MRPA_09

Mineral resource potential assessments of selected areas of north-eastern Tasmania

JANUARY 1991

TASMANIA DEPARTMENT OF MINES

OS-K 6930

MINERAL RESOURCE POTENTIAL ASSESSMENTS OF SELECTED AREAS OF NORTHEASTERN TASMANIA

DEPARTMENT OF RESOURCES AND ENERGY

DIVISION OF MINES AND MINERAL RESOURCES

JANUARY 1991

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INTRODUCTION

Two areas in northeastern Tasmania, the Blue Tier area and the Rattler Range - Mt. Victoria - Mt. Maurice area, have undergone preliminary assesssments for mineral resources at the request of the Mining Forum (Figure 1).

Details of methodology and definitions of mineral resource potential are to be found in the first volume of this series (*Mineral Resource potential assessments of selected areas in Central to Southern Tasmania*) and in Appendix 1.

These results are preliminary compilations of the more important geological studies in the areas, and assessments of the adequacy of these geoscientific databases. This work does not purport to be complete, and does not include any reinterpretation or synthesis of the data

SUMMARY

These areas are considered to have a very high potential for economic deposits of tin, tungsten, gold and building stone (granite), as all of these commodities have been mined within in close to the areas. There is also a low to moderate potential for rare earth minerals, uranium, molybdenum, copper, clays, gemstones, beryllium, lithium, feldspars and topaz, and an unknown potential for many other commodities, including base metals, oil shale, coal and zeolites.

The Blue Tier area has been adequately mapped and moderately well explored for tin, but there is still significant potential for many of the above commodities.

The Rattler Range - Mt. Victoria - Mt. Maurice area requires much better geological, geochemical and geophysical surveys over most of the area, as the present databases are inadequate for the determination of mineral potential.

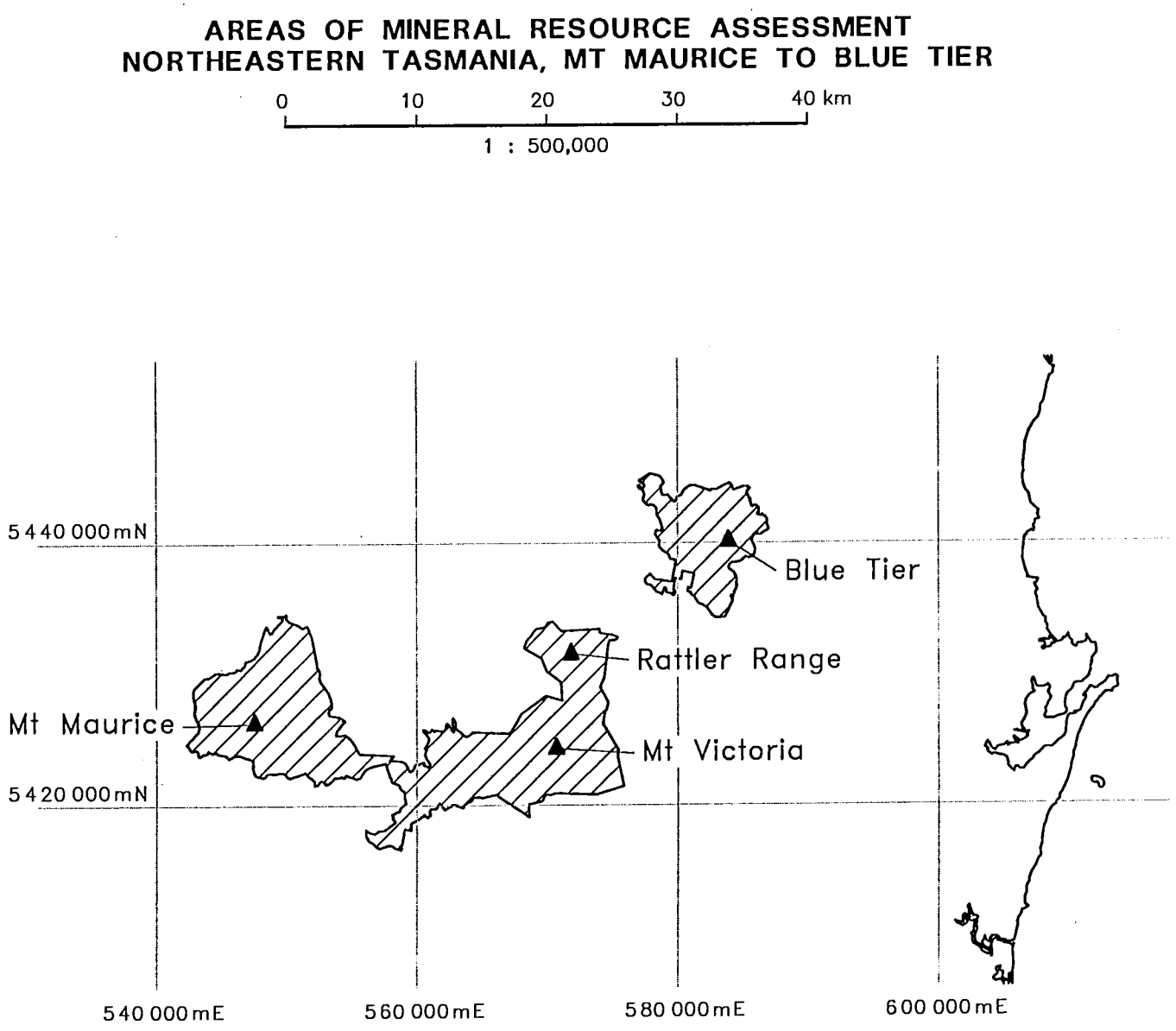
AREAS OF MINERAL RESOURCE ASSESSMENT
NORTHEASTERN TASMANIA, MT MAURICE TO BLUE TIER
0
10
20
30
40 km
1 : 500,000
5440 000mN
5420 000mN
Blue Tier
Rattler Range
Mt Maurice
Mt Victoria
540 000mE
560 000mE
580 000mE
600 000mE

FIGURE 1.

Area 1. Blue Tier

DATA

a) Geological Maps

Brown, A. V. et al., 1977. Tasmanian Geological Atlas 1: 50,000 Series. Sheet 32 (8415N). Ringarooma. *Tas. Dept. Mines.*

Groves, D.I.; Cocker, J.D.; Jennings, D.J., 1977. The Blue Tier Batholith. *Tas. Dept. Mines Geol Survey Bull.* 55

McClenaghan, M. P.; Williams, P. R., 1983. Tasmanian Geological Atlas 1: 50,000 Series. Sheet 33 (8515N). Blue Tier. *Tas. Dept. Mines.*

(b) Geological Summary (Figs. 2 and 3)

This area is covered almost entirely by alkali granites and adamellites of the Blue Tier Batholith, of probable upper Devonian to lower Carboniferous age. They are partly greisenised in the upper levels, with greisen sheets and veins. Overlying the granitoids, in a small area around Mt. Littlechild in the Southwest of the area, are Tertiary basalts and, in a very small outcrop near Mt. Littlechild, sediments of the Parmeener Supergroup (Permo-Triassic).

(c) Geophysical Coverage (Fig. 4)

Gravity station coverage is in the regional category, with stations spaced at approximately 1 station per 8-9 sq. km[1]. Aeromagnetic data was derived from flights at a spacing of about 1.5 km, and would also be classed as regional[2]. Airborne radiometric surveys were conducted in the area in about 1969, and followed up by some more detailed ground surveys[3].

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[1]Richardson, R.G., & Leaman, D.E. 1987. TASGRAV-The Tasmanian gravity database. *Unpub. Rep. Dep. Mines Tasm.*1987/02.

[2]Bureau of Mineral Resources Aeromagnetic survey, 1985.

[3]Rattigan, J.H., 1970. Summary, digital Geophysical and Geochemical data sheets at 1:100,000 scale, EL 6/68, N.E. Tas. Unpub. Report for Geophoto Resources Consultants. [TCR 70-700]

REGIONAL GEOLOGY
NORTHEASTERN TASMANIA, MT MAURICE TO BLUE TIER

0 10 20 30 40 km

1 : 500,000

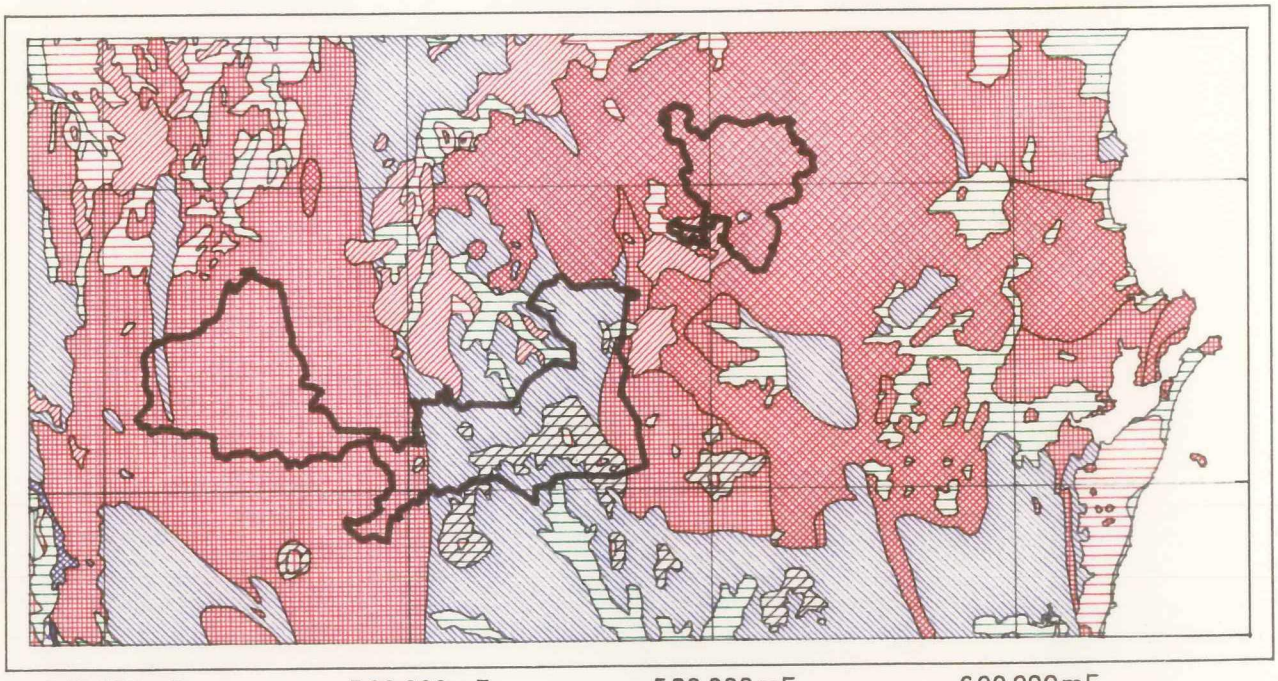
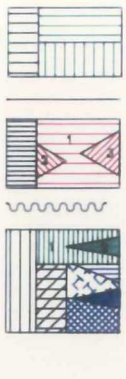


FIGURE 2.

