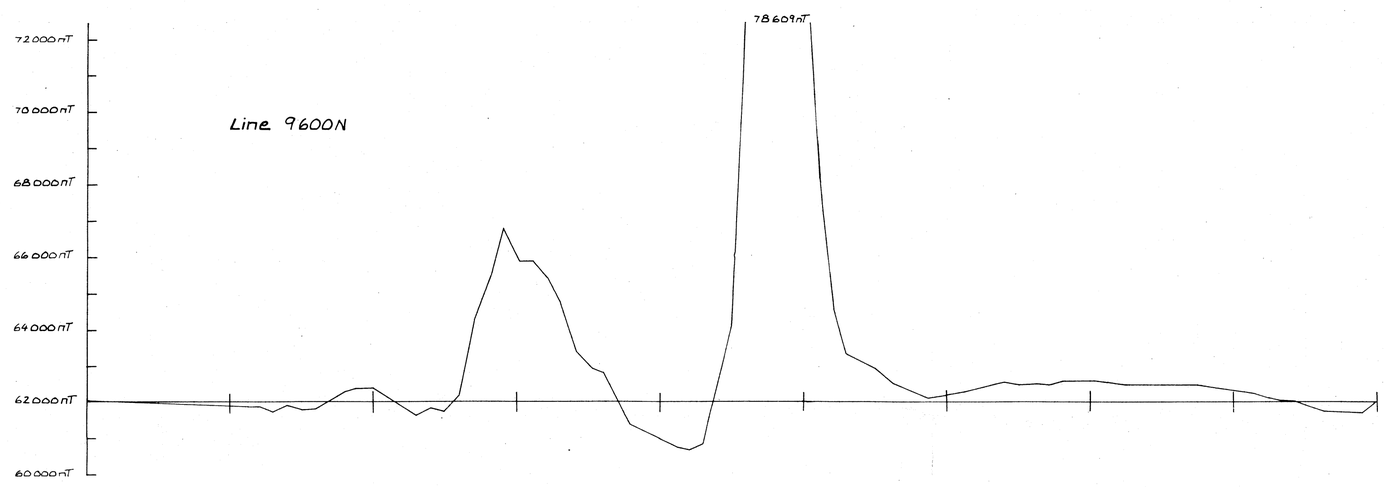
FILE NO: TS 1177-GCSE-1

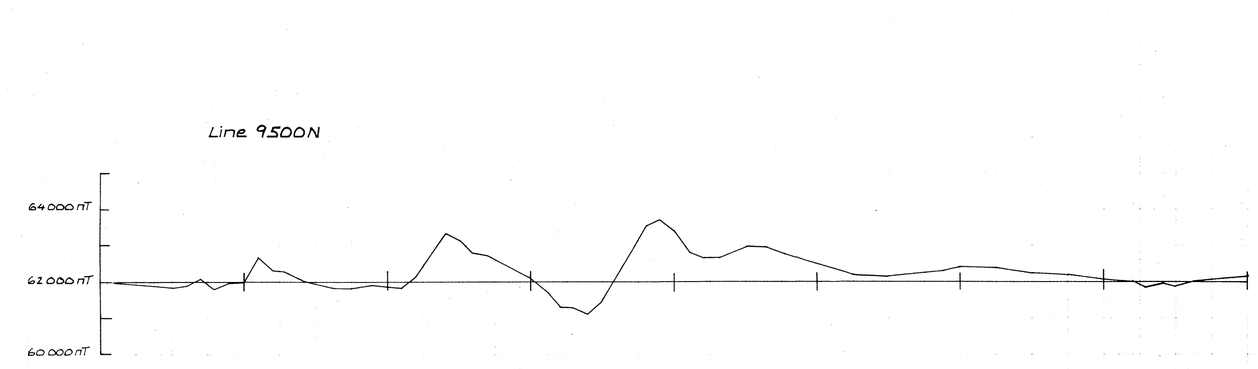












457090

5 cm

84-2097

Note: Vertical Scale: 1cm = 1000nT
Instrument: GB16
Observer: R Outram

SHEET INDEX
Gourlays Creek

NW	NE
SW	SE

DATE: June 83
GEOL: R.J.P.
DRAWN: R.Tag
CHECKED:

