Department of Infrastructure Energy and Resources
MINERAL RESOURCES TASMANIA

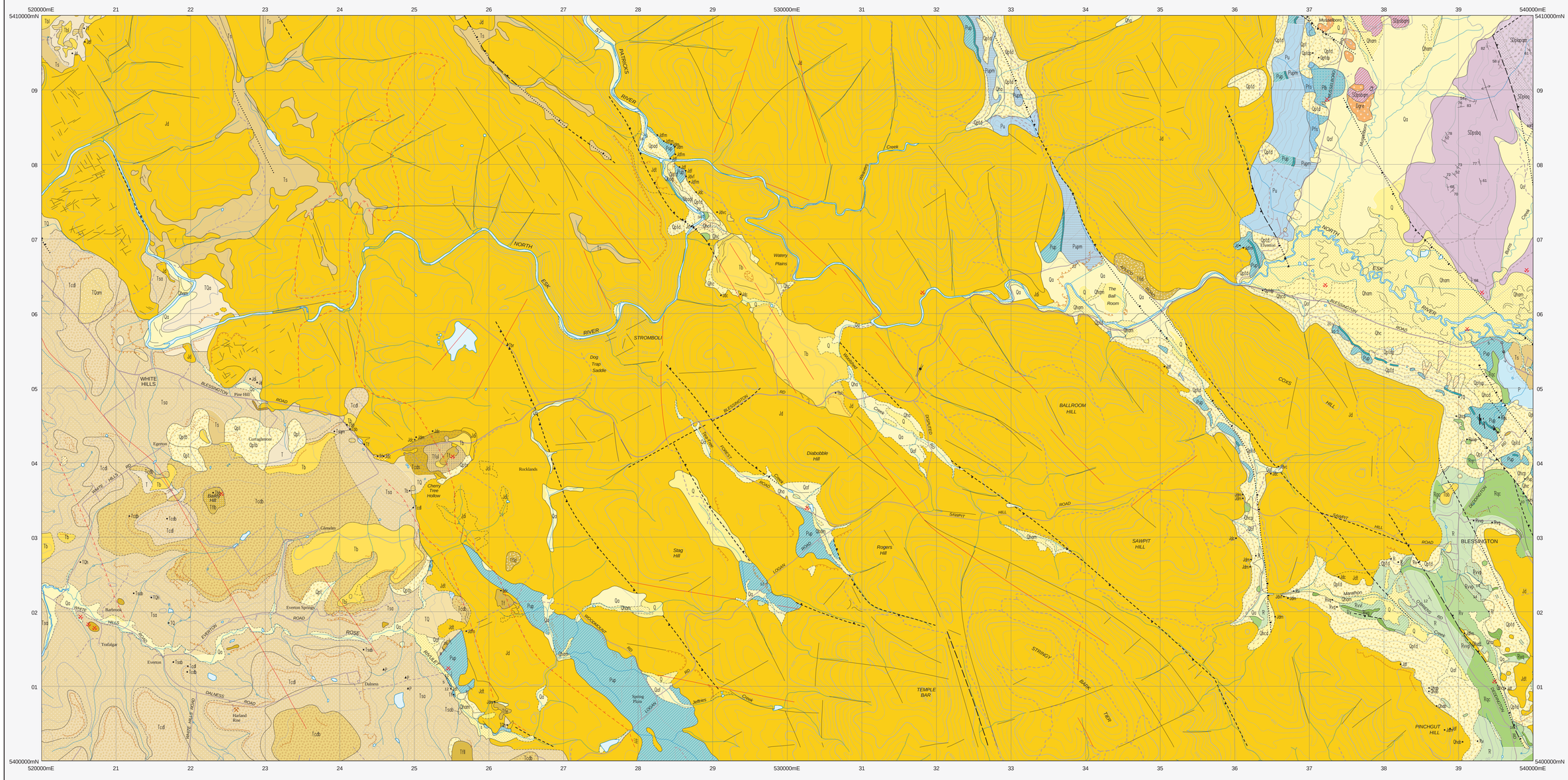
DIGITAL GEOLOGICAL ATLAS 1:25 000 SCALE SERIES
BLESSINGTON, SHEET 5240

BLESSINGTON

Scale: 1:25 000

0 500 1000 1500 2000 2500m

Tasmania
Explore the possibilities



CENOZOIC

QUATERNARY

HOLOCENE

- **Qhcf** — Recent landslide deposit (Qhcf).
- **Qn** — Pisolitic ironstone gravel, cemented in places, of lag alluvial and colluvial origin (Qn).
- **Qha** — Alluvial gravel, sand and clay, generally peaty clay with small weathered dolerite blocks and granules and magnetic pisoliths in dolerite areas, sand and clay abundant quartzite pebbles along parts of the North Esk River (Qa), alluvial fans (Qaf). Undifferentiated swamp, marsh and alluvial deposits (Qha).
- •Qhab — Marsh and swamp deposits (Qhab).
- **Qa / Qham** — Holocene alluvial deposits, alluvial and marsh deposits of modern flood plains – gravel, sand, silt and clay (Qham), – alluvial gravel deposits (Qhag).
- **Qhagt** — Alluvial gravel forming low terraces (Qhagt).
- **Qpad** — Alluvial terrace deposits of cobbles and boulders of dolerite (Qpad).

