**Department of State Growth**
MINERAL RESOURCES TASMANIA

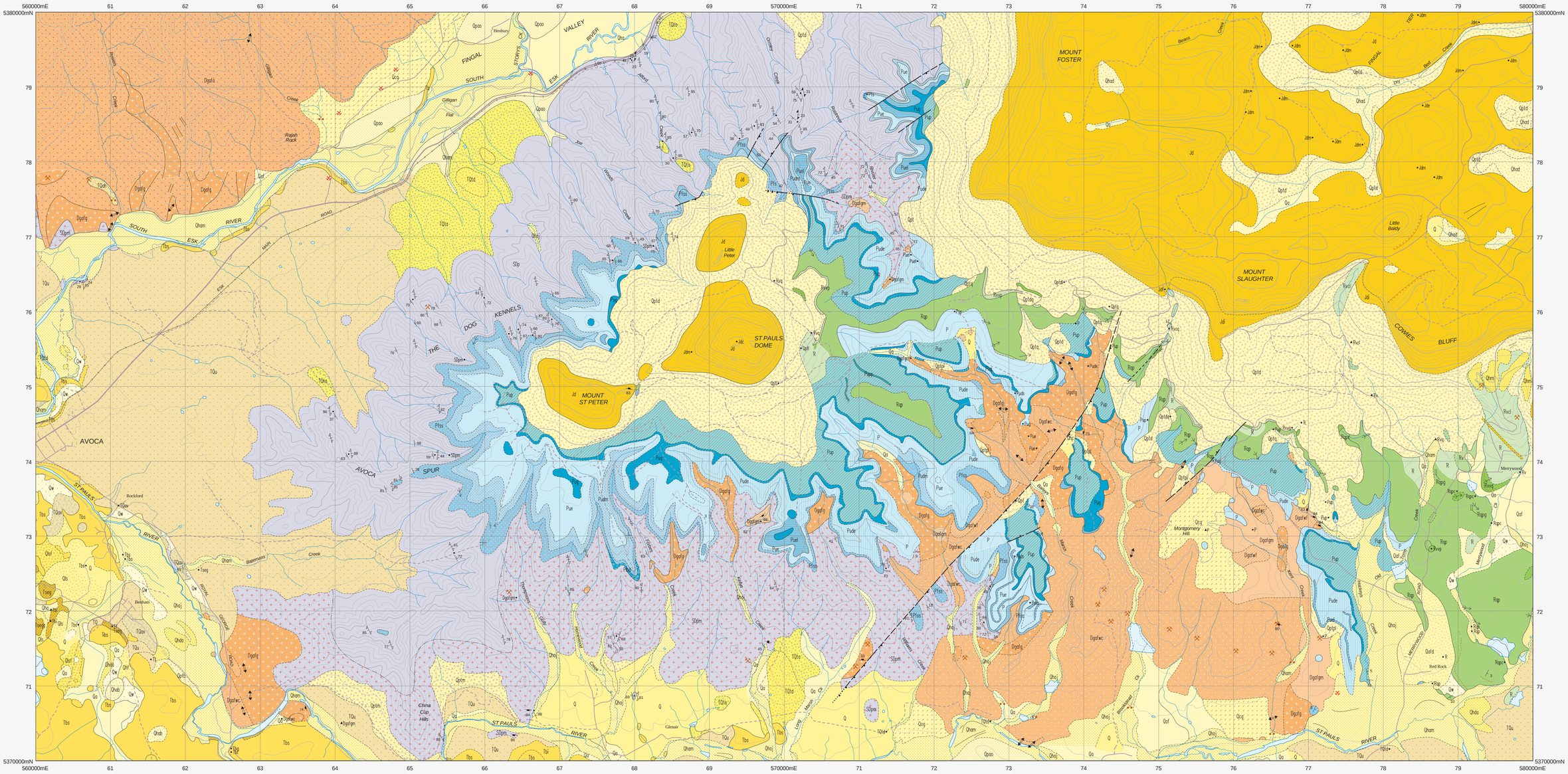
DIGITAL GEOLOGICAL ATLAS 1:25 000 SCALE SERIES
ST PAULS DOME, SHEET 5637

