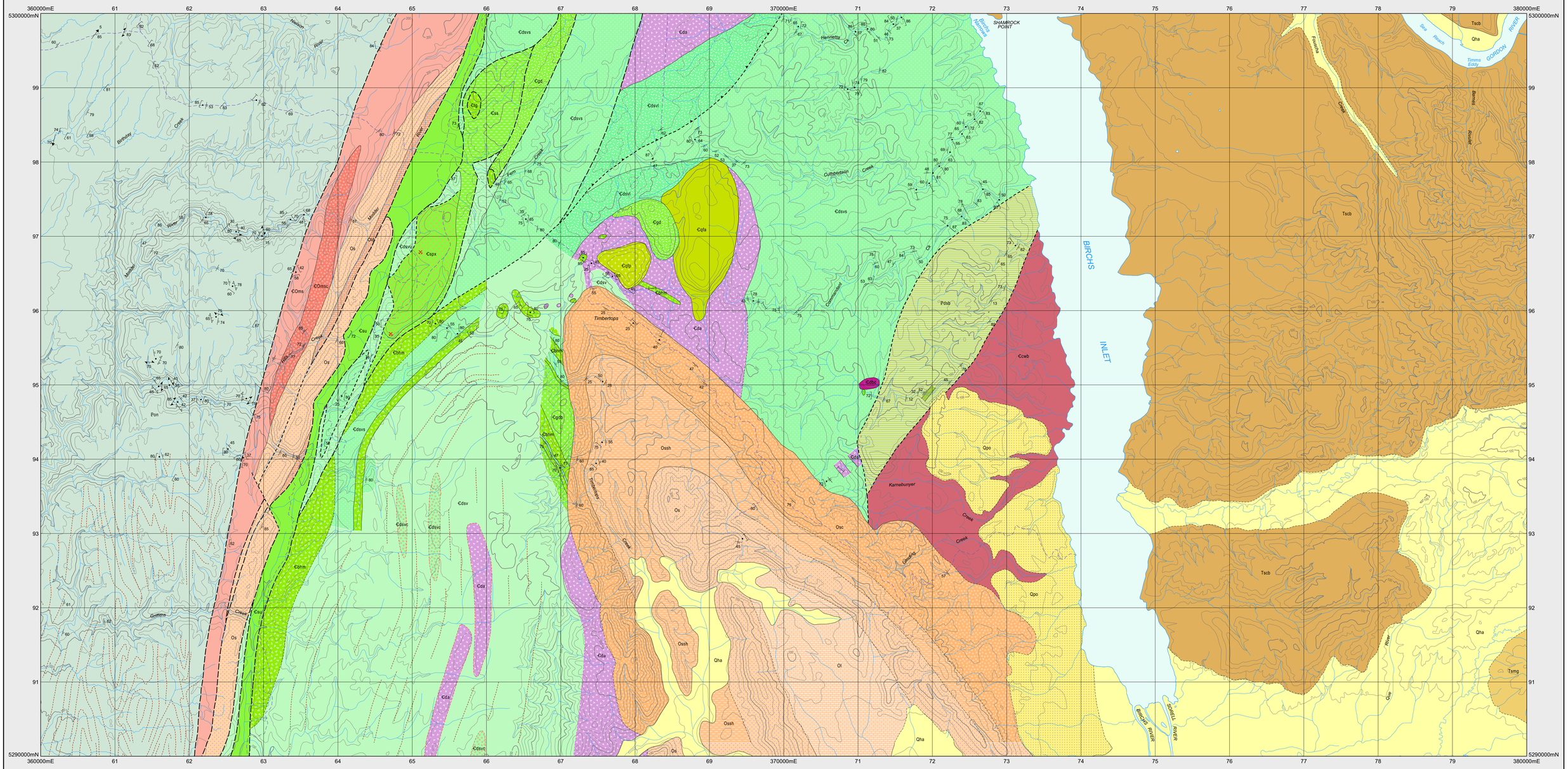
Department of State Growth
MINERAL RESOURCES TASMANIA

DIGITAL GEOLOGICAL ATLAS 1:25 000 SCALE SERIES
BIRCHS, SHEET 3629

BIRCHS

Scale 1:25 000

0 500 1000 1500 2000 2500m



CENOZOIC

PALEOGENE – NEOGENE – QUATERNARY

Qha — *Alluvium and swamp deposits (Qha).*

Qpo — *Older alluvial gravels, mainly on raised terraces developed on Tertiary deposits, and showing a gradational relationship to younger alluvium (Qpo).*

Erosional surface.

