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Received Answered				13 SEP 1983
DEPT. OF MINES				Registrar
REF. No: 8435/83				E & IL

THE SHELL COMPANY OF AUSTRALIA LIMITED

METALS DIVISION

E.L. 2/78 - GRANITE TOR

Annual Report on Retained Area for the Period

June, 1982 to June, 1983

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Report No: 08.1267

Date : 20/8/83

Copy No : 1

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SUMMARY

The area of E.L. 2/78 Granite Tor has been reduced to 73 sq km all of which is included in the Joint Venture agreement with Alcoa of Australia Ltd.

Work during the past year has mainly been follow up investigation of eight anomalies previously investigated. Only one is thought to be worth further work, the Lower Brougham Anomaly.

Regional geologic traverses during the year has outlined the distribution of the target Cambrian volcanics. These consist in part of tuffs, lavas and siliceous sediments but also have a large intrusive component. The age of some of these intrusives is not certain and may be younger than Cambrian. Minor mineralization in the Ordovician and Precambrian may be related to the intrusives.

Regional stream sediment sampling has outlined an anomalous Sn, W, Au zone near Mt. Remus. The northern portion of the licence has been well covered by stream sediment sampling while the southern portion requires further work.

1.0 INTRODUCTION

E.L. 2/78 Granite Tor was reduced from 322 sq km to 73 sq km in May, 1983. This report covers work completed during the year to July, 1983 on the area retained. Work done on the relinquished area is outlined in a separate report: Smyth, W.D., July 1983. E.L. 2/78 - Granite Tor - Relinquishment Report.

The licence was originally taken up by Alcoa of Australia Ltd. The Shell Co. of Australia agreed to a Joint Venture on the northern portion of the licence, designated Area A, with an option over the southern portion of the licence designated Area B. The retained area consist of most of Area A with some of Area B, all now included within the Joint Venture agreement.

Appendix 1 gives a comprehensive list of literature about and work done on the licence.

2.0 LOCATION & ACCESS

The area is located on the Sophia 1:100 000 sheet. The eastern boundary is partly formed by the Cradle Mt. - Lake St Clair National Park boundary, with the licence lying as a narrow strip from Mayberry Mount to Mt. Swallow (Refer Fig. 1).

Access is by boat across the lake from Tullah and up navigable rivers, and then by walking track or by helicopter to more isolated portions of the licence.

3.0 REGIONAL GEOLOGY

Refer to Speijers, D.C. June, 1982 "Exploration at Granite Tor E.L. 2/78 During 1981-82 Field Season".



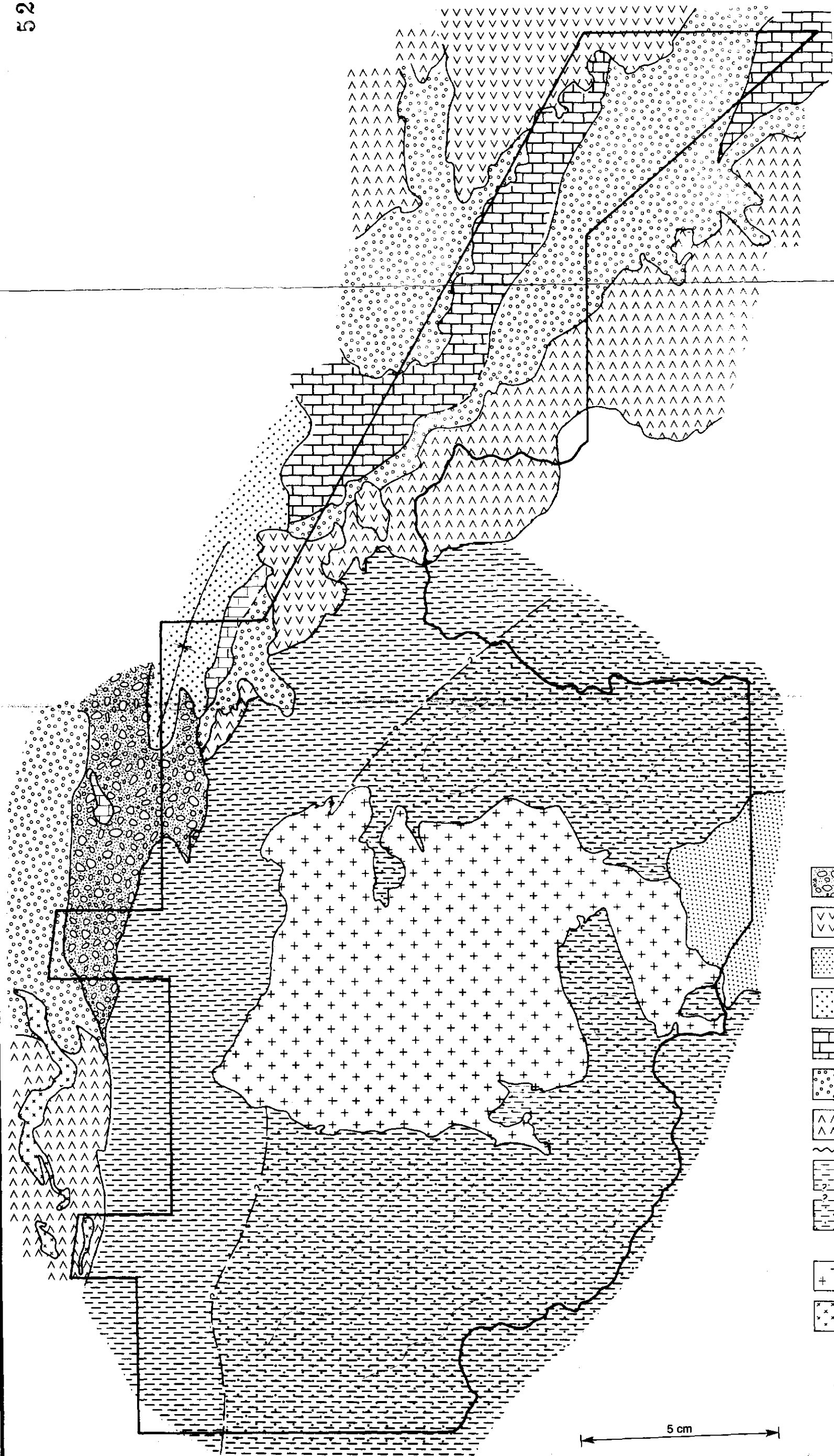
006

The area retained consists of Precambrian quartzites and phyllites in the south, intruded and overlain unconformably by Cambrian volcanics. The Cambrian is in turn overlain by Ordovician Owen Conglomerate Moina Sandstone(?) and Gordon Limestone. A sheet of Tertiary basalt overlies much of the Palaeozoic rocks in the Mt. Romulus area. (Refer Fig. 2).

Regional traverses across the area have concentrated on locating and ascertaining the nature of the Cambrian volcanics. In the Mt. Remus area a massive intrusive feldspar-biotite-quartz porphyry occupies the position of the Cambrian with a width of approximately 2 km. The porphyry continues and thins to the south east and has a width of 0.5 km in the Brougham River. It appears to have a conformable contact with the overlying Ordovician at the mouth of the Brougham River and has the appearance of being a sill. Several areas of minor mineralization appear to be close to the contact of the porphyry and the Ordovician and it is believed by the author that the porphyry is much younger than Cambrian and may intrude the Ordovician and be the cause of the mineralization. The one contact observed, at the mouth of the Brougham River was not able to be sampled or inspected closely because of the lake waters.

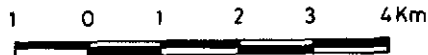
At Mt. Romulus a thickness of approximately 1.5 km of acid tuffs and lavas is developed. This thins to the south and in the Brougham River only approximately 250 m of volcanics are exposed. A 1.0 km wide zone of quartzites is developed to the east of the tuffs in the Brougham River. This is intruded by a minor porphyry and a alkali granite in the extreme east. A sheet of granite may be intruded along the eastern margin of the Cambrian sediments with granite outcrops reported in the Fury River, on the slopes of Mt. Romulus and in Brougham River. The granite may be associated with the Devonian Granite Tor Batholith or may be Cambrian.

520010



LEGEND

-  Pleistocene Fluvio-glacials
-  Tertiary Basalts
-  Permian Sediments
-  Siluro-Devonian Sediments
-  Gordon Limestone
-  Owen Conglomerate
-  Cambrian Mt. Read Volcanics
-  Western Series Metasediments
(Precambrian?)
-  Precambrian Metasediments
-  Devonian Granitic Intrusion
-  Cambrian Murchison Granite



5 cm

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E.L. 2/78 GRANITE TOR
OUTLINE OF REGIONAL
GEOLOGY

SCALE	1:100 000	DATE	11-8-82
AUTHOR	D. SPEIJERS	DRAWN	H.L.S.
OFFICE	DEVONPORT	REP. No.	
DRG. No.	D/NP01/079	FIG. No.	2

The contact with the Precambrian to the west if not exposed. At least one porphyry dyke intrudes the Precambrian at Fury Valley and may be associated with As, Pb, Au mineralization at Romulus East. Porphyry dykes intrude Precambrian at Mt. Remus and appear to be associated with Mo, Co, V mineralization. (Refer Drawing No. D/NP 01/ 147, 148).

4.0 INVESTIGATIONS COMPLETED

A total of eight anomalies in the retained area were investigated during the year.

Anomaly numbers used are the same as in the previous report: Speijers, D.C. June, 1982, "Exploration at Granite Tor E.L. 2/78 During 1981-82 Field Season". Only work additional to that previously done will be recorded.

4.1 ANOMALY 4 : FURY VALLEY

4.1.1 Location & Access

The anomaly is located at AMG 5,384,500m N 396,500m E, above the Fury River.

The only practical means of access is by helicopter to a pad and campsite alongside the Fury River to the east of the area.

4.1.2 Gridding

A total of 5740m of grid lines were cut and flagged. This includes a baseline (700 E) bearing 020° M and five cross lines as below.

200N	60W - 800E
400N	60E - 840E
600N	140E - 840E
800N	140E - 840E
1000N	1000W - 900E

The 1000N line was extended to get a regional fit for the geology of the grid. (Refer Section D/NP 01/118, 125 to 130 & Plans D/NP 01/144, 145).

4.1.3 Geology & Mineralization

The area consists mainly of Precambrian quartz-mica schists, biotite and muscovite schists with narrow zones of carbonaceous schists and quartzites. A Cambrian? acid dyke intrudes the gridded area on the western side. This is described as a sericitized quartz-feldspar porphyry of broadly rhyolitic composition (Refer Appendix 2 - 8179, 8181). To the west along line 1000N possibly Cambrian sediments (volcanics?) outcrop. These are described as chloritic meta-quartzites and sericitised feldspathic metaquartzites (Refer Appendix 2 - 8178, 8183). These pass into

aplite and alkali granite at the western end of the line (Refer Appendix 2 - 8180, 8182). Pleistocene glacials obscure much of the north-east of the grid.

4.1.4 Geophysics

Ground magnetics, max-min EM and gravity surveys were done on the grid. (Refer Appendix 3 - Geophysics).

All lines were traversed by ground magnetics. Broad flat anomalies of the order of 100 nT were recorded on all lines, however no consistent pattern emerged.

Max-min EM was done on all lines except the baseline and the western half of 1000 N. Anomalies were detected on all lines except 1000 N. However the style of anomaly changes from lines 200 N and 400 N a single discrete conductor (dips opposite on the two lines) two lines 600 N and 800 N where the anomaly may be due to a single broad conductor or two widely spaced separate conductors.

A line of gravity done on line 600 N failed to locate a mass excess.

4.1.5 Geochemistry

Soil sampling was done at 20m intervals along all cross lines. Several low order Pb, Zn, As, Co anomalies were located. These appear to be related to the presence of carbonaceous phyllite.

Repeat stream sediment sampling of the previous year's results gave the same low order Pb Zn anomalies. These are related to two drainages. One within the gridded area (200 N 300 E to 900 N 500 E) appear to

be associated with one zone of elevated soil geochemistry and carbonaceous phyllite. The other drainage to the west of the gridded area has not been covered by soil sampling however it may be surmised that a similar source for the very similar Pb, Zn, Co, As, Mn anomalies. A sample from a ferruginous seepage within the carbonaceous phyllite assayed 95 ppm Cu, 1350 ppm Pb, 360 ppm Zn, 70 ppm Co, 41% Fe, 1650 ppm Mn, 290 ppm As.

Anomalous Sn values spread across the bottom half of the grid and up adjacent drainage to the east is thought to be due to glacial debris from the granite to the south.

4.1.6 Conclusions & Recommendations

The Digheem anomaly was located by the max-min EM system. The EM anomalous zones appear to be coincident with carbonaceous phyllite horizons as do the geochemically anomalous zones.

The carbonaceous phyllite is not a target of interest. No further work is recommended for this grid.

4.2 ANOMALY 5 : ROMULUS EAST

4.2.1 Location & Access

The anomaly is located at AMG co-ordinates 5,383,160 N 395,330 E on the east slope of Mt. Romulus.

The only practical means of access is by helicopter to a pad on the east side of the grid.

4.2.2 Gridding

Grids were extended to better cover the anomaly. The grid now consists of a baseline (00 E) bearing 188° M and seven cross lines as follows:

00 E	100N	to	400S
400 S	140E	to	240W
200 S	140E	to	240W
100 S	200E	to	400W
50 S	00E	to	200W
00 N	200E	to	200W
50 N	00E	to	200W
100 N	200E	to	200W

(Refer Figs. 3, 4, 5. Drawing D/NP 01/086).

4.2.3 Geology & Mineralization

The major rock types are Precambrian metasediments including quartzite, mica schists and some carbonaceous phyllite. A zone of silicification-chloritization and minor quartz veining was located which contained minor arsenopyrite veins. Petrographic descriptions indicate the material is a quartz-mica schist breccia. Fragments of schist are cemented by quartz veins, chlorite and arsenopyrite. Samples of gossanous material assayed 14.2% As, 2.6% Pb, 550 ppm Ag, 2.3 ppm Au, 430 ppm Bi. Less weathered material had approximately 1% As, 1000 ppm Pb, 3 ppm Ag, 0.05 ppm Au, 10 ppm Bi. This zone of brecciation occurs over a strike length of 100 m with a width of the order of 10 m.

015

4.2.4 Geophysics

Ground magnetic, max-min EM and gravity surveys were done on the grid. (Refer Appendix 3 - Geophysics).

Ground magnetic surveys were done on all lines. No anomalies were detected.

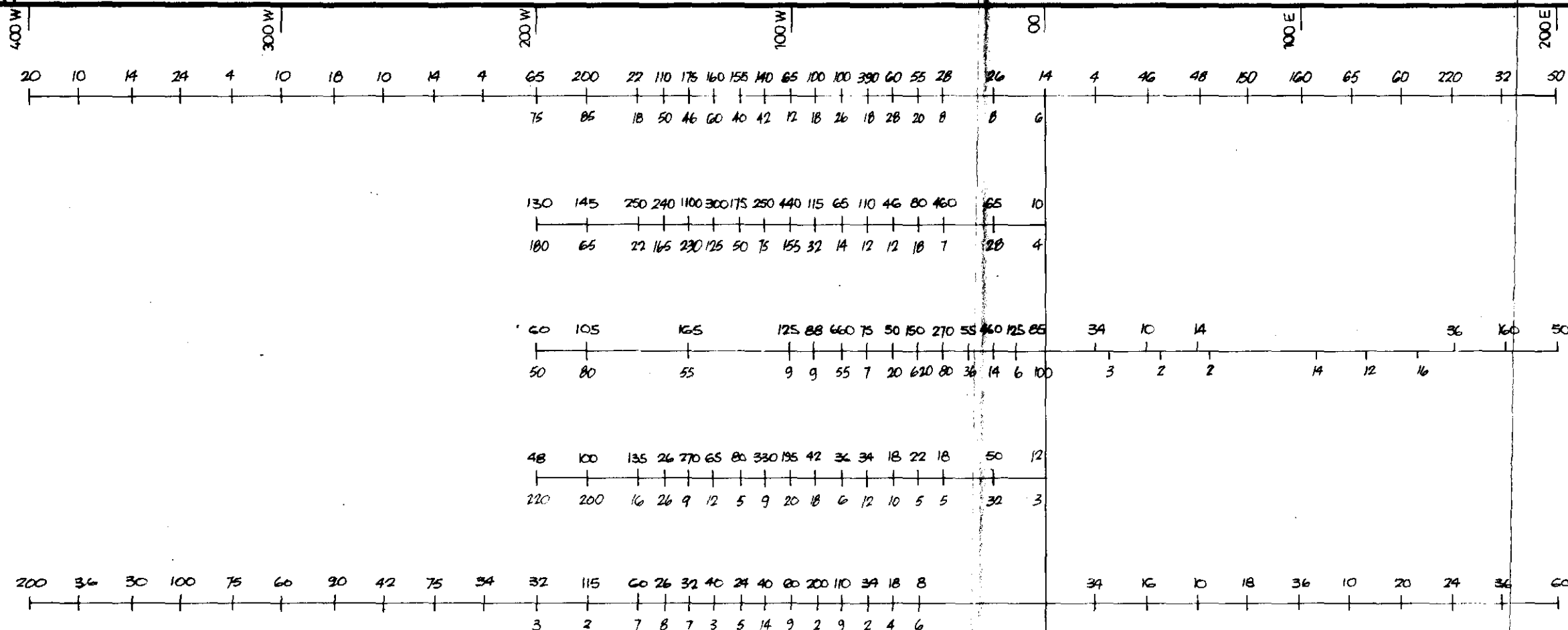
Max-min EM surveys were done on lines 100 S, 00 N and 100 N. Discrete conductors were detected at 00 N 60 W and 100 N 110 W. A pit dug at 100 N 115 W located black carbonaceous shales/phyllite.

One line of gravity was done along line 00 N. The result is interpreted as either a 0.4 mgal anomaly at 00 N 0-80 W or a sharp contact or fault at 00 N 30 E.

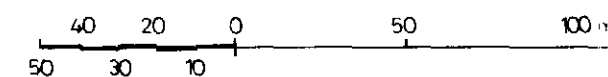
4.2.5 Geochemistry

Soil sampling was done along all cross lines. This outlined a broad Pb anomaly from 100 N to 400 S which has not been closed off to the north or the south. A lower order Pb anomaly in the east of the grid has not been closed off to the east. The zone of best values of Pb is located from 50 N to 100 S between approximately 50 W and 150 W. A smaller area of anomalous As was outlined which is not closed off to the north but appears to be patchy on lines 100 S 200 S and 400 S. It does not appear to be closed off to the west. The zone of best values of As lies from 100 N 130 E to 50 S 200 E.

520017



Pb
As
Analysis in p.p.m.



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E.L. 2/78 GRANITE TOR
ROMULUS EAST ANOMALY 5
SOIL GEOCHEMISTRY
Pb, As

400 S

SCALE 1:2000	DATE 9-8-83
AUTHOR W.D.S.	DRAWN J.L.L.
OFFICE DEVONPORT	REP.No.
DRG.No. 3	FIG.No. D/NP01/083

Several pits were dug to bedrock on the soil samples with highest values. Rock chip sampling from the pits gave very similar results for As and Pb as did the soil samples. (Refer Fig. D/NP 01/098).

Rock chip sampling located a zone of high As, Pb, Ag, Au associated with a breccia zone between 00 N and 50 N at approximately 120m E. Only two of seven samples analysed for gold had values of greater than 0.05 ppm, one at 0.25 ppm and one 2.30 ppm. (Refer Fig. 5).

4.2.6 Conclusions & Recommendations

The Dighem anomaly was located by the max-min EM system. The anomaly on line 100 N may be accounted for by carbonaceous shales.

The geochemical anomaly appears to be related to quartz-chlorite-arsenopyrite veining within a breccia zone. The full extent of the mineralized zone is not yet known. Minor gold is associated with the mineralization but appeared to be concentrated in ppm quantities only in an extremely weathered/gossanous sample. This style of geochemical anomaly does not appear to be similar to that at the nearby Fury Valley Grid. At Romulus East the anomalous geochemical association appears to be Pb, As. On the Fury Valley Grid it appears to be a Zn, Pb, Cu, As, Ni, Co association.

The Au possibilities do not appear good. No other targets appear to be present. No further work is recommended for the grid at this stage.

018

520019

00 E

PIT 5, 44, 10, <1

100 N

PIT 2, 150, 460, <1

PIT 1, 200, 330, 2

50 N

PIT 3, 210, 175, <1
130, 125, <1

PIT 4, 85, 42, <1

4.6%, 1100, 3 x

x 620, 380, 2

x 1.7%, 1100, 8

x 14.2%, 2.6%, 550

x 1350, 400, <1

PIT 7, 330, 333, <1

00 N

PIT 6, 12, 42, <1

x 110, 100, N.A.

x 26, 42, <1

x 24, 60, N.A.

PIT 8, 250, 450, <1

50 S

PIT 9, 28, 250, <1

PIT 10, <2, 310, <1

100 S

PIT 11, 8, 310, <1

PIT No., As, Pb, Ag.

5 cm

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ROMULUS EAST ANOMALY 5
ROCK CHIP SAMPLES
BEDROCK OR OUTCROP

SCALE 1:1000 DATE 14-3-83

AUTHOR W.D.S. DRAWN J.L.L.

OFFICE D'PORT REP.No.

DRG No. D/NP01098 FIG No. 46

01.

520020

W
8

100 N

50 N

00 N

50 S

100 S

< 0.05

0.25 x

x < 0.05
x 0.05

x 2.30
x < 0.05

< 0.05

5 cm

The Shell Company of Australia Limited METALS DIVISION	
E.L. 2/78 GRANITE TOR	
ROMULUS EAST: ANOMALY 5	
GEOCHEMISTRY	
Au.	
SCALE 1:1000	DATE 29-3-83
AUTHOR W.D.S	DRAWN J.L.L
OFFICE D'PORT	REP.No.
DRG No D/NPOV107	FIG No 5

4.3 ANOMALY 9 : SOPHIA

4.3.1 Location & Access

The anomaly is located at AMG 5,376,100 N 389,160 E at the mouth of the Sophia River.

Access is by boat across Lake Mackintosh.

4.3.2 Geophysics

One line of max-min EM was done on line 00 N from 60 E to 320 E to take advantage of the low level of water in Lake Mackintosh. No clear anomaly was detected. (Refer Appendix 3 - Geophysics). (Refer Drawing D/NP 01/133, 134).

4.3.3 Geochemistry

Three pits were dug on line 00 N between 210 E and 250 E, in the area of the "transported gossan". Samples indicate anomalous As, Pb, Zn geochemistry.

4.3.4 Conclusions & Recommendations

The Dighem anomaly was not recovered and is probably under the lake. The area remains of interest because of the presence of Cambrian volcanics and anomalous geochemistry. The presence of arsenic may however indicate a Precambrian association rather than a Cambrian association for the geochemistry.

Further work is needed in the area to try to trace the source of the anomalous geochemistry and to investigate the Cambrian volcanics more fully.

4.4 ANOMALY 13 : BACKWATER

4.4.1 Location & Access

The main anomaly is located at approximately AMG 5,385,500 N 394,300 E on the eastern side of Backwater Creek.

Access is via a walking track from Lake Mackintosh near the position of the drowned mouth of Backwater Creek.

4.4.2 Gridding

Two lines have been extended. The grid now consists of a baseline (200 E) bearing 040° M and three cross lines as follows:

200 E	200N	to	800N
400 N	200E	to	1200E
600 N	200E	to	1200E
800 N	200E	to	1000E

(Refer Plans D/NP 01/63, 64A, 64B, 90, 91).

4.4.3 Geology & Mineralization

No definite outcrops were located. The grid is thought to be underlain by Ordovician Moina Sandstone in the east of the grid and Gordon Limestone in the rest of the grid. Eleven pits were dug however all ended in glacials.

4.4.4 Geophysics

Ground magnetic, max-min EM and gravity surveys were done over the grid. (Refer Appendix 3 - Geophysics). No magnetic anomalies were located.

Max-min EM was done on lines 200 E, 400 N and 600 N. Conductors were located at 200 E 540 N, 600 N 1000 E and either a broad conductor on line 400 N between 340 E and 640 E or individual conductors at those locations.

A line of gravity was done on 400 N. A broad gravity high was detected in the vicinity of 300 E.

4.4.5 Geochemistry

The soil geochemistry shows dispersed areas of elevated Pb values. Pitting at some of the soil sample sites did not get to bedrock and were taken in glacial material. One pit at 600 N 1080 E located boulders of granite. This is associated with a Pb, As, Ba, Co, Zn anomaly. The elevated Pb, Ba, As may be associated with the granite. The anomalous Co may be derived from nearby Tertiary basalt boulders. This anomaly is located at a change in slope. The highest value for Pb (150 ppm) is located at 400 N 200 E associated with As and Ba. Other zones of elevated Pb are associated with high Ba (from 200 ppm Ba up to 800 ppm Ba). These are:

Line 200E 400N and 640N.

Line 400N 200E, 300E

Line 600N 1020-1080E

Line 800N 300E, 420-560E, 600-660E, 840-980E

These may all be related to granite glacial debris. Other Pb, Zn, Ni, Cu associations at 400N 840E and 600N 620-640E may be associated with basalt debris.

4.4.6 Conclusions & Recommendations

The Dighe anomaly was recovered by the max-min EM system. The conductor is probably related to the glacials. The geochemical anomalies are low order.

They are in part at least not related to bedrock
and most likely related to granitic debris within
the glacials.

No further work is recommended for this anomaly.

4.5 ANOMALY 14 : FURY FLATS

4.5.1 Location & Access

The anomaly is centered about AMG 5,390,400 N 397,400 E at the junction of the Fury and Mackintosh Rivers.

Access is best gained by boat from Lake Mackintosh. An emergency helicopter pad has been cleared close to the campsite.

4.5.2 Gridding

An additional grid line was cut and lines were extended. The grid now consists of a baseline (400 E) bearing 040° M and four crosslines as follows:

400 E	280N	to	800N
400 N	200E	to	800E
550 N	400E	to	800E
700 N	200E	to	800E
800 N	300E	to	800E

(Refer Fig. 6 Plans D/NP 01/55, 56, 58, 93, 111).

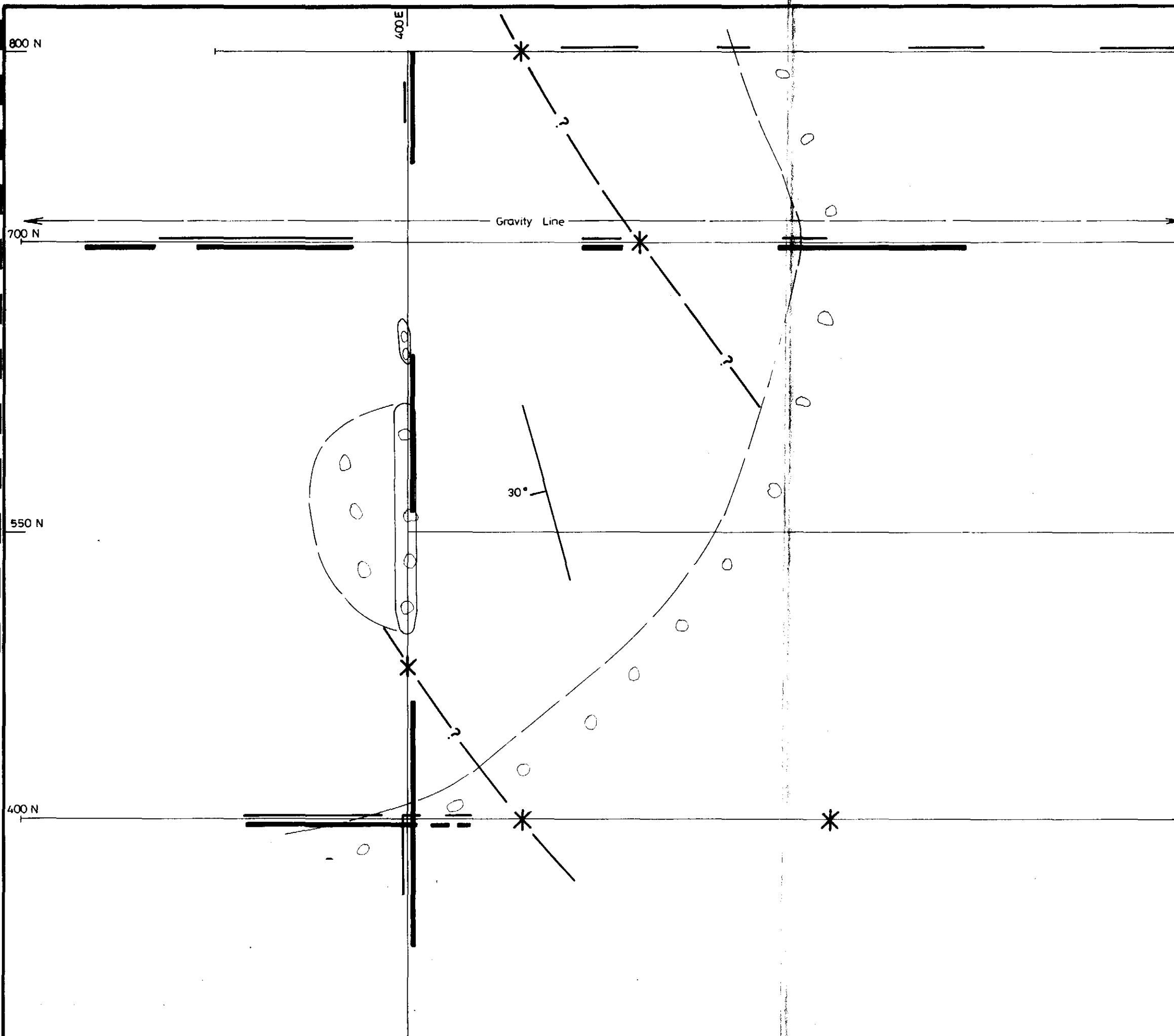
4.5.3 Geology & Mineralization

Ordovician Gordon Limestone crops out north of the river and probably underlies most of the rest of the grid. Much of the grid is covered by alluvial boulder and cobble deposits.

4.5.4 Geophysics

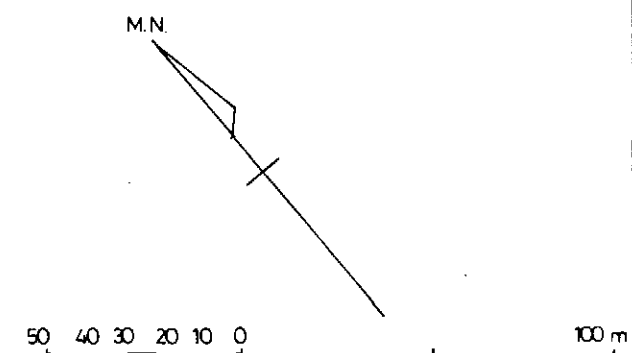
Max-min EM and gravity surveys were done. (Refer Appendix 3 - Geophysics).

520026

**LEGEND**

- Alluvial
- Gordon Limestone
- Max - Min. E.M. Anomalies
- Possible Trace of Anomalies
- Pb Anomaly
- Zn Anomaly

5 cm



The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
FURY FLATS
GEOLOGY/GEOCHEMISTRY/GEOPHYSICS

SCALE	1: 2000	DATE	10 - 8 - 83
AUTHOR	W.D.S.	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP.No.	
DRG.No.	D/NP01/146	FIG.No.	6

Max-min EM was done on lines 400E, 400N, 700N and 800N. Conductors were located at 400E 480N, 800N 460E, 700N 520E and 400N at 540E or one at both 460E and 620E.

A line of gravity was done along 700N. No anomaly was detected.

4.5.5 Geochemistry

The anomalous geochemistry appears to be mainly Pb-Zn anomalies. The major anomaly near 400N 400E has minor As associated with it. Maximum values from different samples are 770 ppm Pb, 830 ppm Zn. This anomaly is located mainly within limestone at the base of a steep slope. Two Zn anomalies located within the alluvium have slightly elevated Ni and may be due to basalt within the alluvium. Other Pb Zn anomalies are scattered low order, generally less than 100 ppm Pb 150 ppm Zn.

4.5.6 Conclusions & Recommendations

The Dighem anomaly has been located by the max-min EM system. Two possibly subparallel EM anomalies were located which dip at shallow angles to the west. These may be due to shaley beds within the limestone which dips at 30° to the west. The soil geochemistry is not associated with the EM anomalies. Some of these anomalies may be due to contamination by basalt, however Pb, Zn values of the order of these anomalies are common throughout the area of limestones.

No further work is recommended for this grid.

027

4.6 ANOMALY 15 : MACKINTOSH

4.6.1 Location & Access

The anomaly is located at approximately AMG 5,390,700 N 396,100 E, east of the Mayday Creek junction with Lake Mackintosh.

Access is by boat along Lake Mackintosh.

4.6.2 Gridding

Additions have been made to the grid because of the lowering of the lake level. The grid now consists of a baseline (500 E) bearing 040° M and three crosslines as follows:

500 E	350N	to	650N
350 N	500E	to	540E
500 N	500E	to	780E
650 N	500E	to	900E

(Refer Plans D/NP 01/061, 092).

4.6.3 Geology & Mineralization

Ordovician Gordon Limestone conformably overlain by Silurian Crotty Quartzite(?) underlies the grid.

4.6.4 Geophysics

Max-min EM was done on lines 500N and 600N. No anomaly was detected.

4.6.5 Geochemistry

The main Pb Zn anomaly occurs on line 650N from 700E to 900E over the whole area of limestone outcrop.

Maximum values are 250 ppm Pb 550 ppm Zn. Associated with these elevated values are high Ba, As, Ni and Co values. Sampling from a pit dug at 650N 740E returned similar values.

On line 500E one sample is anomalous in Pb and Ba in quartzite scree. A pit on the site located mudstone/siltstone fragments. On line 500N, one sample at the base of the slope is anomalous in Pb, Zn in quartzite scree.

4.6.6 Conclusions & Recommendations

The Dighem anomaly has not been recovered and is probably under the lake.

The anomalous Pb Zn is common throughout the limestone areas.

No further work is recommended for this grid.

4.7 ANOMALY 16 : LOWER BROUGHAM

4.7.1 Location & Access

The anomaly at AMG 5,383,000 N 392,800 E on the north bank of the Brougham River.

Access is by boat across Lake Mackintosh then walk up Brougham River for approximately 1 hour. A rough helicopter pad has been cut in the centre of the grid.

4.7.2 Gridding

Some two kilometers of grid lines were cut and flagged at 20 metre intervals. This included a baseline (00 E) bearing 040° M and two crosslines as follows:

00 E	340S	to	400N
00 N	100E	to	160W
40 N	160W	to	520W
400 N	315E	to	340W

The river provides an additional very well exposed section and a compass and topolite survey was used to locate it with respect to the grid.

(Refer Drawing D/NP 01/124, 113, 121, 114, 120).

4.7.3 Geology & Mineralization

The river traverse shows a sequence of approximately 1 km across strike of fine grained quartzite (Cambrian) with some fine grained tuffs and lavas intruded by a feldspar-quartz-biotite porphyry (Cambrian?) in the east and west and also intruded by an alkali granite (Devonian?, Cambrian?) in the west. The fine grained metaquartzites are strongly jointed with obvious silicification emanating from the joints. Pyrite is concentrated along joints and also disseminated

throughout the rock. Minor chlorite-pyrite veins may develop up to 20cm x 5cm in places.

4.7.4 Geophysics

No geophysical surveys were carried out in the area.

4.7.5 Geochemistry

Soil sampling was carried out over the grid and intensive rock chip sampling done along the creek traverses. No anomalous base metal values were reported. Separate rock chip (quartzites) samples returned values of 160 ppm Sn and 50 ppm W.

4.7.6 Conclusions & Recommendations

The area of the Dighem anomaly has been covered although no geophysical method was used to confirm the presence of the anomaly.

Soil and rock chip sampling failed to locate any anomalous base metal values. Sulphide mineralization was however located but is probably related to either the alkali granite intrusive, giving elevated Sn, W values, or the porphyry dyke.

Additional rock chip samples will be submitted for Sn, W analysis to determine if the zone may have potential for Sn, W mineralization.

4.8 WAYS PROSPECT

4.8.1 Location & Access

The grid is located at AMG 5,387,400 N 394,000 E west of Romulus Pup.

Access is via boat along Lake Mackintosh to Backwater Creek then approximately 1 hours walking to the grid along a flagged track.

4.8.2 Gridding

Two additional lines have been cut. The grid now consists of a baseline (1175 E) bearing 020° M and six crosslines as follows:

1175 E	2400N	to	2850N
2400 N	900E	to	1360E
2550 N	895E	to	1495E
2650 N	795E	to	1355E
2700 N	895E	to	1625E
2750 N	895E	to	1625E
2850 N	795E	to	1325E

(Drawings D/NP 01/28, 44, 66, 94, 95).

4.8.3 Geology & Mineralization

The grid covers an area of Ordovician Moina Sandstone with inferred overlying Gordon Limestone. The sandstone/quartzite has been intruded by a feldspar-biotite-quartz porphyry in the south east of the grid. Galena with minor chalcopryrite and pyrite occur disseminated throughout the quartzite at 2700N 1175E. Sericitic alteration accompanies the mineralization.

4.8.4 Geophysics

Max-min EM and gravity surveys were done. (Refer Appendix 3 - Geophysics).

Max-min EM was done along lines 2550N, 2650N, 2750N and 2850N. Conductors were located at 2550N 995E, 2650N 995E, 2700N 1020E (previous year) 2750N 1000E and 2850N 995E. All were shallow conductors dipping shallow to the west.

A line of gravity was done along line 2750N which failed to locate a significant anomaly.

4.8.5 Geochemistry

The soil sample anomaly previously established was centered on 2700N 1120E to 1175E 2620N. This is located between the two main drainages in the area. Pitting at three of the high order geochemical anomalies was carried out at 2700N 1120E, 2650N 1135E, and 2650N 1175E. Pits were dug to 0.5m at the former two locations then augers dug to total depth of 1.5m. Material recovered was obvious alluvial grits. The soil samples in the vicinity had not gone past 1.0m and most were much less, probably due to encountering large boulders similar to those in the pits. The pit dug at 2650N 1175E went to 2m without encountering bedrock. Soils were encountered but pebble horizons indicate they are probably transported.

Rock chip sampling shows zones of high level Pb (90-180 ppm Pb) in sandstone around 2620N 1225E. Float of a feldspar-porphyry with some magnetite veining around 2630N 1170E had Pb values of upto 510 ppm. In the pit at 2700N 1120E high Pb values (360 ppm Pb) were recorded from sheared float at 0.5m.

520034

LEGEND



Alluvials



Maina Sandstone



Quartz - feldspar
porphyry



Max - Min E.M. Anomalies



Possible Trace of Anomalies

2850 N

2750 N

2700 N

2650 N

2550 N

2400 N

800 E

900 E

1000 E

1100 E

1175 E

1200 E

1300 E

1400 E

Gravity Line

Galena Veinlets

creek

creek

T.N. M.N.

50 40 30 20 10 0 50 100m

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
ROMULUS WEST: RAY'S ANOMALY
GEOLOGY / GEOPHYSICS

SCALE 1:2000 DATE 13-5-83

AUTHOR W.D.S. DRAWN J.L.L.

OFFICE DEVONPORT REP.No.

DRG.No. D/NP01/132 FIG.No. 7

5 cm

520036

800 E

900 E

1000 E

1100 E

1175 E

1200 E

1300 E

1400 E

2850 N

2750 N

2700 N

2650 N

2550 N

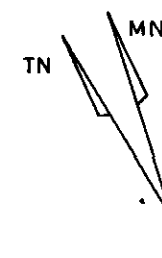
2400 N

8,42,100,8
42,360,60,10

50,42,85,130
8,16,130,10
100,80,30,30

95,230,180,48
150,430,180,50
2,<4,6,4
6,130,10,4
12,510,240,28
4,70,8,<4
12,60,6,12
14,95,80,18
36,180,65,12
155,22,28,14
8,30,10,<4
16,90,10,10

Cu, Pb, Zn, Ni
Analyses in ppm.



5 cm

40 20 0 50 100m
50 30 10

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
ROMULUS WEST : RAY'S ANOMALY
ROCK CHIP ANALYSES
Cu, Pb, Zn, Ni

SCALE	1 2000	DATE	12-4-83
AUTHOR	W.D.S.	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP.No.	
DRG.No.	D/NP01/ 115	FIG.No.	9

520037

4.8.6 Conclusions & Recommendations

A zone of interesting Pb mineralization was located. The results of pitting and rock chip sampling indicated the soil geochemical anomaly is transported a short distance (100m) down hill from its origin within a part of the feldspar-quartz-biotite porphyry and within sandstones intruded by the porphyry.

The max-min EM anomaly is not associated with the geochemical anomaly and is most likely caused by the thickness of alluvials. The gravity survey failed to find any anomaly in the area.

No more work is recommended for this grid. It is thought the porphyry has locally mineralized the quartzite giving the anomaly.

4.9 REGIONAL STREAM SEDIMENT SAMPLING

Stream sediment sampling has been carried out mainly within and adjacent to gridded areas. Several additional drainages have also been covered by stream sediment sampling.

Samples were taken from the -80# fraction and from a separate panned concentrate panned at the site of the sample. (Refer Drawings D/NP 01/103, 104, 105, 106, 135, 141, 149). No statistical treatment has been attempted on the data.

4.9.1 Anio Creek - Mt. Remus Area

Three anomalous zones were outlined. The major anomalous zone is a Sn, W, As, Pb, Au zone along 10 Mile Creek and the adjacent northern stream. This zone is within the Ordovician Sandstone adjacent to the Cambrian porphyry. The topographic map indicates that the anomalous area is a flat zone at the base of a steeper zone and may account for the accumulation of heavy material. the Sn, W and As may be derived from a haematitic stockwork within the Cambrian Porphyry. No Devonian granite float was noticed which might account for the Sn, W anomalies.

A Pb, Zn, As, Au anomaly to the north of the previous anomaly may be part of the same anomaly without any Sn or W. It occupies a similar topographic position and is probably derived from the Cambrian porphyry. Visible gold was noted in the pan at 11152 although no gold was reported in the assays.

A Mo, V (Au, Sn) anomaly extends along the northern boundary of Anio Creek. Four tributaries draining into Anio Creek from the Cambrian Porphyry contain anomalous Mo and V and one contains anomalous Sn and Au.

