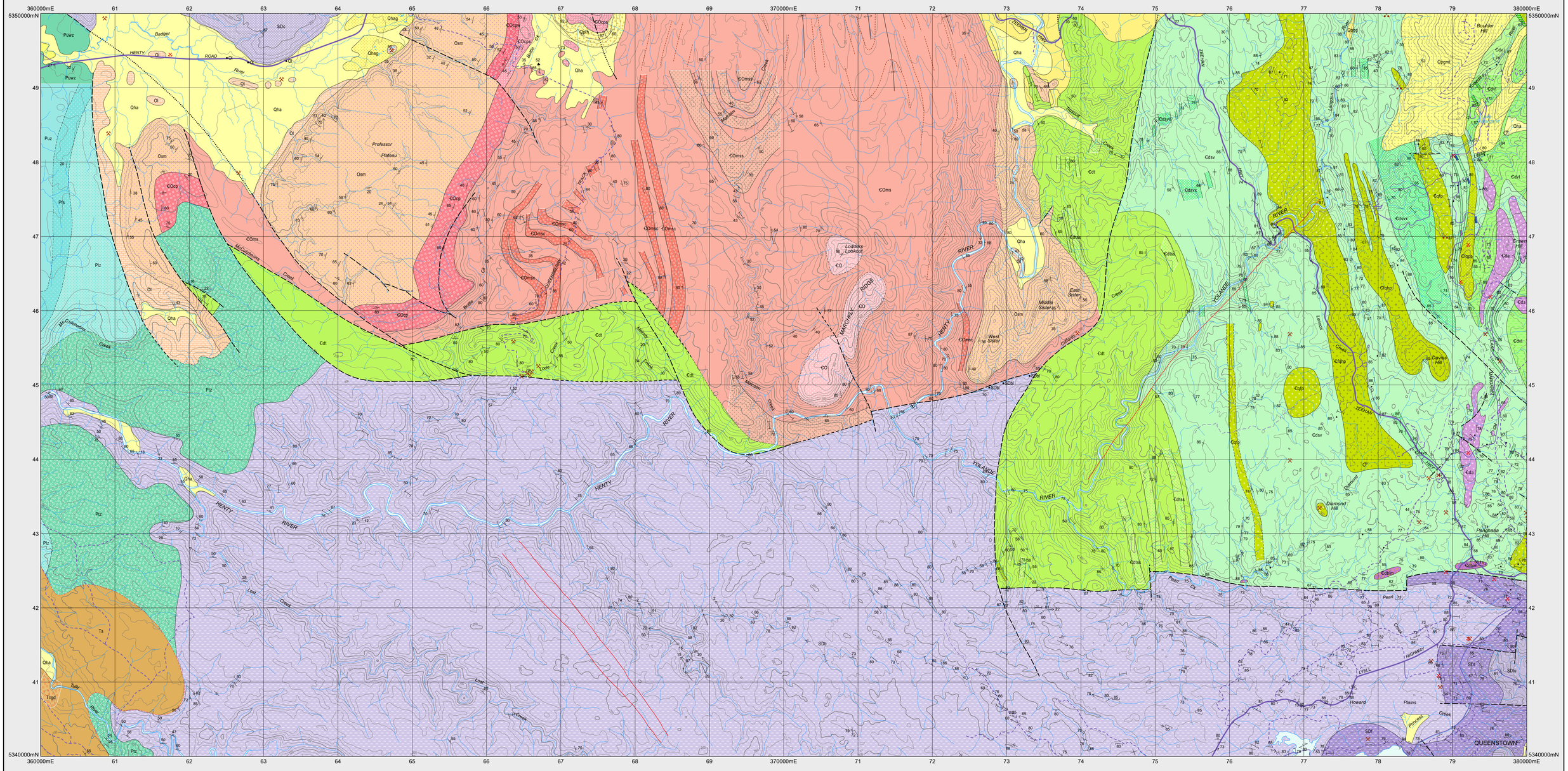
Department of State Growth
MINERAL RESOURCES TASMANIA

