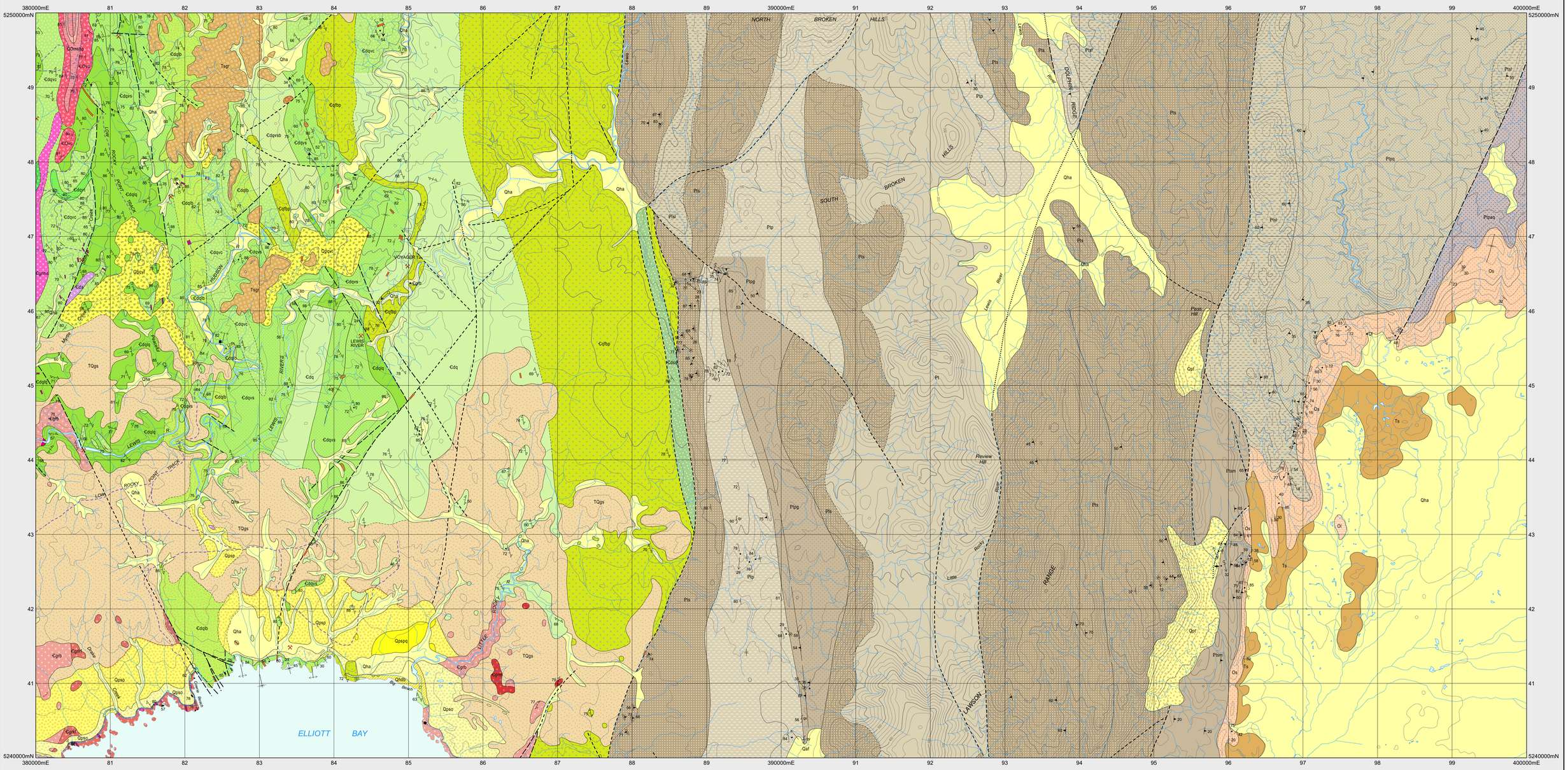
Department of State Growth
MINERAL RESOURCES TASMANIA