4.9.2 Vale - Mayday Drainage

This drainage covers mostly areas underlain by Gordon Limestone. One anomalous Pb value and several Zn values were located, along the length of the Mayday Creek. These are not thought to be significant.

4.9.3 Fury Valley Drainage

This has been reported upon in section 4.1. Two Pb, Zn, Co, As anomalies are thought to be associated with carbonaceous phyllite zones. An extensive Sn, W anomalous zone is probably due to glacial debris.

4.9.4 Backwater Creek Drainage

Several individual anomalies occur. One Mo and one Ba anomalies occur in the headwaters and are probably related to the presence of Cambrian volcanics. Three Sn anomalies are distributed further down the drainage and all are thought to be related to alluvium. One isolated Zn may be related to a nearby porphyry intrusive. The -80# stream sediments do not show the presence of the galena exposed in the creek bank at Ray's Anomaly.

4.9.5 White Hawk Creek Drainage

Several separate Zn, Ni anomalous values were recorded. These are due to the basalt in the area. Two panned concentrate Sn anomalous values were reported, probably derived from glacials which are abundant on Romulus West.

One Mo anomaly and two Pb, Zn, Ni anomalies are reported. These may be related to the porphyry intrusive. Rock sample 8193 further up the same drainage is a sandstone with reported pyrite chalcopyrite mineralization. The rock sample assayed 270 ppm Cu, 160 ppm Pb, 110 ppm Zn, 22 ppm Ni, 36 ppm Co and 24 ppm Mo.

4.9.6 Conclusions & Recommendations

Only one zone of the above is thought to be worth further work. This is the Sn, W, Au zone at Mt. Remus which may extend along the entire strike length of the Cambrian(?) exposed in this region.

Follow up stream sediment sampling and some rock chip sampling should be done in the area. Stream sediment sampling is at the moment at approximately 500m spacings.

Much of the outcrop of the Cambrian volcanics in the northern portion of the licence has been covered. The southern portion of the belt has few samples taken. A more intensive survey of the southern portion of the licence is required.

5.0 CONCLUSIONS & RECOMMENDATIONS

Eight anomalies were investigated during the year. Seven were picked as Dighem anomalies and one was located because of the presence of mineralization. The Dighem anomaly has been recovered on five of the anomalies with the possible position of the other two anomalies being under the waters of Lake Mackintosh.

Only one of the anomalies investigated appears to warrant further work. This is the Lower Brougham Anomaly where additional assays on rock chip samples will be done.

Stream sediment samples have been collected over most of the northern portion of the licence. A zone of anomalous Sn, W, Au and one of anomalous Mo, V values will be further investigated.

Stream sediment sampling should be completed over the southern portion of the licence.

APPENDIX 1

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BIBLIOGRAPHY

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APPENDIX 2

PETROGRAPHY

044

Central Mineralogical Services



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18th February, 1983

REPORT CMS 83/2/12

YOUR REFERENCE:	Sample Despatch No. 4317/NP02/WDS/171
DATE RECEIVED:	16th February, 1983
SAMPLE NOS.:	9548, 9549
SUBMITTED BY:	W.D. Smyth
WORK REQUESTED:	Petrology


H.W. Fander, M. Sc.

CENTRAL MINERALOGICAL SERVICES PTY. LTD.

Date 18th February, 1983

SAMPLE REPORT (Mineralogy, Petrology, Ore Microscopy)

Job No. CMS 83/2/12 Date Received: 16.2.1983

Reference Sample Despatch No. 4317/NP02/WDS/171

Sample No. 9548, 9549

Nature of Sample: Hand Specimens

DESCRIPTION SECTION No. 45255, 45256

a. Hand Specimen:

Greenish, fine-grained, with fine sulphides.

b. Microscopic:

The two rocks are very similar and may be described together.

The rocks are classified as quartz-mica schist breccias, containing introduced sulphides. They consist of small and large fragments of fine-grained schist which composed of granular quartz and muscovite laminations with minor chloritised biotite; some fragments contain chlorite pseudomorphs after ?cordierite or a related aluminosilicate mineral, and the ratio of quartz/micas is also variable. Some fragments are strongly crenulated.

Spaces between the schist fragments are filled with vein-quartz and chlorite, accompanied by small arsenopyrite showing all stages of oxidation to fine scorodite and pharmacosiderite pseudomorphs; there are younger veinlets of scorodite and ?jarosite. Apart from arsenopyrite, minor pyrite also occurs, but no other sulphides were seen. No cassiterite was detected; there are small semi-opaque whitish patches which are believed to be aggregates of extremely fine rutile.

H.W. Fander, M. Sc.

IDENTIFICATION

9548, 9549

Quartz-Mica Schist
Breccia

Central Mineralogical Services



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Mr. D.C. Speijers
Geologist
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P.O. Box 860
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25th January, 1983

REPORT CMS 82/12/28

YOUR REFERENCE:	Sample Despatch No. 4207/NP02/JJL/90
DATE RECEIVED:	20th December, 1982
SAMPLE NOS.:	8155 - 8173; 8175 - 8183
SUBMITTED BY:	D.C. Speijers
WORK REQUESTED:	Petrology

H.W. Fander

H.W. Fander, M. Sc.

REPORT CMS 82/12/28

Twenty-eight rock samples were received for petrological examination; thin-sections were prepared of all rocks, and K-stain tests were carried out on offcuts, where necessary. Since the samples appeared to be of a reconnaissance nature, petrological descriptions were kept very brief for economy reasons; if more detailed information is required on any rock or group of rocks, this can be provided subsequently.

Comments

The two major rock types represented in this suite are igneous and low-grade metasedimentary, with only one clastic sediment and two possible tuffs.

The metasediments are low-grade (green-schist facies) schists and metaquartzites; the mica schists generally show a post-metamorphic phase of shearing and crenulation, and the metaquartzites are sericitised, i.e. retrograded. Some of the metaquartzites contain pyrite, probably of pre-metamorphic origin; some are microfractured and veined with chlorite and sericite.

The igneous rocks comprise a series of porphyries, mainly feldspathic, but with sporadic free quartz, generally extensively sericitised, as well as alkali granites, aplite, microgranite, rhyolite and felsites. All seem to be intrusive except for 8162, which is a tuff-lava (i.e. lava with pyroclastic components). It is quite possible that the porphyries, felsites and rhyolite are genetically related, and that the alkali granites, microgranites, and aplite form another subgroup.

Many rocks, regardless of origin, carry evidence of retrograde, low-grade hydrothermal activity, of veining or of metasomatism; sulphides are sporadically distributed.

H.W. Fander, M. Sc.

- 8155 Brecciated Porphyritic Microgranite. Phenocrysts of quartz, chloritised biotite, orthoclase, sericitised ?plagioclase; medium-granular quartz-orthoclase groundmass, accessory magnetite. Chlorite-filled microfractures throughout.
- 8156 Alkali Granite. Mainly orthoclase (65 %), subhedral and poikilitic, subordinate (30-35 %) granular quartz, occasional chloritised biotite and sericitised plagioclase; accessory apatite. Minor microfracturing. Aplite-like.
- 8157 Pyritic, Sericitic Metaquartzite. Small interlocking quartz grains with vague relict clastic textures, intergranular fine sericite; scattered euhedral small pyrite crystals. Mildly metamorphosed orthoquartzite.
- 8158 Porphyritic Felsite. Embayed quartz, sericitised feldspar phenocrysts in medium-grained felsitic mass of quartz, altered feldspar; some micrographic textures. Patches of introduced pale chlorite.
- 8159 Brecciated Porphyritic Felsite. Argillised feldspar phenocrysts, embayed quartz, occasional chloritised biotite, in a felsitic, altered quartz-feldspar mass. Chloritic microfracture fillings. Could be related to 8155, 8158.
- 8160 Pyritic Metaquartzite. Clear mosaic of polygonal quartz grains with scattered euhedral pyrite, a few muscovite patches, crushed pale tourmaline crystals, sericite-filled microfractures. Cp. 8157.
- 8161 Chloritic Metaquartzite. Quartz grains, recrystallized but with relict clastic textures, and fine interstitial chlorite and sericite; micaceous bands. Scattered pyrite. Chlorite and quartz veins. Related to 8157, 8160.
- 8162 Rhyolitic Tuff-Lava. Whole and fragmentary quartz and sericitised feldspar phenocrysts in a flow-banded, argillised, glass mass with altered lava fragments. Flow-brecciated lava with tuff fragments.
- 8163 Altered ?Tuff. Mostly ultrafine illite-sericite with vague relict pyroclastic textures; scattered small quartz grains; quartz-muscovite patches. Thin heavy mineral bands. Perhaps a mixed clastic-pyroclastic rock.
- 8164 Altered ?Tuff. Dominantly fine illite-sericite with a few recognisable shard textures; embedded random quartz splinters. Goethite veinlets with partly oxidised pyrite, ?pyrrhotite.
- 8165 Altered Lithic Sandstone. Coarse grains of quartz, siltstone, ?tuff (8164?), metaquartzite, in clastic quartz matrix with sericite cement. Introduced chlorite, pyrite, K-feldspar, albite, fibrous epidote, replacing rock.
- 8166 Porphyritic Rhyolite. Phenocrysts of quartz, albite and chloritised biotite, rare hornblende; microcrystalline quartz-K-feldspar groundmass. Sheared, brecciated. Wide veins of coarse quartz and epidote.
- 8167 Sheared Porphyritic Felsite. Phenocrysts of quartz, sericitised feldspar, chloritised biotite; poorly-preserved groundmass of felsitic-micrographic quartz/feldspar. Networks of chlorite veinlets, fracture-fillings.

520049

048

Sample
No.

Rock Name - Brief Petrography

- 8168 Porphyritic Microgranite. Phenocrysts of quartz, largely sericitised albite, chloritised biotite, in a microgranular groundmass of quartz, K-feldspar. Accessory apatite. Probably correlatable with 8155.
- 8169 Quartz-Feldspar Breccia. Angular fragments of coarse, stressed quartz and feldspar, sericitised plagioclase, with many chlorite-filled microfractures and granular carbonate patches. Possible crushed pegmatite.
- 8170 Sericitised Feldspathic Metaquartzite. Small interlocking grains of quartz and sericitised feldspar; muscovite shreds, chlorite-pyrrhotite veins. Patches of dravite. Fine banding/preferred orientation. Sericite veinlets.
- 8171 Sheared, Crenulated Schist. Alternating bands of microgranular quartz and matted muscovite; strongly, tightly folded and sheared at right angles to schistosity; development of secondary cleavage.
- 8172 Cordierite-Muscovite Schist. Fine matted-parallel muscovite flakes, small cordierite poikiloblasts with carbonaceous inclusions, chlorite shreds, interstitial fine quartz. Fine leucoxene throughout.
- 8173 Sericitised Feldspar Porphyry. Large phenocrysts of almost completely sericitised albite, chloritised hornblende; large altered spherulites; microcrystalline groundmass. Felsic to intermediate composition. Introduced pyrite.
- 8175 Brecciated Quartz-Muscovite Schist. Thin muscovite laminations, intervening microgranular quartz bands with albite; chlorite shreds. Blocky fracturing, and some folding. Cp. 8171.
- 8176 Sericitised Feldspar Porphyry. Large sericitised feldspar (?plagioclase) phenocrysts, occasional embayed quartz; groundmass of small spherulites. Chloritised hornblende, leucoxenised opaques. Probably altered rhyolite-dacite. Cp. 8173.
- 8177 Sheared, Crenulated Schist. Thin, closely-spaced bands of matted muscovite with interleaved chlorite, intervening quartz with crenulated micas; mica bands represent secondary foliation. Cp. 8171, 8175.
- 8178 Chloritic Metaquartzite. Mainly interlocking small quartz grains, intergranular chlorite shreds. Many thin parallel fractures filled with pale chlorite, sericite, with connecting cross-fractures. Cp. 8161.
- 8179 Sericitised Quartz-Feldspar Porphyry. Completely sericitised feldspar phenocrysts and embayed quartz, groundmass of small altered spherulites; chlorite patches. Broadly rhyolitic composition. Cp. 8176, 8173.
- 8180 Aplite. Medium-grained subhedral orthoclase (50 %) with scattered quartz (30 %) and euhedral, partly argillised albite (20 %), a few altered biotite shreds. Could be termed alkali microgranite.
- 8181 Sericitised Quartz-Feldspar Porphyry. Extensively sericitised albite, embayed quartz phenocrysts, some altered spherulites; microcrystalline quartz-feldspar groundmass. Cp. 8179 et al. All are minor intrusives.

520050

Sample
No.

Rock Name - Brief Petrography

-
- 8182 Alkali Granite. About 65 % orthoclase, 30 % quartz, 5 % argillised plagioclase. Coarsely-crystalline. Accessory
 7xenotime. Possibly related to 8180 and 8156.
- 8183 Sericitised Feldspathic Metaquartzite. Microgranular quartz and interlocking patches of fine sericitised feldspar,
 with small muscovite flakes. Quartz/oxidised chlorite veins. All pervasively iron-stained. Cp. 8170.

T.S. 44898 - 44925

520051

050

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21st December, 1982

REPORT CMS 82/11/33

YOUR REFERENCE:	Sample Despatch No. 4204/NP01/JJL/87
DATE RECEIVED:	24th November, 1982
SAMPLE NOS.:	7 Samples
SUBMITTED BY:	D.C. Speijers
WORK REQUESTED:	Petrology


H.W. Fander, M. Sc.

REPORT CMS 82/11/33

Seven rock specimens were received for petrological examination; thin-sections were prepared, and two offcuts were subjected to potash staining tests.

Summary

Several of the rocks are thoroughly and pervasively sericitised, which has obliterated textural features and minerals, making accurate classification difficult; thus, interpretations are somewhat tentative. However, there is reasonable evidence that three of them were pyroclastics of rhyolitic composition (8185, 8187, 8188). 8184 may have been a volcanomict conglomerate, i.e. containing reworked volcanic material, but it is possible that it was, say, a lapilli-tuff.

8193 is an orthoquartzite verging on a quartzose grit, which was stressed and incipiently brecciated, then weakly pyritised.

8195 and 8200 are porphyritic rhyolites, very probably genetically related, and intrusive rather than extrusive; one is sericitised, the other is fairly fresh.

H.W. Fander, M. Sc.

p16	Rock Type - Composition	Fabric	Minor Minerals	Comments
4 S. 68)	<u>Sericitised Conglomerate</u> . Rounded to sub-angular pebbles, granules of sericitised volcanics; stressed quartz, sericitised feldspar grains; fine sericite cement.	Poorly-sorted/sized, with pebbles up to 20 mm in sandy matrix.	Introduced pyrite, traces of fine tourmaline.	Volcanic pebbles are of felsic composition and include probable tuffs and lavas. Sericitisation was hydrothermal.
5	<u>Sericitised ?Volcanic</u> . Dominantly composed of featureless, fine interlocking quartz and sericite, with evenly distributed small quartz splinters.	Quartz splinters have subparallel orientation. No relict textures.	Apatite grains, euhedral zircon. Small chlorite patches. Trace pyrite.	Could be extrusive or pyroclastic, but primary diagnostic features mostly obliterated by sericitisation.
7	<u>Sericitised ?Volcanic</u> . Small quartz and altered feldspar splinters embedded in fine sericite/quartz with relict ?shard textures.	Fine-grained, faintly bedded, homogeneous. Suspected shards.	Isolated embayed quartz crystals. Chlorite veinlets. Trace pyrite.	Believed to be an altered vitric tuff with quartz xenocrysts. Broadly rhyolitic composition.
8	<u>Altered ?Volcanic</u> . Mostly fine sericite with embedded quartz grains, vaguely defined ?volcanic material. Zones of magnetite-pyrite-quartz-chlorite.	Original grainsizes coarser, but obscured by sericitisation.	Lenses of fine quartzose sand. Siderite patches in magnetite-pyrite zones.	Thought to be a tuff, but may be of mixed clastic/pyroclastic origin. Magnetite-pyrite zones are hydrothermal.
93	<u>Pyritised Quartzite</u> . Pebbles, granules and sand-sized grains of strongly stressed, microfractured quartz; quartz-grain matrix, quartz cement. Small pyrite crystals.	Poorly-sorted/sized, but mostly sand-sized, close-packed, all stressed.	A few chert grains. Fine interstitial sericite films.	Orthoquartzite. Thoroughly lithified, then stressed before introduction of pyrite.
95	<u>Sericitised Porphyritic Rhyolite</u> . Large quartz and smaller sericitised feldspar phenocrysts, chloritised biotite, in altered quartz-feldspar groundmass.	Groundmass is medium-crystalline, fabric is intrusive; no flow features.	Quartz-chlorite veins. Goethite veinlets. Leucoxene.	Typical shallow/minor intrusive. Rhyolitic composition is inferred, rock could be rhyodacite (toscanite).
10 S. 74)	<u>Porphyritic Rhyolite</u> . Very large embayed quartz, sericitised plagioclase, fresh K-feldspar phenocrysts, chloritised biotite, in quartz/K-feldspar groundmass.	Phenocrysts up to 10 mm. Medium-crystalline groundmass. Uniform fabric.	Leucoxenised oxide opaques. Massive chlorite veins. Zircon.	Verging on a microgranite. Very probably the fresher equivalent of 8195. Minor intrusive.

APPENDIX 3

GEOPHYSICS

GEOPHYSICS AT GRANITE TOR - NOVEMBER - DECEMBER, 19821.0 Summary

During the November - December field season in 1982, max-min was done at Ray's Prospect, Fury Flats, Alexandra Hills, Backwater, Romulus East, Fury Valley, Sophia and Mackintosh; these being the areas that had shown anomalous geochem. or interesting geology in earlier seasons.

Discrete max-min anomalies were detected at Ray's Prospect, Fury Flats, Alexandra Hills, Backwater, Romulus East and Fury Valley, hence the Dighem features in these areas have been ground located. These areas have now all been covered with short lines of gravity to test the existence of excess mass associated with the conductors.

No EM anomalies were observed at Sophia or Mackintosh, implying that the Dighem anomalies have not yet been located, and probably now lie beneath Lake Mackintosh.

A traverse of VLF and magnetics was done up the Brougham River, in order to gain some idea of rock properties and the usefulness of these two techniques as mapping tools.

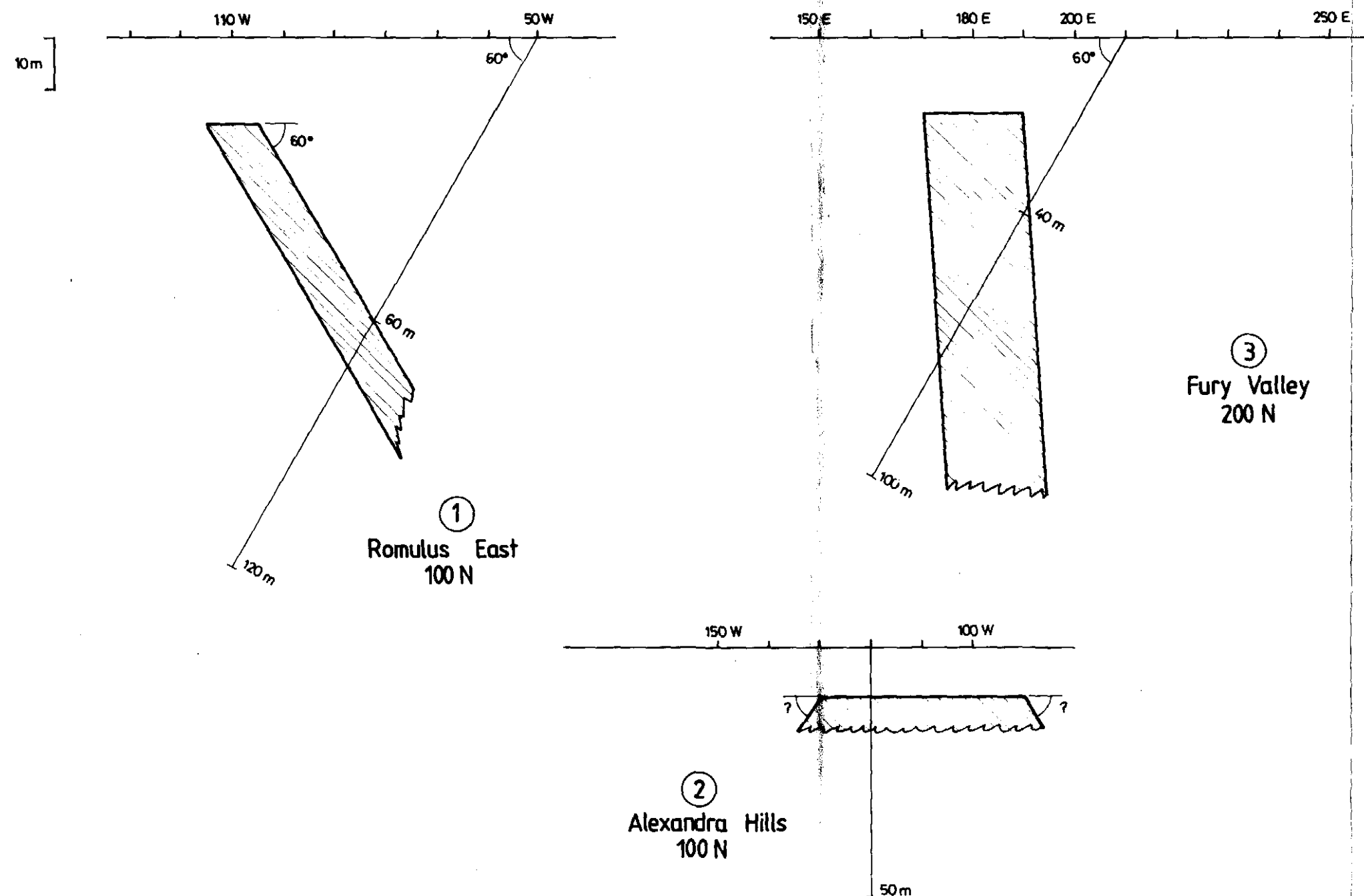
1.1 Proposed Drillholes

The following drillholes are proposed, to test the sources of combined em/gravity(?) / geochem. anomalies (in order of priority):-

- (1) Romulus East - Location 100N, 50W
Inclination: 60° to grid W
The target is at 60 metres, and a total hole depth of 100-120m should be sufficient.
- (2) Alexandra Hills Location: 100N, 120W
Inclination: Vertical
The target is at 10-20m and a total hole depth of 50 metres should be sufficient. (This location may be changed after additional max-min is done, as the entire grid has not yet been covered).
- (3) Fury Valley? - Location: 200N, 210E
Inclination: 60° to grid W
The target is a 30-50m and a total hole depth of 100m should be sufficient. (Note: I have not yet seen the soil geochem. results, and gravity should be done on 200N before drilling).

This drilling would total 250-270m, for a total of \$27,000, at \$100 per metre. (Note that these holes have been located on the basis of the geophysics only - no consideration has been given to questions of suitable drill pads etc., as this would best be considered by someone with better knowledge of the grids).

If the geochem/geology is sufficiently interesting to compensate for the lack of distinct gravity anomalies, the other conductors could be tested by drillholes at:-



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E.L. 2/78 GRANITE TOR
FIG. 2 PROPOSED DRILL TARGETS

SCALE 1:1000	DATE 24-12-82
AUTHOR G. OAKES	DRAWN J.L.L.
OFFICE DEVONPORT	REP.No.
DRG.No. D/NP01/082	FIG.No.

520058

- (4) Backwater - Location 400N, 340E
Inclination: Vertical
Max-min suggests a shallow target, whereas gravity suggests a deep target, if anything. A 100m hole should be sufficient to cover both possibilities.
- (5) Ray's Prospect - Location 2750N, 960E
Inclination: Vertical
The target is at 40m and a total hole depth of 80-100m should be sufficient.
- (6) Fury Flats - Location 700N, 480E
Inclination: Vertical
The target is at 40-60m and a total hole depth of 80-100m should be sufficient.
- (7) Fury Valley - A second hole in the vicinity of 800N, 360E may be worth considering if the results of infill max-min lines, and drilling at 200N are encouraging. (A very low priority target, given the poor gravity on 600N).

2.0 Follow-up Details

2.1 Ray's Prospect

Work done - max-min: 2550N 915 - 1415E
2650N 875 - 1135E
2750N 875 - 1275E
2850N 935 - 1235E

gravity: 2750N 795 - 1175E

magnetics:

Results - (1) Max-min gave conductors at:

- (i) 2550N, 995E
(ii) 2650N, 995E
(iii) 2700N, 1020E dip is shallow to west
(iv) 2750N, 1000E (30°)
(v) 2850N, 995E depth 15-30m

The conductivity-thickness is 4 at 2700N and 1.5-2 elsewhere (details are on drawings). increases at low frequency, in general, indicating a moderate conductor.

The conductor appears to be dying off to the south, but it could well extend further north (it has not really been closed off in either direction, therefore it has a strike length of 300m).

(2) No significant gravity anomaly was detected over the conductor. If there was a body of significant tonnage potential within 30m of the surface, I would have expected a detectable gravity anomaly, so the area is downgraded by the lack of any anomaly.

(3) Magnetics:

058

1035 E

1135 E

520059

Approx top of
max-min conductorV.L.F. conductor
axisGeochem
(450ppm Pb)

Topography

60-75°

Conductor
($\sigma-T > 20$)The Shell Company of Australia Limited
METALS DIVISIONE.L. 2/78 GRANITE TOR
RAYS ANOMALY
INTERPRETED BODY

SCALE DATE 1-6-82

AUTHOR G.O. DRAWN H.L.H.

OFFICE DEVONPORT REP.No.

DRG No 0/NP01071 FIG No 1

Recommendations - We have found a reasonable conductor with good strike length and in the right location with respect to the geochem anomaly on 2700N (I haven't seen the geochem etc. done this year, as yet). This body is downgraded significantly by the lack of a gravity anomaly, however.

The conductor could be tested by a vertical drillhole at 2750N, 960E. The target would be at 40m and a total hole depth of 80-100m should be sufficient. The area would need to be upgraded considerably by geochem or geology before this hole would be worthwhile, however.

2.2 Fury Flats

Work done - max-min:	400E	420-620N
	400N	280-720E
	700N	280-720E
	800N	380-720E

gravity: 700N 280-680E

magnetics:

Results: (1) Conductors were located at:

- (i) 400E, 480N
- (ii) 400N - a flat-lying conductor centred on 540E or 2, at 460E and 620E? (Cannot be resolved on max-min alone, but I tend to favour a flat-lying conductor).
- (iii) 700N, 520E
- (iv) 800N, 460E

The conductor on 700N and 800N appears to dip shallowly west, from a depth of 15-30m (although depth and interpretation is a bit dubious as the conductor does not strike perpendicular to the lines). The conductivity-thickness is 2.5 at 700N and increasing at low frequency, making it a reasonable conductor (probably slightly better than at Ray's Prospect).

The conductor on 400N could well be just a surficial conductor (e.g. related to glacial overburden).

(2) The gravity line did not give any anomaly of any consequence hence the area is downgraded.

(3) Magnetics:

Recommendations: The conductor here is slightly better than that at Ray's prospect and it also appears to have a reasonable strike length. However the geological situation is similar at both areas, and neither has any significant gravity response. Unless the geochem upgrades the area considerably no further work should be done here.

If the geochem upgrades the area, the anomaly could be tested by a vertical hole at 700N, 480E. The target zone would be at 40-60m and a total hole depth of 100m should be sufficient.

(If Ray's prospect gives any interest after drilling(?) then Fury Flats is obviously worth reconsidering.

2.3 Alexandra Hills

Work done - max-min: 300N 620W-240W
 200N 420W- 80W
 100N 420W- 80W

gravity: 100N 0 -340W

Results: (1) A conductor was detected on the eastern ends of lines 100N and 200N. The eastern edge of the anomaly was not surveyed, therefore no information on the sttitude of the body is available, but a shallow, broad conductor would probably be reasonable, and would fit the VLF and DIGHEM results.

Assuming a dip of 30° , the anomaly yields a conductivity-thickness of 2-4, but possibly decreasing at low frequency (?). This suggests a reasonable to good conductor, but possibly just a surficial one (which would fit the buttongrass swamp covering the area). A depth of 30m at 200N and 15m at 100N was obtained.

(2) Gravity gave a 0.2 mgal anomaly at 100N, 120W (directly over the max-min conductor). This anomaly lies within a 0.6 mgal low, suggesting that a change in overburden thickness is cancelling a larger gravity anomaly. Alternately 0.2 mgal is on the detection limit for the survey, so I don't have a low of confidence in its reality.

The anomaly is quite narrow, consistent with the shallow interpreted depth of the conductor.

Recommendations - If there was appreciable mineralization associated with a broad, shallow body, I would have expected a larger gravity anomalu, however this may be explained by overburden effects. A good conductor with a gravity association is definitely worth testing with a shallow drillhole, especially as there is interesting geology in the area.

At this stage, a vertical hole at 100N, 120W is suggested. A total depth of 50m should be sufficient to test a target at 10-20m. Before a hole is drilled however, the entire grid should be covered with max-min: i.e. lines 200S, 100S, ON and 100N, 200N after extending them 150m to the east. This work would require 1-2 days only and would enable an optimum drilling location to be selected.

2.4 Backwater

Work done - max-min: 200E 280N- 720N
 400N 280E-1120E
 600N 280E-1120E

gravity: 400N 200E-900E

Results: (1) Conductors were detected at:

- (i) 200E, 540N - dip is shallow to the south, at a depth 30m and 0.6 (a poor conductor).
- (ii) 600N, 1000E - 2(?), but generally broad and unexciting.
- (iii) 400N - either a flat-lying conductor between 340E and 640E (1, depth 30m) or 2 conductors at 340E and 640E (dip unknown, 1(?), depth 15m(?)).

The max-min is generally fairly unexciting (possibly just variable surficial conditions); the DIGHEM feature has probably been located, but nothing really stands out.

(2) Gravity was done on line 400N to determine if a mass excess was associated with the best conductors in the area. A very broad gravity high was detected in the vicinity of 300E, with a broad low at 600-700E. While the high overlies the conductor at 340E(?), it is not very convincing as it is much too broad to be due to a thin, shallow conductor at 340E and in the wrong location to be due to a broad conductor at 340-640E.

Recommendations - Neither the max-min nor the gravity is very exciting, and they do not tie together very well. Unless the geology or geochemistry upgrades the area, no further work is recommended.

If the geochem is sufficiently interesting to warrant drilling, a vertical hole at 400N, 340E would test the best geophysics. The max-min suggests a shallow target while the gravity favours a deeper one - a 100m hole should be adequate to test both possibilities.

2.5 Romulus East

Work done - max-min: 100S 320W-120E
 ON OE-120E (extension)
 100N 320W-120E

gravity: ON 240W-200E

magnetics: 100N 400W-200E
 100S 400W-200E

Results: (see fig. 1 also)

(1) Discrete conductors were detected at

- (a) ON, 60W - 2 and decreasing at low frequency,
 depth 30m, dip 60°W
- (b) 100N, 110W - 4 and decreasing at low frequency,
 depth 15m, dip 60°E.

(2) The gravity gave rather ambiguous results with 2 possible interpretations being reasonable:

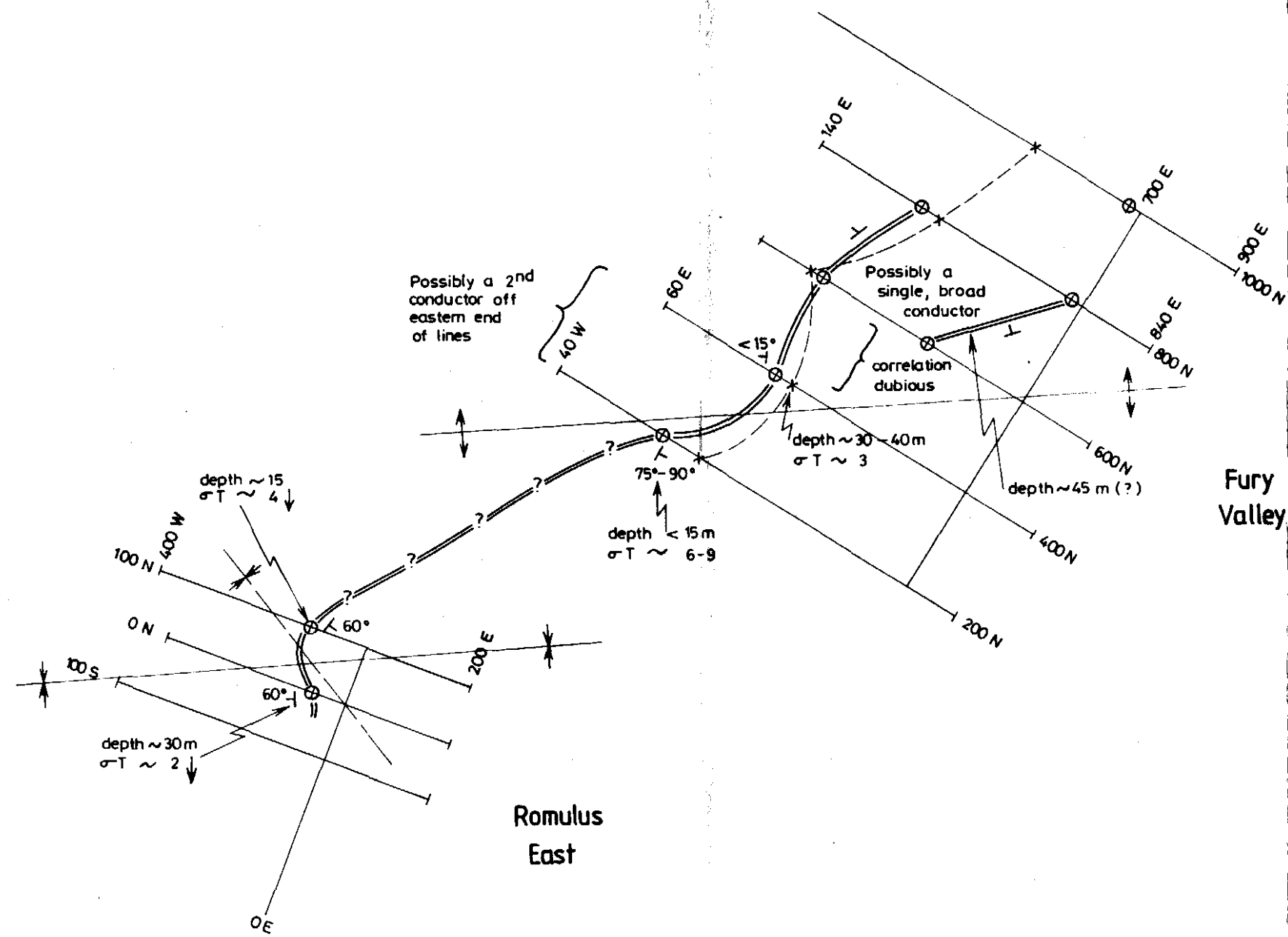
- (a) a 0.4 mgal anomaly at ON, 0-80W and superimposed on a strong regional gradient. The shape of the anomaly would be consistent with a westerly dipping conductor. If correct this interpretation upgrades the max-min/geochem anomaly considerably.
- (b) a sharp contact or fault at ON, 30E this interpretation would fit the topography well.

(3) No magnetic anomaly of any consequence was detected.

Recommendations - The reasonable-good conductor detected by max-min has located the DIGHEM anomaly and suggests that the probable cause is black shales (probably the same unit as seen at Fury Valley). However, there is a good conductor and possible gravity association with the conductor, hence it is certainly worth testing with a drillhole into the best conductor (on line 100N).

Thus a hole at 100N, 50W and inclined 60° to grid west is recommended. The target would be at 60m and a total hole depth of 100-120m should be sufficient.

If any interest remains in the area after this drilling, an attempt should be made to grid this area between Romulus East and Fury Valley, and survey the area with genie or max-min.



LEGEND

- ⊕—⊕ CONDUCTOR
- x---x MAGNETIC TREND (broad anomaly)
- | AFTER σ_T DECREASING AT LOW FREQUENCY
- X FOLD AXIS (very conjectural)

5 cm

The Shell Company of Australia Limited
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E.L. 2/78 GRANITE TOR
FIG.1 ROMULUS EAST,
FURY VALLEY
GEOPHYSICAL INTERPRETATION

SCALE 1:10000	DATE 24-12-82
AUTHOR G. OAKES	DRAWN J. L.L.
OFFICE DEVONPORT	REP.No.
DRG No D/NP01/081	FIG No

2.6 Fury Valley (see fig. 1 also)

Work done - max-min: 1000N 60E-820E
 800N 220E-760E
 600N 220E-780E
 400N 120E-760E
 200N 0E-720E

gravity: 600N 140E-840E

magnetics: 1000N 180W-900E
 800N 140E-840E
 600N 140E-840E
 400N 60E-840E
 200N 20E-800E

Results - (1) Max-min gave conductors at:

- (i) 200N, 180E (6-9, depth 15m, dip is subvertical to steeply east).
- (ii) 400N, 300E (3, depth 30-40m, dip very shallow to the west).
- (iii) 600N - The max-min character changes markedly between 400N and 600N (partly due to glacial cover?). There are either 2 conductors (at 280E and 500E, probably fairly deep, e.g. 45m +, and dipping west; by comparison to fig. 67 of Ketola and Puranen) or a single, broad body which is probably also quite deep. The magnetics would tend to favour 2 conductors with the western one being magnetic also, and hence possibly correlating to the conductor on 200N/400N. The gravity would maybe favour a single body of low density and hence no interest.

Another possibility is that 2 conductors/ a single broad conductor, were detected on all lines, but that lines 200N and 400N did not extend far enough to the west to cover the western anomaly. The question is not well resolved at all - infill lines at 100m spacing may be useful to help the interpretation.

- (iv) 800N - a similar anomaly to that on 600N was observed with fairly deep conductors at 360E and 680E or a fairly broad body between these stations.

No discrete anomaly was observed on line 100N.

(2) The gravity gave a fairly broad low at about 600N, 380E suggesting that the conductor on 600N is broad and of little interest. Unfortunately the gravity line was done too far north to be of much relevance to the conductor on line 200N if there are indeed 2 different bodies to the north and south of 500N.

(3) The magnetics gave anomalies at:

1000N : 80nT broad anomaly at 400-600E (deep source, beneath
glacials?)
800 N : broad 150nT anomaly at 300-500E
600 N : broad 150nT anomaly to west of 300E
400 N : 80nT anomaly at 340E
200 N : 90nT anomaly at 250E

Recommendations - There are possibly 2 different bodies to the south and north of 500N (i.e. the area of dubious correlation in fig. 1). Infill lines at 100m spacing should be done to help resolve this problem and a line of gravity done on 200N to test the conductor there.

Despite this problem, the DIGHEM feature has been located and as for Romulus East, probably correlates to a black shale unit. However, the area has good geochem (although I have not yet seen the soil results) the conductor at 200N 180 is the best seen in this season's follow-up and it has a magnetic association. If the soil geochem or gravity suggested above is encouraging then the conductor should be tested by a hole at 200N 210E and inclined 60°W. The target zone is at 30-50m and a total hole depth of 100m should be sufficient.

The significance of the conductors to the north of 500N is dubious at this stage due to the gravity on 600N. If the infill work suggests that there are 2 conductors rather than a broad conductor then the anomaly at 800N 360E is of some interest due to its magnetic association and should be drilled if the drilling results at 200N are encouraging. the gravity results on 600N suggest that this conductor is unlikely to be of much interest however.

2.7 Sophia

Work done - max-min: ON 60E-320E (work on line 400S
was cancelled as the genie system
was not available)

Results - No clear anomaly was detected, although a weak
conductor was possibly seen at 200E with another anomaly
off the eastern end of the line (???).

Recommendations - The DIGHEM anomaly has not yet been
located, and probably won't be located easily while Lake
Mackintosh is in the way. The area needs to be upgraded
considerably by geology or geochem in which case some way of
surveying across the lake is still required. (IP or genie
are probably the best bets).

2.8 Mackintosh

Work done - max-min: 500N 580-700E
650N 580-840E

Results - No anomaly was detected.

Recommendations - As for Sophia, the DIGHEM anomaly has not
yet been located and probably won't be located easily (the
lake here presents even more problems than at Sophia).
Hence, unless the geology or geochem is particularly
interesting no further work is recommended.

