Department of State Growth
MINERAL RESOURCES TASMANIA

DIGITAL GEOLOGICAL ATLAS 1:25 000 SCALE SERIES
OWEN, SHEET 3833

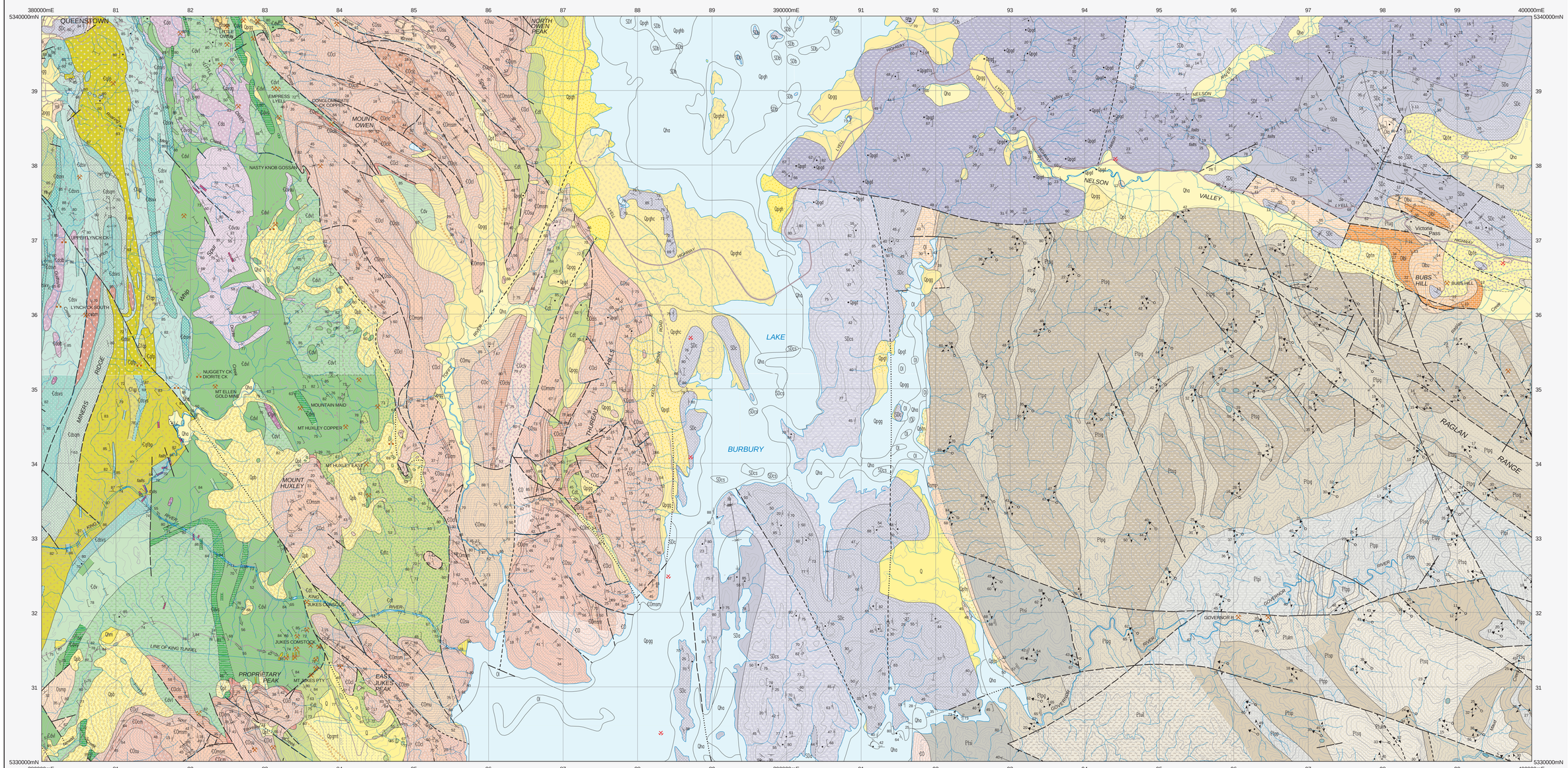
OWEN

Scale: 1:25 000

0 500 1000 1500 2000 2500m

INDUSTRY TOURISM RESOURCES

Tasmanian Government



CENOZOIC

QUATERNARY

HOLOCENE

- Qhm — Man-made deposits including mine dumps and disturbed ground (Qhm).
- Qha — Alluvium, swamp and marsh deposits. May include older alluvial deposits (Qha).

