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THE SHELL COMPANY OF AUSTRALIA LIMITED

METALS DIVISION

E.L. 2/78 - GRANITE TOR

Final Report on the Area

Author: W.D. Smyth

Date : 14/2/84

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SUMMARY

Work during the past year has consisted of stream sediment surveys and minor work on one Dighem anomaly. The stream sediment surveys have been done to check previously located anomalies and also to fill in gaps in the survey along the belt of Cambrian sediments and volcanics. The stream sediment surveys have included regional geological traverses which have defined the local Cambrian stratigraphy in more detail. This consists largely of an intrusive quartz-feldspar-biotite porphyry and a quartzite. A minor section of pyroclastics outcrops throughout the centre of the area.

Results of these investigations have not provided encouragement for further work to be done. It is recommended that E.L. 2/78 be relinquished.

Note:
No drilling done !

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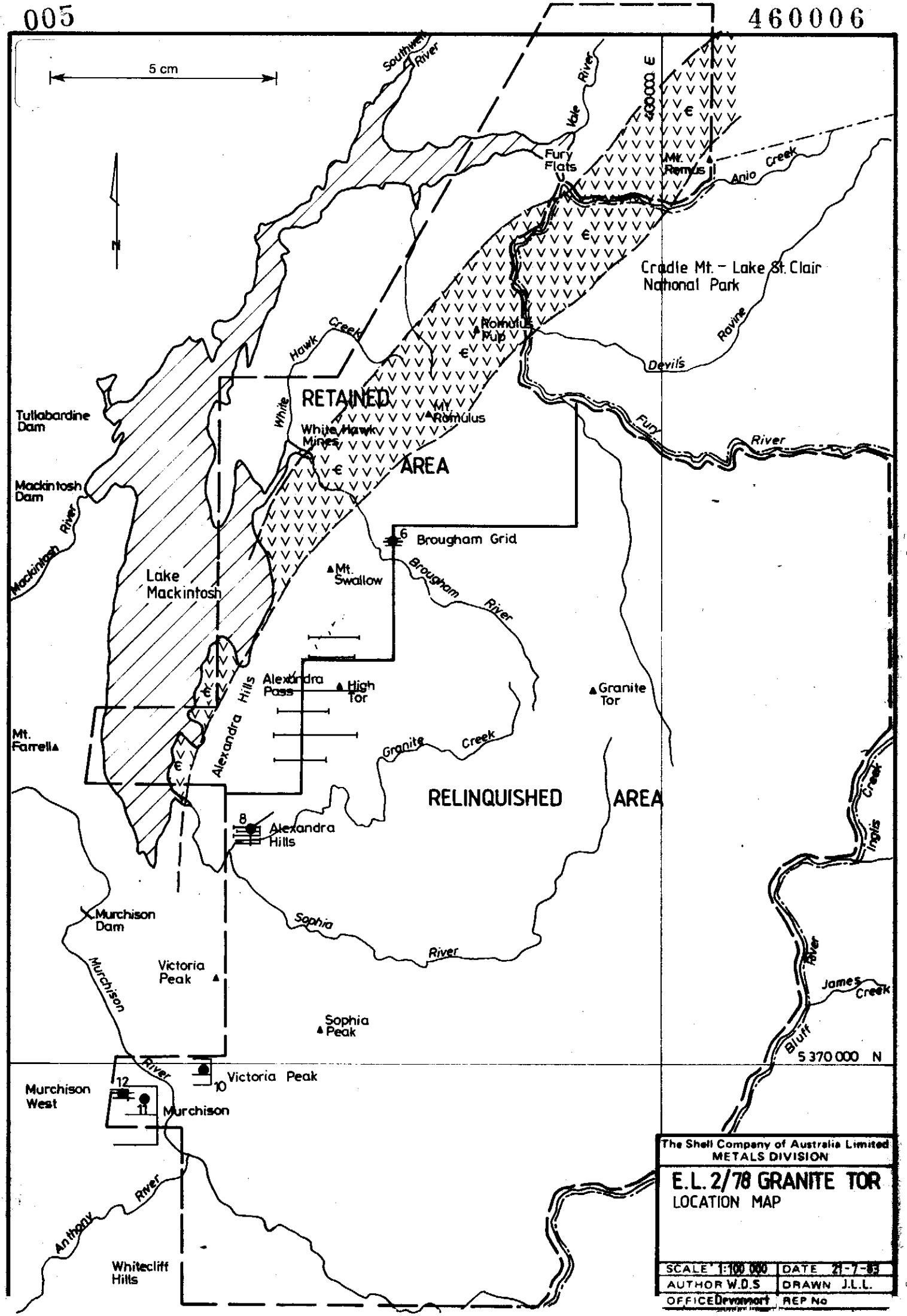

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
LOCATION MAP

SCALE 1:100 000	DATE 21-7-83
AUTHOR W.D.S	DRAWN J.L.L.
OFFICE Devonport	REP No

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1.0 INTRODUCTION

E.L. 2/78 Granite Tor has been worked as a Joint Venture with Alcoa of Australia Ltd., with SCOA acting as operators. This report covers all work undertaken in the licence area from June, 1983 to February, 1984.

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 Alexandra Hills.

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 GEOLOGY

3.1 Local Stratigraphy

The licence area consists of Precambrian quartzites and phyllites in the south and east intruded and overlain unconformably by Cambrian volcanics and sediments. 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. Widespread areas of Quaternery fluvioglacials obscure much of the area.

Regional traverses across the area have concentrated on locating and ascertaining the nature of the Cambrian volcanics. The geology has been interpreted from widely spaced traverses. No contacts have been walked out. (Refer Plans D/NP 01/147, 148).

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 southeast and has a width of 0.5 km in the Brougham River. (Sample No. 99372, 99369, 8155, 8195, 8200, 3300, Appendix 1). Additional outcrops of identical rocks are reported further to the southeast in the Brougham (Sample No. 8158, 8159) and Fury Rivers (8166, 8167, 8168).

It has been variously described as a prophyritic rhyolite, porphyritic microgranite or porphyritic felsite. It consists of large quartz, generally embayed, with sericitized plagioclase phenocrysts and chloritised biotite phenocrysts, occassionally K feldspar phenocrysts in a quartz-feldspar, commonly altered (sericite, albite, chlorite) groundmass of fine to medium grain.

Fine chlorite veining appears to be common. A zone of haematite veining and stockwork was located west of Mt. Remus.

A quartz-feldspar or feldspar-hornblende porphyry dyke intrudes the Precambrian schists and phyllite of the Fury Valley grid. (Sample No. 8173, 8176, 8179, 8181, Appendix 1). Two samples are described as sericitised feldspar porphyry with minor chloritised hornblende.

The main zone of volcanics outcrops in a strip southeast of and adjoining the main porphyry intrusive, stretching from the Fury River where it is approximately 600m wide through the Mt. Romulus area where it attains its maximum thickness of approximately 1500m, through the Brougham River (500m) and south in a narrow strip to the Sophie River junction with Lake Mackintosh. (Samples

99359, 99362, 8162, 8163, 8164, 8165, 8184, 8185, 8187, 6210, Appendix 1). The rocks are mainly fine grained altered (sericitic) tuffs with quartz splinters and some feldspar in a sericitic groundmass. Some show evidence of reworking or a sedimentary component (8163, 8165, 8184). Two samples are named as tuff-lavas (99362, 8162) with some similarities to the massive porphyry to the west. Sericitic alteration is common and also some chlorite, pyrite, pyrrhotite and tourmaline has been introduced.

A zone of massive quartzites is developed to the east of the volcanics. The main thickness of possibly 800m is exposed in the Brougham River with lensing out to the north to the Fury River and south on the western flanks of Mt. Swallow (Sample No.s 8157, 8160, 8161, 8170, 8178, 8183, Appendix 1). It is described as a sericitic or chloritic metaquartzite in part feldspathic. Chlorite and pyrite/pyrrhotite veining and disseminations with some tourmaline are reported. The veining appears to be joint controlled and patches of chlorite-pyrite up to 20cm x 5cm are developed.

Granite outcrop are reported along the eastern side of the Cambrian outcrop in the Brougham River, on the east flanks of Mt. Romulus and in the Fury River. (Sample No.s 8156, 8180, 8182, 99349, 99353, 99355, 99357, Appendix 1). This may form a continuous dyke or represent a series of apophyses. Fresh outcrops of granite in the Brougham River and at Mt. Romulus are described as alkali granites composed of mainly orthoclase with subordinate quartz and minor biotite and plagioclase. The rocks described from Fury River are highly altered granites, consisting of quartz, clay-sericite after feldspars and minor chloritised biotite. A primary myrmekite texture

is indicated by the intergrowth of quartz and sericite. It is not certain if this is a Cambrian or Devonian granite. The fresh appearance in the Brougham River section suggests it may be Devonian, related to the Granite Tor batholith which outcrops less than 2 km to the south.

Contacts with the Precambrian were not observed. An intrusive contact is implied in areas where the porphyry abuts the Precambrian and an unconformable relationship where the volcanics and quartzites are in contact. The quartzites may be equivalent to the Sticht Quartzite south in the Lake Dora area where the contact is known to be unconformable. The Owen Conglomerate/Moina Sandstone contact with the Cambrian is everywhere underlain by the massive porphyry. No discordance is evident at the mouth of the Brougham River.

3.2 Mineralization

Mineralization has been previously recorded at the Mt. Remus Prospect (Collins et. al. 1981) and White Hawk Mine (Ibid). The Mt. Remus prospect consists of pyrite molybdenite veinlets in Precambrian schists possibly associated with Cambrian quartz-feldspar-porphyry dykes. The White Hawk Mine is located in Gordon Limestone where galena and sphalerite veins with high Ag values was mined.

Mineralization has been located at Ray's Prospect (galena in Moina Sandstone) and at Romulus East (arsenopyrite-gold veins in Precambrian schists). An additional occurrence was located on a tributary of White Hawk Creek which consisted of pyrite and chalcopyrite in conglomerate. A zone of haematite veining and stockwork is reported from the major zone of quartz-feldspar-biotite porphyry west of Mt. Remus.

4.0 INVESTIGATIONS COMPLETED

Work has consisted mainly of regional geological traverse in association with stream sediment sampling. Rock chip samples from the Brougham River area were assayed.

4.1 Lower Brougham River Grid

4.1.1 Rock Chip Sampling

A total of 56 rock chip samples were assayed to test silica-pyrite-chlorite mineralization in quartzites, mostly exposed along the Brougham River. Several samples of volcanics, quartz-feldspar-biotite porphyry and alkali granite were also sampled. (Appendix 2). The porphyry is the most distinctive unit having elevated Cu, Pb, Zn, Ni compared to the others. The volcanics may be partly distinguished on the basis of elevated Zn compared to the quartzites and granite.

Best base metal values are reported from the porphyry with a maximum values of 22 ppm Cu, 100 ppm Pb, 200 ppm Zn, 40 ppm Ni. Best value in the volcanics (8 samples) was 8 ppm Cu, 120 ppm Pb, 30 ppm Zn, <4 ppm Ni. Not all samples were assayed for Sn, W.

The best Sn value is 130 ppm Sn (45 ppm W, <2 ppm As) with the rest less than 34 ppm Sn. (Refer plan D/NP 01/124, 113, 120, 114).

4.1.2 Conclusions & Recommendations

The results of the rock chip sampling have not given encouragement for either the possibility of tin mineralization or basemetal mineralization. No further work is recommended for this area.

4.2 Stream Sediment Surveys

Three main areas were picked for stream sediment sampling. The Anio Creek - Mt. Remus area was picked as already having an anomalous Sn, W, As, Pb, Au zone. The Romulus Fury River - Backwater Creek area and the western slopes of Mt. Swallow had not previously been tested.

A panned concentrate (taken at the site)and a -80# sample were taken at each location. The panned concentrates were analysed for Cu, Pb, Zn, Ni, Co, Bi, Cd, Sn, W, Ba, Au and the -80# fraction for Cu, Pb, Zn, Ni, Co, Bi, Cd, Fe, Mn, Ag, Mo, Au. (Appendix 3 and 4). Refer Plans D/NP 01/104, 103, 106, 105, 141, 149, 142, 135).

4.2.1 Anio Creek - Mt. Remus Area

The zone of Au anomalies along 10 Mile Creek and the adjacent drainage were investigated with additional sampling. Associated with the Au anomaly is a Sn anomaly and a more widely dispersed W and low order Pb anomaly. In this area the tungsten values are higher than the tin values. The sampling confirmed and extended downstream the area of anomalous Au, Sn, W and Pb. The Au, (Sn) anomalous zone is confined to the area of Moina Sandstone in a topographic low. The W, Pb anomalies extend upstream into the area of Cambrian porphyry but values decrease upstream away from the Au, Sn zone.

An additional area of anomalous Au and Pb (no Sn, W) in the north-eastern corner was investigated. An additional Au value was recorded on the edge of the National Park possibly draining from the

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Cambrian Porphyry. The high Pb values are associated with high Mn values. A rock chip sample of Moina Sandstone in the drainage gave values of 90 ppm Cu, 320 ppm Pb, 10 ppm Zn. These values may be responsible for the wide-spread Pb anomalous zones.