TABLE 1

Stream Sediment Sampling

520068

Sample No.	Cu	Pb	Zn	Ni	Co	Bi	Fe%	Mn	As	W	Ba	Sn	Ta	Mo
8101	12	22	70	30	8		1.35	210	3	15	180	4		36
8102	12	8	6	32	<4		0.62	44	4	10	105	6		75
8103	16	20	80	28	8		1.55	460	7	10	80	6		34
8104	18	16	55	36	6		2.35	170	6	10	390	14		36
8105	12	4	28	20	<4		0.56	48	4	10	105	4		44
8106	16	18	70	38	6		1.30	380	4	10	140	<4		55
8107	10	<4	6	28	<4		0.42	28	3	10	40	12		60
8119	10	10	42	16	<4		0.72	260	4	10	50	<4		42
8120	8	8	6	20	<4		0.80	50	5	15	65	10		60
8121	8	8	80	18	<4		0.90	30	5	15	75	4		36
8122	12	14	60	34	8		1.25	200	4	<10	95	4		42
8123	10	10	14	16	<4		0.65	165	2	15	210	6		46
8124	10	10	18	22	<4		0.59	90	<2	15	270	4		44
8125	10	12	12	18	<4		0.42	100	3	15	280	<4		36
8126	8	6	4	20	<4		0.28	30	3	15	160	4		60
8127	12	8	4	14	<4		0.32	32	3	10	160	4		34
8128	10	<4	4	16	<4		0.34	28	3	10	110	8		55
8129	8	<4	14	18	<4		0.33	20	2	10	60	8		36
8130	12	8	60	26	<4		0.69	115	6	10	55	<4		40
8131	22	24	18	12	<4		0.90	70	<2	15	800	44		40
8132	16	16	20	12	<4		0.95	50	4	20	690	8		38
8133	6	10	14	8	<4		0.45	50	<2	15	580	105		32
8134	6	8	16	12	<4		0.55	85	<2	<10	220	55		40
8135	8	12	24	6	<4		0.50	95	<2	25	240	85		40
8136	14	14	16	16	<4		1.50	85	<2	<10	310	12		65
8137	22	10	14	12	<4		1.95	170	6	25	690	6		42
8138	8	10	22	8	<4		0.55	85	<2	10	220	75		32
8139	10	8	16	8	<4		0.65	90	2	10	160	18		30
8140	4	4	6	8	<4		0.20	34	<2	<10	85	12		36
9520	6	4	10	14	<4		0.45	60	<2	10	110	44		40
9521	14	12	48	24	<4		1.30	500	<2	<10	610	8		28
9522	12	14	48	50	<4		0.80	200	<2	<10	520	4		42
9523	8	6	22	12	<4		0.50	120	<2	<10	360	22		46
9524	10	6	22	16	<4		0.65	120	<2	20	410	50		48
9525	10	10	48	18	<4		1.20	260	<2	<10	550	10		22
9526	12	14	46	22	<4		1.50	410	<2	10	740	6		30
9527	8	12	50	22	<4		1.65	250	<2	<10	730	<4		18
8109	18	55	95	46	10		1.50	470	4	15	195	4		28
8110	12	<4	4	20	<4		0.35	44	5	15	45	24		60
8111	8	<4	12	22	<4		0.35	30	<2	15	45	8		42
8112	20	40	70	70	16		2.85	540	4	<10	180	14		20
8113	14	18	30	42	6		1.30	240	4	20	185	32		40
8114	28	12	130	135	26		6.80	490	<2	<10	160	6		8
8115	14	6	28	38	6		1.35	130	3	<10	65	12		36
8116	12	8	12	28	<4		0.95	110	2	15	180	24		48

TABLE 1

Stream Sediment Sampling

520069

Sample No.	Cu	Pb	Zn	Ni	Co	Bi	Fe%	Mn	As	W	Ba	Sn	V	Mo
11101	16	10	16	26	<4	10	1.10	140	<2		410		80	36
11103	18	10	46	24	6	12	1.65	480	2		460		120	44
11105	16	10	40	26	6	10	1.45	400	4		600		80	26
11107	18	12	36	26	8	10	1.65	700	4		690		140	60
11109	18	14	30	30	6	10	1.60	370	4		570		50	12
11111	22	20	24	30	6	10	1.70	430	3		390		40	8
11113	34	18	32	20	8	12	2.20	790	6		490		40	6
11115	14	26	24	24	<4	6	1.10	65	4		230		30	10
11117	16	20	24	28	<4	8	1.50	340	4		330		30	10
11119	22	12	42	24	4	10	1.85	1000	4		580		30	8
11121	18	10	36	14	8	8	1.60	1400	2		600		60	8
11122	16	16	32	22	8	12	1.55	1350	5		580		40	8
11125	14	12	16	20	<4	8	1.15	270	<2		410		20	6
11127	22	14	28	16	<4	8	1.45	340	<2		470		30	8
11129	14	24	30	24	<4	10	1.50	270	2		390		30	8
11131	12	14	32	20	<4	10	1.50	370	2		580		40	8
11133	16	24	28	32	<4	8	1.80	400	4		570		40	8
11135	12	14	34	18	<4	10	1.90	640	<2		650		50	10
11137	18	16	26	14	10	10	2.60	600	4		690		40	8
11139	16	20	34	26	6	10	1.55	1150	<2		700		40	8
11141	12	12	38	18	<4	10	1.65	500	3		730		30	10
11143	20	14	20	24	8	10	1.80	520	2		620		50	8
11145	12	10	34	10	<4	8	1.20	460	5		700		30	6
11147	14	12	38	26	<4	12	1.70	540	7		630		40	6
11149	28	46	80	28	14	10	2.45	3000	8		510		60	12
11151	22	42	60	26	4	10	1.65	700	3		520		40	10
Cu	Pb	Zn	Ni	Bi	As	W	Ba	Sn	Mo	Au				
11102	6	8	16	10	<4	9	20	450	55	8	0.35	Panned Conc.		
11104	10	18	55	20	<4	5	15	490	8	8	<0.05	Panned Conc.		
11106	8	8	32	14	<4	4	<10	600	8	8	<0.05	P.C.		
11108	10	6	42	14	<4	7	20	690	4	10	<0.05	P.C.		
11110	8	14	30	14	<4	4	10	670	<4	6	<0.05	P.C.		
11112	12	18	28	12	<4	3	70	390	28	6	<0.05	P.C.		
11114	12	8	22	12	<4	4	25	540	4	6	<0.05	P.C.		
11116	6	20	42	12	<4	3	15	120	12	8	<0.05	P.C.		
11118	14	12	30	16	<4	<2	<10	280	8	22	<0.05	P.C.		
11120	20	26	65	28	<4	9	80	560	8	8	<0.05	P.C.		
11122	12	12	55	18	<4	6	20	660	8	6	<0.05	P.C.		
11124	12	10	34	16	<4	6	10	650	6	6	<0.05	P.C.		
11126	8	8	24	10	<4	2	15	310	60	6	<0.05	P.C.		
11128	32	65	65	20	<4	16	280	410	155	4	1.20	P.C.		
11130	10	30	34	10	<4	10	220	430	24	4	<0.05	P.C.		
11132	16	42	42	14	<4	14	185	500	4	10	<0.05	P.C.		
11134	8	28	26	10	<4	3	95	560	4	<4	<0.05	P.C.		
11136	8	20	32	10	<4	7	220	700	12	4	<0.05	P.C.		
11138	10	18	28	14	<4	8	90	880	4	4	<0.05	P.C.		
11140	12	14	34	14	<4	4	20	700	<4	10	<0.05	P.C.		
11142	6	12	34	12	<4	4	10	670	<4	8	<0.05	P.C.		
11144	14	12	30	10	<4	6	30	600	4	6	<0.05	P.C.		
11146	10	12	48	16	<4	7	25	620	<4	10	<0.05	P.C.		
11148	8	10	34	10	<4	3	50	590	<4	4	<0.05	P.C.		
11150	26	16	100	16	<4	4	10	630	4	6	<0.05	P.C.		
11152	16	32	80	14	<4					6	<0.05	P.C.		

TABLE 1
Stream Sediment Sampling

520070

Sample No.	Cu	Pb	Zn	Ni	Co		Fe%	Mn	As	W	Ba	Sn		Mo
8141	16	24	42	10	6		1.75	250	4	15	290	22		22
8142	10	22	36	10	8		1.00	540	<2	15	95	<4		46
8143	22	90	230	26	80		3.35	3350	9	<10	180	4		38
8144	26	22	42	20	36		1.45	1100	2	10	155	4		55
8145	24	80	600	60	50		7.20	8700	50	<10	200	<4		50
8146	16	230	70	20	110		2.80	2900	<2	10	160	4		46
8147	12	70	210	28	24		2.20	3100	7	15	110	4		44
8148	30	130	260	24	36		2.35	3600	2	<10	850	8		46
8149	12	80	28	14	14		1.90	900	26	10	230	4		32
8150	18	80	60	16	14		1.90	980	6	20	510	8		34
8151	10	14	16	14	<4		1.35	42	3	<10	195	10		26
8152	14	55	85	34	32		2.20	1000	4	10	185	10		30
8153	14	18	34	22	4		1.60	190	2	<10	240	12		24
8154	10	12	24	12	<4		0.65	160	<2	10	145	60		30

TABLE 2
Rock Chip Samples

Sample No.	Cu	Pb	Zn	Ni	Co	Bi	Fe%	Mn	As	Ag	Ba	V	Mo	
11153	60	50	48	6	<4	20	21.0	430	75	<1	690	60	14	
11154	90	16	65	10	6	<4	4.60	530	12	<1	1800	40	6	
11155	10	24	6	14	<4	<4	1.30	28	7	<1	140	30	6	
11156	22	34	8	10	8	<4	1.20	50	14	<1	410	20	6	
11157	4	8	70	32	6	<4	2.80	220	<2	<1	960	40	4	
11158	4	16	2	<4	<4	<4	18.0	55	5	<1	620	40	4	
11159	10	14	60	<4	<4	<4	4.7	320	2	<1	2600	30	<4	
	Cu	Pb	Zn	Ni	Co	Bi	Fe%	Mn	As	W	Ba	Sn	Mo	Mo
21217	10	30	16	4	<4	<4	0.35	75	36	<10	40	4	12	12
21218	8	<4	10	4	<4	<4	0.20	70	7	<10	15	<4	12	12
3280	16	4	38	12	8	<4			7	<10	360	<4		
3282	6	12	50	28	8	<4			14	<10	610	4		
3283	8	4	16	12	4	<4			<2	20	35	28		
8284	6	<4	32	20	10	<4			3	<10	460	8		
3285	24	170	42	36	8	<4			95	20	320	55		
3286	70	180	4	90	750	1700			16.4%	<10	40	12		
3287	65	<4	30	8	8	<4			130	<10	540	8		
3288	22	<4	14	24	10	<4			75	10	400	10		
3289	20	8	140	32	16	<4			26	10	320	8		
3290	6	<4	70	20	6	<4			20	15	240	<4		
3291	12	4	24	16	4	<4			14	10	250	6		
3291	12	4	48	8	6	<4			22	10	220	8		
3293	10	<4	350	4	6	<4			2700	<10	880	<4		
3294	14	12	160	40	12	<4			10	10	1350	4		
3295	10	32	20	16	4	<4			14	<10	210	4		
3296	12	55	28	<4	4	<4			10	40	1600	10		
3297														
3298														
3299														
3300														
2839	<2	8	6	4					9	<10	<10			
2840	30	60	70	10					24	<10	320			
2841	8	100	60	8					110	<10	155			
2842	10	26	14	<4					105	<10	25			
8155														T.S.
8156														T.S.
8157														T.S.
8158														T.S.
8159														T.S.
8160														T.S.
8161	6	6	26	20	6		1.35	260	<2		190		12	T

TABLE 2

520072

Rock Chip Samples

Sample No.	Cu	Pb	Zn	Ni	Co	Bi	Fe%	Mn	As	W	Ba	Sn	Mo	
8184	860	60	26	8	680		5.90	110	<2		990		50	T.S.
8185														T.S.
8186	20	8	2	<4	<4		1.10	60	3		890		8	
8187														T.S.
8188														T.S.
8189	10	12	90	34			3.10	680	5		1300		8	
8190	6	36	180	36	10		3.30	1500	6		930		8	
8191	6	24	110	34	8		2.80	410	4		1000		12	
8192	95	16	105	30	10		3.70	760	2		1150		6	
8193	270	160	110	22	36		1.50	40	12		45		24	T.S.
8194	20	60	10	12	<4		1.30	16	7		1100		<4	
8195	14	16	12	12	<4		0.80	34	3		730		8	T.S.
8196	10	20	130	50	8		4.20	1300	4		1250		<4	
8197	8	60	85	18	<4		0.40	600	9		25		<4	
8198	34	300	480	75	20		5.90	3100	55		390		4	
8199	8	42	12	12	<4		0.50	155	2		45		<4	
8200	4	12	110	26	6		2.20	480	5		880		8	T.S.
3487	4	4	30	<4	<4	<4			<2	<10	65	14		
3488	32	8	85	90	28	<4			<2	10	410	<4		
3489	160	16	85	20	<4	<4			6	<10	890	4		
3490	14	12	36	12	<4	<4			3	10	820	8		
3491	12	8	6	8	<4	<4			3	10	80	6		
3492	4	8	4	8	<4	<4			2	10	25	4		
3493	12	70	28	4	<4	<4			12	10	650	4		
3494	28	150	330	32	<4	<4			3	20	300	6		
3495	16	4	10	4	<4	<4			<2	<10	410	<4		
2843	10	8	38	8	<4	<4			4	10	1500			
2893	36	100	12	<4	<4	12			5	20	410	36		
2894	10	8	14	<4	<4	<4			3	15	240	16		
2895	8	4	10	<4	<4	<4			2	20	890	20		
2896	4	18	8	<4	<4	<4			2	10	890	10		
2897	4	14	4	<4	<4	<4			8	10	350	8		
2898	22	<4	10	<4	<4	<4			3	20	300	12		
2899	12	<4	12	<4	<4	<4			2	10	2350	14		
2900	10	<4	14	<4	<4	<4			<2	15	2150	8		

LIST OF PLANS

D/NP 01/147 GRANITE TOR - Geology
 D/NP 01/148 GRANITE TOR - Geology

D/NP 01/118 FURY VALLEY
 D/NP 01/125 FURY VALLEY
 D/NP 01/126 FURY VALLEY
 D/NP 01/127 FURY VALLEY
 D/NP 01/128 FURY VALLEY
 D/NP 01/129 FURY VALLEY
 D/NP 01/130 FURY VALLEY
 D/NP 01/144 FURY VALLEY
 D/NP 01/145 FURY VALLEY

D/NP 01/086 ROMULUS EAST
 D/NP 01/087 ROMULUS EAST
 D/NP 01/088 ROMULUS EAST

D/NP 01/133 SOPHIA
 D/NP 01/134 SOPHIA

D/NP 01/063 BACKWATER
 D/NP 01/64A BACKWATER
 D/NP 01/64B BACKWATER
 D/NP 01/090 BACKWATER
 D/NP 01/091 BACKWATER

D/NP 01/055 FURY FLATS
 D/NP 01/056 FURY FLATS
 D/NP 01/058 FURY FLATS
 D/NP 01/093 FURY FLATS
 D/NP 01/117 FURY FLATS

D/NP 01/061 MACKINTOSH
 D/NP 01/092 MACKINTOSH

D/NP 01/124 LOWER BROUGHAM RIVER
 D/NP 01/113 LOWER BROUGHAM RIVER
 D/NP 01/121 LOWER BROUGHAM RIVER
 D/NP 01/114 LOWER BROUGHAM RIVER
 D/NP 01/120 LOWER BROUGHAM RIVER

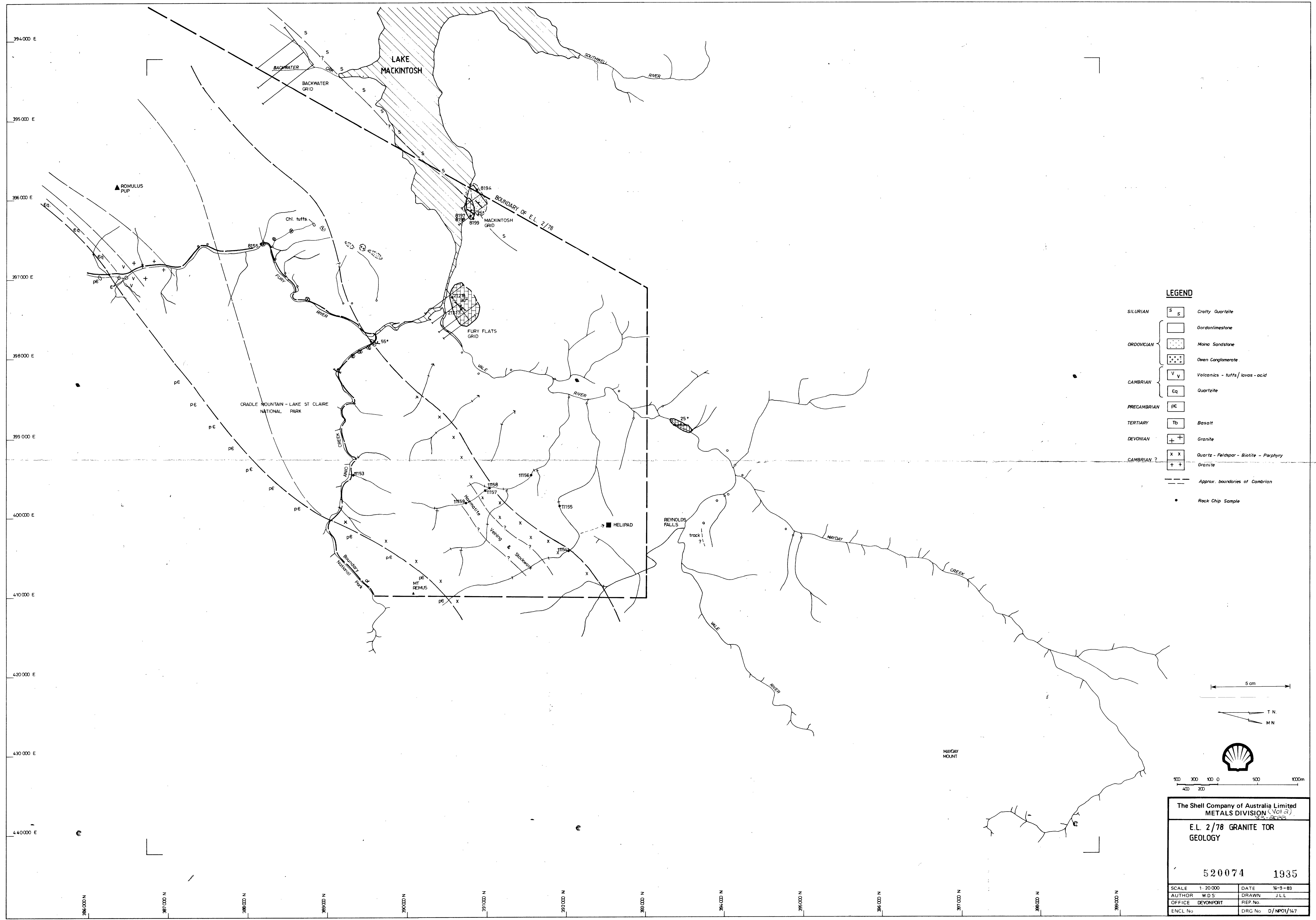
D/NP 01/028 RAY's PROSPECT
 D/NP 01/044 RAY's PROSPECT
 D/NP 01/066 RAY's PROSPECT
 D/NP 01/094 RAY's PROSPECT
 D/NP 01/095 RAY's PROSPECT

D/NP 01/103 GRANITE TOR - Sample Locations
 D/NP 01/104 GRANITE TOR - Sample Locations
 D/NP 01/105 GRANITE TOR - Stream Sediment - Pb, Zn, Cu, Ni
 D/NP 01/106 GRANITE TOR - Stream Sediment - Pb, Zn, Cu, Ni
 D/NP 01/135 GRANITE TOR - Stream Sediment - Ba, Mo, V
 D/NP 01/141 GRANITE TOR - Panned Concentrates - Sn, W, Au
 D/NP 01/149 GRANITE TOR - Panned Concentrates - Sn, W

D of M. <i>hml</i>	A.G. <i>hml</i>	C.G. <i>hml</i>	E.O. <i>hml</i>	D.S.M.E. <i>hml</i>
Received Answered			3 SEP 1983	
DEPT. OF MINES			E & IL	
REF. No. 8435/83				

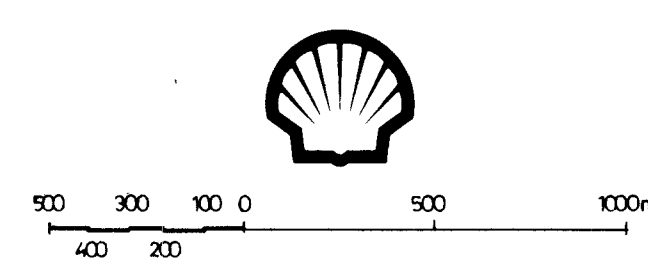
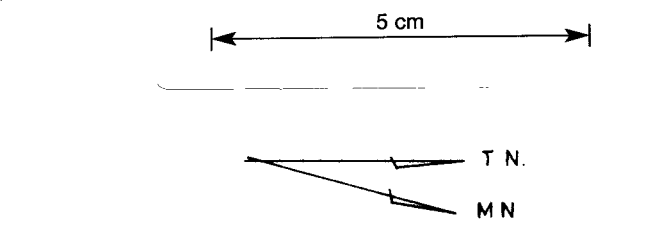
OPEN FILE

MICROFILMED

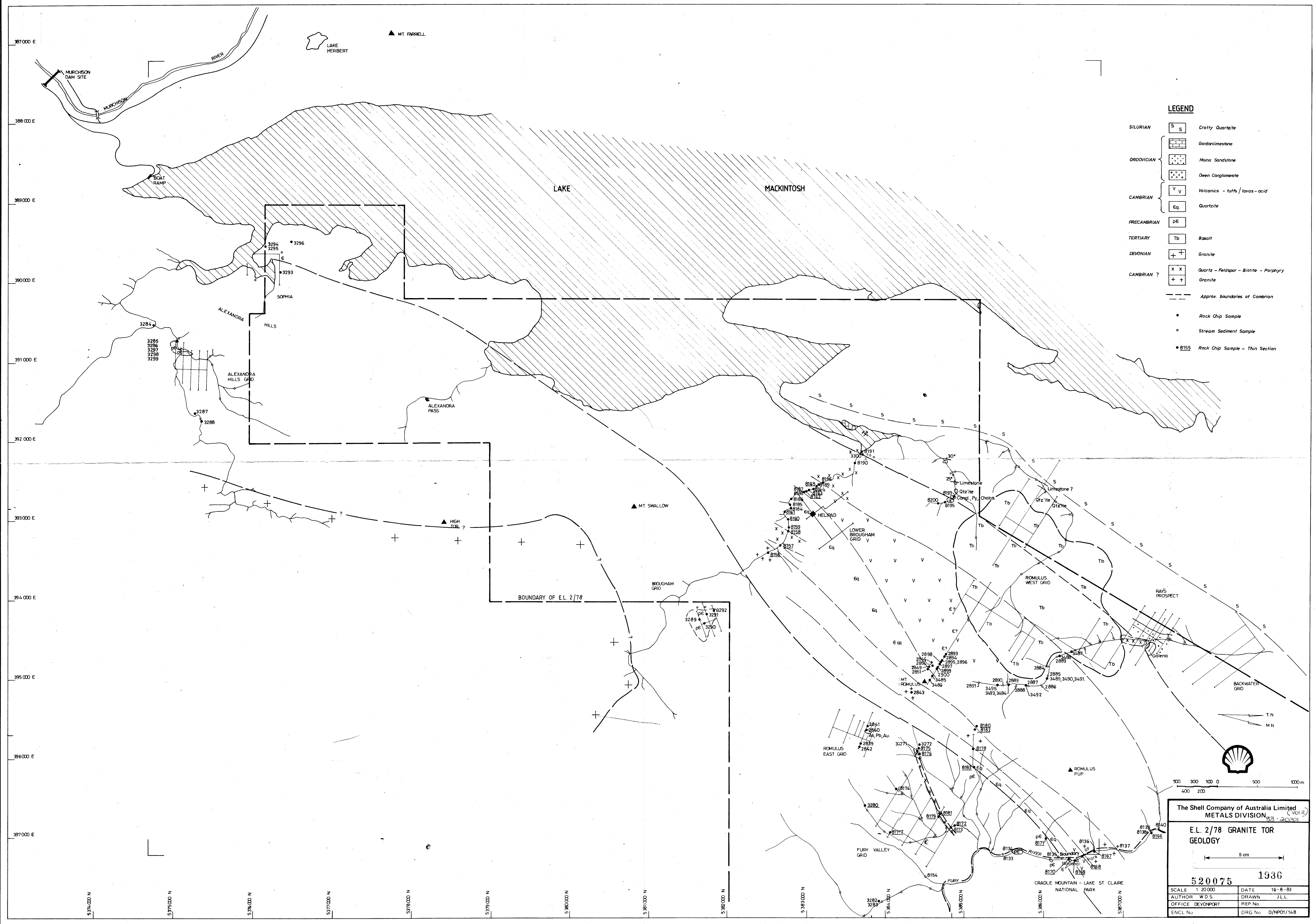


LEGEND

- | | | |
|------------------------------------|-----|--|
| SILURIAN | S | Crotty Quartzite |
| | S | Gordonlimestone |
| ORDOVICIAN | | Mona Sandstone |
| | | Owen Conglomerate |
| CAMBRIAN | V | Volcanics - tuffs / lavas - acid |
| | Eq | Quartzite |
| PRECAMBRIAN | pe | |
| TERTIARY | Tb | Basalt |
| DEVONIAN | + | Granite |
| CAMBRIAN ? | x x | Quartz - Feldspar - Biotite - Porphyry |
| | + | Granite |
| --- Approx. boundaries of Cambrian | | |
| • Rock Chip Sample | | |



The Shell Company of Australia Limited METALS DIVISION (Vol 2)	
E.L. 2/78 GRANITE TOR GEOLOGY	
520074	1935
SCALE 1:20 000	DATE 16-9-83
AUTHOR W.D.S.	DRAWN J.L.L.
OFFICE DEVONPORT	REP. No.
ENCL No.	DRG No. D/NP01/147



LEGEND

- SILURIAN { S S } Crotty Quartzite
- ORDOVICIAN { G G } Gordon Limestone
- ORDOVICIAN { M M } Maina Sandstone
- ORDOVICIAN { O O } Owen Conglomerate
- CAMBRIAN { V V } Volcanics - tufts / lavas - acid
- CAMBRIAN { E E } Quartzite
- PRECAMBRIAN { P P } Basalt
- TERTIARY { T T } Basalt
- DEVONIAN { + + } Granite
- CAMBRIAN ? { X X } Quartz - Feldspar - Biotite - Porphyry
- CAMBRIAN ? { + + } Granite
- Approx. boundaries of Cambrian
- Rock Chip Sample
- Stream Sediment Sample
- 8155 Rock Chip Sample - Thin Section

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
GEOLOGY

520075 1936

SCALE 1:20,000 DATE 16-8-83
AUTHOR W.D.S. DRAWN J.L.L.
OFFICE DEVONPORT REP. No.
ENCL. No. DRG. No. D/NPOT/148

Total Magnetic Intensity
N.B.
1. Uncorrected for diurnal variations.
2. Geometrics 816 with sensor in
back - pack

62000 nT

62500 nT

V.L.F.
RELATIVE FIELD
INTENSITY
N.B.
Readings taken using
N.W. Code transmitter

200 %
150 %
100 %

DIP ANGLE

+9°
0°
-9°

Max - Min
Coil Separation = 150m
N phase
Out phase

+20 %
222 Hz 0
-20 %

+20 %
888 Hz 0
-20 %

Topography & Geology (Metres A.S.L.)

N.B.
1. Topography by Toplite &
Chironneer.
2. Geology from o/c & examination
of soil samples.
3. Dip angles from surveying (5°)
indicated where present.

600
580
560
540
520
500
480

Soil Sample Nos & Depths (m)

- NOTE: WESTERN END OF THIS LINE BENDS NORTHWARD TOWARDS LINE 400 N
- 9201 (0.7)
 - 9202 (0.6)
 - 9203 (1.0)
 - 9204 (0.3)
 - 9205 (1.0)
 - 9206 (0.6)
 - 9207 (0.4)
 - 9208
 - 9209 (0.5)
 - 9210 (0.7)
 - 9211 (0.6)
 - 9212 (0.4)
 - 9213 (0.8)
 - 9214 (0.2)
 - 9215 (0.2)
 - 9216 (0.3)
 - 9217 (0.4)
 - 9218 (0.8)
 - 9219 (1.0)
 - 9220 (0.7)
 - 9221 (0.7)
 - 9222 (1.0)
 - 9223 (1.1)
 - 9224 (1.0)
 - 9225 (0.6)
 - 9226 (0.7)
 - 9227 (0.4)
 - 9228 (0.8)
 - 9229 (1.1)
 - 9230 (0.8)
 - 9231 (1.0)
 - 9232 (0.3)
 - 9233 (0.7)
 - 9234 (1.0)
 - 9235 (1.0)
 - 9236
 - 9237
 - 9238
 - 9239
 - 9240
 - 9241

Float of qtz. schist
poss. glacials.
mica schist float
O/c contains cobbles of mica schist & minor qtzite. Also o/c of grey mica schist & black surface staining float of grey to dark grey schist
O/c Fe-stil siliceous schist (235°/80°W)
O/c contains boulders of siliceous schist
O/c grey schist & minor Fe-stil
s/c indurated qtzite
float qtzite & grey schist
O/c schist, gen pyc & / or carbonac. Strong Fe pite in ck emanates from spring 20 m upstream
O/c/s/c of carb. schists
O/c mica schist & minor qtz. veins & siliceous laminations (sch. 235°)
O/c mica schist & some qtz. veins
scree of mica schist and qtzite
float mica schist
float / scree mica schist
float mica schist
poss. glacials.
O/c qtz. mica schist (050°)
float py^c qtz. - mica schist
O/c mica schist and qtz. mica schist
O/c contains o/c mica schist (245°)
scree mica schist
O/c mica schist in cliff face

+20 %
0 1777 Hz
-20 %

+20 %
0 444 Hz
-20 %



520076

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2 78 GRANITE TOR
FURY VALLEY
LINE 200 N
60 W - 800 E

1937

SCALE 1:2000	DATE 22-4-83
AUTHOR J.L.L.	DRAWN J.L.L.
OFFICE DEVONPORT	REP. No.
ENCL No	DRG No D/NP01/118

ARSENIC

0

LEAD

0

ZINC

0

COPPER

0

Soil Sampling Results

Analyses in p.p.m.

0

50

100

150

200

250

300

350

400

450

500

550

600

650

700

750

800

850

900

950

1000

1050

1100

1150

1200

1250

1300

1350

1400

1450

1500

1550

1600

1650

1700

1750

1800

1850

1900

1950

2000

2050

2100

2150

2200

2250

2300

2350

2400

2450

2500

2550

2600

2650

2700

2750

2800

2850

2900

2950

3000

3050

3100

3150

3200

3250

3300

3350

3400

3450

3500

3550

3600

3650

3700

3750

3800

3850

3900

3950

4000

4050

4100

4150

4200

4250

4300

4350

4400

4450

4500

4550

4600

4650

4700

4750

4800

4850

4900

4950

5000

5050

5100

5150

5200

5250

5300

5350

5400

5450

5500

5550

5600

5650

5700

5750

5800

5850

5900

5950

6000

6050

6100

6150

6200

6250

6300

6350

6400

6450

6500

6550

6600

6650

6700

6750

6800

6850

6900

6950

7000

7050

7100

7150

7200

7250

7300

7350

7400

7450

7500

7550

7600

7650

7700

7750

7800

7850

7900

7950

8000

8050

8100

8150

8200

8250

8300

8350

8400

8450

8500

8550

8600

8650

8700

8750

8800

8850

8900

8950

9000

9050

9100

9150

9200

9250

9300

9350

9400

9450

9500

9550

9600

9650

9700

9750

9800

9850

9900

9950

10000

10050

10100

10150

10200

10250

10300

10350

10400

10450

10500

10550

10600

10650

10700

10750

10800

10850

10900

10950

11000

11050

11100

11150

11200

11250

11300

11350

11400

11450

11500

11550

11600

11650

11700

11750

11800

11850

11900

11950

12000

12050

12100

12150

12200

12250

12300

12350

12400

12450

12500

12550

12600

12650

12700

12750

12800

12850

12900

12950

13000

13050

13100

13150

13200

62 500 m

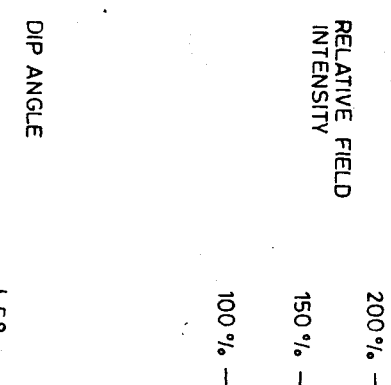
Total Magnetic Intensity

N.B.
1. Uncorrected for diurnal variations.
2. Geometrics 816 with sensor in boat - peak

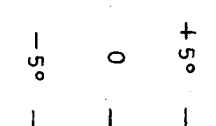
62 000 m

V.L.F.

N.B.
Readings taken using N.W. Cape transmitter

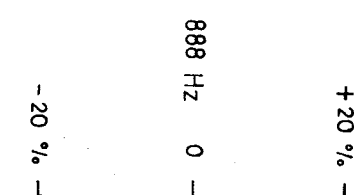
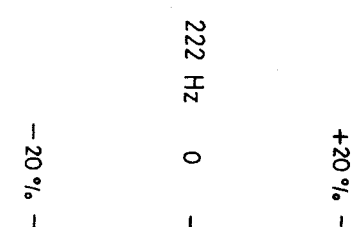


DIP ANGLE



Max - Min

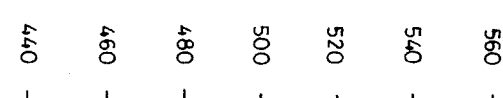
Cell Separation = 150 m
In phase
Out phase



Topography & Geology

(Metres A.S.L.)

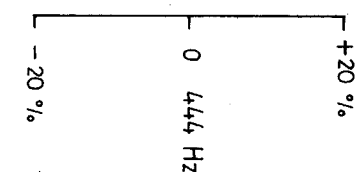
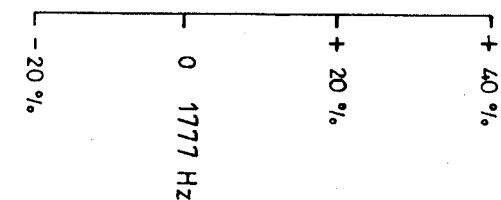
N.B.
1. Topography by Topolite & Chrometer
2. Geology from O.C. & examination of soil samples (approx. 5%)
3. Minor faults (if any) indicated where present.



Soil Sample Nos & Depths (m)

- 8422 (0.9)
- 8423 (0.6)
- 8424 (1.0)
- 8425 (0.8)
- 8426 (1.1)
- 8427 (0.9)
- 8428 (1.6)
- 8429 (1.4)
- 8430 (0.4)
- 8431 (1.0)
- 8432 (1.0)
- 8433 (0.7)
- 8434 (0.7)
- 8435 (0.8)
- 8436 (0.7)
- 8437 (0.4)
- 8438 (0.7)
- 8439 (0.9)
- 8440 (1.5)
- 8441 (0.5)
- 8442 (1.9)
- 8443 (0.4)
- 8444 (0.9)
- 8445 (0.5)
- 8446 (1.0)
- 8447 (0.4)
- 8448 (0.3)
- 8449 (0.9)
- 8450 (0.9)
- 8451 (0.9)
- 8452 (0.7)
- 8453
- 8454 (0.9)
- 8455 (1.1)
- 8456 (0.9)
- 8457 1.0
- 8458 (0.4)
- 8459
- 8460 (0.8)
- 8461 (1.0)

N.B.
222 Hz IP subtracted from IP response at higher frequencies to correct for terrain effects.



300 E - dip < 15° W
depth ~ 30-40 m
σ T ~ 3

dip < 15° W
depth ~ 30-40 m
σ T ~ 3

dip < 15° W
depth ~ 40 m
σ T ~ 3

dip < 15° W
depth ~ 40 m
σ T ~ 3

minor float mica schist

o/c silic'd qtz schist (240° 70° S.E.)
mica schist float in upturned tree roots

scree floats Fe std mica schist

scattered float of mica schist

O.C. has o/c mica schist (sch 235°)
also some granite erratics
o/c mica schist

poorly exposed

grey mica schist float in upturned tree roots

float of grey mica schist

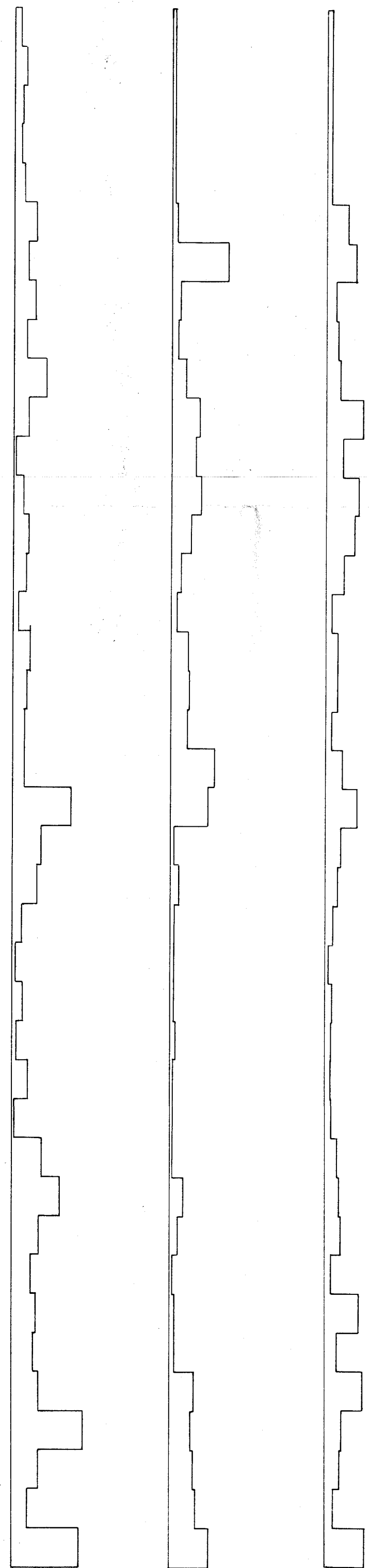
s/c qtz-mica schist
o/c mica schist

scree mica schist

o/c carbonac. schist. Also some granite erratics

o/c carbonac. schist (230° vert.)

Carb. schist bedrock



Soil Sampling Results

Analyses in ppm.

COPPER

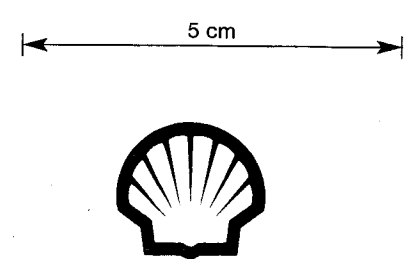
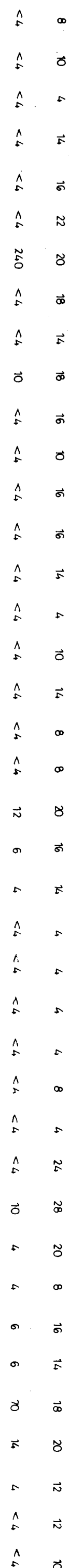
LEAD

ZINC

ARSENIC



BARIUM
TUNGSTEN
NICKEL
COBALT
BISMUTH



The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
FURY VALLEY
LINE 400 N
60 E - 840 E

520077 1938

SCALE 1:2000	DATE 2-5-83
AUTHOR J.L.L.	DRAWN J.L.L.
OFFICE DEVONPORT	REP No.
ENCL No.	DRG No. D/NP01/125

Total Magnetic Intensity

- N.B.
1. Uncorrected for diurnal variations
2. Geomagnetic 816 with minor N back-pick

62,000 nT

100 E 200 E 300 E 400 E 500 E 600 E 700 E 800 E



The Shell Company of Australia Limited
METALS DIVISION

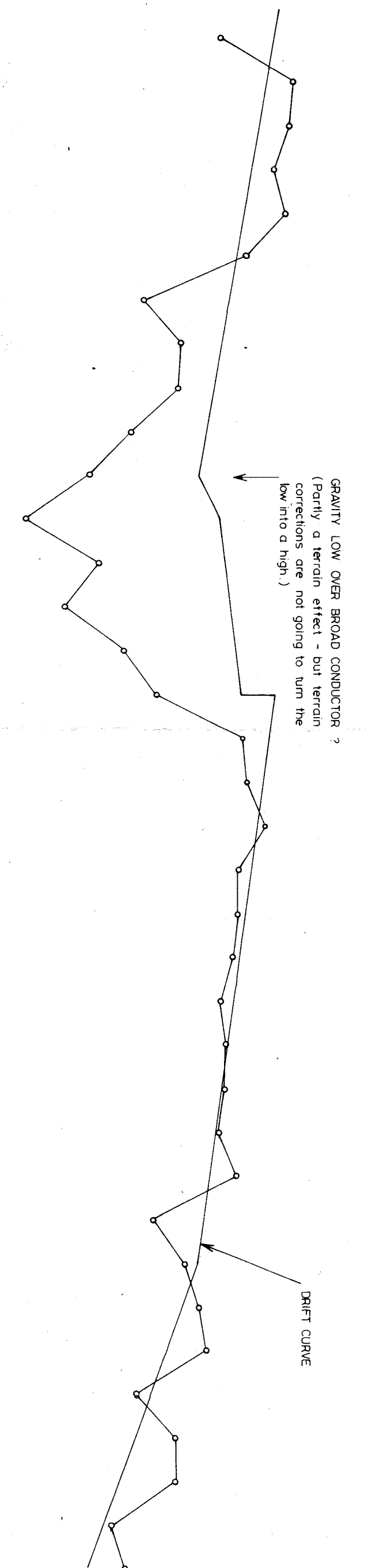
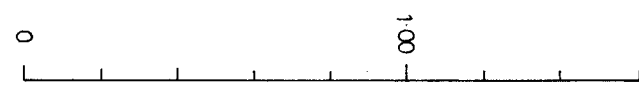
E.L. 2/78 GRANITE TOR
FURY VALLEY
LINE 600 N
140 E - 840 E

520078 1939

SCALE 1:2000	DATE 10-5-83
AUTHOR J.L.L.	DRAWN J.L.L.
OFFICE DEVONPORT	REP No.
ENCL No.	DRG No D/NP01/126

BOUGUER GRAVITY

DENSITY = 2.70
READING SCALE = MAG (1 cm = 0.20 MAG.)
TERMIN CORRECTED TO CIRCLE 0



MAX - MIN

Coil Separation = 80
In phase
Out phase

$\sigma T \sim 1.5$
depth ~ 45m

$\sigma T \sim 2.6$
depth ~ 45m

$\sigma T \sim 1.2$
depth ~ 45m

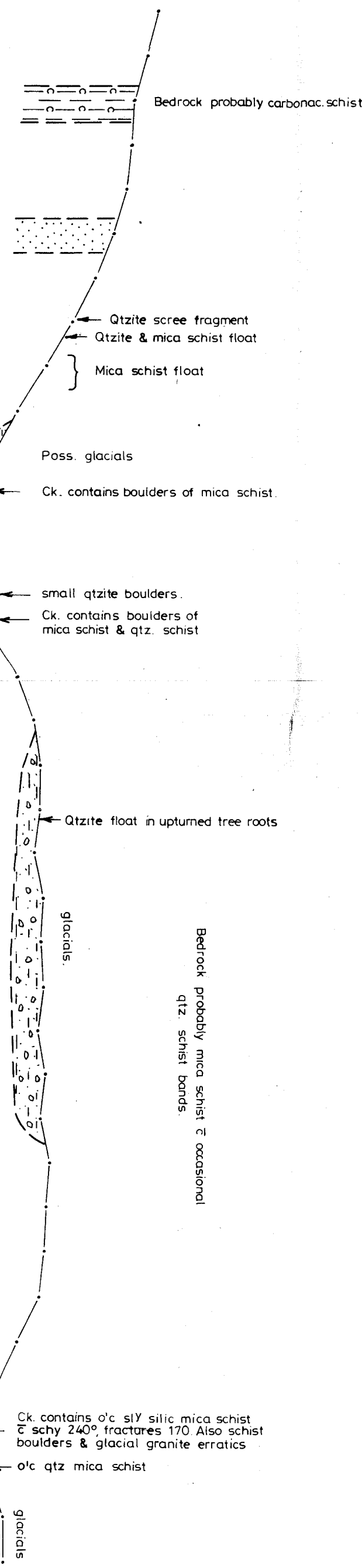
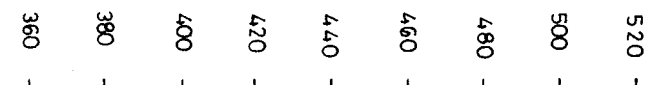
1. Broad (flat lying?) conductor at 300-500 E $\Rightarrow \sigma T \sim 2$
depth ~ 45
2. Conductors at 280E & 300E $\Rightarrow \sigma T \sim 1.9$ 67 $\Rightarrow$ deep?

