Department of State Growth
MINERAL RESOURCES TASMANIA

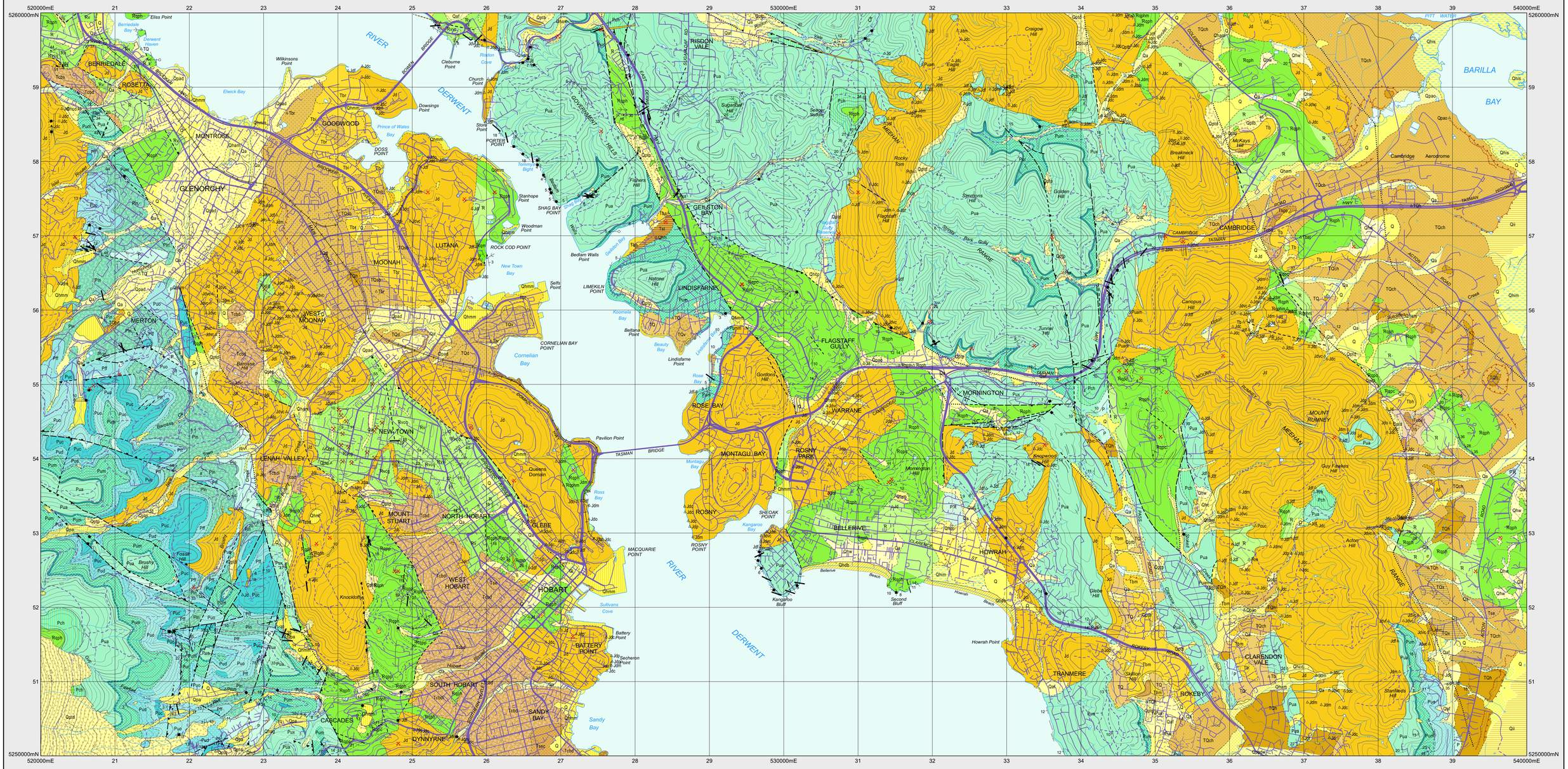
DIGITAL GEOLOGICAL ATLAS 1:25 000 SCALE SERIES
HOBART, SHEET 5225