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

25 0 25 50 75 100 125 metres | Scale: 1:2 500 | Sheet No: GCSE-1

E.L. 1177 Rocky Cape, Tasmania

Gourlay's Creek - SE

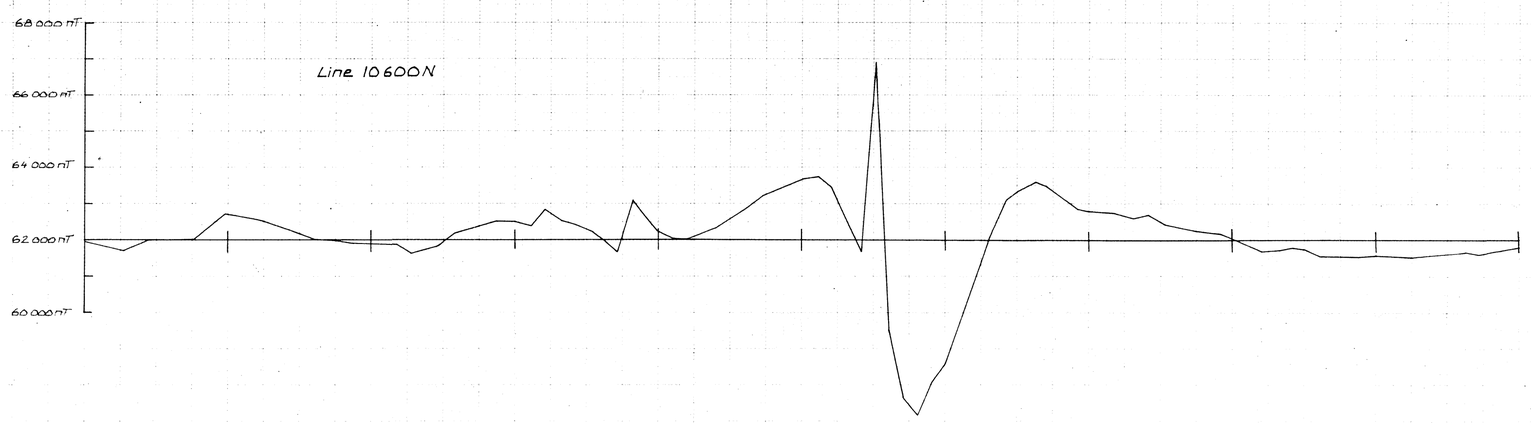
Profiles of Total Magnetic Intensity - Sht: A