Anomalous Au was reported from one stream draining into Anio Creek which was also anomalous in Mo, V, Sn. An additional anomalous Au value was reported from the some drainage upstream with anomalous Sn, W (not Mo). An additional drainage to the west had no anomalous Au, Sn or Mo.

4.2.2 Fury River - Backwater Creek

The area is mostly covered by fluvioglacials containing mostly Devonian granite, Cambrian porphyry and Jurassic dolorite boulders. This overlies mainly Moina Sandstone and Cambrian porphyry.

A large zone of anomalous Sn and W values (up to 4350 ppm Sn) is reported. (Sn much greater than W). This is due to the presence of granite boulders in the fluvio-glacials.

Three widely spread anomalous Au values are reported, two with associated high Sn but one, on the western edge of the alluvials has little or no glacial contribution. This drains an area of Cambrian porphyry or volcanics.

A zone of elevated Zn values are reported from the area of Cambrian Porphyry not covered by glacials and also from a zone within the glacials in the

western drainage. Both zones also have elevated Fe, Mn and the porphyry area has higher Ni and Co compared to the glacial area.

4.2.3 Mt. Swallow West

The streams sampled in this area drain areas of Precambrian quartzite, Cambrian quartzite and volcanics. Some fluvio glacial material including granite boulders is found in the streams.

Anomalous values are reported from two streams in the northern end of the area sampled. One stream drains from the Precambrian and the other an area of Cambrian quartzites.

An anomalous Sn zone is associated with the same drainage.

An additional Au anomalous stream occurs in the centre of the area and appears to drain from Precambrian rocks. High Sn (low W) values are also reported from this area, reflecting the presence of granite boulders in the streams. Values for Zn are also anomalous from the anomalous Au sample.

Base metal values are uniformly low elsewhere except for one sample with 24 ppm Pb, 20 ppm Zn, to the south of Alexandra Pass. This drains an area of volcanics.

4.2.4 Conclusions & Recommendations

Two main zones of anomalous gold concentrations were located one at 10 Mile Creek (Mt. Remus Area)

and one on the north western slopes of Mt. Swallow. The zone at 10 Mile Creek appears to be restricted to Moina Sandstone and that at Mt. Swallow may be shedding from the Precambrian. Other more dispersed gold concentrations are located at north Mt. Remus, off Anio Creek, near Romulus Pup and at Mt. Swallow. These are single drainage or single point anomalies and appear to originate from Moina Sandstone, Cambrian Porphyry, fluvio-glacials/Cambrian porphyry and volcanics and Precambrian schists respectively.

Several zones of anomalous Sn and W were located in all three areas sampled. These are generally associated with fluvioglacial debris including granite boulders in the Mt. Swallow and Fury River - Backwater areas and are thought to originate from the debris. These are characterised by Sn values being much greater than W values. In the Mt. Remus area Sn W anomalies are characterised by W values being greater than Sn values. No fluvio glacials are reported from this area. The anomalous Sn values are restricted to areas of Moina Sandstone. The anomalous W is more widespread but decreases upstream onto the area of Cambrian porphyry. This reverse "tail" may reflect the efficiency of the topographic trap where the main concentration of Sn, W and Au occur. The source of the Sn and W is unknown but may be due to extreme concentration of values from the Cambrian porphyry.

Best base metal values are reported from north Mt. Remus. These may be due to high Pb, Cu, Zn values reported from Moina Sandstone. (Refer Plans D/NP 01/143, 150, Appendix 5).

No other anomalous base metal values were reported.

The main interest lies in the anomalous Au values. These are widely distributed along the licence area and appear to have several differing provinances. A Precambrian provinance is thought likely for the Mt. Swallow area. A similar source to the Sb, As, Pb mineralization at Romulus West may be envisaged. The major zone of Au at 10 Mile Creek may be derived from quartz-pyrite-gold veins in sheared Moina Sandstone as at the Devonport Mine near Moina. Other zones of Au mineralization may be derived from the Cambrian porphyry. In the Bond Range area 15 km to the north a similar or the same porphyry investigated and relinquished by Geopeko contained values of upto 0.5 ppm Au in quartz-pyrite veins within slightly altered sections of the porphyry. Elevated Sn values (to 1000 ppm Sn) were also reported, however, W values appeared to be low.

The Au anomalous areas are not thought to represent areas of major mineralization. No areas of prospective volcanics are outlined by the stream sediment survey and the volcanics located, mainly a massive quartz-feldspar-biotite intrusive, are thought to be unprospective. No further work is recommended for these areas.

5.0 CONCLUSIONS & RECOMMENDATIONS

A total of eight prospects have been investigated in the area and none thought to be worth further work.

Regional mapping and stream sediment surveys have located and sampled the areas of Cambrian outcrop. No areas are thought to warrant follow-up work.

It is recommended that E.L. 2/78 be relinquished.

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RABONE, G. 1975. Progress Report for period ending May 30th, 1975. E.L. 5/74, Mayday Creek. Unpubl. Rep. Cominco Expl. Pty. Ltd.

SMYTH, W.D. 1983. E.L. 2/78, Granite Tor. Annual Report on Retained area for the Period June, 1982 to June, 1983. Unpubl. Rep. Shell Co. of Aust. Ltd. Metals Div.

APPENDIX 1

Petrology Reports

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Central Mineralogical Services

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Mr. W.D. Smyth
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The Shell Co. of Aust. Ltd.
Metals Division
P.O. Box 860
DEVONPORT / TAS. 7310

31st January, 1984

REPORT CMS 84/1/1

YOUR REFERENCE:	Sample Despatch No. 4475/NP01/WDS/229
DATE RECEIVED:	3rd January, 1984
SAMPLE NOS.:	6202, 6210
SUBMITTED BY:	W.D. Smyth
WORK REQUESTED:	Petrology

for

H.W. Fander, M. Sc.

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REPORT CMS 84/1/1

Two rock samples were received for identification and petrological description. Representative thin-sections were prepared and examined together with their respective cobaltinitrite-stained offcuts. Brief tabulated petrological descriptions are attached. These incorporate data from oblique incident and transmitted light microscopy, and include interpretative comments.

D. Cowan, B. Sc.

Sample No.	Classification - Composition	Fabric	Accessories	Comments
6202 (T.S. 48569)	Porphyritic Microgranodiorite. Phenocrysts of extensively sericitised oligoclase, subordinate biotite, minor quartz in a groundmass of quartz; sericitic oligoclase and biotitised poikilitic amphibole with minor orthoclase.	Strongly porphyritic, even-grained granitic groundmass (mean 400μ). Weakly vuggy in quartz, orthoclase.	Minor secondary epidote, chlorite (after biotite). Disseminated pyrite. Primary apatite, zircons.	Hornblende-biotite granodiorite with high-level intrusive characteristics. Includes rare relics of dark brown hornblende. Deuteric style of alteration.
6210 (T.S. 48570)	Rhyolitic Tuff Lava. Frequent stressed relict phenocrystal quartz, subordinate sericitised biotite flakes, feldspar grains in a silicified/sericitised felsitic (devitrified) matrix.	Flow-brecciated, lava-like, but detail confused by mild shearing.	Thinly disseminated leucoxenised opaques. Weak pervasive secondary Fe-staining.	Devitrified silicified/sericitised biotite rhyolitic flow-breccia. Reflects low-greenschist facies regional metamorphism.

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Mr. D.C. Speijers
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DEVONPORT / TAS. 7310

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

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.

184 T.S. 4668)	[redacted] Sericitised conglomerate. Rounded to sub-angular pebbles, granules of sericitised volcanics; stressed quartz, sericitised ?feldspar grains; fine sericite cement.	[redacted] Poorly sorted/sized, with pebbles up to 20 mm in sandy matrix.	[redacted] Introduced pyrite, traces of fine tourmaline.	[redacted] Volcanic pebbles [redacted] of [redacted] sic [redacted] composition and include probable tuffs and lavas. Sericitisation was hydrothermal.
185	Sericitised ?Volcanic. 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
187	Sericitised ?Volcanic. 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.
188	Altered ?Volcanic. 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.
193	Pyritised Quartzite. Pebbles, granules and sand-sized grains of strongly stressed, micro-fractured 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.
195	Sericitised Porphyritic Rhyolite. 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).
200 T.S. 4674)	Porphyritic Rhyolite. Very large embayed quartz, sericitised plagioclase, fresh K-feldspar phenocrysts, chloritised biotite, in quartz/K-feldspar groundmass.	Phenocrysts up to 10 mm. Medium-crystalline ground-mass. Uniform fabric.	Leucoxenised oxide opaques. Massive chlorite veins. Zircon.	Verging on a microgranite. Very probably the fresher equivalent of 8195. Minor intrusive.

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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.

[redacted] Ro[redacted]ame[redacted] B[redacted] Pe[redacted]grap[redacted]

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 alteredlava 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.

Sample No.	Rock Name — Brief Petrography
8168	Porphyritic Microgranite. Phenocrysts of quartz, largely sericitised albite, chloritisedbiotite, 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; groundmas 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-grainedsubhedral 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.

Sample No.	Rock Name	Brief Petrography
8182	Alkali Granite.	About 65 % orthoclase, 30 % quartz, 5 % argillised plagioclase. Coarsely-crystalline. Accessory ?xenotime. 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

030

460031

FROM : RABONE, G. 1975

99346: crenulated quartz-albite-muscovite-chlorite schist (metamorphosed tuffaceous sediment)

A strongly schistose rock with a folded schistosity and a new layering parallel to the axial plane of crenulations in the schistosity. Some mica-rich and quartz-albite-rich segregations have developed on both schistosities, both segregation layerings being lenticular. Minor chlorite patches and streaks are somewhat irregular.

Small albite porphyroblasts (7-10%) are randomly disposed and have a planar orientation of ultra fine opaque inclusions mostly parallel to the first schistosity.

The texture, and the presence of accessory tourmaline most of which seems to be authigenic but some grains appear ex-detrital, suggest that this is predominantly a metasediment, however minor volcanic (tuffaceous) component is represented by the albite porphyroblasts and probably by some patches of quartz mosaic.

88349: chlorite, clay-sericite quartz rock; derived by extensive pervasive ?hydrothermal alteration of a fine leucocratic acid intrusive ?adamellite or granite; minor veinlets of pyrite

This rock consists of coarse, strained, generally equidimensional anhedral quartz crystals forming a homogeneous loose aggregate with an essential matrix of clay-sericite and minor chlorite. The quartz has an average size of 0.6 mm.

This gross texture indicates an original homogeneous allotriomorphic granular rock, the composition indicates that it was originally a leucocratic quartzo-felspathic rock with minor biotite. The felspar has been completely altered to clay-sericite, the biotite to chlorite, conceivably by hydrothermal alteration.

Minor variably continuous veinlets of pyrite, partly altered to limonite occur sporadically.

The homogeneity in nature, size and distribution of the quartz, separated by an equal abundance of felspar alteration products, provides the interpretation of an original acid intrusive facies.

99353: chlorite-biotite, clay-sericite, quartz rock (altered fine grained granitic rock)

This rock consists of rather random, allotriomorphic granular aggregates of quartz, intimately intergrown with subordinate clay-sericite pseudomorphs after felspar, and with minor chloritised biotite, and chlorite pseudomorphs after biotite.

Accessory very fine grains of magnetite, trace pyrite and sphene are disseminated, generally clustered around altered biotite. Some quartz shows relict myrmekite texture.

Relict textures considered together with the composition indicates this rock to be an original fine grained leucocratic granite (?or adamellite), stressed, texturally partly reconstituted, and subjected to perverive, probable hydrothermal alteration.

99355: extensively altered, fine to medium grained (biotite) granitic rock

This rock has a distinct, relict allotriomorphic granular texture, consisting of a fairly coarse aggregate of irregular quartz grains intimately intergrown with interstitial areas, of sericite after felspar. Irregular intergrowths of sericite in the quartz reflect primary myrmekite.

Subordinate (25%) chloritised biotite and chlorite pseudomorphs after biotite with associated fine iron and titania oxides, are distributed throughout the altered quartzo-felspathic aggregate.

99357: altered, brecciated, and partly recrystallised fine grained granitic rock

This rock consists of a loosely packed aggregate of variably angular to subrounded (allotriomorphic) stressed quartz grains, and sericitic pseudomorphs after felspar, of generally the same size as in the preceding 3 samples, although it is clear that many of these are broken fragments. These are randomly disposed through a homogeneous microcrystalline (?recrystallised) matrix of quartz crowded with fine chlorite and sericite. Streaky veinlets of chlorite cut the rock.

Objectively this rock could be interpreted as a recrystallised quartz-felspar (crystal) tuff. Its spatial relationship to the 3 granitic rocks described above is not known, however the nature of the components are identical to those in 99349, 99353 and 99355. The rock does have a largely fragmental texture, however. The conclusion is that this rock is a (tectonically) brecciated and recrystallised equivalent of the granitic facies described above.

