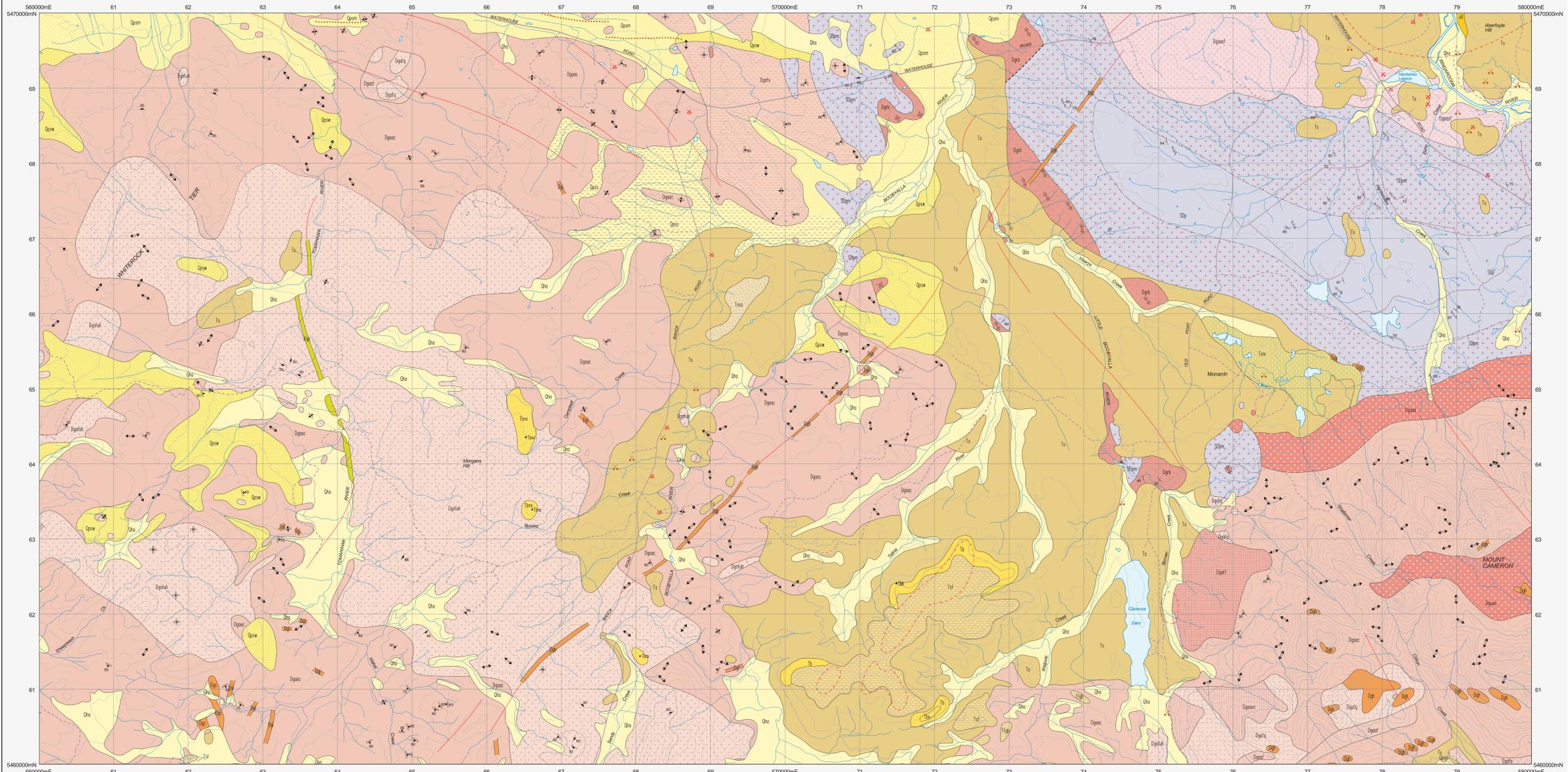
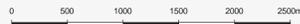