PLEISTOCENE

- Qpt — Talus, scree and colluvial deposits (Qpt).
- Qpte — Talus, scree and associated colluvium – derived from Eldon Group rocks (Qpte).
- Qptn — Talus, scree and associated colluvium – derived from Precambrian rocks (Qptn).
- Qpb — Bouldery slope and fan deposits, commonly with levyed channels; probably partly of glacial origin (Qpb).
- Qpgg — Undifferentiated Pleistocene glacial deposits (Qpgg). Isolated occurrences of dolerite derived erratics (Qpgd).
- Qpgmt — Mainly till deposits – unweathered or slightly weathered (Qpgmt). Deposits of Margaret Glaciation.
- Qpgfd — Weathered and poorly sorted outwash gravel and till (David Formation) (Qpgfd). Deposits of Henty Glaciation.
- Qpgfc — Weathered outwash, gravel and till (Cableway Formation) (Qpgfc). Deposits of Henty Glaciation.
- Qpgt — Deeply weathered till, outwash gravel and lacustrine sediments. Reversed magnetic polarity indicate age > 730,000 ybp (Qpgt). Deposits of Linda Glaciation.

In some areas lake fill is shown by water level line only, with previously mapped geology indicated. Some previously mapped structure and mineralisation sites are shown on top of subsequent lake fill.

PALEOZOIC

DEVONIAN

- SDb — Mudstone, siltstone, minor fine–grained sandstone and rare limestone (correlate of Bell Formation) (SDb).
- SDf — Fine–grained quartz sandstone with minor siltstone and mudstone (correlate of Florence Formation) (SDf).

SILURIAN

- SDa — Mainly mudstone and siltstone with minor sandstone and rare limestone (correlate of Amber Formation) (SDa).
- SDcs — Siltstone and fine–grained sandstone (upper unit of Crotty Formation) (SDcs).
- SDc — Fine–to coarse–grained quartz–rich sandstone, calcareous sandstone and minor mudstone (Crotty Formation) (SDc).

ORDOVICIAN

- Ola — Interbedded mudstone and siltstone with some limestone (Ola).
- Olbu — Dominantly brown weathering impure (dolomitic, muddy and/or sandy) limestone, frequently massive (Olbu).
- Olbl — Dominantly grey weathering micritic limestone (Olbl).

CAMBRIAN

FURONGIAN

- Osmp — Grey to pink quartz sandstone with basal pebble–granule conglomerate; trace fossils and chromite–rich bands in upper part (Pioneer Beds and correlates) (Osmp).
- COsu — Thin–bedded quartz sandstone, commonly bioturbated, with interbedded siltstone and minor granule–pebble conglomerate. Chert clasts in places. Bioturbation common (Upper Owen Sandstone and correlates) (COsu).
- COcm — Mainly pale pink to cream coloured, thick–bedded pebble–cobble to cobble–boulder quartzitic conglomerate, with minor quartz sandstone and some partly volcaniclastic sandstone in some areas (Middle Owen Conglomerate and correlates) (COcm).
- COmsm — Mainly thin–bedded pink quartzitic sandstone and pebbly sandstone with bands of pebble conglomerate, minor siltstone (Middle Owen Sandstone and correlates) (COmsm).
- COcl — Mainly white/grey to pale pink pebble–cobble–boulder conglomerate and quartz sandstone, with minor siltstone and volcaniclastic sandstone (Lower Owen Conglomerate and correlates) (COcl).
- COcls — Thin–bedded grey–green siltstone and micaceous sandstone, grading laterally to pink thin–bedded sandstone (COcls).
- COclc — Units of thick–bedded to massive cobble–boulder conglomerate. Erosional unconformity at base of some units in some areas (COclc).
- COclv — Mainly volcaniclastic sandstone with minor conglomerate and siltstone (basal unit of Lower Owen Conglomerate at Thureau Hills) (COclv).
- COve — Volcaniclastic conglomerate and breccia and minor sandstone, usually locally developed at contact with volcanic rocks (Correlate of Jukes Conglomerate) (COve).

