Department of Infrastructure Energy and Resources
MINERAL RESOURCES TASMANIA

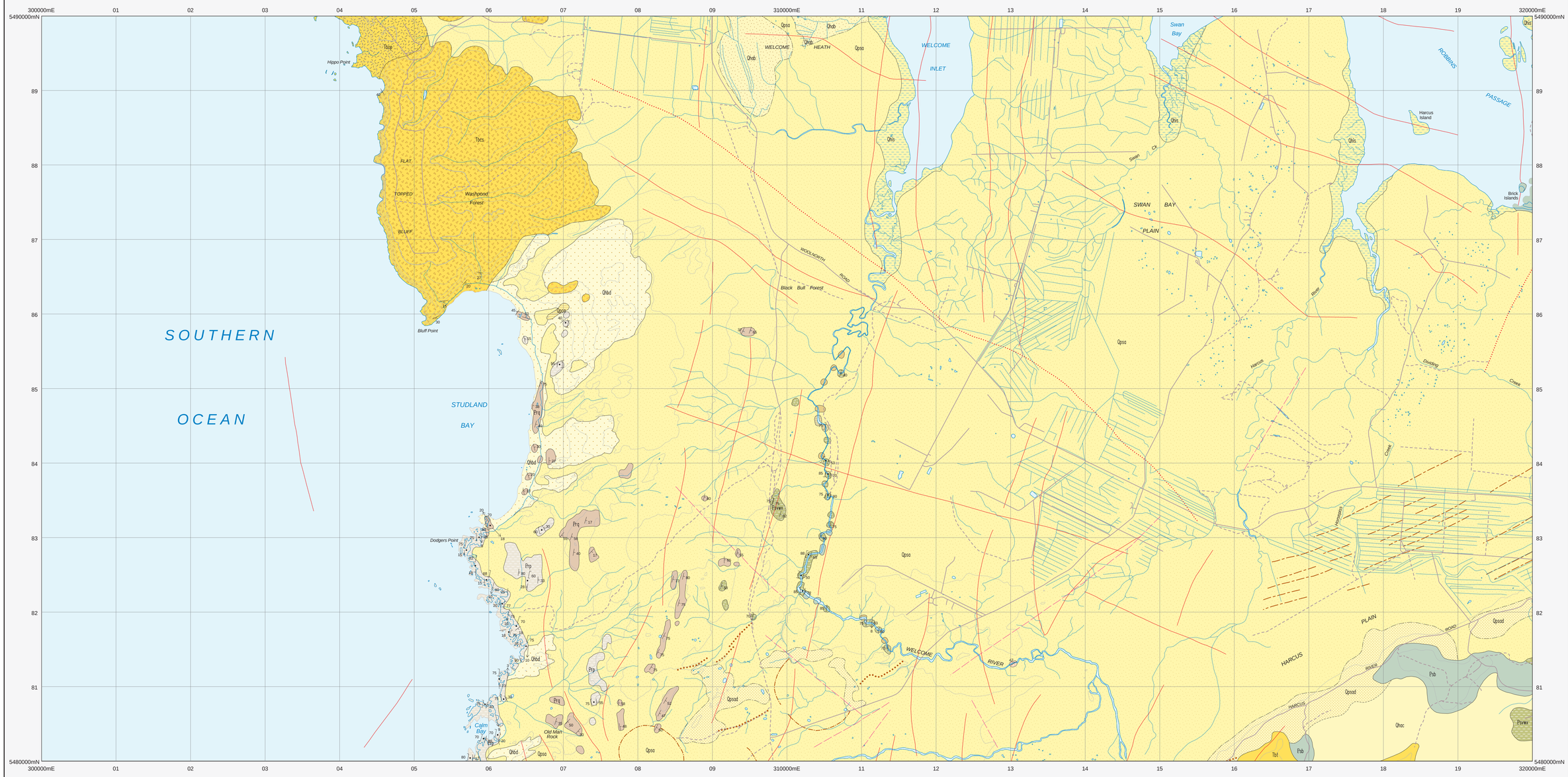
DIGITAL GEOLOGICAL ATLAS 1:25 000 SCALE SERIES
STUDLAND, SHEET 3048