LEGEND - 1:500,000 TASMANIA, GEOLOGY



HOLOCENE
PLEISTOCENE

Alluvium, sand, gravel and talus.

Till, fluvioglacial, periglacial, and associated deposits.

Erosional surface.

TERTIARY

Non-marine sequences (1); marine limestone (2); basalt and related igneous rock types (3).

Low angle unconformity.

TRIASSIC
PERMIAN
UPPER
CARBONIFEROUS

Fluvio-lacustrine sequences of sandstone, siltstone, mudstone (1) with carbonaceous sequences indicated (2). Fresh water sequence with some coal measures. — UPPER PARMEENER SUPER GROUP

Upper glacio-marine sequence of pebbly mudstone, pebbly sandstone and limestone. Fresh water sequence with some coal measures. Lower glacio-marine sequence of pebbly mudstone, pebbly sandstone, minor limestone, Tasmanite oil shale and basal tillite. — LOWER

WESTERN TASMANIA

UPPER-MIDDLE
DEVONIAN

Terrestrial cavern fillings (grid ref. 442 436) — EUGENANA BEDS

Unconformity attributed to the Tabberabberan Orogeny.

LOWER-DEVONIAN
SILURIAN
ORDOVICIAN

Quartzite, sandstone, siltstone, and shale; Devonian limestone-siltstone (1) — ELDON GROUP & CORRELATES; SPERO BAY GROUP

Limestone sequence with siltstone in some areas.

Siliceous conglomerate, shallow water quartzose sandstone & siltstone. — JUNEE GROUP AND CORRELATES

CAMBRIAN

Middle-Upper Cambrian fossiliferous usually greywacke turbidite sequences (1); acid with intermediate volcanic and associated rocks dominant (2), basic-intermediate volcanic and associated rocks dominant (3); probably Cambrian unfossiliferous usually greywacke turbidite sequences (4); probably Cambrian unfossiliferous orthoquartzite sequence (5). — INCLUDING DUNDAS GROUP (fossiliferous); MT READ VOLCANICS AND OTHER FORMATIONS

Usually unconformity attributed to Cambrian movements; occasionally unconformity e.g. parts of western Tasmania

PRECAMBRIAN

Comparatively unmetamormorphosed sequences. Orthoquartzite-mudstone sequences (1); quartzwacke turbidite successions (2); dolomite (3); basalt lava (4).

Metamorphic rocks of dominantly metaquartzite and pelitic sequences, amphibolite indicated (1).

EASTERN TASMANIA

Unconformity attributed to the Tabberabberan Orogeny.

LOWER DEVONIAN
TREMADOCIAN-
CAMBRIAN(?)

Micaceous quartzwacke turbidite sequences dominant (1); mudstone sequences dominant (2). — MATHINNA BEDS

IGNEOUS ROCKS

TERTIARY — *Basalt and related rock types.*

CRETACEOUS
- *Syenite.*
- *Appinite.*

JURASSIC — *Dolerite and related rock types.*

LOWER
CARBONIFEROUS
(?)-DEVONIAN
- *Dominantly adamellite-granite; biotite hypersthene-adamellite porphyry (1).*
- *Dominantly granodiorite.*

CAMBRIAN
- *Granitic rocks.*
- *Coarser grained basic rocks*
- *Serpentinite, peridotite and associated rocks.*
- *Acid with intermediate volcanic and assoc. rocks.*
- *Basic-intermediate volcanic and associated rocks.*

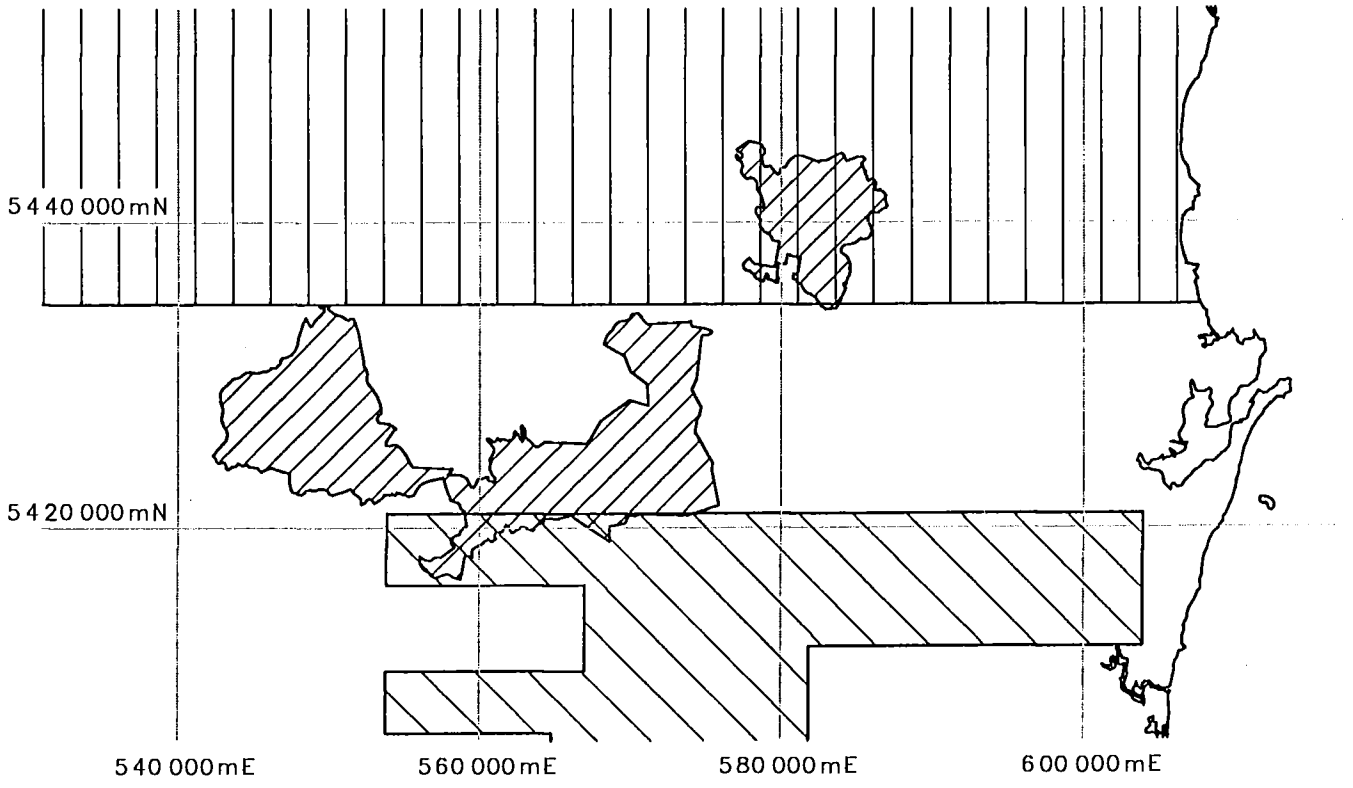
PRECAMBRIAN
- *Granite.*
- *Dolerite.*

Figure 3

GEOPHYSICAL COVERAGE : GRAVITY AND AEROMAGNETICS NORTHEASTERN TASMANIA, MT MAURICE TO BLUE TIER

0 10 20 30 40 km

1 : 500,000



GEOPHYSICAL COVERAGE

Aeromagnetic survey with moderwithe spacing (about 1.5km), Gravity coverage about 1 station / 9 sq.km.

Aeromagnetic survey with wide spacing (about 400m), Gravity coverage about 1 station / 50 sq.km.

Aeromagnetic survey with wide spacing (about 1.5km), Gravity coverage about 1 station / 50 sq.km.

FIGURE 4.

(d) Geochemical Coverage

Geochemical stream sediment surveys (Cu, Pb, Zn, Ag, Bi, Mo) were undertaken on a regional scale by Geophoto Consultants, but records are poor[4]. Amoco also conducted regional stream sediment surveys (Cu, Zn, Mo, Mn, As, Ba, Ag, F, Au, As, W) over the northern part of the area[5]. More detailed surveys (rockchip and soil) have been conducted in and about specific mines and prospects by exploration companies as mentioned below.

(e) Drilling Coverage

The area has been drilled extensively by mining and exploration companies, mostly with relatively shallow (rarely > 200m) percussion and diamond drilling[6,7]. Most of this was in and around the hard rock mines and prospects, but some was in alluvials[8].

(f) Mineralisation

The area is extensively mineralised, with 56 known tin ± tungsten deposits within or in close proximity to the area (Appendix 1; Fig. 5). Most of these deposits were relatively small detrital deposits, derived from weathering of greisen veins, pipes and sheets; some represent veins or alluvial deposits. Amongst the most important of these deposits is the Anchor mine, peripheral to the area but recently operational. Others within the area include the Crystal Hill, Don, Liberator, Moon, Kent, Summit, Australia and Mt. Michael mines.

Other commodities known to occur in significant quantities in the granitoid rocks include uranium (eg. Anchor Mine), thorium and rare earth minerals (monazite), topaz, fluorite, copper (sulphides, eg. Anchor Mine), beryllium (beryl and phenakite), lithium (zinnwaldite), mica and feldspar. No serious attempts to mine any of the above are known, although exploration companies have recognised some of the potential, and assayed for some of these

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[4]Rattigan, J.H., 1970. Summary, digital Geophysical and Geochemical data sheets at 1:100,000 scale, EL 6/68, N.E. Tas. Unpub. Report for Geophoto Resources Consultants. [TCR 70-700]

[5]Suppree, J., 1985. Combined final report and progress report 12 months to July 1985 EL 32/82 Weldborough. Unpub Rep to Amoco Minerals Aust. Co. [85-2378]

[6]Cartwright, A.J., 1985. EL 9/76, Blue Tier area, report on the area relinquished in August 1985. Unpub. Rep. to Heilyer Mining & Exploration Pty. Ltd. [TCR 85-2483]