N.B. 222 Hz IP subtracted from higher frequency IP response to correct for terrain effects.

Topography & Geology

(Metres A.S.L.)

- N.B.
1. Contouring by Topolite & Crossed
2. Geology from OC & examination of soil samples
3. Bedrock from logs (S.C.) indicated where present



Soil Sample Nos & Depths (m)

- 8462 (1.3)
- 8463 (1.4)
- 8464 (1.2)
- 8465 (2.0)
- 8466 (0.8)
- 8467 (2.0)
- 8468 (1.2)
- 8469 (1.3)
- 8470 (0.9)
- 8471 (0.8)
- 8472 (2.0)
- 8473 (0.9)
- 8474 (1.6)
- 8475 (0.4)
- 8476 (0.8)
- 8477 (1.0)
- 8478 (1.7)
- 8479 (0.3)
- 8480 (0.4)
- 8481 (1.2)
- 8482 (0.7)
- 8483 (0.7)
- 8484 (1.0)
- 8485 (1.0)
- 8486 (1.9)
- 8487 (1.6)
- 8488 (1.8)
- 8489 (1.6)
- 8490 (0.6)
- 8491 (2.0)
- 8492 (1.2)
- 8493 (0.7)
- 8494 (1.1)
- 8495 (0.7)
- 8496 (2.0)
- 8497 (0.5)

Soil Sampling Results

Analyses in p.p.m.

COPPER

LEAD

ZINC

ARSENIC

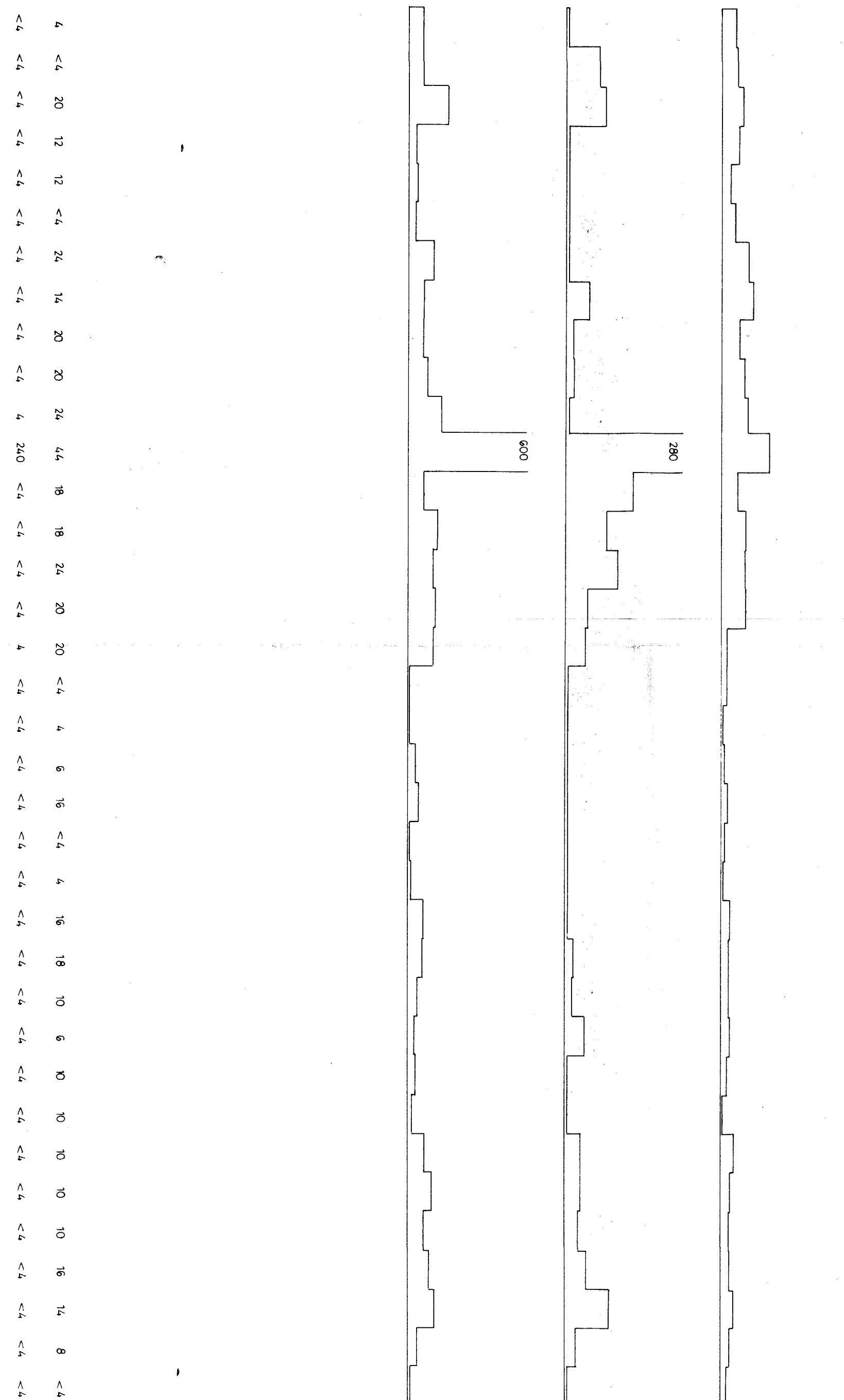
BARLIUM

TUNGSTEN

NICKEL

COBALT

BISMUTH



Total Magnetic Intensity

- N.B.
1. Uncorrected for diurnal variations.
2. Corrected for magnetic declination.

67000 nT

V.L.F.
RELATIVE FIELD
INTENSITY
N.B.
Readings taken using
N.W. Cape transmitter

200 %
150 %
100 %

DIP ANGLE

+5°
0
-5°

Max - Min

Coil Separation = 30 m
In phase
Out of phase

+20 %
0
-20 %

+20 %
0
-20 %

100 E

200 E

300 E

400 E

500 E

600 E

700 E

800 E



40 20 0 50 100 m

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
FURY VALLEY
LINE 800 N
140 E - 800 E

520079

1940

SCALE	1:2000	DATE	22-4-83
AUTHOR	J.L.L.	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP. No.	
ENCL. No.		DRG. No.	D/NP01/127

5 cm

RT ~ 0.8
depth ~ 30 m

RT ~ 0.8
depth ~ 30 m

RT ~ 0.5
depth ~ 30 m
(assume flat lying)

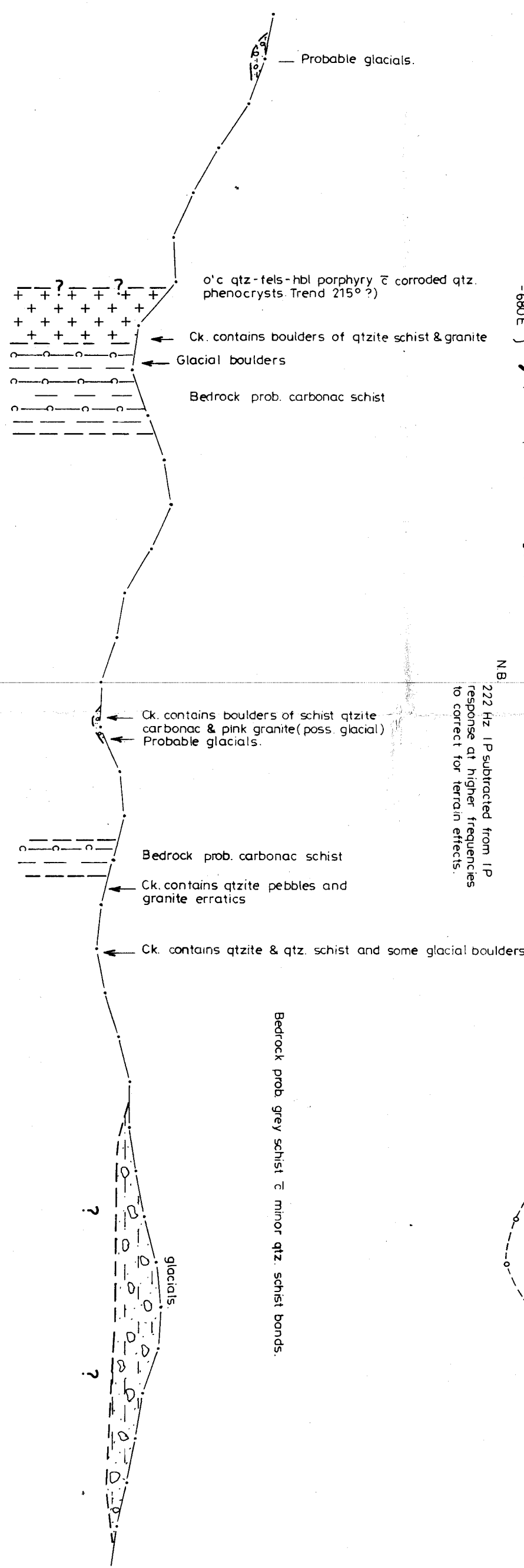
2 Conductors - 300 E
quite deep (K & P fig 68)

N.B. 222 Hz IP subtracted from IP
response at higher frequencies
to correct for terrain effects.

Topography & Geology

- (Meters A.S.L.)
N.B.
1. Topography by Topline &
Clinometer.
2. Geological map & examination
of soil profiles.
3. Outcrop (O.C.) & bedrock (S.C.)
indicated where present.

480
460
440
420
400
380
360
340



Soil Sample No's & Depths (m)

- 8386 (0.6)
- 8387 (0.7)
- 8388 (0.7)
- 8389 (0.6)
- 8390 (0.9)
- 8391 (0.9)
- 8392 (0.5)
- 8393 (0.5)
- 8394 (1.0)
- 8395 (0.8)
- 8396 (0.9)
- 8397 (1.0)
- 8398 (1.0)
- 8399 (1.0)
- 8400 (1.0)
- 8401 (2.0)
- 8402 (0.9)
- 8403 (1.6)
- 8404 (1.1)
- 8405 (0.9)
- 8406 (2.0)
- 8407 (0.6)
- 8408 (1.1)
- 8410 (0.9)
- 8410 (0.9)
- 8411 (0.8)
- 8412 (2.0)
- 8413 (0.8)
- 8414 (2.0)
- 8415 (1.2)
- 8416 (1.0)
- 8417 (1.2)
- 8418 (2.0)
- 8419 (0.5)
- 8420 (1.2)
- 8421 (0.7)

Soil Sampling Results

Analyses in ppm

COPPER

LEAD

ZINC

ARSENIC

BARIUM

TUNGSTEN

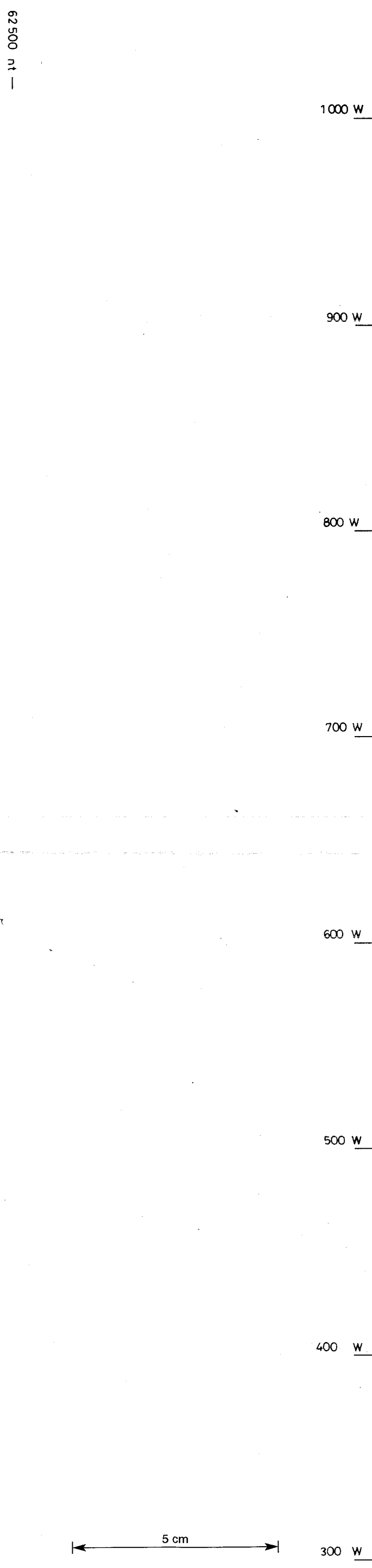
NICKEL

COBALT

BISMUTH

150
100
50
0

6 <4 6 <4 8 <4 6 <4 14 <4 8 <4 20 <4 10 <4 10 <4 14 <4 16 <4 18 <4 10 <4 10 <4 12 <4 24 <4 18 <4 16 <4 20 <4 18 <4 16 <4 20 <4 16 <4 6 <4 14 <4 18 <4 10 <4 12 <4 6 <4 18 <4 18 <4 10 <4 18 <4 10 <4



The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
FURY VALLEY
LINE 1000 N
1000 W - 100 W

520081 1942

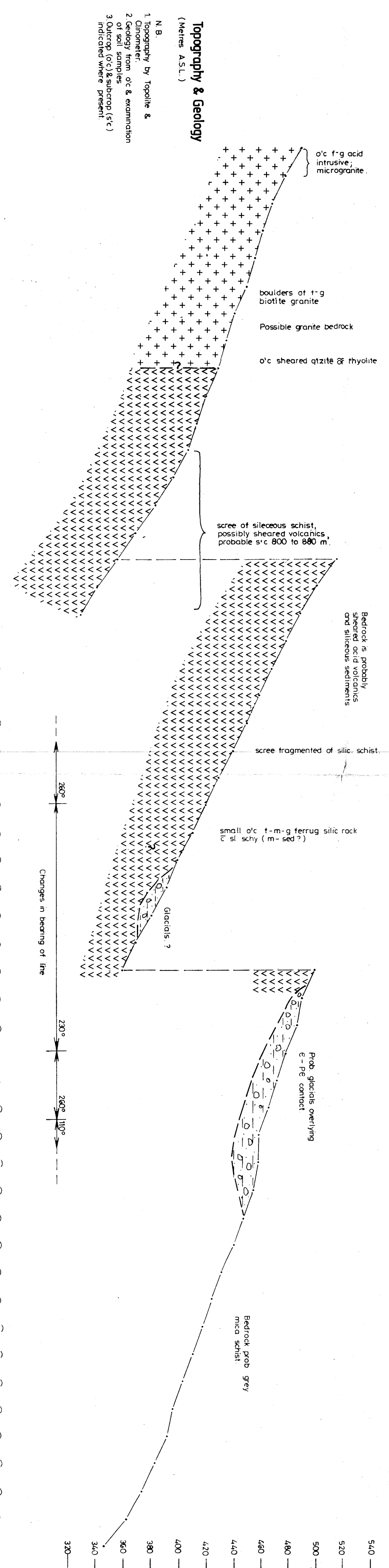
SCALE	1:2000	DATE	4-5-83
AUTHOR	J.L.L.	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP. No.	
ENCL. No.		DRG No.	D/NP01/129

Total Magnetic Intensity
N.B.
1. Uncorrected for diurnal variations
2. Geomagnetic 516 with sensor in back-pack

V.L.F.
RELATIVE FIELD INTENSITY
N.B.
1. Readings taken using NW Code transmitter
200% -
150% -
100% -

DP ANGLE
+5° -
0 -

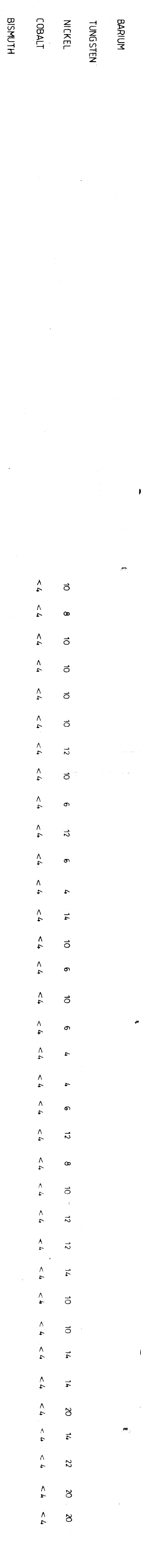
Max - Min
Coil Separation = 150m
h. phase
d. phase



Soil Sample Nos & Depths (m)

Soil Sampling Results.
Analyses in p.p.m.
COPPER

LEAD
150 -
100 -
50 -
0 -
ZINC
150 -
100 -
50 -
0 -
ARSENIC
150 -
100 -
50 -
0 -



62 500 nT —

Total Magnetic Intensity

N.B.
1. Uncorrected for diurnal variations.
2. Geometrics 816 with sensor in back - pick

62 000 nT —

V.L.F

RELATIVE FIELD
INTENSITY

200 % —
150 % —
100 % —

N.B.
Readings taken using
NW Code Transmitter

DIP ANGLE

+5° —
0 —

Max - Min

Coil Separation = 150m
In phase —
Out phase —

Topography & Geology
(Metres A.S.L.)

N.B.
1. Topography by Topolite &
2. Geology from ore examination
of soil samples.
3. Outcrop (etc) & subcrop (etc)
indicated where present

540 —
520 —
500 —
480 —
460 —
440 —
420 —
400 —
380 —

Soil Sample Nos & Depths (m)

- 9241 (0.7)
- 9242 (1.0)
- 9243 (0.5)
- 9244 (0.5)
- 9245 (0.5)
- 9246 (0.8)
- 9247 (1.1)
- 9248 (0.6)
- 9249 (0.5)
- 9250 (0.7)
- 9251 (0.9)
- 9252 (1.2)
- 9253 (1.0)
- 9254 (1.0)
- 9255 (0.9)
- 9256 (1.0)
- 9257 (0.7)
- 9258 (1.1)
- 9259 (1.1)
- 9260 (2.0)
- 9261 (1.0)
- 9262 (1.3)
- 9263 (0.9)
- 9264 (0.5)
- 9265 (1.7)
- 9266 (0.8)
- 9267 (0.9)
- 9268 (0.9)
- 9269 (1.4)
- 9270 (2.0)
- 9271 (2.0)
- 9272 (1.5)
- 9273 (1.1)
- 9274 (1.5)
- 9275 (0.5)
- 9276 (0.6)

Soil Sampling Results.

Analyses in p.p.m.

COPPER

LEAD

ZINC

ARSENIC

BARIUM
TUNGSTEN
NICKEL
COBALT
BISMUTH

5 cm



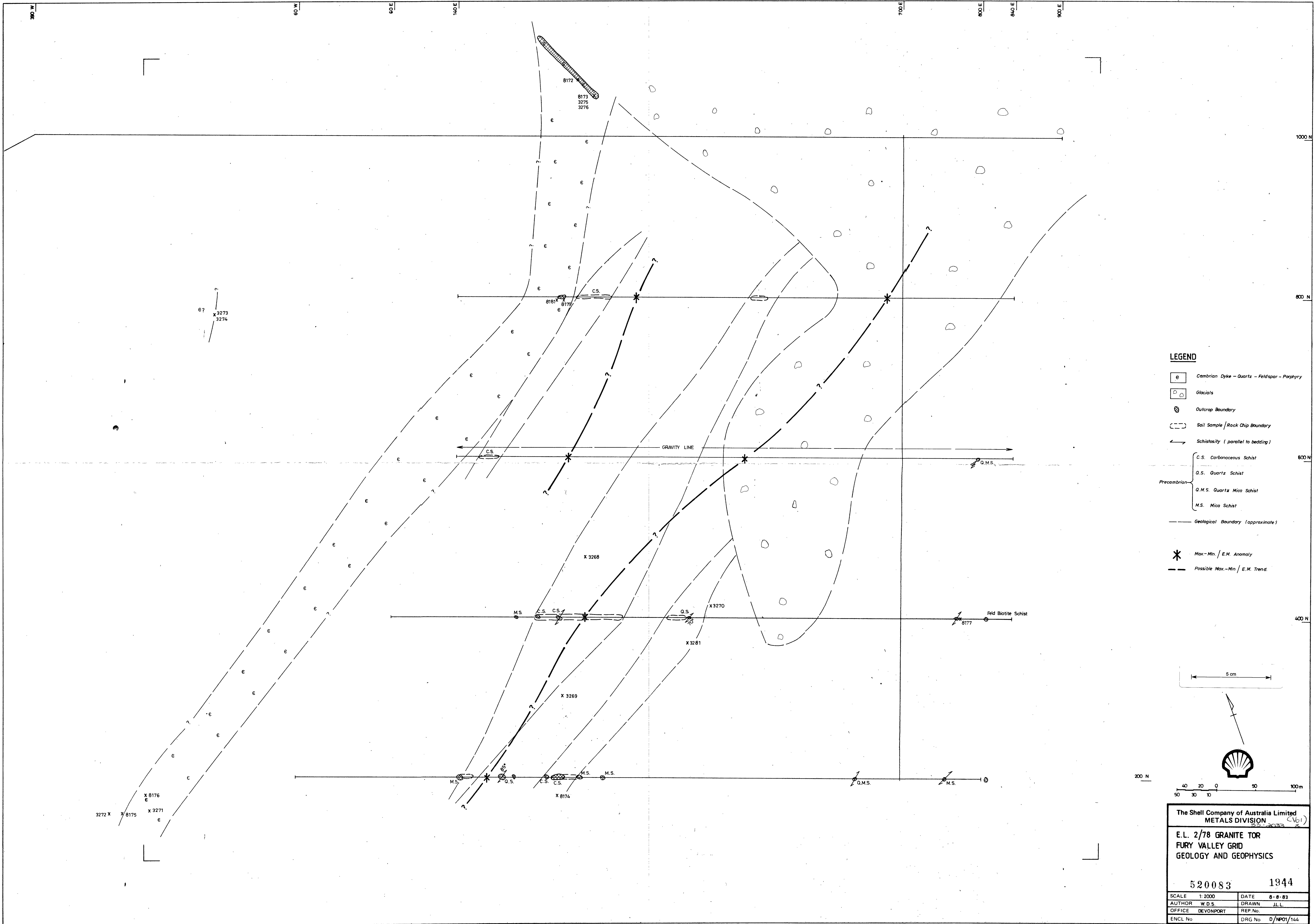
40 30 20 10 0 50 100m

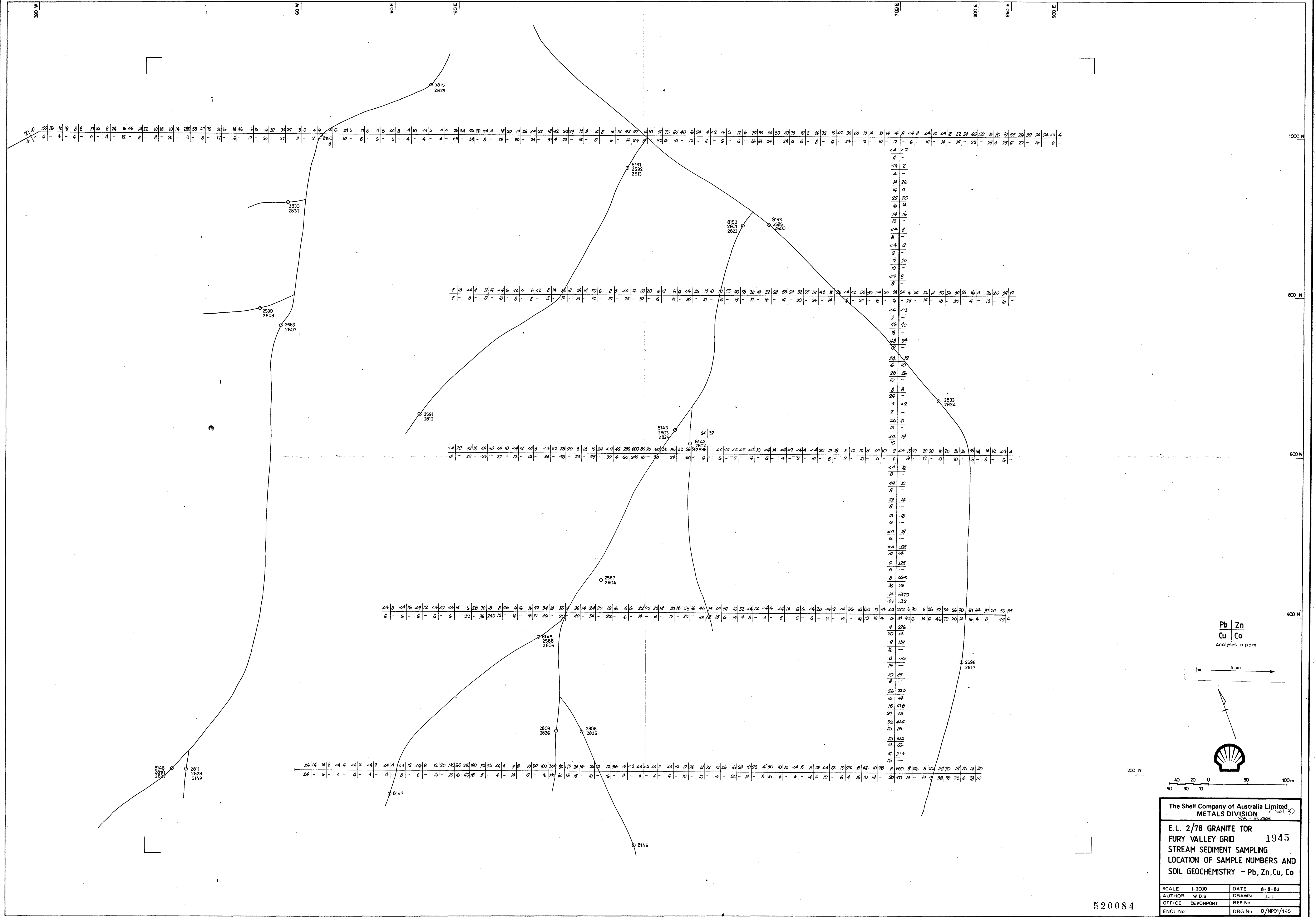
The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
FURY VALLEY
LINE 700 E
200 N - 1000 N

520082 1943

SCALE 1:2000	DATE 3-5-83
AUTHOR J.J.L.	DRAWN J.L.L.
OFFICE DEVONPORT	REP.No.
ENCL No.	DRG No. 0/NP01/180





The Shell Company of Australia Limited
METALS DIVISION

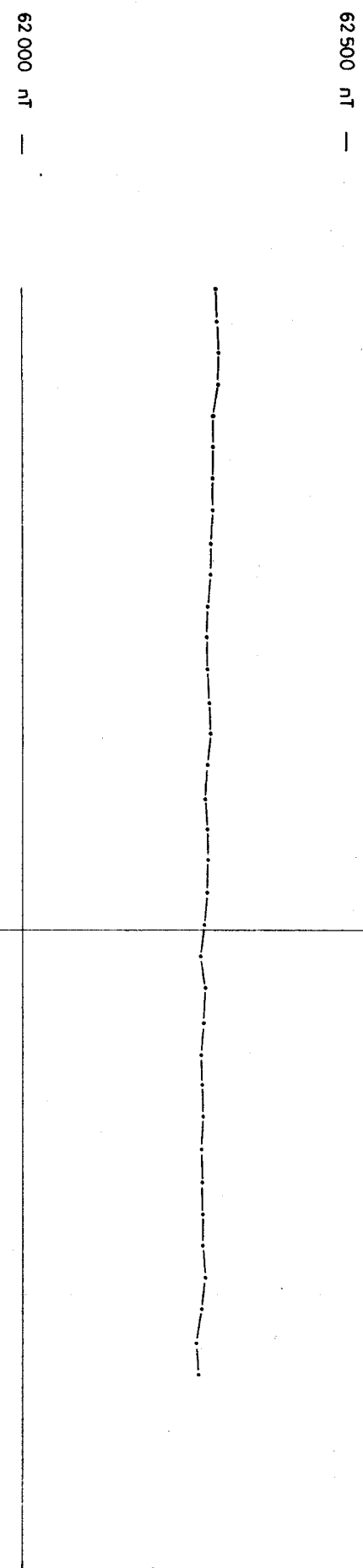
E.L. 2/78 GRANITE TOR
FURY VALLEY GRID 1945
STREAM SEDIMENT SAMPLING
LOCATION OF SAMPLE NUMBERS AND
SOIL GEOCHEMISTRY - Pb, Zn, Cu, Co

SCALE	1:2000	DATE	8-8-83
AUTHOR	W.D.S.	DRAWN	J.L.L.
OFFICE	DEVONPORT	REF No.	
ENCL No		DRG No	D/NP01/145

520084

Total Magnetic Intensity

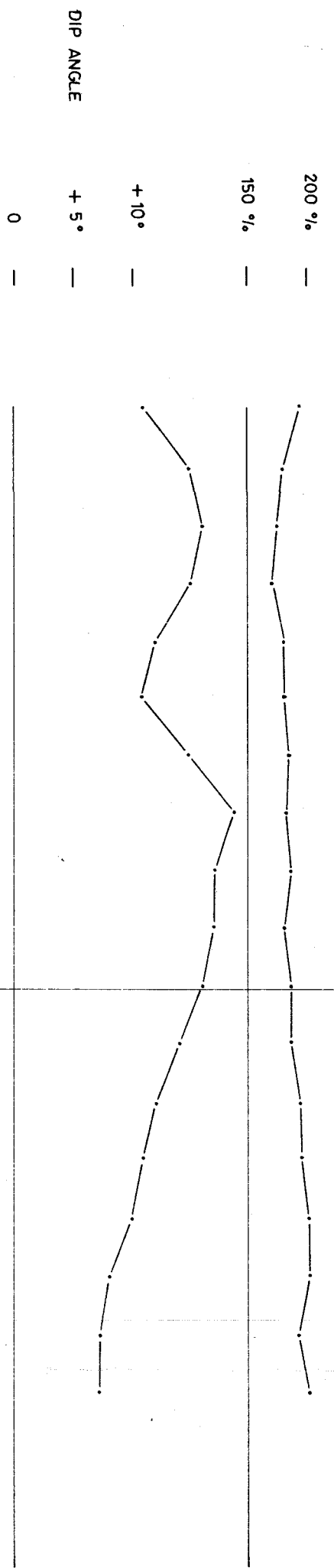
N.B.
1) Uncorrected for diurnal variation
2) Readings taken 816 with sensor in
Dredge



RELATIVE FIELD INTENSITY

V.L.F.

N.B.
READINGS TAKEN USING
NW CAPE TRANSMITTER

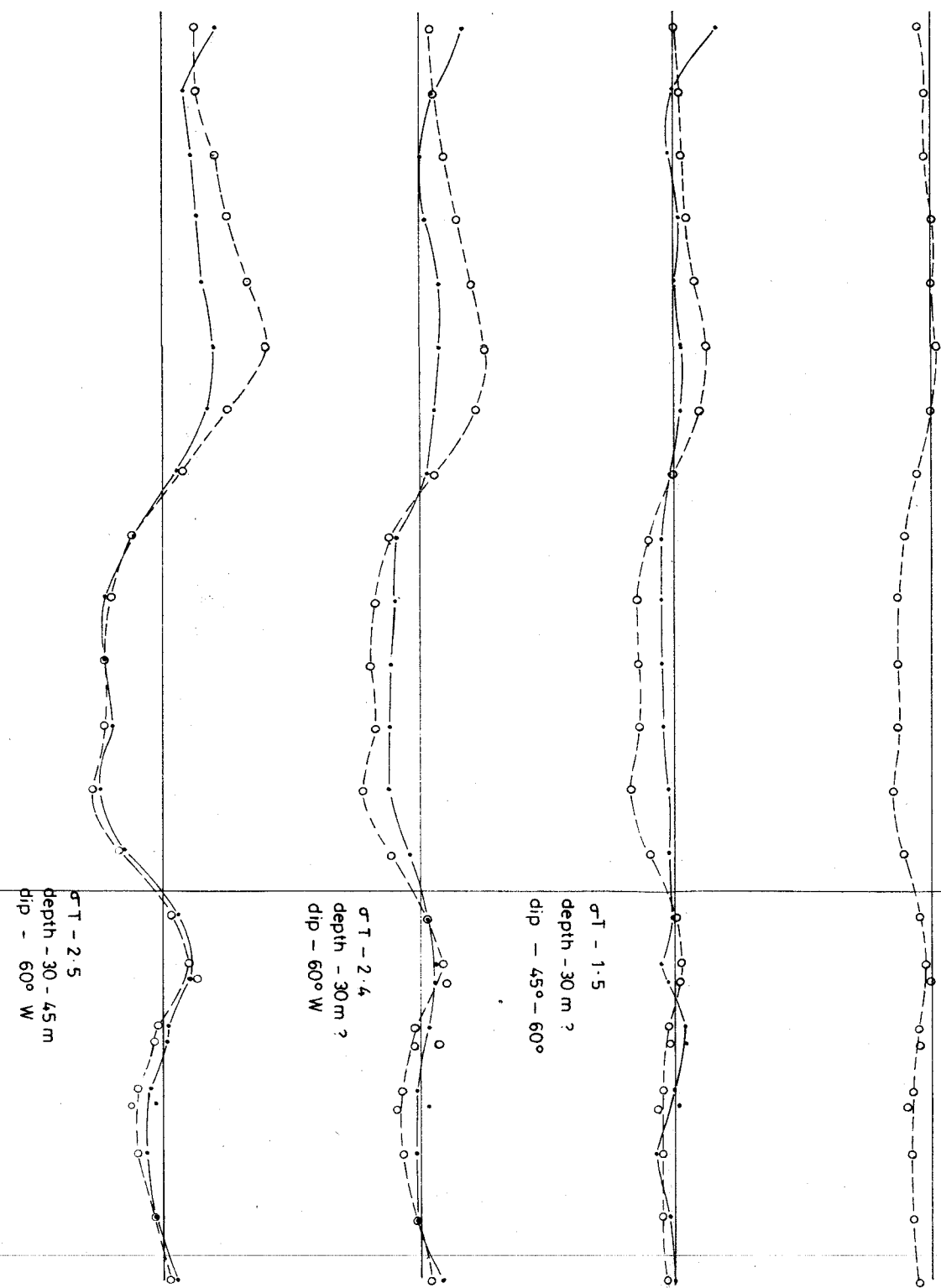


DIP ANGLE

+10°
+5°
0

MAX - MIN

COIL SEPARATION - 150 m
IN PHASE
OUT OF PHASE

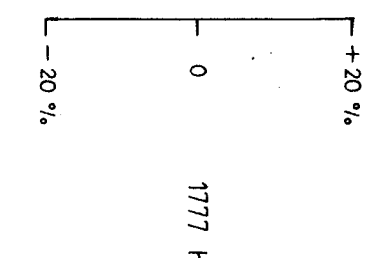
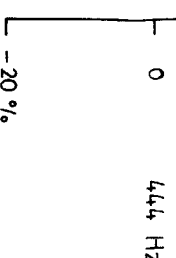


$\sigma T = 1.5$
depth - 30 m ?
dip - 45° - 60°

$\sigma T = 2.4$
depth - 30 m ?
dip - 60° W

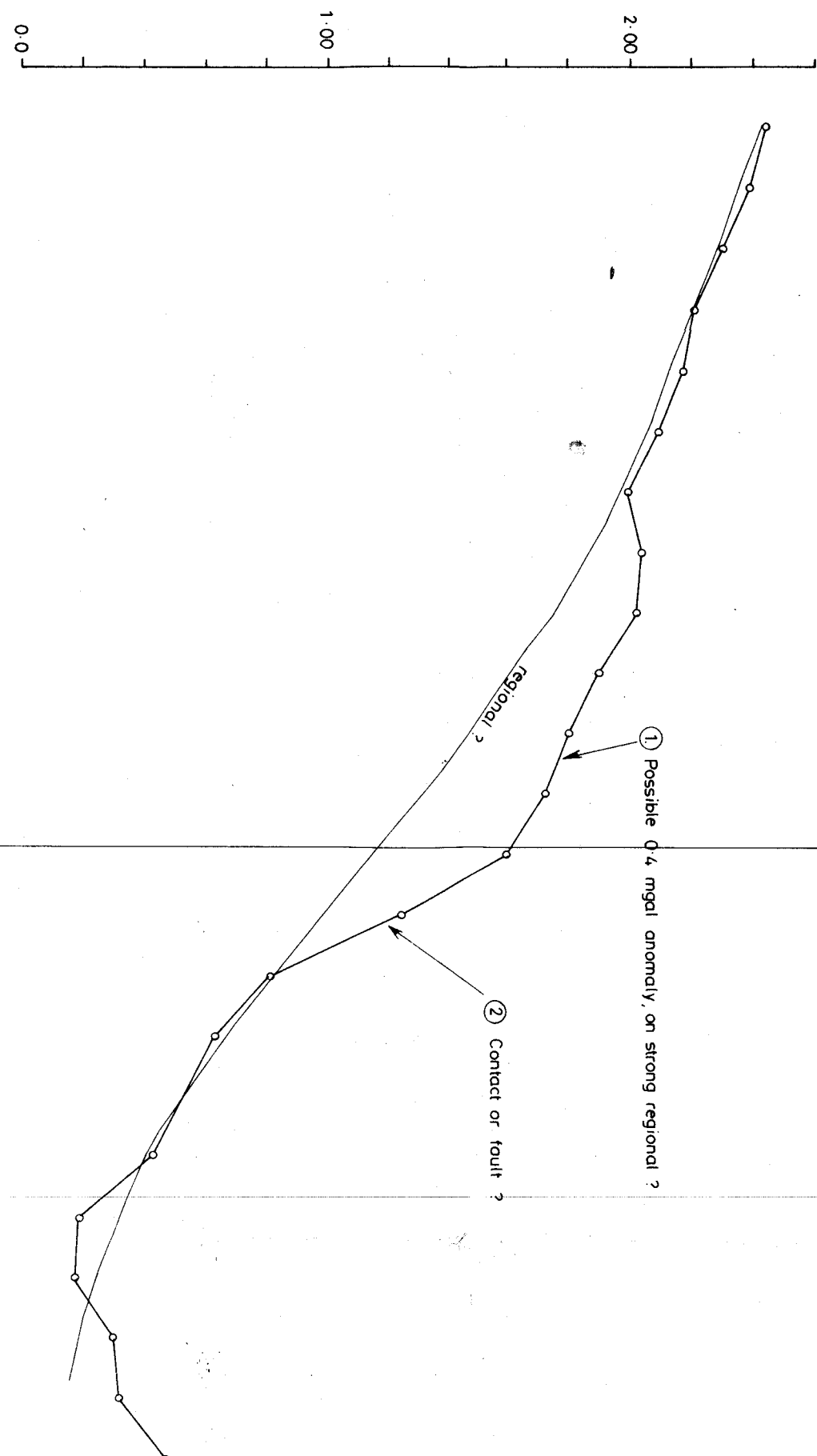
$\sigma T = 2.5$
depth - 30 m ?
dip - 60° W

N.B. 222 Hz subtracted from I.P.
response at higher frequencies to
correct for terrain effects.
60° W. Dip - 60° W.
Depth - 30 m ?
 $\sigma T \sim 2$ (decr @ low freq ?)



Bouguer Gravity

DENSITY = 2.40
READING SCALE = MAG. (1 cm = 0.20 MAG.)
TERRAIN CORRECTED TO CIRCLE E



① Possible 0.4 mgal anomaly on strong regional ?

② Contact or fault ?

5 cm



50 30 10 0 50 100 m

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2 78 GRANITE TOR
ROMULUS EAST: ANOMALY 5
LINE 00 N
200 W - 200 E

520085

1946

SCALE 1:2000	DATE 3-2-83
AUTHOR D. SPEIJERS	DRAWN J.L.L.
OFFICE DEVONPORT	REP. No.
ENCL No.	DRG No. D/NP01/086

Total Magnetic Intensity

N.B.
1. Unconnected for diurnal variation
2. Geomagnetic field with sensor in
5000 ft.

62 200 nT

V.L.F.
RELATIVE FIELD
INTENSITY
N.B.
Readings taken using
N.W. Cape transmitter

DIP ANGLE

+20%
+10%
+5%
0
-5%
-10%
-20%

Max-Min

Coil separation = 150m
In phase
Out phase

222 Hz

-20%

444 Hz

-40%

-20%

888 Hz

-20%

400 W

300 W

200 W

100 W

00

100 E

200 E

5 cm



The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
ROMULUS EAST: ANOMALY 5
LINE: 100 S

1947

SCALE 1:2000	DATE 1-2-83
AUTHOR D. SPEIJERS	DRAWN J.L.L.
OFFICE DEVONPORT	REP No.
ENCL No.	DRG No. D/NP01/087

520086

Topography & Geology

N.B.
1. Topography by level &
2. Geology from 0' to examination
3. Outcrop (C) & subcrop (S)
indicated where present

820
800
780
760
740
720
700

nearby o/c of siliceous
grey schist.
granite erratic
weathered schist
in soil.
qtzite grit in soil
qtzite grit in soil
change from li-tree
to rain forest

schist and qtzite
in soil.