# MONARCH

Scale: 1:25 000



PERIOD	UNIT	SYMBOL	DESCRIPTION
			<p><b>QUATERNARY</b></p> <p><b>PLEISTOCENE - HOLOCENE</b></p> <p><b>Qha</b> Stream alluvium, swamp and marsh deposits (Qha).</p> <p><b>Qpaa</b> Older alluvium of river terraces (Qpaa).</p> <p><b>Qpam</b> Marine terrace deposits of gravel, sand, clay, shells and organic material (Qpam). Older aeolian sand and sand dunes (Qpam).</p> <p><b>Qpca</b> Clay, sand, minor peat and gravel containing marine shells (Qpca).</p> <p><b>Qpcc</b> Conglomerate, gravel, sand, silt and mud disturbed by mining (Tam). Basalt (Tb).</p> <p><b>Qpca</b> Dominantly non-marine sequences of gravel, sand, silt, clay and regolith (Tc). Gravel lag (Tca).</p> <p><b>Qpca</b> Lag and outcrop of silicified quartz sandstone and conglomerate (Tca).</p> <p><b>Qpca</b> Grey-billy and silcrete (Tca).</p> <p><b>Qpca</b> Sands and gravels cemented by iron oxides (Tca).</p>
<p><b>PALEOZOIC</b></p> <p><b>SILURIAN (?)</b></p> <p><b>DEVONIAN</b></p>	<p><b>PALEOZOIC</b></p> <p><b>DEVONIAN</b></p>	<p><b>SDp</b> Undifferentiated Panama Group sandstone, siltstone and mudstone, primarily turbiditic in origin (SDp). Metamorphosed by granitic intrusion (SDpm).</p>	<p><b>IGNEOUS ROCKS</b></p> <p><b>Tb</b> Basalt (Tb), hawthite (Tbn) indicated.</p> <p><b>Tbn</b> Olivine nephelinite (Tbn), with theralite nodules (Tbn).</p> <p><b>Kap</b> Phonolite dyke (Ar/Ar plateau age 75.0 +/- 0.3 Ma) (Kap).</p> <p><b>Jd</b> Dolerite and related rocks (Jd).</p>

UNIT	DESCRIPTION
<b>MINOR GRANITIC INTRUSIONS</b>	<p><b>Dgq</b> Fine grained equigranular granite (Dgq). Aelite (Dgq). Fine grained porphyritic granite (Dgp). Quartz-muscovite granite (Dgq). Garnetiferous quartz-feldspar porphyry (Dgp).</p> <p><b>Dgpf</b> Quartz - feldspar porphyry (Dgpf).</p>
<b>EDDYSTONE BATHOLITH</b>	<p><b>Dgac</b> Fine- to coarse-grained porphyritic, garnet-bearing biotite-muscovite syenogranite/alkali feldspar granite (Dgac) (Batholith Granite S-type).</p>
<b>BLUE TIER BATHOLITH</b>	<p><b>Dgafa</b> Fine- to medium-grained, porphyritic, (feldspar and rounded quartz) biotite-muscovite alkali feldspar granite/syenogranite (Dgafa).</p> <p><b>Dgafe</b> Fine- to coarse-grained equigranular biotite-muscovite alkali feldspar granite/syenogranite (Dgafe).</p> <p><b>Dgafn</b> Fine- to medium-grained, equigranular to variably porphyritic, (feldspar and quartz) biotite-variably muscovite syenogranite (Little Mt. Horror Granite) (Dgafn).</p> <p><b>Dgaff</b> Fine- to medium-grained, sparsely porphyritic, biotite-minor muscovite monzogranite (Dgaff).</p> <p><b>Dgaof</b> Fine- to medium-grained, porphyritic (feldspar) biotite-muscovite monzogranite (Dgaof).</p> <p><b>Dgaa</b> Medium- to coarse-grained sparsely porphyritic (K-feldspar) biotite-minor muscovite monzogranite (Dgaa).</p> <p><b>Dgaa</b> Coarse-grained, porphyritic (K-feldspar) to equigranular biotite-minor muscovite monzogranite (Dgaa).</p> <p><b>Dgaav</b> Very coarse-grained, porphyritic (K-feldspar) biotite-minor muscovite monzogranite (Dgaav).</p> <p><b>Dgavl</b> Medium-grained, equigranular, foliated biotite-variably muscovite alkali feldspar granite (Dgavl) (Glenelg Mt Granite S-type).</p> <p><b>Dgab</b> Medium- to coarse-grained, foliated, biotite monzogranite/granolite (Dgab) (Vicarys Creek Granodiorite I-type).</p>

