AUSTRALIA

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Mineral Resource Report

Mt Isa Inlier and Environs Mineral Deposit Database Version 1.0. Record 1992/66

O L Raymond

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ERRATA and ADDENDA

Deposit 105 - Mount Fort Constantine (Ernest Henry)

Approximate resources (calculated from reference 215) - 60,000,000 tonnes @ 1.6% Cu, 0.8 g/t Au.
Location - 20.447 S
140.708 E

Deposit 129 - Osborne (Trough Tank)

Resources (reference 231) - 36,000,000 tonnes @ 2.0% Cu, 1.0 g/t Au.

Deposit 192 - Century

Resources (reference 232) - 116,000,000 tonnes @ 10.3% Zn, 1.5% Pb, 35 g/t Ag.
Deposit expression - outcrop, geochemical

Additional references

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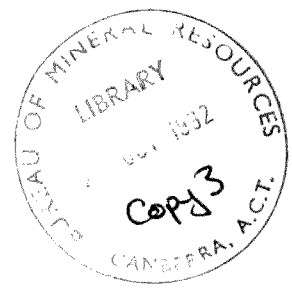
Explanatory Notes



AGSO
AUSTRALIAN GEOLOGICAL
SURVEY ORGANISATION

DEPARTMENT OF PRIMARY INDUSTRIES AND ENERGY

Minister for Resources: The Hon. Alan Griffiths
Secretary: G.L. Miller

AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION
(formerly BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS)

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Contents

Summary

The Mount Isa Inlier and Environs Mineral Deposit Database describes 251 of the most significant mineral deposits in the Mount Isa Inlier and environs, out of a total of more than 1800 locations listed in the Australian Geological Survey Organisation (AGSO) mineral occurrence database, 'MINLOC'.

The database comprises five commodity-based tables, grouped as follows: copper-gold-silver (187 locations), lead-zinc-silver (22), gold (15), uranium (12) and miscellaneous (including silver, cobalt, tungsten, tin, manganese, iron and beryl; 15 locations). Each of the mineral deposits described either has combined production and reserves equivalent in value to more than 20 tonnes of copper metal, or is a significant prospect typical of a particular deposit type.

Mineral deposits described in the database are presented on a 1:500 000 scale metallogenic map of the Mount Isa Inlier and Environs, which is available separately.

Mount Isa Inlier and Environs Mineral Deposit Database
Explanatory Notes

[PLEASE NOTE: This version for library distribution contains the database as microfiche hard copy only. The version available for purchase contains both hard copy (as A3 fold-out pages) and digital formats.]

Introduction

The database was developed using Microsoft EXCEL 3.0a software and is provided on a 3.5 inch diskette in EXCEL (tab delimited) and ASCII (comma delimited) formats. The database contains 251 records of mineral deposits in the Mount Isa region, each consisting of the descriptive fields shown below:

Deposit number	Reference number for 1:500 000 scale metallogenic map
Deposit name	Includes synonyms of deposit names and deposit groups
Metal production	Commodities mined include Cu, Au, Ag, Co, Pb, Zn, U, Sn, W, Mn, Fe, and Be
Resource/reserve	Tonnes and grade of unmined mineralisation and classification of reserves
Value	Total monetary value of all commodities in the deposit
Location	Includes map sheet, longitude and latitude
Host rocks	Includes geological province, formation, host lithologies and metamorphic grade
Deposit description	Includes the shape, texture, dimensions and orientation of the deposit, its relationship to host rocks and secondary enrichment
Mineralisation	Primary, secondary, gangue and wallrock alteration mineralogy
Deposit expression	Describes the surface expression of the deposit (eg: gossan, concealed)
Type	Classification according to scheme outlined below in "Deposit Types".
References	Numerical reference list appears at the end of these explanatory notes

The information in the database is as far as possible descriptive so as to maintain objectivity. However, a brief summary of deposit types and comments on the metallogenesis of the major commodities is presented.

Notes on database fields

Deposit name and location

Deposit names are quoted according to the conventions established by the 'MINLOC' database:

- Where more than one mineral deposit is represented by a single location, the names of each deposit are separated by commas.

- Synonyms for the name of a mineral deposit are included in parentheses.

- A name in square brackets is that of a group of deposits at a location.

The locations (latitude and longitude) of mineral deposits are quoted in decimal degrees as in the 'MINLOC' database.

Production

Production figures were obtained mainly from Carter *et al.* (1961) and Krosch and Sawers (1974). Those from more recent mining operations were compiled from Queensland Department of Mines Annual Reports and Mount Isa Mines Ltd royalty returns. Much of the small scale mining in the Mount Isa Inlier occurred near the beginning of this century, and official production figures may be incomplete. Production grades have not been quoted because of uncertainties due to variable degrees of sorting of much of the ore mined in the early mining history of the inlier. Where the grade of ore shipments from some mines was not known, estimates of their metal content were made based on known grades of previously mined ore from the deposits.

Value

As a guide to the relative size or importance of the described mineral deposits, a "Value" column is included in the database. The "Value" attribute is based on the monetary value of the total metal production and resources/reserves of a deposit at approximate 1992 commodity prices (see Appendix 1). It is recognised that commodity prices vary widely over time and that production from some deposits may have been dependent on fluctuations in commodity prices. However, the "Value" attribute does provide a semi-quantitative method of comparing the relative importance of mineral deposits which have mined different metals.

The mineral deposits are divided into four size categories for presentation on the metallogenic map of the Mount Isa Inlier and Environs available with the database. The categories range on a logarithmic scale from the many small deposits less than A$0.5 million in value, to deposits up to A$50 million (eg: Orphan, Mount Cobalt, Gilded Rose), large deposits up to A$5000 million (eg: Pegmont, Mammoth, Hampden) and world class deposits such as Mount Isa, Hilton and Century. A table of corresponding amounts of contained metals for deposits in each size category is presented on the metallogenic map.

Geology

Geological provinces are taken from Blake (1987) who divided the Proterozoic rocks of the Mount Isa Inlier and environs into discrete tectonic units (Fig. 1).

An attempt has been made, using available literature, to distinguish the actual host lithology of an ore deposit from those lithologies which may be associated with the deposit, but are not mineralised. In the case of recently discovered mineral deposits, geological information has been inferred from press releases, stock exchange reports and public lectures in the absence of scientific publications.

Deposit Type

The mineral deposits of the Mount Isa Inlier and environs have been categorised into eight major deposit types, similar to those proposed by Williams (1980), Blake (1987), Blake *et al.* (1990) and Derrick (1991). The categories are based on the style of mineralisation (eg: vein, stratiform) rather than genetic models of mineralisation (eg: syngenetic, metamorphic). Some deposits, particularly those worked around the turn of the century, cannot be confidently assigned to a particular category as the available literature is insufficient to form a reliable assessment of the deposit type.

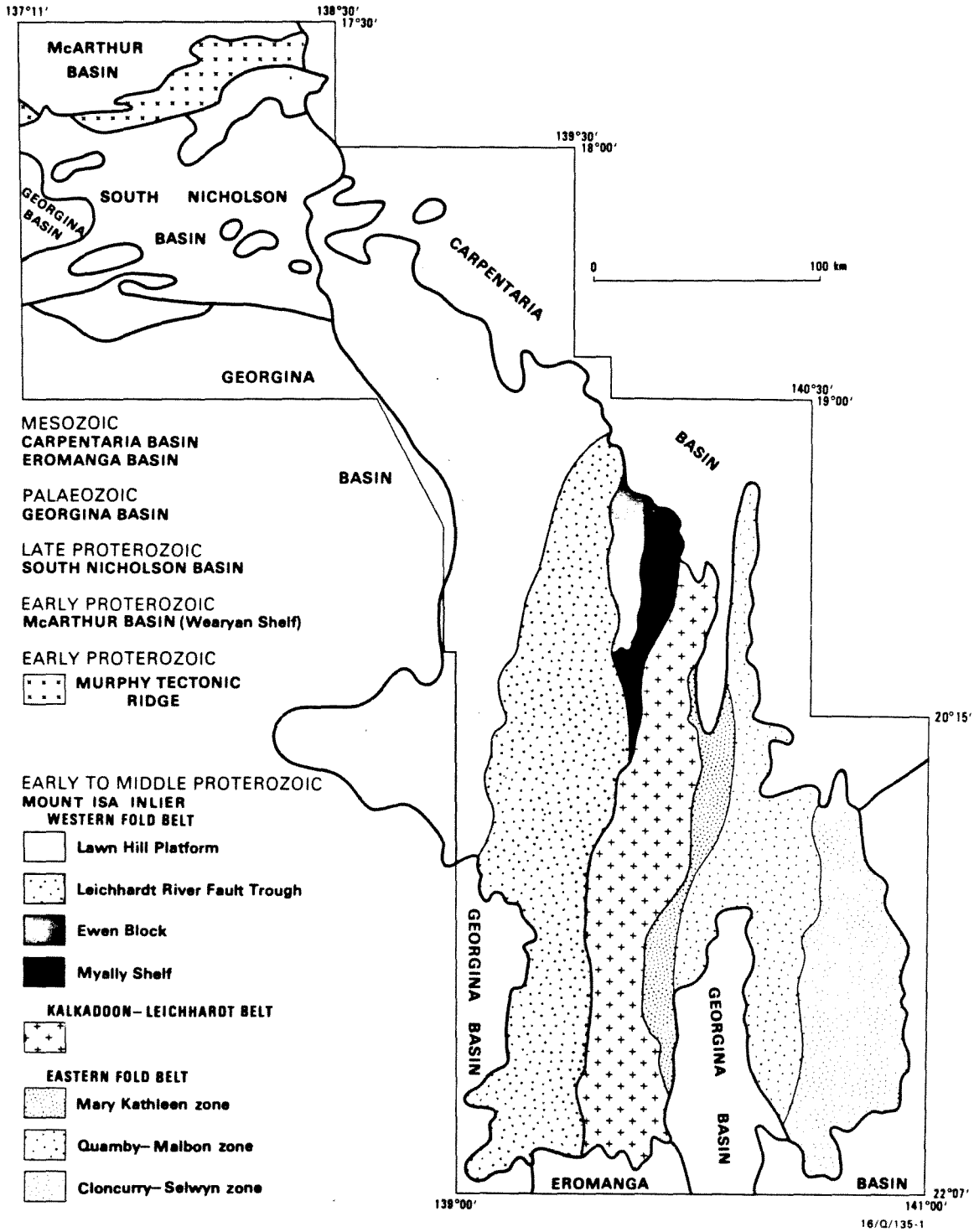

Figure 1. Tectonic zones in the Mount Isa Inlier and environs (after Blake, 1987).

References

The reference list is not exhaustive. There are many unpublished company exploration reports held by the Queensland Department of Mines, of which only a few are quoted. In addition, only a few of the main references are quoted for some of the major deposits on which much has been written.

Deposit Types

Type 1. Breccia hosted deposits in metasediments (eg: Mount Isa, Mammoth)

The largest copper deposits in the Mount Isa Inlier are of this type. The characteristic alteration is a pervasive quartz - dolomite assemblage, typified by the 'silica-dolomite' at Mount Isa (Perkins, 1984). However, deposits such as Mammoth which are not located in a carbonate-rich host rock have not developed the dolomite alteration (van Dijk, 1991). Several generations of CO_2-rich, $CaCl_2$-rich and NaCl-rich brines accompanying D_2 - D_3 deformation and regional metamorphism are thought to be responsible for the copper mineralisation and extensive alteration haloes (Heinrich *et al.*, 1989).

Type 2. Shear zone and fracture controlled vein deposits

a) copper - gold - silver (eg: Mount Elliott, Hampden, Duchess, Great Australia)
b) gold (eg: Gilded Rose)
c) lead - zinc - silver (eg: Silver King)
d) miscellaneous (eg: silver - Silver Phantom; cobalt - Mount Cobalt; tungsten - McLennan's Claim; uranium - Eva)

The majority of these deposits are relatively small and occur as single or multiple vein lodes within shear zones and faults. Quartz is the predominant gangue mineral, although some deposits are developed within large calcite lenses (eg: Dolomite, Mount Frosty). The majority of the shear hosted copper occurrences in the Mount Isa Inlier are uneconomic due to their small size. Where they have been worked, typically only the high grade mineralisation in the secondary enriched zone at the top of the deposit has been mined. Production figures, therefore, commonly reflect the extent of supergene enrichment rather than the amount of primary mineralisation. In situ leaching operations have been attempted to recover primary copper mineralisation at some deposits (eg: Mount Oxide, Mammoth, Wee MacGregor) with variable success.

The vein or breccia lead-zinc-silver deposits within the McNamara Group in the Lawn Hill region are localised primarily along north-east to east-north-east trending tensional faults (Sweet and Hutton, 1982). The mineralisation contains mainly galena and sphalerite and minor pyrite and chalcopyrite in a gangue of quartz and siderite. Suggested sources for the mineralisation include hydrothermal solutions from an unknown igneous intrusion, migration of metal bearing connate waters, or remobilisation of earlier mineralisation (Sweet and Hutton, 1982). The recently discovered and very large Century deposit may have provided a source of remobilised lead and zinc for the nearby vein deposits.

Type 3. Sediment hosted stratiform lead - zinc - silver deposits (eg: Mount Isa, Hilton, Dugald River)

These deposits occur in rocks deposited in intracratonic, fault bounded basins with the bounding growth faults providing potential channels for mineralising fluids. Thinly bedded, weakly metamorphosed dolomitic clastic sediments are typical hosts and evaporitic environments are commonly evident locally (Neudert, 1983). The more strongly metamorphosed Dugald River deposit is a notable exception. Pyrite, galena and sphalerite exhibit finely laminated textures in multiple beds ranging from millimetres to metres thick. The deposits are typically laterally extensive and exhibit varying degrees of folding, faulting and remobilisation.

At Mount Isa, lead-zinc mineralisation is now generally considered to be of syngenetic (Mathias and Clark, 1975; Finlow-Bates, 1979) or diagenetic (Muir, 1981; Forrestal, 1990) origin. However,

epigenetic processes have recently been proposed again (Laing, 1990b; Perkins, 1991). Separate sulphur sources are envisaged for early pyrite and later lead-zinc sulphides at Mount Isa, Hilton and Lady Loretta (Eldridge *et al.*, 1986).

Type 4. Ironstone hosted stratiform deposits

a) lead - zinc - copper (eg: Pegmont)
b) copper - gold (eg: Starra, Osborne)

This type of mineralisation occurs largely within metamorphosed and deformed banded iron formations of the Cloncurry-Selwyn Zone. Iron and base metal mineralisation may be essentially syngenetic and possibly of exhalative origin (Blake *et al.*, 1984; Davidson *et al.*, 1989). However, other studies of copper-gold deposits of this type suggest a two stage origin of early ironstone formation followed by later epigenetic introduction of copper and gold (eg: Wall and Valenta, 1990), possibly during regional metamorphism (Switzer *et al.*, 1988; Kary and Harley, 1990).

Laing (1990a) has suggested that BIF hosted lead-zinc deposits such as Pegmont and Fairmile may be epigenetic regional skarn mineralisation.

Type 5. Skarn hosted deposits (Mary Kathleen - U; Maramungee - Pb/Zn)

These deposits are hosted by garnetiferous calc-silicate skarns. However, the style of mineralisation varies from irregular veins (eg: Mary Kathleen) to stratiform (eg: Maramungee). The origin of the Mary Kathleen deposit is contentious. Derrick *et al.* (1977) and Cruikshank *et al.* (1980) considered that the host calc-silicates were formed during metasomatism related to intrusion of the Burstall Granite. Abeysinghe *et al* (1984) considered the fractionated granite and associated dykes to be the source of the uranium. However, other authors have suggested that the uranium was remobilised from within the sedimentary pile during metamorphism (Hawkins, 1975) or even syngenetic mineralisation related to basaltic volcanism (Scott and Scott, 1985). More recent work, including isotopic dating of the mineralisation, suggests that the deposit formed after granite intrusion during waning metamorphism (Maas *et al.*, 1988; Oliver *et al.*, 1990).

Recent studies at Maramungee (Williams and Heinemann, 1991) suggests that the garnetiferous lead-zinc mineralisation is a skarn deposit adjacent to the Williams Batholith. Previous work on other stratiform lead-zinc deposits in the Cloncurry-Selwyn Zone (eg: Pegmont) had suggested a syngenetic origin for the Maramungee mineralisation (Stanton and Vaughan, 1979).

Type 6. Stratabound, fault related deposits (eg: Counter, Redtree)

Many uranium deposits in the Mount Isa Inlier are of this type. They are mainly found in ferruginous sedimentary or tuffaceous horizons interbedded with mafic volcanics. The mineralisation is commonly broadly stratabound but may be locally discordant. Primary mineralisation consists of very finely disseminated uraninite, brannerite or uraniferous magnetite. The deposits are most probably of metamorphic hydrothermal replacement origin with oxidised fluids being focussed along faults and shear zones and depositing uranium in favourable host rocks (Brooks, 1960; Wyborn, 1987).

At the southern margin of the McArthur Basin, stratabound uranium mineralisation is associated with mafic dykes which have intruded north-east trending fault zones in the Westmoreland Conglomerate. Hydrothermal mineralisation may have been associated with repeated dyke reactivation (Schindlmayr and Beerbaum, 1984) with uranium being leached from the host conglomerate (Hochman and Ypma, 1984).

Type 7. Granite and pegmatite hosted deposits (eg: Crystal Hill, Big Beryl)

Disseminated cassiterite mineralisation occurs at Crystal Hill in the Nicholson Granite Complex of the Murphy Tectonic Ridge. Quartz-albite pegmatite bodies in the Sybella Granite in the Mica Creek

area, south of Mount Isa, host deposits of beryl, mica, tourmaline, and also tin, tantalum and rare earth-bearing minerals. The pegmatite bodies may have been derived during metamorphism (Blanchard and Hall, 1942).

Type 8. Placer deposits (eg: Top Camp)

Alluvial gold was mined around the turn of the century along the Cloncurry River, south of Cloncurry, and to a lesser extent in other parts of the inlier. Some auriferous quartz veins which sourced these deposits were also worked. At Mount Quamby, north of Cloncurry, alluvial gold has been obtained from the late Proterozoic Quamby Conglomerate. The gold occurs in joints and fractures and in the ilmenite- and hematite-rich matrix of the conglomerate.

Regional Metallogenesis

Copper

The distribution of copper mineralisation in the Mount Isa Inlier shows several significant trends. In the Kalkadoon-Leichhardt Belt, Mary Kathleen Zone and Quamby-Malbon Zone, copper mineralisation is dominated by hundreds of small shear and fracture controlled vein deposits. These deposits are most common in the more deformed and metamorphosed parts of the Corella and Argylla Formations and the Leichhardt Volcanics. Controls on the localisation of this mineralisation are largely structural. Many deposits occur near major structures such as the Fountain Range or Mount Remarkable Fault Zones, but most are in subordinate shear zones removed from the main faults.

A significant lithological control on mineralisation is suggested as approximately half of the copper deposits described in the database are spatially associated with mafic intrusions or volcanics. These rocks in the Mount Isa Inlier are relatively enriched in copper and could provide a local source for many copper deposits (Smith and Walker, 1971; Wilson *et al*, 1985). Mobilisation of copper from metabasalts during cleavage formation has been documented by Wyborn (1987).

In contrast to the central regions of the Mount Isa Inlier, copper deposits in the Cloncurry-Selywn Zone are not closely associated with the calc-silicate rocks of the Corella Formation. A significant number, however, occur near the margins of the fractionated Williams and Naraku Batholiths which have been compared to the granites of the Stuart Shelf, S.A. and associated mineralisation at Olympic Dam (Wyborn, 1992).