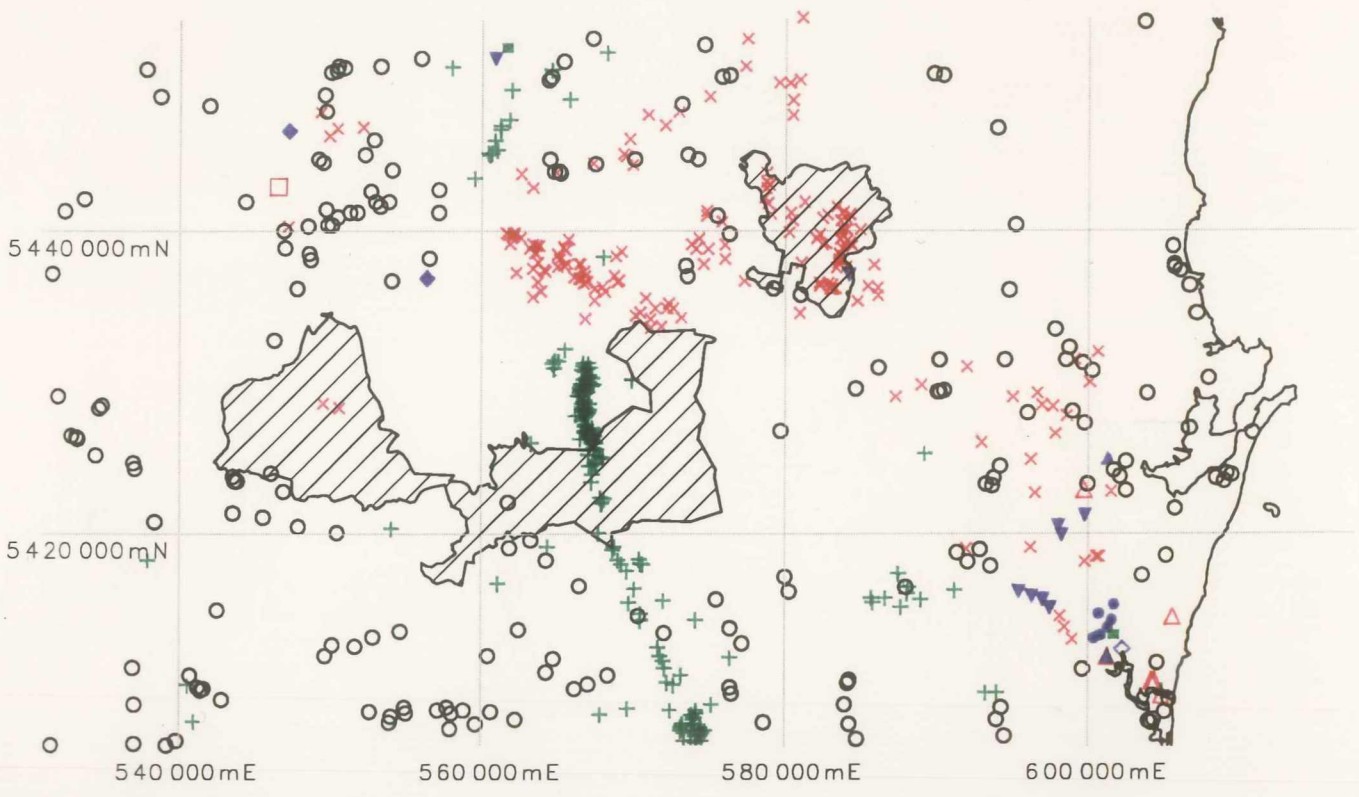
[7]Sise, J.R., 1982. Exploration licence 19/78 Weldborough Final report. Unpub. report for Aberfoyle Exploration Pty. Ltd. [82-1865]

[8]Mortimore, I.R., 1974. Final report on exploration activities within EL 6/68, NE Tasmania. Unpub. Rep. to Geophoto Resources Consultants. [TCR 74-999]

MINES, MINERAL OCCURRENCES AND CONTRUCTION MATERIAL WORKINGS NORTHEASTERN TASMANIA, MT MAURICE TO BLUE TIER

0 10 20 30 40 km

1 : 500,000



METALLIC AND INDUSTRIAL MINERALS AND CONSTRUCTION MATERIALS

- *Major Commodity : Pb*
- *Major Commodity : W*
- *Major Commodity : As*
- *Major Commodity : Au*
- *Major Commodity : Sn*
- *Major Commodity : Construction Material*
- *Major Commodity : Clays*
- *Major Commodity : Zn*
- *Major Commodity : Mo*
- *Major Commodity : Cu*
- *Major Commodity : REE*
- *Major Commodity : Ag*

Sources : Division of Mines and Mineral Resources Database "Mirloch"
Green, G.R., Bottrill, R.S., Bacon, C.A., Turner, N.J., 1988.
Mineral Deposits and Metallogenic Map of Tasmania
Tasmania Department of Mines

FIGURE 5.

minerals[9]. Gemstones (sapphires, topaz, chrysoberyl, quartz varieties and black spinel) are apparently recovered by collectors from Cainozoic alluvium in the area (eg. Wyniford River), but little serious work has been undertaken on these. The sources of these are uncertain.

(g) Previous Mineral Exploration

This area has been the site of extensive mining operations, with large quantities of tin being produced by many small miners between about 1880 and 1950. The Anchor Mine, just outside the area of interest, was reopened recently.

Prior to 1970, the area has been explored by a number of companies, including Mt. Lyell Mining and Railway Co., Electrolytic Zinc Co., Austminex and Aberfoyle Devt. Co., mainly for tin. Apparently none of these efforts resulted in any mineral production. The exploration licences held since 1970 are summarised below:

EL 6/68 (Geophoto Resources Consultants, Texins Devt. Pty. Ltd.)

This lease covered a relatively large area, including most of the Blue Tier area. Surveys conducted included some intensive drilling, detailed and regional scale geological mapping, regional stream sediment geochemistry and airborne radiometric surveys[10]. Detailed geochemical surveys were conducted about the Australia, Summit, Liberator, Moon and Michael mines, and the Frome River area. All of these hardrock (greisen-vein) prospects were deemed too small and/or low grade to be of interest, and it was considered that, while some potential existed, the other mines in the area would be similarly subeconomic. Vein style deposits were found to be of high grade but low tonnage. Small mineable reserves of alluvial tin were located in the Wyniford River area, but evaluation and exploration by drilling was found to be too expensive to justify.

9/76 (Hellyer Mining & Exploration Pty. Ltd.)

This lease was taken up in an attempt to both extend the known reserves of tin mineralisation in and about the Anchor Mine, and to explore for other similar deposits in the area. Following an extensive drilling program, plus soil sampling and mapping, the potential for hidden tin greisens was assessed as low[11]. IP and radiometric surveys appeared ineffective at delineating orebodies.

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[9]Mortimore, I.R., 1974. Final report on exploration activities within EL 6/68, NE Tasmania. Unpub. Rep. to Geophoto Resources Consultants. [TCR 74-999]

[10]Mortimore, I.R., 1974. Final report on exploration activities within EL 6/68, NE Tasmania. Unpub. Rep. to Geophoto Resources Consultants. [TCR 74-999]

[11]Cartwright, A.J., 1985. EL 9/76, Blue Tier area, report on the area relinquished in August 1985. Unpub. Rep. to Hellyer Mining & Exploration Pty. Ltd. [TCR 85-2483]

19/78 (Aberfoyle Exploration Pty. Ltd.)

This company explored for tin around the Cream Creek, Spinks and FB (Nicholls) mine areas. Surveys included rockchip geochemistry, percussion drilling and some geological mapping. The area was leases were relinquished due to the apparent limited potential, low tenor of greisens, and remoteness of the area[12].

32/82 (Amoco Minerals Aust. Co.)

Geochemical sampling (stream sediment) and geological reconnaissance over the northern part of the area failed to locate any significant tin-hosting greisen sheets[13].

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[12]Sise, J.R., 1982. Exploration licence 19/78 Weldborough Final report. Unpub. report for Aberfoyle Exploration Pty. Ltd. [82-1865]

[13]Suppree, J., 1985. Combined final report and progress report 12 months to July 1985 EL 32/82 Weldborough. Unpub Rep to Amoco Minerals Aust. Co. [85-2378]

ASSESSSMENT (Fig. 3)

(a) Quality of data

The area has been mapped, relatively recently, at the satisfactory scale of 1: 50,000.

Gravity station coverage and aeromagnetic data are in the regional category. Airborne radiometric surveys were conducted prior to 1970 but records are poor, flight paths are poorly constrained, and the data may be dated. More detailed and up to date aeromagnetic, radiometric and gravity surveys are necessary prerequisites for a more accurate mineral resource assessment.

Geochemical stream sediment surveys were undertaken on regional scale by Geophoto Consultants, but records are inadequate[14]. Amoco also conducted regional stream sediment surveys over the northern part of the area[15]. More detailed surveys have been conducted about specific mines and prospects by exploration companies as mentioned above. Most of these surveys were restricted in the number of elements assayed for.

The drilling coverage is probably adequate, although not to any great depth.

(b) Preliminary listing of possible resource models

A discussion of confidence levels is given in Appendix 1.

Numbers (e.g. CS 15a) refer to the ore deposit models of Cox & Singer (1986) where applicable.

Metallic Resources

1. Greisen and vein-hosted tin-tungsten ± copper, molybdenum, uranium and bismuth (Anchor style mineralisation) in Devonian granitoid rocks (CS 15a, 15b, 15c).

2. Tin ± Rare earth mineral placers in Quaternary sediments (CS 39e).

3. Molybdenum and/or copper in granitoids (? Porphyry: CS16, 21a, 21b; Mt Stronach or Mt. Maurice Mine style?).

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[14]Rattigan, J.H., 1970. Summary, digital Geophysical and Geochemical data sheets at 1:100,000 scale, EL 6/68, N.E. Tas. Unpub. Report for Geophoto Resources Consultants. [TCR 70-700]

[15]Suppree, J., 1985. Combined final report and progress report 12 months to July 1985 EL 32/82 Weldborough. Unpub Rep to Amoco Minerals Aust. Co. [85-2378]

4. Polymetallic veins in granitoids (CS 22c).

5. Gold in granitoids (Ketza River or Lisle style ?)

6. Rare earth minerals (florencite - crandallite group), of uncertain origin, in clays underlying Tertiary basalt (Legerwood style occurrence)

The confidence level is very high for the greisen and vein-hosted deposits (1, 6), due to the abundant known mineralisation of this type in the area. The placer deposits (2) also have a high potential, but tonnages are likely to be rather low due to the restricted distribution of Cainozoic sediments (e.g. Wyniford River). The prospectivity for (3), (4), (5) and (7) is unknown but probably low as few indications are present, although little specific exploration has been undertaken.

Non-metallic, fuel and other resources

1. Geothermal energy in Devonian granites.

2. Building stone in Devonian granites and Tertiary basalt.

3. Construction materials in granite and basalt.

4. Zeolites in Tertiary basalt or pyroclastics.

5. Brick clay and kaolin in weathered and altered Devonian granites (Tonganah or Cornwall style).

6. Gemstones (sapphires, etc.) in Quaternary alluvium.

7. Uranium in sandstones of the Parmeener Supergroup (CS 30c, analagous with equivalent deposits in South Africa).

8. Uranium and Rare earth minerals (monazite group) in altered Devonian granites and greisens.

9. Industrial Minerals (Beryllium, lithium, feldspar, fluorite, topaz and micas) in altered Devonian granites and granite pegmatites.