—	Geological boundary - position approximate.
- - - - -	Geological boundary - inferred.
- . - . - .	Transitional boundary.
- - - - -	Fault - inferred.
- - - - -	Magnetic gradient or lineament (direction towards lower values indicated).
- - - - -	Lineament visible in airborne magnetic data.
.....	Dune crests.
(White line)	Limit of mapping of sub-unit within undifferentiated rock unit.

↘	Strike and dip of bedding, facing known.
↗	Strike and dip of bedding, facing unknown - dipping; vertical.
+	Strike and dip of foliation due to alignment of K-feldspar phenocrysts in granite rock - dipping; vertical.
+	Horizontal foliation due to alignment of hornblende and/or biotite in granitic rock.
+	Trend of preferred orientation of K-feldspar phenocrysts in granite rock.
+	Strike of vertical foliation due to alignment of hornblende and/or biotite in granite rock.
+	Trend of preferred orientation of hornblende and/or biotite in granite rock.
+	Strike and dip of cleavage or foliation, relative local set - dipping; vertical.
+	Strike and dip of dominant joint set - dipping; vertical.
+	Notable small outcrop with rock unit indicated.
+	Notable small float or lag occurrence, with rock type indicated.
+	Mineral deposit location - hardrock.
+	Mineral deposit location - alluvial/alluvial.
+	Construction material/industrial mineral/gemstone location.

Compiled by A.R. Reed, B.Sc.(Hons), Ph.D., 1998 from the following sources (see responsibility diagram):

A. BAILLIE, P.W., TURNER, N.J. & COX, S.F., 1979. Geological Atlas 1:50 000 series, sheet 54 (8450) (Batholith), Tasmania Department of Mines.

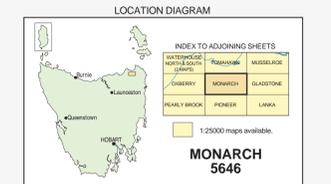
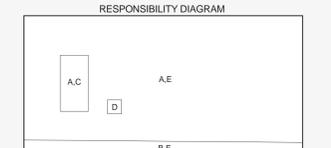
B. BROWN, A.V., MCLENAGHAN, M.P., MOORE, W.R., TURNER, N.J., MCLENAGHAN, J., WILLIAMS, P.R., BAILLIE, P.W., CORBETT, K.D., CORBETT, E.B., COX, S.F. & CROOKES, D.J., 1977. Geological Atlas 1:50 000 series, sheet 52 (8450) (Panama), Tasmania Department of Mines.

Updated by:

C. EVERARD, J.L., SUTHERLAND, F.L. & ZWINGMANN, H., 2004. A Cretaceous phonite dyke from the Tonolowick River, northeast Tasmania. Papers and Proceedings of the Royal Society of Tasmania 136:11-33.

D. J.L. Everard, Fieldwork 2008.

E. Geophysical Invasions derived from 2008 Mineral Resources Tasmania "TasExpore" Survey sheet by J.L. Everard.



**REFERENCE THIS MAP AS:**

REED, A.R. 1998. Digital Geological Atlas 1:25 000 Scale Series. Sheet 5646. Monarch. Mineral Resources Tasmania.

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Map produced by the Geoscience Information Branch of Mineral Resources Tasmania using G.I.S. software.

GDAS4 - MGA Zone 55. Contour Interval: 20 metres.

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