Mineralisation in the relatively weakly metamorphosed and deformed Leichhardt River Fault Trough and Lawn Hill Platform contrasts markedly with that in the more deformed and metamorphosed central and eastern parts of the inlier. Copper mineralisation is concentrated in a small number of medium to large size brecciated sediment hosted deposits (eg: Mount Isa, Mammoth). The large discrepancy between the number and size of deposits in formations of the Mount Isa Inlier is indicated in Figure 2. The Mount Isa deposit contains over 90% of the copper resources of the entire inlier.

Ironstone hosted copper-gold deposits (eg: Starra, Osborne) are a relatively new addition to the ore deposit inventory of the Mount Isa Inlier. They occur in the Stavely Formation and Mount Norna Quartzite of the Cloncurry-Selwyn Zone and are relatively large deposits. Debate exists over whether these deposits are syngenetic or of epigenetic/ metamorphic origin (Davidson *et al.*, 1989; Switzer *et al.*, 1988). The Dingo prospect in the Soldiers Cap Group at the eastern margin of the inlier, is a copper-rich version of the ironstone hosted lead-zinc deposits of that area.

Lead - Zinc - Silver

The majority of the lead-zinc mineralisation in the Mount Isa Inlier is confined to a few very large stratiform deposits in the Mount Isa Group and its equivalent in the Lawn Hill Platform, the McNamara Group. Mount Isa, Hilton, Century and Lady Loretta contain over 80% of the currently

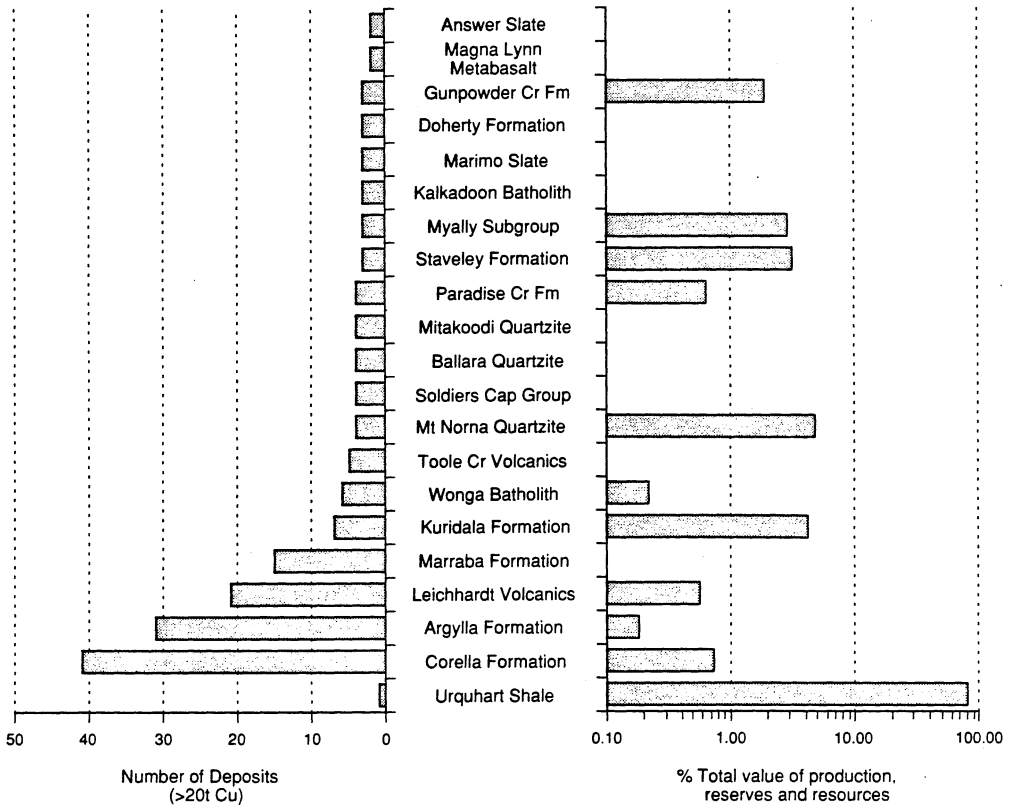

Figure 2. Comparison by formation of the distribution of Cu-Au-Ag deposits and of the production and resources of those deposits.

defined lead-zinc-silver resources of the inlier. The breccia and vein hosted deposits in the Lawn Hill region (eg: Silver King) form a tight cluster of a characteristic deposit type, but are of small size.

The stratiform Dugald River deposit occurs in more deformed and metamorphosed sedimentary rocks mapped as the Corella Formation. The deposit does not appear to be related to any lead-zinc metallogenic trend and contains the only known lead-zinc mineralisation in the Mary Kathleen Zone. The Quamby-Malbon Zone contains a small group of minor zinc occurrences in the Marimo Slate, south-west of Cloncurry. The Kalkadoon-Leichhardt Belt contains no known significant lead-zinc mineralisation.

In contrast to the western Mount Isa Inlier, lead-zinc mineralisation occurs predominantly in the Cloncurry-Selwyn Zone in stratiform deposits associated with banded iron formations (eg: Pegmont). The mineralisation occurs in the highly metamorphosed and deformed Soldiers Cap Group and Kuridala Formation along the south-eastern margin of the inlier. Identified reserves of lead and zinc in the region were boosted substantially by the recent discovery of the very large Cannington deposit. The deposits of the Cloncurry-Selwyn Zone show striking similarities to mineralisation at Broken Hill, N.S.W., in mineralogy, host formations, and metamorphism (Derrick, 1976; Laing, 1990a).

Uranium

Uranium mineralisation in the Mount Isa Inlier is dominated by the Mary Kathleen skarn deposit located in the Corella Formation adjacent to the Burstall Granite. A small number of minor uranium occurrences also occur in the general vicinity (Derrick *et al.*, 1971). There are also many

uneconomic uranium deposits within the Haslingden Group, primarily in the Eastern Creek Volcanics, close to and north of Mount Isa. Mobilisation of uranium from the uranium-rich Sybella Granite during metamorphism is thought to have provided the source for many of these small deposits in the Mount Isa vicinity (Wyborn, 1987).

The other major concentration of uranium occurrences is in the Westmoreland area of the McArthur Basin and Murphy Tectonic Ridge, north of the Mount Isa Inlier. Ahmad (1987) described five basic types of deposits in the Westmoreland Conglomerate and Seigal Volcanics, ranging from disseminated stratabound ores to vein deposits. The largest of the deposits are the shear zone/mafic dyke related stratabound deposits at Namalangi, Redtree and Northeast Westmoreland.

Gold

Most of the gold production from the Mount Isa Inlier has been a by-product from shear and fault controlled vein copper deposits in the Eastern Fold Belt (eg: Mount Elliott, Trekelano, Hampden). However, vein deposits worked solely for gold occur in the Cloncurry-Soldiers Cap area (eg: Gilded Rose), the Bower Bird area of the Myally Shelf (eg: Gertrude) and the May Downs area north-west of Mount Isa. Alluvial gold has been worked at Mount Quamby and from eroded vein deposits on the Cloncurry River (eg: Top Camp).

Discovery of ironstone hosted copper-gold mineralisation at Starra and Osborne (Trough Tank) has added a new class of gold mineralisation to the Mount Isa Inlier. Reserves of gold in these two deposits far exceed the entire previous production from the inlier. More recently, gold has been discovered at Tick Hill in the Corella Formation south of Duchess, broadening gold exploration targets in the Mount Isa Inlier.

Cobalt, Silver, Tungsten, Tin, Manganese, Beryl and Mica, Iron

Each of these commodities has only one or two significant deposits in the Mount Isa Inlier. Mount Cobalt (cobalt), Silver Phantom (silver) and McClennan's Claim (tungsten) are shear or fracture related vein deposits, similar to most of the copper deposits in the eastern part of the inlier. Secondary manganese concentrations (eg: Overhang) occur in the Overhang Jaspilite in the Quamby-Malbon Zone. Beryl and mica are found in pegmatites in the Sybella Granite south of Mount Isa.

Extensive banded iron formations occur in the South Nicholson Basin at Constance Range. The Mount Philp massive hematite-magnetite deposit, hosted by the Corella Formation, may be hydrothermal replacement of a favourable bed or shear zone.

Acknowledgements

The author acknowledges the assistance of the Mineral Resource Assessment Branch of the Australian Geological Survey Organisation in the compilation of the mineral deposit database. R.S. Needham and L.A.I. Wyborn also provided invaluable assistance and editorial guidance. Compilation of the 1:500 000 metallogenic map benefitted from editorial suggestions from the Geological Survey of Queensland.

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Appendix 1

Table of commodity prices used in value calculations

Copper	A$ 3,100/t Cu
Gold	A$ 480/oz Au
Silver	A$ 5.60/oz Ag
Lead	A$ 715/t Pb
Zinc	A$ 1,600/t Zn
Uranium	A$ 24,500/t U3O8
Cobalt	A$ 31,000/t Co
Tin	A$ 6,500/t Sn
Tungsten	A$ 8,000/t W
Manganese	A$ 200/t Mn ore
Iron	A$ 0.75/t Fe ore

Appendix 2

Database Specifications (width is defined by the maximum number of digits or characters allowable in a field, and the number of decimal places in a numerical field)

Copper-gold-silver database

Field	Type	Width
Number	Num	(3,0)
Name	Char	(120)
Metal Production		
Cu (t)	Char	(10)
Au (g)	Num	(7,0)
Ag (kg)	Num	(5,2)
Co (t)	Num	(2,1)
Resource/Reserve		
Tonnes ('000)	Num	(6,0)
Grade		
Cu (%)	Num	(2,1)
Au (g/t)	Num	(2,1)
Classification	Char	(40)
Reference	Num	(3,0)
Value	Char	(10)
Location		
1:100000 geological map	Char	(15)
Lat.	Num	(6,3)
Long.	Num	(6,3)
Host Rocks		
Province	Char	(30)
Formation	Char	(60)
Host lithology	Char	(90)
Associated lithologies	Char	(80)
Regional metamorphism	Char	(30)
Deposit Description		
Relationship to host	Char	(30)
Shape	Char	(30)
Nature of mineralisation	Char	(40)
Secondary enrichment	Char	(20)
Texture	Char	(40)
Local structure	Char	(30)

Dimensions (m)		
length	Char	(12)
width	Char	(10)
depth	Char	(10)
Attitude		
strike	Char	(10)
dip	Char	(10)
pitch	Char	(10)
Mineralisation		
Primary ore	Char	(150)
Secondary ore	Char	(120)
Gangue	Char	(130)
Wallrock alteration	Char	(90)
Deposit Expression	Char	(40)
Type	Char	(6)
References	Char	(60)
Name	Char	(120)

Lead -zinc -silver database

Field	Type	Width
Number	Num	(3,0)
Name	Char	(120)
Metal Production		
Ag (kg)	Num	(8,0)
Pb (t)	Num	(7,0)
Zn (t)	Num	(7,0)
Resource/Reserve		
Tonnes ('000)	Num	(6,0)
Grade		
Ag (g/t)	Num	(3,0)
Pb (%)	Num	(3,1)
Zn (%)	Num	(3,1)
Classification	Char	(40)
Reference	Num	(3,0)
Value	Char	(40)
Location		
1:100000 geological map	Char	(15)
Lat.	Num	(6,3)
Long.	Num	(6,3)
Host Rocks		
Province	Char	(30)
Formation	Char	(60)
Host lithology	Char	(90)
Associated lithologies	Char	(80)
Regional metamorphism	Char	(30)
Deposit Description		
Relationship to host	Char	(30)
Shape	Char	(30)
Nature of mineralisation	Char	(40)
Secondary enrichment	Char	(20)
Texture	Char	(40)
Local structure	Char	(30)
Dimensions (m)		
length	Char	(12)
width	Char	(10)
depth	Char	(10)

Attitude		
strike	Char	(10)
dip	Char	(10)
pitch	Char	(10)
Mineralisation		
Primary ore	Char	(150)
Secondary ore	Char	(120)
Gangue	Char	(130)
Wallrock alteration	Char	(90)
Deposit Expression	Char	(40)
Type	Char	(6)
References	Char	(60)
Name	Char	(120)

Gold database

Field	Type	Width
Number	Num	(3,0)
Name	Char	(120)
Metal Production		
Au (g)	Char	(10)
Ag (kg)	Num	(4,2)
Resource/Reserve		
Tonnes ('000)	Num	(6,0)
Grade		
Au (g/t)	Num	(3,1)
Classification	Char	(40)
Reference	Num	(3,0)
Value	Char	(10)
Location		
1:100000 geological map	Char	(15)
Lat.	Num	(6,3)
Long.	Num	(6,3)
Host Rocks		
Province	Char	(30)
Formation	Char	(60)
Host lithology	Char	(90)
Associated lithologies	Char	(80)
Regional metamorphism	Char	(30)
Deposit Description		
Relationship to host	Char	(30)
Shape	Char	(30)
Nature of mineralisation	Char	(40)
Secondary enrichment	Char	(20)
Texture	Char	(40)
Local structure	Char	(30)
Dimensions (m)		
length	Char	(12)
width	Char	(10)
depth	Char	(10)
Attitude		
strike	Char	(10)
dip	Char	(10)
pitch	Char	(10)
Mineralisation		
Primary ore	Char	(150)
Secondary ore	Char	(120)

Gangue	Char	(130)
Wallrock alteration	Char	(90)
Deposit Expression	Char	(40)
Type	Char	(6)
References	Char	(60)
Name	Char	(120)

Uranium database

Field	Type	Width
Number	Num	(3,0)
Name	Char	(120)
Metal Production		
U3O8 (t)	Num	(5,1)
Cu (t)	Num	(3,1)
Resource/Reserve		
Tonnes ('000)	Num	(6,0)
Grade		
U3O8 (%)	Char	(12)
Cu (%)	Num	(2,1)
Au (g/t)	Char	(6)
Classification	Char	(40)
Reference	Char	(20)
Value	Num	(5,2)
Location		
1:100000 geological map	Char	(15)
Lat.	Num	(6,3)
Long.	Num	(6,3)
Host Rocks		
Province	Char	(30)
Formation	Char	(60)
Host lithology	Char	(90)
Associated lithologies	Char	(80)
Regional metamorphism	Char	(30)
Deposit Description		
Relationship to host	Char	(30)
Shape	Char	(30)
Nature of mineralisation	Char	(40)
Secondary enrichment	Char	(20)
Texture	Char	(40)
Local structure	Char	(30)
Dimensions (m)		
length	Char	(12)
width	Char	(10)
depth	Char	(10)
Attitude		
strike	Char	(10)
dip	Char	(10)
pitch	Char	(10)
Mineralisation		
Primary ore	Char	(150)
Secondary ore	Char	(120)
Gangue	Char	(130)
Wallrock alteration	Char	(90)
Deposit Expression	Char	(40)
Type	Char	(6)
References	Char	(60)

Name	Char	(120)

Miscellaneous database

Field	Type	Width
Number	Num	(3,0)
Name	Char	(120)
Metal commodity	Char	(5)
Metal Production		
Au (g)	Num	(4,0)
Ag (kg)	Num	(5,1)
Co (t)	Num	(4,1)
Cu (t)	Num	(4,1)
W (t)	Num	(2,1)
Mn ore (t)	Num	(4,0)
Beryl (t)	Num	(3,1)
Resource/Reserve		
Tonnes ('000)	Num	(6,0)
Grade		
Fe (%)	Num	(3,1)
Classification	Char	(40)
Reference	Num	(2,0)
Value	Num	(4,2)
Location		
1:100000 geological map	Char	(15)
Lat.	Num	(6,3)
Long.	Num	(6,3)
Host Rocks		
Province	Char	(30)
Formation	Char	(60)
Host lithology	Char	(90)
Associated lithologies	Char	(80)
Regional metamorphism	Char	(30)
Deposit Description		
Relationship to host	Char	(30)
Shape	Char	(30)
Nature of mineralisation	Char	(40)
Secondary enrichment	Char	(20)
Texture	Char	(40)
Local structure	Char	(30)
Dimensions (m)		
length	Char	(12)
width	Char	(10)
depth	Char	(10)
Attitude		
strike	Char	(10)
dip	Char	(10)
pitch	Char	(10)
Mineralisation		
Primary ore	Char	(150)
Secondary ore	Char	(120)
Gangue	Char	(130)
Wallrock alteration	Char	(90)
Deposit Expression	Char	(40)
Type	Char	(6)
References	Char	(60)
Name	Char	(120)

Copper

Gold

Silver

	Name	Metal Production (to 1990)				Resource / Reserve					Value	Location			Host Rocks				
		Cu (tonnes)	Au (grams)	Ag (kg)	Co (tonnes)	Tonnes ('000)	Grade Cu (%)	Grade Au (g/t)	Classification	Reference	($A millions) 1992	1:100 000 geological map	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional metamorphism
1	Again	24.1									0.07	Mammoth Mines	19.962	139.114	Lawn Hill Platform				
2	Amy, Amy North, Amy South (Lady Amy)	37.2									0.12	Mary Kathleen	20.910	139.974	Kalkadoon-Leichhardt Belt	Argylla Formation	acid metavolcanics, schist	slate, siliceous gneiss	greenschist
3	Angel	36.4									0.11	Mary Kathleen	20.768	139.721	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics			
4	Answer	1,083	11,571			7	8.5		unknown	145	5.38	Mount Merlin	21.672	140.360	Quamby-Malbon Zone	Answer Slate	carbonaceous slate, phyllite	quartz sericite schist, quartzite	amphibolite
5	Apple Pie, Apple Pie Extended, Apple Pie #2	54.0	183								0.17	Marraba	20.710	140.015	Mary Kathleen Zone	Corella Formation	hornblende schist		amphibolite
	Argylla - see Blockade																		
6	Asia	108.2	28								0.34	?Marraba							
7	Australian Margaret	73.0									0.23	Cloncurry	20.636	140.525	Quamby-Malbon Zone	Toole Creek Volcanics		granite	
8	Bald Hills	27.4									0.09	Oban	21.483	139.303	Leichhardt River Fault Trough	Eastern Creek Volcanics	chlorite schist, actinolite schist	quartzite, hornblende schist, metabasalt	greenschist
9	Barbara	20.7									0.06	Mary Kathleen	20.635	139.693	Kalkadoon-Leichhardt Belt	Kalkadoon Granodiorite	granite, metadolerite		greenschist
10	Bedford, Bedford North	63.1									0.20	Quamby	20.189	140.186	Quamby-Malbon Zone	Corella Formation	metabasic rocks		
11	Belgium	90.1									0.28	Mount Merlin	21.595	140.452	Quamby-Malbon Zone	Staveley Formation	calcareous micaceous metasiltstone, phyllite	granite	greenschist
	Big Bit - see Little Bit																		
	Binna Burra - see Mt Hope group																		
12	Birthday	30.5									0.09	?Malbon							
13	Blockade, Blockade North, Blockade South (Argylla)	1,283									3.98	Mary Kathleen	20.622	139.877	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics, Magna Lynn Metabasalt	biotite sericite schist, porphyritic rhyolite, metabasalt		amphibolite
	Blue Moon - see Gosp																		
14	Blue Star, Blue Star #2, Blue Star Extended (Double F)	126.9									0.39	Mary Kathleen	20.608	139.901	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	biotite schist	metadolerite, acid metavolcanics	amphibolite
15	Bobby Rod	23.5									0.07	Marraba	20.970	140.039	Quamby-Malbon Zone	Argylla Formation	sericite quartzite		
16	Bohemian Girl	47.3	167								0.15	Quamby	20.377	140.014	Kalkadoon-Leichhardt Belt	Wonga Granite	granite		amphibolite
17	Boomerang (Mt Maggie) (Lady Maggie) (Matlock)	262.3									0.81	Mammoth Mines	19.995	139.112	Lawn Hill Platform	Paradise Creek Formation	shale, jasper	quartzite	
	Brightlights - see Lady Fanny group																		
18	Brilliant, Brilliant Extended	19.5	3,748								0.12	Cloncurry	20.836	140.624	Cloncurry-Selwyn Zone	Mount Norna Quartzite	amphibolite	schist	amphibolite
	Burke and Wills - see Lady Fanny group																		
19	Bushy Park	36.5	62								0.11	Duchess							
	Cabbage Tree - see Little Eva																		
20	Celestial (Telegraph)	26.7									0.08	Marraba	20.999	140.272	Quamby-Malbon Zone	Marraba Volcanics	biotite schist, chlorite schist	metadolerite, quartzite	greenschist
21	Chinaman	71.7									0.22	Marraba	20.998	140.286	Quamby-Malbon Zone	Marraba Volcanics	schist, chloritic schist, quartz chlorite gneiss		greenschist