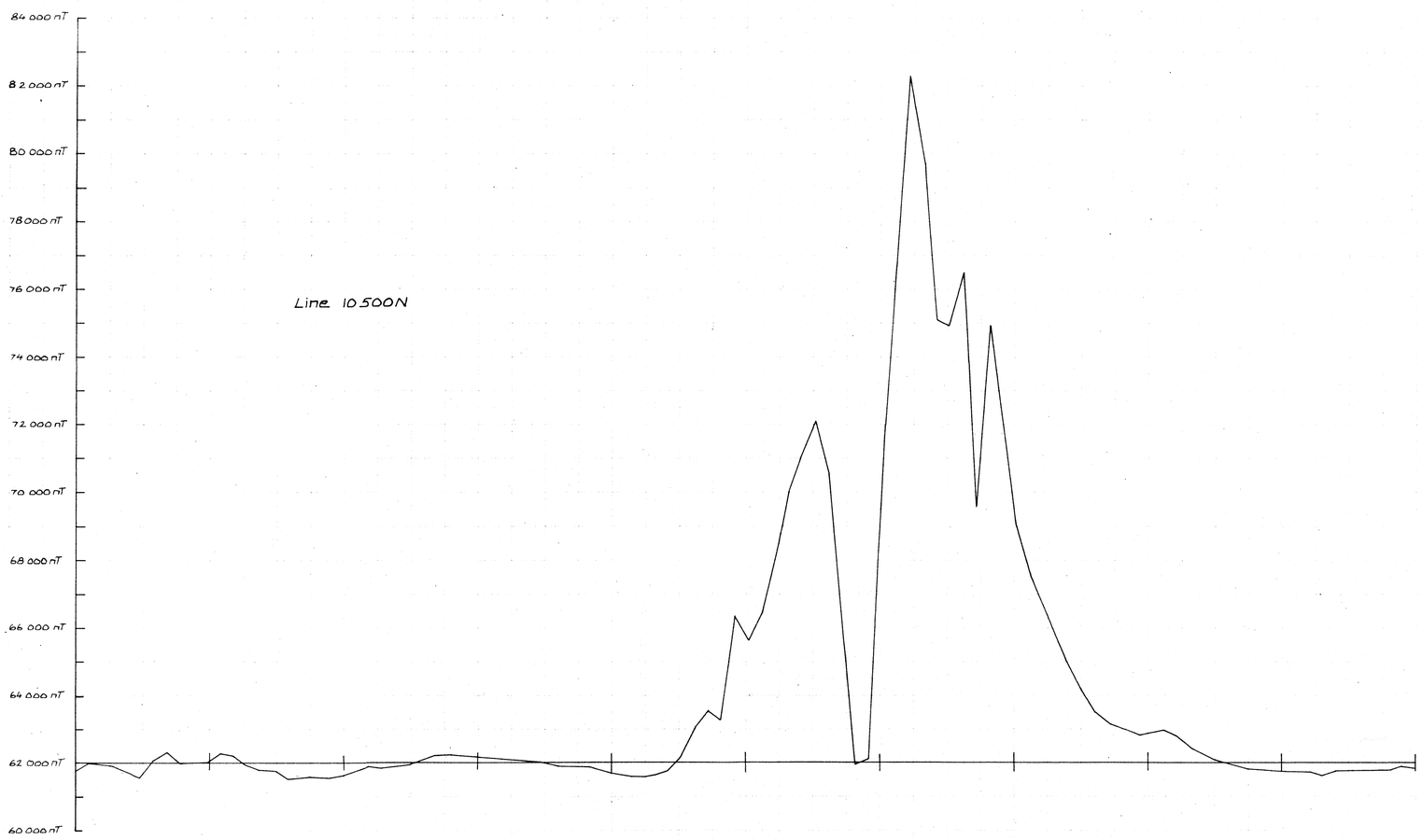
018

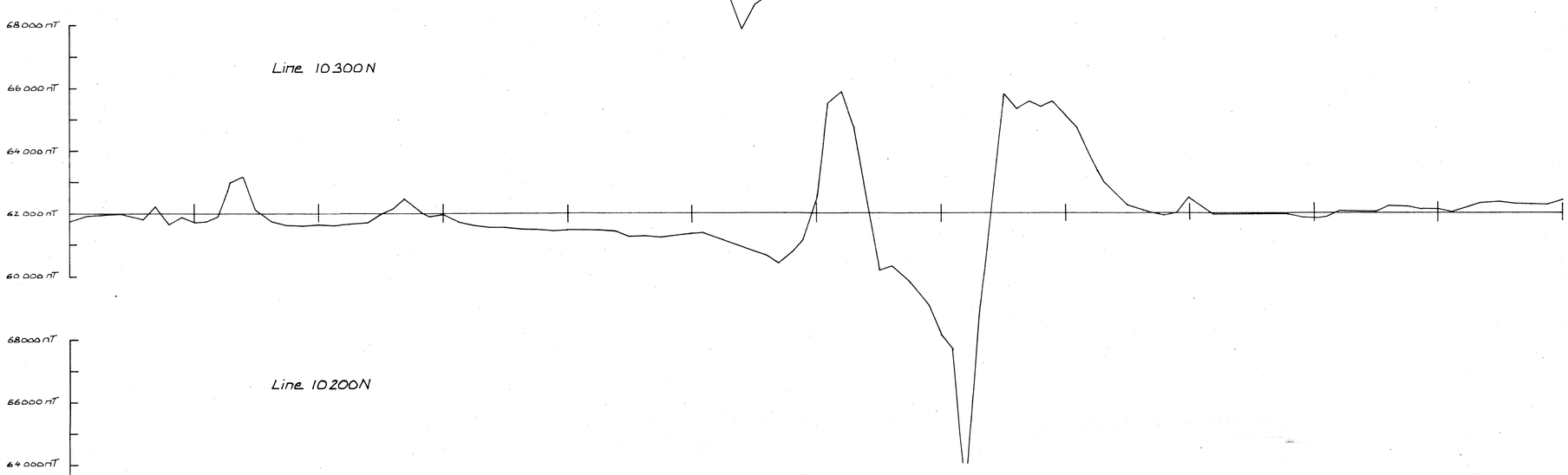
PLAN 19A

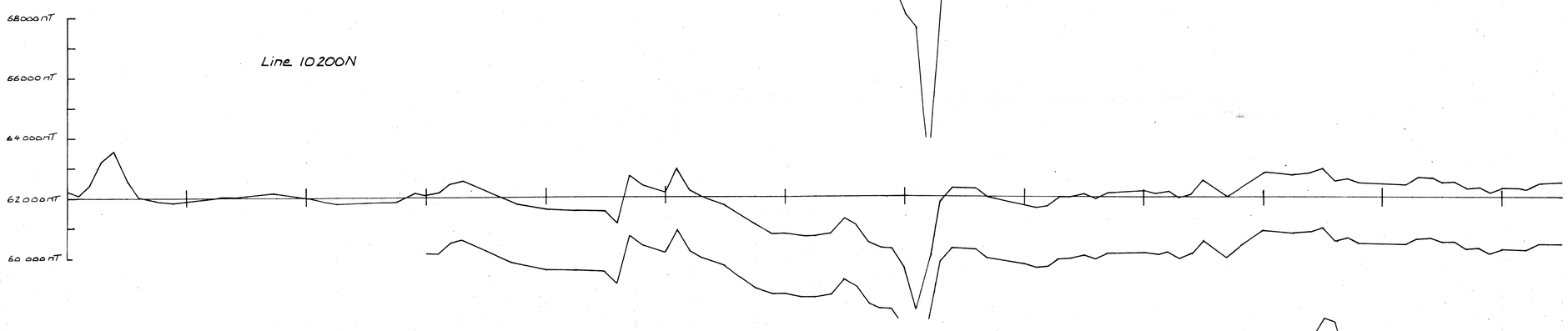
FILE NO: TS 1177-GCSE-2

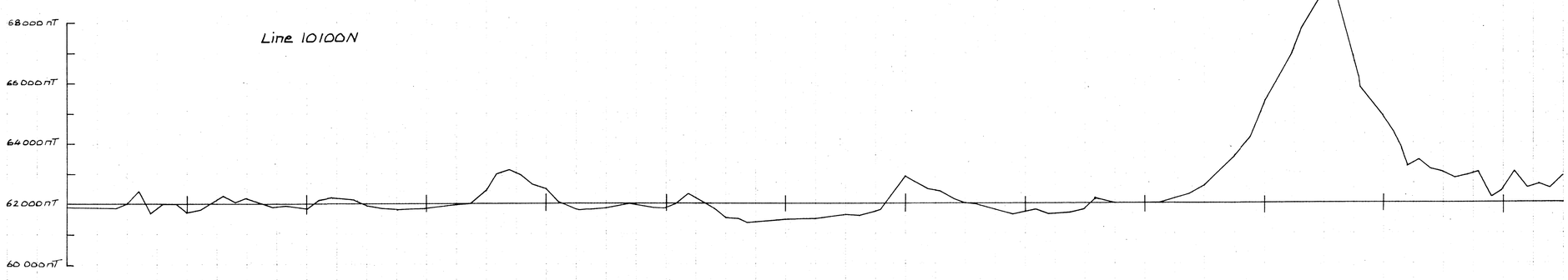
1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E











1500E 1600E 1700E 1800E 1900E 2000E 2100E 2200E 2300E 2400E 2500E 2600E 2700E 2800E 2900E 3000E

5 cm

457091

84-2097

Note: Vertical Scale : 1cm = 1000 nT
Instrument : GB16
Observer : R Outram

SHEET INDEX
Gourlays Creek

NW	NE
SW	SE

DATE : June 83
GEOL : R.J.P.
DRAWN : R.Tag
CHECKED :

GEOPEKO
A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

25 0 25 50 75 100 125 metres | Scale : 1 : 2 500 | Sheet No : GCSE-2

E.L. 1177 Rocky Cape, Tasmania

Gourlay's Creek-SE

Profiles of Total Magnetic Intensity - Sht:B

019

PLAN 19B

FILE NO : TS 1177 - GCSE - 3