Model (1) has apparently not been tested in the area, but should have some potential due to the granites inherent radiactivity. Model (2) has not been tested

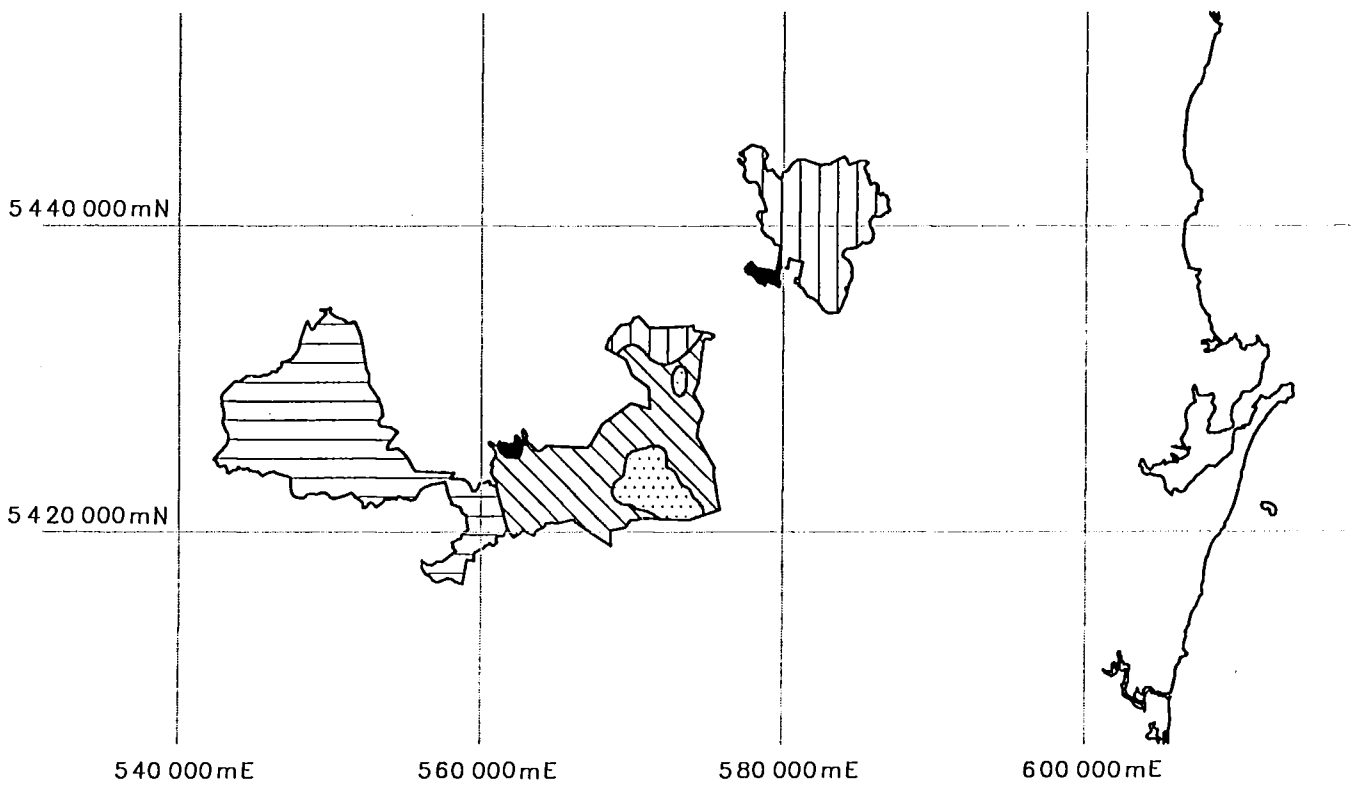
in the area[16], so it has unknown prospectivity.The confidence level is very high for construction materials (3), with several workings in the area. The minerals in (4), (5), (6), (8) and (9) are known to occur in signifcant quantities in the area, so they have a moderate potential, despite little specific exploration. The potential for (7) is low due to the restricted distribution of the Parmeener Supergroup, and poor results from radiometric surveys, although the granites would provide good source rocks.

[16]Sharples, C., 1990. The Building and Ornamental Stone Resources of Tasmania. Tas. Devt. Authority & Tas. Dept. of Mines.

PRELIMINARY MINERAL RESOURCE POTENTIAL MAP NORTHEASTERN TASMANIA, MT MAURICE TO BLUE TIER

0 10 20 30 40 km

1 : 500,000



MINERAL RESOURCE POTENTIAL

High for tin ± tungsten in greisens and associated deposits.

Moderate to locally very high for gold veins, stockworks and placer deposits.

Unknown to moderate for construction materials, coal and oil shale in Permian – Jurassic sequences.

Unknown for zeolites, building stone, gems, REE and clays, in or underlying basalts.

High for building stone, low for tin ± copper ± molybdenum.

FIGURE 6.

Area 2. Rattler Range - Mt. Victoria - Mt. Maurice

DATA

a) Geological Maps

Brown, A. V. et al., 1977. Tasmanian Geological Atlas 1: 50,000 Series. Sheet 32 (8415N). Ringarooma. *Tas. Dept. Mines.*

Groves, D.I.; Cocker, J.D.; Jennings, D.J., 1977. The Blue Tier Batholith. *Tas. Dept. Mines Geol Survey Bull.* 55

Longman, M.J., Matthews, W.L.; & Rowe S.M., 1964. Tasmanian Geological Atlas 1 Mile Series. Sheet 39 (8315S). Launceston. *Tas. Dept. Mines.*

McClenaghan, M. P.; et al., in press. Tasmanian Geological Atlas 1: 50,000 Series. Sheet 40 (8415S). Alberton. *Tas. Dept. Mines.*

(b) Geological Summary (Fig. 1)

The oldest rocks exposed in the area are the Mathinna Beds, quartzwacke turbidite sequences of (?)Ordovician - Devonian age. These are intruded and locally metamorphosed by granitic to dioritic rocks of the Scottsdale and Blue Tier Batholiths, of probable upper Devonian to lower Carboniferous age. These rocks were all overlain by sediments of the Parmeener Supergroup, now largely removed by erosion except in some of the more elevated areas, particularly about Mt. Victoria. Jurassic dolerite has intruded these sequences as sills and dykes, but is relatively uncommon in this area. Tertiary basalt flows may have covered part of the area, but are now rarely preserved. The river valleys are frequently partly filled with Cainozoic alluvium, probably Tertiary in part.

(c) Geophysical Coverage

Gravity station coverage is in the reconnaissance category, with about 1 station per 50 sq. km.[17]. Aeromagnetic data for most of the area was derived from

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[17]Richardson, R.G., & Leaman, D.E. 1987. TASGRAV-The Tasmanian gravity database. *Unpub. Rep. Dep. Mines Tasm.* 1987/02.

flights at a spacing of about 1.5 km, and is assessed as regional[18]. A small southern part of the area was flown at greater detail (about 400m spacing) by the Electrolytic Zinc Co.in 1959, although this is now rather dated data[19]. An Airborne Radiometric survey flown by Geophoto Resources Consultants in about 1969 covered part of the area[20], but the data appears to be poorly constrained and recorded[21].

(d) Geochemical Coverage

Geochemical stream sediment surveys (Cu, Pb, Zn, Ag, Bi, Mo) undertaken on a regional scale by Geophoto Resources Consultants covered the eastern part of the area, but records are poor[22]. Union Corp. also conducted regional stream sediment surveys (Sn, W, Mo, Cu, Pb, Zn) and some rockchip surveys (mostly Sn) over the Rattler Range area[23,24]. Relatively comprehensive stream sediment surveys (Sn, W, Mo, Cu, Pb, Zn, Ni, Bi, Au, Ag, Sb, As) were conducted by CSR in the Mt. Maurice area[25]. More detailed surveys (rockchip and soil), for limited commodities (e.g. gold or tin), have been conducted in and about specific mines and prospects by exploration companies as mentioned below.

(e) Drilling Coverage

The Mt. Paris Tin Field has been drilled (percussion) extensively by mining and exploration companies, but little or none of this was in the area of contention. Some drilling has also been done in the gold mining areas, but again apparently not within die area of contention. The subsurface geology thus is poorly known.

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[18]Bureau of Mineral Resources Aeromagnetic survey, 1985.

[19]Gregory, I.S., 1961. Second Report on the ground checking of the airborne anomalies, Fingal area. Unpub. Rep. to Electrolytic Zinc Co. [TCR59-334]

[20]Rattigan, J.H., 1970. Summary, digital Geophysical and Geochemical data sheets at 1:100,000 scale, EL 6/68, N.E. Tas. Unpub. Report for Geophoto Resources Consultants. [TCR 70-700]

[21]Mortimore, I.R., 1974. Final report on exploration activities within EL 6/68, NE Tasmania. Unpub. Rep. to Geophoto Resources Consultants. [TCR 74-999]

[22]Rattigan, J.H., 1970. Summary, digital Geophysical and Geochemical data sheets at 1:100,000 scale, EL 6/68, N.E. Tas. Unpub. Report for Geophoto Resources Consultants. [TCR 70-700]

[23]Winnall, N.J., 1982. EL11/77 Final Report. Unpub.. Rep. to Union Corp. (Aust. Pty. Ltd.) [82-1711]

[24].Winnall, N.J., 1982. EL 21/80 Final Report. Unpub.. Rep. to Union Corp. (Aust. Pty. Ltd.) [82-1694]

[25]Ellis, P.D., 1984. Relinquishment Report, Nt Maurice EL 43/82 Northeast Tasmania. Unpub. Report for CSR Ltd. [84-2203]

(f) Mineralisation

The area is locally highly mineralised, with at least16 known tin deposits, 185 known gold deposits, and12 miscellaneous deposits within or in close proximity to the area (Appendix 3 and Fig. 5).

The Mount Paris Tin Field is immediately adjacent to the area of contention, particularly the Star of Peace, Mammoth, Rattler, Welcome and Bells Hill workings. It is quite likely that some of these workings were within the area. Most of the tin deposits were relatively small detrital or alluvial deposits, derived from weathering of greisen veins, sheets and pipes, quartz veins and stockworks, formed near the roofs of alkali granites.

There are two goldfields overlapping the area, namely the Alberton - Mt. Vicoria and the Dan Rivulet Fields, plus some other sporadic occurrences. Gold occurs in numerous quartz veins in the Mathinna Beds, usually small and rich, but erratic in size and grade. It also has been recovered from placer deposits in associated Cainozoic alluvials, which have not been well tested. Most of the mining was done in the period 1860-1920, but sporadic prospecting and small scale mining continues to the present day. Some of the more important deposits within the area of contention include the Strickland, Una, Hinemoa, Southern Star, Bright Star, Esk, Mt.Victoria, Caxton, Scotchman, Beckers and Struggle workings, and there are a large number just outside the area.

Granite has been quarried for building and ornamental stone in several parts of the Scottsdale Batholith close to the area of contention, and the Mt. Maurice area is considered highly prospective for such[26].

Copper $\pm$ tin $\pm$ bismuth prospects occur near Mt. Maurice, and appear to be relatively small veins but little detailed exploration has been conducted in the area.

(g) Previous Mineral Exploration

This area covers part of the Alberton - Mt. Victoria - Dan Rivulet Gold Field, which has been the site of numerous small mining operations, with large quantities of gold being produced by many small miners between about 1860 and 1920.

