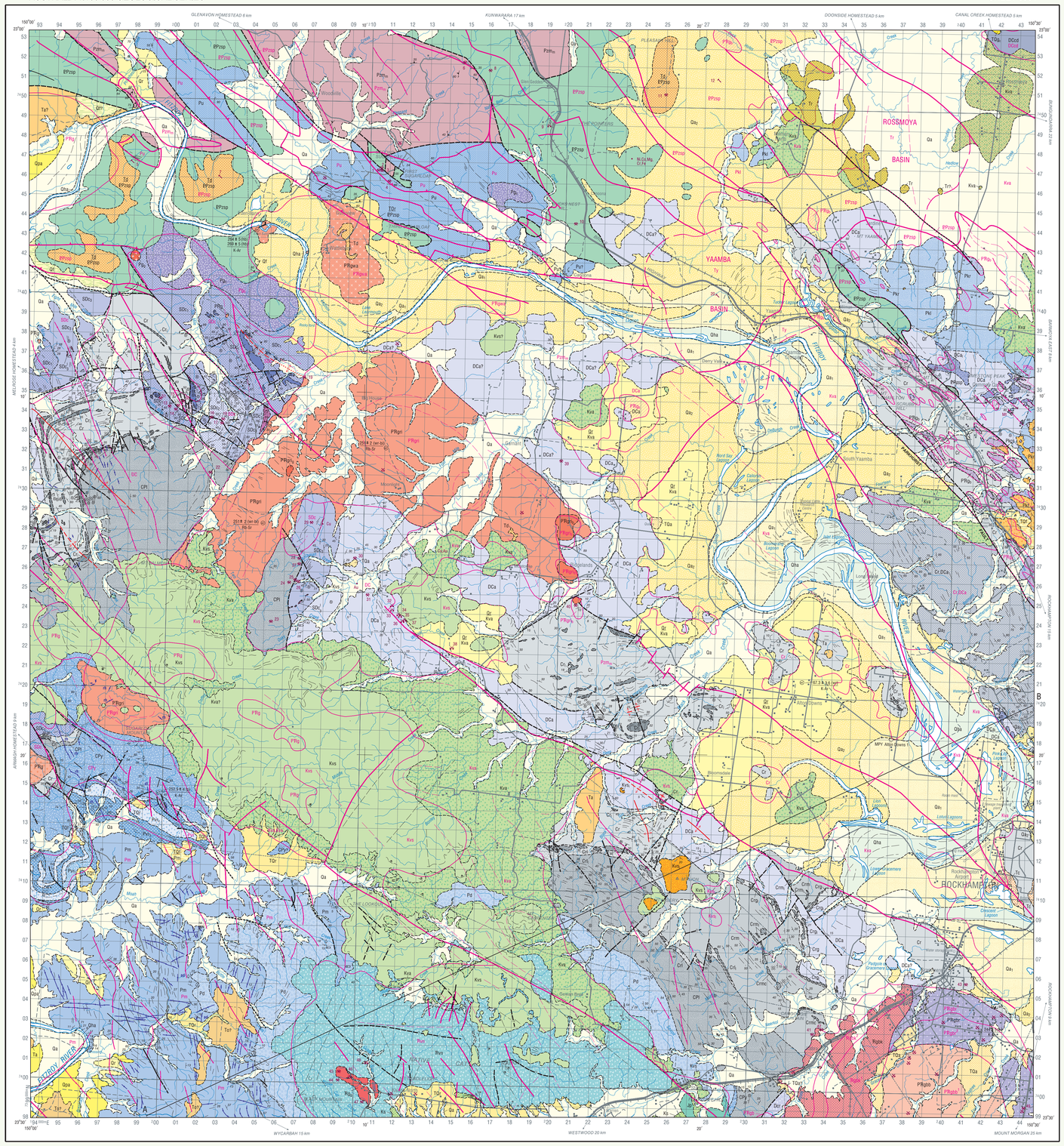
RIDGELANDS

QUEENSLAND

AUSTRALIA 1:100 000 GEOLOGICAL SERIES

SHEET 8951



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Queensland Government
Natural Resources, Mines and Water