DIGITAL GEOLOGICAL ATLAS 1:25 000 SCALE SERIES
PROFESSOR, SHEET 3634

PROFESSOR

Scale 1:25 000

0 500 1000 1500 2000 2500m



CENOZOIC

QUATERNARY

HOLOCENE

- **Qha** — *Stream alluvium, swamp and marsh deposits (Qha).*
- **Qhe** — *Elluvium (Qhe).*
- **Qhag** — *Alluvial gravel deposits (Qhag).*

PLEISTOCENE

- **Qpth** — *Talos of unspecified type (Qpth).*
- **Qpgmt** — *Mainly till deposits - unweathered or slightly weathered (Deposits of Margaret Glaciation - 13 000 - 100 000 years before present) (Qpgmt).*
- **Qpgg** — *Pleistocene glacial deposits (Qpgg).*

PALEOGENE - NEOGENE

MACQUARIE HARBOUR BEDS

- **Ts** — *Dominantly non-marine sequence of gravel, sand, silt, clay and regolith (Ts).*
- **Tcgd** — *Poorly indurated siliceous pebble to cobble conglomerate horizons containing more than 5% dolerite clasts (Tcgd).*

PALEOZOIC

PERMIAN

PARMEENER SUPERGROUP

- **Puz** — *Siltstone, sandy siltstone and sandstone with dropstones, occasional fossil horizons (Upper Glacio-Marine Sequence) (Puz).*
- **Puwz** — *Poorly sorted, fossiliferous pebbly conglomeratic sandstone (Puwz).*
- **Pfs** — *Carbonaceous sandstone (correlate of Liffey Group - Lower Freshwater Sequence) (Pfs).*
- **Plz** — *Black pyritic mudstone overlain by fossiliferous mudstone, dropstones present (Plz).*
- **Ptz** — *Tillite and associated glacigene rocks (correlate of Wynyard Tillite) (Ptz).*

DEVONIAN

SILURIAN

ELDON GROUP

- **SDb** — *Grey or greenish grey interbedded laminated mudstone, siltstone and minor fine-grained quartz sandstone (Bell Shale and correlates) (SDb). Local occurance of limestone indicated (SDbl).*
- **SDf** — *Fine-grained quartz sandstone with minor siltstone and mudstone (correlate of Florence Sandstone) (SDf).*

WURAWINA SUPERGROUP

- **SDlu** — *Undifferentiated sandstone -mudstone-minor limestone sequence (correlates of Crotty and Amber Formations) (SDlu); mainly coarse- to fine-grained sandstone (commonly decomposed to a friable sand) with an upper sequence of siltstone and fine-grained sandstone in some areas (Crotty Formation and correlates) (SDc).*
- **SDc**

PALEOZOIC

ORDOVICIAN

GORDON GROUP

- **Ol** — *Limestone with some interbedded siltstone in places. Commonly decomposed to black clay "pug" (Gordon Limestone) (Ol).*
- **Osm** — *Undifferentiated shallow marine - non-marine siliciclastic conglomerate - sandstone sequence (€O); grey to pink, commonly cross-bedded quartz sandstone, coarse and pebbly towards base and with tubicular trace fossils in upper part (correlate of Moina Sandstone and Pioneer Beds) (Osm).*

CAMBRIAN

FURONGIAN

OWEN GROUP — WURAWINA SUPERGROUP

- **€Ocpw** — *Interbedded cross-bedded quartz sandstone, pebbly sandstone and siliceous well-sorted pebble conglomerate (€Ocp); white massive siliciclastic cobble conglomerate with clast composition - quartzite 84%, vein quartz 13%, chert <4% (€Ocpw).*
- **€Ocps** — *Pink interbedded quartzose sandstone, pebbly sandstone and commonly sandy siliciclastic pebble-cobble conglomerate with clasts - quartzite 66%, chert 24%, vein quartz 7%, quartz sandstone 3% (€Ocps).*
- **€Oms** — *Marine sandstone-siltstone-conglomerate sequence, siliciclastic to polymict, marine fossils in places. Includes correlates of Upper Dundas Group and 'Rosebery Group' (€Oms).*
- **€Omsc** — *Dominantly conglomerate and sandstone (€Omsc).*
- **€Omss** — *Dominantly sandstone (€Omss).*