The principal exploration licences held over the area are summarised below:

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[26]Sharples, C., 1990. The Building and Ornamental Stone Resources of Tasmania. Tas. Devt. Authority & Tas. Dept. of Mines.

EL 2/59 Electrolytic Zinc Co. of Aust. Ltd.

This company flew airborne Aeromagnetic surveys over the southrnmost part of the area, but appear to have done little else within the area[27].

EL 6/68 (Geophoto Resources Consultants, Texins Devt. Pty. Ltd.)

This relatively large lease covered some the eastern part of the area, including most of the Mt. Paris area. Surveys conducted included some intensive drilling, detailed and regional scale geological mapping, fracture analysis, regional stream sediment geochemistry and airborne radiometric surveys[28]. Detailed geochemical surveys were conducted over the tin greisens of the Bald Hill - Star of Peace area. These hardrock (greisen-vein) prospects were deemed too small and/or low grade to be of interest, and it was considered that, while some potential existed, the other mines in the area would be similarly subeconomic. Alluvial gold in the Dan Rivulet (pardy in the area?), was not fully tested but grades were low and erratic, and evaluation and exploration by drilling was found to be too expensive to justify.

SPL 107 Geopeko

The Una - Strickland - Hinemoa mine area was evaluated using rock chip assays and found to have little potential for mining[29].

EL 31/76 ACA Howe Aust. Pty. Ltd., Mineral Holdings Aust. Pty. Ltd.

Lodes in the Dan Rivulet area were found, by limited mapping and rockchip geochemistry, to be erratic and with only minor gold concentrations[30].

EL 11/77 Union Corp., Mineral Holdings, Newmont, ICI, CRA, Amax Aust.

Exploration around the Rattler tin prospect in the northeast, using drilling, costeaning, geochemistry (soil, rock chip and stream sediment) and geological mapping, found several large tin-anomalous areas, but with thick overburden and low grades[31,32].

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[27]Hancock, H.S., 1959. Geophysical Report to Electrolytic Zinc Co. of Australasia Ltd. on the Aerogeophysical resultsof the Fingal area, Tasmania. Unpub. Report to Electrolytic Zinc Co. of Australasia Ltd. [59-263]

[28]Mortimore, I.R., 1974. Final report on exploration activities within EL 6/68, NE Tasmania. Unpub. Rep. to Geophoto Resources Consultants. [TCR 74-999]

[29]Danielson, M.J., 1973. Geologcal evaluationof SPL 107, N.E. Tasmania. Unpub. Rep. to Geopeko Ltd. [73-952]

[30]Mitchell, P.R., 1980. Geological appraisal of the Dan Rivulet area (EL31/76), Mathinna, Tasmania. Unpub. Rep. to ACA Howe Aust. Pty. Ltd. [80-1464]

[31]Winnall, N.J., 1982. EL11/77 Final Report. Unpub.. Rep. to Union Corp. (Aust. Pty. Ltd.) [82-1711]

EL 7/80 Amdex Mining Ltd., Kibuka Mines Pty. Ltd.

A preliminary investigaten of some of the mines of the Alberton Gold Field, using rockchip geochemistry[33].

EL 21/80 Union Corp., Mineral Holdings

Regional stream sediment geochemistry, followed up by reconnaissance geological mapping in the Rattler Range and Mt. Maurice areas, identified no significant new anomalies.[34]

23/82 Oceana, Renison Gold Fields

Exploration with geophysics of alluvials in the New and Dorset Rivers suggested some prospectivity for gold and tin[35]. Sampling and assaying was carried out in the old mines. The lease was dropped in favour of mining leases.

43/82 CSR

This licence was explored with a relatively comprehensive stream sediment geochemistry survey, geological mapping and some more detailed rock chip assays in various areas[36].

EL 17/86 Goldfields Exploration Pty. Ltd.

Reconnaissance mapping and rock chip geochemical surveys were undertaken in an attempt to delineate bulk mineable gold ores in the Alberton, Dan Rivulet and other areas[37]. The Dan Rivulet area was considered to have potential.

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[32]Thomas, N.M., Weber, G.B., 1985. Final Report EL 11/77. Unpub. Rep. to Mineral Holdings Aust. Pty. Ltd. [84-2434]

[33]Morrison, K.C., 1981. Report on preliminary investigations by Amdex Mining Ltd., EL 7/80. Unpub. Rep. Amdex Mining Ltd. [81-1535]

[34]Winnall, N.J., 1982. EL 21/80 Final Report. Unpub.. Rep. to Union Corp. (Aust. Pty. Ltd.) [82-1694]

[35]Lewis, R.G., 1988. Annual and Relinquishment Report, 1987-88, EL 23/82, Alberton Goldfields. [88-2809]

[36]Ellis, P.D., 1984. Relinquishment Report on Mt. Maurice, EL 43/82 Northeast Tasmania. [84-2203]

[37]Roberts, P.A., 1987. EL 17/86 Branxholm area annual report for 1986/87. Unpub. Rep. for Goldfields Expl. Pty. Ltd. [87-2735]

ASSESSSMENT (Fig. 3)

(a) Quality of data

A small part of the area (on the Ringarooma sheet) has been mapped, relatively recently, at the satisfactory scale of 1: 50,000. Another small part of the area (on the Launceston sheet) was mapped at 1:63,360, prior to 1964, and this is now outdated information. The bulk of the area is on the Alberton !:50,000 sheet, being mapped at present. The geological knowledge of this are must, therefore, be considered as inadequate until mapping is complete. The geology of the Mathinna Beds is particularly poorly known, due mainly to poor outcrop and lack of marker beds. The structural controls on the gold mineralisation are also poorly understood.

Gravity station coverage is in the reconnaissance category, and aeromagnetic data in the regional category. Some of the Rattler Range area was probably covered by airborne radiometric surveys, but these are poorly recorded and rather dated.

Geochemical surveys are good for the western (Mt. Maurice) and northeastern areas (Rattler Range), but rather poor and erratic in quality for the rest of the area.

Drilling coverage is poor to nonexistent.

(b) Preliminary listing of possible resource models

A discussion of confidence levels is given in Appendix 1.

Numbers (e.g. CS 15a) refer to the ore deposit models of Cox & Singer (1986) where applicable.

Metallic Resources

1. Greisen-hosted and vein style tin-tungsten ± copper, molybdenum and bismuth in Devonian granitoid rocks (CS15a, 15b, 15c; Anchor style, Rossarden and Storys Ck. style mineralisation)).

2. Tin ± gold ± Rare earth mineral placers in Quaternary sediments (CS 39a, 39e).

3. Molybdenum and/or copper in granitoids (? Porphyry style: CS16, 21a, 21b; Mt Stronach or Mt. Maurice Mine style?).

4. Polymetallic veins in granitoids (CS 22c).

5. Gold in granitoids (Ketza River or Lisle style ?)

6. Gold in quartz veins and stockworks in turbiditic sediments (CS 36a).

7. Rare earth minerals (florencite - crandallite group), of uncertain origin, in clays underlying Tertiary basalt (Legerwood style occurrence)

The confidence level is very high for the greisen and vein-hosted deposits (1, 6), due to the abundant known mineralisation of this type in the area. The placer deposits (2) also have a high potential, but tonnages are likely to be rather low due to the restricted distribution of Cainozoic sediments. The potential for (3) may be moderate in the Mt. Maurice area. The prospectivity for (4), (5) and (7) is unknown but probably low as few indications are present, although little specific exploration has been undertaken.

Non-metallic and fuel resources

1. Geothermal energy in Devonian granites.

2. Building stone in Devonian granites and Tertiary basalt.

3. Construction materials in granite and basalt.

4. Zeolites in Tertiary basalt or pyroclastics.

5. Brick clay and kaolin in weathered and altered Devonian granites (Tonganah or Cornwall style).

6. Gemstones (sapphires, etc.) in Quaternary alluvium.

7. Uranium in sandstones of the Parmeener Supergroup (CS 30c, analagous with equivalent deposits in South Africa).

8. Uranium and Rare earth minerals (monazite group) in altered Devonian granites and greisens.

9. Industrial Minerals (Beryllium, lithium, feldspar, fluorite, topaz and micas) in altered Devonian granites and granite pegmatites.

Model (1) has apparently not been tested in the area, but should have some potential due to the granite's inherent radiactivity. Model (2) has very high

prospectivity in the area[38]. The confidence level is very high for construction materials (3), with several workings in the area. The minerals in (4), (5), (6), (8) and (9) are known to occur in signifcant quantities in the area, so they have a moderate potential, despite little specific exploration. The potential for (7) is low due to the restricted distribution of the Parmeener Supergroup, and poor results from radiometric surveys, although the granites would provide good source rocks.

[38]Sharples, C., 1990. The Building and Ornamental Stone Resources of Tasmania. Tas. Devt. Authority & Tas. Dept. of Mines.

Appendix 1.

Mineral Resource Potential definitions

DEFINITIONS

A previous report by the Division entitled "Contrasting Approaches to the Assessment of Mineral Resource Potential" adopted preferred definitions of the various classes - high, moderate, low and unknown. These definitions are restated below. It is necessary to restate that these categories are a product of both the current knowledge of the geology of the area and ore genetic models. As such they are likely to change dramatically with future work and with different commodities required to meet the future needs of humanity.

A HIGH MINERAL RESOURCE POTENTIAL exists where the geological characteristics favourable for resource accumulation are known to be present, or where enough of these features are present to support the relevant genetic model and where there is evidence that mineralisation, not necessarily of economic size or grade, has taken place.

A MODERATE MINERAL RESOURCE POTENTIAL exists where the geological data suggest that the factors favourable for formation of a class of deposit are present or can be reasonably inferred, or where the geological features of the area show a reasonable degree of fit with those of the deposit class considered. There need not be evidence of mineralisation in the area.

A LOW MINERAL RESOURCE POTENTIAL exists where the geological conditions suggest that mineral concentrations are unlikely and that the relevant genetic model cannot be supported. As noted by Taylor and Steven (1983), this requires an element of positive knowledge.

A category of UNKNOWN MINERAL RESOURCE POTENTIAL is used in situations where either the geoscientific data base is inadequate to assess the likelihood of the resource accumulation, or the relevant deposit models are so poorly understood that a reasonable assessment cannot be made. This definition is not to be equated with low mineral resource potential, but takes into account a high degree of uncertainty or incompleteness in the available information.

Appendix 2.