SCALE 1:100 000

1 0 1 2 3 4 5 6 7 8 9 10

KILOMETRES

GREY NUMBERED LINES ARE 1 000 METRE INTERVALS OF THE MAP GRID OF AUSTRALIA 1994, ZONE 56
TRANSVERSE MERCATOR PROJECTION
HORIZONTAL DATUM: GEOCENTRIC DATUM OF AUSTRALIA 1994 (GDA94)

GDA

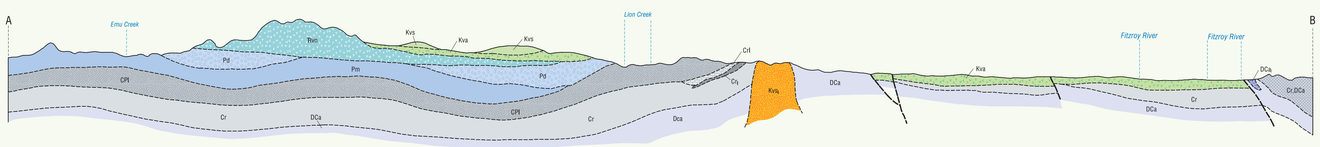
Geology :1962 by B.W. Hawkins and I.G. Whitcher (Consolidated Zinc Pty Ltd)
:1965–1968 by A.G. Kirkegaard, C.G. Murray (GSQ) and R.D. Shaw (BMR)
:1977 by N.J.Krosch and J.R.Kay
:1981 by W.F. Willmott, M.L. O'Flynn and D.L. Trezise (GSQ),
with contributions from J.F. Dear
:1993-95 by B. Bradley (QUT), R.J. Holcombe, C.J. Stephens, C.R. Fielding and S.A. O'Connell (University of Queensland)
:1994-97 by G.A. Simpson, M.A. Hayward, R.M. Barker, A.D. Robertson, S.B.S Crouch, C.G. Murray, F.R. Blake, J. Domagala and B.G. Fordham

Mineral occurrence mapping :1997 by P.E. Burrows
Compiled by G.A. Simpson, S.B.S. Crouch, C.G. Murray, I.W. Withnall, R.K.J. Blight

Cartography by Graphic Services Unit, GSQ, Natural Resource Sciences,
Department of Natural Resources, Mines and Water

SCHEMATIC SECTION

Topography vertically exaggerated
Cainozoic units omitted



QUATERNARY

- **Qha** — *Clay, silt, sand, gravel; active stream channel and low terraces*
- **Qa1** — *Clay, silt, sand, gravel; intermediate terraces of Fitzroy River flood plain alluvium*
- **Qa2** — *Clay, silt, sand, gravel; highest terraces of Fitzroy River flood plain alluvium*
- **Qa** — *Clay, silt, sand, gravel; flood plain alluvium*
- **Qpa** — *Sand, mud and gravel; alluvium on higher terraces, commonly with 'melon holes'*
- **Qr** — *Clay, silt, sand, gravel and soil; colluvial and residual deposits*
- **Qf** — *Sand, gravel, clay; floodout sheets and small fans*

TERTIARY-QUATERNARY

- **TQa** — *Sand, mud and gravel; high-level alluvium and colluvium*
- **TQf** — *Sand, gravel, clay; floodout sheets and small fans*
- **TQr** — *Clay, silt, sand, gravel and soil; colluvial and residual deposits*
- **TQgL** — *Chert gravel*

TERTIARY

- *Deep weathered profile; mottled leached and kaolinised rock*
- **Td** — *Indurated and ferruginised top of deep weathering profiles, locally including ferricrete*
- **Ta** — *Sandy claystone, clayey sandstone, minor gravel beds; old alluvium*
- Casuarina beds — **Tc** — *Mudstone, siltstone, oil shale, minor lignite, conglomerate and dolomite*
- Rossmoya beds — **Tr** — *Mudstone, shale, oil shale; low magnetic domain*
- Biloela Formation — **To** — *Silty-sandy mudstone, sandstone*
- Yaamba beds — **Ty** — *Mudstone, oil shale, sandstone, lignite; low magnetic domain*