STUDLAND

Scale: 1:25 000

0 500 1000 1500 2000 2500m

Tasmania
Explore the possibilities



CENOZOIC

QUATERNARY

HOLOCENE

- **Qhis** — *Paralic clay, silt, sand and minor gravel deposits of modern salt marsh and associated tidal flats (Qhis).*
- **Qhac** — *Alluvium and colluvium – including alluvial deposits of sand, clay–rich sand or gravel; talus and slope–wash deposits; swamp deposits of sand, clay and peat; and deposits rich in chert lag derived with associated soil from underlying Proterozoic dolomite sequences (Qhac).*
- **Qhbd** — *Younger active dune and beach sand and beach gravel.*
- **Qhab** — *Marsh and swamp deposits (Qhab).*

?PLEISTOCENE

- **Qpca** — *Aeolian calcarenite, partially lithified, showing dune cross–bedding (Qpca).*
- **Qpsa / Qpsad** — *Older stabilised aeolian sand of predominantly coastal plain, with underlying marine sands in places; may show relict landforms including terraces, lunettes, linear or barchan dunes, and beach ridges related to regressive strandlines of Last Interglacial Stage (Qpsa); some areas with preserved relict dune forms indicated (Qpsad).*

Erosional surface.

PALEOGENE - NEOGENE

- **Tbt** — *Massive olivine tholeiite (Tbt).*
- **Tbcs** — *Bedded basaltic flow–foot breccias and associated small pillow lava flows, with dips of 15–45 degrees probably representing original depositional slopes (Tbcs).*
- **Tbop** — *Pillow, 'entrail' and massive–columnar, olivine basalt lavas (Tbop).*
- **Ts** — *Dominantly non–marine sequences of gravel, sand, silt, clay and regolith (Ts).*

Angular unconformity.

PALEOZOIC

CAMBRIAN — CAMBRIAN SERIES 3 – FURONGIAN

- **Ꞓm** — *Red–brown weathering, interbedded lithic wacke, litharenite, lithic conglomerate and laminated siltstone/mudstone, generally well bedded and commonly in thick fining–upward cycles, turbidific in part (Scopus Formation) (Ꞓm).*

Inferred disconformity.

NEOPROTEROZOIC

TOGARI GROUP

- **Psdl** — *Well bedded to massive, shallow marine dolomite and dolomitic limestone, of subtidal to ?supratidal facies, and cherty silicified equivalents in some localities. (Correlate of Smithton Dolomite) (Psdl).*
- **Psb** — *Interbedded lithic wacke (massive to well bedded, turbidific and/or mafic volcaniclastic in part), laminated siltstone/mudstone, and minor polymict lithic conglomerate; includes some occurrences of coarse breccia or mixtite with clasts of mafic volcanic rocks. (Correlate of Keppel Creek Formation, may include some equivalents of Croles Hill Mixtite) (Psvwx). Massive and minor amygdaloidal, dominantly tholeiitic basalt (Correlate of Spinks Creek Volcanics) (Psb).*
- **Psvwx** — *Dolomitic breccia, with clasts of dolomite and chert in a dolomitic matrix (Correlate of Julius River Member) (Psb).*
- **Pssr** — *Massive to banded or mottled, black, white and grey chert (after shallow marine carbonate), with subordinate interbedded laminated black mudstone, and with preserved oolitic and stromatolitic textures in places. (Correlate of Black River Dolomite) (Pssr).*
- **Psscm** — *Monomict (with dominantly quartzwacke clasts) and minor polymict, massive coarse lithic breccia, and bedded lithic conglomerate with subordinate cross–laminated quartzarenite. (Correlate of Forest Conglomerate and Quartzite) (Psscm).*
- **Psscx** — *Angular unconformity.*

