



GEOLOGY — WINNALEAH

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CARTOGRAPHY BY G. J. DICKENS

SCALE 1:100 000



CONTOUR INTERVAL 20 METRES

<p>QUATERNARY</p> <ul style="list-style-type: none"> Qa Alluvium (Older) Swamp deposits (Older). Tailings of alluvial mines (Older) Qbc Younger alluvial dune sand, beach sand and gravel. Major active and stabilised dune ridges indicated. Qd Talus, scree and slope deposits (Older) derived from basalt (Older). Qe Derived from dolerite (Older). Qf Derived from Mathinna Beds (Older). <p>PALEOZOIC</p> <p>CAMBRIAN</p> <ul style="list-style-type: none"> Ca Older medium dune sand — sand sheets and small sheets of locally derived sand. Ca1 Sand, silt and clay, often containing organic material and occasional shell beds — coastal plain sediments. Ca2 Profoundly coarse quartz gravel (Ca2a), predominantly quartz sand (Ca2a), predominantly silt and clay (Ca2a), undifferentiated sediments (Ca2a) — a thin sequence of Pleistocene and/or Tertiary age. <p>TERTIARY</p> <ul style="list-style-type: none"> Ta Basalt (Ta) and associated iron-cemented gravel (Iron-cemented) (Ta). Tb Silicified quartz sandstone and conglomerate (tuffaceous and greyish) (Ta). Tc Older basalt. Td Agglomerate and tuff (Ta). Te Sand, fine gravel, white and grey clay (Te), interbedded and lenses with coarse to fine gravel (Te) and coarse to fine white sand (Te). Brown to yellow-brown clays (Tamar Graben) (Te). <p>MESOZOIC</p> <p>TRIASSIC</p> <ul style="list-style-type: none"> Ta1 Triassic — bedded quartz and feldspathic sandstone and mudstone. Ta2 Upper Permian — mudstone with minor siltstone/sandstone and conglomerate beds. Upper Permian and Lillie Group correlate — Launceston and Pipers River maps. Upper glacial marine sequence and freshwater sequence correlate — Eddystone map. <p>PERMIAN</p> <ul style="list-style-type: none"> P1 Lower Permian — mudstone with minor pebble horizons and basal tillite — variable thickness and distribution in the Lillie area. Lower Permian correlate — Launceston and Pipers River maps. Lower glacial marine sequence correlate — Boodysella and Eddystone maps. P2 Sandstone, mudstone and siltstone — undifferentiated sediments of the Permian Supergroup. <p>DEVONIAN-SILURIAN-ORDOVICIAN (T)</p> <ul style="list-style-type: none"> Ss Devonian turbidite sequence of siltstone, mudstone, slate and sandstone. Ss1 Contact metamorphic zone of psammite spotted gneiss and minor schists — quartz veins common. <p>IGNEOUS ROCKS</p> <p>TERTIARY</p> <ul style="list-style-type: none"> Tb1 Basalt, variably weathered — areas of thick unweathered flow sequences and areas of red clay with basalt boulders. Tb2 Agglomerate and tuff. <p>CRETACEOUS</p> <ul style="list-style-type: none"> C1 Agnites with andesitic lava flow and lamprophyre dykes. <p>JURASSIC</p> <ul style="list-style-type: none"> J1 Dolerite. <p>MINOR GRANITIC INTRUSIONS</p> <ul style="list-style-type: none"> IG1 Aplite/microgranite/adamellite/pegmatite. IG2 Porphyry veins and minor outcrops. <p>MAJOR GRANITIC INTRUSIONS</p> <p>BLUE TIER BATHOLITH</p> <ul style="list-style-type: none"> IB1 Undifferentiated non-porphyrific adamellite/granite — deeply weathered outcrops. IB2 Porphyritic fine to coarse-grained biotite-muscovite adamellite/granite. Phenocrysts of variable size and distribution, generally feldspar and quartz (IB2a). Fine