Deposit Description												Mineralisation				Deposit Expression	Type	References	Name
Relationship to host	Shape	Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m) length	width	depth	Orientation strike	dip	pitch	Primary ore	Secondary ore	Gangue	Wallrock alteration				
																	?2a	118	Again
discordant		multiple vein	supergene		faulted	120	0.2 - 0.9		020	60 W			malachite	quartz, limonite		quartz, gossan	2a	13, 55, 105, 118	Amy, Amy North, Amy South (Lady Amy)
																	?2a	55, 118	Angel
concordant	pipe-like, tabular	shear zone	supergene		sheared	366	0.6 - 4.6	61	170	75 E		chalcopyrite, bornite, pyrite, scheelite	chalcocite, chrysocolla, cuprite	quartz, jasper, limonite		gossan	2a	20, 43, 44, 55, 106, 118, 146, 160	Answer
concordant		shear zone	supergene			600	0.3 - 0.6	30	010	70 W		chalcopyrite	malachite, cuprite tenorite, chalcocite		argillic		2a	55, 105, 118	Apple Pie, Apple Pie Extended, Apple Pie #2
																			Argylla - see Blockade
																	?2a	55	Asia
																	?2a	55	Australian Margaret
discordant		shear zone	supergene	disseminated	sheared			25	165	55 - 80 W		chalcopyrite, arsenopyrite, bornite, galena, tetrahedrite-tennantite	malachite, azurite, chalcocite, tenorite, anglesite				2a	37, 118, 137, 201	Bald Hills
discordant	lenticular		supergene	disseminated	sheared		3.0	6					malachite, chalcocite	calcite, quartz, chlorite		outcrop	2a	72, 118	Barbara
			supergene		sheared							chalcopyrite	malachite, azurite				?2a	55, 118, 227	Bedford, Bedford North
discordant		multiple vein	supergene						000			chalcopyrite, ?pyrite	malachite	quartz, hematite			2a	22, 55, 217	Belgium
																			Big Bit - see Little Bit
																			Binna Burra - see Mt Hope group
																	?2a	55	Birthday
discordant	lenticular	shear zone, multiple vein	supergene		faulted	850	7.6	100	130 - 145	65 - 80 W		chalcopyrite	chalcocite, malachite, cuprite, azurite, chrysocolla, native copper	quartz	silicification	quartz	2a	27, 32, 38, 43, 47, 55, 72, 105, 118, 140	Blockade, Blockade North, Blockade South (Argylla)
																			Blue Moon - see Gosp
discordant		multiple vein, breccia	supergene			40	2.4	41				chalcopyrite	chalcocite, cuprite, azurite, malachite	quartz		outcrop	2a	12, 43, 72, 118, 151	Blue Star, Blue Star #2, Blue Star Extended (Double F)
																	?2a	118	Bobby Rod
			supergene									chalcopyrite, bornite	malachite, azurite, covellite				?2a	55, 118, 227	Bohemian Girl
discordant	pipe-like, lenticular	shear zone, breccia	supergene		sheared, folded	46	4.6 - 9.1	46	090	50 - 80 N			malachite, azurite, cuprite, chalcocite, chrysocolla	quartz, jasper, limonite, calcite	silicification, argillic		2a	27, 32, 43, 55, 118, 186	Boomerang (Mt Maggie) (Lady Maggie) (Matlock)
																			Brightlights - see Lady Fanny group
concordant		multiple vein	supergene		folded		0.9	28	080 - 095	35 - 45 N		scheelite, wolframite	malachite, bismuthinite	quartz, siderite, limonite			2a	55, 88, 102	Brilliant, Brilliant Extended
																			Burke and Wills - see Lady Fanny group
																	?2a	55	Bushy Park
																			Cabbage Tree - see Little Eva
discordant	lenticular	multiple vein	supergene				1.1 - 1.5	9	075 - 085	85 S			malachite, cuprite, azurite, chlacocite	quartz, limonite		quartz	2a	13, 55, 71, 118	Celestial (Telegraph)
concordant	lenticular	shear zone, single vein	supergene		faulted	150	0.9 - 3.0	6	060	75 S			malachite, chalcocite	quartz, limonite, hematite	chlorite, argillic, silicification	quartz	2a	13, 55, 71, 118	Chinaman

	Name	Metal Production (to 1990)				Resource / Reserve					Value	Location			Host Rocks				
		Cu (tonnes)	Au (grams)	Ag (kg)	Co (tonnes)	Tonnes ('000)	Grade Cu (%)	Grade Au (g/t)	Classification	Reference	($A millions) 1992	1:100 000 geological map	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional metamorphism
22	Chum	60.3	121								0.19	Marraba	20.692	140.390	Quamby-Malbon Zone	Mitakoodi Quartzite	quartzite, biotite schist		greenschist
23	Copper Blonde	38.0									0.12	Quamby	20.476	140.068	Mary Kathleen Zone	Corella Formation	siltstone, schist, calc-silicate rocks		amphibolite
	Cosmopolitan - see Little Wonder																		
24	Cresant (?Crescent)	23.8									0.07	Mount Isa	20.804	139.471	Leichhardt River Fault Trough	Eastern Creek Volcanics			greenschist
25	Crusader, Crusader North, Crusader South, Crusader Endeavour, Young Crusader	392.8	1,241								1.24	Coolullah	19.825	140.046	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	amphibolite, granite	quartzite	amphibolite, contact
26	Dahlia	31.4									0.10	?Marraba							
27	Daisy	38.0									0.12	Marraba	20.965	140.276	Quamby-Malbon Zone	Marraba Volcanics	metabasalt, chlorite biotite schist	metadolerite, metadiorite	greenschist
28	Deadlock	34.9									0.11	Malbon	21.020	140.297	Quamby-Malbon Zone	Marraba Volcanics	metabasalt, biotite schist		greenschist
29	Diagonal	57.8	121								0.18	Marraba	20.989	140.269	Quamby-Malbon Zone	Marraba Volcanics	metabasalt, metagreywacke		greenschist
30	Dingo								prospect			Mount Angelay	21.487	140.904	Cloncurry-Selwyn Zone	Soldiers Cap Group	BIF, garnetiferous quartzite	quartzite, amphibolite, gneiss, chlorite sillimanite mica schist	amphibolite
31	Dinkum Digger	58.5	224								0.18	Coolullah	19.842	140.086	Kalkadoon-Leichhardt Belt	Corella Formation	quartz biotite schist, amphibolite		amphibolite
32	Dobbyn, Dobbyn North, Dobbyn South	2,884	11,830								9.12	Alsace	19.799	139.997	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	schist, metarhyolite		greenschist
33	Dolomite	223.1	47								0.69	Marraba	20.741	140.443	Quamby-Malbon Zone	Corella Formation	calc-silicate granofels, calc-silicate breccia, metadolerite		greenschist
	Double F - see Blue Star																		
34	Double Oxide, New Chum	20.9									0.06	Marraba	20.684	140.363	Quamby-Malbon Zone	Mitakoodi Quartzite	schist		
35	Duchess	25,405	76,133	61.83							79.94	Duchess	21.363	139.860	Mary Kathleen Zone	Mount Erle Igneous Complex, Corella Formation	granite	schist, amphibolite, calc-silicate granofels	amphibolite
	Ernest Henry - see Mount Fort Constantine																		
36	Eclipse, Eclipse West	81.6	597								0.26	Coolullah	19.759	140.229	Quamby-Malbon Zone	Soldiers Cap Group	hornblende schist	pegmatite, quartzite	amphibolite
37	Edna May, Edna May West, Edna May West Extended (Willsburgh)	308.6									0.96	Mary Kathleen	20.820	139.839	Kalkadoon-Leichhardt Belt	Argylla Formation	quartz feldspar porphyry	metadolerite	amphibolite
38	Elsie (Elsie Siding)	91.1	628								0.29	Coolullah	19.823	140.016	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics			
	Esperanza - see Mammoth																		
39	Even Steven	57.2									0.18	Marraba	20.905	140.013	Mary Kathleen Zone	Corella Formation, Burstall Granite			
40	Evening Star (Mt Wheeler)	124.0	1,281	10.78							0.41	Cloncurry	20.991	140.742	Cloncurry-Selwyn Zone	Toole Creek Volcanics	slate	metabasalt, metadolerite	greenschist
41	Fairfield	107.7	37								0.33	Marraba	20.652	140.363	Quamby-Malbon Zone	Corella Formation			greenschist
42	Federal	1,035	1,561	92.65							3.25	Marraba	20.599	140.196	Quamby-Malbon Zone	Tommy Creek beds	schist, carbonaceous slate		greenschist

Deposit Description												Mineralisation				Deposit Expression	Type	References	Name
Relationship to host	Shape	Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m)			Orientation			Primary ore	Secondary ore	Gangue	Wallrock alteration				
						length	width	depth	strike	dip	pitch								
discordant		single vein	supergene		faulted, sheared	100	1.2 - 4.0	30	105 - 120	80 N	E	chalcopyrite	cuprite, chalcocite, malachite, tenorite, scheelite	quartz, jasper, limonite, calcite, chlorite		outcrop, geophysical	2a	27, 32, 43, 55, 71, 118	Chum
discordant	lenticular	multiple vein	supergene			200	25 - 30					chalcopyrite	malachite, cuprite, chalcocite	calcite, clay		outcrop	2a	30, 55, 117, 227	Copper Blonde
																			Cosmopolitan - see Little Wonder
																	?2a	118	Cresant (?Crescent)
discordant		shear zone	supergene		faulted	275	10.0	60	145	65 - 75 E		chalcopyrite, bornite, pyrrhotite, pyrite	chalcocite, covellite, malachite, cuprite	calcite, magnetite	silicification, sericite, talc	outcrop	2a	55, 75, 117, 118, 177, 186, 225	Crusader, Crusader North, Crusader South, Crusader Endeavour, Young Crusader
																	?2a	55	Dahlia
discordant	lenticular	shear zone, multiple vein	supergene		faulted	600	0.5 - 2.5	23	075	80		chalcopyrite, pyrite	malachite, cuprite, chalcocite	quartz, limonite, chlorite		quartz	2a	13, 43, 55	Daisy
discordant	lenticular	shear zone	supergene		faulted	131	0.6 - 2.4	24	070	80 - 90 S		pyrite, pyrrhotite	malachite, cuprite	quartz, limonite		quartz	2a	13, 55, 73, 118, 201	Deadlock
discordant	lenticular	multiple vein	supergene		faulted	50	0.6 - 0.9	3	080	75 S			malachite, cuprite, chalcocite, ?tetrahedrite	quartz, hematite		quartz	2a	13, 55	Diagonal
stratiform	tabular	bed	supergene	laminated/ banded	folded							chalcopyrite, pyrrhotite, sphalerite, pyrite	gahnite, corkite, plumbogummite	magnetite, hematite, quartz, garnet, goethite, graphite, cryptomelane, Mn silicates, Mn oxides		gossan	4a	73, 145	Dingo
discordant	tabular	shear zone, multiple vein	supergene		faulted	15	1.2	27	160	90		chalcopyrite, pyrite, molybdenite	malachite, azurite, chalcocite, covellite	quartz, limonite		gossan	2a	47, 55, 118, 225	Dinkum Digger
discordant		shear zone	supergene		sheared	134	0.9 - 3.7	101	000	75 E		chalcopyrite, pyrite	chalcocite, malachite, azurite, tenorite, cuprite	quartz			2a	55, 70, 83, 146	Dobbyn, Dobbyn North, Dobbyn South
discordant	lenticular		supergene	disseminated			100	50				chalcopyrite	malachite	calcite		outcrop	2a	55, 71	Dolomite
																			Double F - see Blue Star
discordant		shear zone, single vein	supergene				0.8 - 1.2	8	110				malachite, chrysocolla, cuprite	quartz, limonite		quartz, gossan	2a	13, 55	Double Oxide, New Chum
discordant		shear zone	supergene		sheared, faulted	110		260	000	60 - 80 W	steep N	chalcopyrite, pyrite	bornite, chalcocite, cuprite, malachite	quartz, limonite		outcrop	2a	13, 20, 25, 55, 146	Duchess
																			Ernest Henry - see Mount Fort Constantine
discordant		multiple vein	supergene				0.2 - 1.2	5	000			chalcopyrite	cuprite, chalcocite, malachite	quartz, limonite		gossan	2a	13, 55, 118, 221, 225	Eclipse, Eclipse West
discordant		shear zone, single vein	supergene	disseminated	faulted	24	15.2	31	130 - 150	80 W	steep S		malachite, cuprite, azurite, chrysocolla	quartz	argillic		2a	27, 32, 43, 55, 72, 118	Edna May, Edna May West, Edna May West Extended (Willsburgh)
			supergene				0.3 - 0.9		150	90			malachite, chrysocolla	quartz, limonite		quartz	2a	13, 55, 225	Elsie (Elsie Siding)
																			Esperanza - see Mammoth
																	?2a	118	Even Steven
discordant		shear zone, single vein	supergene		faulted		2.0 - 15.2	28	010	45 S		pyrite	malachite	quartz, calcite, kaolinite	argillic, carbonate	gossan	2a	13, 88, 99, 102, 166	Evening Star (Mt Wheeler)
discordant		single vein	supergene			152	1.5		057 - 087	90			malachite, chalcocite, cuprite	quartz, jasper, limonite		gossan	2a	27, 32, 55, 118	Fairfield
concordant	tabular	shear zone, multiple vein	supergene		sheared	64	1.7	122	000	steep		chalcopyrite, pyrite	azurite, chalcocite, bornite, malachite, cuprite	quartz, calcite, kaolinite			2a	55, 71, 118, 213	Federal

	Name	Metal Production (to 1990)				Resource / Reserve					Value	Location			Host Rocks				
		Cu (tonnes)	Au (grams)	Ag (kg)	Co (tonnes)	Tonnes ('000)	Grade Cu (%)	Grade Au (g/t)	Classification	Reference	($A millions) 1992	1:100 000 geological map	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional metamorphism
43	Flagship, Flagship #1, Flagship #2	43.2	178								0.14	Cloncurry	20.933	140.783	Cloncurry-Selwyn Zone	Toole Creek Volcanics	slate	feldspar porphyry dyke	
	Florence - see McPhail																		
	Flying Pig - see Lady Annie																		
44	Gosp, Gosp South, Gosp West (Blue Moon)	108.0									0.33	Mary Kathleen	20.599	139.897	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	metadolerite, biotite schist	acid metavolcanics, chlorite schist, actinolite schist	amphibolite
45	Great Australia, Paddock Lode	2,939	1,322			3,840	0.9		inferred	207	119.84	Cloncurry	20.721	140.512	Mary Kathleen Zone	Gilded Rose Breccia	dolomitic sandstone, dolomitic breccia, metabasalt, metadolerite	metasediments	greenschist
46	Great Central (Grand Central)	31.6									0.10	Mary Kathleen	20.918	139.942	Kalkadoon-Leichhardt Belt	Argylla Formation	schist		amphibolite
	Green's Creek - see Mount Hope group																		
	Gunpowder - see Mammoth																		
47	Hampden, Hampden Consols, Hampden Queen, Block 37, Block15	16,795	376,112			1,481	1.7		inferred, indicated	132	136.35	Mount Angelay	21.277	140.506	Cloncurry-Selwyn Zone	Kuridala Formation	carbonaceous slate, metadolerite	metabasalt, quartzite	amphibolite
48	Hidden Treasure	22.8									0.07	Alsace	19.679	139.807	Myally Shelf	Surprise Creek Formation	carbonaceous siltstone		greenschist
49	Horse Creek	40.4									0.13	Malbon	21.407	140.325	Quamby-Malbon Zone	Mitakoodi Quartzite			
50	Inheritance (Inherited)	95.3	1,997								0.33	Duchess	21.482	139.903	Mary Kathleen Zone	Corella Formation			
51	Inkerman	54.9									0.17	Mary Kathleen	20.873	139.931	Kalkadoon-Leichhardt Belt	Argylla Formation	metarhyodacite, biotite schist	feldspar biotite rock	amphibolite
52	Iron Duke, Iron Duke Extended	89.3									0.28	Mary Kathleen	20.604	139.899	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	metadolerite, biotite schist	acid metavolcanics	amphibolite
53	Italian	32.2	37								0.10	Duchess			Kalkadoon-Leichhardt Belt	Argylla Formation	porphyry, chloritic schist		amphibolite
54	Ivena, Ivena North	593.1									1.84	Mount Oxide	19.470	139.400	Lawn Hill Platform	Whitworth Quartzite			greenschist
55	IXL	73.6									0.23	Mary Kathleen	20.601	139.886	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	biotite schist	acid metavolcanics, metadolerite	amphibolite
56	Jonny May	42.8									0.13	?Alsace							
57	Jessie	58.6									0.18	Marraba	20.722	140.497	Quamby-Malbon Zone	Mitakoodi Quartzite	sandstone, siltstone, metadolerite		amphibolite
	Jola Rose - see Lady Rose																		
58	Jubilee, Jubilee North	237.4									0.74	Marraba	20.799	140.006	Mary Kathleen Zone	Corella Formation	biotite schist, muscovite schist	amphibolite, feldspathic gneiss, calc silicate granofels, hornfels, quartzite	amphibolite
59	Juenburra	28.4									0.09	Duchess							
	Juno - see Lady Fanny																		
60	Just in Time	133.2	196								0.42	Malbon	21.082	140.271	Quamby-Malbon Zone	Marraba Volcanics	metabasalt		greenschist
	Kabunga - see Mammoth																		
61	Kalkadoon	3,553	1,197								11.03	Alsace	19.983	139.913	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	schist, slate	acid metavolcanics, metadolerite	greenschist
	Kangaroo - see Mount Devencourt																		
62	Kangaroo Rat (Wallace)	31.9	2,110								0.13	Cloncurry	20.839	140.749	Cloncurry-Selwyn Zone	Soldiers Cap Group	siliceous slate	amphibolite	amphibolite