Mines and Mineral Deposits of the Blue Tier area

From the MIRLOCH database

REFNO	MINE/DEPOSIT NAME	MAJOR - COMM - MINOR	mE	mN	ERROR	SHEET	STAT	SIZE	HOSTROX	AGE	FORM	STK
32055	CRYSTAL HILL	SN	583000	5436100	<500	84151	AMX		DGN,	LD	DISS,	-99
		EXPLORATION:PS, , , ,			REFS:TCR63-364,GSB55,38							
32056	LIBERATOR	SN MO,CU	582300	5436300	<500	84151	AMX		DGN,	LD	DISS,	-99
		EXPLORATION:PS, , , ,			REFS:TCR63-364,GSB55,38							
32057	AUSTRALIA	SN W,CU	583400	5437500	<500	84151	AMX		DGN,	LD	VEIN,DISS	-99
		EXPLORATION:PS,GC, , ,			REFS:TCR63-364,GSB55,38							
32058	SOUTHERN CROSS	SN	583650	5438500	<500	84151	AMX	ME	DGN,	LD	RESD,	20
		EXPLORATION:PS,GC, , ,			REFS:TCR63-364,GSB55,38							
32059	MT MARIE	SN	583700	5439350	<500	84151	AMX		DGN,	LD	DISS,	10
		EXPLORATION:PS,GC,DR, ,			REFS:TCR63-364,GSB55,38							
32060	WELLINGTON	SN	582100	5439400	<500	84151	AMX		DGN,	LD	VEIN,	-99
		EXPLORATION:PS,GC, , ,			REFS:TCR63-364,GSB55,38							
32061	SUMMIT	SN	583550	5437800	<500	84151	AMX		DGN,	LD	,	-99
		EXPLORATION:PS, , , ,			REFS:TCR63-364,GSB55,38							
32062	NORTH CAMBRIA	SN	581100	5437800	<500	84151			DGN,	LD	,	-99
		EXPLORATION:PS, , , ,			REFS:TCR63-364,GSB55,38,TDM PLAN1207							
32064	DUCO	SN	582900	5436500	<500	84151	AMX		DGN,	LD	,	-99
		EXPLORATION: , , , ,			REFS:GSB55,38							
32065	PLANET	SN	583600	5438400	<500	84151	AMX		DGN,	LD	VEIN,RESD	-99
		EXPLORATION:PS, , , ,			REFS:3SB55,38							
32066	PERENNIAL	SN	583700	5440600	<500	84151	AMX		DGN,	LD	DISS,	-99
		EXPLORATION:PS, , , ,			REFS:GSB55,38							
32067	MASHER	SN	581300	5441800	<500	84151			DGN,	LD	,	-99
		EXPLORATION: , , , ,			REFS:GSB55,38							
32068	KENT	SN	580400	5441100	<500	84151	AMX		DGN,	LD	DISS,RESD	-99
		EXPLORATION:PS, , , ,			REFS:GSB55,38							
32069	LOTTIE CHINTCCK	SN	580500	5440600	<500	84151	PEX		DGN,	LD	DISS,RESD	-99
		EXPLORATION:PS, , , ,			REFS:GSB55,3S							
32070	DOYLE3	SN	580300	5439800	<500	84151			DGN,	LD	,	-99
		EXPLORATION:PS, , , ,			REFS:GSB55							
32077	DUNLOP	SN	577400	5436600	<500	84151	MAR		JCS,	TT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:GSB55							
32034	EMU FLAT	SN	579100	5441000	<100	84151			JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:GSB55 SHEET32							
32104	FB(NICHCLS)	SN	578900	5441700	<100	84151	PEX		DGN,	LD	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:GSB55,TCR81-1511							
32105	CREAM CREEK(MIDDLE)	SN	578700	5442100	<100	84151	PEX		DGN,	LD	,	-99
		EXPLORATION:PS, , , ,			REFS:GSB55,TCR81-1511							
32106	SPINKS	SN	578800	5443700	<100	84151	PEX		DGN,	LD	,	-99
		EXPLORATION:PS, , , ,			REFS:GSB55,TCR81-1511							
32107	WYNIFORD R/MACMICHAEL CREEK	SN	582600	5440800	<100	84151	PEX		JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:GSB55,38							
32108	WELLINGTON CREEK	SN	582300	5439700	<100	84151	PEX		JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:GSB55,38							
32109	COMPEER	SN	582500	5439000	<100	84151	AMX		JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:GSB55 38,TDM PLAN1207							
32148	LIBERATOR	SN	582300	5436500	<100	84151	AMX		DGN,	LD	DISS,RESD	-99
		EXPLORATION:PS, , , ,			REFS:GSB55,38							
32160	ETHEL	SN	583550	5438050	<500	85151	AMX		DGN,	LD	,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN1207,GSB38							
32161	GRIFFIN DYKE A	SN	582500	5441000	<500	84151	PEX		DGN,	LD	DISS,	-99
		EXPLORATION:PS, , , ,			REFS:GSB38							
32162	GRIFFIN DYKE B	SN	582700	5439100	<500	84151	PEX		DGN,	LD	DISS,	-99
		EXPLORATION:PS, , , ,			REFS:GSB38							
32163	DIREEN'S	SN	583800	5438800	<500	84151	PEX		DGN,	LD	DISS,	-99
		EXPLORATION:PS,GC, , ,			REFS:GSB38							

REFNO	MINE/DEPOSIT NAME	MAJOR - CGMM - MINOR	mE	mN	ERROR	SHEET	STAT	SIZE	HOSTROX	AGE	FORM	STK
32165	GIANT	SN	583700	5439400	<1000	84151	AMX		DGN,	LD	DISS,	-99
		EXPLORATION:PS, , , ,			REFS:GSB38							
32166	FULL MOON EXTD.	SN	583700	5439400	<1000	84151	AMX		DGN,	LD	DISS,	-99
		EXPLORATION:PS, , , ,			REFS:GSB38							
32167	WHEAL TASMAN	SN	583700	5439400	<1000	84151	AMX		DGN,	LD	DISS,	-99
		EXPLORATION:PS, , , ,			REFS:GSB38							
32168	RISING SUN	SN	583700	5439400	<1000	84151	AMX		DGN,	LD	DISS,	-99
		EXPLORATION:PS, , , ,			REFS:GSB38							
32169	?	SN	583350	5436150	<500	84151			DGN,	LD	,	-99
		EXPLORATION:PS, , , ,			REFS:GSB38							
32170	GAUNTS	SN	583200	5436100	<500	84151			DGN,	LD	,	-99
		EXPLORATION:PS, , , ,			REFS:GSB38							
32171	LEASE 10195-M	SN	583800	5440000	<500	84151	PEX		DGN,	LD	DISS,	150
		EXPLORATION:PS, , , ,			REFS:GSB38							
32172	10257-M	SN	583400	5441500	<500	84151	PEX		DGN,	LD	VEIN,	160
		EXPLORATION:PS, , , ,			REFS:GS838							
32181	CREAM CREEK(LOWER)	SN	578800	5442700	<100	84151	AMX		DGN,	LD	,	-99
		EXPLORATION:PS, , , ,			REFS:TCR81-1511,GSB55							
32182	CREAM CREEK(TOP)	SN	578S00	5443100	<100	84151	AMX		DGN,	LD	,	-99
		EXPLORATION:PS, , , ,			REFS:TCRS1-1511,GSBS5							
32153	CREAM CREEK(NEW)	SN	579000	5442950	<100	84151	AMX		DGN,	LD	,	-99
		EXPLORATION:PS, , , ,			REFS:TCRS1-1511,GSB55							
33001	ANCHOR	SN Cu,U	584800	5435300	<100	85154	OPM	ND	DGN,	LD	DISS,	-99
		EXPLORATION:PS,GM,DR, ,			REFS:							
33003	MT. MICHAEL/MACMICHAEL	SN	584150	5440650	<100	85154	PEX		DGN,	LD	DISS,	-99
		EXPLORATION:P8,DR,GC, ,			REFS:GS MAP33,GSB38							
33004	MOON, NEU MOON	SN	584300	5439100	<100	85154	AMX		DGN,	LD	DISS,RESD	-99
		EXPLORATION:PS,GC,DR, ,			REFS:GS MAP33,GSB38							
33005	DON	SN	583100	5436350	<100	85154	PEX		DGN,	LD	DISS,	-99
		EXPLORATION:PS,GC, , ,			REFS:GS MAP33,GSB38							
33006	VICTORY/EAST COAST BISCHOFF	SN	586150	5435700	<100	8S154	AMX		DGN,	LD	VEIN,	50
		EXPLORATION:PS, , , ,			REFS:GS MAP33,GSB38							
33007	RANSOM	SN	586150	5436200	<100	85154	AMX		DGN,	LD	DISS,	-99
		EXPLORATION:PS, , , ,			REFS:GS MAP33,GSB38							
33008	LOTTAH/GIANT	SN	585900	5437700	<100	85154	AMX		DGN,	LD	VEIN,	30
		EXPLORATION:PS, , , ,			REFS:GS MAP33,TCR63-364,GSB38							
33011	SUN FLAT	SN	585000	5440000	<500	85154	AMX		JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:GSB55							
33012	HOPE	SN	584150	5439300	<500	85154	PEX		DGN,	LD	,	140
		EXPLORATION:PS, , , ,			REFS:GSB38							
33013	MUNDYS	SN	584050	5440000	<50	85154	PEX		DGN,	LD	,	140
		EXPLORATION:PS, , , ,			REFS:GSB38							
33014	?	SN	585500	5436300	<100	85154	MAR		JCS,		PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:GSB38							
33015	GOUGH VEINS	SN,U CU,MO	584100	5437600	<500	85154	PEX		DGN,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:GSB38							
33016	UOLFRAM VEINS	U CU,SN	584300	5437100	<500	85154	MOC		DGN,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:GSB38							
33017	FULL MOON	SN	584450	5438950	<500	85154	AMX		DGN,	LD	VEIN,	60
		EXPLORATION:PS, , , ,			REFS:GSB38							
33018	HALEY'S ML 10097-M	SN	584300	5441000	<500	85154	PEX		DGN,	LD	VEIN,RESD	-99
		EXPLORATION:PS, , , ,			REFS:GSB38							
33019	HALEY'S ML10098-M	SN	583900	5441200	<500	85154	PEX		DGN,	LD	VEIN,RESD	-99
		EXPLORATION:PS, , , ,			REFS:GSB38							

SEARCH OPTIONS ARE:
SEARCH RECTANGLE FROM 577000mE TO SSS000mE AND FROM 5435000mN TO 5445000mN

STATUS

OPM	OPERATING MINE
NOR	NON-OPERATING MINE - RESERVES KNOUN
NQX	NON-OPERATING MINE - RESERVES UNKNOUN
AMR	ABANDONED MINE - RESERVES KNOUN
AMX	ABANDONED MINE - RESERVES UNKNOUN
AMO	ABANDONED - MINED OUT
PEX	PROSPECT - EXPLORED
PUN	PROSPECT - UNEXPLORED
MAR	MINERALIZED AREA
MOC	MINERAL OCCURRENCE

SIZE OF DEPOSIT

ND	NOT DETERMINED	
VS	VERY SMALL:	< 100 TONNES (OR CUBIC METRES
SM	SMALL:	100 T - 10 000 T
ME	MEDIUM:	10 000 T - 1 000 000 T
LA	LARGE:	1 000 000 T - 10 000 000 T
VL	VERY LARGE:	> 10 000 000 T