N.B. 222 Hz I.P. response
at higher frequencies to correct for terrain effects

-20%

1777 Hz

0

+20%

+40%

-20%

0

Soil Sample Nos & Depths (m)

9297 (0.6)
9298 (0.7)
9299 (0.4)
9300 (0.4)
9501 (0.2)
9502 (0.5)
9503 (0.5)
9504 (0.5)
9505 (0.9)
9506 (1.0)
3527 (0.3)
3526 (0.7)
3525 (0.3)
3524 (0.3)
3523 (0.9)
3522 (0.4)
3521 (0.2)
3520 (0.7)
3519 (0.3)
3518 (0.3)
3517 (0.3)
3516 (0.3)
3515 (0.3)
3514 (0.3)
3513 (0.4)
3512 (0.4)
3511 (0.4)
3510 (0.5)
3509 (0.5)
3508 (0.3)
3507 (0.7)
3506 (0.7)
3505 (0.5)
3504 (0.5)
9507 (6.0)
9508 (0.4)
9509 (0.5)
9510 (0.5)
9511 (0.8)
9512 (0.7)
9513 (0.7)
9514 (0.5)
9515 (0.5)
9516 (0.7)

Soil Sampling Results

Analyses in p.p.m.

COPPER

LEAD

ZINC

ARSENIC

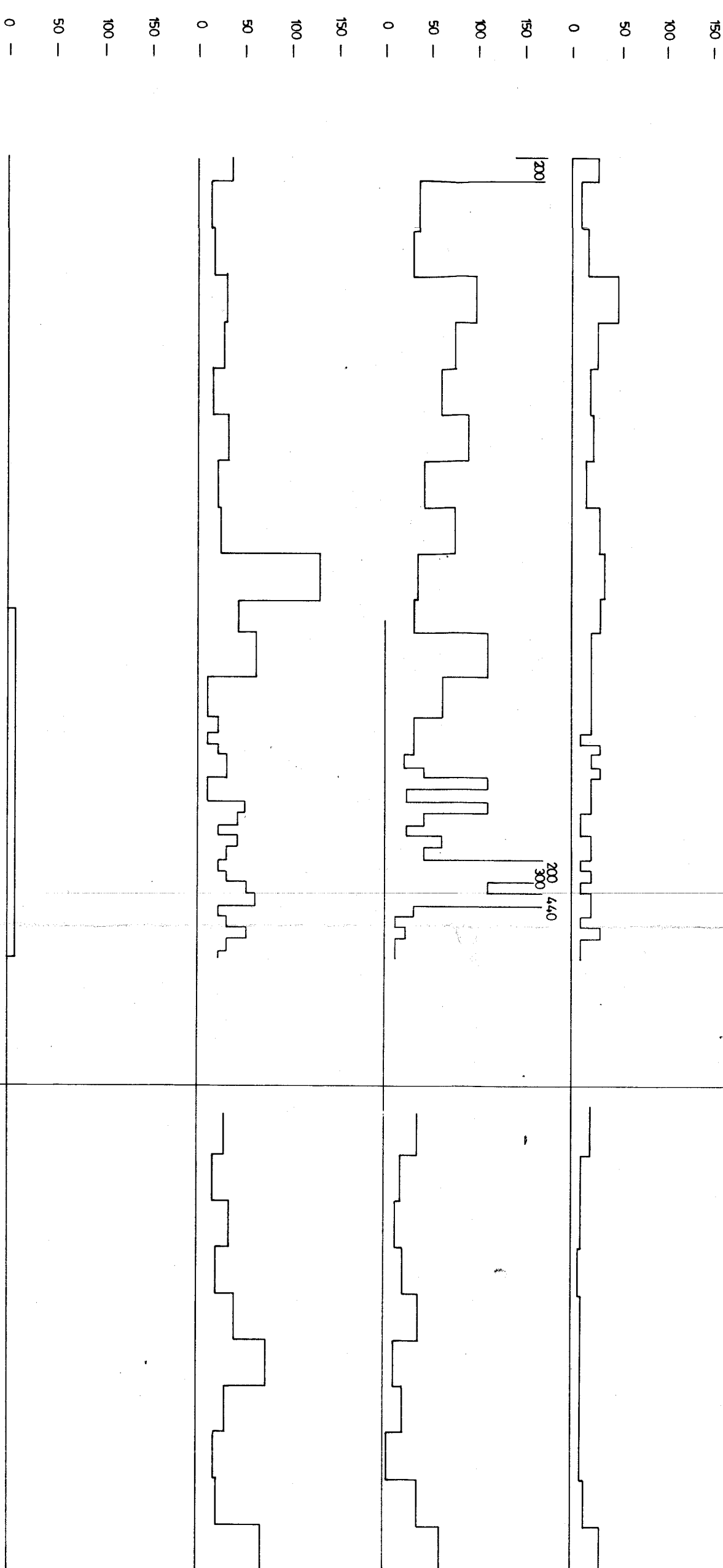
BARIUM

TUNGSTEN

NICKEL

COBALT

BISMUTH



16 14 12 10 12 14 10 10 22
<4 <4 <4 <4 <4 <4 <4 <4

18 14 18 10 18 20 14 16 20
<4 <4 <4 4 6 10 6 <4 <4 <4

Total Magnetic Intensity
N.B.
1. Uncorrected for diurnal variation.
2. Geometrics 816 with sensor in back-pack.

V.L.F.
RELATIVE FIELD INTENSITY
N.B.
Readings taken using NW Cape transmitter

DIP ANGLE
+10°
+5°
0°

Max - Min
Coil separation = 150m
In phase
Out phase

62200 nT

200%

150%

100%

222 Hz

-20%

444 Hz

-20%

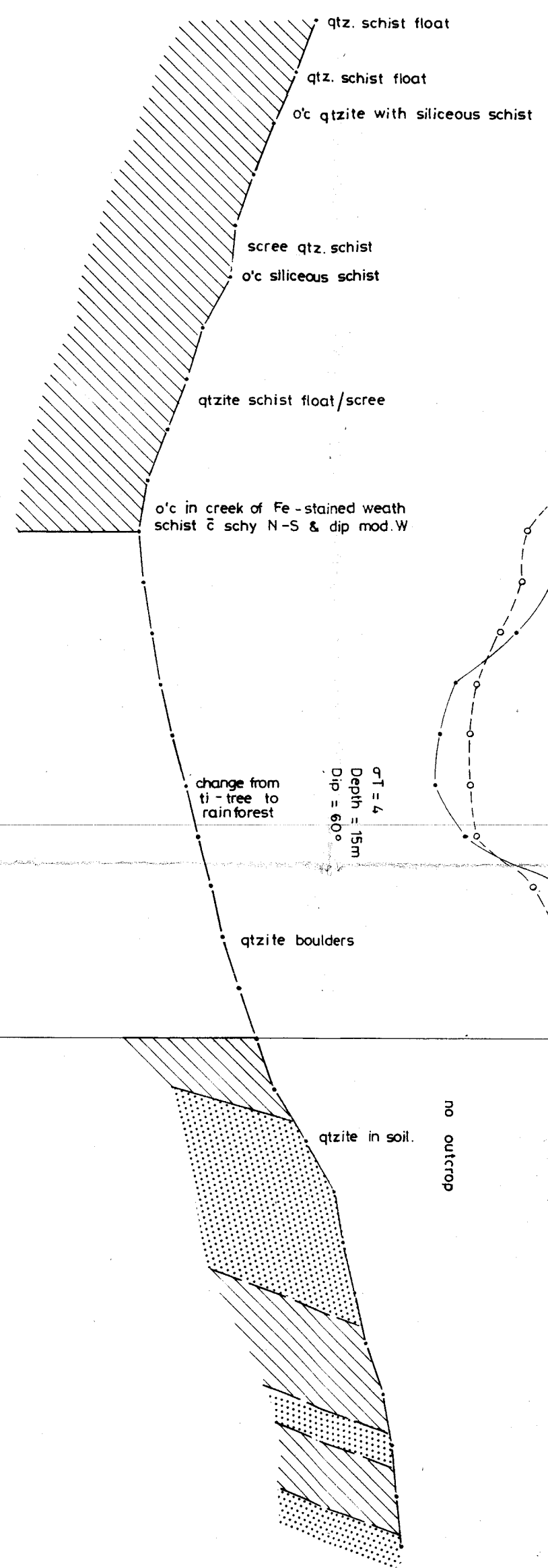
-20%

888 Hz

-20%

1777 Hz

Topography & Geology
(Metres A.S.L.)
N.B.
1. Interpreted by Toplite & Geometrics
2. Geology from OC & examination
3. Outcrop (O.C.) & subcrop (S.C.) indicated where present



Soil Sample Nos & Depths (m)

- 9277 (0.6)
- 9278 (0.5)
- 9279 (0.5)
- 9280 (0.8)
- 9281 (0.9)
- 9282 (0.7)
- 9283 (0.5)
- 9284 (0.5)
- 9285 (0.2)
- 9286 (0.4)
- 3327 (0.9)
- 3326 (0.9)
- 3325 (0.5)
- 3324 (0.7)
- 3323 (0.4)
- 3322 (0.3)
- 3321 (0.8)
- 3320 (0.8)
- 3319 (0.8)
- 3318 (0.3)
- 3317 (0.3)
- 3316 (0.3)
- 3315 (0.5)
- 3314 (0.6)
- 3313 (0.5)
- 3312 (0.4)
- 3311 (0.5)
- 3310 (0.7)
- 3309 (0.4)
- 3308 (0.5)
- 3307 (0.7)
- 3306 (0.7)
- 3305 (0.5)
- 3304 (0.4)
- 3303 (0.3)
- 3302 (0.3)
- 3301 (0.3)
- 9287 (0.5)
- 9288 (0.6)
- 9299 (0.7)
- 9290 (0.6)
- 9291 (0.5)
- 9292 (0.4)
- 9293 (0.5)
- 9294 (0.5)
- 9295 (0.5)
- 9296 (0.6)

Soil Sampling Results
Activities in ppm

COPPER

LEAD

ZINC

ARSENIC

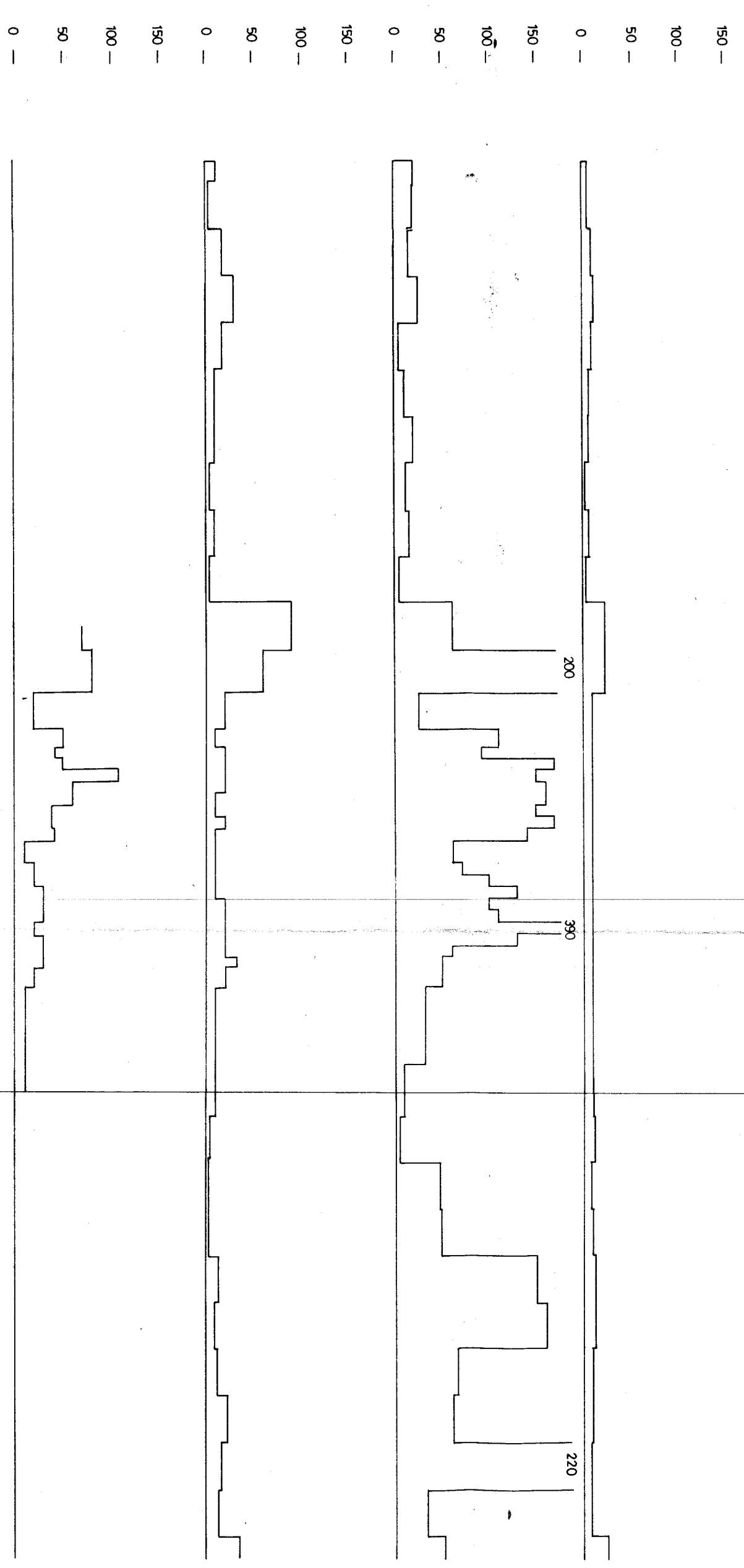
BARUM

TUNGSTEN

NICKEL

COBALT

BISMUTH



The Shell Company of Australia Limited METALS DIVISION	
E.L. 2/78 GRANITE TOR ROMULUS EAST: ANOMALY 5 LINE: 100 N	
1948	
SCALE 1:2000	DATE 1-2-83
AUTHOR D. SPEIJERS	DRAWN J.L.L.
OFFICE DEVONPORT	REF. No.
ENCL. No.	DRG. No. D/NP01/086

520087

Total Magnetic Intensity

- N.B.
1. Uncorrected for diurnal variations.
2. Geometrics 816 with sensor in back-pack

62 000 nT

V.L.F. RELATIVE FIELD INTENSITY

- N.B.
Readings taken using N.W. Cope transmitter

200%
150%
100%

DIP ANGLE

+5°
0
-5°

Max - Min

- Coil Separation = 150m
h phase
Out phase

+20%
0
-20%

222 Hz

+20%
0
-20%
888 Hz

Topography & Geology
(Metres A.S.L.)

- N.B.
1. Topography by Topdite & Geometrics
2. Geology from DC & examination of soil samples
3. Outcrop labels (S-C) indicate where present

280
260
240

Soil Sample Nos & Depths (m)

Soil Sampling Results

- Analyses in p.p.m.

COPPER

LEAD

ZINC

ARSENIC

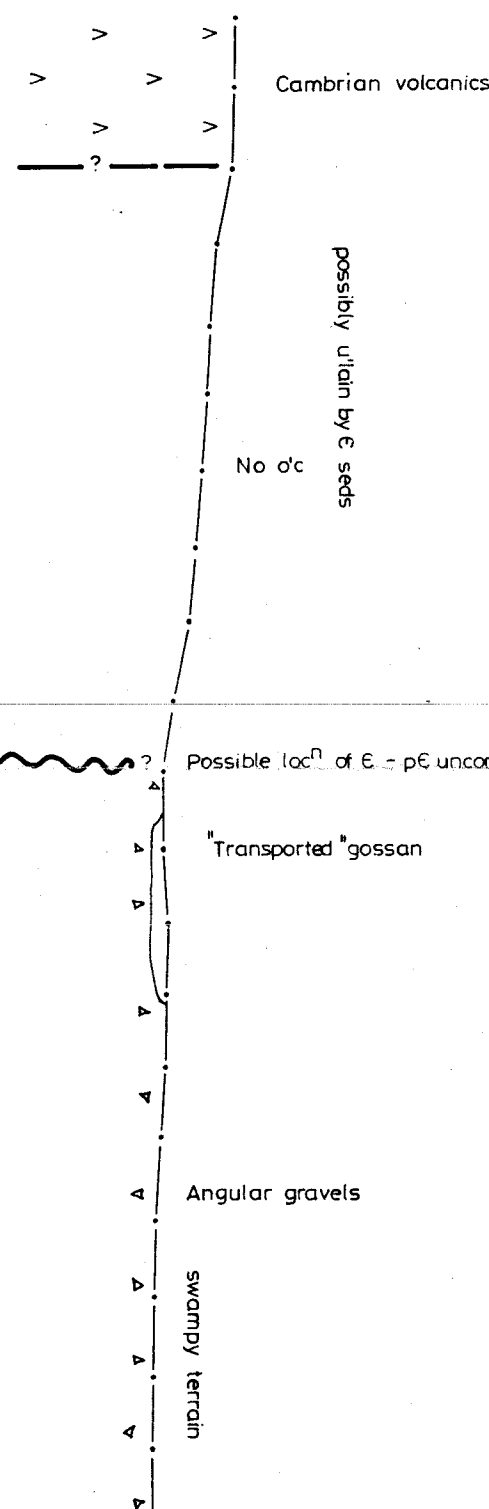
BARIUM

TUNGSTEN

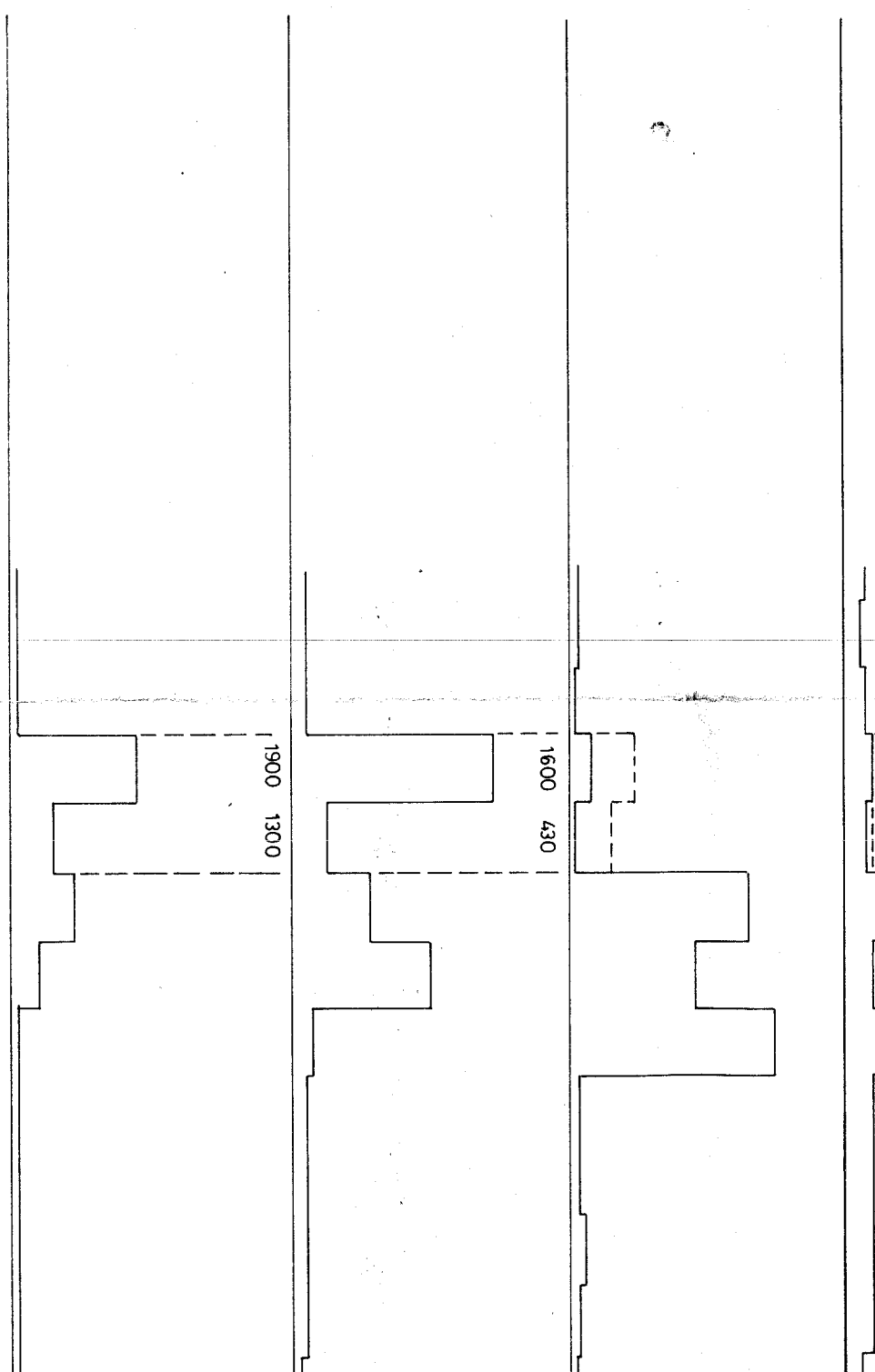
NICKEL

COBALT

BISMUTH



3472
3473
3474
3475
3476
3477
3478
3479
3480
3481
3482
3483
3484



55 40 45 145 200
10 10 10 20 20
18 6 14 12 12 22 14 10 16 8 8 8
4 4 4 4 4 4 4 4 4 4 4 4
4 4 4 4 4 4 4 4 4 4 4 4

5 cm



40 20 0 50 100 m

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
SOPHIA : ANOMALY 9
LINE 00

1949

SCALE	1:2000	DATE	17-5-83
AUTHOR	J.L.L.	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP.No.	
ENCL.No.		DRG.No.	D/NP01/133

520088

Total Magnetic Intensity

- N.B.
1. Uncompensated for diurnal variations.
2. Geomagnetic field with station in back - peak

62 000 nT

V.L.F.

N.B.
Readings taken using
WV coils - transmitter

RELATIVE FIELD
INTENSITY

200%
150%
100%

DP ANGLE

+5°
0
-5°

Max - Min

Coil Separation = 150m
In phase
Out phase

222 Hz

+20%
0
-20%

888 Hz

+20%
0
-20%

Topography & Geology
(Where A.S.L.)

- N.B.
1. Topography by Topcon &
2. Clinometer.
3. Geology from G.C. & examination
of soil samples.
4. Outcrop (OC) & subcrop (SC)
indicated where present.

260
240
220

Lake - waters

No. o/c

pE quartzite

Soil Sample Nos & Depths (m)

- 3409
• 3410
• 3411
• 3412
• 3413
• 3414
• 3415

Soil Sampling Results

Analyses in p.p.m.

COPPER

150

100

50

0

150

100

50

0

150

100

50

0

150

100

50

0

150

100

50

0

150

100

50

0

5 cm



40 20 0 50 100m
50 30 10

The Shell Company of Australia Limited
METALS DIVISION (Vol 2)
15.12.2022

E.L. 2/78 GRANITE TOR
SOPHIA: ANOMALY 9
LINE 400 S

1950

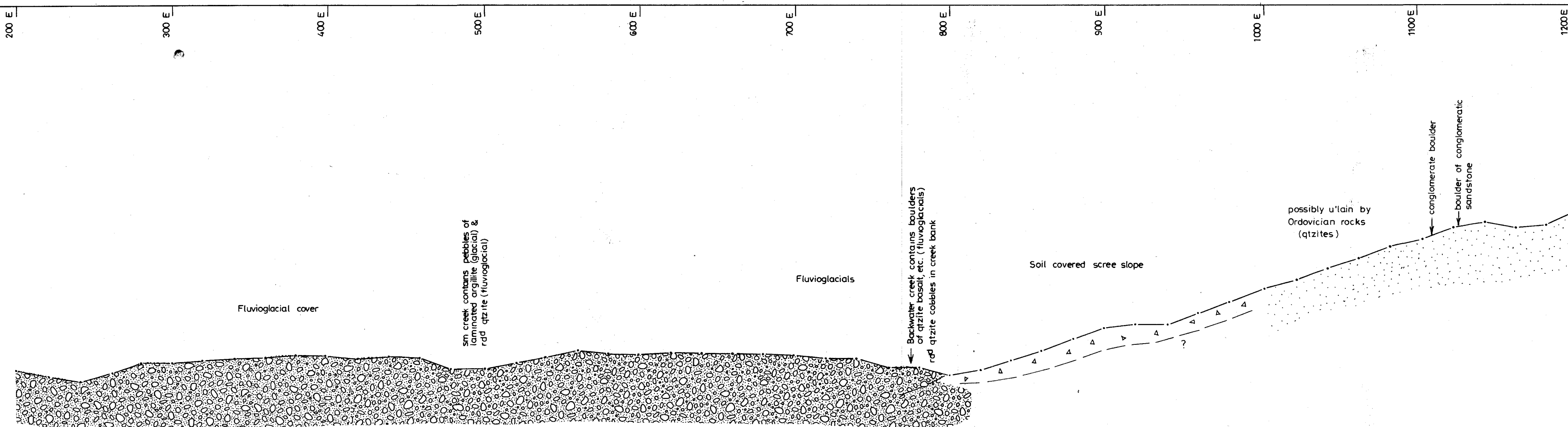
SCALE	1:2000	DATE	16-5-83
AUTHOR	J.L.L.	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP No.	
ENCL No.		DRG No.	D/NP01/134

520089

Topography & Geology

N.B.
1) Topography by Topolite and clinometer
2) Geology from outcrop and examination of soil samples
3) Outcrop (o/c) and subcrop (s/c) indicated where present.

(Metres A.S.L.)
360
340
320
300
280
260



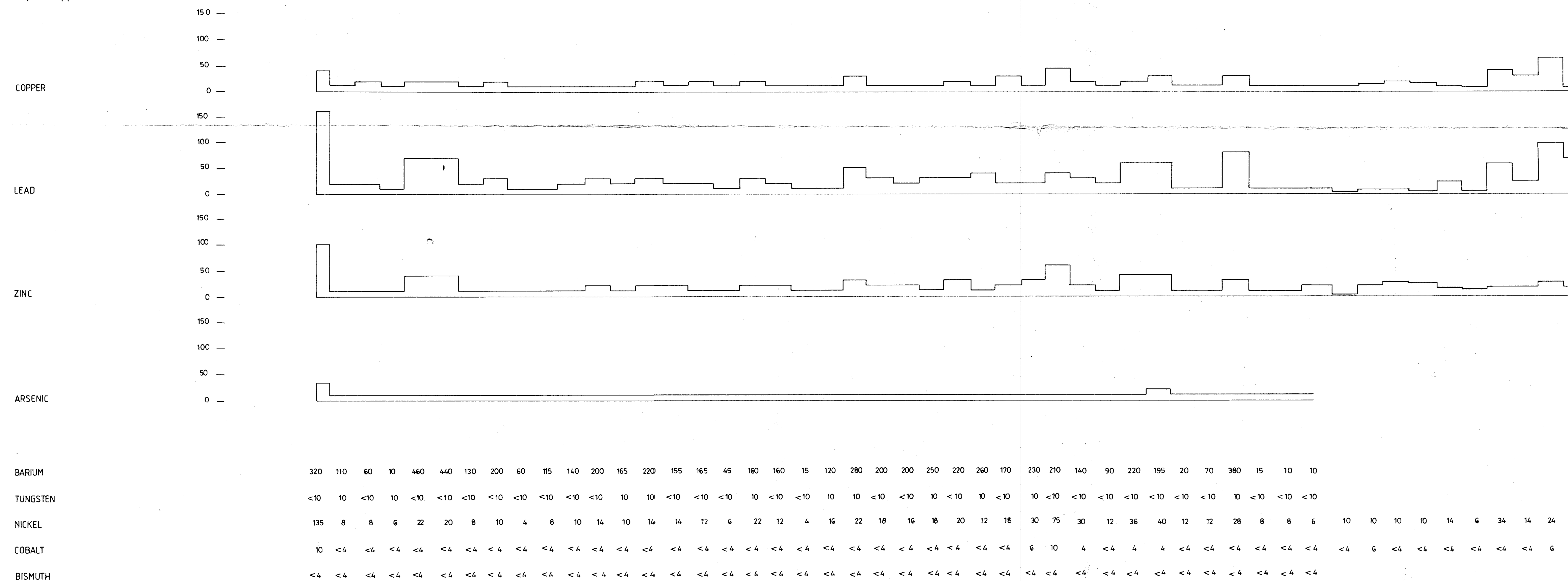
Pits (depth m)

Soil Sample No's & Depths (m)

4840 (1.0) 4841 (0.6) 4842 (0.7) 4843 (0.4) 4844 (1.0) 4845 (1.0) 4846 (0.8) 4847 (1.0) 4848 (0.5) 4849 (0.9) 4850 (1.0) 4851 (1.0) 4852 (1.0) 4853 (1.0) 4854 (1.0) 4855 (1.0) 4856 (1.0) 4857 (1.0) 4858 (1.0) 4859 (0.4) 4860 (1.0) 4861 (1.0) 4862 (1.0) 4863 (1.0) 4864 (1.0) 4865 (1.0) 4866 (1.0) 4867 (0.7) 4868 (0.6) 4869 (1.0) 4870 (0.4) 4871 (0.4) 4872 (0.3) 4873 (1.0) 4874 (0.4) 4875 (0.5) 4876 (1.0) 4877 (0.6) 4878 (0.5) 4879 (0.8) 8219 (0.8) 8220 (0.5) 8221 (0.6) 8222 (0.7) 8223 (1.2) 8224 (0.9) 8225 (0.8) 8226 (0.9) 8227 (1.1) 8228 (0.7)

Soil Sampling Results

Analyses in p.p.m.



BARIUM	320	110	60	10	460	440	130	200	60	115	140	200	165	220	195	165	45	160	160	15	120	280	200	200	250	220	260	170
TUNGSTEN	<10	10	<10	10	<10	<10	<10	<10	<10	<10	<10	<10	10	10	<10	<10	<10	10	<10	<10	10	<10	<10	<10	10	<10	<10	<10
NICKEL	135	8	8	6	22	20	8	10	4	8	10	14	10	14	14	12	6	22	12	4	16	22	18	16	18	20	12	16
COBALT	10	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
BISMUTH	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4

5 cm



40 20 0 50 100m

The Shell Company of Australia Limited METALS DIVISION	
E.L. 2 78 GRANITE TOR BACKWATER : ANOMALY 13 LINE 400 N 1951 200 E - 1200 E TOPOGRAPHY AND GEOLOGY SOIL SAMPLING RESULTS	
SCALE 1:2000	DATE 15.2.83
AUTHOR D. SPEIJERS	DRAWN J.L.L.
OFFICE DEVONPORT	REP No.
ENCL No.	DRG No. D/NP01/063

520090

Total Magnetic Intensity
N.B.
1. Uncompensated for diurnal variations.
2. Geometrics 816 with sensor in back-pole

62 500 nT

V.L.F.
RELATIVE FIELD
INTENSITY
N.B.
Readings taken using
N.W. Cape Transmitter

200%
50%
100%

DIP ANGLE

+6°
+5°
0

Max - Min
Coil separation = 150 m
In phase
Out phase

222 Hz

+20%
0
-20%

444 Hz

+20%
0
-20%

888 Hz

+20%
0
-20%

1777 Hz

+4.0%
+20%
0
-20%

N.B. IP is normalized to 222 Hz

Topography & Geology (Metres A.S.L.)

N.B.
1. Topography by topolite &
C. Speijers.
2. Geology from OC & examination
of soil samples.
3. Shaded areas represent (S.C.)
indicated where present

300
280
260
240

Pits (depth m)

Soil Sample No's & Depths (m)

• 4755 (0.8)
• 4756 (0.6)
• 4757 (0.6)
• 4758 (0.5)
• 4759 (0.6)
• 4760 (0.8)
• 4761 (0.7)

• 4762 (0.6)
• 4763 (0.8)
• 4764 (0.7)
• 4765 (0.6)
• 4766 (0.5)
• 4767 (0.6)
• 4768 (0.8)
• 4769 (0.7)
• 4770 (0.6)
• 4771 (0.6)
• 4772 (0.8)
• 4773 (0.5)

[(0.6)]

Soil Sampling Results Analyses in p.p.m.

COPPER

LEAD

ZINC

ARSENIC

BARUM
TUNGSTEN
NICKEL
COBALT
BISMUTH

140 75 50 60 65 80 90 115 135 150 65 95 75 65 190 185 95 195 190
70 75 <40 <10 <10 <10 <10 <10 <10 <10 15 15 <10 <10 <10 <10 70
4 6 <4 <4 <4 <4 6 8 14 <10 14 10 8 6 14 70 24 30 32
<4 1 <4 <4 <4 <4 <4 <4 <4 <4 8 <4 <4 <4 <4 <4 <4
<4 <4 <4 <4 <4 <4 <4 <4 <4 <4 <4 <4 <4 <4 <4 <4

5 cm



40 20 0 50 100 m
50 30 10

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
BACKWATER : ANOMALY 13
LINE 600 N
200 E - 600 E

1952

SCALE 1:2000 DATE 16-2-83
AUTHOR D. SPEIJERS DRAWN J.L.L.
OFFICE DEVONPORT REP. No.
ENCL No. DRG No. D/NP01/064 A

520091

Total Magnetic Intensity

N.B.
1. Uncorrected for diurnal variations
2. Geophysical 816 with sensor in
East position

62500 nT

V.L.F.

N.B.
Readings taken using
NW Cape transmitter

200% -
150% -
100% -

DP ANGLE

+5° -
0 -
-5° -

Max - Min

Coil Separation = 150m
In phase -
Out phase -

222 Hz

+20% -
0 -
-20% -

888 Hz

+20% -
0 -
-20% -

600 E

700 E

800 E

900 E

1000 E

1100 E

1200 E



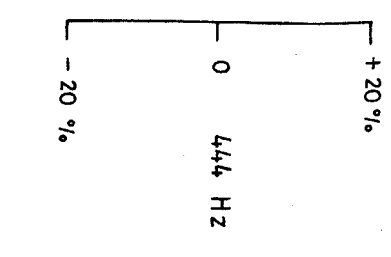
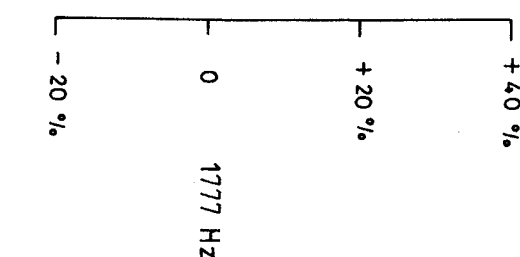
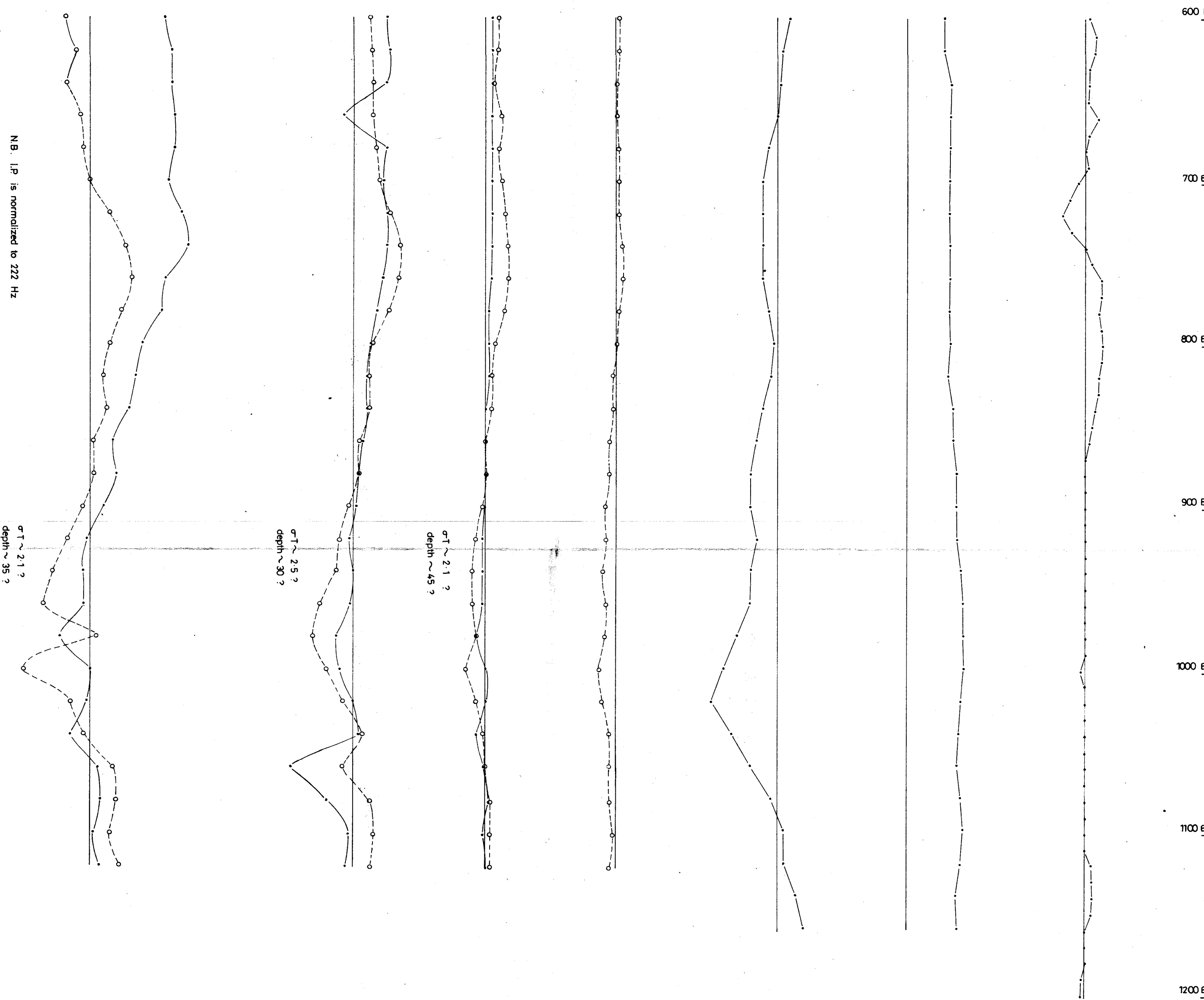
The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
BACKWATER: ANOMALY 13
LINE 600 N
600 E - 1200 E

1953

SCALE	1:2000	DATE	16-2-83
AUTHOR	D. SPEIJERS	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP. No.	
ENCL. No.		DRG. No.	D/NP01/064 B

520092



1000 E (approx)
- no clear dip into
(possibly shallow w. ???)
- broad conductor
- assume depth ~ 30m ??
- $\sigma T \sim 2-25$ (surface)

Topography & Geology

(Merrie A.S.L.)
N.B.
1. Topography by Topline &
Clinometer.
2. Geology from air & examination
of soil samples.
3. Outcrop (O.C.) & adobe (A.C.)
indicated where present

400 -
380 -
360 -
340 -
320 -
300 -
280 -
260 -

Pits (depth)

Soil Sample Nos & Depths (m)

4773 (0.5)	(1.0)	4788 (0.9)	(1.0)	4797 (0.5)	(0.3)
4774 (0.8)		4789 (0.7)		4798 (0.5)	
4775 (0.5)		4790 (0.8)		4799 (0.5)	
4776 (0.9)		4791 (0.6)		4901 (0.3)	
4777 (0.9)		4792 (0.8)		4902 (0.4)	
4778 (0.7)		4793 (0.6)		4903 (0.5)	
4779 (1.0)		4794 (0.6)		4904 (0.5)	
4780 (0.5)		4795 (1.0)			
4781 (0.6)		4796 (1.0)			
4782 (0.8)					
4783 (0.8)					
4784 (0.6)					
4785 (0.8)					
4786 (0.7)					
4787 (1.0)					
4788 (0.9)					
4789 (0.7)					
4790 (0.8)					
4791 (0.6)					
4792 (0.8)					
4793 (0.6)					
4794 (0.6)					
4795 (1.0)					
4796 (1.0)					
4797 (0.5)					
4798 (0.5)					
4799 (0.5)					
4901 (0.3)					
4902 (0.4)					
4903 (0.5)					
4904 (0.5)					

Soil Sampling Results

Analyses in ppm.