DIGITAL GEOLOGICAL ATLAS 1:25 000 SCALE SERIES
LEWIS, SHEET 3824

LEWIS

Scale 1:25 000

0 500 1000 1500 2000 2500m



CENOZOIC

QUATERNARY

- **Qha** — *Stream alluvium, swamp and marsh deposits (Qha).*
- **Qhdb** — *Modern shore face and associated aeolian dune sand (Qhdb).*
- **Qhr** — *Raised beach deposits (Qhr).*
- **Qf** — *Ferricrete deposit of probable Quaternary age (Qf).*
- **Qaf** — *Alluvial fans (Qaf).*
- **Qpt** — *Talus, till and scree of probable Pleistocene age (Qpt).*
- **Qpqvt** — *Quartz vein-derived talus and scree (Qpqvt).*
- **Qpso** — *Older aeolian sand and sand dunes (Qpso).*
- **Qpsp / Qpspq** — *Sands and gravels associated with older marine platforms - probably includes marine, alluvial and slope deposits (Qpsp).* *Silicified gravel deposits, generally occuring as loose blocks (Qpspq).*

Erosional surface.

LATE PALEOGENE - NEOGENE(?)

- **TQgs** — *Gravel and sand deposits associated with surface approx. 50m a.s.l. Includes vein quartz lag and probable younger alluvial deposits (TQgs).*
- **T: Tsgr** — *Undifferentiated Paleogene - Neogene (T). Rounded gravel, mainly vein quartz (Tsgr).*
- **T: Ts** — *Predominantly unconsolidated gravel, commonly rounded (Ts).*
- **T: Tcqbl** — *Basal lag deposit of mainly subangular vein quartz clasts (Tcqbl).*

Angular unconformity.

PALEOZOIC

ORDOVICIAN

- **Ol** — *Dark grey limestone, dolomite, calcareous mudstone, minor quartz sandstone. In part fossiliferous (Ol).* — GORDON GROUP
- **Os** — *Mostly siliceous sandstone, grey to pink (Os).* — GORDON GROUP

FURONGIAN

- **€Omshp** — *Mainly black pyritic shale and siltstone (€Omshp).* — WATERLOO CREEK GROUP
- **€Omsh** — *Unit of green-grey thin-bedded micaceous siltstone (€Omsh).* — WATERLOO CREEK GROUP
- **€Ovc** — *Volcaniclastic conglomerate and sandstone, with some siliceous sandstone in places (€Ovc).* — CORRELATE OF OWEN GROUP

Unconformity.

CAMBRIAN

CAMBRIAN SERIES 3

- **€dq** — *Mainly felsic volcaniclastic, volcanic and intrusive rocks, typically quartz-feldspar-phyric (€dq).* — CORRELATE OF EASTERN QUARTZ - PHYRIC SEQUENCE
- **€dqvc** — *Dominantly felsic volcaniclastic rocks, well bedded to massive. Includes sandstone, siltstone, minor conglomerate, probable pyroclastic rocks and minor felsic lavas (€dqvc).* — CORRELATE OF EASTERN QUARTZ - PHYRIC SEQUENCE
- **€dqvs / €dqvs / €dqcs** — *Dominantly volcaniclastic sandstone with minor siltstone, typically well bedded (€dqvs). Siliclastic conglomerate, sandstone and breccia (€dqcs).* — CORRELATE OF EASTERN QUARTZ - PHYRIC SEQUENCE
- **€dqvsb** — *Felsic volcaniclastic rocks containing significant detrital biotite (€dqvsb).* — CORRELATE OF EASTERN QUARTZ - PHYRIC SEQUENCE
- **€dqvt** — *Vitric ash unit (€dqvt).* — CORRELATE OF MOUNT READ VOLCANICS
- **€dqlq** — *Quartz-feldspar-phyric lavas and/or intrusives (€dqlb).* — CORRELATE OF MOUNT READ VOLCANICS
- **€dqlb** — *Quartz-feldspar-biotite-phyric lava and/or intrusive (€dqlb).* — CORRELATE OF MOUNT READ VOLCANICS
- **€dsq** — *Bedded volcaniclastic sandstone, siltstone and minor siliceous sandstone abutting Precambrian rocks (correlate of Stichi Range Beds) (€dsq).* — CORRELATE OF MOUNT READ VOLCANICS