Deposit Description												Mineralisation				Deposit Expression	Type	References	Name
Relationship to host	Shape	Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m)			Orientation			Primary ore	Secondary ore	Gangue	Wallrock alteration				
						length	width	depth	strike	dip	pitch								
discordant		multiple vein	supergene		folded	300	5.5	15	170	90			malachite, chalcocite	quartz, limonite			2a	43	Flagship, Flagship #1, Flagship #2
																			Florence - see McPhail
																			Flying Pig - see Lady Annie
discordant		shear zone, multiple vein	supergene		sheared		0.6 - 1.8	24				chalcopyrite	malachite, azurite, chalcocite, cuprite, chrysocolla, bornite	quartz			2a	12, 55, 118	Gosp, Gosp South, Gosp West (Blue Moon)
discordant	pipe-like, tabular	shear zone, multiple vein	supergene		faulted, folded	152	0.6 - 15.2	107	000 - 045	45 - 60 W	35 S	chalcopyrite, pyrite	chalcocite, bornite, cuprite, native copper, malachite, azurite, chrysocolla	quartz, dolomite, calcite, jasper, hematite, magnetite, chlorite, limonite	albitic	gossan, geophysical	2a	55, 69, 76, 118, 146	Great Australia, Paddock Lode
discordant	lenticular	shear zone, multiple vein	supergene		sheared	120	9.0 - 21.0		360	85 W			malachite	quartz, limonite		gossan, quartz	2a	13, 105, 118	Great Central (Grand Central)
																			Green's Creek - see Mount Hope group
																			Gunpowder - see Mammoth
discordant	lenticular	shear zone, multiple vein	supergene		sheared	975	1.0 - 12.0	213	360	75 E		chalcopyrite, marcasite, pyrite	malachite, chrysocolla, tenorite, chalcocite, cuprite	quartz, kaolinite, hematite	silicification, argillic	outcrop, geophysical	2a	13, 24, 27, 43, 55, 69, 73, 118, 146, 195, 197	Hampden, Hampden Consols, Hampden Queen, Block 37, Block15
stratabound			supergene										chalcocite				?2a	55, 70, 118	Hidden Treasure
																	?2a	55, 118	Horse Creek
																	?2a	55	Inheritance (Inherited)
discordant		shear zone, breccia	supergene		sheared	33	0.6 - 3.4	13	038, 160	55 - 75 N		chalcopyrite, pyrite	azurite, malachite, chalcocite, chrysocolla	quartz, kaolinite	argillic	quartz	2a	47, 55, 72, 118	Inkerman
discordant		shear zone, multiple vein	supergene		sheared	170	0.3 - 1.8	30	160	90		chalcopyrite, pyrite	malachite, azurite, chalcocite, cuprite, bornite	quartz, calcite, gypsum			2a	12, 118	Iron Duke, Iron Duke Extended
			supergene				0.5 - 1.8	14				chalcopyrite	malachite, cuprite, chalcocite, native copper	quartz, limonite	argillic	outcrop	?2a	13, 55	Italian
																	?2a	55, 118	Ivena, Ivena North
discordant		multiple vein	supergene						135	steep		chalcopyrite	malachite, chalcocite, bornite, chrysocolla	quartz, jasper, opal	argillic	gossan	2a	55, 118	IXL
																	?2a	118	Jenny May
discordant		single vein	supergene			13	0.6 - 1.2	18	080	80 S			malachite	quartz, limonite, chalcedony		quartz	?2a	13, 55, 71	Jessie
																			Jola Rose - see Lady Rose
concordant	lenticular	single vein	supergene		faulted	360	0.3 - 3.0	40	175	65 - 85 W		chalcopyrite, pyrite, pyrrhotite	malachite, azurite, chalcocite, cuprite, bornite, chrysocolla	quartz, calcite, limonite, tourmaline, gypsum, apatite		gossan	2a	47, 55, 71, 105, 118	Jubilee, Jubilee North
																	?2a	55	Juenburra
																			Juno - see Lady Fanny
discordant	lenticular		supergene				0.9	6	070	steep		chalcopyrite, pyrite	chalcocite, malachite, cuprite, chrysocolla	quartz	silicification	quartz	2a	13, 55, 73	Just in Time
																			Kabunga - see Mammoth
discordant	tabular	shear zone, multiple vein	supergene		sheared	198	1.2 - 3.7	107	000			chalcopyrite	chalcocite, malachite, azurite, cuprite	quartz, calcite, siderite	carbonate		2a	55, 70, 118, 185, 222	Kalkadoon
																			Kangaroo - see Mount Devoncourt
	lenticular		supergene	disseminated		46	0.1 - 1.0		030 - 040	70 N		pyrite, native gold	malachite, chalcocite, cuprite, chrysocolla, native copper	quartz, jasper, limonite, amphibole, siderite	silicification	concealed	2a	47, 55, 88, 102, 117, 118	Kangaroo Rat (Wallace)

	Name	Metal Production (to 1990)				Resource / Reserve					Value	Location			Host Rocks				
		Cu (tonnes)	Au (grams)	Ag (kg)	Co (tonnes)	Tonnes ('000)	Grade Cu (%)	Grade Au (g/t)	Classification	Reference	($A millions) 1992	1:100 000 geological map	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional metamorphism
63	King Edward (King Edward VII)	24.3	3,257								0.13	Cloncurry	20.721	140.654	Cloncurry-Selwyn Zone	Corella Formation	hornblende schist	acid metavolcanics	amphibolite
64	King Solomon #1, King Solomon #2, King Solomon #3, King Solomon North, King Solomon South	131.6									0.41	Mary Kathleen	20.700	139.810	Kalkadoon-Leichhardt Belt	Corella Formation	schist, phyllite, siltstone, limestone	scapolite calc-silicate, metadolerite	amphibolite
65	Kings Cross	287.5									0.89	Mary Kathleen	20.745	139.910	Kalkadoon-Leichhardt Belt	Hardway Granite	granite, biotite schist, metadolerite, felsic dykes		amphibolite
66	Kohinoor	130.0	187								0.41	Coolullah	19.761	140.005	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	hornblende schist	porphyritic rhyolite	amphibolite
67	Labour Victory	309.0	709								0.97	Malbon	21.449	140.465	Cloncurry-Selwyn Zone	Kuridala Formation	carbonaceous slate, carbonaceous siltstone		amphibolite
68	Lady Agnes	77.6									0.24	Kennedy Gap	20.414	139.488	Leichhardt River Fault Trough	Breakaway Shale	siltsone, shale		greenschist
	Lady Amy - see Amy																		
69	Lady Annie, Flying Pig	1,393	65			1,461	2.8		measured, indicated, inferred	151	132.49	Mammoth Mines	19.776	139.044	Lawn Hill Platform	Paradise Creek Formation	dolomitic siltstone, dolomitic shale	dolomite, carbonaceous dolomite, sanstone, quartzite, chert	sub-greenschist
70	Lady Clayre	25.7		1.38							0.08	Quamby	20.323	140.137	Mary Kathleen Zone	Corella Formation	slate	limestone, quartzite	amphibolite
71	Lady Ethleen	60.5									0.19	Mary Kathleen	20.930	139.962	Kalkadoon-Leichhardt Belt	Argylla Formation	acid metavolcanics, amphibolite		amphibolite
72	Lady Fanny, Lady Fanny North, Brightlights, Burke and Wills, Juno [Lady Fanny Group]	597.5	2,044								1.88	Duchess	21.254	139.784	Kalkadoon-Leichhardt Belt	Argylla Formation	biotite schist, amphibolite, quartzite	feldspar porphyry dykes, acid metavolcanics	amphibolite
73	Lady Jenny	109.9	66								0.34	Mary Kathleen	20.919	139.970	Kalkadoon-Leichhardt Belt	Argylla Formation	quartzite, acid metavolcanics, chloritic schist		amphibolite
	Lady Maggie - see Boomerang																		
74	Lady May	211.8									0.66	?Malbon							
75	Lady Rose, Jola Rose (Rose)	78.5	707								0.25	Mary Kathleen	20.906	139.972	Kalkadoon-Leichhardt Belt	Argylla Formation, Ballara Quartzite	amphibolite, micaceous schist, acid metavolcanics	quartzite	amphibolite
76	Lady Vera	42.9									0.13	Marraba	20.764	140.093	Mary Kathleen Zone	Corella Formation	limestone, calc-silicate rock, metadolerite		greenschist
77	Lakeview, Lakeview #1	75.2									0.23	Marraba	20.834	140.025	Mary Kathleen Zone	Argylla Formation	biotite schist, basic metavolcanics, acid metavolcanics		amphibolite
	Late Volga - see Volga																		
78	Lillimay, Lillimay #1, Lillimay Extended #1 (Royal)	494.8									1.53	Prospector	20.432	139.826	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	acid metavolcanics, talc chlorite schist, biotite schist	metadolerite	amphibolite
79	Little Beauty, Little Beauty #2, (McMillans)	64.5									0.20	Mary Kathleen	20.604	139.972	Kalkadoon-Leichhardt Belt	Argylla Formation, Ballara Quartzite	quartzite, schist		greenschist
80	Little Bit, Little Bit Extended, Big Bit	154.8									0.48	Dajarra	21.818	139.802	Kalkadoon-Leichhardt Belt	One Tree Granite, Magna Lynn Metagasalt	granite, metabasalt	metadolerite	amphibolite
81	Little Eva (Cabbage Tree)	28.6									0.09	Quamby	20.144	140.144	Mary Kathleen Zone	Corella Formation	calc-silicate rocks		

Deposit Description												Mineralisation				Deposit Expression	Type	References	Name
Relationship to host	Shape	Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m) length	width	depth	Orientation strike	dip	pitch	Primary ore	Secondary ore	Gangue	Wallrock alteration				
discordant		shear zone, single vein					0.9	25	025			chalcopyrite, native gold		quartz			2a	55, 181	King Edward (King Edward VII)
discordant		shear zone, multiple vein	supergene		sheared	100	5.0		170 - 180	80 - 85 E		chalcopyrite	malachite, azurite, chalcocite, cuprite	quartz, jasper, calcite, limonite, actinolite			2a	31, 55, 72, 118, 160	King Solomon #1, King Solomon #2, King Solomon #3, King Solomon North, King Solomon South
discordant		shear zone	supergene		faulted	70	0.9 - 2.4	24	060	70 N		chalcopyrite	chalcocite, malachite, cuprite, tenorite	quartz, limonite, chlorite, actinolite, biotite, tourmaline		gossan	2a	27, 32, 38, 47, 55, 72, 105, 118	Kings Cross
																geophysical	?2a	55, 118, 168, 225	Kohinoor
discordant		shear zone	supergene		sheared, fractured		0.5 - 1.8	11				pyrite	cuprite, malachite, azurite, chrysocolla, chalcocite	quartz, limonite	argillic	gossan	2a	13, 20, 55, 73, 118	Labour Victory
discordant		shear zone, multiple vein	supergene		faulted			20	025	75 E			malachite, azurite	quartz, limonite			2a	55, 118, 201	Lady Agnes
																			Lady Amy - see Amy
discordant	lenticular, irregular	breccia	supergene	brecciated, disseminated	faulted, folded	300	60	160	070			chalcopyrite, arsenopyrite, pyrite	bornite, chalcocite, covellite, malachite, azurite, cuprite, tenorite, chrysocolla, neodigenite, native copper	quartz, dolomite, mica, diabantite, graphite, limonite	silica-dolomite, argillic	outcrop	1	27, 32, 38, 43, 55, 66, 118, 122, 201, 211	Lady Annie, Flying Pig
concordant		multiple vein	supergene		faulted		0.3 - 1.8	14	000				malachite, chalcocite, cuprite	quartz, limonite	argillic, silicification	gossan	2a	13, 55, 67, 118	Lady Clayre
concordant	lenticular	shear zone, multiple vein	supergene		sheared, faulted	104	8.5	90	010	45 W		chalcopyrite	malachite, azurite, chrysocolla	quartz, limonite		gossan	2a	43, 44, 55, 72, 105, 213	Lady Ethleen
discordant		shear zone, multiple vein	supergene		faulted, folded	12 - 46	0.1 - 7.3	19 - 58	005 - 070	75 - 80 E	80 S	chalcopyrite, pyrite, native gold	chalcocite, bornite, cuprite, malachite, azurite, chrysocolla	quartz, biotite, hornblende	silicification	gossan, quartz	2a	13, 20, 44, 55, 118, 186, 201	Lady Fanny, Lady Fanny North, Brightlights, Burke and Wills, Juno [Lady Fanny Group]
discordant		shear zone, multiple vein	supergene		folded, sheared	183	3.0	31	030	70 W		chalcopyrite, pyrite	malachite, azurite, cuprite, chalcocite, chrysocolla, chalcanthite	quartz, limonite		quartz	2a	43, 55, 117, 118, 160	Lady Jenny
																			Lady Maggie - see Boomerang
																	?2a	55	Lady May
discordant	lenticular	shear zone, multiple vein, breccia	supergene		folded, sheared	27	0.2 - 2.0	30	160, 070	80 - 85 N		chalcopyrite, pyrite	malachite, chalcocite, cuprite, azurite	quartz, calcite, limonite	argillic	gossan	2a	13, 43, 55, 72, 105, 117, 118	Lady Rose, Jola Rose (Rose)
discordant		shear zone, multiple vein	supergene		sheared	300		10	025			chalcopyrite	chrysocolla, malachite, azurite	quartz, calcite			2a	71, 118	Lady Vera
discordant		shear zone, multiple vein	supergene	disseminated	faulted, sheared	107 - 152	2.4 - 3.1	30 - 40	070 - 095	steep N		chalcopyrite, pyrrhotite, pyrite, arsenopyrite	malachite, chrysocolla	quartz, epidote, chlorite			2a	71, 118	Lakeview, Lakeview #1
																			Late Volga - see Volga
discordant		shear zone, multiple vein	supergene	massive	sheared	49	0.6 - 1.5	61	080 - 085	65 - 75 S		chalcopyrite, pyrite	chalcocite, covellite, malachite, azurite, tenorite	quartz, biotite, limonite		gossan, quartz	2a	27, 32, 43, 55, 118, 224	Lillimay, Lillimay #1, Lillimay Extended #1 (Royal)
concordant		single vein	supergene		faulted	150	0.2 - 0.9	15	175 - 180	80 E - 85 W		chalcopyrite	malachite, azurite, chalcocite	quartz, limonite		gossan	2a	13, 55, 118, 201	Little Beauty, Little Beauty #2, (McMillans)
discordant			supergene						045	S		chalcopyrite, bornite, pyrite	malachite, chrysocolla, cuprite, native copper, covellite, chalcocite	quartz, limonite, jasper		gossan	2a	19, 37, 118, 128	Little Bit, Little Bit Extended, Big Bit
																	?2a	55, 118	Little Eva (Cabbage Tree)

	Name	Metal Production (to 1990)				Resource / Reserve					Value	Location			Host Rocks				
		Cu (tonnes)	Au (grams)	Ag (kg)	Co (tonnes)	Tonnes ('000)	Grade Cu (%)	Grade Au (g/t)	Classification	Reference	($A millions) 1992	1:100 000 geological map	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional metamorphism
82	Little Wonder (Cosmopolitan), Mussolini, Trump [Little Wonder Group]	387.9									1.20	Alsace	19.939	139.995	Kalkadoon-Leichhardt Belt	Argylla Formation	biotite schist, hornblende schist	quartzite, porphyritic metarhyodacite	amphibolite
83	Longara	57.5									0.17	Marraba	20.909	140.310	Quamby-Malbon Zone	Marraba Volcanics	metabasalt	metadolerite	greenschist
84	Magnet	845.8	6,552								2.72	Quamby	20.276	140.195	Quamby-Malbon Zone	Soldiers Cap Group, Naraku Granite	micaceous schist, metabasic rocks	granite	greenschist
85	Magpie	197.9	348								0.62	Marraba	20.733	140.422	Quamby-Malbon Zone	Corella Formation	calc silicate breccia, quartzite, crystalline calcite dolomite lenses	metadolerite	greenschist
86	Malbon	280.3	1,431								0.89	Malbon	21.085	140.268	Quamby-Malbon Zone	Marraba Volcanics	metabasalt, slate		greenschist
87	Mammoth (Gunpowder), Mammoth South, Mammoth Extended, North Portal, Kabunga, Esperanza	56,028				12,800	2.1		measured, indicated, inferred	2	995.06	Mammoth Mines	19.699	139.366	Lawn Hill Platform	Myally Subgroup, Esperanza Formation	sandstone, siltstone, quartzite, stromatolitic chert, dolomite	metabasalt, conglomerate	sub-greenschist
88	Manxman	214.3									0.66	Prospector	20.451	139.819	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	hornblende schist, feldspar porphyry		amphibolite
89	Maria Doll (IXL)	26.2	267								0.09	Cloncurry	20.842	140.691	Cloncurry-Selwyn Zone	Toole Creek Volcanics	carbonaceous slate	amphibolite	amphibolite
90	Marilyn	30.4									0.09	Selwyn	21.664	140.500	Cloncurry-Selwyn Zone	Kuridala Formation	carbonaceous slate		amphibolite
	Matlock - see Boomerang																		
91	McLeod Hill (Mount McLeod)	34.9									0.11	Mammoth Mines	19.943	139.150	Lawn Hill Platform	Fiery Creek Volcanics	sandstone	shale, calcareous shale	sub-greenschist
92	McPhail, Florence	36.5	31								0.11	Malbon	21.174	140.373	Quamby-Malbon Zone	Marraba Volcanics	metasiltstone, quartzite		greenschist
	McMillans - see Little Beauty																		
93	Megaphone (The Belfast)	285.3									0.88	Mary Kathleen	20.661	139.893	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	metarhyolite, biotite schist, muscovite schist, metadolerite		amphibolite
94	Melba	113.5									0.35	Mary Kathleen	20.852	139.916	Kalkadoon-Leichhardt Belt	Argylla Formation	biotite schist, acid metavolcanics, metadolerite		amphibolite
95	Mighty Atom, Mighty Atom South	1,211	1,070								3.77	Alsace	19.946	139.989	Kalkadoon-Leichhardt Belt	Argylla Formation	metasilstone, biotite schist, chlorite schist, metadacite		amphibolite
96	Mike	77.7									0.24	Duchess	21.128	139.592					
97	Monakoff	18.6	367								0.06	Cloncurry	20.628	140.687	Cloncurry-Selwyn Zone	Mount Norna Quartzite	ferruginous sandstone	slate, mica schist, amphibolite	amphibolite
	Monitor - see Young Australian																		
98	Mount Colin	30.6									0.09	Marraba	20.776	140.044	Mary Kathleen Zone	Corella Formation	calc silicate hornfels		amphibolite
99	Mount Cuthbert, Mt Cuthbert South	4,481	5,427	30.98							13.98	Alsace	19.991	139.914	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	schist, slate, acid metavolcanics	metadolerite, chlorite schist, biotite schist, phyllite, arkose	greenschist
100	Mount Debbie	98.0									0.30	Mary Kathleen	20.563	139.982	Kalkadoon-Leichhardt Belt	Argylla Formation	biotite schist, acid metavolcanics, quartzite	metadolerite	amphibolite
101	Mount Devencourt (Kangaroo)	32.5									0.10	Malbon	21.308	140.381	Quamby-Malbon Zone	Wimberu Granite, Marraba Volcanics	quartzite, hornblende biotite schist	granite	greenschist
102	Mount Devine	101.7									0.32	Mary Kathleen	20.550	139.831	Kalkadoon-Leichhardt Belt	Argylla Formation	quartz feldspar porphyry, rhyodacite tuff, quartz mica schist	chlorite schist, sericite schist	amphibolite