COPPER

LEAD

ZINC

ARSENIC

150 -
100 -
50 -
0 -
150 -
100 -
50 -
0 -
150 -
100 -
50 -
0 -

BARUM
TUNGSTEN
NICKEL
COBALT
BISMUTH

70	240	250	255	260	265	270	275	280	285	290	295	300	305	310	315	320	325	330	335	340	345	350	355	360	365	370	375	380	385	390	395	400	405	410	415	420	425	430	435	440	445	450	455	460	465	470	475	480	485	490	495	500	505	510	515	520	525	530	535	540	545	550	555	560	565	570	575	580	585	590	595	600	605	610	615	620	625	630	635	640	645	650	655	660	665	670	675	680	685	690	695	700	705	710	715	720	725	730	735	740	745	750	755	760	765	770	775	780	785	790	795	800	805	810	815	820	825	830	835	840	845	850	855	860	865	870	875	880	885	890	895	900	905	910	915	920	925	930	935	940	945	950	955	960	965	970	975	980	985	990	995	1000	1005	1010	1015	1020	1025	1030	1035	1040	1045	1050	1055	1060	1065	1070	1075	1080	1085	1090	1095	1100	1105	1110	1115	1120	1125	1130	1135	1140	1145	1150	1155	1160	1165	1170	1175	1180	1185	1190	1195	1200	1205	1210	1215	1220	1225	1230	1235	1240	1245	1250	1255	1260	1265	1270	1275	1280	1285	1290	1295	1300	1305	1310	1315	1320	1325	1330	1335	1340	1345	1350	1355	1360	1365	1370	1375	1380	1385	1390	1395	1400	1405	1410	1415	1420	1425	1430	1435	1440	1445	1450	1455	1460	1465	1470	1475	1480	1485	1490	1495	1500	1505	1510	1515	1520	1525	1530	1535	1540	1545	1550	1555	1560	1565	1570	1575	1580	1585	1590	1595	1600	1605	1610	1615	1620	1625	1630	1635	1640	1645	1650	1655	1660	1665	1670	1675	1680	1685	1690	1695	1700	1705	1710	1715	1720	1725	1730	1735	1740	1745	1750	1755	1760	1765	1770	1775	1780	1785	1790	1795	1800	1805	1810	1815	1820	1825	1830	1835	1840	1845	1850	1855	1860	1865	1870	1875	1880	1885	1890	1895	1900	1905	1910	1915	1920	1925	1930	1935	1940	1945	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	2075	2080	2085	2090	2095	2100	2105	2110	2115	2120	2125	2130	2135	2140	2145	2150	2155	2160	2165	2170	2175	2180	2185	2190	2195	2200	2205	2210	2215	2220	2225	2230	2235	2240	2245	2250	2255	2260	2265	2270	2275	2280	2285	2290	2295	2300	2305	2310	2315	2320	2325	2330	2335	2340	2345	2350	2355	2360	2365	2370	2375	2380	2385	2390	2395	2400	2405	2410	2415	2420	2425	2430	2435	2440	2445	2450	2455	2460	2465	2470	2475	2480	2485	2490	2495	2500	2505	2510	2515	2520	2525	2530	2535	2540	2545	2550	2555	2560	2565	2570	2575	2580	2585	2590	2595	2600	2605	2610	2615	2620	2625	2630	2635	2640	2645	2650	2655	2660	2665	2670	2675	2680	2685	2690	2695	2700	2705	2710	2715	2720	2725	2730	2735	2740	2745	2750	2755	2760	2765	2770	2775	2780	2785	2790	2795	2800	2805	2810	2815	2820	2825	2830	2835	2840	2845	2850	2855	2860	2865	2870	2875	2880	2885	2890	2895	2900	2905	2910	2915	2920	2925	2930	2935	2940	2945	2950	2955	2960	2965	2970	2975	2980	2985	2990	2995	3000	3005	3010	3015	3020	3025	3030	3035	3040	3045	3050	3055	3060	3065	3070	3075	3080	3085	3090	3095	3100	3105	3110	3115	3120	3125	3130	3135	3140	3145	3150	3155	3160	3165	3170	3175	3180	3185	3190	3195	3200	3205	3210	3215	3220	3225	3230	3235	3240	3245	3250	3255	3260	3265	3270	3275	3280	3285	3290	3295	3300	3305	3310	3315	3320	3325	3330	3335	3340	3345	3350	3355	3360	3365	3370	3375	3380	3385	3390	3395	3400	3405	3410	3415	3420	3425	3430	3435	3440	3445	3450	3455	3460	3465	3470	3475	3480	3485	3490	3495	3500	3505	3510	3515	3520	3525	3530	3535	3540	3545	3550	3555	3560	3565	3570	3575	3580	3585	3590	3595	3600	3605	3610	3615	3620	3625	3630	3635	3640	3645	3650	3655	3660	3665	3670	3675	3680	3685	3690	3695	3700	3705	3710	3715	3720	3725	3730	3735	3740	3745	3750	3755	3760	3765	3770	3775	3780	3785	3790	3795	3800	3805	3810	3815	3820	3825	3830	3835	3840	3845	3850	3855	3860	3865	3870	3875	3880	3885	3890	3895	3900	3905	3910	3915	3920	3925	3930	3935	3940	3945	3950	3955	3960	3965	3970	3975	3980	3985	3990	3995	4000	4005	4010	4015	4020	4025	4030	4035	4040	4045	4050	4055	4060	4065	4070	4075	4080	4085	4090	4095	4100	4105	4110	4115	4120	4125	4130	4135	4140	4145	4150	4155	4160	4165	4170	4175	4180	4185	4190	4195	4200	4205	4210	4215	4220	4225	4230	4235	4240	4245	4250	4255	4260	4265	4270	4275	4280	4285	4290	4295	4300	4305	4310	4315	4320	4325	4330	4335	4340	4345	4350	4355	4360	4365	4370	4375	4380	4385	4390	4395	4400	4405	4410	4415	4420	4425	4430	4435	4440	4445	4450	4455	4460	4465	4470	4475	4480	4485	4490	4495	4500	4505	4510	4515	4520	4525	4530	4535	4540	4545	4550	4555	4560	4565	4570	4575	4580	4585	4590	4595	4600	4605	4610	4615	4620	4625	4630	4635	4640	4645	4650	4655	4660	4665	4670	4675	4680	4685	4690	4695	4700	4705	4710	4715	4720	4725	4730	4735	4740	4745	4750	4755	4760	4765	4770	4775	4780	4785	4790	4795	4800	4805	4810	4815	4820	4825	4830	4835	4840	4845	4850	4855	4860	4865	4870	4875	4880	4885	4890	4895	4900	4905	4910	4915	4920	4925	4930	4935	4940	4945	4950	4955	4960	4965	4970	4975	4980	4985	4990	4995	5000
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Total Magnetic Intensity

N.B.
1. Uncorrected for diurnal variation
2. Geometric's 816 with sensor in back-pack

62 500 nT

V.L.F.

N.B.
Readings taken using N.W. Cape transmitter

RELATIVE FIELD INTENSITY

DIP ANGLE

200%
150%
100%

+5°
0
-5°

+ 20 %
0
- 20 %

Max - Min

Coil separation = 150 m
In phase
Out phase

+ 20 %
0
- 20 %

888 Hz

+ 20 %
0
- 20 %

444 Hz

+ 40 %
+ 20 %
0
- 20 %

1777 Hz

Bouguer Gravity

Density = 2.70
Reading scale = MAGL (1cm = 0.20 MAGL)
Terrain corrected to Circle D

102 00
101 00
100 40

- ① broad flat-lying $\Rightarrow$ $\sigma T \sim 1$
depth ~ 30
- ② 2 Conductors $\Rightarrow$ $\sigma T \sim 1$
depth ~ 15 } 640 E
- (assume 30° dip) $\sigma T \sim ?$
depth $\sim ?$ } 340 E

NB: I.P. is normalized to 222 Hz I.P.

5 cm



40 20 0 50 100 m
50 30 10

The Shell Company of Australia Limited METALS DIVISION (Vol 2)	
E.L. 2/78 GRANITE TOR BACKWATER: ANOMALY 13 LINE 400 N, 200E - 1200E MAGNETICS V.L.F. MAX - MIN BOUGUER GRAVITY 1954	
SCALE 1:2000	DATE 15-2-83
AUTHOR J.L.L.	DRAWN J.L.L.
OFFICE DEVONPORT	REP No.
ENCL No.	ORG No. D/NP01/090

520093

Total Magnetic Intensity

- N.B.
1. Uncorrected for diurnal variations
2. Uncorrected for latitude with anomaly in
total - pick

V.L.F.
N.B.
Readings taken using
Mk. 1000 instrument

RELATIVE FIELD
INTENSITY

DIP ANGLE

Max - Min
Coil Separation = 150m
In phase
Out phase

222 Hz

888 Hz

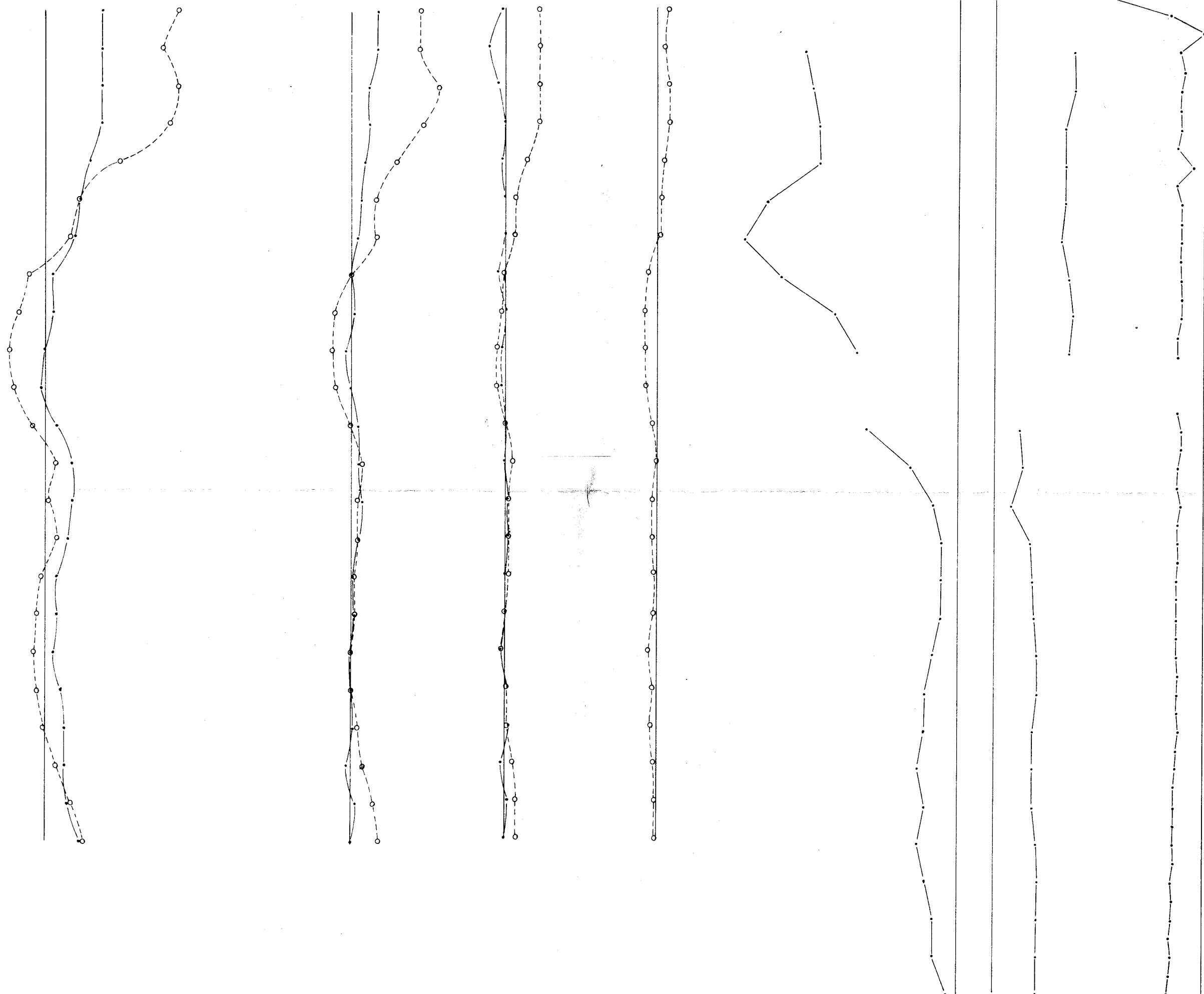
200 E 300 E 400 E 500 E 600 E 700 E 800 E

5 cm



The Shell Company of Australia Limited METALS DIVISION	
E.L. 2/78 GRANITE TOR FURY FLATS: ANOMALY 14 LINE 400 N 200 E - 800 E	
1956	
SCALE 1:2000	DATE 18-2-83
AUTHOR O. SPEIJERS	DRAWN J.L.L.
OFFICE DEVONPORT	REP No.
ENCL No.	DRG No. D/NP01/055

520095

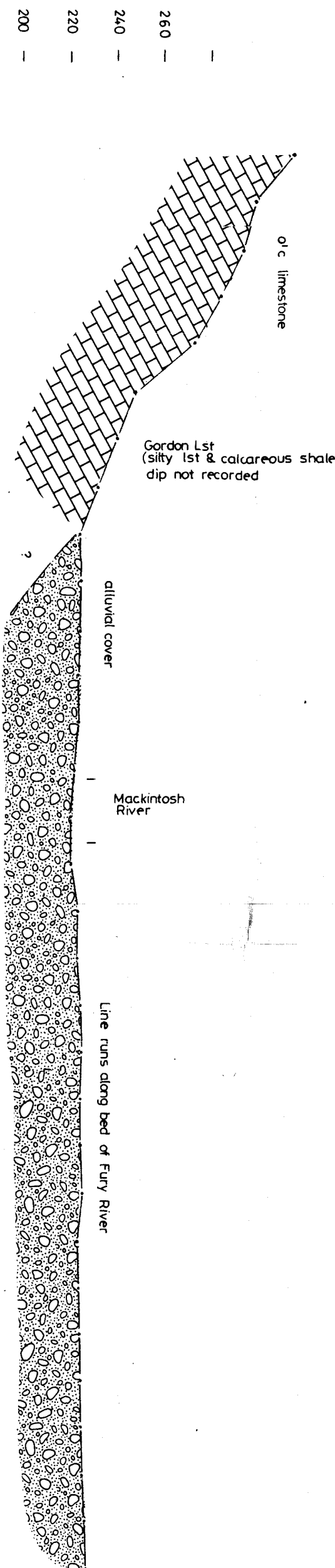


N.B. I.P. is normalized to 222 Hz I.P.

+40%
+20%
0
-20%

Topography & Geology
(Series A.S.L.)

- N.B.
1. Topography by Toplite &
Chromometer
2. Geology by Toplite & examination
3. Outcrop (O.C.) & subcrop (S.C.)
indicated where present



Soil Sample Nos & Depths (m)

SAMPLES TAKEN
14-11-83
(S10)

- 8250 (0-1)
- 8249 (0-2)
- 8248 (0-4)
- 8247 (1-0)
- 8246 (0-9)
- 8245 (1-1)
- 8244 (1-0)
- 8243 (0-6)
- 8242 (0-7)
- 8241 (1-1)
- 8241 (2-0)
- 4729 (0-2)
- 4730 (0-5)
- 4731 (0-4)
- 4732 (0-6)
- 4733 (0-7)
- 4734 (0-7)
- 4735 (0-9)
- 4736 (1-0)

Soil Sampling Results

Analyses in p.p.m.

COPPER

LEAD

ZINC

ARSENIC

BARUM

TUNGSTEN

NICKEL

COBALT

BISMUTH

85	155	170	185	180	240	165	210
<10	<10	<10	<10	<10	<10	15	<10
(26)	(20)	(48)	(20)	(44)	(38)	(24)	(36)
26	44	16	36	20	16	18	16
(10)	(6)	(20)	(10)	(18)	(12)	(12)	(10)
8	10	8	20	6	10	10	10
<4	<4	<4	4	8	6	<4	<4

N.B.
1. Uncorrected for diurnal variations
2. Geometrics 816 with sensor in
back - pack

RELATIVE FIELD
INTENSITY

3

-50

Temperature (°C)	R _p
0	0
20	0
40	2
50	10
60	18
70	15
80	10

222112

- 20%

Chemical shift scale for ^1H NMR in CDCl_3 . The scale is marked at $+20\%$, 0 , and -20% . A reference peak is labeled 888 Hz .

(Metres A.S.L.)

- 1 Topography by Topolite & Clinometer
- 2 Geology from dc & examination of soil samples.
3. Outcrop (o'c) & subcrop (s'c) indicated where present.

280 —
260 —
240 —
220 —

Depth (m)

Depth (m)

340	—
320	—
300	—
280	—
260	—
240	—
220	—

50
0

01

01

01

62500 nT -



Intensity

62 500 nt⁻¹

RELATIVE FIELD INTENSITY

200 %

150 %

62 500 m⁻¹ -

Density

Figure 1 is a line graph showing the relationship between the relative field intensity of the 62500 mT line (y-axis) and the 15070 mT line (x-axis). The y-axis is labeled 'RELATIVE FIELD INTENSITY' and ranges from 0 to 1.0. The x-axis is labeled 'RELATIVE FIELD INTENSITY' and ranges from 0 to 1.0. The data points are plotted at (0.15, 0.15), (0.20, 0.20), (0.25, 0.25), (0.30, 0.30), (0.35, 0.35), (0.40, 0.40), (0.45, 0.45), (0.50, 0.50), (0.55, 0.55), (0.60, 0.60), (0.65, 0.65), (0.70, 0.70), (0.75, 0.75), (0.80, 0.80), (0.85, 0.85), (0.90, 0.90), (0.95, 0.95), and (1.00, 1.00). A solid line represents the linear fit to the data points.

+5°
0
-5°

Total Magnetic Intensity
N.B.
1) Uncorrected for diurnal variation
2) Geometrics 816 with sensor in
bedrock.

62500 nT

62000 nT

RELATIVE FIELD
INTENSITY

200 %

150 %

100 %

V.L.F.

N.B.
READINGS TAKEN USING
N.W. CAPE TRANSMITTER

DIP ANGLE

+10°

+5°

0

-5°

222 Hz

+20 %

0

-20 %

MAX - MIN

COIL SEPARATION = 150m
IN PHASE
OUT OF PHASE

888 Hz

+20 %

0

-20 %

BOUSSIER GRAVITY
DENSITY = 2.65
GRAVITY SCALE = MAG. (11m - 0.020 MAG.)
TERRAIN CORRECTED TO CIRCLE E

100

200

00

200 E

300 E

400 E

500 E

600 E

700 E

800 E

5 cm



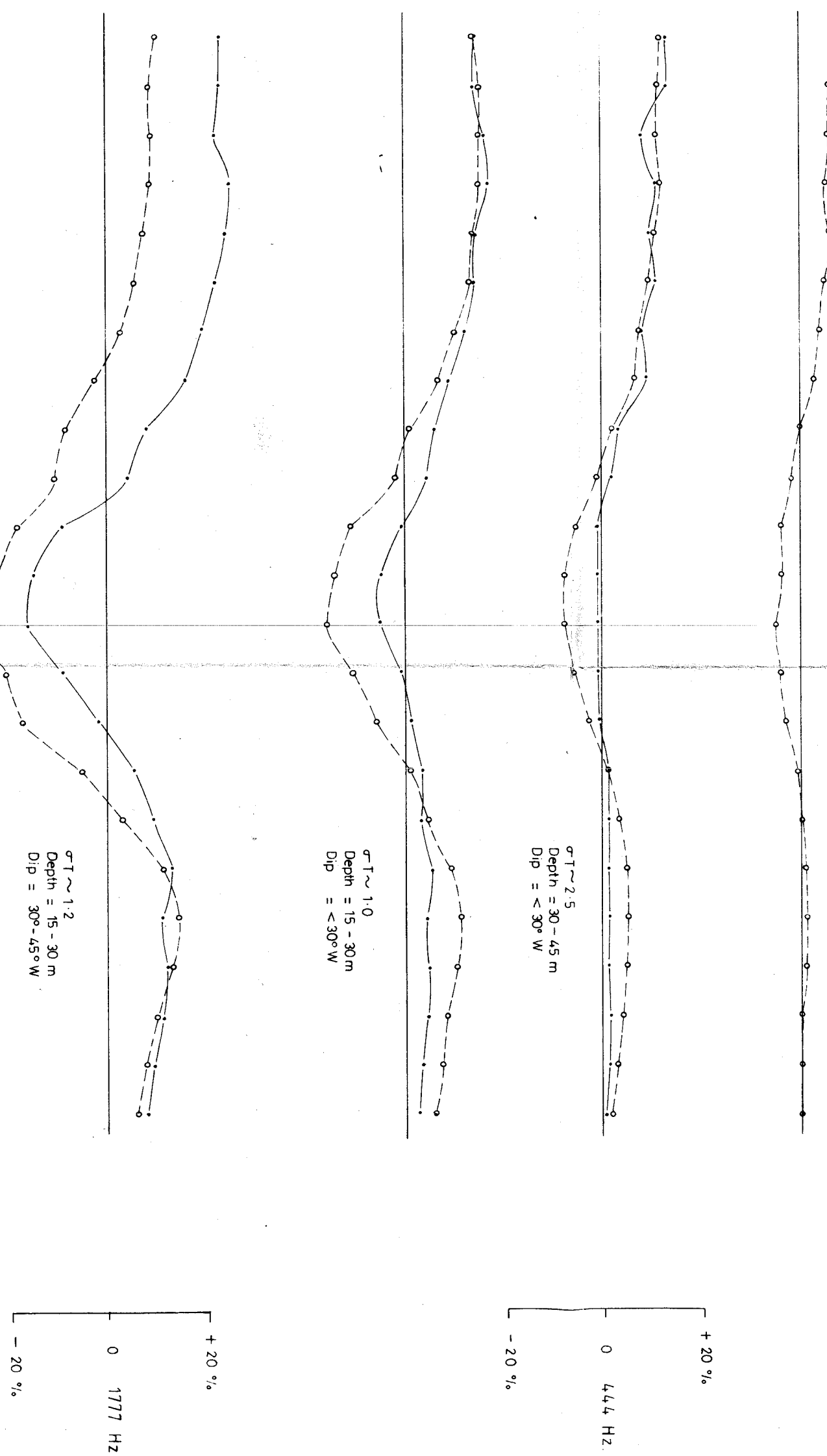
The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
FURY FLATS : ANOMALY 14
LINE 700 N
200 E - 800 E

1958

SCALE	1:2000	DATE	24-2-83
AUTHOR	D. SPEIJERS	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP. No.	
ENCL. No.		DRG. No.	D/NP01/058

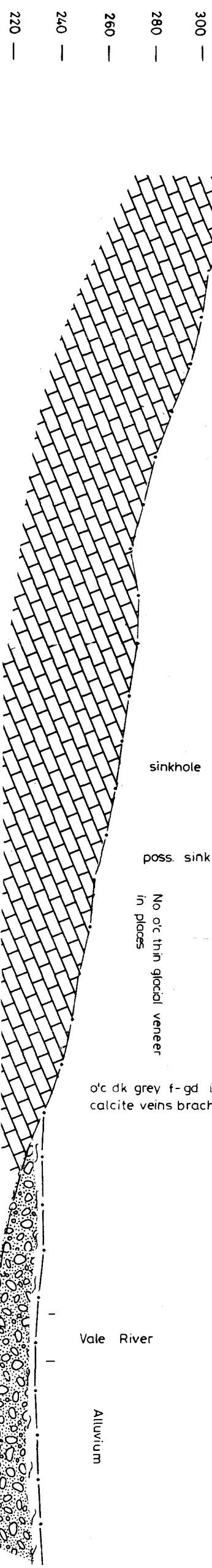
520097



N.B. I.P. is normalized to 222 Hz
520 E Dip ~ 30°W
Depth ~ 10-15m
σT ~ 2.5+ (reasonable conductor)

Topography & Geology

(Metres A.S.L.)
N.B. Topography by Topolite and
1) dirometer
2) Geology from outcrop and
examination of soil samples
3) Outcrop (S.C.) and slope (S.C.)
noted where present

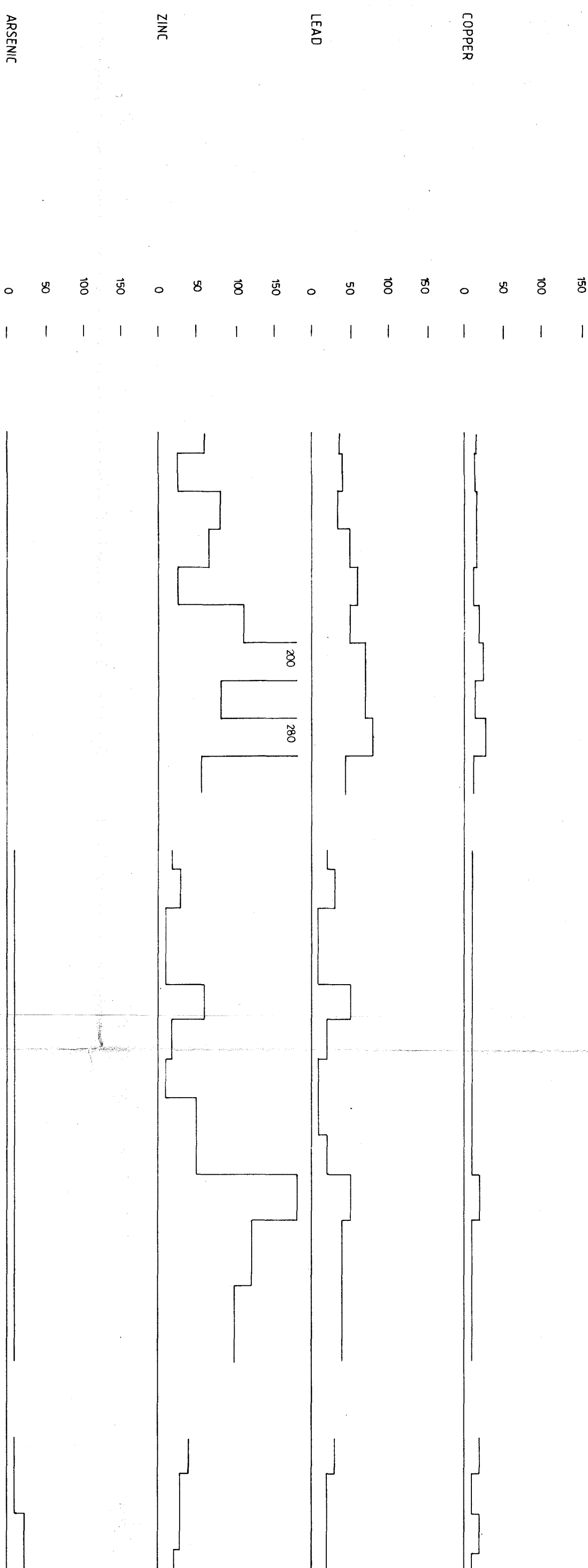


Soil Sample Nos & Depths (m)

- 8251 (1.1)
- 8252 (1.0)
- 8253 (0.9)
- 8254 (1.2)
- 8255 (1.2)
- 8256 (1.7)
- 8257 (1.8)
- 8258 (0.5)
- 8259 (2.0)
- 8260 (0.9)
- 4737 (1.0)
- 4738 (1.0)
- 4739 (0.4)
- 4740 (0.4)
- 4741 (0.4)
- 4742 (0.8)
- 4744 (0.8)
- 4743 (0.4)
- 4745 (0.6)
- 4746 (1.0)
- 4747 (1.0)
- 4748 (1.0)
- 4749 (1.0)
- 4750 (1.0)
- 4751 (1.0)
- 4752 (0.9)
- 4753 (1.0)
- 4754 (1.0)

Soil Sampling Results

Analyses in p.p.m.



BARIUM	105	135	35	70	140	55	65	105	100	190	220	250	175	180	270	290	220	270
TUNGSTEN	15	<4	<10	<10	<10	10	<10	<10	<10	<10	<10	<10	<10	<10	10	<10	10	<10
NICKEL	40	8	20	8	8	28	8	40	10	6	10	<4	<4	18	4	<4	18	14
COBALT	12	<4	4	20	<4	4	6	6	12	6	<4	<4	<4	<4	<4	<4	8	24
BISMUTH		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4

5 cm



50 30 10 0 50 100 m

The Shell Company of Australia Limited METALS DIVISION	
E.L. 2/78 GRANITE TOR FURY FLATS: ANOMALY 14 LINE 700 N 200 E - 800 E	
1959	
SCALE 1:2000	DATE 24-2-83
AUTHOR D.SPEIJERS	DRAWN J.L.L.
OFFICE DEVONPORT	REP No.
ENCL No	DRG No D/NP01/093

520098

Total Magnetic Intensity

N.B.
1. Uncorrected for diurnal variations
2. Geometrics 816 with sensor in back - rock

V.L.F.

RELATIVE FIELD INTENSITY

N.B.
Readings taken using N.W. Cape transmitter

DP ANGLE

0
-5°
-10°

Max - Min

Coil Separation = 150 m
In phase
Out phase

+20%
0
-20%

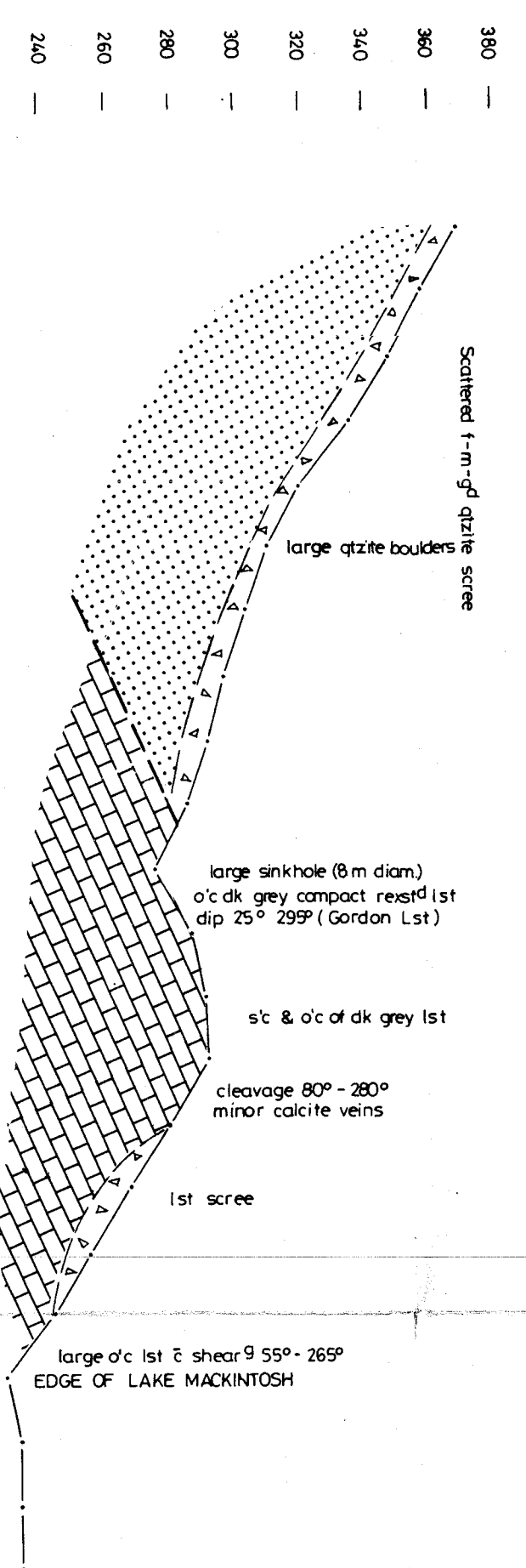
+20%
0
-20%

+20%
0
-20%

N.B. IP is normalized to 222 Hz IP

Topography & Geology

(Metres (A.S.L.))
N.B.
1. Topography by Topline & Spot heights
2. Geology from OC & examination of soil samples
3. Outcrop (O.C.) & Lithology (Lst.) indicated where present



Soil Sample Nos & Depths (m)

- 4931 (0.5)
- 4932 (0.5)
- 4933 (0.8)
- 4934 (0.1)
- 4935 (0.1)
- 4936 (0.5)
- 4937 (0.4)
- 4938 (0.5)
- 4939 (0.4)
- 4940 (1.3)
- 4941 (1.5)
- 4942 (1.3)
- 4943 (0.6)
- 4944 (0.4)
- 4945 (0.6)
- 4946 (0.5)
- 4947 (0.3)
- 4948 (0.5)
- 4949 (1.0)
- 8197
- 8198

Soil Sampling Results

Analyses in p.p.m.

COPPER

LEAD

ZINC

ARSENIC

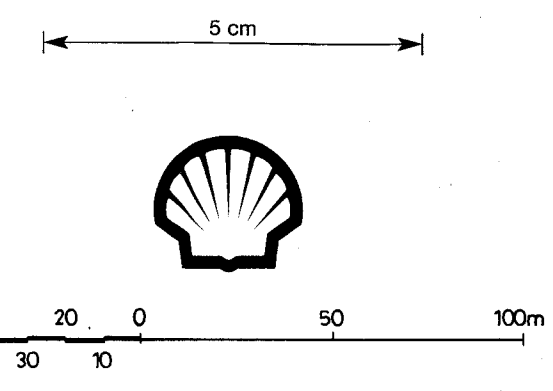
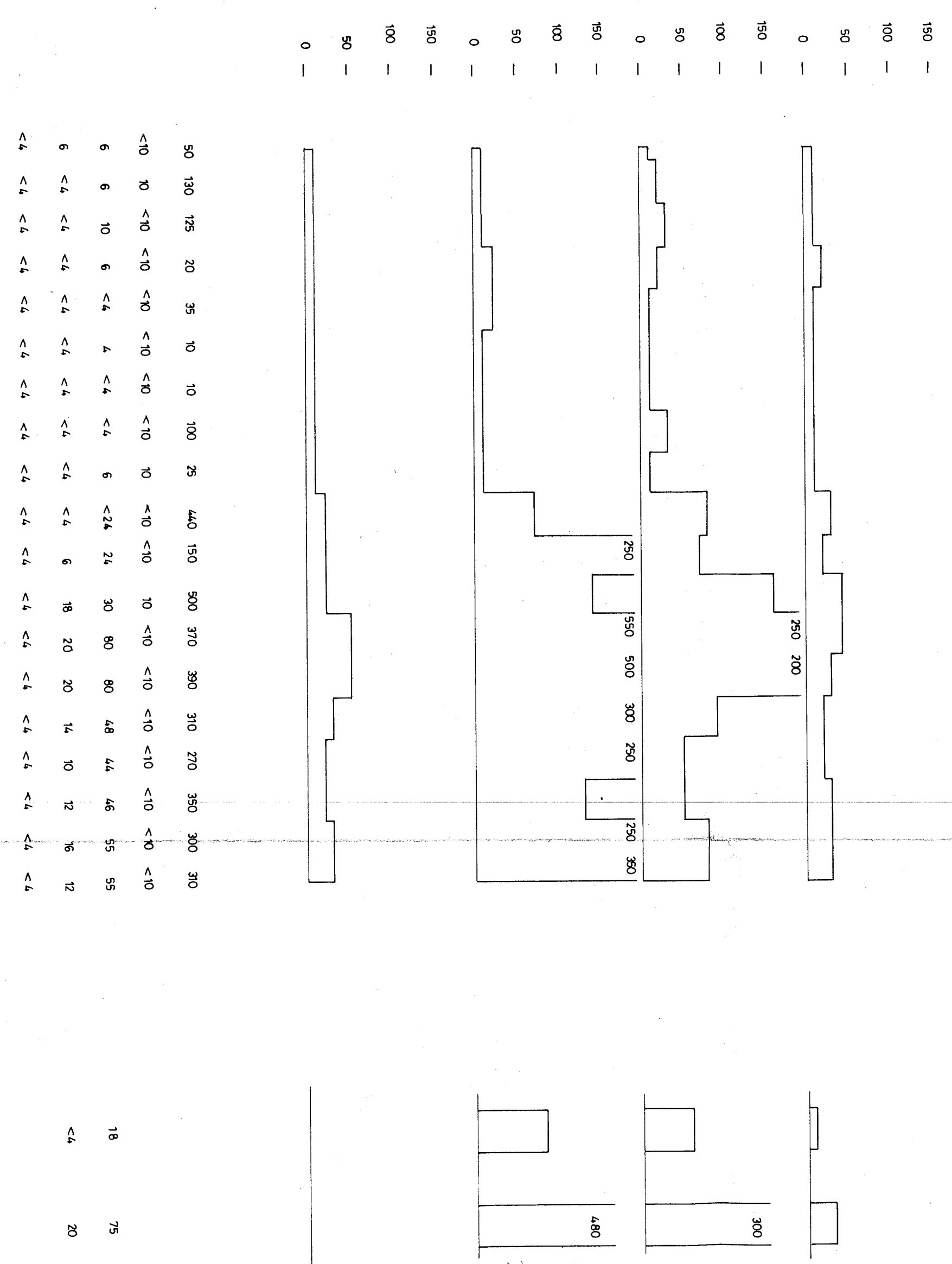
BARUM

TUNGSTEN

NICKEL

COBALT

BRUMPH



The Shell Company of Australia Limited
METALS DIVISION (Vol. 2)
E.L. 2/78 GRANITE TOR
MACKINTOSH: ANOMALY 15
LINE 650 N: 500 E - 920 E
1961
SCALE 1:2000 DATE 18-2-83
AUTHOR D.SPEIJERS DRAWN J.L.L.
OFFICE DEVONPORT REP No.
ENCL No. DRG No. D/NP01/061

520100

Total Magnetic Intensity

N.B.
1 Uncorrected for diurnal variations.
2 Geometrics 616 with sensor in book-pool

62 500 nT

V.L.F.

RELATIVE FIELD INTENSITY
N.B.
Readings taken using NW Cape transmitter

200%
150%
100%

DP ANGLE

+5°
0
-5°

Max - Min

Coil Separation = 150 m
In phase
Out phase

222 Hz

+20%
0
-20%

888 Hz

+20%
0
-20%

500 E

600 E

700 E

780 E

5 cm



The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
MACKINTOSH: ANOMALY 15
LINE 500 N 500E - 780E

1962

SCALE	1: 2000	DATE	17 - 2 - 83
AUTHOR	D. SPEIJERS	DRAWN	J. L.L.
OFFICE	DEVONPORT	REP No.	
ENCL No.		DRG No.	D/NPOT/092

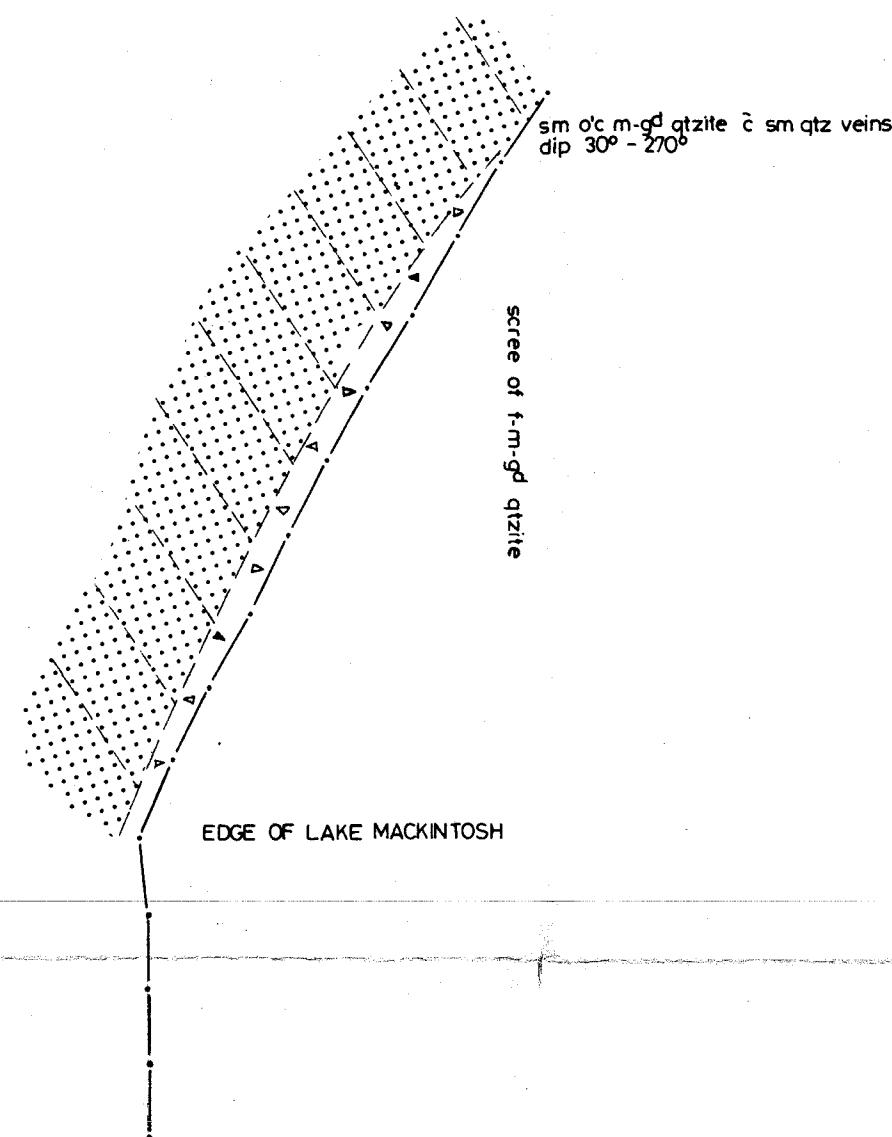
520101

Topography & Geology

(Meters A.S.L.)

N.B.
1. Topography by Toplite & Clinometer
2. Geology from dc & examination of soil samples
3. Dips from 1:500 topographic map (1:500 indicated where present)

340
320
300
280
260
240
220



- 4920 (0.3)
- 4921 (0.7)
- 4922 (0.6)
- 4923 (0.4)
- 4924 (0.4)
- 4925 (0.4)
- 4926 (0.5)
- 4927 (0.5)
- 4928 (0.6)
- 4929 (0.7)
- 4930 (0.9)

Soil Sampling Results

Analyses in p.p.m.

