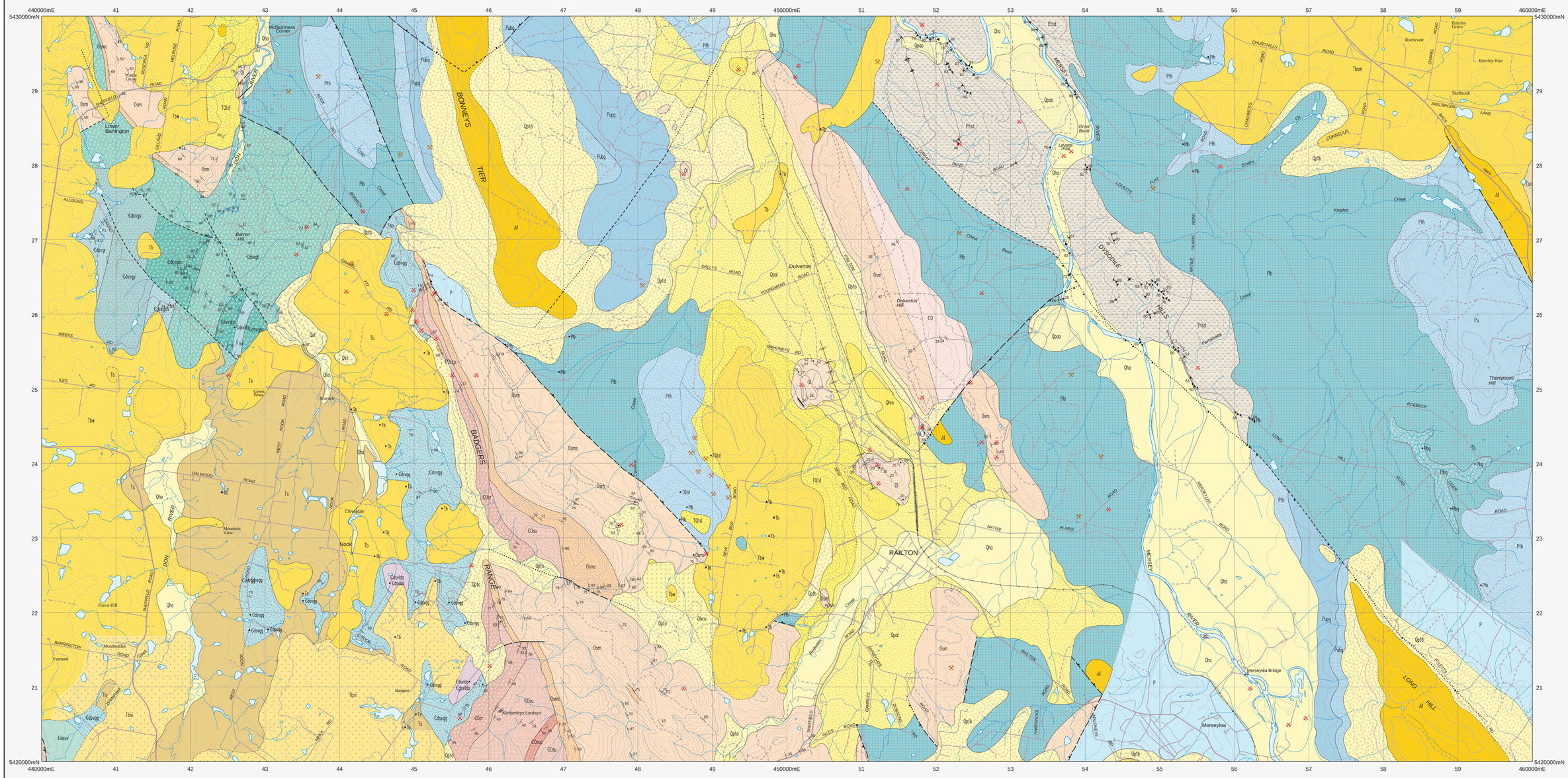
Department of Infrastructure Energy and Resources
MINERAL RESOURCES TASMANIA

DIGITAL GEOLOGICAL ATLAS 1:25 000 SCALE SERIES
RAILTON, SHEET 4442

RAILTON

Scale: 1:25 000

0 500 1000 1500 2000 2500m



CENOZOIC

QUATERNARY

HOLOCENE

- **Qhm** — *Undifferentiated Quaternary Sediments (Q). Mine–tailings and man–disturbed ground (Qhm).*
- **Qha** — *Stream alluvium, swamp and marsh deposits (Qha).*
- **Qxl** — *Landslide deposits derived dominantly from weathered Paleogene – Neogene rocks (Qxl).*
- **Qhco** — *Colluvium derived mainly from Owen Group quartz sandstone and conglomerate (Qhco).*

PLEISTOCENE

- **Qpal** — *Clay and alluvial gravel with dolerite boulders in places (Qpal).*
- **Qpt** — *Talus, (Qpt); derived dominantly from Paleogene – Neogene basalt (Qptb), from Jurassic dolerite (Qptd), from Owen Group sandstone and conglomerate (Qpto).*
- **Qpao** — *Older alluvium of river terraces (Qpao).*

Erosional surface.