Deposit Description												Mineralisation				Deposit Expression	Type	References	Name
Relationship to host	Shape	Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m)			Orientation			Primary ore	Secondary ore	Gangue	Wallrock alteration				
						length	width	depth	strike	dip	pitch								
discordant		shear zone, breccia, multiple vein	supergene	disseminated	sheared	580	0.3 - 3.0	46	155 - 180	70 E - 75 W		chalcopyrite, pyrite	malachite, azurite, cuprite, chalcocite, chrysocolla, native copper, chalcotrichite	quartz, biotite		outcrop	2a	55, 70, 118, 186	Little Wonder (Cosmopolitan), Mussolini, Trump [Little Wonder Group]
																	?2a	55	Longara
discordant	lenticular	shear zone	supergene		sheared	152	4.6	70	080	70 - 80 N		chalcopyrite, pyrite, molybdenite	chalcocite, malachite	quartz			2a	55, 118, 227	Magnet
discordant	lenticular	multiple veins, shear zone, breccia	supergene		faulted	300	12.0	15	160	60 - 70 E			cuprite, malachite, chrysocolla, native copper	calcite, dolomite, quartz, jasper, limonite		outcrop	2a	43, 55, 117, 118	Magpie
discordant			supergene			240	0.1 - 1.3	13	070	75		chalcopyrite, pyrite	malachite, chrysocolla, cuprite, chalcocite	quartz	silicification	outcrop	2a	13, 55, 73	Malbon
stratabound	lenticular	breccia	supergene		faulted, folded	640	150.0	660				chalcopyrite, pyrite, chalcocite, bornite, digenite, covellite	chalcocite, malachite	quartz, calcite, chlorite, dolomite	silicification, dolomite, sericite, chlorite, Kfeldspar	gossan	1	32, 38, 47, 55, 109, 118, 136, 211	Mammoth (Gunpowder), Mammoth South, Mammoth Extended, North Portal, Kabunga, Esperanza
concordant		shear zone	supergene			31	0.9 - 1.7	25	105	80 S		chalcopyrite	malachite, azurite, cuprite, chalcocite, tenorite, covellite	quartz. limonite		gossan	2a	27, 32, 43, 55, 118, 186, 224	Manxman
discordant		single vein	supergene				0.1 - 0.5	37	120 - 135	75 - 90 N			malachite, azurite, cuprite	quartz, jasper, limonite, calcite, siderite, kaolinite		quartz	2a	43, 55, 102, 118, 173	Maria Dell (IXL)
																	?2a	118	Marilyn
																			Matlock - see Boomerang
		shear zone, multiple vein	supergene		sheared	30	0.4	5		70 - 80 W			malachite, chrysocolla	quartz, limonite			2a	27, 32, 55	McLeod Hill (Mount McLeod)
			supergene				0.8	15				chalcopyrite	malachite, chrysocolla, chalcocite, cuprite	quartz, limonite		gossan	2a	13, 55, 73	McPhail, Florence
																			McMillans - see Little Beauty
concordant		shear zone, multiple vein	supergene	disseminated	sheared	49	0.3 - 3.0	26	160	60 - 80 W		chalcopyrite, pyrite	chalcocite, bornite, malachite, azurite, chrysocolla	quartz, chlorite, limonite		gossan	2a	27, 32, 55, 72, 105, 118	Megaphone (The Belfast)
discordant		shear zone, breccia, multiple vein	supergene		sheared, faulted	80	0.1 - 2.0	34	130 - 150	60 - 90 W		chalcopyrite, pyrite	chalcocite, malachite, azurite	quartz, biotite	silicification	gossan	2a	43, 55, 105, 117, 118	Melba
discordant	pipe-like	shear zone	supergene	disseminated	sheared	183	0.3 - 1.5	76	000	70 E		chalcopyrite	chalcocite, malachite, azurite	quartz, calcite		geophysical	2a	43, 55, 70, 83, 118, 214	Mighty Atom, Mighty Atom South
																	?2a	118	Mike
discordant		single vein	supergene				0.6		045				chalcocite, cuprite, bornite	quartz, limonite		outcrop	2a	13, 31, 55	Monakoff
																			Monitor - see Young Australian
discordant		shear zone, multiple vein, breccia	supergene		faulted	153	0.3 - 1.5	34	090 - 120	60 - 80 N		chalcopyrite, pyrite	malachite, chrysocolla, chalcocite	quartz, jasper, limonite			2a	118, 201	Mount Colin
discordant		shear zone, multiple vein	supergene		sheared	91 - 198	9.1	148	000	60 - 90 E		chalcopyrite, pyrite, pyrrhotite	chalcocite, malachite, cuprite, azurite	dolomite, quartz, limonite, siderite	argillic	gossan	2a	13, 55, 56, 70, 185	Mount Cuthbert, Mt Cuthbert South
discordant		shear zone, multiple vein	supergene		sheared		0.6 - 1.5	30	000	70 W		chalcopyrite	malachite, azurite, cuprite	quartz, limonite, kaolinite			2a	72, 118	Mount Debbie
discordant		multiple vein	supergene		fractured	24		15		W			chrysocolla, malachite, azurite, cuprite	limonite		concealed	2a	13, 73, 118	Mount Devencourt (Kangaroo)
discordant	irregular	multiple vein	supergene	disseminated	faulted, sheared	200	4.0 - 6.0		150	90	60 S	chalcopyrite, pyrrhotite, pyrite	malachite, azurite				2a	72, 118, 203	Mount Devine

	Name	Metal Production (to 1990)				Resource / Reserve					Value	Location			Host Rocks				
		Cu (tonnes)	Au (grams)	Ag (kg)	Co (tonnes)	Tonnes ('000)	Grade Cu (%)	Grade Au (g/t)	Classification	Reference	($A millions) 1992	1:100 000 geological map	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional metamorphism
103	Mount Dore	6.0				26,000	1.1		indicated	79	886.62	Mount Merlin	21.664	140.491	Cloncurry-Selwyn Zone	Kuridala Formation	quartz mica schist, carbonaceous slate	granite	amphibolite
104	Mount Elliott	24,889	1,854,199			1,200	3.3	1.7	indicated, inferred	79	259.89	Selwyn	21.541	140.500	Cloncurry-Selwyn Zone	Kuridala Formation	carbonaceous slate, metadolerite	hornfels, schist	amphibolite
105	Mount Fort Constantine (Ernest Henry)						1.6	0.8	inferred	215		Clonagh	20.443	140.703					
106	Mount Frosty	155.7									0.48	Mary Kathleen	20.783	139.921	Kalkadoon-Leichhardt Belt	Corella Formation	calcareous granofels, biotite schist, metadolerite		amphibolite
107	Mount Gordon	91.9									0.28	Mount Oxide	19.438	139.419	Lawn Hill Platform	Whitworth Quartzite	siltstone, graphitic shale, conglomerate, arenaceous shale		greenschist
108	Mount Hope North, Mount Hope South, Mount Hope West, Greens Creek, Binna Burra, Regina, The Stubbie (Mount Hope group)	6,532	109								20.25	Duchess	21.174	139.809	Kalkadoon-Leichhardt Belt	Magna Lynn Metabasalt, Bushy Park Gneiss, Argylla Formation	amphibolite, quartz feldspar gneiss, biotite schist, metarhyolite		amphibolite
109	Mount Isa	3,815,000				130,000	3.3		proved, probable, inferred	124	25246.40	Mount Isa	20.726	139.477	Leichhardt River Fault Trough	Urquhart Shale	dolomitic pyritic carbonaceous shale, dolomitic pyritic carbonaceous siltstone	metabasalt, quartzite	greenschist
110	Mount Kalkadoon	40.1									0.12	Mount Angelay	21.214	140.711	Cloncurry-Selwyn Zone	Doherty Formation	quartzite	calc-silicate breccia, calc-silicate granofels	amphibolite
111	Mount Kelly	164.4				1,800	2.3		inferred	206	128.85	Mammoth Mines	19.897	139.144	Lawn Hill Platform	Paradise Creek Formation, Gunpowder Creek Formation	dolomitic carbonaceous siltstone, chert, carbonaceous siliceous shale		sub-greenschist
112	Mount Lindsay	451.6									1.40	Marraba	20.810	140.054	Mary Kathleen Zone	Corella Formation	calc silicate granofels, schist	granite	amphibolite
	Mount Maggie - see Boomerang																		
113	Mount Mascotte	889.6	7,725								2.88	Duchess	21.181	139.855	Mary Kathleen Zone	Corella Formation	quartz biotite schist, amphibolite		amphibolite
114	Mount McCabe	164.4									0.51	Malbon	21.069	140.487	Quamby-Malbon Zone	Marimo Slate	chloritic ferruginous siltstone, ferruginous sandstone		greenschist
	Mount McLeod - see McLeod Hill																		
115	Mount McNamara	648.7	4,261								2.08	Marraba	20.923	140.420	Quamby-Malbon Zone	Marimo Slate	slate		greenschist
116	Mount Metallic	34.2									0.11	Prospector	20.192	139.926	Kalkadoon-Leichhardt Belt	Corella Formation	siliceous slate	calc-silicate breccia	greenschist
117	Mount Minde	39.7									0.12	Marraba	20.876	140.309	Quamby-Malbon Zone	Marraba Volcanics	epidote slate, chloritic schist	metadolerite	greenschist
118	Mount Norna (Mountain Home)	585.3	9	326.71							1.87	Cloncurry	20.922	140.697	Cloncurry-Selwyn Zone	Llewellyn Creek Formation	shale, siltstone, slate	schist, metagreywacke, metasiltsone, quartzite	amphibolite
119	Mount Olive, Mt Olive #3	345.8	12								1.07	Prospector	20.446	139.829	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	porphyritic rhyolite		amphibolite

Deposit Description												Mineralisation				Deposit Expression	Type	References	Name
Relationship to host	Shape	Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m)			Orientation			Primary ore	Secondary ore	Gangue	Wallrock alteration				
						length	width	depth	strike	dip	pitch								
discordant		breccia, shear zone	supergene		faulted							chalcopyrite, sphalerite, galena, pyrite	chalcocite, malachite, azurite, torbenite	quartz	silicification, Kfeldspar, tourmaline, sericite, dolomite, biotite, chlorite, apatite		2a	8, 11, 15, 22, 55, 114	Mount Dore
discordant	lenticular, pipe-like	shear zone, multiple vein	supergene		sheared	34 - 98	15 - 91	198	160	65 - 75 E	steep NNW	chalcopyrite, pyrite, pyrrhotite	malachite, cuprite, tenorite, azurite, chrysocolla, native copper	calcite, magnetite, diopside, scapolite, gypsum, apatite, sphene, prehnite, hornblende			2a	13, 22, 55, 106, 146, 194, 196	Mount Elliott
				disseminated		600	150 - 200	440							magnetite	concealed	?	107, 214, 216	Mount Fort Constantine (Ernest Henry)
	irregular, lenticular	multiple vein, breccia		disseminated	sheared	70	5.0 - 30.0	25			S	chalcopyrite, pyrrhotite, pyrite		calcite, actinolite	silicification	outcrop	2a	34, 72, 117, 118	Mount Frosty
discordant		shear zone, breccia	supergene	disseminated	faulted	45	1.5 - 3.0	35	170	70 - 85 E		chalcopyrite, pyrite	chalcocite, malachite	hematite	silicification, sericite		2a	27, 32, 47, 55, 104, 118	Mount Gordon
discordant		shear zone, multiple vein	supergene		faulted, sheared	230	0.9 - 1.8	43	020 - 135			chalcopyrite	malachite, azurite, cuprite, chrysocolla, native copper	quartz, hematite, kaolinite, jasper		quartz	2a	13, 27, 32, 43, 51, 55, 118	Mount Hope North, Mount Hope South, Mount Hope West, Greens Creek, Binna Burra, Regina, The Stubbie [Mount Hope group]
stratabound, discordant	lenticular	breccia, stockwork	supergene	brecciated, massive	faulted	3000 - 4000	300 - 500	1800	000	45 - 65 W	N	chalcopyrite, pyrite, pyrrhotite, cobaltite, arsenopyrite, marcasite, galena, sphalerite	chalcocite, chrysocolla, cuprite, malachite, native copper, tenorite	dolomite, quartz, talc, Kfeldspar, graphite	silica-dolomite, talc	gossan	1	9, 55, 130, 142, 153, 154, 191	Mount Isa
discordant		shear zone, multiple vein	supergene		faulted	9 - 52	0.2 - 2.1	18	110 - 120	70 - 90 N			malachite, chrysocolla, chalcocite	quartz			2a	55, 73, 118, 201	Mount Kalkadoon
discordant	lenticular	breccia	supergene	brecciated, disseminated	faulted, folded	1170	30 - 60	580	310			chalcopyrite, pyrite	malachite, azurite	quartz, dolomite, chlorite	silica-dolomite	gossan	1	27, 32, 47, 55, 90, 118, 211	Mount Kelly
discordant		shear zone, breccia	supergene		faulted	40	3.6	64	030 - 055	80 - 85 W		chalcopyrite, pyrite	covellite, cuprite, malachite, azurite, chalcocite, chrysocolla, chalcanthite, native copper	quartz, jasper, limonite, chalcedony		gossan	2a	34, 43, 47, 118, 201	Mount Lindsay
																			Mount Maggie - see Boomerang
discordant		shear zone, single vein	supergene	massive		61	0.3 - 1.0	91	020			chalcopyrite, bornite	chalcocite, malachite, cuprite	quartz, calcite, limonite			2a	13, 20, 55, 118	Mount Mascotte
discordant	lenticular	breccia, shear zone	supergene		sheared, folded	240	10.7	20	045			chalcopyrite	malachite, cuprite, chrysocolla, tenorite, native copper	quartz, kaolinite, calcite	chlorite	gossan	2a	13, 55, 73, 85	Mount McCabe
																			Mount McLeod - see McLeod Hill
concordant		breccia, shear zone	supergene		sheared		1.0		160	60 - 90 E			malachite	quartz, hematite, pyrolusite	silicification, argillic	quartz	2a	55, 71, 118	Mount McNamara
discordant		shear zone?	supergene				0.1 - 0.3	3	150	90		pyrite, chalcopyrite	malachite, chalcocite, native copper, cuprite	quartz, kaolinite, limonite		gossan	2a	13, 55, 224	Mount Metallic
discordant		multiple vein	supergene				0.5 - 1.2	9	115 - 125	80 - 90 N		chalcopyrite	malachite, cuprite	quartz, limonite		quartz	2a	13, 55	Mount Minde
		breccia, shear zone?	supergene			122	2.0 - 7.6	43	170	80 E			cuprite, chalcocite, malachite	quartz, limonite, kaolinite		outcrop	2a	43, 55, 88, 110, 117, 118	Mount Noma (Mountain Home)
discordant	lenticular	shear zone	supergene		sheared, faulted	31	0.6 - 1.5	40	110 - 140	70 S		chalcopyrite, pyrite	covellite, chalcocite, tenorite, cuprite, malachite	quartz, talc, chlorite	argillic, sericite		2a	27, 32, 55, 118, 224	Mount Olive, Mt Olive #3

	Name	Metal Production (to 1990)				Resource / Reserve					Value	Location			Host Rocks				
		Cu (tonnes)	Au (grams)	Ag (kg)	Co (tonnes)	Tonnes ('000)	Grade Cu (%)	Grade Au (g/t)	Classification	Reference	($A millions) 1992	1:100 000 geological map	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional metamorphism
120	Mount Oxide	13,118				28,000	0.5		unknown	210	474.67	Mount Oxide	19.479	139.388	Lawn Hill Platform	Gunpowder Creek Formation	carbonaceous dolomitic shale, carbonaceous dolomitic siltstone	ferruginous quartzite	sub-greenscist
121	Mount Remarkable	20.6									0.06	Prospector	20.258	139.892	Kalkadoon-Leichhardt Belt				
	Mount Wheeler - see Evening Star																		
	Mountain Home - see Mt Norna																		
	Mussolini - see Little Wonder group																		
122	Native Bee	73.0									0.23	Mount Isa	20.827	139.478	Leichhardt River Fault Trough	Native Bee Siltstone	dolomitic siltstone	metabasalt	greenschist
123	Native Companion	107.7	326								0.34	Quamby	20.434	140.170	Mary Kathleen Zone	Corella Formation	calcareous slate, siliceous slate, schist		greenschist
	New Chum - see Double Oxide																		
124	Nil Desperandum #2, Nil Desperandum #3	81.5	9								0.25	Duchess	21.283	139.779	Kalkadoon-Leichhardt Belt	Argylla Formation	biotite schist		amphibolite
125	Non Pariel	23.9									0.07	Mary Kathleen	20.995	139.889	Kalkadoon-Leichhardt Belt	Argylla Formation, Ballara Quartzite	acid metavolcanics, metadolerite, sandstone		amphibolite
126	Norris	> 25									> 0.08	Seigal	17.673	137.852	Murphy Tectonic Ridge	Nicholson Granite Complex	granite		greenschist
	North Portal - see Mammoth																		
	Old Joker - see The Joker																		
127	O.P. (Proxham Park)	102.7									0.32	Mount Oxide	19.369	139.084					
128	Orphan	2,871	18,763	51.10							9.20	Coolullah	19.788	140.022	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	hornblende schist, felsic porphyry		greenschist
129	Osborne (Trough Tank)					27,000	1.4	0.8	indicated	111	1504.44	Toolebuc	22.083	140.583	Cloncurry-Selwyn Zone	Mount Norna Quartzite (Staveley Formation?)	BIF	feldspathic psammite, biotite schist, amphibolite, pegmatite	amphibolite
130	Overlander #1, Overlander #4	44.9									0.14	Duchess	21.040	139.907	Mary Kathleen Zone	Corella Formation	calc-silicate rocks	acid metavolcanics	amphibolite
131	P.A.	63.6									0.20	Mammoth Mines	19.883	139.263	Lawn Hill Platform	Paradise Creek Formation	siltstone		greenschist
	Paddock Lode - see Great Australia																		
	Patsy Lorraine - see Queen Elizabeth																		
132	Pearl, Pearl Extended	53.7									0.17	Marraba	20.862	140.025	Mary Kathleen Zone	Corella Formation	arenaceous calc-silicate rock, metadolerite, quartz feldspar biotite schist		amphibolite
133	Perseverence	100.1	970								0.33	Duchess	21.197	139.810	Kalkadoon-Leichhardt Belt				amphibolite
134	Pindora #1, Pindora #2	571.9	174								1.78	Duchess	21.063	139.995	Quamby-Malbon Zone	Argylla Formation			amphibolite
135	Pioneer	93.8	650								0.30	Marraba	20.988	140.270	Quamby-Malbon Zone	Marraba Volcanics	chloritic schist		greenschist
136	Pommern, Pommern #2	69.7	125								0.22	Marraba	20.970	140.095	Quamby-Malbon Zone	Marraba Volcanics	micaceous schist, metadolertie		greenschist
137	Prince of Wales	36.5									0.11	Mary Kathleen	20.956	139.953	Mary Kathleen Zone	Corella Formation	siltstone, quartzite	calc-silicate breccia	greenschist
	Proxham Park - see O.P.																		