COPPER

150
100
50
0

LEAD

150
100
50
0

ZINC

150
100
50
0

ARSENIC

50
0

BARIUM

30
20
10
0

TUNGSTEN

8
6
4
2
0

NICKEL

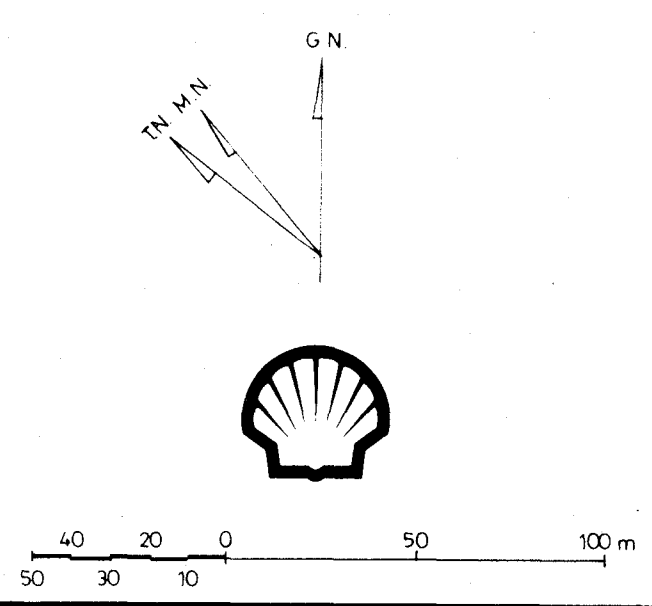
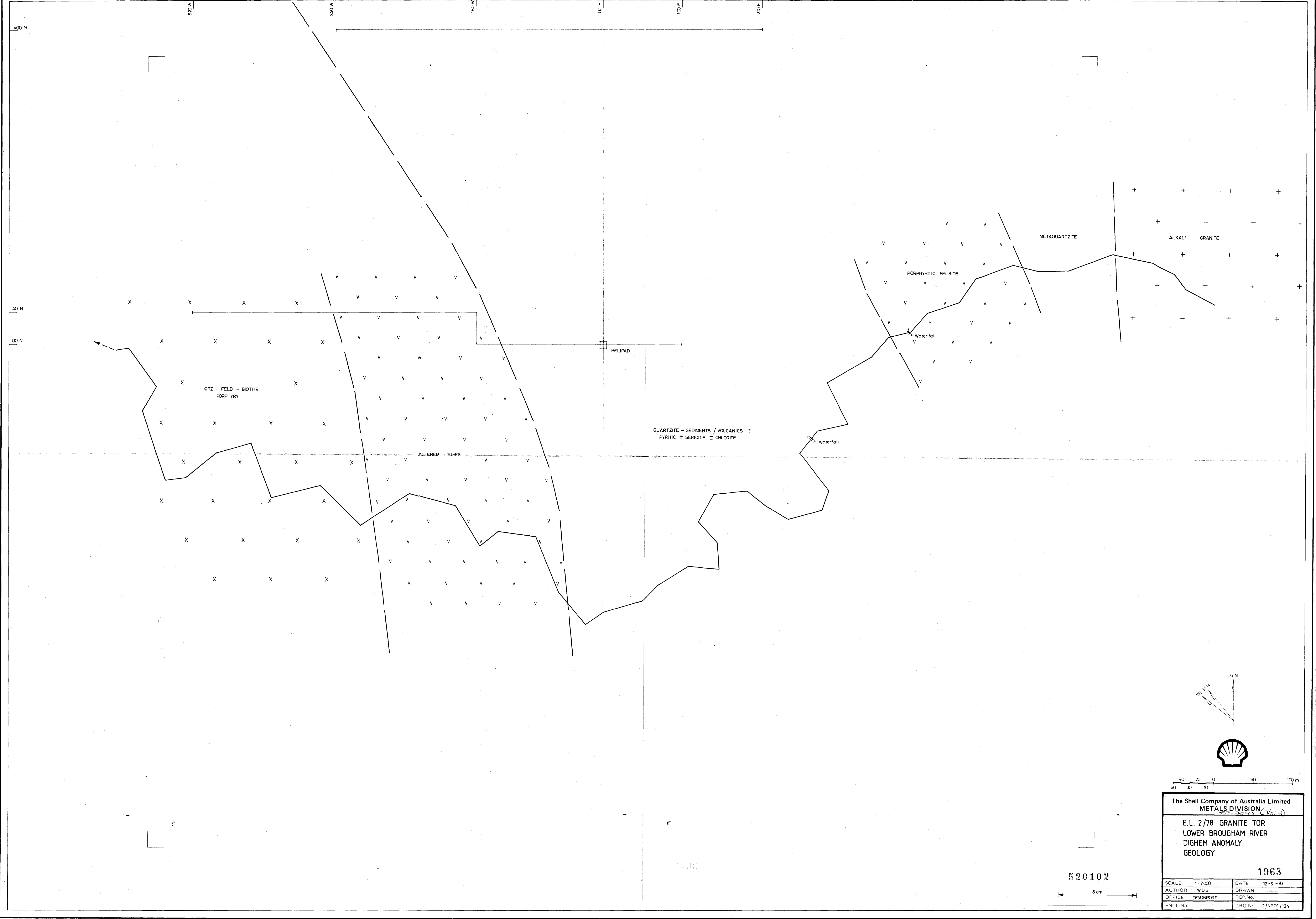
30
20
10
0

COBALT

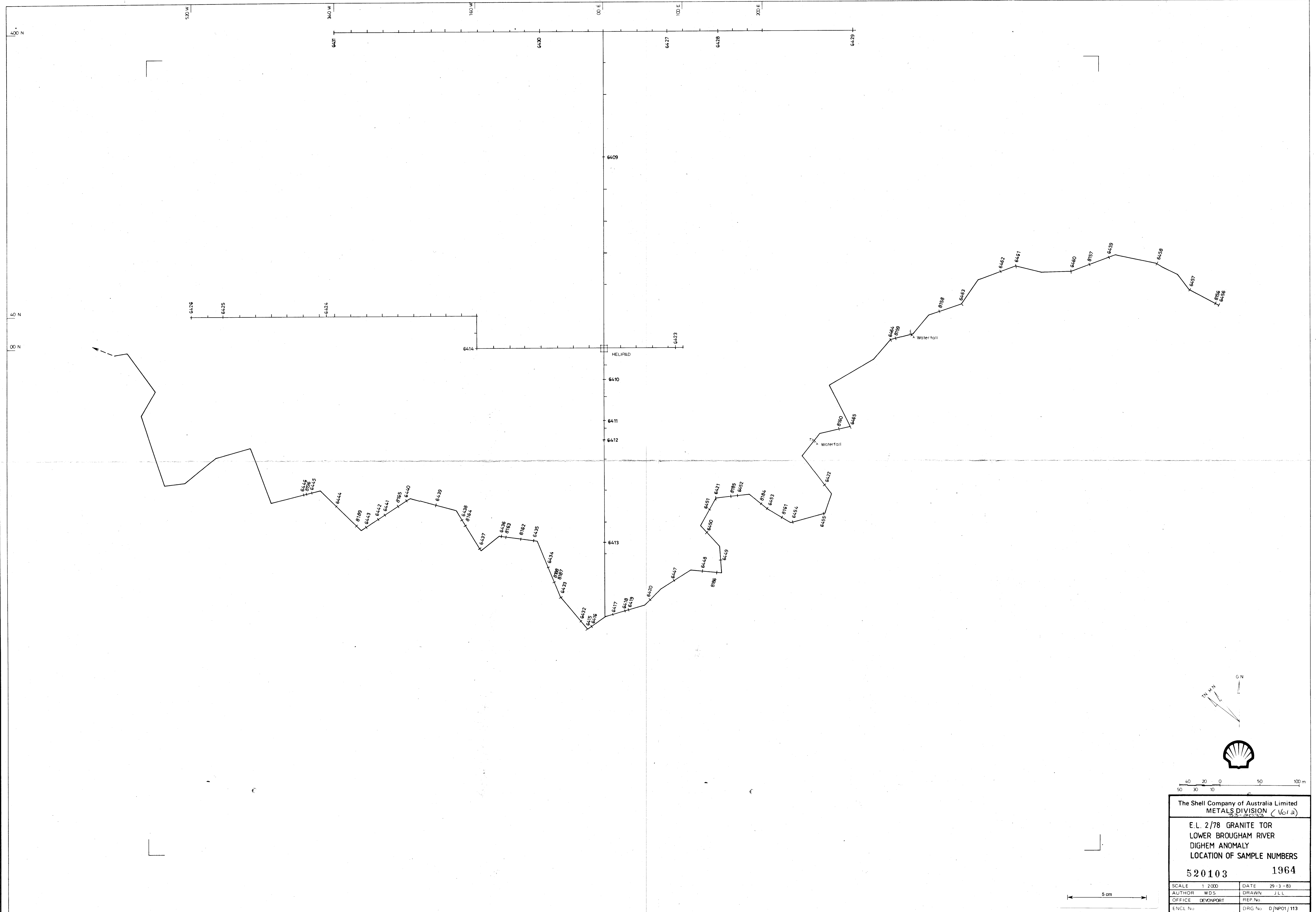
30
20
10
0

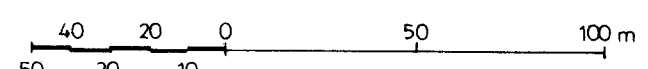
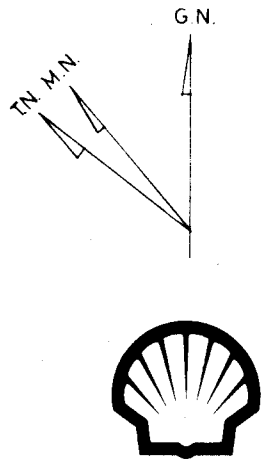
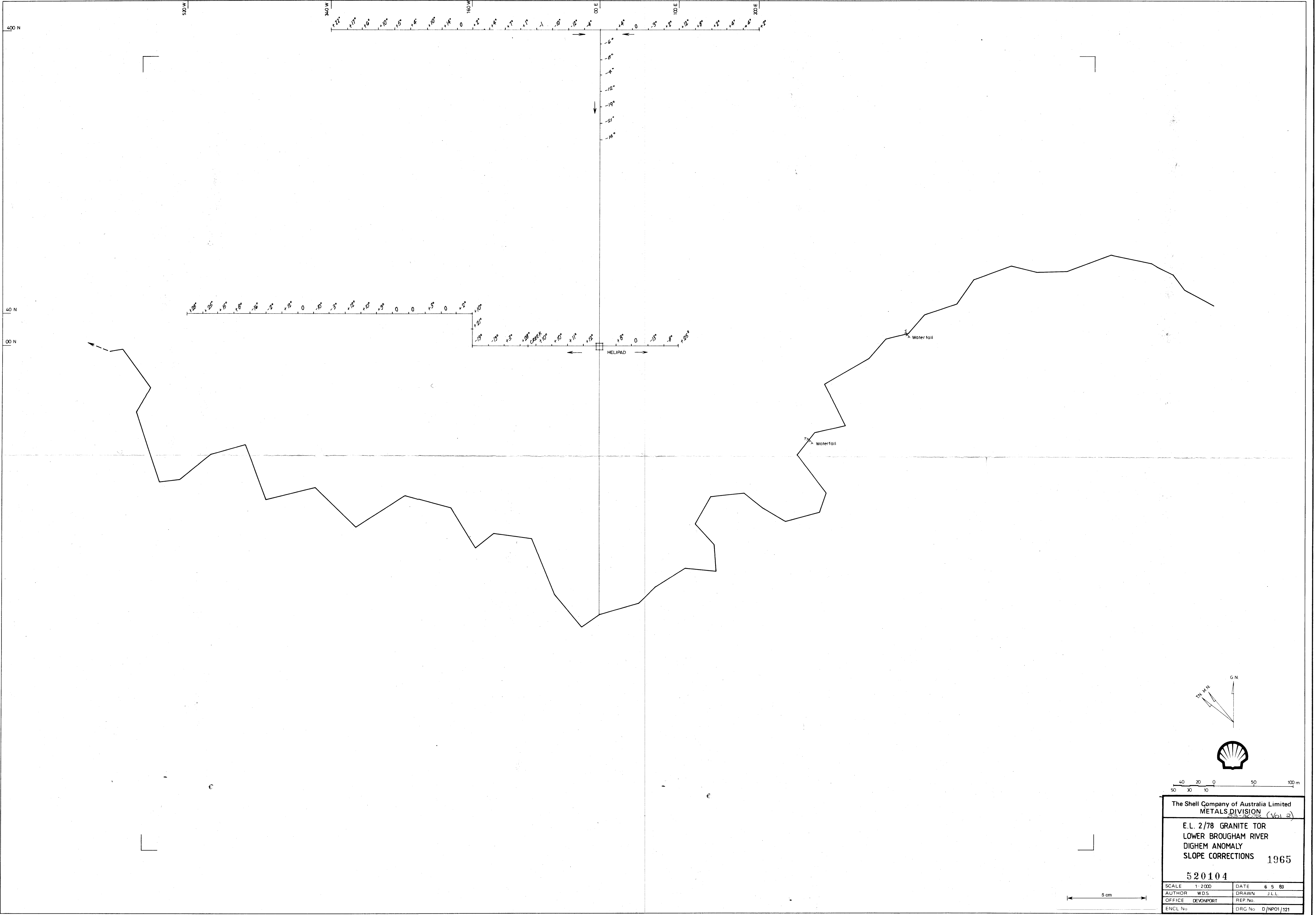
BISMUTH

30
20
10
0



The Shell Company of Australia Limited			
METALS DIVISION			
E.L. 2/78 GRANITE TOR			
LOWER BROUGHAM RIVER			
DIGHEM ANOMALY			
GEOLOGY			
1963			
SCALE	1:2000	DATE	12-5-83
AUTHOR	W.D.S.	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP. No.	
ENCL. No.		DRG. No.	D/NP01/124

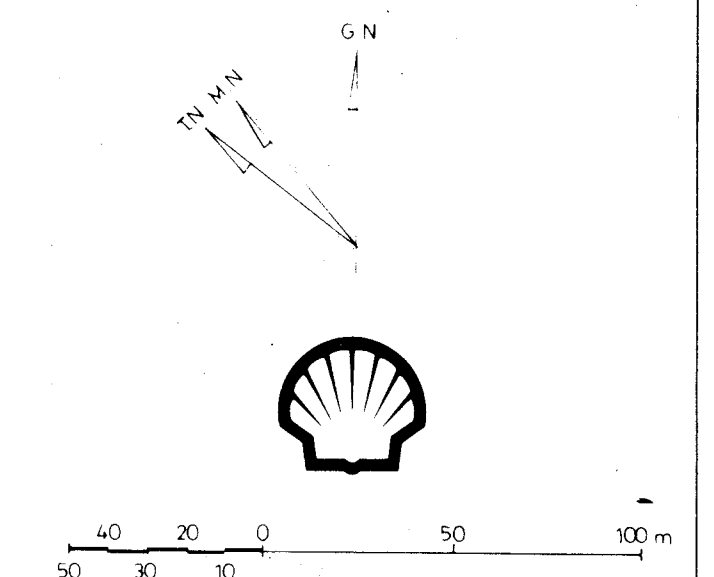




The Shell Company of Australia Limited			
METALS DIVISION			
E.L. 2/78 GRANITE TOR			
LOWER BROUGHAM RIVER			
DIGHEM ANOMALY			
SLOPE CORRECTIONS			
1965			
520104			
SCALE	1:2000	DATE	6 5 83
AUTHOR	W.D.S.	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP. No.	
ENCL. No.		DRG. No.	D/NP01/121



SOIL SAMPLE
ROCK SAMPLE
Cu, Pb, Zn, Ni
Analyses in p.p.m.

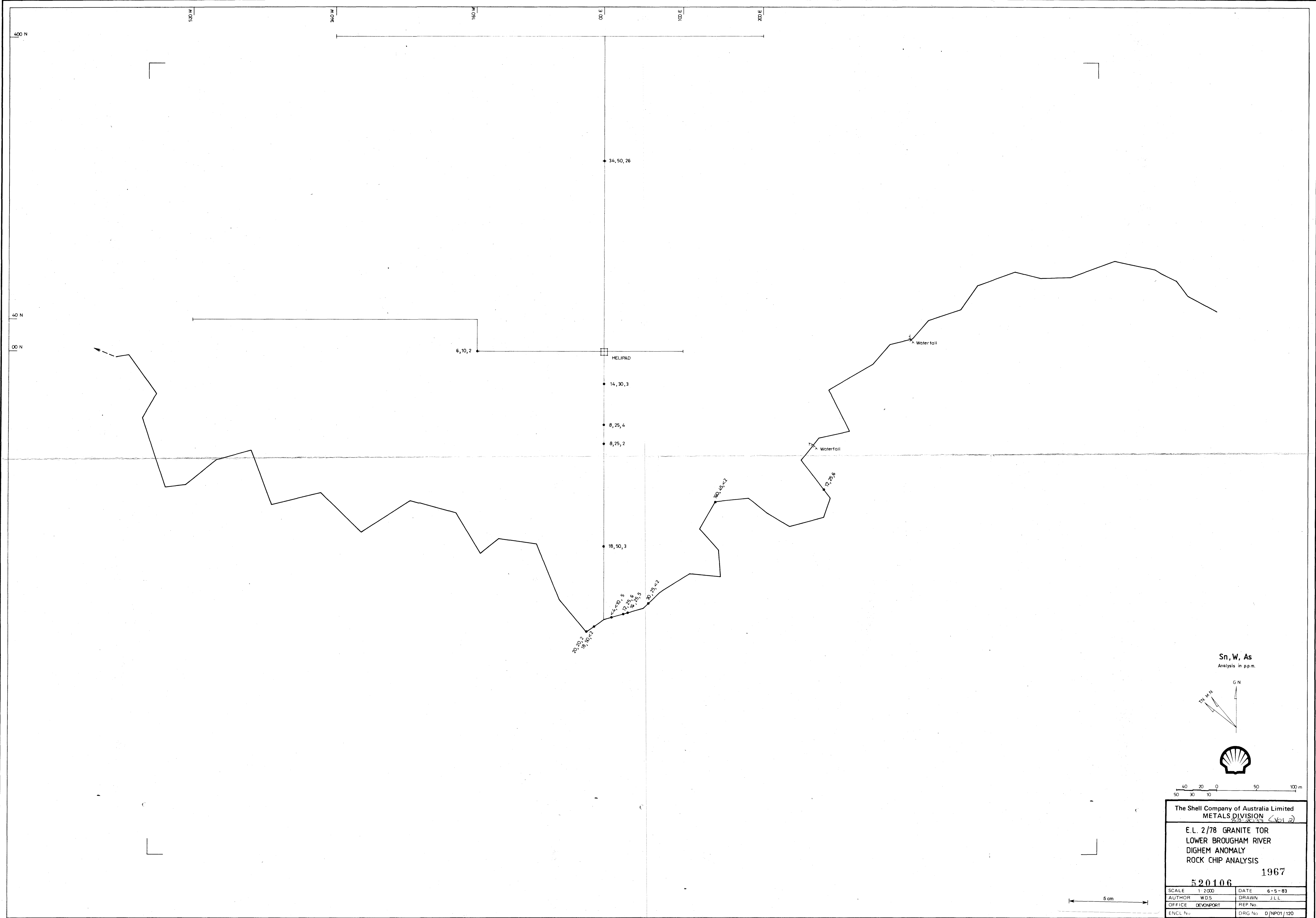


The Shell Company of Australia Limited
METALS DIVISION

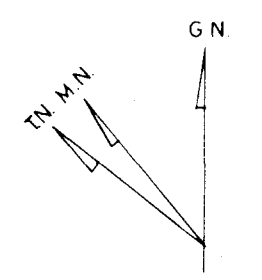
E.L. 2/78 GRANITE TOR
LOWER BROUGHAM RIVER
DIGHEM ANOMALY
GEOCHEMISTRY
Cu, Pb, Zn, Ni,
520105

1966

SCALE	1:2000	DATE	13-4-83
AUTHOR	WDS	DRAWN	JLL
OFFICE	DEVONPORT	REP NO.	
ENCL. NO.		DRG. NO.	0/NP01/114



Sn, W, As
Analysis in ppm.



40 20 0 50 100 m
50 30 10

The Shell Company of Australia Limited			
METALS DIVISION			
E.L. 2/78 GRANITE TOR			
LOWER BROUGHAM RIVER			
DIGHEM ANOMALY			
ROCK CHIP ANALYSIS			
1967			
520106			
SCALE	1:2000	DATE	6-5-83
AUTHOR	WDS	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP No.	
ENCL No.		DRG No.	D/NP01/120

Total Magnetic Intensity
N.B.
1) Uncorrected for diurnal variation
2) Data from 818 with series in
Book-Pack

63000 nT

V.L.F.
RELATIVE FIELD
INTENSITY

N.B.
READINGS TAKEN USING
N.W. CAPE TRANSMITTER.

V.L.F.

DIP ANGLE

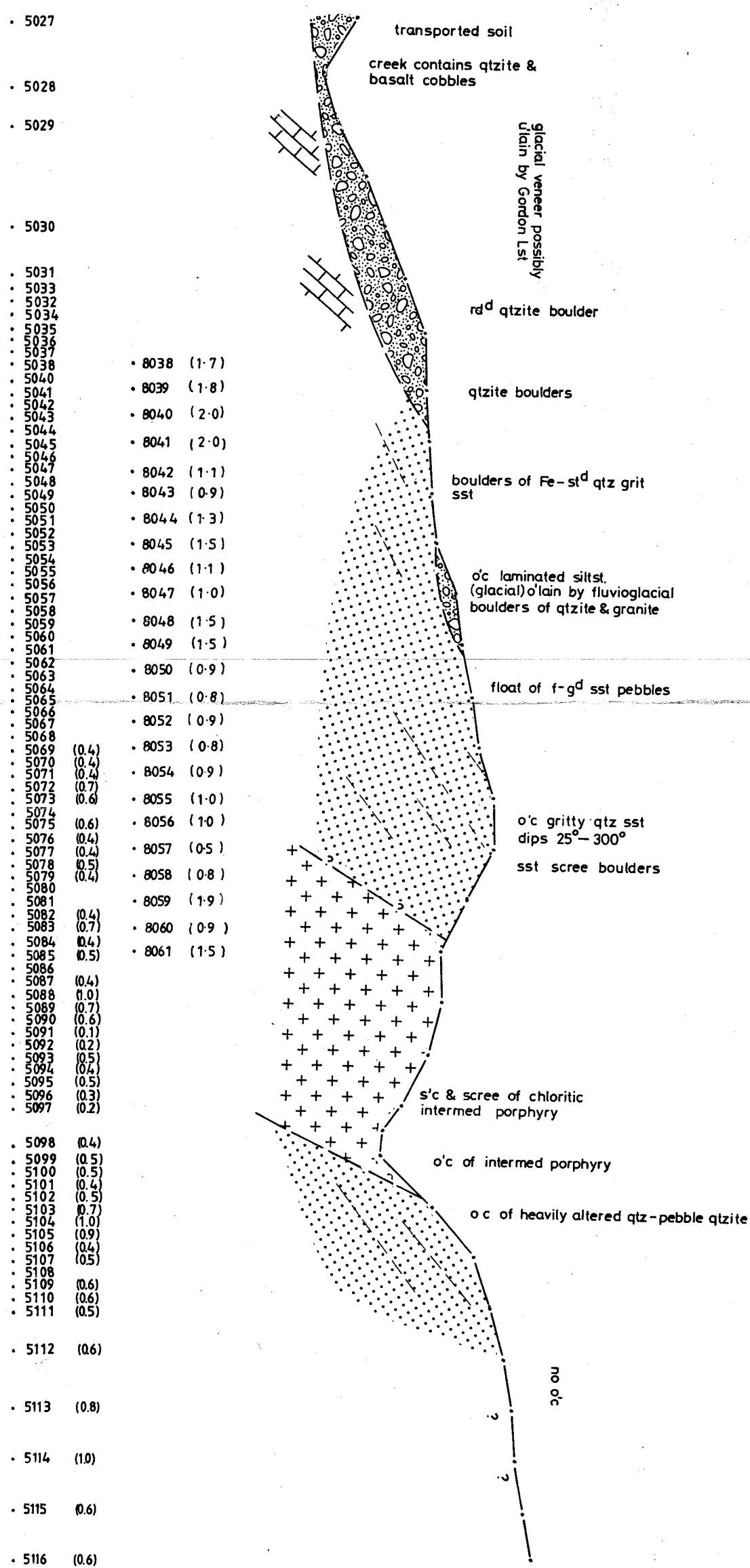
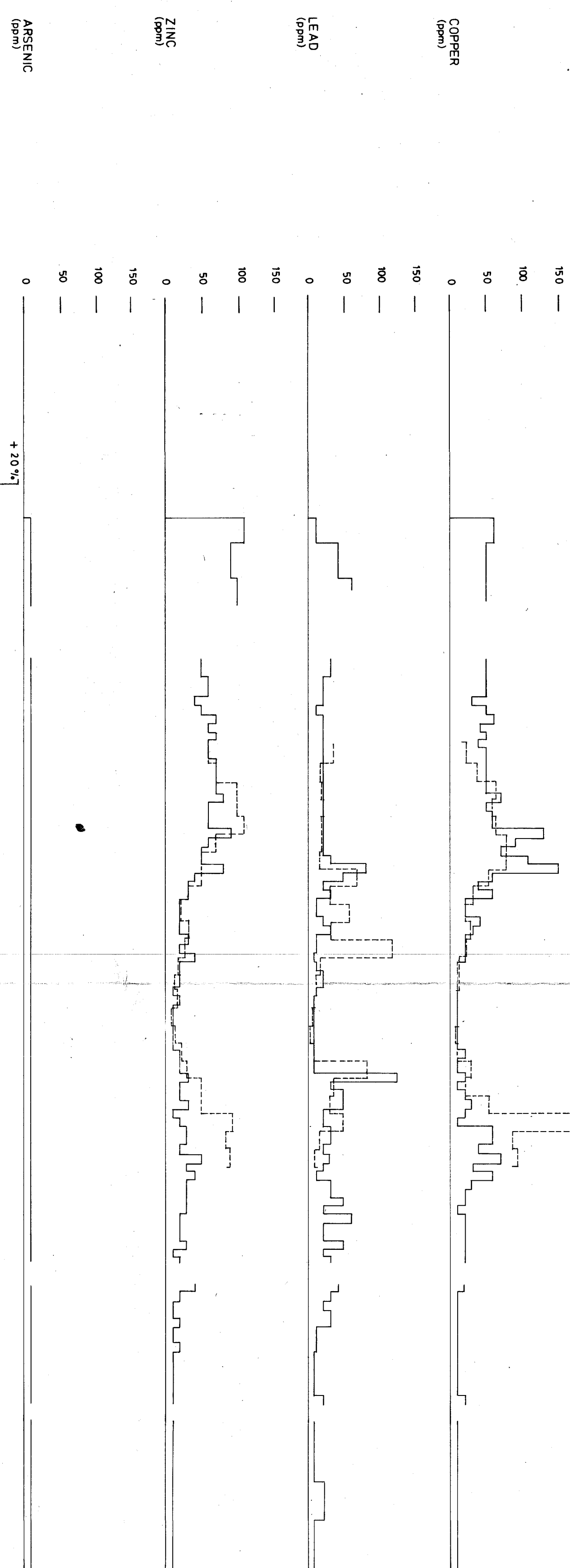
Topography & Geology

(Metres A.S.L.)
N.B.
1) Topography by topographic and
clinometer.
2) Geology from outcrop and
aerial photograph.
3) Outcrop (S) and Subcrop (SS)
indicated where present

Soil Auger Sample Nos & Depths

Soil Sample Nos & Depths (m)

Soil Auger Results
Soil Sampling Results



MAX - MIN
COL. SEPARATION 150 m
IN PHASE
OUT PHASE

888 Hz
+20%
0
-20%

222 Hz
+20%
0
-20%

$\sigma T = 15$
depth ~ 30 - 45 m
dip = shallow W

$\sigma T = 0.8$
depth ~ 30 m
dip = shallow W

$\sigma T = 0.8$
depth ~ 30 m
dip = shallow W

595 E
dip v shallow W
 $\sigma T \sim 15+$

444 Hz
+20%
0
-20%

1777 Hz
+20%
0
-20%



50 30 0 50 100m

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
ROMULUS WEST RAY'S PROSPECT
LINE 2550 N
895E - 1495E
520107 1968

Scale 1:2000 Horizontal
FIG No. REPORT No.
ENCL No. DRG No. D/NP01/028
DATE 9-2-83 AUTHOR D SPEIJERS
DRAWN H.L.H. OFFICE DEVONPORT

Total Magnetic Intensity

N.B.
1. Uncorrected for diurnal variation
2. Geometrics 816 with sensor in back-pick

V.L.F.
N.B.
Readings taken using N.W. Cape transmitter

RELATIVE FIELD INTENSITY
200%+
150%+
100%+
0
+5°
+10°
DIP ANGLE

Max - Min
Coal separation = 150M
In place
Out place

222 Hz
0
-20%
+20%

444 Hz

+40%
-20%

888 Hz

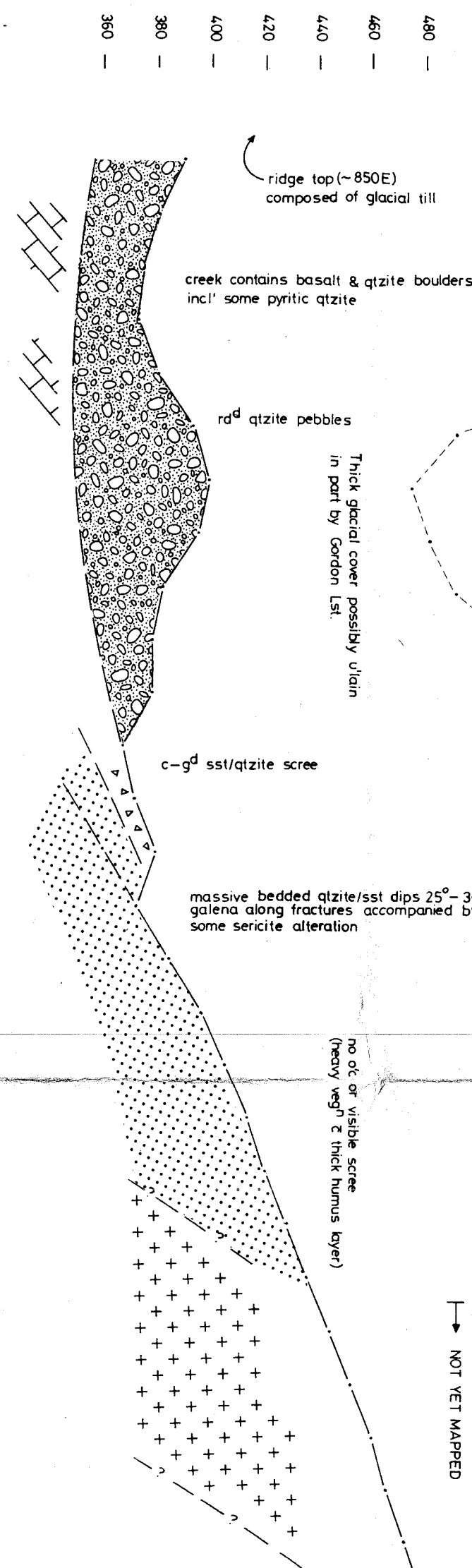
-20%
+20%

1777 Hz

-20%
+20%

Topography & Geology

N.B.
1. Topography by Toposide & Clinometer
2. Geology from oc. & examination of soil samples
3. Dip angles in degrees & strike-slip indicated where present



Soil Auger Sample Nos & Depths (m)

• 5003 (0.4)	• 8027 (1.2)
• 5004 (0.4)	• 8028 (1.7)
• 5005 (0.8)	• 8029 (1.8)
• 5006 (0.5)	• 8030 (0.9)
• 5007 (0.6)	• 8031 (1.6)
• 5008 (0.8)	• 8032 (1.7)
• 5009 (0.5)	• 8033 (1.5)
• 21779 (1.0)	• 8034 (2.0)
• 21778 (1.0)	• 8035 (1.2)
• 21777 (1.0)	• 8036 (1.3)
• 5010 (1.0)	• 8037 (1.6)
• 5011 (0.8)	
• 5012 (0.7)	
• 5013 (0.8)	
• 5014 (0.7)	
• 5015 (0.7)	
• 5016 (0.8)	
• 5017 (0.8)	
• 5018 (0.8)	
• 5019 (0.8)	
• 5020 (0.8)	
• 5021 (0.8)	
• 5022 (0.8)	
• 5023 (0.8)	
• 5024 (0.8)	
• 5025 (0.8)	
• 5026 (0.8)	
• 5027 (0.8)	
• 5028 (0.8)	
• 5029 (0.8)	
• 5030 (0.8)	
• 5031 (0.8)	
• 5032 (0.8)	
• 5033 (0.8)	
• 5034 (0.8)	
• 5035 (0.8)	
• 5036 (0.8)	
• 5037 (0.8)	
• 5038 (0.8)	
• 5039 (0.8)	
• 5040 (0.8)	
• 5041 (0.8)	
• 5042 (0.8)	
• 5043 (0.8)	
• 5044 (0.8)	
• 5045 (0.8)	
• 5046 (0.8)	
• 5047 (0.8)	
• 5048 (0.8)	
• 5049 (0.8)	
• 5050 (0.8)	
• 5051 (0.8)	
• 5052 (0.8)	
• 5053 (0.8)	
• 5054 (0.8)	
• 5055 (0.8)	
• 5056 (0.8)	
• 5057 (0.8)	
• 5058 (0.8)	
• 5059 (0.8)	
• 5060 (0.8)	
• 5061 (0.8)	
• 5062 (0.8)	
• 5063 (0.8)	
• 5064 (0.8)	
• 5065 (0.8)	
• 5066 (0.8)	
• 5067 (0.8)	
• 5068 (0.8)	
• 5069 (0.8)	
• 5070 (0.8)	
• 5071 (0.8)	
• 5072 (0.8)	
• 5073 (0.8)	
• 5074 (0.8)	
• 5075 (0.8)	
• 5076 (0.8)	
• 5077 (0.8)	
• 5078 (0.8)	
• 5079 (0.8)	
• 5080 (0.8)	
• 5081 (0.8)	
• 5082 (0.8)	
• 5083 (0.8)	
• 5084 (0.8)	
• 5085 (0.8)	
• 5086 (0.8)	
• 5087 (0.8)	
• 5088 (0.8)	
• 5089 (0.8)	
• 5090 (0.8)	
• 5091 (0.8)	
• 5092 (0.8)	
• 5093 (0.8)	
• 5094 (0.8)	
• 5095 (0.8)	
• 5096 (0.8)	
• 5097 (0.8)	
• 5098 (0.8)	
• 5099 (0.8)	
• 5100 (0.8)	

Soil Sample Nos & Depths (m)

Soil Auger Results
Soil Sampling Results
Analyses in ppm.
COPPER

LEAD

ZINC

ARSENIC

BARUM
TUNGSTEN
NICKEL
COBALT
BISMUTH

The Shell Company of Australia Limited
METALS DIVISION
E.L. 2/78 GRANITE TOR
ROMULUS WEST
RAY'S PROSPECT
LINE 2700N: 895E - 1625E
520108 1969
SCALE 1:2000 Horizontal DATE 9-2-83
AUTHOR D. SPEIJERS DRAWN H.L.S.
OFFICE DEVONPORT REP. No.
ENCL. No. DRG No. D/NP01/044

Total Magnetic Intensity
N.B.
1. Uncorrected for diurnal variations.
2. Geometrics 816 with sensor in back - peak

62500 nT

V.L.F.
RELATIVE FIELD
INTENSITY
N.B.
Readings taken using
NW Cope transmitter

200%
150%
100%
0

DIP ANGLE

+10°
+5°
0

Max - Min

Coil separation 150m
In phase
Out phase

222 Hz

+20%
0
-20%

888 Hz

+20%
0
-20%

$\sigma T \sim 0.7 (1.2)$
depth $\sim 15 (2)$
dip - W (shallow)

$\sigma T \sim 0.9 (2)$
depth $\sim 15 (2)$

$\sigma T \sim 1.7$
depth $\sim 15 - 30$ m

995 E dip fairly shallow W (?)
depth ~ 15 m
 $\sigma T \sim 2+$
N.B. IP is normalized to 222 Hz

1777 Hz

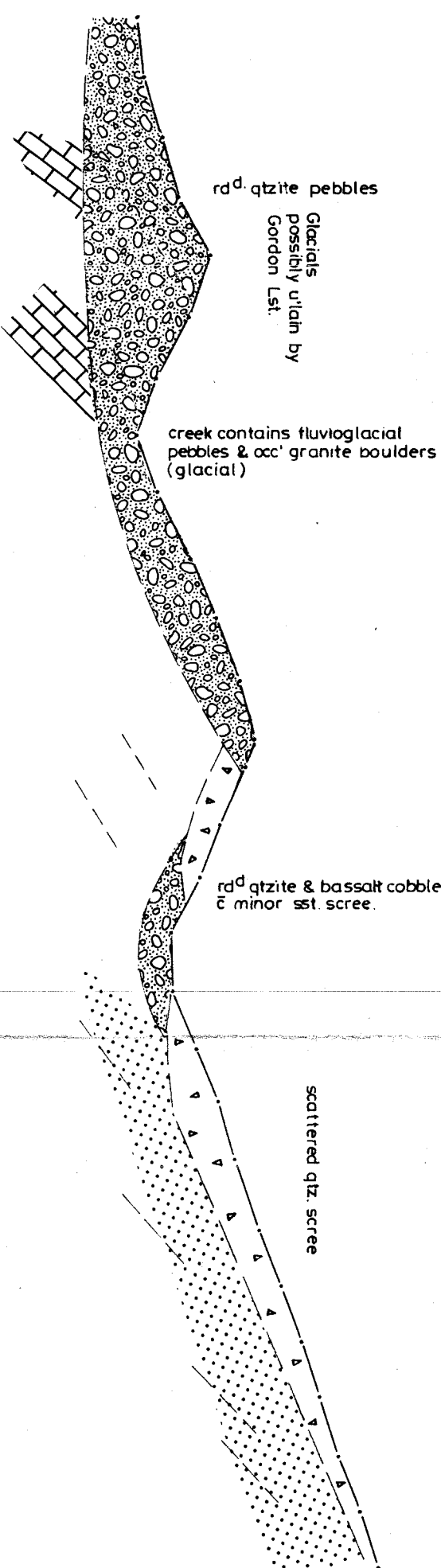
+20%
0
-20%
-40%

Topography & Geology

(Metres A.S.L.)

- N.B.
1. Topography by Topolite & Clinometer.
2. Geology from O.C. & examination of 1:50,000 map.
3. Outcrop & subcrop (S.C.) indicated where present

440
420
400
380
360
340



Soil Sample No's & Depths (m)

- 4975
- 4976 (0.8)
- 4977 (0.7)
- 4978 (0.9)
- 4979 (0.5)
- 4980 (0.6)
- 4981 (0.4)
- 4982 (0.5)
- 4983 (0.5)
- 4984 (0.6)
- 4985 (0.6)
- 4986 (1.0)
- 4987 (0.9)
- 4988 (0.8)
- 4989 (1.0)
- 4990 (0.6)
- 4991 (0.6)
- 4992 (0.5)
- 4993 (0.7)
- 4994 (0.5)
- 4995 (0.6)
- 4996 (0.3)
- 4997 (0.3)
- 4998 (0.5)
- 4999 (0.6)
- 5000 (0.6)
- 5001 (0.5)
- 5002 (0.5)

Soil Auger Sampling Results

Analyses in p.p.m.

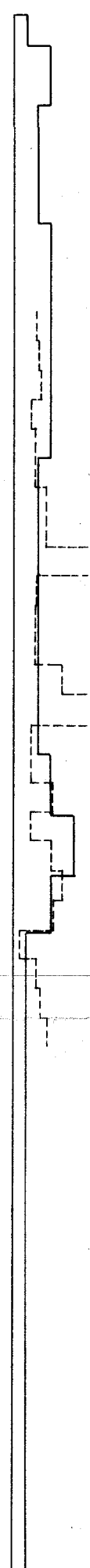
COPPER

150
100
50
0



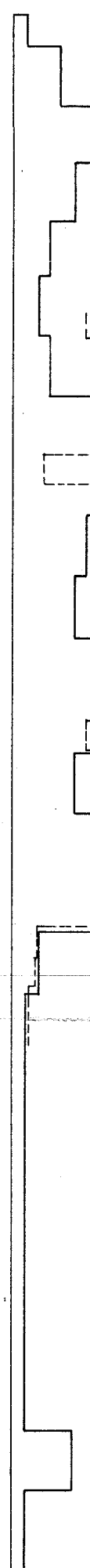
LEAD

150
100
50
0



ZINC

150
100
50
0

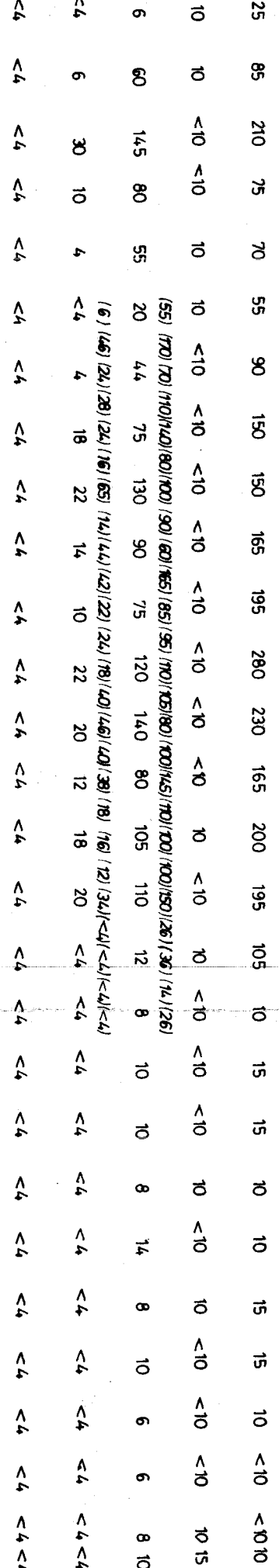


ARSENIC

50
0



BARUM
TUNGSTEN
NICKEL
COBALT
BISMUTH



The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
ROMULUS WEST: RAY'S PROSPECT
LINE 2850 N
795 E - 1325 E

520109

1970

SCALE 1:2000	DATE 11-2-83
AUTHOR J.L.L.	DRAWN J.L.L.
OFFICE DEVONPORT	REP. No.
ENCL. No.	DRG No. D/NP01/066

Total Magnetic Intensity

N.B.
1. Incorporated for diurnal variations.
2. Geomagnetic field with sensor in back-pick.