# ST PAULS DOME

Scale: 1:25 000

0 500 1000 1500 2000 2500m

Tasmanian Government




## CENOZOIC

### QUATERNARY

**HOLOCENE**

- **Qhm** — Selected mine tailings and man disturbed ground indicated (Qhm).
- **Qw** — Aeolian dune and sheet deposits, including locally derived sand and silt (Qw).
- **Qhda** — Photo-interpreted dune form (Qhda).
- **Qhab** — Swamp deposits including lunette lagoon deposits (Qhab).
- **Qhf** — Lag deposits, after ferricrete (Qhf), after Tertiary silicified rock (Qls).
- **Qlsf** — Lag deposit of mixed Tertiary ferruginous fragments or pisolths and Tertiary silicified fragments or quartz granules (Qlsf).
- **Qhc** — Colluvium (Qhc), piedmont colluvium of clayey quartz-granule gravel derived from granitic rocks (Qcg).
- **Qa** — Alluvial gravel sand and clay (Qa), stream alluvium, swamp and marsh deposits, locally associated with wind blown deposits (Qha), alluvial fans (Qaf).
  - **Qhad** — Highland marsh deposits with common protruding dolerite outcrops and boulders (Qhad).
  - **Qhaj** — Holocene alluvium (Qhaj), alluvial and marsh deposits of modern flood plains, – gravel, sand, silt and clay commonly with dark coloured top layer in stable environments and loose sand and gravel near major active channels (Qham).
  - **Qpao** — Alluvial terrace deposits (Qpao).
  - **Qafd** — Alluvial fans with clasts dominantly of dolerite (Qafd).

**PLEISTOCENE**

- **Qpt** — Talus and remobilized talus deposits (Qpt). basalt talus (Qptb), dominantly of dolerite boulders (Qptd), dominantly of Upper Parmeener lithic sandstone (Qptl), dominantly of Upper Parmeener quartz sandstone and sand (Qptq), dominantly of Lower Parmeener rocks (Qptp), and talus of mixed clasts of dolerite and Upper Parmeener lithic sandstone (Qptd) and of dolerite and Upper Parmeener quartz sandstone (Qptdq).
  - **Qptm** — Talus dominantly of Mathinna Supergroup rocks (Qptm).
- **TQta** — Talus and possible alluvial deposits of probable pre-last glacial age (TQta).
- **TQtd** — Talus deposits with boulders consisting dominantly of dolerite, of probable pre-last glacial age (TQtd).
- **TQu** — Aeolian, alluvial and piedmont deposits in floors of major valleys, with basement thinly covered in some areas (TQu).
- **TQav** — Alluvium of dominantly quartzose granule- to cobble-size clasts, partly consolidated and commonly located supra-basalt (TQav).
- **TQah** — Alluvium with boulder-sized clasts (TQah).

### PALEOGENE – NEOGENE

- **Tf** — Ferricrete (Tf).
- **Tb** — Basalt (Tb), tholeiitic basalt (Tbs), quartz tholeiite (Tbq), olivine tholeiite (Tbt). Inferred basalt beneath soil or Cenozoic deposits (Tb).
- **Tseg** — Dominantly poorly-consolidated mudstone, sandstone and quartzose granule sandstone, locally may include some undifferentiated poorly-consolidated quartzose conglomerate (Tseg); some areas of coarser beds indicated (Tsegc).

Erosional surface.