99358: **altered quartz-felspar (rhyolitic) porphyritic lava**

This is a highly altered rock with randomly distributed, abundant embayed quartz and extensively sericitised and/or albitised felspar phenocrysts. Subordinate chloritised biotite phenocrysts are also scattered.

Patches of secondary chlorite, with marginal inclusions of quartz, minor secondary ?stilpnomelane and veins of white mica are also present. All of these components occur in a diffuse microcrystalline, highly potassic quartzo-felspathic groundmass, clouded with ultra fine chlorite.

Accessory leucoxene, after titanomagnetite or ilmenite, is found in places.

99359: altered volcanic breccia

This has a fairly clearly defined fragmental texture. It is composed of angular fragments measuring greater than 5 mm, of fine grained, potassic aphanitic volcanic rock, and smaller fragments of quartz and sericitised felspar.

The only textures visible inside the fragments are of felspar microlites and small vesicles, indicating that they are original lavas, but now completely altered to clouded masses of indefinable clays.

Some fragments appear to have been scoriaceous and have large patches of chlorite in them. Fractures outlined by extremely fine opaques are common.

037

460038

99362: extensively altered highly porphyritic rhyolite or rhyodacite, with minor contamination by tuff fragments

This rock has abundant large commonly embayed phenocrysts of quartz, subordinate, extensively sericitised plagioclase and potash felspar; and slightly less abundant chlorite pseudomorphs after deformed biotite phenocrysts.

The groundmass is completely recrystallised to chlorite, sericite, quartz and K-felspar but has some vague relict flow textures.

In addition to the phenocrysts, minor fragments of silicic and potassic volcanic groundmass material are randomly scattered.

The rock is interpreted as a lava of rhyodacite to rhyolite composition contaminated with xenoliths of possible tuffaceous origin, thus suggesting the term tuff-lava.

99369: **altered, (biotite) rhyodacite porphyry -- a high level intrusive**

Large phenocrysts of embayed quartz, and euhedral plagioclase crystals, with subordinate chlorite pseudomorphs after biotite ± epidote are randomly disposed through a fairly homogeneous, microcrystalline groundmass of quartz, potash felspar and minor albite. The plagioclase phenocrysts are partly sericitised and albitised. Minor fine chlorite pseudomorphs after biotite are scattered through the groundmass.

The gross texture (notably of the groundmass) appears to be primary, in which case the rock is an altered (biotite) rhyodacitic porphyry, which is almost certainly a high level intrusive. (It is conceivably a lesser altered, intrusive equivalent of the extrusive 99362.)

99372: breccia derived from fragmentation of fine rhyolitic porphyry of 99369

This rock has a fairly fine, homogeneous fragmental texture. Quartz grains, commonly embayed and broken, sericitised broken plagioclase crystals, and fragments of quartzo-felspathic groundmass form a loosely packed aggregate in a much finer matrix. This matrix consists largely of chlorite, minor shredded sericite and fine crushed quartzo-felspathic material.

Objectively the rock may be interpreted as a chloritised crystal lithic tuff. However the components are virtually identical to those in the previously described porphyry 99369, strongly suggesting that the rock has derived by the tectonic fragmentation of this porphyry (or by the explosive boiling off of volatiles). Note this interpretation has the same basis as that given for 99357 above.

APPENDIX 2

Lower Brougham River - Rock Chip Assays

041 C
COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460042 Head Office and Central Laboratory
305 SOUTH ROAD
MILE END SOUTH
STH AUST 5031
TEL: (08) 43 5722
TELEX: AA89323

NATA REGISTERED No. 1526

OUR REF.: COM 831607

YOUR REF.: ADDITIONAL ASSAY

Mr. W. Smyth,
The Shell Co Of Aust.,
PO Box 860,
DEVONPORT. TAS. 7310,

7.9.83

Dear Bill,

RE: JOB COM 831607

Enclosed are the assays for the samples requested as additional to our Job COM831607.

Yours sincerely,
COMLABS PTY LTD

per :

Queensland Preparation Laboratory: 172 Lavarack Ave., Eagle Farm, Queensland. 4007 Tel.: (07) 268 4748
Western Australia Preparation Laboratory: 52 Fairbrother St., Belmont, W.A. 6104 Tel.: (09) 47 81336
Northern Territory Preparation Laboratory: 3 Bishop Street Darwin N T 5790 Tel · (089) 81 3961

460043

042 C COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM830607 O/N : Additional Assay

Results in ppm

SAMPLE	Sn	W
6440	12	25
6441	10	55
6442	4	20
6443	10	<10
6444	4	<10
6445	8	20
6446	4	<10
6456	24	<10
6457	<4	10
6458	4	<10
6459	10	20
6460	6	20
6461	6	<10
6462	6	<10
6463	10	15
6464	16	20
6465	16	15
6466	10	35
6467	10	<10

Method of Analysis : Sn W : XRF1

043

COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

460044

Head Office and Central Laboratory
305 SOUTH ROAD
MILE END SOUTH
STH. AUST 5031
TEL.: (08) 43 5722
TELEX: AA89323

NATA REGISTERED No. 1526

OUR REF.: COM 830643

YOUR REF.: 4328/NP01/WDS/182

Mr. W. Smyth,
The Shell Co Of Aust. Ltd,
PO Box 860,
DEVONPORT. TAS. 7310,

29.4.83

Dear Bill,

RE: JOB COM 830643

Enclosed are the assays for the samples delivered to our laboratory on the 5th April, 1983.

Yours sincerely,
COMLABS PTY LTD

per :

044 C

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

NATA

46004

ANALYTICAL REPORT

JOB COM830643 O/N : 4328/EP01/WDS/182

Results in ppm

SAMPLE	Sn	W	As
6409	34	50	26
6410	14	30	3
6411	8	25	4
6412	8	25	2
6413	18	50	3
6414	6	10	2
6415	20	20	2
6416	18	50	<2
6417	<4	<10	5
6418	12	25	6
6419	16	25	5
6420	30	25	<2
6421	160	45	<2
6422	12	25	6

Method of Analysis : Sn W As : XRF1

460046

045

COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

Head Office and Central Laboratory
305 SOUTH ROAD
MILE END SOUTH
STH AUST 5031
TEL. (08) 43 5722
TELEX. AA89323

NATA REGISTERED No. 1526

OUR REF.: COM 830607

YOUR REF.: 4329/NP01/WDS/183

Mr. W. Smyth,
The Shell Co. of Aust. Ltd.,
Metals Division,
P.O. Box 860,
DEVONPORT TAS 7310,

12.4.83

Dear Bill,

RE: JOB COM 830607

Enclosed are the assays for the samples delivered to our laboratory on the 30th March 1983.

Yours sincerely,
COMLABS PTY LTD

per :

046

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460047

ANALYTICAL REPORT

JOB COM830607 O/N : 4329/NP01/WDS/183

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Co	Bi
6423	20	6	6	<4	<4	<4
6424	12	18	170	34	8	<4
6425	28	40	140	38	12	<4
6426	18	12	170	32	12	<4
6427	8	24	4	<4	<4	<4
6428	16	6	4	8	<4	<4
6429	16	8	12	<4	<4	<4
6430	8	<4	6	<4	<4	<4
6431	10	8	8	<4	<4	<4
6432	10	<4	16	<4	<4	<4
6433	6	6	10	<4	<4	<4
6434	8	6	12	<4	<4	<4
6435	6	<4	30	12	<4	<4
6436	6	<4	20	<4	<4	<4
6437	6	<4	55	8	4	<4
6438	8	<4	34	6	<4	<4
6439	8	6	70	12	<4	<4
6440	10	8	65	18	<4	<4
6441	8	120	30	<4	<4	<4
6442	4	8	12	<4	<4	<4
6443	22	100	200	40	<4	<4
6444	6	8	130	44	8	<4
6445	14	8	60	20	6	<4
6446	14	10	90	46	10	<4
6447	36	8	14	6	<4	<4

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047 C

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM830607 O/N : 4329/NP01/WDS/183

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Co	Bi
6448	8	6	12	4	<4	<4
6449	6	6	10	<4	<4	<4
6450	18	8	12	<4	<4	<4
6451	18	6	10	<4	<4	<4
6452	12	4	10	<4	<4	<4
6453	10	4	12	<4	<4	<4
6454	12	10	18	8	4	<4
6455	14	6	12	6	<4	<4
6456	60	12	8	<4	<4	<4
6457	8	8	4	<4	<4	<4
6458	6	<4	10	<4	<4	<4
6459	10	16	2	8	<4	<4
6460	14	<4	<2	6	<4	<4
6461	70	<4	70	28	10	<4
6462	50	<4	60	50	20	<4
6463	12	<4	80	42	20	<4
6464	200	26	42	20	22	<4
6465	8	8	8	4	6	<4
6466	24	75	50	6	<4	<4
6467	4	<4	18	4	<4	<4

Method of Analysis : Cu Pb Zn Ni Co Bi : AAS1

048 C
COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460049
Head Office and
Central Laboratory
305 SOUTH ROAD
MILE END SOUTH
STH AUST 5031
TEL.: (08) 43 5722
TELEX: AA89323

NATA REGISTERED No. 1526

OK.

OUR REF.: COM 830529

YOUR REF.: 4324/NP01/WDS/178

Mr. W. Smyth,
The Shell Co. of Aust. Ltd,
Metals Division,
P.O. Box 860,
DEVONPORT TAS 7310,

6.4.83

Dear Bill,

RE: JOB COM 830529

Enclosed are the assays for the samples delivered to our laboratory on the 22nd March 1983.

Yours sincerely,
COMLABS PTY LTD

per :

049 c

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460050

ANALYTICAL REPORT

JOB COM830529 O/N : 4324/NP01/WDS/178

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Bi
6409	38	14	8	6	<4
6410	20	<4	6	4	<4
6411	6	<4	6	<4	<4
6412	<2	<4	4	<4	<4
6413	4	<4	4	10	<4
6414	2	<4	4	10	<4
6415	8	<4	4	14	<4
6416	4	<4	6	4	<4
6417	4	<4	6	6	<4
6418	4	<4	4	6	<4
6419	4	<4	4	<4	<4
6420	4	<4	4	10	<4
6421	32	14	4	4	<4
6422	8	8	6	12	<4
9038	60	18	120	70	<4
9039	42	14	145	120	<4
9040	8	36	70	<4	<4
9041	6	8	120	70	<4
9571	8	30	10	<4	<4
9572	155	22	28	14	<4
9573	36	180	65	12	<4
9574	14	95	80	18	<4
9575	16	90	10	10	<4
9576	4	70	8	<4	<4
9577	6	130	10	4	<4

.../ 2

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460051

ANALYTICAL REPORT

JOB COM830529 O/N : 4324/NP01/WDS/178

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Bi
9578	50	42	85	130	<4
9579	8	16	130	10	<4
9580	100	80	30	30	<4
9581	12	510	240	28	<4
9582	12	60	6	12	<4
9583	95	230	180	48	<4
9584	150	430	180	50	<4
9585	2	<4	6	4	<4
9586	8	42	100	8	<4
9587	42	360	60	10	<4

Method of Analysis : Cu Pb Zn Ni Bi : AAS1

APPENDIX 3

Stream Sediment Surveys - Assays -80#

460053
Head Office and
Central Laboratory
305 SOUTH ROAD
MILE END SOUTH
STH AUST 5031
TEL (08) 43 5727
TELEX AA89323

COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

NATA REGISTERED No. 1526

OUR REF.: COM 832718

YOUR REF.: 4457/NP01/WDS/211 - SOW

Mr. B. Smyth,
The Shell Co of Aust. Ltd,
PO Box 860,
DEVONPORT. TAS. 7310,

23.12.83

Dear Bill,

RE: JOB COM 832718

Enclosed are the assays for the samples delivered to our laboratory on the 5th December, 1983.