HOBART

Scale 1:25 000

0 500 1000 1500 2000 2500m

Tasmanian Government



CENOZOIC

QUATERNARY (Q)

Qhm — *Undifferentiated Cenozoic sediments (TQ). Undifferentiated Quaternary sediments (Q). Selected mine tailings and man disturbed ground indicated (Qhm). Man made deposits (Qhmm).*

Qhdb — *Modern shore face and associated aeolian dune sand (Qhdb).*

Qhi — *Paralic clay, silt, sand and minor gravel deposits (Qhi), - of modern salt marsh and associated tidal flats (Qhis), of older lagoons and swamps (Qhim).*

Qi — *Undifferentiated bay, estuarine, deltaic and alluvial deposits of sand, shelly sand, pebbly sand, cobble gravels, clayey sand, silt and clay (Qi).*

Qhaf — *Alluvial fan deposits at base of former coastal cliffs (Qhaf).*

Qii — *Inferred undifferentiated paralic barrier complex and marine deposits (Qii).*

Qhw — *Aeolian and locally derived sand deposits locally reworked by alluvial processes (Qhw), aeolian dune and sheet sand (Qhwd).*

Qhc — *Colluvium (Qhc) - clayey gravel derived from dolerite (Qhcd), sandy, derived from Upper Parmeener rocks (Qhcp) derived predominantly from Lower Parmeener rocks (Qhcl).*

Qa / Qham — *Alluvial gravel sand and clay (Qa), alluvial fans (Qaf). Alluvial and marsh deposits of modern flood plains, - gravel, sand, silt and clay commonly with organic top layer (Qham), - alluvial gravel deposits (Qhag).*

Qpao — *Alluvial terrace deposits (Qpao).*

Qpad — *Alluvial terrace deposits dominantly of cobbles and small boulders of dolerite and subordinate Parmeener clasts (Qpad).*

Qpa — *Deeply dissected alluvial fan, proximal alluvial terrace and minor talus deposits containing boulders of weathered dolerite and Parmeener derived rocks in places (Qpa).*

Qptinv — *Periglacial non vegetated scree deposits (Qptinv).*

Qpt — *Talus and remobilised talus deposits (Qpt), basalt talus (Qptb), talus predominantly of Upper Parmeener sandstone and sand (Qptq), silty talus breccia derived from Lower Parmeener rocks, moderately cemented in places, includes alluvially reworked deposits (Qptp), talus dominantly of Lower Parmeener rocks and dolerite (Qptdp), talus of dolerite and subordinate Upper Parmeener rocks (Qptup) and talus dominantly of large dolerite boulders and in places subordinate Parmeener rocks (Qptd).*

Qppdw — *Low gradient alluvial fan and alluvial terrace deposits of interbedded gravel and coarse sand, clasts predominantly of dolerite and Parmeener Supergroup rocks (Qppdw).*

TQsb — *Undifferentiated Cenozoic deposits with possible subsurface Paleogene - Neogene basalt (TQsb).*

TQbd — *Boulder deposit, clasts dominantly of weathered to extremely weathered dolerite and Parmeener rock, rare basalt clasts (TQbd).*

TQch — *Dominantly plastic clay, silty clay and sandy clay with minor pebbly layers and subordinate gravel and well-sorted sand layers (TQch).*

TQh — *Undifferentiated piedmont, alluvial fan, alluvial terrace, exhumed alluvial, lag and possible beach gravel and poorly-cemented conglomerate containing pebbles and cobbles of dolerite or Parmeener derived rocks (TQh).*

TQv — *Supra-basalt moderately lithified conglomerate with interbedded sandstone at places, clasts of well rounded siliceous cobbles and pebbles, of Paleogene - Neogene derived silica, and rarely of dolerite (TQv).*