grained (IB2a), medium grained (IB2a) and coarse grained (IB2a). IB3 Equigranular fine to coarse-grained biotite-muscovite adamellite/granite (IB3a), fine to medium grained (IB3a) and coarse grained (IB3a). IB4 Fine to coarse-grained equigranular biotite-hornblende granodiorite. <p>EDDYSTONE BATHOLITH</p> <ul style="list-style-type: none"> EB1 Undifferentiated non-porphyrific fine to medium-grained adamellite. EB2 Porphyritic fine to coarse-grained biotite-muscovite adamellite/granite. Phenocrysts of variable size and distribution, generally feldspar and quartz (EB2a). Fine grained (EB2a) and coarse to very coarse grained (EB2a). EB3 Equigranular fine to coarse-grained biotite-muscovite adamellite/granite (EB3a), predominantly fine grained (EB3a), medium grained (EB3a) and coarse grained (EB3a). EB4 Medium to coarse-grained equigranular biotite-hornblende granodiorite. <p>SCOTTSDALE BATHOLITH</p> <ul style="list-style-type: none"> SB1 Undifferentiated non-porphyrific adamellite/granite — deeply weathered outcrops. 	<p>Geological boundary — position approximate.</p> <p>Borehole number.</p> <p>Cable-tool drill.</p> <p>Rotary drill.</p> <p>Down-hole hammer test.</p> <p>Diamond drill.</p> <p>Spear bore.</p> <p>DEPARTMENT OF MINES DRILLERS</p> <p>Cable tool drilling by C. Nugent 1968/69; T. Johnson 1969/72; J. Hamworthy 1970/71; K. N. Harper 1972/75; M. J. Kerston 1972/82; Rotary and down hole hammer drilling by T. J. Green 1971/75; K. M. Richardson 1972/82; R. Strenson 1981/88; Diamond drilling C. Lock 1970/71; G. W. Baker 1977/78; Spear bore testing by B. L. Cox, K. M. Harper, M. J. Kerston, K. M. Richardson.</p> <p>PRIVATE CONTRACT DRILLERS</p> <p>Cable tool drilling by H. J. Steageme 1973; Rotary and down hole hammer drilling by G. Spaulding 1974.</p> <p>RESIDUAL GRAVITY ANOMALY MAP (BOUGUER ANOMALY MINUS MANTLE 88)</p> <p>MARCH 1990</p> <p>(View with back lighting.)</p> <p>BOUGUER DENSITY 2.67 (t/m³) CONTOUR INTERVAL 2 mGal</p> <p>All data herein corrected.</p> <p>Data sources listed in: RICHARDSON, R.G., LEAMAN, D.E. 1987 TASGRAV — The Tasmanian Gravity Data Base (Unpubl. Rep. Dep. Mines Form 1987/02)</p> <p>Data processing: 1000 metre mesh; 8000 metre scale distance; no additional smoothing.</p> <p>Data compilation by R.G. Richardson, B.Sc. (Hons), Ph.D. MANTLE88 model by D.E. Leaman, B.Sc. (Hons), Ph.D. Computer mapping by R.J. Sedgman.</p> <p>LILYDALE WINNALEAH</p> <p>NOLAN BAY BOODYSSELLA EDDYSTONE</p> <p>PIPERS RIVER RINGAROOMA BLUE TIER</p> <p>LAUNCESTON ALBERTON ST HELENS</p> <p>Base map adapted from the 1:100 000 map series produced by the Department of Environment and Planning, Hobart. Geological maps from Nolan Bay, Pipers River, Launceston 1:63 200 geological map series, Boodysella, Ringarooma, Eddystone, Blue Tier, St Helens 1:50 000 geological map series and Launceston 1:250 000 geological map. Geological map production by the Cartographic Section of the Geological Survey, Division of Mines and Mineral Resources, Department of Resources and Energy. W. L. Mathews, B.Sc., Acting Deputy Chief Geologist, Engineering Geology and Groundwater Section. Compiled under the direction of M. B. Hargreaves, Acting Director of Mines. Issued under the authority of the Minister for Resources and Energy. Published 1991. CROWN COPYRIGHT RESERVED.</p>
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