Yours sincerely,
COMLABS PTY LTD

per :

053 C

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB CON832718 O/N : 4457/NP01/WDS/211

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Ag	Mo	Au
6203	10	4	8	<4	<1	8	0.55
6206	4	6	6	<4	1	<4	<0.05
6208	6	4	8	<4	1	<4	0.15
6219	6	6	20	<4	<1	<4	<0.05
6220	8	24	20	<4	1	<4	<0.05
6224	4	<4	14	<4	1	<4	<0.05
6225	4	<4	8	<4	<1	<4	<0.05
6227	6	<4	10	<4	<1	<4	<0.05
6228	2	<4	2	<4	<1	<4	<0.05
6229	6	<4	4	<4	1	<4	<0.05
6230	4	<4	4	<4	<1	<4	<0.05
6231	2	<4	6	<4	<1	<4	<0.05
6232	2	<4	10	<4	1	<4	<0.05
6233	8	<4	8	<4	<1	<4	<0.05
6234	4	<4	6	<4	<1	<4	<0.05
6235	2	<4	4	<4	<1	<4	<0.05
6236	6	<4	<2	<4	<1	<4	<0.05
6237	2	<4	6	<4	1	<4	<0.05
6238	8	<4	70	6	<1	<4	<0.05
6239	6	<4	6	<4	<1	<4	<0.05
6240	6	<4	6	<4	<1	<4	<0.05
6241	4	<4	2	<4	<1	<4	<0.05
6242	20	<4	16	<4	1	<4	<0.05
6243	10	<4	6	<4	<1	<4	<0.05

Method of Analysis : Cu Pb Zn Ni : AAS1
Ag Mo : AAS3
Au : AAS5A

.../ 2

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460055

ANALYTICAL REPORT

SS

JOB COMB32718 O/N : 4457/NP01/WDS/211

Results in ppm

SAMPLE	Bi	Co	Cd	%Fe	Mn
6203	<4	<4	<1	0.20	30
6206	<4	<4	<1	0.30	40
6208	<4	<4	<1	0.20	32
6219	<4	<4	<1	0.30	38
6220	<4	<4	<1	0.50	280
6224	<4	<4	<1	0.10	20
6225	<4	<4	<1	0.15	26
6227	<4	<4	<1	0.10	20
6228	<4	<4	<1	0.06	20
6229	<4	<4	<1	0.20	26
6230	<4	<4	<1	0.20	30
6231	<4	<4	<1	0.25	32
6232	<4	<4	<1	0.20	26
6233	<4	<4	<1	0.30	38
6234	<4	<4	<1	0.30	44
6235	<4	<4	<1	0.10	16
6236	<4	<4	<1	0.06	12
6237	<4	<4	<1	0.08	24
6238	<4	<4	<1	0.30	50
6239	<4	<4	<1	0.20	40
6240	<4	<4	<1	0.20	28
6241	<4	<4	<1	0.15	28
6242	<4	<4	<1	0.10	26
6243	<4	<4	<1	0.10	22

Method of Analysis : Bi Co Cd : AAS1
Fe Mn : AAS2/2A

055 C
COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460056 Metallurgical and Central Laboratory
305 SOUTH ROAD
MILE END SOUTH
STH AUST 5031
TEL. (08) 43 5722
TELEX AA89323

NATA REGISTERED No. 1526

OUR REF.: COM 832782

YOUR REF.: 4462/NP01/WDS/216

Mr. W. Smyth,
The Shell Co. of Aust. Ltd,
Metals Division,
P.O. Box 860,
DEVONPORT TAS 7310,

30.12.83

Dear Bill,

RE: JOB COM 832782

Enclosed are the assays for the samples delivered to our laboratory on the 12th December 1983.

Yours sincerely,
COMLABS PTY LTD

per :

056

460057

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM832782 O/N : 4462/NP01/WDS/216

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	%Fe	Mn
11160	6	4	16	6	0.25	34
11162	6	<4	4	4	0.15	22
11164	6	12	24	6	0.60	80
11166	2	<4	6	6	0.20	32
11168	12	24	40	8	1.00	230
11170	14	24	38	12	0.80	170
11172	6	16	34	16	1.00	290
11174	20	70	70	16	1.90	730
11176	6	28	28	12	0.70	160
11178	4	<4	12	6	0.30	34
11180	<2	<4	8	4	0.25	34
11182	12	8	22	6	0.65	90
11184	6	4	20	6	0.50	75
11186	6	<4	<2	6	0.20	32
11188	4	<4	2	4	0.35	70
11190	2	<4	10	6	0.40	44
11192	8	10	60	8	1.00	380
11194	16	14	70	16	1.35	970
11196	22	10	70	18	1.20	1100
11198	10	6	50	14	1.00	730
11200	8	8	70	18	1.50	580
11202	16	6	48	16	1.80	480

Method of Analysis : Cu Pb Zn Ni : AAS1
Fe Mn : AAS2/2A

.../ 2

057

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM832782 O/N : 4462/NP01/WDS/216

Results in ppm

SAMPLE	Co	Cd	Bi	Ag	Mo	Au
11160	<4	<1	<4	<1	<4	<0.05
11162	<4	<1	<4	<1	<4	<0.05
11164	<4	<1	<4	<1	<4	<0.05
11166	<4	<1	<4	<1	<4	<0.05
11168	<4	<1	<4	<1	<4	<0.05
11170	<4	<1	<4	<1	<4	<0.05
11172	<4	<1	<4	<1	<4	<0.05
11174	6	<1	<4	<1	<4	<0.05
11176	<4	<1	<4	<1	<4	<0.05
11178	<4	<1	<4	<1	<4	<0.05
11180	<4	<1	<4	<1	<4	<0.05
11182	<4	<1	<4	<1	<4	0.35
11184	<4	<1	<4	<1	<4	<0.05
11186	<4	<1	<4	<1	<4	<0.05
11188	<4	<1	<4	<1	<4	<0.05
11190	<4	<1	<4	<1	<4	<0.05
11192	<4	<1	<4	<1	<4	<0.05
11194	<4	<1	<4	<1	<4	<0.05
11196	<4	<1	<4	<1	<4	<0.05
11198	<4	<1	<4	<1	<4	<0.05
11200	<4	<1	<4	<1	<4	<0.05
11202	<4	<1	<4	<1	<4	<0.05

Method of Analysis : Co Cd Bi : AAS1
Ag Mo : AAS3
Au : AAS5A

058

COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

460059

Head Office and
Central Laboratory
305 SOUTH ROAD
MILE END SOUTH
STH AUST 5031
TEL.: (08) 43 5722
TELEX AA89323

NATA REGISTERED No. 1526

OUR REF.: COM 832783

YOUR REF.: 4463/NPO1/WPS/217

Mr. P. Smyth,
The Shell Co. of Aust. Ltd.,
Metals Division,
P.O. Box 860,
DEVONPORT TAS 7310,

21.12.83

Dear Bill,

RE: JOB COM 832783

Enclosed are the assays for the samples delivered to our laboratory on the 12th December 1983.

Yours sincerely,
COMLABS PTY LTD

per :

059

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB: COM832783 O/F : 4463/EP01/VDS/217

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Cd
6302	16	30	50	8	6	<4	<1
6304	14	28	46	10	8	<4	<1
6306	8	38	28	<4	6	<4	<1
6308	8	26	20	4	<4	<4	<1
6310	8	26	34	4	6	<4	<1
6312	10	6	20	6	<4	<4	<1
6314	10	24	42	6	4	<4	<1
6316	8	65	16	<4	<4	<4	<1
6318	8	8	18	<4	<4	<4	<1
6320	60	60	140	20	20	<4	<1
6322	65	90	130	14	12	<4	<1
6324	24	100	100	14	8	<4	<1
6326	26	40	50	12	8	<4	<1
6328	12	14	28	4	4	<4	<1

Method of Analysis : Cu Pb Zn Ni Co Bi Cd : AAS1

.../2

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB CON832703 O/P : 4463/EP01/WPS/217

Results in ppm

SAMPLE	%Fe	Mn	Ag	Mo	Au
6302	1.20	470	<1	6	<0.05
6304	1.45	1000	<1	8	<0.05
6306	0.90	620	<1	6	<0.05
6308	0.35	110	<1	<4	<0.05
6310	0.95	260	<1	<4	<0.05
6312	0.60	110	<1	8	<0.05
6314	0.95	320	<1	<4	<0.05
6316	0.55	120	<1	<4	<0.05
6318	0.55	130	<1	<4	<0.05
6320	2.60	5100	<1	<4	<0.05
6322	1.50	1750	<1	6	<0.05
6324	1.45	1350	<1	4	<0.05
6326	1.60	1050	<1	6	<0.05
6328	0.90	490	<1	<4	<0.05

Method of Analysis : Fe Mn : AAS2
Ag Mo : AAS3
Au : AAS5A

061 C COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460062
Head Office and Central Laboratory
305 SOUTH ROAD
MILE END SOUTH
STH AUST 5031
TEL (08) 43 5722
TELEX AA89323

NATA REGISTERED No. 1526

OUR REF.: COM 830994

YOUR REF.: Additional Assay

Mr. W. Smyth,
The Shell Co. of Aust. Ltd.,
Metals Division,
P.O. Box 860,
DEVONPORT TAS 7310,

29.9.83

Dear Bill,

RE: JOB COM 830994

Enclosed are the assays for the samples requested as additional to our Job COM830994.

Yours sincerely,
COMLABS PTY LTD

per :

PR Harvey

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460063

ANALYTICAL REPORT

JOB COM830994 O/N : Additional

Results in ppm

SAMPLE	Au
11101	<0.01
11103	<0.01
11105	<0.01
11107	<0.01
11109	<0.01
11111	<0.01
11113	<0.01
11115	<0.01
11117	<0.01
11119	<0.01
11121	<0.01
11123	<0.01
11125	<0.01
11127	<0.01
11129	<0.01
11131	<0.01
11133	<0.01
11135	<0.01
11137	<0.01
11139	<0.01
11141	<0.01
11143	<0.01
11145	<0.01
11147	<0.01
11149	<0.01

.../ 2

063

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460064

ANALYTICAL REPORT

JOB COM830994 O/N : Additional

Results in ppm

SAMPLE	Au
11151	<0.01

Method of Analysis : Au : AAS5B

064

COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

460065

Head Office and Central Laboratory
305 SOUTH ROAD
MILE END SOUTH
STH AUST 5031
TEL.: (08) 43 5722
TELEX: AA89323

NATA REGISTERED No. 1526

OUR REF.: COM 830994

YOUR REF.: 4331/NP01/WDS/185

Mr. W. Smyth,
The Shell Co. of Aust. Ltd.,
Metals Division,
P.O. Box 860,
DEVONPORT TAS 7310,

2.6.83

Dear Bill,

RE: JOB COM 830994

Enclosed are the assays for the samples delivered to our laboratory on the 13th May 1983.

Yours sincerely,
COMLABS PTY LTD

per :

Queensland Preparation Laboratory: 172 Lavarack Ave., Eagle Farm, Queensland. 4007 Tel.: (07) 268 4748
Western Australia Preparation Laboratory: 52 Fairbrother St., Belmont, W.A. 6104 Tel.: (09) 47 81336
Northern Territory Preparation Laboratory: 3 Bishop Street, Darwin, N T 5790 Tel · (089) 81 3961

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM830994 O/N : 4331/NP01/WDS/185

Results in ppm

SAMPLE	As	Be	Ag	Mo	V	%Fe	Mn
11101	<2	410	<1	36	80	1.10	140
11103	2	460	<1	44	120	1.65	480
11105	4	600	<1	26	80	1.45	400
11107	4	690	<1	60	140	1.65	700
11109	4	570	<1	12	50	1.60	370
11111	3	390	<1	8	40	1.75	430
11113	6	490	<1	6	40	2.20	790
11115	4	230	<1	10	30	1.10	65
11117	4	330	<1	10	30	1.50	340
11119	4	580	<1	8	30	1.85	1000
11121	2	600	<1	8	60	1.60	1400
11123	5	580	<1	8	40	1.55	1350
11125	<2	410	<1	6	20	1.15	270
11127	<2	470	<1	8	30	1.45	340
11129	2	390	<1	8	30	1.50	270
11131	2	580	<1	8	40	1.50	370
11133	4	570	<1	8	40	1.80	400
11135	<2	650	<1	10	50	1.90	640
11137	4	690	<1	8	40	2.60	600
11139	<2	700	<1	8	40	1.55	1150
11141	3	730	<1	10	30	1.65	500
11143	2	620	<1	8	50	1.80	520
11145	5	700	<1	6	30	1.20	460
11147	7	630	<1	6	40	1.70	540
11149	8	510	<1	12	60	2.45	3000

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM830994 O/N : 4331/NPO1/WDS/185

Results in ppm

SAMPLE	As	Ba	Ap	Mo	V	%Fe	Mn
11151	3	520	<1	10	40	1.65	700

Method of Analysis : As Ba : XRF1
Ap Mo V : AAS3
Fe Mn : AAS2/2A

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460068

ANALYTICAL REPORT

JOB COM830994 O/N : 4331/NP01/WDS/185

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Co	Cd	Bi
11101	16	10	16	26	<4	<1	10
11103	18	10	46	24	6	<1	12
11105	16	10	40	26	6	<1	10
11107	18	12	36	26	8	<1	10
11109	18	14	30	30	6	<1	10
11111	22	20	24	30	6	<1	10
11113	34	18	32	20	8	<1	12
11115	14	26	24	24	<4	<1	6
11117	16	20	24	28	<4	<1	8
11119	22	12	42	24	4	<1	10
11121	18	10	36	14	8	<1	8
11123	16	16	32	22	8	<1	12
11125	14	12	16	20	<4	<1	8
11127	22	14	28	16	<4	<1	8
11129	14	24	30	24	<4	<1	10
11131	12	14	32	20	<4	<1	10
11133	16	24	28	32	<4	<1	8
11135	12	14	34	18	<4	<1	10
11137	18	16	26	14	10	<1	10
11139	16	20	34	26	6	<1	10
11141	12	12	38	18	<4	<1	10
11143	20	14	30	24	8	<1	10
11145	12	10	34	10	<4	<1	8
11147	14	12	38	26	<4	<1	12
11149	28	46	80	28	14	<1	10

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068

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460069

ANALYTICAL REPORT

JOB COM830994 O/N : 4331/KP01/WDS/185

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Co	Cd	Bi
11151	22	42	60	26	<4	<1	10

Method of Analysis : Cu Pb Zn Ni Co Cd Bi : AAS1

APPENDIX 4

Stream Sediment Surveys - Assays

Panned Concentrates

070

COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

460071

Head Office and Central Laboratory
30A SOUTH ROAD
MILE END SOUTH
STH AUST 5031
TEL (08) 43 5727
TELEX AA89323

NATA REGISTERED No. 1526

OUR REF.: COM 832719

YOUR REF.: 4458/NP01/WDS/212 f.c.