TQd — *Undifferentiated fluviatile and swamp deposits of poorly-consolidate to unconsolidated sand, clayey lable sand and silt with wood pieces and cross-bedding at places and interbedded subordinate clay and silty clay, minor fine-grained gravel: includes deposits related to probable former course of Derwent River, surficial swamp deposits and supra-basalt sand (TQd).*

CENOZOIC — PALEOGENE - NEOGENE

TQx — *Undifferentiated Cenozoic sediments (TQ). Cenozoic or older strata inferred from closely spaced uniform bedding traces visible on aerial photographs (TQx).*

△ TQsi — *Silica stone and lag of silica stone (TQsi).*

Tf — *Undifferentiated Paleogene - Neogene (T). Ferricrete (Tf).*

Tb — *Basalt (Tb).*

Tst — *Travertine spring deposits with fossil plants and freshwater fauna, associated with basalt at Geilston Bay (Tst) (includes Geilston Travertine).*

Tbat — *Basaltic volcanic agglomerate, tuff and associated rocks (Tbat).*

Tsp — *Sub-basalt or inferred sub-basalt deposits (Tsp), - very poorly-consolidated well sorted sandstone, siltstone and claystone (Tsph), poorly-sorted boulder and cobble deposits with clasts of dolerite, Parmeener rocks and possible volcanic rocks, clayey matrix (Tspv), very poorly-consolidated plastic olive, brown and buff coloured mudstone siltstone and sandstone with dispersed or bedded layers of dolerite and Parmeener clasts (Tspp).*

Tcb — *Poorly-sorted large boulder to pebble grade deposits (Tcb), - clasts dominantly of dolerite with traces to rarely dominant amounts of Parmeener mudstone and other rocks, clayey matrix (Tcbd), inferred dolerite boulder beds overlying older rocks or deposits at unknown depth (Tcbdl); clasts generally smaller and locally derived, dominantly of Parmeener rocks with subordinate dolerite in some areas, clayey or sandy matrix (Tcbs).*

Tcbx — *Deposits of very large (> 2m) dolerite boulders in clay, and derived bouldery lag deposits (Tcbx).*

Tse — *Poorly-consolidated interbedded claystone, sandstone and pebble conglomerate (Tse).*

Tsec — *Poor-consolidated claystone with some horizons with lignitic material (Tsec).*

Tsi — *Poorly-consolidated white siltstone, sandstone and claystone with Paleogene - Neogene fossil flora (Tsi).*

Erosional surface.

MESOZOIC

TRIASSIC — UPPER PARMEENER SUPERGROUP

Rvcg — *Undifferentiated Parmeener Supergroup rocks (PR). Undifferentiated Upper Parmeener Supergroup rocks (R). Thick-to thin-bedded volcanic lithic sandstone, siltstone, mudstone and coal seams, fossil plants on some horizons (Newtown Coal Measures in part (Rvcg).*

Rvcq — *Interbedded cross-bedded white quartzose sandstone, quartz-rich lithic sandstone, siltstone and mudstone; upper interval with much dark grey carbonaceous mudstone, thin lenticular coal seams and fossil plants in places (Newtown Coal Measures in part) (Rvcq).*

Rvvl — *Interbedded yellow brown or grey carbonaceous siltstone, mudstone and thin-to thick-bedded quartz-rich lithic, arkosic sandstone, some fossil plants, common siltstone palaeosols (Rvvl).*

Rvvs — *Predominantly fine-grained quartz sandstone, commonly partly silicified, interbedded with mudstone and lithic sandstone at places (Rvvs).*

Rvvr — *Predominantly brown, buff, grey carbonaceous and green siltstone and mudstone, interbedded with quartz-rich lithic sandstone, horizons of crowded vertical burrows and siltstone palaeosols (Rvvr).*
Rv = Rvcg + Rvcq + Rvvl + Rvvs + Rvvr

Rqm — *Interbedded micaceous brown, red-purple, green and grey carbonaceous siltstone, shale, mudstone and planar bedded, ripple-laminated or cross-bedded sandstone and notable thin beds of silicified bioturbated sandstone (Rqm).*