HOST ROCK

PCS	PRECAMBRIAN SEQUENCES
CSS	CAMBRIAN SEDIMENTARY SEQUENCES
CIG	CAMBRIAN IGNEOUS SEQUENCES
MRV	MOUNT READ VOLCANICS AND CORRELATES
OMS	OUEN CONGLOMERATE/MOINA SANDSTONE AND COR
GLE	GORDON LIMESTONE/ELDON GROUP AND CORRELATES
MAT	MATHINNA BEDS
DGN	DEVONIAN GRANITOID
PSG	PARMEENER SUPER GROUP
JCS	JURASSIC-CENOZOIC SEQUENCES

AGE OF MINERALIZATION

ND	NOT DETERMINED
PC	PRECAMBRIAN
EC	EOCAMBRIAN-EARLY CAMBRIAN
MC	MIDDLE-LATE CAMBRIAN
OD	ORDOVICIAN-EARLY DEVONIAN
LD	LATE DEVONIAN (GRANITE ASSOCIATED)
PT	PERMO-TRIASSIC
JC	JURASSIC-CRETACEOUS
TT	TERTIARY
QT	QUATERNARY

FORM OF DEPOSIT

VMS	VOLCANIC MASSIVE SULPHIDE
STFM	STRATIFORM
VEIN	VEIN(SINGLE,SHEET,SADDLE)
STUK	STOCKUORK
DISS	DISSEMINATED
REPL	REPLACEMENT
PIPE	PIPE
PLAC	PLACER
RESD	RESIDUAL
OTHR	OTHER (NOTED IN REFS)

EXPLORATION OF DEPOSIT

NO	NIL OR NO KNOUN EXPLORATION
PS	PROSPECTING
GM	GEOLOGICAL MAPPING
GC	GEOCHEMICAL SURVEYS
GP	GEOPHYSICAL SURVEYS
DR	DRILLING

Appendix 3.

Mines and Mineral Deposits of the Mt. Maurice - Mt. Victoria - Rattler Range area

From the MIRLOCH database

REFNO	MINE/DEPOSIT NAME	MAJOR - COMM - MINOR	mE	mN	ERROR	SHEET	STAT	SIZE	HOSTROX	AGE	FORM	STK
32025	STAR OF PEACE	SN	571900	5433600	<100	84151	AMX		DGN,	LD	VEIN,	80
		EXPLORATION:PS,GC,DR, ,			REFS:TCRB2-1711,TDM PLAN870							
32026	RATTLER	SN	572700	5434800	<500	84151	PEX		DGN,	LD	VEIN,	170
		EXPLORATION:PS,GC, , ,			REFS:TCRB2-1711,TDM PLAN870							
32027	BALD HILL	SN	572250	5434800	<100	84151	AMX		DGN,	LD	VEIN,	-99
		EXPLORATION:P3,GC,DR, ,			REFS:TCR82-1711,TDM PLAN870							
32028	MAMMOTH	SN	571500	5434800	<100	84151	AMX		DGN,	LD	,	80
		EXPLORATION:PS,GC, , ,			REFS:TCRS2-1711,TDM PLAN870							
32029	BROCKS ADIT	SN	570900	5435450	<100	84151	PEX		DGN,	LD	,	-99
		EXPLORATION:PS,GC, , ,			REFS:TCR32-1711,TDM PLAN870							
32031	NEW HOPE NO.1	SN	567500	5435300	<500	84151	PEX		DGN,	LD	,	-99
		EXPLORATION:PS,GC,DR, ,			REFS:TCR82-1711							
32073	SURPRISE	SN	570500	5434500	<500	84151			DGN,	LD	,	-99
		EXPLORATION:PS, , , ,			REFS:GSB55							
32074	LONE STAR	SN	570200	5434300	<500	84151			DGN,	LD	,	-99
		EXPLORATION:PS, , , ,			REFS:GSB55							
32085	McINTYRE CREEK	SN	571200	5434100	<500	84151	MAR		JCS,	QT	PLAC,	-99
		EXPLORATION:PS,GC, , ,			REFS:TCR82-1711							
32086	CASCADE R	SN	571200	5433500	<500	84151	MAR		JCS,	QT	PLAC,	-99
		EXPLORATION:PS,GC, , ,			REFS:TCRB2-1711							
32092	COOK CREEK	SN	564000	5435900	<500	84151	MAR		JCS,	QT	PLAC,	-99
		EXPLORATION:PS,GC, , ,			REFS:TCR82-1711							
32094	?	SN	566900	5434100	<500	84151	MAR		JCS,	QT	PLAC,	-99
		EXPLGRATION:PS,GC, , ,			REFS:TCR82-1711							
32095	?	SN	563500	5435500	<500	84151	MAR		JCS,	QT	PLAC,	-99
		EXPLORATION:PS,GC, , ,			REFS:TCR82-1711							
32098	ENERGETIC CREEK	SN	568200	5435900	<500	84151	MAR		JCS,	QT	PLAC,	-99
		EXPLORATION:PS,GC, , ,			REFS:TCRB2-1711							
32173	GORGE CREEK	SN	573200	5434200	<500	84151	PEX		JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN2570							
32174	RATTLER CREEK	SN	572400	5435100	<500	84151	PEX		JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN2570							
40030	HINEMOA / HINEMONA	AU, AG	568200	5422150	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN1020							
40031	STRICKLAND	AU,	567850	5419900	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN1020							
40032	LARANDAH	AU, AG	568850	5419000	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN1020							
40033	LADY HAVELOCK	AU, AG	568750	5418800	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN1020							
40034	HAVELOCK (HICKSONS)	AU,	569100	5418150	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN1020							
40035	NATIONAL INVESTMENT	AU,	569350	5417850	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN1020							
40036	O'BRIENS (KERRIGANS DISCOVERY)	AU,	569700	5417420	<100	84152	AMX	SM	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,DR, , ,			REFS:TDM PLAN1020							
40037	KING EDUARD	AU,	570500	5418200	<100	84152	AMX	SM	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN1020							
40038	STARLIGHT	AU, AG	570600	5417900	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,DR, , ,			REFS:TDM PLAN1020							
40039	CARNEGIE	AU, AG	570750	5417850	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN1020							
40052	BATTERY	AU,	567200	5430200	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN108BS							
40053	DRUNKARD'S DREAM / DRUNKEN DREAM	AU,	567200	5429800	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN718A							

REFNO	MINE/DEPOSIT NAME	MAJOR - COMM - MINOR	mE	mN	ERROR	SHEET	STAT	SIZE	HOSTROX	AGE	FORM	STK
40055	CREST	AU,	566650	5429700	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718A						
40056	NEW RIVER (PRENDERGAST)	AU,	566800	5429700	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718A						
40057	BODYLINE	AU,	566800	5429700	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718A						
40058	PENNEFATHER	AU,	566600	5429500	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718A						
40059	CENTRAL RINGAROOMA	AU,	566700	5429400	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718A						
40060	McCAUL'S "A1"	AU,	566700	5429250	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718B						
40061	ALMORA	AU,	566600	5429150	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718B						
40062	FOREST KING (JANS)	AU,	566900	5428500	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718B,HERRMANN(1987)TCR87-2735						
40063	CROUN PRINCE	AU,	567200	5428400	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718B HERRMANN(1987)TCR87-2735						
40064	ROSALIND GUMSUCKER	AU,	566900	5427900	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDMPLAN 718C, HERRMANN(1987)TCR87-2735						
40065	PREMIER	AU,	566900	5427900	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718C,HERRMANN(1787)TCR87-2735						
40065	PREMIER		566900	5427900					,		,	-99
		EXPLORATION: ,	,	,	,	REFS:TDMPLAN 718B,HERRMANN(1987) TCR87-2735						
40066	HANNAH /BANK	AU,	566950	5427750	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN713C,HERRMANN(1787)TCR87-2735						
40067	MAGG/ROARING MAG	AU,	567100	5427850	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718C						
40068	ENDEAVOUR	AU,	567150	5427850	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718C, HERRMANN(1987)TCR87-2735						
40069	NELSONS/SOFT SPUR LODES	AU,	566900	5427950	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN108BS						
40071	MERCURY NO.1	AU,	567150	5426750	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718D,HERRMANN(1987)TCR87-2735						
40072	HOPE	AU,	567400	5426600	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718D						
40073	UILSON (NEU)	AU,	567400	5426400	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN108B,718D						
40074	CAXTON (NO.1)	AU,	567400	5426100	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN108B,718D TCR87-2735						
40075	LONG STRUGGLE	AU,	567400	5426100	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN108B,718D TCR87-2735						
40076	CROSS REEFS	AU,	567300	5426100	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN108B,718D TCR87-2735						
40077	BECKERS	AU,	567400	5426800	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN108B,718D						
40078	SCOTCHMAN	AU,	567500	5425950	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN108B,718D						
40079	MT VICTORIA	AU,	567700	5425400	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN108B,718D TCR87-2735						
40080	BRIGHT STAR	AU,	567150	5425050	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718E						
40081	ESK	AU,	567600	5424450	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718E,TCR87-2735						
40082	SOUTH STAR	AU,	567200	5424300	<500	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	,	,	,	REFS:TDM PLAN718E, TCR87-2735						

REFNO	MINE/DEPOSIT NAME	MAJOR - COMM - MINOR	mE	mN	ERROR	SHEET	STAT	SIZE	HOSTROX	AGE	FORM	STK
40086	RINGAROOMA UNITED	AU	566700	5428200	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:							
40087	JIMMIE GOVENOR	AU	566800	5429000	<500	84152	AMX	ND	,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN718B, TCRS7-2735							
40088	MALLUNAH /MULLUNAH	AU	566500	5428900	<500	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN718B, TCR87-2735							
40089	ALBERTON 1	AU	566900	5428600	<500	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN718B, TCR87-2735							
40090	QUEEN	AU	566900	5428500	<500	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN718B, TCR87-2735							
40091	POINT ADIT	AU	566900	5426600	<100	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN7183, TCR87-2735							
40092	SOUTH POINT ADIT	AU	566900	5426550	<500	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN718B, TCR87-2735							
40093	FROG	AU	567000	5427000	<500	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN718D, TCR88-2809							
40094	REFORM NOS.1-3 LODES	AU	567150	5426500	<500	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TCR88-2809 ,TDM PLAN718D							
40095	BOUNDARY	AU	566900	5426500	<100	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN718D, TCR88-2809							
40096	CAKE	AU	567000	5427900	<500	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN718C, TCR87-2735							
40097	PLUM PUDDING	AU	567000	5427900	<500	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN718C, TCR87-2735							
40098	RAGGED YOUTH	AU	567200	5426300	<500	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN718D, TCR87-2735							
40099	CAXTON NO.2	AU	567500	5426300	<500	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN718D, TCRS7-2735							
40100	MONTANA	AU	567650	5425800	<100	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN718D, TCR87-2735							
40101	SOUELL'S	AU	567600	5425800	<100	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN718B, TCR88-2809							
40103	MT VICTORIA ALLUV	AU	570000	5430000	>1000	84152	MAR	ND	JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:							
40104	NEU RIVER ALLUV	AU	570000	5430000	>1000	84152	MAR	ND	JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:							
40105	DORSET RIVER ALLUV.	AU	570000	5430000	>1000	84152	MAR	ND	JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:							
40106	STH ESK RIVER ALLUV.	AU	570000	5430000	>1000	84152	MAR	ND	JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:							
40108	KRUSKAS FREEHOLD	AU	567150	5431080	>1000	84152	MAR	ND	JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:TCR90-3151							
40110	GOLDEN POSSUM	AU	563400	5425800	<100	84152	PEX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS,DR, , ,			REFS:TCR89-2947							
40112	EVERETTS	AU	567400	5423750	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718E,TUELVETREES (1904)OS221							
40113	FARRELLS	AU	567350	5423250	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718E,TUELVETREES(1904)OS221							
40114	McCAULS LITTLE SHOU	AU	567400	5424300	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:GC, , , ,			REFS:TDM PLAN 718E							
40115	McCAULS WKGS	AU	567700	5424450	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718E							
40116	MAMMOTH 2	AU	568050	5424900	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718E							
40117	MAMMOTH 1	AU	567900	5424900	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718E							