1400 E 1500 E 1600 E 1700 E 1800 E 1900 E 2000 E 2100 E 2200 E 2300 E 337000E A.M.G 2400 E 2500 E 2600 E 2700 E 2800 E 2900 E 3000 E

10 700 N

10 600 N

10 500 N

10 400 N

5 371 000N A.M.G

10 300 N

5 371 000N A.M.G

10 200 N

10 100 N

10 000 N

9900 N

9800 N

9700 N

9600 N

9500 N

9400 N

9300 N

9200 N

9100 N

9000 N

8900 N

8800 N

8700 N

1400 E 1500 E 1600 E 1700 E 1800 E 1900 E 2000 E 2100 E 2200 E 2300 E 337000E A.M.G 2400 E 2500 E 2600 E 2700 E 2800 E 2900 E 3000 E

BOUNDARY E.L 1/77

5 cm

457092

84-2097

SHEET INDEX

Gourlays Creek

NW	NE
SW	SE

TN GN MN

6.4°

6°

CONT INT :- 1000 nT
INSTRUMENT - GB16
OBS :- R.O.
DATE :- JUNE 83.

LIB BOOK NO. :
DATE : AUG 83
GEOL : R.J.P.
DRAWN : M v d S.
CHECKED :

GEOPEKO

A DIVISION OF PEKO-WALLSEND OPERATIONS LTD - DEVONPORT

metres | Scale : 1 : 2500 | Plan No : 20.

E.L. 1/77 ROCKY CAPE TASMANIA GCSE-3

GOURLAYS CREEK-SE 020

CONTOURS OF TOTAL MAGNETIC INTENSITY