MESOPROTEROZOIC

TYENNAN REGION METASEDIMENTARY ROCKS

- **Pt: Pts** — *Metamorphic rocks, dominantly metaquartzite and metapelite (Pt). Dominantly quartzite (Pts).*
- **Pt: Ptsl** — *Platey or schistose micaceous quartzite (Ptsl).*
- **Pt: Ptsm** — *Quartzite with interlayered quartz-mica and mica-quarz phyllite (Ptsm).*
- **Pt: Ptp** — *Phyllite and quartz-schist (Ptpq). Dominantly phyllite (Ptp).*
- **Pt: Ptpq** — *Quartz-mica and mica-quartz phyllite of predominantly light- to dark-grey colour (Ptpaq).*
- **Pt: Ptpg** — *Fine- to coarse-grained, often thinly banded, pelitic, garnetiferous quartz-mica and mica-quartz schist, commonly containing phengite, biotite, almandine, albite and chlorite. Minor gneiss, amphibolite and granite. Relatively high metamorphic grade (Ptpg).*

INTRUSIVE ROCKS

DEVONIAN

- **Dl** — *Lamprophyre dykes (Dl).*
- **qv** — *Quartz vein (qv).*

PALEOZOIC — CAMBRIAN — CAMBRIAN SERIES 3

- **€dbc** — *Mafic dyke, typically chlorite-altered (€dbc).*
- **€grb** — *Biotite granite-adamellite, medium to coarse-grained (€grb).* — MOUNT READ VOLCANICS
- **€grs** — *Granite with strongly sericitised feldspar and biotite altered to opaques, muscovite and chlorite (€grs).* — MOUNT READ VOLCANICS
- **€grm** — *Microgranite and porphyritic microgranite (€grm).* — MOUNT READ VOLCANICS
- **€grms** — *Intensely sericite-quartz altered microgranite. May include minor thermally altered country rocks (€grms).* — MOUNT READ VOLCANICS
- **€grkf** — *K-feldspar-phyric granite, medium to coarse-grained (€grkf).* — MOUNT READ VOLCANICS
- **€gra** — *Granite-related aplite, microgranite or quartz-feldspar porphyry dyke (€gra).* — MOUNT READ VOLCANICS
- **€qfbp** — *Quartz-feldspar-biotite porphyry, coarse-grained (€qfbp).* — MOUNT READ VOLCANICS
- **€dqlb** — *Quartz-feldspar-biotite-phyric lava and/or intrusive (€dqlb).* — MOUNT READ VOLCANICS
- **€da** — *Intermediate intrusive and/or lava (€da).* — MOUNT READ VOLCANICS
- **€dqlq** — *Quartz-feldspar-phyric lava and/or intrusive (€dqlq).* — MOUNT READ VOLCANICS
- • **€grn** — *Local occurrence of granite, associated with high grade metamorphic rocks (€grn).*

CONTACTS

- *Geological contact.*
- *Geological contact - inferred.*
- *Limit of mapping of sub-unit within undifferentiated rock unit.*
- *Limit of detailed mapping.*

FAULTS

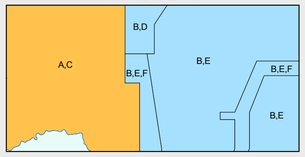
- *Fault.*
- *Fault - inferred.*
- *Fault - concealed.*

LINEARS

- *Axial surface trace of major antiform.*
- *Axial surface trace of major synform.*
- *Scarp.*
- *Lineament - visible on aerial photographs.*
- *Lithological trend line, including bedding trace interpreted from aerial photographs.*