## MESOZOIC

### TRIASSIC

- **Rs** — Mudstone at isolated locality (Rs).
- **Rvcl** — Predominantly fine- to very coarse-grained volcaniclastic lithic sandstone with subordinate carbonaceous mudstone, coal seams, silicified wood and in upper parts tuff layers and extrabasinal clasts (Rvcl); intervals dominantly of mudstone (Rvclm).
- **Rvcq** — Interbedded cross-bedded white quartzose sandstone, quartz-rich lithic sandstone, siltstone and mudstone known from drill holes (Rvcq). Undifferentiated quartz sandstone, in some areas interbedded with quartz-lithic sandstone and mudstone, and generally part of poorly exposed or condensed interval of quartz-rich lithic sandstone and mudstone such that differentiation of Rvcq and Rvvq units has not been made (Rvq = Rvcq or Rvvq).
- **Rvvl** — Interbedded yellow brown or grey carbonaceous siltstone, mudstone and thin- to thick-bedded quartz-rich lithic, arkosic sandstone, some carbonaceous beds (Rvvl).
- **Rvvq** — Dominantly quartz sandstone, commonly fine-grained and ripple laminated (Rvvq).
- **Rvvp** — Lenticular variable medium- to coarse-grained sandstone, generally containing quartz granules (Rvvp).
  - Rv = Rvcl + Rvcq + Rvvl + Rvvq + Rvvp + Rvq.
- **Rqp** — Dominantly freshwater cross-bedded quartzose sandstone, micaceous siltstone and mudstone (Rqp), selected intervals predominantly of siltstone, shale, mudstone and sandstone indicated (Rqpc), intervals of coarse-grained sandstone and granule sandstone indicated in some areas (Rqpg).
  (Rqp, Rqpc, Rqpg correlates of Ross Formation).
- **Rcq** — Freshwater cross-bedded arkosic to quartzose sandstone and micaceous siltstone possible correlate of Jackey Shale) (Rcq).

### PERMIAN

- **Pup, Pupp** — Poorly-sorted grey mudstone, siltstone and rare sandstone, unfossiliferous except for rare Foraminifera (Pup). Bed of pebbly sandstone, 1–4m thick, indicated in places (Pupp). (Pup – Prospect Creek Mudstone, Pupp – possible correlate of Palmer Sandstone).
- **Pug** — Thickly bedded, usually poorly-sorted sandstone passing up into interbedded sandstone, siltstone and mudstone. Marine fossils present in places (Pug) (Mistletoe Sandstone).
- **Puel, Pue** — Marine mudstone, siltstone and minor sandstone and bioclastic limestone (Pude); richly fossiliferous beds (Pue); dominantly bioclastic limestone or silicified beds (Puel); well-sorted granule sandstone with rare marine fossils (Puds).
- **Puf, Pudm** — Fine-grained pebbly sandstone with phosphatic nodules. Marine fossils present in some areas (Font Hill Sandstone Member) (Puf). Dominantly mudstone and siltstone with generally sparse marine fossils, and in some places sparse phosphatic nodules typically near the top of the unit (Pudm). Well-sorted granule sandstone with rare marine fossils (Puds).
- **Pfs** — Dominantly well sorted quartz sandstone, usually cross-bedded and commonly with interbedded and interlaminated carbonaceous shale lesser conglomerate and rare coal (Pfs), quartz sandstone, arkose and conglomerate (Ptss) (Pfs, Ptss Aberfoyle Formation).
- **Pibd** — Interbedded conglomerate, sandstone and mudstone (Pibd).

Unconformity.

### SILURIAN(?) – DEVONIAN

- **SDp, SDpm** — Undifferentiated Panama Group (sandstone, siltstone and mudstone, primarily turbiditic in origin) (SDp), contact metamorphosed by granitic intrusion (SDpm).

UPPER PARMEENER SUPERGROUP; LOWER PARMEENER SUPERGROUP; REKUNIAN SERIES: Lymingtonian Stage, Bernacchian Stage, Tamarian Stage; PANAMA GROUP; MATHINNA SUPERGROUP

## INTRUSIVE ROCKS

### MESOZOIC – JURASSIC

- **Jd** — Dolerite (Jd), with abundant poorly crystalline metastasis (Jde), dolerite inferred beneath soil or Cenozoic deposits (Jdi). Dolerite of grainsize 0.7–15mm (Jdf), 1.5–3mm (Jdm), >3mm (Jdc) indicated.