Rqp — *Dominantly freshwater cross-bedded quartzose sandstone, micaceous siltstone and mudstone (correlate of Ross Sandstone) (Rqp). Freshwater predominantly cross-bedded quartzose to feldspathic sandstone, commonly with overturned cross-bedding, and subordinate micaceous siltstone with some red-purple beds and sparse plant and vertebrate fossils (Rqph); contact metamorphosed by Jurassic dolerite (Rqphm), intervals predominantly of red-purple, green, tan or grey micaceous or carbonaceous siltstone, shale, mudstone and ripple cross-laminated, planar-bedded or cross-bedded sandstone (Rqpc); Poets Road Member (Rqpp); granule to pebbly sandstone indicated (Rqpg). (Rqph, Rqphm, Rqpc, Rqpp, Rqpg: Knocklofty Formation).*

Pch — *Freshwater cross-bedded arkosic to quartzose sandstone and micaceous siltstone, lower interval with some graphitic or carbonaceous sandstone, rare coalified wood, large calcareous concretions in some areas, thin beds of quartz pebble conglomerate near base in many areas; upper interval less feldspathic (correlate in part of Cygnet Coal Measures) (Pch). Occurrence of freshwater sandstone with coal measures at 536350mE, 5253095mN (Pcuc).*

△ Rm — *Upper Parmeener contact metamorphosed by Jurassic dolerite (Rm).*

PALEOZOIC

PERMIAN — PENNSYLVANIAN (?)

Pua — *Undifferentiated Parmeener Supergroup rocks (PR). Undifferentiated Permo-Carboniferous sediments (P). Generally unfossiliferous, glaciomarine interbedded non-fissile and fissile siltstone and silty sandstone, common bioturbation, lonestones: uppermost beds of laminated to massive siltstone with some thin beds of well-sorted sandstone (Abels Bay Formation) (Pua) contact metamorphosed by Jurassic dolerite (Puam).*

Pur — *Cliff forming massive, bioturbated to homogeneous, moderately well-sorted feldspathic quartz sandstone with thin pebble-and cobble-rich layers (Risdon Sandstone) (Pur).*

Pum — *Generally poorly fossiliferous interbedded glaciomarine fine-to medium-grained sandstone and fissile to non-fissile siltstone with common lone stones and pebble rich patches, tsp beds richly fossiliferous, lower beds generally coarse-grained and variably fossiliferous (Malbina Formation) (Pum) contact metamorphosed by Jurassic dolerite (Pumm).*
Pux = Pua + Pur + Pum

Pud — *Dominantly interbedded, richly fossiliferous glaciomarine siltstone and sandstone and subordinate thin beds of granule sandstone, lonestones present, thinner bedded than enclosing formations (Deep Bay Formation) (Pud).*

Puc — *Dominantly richly fossiliferous, interbedded glaciomarine grey bioclastic and argillaceous limestone, calcareous siltstone and rare metabentonite layers, overlying dark grey fossiliferous siltstone and calcareous siltstone and basal fossiliferous poorly-sorted pebbly sandstone (Berriedale Limestone, Nassau Siltstone and Rayner Sandstone) (Puc).*
Puo = Pud + Puc

Pff — *Paralic siltstone and fine-grained sandstone, variably bedded - massive, laminated, flaser bedded, rippled, thin beds of cross-laminated or wavy-bedded sandstone, glaciomarine intervals and rare thin beds of pebbly granule sandstone (Faulkner Group) (Pff).*

Pln — *Generally fossiliferous, fissile and non-fissile glaciomarine siltstone and sandstone with lonestones; richly fossiliferous central interval with some impure limestone; upper interval dominantly of less fossiliferous micaceous siltstone (Bundella Formation) (Pln), contact metamorphosed by Jurassic dolerite (Pnm).*

Plo — *Poorly-bedded coarsely fretting uniform grey marine siltstone with sparse lodestones and probable glendonite moulds (correlate of Woody Island Siltstone) (Plo).*