CRETACEOUS

- Mount Salmon Volcanics — **Kvs** — *Rhyolitic and trachytic flows, breccia, ignimbrite and tuff; basalt; low to moderate magnetic domain*
  - **Kvs1** — *Trachyte, rhyolite plugs; moderate magnetic domain*
  - **Kvs2** — *Trachyte, rhyolite plugs; moderate magnetic domain*
- Alton Downs Basalt — **Kva** — *Olivine- and feldspar-phyric basalt; moderate magnetic domain*
- Stanwell Coal Measures — **Ks** — *Mudstone, sandstone, siltstone, minor coal*

JURASSIC

- Precipice Sandstone — **Jp** — *Thick-bedded, cross-bedded fine to coarse-grained, pebbly quartzose sandstone and minor lithic sublabile sandstone, siltstone and mudstone*

TRIASSIC

- **Rg** — *Gabbro, diorite, granodiorite, granite; moderate to high magnetic domain*
- **Rg2** — *Granite, granodiorite*
- Native Cat Andesite — **Rya** — *Andesite, andesitic tuff, trachyandesite, andesitic to rhyolitic breccia, minor rhyolite; moderate to high magnetic domain*
- Boulder Creek Igneous Complex — Kabra Quartz Monzodiorite — **Rgbk** — *Altered grey medium-grained hornblende quartz monzodiorite, dark grey hornblende-augite quartz gabbro, hornblende-hypersthene-augite-biotite quartz gabbro; 'Rgbk' - high magnetic domain; 'Rgbk' - very low magnetic domain (reversely magnetised)*

PERMIAN-TRIASSIC

- Bundaleer Tonalite — **PRgbb** — *Pale grey medium-grained leucocratic hornblende-biotite tonalite, minor pink medium-grained biotite granite; 'PRgbb' - moderate magnetic domain*
- Gracemere Gabbro — **PRgbr** — *Grey medium to coarse-grained foliated quartz-hornblende-biotite-hypersthene-augite gabbro; 'PRgbr' - moderate to high magnetic domain; 'PRgbr' - very low magnetic domain (reversely magnetised)*
- **PRg** — *Granite, granodiorite, diorite*
- **PRg** — *Granite, granodiorite, diorite; moderate magnetic domain*
- **PRgb1** — *Gabbro, diorite; moderate to high magnetic domain*
- **PRgb2** — *Gabbro, diorite; moderate to high magnetic domain*
- Ridgelands Granodiorite
  - **PRgrb** — *Fine to medium-grained diorite to gabbro, dark grey medium to coarse-grained hornblende gabbro, speckled grey medium to coarse-grained hornblende gabbro to quartz gabbro; high magnetic domain*
  - **PRgrp** — *Pink biotite-bearing micro syenogranite, grey fine-grained equigranular to sparsely glomeroporphyritic, biotite +/- hornblende microgranite*
  - **PRgrl** — *Grey medium-grained biotite-hornblende to hornblende-biotite granodiorite, grey to cream medium-grained biotite-hornblende tonalite to quartz diorite, locally xenolith-bearing; moderate magnetic domain*
- Wattlebank Granodiorite — **PRgwb** — *Grey fine to medium-grained granodiorite, commonly xenolith-bearing; minor pink pegmatite; moderate magnetic domain*