CAMBRIAN SERIES 3

TYNDALL GROUP

- **€dt** — *Mainly volcaniclastic to polymict sandstone, breccia, siltstone, mudstone and conglomerate, typically quartz-feldspar-phyric. Marine fossils in places, (correlate of Tyndall Group) (€dt).*
- **€dtss** — *Mainly well bedded quartz-feldspar crystal rich volcaniclastic sandstone with minor siltstone, and volcaniclastic conglomerate, graded bedding common (€dtss)*
- **€dtcb** — *Limestone (€dtcb).*

WESTERN VOLCANO SEDIMENTARY GROUP — MOUNT READ VOLCANICS

- **€dsv** — *Interbedded volcaniclastic sandstone, breccia, siltstone, mudstone and conglomerate, with minor andesitic to basaltic volcanics and intrusive-extrusive porphyry bodies. Includes sequences in Howards Road area (White Spur Formation), Henty Fault Wedge and Langdon River - Yolande River area (€dsv).*
- **€dsvx** — *Mainly volcaniclastic sandstone and breccia and tuffaceous units, typically crystal-rich, with minor siltstone and mudstone (€dsvx).*
- **€dsvs** — *Interbedded siltstone-sandstone-mudstone units (€dsvs).*
- **€da** — *Andesitic to basaltic intrusives and volcanic rocks, feldspar-pyroxene +/- hornblende phyric (€da).*
- **€dbim** — *Brown weathering lava, breccia, and related intrusives of basaltic to andesitic composition (feldspar-pyroxene-phyric), including "Lynch Creek Basalts" (€dbim).*

CENTRAL VOLCANICS COMPLEX

- **€dv** — *Dominantly feldspar-phyric volcanic and volcaniclastic rocks, with some andesitic to basaltic volcanics (€dv).*
- **€dvt** — *Mainly felsic volcaniclastic and pyroclastic rocks, dominantly feldspar-phyric, including pumice bearing units, minor shale and sandstone (€dvt).*
- **€dvs** — *Shale-siltstone-sandstone units (€dvs).*

INTRUSIVE ROCKS

DEVONIAN

- **Dl** — *Lamprophyre (Dl).*

CAMBRIAN

CAMBRIAN SERIES 3 — MT READ VOLCANICS

- **€fp** — *Quartz-feldspar porphyry - dominantly intrusive (€fp).*
- **€fpp** — *Feldspar-quartz-pyroxene porphyry (€fpp).*
- **€fphp** — *Feldspar-quartz-hornblende porphyry (€fphp).*
- **€da** — *Andesitic to basaltic intrusives and volcanic rocks, feldspar-pyroxene ± hornblende phyric (€da).*
- **€dbim** — *Brown weathering lava, breccia and related intrusives of basaltic to andesitic composition (feldspar-pyroxene-phyric), including "Lynch Creek Basalts" (€dbim).*

CONTACTS

- *Geological contact.*
- *Geological contact - inferred.*
- *Geological contact - inferred from magnetic data.*
- *Limit of mapping of sub-unit within undifferentiated rock unit.*

FAULTS

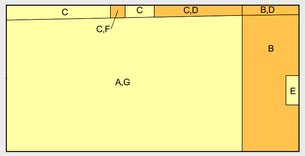
- *Fault.*
- *Fault - inferred.*
- *Fault - concealed.*

LINEARS

- *Axial surface trace of major antiform.*
- *Axial surface trace of major synform.*
- *Moraine ridge crest.*
- *Lineament - visible in magnetic data.*
- *Lithological trend line, including bedding trace interpreted from aerial photographs.*