Mr. W. Smyth,
The Shell Co. of Aust. Ltd.,
Metals Division,
P.O. Box 860,
DEVONPORT TAS 7310,

15.12.83

Dear Bill,

RE: JOB COM 832719

Enclosed are the assays for the samples delivered to our laboratory on the 5th December 1983.

Yours sincerely,
COMLABS PTY LTD

per :

071

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460072

ANALYTICAL REPORT

P.C.

JOB COM832719 O/N : 4458/NPO1/WDS/212

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Cd
6203 P	20	12	24	60	<4	<4	<1
6206 P	4	12	32	12	<4	<4	<1
6208 P	6	22	18	28	<4	<4	<1
6219 P	<2	6	10	10	<4	<4	<1
6220 P	4	30	14	8	<4	<4	<1
6224 P	20	4	10	50	<4	<4	<1
6225 P	4	4	6	14	<4	<4	<1
6227 P	18	6	6	42	<4	<4	<1
6228 P	6	6	20	18	<4	<4	<1
6230 P	12	16	95	10	<4	<4	<1
6231 P	6	6	4	12	<4	<4	<1
6232 P	4	4	10	12	<4	<4	<1
6233 P	6	6	12	14	<4	<4	<1
6234 P	4	6	10	12	<4	<4	<1
6235 P	4	6	14	14	<4	<4	<1
6236 P	4	4	6	8	<4	<4	<1
6237 P	<2	<4	12	8	<4	<4	<1
6238 P	42	28	330	75	<4	<4	1
6239 P	2	8	24	10	<4	<4	<1
6240 P	20	4	6	60	<4	<4	<1
6241 P	<2	4	4	12	<4	<4	<1
6242 P	24	<4	6	75	<4	<4	<1
6243 P	<2	30	10	6	<4	<4	<1

Method of Analysis : Cu Pb Zn Ni Co Bi Cd : AAS1

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460073

ANALYTICAL REPORT

JOB COM832719 O/N : 4458/NPO1/WDS/212

Results in ppm

SAMPLE	Sn	W	Ba	Au
6203 P	160	25	70	<0.05
6206 P	175	40	135	<0.05
6208 P	390	60	130	0.20
6219 P	14	35	70	<0.05
6220 P	4	30	230	<0.05
6224 P	44	20	55	0.60
6225 P	60	25	100	<0.05
6227 P	26	20	70	<0.05
6228 P	60	25	50	0.10
6230 P	46	20	80	<0.05
6231 P	22	25	70	<0.05
6232 P	50	10	40	<0.05
6233 P	270	40	55	<0.05
6234 P	145	20	75	<0.05
6235 P	65	15	45	<0.05
6236 P	50	<10	10	<0.05
6237 P	44	25	25	<0.05
6238 P	1350	75	35	0.35
6239 P	530	55	55	<0.05
6240 P	80	15	45	<0.05
6241 P	160	40	40	<0.05
6242 P	34	20	45	<0.05
6243 P	46	40	80	<0.05

Method of Analysis : Sn W Ba : XRFl
Au : AAS5A

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COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

460074

Head Office and
Central Laboratory
305 SOUTH ROAD
MILE END SOUTH
STH AUST 5031
TEL: (08) 43 5722
TELEX: AA89323

NATA REGISTERED No. 1526

OUR REF.: COM 832781

YOUR REF.: 4461/NP01/WDS/215

Mr. W. Smyth,
The Shell Co. of Aust. Ltd,
Metals Division,
P.O. Box 860,
DEVONPORT TAS 7310,

30.12.83

Dear Bill,

RE: JOB COM 832781

Enclosed are the assays for the samples delivered to our laboratory on the 12th December 1983.

Yours sincerely,
COMLABS PTY LTD

per :

074

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM832781 O/N : 4461/NP01/WDS/215

Results in ppm

SAMPLE	Sn	W	Ba	Au
11161	310	70	130	<0.05
11163	155	30	40	<0.05
11165	440	20	180	<0.05
11167	280	30	95	<0.05
11169	60	10	260	<0.05
11171	75	45	300	<0.05
11173	330	40	250	<0.05
11175	16	25	390	0.20
11177	65	20	230	<0.05
11179	650	25	70	2.80
11181	270	15	65	<0.05
11183	360	35	130	<0.05
11185	1700	100	175	<0.05
11187	4350	30	20	<0.05
11189	520	15	90	<0.05
11191	1150	35	80	<0.05
11193	125	<10	390	<0.05
11195	8	30	640	<0.05
11197	4	<10	780	<0.05
11199	8	15	730	<0.05
11201	6	<10	850	<0.05
11203	6	10	800	<0.05

Method of Analysis : Sn W Ba : XRF1
Au : AAS5A

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COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460076

ANALYTICAL REPORT

JOB COM832781 O/N : 4461/NP01/WDS/215

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Cd
11161	10	16	24	12	<4	<4	<1
11163	6	6	10	<4	<4	<4	<1
11165	16	50	38	20	4	<4	<1
11167	10	16	10	6	<4	<4	<1
11169	18	46	40	18	4	<4	<1
11171	12	32	48	12	4	<4	<1
11173	14	38	55	14	6	<4	<1
11175	12	44	60	14	8	<4	<1
11177	16	26	26	12	4	<4	<1
11179	6	6	16	6	<4	<4	<1
11181	10	4	12	12	<4	<4	<1
11183	14	8	24	10	4	<4	<1
11185	16	16	30	10	6	<4	<1
11187	14	6	6	6	<4	<4	<1
11189	12	6	8	10	<4	<4	<1
11191	6	10	12	8	<4	<4	<1
11193	14	18	65	20	6	<4	<1
11195	28	28	130	60	34	<4	<1
11197	24	16	90	40	20	<4	<1
11199	16	8	80	26	12	<4	<1
11201	20	10	80	30	16	<4	<1
11203	14	14	44	16	8	<4	<1

Method of Analysis : AAS1

460077
Head Office and
Central Laboratory
305 SOUTH ROAD
MILE END SOUTH
STH AUST 5031
TEL. (08) 43 5722
TELEX AA89323

COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

NATA REGISTERED No. 1526

OUR REF.: COM 832784

YOUR REF.: 4464/NP01/WDS/218 P.C

Mr. W. Smyth,
The Shell Co. of Aust. Ltd,
Metals Division,
P.O. Box 860,
DEVONPORT TAS 7310,

23.12.83

Dear Bill,

RE: JOB COM 832784

Enclosed are the assays for the samples delivered to our laboratory on the 12th December 1983.

Yours sincerely,
COMLABS PTY LTD

per :

077

460078

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM832784 O/N : 4464/NP01/WDS/218

Results in ppm

SAMPLE	Sn	W	Ba	Au
6301	55	720	410	0.15
6303	8	30	470	<0.05
6305	4	45	460	<0.05
6307	750	75	390	1.05
6309	<4	145	430	<0.05
6311	12	110	330	<0.05
6313	50	135	360	<0.05
6315	32	40	270	0.45
6317	38	55	220	<0.05
6319	6	25	500	1.05
6321	<4	30	630	<0.05
6323	<4	25	530	<0.05
6325	10	140	640	<0.05
6327	34	40	410	<0.05

Method of Analysis : Sn W Ba : XRF1
Au : AAS5A

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078

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460079

ANALYTICAL REPORT

JOB COM832784 O/N : 4464/NP01/WDS/218

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Cd
6301	14	50	44	18	14	<4	<1
6303	18	24	46	22	10	<4	<1
6305	12	20	30	10	8	<4	<1
6307	30	14	42	26	8	<4	<1
6309	10	40	36	14	10	<4	<1
6311	12	12	16	14	6	<4	<1
6313	12	38	44	12	10	<4	<1
6315	10	14	30	16	6	<4	<1
6317	6	10	44	6	6	<4	<1
6319	26	24	110	28	14	<4	<1
6321	20	38	120	32	14	<4	<1
6323	24	38	110	24	10	<4	<1
6325	24	20	60	16	10	<4	<1
6327	14	16	38	14	6	<4	<1

Method of Analysis : Cu Pb Zn Ni Co Cd Bi : AAS1

079
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COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

460080
Head Office and
Central Laboratory
305 SOUTH ROAD
MILE END SOUTH
STH AUST 5031
TEL: (08) 43 5722
TELEX AA89323

NATA REGISTERED No. 1526

OUR REF.: CON 831300

YOUR REF.: 4338/NP01/WDS/192

Mr. W. Smyth,
The Shell Co Of Aust. Ltd,
PO Box 860,
DEVONPORT. TAS. 7310,

28.6.83

Dear Bill,

RE: JOB CON 831300

Enclosed are the assays for the samples delivered to our laboratory on the 20th June, 1983.

Yours sincerely,
COMLABS PTY LTD

per :

080

460081

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM831300 O/R : 4338/RP01/WDS/192

Results in ppm

SAMPLE	Sn	W	As	Ba	Au
11102	55	20	9	450	0.35
11104	8	15	5	490	<0.05
11106	8	<10	4	600	<0.05
11108	4	20	7	690	<0.05
11110	<4	10	4	670	<0.05
11112	28	70	3	390	<0.05
11114	4	25	4	540	<0.05
11116	12	15	3	120	<0.05
11118	8	<10	<2	280	<0.05
11120	8	80	9	560	<0.05
11122	8	20	6	660	<0.05
11124	6	10	6	650	<0.05
11126	60	15	2	310	<0.05
11128	155	280	16	410	1.20
11130	24	220	10	430	<0.05
11132	4	185	14	500	<0.05
11134	4	95	3	560	<0.05
11136	12	220	7	700	<0.05
11138	4	90	8	880	<0.05
11140	<4	20	4	700	<0.05
11142	<4	10	4	670	<0.05
11144	4	30	6	600	<0.05
11146	<4	25	7	620	<0.05
11148	<4	50	3	590	<0.05
11150	4	<10	4	630	<0.05

.../ 2

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COMB31300 O/N : 4338/NP01/WDS/192

Results in ppm

SAMPLE	Sn	W	As	Ba	Au
11152	6	10	26	520	<0.05

Method of Analysis : Sn W As Ba : XRFI
Au : AAS5A

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM831300 O/E : 4338/EP01/WTS/192

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Pt	Ag	Mo
11102	6	8	16	10	<4	<1	8
11104	10	18	55	20	<4	<1	8
11106	8	8	32	14	<4	<1	8
11108	10	6	42	14	<4	<1	10
11110	8	14	30	14	<4	<1	6
11112	12	18	28	12	<4	<1	6
11114	12	8	22	12	<4	<1	6
11116	6	20	42	12	<4	<1	8
11118	14	12	30	16	<4	<1	22
11120	20	26	65	28	<4	<1	8
11122	12	12	55	18	<4	<1	6
11124	12	10	34	16	<4	<1	6
11126	8	8	24	10	<4	<1	6
11128	32	65	65	20	<4	<1	4
11130	10	30	34	10	<4	<1	4
11132	16	42	42	14	<4	<1	10
11134	8	28	26	10	<4	<1	<4
11136	8	20	32	10	<4	<1	4
11138	10	18	28	14	<4	<1	4
11140	12	14	34	14	<4	<1	10
11142	6	12	34	12	<4	<1	8
11144	14	12	30	10	<4	<1	6
11146	10	12	48	16	<4	<1	10
11148	8	10	34	10	<4	<1	4
11150	26	16	100	16	<4	<1	6

.../ 4

083

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460084

ANALYTICAL REPORT

JOB COM831300 O/N : 4338/NP01/WDS/192

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Bi	Ag	Mo
11152	16	32	80	14	<4	<1	6

Method of Analysis : Cu Pb Zn Ni Bi : AAS1
Ag Mo : AAS3

APPENDIX 5

Rock Chip Samples - Assays

083

COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

460086

Head Office and
Central Laboratory
305 SOUTH ROAD
MILE END SOUTH
STH AUST 5031
TEL (08) 43 5722
TELEX: AA89323

NATA REGISTERED No. 1526

OUR REF.: COM 840002

YOUR REF.: 4474/NP01/WDS/228

Mr. W. Smyth,
The Shell Co Of Aust. Ltd,
PO Box 860,
DEVONPORT. TAS. 7310,

20.1.84

Dear Bill,

RE: JOB COM 840002

Enclosed are the assays for the samples delivered to our laboratory on the 3rd January, 1984.