CAMBRIAN

TERRENUNIAN CAMBRIAN SERIES 2

- €dt — Interbedded volcaniclastic and volcanic rocks, typically quartz–feldspar–phyric (€dt).
- €dtc — Mainly volcaniclastic conglomerate and sandstone with minor mudstone. Quartz–rich matrix. Sparse quartzite clasts in places (€dtc).
- €dtbl — Mainly volcaniclastic sandstone and breccia (quartz–feldspar +/– pyroxene–phyric), with minor vitric ash, conglomerate, sandstone and siltstone. Lynchford Member or Lower Tyndall Group (€dtbl).
- €dv — Feldspar–phyric volcanic and volcaniclastic rocks undifferentiated (€dv).
- €dvau — Upper sequence of mainly andesitic volcaniclastic and volcanic rocks, including graded mass–flow breccia units, sandstone, siltstone, lava and lava breccia and minor intrusives. Lavas typically feldspar–pyroxene +/– hornblende–phyric (€dvau).
- €da — Andesitic to basaltic intrusive bodies with minor extrusive and clastic units. Includes feldspar–hornblende–pyroxene–phyric and feldspar–pyroxene–phyric types and small chlorite–altered dykes (€da).
- €dvt — Mainly felsic volcaniclastic and pyroclastic rocks, dominantly feldspar–phyric, including pumice–bearing units, minor shale and sandstone (€dvt).
- €dvl — Mainly feldspar +/– quartz–phyric lavas and possible intrusives, commonly with spherulitic groundmass. Columnar jointing in some areas (€dvl).
- €dvs — Units of bedded siltstone, sandstone and volcaniclastic breccia (€dvs).
- €dvag — Dark green, chlorite–rich mafic to intermediate agglomerate with abundant basaltic clasts (€dvag).
- €dsv — Mixed sequence of bedded volcaniclastic sandstone, siltstone, mudstone and breccia, typically quartz–feldspar–bearing, with some andesitic lavas and intrusives (€dsv).
- €dfp — Quartz–feldspar +/– biotite porphyry, mostly intrusive but may be partly extrusive (€dfp).
- €dalb — Andesitic to basaltic lavas, breccias and intrusives, mostly feldspar–pyroxene–phyric, of Lynch Creek area (Lynch Creek basalts) (€dalb).
- €dtuv — Crystal–rich (quartz–feldspar) tuffaceous sandstone (€dsvx).
- €dsvs — Units of bedded siltstone, sandstone, mudstone and volcaniclastic breccia (€dsvs).
- €dsqm — Well bedded micaceous, quartzwacke sandstone, and grey–black mudstone (Miners Ridge Sandstone) (€dsqm).
- €cwbm — Ophitic–textured tholeiitic basalt lava, breccia and tuff with associated intrusives (Miners Ridge Basalt) (€cwbm).

ELDON GROUP · GORDON GROUP · WURAWINA SUPERGROUP · OWEN GROUP

TYNDALL GROUP · CENTRAL VOLCANIC COMPLEX · YOLANDE RIVER SEQUENCE

CLEVELAND–WADDATAH VOLCANICS CORRELATE

PALEOZOIC — CAMBRIAN

- Ptsg — Lithologically undifferentiated, commonly garnetiferous, rocks of relatively high metamorphic grade, including massive schistose quartzite and fine– to coarse–grained commonly containing phengite, almandine and chlorite (Ptsg).
- Ptpg — Fine–to coarse–grained, often thinly banded, pelitic, garnetiferous quartz–mica and mica–quartz schist, commonly containing phengite, biotite, almandine, albite and chlorite. Relatively high metamorphic grade (Ptpg).

MESOPROTEROZOIC — MOUNT READ VOLCANICS

- Ptsl — Fine–grained, banded, pink and white quartzite with interbanded pelitic quartz–mica phyllite occasionally containing albite porphyroblasts. Intermediate metamorphic grade (Ptsl).
- Ptpl — Dominantly dark grey carbonaceous quartz–mica phyllite, sometimes porphyroblastic and occasionally containing albite, biotite, phengite, chlorite and minor garnet; fine–grained quartzite frequently present. Intermediate metamorphic grade (Ptpl).
- Ptul — Lithologically undifferentiated rocks of intermediate to low metamorphic grade (garnet minor to absent), including phyllite, fine–grained quartzite and dolomitic schist (Ptul).
- Ptpp — Dominantly grey to green carbonaceous pelitic quartz–phyllite and phyllite. Non–garnetiferous and relatively low metamorphic grade (Ptpp).
- Ptsp — Interbanded fine–grained phengitic quartzite, green phengite–wartz phyllite, and grey to green carbonaceous pelitic quartz–phengite phyllite. Non–garnetiferous and relatively low metamorphic grade (Ptsp).
- Ptum — Lithologically undifferentiated rocks of low metamorphic grade including non–garnetiferous quartzite and phyllite (Ptum). Fine–grained, thickly foliate, phengitic quartzite and subordinate fine–grained massive quartzite. Non–garnetiferous and relatively low metamorphic grade (Ptsq).

TYENNAN REGION METASEDIMENTS

INTRUSIVE ROCKS

PALEOZOIC — CAMBRIAN

- €qfp — Quartz–feldspar +/– biotite porphyry, mostly intrusive but may be partly extrusive (€qfp).
- €qfpb — Quartz–feldspar–biotite–porphyry – mainly intrusive but may be partly extrusive (€qfpb).
- €fqp — Feldspar–quartz–pyroxene porphyry (€fqp).
- €fph — Feldspar–pyroxene–hornblende porphyry (€fph).
- €dvl — Mainly feldspar–phyric lava and intrusives (€dvl).
- €da — Andesitic lavas and intrusives (€da).
- €dalb — Andesitic to basaltic lavas and intrusives of Lynch Creek area (Lynch Creek basalts) (€dalb).
- €dbc — Basaltic dykes, typically chlorite–altered, including tholeiitic dolerites at Diorite Creek (€dbc).