?MESOPROTEROZOIC

ROCKY CAPE GROUP – CORNELIAN

- **Prq** — *Pale weathering, variably silicified quartzarenite, well bedded and commonly with cross–lamination of trough and planar–tabular types and oscillation ripple bedforms, and with minor horizons of laminated siltstone; tidal influence suggested by bed to bed reversals of cross–lamination polarity in some sections (Prq).*
- **Prp** — *Mid to dark grey, thin–bedded laminated siltstone and mudstone, with minor thin interbeds of cross–laminated and oscillation ripple–marked quartzarenite in some places (Prp); laminated dolomitic mudstone in some areas (Prpds).*

IGNEOUS ROCKS

CENOZOIC — PALEOGENE – NEOGENE

- **Tbt** — *Massive olivine tholeiite (Tbt).*
- **Tbop** — *Pillow, 'entrail' and massive–columnar, olivine basalt lavas (Tbop).*

NEOPROTEROZOIC

- **Psb** — *Massive and minor amygdaloidal, dominantly tholeiitic basalt. (Correlate of Spinks Creek Volcanics) (Psb).*

Geological boundary – position accurate or approximate.
Geological boundary – inferred.
Geological boundary – transitional.
Fault – unspecified type, concealed, inferred from airborne magnetic data.
Lineament visible in airborne magnetic data.
Lineament visible in airborne radiometric data.
Margin of relict lunette and associated swamp.
Crest of remnant old stabilised longitudinal dune.
Trends of relict beach ridges related to regressive strandlines of Last Interglacial Stage.
Limit of mapping.

Strike and dip of bedding – facing known; facing unknown.
Strike and dip of cleavage, type and relative age unspecified – dipping; vertical; parallel to bedding, facing unknown.
Trend and plunge of hingeline of minor fold, relative age unspecified; with dip and dip direction of axial surface.

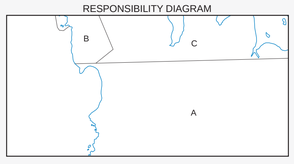
Compiled by D.B. Seymour, B.Sc.(Hons), PhD, 2004 from the following sources (see Responsibility Diagram):

A SEYMOUR, D.B., BAILLIE, P.W. 1992. Geological Atlas 1:50 000 Series. Sheet 7816S, Woolnorth. Tasmania Department of Mines. (Re-compiled from original 1:25 000 compilations and original structural data, with modifications and additions based on interpretation of airborne magnetic and radiometric data collected under the Western Tasmanian Regional Minerals Program, 2001).

B Geology sourced with minor modifications from:
(1) SUTHERLAND, F.L., CORBETT, K.D. 1967. The Tertiary volcanic rocks of far north-western Tasmania. Pap. Proc. Roy. Soc. Tasmania 101: 71-90.
(2) SUTHERLAND, F.L. 1980. Aquagene volcanism in the Tasmanian Tertiary, in relation to coastal seas and river systems. Pap. Proc. Roy. Soc. Tasmania 114: 177-199.
(3) Minor additional linears interpreted by D.B. Seymour from aerial photographs and airborne magnetic data collected under the Western Tasmanian Regional Minerals Program, 2001.

C Extrapolation of known geology in area A, supplemented by interpretation of aerial photographs, and interpretation of airborne magnetic and radiometric data collected under the Western Tasmanian Regional Minerals Program, 2001.

RESPONSIBILITY DIAGRAM



REFERENCE THIS MAP AS:

SEYMOUR, D.B., SUTHERLAND, F.L. and CORBETT, K.D. (compilers) 2004. Digital Geological Atlas 1:25 000 Scale Series. Sheet 3048 Studland. Mineral Resources Tasmania.

Base data from the LIST, Copyright State of Tasmania.

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

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

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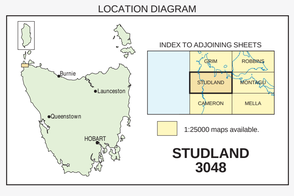
LOCATION DIAGRAM



Plotfile for this map generated from digital data as at: 14-JUN-2013

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