Deposit Description												Mineralisation				Deposit Expression	Type	References	Name
Relationship to host	Shape	Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m)			Orientation			Primary ore	Secondary ore	Gangue	Wallrock alteration				
						length	width	depth	strike	dip	pitch								
discordant	lenticular	breccia	supergene	massive, brecciated, disseminated	faulted, folded	90	1.5 - 9.8	100	030 - 040	50 - 80 E		chalcopyrite, pyrite	chalcocite, covellite, malachite, azurite, atacamite, brochantite, tenorite, cuprite, bornite	quartz, dolomite, chlorite, hematite, kaolinite	silica-dolomite	gossan	1	27, 32, 44, 55, 78, 101, 146, 201, 211	Mount Oxide
																	?2a	55	Mount Remarkable
																			Mount Wheeler - see Evening Star
																			Mountain Home - see Mt Norna
																			Mussolini - see Little Wonder group
discordant	lenticular	breccia, multiple vein		disseminated, brecciated	faulted							chalcopyrite		quartz, dolomite	silica-dolomite		1	55, 95, 211	Native Bee
discordant	lenticular	multiple vein	supergene			140	0.8	10	040				chrysocolla, chalcocite, native gold	quartz, limonite	argillic	gossan	2a	13, 14, 55, 118	Native Companion
																			New Chum - see Double Oxide
discordant		shear zone, multiple vein, breccia	supergene		faulted				020	80 E		pyrite	malachite, azurite	quartz, calcite, limonite			2a	55, 118	Nil Desperandum #2, Nil Desperandum #3
discordant		shear zone, breccia	supergene		sheared	400	1.2	15	160 - 190	70 - 90 E			cuprite, malachite, azurite, chalcocite, native copper	quartz	carbonate, argillic	quartz	2a	27, 32, 55, 72, 118	Non Pariel
discordant		shear zone, single vein	supergene	brecciated	sheared	1000	1.0		100			chalcopyrite	malachite, azurite, chalcocite, digenite	quartz			2a	6, 171, 199	Norris
																			North Portal - see Mammoth
																			Old Joker - see The Joker
																	?2a	55, 118	O.P. (Proxham Park)
discordant	tabular	shear zone, multiple vein	supergene		sheared	91	1.5 - 4.6	53	135	70 S	steep SE	chalcopyrite, bornite, pyrite	chalcocite, malachite, azurite, cuprite	quartz, siderite	silicification	outcrop, geophysical	2a	18, 43, 55, 87, 89, 168, 187	Orphan
stratiform, discordant	tabular, pipe-like	multiple bed, multiple vein	supergene	disseminated	folded	900		340				chalcopyrite, cobaltian pyrite, pyrrhotite	bornite	magnetite, hematite, quartz, calcite, apatite, siderite, tourmaline	chlorite, talc, carbonate, albite	concealed, geophysical	4b	63, 69, 111, 121, 156	Osborne (Trough Tank)
stratabound ?					faulted												?2a	20, 118	Overlander #1, Overlander #4
discordant	lenticular	shear zone, multiple vein	supergene		faulted		3.0		060	70 - 80 N			malachite, azurite, chalcocite	quartz			2a	55, 118, 201	P.A.
																			Paddock Lode - see Great Australia
																			Patsy Lorraine - see Queen Elizabeth
discordant		shear zone, multiple vein	supergene	disseminated	sheared		0.5 - 1.2	22	010 - 015	70 W		chalcopyrite, pyrite	chalcocite, malachite, azurite	calcite, quartz, limonite	silicification, argillic	quartz, gossan	2a	13, 55, 71, 105, 118	Pearl, Pearl Extended
																	?2a	55	Perseverence
									030							quartz	2a	13, 55, 118	Pindora #1, Pindora #2
discordant	lenticular	shear zone, multiple vein	supergene				0.2 - 1.2	27	065	80 S		chalcopyrite	malachite, cuprite, azurite, chalcocite	quartz, limonite			2a	13, 55	Pioneer
discordant		multiple vein	supergene					17		60 - 70		chalcopyrite	malachite, azurite, chrysocolla, cuprite, chalcocite	quartz, calcite, limonite		quartz, gossan	2a	117, 118	Pommern, Pommern #2
discordant		multiple vein	supergene					15	010	75 W			malachite, azurite, chrysocolla	calcite, quartz, hematite		gossan	2a	55, 72, 105, 118	Prince of Wales
																			Proxham Park - see O.P.

	Name	Metal Production (to 1990)				Resource / Reserve					Value	Location			Host Rocks				
		Cu (tonnes)	Au (grams)	Ag (kg)	Co (tonnes)	Tonnes ('000)	Grade Cu (%)	Grade Au (g/t)	Classification	Reference	($A millions) 1992	1:100 000 geological map	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional metamorphism
138	Pup	24.8									0.08	Mary Kathleen	20.749	139.977	Kalkadoon-Leichhardt Belt	Argylla Formation	biotite schist, metadolerite	acid metavolcanics	greenschist
139	Queen Elizabeth (Patsy Lorraine)	36.3									0.11	Prospector	20.224	139.835	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	metarhyolite, chloritic schist, crystalline dolomite	metadolerite	amphibolite
140	Referee, Referee Extended, Referee Extended #1, Referee West, Referee South, Referee #1, Referee #2, Referee #3, (Ruth)	784.0	16,090	0.38							2.68	Prospector	20.317	139.848	Kalkadoon-Leichhardt Belt	Kalkadoon Granite	granite, chloritic schist		greenschist
	Regina - see Mount Hope group																		
141	Revenue Central	89.2									0.28	Duchess	21.290	139.832	Mary Kathleen Zone	Corella Formation	biotite schist, crystalline calcite, calc-silicate rocks		amphibolite
142	Revenue Extended, Revenue Extended #3, Revenue, Revenue North	176.5	311								0.55	Duchess	21.278	139.834	Mary Kathleen Zone	Corella Formation	calc-silicate granofels, biotite schist, crystalline calcite		amphibolite
143	Richardson Road	44.7									0.14	Duchess							
144	Robur, Robur #3	20.1									0.06	Cloncurry	20.945	140.573	Quamby-Malbon Zone	Roxmere Quartzite			greenschist
145	Rocky Home	32.7									0.10	Mary Kathleen	20.541	139.885	Kalkadoon-Leichhardt Belt				greenschist
146	Rosebud	1,483									4.60	Mary Kathleen	20.835	139.972	Kalkadoon-Leichhardt Belt	Ballara Quartzite	calc-silicate granofels, amphibolite		amphibolite
147	Rosebud Extended, Rosebud #2	44.2									0.14	Mary Kathleen	20.833	139.972	Kalkadoon-Leichhardt Belt	Argylla Formation	biotite schist, acid metavolcanics		amphibolite
	Royal - see Lillimay																		
	Ruth - see Referee																		
148	Second Chance	107.2									0.33	Malbon			Quamby-Malbon Zone				greenschist
149	Secret	337.5									1.05	Mary Kathleen	20.881	139.985	Kalkadoon-Leichhardt Belt	Argylla Formation	acid metavolcanics		greenschist
150	Selwyn	502.8									1.56	Selwyn	21.526	140.508	Cloncurry-Selwyn Zone	Kuridala Formation			amphibolite
151	Southern Cross	56.6	361								0.18	Malbon	21.018	140.404	Quamby-Malbon Zone	Overhang Jaspilite	siltstone		greenschist
152	Springs, Springs Extended	39.7									0.12	Marraba	20.883	140.005	Mary Kathleen Zone	Corella Formation	quartzose calc-silicate rocks, amphibolite	epidote quartz feldspar schist	amphibolite
153	St Andrews	30.3									0.09	Duchess	21.356	139.819	Mary Kathleen Zone	Corella Formation			amphibolite
154	St George	49.2									0.15	Duchess	21.378	139.870	Mary Kathleen Zone	Corella Formation			amphibolite
155	St Mungo	1,661									5.15	Dajarra	21.627	139.849	Kalkadoon-Leichhardt Belt	Saint Mungo Granite	granite, metadolerite		amphibolite
156	Starra (Selwyn)					3,812	3.0	2.5	measured, indicated, inferred	79	502.44	Mount Merlin	21.683	140.472	Cloncurry-Selwyn Zone	Staveley Formation	BIF, quartz feldspar magnetite schist, chloritic schist		greenschist
157	Straight Eight	22.6									0.07	Mount Angelay	21.265	140.545	Cloncurry-Selwyn Zone	Doherty Formation	carbonaceous slate	metadolerite	amphibolite
157	Stuart (Stuart 186)	87.9									0.27	Mount Merlin	21.779	140.472	Cloncurry-Selwyn Zone	Kuridala Formation	phyllite, slate, carbonaceous metasiltstone		amphibolite
159	Success (Varie's Success)	123.2	1,013	13.41	5.6						0.57	Marraba	20.875	140.306	Quamby-Malbon Zone	Marraba Volcanics	chlorite schist, biotite schist	hornblende schist	greenschist/ amphibolite

Deposit Description												Mineralisation				Deposit Expression	Type	References	Name
Relationship to host	Shape	Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m) length	Dimensions (m) width	Dimensions (m) depth	Orientation strike	Orientation dip	Orientation pitch	Primary ore	Secondary ore	Gangue	Wallrock alteration				
discordant		shear zone, breccia	supergene		sheared	100	0.6 - 2.4	30	000	80 - 90 E			malachite, azurite	quartz, limonite	silicification		2a	118	Pup
concordant	lenticular	shear zone, multiple vein	supergene		faulted	350	12.2		160	80 W			malachite, chrysocolla, chalcocite, bornite	dolomite, quartz, limonite		gossan	2a	47, 112, 118, 201, 224	Queen Elizabeth (Patsy Lorraine)
discordant	pipe-like, tabular	shear zone	supergene		faulted	27 - 57	1.2 - 4.9	37	085, 020	65 - 90 S		chalcopyrite, pyrite	covellite, malachite, azurite, bornite, cuprite, chalcocite	quartz, limonite, chlorite		gossan	2a	13, 27, 32, 43, 55, 118, 201, 224	Referee, Referee Extended, Referee Extended #1, Referee West, Referee South, Referee #1, Referee #2, Referee #3, (Ruth)
																			Regina - see Mount Hope group
discordant		shear zone, multiple vein, breccia	supergene		faulted		0.8	32	000	80 - 85 W		chalcopyrite	malachite, azurite, cuprite, tenorite	calcite, biotite, quartz, jasper, chalcedony	argillic, gypsum		2a	55, 117, 118	Revenue Central
discordant		shear zone, multiple vein, breccia	supergene		faulted	52	1.5	46	160	75 - 85 W		chalcopyrite, pyrite	chalcocite, malachite, azurite	quartz, calcite, jasper, biotite	argillic, gypsum		2a	55, 117, 118	Revenue Extended, Revenue Extended #3, Revenue, Revenue North
																	?2a	118	Richardson Road
																	?2a	118	Robur, Robur #3
																	?2a	55	Rocky Home
discordant	tabular	shear zone, multiple vein				107	1.5 - 7.6	91	160			chalcopyrite, pyrite		quartz, calcite, magnetite		outcrop	2a	13, 43, 55, 72, 105, 118, 222	Rosebud
discordant	lenticular	shear zone, multiple vein	supergene		folded			34	085	S			azurite, malachite	quartz		quartz	2a	43, 72, 105, 118	Rosebud Extended, Rosebud #2
																			Royal - see Lillimay
																			Ruth - see Referee
																	?2a	55	Second Chance
discordant		multiple vein			sheared		0.3 - 6.6	29				pyrite		quartz, hematite			2a	13, 55, 72, 105, 118	Secret
																	?2a	55	Selwyn
discordant		shear zone, breccia	supergene		faulted			30	000	90			malachite, chrysocolla	quartz, limonite			2a	55, 73, 118	Southern Cross
discordant		shear zone	supergene	disseminated	sheared		1.8	14	005				malachite, chalcocite	quartz, hematite		quartz	2a	13, 55, 71	Springs, Springs Extended
																	?2a	55	St Andrews
																	?2a	55	St George
discordant	pipe-like	shear zone	supergene	massive	faulted	107	0.1 - 2.4	116	000			chalcopyrite, pyrite	chalcocite				2a	20, 55, 221	St Mungo
stratiform	tabular, folded	multiple bed	supergene	massive, laminated/ banded	folded, sheared	3500	1 - 20	400	000 - 020	70 - 90 E	90	chalcopyrite, bornite, pyrite, native gold, scheelite	covellite, chalcocite, malachite, native copper	magnetite, quartz, chalcedony, siderite, chlorite, hematite, albite, apatite, tourmaline, actinolite, scapolite, calcite	albite, chlorite, argillic	outcrop, geophysical, geochemical	4b	11, 16, 63, 69, 114, 115, 121, 200	Starra (Selwyn)
			supergene		faulted								malachite, chrysocolla				?2a	73, 118	Straight Eight
concordant		shear zone	supergene						000	80 E			malachite, azurite, chalcocite, chrysocolla	quartz, limonite			2a	20, 22, 117, 118, 217	Stuart (Stuart 186)
discordant	lenticular	shear zone	supergene	massive, nodular	folded	27	0.3 - 1.8	40	060	80 S	E	chalcopyrite, pyrite, cobaltite	chalcocite, covellite, erythrite, chalcophyllite, bornite, enargite	quartz, limonite			2a	44, 55, 71, 181, 193	Success (Varie's Success)

	Name	Metal Production (to 1990)				Resource / Reserve					Value	Location			Host Rocks				
		Cu (tonnes)	Au (grams)	Ag (kg)	Co (tonnes)	Tonnes ('000)	Grade Cu (%)	Grade Au (g/t)	Classification	Reference	($A millions) 1992	1:100 000 geological map	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional metamorphism
160	Sunset, Sunset North, Sunset South	149.0	20								0.46	Mary Kathleen	20.765	139.973	Kalkadoon-Leichhardt Belt	Corella Formation, Argylla Formation	calc-silicate granofels, acid metavolcanics, crystalline calcite, metadolerite		amphibolite
161	Surprise, Surprise North	567.4	8,233								1.89	Prospector	20.166	139.999	Mary Kathleen Zone	Corella Formation	biotite schist, calc-silicate granofels, crystalline calcite		greenschist
162	Swan					13,500	0.9	0.5	indicated	79	480.60	Mount Merlin	21.548	140.497	Cloncurry-Selwyn Zone	Staveley Formation	calc-silicate granofels, schist, claystone, quartzite, diopside marble	amphibolite	amphibolite
163	Sweet William	61.5	222								0.19	Malbon	21.008	140.451	Quamby-Malbon Zone	Marimo Slate	carbonaceous slate, hematitic slate		greenschist
164	T.C.	70.4	480								0.23	Prospector	20.416	139.955	Kalkadoon-Leichhardt Belt	Argylla Formation	porphyritic acid metavolcanics	metadolerite	amphibolite
	Telegraph - see Celestial																		
	The Belfast - see Megaphone																		
165	The Joker (Old Joker)	41.9	177								0.13	Cloncurry	20.892	140.706	Cloncurry-Selwyn Zone	Mount Noma Quartzite	quartzite, amphibolite	mica schist	amphibolite
	The Stubbie - see Mount Hope group																		
166	Timberoo	158.6									0.49	Marraba	20.874	140.311	Quamby-Malbon Zone	Marraba Volcanics	hornblende schist, chlorite schist, biotite schist, slate	metadolerite	greenschist/ amphibolite
167	Tom Cat	26.8									0.08	Marraba	20.707	140.016	Mary Kathleen Zone	Corella Formation			amphibolite
168	Trafalgar	248.2	865								0.78	Marraba	20.894	140.001	Mary Kathleen Zone	Corella Formation	arenaceous calc-silicate rocks, amphibolite	epidote quartz feldspar granofels	amphibolite
169	Trekelano	20,472	423,236	338.56							70.04	Duchess	21.484	139.900	Mary Kathleen Zone	Corella Formation	hornblende biotite schist, calc-silicate granofels	granite	amphibolite
170	Trey Bit	90.7				170		47.0	inferred	12	123.33	Mary Kathleen	20.588	139.888	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	talc mica schist, metadolerite	acid metavolcanics	amphibolite
	Trough Tank - see Osborne																		
171	True Blue	39.1									0.12	Dajarra	21.763	139.929	Mary Kathleen Zone	Corella Formation	siliceous shale, chert, amphibolite		amphibolite
	Trump - see Little Wonder group																		
172	Two Bobs	22.4	68	5.09							0.07	Malbon	21.163	140.499	Cloncurry-Selwyn Zone	Doherty Formation	quartzite, carbonaceous pyritic shale		amphibolite
173	Two Macs	50.6									0.16	Alsace	19.920	139.988	Kalkadoon-Leichhardt Belt	Argylla Formation	metadolerite, acid metavolcanics	quartzite	greenschist
174	Una	42.3	947								0.15	Quamby	20.351	140.164	Mary Kathleen Zone	Corella Formation	slate	calc-silicate rocks	amphibolite
	Varie's Success - see Success																		
175	Volga, Volga North, Late Volga	56.6	476								0.18	Quamby	20.412	140.065	Kalkadoon-Leichhardt Belt	Wonga Granite, Corella Formation	granite		amphibolite
	Wallace - see Kangaroo Rat																		
176	Wallaroo	177.0	1,540								0.57	Mary Kathleen	20.923	139.947	Kalkadoon-Leichhardt Belt	Argylla Formation	chloritic schist, acid metavolcanics, quartzite	metadolerite	amphibolite
177	Warwick Castle	352.9	355								1.10	Alsace	19.908	139.895	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	hornblende biotite schist	granite	greenschist
178	Waterhole, Waterhole #2	29.5									0.09	Mary Kathleen	20.730	139.976	Kalkadoon-Leichhardt Belt				

Deposit Description												Mineralisation				Deposit Expression	Type	References	Name
Relationship to host	Shape	Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m) length	width	depth	Orientation strike	dip	pitch	Primary ore	Secondary ore	Gangue	Wallrock alteration				
concordant	lenticular, pipe-like	shear zone, multiple vein	supergene		folded, fractured	400	0.1 - 2.0	21	005 - 015	80 - 90 W	40 S	chalcopyrite, pyrite	malachite, cuprite, chalcocite, covellite, chrysocolla, neodigenite, native copper	calcite, jasper, limonite, gypsum, hematite, geothite, quartz, lepidocrocite	argillic	gossan	2a	27, 32, 47, 55, 72, 105, 118, 205	Sunset, Sunset North, Sunset South
discordant	lenticular	multiple vein	supergene	massive, disseminated		61		44	160	90		chalcopyrite	chalcocite, malachite, azurite, cuprite, tenorite, native copper	calcite, quartz, jasper		gossan, geophysical	2a	43, 55, 117, 118	Surprise, Surprise North
discordant		multiple vein, breccia	supergene									chalcopyrite, pyrite, native gold	malachite, azurite, chrysocolla, chalcocite, covellite, cuprite, native copper	calcite, magnetite, diopside, actinolite, hematite	argillic, sericite, chlorite		2a	8, 11, 114, 143	Swan
?discordant		shear zone, multiple vein	supergene		folded				170			pyrite	malachite, cuprite, tenorite, chrysocolla	quartz, hematite			2a	55, 73, 118	Sweet William
		?single vein	supergene					40	160			pyrite, chalcopyrite	covellite, malachite, azurite	quartz, limonite, jasper			2a	55, 118, 224	T.C.
																			Telegraph - see Celestial
																			The Belfast - see Megaphone
discordant		shear zone, breccia	supergene			107	0.6 - 1.2	37	020	80 W		pyrite, chalcopyrite	malachite	quartz, limonite			2a	55, 88, 102	The Joker (Old Joker)
																			The Stubbie - see Mount Hope group
discordant	lenticular	multiple vein	supergene				0.2 - 1.4	27	050 - 085	85 - 90 S		pyrite, chalcopyrite	chalcocite, malachite, bornite, cuprite, azurite	quartz, limonite, calcite, siderite		gossan	2a	13, 55, 71, 118	Timberoo
																	?2a	118	Tom Cat
discordant		multiple vein	supergene			1200	0.8	61	020	80 W		chalcopyrite	malachite, cuprite, azurite, chalcocite	calcite, quartz			2a	55, 71, 105, 118	Trafalgar
discordant		shear zone, multiple vein	supergene	disseminated	sheared	107	1.5 - 12.0	263	000	60 - 65 W	steep N	chalcopyrite, pyrite, marcasite, galena, sphalerite, molybdenite, cobaltite	chalcocite, malachite, chrysocolla, tenorite	calcite, hornblende, augite, magnetite, garnet, epidote, quartz	silicification	concealed, geophysical	2a	55, 118, 146, 167, 188, 206	Trekelano
discordant		shear zone	supergene			244	0.6 - 5.0	45	075 - 105	80 S		chalcopyrite	malachite, chalcocite, bornite	quartz, actinolite	talc		2a	12, 55, 118	Trey Bit
																			Trough Tank - see Osborne
discordant	lenticular	shear zone, multiple vein	supergene			61	0.6 - 2.4		160	85 W		pyrite	chrysocolla, malachite, azurite, chalcocite	quartz, hematite		outcrop	2a	55, 118, 201	True Blue
																			Trump - see Little Wonder group
discordant		multiple vein	supergene		fractured							pyrite	chalcocite, malachite, chrysocolla				2a	20, 73, 118	Two Bobs
discordant		shear zone															2a	35, 70	Two Macs
		shear zone	supergene			75	0.2 - 0.6	12	010	80 E			malachite	limonite, quartz	argillic, silicification	gossan	2a	13, 55	Una
																			Varie's Success - see Success
			supergene									chalcopyrite	malachite, bornite, covellite	quartz, limonite		gossan	2a	55, 227	Volga, Volga North, Late Volga
																			Wallace - see Kangaroo Rat
concordant	lenticular	shear zone, multiple vein	supergene		sheared		0.2 - 0.8	75	155	70 - 75 W		pyrite, chalcopyrite	malachite, chalcocite, azurite, cuprite	quartz, limonite		quartz	2a	13, 44, 55, 72, 105, 118	Wallaroo
	lenticular	multiple vein	supergene		sheared	290	0.3 - 15.0	53	155	85 - 90 E			chalcocite, cuprite, malachite, azurite, chrysocolla	quartz, limonite		gossan, geophysical	2a	43, 47, 55, 117, 160, 161	Warwick Castle
																	?2a	118	Waterhole, Waterhole #2

