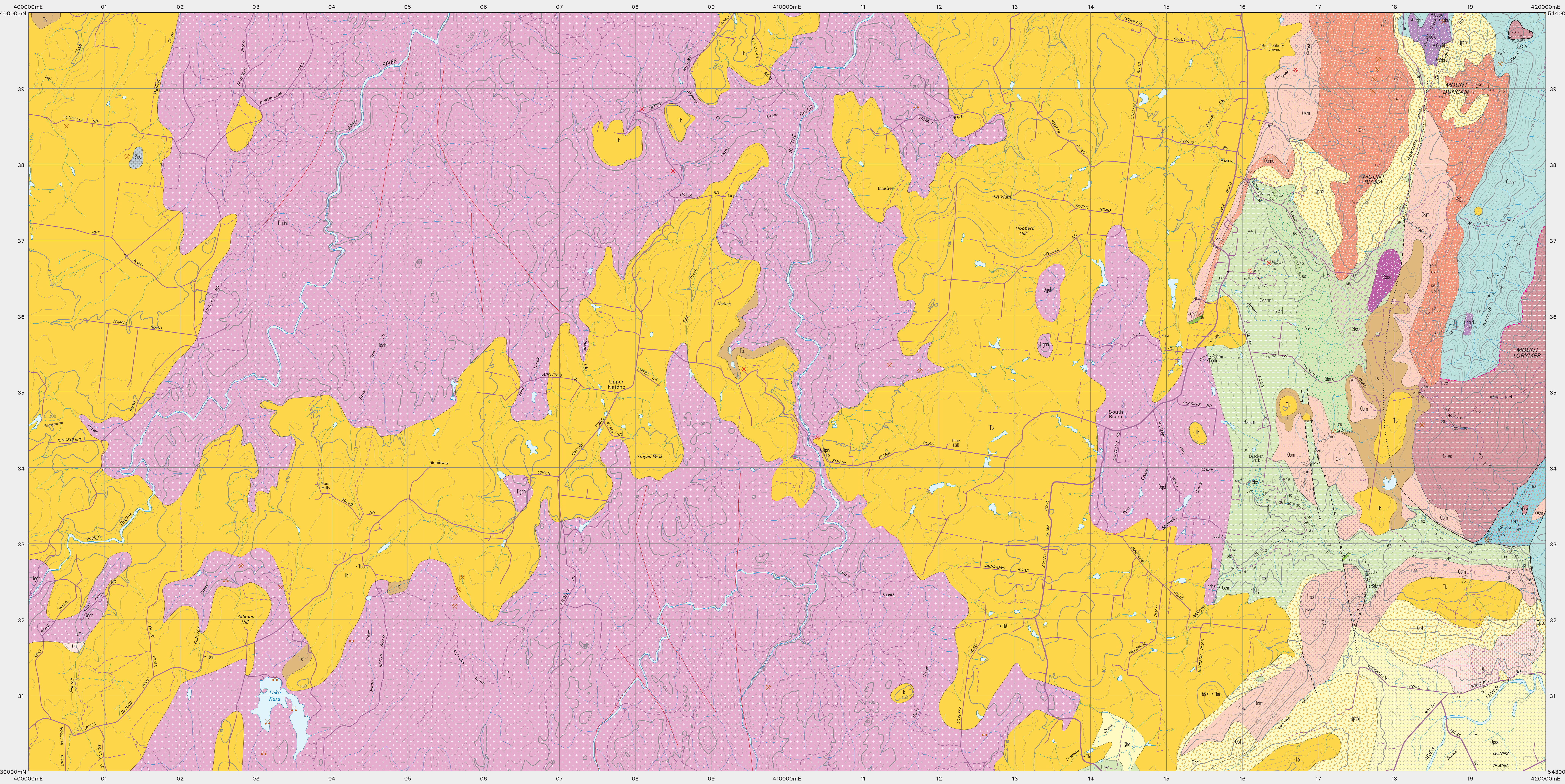
MINERAL RESOURCES TASMANIA
DIGITAL GEOLOGICAL ATLAS 1:25 000 SERIES
RIANA, SHEET 4043

RIANA

Scale: 1:25 000

0 500 1000 1500 2000 2500m

MINERAL RESOURCES TASMANIA
Tasmania
DEPARTMENT of INFRASTRUCTURE ENERGY and RESOURCES



CENOZOIC

QUATERNARY

HOLOCENE

Qha — Stream alluvium, swamp and marsh deposits (Qha).

HOLOCENE / PLEISTOCENE — Qpt

Qptb — Basalt talus (Qptb).

Qpto — Quartz sandstone and conglomerate talus derived from Owen Group correlates (Qpto).

PLEISTOCENE

Qpao — Older alluvium (Qpao).

TERTIARY

Tb — Basalt (Tb), including local occurrences of alkali olivine basalt (Tbao), basanite (Tbb), olivine nephelinite (Tbn), nepheline hawaiite (Tbnh), transitional olivine basalt (Tbr) and olivine tholeiite (Tbt).