PERMIAN

- **Pg1** — *Gabbro, diorite*
- **Pg2** — *Granite, granodiorite*
- Dinner Creek Conglomerate — **Pd** — *Conglomerate, lithic sandstone, mudstone*
- Moah Creek beds — **Pm** — *Mudstone, lithic sandstone, conglomeratic mudstone, conglomerate; low magnetic domain*
- Bencarter Group
  - Sleipner Member — **Pks** — *Massive, poorly sorted, matrix to clast supported, monomictic and lesser polymictic, granule to boulder breccia and minor conglomerate; lithic sandstone and siltstone*
  - Ellrott Rhyolite — **Pkr** — *Intrusive porphyritic rhyolite and dacite; possibly locally extrusive lava and breccia*
  - Lakes Creek Formation — **Pkl** — *Siltstone and lithic sandstone; low magnetic domain*
- **Pz** — *Siltstone, interbedded lithic sandstone and conglomerate, cherty vitric tuff, crystal tuff; moderate magnetic domain*
- Rookwood Volcanics
  - **Pvr1** — *Rhyolitic lava and volcaniclastics including pumiceous breccia*
  - **Pvr2** — *Silicified mudstone, siltstone, carbonaceous mudstone, tuffaceous sandstone, conglomerate*
  - **Pvr3** — *Basaltic pillow lava and breccia, minor chert, sandstone, siltstone; some dolerite sills or dykes*
  - **Pvr** — *Undivided Rookwood Volcanics; moderate to high magnetic domain*

LATE CARBONIFEROUS-EARLY PERMIAN

- Youlamble Conglomerate — **CPy** — *Granule to boulder polymictic conglomerate commonly with abundant granite and rhyolite clasts, felsic volcaniclastic sandstone, tuffaceous and carbonaceous siltstone, dacitic to rhyolitic ignimbrite, breccia, mudstone, minor coal; low magnetic domain*
- Lorray Formation — **CPl** — *Bryozoan-rich mudstone, fossiliferous siltstone, sandstone, granite-rich, quartz-bearing, polymictic conglomerate and subordinate crinoid-rich limestone*

EARLY CARBONIFEROUS

- Rockhampton Group
  - **Cr** — *Dark grey mudstone and siltstone; felsic volcaniclastic sandstone; oxid-bearing sandstone; oxid-bearing conglomerate with dark grey mudstone rip-up clasts; rounded polymictic conglomerate, oolitic limestone; low magnetic domain*
  - **Cs** — *Oolitic limestone, calcareous sandstone*
  - Lion Creek Limestone
    - **Crl** — *Oolitic limestone, skeletal limestone, lithic and feldspathic labile sandstone*
    - **Crls** — *Oolitic limestone and subordinate skeletal limestone*
  - Macalister Formation
    - **Crm** — *Silicified mudstone, lithic sandstone, oolitic limestone, conglomerate*
    - Cargoogle Oolite Member
      - **Crmo** — *Oolitic limestone*
      - **Crmoc** — *Oolitic limestone, minor sandstone and mudstone*
    - Gudman Oolite
      - **Crg** — *Pisolitic and oolitic limestone, fossil-bearing sandstone, minor siltstone*
      - **Crgs** — *Pisolitic and oolitic limestone*

LATE DEVONIAN-EARLY CARBONIFEROUS

- **DC** — *Sandstone, siltstone, mudstone, conglomerate, limestone; low magnetic domain*
- Doonside Formation — **DCcd** — *Chert, jasper, mudstone, siltstone, lithic sandstone, tuff, limestone and altered basalt; low to moderate magnetic domain*
- **Cr,DCa** — *Complex zone containing fold and fault repetitions of Rockhampton Group and Mount Alma Formation*
- Mount Alma Formation
  - **DCa** — *Thinly interbedded fine-grained sandstone and siltstone and thick beds of conglomerate with andesitic to dacitic volcanic clasts and siltstone rip-up clasts; low magnetic domain*
  - **DCls** — *Fossiliferous limestone, marble*

DEVONIAN

- Raspberry Creek Formation — **Dcr** — *Basaltic to andesitic (rarely dacitic and rhyolitic) volcaniclastic sandstone and conglomerate, minor silicified siltstone and fossiliferous limestone*