LOWER PARMEENER SUPERGROUP — REKUNJAN SERIES

- Lymingtonian Stage
- Bernacchian Stage
- Tamarian Stage

IGNEOUS ROCKS

MESOZOIC CENOZOIC — PALEOGENE - NEOGENE

Tb — *Basalt (Tb), mugearite (Tbm), alkali basalt (Tba), hawaiite (Tbh), transitional olivine basalt (Tbr), basalt inferred beneath soil or Cenozoic deposits (Tbi).*

Tbn — *Olivine nephelinite (Tbn).*

JURASSIC

Jd — *Dolerite (Jd), with orthopyroxene (Jdo), granophyre and pegmatite indicated (Jdp), dolerite inferred beneath soil or Cenozoic deposits (Jdi). Dolerite of grainsize < 0.2mm (Jdef); 0 - 0.7mm (Jdvf); 0.7 - 1.5mm (Jdf); > 1.5mm (Jdmc); 1.5 - 3mm (Jdm); > 3mm (Jdc); > 6mm (Jdvc) indicated.*

CONTACTS

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

FAULTS

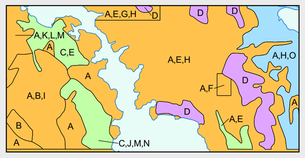
- *Fault.*
- *Fault - inferred.*
- *Fault - concealed.*
- *Normal fault (downthrown side indicated).*
- *Normal fault (downthrown side indicated) - inferred.*
- *Normal fault (downthrown side indicated) - concealed.*

LINEARS

- *Scarp.*
- *Slope break.*
- *Lineament - visible on aerial photographs.*
- *Internal intrusive boundary within igneous body.*
- *Internal intrusive boundary within igneous body - inferred.*

- *Strike and dip of bedding, right way up.*
- *Strike of vertical bedding, facing indicated by single tic.*
- *Horizontal bedding.*
- *Trend and plunge of lineation of unspecified type.*
- *Strike of outcrop-scale fault, type unspecified; downthrown side indicated.*
- *Strike and dip of outcrop-scale fault, type unspecified; thrust fault.*
- *Trend and plunge of slickenslides, movement sense unspecified.*
- *Strike and dip of dominant joint set; vertical.*
- *Trend of dyke or vein, rock type or mineral specified by RCODE in Point Attribute Table.*
- *Generalised palaeocurrent direction, showing sense of movement.*
- *Trend and plunge of palaeocurrent lineation, polarity down-plunge.*
- *Field station for adjacent readings on the map.*
- *Notable small outcrop or float/lag occurrence with rock unit indicated.*
- *Mineral deposit location - hardrock.*
- *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.

Geology by S.M. Forsyth, B.Sc.(Hons) and M.J. Clarke, 1999 from the following sources (see source diagram):

A S.M. Forsyth, 1995-1997. 1:25 000 geological mapping.

B M.J. Clarke, 1995-1997. 1:25 000 geological mapping.

C S.M. Forsyth, 1995-1997. 1:100 000 geological mapping.

D S.M. Forsyth, 1999. Aerial photo interpretation.

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F HUGHES, T.D. and BLAKE, F. 1959. Brick-making Materials near Mt Rumney. Technical Report Department of Mines Tasmania, Volume: 3, Pages: 54-57

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I B.W. Weldon, 1997. Personal communication.

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N M.R. Banks, 1997. Personal communication.

O LEAMAN, D.E. 1972. Gravity survey of the Hobart district. Bulletin Geological Survey of Tasmania, Volume: 52. Department of Mines, Tasmania.

REFERENCE THIS MAP AS:

FORSYTH, S.M. and CLARKE, M.J. (compilers) 1999. Digital Geological Atlas 1:25 000 Scale Series. Sheet 5225 Hobart. Mineral Resources Tasmania.

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Website: www.mrt.tas.gov.au

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

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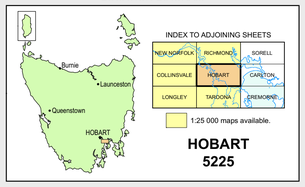
LOCATION DIAGRAM



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