Ts — Terrestrial sand, gravel and minor lacustrine deposits (Ts).

PALEOZOIC

ORDOVICIAN

WURAWINA SUPERGROUP — GORDON GROUP

Ol — Massive or thickly bedded, grey, fine-grained limestone, with marine fossils in places (Ol).

Osm — Dominantly very fine- to medium-grained, purple, pink or white quartzarenite, locally cross-bedded or bioturbated, and minor granule-pebble conglomerate (Osm).

Osmc — Granule to pebble conglomerate, with quartzite and chert clasts (Osmc). (Osmc + Osm = correlate of Moina Sandstone).

WURAWINA SUPERGROUP — OWEN GROUP

€Ocd — Conglomerate with chert and quartzite clasts (Duncan Conglomerate) (€Ocd).

~~~~~~~~~ Angular unconformity.

LATE CAMBRIAN

MOUNT READ VOLCANICS — RIANA SEQUENCE (IN PART CORRELATE OF TYNDALL GROUP)

€dsr — Undifferentiated mainly sedimentary sequence (near Riana) of shale, siltstone, lithicwacke, sandstone and conglomerate, with minor volcaniclastic units and rare felsic lava (€dsr).

€dsrl — Felsic lava (€dsrl).

€dsrp — Polymict conglomerate, with basalt and chert clasts (€dsrp).

€dsrm — Thin bedded shale and siltstone, with minor fine-grained micaceous sandstone (€dsrm).

€dsrv — Pebble-granule conglomerate and pebbly sandstone, with andesitic clasts and detritus (€dsrv).

€dsrsc — Chert-pebble conglomerate and minor coarse-grained lithic sandstone (€dsrsc).

€dsrs — Massive, sparsely pebbly lithicwacke sandstone (€dsrs).

€dsrc — Pebble-cobble, volcaniclastic conglomerate (€dsrc).

MOUNT READ VOLCANICS — WESTERN VOLCANO-SEDIMENTARY SEQUENCE

€dsvgs — Polymict pebble-granule conglomerate to lithicwacke sandstone, with clasts including chert, black shale, limestone, basalt and/or felsic volcanics; possible correlate of 'Sprent Conglomerate' (€dsvgs).

€dsv — Undifferentiated marine volcano-sedimentary sequence, with minor interbedded volcanic units (€dsv).

PALEOZOIC — ?EARLY CAMBRIAN

CLEVELAND - WARATAH ASSOCIATION

Faulted contacts of €cwc attributed to major thrusting.

€cwc — Pale to dark grey, faintly bedded to massive or brecciated chert (Barrington Chert) (€cwc).

Faulted contacts of €cwc attributed to major thrusting.

PROTEROZOIC — ?NEOPROTEROZOIC

BURNIE FORMATION

Pod — Metamorphosed impure dolomite-rich sequences of mudstone, siltstone and sandstone (Pod).

INTRUSIVE ROCKS

PALEOZOIC — DEVONIAN

Dgah — Dominantly equigranular to sparsely porphyritic fine-to medium-grained biotite +- hornblende phyric granite/adamellite (I-type) (Housetop Granite) (Dgah).

PALEOZOIC — MIDDLE CAMBRIAN

MOUNT READ VOLCANICS

€daid — Massive plagioclase - hornblende phyric, andesitic and dacitic intrusives (Lobster Creek intrusives) (€daid).

€dad — Coarse-grained plagioclase-pyroxene cumulate dolerite ('Riana Dolerite') (€dad).

Geological boundary - position accurate or approximate.
Geological boundary - inferred.
Geological boundary - inferred from airborne magnetic and/or radiometric data.
Geological boundary - inferred from airborne radiometric data.
Intrusive boundary - position accurate or approximate.
Fault - position accurate or approximate.
Fault - inferred.
Fault - concealed.
Normal fault (downthrown side indicated) - inferred.
Thrust fault (teeth on upper plate) - position accurate or approximate.