LATE SILURIAN-EARLY DEVONIAN

- **SDc** — *Sandstone, siltstone, mudstone, andesitic to dacitic volcanics, volcaniclastic breccia, limestone, polymictic conglomerate, sparse peperite and andesite to dacite intrusives; moderate to high magnetic domain*
- Craiglee beds
  - **SDc3** — *Sandstone, siltstone, polymictic conglomerate, andesitic volcanics, calc-silicate rocks and minor limestone*
  - **SDc2** — *Limestone and minor siltstone*
  - **SDc1** — *Andesitic to dacitic volcanics, siltstone, mudstone, volcaniclastic breccia and minor sandstone*
  - **SDc0** — *Quartz-bearing feldspathic to lithofeldspathic sandstone, thinly bedded siliceous siltstone, limestone, dacitic volcanics and minor conglomerate and andesitic to dacitic intrusives*
  - **SDc1** — *Limestone and minor siltstone and sandstone*

PALAEOZOIC

- Marlborough Metamorphics — **PzMm** — *Chlorite-quartz phyllite, muscovite-plagioclase-quartz schist or gneiss, marble, diopside-plagioclase hornfels, amphibolite; low magnetic domain*

NEOPROTEROZOIC OR PALAEOZOIC

- Princhester Serpentinite — **EPzsp** — *Serpentinite, serpentinised harzburgite, altered gabbro, minor pyroxenite (tectonically emplaced in Permian-Triassic); very high magnetic domain*

GEOLOGICAL SYMBOLS

- Geological boundary
- Weathering boundary
- Fault
- Fault showing relative displacement
- Thrust fault, triangles pointing in direction of fault dip
- Dyke or vein; **ad** - andesite, **bs** - basalt, **dl** - dolerite, **rh** - rhyolite
- Anticline
- Anticline, showing plunge
- Syncline

Where location of boundaries, faults and folds is approximate, line is broken; where inferred queried; where concealed, boundaries and folds are dotted, faults are shown by short dashes

- Strike and dip of strata
- Strike and dip of strata, facing not known
- Strike and dip of strata, dip 5° to 15°
- Strike and dip of strata, dip 15° to 45°
- Strike and dip of strata, dip greater than 45°
- Trend line
- Lineament

(Airphoto intrepretation)

- Strike and dip of joint
- Strike and dip of foliation
- Vertical first generation foliation
- Strike and dip of first generation foliation
- Strike and dip of second generation foliation
- Strike and dip of cleavage
- Macrofossil locality
- Trace fossil locality
- Fossil wood locality
- Plant fossil locality
- Conodont locality
- Isotopic age in million of years
  - 264 ± 5 (10) K-Ar - potassium-argon method
  - Rb-Sr - rubidium-strontium method
  - bi - biotite, hb - hornblende, p - plagioclase, wr - whole rock

TOPOGRAPHICAL AND CULTURAL FEATURES

- Highway, National route marker
- Minor road
- Vehicle track
- Railway; station
- Transmission line
- Bluegoose — Homestead
- Building
- Trigonometrical station
- Tank or small dam
- Waterhole

MAGNETIC INTERPRETATION

Magnetic interpretation is shown in magenta using standard geological linestyles. Areas labelled in magenta indicate the extent of mapped units, or anomalies associated with concealed magnetic units, interpreted from aerial magnetic data.

Boundary of main depocentre of Rossmoya and Yaamba Basins

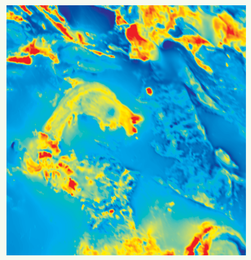
RADIOMETRIC IMAGE

Red-green-blue ternary (potassium-thorium-uranium)

The radiometric image shows the relative concentrations of the radioactive elements potassium, thorium and uranium in the topmost 20-30 cm of the Earth's surface, as measured by an airborne detector that records gamma radiation. The data are displayed as a composite coloured image, with potassium in red, thorium in green and uranium in blue. Rock units with different contents of these elements are clearly outlined by their different colours. Those with relatively high contents of all three elements appear white in the image, like Mount Salmon Volcanics in the west; those with low contents (and water bodies) are dark, like Princhester Serpentinite in the north

MAGNETIC IMAGE

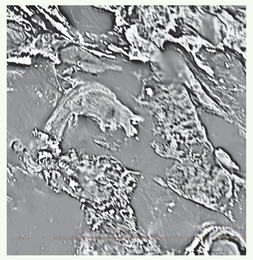
Total magnetic intensity - reduced to pole