MESO–PROTEROZOIC

- Pta — Amphibolite bodies (Pta).

ALTERATION

PALEOZOIC — CAMBRIAN

- €hpys — Pyritic schist, typically with sericite +/– chlorite +/– quartz (€hpys).
- €hses — Sericitic schist, typically developed from felsic volcanic rocks (€hses).

MOUNT READ VOLCANICS

- Dip of geological contact of unspecified type.
- Strike and dip of bedding facing known, right way up; overturned; vertical (facing indicated by single tic).
- Strike and dip of bedding, facing unknown – dipping; vertical.
- Strike and dip of compositional banding.
- Horizontal bedding.
- Strike and dip of dominant cleavage, relative local age S2, however locally S1 (in quartzite units) or S3.
- Strike and dip of igneous banding – dipping; vertical.
- Strike and dip of cleavage, type and relative age unspecified – dipping; vertical.
- Trend and plunge of minor fold hingeline, unspecified relative age; with dip and dip direction of axial surface.
- Trend and plunge of hinge line of minor antiform, unspecified relative age.
- Trend and plunge of lineation L2, formed by intersection of cleavages or foliations of relative local ages S1 and S2.
- Trend and plunge of columnar jointing.
- Field station for adjacent readings on the map.
- Notable small outcrop or erratic boulder with rock unit indicated.
- Mineral deposit location – hardrock
- Mineral deposit location – alluvial/tailings
- Construction material/industrial mineral/gemstone location

Data derived from Mineral Resources Tasmania DEPOSITS database. Data point position has not been verified in every case.

- Geological boundary – position accurate or approximate.
- Geological boundary – inferred.
- Transitional geological boundary – possition aproximate.
- Moraine Ridge Crests.
- Fault – unspecified type, position accurate or approximate.
- Fault – unspecified type, inferred.
- Fault – unspecified type, concealed.
- Thrust fault – position accurate or approximate, teeth on upper plate.
- Axial surface trace of major antiform.
- Axial surface trace of major synform.

Compiled by D.C. Green, B.Sc.(Hons), Ph.D. and J.L. Everard, B.Sc.(Hons), 1998 from the following sources (see responsibility diagram):

A CALVER, C.R. et al 1987. Geological Atlas 1:50 000 Series. Sheet 58 (8013N), Lyell. Tasmania Department of Mines.

B CORBETT, K.D., CALVER, C.R. EVERARD, J.L. and SEYMOUR, D.B. 1989. Geological Atlas 1:25 000 Series, Queenstown. Department of Mines Tasmania.

C CORBETT, K.D., PEMBERTON, J. and VICARY, M.J. 1993. Geology of the Mt Jukes –Mt Darwin area. Map 13. Mt Read Volcanics project, Tasmania Department of Mines.

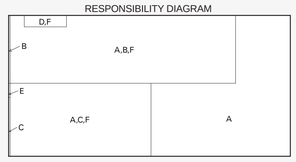
D M.Sc. mapping by K.D. Corbett 2001.

E Stockwell, R. 1998 Annual Report May 1997 –May 1998 –Tasmanian Base Metals Project, EL2/94 –Lynchford. RGC Exploration Propriety Limited. TCR 98 –4200.

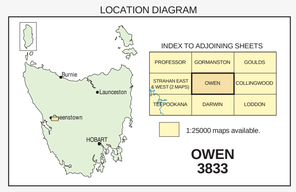
Updated by:

G K.D. Corbett, 2003 as part of the Western Tasmanian Regional Minerals Program.

RESPONSIBILITY DIAGRAM



LOCATION DIAGRAM



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PROFESSOR	GORMANSTON	GOULDS
STRAHAN EAST & WEST (2 MAPS)	OWEN	COLLINGWOOD
TEPPOOKANA	DARWIN	LODDON

1:25000 maps available.

OWEN 3833

REFERENCE THIS MAP AS:

GREEN, D.C. and EVERARD, J.L. (compilers) 2003. Digital Geological Atlas 1:25 000 Scale Series. Sheet 3833 Owen. Mineral Resources Tasmania.

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Map produced by Spatial Information Services, Mineral Resources Tasmania using G.I.S. software.

Website: www.mrt.tas.gov.au

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

GDA

Plotfile for this map generated from digital data as at: 19-JUN-2017

WARNING:INKS ARE LIGHT SENSITIVE