	Name	Metal Production (to 1990)				Resource / Reserve					Value	Location			Host Rocks				
		Cu (tonnes)	Au (grams)	Ag (kg)	Co (tonnes)	Tonnes ('000)	Grade Cu (%)	Grade Au (g/t)	Classification	Reference	($A millions) 1992	1:100 000 geological map	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional metamorphism
179	Wee MacGregor	2,843.9	43,514			520	1.8		inferred	208	38.50	Mary Kathleen	20.914	139.942	Kalkadoon-Leichhardt Belt	Argylla Formation	brecciated metarhyolite, mica schist	metadolerite	amphibolite
180	Western	26.2	6								0.08	Prospector	20.179	139.905	Kalkadoon-Leichhardt Belt	Leichhardt Volcanics	feldspar porphyry, quartzite	granite	greenschist
181	Wharspurwhar	21.9									0.07	Coolullah							
	Willsburgh - see Edna May																		
182	Winston Churchill	813.6									2.52	Mary Kathleen	20.568	139.974	Kalkadoon-Leichhardt Belt	Argylla Formation, Ballara Quartzite	biotite schist, metadolerite, porphyritic rhyolite		amphibolite
183	Wonder	29.4									0.09	?Mount Isa							
184	Wonder Valley	23.2									0.07	Marraba	20.642	140.149	Mary Kathleen Zone	Corella Formation	calc-silicate granofels, metabasic rocks		amphibolite
185	Woolondonga (Wollondonga)	240.9	180								0.75	Marraba	20.689	140.052	Mary Kathleen Zone	Corella Formation	calc-silicate granofels, quartzite, hornblende biotite schist	amphibolite	amphibolite
186	Yamamilla (Yamamiller)	60.4	218								0.19	Prospector	20.373	139.937	Kalkadoon-Leichhardt Belt	Ballara Quartzite, Corella Formation	calc-silicate rock, quartzite		amphibolite
187	Young Australian (Monitor)	3,916									12.14	Malbon	21.338	140.407	Quamby-Malbon Zone	Answer Slate	carbonaceous slate, chloritic schist	quartzite	greenschist

Deposit Description												Mineralisation				Deposit Expression	Type	References	Name
Relationship to host	Shape	Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m)			Orientation			Primary ore	Secondary ore	Gangue	Wallrock alterati...				
						length	width	depth	strike	dip	pitch								
discordant	pipe-like, irregular	shear zone, multiple vein, breccia	supergene		faulted, sheared	210	1.5 - 15	146	160	shallow W	30 - 45 N	chalcopyrite, pyrite	chalcocite, malachite, cuprite, brochantite, tenorite	quartz, calcite, garnet, biotite		outcrop	2a	43, 44, 55, 72, 77, 105, 117, 118, 158, 160, 161, 213	Wee MacGregor
discordant		shear zone, breccia	supergene				1.1 - 1.2		040	shallow E		chalcopyrite	bornite, chalcocite, covellite, malachite, azurite		argillic		2a	55, 112, 224	Western
																	?2a	55, 225	Wharspurwhar
																			Willsburgh - see Edna May
discordant	pipe-like, tabular	multiple vein	supergene		sheared	43 - 46	1.8 - 4.5	60	160 - 165	80 E	30 -40 SE	chalcopyrite, bornite, pyrrhotite, pyrite	malachite, azurite, cuprite, tenorite	quartz, hornblende, biotite		outcrop	2a	72, 118, 201	Winston Churchill
																	?2a	118	Wonder
discordant		shear zone	supergene			40			010 - 040	50 - 60 W			malachite, azurite, chrysocolla	quartz, magnetite			2a	55, 71, 118	Wonder Valley
discordant	lenticular	multiple vein	supergene	massive		300	0.3 - 1.8	30	045 - 120	80 S		chalcopyrite, pyrite	malachite, azurite, covellite, chalcocite, chrysocolla, tenorite	quartz, limonite	argillic	quartz	2a	27, 32, 55, 71, 118, 160	Woolondonga (Wollondonga)
discordant		shear zone, breccia, multiple vein	supergene		faulted	76	0.6 - 7.6	24	160 - 185	65 - 80 S			malachite, chalcocite, cuprite, chrysocolla	quartz, jasper, limonite			2a	13, 27, 32, 47, 55, 118, 224	Yamamilla (Yamamiller)
concordant		shear zone, multiple vein	supergene			300			030	75 - 90 E			malachite, chalcocite, cuprite, tenorite, azurite	quartz, hematite	silicification, argillic	outcrop, geophysical	2a	13, 20, 27, 32, 55, 73, 118	Young Australian (Monitor)

Lead

Zinc

Silver

	Name	Metal Production			Resource / Reserve						Value	Location			Host Rocks				
		Ag	Pb	Zn	Tonnes	Grade			Classification	Reference	($A millions)	1:100000	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional
		(kg)	(tonnes)	(tonnes)	('000)	Ag (g/t)	Pb (%)	Zn (%)			1992	geological map							metamorphism
188	Anglo-American, Union Jack	26	56								0.04	Lawn Hill	18.709	138.564	Lawn Hill Platform	Lawn Hill Formation	sandstone, siltstone, tuff		sub-greenschist
189	Bemborough	1,205	1,750								1.47	Mount Isa	20.751	139.480	Leichhardt River Fault Trough	Urquhart Shale	dolomitic pyritic siltstone, dolomitic pyritic shale		greenschist
190	Black Rock											Selwyn	21.633	140.912	Cloncurry-Selwyn Zone	Soldiers Cap Group	BIF, graphitic schist	migmatitic gneiss, pegmatite, quartzite, amphibolite, marble	amphibolite
191	Cannington				20,000	470	10.2	3.3		17	4,207	Selwyn	21.9	140.9	Cloncurry-Selwyn Zone	Soldiers Cap Group	BIF?		amphibolite
192	Century				120,000	30	1.5	10.0	indicated	61	21,135	Lawn Hill	18.741	138.625	Lawn Hill Platform	Lawn Hill Formation	dolomitic siltstone, carbonaceous shale		sub-greenschist
193	Copalot	34	54								0.04	Mount Isa	20.875	139.467	Leichhardt River Fault Trough	Mt Isa Group			greenschist
194	Cowie											Selwyn	21.795	140.863	Cloncurry-Selwyn Zone	Soldiers Cap Group	BIF	quartz garnet gneiss, muscovite pegmatite, schist, quartzite	amphibolite
195	Dugald River				35,400	42	2.1	13.6	indicated	61	8,502	Quamby	20.255	140.154	Mary Kathleen Zone	Corella Formation	carbonaceous slate	slate, limestone, mica schist, calc-silicate rocks	amphibolite
196	Fairmile											Mount Angelay	21.240	140.847	Cloncurry-Selwyn Zone	Soldiers Cap Group	BIF, garnet magnetite calc-silicate rock	garnet schist, amphibolite, marble, carbonaceous schist	amphibolite
197	Hann's Ridge, Axis Hill, Silver Queen	25	67								0.05	Lawn Hill	18.682	138.566	Lawn Hill Platform	Lawn Hill Formation	sandstone, siltstone		sub-greenschist
198	Hilton, Hilton North	100,000	60,000	100,000	124,000	103	5.5	10.5	proved, probable, measured, indicated	125	28,228 (production estimated only)	Mount Isa	20.574	139.472	Leichhardt River Fault Trough	Urquhart Shale	dolomitic carbonaceous pyritic siltstone, dolomitic carbonaceous pyritic shale	tuff, basic dykes, metabasalt	greenschist
199	Lady Loretta				8,246	125	8.4	18.4	measured, indicated	152	3,108	Mammoth Mines	19.773	139.069	Lawn Hill Platform	Lady Loretta Formation	calcareous siltstone, shale, pyritic shale	carbonate, sandstone, tuff	sub-greenschist
200	Lead Hill											Hedley's Creek	17.806	138.139	Lawn Hill Platform	Mount Les Siltstone	siltstone	dolomite	sub-greenschist
201	Lilydale	24	74								0.06	Lawn Hill	18.844	138.594	Lawn Hill Platform	Lawn Hill Formation	siltstone, shale, tuff		sub-greenschist
202	Maramungee				1,800			4.4	inferred	7	127	Selwyn	21.577	140.909	Cloncurry-Selwyn Zone	Soldiers Cap Group, Maramungee Granite	amphibolite, quartzose gneiss, quartz-feldspar gneiss, biotite gneiss	granite	amphibolite
203	Mended Hill	484	407								0.38	Lawn Hill	18.757	138.608	Lawn Hill Platform	Lawn Hill Formation	sandstone, siltstone, tuff		sub-greenschist
204	Mount Isa	13,340,000	5,160,000	4,290,000	45,000	132	5.4	6.6	proved	125	20,513	Mount Isa	20.726	139.477	Leichhardt River Fault Trough	Urquhart Shale	dolomitic carbonaceous pyritic siltstone, dolomitic carbonaceous pyritic shale	tuff, metabasalt, quartzite	greenschist

Deposit Description												Mineralisation				Deposit Expression	Type	References	Name
Relationship to host	Shape	Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m) length	width	depth	Attitude of orebody strike	dip	pitch	Primary ore	Secondary ore	Gangue	Wallrock alteration				
discordant		breccia, multiple vein	supergene		folded, faulted	240	6	12	070	70 N		galena, chalcopyrite	cerussite, anglesite, malachite, covellite	quartz, ?calcite, ?siderite		gossan, quartz	2c	55, 113, 198, 202	Anglo-American, Union Jack
stratiform	tabular	multiple beds	supergene	laminated/ banded	folded	180	0.3	60	000	70 W			cerussite	quartz, dolomite		outcrop	3	55, 95	Bemborough
stratiform	tabular	bed	supergene		folded				000			sphalerite, chalcopyrite, gahnite, galena	goethite, hemimorphite, plumbogummite	quartz, garnet, chlorite, graphite, cryptomelane		quartz, gossan	4a	22, 123, 204	Black Rock
												galena, sphalerite				concealed	?4a	17	Cannington
stratiform	tabular	multiple beds		laminated/ banded	faulted		34					galena, sphalerite, pyrite				outcrop	3	69, 127, 134, 135	Century
stratiform	tabular																3	55, 95	Copalot
stratiform	tabular, folded	bed	supergene		folded	2500	1					sphalerite, marmatite, pyrite, pyrrhotite, galena	chalcophanite, coronadite, plumbogummite, plumbojarosite, hematite	garnet, rhodonite, bustamite, quartz, apatite, cryptomelane		gossan	4a	16, 22, 73, 123, 145,204	Cowie
stratiform	tabular	bed, breccia	supergene	laminated/ banded		2200	5 - 21	1000	170	40 - 90 W	N	pyrrhotite, sphalerite, pyrite, galena, chalcopyrite, arsenopyrite, tetrahedrite, pyrargyrite	plumbojarosite, cerussite, smithsonite	quartz, calcite, muscovite, Kfeldspar, phlogopite, barite		gossan, geophysical	3	55, 58, 189, 228	Dugald River
stratiform	tabular, folded	bed	supergene		folded		20 - 30					pyrite, pyrrhotite, galena	corkite, plumbogummite, pyromorphite, Mn oxides	magnetite, hematite, goethite, quartz, garnet, apatite, mica, cryptomelane, feldspar, chlorite		gossan	4a	16, 64, 126, 180, 185	Fairmile
discordant		multiple vein, shear zone	supergene	brecciated	sheared, faulted		2	15	145, 030	60 - 90 W		galena, sphalerite, chalcopyrite	cerrussite, anglesite, covellite, pyromorphite	quartz, siderite, Mn & Fe oxides		gossan, quartz	2c	55, 113, 198	Hann's Ridge, Axis Hill, Silver Queen
stratiform	tabular, folded	multiple beds	supergene	laminated/ banded	faulted, folded	4500	110 - 250	800	000	70 W		pyrite, pyrrhotite, galena, sphalerite, chalcopyrite, marcasite, arsenopyrite, freibergite, pyrargyrite, stephanite, argenopyrite, dyscrasite	cerussite, pyromorphite, anglesite, native silver	dolomite, quartz		gossan	3	55, 86, 116, 130	Hilton, Hilton North
stratiform	folded, tabular, lenticular	bed	supergene	laminated/ banded, massive	folded, faulted	2000	50	400 - 500			NE	sphalerite, galena, pyrite, chalcopyrite, tetrahedrite, freibergite	anglesite, cerussite	quartz, siderite, barite		gossan	3	91, 124	Lady Loretta
stratabound	pipe-like	breccia	supergene	brecciated			3 - 4	15		90		galena, sphalerite	cerussite, pyromorphite				2c	6, 199	Lead Hill
discordant		shear zone, multiple vein	supergene	brecciated	folded, faulted							galena, pyrite	cerussite, malachite	siderite			2c	55, 198	Lilydale
stratiform	tabular			laminated/ banded, brecciated	folded	1000	10		010	steep E		sphalerite, pyrrhotite, pyrite, galena, chalcopyrite, molybdenite, arsenopyrite, electrum	goethite, hematite, chalcophanite, coronadite, plumbogummite, plumbojarosite	quartz, garnet, biotite, hedenbergite, apatite, scapolite, feldspar, hornblende, graphite, epidote, chlorite	skarn, potassic	gossan	5	16, 22, 73, 94, 123, 145, 204, 219	Maramungee
discordant		stockwork, fault breccia	supergene		folded, faulted	120	1 - 4		040 - 080	90		galena, pyrite, ?tetrahedrite, ?argentite	cerussite	quartz, siderite, psilomelane, Fe-oxides		gossan, quartz	2c	55, 113, 198	Mended Hill
stratiform	tabular, folded	multiple beds	supergene	laminated/ banded	faulted, folded	1600	650	1200	000	65 W	45 N	pyrite, galena, sphalerite, pyrrhotite, freibergite, chalcopyrite, arsenopyrite, marcasite	cerussite, Fe oxides	dolomite, quartz, phlogopite, biotite	potassic	gossan	3	55, 80, 84, 86, 120, 130, 139, 142, 155	Mount Isa

	Name	Metal Production			Resource / Reserve						Value	Location			Host Rocks				
		Ag	Pb	Zn	Tonnes	Grade			Classification	Reference	($A millions)	1:100000	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional
		(kg)	(tonnes)	(tonnes)	('000)	Ag (g/t)	Pb (%)	Zn (%)			1992	geological map							metamorphism
205	Mount Novit											Mount Isa	20.891	139.468	Leichhardt River Fault Trough	Breakaway Shale	metasiltstone, mica schist, phyllite	actinolite schist, albite schist, dolomitic siltstone	greenschist
206	Pegmont				10,000		7.0	3.0	indicated	8	981	Selwyn	21.853	140.667	Cloncurry-Selwyn Zone	Kuridala Formation	BIF	quartz mica schist, quartzite, amphibolite	amphibolite
207	Silver King	1,518	1,383		949	70	11.9	7.8	measured, indicated, inferred	132	212	Lawn Hill	18.747	138.589	Lawn Hill Platform	Lawn Hill Formation	sandstone, tuff, siltstone, shale		sub-greenschist
208	Stardust, East Star, Silver Star	108	434								0.33	Lawn Hill	18.836	138.622	Lawn Hill Platform	Lawn Hill Formation	siltstone, shale		sub-greenschist
209	Watson's Lode (Wooden Duck)	16	82								0.06	Lawn Hill	18.826	138.590	Lawn Hill Platform	Lawn Hill Formation	calcareous sandstone	shale, siltstone, tuff	sub-greenschist

Deposit Description												Mineralisation				Deposit Expression	Type	References	Name
Relationship to host	Shape	Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m) length	width	depth	Attitude of orebody strike	dip	pitch	Primary ore	Secondary ore	Gangue	Wallrock alteration				
stratiform	tabular	multiple beds	supergene	laminated/ banded	faulted, folded	5000	20					sphalerite, galena, marcasite, chalcopyrite, arsenopyrite, pyrite, pyrrhotite, magnetite	goethite, hematite, plumbojarosite	quartz, feldspar, dolomite, siderite, biotite, sericite, chlorite		gossan	3	59, 55, 172, 204	Mount Novit
stratiform	tabular, folded	bed	supergene	laminated/ banded	folded	3000	4 - 6		040	0 -20 E		magnetite, galena, sphalerite, pyrite, pyrrhotite, gahnite, chalcopyrite	goethite, plumbogummite, graphite, hematite, corkite	garnet, apatite, graphite, quartz, fayalite, hornblende, pyroxene, cryptomelane		gossan	4a	16, 22, 123, 150, 192	Pegmont
discordant		multiple vein, breccia	supergene		faulted, folded	300	15	73	015 - 035	65 - 85 W	45 NE	galena, sphalerite, pyrite, chalcopyrite	cerussite, anglesite	quartz, siderite, Fe oxides, Mn oxides	silicification	quartz	2c	36, 55, 113, 141, 198, 202	Silver King
discordant		shear zone	supergene	brecciated	faulted							galena	anglesite, malachite, azurite	quartz			2c	55, 198	Stardust, East Star, Silver Star
discordant		shear zone, stockwork	supergene	brecciated	folded, faulted			31				galena, sphalerite, chalcopyrite, pyrite	cerussite	quartz, Mn oxides		concealed	2c	36, 55, 113, 198, 202	Watson's Lode (Wooden Duck)