Yours sincerely,
COMLABS PTY LTD

per :

086

460087

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM840002 O/N : 4474/NP01/WDS/228

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Bi
6329	18	6	55	26	<4
6330	4	10	42	16	<4
6331	4	8	18	4	<4
6332	24	80	28	26	<4
6333	6	28	10	<4	55
6334	90	320	10	16	<4

.../ 2

087

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM840002 O/N : 4474/NP01/WDS/228

Results in ppm

SAMPLE	Cd	Co	Ag	Au	
6329	<1	10	<1	<0.05	
6330	<1	8	<1	<0.05	
6331	<1	6	<1	<0.05	
6332	<1	18	<1	<0.05	
6333	<1	10	2	2.20	←
6334	<1	18	1	<0.05	

Method of Analysis : Cu Pb Zn Ni Bi Cd Co : AAS1
Ag : AAS3
Au : AAS5A

088

COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

460089

Head Office and Central Laboratory
33A SOUTH ROAD
MILE END SOUTH
STH AUST 5031
TEL (08) 43 5722
TELEX AA89323

NATA REGISTERED No. 1526

OUR REF.: COM 832910

YOUR REF.: 4476/NP01/WDS/230 R.C.

Mr. W. Smyth,
The Shell Co Of Aust. Ltd,
PO Box 860,
DEVONPORT. TAS. 7310,

20.1.84

Dear Bill,

RE: JOE COM 832910

Enclosed are the assays for the samples delivered to our laboratory on the 28th December, 1983.

Yours sincerely,
COMLABS PTY LTD

per :

089

460090

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM832910 O/N : 4476/NP01/WDS/230

Results in ppm

SAMPLE	As	Ba	Ag	Au
6201	<2	2300	<1	<0.05
6202	<2	1900	<1	<0.05
6207	3	780	<1	<0.05
6209	<2	800	<1	<0.05
6210	<2	1300	<1	<0.05
6211	<2	1000	<1	<0.05
6212	<2	1250	<1	<0.05
6213	5	1100	<1	<0.05
6214	<2	1200	<1	<0.05
6215	<2	740	<1	<0.05
6216	<2	1150	<1	<0.05
6217	<2	520	<1	<0.05
6218	5	740	<1	<0.05
6222	2	1150	<1	<0.05
6223	9	370	<1	<0.05
6226	<2	810	<1	<0.05

Method of Analysis : As Ba : XRF1
Ag : AAS3
Au : AAS5A

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

ANALYTICAL REPORT

JOB COM832910 O/N : 4476/NP01/WDS/230

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Cd
6201	10	55	22	6	20	<4	<1
6202	40	4	80	34	16	<4	<1
6207	18	<4	20	4	4	<4	<1
6209	14	<4	38	16	10	<4	<1
6210	6	16	90	26	8	<4	<1
6211	6	6	140	28	10	<4	<1
6212	8	12	170	32	8	<4	<1
6213	14	8	80	24	8	<4	<1
6214	14	8	130	12	14	<4	<1
6215	2	16	85	6	6	<4	<1
6216	10	38	190	24	18	<4	<1
6217	4	8	110	42	14	<4	<1
6218	10	95	170	24	30	<4	<1
6222	12	10	26	<4	<4	<4	<1
6223	40	12	40	<4	<4	<4	<1
6226	12	<4	4	<4	14	<4	<1

Method of Analysis : AAS1

091

COMLABS Pty. Ltd.

COMPUTERISED ANALYTICAL LABORATORIES

460092
Head Office and
Central Laboratory
305 SOUTH ROAD,
MILE END SOUTH
STH AUST 5031
TEL (08) 43 5722
TELEX AA89323

NATA REGISTERED No. 1526

OUR REF.: COM 830993

YOUR REF.: 4332/NP01/WDS/186

Mr. W. Smyth,
The Shell Co. of Aust Ltd,
Metals Division,
P.O. Box 860,
DEVONPORT TAS 7310,

2.6.83

Dear Bill,

RE: JOB COM 830993

Enclosed are the assays for the samples delivered to our laboratory on the 13th May 1983.

Yours sincerely,
COMLABS PTY LTD

per :

092 C

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

460093

ANALYTICAL REPORT

JOB COM830993 O/N : 4332/NP01/WDS/186

Results in ppm

SAMPLE	Ba	As	Ag	Mo	V	%Fe	Mn
11153	690	75	<1	14	60	21.0	430
11154	1800	12	<1	6	40	4.60	530
11155	140	7	<1	6	30	1.30	28
11156	410	14	<1	6	20	1.20	50
11157	960	<2	<1	4	40	2.50	220
11158	620	5	<1	4	40	18.0	55
11159	2600	2	<1	<4	30	4.70	320

Method of Analysis : Ag Mo V : AAS3
Fe Mn : AAS2/2A
As Ba : XRF1

.../ 2

093

COMLABS Pty. Ltd.
COMPUTERISED ANALYTICAL LABORATORIES

NATA

460094

ANALYTICAL REPORT

JOB COM830993 O/N : 4332/MPO1/WDS/186

Results in ppm

SAMPLE	Cu	Pb	Zn	Ni	Co	Bi	Cd
11153	60	50	48	6	<4	20	<1
11154	90	16	65	10	6	<4	<1
11155	10	24	6	14	<4	<4	<1
11156	22	34	8	10	8	<4	<1
11157	4	8	70	32	6	<4	<1
11158	4	16	<2	<4	<4	<4	<1
11159	10	14	60	<4	<4	<4	<1

Method of Analysis : Cu Pb Zn Ni Co Bi Cd : AAS1


LAKE MACKINTOSH
SOUTHWELL RIVER
BACKWATER
BACKWATER GRID
ROMULUS PUP
Chl. tuffs
BOUNDARY OF E.L. 2/78
MACKINTOSH GRID
FURY RIVER
FURY FLATS GRID
VALE RIVER
CRADLE MOUNTAIN - LAKE ST. CLAIRE NATIONAL PARK
QTZ. CHLORITE VEIN
Haematite Veining & Stockwork
HELIPAD
REYNOLDS FALLS
track
MAYDAY CREEK
VALE RIVER
MT REMUS
Boundary National Park
Py, Mo, V, Co.
MAYDAY MOUNT
LEGEND
Fluvioglacials
SILURIAN
Crotty Quartzite
Gordonlimestone
ORDOVICIAN
Moina Sandstone
Owen Conglomerate
CAMBRIAN
Volcanics - tuffs / lavas - acid
Quartzite
PRECAMBRIAN
TERTIARY
Basalt
DEVONIAN
Granite
CAMBRIAN ?
Quartz - Feldspar - Biotite - Porphyry
Granite
Approx. boundaries of Cambrian
Rock Chip Sample
T.N
M.N
460095
The Shell Company of Australia Limited
METALS DIVISION
E.L. 2/78 GRANITE TOR
GEOLOGY - NORTH
5 cm
SCALE 1:20 000
DATE 31 - 1 - 84
AUTHOR W.D.S.
DRAWN J.L.L.
OFFICE DEVONPORT
REP.No.
ENCL.No.
DRG.No. D/NP01/147

LEGEND
SILURIAN
Crotty Quartzite
Gordon Limestone
ORDOVICIAN
Moina Sandstone
Owen Conglomerate
CAMBRIAN
Volcanics - tuffs / lavas - acid
Quartzite
PRECAMBRIAN
TERTIARY
Basalt
DEVONIAN
Granite
CAMBRIAN ?
Quartz - Feldspar - Biotite - Porphyry
Granite
Approx. boundaries of Cambrian
Rock Chip Sample
Stream Sediment Sample
Rock Chip Sample - Thin Section
MT. FARRELL
LAKE HERBERT
MURCHISON DAM SITE
MURCHISON
RIVER
BOAT RAMP
LAKE
MACKINTOSH
SOPHIA
ALEXANDRA
HILLS
ALEXANDRA HILLS GRID
ALEXANDRA PASS
WHITE HAWK MINE
HELIPAD
LOWER BROUGHAM GRID
MT. SWALLOW
HIGH TOR ?
BROUGHAM GRID
BOUNDARY OF E.L. 2/78
ROMULUS WEST GRID
RAYS PROSPECT
Galena
BACKWATER GRID
MT. ROMULUS
ROMULUS EAST GRID
ROMULUS PUP
FURY VALLEY GRID
FURY
RIVER
CRADLE MOUNTAIN - LAKE ST CLAIRE NATIONAL PARK
Limestone
Qtz'ite
Congl., Py., Chalco.
Limestone ?
Ag, Pb, Au.
T.N.
M.N.
The Shell Company of Australia Limited
METALS DIVISION
E.L. 2/78 GRANITE TOR
GEOLOGY - SOUTH
466096
5 cm
SCALE 1:20 000
DATE 31-1-84
AUTHOR W.D.S.
DRAWN J.L.L.
OFFICE DEVONPORT
REP. No.
ENCL. No.
DRG. No. D/NP01/148

520 W | 340 W | 160 W | 0 E | 100 E | 200 E

400 N

60 N

00 N

HELIPAD

QTZ - FELD - BIOTITE PORPHYRY

ALTERED TUFFS

QUARTZITE – SEDIMENTS / VOLCANICS ?
PYRITIC ± SERICITE ± CHLORITE

METAQUARTZITE

ALKALI GRANITE

PORPHYRITIC FELSITE

Waterfall

Waterfall

G.N.

T.N. M.N.

460097

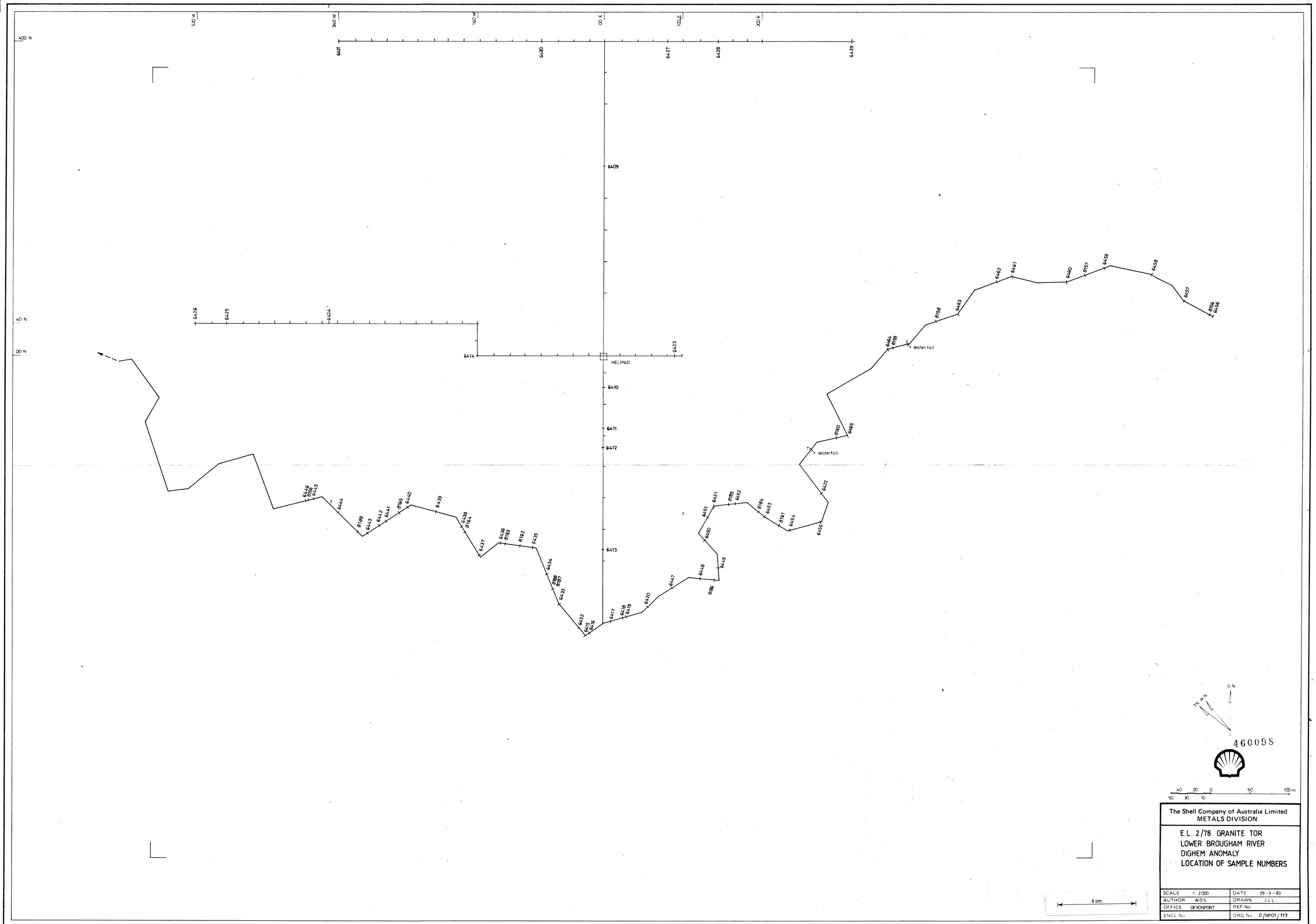
40 20 0 50 100 m
50 30 10

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
LOWER BROUGHAM RIVER
DIGHEM ANOMALY
GEOLOGY

5 cm

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



GN

TN M N

460098

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
LOCATION OF SAMPLE NUMBERS

SCALE 1:2000	DATE 29-3-83
AUTHOR W.D.S	DRAWN J.L.L
OFFICE DEVONPORT	REP. No.
ENCL No.	DRG. No. D/NP01/113

520 W | 340 W | 160 W | 00 E | 100 E | 200 E

400 N

40 N

00 N

34, 50, 26

6, 10, 2

HELIPAD

14, 30, 3

8, 25, 4

8, 25, 2

18, 50, 3

4, <10, -
8, 30, -
4, <10, -
10, <10, -
4, 20, -
55, 10, -
12, 25, -

20, 20, 2
18, 55, <2
<1, <10, 5
12, 25, 8
18, 35, 5
30, 35, <2

160, 45, <2

12, 25, 8

Waterfall

16, 15, -

16, 20, -

Waterfall

10, 15, -

6, <10, -
6, <10, -
6, 20, -
20, 20, -
4, <10, -
4, 10, -
24, 10, -

Sn, W, As
Analysis in p.p.m.