PLEISTOCENE

- **Qatd** — Undifferentiated erosion terrace cut in Jurassic dolerite or alluvial deposit of large dolerite boulders (Qatd).
- **Qhc** — Colluvium (Qhc), clayey gravel derived from dolerite (Qhcd), sandy, derived from Upper Parmeener rocks (Qhcp).
- **Qf** — Ferricrete of probable Quaternary age (Qf).
- **Qpt** — Talus and remobilised talus deposits (Qpt), talus predominantly of Tertiary ferricrete fragments (Qptx), of basalt (Qptb), predominantly of large dolerite boulders and in places subordinate Parmeener rocks (Qptd), of predominantly Upper Parmeener sandstone and sand (Qpts), of dolerite and subordinate Upper Parmeener rocks (Qptup), of dolerite and subordinate Upper Parmeener quartz sandstone (Qptqs), dominantly of Lower Parmeener rocks (Qptp) and dominantly of Lower Parmeener rocks and dolerite (Qptdp).

TQ

- **TQh** — Undifferentiated gravel deposits, clasts generally of basalt, dolerite and siliceous rocks, may include late Cenozoic alluvial terrace and slope deposits and exhumed Tertiary conglomerate beds (TQh).
- **TQa** — Late Cenozoic terrace deposits of loose to poorly consolidated or cemented, upward fining, cobbles, pebbles, sand, silt and clay, generally includes clasts of dolerite, siliceous rocks, quartz and ferruginous pisoliths (TQa).
- **TQam** — Late Cenozoic alluvial terrace deposit approximately 100m above distal local base level, basal dolerite and siliceous clasts overlain by poorly-consolidated quartz granule sandstone (TQam).
- **Jdt** — In situ Jurassic dolerite or deposits of transported dolerite masses of uncertain Cenozoic age (Jdt).

CENOZOIC – PALEOGENE – NEOGENE

- **Ts** — Sandstone and clay, may include residual clay and Quaternary deposits (Ts).
- **Tf / Tflb** — Undifferentiated sedimentary deposits, ferricrete and basalt (Tf). Ferricrete (Tfl). Laterite developed on Paleogene – Neogene strata (Tflb). Laterite derived from Tertiary Paleogene – Neogene basalt (Tflb).
- **Tfld** — Laterite derived from dolerite (Tfld).
- **Tfol** — Lower part of ferruginous or aluminous lateritic profile beneath upper cemented zone (Tfol).
- **Tfe** — Lower remnants of lateritic profile grading down to very weathered rock, lacks silica stone and generally lacks substantial occurrences of ferricrete, commonly developed over dolerite (Tfe).
- **Tb / Tbr** — Basalt (Tb), transitional olivine basalt (Tbr).
- **Tb** — Basalt (Tb).
- **Tcds** — Moderately consolidated alluvial conglomerate, dominantly of cobble or pebble-grade, clasts dominantly of dolerite and well-rounded quartzite and quartz and subordinate basalt, most beds dominated by dolerite clasts, some beds dominated by siliceous clasts (Tcds).
- **Tbl / Tsgm / Tsqb** — Limburgite (Tbl). Sub-basalt silicastone (Tsgm). Poorly consolidated quartz-rich, fine-grained to granule grade sandstone with some siliceous pebbles (Tsqb).
- **Tbb / Tb / Tsgm / Tcdl / Tcdb / Tb** — Basalt (Tb), inferred basalt beneath soil or Cenzoic deposits (Tbi), basanite (Tbb). Sub-basalt silicastone (Tsgm). Dominantly moderately consolidated heterogeneous cobble-grade conglomerate with basalt clasts and in some areas subordinate sandstone, basalt flows and possible agglomerate, basalt or dolerite form the dominant clast type with subordinate sedimentary rock clasts, occurs in or above Nothofagidites asperus Zone (Tcdb).
- **Tsa** — Poorly consolidated clay, silt and clayey labile sand with rare gravel and lignite; some iron oxide–cemented layers and concretions; some leaf fossils (Tsa). Tsa unit mudstone or sandstone strongly indurated, strongly cemented or thermally altered (Tsab).
- **Tf / Tfbo / Tcdl** — Moderately–consolidated dolerite conglomerate dominantly of cobble grade with subordinate pebble or boulder grade clasts, some sandstone and rare siltstone (Tcdl). Bauxite profile developed on pre–Paleogene rocks and overlain by Paleogene rocks (Tfbo).