Gold

	Name	Production		Resource / Reserve				Value	Location			Host Rocks						
		Au (grams)	Ag (kg)	Tonnes ('000)	Grade Au (g/t)	Classification	Reference	($A millions) 1992	1:100000 geological map	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional metamorphism	Relationship to host	Shape
210	Comstock	6,053						0.09	Cloncurry	20.996	140.735	Cloncurry-Selwyn Zone	Mount Norna Quartzite	quartzite	amphibolite, schist	amphibolite	discordant	lenticular
211	Falcon (Rose & Thistle), Shamrock	8,827	39.28					0.14	Cloncurry	20.965	140.743	Cloncurry-Selwyn Zone	Toole Creek Volcanics	quartzite, amphibolite		amphibolite	discordant	lenticular
212	Gertrude, Doughboy Creek	40,430						0.62	Prospector	20.306	139.754	Leichhardt River Fault Trough	Quilalar Formation	slate	quartzite	?greenschist	stratabound	lenticular
213	Gilded Rose, Victory, Victory Consolidated, La France, Sauce Bottle, Comet, Boomerang, Gilt Edge, Silver Lining, Iron Blow, Jone's Favourite, Sweat Box, New Moon, Pepper Pot	258,506						3.98	Cloncurry	20.777	140.618	Cloncurry-Selwyn Zone	Mount Norna Quartzite	garnetiferous schist, sericite schist	amphibolite, quartzite	amphibolite	conformable	lenticular
214	Last Call	4,457						0.07	Mount Angelay	21.069	140.544	Quamby-Malbon Zone	Staveley Formation	carbonaceous slate, limestone	calcareous breccia, quartzite	greenschist	discordant	lenticular
215	Mount Freda (Saracanesca)	5,378						0.08	Cloncurry	20.981	140.736	Cloncurry-Selwyn Zone	Toole Creek Volcanics	metabasalt, quartzite, slate, mica schist		greenschist	discordant	
216	Mount Quamby (Quamby)	6,059		122	3.7	unknown	69	7.04	Quamby	20.381	140.175	Mary Kathleen Zone	Quamby Conglomerate	conglomerate		greenschist	stratabound	tabular
217	Surprise (Cloncurry Surprise)	5,288						0.08	Cloncurry	20.701	140.566	Cloncurry-Selwyn Zone	Toole Creek Volcanics			greenschist		
218	Tick Hill			470	28.0	proved, measured, indicated, inferred	125	202.66	Dajarra	21.652	139.926	Mary Kathleen Zone	Corella Formation	amphibolite, calc-silicate granofels, granite, quartzite	quartzofeldspathic granofels, felsic metavolcanics	amphibolite	stratabound	
219	Tip Top Camp (Agate Downs)	9,300						0.14	Malbon	21.383	140.483	Cloncurry-Selwyn Zone	Kuridala Formation	slate		greenschist	discordant	
220	Top Camp, Eldorado	>> 39,000						>> 0.6	Malbon	21.056	140.439	Quamby-Malbon Zone	Overhang Jaspilite	slate, calcareous siltstone, schist, phyllite	quartzite	greenschist	?concordant	
221	Two Mile Creek	> 52,000						> 0.8	Malbon	21.017	140.417	Quamby-Malbon Zone	Overhang Jaspilite			greenschist	?concordant	
222	Uncle Tom	5,983						0.09	Cloncurry	20.717	140.656	Cloncurry-Selwyn Zone	Toole Creek Volcanics			greenschist		
223	Urandala	4,354						0.07	Cloncurry									
224	Victoria	27,853						0.43	Prospector	20.098	139.696	Leichhardt River Fault Trough	Myally Subgroup	quartzite, meta-andesite		greenschist	concordant	

Deposit Description										Mineralisation				Deposit Expression	Type	References	Name
Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m) length	width	depth	Attitude strike	dip	pitch	Primary ore	Secondary ore	Gangue	Wallrock alteration				
multiple vein			faulted	49	0.3	34		E	S	native gold, scheelite		quartz, Fe oxides, biotite, kaolinite		outcrop	2b	55, 88, 102, 182	Comstock
multiple vein				91	0.2 - 2.4	24	170	75 W		native gold, pyrite, scheelite		quartz, limonite, kaolinite, calcite, siderite, tourmaline, biotite, hematite, scapolite		outcrop	2b	13, 55, 88, 102, 162	Faicon (Rose & Thistle), Shamrock
multiple vein			folded		0.1	30	175	55 W	45 S	native gold		quartz	argillic		2b	55, 103, 162, 224	Gertrude, Doughboy Creek
multiple vein			faulted, folded	800	0.1 - 1.2	46	090 - 145	75 S		native gold, pyrite		quartz		outcrop	2b	55, 88, 100, 102, 179, 180	Gilded Rose, Victory, Victory Consolidated, La France, Sauce Bottle, Comet, Boomerang, Gilt Edge, Silver Lining, Iron Blow, Jone's Favourite, Sweat Box, New Moon, Pepper Pot
multiple vein						4				pyrite, native gold		quartz	argillic		2b	20, 55, 73, 162	Last Call
shear zone, breccia, single vein	supergene		faulted	350	0.3 - 9.1	37	090 - 105	70 S		pyrite, native gold	malachite, erythrite, asbolite	quartz	carbonate	quartz, geophysical	2b	55, 88, 99, 102, 162, 166, 182	Mount Freda (Saracanesca)
bed	detrital, supergene	disseminated	faulted, folded	100	15		090	20 N			native gold, malachite, chrysocolla	hematite, ilmenite, pyrolusite, lepidocrocite		outcrop	8	13, 14, 55, 69, 227	Mount Quamby (Quamby)
															?2b	55	Surprise (Cloncurry Surprise)
		disseminated								pyrite, native gold					?	69, 125	Tick Hill
multiple vein	detrital, supergene					18	045, 135				chrysocolla, malachite, native gold	quartz, talc	argillic, talc	quartz	8, 2b	55, 73, 106, 162	Tip Top Camp (Agate Downs)
multiple vein	detrital				3 - 8	18 - 21	000	85			native gold, bismuthinite, native bismuth	quartz		quartz	8, 2b	20, 73, 110, 162	Top Camp, Eldorado
multiple vein	detrital					15	000				natve gold, native bismuth	quartz, limonite, Mn oxides			8	162	Two Mile Creek
															?2b	55	Uncle Tom
															?2b	55	Urandala
single vein	supergene			76	0.8 - 1.8	14	020	25 E		pyrite, chalcopyrite, native gold	malachite	quartz			2b	55, 103, 162, 224	Victoria

Uranium

	Name	Production		Resource / Reserve						Value	Location			Host Rocks						
		U3O8 (tonnes)	Cu (tonnes)	Tonnes ('000)	Grade U3O8 (%)	Grade Cu (%)	Grade Au (g/t)	Classification	Reference	($A millions) 1992	1:100000 geological map	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional metamorphism	Relationship to host	Shape
225	Counter (Anderson's Lode)			590	0.20			indicated	159	28.91	Mary Kathleen	20.664	139.611	Leichhardt River Fault Trough	Eastern Creek Volcanics	magnetite greywacke	metabasalt, quartzite, volcaniclastic conglomerate, metadolerite	greenschist	stratabound	
226	Eva (Pandanus Creek)	26								0.64	Seigal	17.682	137.818	Murphy Tectonic Ridge	Cliffdale Volcanics	quartzite, porphyritic felsic lavas, talc schist	granite, conglomerate	greenschist	stratabound	lenticular
227	Mary Kathleen	8894.6		2,940	0.12			measured	calculated from 93	304.35	Marraba	20.749	140.013	Mary Kathleen Zone	Corella Formation	garnet diopside skarn, calc-silicate granofels, conglomerate	rhyolite dykes, marble, micaceous schist, pyritic quartzite, amphibolite, diorite	amphibolite	discordant, stratabound	lenticular, irregular
228	Milo	0.07			0.11						Marraba	20.760	140.220	Quamby-Malbon Zone	Tommy Creek beds	carbonaceous slate, siliceous slate, calc-silicate rocks		amphibolite	discordant	
229	Monakoff (Tinbolt)		18.6		0.02	1.6				0.06	Cloncurry	20.628	140.687	Cloncurry-Selwyn Zone	Mount Norna Quartzite	ferruginous sandstone	slate, mica schist, amphibolite	amphibolite	stratabound	
230	Namalangi, Huarabargoo			3,920	0.19				6	182.48	Hedley's Creek	17.520	138.103	McArthur Basin	Westmoreland Conglomerate	sandstone, conglomerate, basaltic dykes		sub - greenscist	discordant, stratabound	lenticular
231	Northeast Westmoreland				0.04 - 0.24		1 - 16				Seigal	17.529	137.989	McArthur Basin	Seigal Volcanics	sandstone, conglomerate, basaltic dykes		sub - greenscist	discordant, stratabound	lenticular
232	Pile, Bikini				0.03 - 0.07						Kennedy Gap	20.423	139.431	Leichhardt River Fault Trough	Eastern Creek Volcanics	quartz magnetite siltstone	metabasalt, calcareous metasediments, arenaceous metasediments	greenschist	stratabound	
233	Redtree										Hedley's Creek	17.518	138.096	McArthur Basin	Westmoreland Conglomerate	sandstone, conglomerate, basaltic dykes		sub - greenscist	discordant, stratabound	lenticular
234	Skal			2,652	0.13			indicated	159	84.47	Kennedy Gap	20.436	139.462	Leichhardt River Fault Trough	Eastern Creek Volcanics	quartzose metasiltstone, feldspathic metasiltstone	metabasalt, chlorite schist, quartzite	greenschist	concordant	pipe-like
235	Valhalla			2,822	0.19			inferred, indicated	159	131.36	Kennedy Gap	20.389	139.369	Leichhardt River Fault Trough	Eastern Creek Volcanics	ferruginous tuff	metabasalt, shale	greenschist	stratabound	
236	Warwai, Watta		5.4	4,325	0.047			inferred	3	49.82	Kennedy Gap	20.160	139.455	Leichhardt River Fault Trough	Leander Quartzite	tuff, magnetite quartzite	metapelite, quartzite	greenschist	stratabound	tabular

Deposit Description										Mineralisation				Deposit Expression	Type	References	Name
Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m) length	width	depth	Attitude strike	dip	pitch	Primary ore	Secondary ore	Gangue	Wallrock alteration				
bed	supergene	disseminated	sheared, faulted	46 - 90	17 - 27	300	095	70 N		?brannerite, magnetite, pyrite,chalcopyrite, hematite	torbenite, carnotite, uranophane	quartz, calcite, chlorite, biotite, ilmenite, rutile	carbonate	outcrop, geophysical	6	10, 33, 40, 41, 55, 170	Counter (Anderson's Lode)
shear zone, multiple vein	supergene	nodular, massive	sheared, unconformity	55	9	25	075	70 N		pitchblende, galena, gold, hematite	carnotite, autinite, sklodowskite, bolywoodite, uranophane, gummite	quartz, sericite, epidote		geophysical	2d	4, 6, 53, 138	Eva (Pandanus Creek)
	supergene	disseminated	sheared, faulted	250	170.0	450	000 - 045	30 - 90 W	N	uraninite, allanite, stillwellite	gummite	garnet, diopside, scapolite, quartz, feldspar	skarn	geophysical, outcrop	5	1, 33, 40, 55, 67, 68, 93, 126, 129, 147, 148, 149, 176	Mary Kathleen
stockwork	supergene	disseminated	faulted, fractured, folded	100	9	11	010	40 E		pyrite, chalcopyrite, galena, sphalerite	metalorbenite, ?uranophane	flourite	argillic	outcrop, geophysical	2d	33, 41, 55, 71	Milo
bed	supergene	disseminated	faulted, folded	110	4	> 75	075	70 - 80 S		magnetite, pyrite, chalcopyrite, ?uraninite	hematite, limonite, malachite, chrysocolla, metatorbenite, azurite	flourite, quartz, calcite, psilomelane, barite, garnet		gossan, geophysical	6	13, 33	Monakoff (Tinboll)
shear zone, multiple vein	supergene	disseminated, brecciated, nodular	sheared		6 - 9	80	040	90		pitchblende, brannerite, gold, galena, hematite	carnotite, torbenite, autunite, renardite, soddyite	quartz, chlorite, sericite, kaolin	argillic	geophysical	6	6, 96, 97, 175, 199	Namalangi, Huarabargoo
shear zone, multiple vein	supergene		sheared							pitchblende, gold, hematite	carnotite, autunite	quartz, chlorite, sericite		geophysical	6	5, 6, 97, 175	Northeast Westmoreland
bed	supergene	disseminated		70	10	35	055	75 - 80 E		brannerite, magnetite, hematite	?autunite	quartz, calcite, chlorite	carbonate	outcrop, geophysical	6	33, 40	Pile, Bikini
shear zone, multiple vein	supergene	disseminated, brecciated, nodular	sheared				040	90		brannerite, pitchblende, gold, galena, hematite	carnotite, torbenite, autunite	quartz, chlorite, sericite, kaolin	argillic	geophysical	6	6, 40, 97, 175	Redtree
shear zone	supergene	disseminated	sheared, fractured	91 - 113	18 - 23	35 - 60	010 - 045	80 W		brannerite, chalcopyrite, pyrite	carnotite	quartz, calcite, jasper, magnetite, hematite	carbonate, silicification	outcrop, geophysical	2d	10, 33, 40, 41, 55	Skal
bed	supergene	disseminated		900	40	305		80 - 90		brannerite, uraninite, zircon	metatorbenite			geophysical	6	10, 33, 40, 41	Valhalla
	supergene	disseminated		854							francevillite		argillic	geophysical	6	3, 10, 33, 40, 41, 213	Warwai, Watta

Miscellaneous

	Name	Metal	Metal Production							Resource / Reserve				Value	Location			Host Rocks				
			Au (grams)	Ag (kg)	Co (tonnes)	Cu (tonnes)	W (tonnes)	Mn ore (tonnes)	Beryl (tonnes)	Tonnes ('000)	Grade Fe (%)	Classification	Reference	($A millions) 1992	1:100000 geological map	Lat.	Long.	Province	Formation	Host lithology	Associated lithologies	Regional metamorphism
237	O'Brien's Soak	Ag		314.9										0.06	Duchess	21.226	139.600	Kalkadoon-Leichhardt Belt	Kurbayia Migmatite	amphibolite, gneiss		amphibolite
238	Silver Phantom	Ag		4,453.2										0.80	Malbon	21.317	140.401	Quamby-Malbon Zone	Mitakoodi Quartzite, Wimberu Granite	impure limestone, quartzite	granite	greenschist
239	Mona (Joy)	Co				6.9								0.02	Marraba	20.591	140.194	Quamby-Malbon Zone	Tommy Creek beds	carbonaceous slate, calc-silicate rocks, andalusite schist, amphibolite	granite	greenschist
240	Mount Cobalt	Co			778.7									24.14	Mount Merlin	21.739	140.491	Cloncurry-Selwyn Zone	Kuridala Formation	schist, metagreywacke, meta-arenite, metadolerite		amphibolite
241	Queen Sally	Co			2.7									0.08	Quamby	20.087	140.173	Quamby-Malbon Zone	Soldiers Cap Group	quartz schist, quartzite, limestone	amphibolite	amphibolite
242	Success (Varrio's Success)	Co	10.3	13.4	5.6	123.2								0.57	Marraba	20.875	140.306	Quamby-Malbon Zone	Marraba Volcanics	chlorite schist, biotite schist	hornblende schist	greenschist/ amphibolite
243	Crystal Hill	Sn, W													Seigal	17.742	137.844	Murphy Tectonic Ridge	Nicholson Granite Complex	granite		greenschist
244	McLennan's Claim (The General)	W					8.3							0.07	Quamby	20.217	140.018	Mary Kathleen Zone	Corella Formation	hornblende schist	crystalline calcite	amphibolite
245	Buka	Mn													Malbon	21.207	140.432	Quamby-Malbon Zone	Overhang Jaspilite	chert, metasiltstone, calc-silicate rocks		greenschist
246	Kafani	Mn													Malbon	21.095	140.425	Quamby-Malbon Zone	Overhang Jaspilite	quartzite, shale		greenschist
247	Mangano	Mn													Malbon	21.087	140.440	Quamby-Malbon Zone	Overhang Jaspilite	shale, quartzite		greenschist
248	Overhang	Mn						7270						1.45	Marraba	20.986	140.389	Quamby-Malbon Zone	Overhang Jaspilite	jaspilite, slate, quartzite		greenschist
249	Constance Range	Fe								368,000	51.2	indicated	92	75.37	Bowthorn	18.375	138.250	South Nicholson Basin	Mullera Formation	BIF	micaceous siltstone, sanstone, shale	sub-greenschist
250	Mount Philp	Fe								18,100	45.6	indicated, inferred	54	3.30	Mary Kathleen	20.988	139.936	Mary Kathleen Zone	Corella Formation	calc-silicate granofels, calc-silicate breccia, arenaceous metasediments, metabasalt		amphibolite
251	Big Beryl	Be							73.0						Mount Isa	20.784	139.427	Leichhardt River Fault Trough	Sybella Granite	quartz feldspar muscovite pegmatite	hornblende schist, mica schist	greenschist

Deposit Description												Mineralisation				Deposit Expression	Type	References	Name
Relationship to host	Shape	Nature of mineralisation	Secondary enrichment	Texture	Local structure	Dimensions (m) length	width	depth	Attitude strike	dip	pitch	Primary ore	Secondary ore	Gangue	Wallrock alteration				
discordant	lenticular	shear zone	supergene	disseminated	faulted								naumannite, cerargyrite, native silver	calcite			2d	20, 55, 131	O'Brien's Soak
discordant	lenticular	multiple vein, stockwork	supergene		fractured	6	2	15	130				cerargyrite, native silver, argentite, proustite, erythrite	barite, jasper, chalcedony, opal		outcrop	2d	20, 26, 55, 57, 73, 117	Silver Phantom
concordant	lenticular	multiple vein	supergene	disseminated		8	0.9	28	040	80 E		cobaltite, chalcopyrite	asbolite, erythrite, malachite	calcite, quartz		gossan, quartz	2d	28, 45, 55, 71, 118	Mona (Joy)
concordant		shear zone	supergene		sheared	220	< 9	34	000	70 - 80E		chalcopyrite, pyrite, cobaltite, scheelite, galena, sphalerite	chalcocite, covellite, cuprite, malachite, azurite, chrysocolla, torbenite, erythrite, asbolite	quartz, calcite, magnetite, siderite, biotite			2d	20, 45, 55, 144, 164	Mount Cobalt
discordant	pipe-like, irregular	multiple vein	supergene	disseminated			0.3 - 0.9	23	155	80 W	S	cobaltite	asbolite, erythrite, malachite, azurite	limonite, quartz, calcite			2d	45, 55, 164, 174, 227	Queen Sally
discordant	lenticular	shear zone	supergene	massive, nodular	folded	27	0.3 - 1.8	40	060	80 S	E	chalcopyrite, pyrite, cobaltite	chalcocite, covellite, erythrite, chalcophyllite, bornite, enargite	quartz, limonite			2d	45, 55, 71, 165, 181, 193	Success (Varrie's Success)
discordant		magmatic, multiple vein		disseminated								cassiterite, pyrite, chalcopyrite, hematite, wolframite		quartz, muscovite, flourite, topaz, phlogopite	greisen			6, 199	Crystal Hill
	lenticular	multiple vein	supergene	disseminated		60	20		135	80 E		scheelite	copper minerals	quartz, calcite			2d	42, 55, 186, 227	McLennan's Claim (The General)
concordant		shear zone	supergene		faulted	110	6.0 - 9.0		155	65 - 75 E			manganese minerals	barite		outcrop	2d	35, 73	Buka
concordant		shear zone	supergene		faulted	46	9.1 - 24.4		155	70 - 85 E			manganese oxides			outcrop	2d	35	Kafani
concordant		shear zone	supergene		sheared, fractured	41 - 70	9.1 - 25.9		045	50 - 70 S			manganese oxides	quartz, limonite		outcrop	2d	35	Mangano
concordant		shear zone, breccia	supergene		faulted	76	8.2 - 16.7	30	135	70 - 80 E			braunite, pyrolusite, manganite, psilomelane, cryptomelane	quartz, limonite, kaolinite		outcrop	2d	35, 42, 55, 71, 74	Overhang
stratiform, concordant	tabular	multiple beds		laminated/ banded	faulted	> 50 km	45 - 180	1800		0 - 30		hematite, chamosite	limonite	quartz, siderite, chert, carbon, pyrite		outcrop		55, 92, 157	Constance Range
concordant	lenticular	shear zone, single vein		massive	faulted, folded	3350	26	180	025	55 - 80 W		hematite, magnetite		quartz		outcrop	2d	54, 55, 72	Mount Philp
discordant	lenticular	magmatic, multiple vein	supergene	disseminated		13	0.5 - 2.4	12.5	160 - 185	65 V		beryl	bertrandite	quartz, albite, microcline, perthite, muscovite, biotite, tourmaline, garnet		quartz	7	23, 29, 46, 48, 55, 186	Big Beryl