- *Strike and dip of bedding, facing known - right way up; overturned.*
- *Strike and dip of bedding, facing unknown - dipping; vertical; horizontal.*
- *Strike and dip of igneous banding or platy alignment; vertical.*
- *Strike and dip of penetrative cleavage; vertical.*
- *Strike and dip of cleavage, type and relative age unspecified - dipping; vertical.*
- *Trend and plunge of hingeline of minor fold; with dip and dip direction of axial surface indicated; vertical.*
- *Trend and plunge of minor fold hingeline, relative local age F_3, with vertical axial surface.*
- *Generalised palaeocurrent direction, showing sense of movement.*
- *Field station for adjacent readings on the map.*
- *Notable small outcrop with rock unit indicated.*
- *Macrofossil location.*
- *Mineral deposit location - hardrock.*
- *Mineral deposit location - alluvial/tailings.*
- *Construction material/industrial mineral/gemstone location.*

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 M.J. Vicary, B.Sc.(Hons), 2004 as part of the Western Tasmanian Regional Minerals Program from the following sources (see source diagram):

A BAILLIE, P. W.; CORBETT, K. D.; COX, S. F.; CORBETT, E. B.; BRAVO, A. P.; GEE, R. D.; GULLINE, A. B.; LEGGE, P. J.; PIKE, G. P.; TURNER, N. J.; WILLIAMS, P. R.; MCCLENAGHAN, M. P.; BROWN, A. V. 1977. Geological Atlas 1:50 000 Series. Sheet 57 (7913N). Strahan. Department of Mines, Tasmania.

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 BROWN, A.V., FINDLAY, R.H., GOSCOMBE, B.D., McCLENAGHAN, M.P. and SEYMOUR, D.B. 1994. Zeehan Geological Atlas 1:50 000 Series, Sheet 50 (7914S) 1994. Tasmania Department of Mines.

D CORBETT, K.D., 1986. Mount Read Volcanics Project Map 3. Geology of the Henty River - Mt Read area. Tasmania Department of Mines.

E Halley, S., Vicary, M., and Boyd, D. 1995 Exploration Licences No: 102/87, 55/89 & 12/92 (Queenstown, Mt Darwin & Queenstown South), West Sedgwick and Garfield/Clark Valley. Annual Report April 1994 - March 1995. TCR 95-3721.

F Tear, S., 2002. Annual Report for EL 6/2001 (Professor Creek) for the period 22 June 2001 to 22 June 2002. Noranda Pacific Pty Ltd. TCR 02-4757.

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

REFERENCE THIS MAP AS:

VICARY, M.J. (compiler) 2004. Digital Geological Atlas 1:25 000 Scale Series. Sheet 3634 Professor. Mineral Resources Tasmania.

Base data from the LIST, Copyright State of Tasmania.

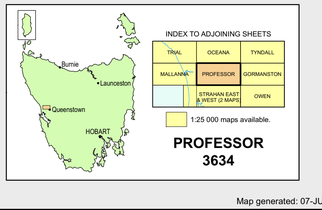
Map produced by Spatial Information Services, Mineral Resources Tasmania.

Website: www.mrt.tas.gov.au

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

While every care has been taken in the preparation of this data, no warranty is given as to the correctness of the information and no liability is accepted for any statement or opinion or for any error or omission. No reader should act or fail to act on the basis of any material contained herein. Readers should consult professional advisers. As a result the Crown in Right of the State of Tasmania and its employees, contractors and agents expressly disclaim all and any liability (including all liability from or attributable to any negligent or wrongful act or omission) to any persons whatsoever in respect of anything done or omitted to be done by any such person in reliance whether in whole or in part upon any of the material in this data. Crown copyright reserved.

LOCATION DIAGRAM



Map generated: 07-JUN-2024

WARNING: INKS ARE LIGHT SENSITIVE.