GN

TN, M.N.

460099

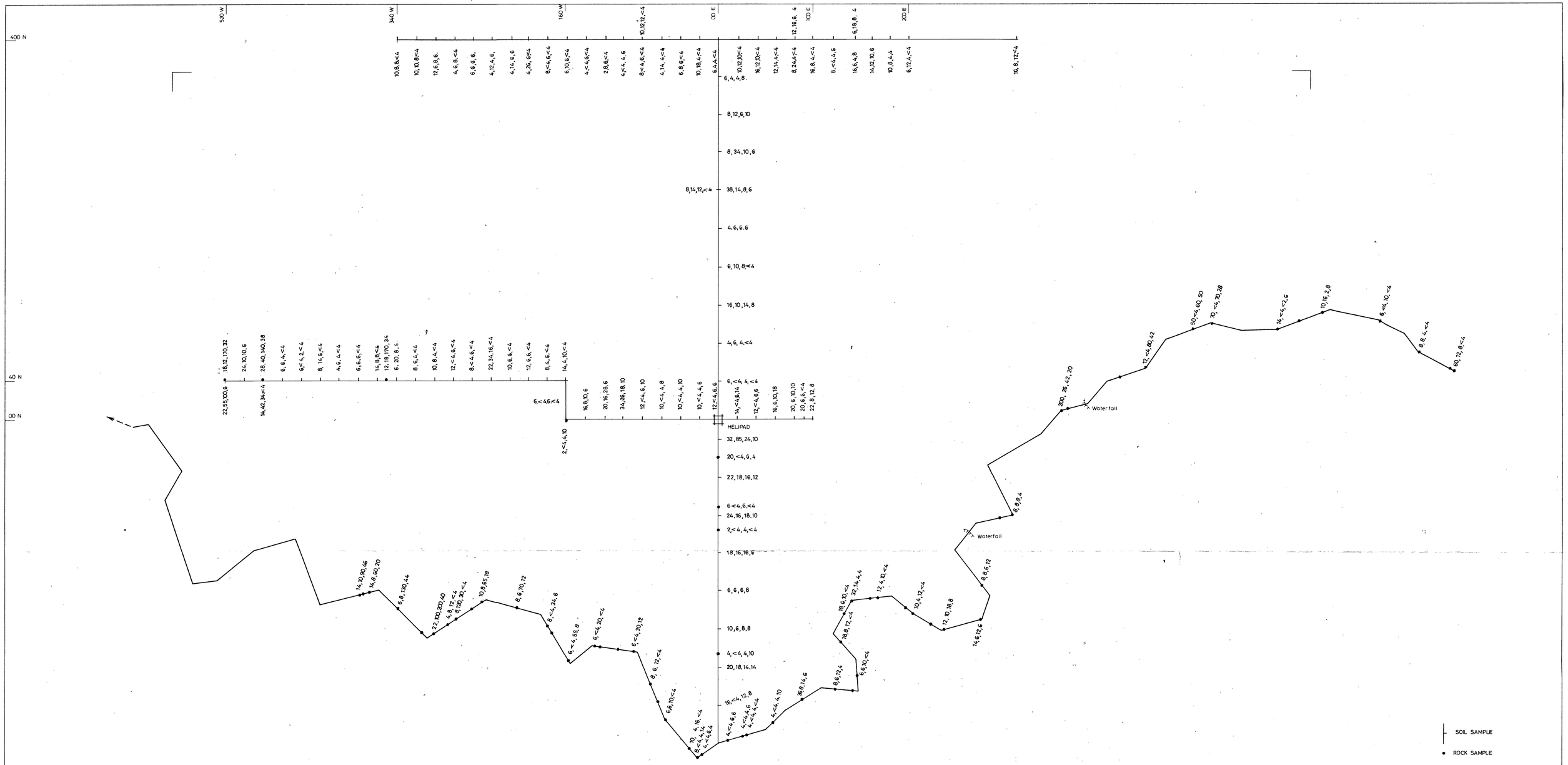
40 20 0 50 100 m
50 30 10

5 cm

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
LOWER BROUGHAM RIVER
DIGHEM ANOMALY
ROCK CHIP ANALYSIS

SCALE 1:2000	DATE 28-9-83
AUTHOR W.D.S.	DRAWN J.L.L.
OFFICE DEVONPORT	REP.No.
ENCL No.	DRG No. D/NP01/120



The Shell Company of Australia Limited
METALS DIVISION

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

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

394 000 E
395 000 E
396 000 E
397 000 E
398 000 E
399 000 E
400 000 E
410 000 E
420 000 E
430 000 E
440 000 E

LAKE MACKINTOSH

BACKWATER CRK

BACKWATER GRID

SOUTHWELL RIVER

111 68/69
111 64/65
111 72/73
111 66/67
111 74/75
111 70/71
111 62/63
111 60/61
111 76/77
111 80/81
111 78/79

BOUNDARY OF E.L. 2/78

MACKINTOSH GRID

111 88/89
111 86/87
111 90/91
111 92/93
111 82/83
111 84/85
111 94/95
9520
9521
111 96/97
111 98/99
9522
111 200/201
9523
FURY
9524
11202/03
9525
9526
9527
RIVER

FURY FLATS GRID

8101
VALE
8102
8080
8103
8104
RIVER
8105
8106
8107
8119
8120
8121
8122
8130
8123
8124
8125
8126
8127
8128
8129
MAYDAY
CREEK

111 17/18
6303/04
6305/06
111 11/12
111 01/2
6307/08
CRADLE MOUNTAIN - LAKE ST CLAIRE NATIONAL PARK
111 13/14
111 15/16
6313/14
6311/12
6301/02
6315/16
111 29/30
111 27/28
111 37/38
111 33/34
6309/10
111 35/36
111 31/32
6317/18
111 25/26
111 03/4
CREEK
111 05/6
111 07/8
111 09/10
111 41/42
111 39/40
6327/28
111 47/48
111 43/44
111 19/20
111 45/46
6325/26
111 21/22
111 23/24
6323/24
111 51/52
111 49/50
6321/22
6319/20
Boundary of National Park
MT REMUS

MAYDAY MOUNT

VALE
RIVER

T N
M N

460101

500 300 100 0 500 1000m
400 200

5 cm

396 000 N
397 000 N
398 000 N
399 000 N
390 000 N
391 000 N
392 000 N
393 000 N
394 000 N
395 000 N
396 000 N
397 000 N
398 000 N
399 000 N

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
STREAM SEDIMENT SURVEY
LOCATION OF SAMPLE Nos.
(NORTH)

SCALE 1:20 000	DATE 31-1-84
AUTHOR W D S	DRAWN J L L
OFFICE DEVONPORT	REP. No.
ENCL No.	DRG No D/NP01/104

MURCHISON DAM SITE
MURCHISON
RIVER
LAKE HERBERT
MT FARRELL
BOAT RAMP
LAKE
MACKINTOSH
SOPHIA
ALEXANDRA
HILLS
ALEXANDRA HILLS GRID
ALEXANDRA PASS
WHITE HAWK CK
MT SWALLOW
HIGH TOR
BROUGHAM GRID
BOUNDARY OF E.L. 2/78
ROMULUS WEST GRID
RAYS PROSPECT
MT ROMULUS
BACKWATER GRID
ROMULUS EAST GRID
ROMULUS PUP
FURY VALLEY GRID
FURY
RIVER
Boundary
National
Park
CRADLE MOUNTAIN - LAKE ST CLAIRE
NATIONAL PARK
T.N
M.N
5 cm
500 300 100 0 500 1000 m
400 200
The Shell Company of Australia Limited
METALS DIVISION
E.L. 2/78 GRANITE TOR
STREAM SEDIMENT SURVEY
LOCATION OF SAMPLE Nos.
SOUTH
460102
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

LAKE MACKINTOSH

BACKWATER CRK

BACKWATER GRID

SOUTHWELL RIVER

BOUNDARY OF E.L. 2/78

MACKINTOSH GRID

FURY RIVER

FURY FLATS GRID

VALE RIVER

CRADLE MOUNTAIN – LAKE ST CLAIRE NATIONAL PARK

ANVIL CREEK

Boundary of National Park

MT REMUS

MAYDAY CREEK

MAYDAY MOUNT

394 000 E
395 000 E
396 000 E
397 000 E
398 000 E
399 000 E
400 000 E
410 000 E
420 000 E
430 000 E
440 000 E

396 000 N
397 000 N
398 000 N
389 000 N
390 000 N
391 000 N
392 000 N
393 000 N
394 000 N
395 000 N
396 000 N
397 000 N
398 000 N
399 000 N

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

T N
M N

5 cm

500 300 100 0 500 1000m
400 200

460103

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
STREAM SEDIMENT SURVEY
GEOCHEMISTRY –80# MESH
Pb, Zn, Cu, Ni.
(NORTH)

SCALE 1:20 000	DATE 31-1-84
AUTHOR W.D.S.	DRAWN J.L.L.
OFFICE DEVONPORT	REP. No.
ENCL No.	DRG No. D/NP01/106

387000 E
388000 E
389000 E
390000 E
391000 E
392000 E
393000 E
394000 E
395000 E
396000 E
397000 E

5374000 N
5375000 N
5376000 N
5377000 N
5378000 N
5379000 N
5380000 N
5381000 N
5382000 N
5383000 N
5384000 N
5385000 N
5386000 N
5387000 N

MURCHISON DAM SITE
MURCHISON RIVER
LAKE HERBERT
MT FARRELL
BOAT RAMP
LAKE MACKINTOSH
SOPHIA
ALEXANDRA HILLS
ALEXANDRA HILLS GRID
ALEXANDRA PASS
MT SWALLOW
HIGH TOR
BROUGHAM GRID
BOUNDARY OF E.L. 2/78
ROMULUS WEST GRID
RAYS PROSPECT
MT ROMULUS
BACKWATER GRID
ROMULUS EAST GRID
ROMULUS PUP
FURY VALLEY GRID
FURY RIVER
CRADLE MOUNTAIN - LAKE ST CLAIRE NATIONAL PARK

6,20,6,-
<4,12,8,<4
4,<2,8,<4
24,20,8,-
<4,32,6,20
6,<2,8,<4
8,8,30,<4
6,<2,6,<4
<4,<2,8,<4
12<2,8,<4
4,<2,6,<4
4,<2,6,<4
-,6,10,-
-16,20,-,8
-,2,4,-
-,70,8,6
-6,6,-,-5,2,-
-6,6,-
-10,2,-,-
-8,8,-,-
-6,4,-,-4,2,-
-5,2,-
-,2,2,-
4,8,6,-
-10,6,-
-4,4,-
6,6,4,-
-,-,6,-
-,4,6,-
-8,4,-
-,14,4,-
4,8,10,-
55,95,18,46,
<4,4,12,20,
<4,12 8,22
8,12,12,28
6,28,14,38
4,4 2,12,4 6 8
16,28,8,16
10,65,16,70,
16,26,6,12
10,18,8,14,2
12,18,8,16
60,70,20,70
18,30,14,42
12,30,12,28
10,75,22,70
6,20,6,14
6,50,16,50
18,22,8,20
12,130,28,135
16,30,12,30
10,26,10,32
8,18,10,24
10,14,6,18
4,14,8,<4
8,22,8,2
8,14,6,4
8,22,10,20
16,26,12,6
8,12,6,4
14,30,12,28
10,24,10,24
12,10,8,8
10,10,12,8
16,12,8,4
12,8,6,<4
12,8,8,8
18,14,9,4
14,24,10,22
8,20,8,18
12,60,10,28
8,36,8,20
16,38,10,10
28,<2,12,20
8,32,10,18
12,34,8,10
20,32,12,4
18,16,12,<4
100,300,36,16
90,28,,14,8
7,20,12,28
20,300,26,26
<4,20,22,6
220,450,32,24
75,60,24,4,4
70,50,12,<4
20,24,12,4
12,16,18,4
16,16,10,8
<4,36,12,8
16,48,12,8
170,300,30,26
80,60,32,8
28,26,18,6
12,42,18,8
6,12,10,6
8,32,16,8
60,100,24,10
16,44,24,10
20,38,20,8
24,18,22,12
16,20,16,12
8,16,6,12
10,14,6,8
12,24,10,12
6,14,16,6
N.A.
<4,32,4,<4
4,12,6,<4
12,24,8,6
14,16,14,16
20,14,22,12
4,4,4,8
8,16,10,8
10,22,8,8