- **TQtd** — *Boulders of Jurassic dolerite and minor quartzite pebbles in clay, reworked into Quaternary slope deposits in places (TQtd).*

PALEOGENE – NEOGENE

- **Tbw** — *Deeply weathered basalt (Tbw).*
- **Tb** — *Basalt (Tb).*
- **Tbsm** — *Alkali olivine basalt, deeply weathered in most areas, dated at 25.9+/–0.2Ma (Moriarty Basalt) (Tbsm).*
- **Tso** — *Sand, quartzite gravel and clay, including interbasalt deposits (Wesley Vale Sand) of Oligocene age (Tso).*
- **Tb** — *Basalt (Tb).*
- **Ts** — *Sand, clay and conglomerate (Ts); intercalated basalt and sand, clay and conglomerate, mostly deeply weathered (Tbsi).*

Erosional surface.

PALEOZOIC

PERMIAN

- **Pubg** — *Unfossiliferous pebbly siltstone, siltstone and sandstone (correlate of Bogan Gap Group) (Pubg).*
- **Pupg** — *Pebbly sandstone, siltstone and mudstone with marine fossils (correlate of Poatina Group) (Pupg). (Pu, Pubg, Pupg – Kelcey Tier Beds; Upper Glaciomarine Sequence).*

Disconformity.

CARBONIFEROUS

- **Pfh** — *Quartz sandstone and minor conglomerate, with a middle interval of mudstone, shale and coal seams (Pfh – Mersey Coal measures, correlate of Liffey Group; Lower Freshwater Sequence).*
- **Pb, Pbg** — *Poorly sorted pebbly mudstone, siltstone and sandstone with marine fossils in places; Tasmanite oil shale toward base and basal conglomerate (Pb); distinctive unit of pebbly quartz sandstone to rounded pebble–cobble–(boulder)–conglomerate indicated (Pbg). (Pb, Pbg – Spreyton Beds; Lower Glaciomarine Sequence).*

Angular unconformity.

LOWER PARMEENER SUPERGROUP

PALEOZOIC

ORDOVICIAN

GORDON GROUP

- **Ol** — *Massive or thickly bedded, grey, fine–grained limestone, with marine fossils in places (Ol).*
- **Osmsh** — *Siltstone, calcareous siltstone and mudstone, with marine fossils in places (Osmsh).*
- **Osm** — *Dominantly very fine– to medium–grained, purple, pink or white quartzarenite, locally cross–bedded (Osm). Dominantly bioturbated quartz siltstone with sparse marine fossils (Osms).*
- **Osms**
- **Osmc** — *Granule to pebble conglomerate, purple, pink or white, with up to 15% chert clasts (Osmc). (Osmc + Osms + Osm + Osmsh = Caroline Creek Sandstone; correlate of Moina Sandstone).*

Angular unconformity.

CAMBRIAN

FURONGIAN — OWEN GROUP

- **€O** — *Angular unconformity.*
- **€Osuc** — *Pink quartzarenite, cross–bedded in places (€Osu); quartzite–derived pebble conglomerate (€Osuc).*
- **€Osu**
- **€Ocrp** — *Pale pink, quartzite–derived, closed–framework pebble conglomerate with minor pink quartzarenite beds (€Ocrp). Pale pink, quartzite–derived, closed– to open–framework, massive pebble –cobble conglomerate with minor pink quartzarenite beds. (Correlate of Roland Conglomerate) (€Ocr).*
- **€Ocr**

Angular unconformity.

CAMBRIAN SERIES 3 — WESTERN VOLCANOSEDIMENTARY SEQUENCE — MT READ VOLCANICS

- **€dsvv** — *Dominantly fine–grained ashy volcaniclastic siltstone, with minor black to grey siltstone (€dsvv).*
- **€dsvgs** — *Polymict conglomerate and sandstone, with clasts of mudstone, siltstone, sandstone, carbonate, basalt, chert, quartzite and schist (€dsvgs).*
- **€dsvgb** — *Massive to thick–bedded, dominantly open–framework pebble conglomerate with clasts of Precambrian provenance (quartzite, schist and carbonate) in micaceous quartz sandstone matrix; and minor coarse–grained quartz sandstone (Bott Conglomerate) (€dsvgb).*
- **€dsvgbc** — *Interlayered sandstone, shale and conglomerate with clasts of Precambrian provenance (quartzite, schist and minor carbonate), commonly of cobble grade (€dsvgbc).*
- **€dsvgsh** — *Laminated siltstone and mudstone with minor sandstone (€dsvgsh).*
- **€dsvgy** — *Dominantly granule to pebble–grade conglomerate with clasts of mudstone, siltstone, volcanics, and minor schist and quartzite (€dsvgy).*
- **€dsvgg** — *Dominantly non–volcanic sandstone and siltstone, typically siliceous–micaceous, massive to thinly bedded; sparsely pebbly in places (€dsvgg).*
- **€dsvgr** — *Sandstone, siltstone, red mudstone and minor granule–pebble grade conglomerate (€dsvgr).*
- **€cwc** — *Pale to dark grey or black, distinctly bedded and plane laminate to massive or brecciated chert with minor red and grey siliceous hematitic mudstone and siltstone (Barrington Chert and correlates) (€cwc).*