### BEN LOMOND BATHOLITH

PALEOZOIC – DEVONIAN – UPPER DEVONIAN

- **Dgafa** — Medium- to coarse-grained, equigranular to sparsely porphyritic alkali feldspar granite, with variably abundant K-feldspar phenocrysts and surficial pink weathering (Dgafa).
- **Dgafg** — Fine- to medium-grained, variably porphyritic alkali feldspar granite, with quartz and K-feldspar phenocrysts (Dgafg).
  (Dgafa, Dgafg in part – Henbury Granite, I-type).
- **Dgafgm** — Fine-grained, equigranular, alkali feldspar granite (microgranite) (Dgafgm).
- **Dgafwc** — Medium- to coarse-grained, equigranular to sparsely porphyritic, alkali feldspar granite, with variably abundant K-feldspar phenocrysts (Dgafwc).
- **Dgafwf** — Fine- to medium-grained, equigranular, alkali feldspar granite (Dgafwf).
  (Dgafgm, Dgafwc, Dgafwf, Dgafg in part – Royal George Granite, S-type).

Geological boundary – position accurate or approximate.
Geological boundary – inferred.
Transitional geological boundary.
Slope break.
Lithological trend line, including bedding trace interpreted from aerial photographs.
Photo lineament.
Fault – inferred.
Normal fault (downthrown side indicated) – position accurate or approximate.
Normal fault (downthrown side indicated) – inferred.
Normal fault (downthrown side indicated) – concealed.
(white line) Limit of mapping of sub-unit within undifferentiated rock unit.

Strike and dip of bedding, right way up, overturned, facing unknown.
Horizontal bedding.
Strike and dip of cleavage – relative local age S1 vertical.
Strike and dip of cleavage – relative local age S2.
Trend and plunge of minor fold hingeline, unspecified relative age, with vertical axial surface.
Palaeocurrent direction, showing sense of movement.
Trend of preferred orientation of K-feldspar phenocrysts in granitic rock.
Strike and dip of dominant joint set; vertical.
Notable small outcrop.
Notable float or log occurrence.
Field station for adjacent reading on map.
Mineral deposit location – hardrock
Mineral deposit location – alluvial/tailings
Construction material/industrial mineral gemstone location
(Data derived from Mineral Resources Tasmania DEPOSITS database. Data point position has not been verified in every case.)

Compiled by S.M. Forsyth, B.Sc. (Hons), 2005 from the following sources (see responsibility diagram):

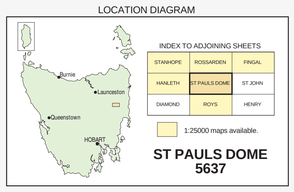
A CALVER, C.R., EVERARD, J.L., FINDLAY, R.H. and LENNOX, P.G. 1988. Geological Atlas 1:50 000 Series. Sheet 48 (8414N). Ben Lomond. Department of Mines Tasmania.

B GULLINE A.B., FORSYTH, S.M., EVERARD, J.L., CALVER, C.R. and MATTHEWS, W.L. 1991. Geological Atlas 1:50 000 Series. Sheet 55 (8414S), Snow Hill. Depatment of Resources and Energy.

RESPONSIBILITY DIAGRAM

| | |
|---|---|
| A | |
| B | |

LOCATION DIagram

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| DIAMOND | ROYS | HENRY |

1:25000 maps available.

**ST PAULS DOME**
**5637**

**REFERENCE THIS MAP AS:**

GULLINE, A.B., EVERARD, J.L., FORSYTH, S.M. (compiler), LENNOX, P.G. and FINDLAY, R.H. 2006. Digital Geological Atlas 1:25 000 Series. Sheet 5637 St Pauls Dome. 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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