T.N
M.N
5 cm
—, = < 4 ppm Pb, Ni.
500 300 100 0 500 1000 m
400 200

460104

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR STREAM SEDIMENT SURVEY GEOCHEMISTRY

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

(SOUTH)

SCALE 1:20000	DATE 1-7-84
AUTHOR W.D.S.	DRAWN J.L.L.
OFFICE DEVONPORT	REP. No.
ENCL. No.	DRG. No. D/NP01/105

LAKE MACKINTOSH

BACKWATER CRK

BACKWATER GRID

SOUTHWELL RIVER

330,4·0,<0·05 60,10,<0·05 440, 20,<0·05

16,25 ,0·20 75,45,<0·05 280 30 <0·05

65,20 ,< 0·05 270,15,<0·05 155,30,<0·05 310 ,70,<0·05

650, 25, 2·80

520,15 ,< 0·05 4350, 30,<0·05

1150,35 ,< 0·05 125, <10,<0·05

1700,100,< 0·05 360,35,<0·05 8 ,30, <0·05

4, <10, < 0·05

8 ,15,< 0·05

6,<10,<0·05

6 ,10 ,<0·05

MACKINTOSH GRID

FURY RIVER

FURY FLATS GRID

VALE RIVER

CRADLE MOUNTAIN – LAKE ST CLAIRE NATIONAL PARK

8,< 10, —

8 ,30,<0·05

4, 45, <0·05

28, 70, —

55, 20, 0·35

750, 75, 1·05

12,15, —

4, 25, —

50,135 ,< 0·05 12,110,<0·05

CREEK

55,720,0·15 32 ,40 ,0·45

24, 220, — 155, 280, 1·20

ANIO

8, 15, —

8, <10, —

4,90, — 4,95, — <4,145,<0·05

12,220, — 4,185, — 38,55,<0·05

4, 20, —

< 4,10, — 60,15, —

< 4,20, —

34, 40,<0·05

< 4, 50, —

8,80, —

4,30, —

< 4,25, — 10,140,<0·05

8,20, —

6,10, —

4,25 ,< 0·05 6,10,

4, <10, —

< 4,30,<0·05

6,25,1·05

MAYDAY CREEK

Boundary of National Park

MT REMUS

VALE RIVER

Boundary of E.L. 2/78

MAYDAY MOUNT

5 cm

Sn, W , Au

Analyses in p.p.m.

T N

M N

460105

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.) (NORTH)	
SCALE 1: 20 000	DATE 31 - 1 - 84
AUTHOR W.D.S.	DRAWN J.L.L.
OFFICE DEVONPORT	REP. No.
ENCL No.	DRG No D/NP01/141

394 000 E

395 000 E

396 000 E

397 000 E

398 000 E

399 000 E

400 000 E

410 000 E

420 000 E

430 000 E

440 000 E

386 000 N

387 000 N

388 000 N

389 000 N

390 000 N

391 000 N

392 000 N

393 000 N

394 000 N

395 000 N

396 000 N

397 000 N

398 000 N

399 000 N

387 000 E
388 000 E
389 000 E
390 000 E
391 000 E
392 000 E
393 000 E
394 000 E
395 000 E
396 000 E
397 000 E

5374 000 N
5375 000 N
5376 000 N
5377 000 N
5378 000 N
5379 000 N
5380 000 N
5381 000 N
5382 000 N
5383 000 N
5384 000 N
5385 000 N
5386 000 N
5387 000 N

MURCHISON DAM SITE
MURCHISON RIVER
LAKE HERBERT
MT FARRELL
BOAT RAMP
LAKE MACKINTOSH
SOPHIA
ALEXANDRA HILLS
ALEXANDRA HILLS GRID
ALEXANDRA PASS
HIGH TOR
MT SWALLOW
BROUGHAM GRID
BOUNDARY OF E.L. 2/78
ROMULUS WEST GRID
RAYS PROSPECT
MT ROMULUS
BACKWATER GRID
ROMULUS EAST GRID
ROMULUS PUP
FURY VALLEY GRID
FURY RIVER
Boundary of National Park
CRADLE MOUNTAIN - LAKE ST CLAIRE NATIONAL PARK

14, 35, <0·05
4, 30, <0·05
46, 40, <0·05
34, 20, <0·05
160, 40, <0·05
80, 15, <0·05
530, 55 <0·05
44, 25, <0·05
60, 25, 0·10
22, 25, <0·05
390, 60, 0·20
1350, 75, 0·35
26, 20, <0·05
46, 20, <0·05
50, 30 <0·05
270, 40, <0·05
50, 10, <0·05
175, 40, <0·05
60, 25, <0·05
44, 20, 0·60
60, 25, <0·05
145, 20, <0·05
65, 15, <0·05
160, 25, <0·05
75, 15,
100, 45,
12, <10,
32, 15,
8, 10,
44, <10,
12, 15,
65, 40,
2500, 65,
340, 70,
55, 15,
75, 30,
135, 15,
22, <10,
255, 515,
1000, 25,
2300, 90,
310, 25,
470, 70,
3600, 65,
510, 25,
2800, 70,
2500, 95,
2100, 35,

T.N
M.N
5 cm
Sn, W, Au,
Analyses as p.p.m.
500 300 100 0 500 1000 m
400 200

The Shell Company of Australia Limited METALS DIVISION	
E.L. 2/78 GRANITE TOR Sn, W, Au PANNED CONCENTRATES (SOUTH)	
460106	
SCALE 1:20 000	DATE 21 - 12 - 83
AUTHOR W.D.S	DRAWN J.L.L
OFFICE DEVONPORT	REP. No.
ENCL No.	DRG. No. D/NP01/149

394000 E

395000 E

396000 E

397000 E

398000 E

399000 E

400000 E

410000 E

420000 E

430000 E

440000 E

LAKE MACKINTOSH

BACKWATER CRK

BACKWATER GRID

SOUTHWELL RIVER

BOUNDARY OF E.L. 2/78

MACKINTOSH GRID

FURY RIVER

FURY FLATS GRID

VALE RIVER

CRADLE MOUNTAIN - LAKE ST CLAIRE NATIONAL PARK

CREEK

MT REMUS

Boundary of National Park

MAYDAY CREEK

VALE RIVER

MAYDAY MOUNT

46,40,18,18
44,60,12,14
14,14,38,55
32,48,12,12
16,10,10,6
50,38,16,20
6,10,6,<4
16,24,10,12
26,26,16,12
4,12,10,12
6,16,6,6
6,8,12,10
6,6,14,6
10,12,6,8
18,65,14,20
16,30,16,10
8,24,14,10
28,130,28,60
16,90,24,40
8,80,16,<26
10,80,20,30
14,44,14,16
12,30,14,16
24,46,18,22
20,30,12,10
18,28,12,12
8,16,6,10
14,42,30,26
20,42,6,12
8,22,12,12
38,44,12,12
12,16,12,14
50,44,14,18
14,30,10,16
30,34,10,10
65,65,32,20
18,28,10,14
28,26,8,10
40,36,10,14
10,44,6,6
20,32,8,10
42,42,16,14
8,24,8,10
18,55,10,20
8,32,8,14
6,42,10,14
12,34,12,14
14,34,12,14
16,38,14,14
14,30,8,14
10,34,8,10
26,65,20,28
12 30 14 10
12,48,10,16
20,60,24,16
12,55,12,18
10,34,12,16
38,110,24,24
32,80,16,14
16,100,26,16
38,170,20,32
24,110,26,28

5 cm

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

T.N.
M.N.

460107

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 Pb, Zn, Cu, Ni, (Panned Conc.) (NORTH)	
SCALE 1:20000	DATE 31-1-84
AUTHOR W.D.S.	DRAWN J.L.L.
OFFICE DEVONPORT	REP.No.
ENCL No.	DRG.No. D/NP01/142

386000 N

387000 N

388000 N

389000 N

390000 N

391000 N

392000 N

393000 N

394000 N

395000 N

396000 N

397000 N

398000 N

399000 N

394000 E

395000 E

396000 E

397000 E

398000 E

399000 E

400000 E

410000 E

420000 E

430000 E

440000 E

LAKE MACKINTOSH

BACKWATER CREEK

BACKWATER GRID

SOUTHWELL RIVER

MACKINTOSH GRID

FURY RIVER

FURY FLATS GRID

VALE RIVER

CRADLE MOUNTAIN – LAKE ST. CLAIRE NATIONAL PARK

330, 10, 30

390, 8, 60

410, 36, 80

230, 10, 30

490, 6, 60

460, 44, 120

390, 8, 30

470, 8, 30

690, 8, 40

570, 8, 40

650, 10, 50

580, 8, 60

600, 26, 80

730, 10, 30

700, 8, 40

690, 60, 140

570, 12, 50

410, 6, 20

630, 6, 40

580, 8, 30

700, 6, 30

600, 8, 60

580, 8, 40

520, 10, 40

510, 12, 60

ANO CREEK

Boundary of National Park

MT REMUS

MAYDAY CREEK

VALE RIVER

Boundary of E.L. 2/78

MAYDAY MOUNT

5 cm

386000 N

387000 N

388000 N

389000 N

390000 N

391000 N

392000 N

393000 N

394000 N

395000 N

396000 N

397000 N

398000 N

399000 N

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

T.N.

M.N.

460108

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
(NORTH)

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

394000 E

395000 E

396000 E

397000 E

398000 E

399000 E

400000 E

410000 E

420000 E

430000 E

440000 E

386000 N

387000 N

388000 N

389000 N

390000 N

391000 N

392000 N

393000 N

394000 N

395000 N

396000 N

397000 N

398000 N

399000 N

LAKE MACKINTOSH

BACKWATER Crk

BACKWATER GRID

SOUTHWELL RIVER

BOUNDARY OF E.L. 2/78

MACKINTOSH GRID

FURY RIVER

FURY FLATS GRID

VALE RIVER

80,28,24,–,

CRADLE MOUNTAIN – LAKE ST. CLAIRE NATIONAL PARK

CRADLE CREEK

ANIO

50,48,60,75

34,8,22,14

8,18,4,–,

8,70,4,<2

78,10,6,–,

16x2,4,5

14,60,10,2

24,6,10,7

16,65,90,12

Boundary of National Park

MT. REMUS

320,10,90,–,

MAYDAY CREEK

VALE RIVER

MAYDAY MOUNT

5 cm

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

T.N.
M.N.

460109

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
ROCK CHIP SAMPLES
Pb, Zn, Cu, As
(NORTH)

SCALE	1:20000	DATE	31-1-84
AUTHOR	W.D.S.	DRAWN	J.L.L.
OFFICE	DEVONPORT	REP. No.	
ENCL No		DRG No	D/NP01/143

387 000 E
388 000 E
389 000 E
390 000 E
391 000 E
392 000 E
393 000 E
394 000 E
395 000 E
396 000 E
397 000 E

5374 000 N
5375 000 N
5376 000 N
5377 000 N
5378 000 N
5379 000 N
5380 000 N
5381 000 N
5382 000 N
5383 000 N
5384 000 N
5385 000 N
5386 000 N
5387 000 N

MURCHISON DAM SITE
MURCHISON RIVER
LAKE HERBERT
MT. FARRELL
BOAT RAMP
LAKE MACKINTOSH
95,170,10,5
98,190,10,<2
16,85,2,<2
8,110,4,<2
8,130,14,<2
8,80,14,5
SOPHIA
ALEXANDRA HILLS
12,170,8,<2
6,130,6,<2
18,90,6,<2
<4,38,14,<2
ALEXANDRA HILLS GRID
ALEXANDRA PASS
55,22,10,<2
<4,20,18,3
4,80,40,<2
10,26,12,2
12,40,40,9
<4,4,12,<2
MT. SWALLOW
HIGH TOR
BROUGHAM GRID
BOUNDARY OF E.L. 2/78
ROMULUS WEST GRID
RAYS PROSPECT
MT. ROMULUS
BACKWATER GRID
ROMULUS EAST GRID
ROMULUS PUP
FURY VALLEY GRID
FURY RIVER
Boundary of National Park
CRADLE MOUNTAIN - LAKE ST. CLAIRE NATIONAL PARK

T.N.
M.N.

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

5 cm

500 300 100 0 500 1000 m
400 200

460110

The Shell Company of Australia Limited
METALS DIVISION

E.L. 2/78 GRANITE TOR
STREAM SEDIMENT SURVEY
GEOCHEMISTRY
ROCK CHIP SAMPLES
Pb, Zn, Cu, As.
(SOUTH)

SCALE 1:20 000	DATE 1-2-84
AUTHOR W.D.S.	DRAWN J.L.L.
OFFICE DEVONPORT	REP No.
ENCL No	DRG No D/NP01/150