REFNO	MINE/DEPOSIT NAME	MAJOR - COMM - MINOR	mE	mN	ERROR	SHEET	STAT	SIZE	HOSTROX	AGE	FORM	STK
4011S	MAMMOTH 3	AU	568100	5424800	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 47B							
40119	TOMBSTONE CK	AU	554300	5420200	<100	84153	MAR		JCS,	QT	PLAC,	-99
		EXPLORATION:GC, , , ,			REFS:TCR 90-3150							
40120	CHINAMANS CORNER	AU	564500	5419000	<100	84152	MOC		MAT,	LD	VEIN,	-99
		EXPLORATION:GC, , , ,			REFS:TCR 90-3150							
40122	MARR	AU	567300	5425800	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108B							
40123	SHORT STRUGGLE	AU	567400	5426050	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108B							
40124		AU	564900	5430700	<50	84152	PEX		JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:TCR 90-3151							
40125		AU	565600	5431980	<50	84152	PEX		JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:TCR 90-3151							
40126		AU	565200	5431200	<50	84152	PEX		JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:TCR 90-3151							
40127		AU	564950	5431240	<50	84152	PEX		JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:TCR 90-3151							
4012S		AU	564320	5431050	<50	84152	PEX		JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:TCR 90-3151							
40129	RICH YOUTH/BLENDE	AU	567200	5426400	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108B							
40130	TELEGRAPH	AU	567350	5426300	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108B							
40131	MERCURY NO.2	AU	567100	5426700	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108B							
40132	MARTINS	AU	567100	5426550	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108B							
40133	BLACK HORSE/DARK HORSE	AU	567100	5426500	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108B							
40134	COBBINS/CROUN	AU	567200	5426400	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108B							
40135	ALBERTON NO.2	AU	566800	5428500	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLANS 718B,108BS							
40136	STAKE	AU	566800	5428400	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLANS 718B,108BS							
40137	LONG SHAFT	AU	566900	5427900	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108BS							
40138	ENDURANCE	AU	566700	5428400	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718B							
40139	BIG BLOU/CHATTERBOX/MALMSBURY	AU	566900	5427650	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLANS 108BS							
40140	McCAULS NO.1	AU	567000	5427800	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLANS 108BS							
40141	CANNON	AU	567200	5428000	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108B							
40142	FOULER'S	AU	567100	5427750	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108B							
40143	CROSSLODE/THOMAS	AU	566950	5427900	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108B							
40144	DUKE'S	AU	567000	5427600	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718C							
40145	BALTIC/SEARLES	AU	566900	5427500	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718C							
40146	GOLDEN HINGES	AU	566700	5427300	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718C							

REFNO	MINE/DEPOSIT NAME	MAJOR - COMM - MINOR	mE	mN	ERROR	SHEET	STAT	SIZE	HOSTROX	AGE	FORM	STK
40147	?	AU	566800	5428100	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718C							
40148	?	AU	566900	5428200	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718C							
40149	?	AU	567000	5428100	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718C							
40150	NO.3 REEF	AU	566900	5427900	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718D							
40151	BOBBY EVANS	AU	566900	5427900	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718D							
40152	SEARLE'S	AU	567000	5426600	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718D							
40153	BATTERY	AU	567250	5426300	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718D							
40154	FLAT	AU	567400	5426300	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718D							
40155		AU	566400	5428900	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718D							
40156	KRUSHKAS REEF	AU	566800	5430900	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40157	MARTIN'S CROSS	AU	567300	5426100	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718D							
40158	CENTRAL	AU	567500	5425850	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718D							
40159	UILSON	AU	567450	5426400	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718D							
40160	HOMESTEAD	AU	567200	5430300	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40161	?	AU	567000	5430700	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40162	?	AU	566900	5430500	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40163	?	AU	566700	5430600	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40164	SULPHIDE	AU	567000	5430100	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40165	BROUN'S	AU	566900	5430000	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40166	MYSTERY	AU	566800	5430000	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40167	NO.1	AU	567400	5430100	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40168	NO.5	AU	567000	5429600	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40169	COOK'S	AU	566600	5429400	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40170	RESERVED	AU	566700	5429600	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40171	NO.3	AU	567100	5429600	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40172	A REEF	AU	567300	5429600	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40173	A REEFS	AU	567400	5429600	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							
40174	STANDARD	AU	566800	5429700	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS,	, , ,		REFS:TDM PLAN 718A							

REFNO	MINE/DEPOSIT NAME	MAJOR - COMM - MINOR	mE	mN	ERROR	SHEET	STAT	SIZE	HOSTROX	AGE	FORM	STK
40175	LANE'S	AU	566700	5429300	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718A							
40176	BURR'S	AU	567100	5429200	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108BN							
40177		AU	566800	5431100	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108BN							
40178	HOLLOWAYS NO.1	AU	566600	5428900	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108BN							
40179	HOLLOWAYS NO.2	AU	566650	5428900	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 108BN							
40180	CROWN PRINCE CK	AU	567300	5430800	<500	84152	MAR		JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718A							
40181		AU	567200	5430300	<500	84152	MAR		JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718A							
40182		AU	567100	5430700	<500	84152	MAR		JCS,	QT	PLAC,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718A							
40183	SINGLINE	AU	567500	5429700	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718A							
40184	WEST DORSET	AU	566600	5426100	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 47B							
40185	PACKHORSE	AU	567500	5425500	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 47B							
40186	CRICKET FIELD	AU	566300	5427600	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 47A							
40187	McCAUL'S	AU	566900	5426950	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 47A							
40188	MERRICK'S	AU	566900	5426900	<500	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 47A							
40189	UNA	AU	567980	5422250	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718G							
40190	UNA NO.2	AU	568080	5421950	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718G							
40191	UNA (UPPER)	AU	568020	5421850	<100	84152	PEX		MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:TDM PLAN 718G							
40193	TIGER	AU,	567300	5429700	<100	84152	AMX	ND	MAT,	LD	VEIN,	-99
		EXPLORATION:PS, , , ,			REFS:HERRMANN(1987)TCR87-2735,TDM PLAN718A							
40194	MT MAURICE-NW	SN,CU MO,BI	549700	5428500	<100	84153			DGN,	LD	VEIN,	-99
		EXPLORATION:PS,GC, , ,			REFS:TCR84-2203							
40195	MT MAURICE-SE	SN,CU MO,BI	550800	5428200	<100	84153			DGN,	LD	VEIN,	-99
		EXPLORATION:PS,GC, , ,			REFS:TCR82-2203							
40196	DING DONG		557800	5420700	<1000	84153			DGN,	LD	,	-99
		EXPLORATION:PS, , , ,			REFS:ADMIN							
40197	DIDDLEUM Q, "TEQUILA"	GRANITE	547100	5422300	<100	84153	OPM		DGN,	LD	,	-99
		EXPLORATION: , , , ,			REFS:SHARPLES(1990)							

SEARCH OPTIONS ARE:
SEARCH RECTANGLE FROM 540000mE TO 577000mE AND FROM 5417000mN TO 5436000mN

STATUS

OPM	OPERATING MINE
NOR	NON-OPERATING MINE - RESERVES KNOUN
NOX	NON-OPERATING MINE - RESERVES UNKNOUN
AMR	ABANDONED MINE - RESERVES KNOUN
AMX	ABANDONED MINE - RESERVES UNKNOUN
AMO	ABANDONED - MINED OUT
PEX	PROSPECT - EXPLORED
PUN	PROSPECT - UNEXPLORED
MAR	MINERALIZED AREA
MOC	MINERAL OCCURRENCE

SIZE OF DEPOSIT

ND	NOT DETERMINED
VS	VERY SMALL: < 100 TONNES (OR CUBIC METRES
SM	SMALL: 100 T - 10 000 T
ME	MEDIUM: 10 000 T - 1 000 000 T
LA	LARGE: 1 000 000 T - 10 000 000 T
VL	VERY LARGE: > 10 000 000 T

HOST ROCK

PCS	PRECAMBRIAN SEQUENCES
CSS	CAMBRIAN SEDIMENTARY SEQUENCES
CIG	CAMBRIAN IGNEOUS SEQUENCES
MRV	MOUNT READ VOLCANICS AND CORRELATES
OMS	OUEN CONGLOMERATE/MOINA SANDSTONE AND COR
GLE	GORDON LIMESTONE/ELDON GROUP AND CORRELATES
MAT	MATHINNA BEDS
DGN	DEVONIAN GRANITOID
PSG	PARMEENER SUPER GROUP
JCS	JURASSIC-CENGZOIC SEQUENCES

AGE OF MINERALIZATION

ND	NOT DETERMINED
PC	PRECAMBRIAN
EC	EOCAMBRIAN-EARLY CAMBRIAN
MC	MIDDLE-LATE CAMBRIAN
OD	ORDOVICIAN-EARLY DEVONIAN
LD	LATE DEVONIAN (GRANITE ASSOCIATED)
PT	PERMO-TRIASSIC
JC	JURASSIC-CRETACEOUS
TT	TERTIARY
QT	QUATERNARY

FORM OF DEPOSIT

VMS	VOLCANIC MASSIVE SULPHIDE
STFM	STRATIFORM
VEIN	VEIN(SINGLE,SHEET,SADDLE)
STUK	STOCKUORK
DISS	DISSEMINATED
REPL	REPLACEMENT
PIPE	PIPE
PLAC	PLACER
RESD	RESIDUAL
OTHR	OTHER (NOTED IN REFS)

EXPLORATION OF DEPOSIT

NO	NIL OR NO KNOUN EXPLORATION
PS	PROSPECTING
GM	GEOLOGICAL MAPPING
GC	GEOCHEMICAL SURVEYS
GP	GEOPHYSICAL SURVEYS
DR	DRILLING