Erosional surface.

PALEOZOIC

MESOZOIC – TRIASSIC – UPPER PARMEENER SUPERGROUP

- **Rvcl** — Dominantly lithic sandstone with minor mudstone and coal (Rvcl).
- **Rvq** — Quartz sandstone, in some areas interbedded with quartz–rich lithic sandstone and mudstone, and generally part of a poorly exposed or condensed interval of quartz–rich lithic sandstone and mudstone such that differentiation of Rvcq and Rvvq type units has not been made (Rvq).
- **Rvvl** — Interbedded yellow brown or grey carbonaceous siltstone, mudstone and thin to thick–bedded quartz–rich lithic arkosic sandstone (Rvvl).
- **Rvq** — Quartz sandstone, in some areas interbedded with quartz–rich lithic sandstone and mudstone.
- **Rvvp** — Lenticular variable medium– to coarse–grained sandstone and quartz granule sandstone (Rvvp).
  Rv = Rvcl + Rvq + Rvvl + Rvvq + Rvvp
- **Rqc** — Freshwater predominantly cross–bedded quartzose to feldspathic sandstone commonly with overturned cross–bedding and subordinate micaceous siltstone (Rqc).
- **Pcj** — Fine–grained slightly feldspathic quartz sandstone, micaceous shale and minor carbonaceous mudstone (correlate of Jackey Formation) (Pcj).

PERMIAN – LOWER PARMEENER SUPERGROUP – REKUNIAN SERIES

- **Pup** — Undifferentiated glacio–marine mudstone, siltstone and poorly–sorted sandstone, uncommon marine fossils (Pu). Predominantly poorly–sorted fissile and non–fissile mudstone with few dropstones and rare thin sandstone beds, coarser–grained beds profusely bioturbated above Pupp unit, unfossiliferous except for rare Foraminifera (Pup).
- **Pupp** — Pebbly sandstone (possible correlate of Palmer Sandstone) (Pupp).
- **Pups** — Pebbly feldspathic sandstone unit (possible correlate of Garcia Sandstone) (Pups).
- **Pupm** — Predominantly grey and brown weathering mudstone with few small lonestones, subordinate micaceous siltstone and poorly–sorted pebbly sandstone intervals, fossiliferous beds at places (Pupm).
- **Pfs** — Dominantly well–sorted quartz sandstone, usually cross–bedded and commonly with interbedded and interlaminated carbonaceous shale minor thin pebbly conglomerate lenses and bioturbated sandstone at top (correlate of Liffey Group and Aberfoyle Formation) (Pfs).
- **Plb** — Dominantly mudstone and siltstone, upper interval with basal fossiliferous limestone and alternating mudstone, siltstone and conglomerate beds, lower interval predominantly of grey to black mudstone with some lonestones and subordinate sandstone and conglomerate beds, some fossils (Plb).

Lymingtonian Stage — ? — ? — Bernacchian Stage — Tamarian Stage

Angular unconformity.

SILURIAN(?) – DEVONIAN – LUDLOWIT(?) – LOWER DEVONIAN – PANAMA GROUP – MATHINNA SUPERGROUP

- **SDpsbqm / SDpsbq** — Dominantly micaceous quartz–rich coarse– to very coarse–grained sandstone with minor interbedded siltstone (SDpsbq), contact metamorphosed by granitic intrusion (SDpsbqm).
  (SDpsbq, SDpsbqm – possible correlates of Sideling Sandstone).
- **SDpla** — Thin–bedded siltstone, with interbedded fine–grained quartz–rich sandstone increasing towards top (SDplq), contact metamorphosed by granitic intrusion (SDplqm).
- **SDplaq** — Medium– to fine–grained turbiditic quartz–rich sandstone (SDplaq).
- **SDplapqm** — Interbedded thin–bedded siltstone and fine–grained quartz–rich sandstone, contact metamorphosed by granitic intrusion (SDplapqm).
  (SDpla, SDplqm, SDplaq, SDplaqm – possible correlates of Lone Star Siltstone).