- *Strike and dip of bedding - right way up; overturned; facing unknown.*
- *Strike of vertical bedding; facing unknown.*
- *Strike and dip of cleavage of unspecified type and relative age; vertical.*
- *Strike and dip of cleavage or foliation, relative local age S_1; vertical.*
- *Strike and dip of cleavage or foliation, relative local age S_2.*
- *Strike and dip of cleavage of unspecified type and relative age parallel to bedding, facing unknown.*
- *Trend and plunge of minor fold hinge line, unspecified relative age; horizontal.*
- *Trend and plunge of minor fold hinge line, unspecified relative age, symmetrical; vergence sinistral.*
- *Trend and plunge of hinge line of reclined minor fold, unspecified relative age, symmetrical.*
- *Trend and plunge of hinge line of minor fold with vertical axial surface, relative local age F_2.*
- *Trend and plunge of hinge line of unspecified relative age, minor synform.*
- *Strike and dip of dominant joint set; vertical.*
- *Strike and dip of igneous banding or platy alignment.*
- *Strike and dip of ductile shear-band.*
- *Strike and dip of mafic schlieren associated with granitic rock.*
- *Strike and dip of metamorphic foliation other than cleavage; vertical; parallel to compositional layering.*
- *Strike of dyke or vein, rock type or mineral specified in digital data; with dip; vertical; mineral unspecified with dip.*
- *Strike of vertical crenulation cleavage.*
- *Generalised palaeocurrent direction, showing sense of movement.*
- *Trend and plunge of mineral elongation lineation.*
- *Field station for adjacent readings on the map.*
- *Notable small outcrop with rock unit indicated.*
- *Mineral deposit location - hardrock.*

SOURCE DIAGRAM



- Highly detailed (eg. more detailed than 1:25 000 scale mapping).
- Detailed systematic (eg.1:25 000 map or equivalent detail).
- Regional systematic (eg.1:50 000, 1:63 360 map or equivalent detail).
- Regional mapping less detailed than 1:63 360 map or equivalent (all other scales).
- Reconnaissance mapping with sparse ground traverses.
- Remote sensing and/or geophysical interpretation with limited or no ground information.

Compiled by R.O. Reid, B.Sc.(Hons) and D.C. Green, B.Sc.(Hons), Ph.D. 2000 from the following sources (see source diagram):

A PEMBERTON, J., VICARY, M.J., BRADBURY, J., CORBETT, K.D. 1991. Geology of the Elliott Bay - Mt Osmund area. Map 10. Mt Read Volcanics Project. Department of Mines, Tasmania.

B Hall, W.D.M. et al. 1969. 1 Inch:Mile Rocky Point and De Witt Geological Maps. Broken Hill Proprietary Company Limited. TCR 69_0555.

Updated by:

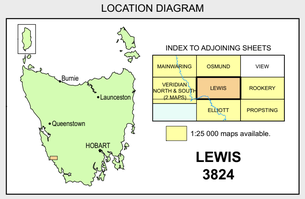
C CORBETT, K.D. 2004. Updating and revision of the 1:25 000 scale series geological maps covering the Mt Read Volcanics belt in western and northwestern Tasmania. Tasmanian Geological Survey Record 2004/03. Mineral Resources Tasmania.

D VICARY, M.J. 2005. Additional map compilation and review of existing maps in western Tasmania. Tasmanian Geological Survey Record 2005/05. Mineral Resources Tasmania.

E Limited traverses by W.D.M. Hall and M.J. Vicary, 2006.

F Air photograph interpretation by W.D.M. Hall and M.J. Vicary, 2006.

LOCATION DIAGRAM



REFERENCE THIS MAP AS:

REID, R.O. and GREEN, D.C. 2000 (Compilers) . Digital Geological Atlas 1:25 000 Scale Series. Sheet 3824 Lewis. Mineral Resources Tasmania.

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Map produced by Spatial Information Services, Mineral Resources Tasmania.

Website: www.mrt.tas.gov.au

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

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