Thrust fault (teeth on upper plate) - inferred.
Thrust fault (teeth on upper plate) - inferred from radiometric data.
Metamorphic boundary - position approximate.
Lineament visible in airborne magnetic data.
(White line) Limit of mapping of sub-unit within undifferentiated rock unit.

Strike and dip of bedding, right way up; overturned; facing unknown.
Strike and dip of cleavage of unspecified type and relative age; vertical.
Trend and plunge of minor fold hinge line, unspecified relative age.
Strike and dip of ductile shear-band.
Strike and dip of dyke.
Notable small outcrop with rock unit indicated
Notable small float or lag occurrence, with rock unit indicated.
Field station for adjacent readings on the map.
Fossil location.
Mineral deposit location - hardrock
Mineral deposit location - alluvial
(Data derived from Mineral Resources Tasmania DEPOSITS data base. Data point position has not been verified in every case.)
Construction materials location - Data derived from Mineral Resources Tasmania DEPOSITS data base. Data point position has not been verified in every case.

Compiled by M.J. Vicary, 2004 as part of the Western Tasmanian Regional Minerals Program from the following sources (see Responsibility Diagram):

A GEE, R.D; GULLINE, A.B. and BRAVO, A.P. 1967. Geological atlas 1 mile series. Sheet 28 (8015N) Burnie. Tasmania Department of Mines.

B BAILLIE, P.W; WILLIAMS, P.R; SEYMOUR, D.B; LENNOX, P.G. and GREEN, G.R. 1986. Geological atlas 1:50,000 series. Sheet 36 (8015N) St Valentines. Tasmania Department of Mines.

C BURNS, K.L. 1963. Geological atlas 1 mile series. Zone 7 Sheet 29 (N8115 I and IV) Devonport. Tasmania Department of Mines.

With additional information from:-

1 Herrmann, W. (1993) and Crawford, A.J. (1993). Appendix B and C in FitzGerald, F.G. 1993. EL9/1992 Dial Annual Report June 1992 - June 1993. Unpublished Report, Pasminco Exploration. TCR 93-3447.

2 Sproule, R.A. 1994. Stratigraphy and Geochemistry of the Dial Range Trough, NW Tasmania. B.Sc.(hons). thesis. University of Tasmania.

D JENNINGS, I.B; BURNS, K.L; MAYNE, S.J. and ROBINSON, R.G. 1959. Geological atlas 1 mile series. Zone 7 Sheet 37 Sheffield. Tasmania Department of Mines.

E Air photograph and WTRMP geophysical data interpretation by M. Vicary.

Updated by:

F M. Vicary 2004.

G C.R. Calver, 2007. 1:25000 scale geological mapping.

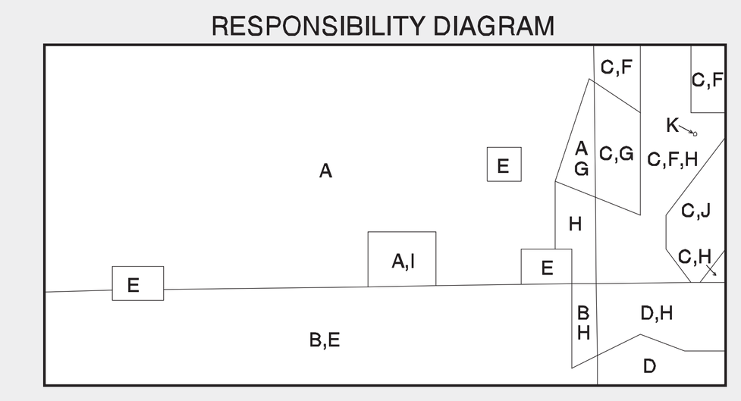
H J.L. Everard, 2007. 1:25000 scale geological mapping.

I J.L. Everard, 2007. Limited traverses.

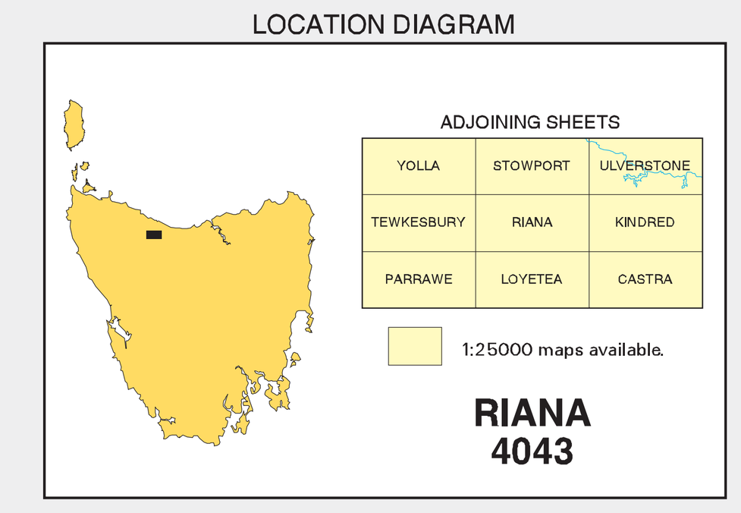
J D.B. Seymour, 2007. 1:25000 scale geological mapping.

K Sumpton, J.F.H. & Turley, S.D. 1984. EL 24/1973, follow-up of aeromagnetic survey of the Dial Range Trough. Unpublished Report, Geopeko Ltd. TCR 84-2149.

RESPONSIBILITY DIAGRAM



LOCATION DIAGRAM



REFERENCE THIS MAP AS:

CALVER, C.R., EVERARD, J.L., SEYMOUR, D.B. 2008. Digital Geological Atlas 1:25000 Series, sheet 4043 Riana. Mineral Resources Tasmania.

Map produced by the Data Management Branch of Mineral Resources Tasmania using G.I.S. software.

AGD66 - AMG Zone 55. Contour Interval: 20 metres.

Plotfile for this map generated from digital data as at: 20-AUG-2008
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