TERRENEUVIAN(?)

MESOPROTEROZOIC – NEOPROTEROZOIC

- **P€sd** — *Dominantly quartz–mica schist and foliated micaceous metaquartzite (P€sd).*

INTRUSIVE ROCKS

PALEOZOIC MESOZOIC — CAMBRIAN JURASSIC

- **Jd** — *Dolerite (Jd).*
- **€dsvlda** — *Massive feldspar+/–pyroxene phyric dacite to andesite lavas and intrusives (€dsvlda).*

Geological boundary – position accurate or approximate.
Geological boundary – inferred.
Fault – position accurate or approximate.
Fault – inferred.
Fault – concealed.
Normal Fault – position accurate or approximate (with downthrown side indicated).
Normal fault – position inferred (with downthrown side indicated).
Normal fault – position concealed (with downthrown side indicated).
Thrust fault – position accurate or approximate (teeth on upper plate).
Axial surface trace of major synform.
(white line) Limit of mapping of sub–unit within undifferentiated rock unit.

Strike and dip of bedding, right way up; overturned; facing unknown.
Strike of vertical bedding.
Horizontal bedding.
Strike and dip of compositional layering.
Strike and dip of cleavage of unspecified type and relative age – dipping; vertical.
Strike and dip of outcrop–scale fault of unspecified type and relative age.
Trend and plunge of minor fold hinge line, relative local age F2; with dip and dip direction of axial surface; vergence dextral.
Trend and plunge of minor fold hinge line, relative local age F3, with dip and dip direction of axial surface; vergence dextral.
Strike and dip of metamorphic foliation other than cleavage; vertical.
Strike and dip of metamorphic foliation other than cleavage, parallel to compositional layering; vertical.
Strike and dip of metamorphic foliation other than cleavage, relative local age S2; vertical.
Strike and dip of metamorphic foliation other than cleavage, relative local age S1.
Notable small float or lag occurrence, with rock type indicated.
Notable small outcrop, with rock type indicated.
Fossil location.
Mineral deposit location – hardrock
Construction material/industrial mineral/gemstone location
Data derived from Mineral Resources Tasmania DEPOSITS database. Data point position has not been verified in every case.

Compiled by M. P. McClenaghan, B.Sc.(Hons), Ph.D., 2003 from the following sources (see responsibility diagram):

A JENNINGS, I.B., BURNS, K.L., MAYNE, S.J. and ROBINSON, R.G. 1959 Geological Atlas 1:63 360 Series. Sheet 37 (8115S), Sheffield. Tasmanian Department of Mines.

B GULLINE, A.B., BRAVO, A.P., and NAQVI, I.H. 1973 Geological Atlas 1:63 360 Series. Sheet 38 (8215S), Frankford. Tasmanian Department of Mines.

Updated by:

C M. Vicary, 2004 as part of the Western Tasmania Regional Minerals Program.

D C.R. Calver 2007. 1:25 000 scale geological mapping.

E J.L. Everard 2007. 1:25 000 scale geological mapping.

F J.L. Everard 2007. Limited traverses.

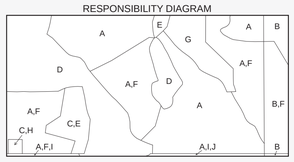
G D.B. Seymour 2007. 1:25 000 scale mapping.

H T.M. Porter 1974. Report on EL 19/72. Dial Range. CRA Exploration Pty Ltd. [TCR74 – 0992].

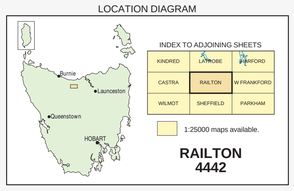
I K.D. Corbett, 2004 as part of the Western Tasmanian Regional Minerals Program.

J C.R. Calver 2007. Reconnaisance geological mapping.

RESPONSIBILITY DIAGRAM



LOCATION DIAGRAM



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Map produced by the Geoscience Information Branch of Mineral Resources Tasmania using G.I.S. software.

GDA94 – MGA Zone 55. Contour Interval: 20 metres.

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