62500 nT

V.L.F.
N.B.
RELATIVE FIELD INTENSITY
200%
150%
100%
N.W. Cape transmitter

DIP ANGLE

+10°
+5°
0°
-5°
-10°

Max - Min

Coil separation = 150 m
In phase
Out phase

+20%
0
-20%
222 Hz

+20%
0
-20%
888 Hz

795 E

895 E

995 E

1095 E

1195 E

1295 E

1355 E



40 20 0 50 100m

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
ROMULUS WEST: RAY'S PROSPECT
LINE 2650 N
795 E - 1355 E

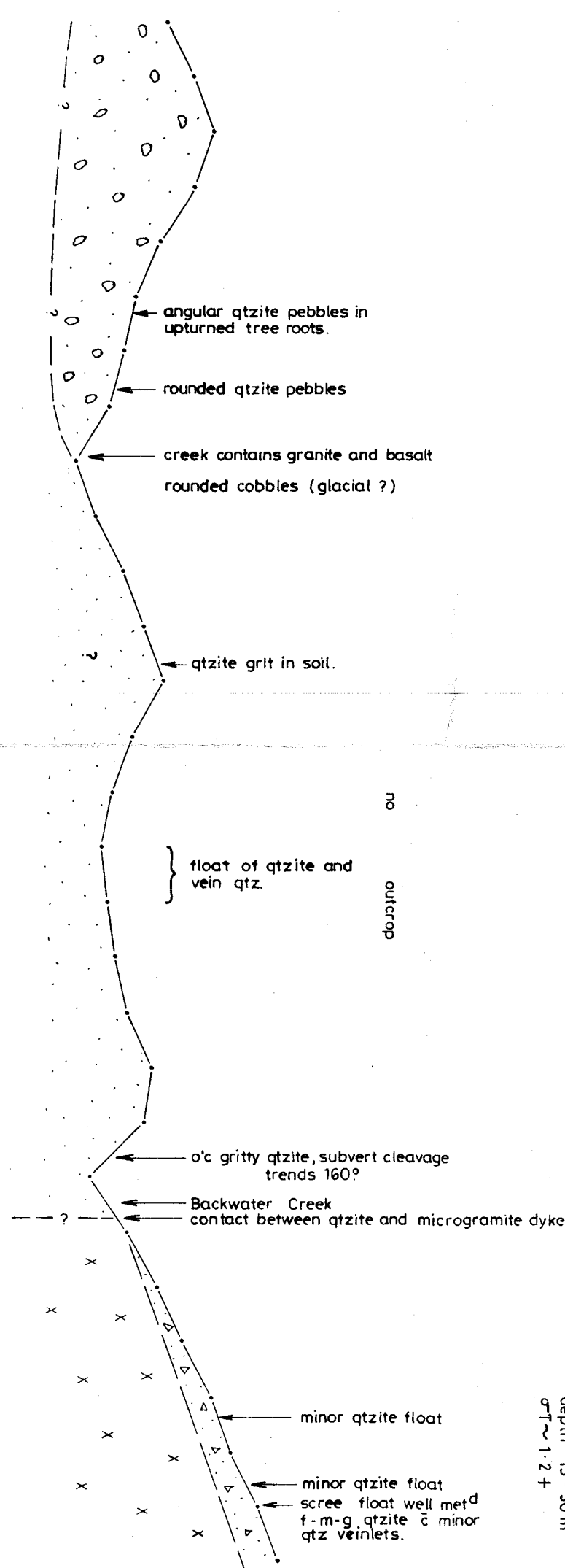
520110 1971

SCALE 1:2000	DATE 8-2-83
AUTHOR J.J.L.	DRAWN J.L.L.
OFFICE DEVONPORT	REP. No.
ENCL No.	DRG No. D/NP01/094

Topography & Geology (Metres A.S.L.)

N.B.
1. Topography by Tophite & Clinometer.
2. Geology from o.c. & examination of soil.
3. Outcrop (o.c.) & subcrop (s.c.) indicated where present.

460
440
420
400
380



Soil Sample No's & Depths (m)

- 8062 (1.1)
- 8063 (1.2)
- 8064 (0.6)
- 8065 (1.0)
- 8066 (1.1)
- 8067 (1.2)
- 8068 (0.9)
- 8069 (1.0)
- 8070 (1.1)
- 8071 (1.2)
- 8072 (2.0)
- 8073 (1.5)
- 8074 (0.9)
- 8075 (0.8)
- 8076 (2.0)
- 8077 (0.8)
- 8078 (0.2)
- 8079 (0.5)
- 8080 (0.9)
- 8081 (1.4)
- 8082 (1.2)
- 8083 (0.9)
- 8084 (1.0)
- 8085 (0.9)
- 8086 (0.8)
- 8087 (0.4)
- 8088 (0.6)
- 8089 (0.8)
- 8090 (0.4)

Soil Sampling Results Analyses in ppm

COPPER

LEAD

ZINC

ARSENIC

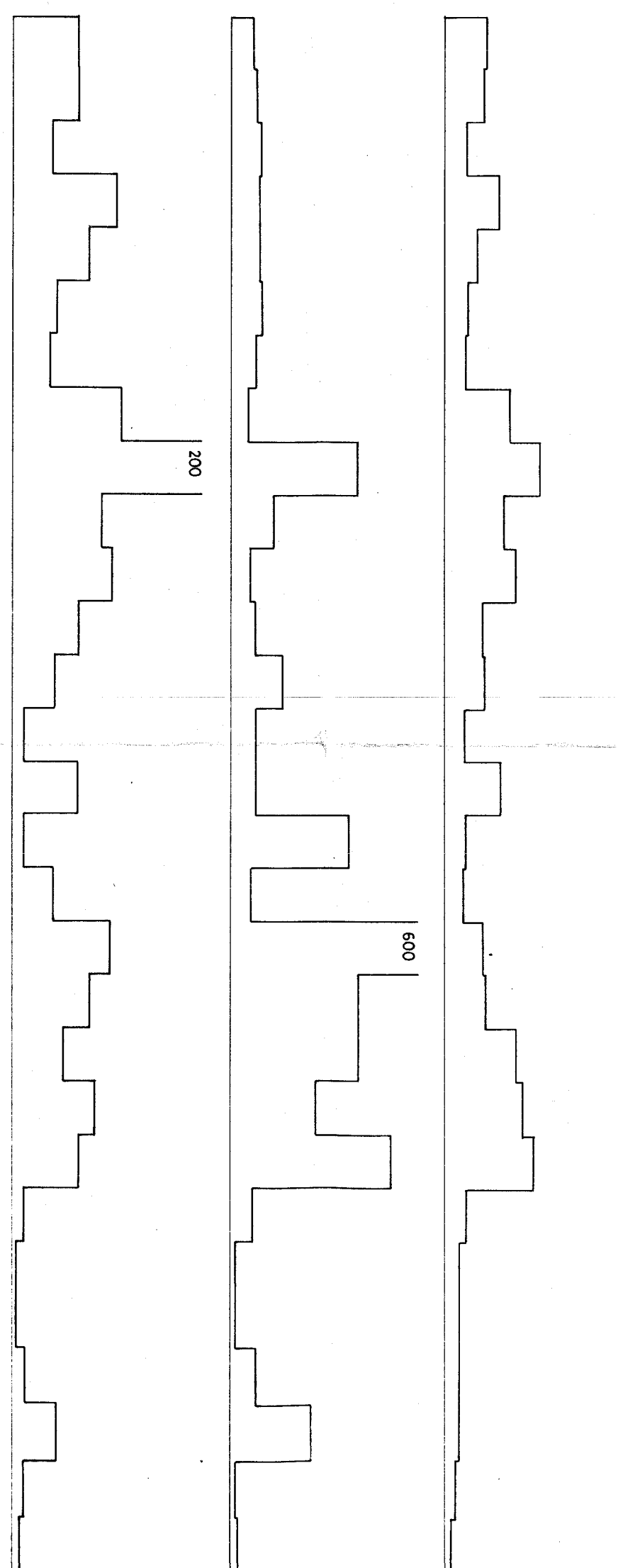
BARIUM

TUNGSTEN

NICKEL

COBALT

BISMUTH



- 70 90 26 140 60 30 28 200 170 135 120 70 30 24 90 24 16 14 28 60 34 26 16 12 12 10 8 6 8
- 14 18 6 20 10 4 6 32 34 12 85 12 6 <4 12 <4 4 26 10 6 6 <4 <4 <4 <4 <4

N.B.
1. Uncorrected for diurnal variations.

1. Uncorrected for diurnal variations.
2. Geometrics 816 with sensor in back - pack

62500 nT—

RELATIVE FIELD
INTENSITY

150%—

V.L.F.
N.B.
Readings taken using
N.W. Cape transmitter

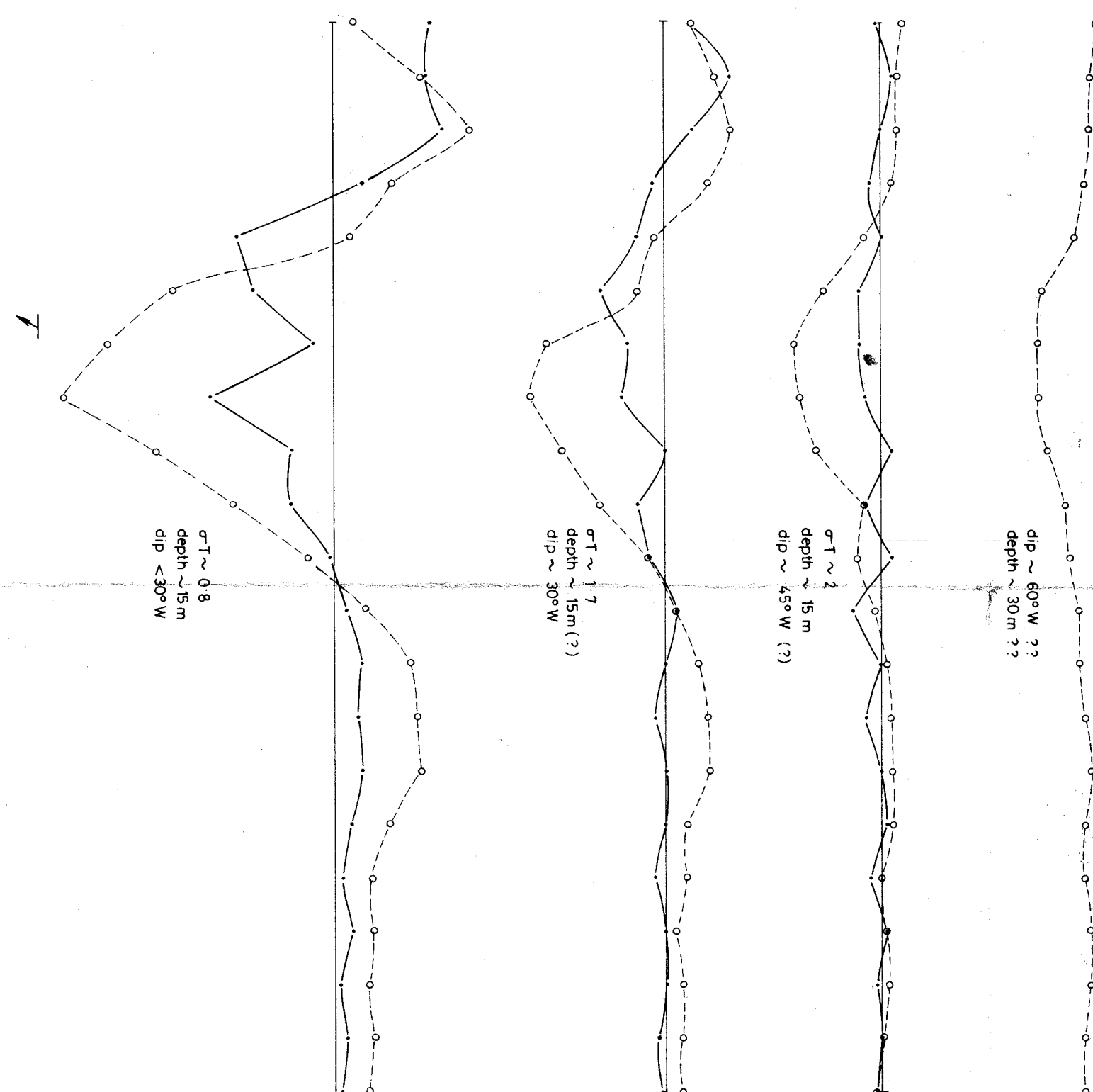
DIP ANGLE

+50—

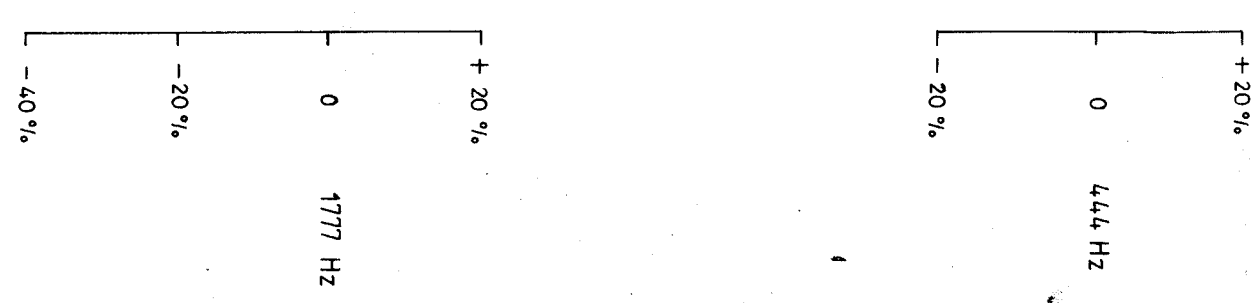
Coil separation = 150 m
In phase •-----•

Our phase

222H-



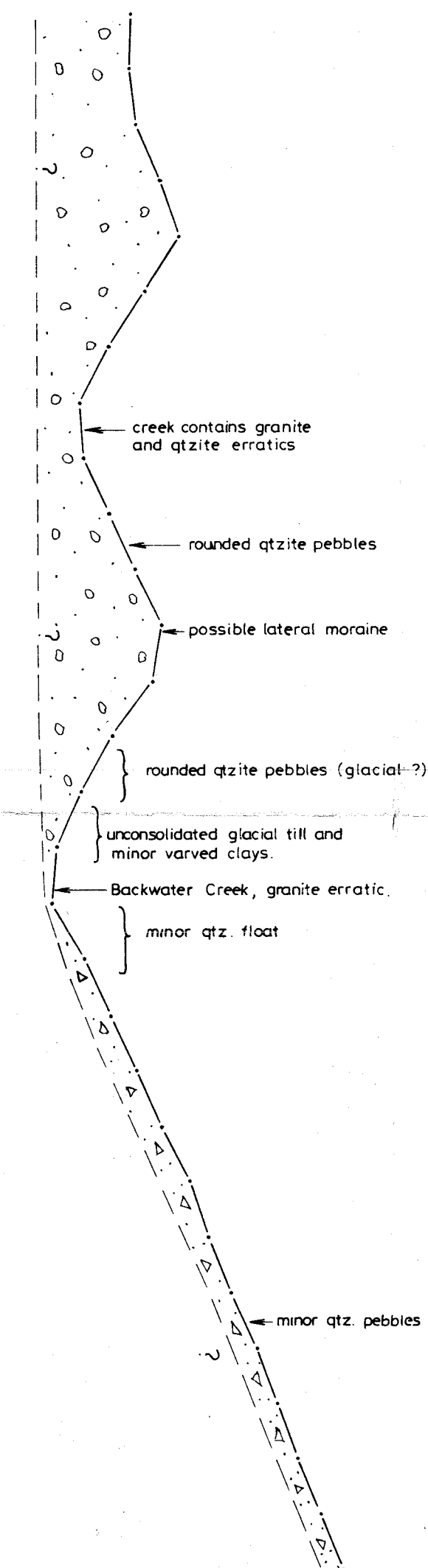
1000 E:-
dip $\sim 30^\circ$ W
depth ~ 15 m
 $\sigma_T \sim 2+$
I.P. is normalized to 222 Hz



(METRES A.S.L.)

1. Topography by Topolite & Clinometer.
2. Geology from o/c & examination of soil samples.
3. Outcrop (o/c) & subcrop (s/c) indicated where present

440	—
420	—
400	—
380	—
360	—
340	—



Soil Sample No's & Depths (m)

- 8091 (1-2)
- 8092 (1-1)
- 8093 (1-0)
- 8094 (0-7)
- 8095 (1-2)
- 8096 (1-0)
- 8097 (1-1)
- 8098 (0-9)
- 8099 (1-2)
- 8100 (1-1)
- 8201 (1-6)
- 8202 (1-3)
- 8203 (1-4)
- 8204 (1-3)
- 8205 (0-5)
- 8206 (0-4)
- 8207 (0-9)
- 8208 (1-2)
- 8209 (0-4)
- 8210 (1-9)
- 8211 (1-0)
- 8212 (0-8)
- 8213 (0-6)
- 8214 (0-9)
- 8215 (0-5)
- 8216 (0-6)
- 8217 (0-5)
- 8218 (0-9)
- 8229 (1-2)

Analyses in p.p.m.

COPPER

01

COPPER

LEAD

01

ZINC

01

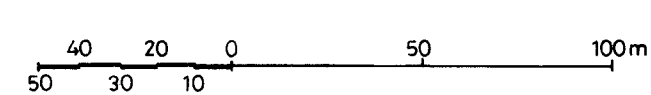
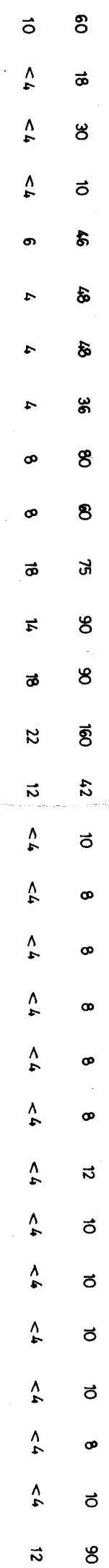
ARSENIC

○
|

BARIIUM

NICKEL

BISMUTH

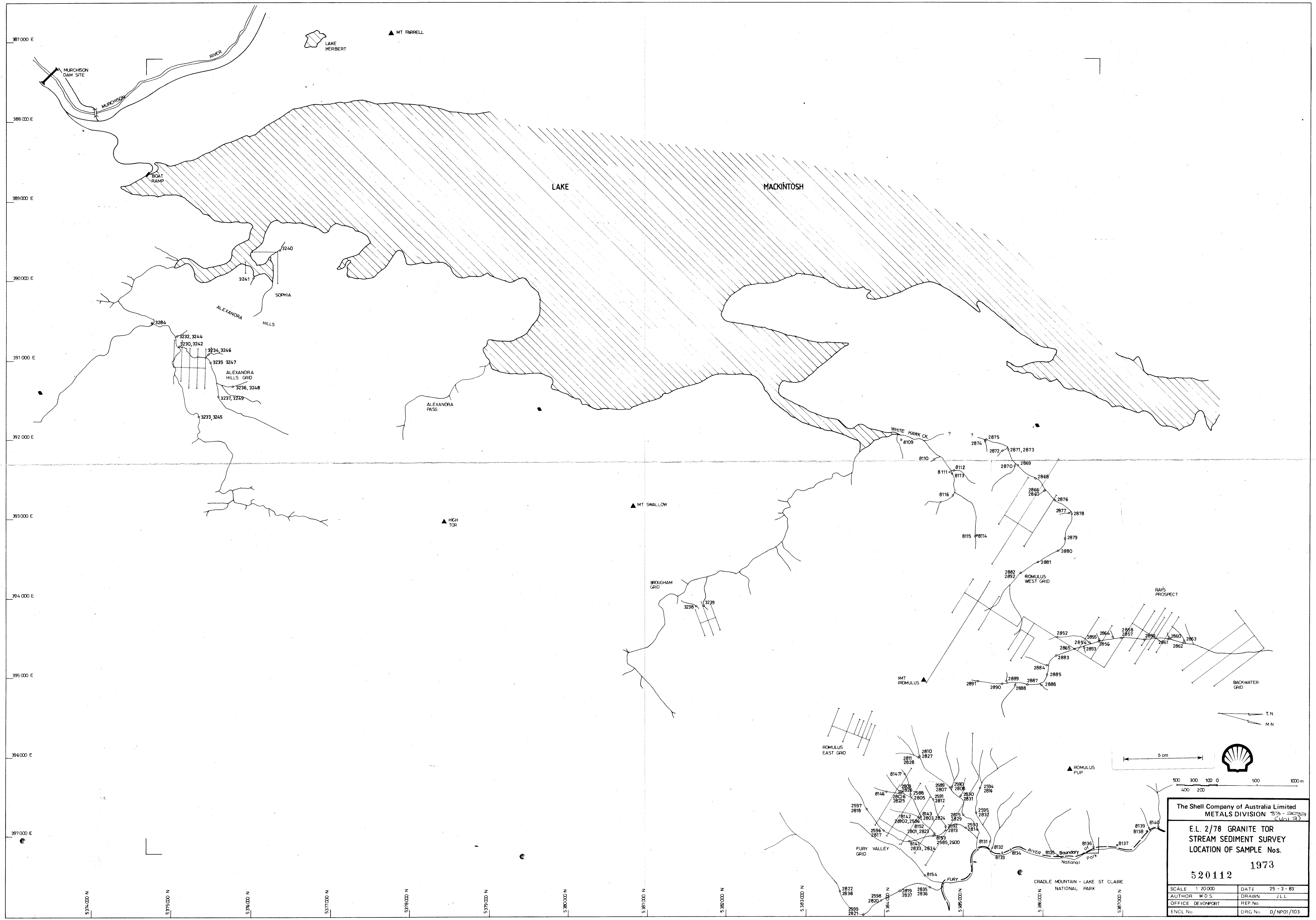


The Shell Company of Australia Limited
METALS DIVISION 83-2033

E.L. 2/78 GRANIT TOR
ROMULUS WEST: RAYS PROSPECT
LINE 2750 N
795 E - 1355 E

1972

SCALE 1: 2000	DATE 10 - 2 - 83
AUTHOR J.J.L.	DRAWN J.L.L.
OFFICE DEVONPORT	REP.No.
ENCL No	DRG No D/NP01/095



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METALS DIVISION (Vol. 2)

E.L. 2/78 GRANITE TOR
STREAM SEDIMENT SURVEY
LOCATION OF SAMPLE Nos.
1973

520112

SCALE 1:20,000	DATE 25-3-83
AUTHOR W.D.S.	DRAWN J.L.L.
OFFICE DEVONPORT	REP. No.
ENCL. No.	DRG. No. D/NP01/103



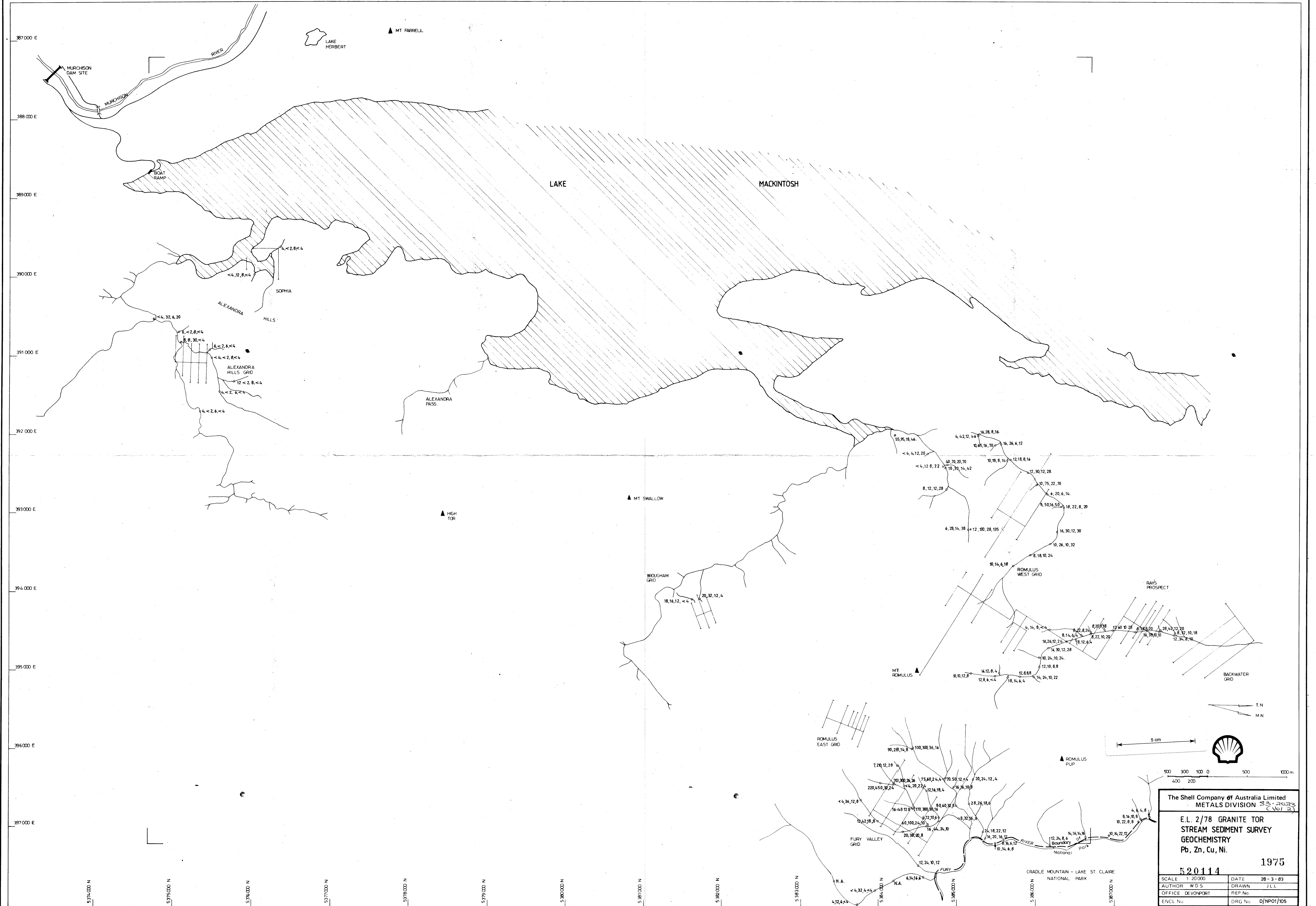
5 cm

T.N.
M.N.



500 300 100 0 500 1000m

The Shell Company of Australia Limited METALS DIVISION 83-2033 SV21-3			
E.L. 2/78 GRANITE TOR STREAM SEDIMENT SURVEY LOCATION OF SAMPLE Nos.			
520113		1974	
SCALE	1:20 000	DATE	10-5-83
AUTHOR	W.D.S.	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP. No.	
ENCL. No.		DRG. No.	D/NP01/104

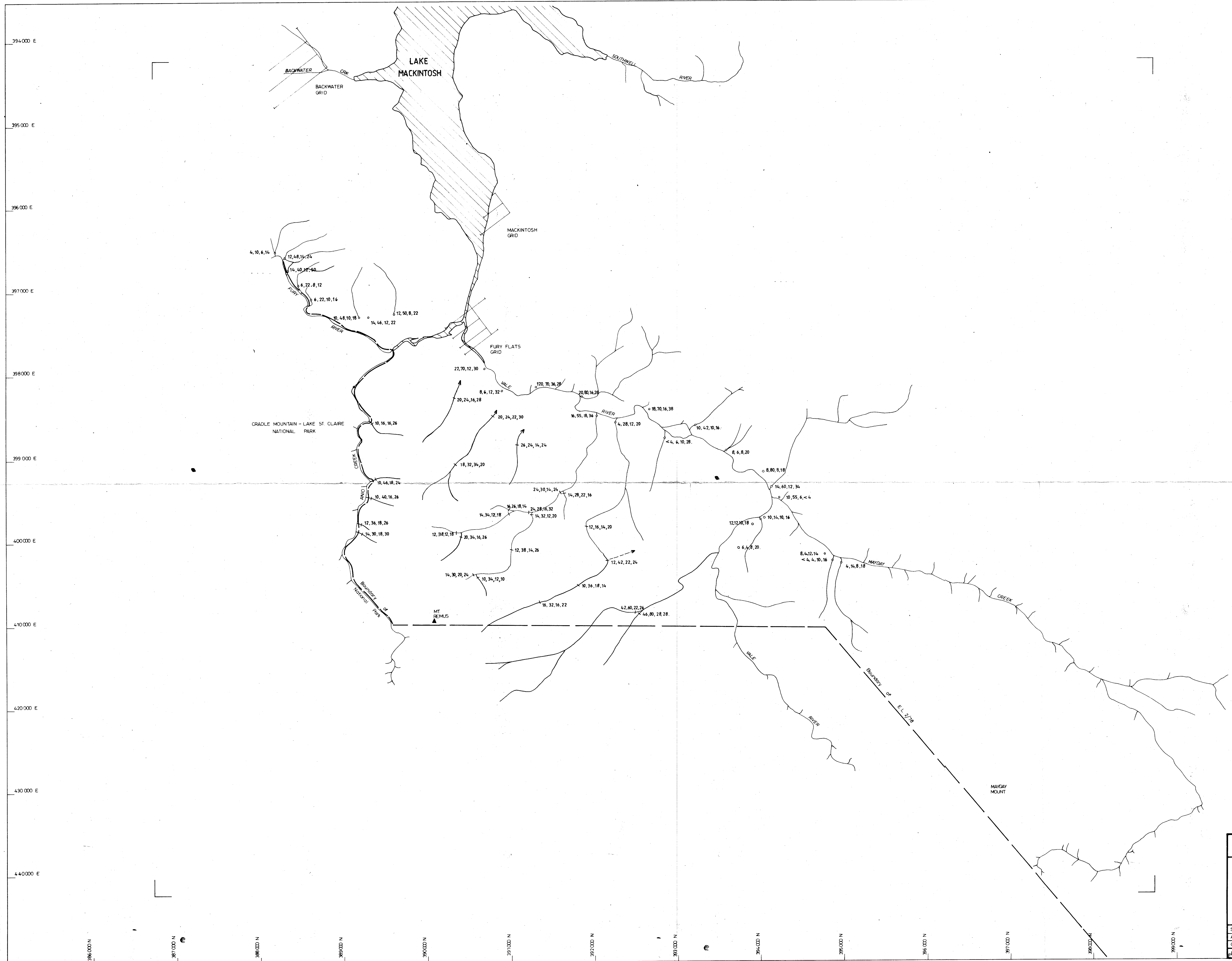


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METALS DIVISION 33-2033 (Vol 2)

E.L. 2/78 GRANITE TOR
STREAM SEDIMENT SURVEY
GEOCHEMISTRY
Pb, Zn, Cu, Ni.

520114 1975

SCALE 1:20000	DATE 28-3-83
AUTHOR W.D.S.	DRAWN J.L.L.
OFFICE DEVONPORT	REP No.
ENCL No.	DRG No. D/NP01/105



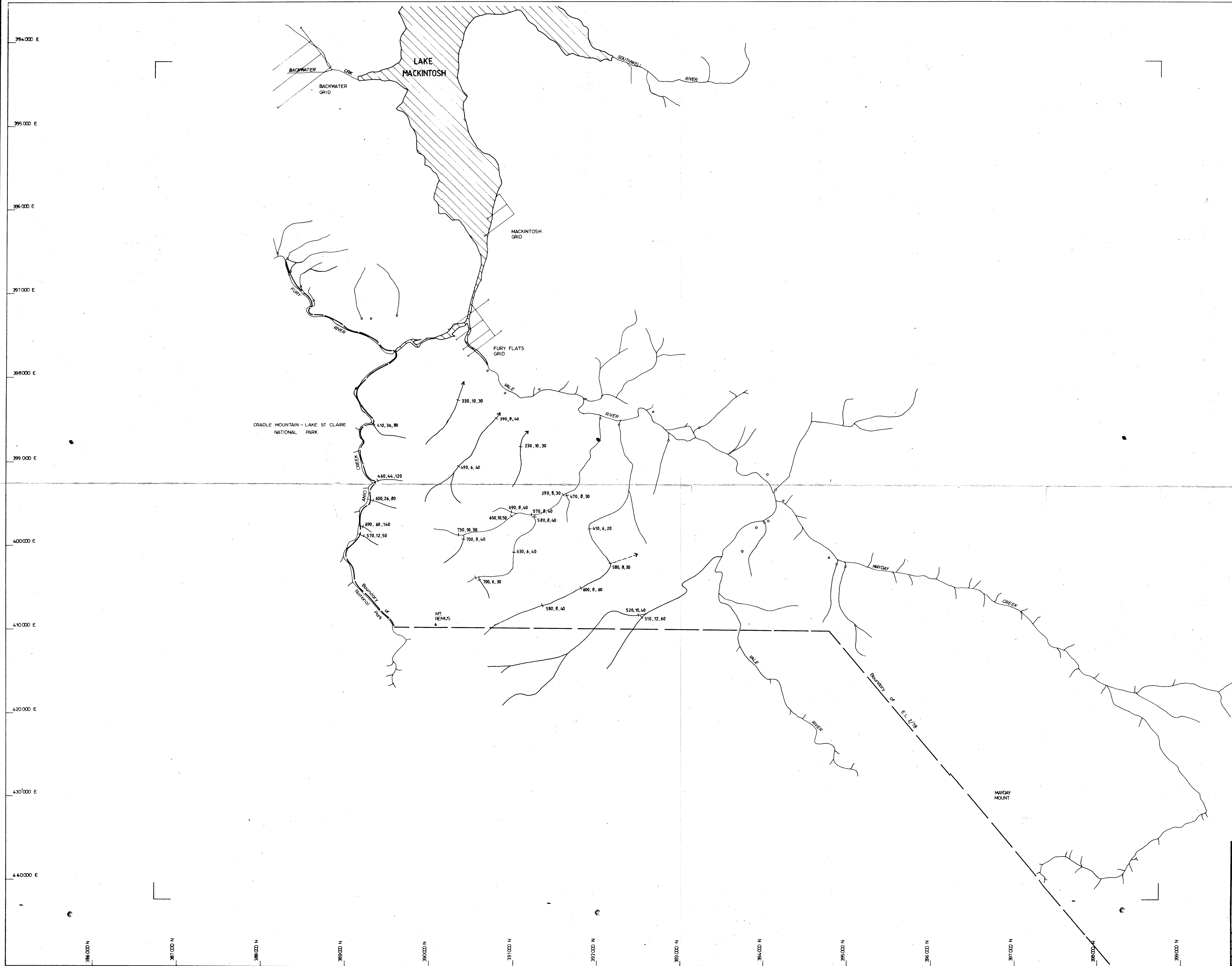
5 cm

Pb, Zn, Cu, Ni
Analyses in p.p.m.

T.N.
M.N.



The Shell Company of Australia Limited METALS DIVISION			
E.L. 2/78 GRANITE TOR STREAM SEDIMENT SURVEY GEOCHEMISTRY Pb, Zn, Cu, Ni.			
520115 1976			
SCALE	1:20,000	DATE	29-3-83
AUTHOR	W.D.S.	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP. No.	
ENCL. No.		DRG. No.	D/NP01/106



5 cm

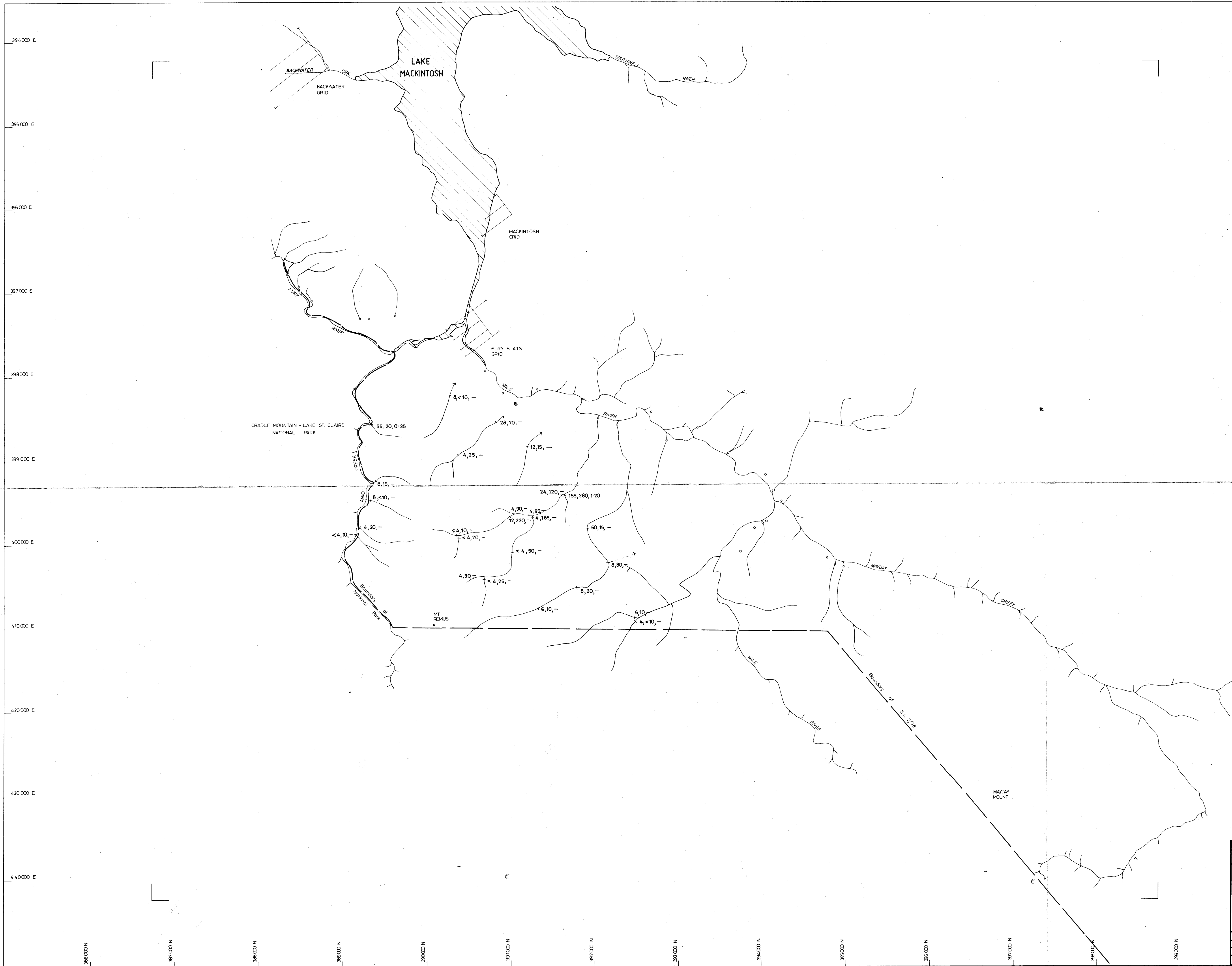
Ba, Mo, V
Analyses in p.p.m.

T.N.
M.N.



500 300 100 0 500 1000m
400 200

The Shell Company of Australia Limited METALS DIVISION			
E.L. 2/78 GRANITE TOR STREAM SEDIMENT SURVEY GEOCHEMISTRY Ba, Mo, V			
520116			1977
SCALE 1:20 000	DATE 22-3-83		
AUTHOR W.D.S.	DRAWN J.L.L.		
OFFICE DEVONPORT	REP. No.		
ENCL. No.	DRG No. D/NP01/135		



5 cm

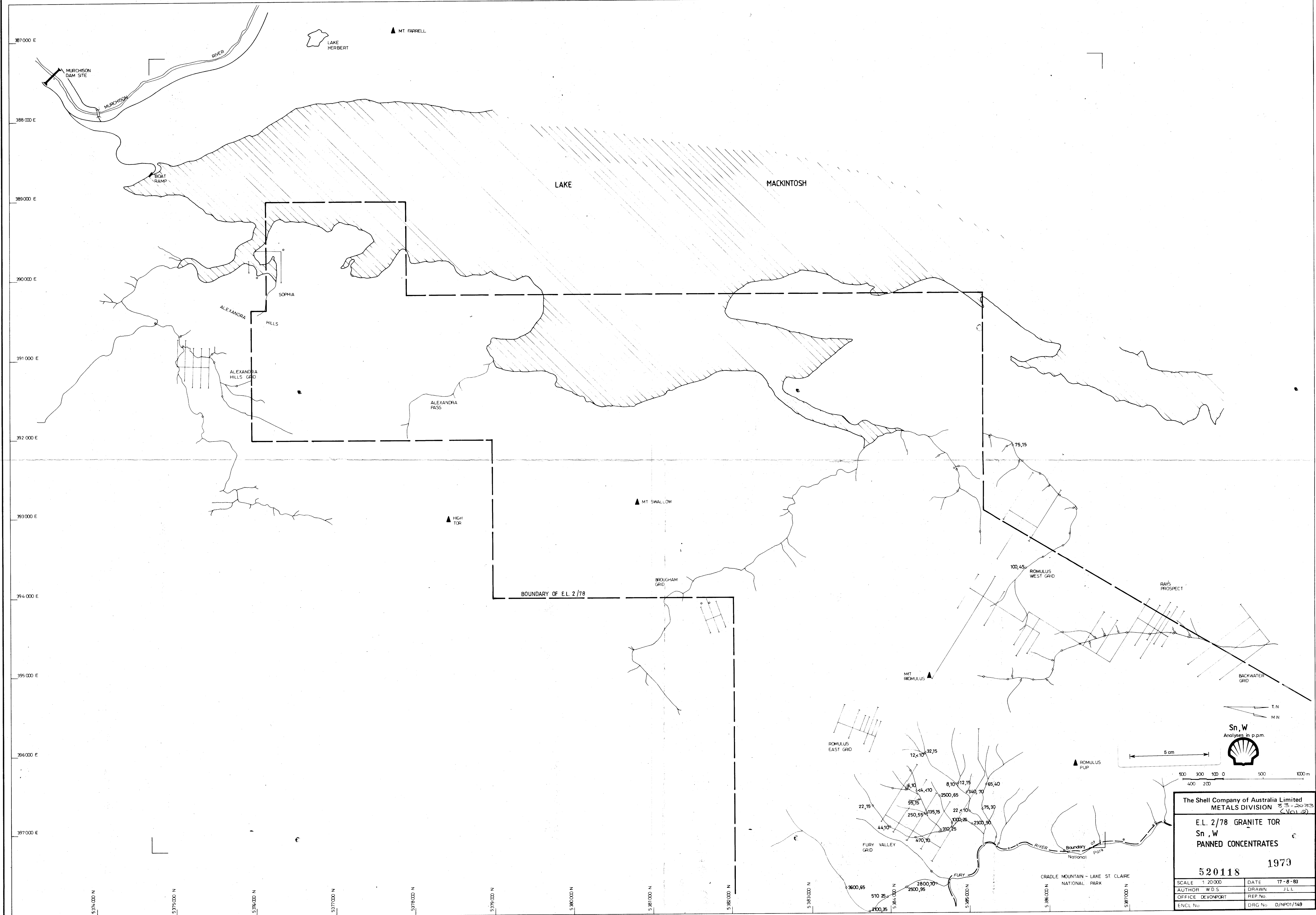
Sn, W, Au
Analyses in p.p.m.

T.N.
M.N.



500 300 100 0 500 1000m
400 200

The Shell Company of Australia Limited METALS DIVISION			
E.L. 2/78 GRANITE TOR STREAM SEDIMENT SURVEY GEOCHEMISTRY Sn, W, Au (Panned Conc.) 520117 1978			
SCALE	1:20 000	DATE	27-7-83
AUTHOR	W.D.S.	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP No.	
ENCL No.		DRG No.	D/NP01/141



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METALS DIVISION (Vol. 2)

E.L. 2/78 GRANITE TOR
Sn, W
PANNED CONCENTRATES

520118 1973

SCALE 1:20000	DATE 17-8-83
AUTHOR W.D.S.	DRAWN J.L.L.
OFFICE DEVONPORT	REP. No.
ENCL. No.	DRG. No. D/NP01/149