The total magnetic intensity image shows variations in the Earth's magnetic field caused by differences in the magnetic properties of rock units in the upper crust. The magnetic response of rocks is directly related to the content of magnetic minerals, and is depicted by means of a rainbow colour scale from red (strongly magnetic like the Princhester Serpentinite in the north), through yellow (moderately magnetic like the Ridgelands Granodiorite in the centre), to blue (weakly to non-magnetic like the Mount Alma beds in the south-west). Dark blue to black areas represent rocks that have an ancient component of remnant magnetisation produced when the polarity of the Earth's magnetic field was opposite to that at present

MAGNETIC IMAGE

First vertical derivative - reduced to pole



The first vertical derivative of the total magnetic intensity data enhances short-wavelength magnetic features relative to those with long wavelengths. This image emphasises the high gradients around the edges of magnetic bodies, and in particular highlights narrow linear magnetic features such as dykes. Variations in magnetic response are indicated by shades of grey, with the strongest magnetic units shown in white. Black areas are either reversely magnetised rock units, or a 'shadow' effect adjacent to highly magnetic features like the Princhester Serpentinite in the north

Images generated from airborne geophysical data available from the Department of Natural Resources, Mines and Water, Brisbane

FIELD OBSERVATION POINTS

INDEX TO MINES AND PROSPECTS

1	Lost Chance	Au	104465	26	---	Au	067254
2	Brittania	Au	105466	27	---	Au	067263
3	---	Au	105465	28	Last Chance?	Au	067266
4	Satan	Au	109459	29	Mount Eagle	Au	073285
5	Moores	Ni,Co	979467	30	McMasters Gully	Au	095267
6	Phoenix Asbestos	Ac	147520	31	Welcome	Au	102248
7	Lagoon Hill	Ni,Co	023460	32	Hunters Gully	Au	115243
8	Just in Time	Au	160517	33	Regent	Au	115241
9	Canoona Alluvials	Au	190489	34	Golden	Au	118239
10	Keiths Hill	Au	205439	35	Boyle and Party	Au	119238
11	Brolga	Ni,Co	249506	36	Johnsons	Au	120236
12	Yaamba Oil Shale	Oil	276514	37	Newman	Au	121236
13	---	Au	999343	38	Forgary	Au	146222
14	Sleeping King	Au	003341	39	Garnant	Au	199318
15	---	Au	004343	40	Ridgelands	Au	208245
16	Carnarvon Castle	Au	021337	41	---	Mt	333029
17	Connors Relief	Au	026334	42	O'Shanessys	Mt	338031
18	Mary Florence	Au	027336	43	Old Hector	Au	411056
19	Elliott Beam	Cu,Mt,Ag	068359	44	Golden Spur	Au	093001
20	Yaamba Magnesite	Ms	278404	45	---	Au	093005
21	Mount Etna	Ls	387368	46	Golden Horseshoe	Au	098003
22	Copper Shafts	Cu	021309	47	Native Cat	Au	104990
23	Three Mile Creek	Au,Cu	053234	48	Golden Spur Creek	Au	106010
24	Mount Monbiath	Au	062254	49	Hector	Au,Cu	441993
25	Alliance	Au	065255	50	---	Au	006345
				51	---	Au	995346

The grid reference is a six figure abbreviated MGA94 coordinate to the nearest 100 metres

MINING SYMBOLS

- Mine
- Mine, abandoned
- Minor opencut or quarry
- Alluvial workings
- Alluvial workings, abandoned
- Prospect
- Mineral occurrence
- MPY (Alton Downs) 1 — Petroleum exploration well

Ac - asbestos (chrysotile), Ag - silver, Au - gold, Co - cobalt, Cr - chromium, Cu - copper, Fe - iron, Ls - limestone, Mg - magnesium, Ms - magnesite, Mt - magnetite, Ni - nickel, Oil - oil shale

RIDGELANDS

SHEET 8951

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Copies of this map may be obtained from the Department of Natural Resources, Mines and Water, Brisbane