Tsmg — *Semi-consolidated interbedded sands, pebble-cobble gravels (upto boulder grade in some places), silts and clays; some horizons contain coalified wood and rare amber (Tsmg).*

Tscb — *Fine to medium grained quartz sandstone with carbonaceous siltstone laminate commonly containing plant stems and leaf impressions (Tscb).*

Angular unconformity due to Middle Devonian polyphase orogeny.

PALEOZOIC

ORDOVICIAN

Ol — *Dark grey limestone, dolomite, calcareous mudstone, minor quartz sandstone and black clay weathering products; in part fossiliferous (Ol).*

Old — *Dolomite, typically mottled grey, poorly bedded, unfossiliferous, crystalline (Old).*

Os — *Mostly quartz sandstone, pink to grey, fine to coarse-grained, with minor conglomerate and siltstone/mudstone (Os).*

Ossh — *Dominantly grey siltstone, with Ordovician brachiopods and trilobites in places (Ossh).*

Osc — *Siliceous sandstone and pebble conglomerate. Contains Ordovician fossils at Timbertops 367 300mE 5 295 900mN (Osc).*

Faulted or unconformable contact.

FURONGIAN

€Oms — *Marine sequence of mudstone, siltstone, sandstone and minor conglomerate. Late Cambrian fossils at 364 500mE 5 298 200mN (€Oms).*

€Omsc — *Dominantly pebble conglomerate (€Omsc).*

GORDON GROUP

CORRELATES OF OWEN GROUP

CAMBRIAN — CAMBRIAN SERIES 3

€dsv — *Mixed sequence of volcano-sedimentary, sedimentary and volcanic rocks, ranging from felsic to andesitic in composition. Includes non-volcanic sedimentary rocks (€dsv). May include some allochthonous units.*

€dsvs — *Dominantly interbedded grey mudstone and lithicwacke sandstone, with some conglomeratic units. Graded bedding typical. Derivation from metaquartzite and volcanic sources (€dsvs).*

€dsvc — *Conglomerate horizons; dominantly from felsic volcanic sources in south. Weakly positive magnetic character (€dsvc).*

€da — *Andesitic lavas abd breccias with volcaniclastic units and possible intrusives. Typically plagioclase-pyroxene-phyric. Includes some units mapped from aeromagnetic signature. Includes part of 'Noddy Creek Volcanics' (€da).*

€dsvl — *Felsic quartz-feldspar-phyric volcanic and intrusive rocks with minor sedimentary interbeds. Possible welded tuff at 368 200mE 5 298 200mN. Includes part of 'Noddy Creek Volcanics' (€dsvl)*

€dbc — *Basaltic lava, chlorite-sericite-altered, of uncertain affinity (€dbc).*

€dsvu — *Schistose possible tuff or lava containing chlorite, quartz and opaques-sheared volcanic rocks of uncertain affinity (€dsvu).*

CORRELATE OF WESTERN VOLCANO - SEDIMENTARY SEQUENCE

CORRELATES OF MOUNT READ VOLCANICS

NEOPROTEROZOIC PALEOZOIC

CAMBRIAN — TERRENEUVIAN - CAMBRIAN SERIES 2

€cwb — *Basaltic lavas, tholeiitic, typically massive, commonly plagioclase-pyroxene-phyric ('Birchs Inlet Volcanics') (€cwb).*

€bhm — *Basaltic lava, breccia and crystal-lithic tuff; commonly vesicular and containing pseudomorphed pyroxene phenocrysts and red-brown spinel; commonly talc-rich (high Mg). (€bhm).*

CORRELATE OF CROTON BAY - VARATAH ASSOCIATION

ALLOCHTHONOUS SEQUENCES

Pdsb / **Pdsbb** — *Siliceous mudstone, siltstone, sandstone and conglomerate (Pdsb); basalt lava (Pdsbb). (Correlates of Success Creek Group).*