IGNEOUS ROCKS

CENOZOIC – PALEOGENE – NEOGENE

- **Tb** — Basalt (Tb), limburgite (Tbl), basanite (Tbb), transitional olivine basalt (Tbr), olivine tholeiite (Tbt), inferred basalt beneath soil or Cenozoic deposits (Tbi).
  Basanite (Tbb) intrusion at 5388?mE, 540347.3mN dated at 36.8+/–0.2Ma (Ar – Ar dating).

MESOZOIC – JURASSIC

- **Jd** — Dolerite (Jd), with orthopyroxene (Jdfo), dolerite inferred beneath soil or Cenozoic deposits (Jdi). Dolerite of grainsize 0–0.7mm (Jdvf); 0.7–1.5mm (Jdf); 1.5–3mm (Jdm); >3mm (Jdc); >6mm (Jdvc) indicated; transitional fine– to medium–grained dolerite (Jdfm). In situ Jurassic dolerite or deposits of transported dolerite masses of uncertain Cenozoic age (Jdt).
- **Jdw** — Predominantly deeply–weathered dolerite (Jdw).

SCOTTSDALE BATHOLITH

PALEOZOIC – DEVONIAN – MIDDLE DEVONIAN

- **Dgre** — Medium– to coarse–grained, equigranular, biotite–hornblende granodiorite (Dgre) (Diddleum Granodiorite; I–type).

- Geological boundary – position accurate or approximate.
- Geological boundary – position inferred.
- Fault – position accurate or approximate.
- Fault – position inferred.
- Fault – concealed.
- Fault – normal – position accurate or approximate.
- Fault – normal – inferred.
- Fault – normal – concealed.
- Thrust fault (teeth on upper plate) – position accurate or approximate.
- Metamorphic boundary – position approximate.
- Slope break.
- Scarp.
- Lithological trend line.
- Lineament visible on aerial photographs.
- Magnetic gradient or lineament (direction towards lower values indicated).
- Lineament visible in airborne magnetic data.
- Axial surface trace of major antiform.
- (white line) Limit of mapping of sub–unit within undifferentiated rock unit.

- Strike and dip of bedding – right way up; overturned; facing unknown.
- Trend and plunge of lineation of unspecified type.
- Stike of dominant joint set, vertical.
- Strike of outcrop–scale fault of unspecified relative age, downthrown side indicated.
- Trend of dyke or vein, rock type or mineral specified by RCODE in Point Attribute Table.
- Trend and plunge of kink–fold hinge line, with dip and dip direction of axial surface, and sense of displacement viewed down–plunge, sinistral.
- Notable small outcrop with rock unit indicated.
- Notable small float or log occurrence, with rock unit indicated.
- Field station for adjacent readings on the map.
- Mineral deposit location – hardrock
- Construction material/industrial mineral/gemstone location

Data derived from Mineral Resources Tasmania DEPOSITS data base. Data point position has not been verified in every case.

Compiled by S.M. Forsyth, B.Sc. and D.B. Seymour, B.Sc.(Hons), Ph.D., 2007 from the following sources (see responsibility diagram).

A LONGMAN, M.J., MATTHEWS, W.L. and ROWE, S.M. 1964. Geological Atlas 1:63 360 series, sheet 39 (8315S) Launceston. (Primarily original 1:36 680 compilation sheets).

B BLAKE, F. 1959. Geological Atlas 1:63 360 series, sheet 47 (8314N) Longford.

C MATTHEWS, W.L. 1979. Geology map 1:100 000. Longford Basin Geology. Department of Mines Tasmania.

D J.L. Everard. Original mapping 2005.

E S.M. Forsyth. Original mapping 2006.

F S.M. Forsyth. Aerial photo interpretation 2006.

G S.M. Forsyth. Geological observations along public roads 2006.

Other sources:

MATTHEWS, W.L. 1983. Geology and Groundwater of the Longford Tertiary basin. Geological Survey of Tasmania Bulletin 59.

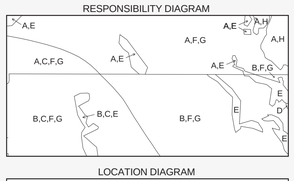
F. Blake, M.J. Longman and W.L. Matthews. Original field data plotted on aerial photographs.

J.L. Everard. Geochemical basalt classificaton.

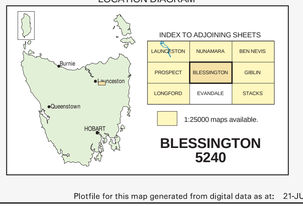
Updated by:

H D.C. Green, 2011. 1:25 000 scale geological mapping and interpretation of airborne geophysical data as part of the TasExplore Project.

RESPONSIBILITY DIAGRAM



LOCATION DIAGRAM



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

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