Pon — *Metamorphosed interbedded quartzwacke and mudstone siltstone (Pon). (Correlate of Oonah Formation).*

INTRUSIVE ROCKS

PALEOZOIC

CAMBRIAN — CAMBRIAN SERIES 3

€qfp — *Quartz-feldspar ± biotite porphyry, probably intrusive (€qfp).*

€qfa — *Felsic intrusive(?) body of rhyolitic composition. Zircon U-Pb radiometric age 502.8 ± 4.4 Ma from 368 800mE 5 296 100mN (€qfa).*

€da — *Andesitic lavas and minor intrusives (€da).*

MOUNT READ VOLCANICS

CAMBRIAN — TERRENEUVIAN - CAMBRIAN SERIES 2

€su — *Undifferentiated, generally coarse-grained ultramafic rocks, gabbro and sheared serpentinite (€su).*

€gd — *Gabbro dykes, intrusive bodies and fault-bounded units (€gd).*

€gdb — *Gabbro with orthopyroxene pseudomorphs (€gdb).*

€sp — *Peridotite (€sp).*

€spx — *Serpentinised pyroxenite (€spx).*

€tg — *Tonalite and quartz gabbro (€tg).*

€ss — *Sheared serpentinite (€ss).*

ALLOCHTHONOUS SEQUENCES

CONTACTS

Geological contact.

Geological contact - inferred.

Geological contact - inferred from magnetic data.

Geological contact - inferred from radiometric data.

Limit of mapping of sub-unit within undifferentiated rock unit.

FAULTS

Fault.

Fault - inferred.

Thrust fault (teeth on upper plate) - inferred.

LINEARS

Lithological trend line, including bedding trace interpreted from aerial photographs.

Strike and dip of bedding, facing known - right way up.

Strike and dip of bedding, facing unknown - dipping; vertical.

Strike and dip of cleavage, type and relative age unspecified - dipping; vertical.

Strike and dip of cleavage, relative local age S_1, S_2.

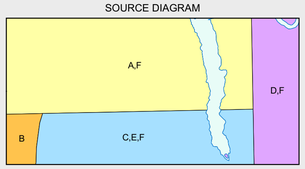
Trend and plunge of hingeline of minor fold, unspecified relative age; with dip and dip direction of axial surface indicated.

Trend and plunge of hingeline of minor fold, relative local age F_2, with dip and dip direction of axial surface indicated.

Field station for adjacent readings on the map.

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 D.B. Seymour, B.Sc.(Hons), Ph.D. and D.C Green, B.Sc.(Hons), Ph.D., 2003 from the following sources (see source diagram):

A McCLENAGHAN, M.P., FINDLAY, R.H., 1989. Geological Atlas 1:50 000 Series. Sheet 64 (7913S), Macquarie Harbour. Tasmania Department of Mines.

B B.D. Goscombe, 1989-1990. Unpublished mapping.

C D.B. Seymour, 1999. New interpretation of airborne magnetic and radiometric data and aerial photographs.

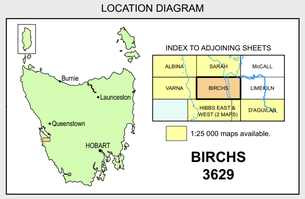
D BROWN, A.V., CALVER, C.R., COREBETT, K.D., FORSYTH, S.M., GOSCOMBE, B.D., GREEN, G.R., McCLENAGHAN, M.P., PEMBERTON, J., SEYMOUR, D.B. (compilation) 1995. Geological Atlas 1:250 000 Digital Series. Geology of Southwest Tasmania. Mineral Resources Tasmania.

E Hall, W.D.M. et al., 1969. Report on Field Work in Exploration Licence 13/65, South-West Tasmania During 1967-1968 Field Season. Broken Hill Proprietary Company Ltd. TCR 69-0555.

Updated as part of the Western Tasmanian Regional Minerals Program by:

F 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.

LOCATION DIAGRAM



REFERENCE THIS MAP AS:

SEYMOUR, D.B. and GREEN, D.C. (compilers) 2003. Digital Geological Atlas 1:25 000 Scale Series. Sheet 3629 Birchs. 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.

Map generated: 05-JUN-2024

WARNING: INKS ARE LIGHT SENSITIVE.