Department of Infrastructure Energy and Resources
MINERAL RESOURCES TASMANIA

DIGITAL GEOLOGICAL ATLAS 1:25 000 SCALE SERIES
PROSPECT, SHEET 5040

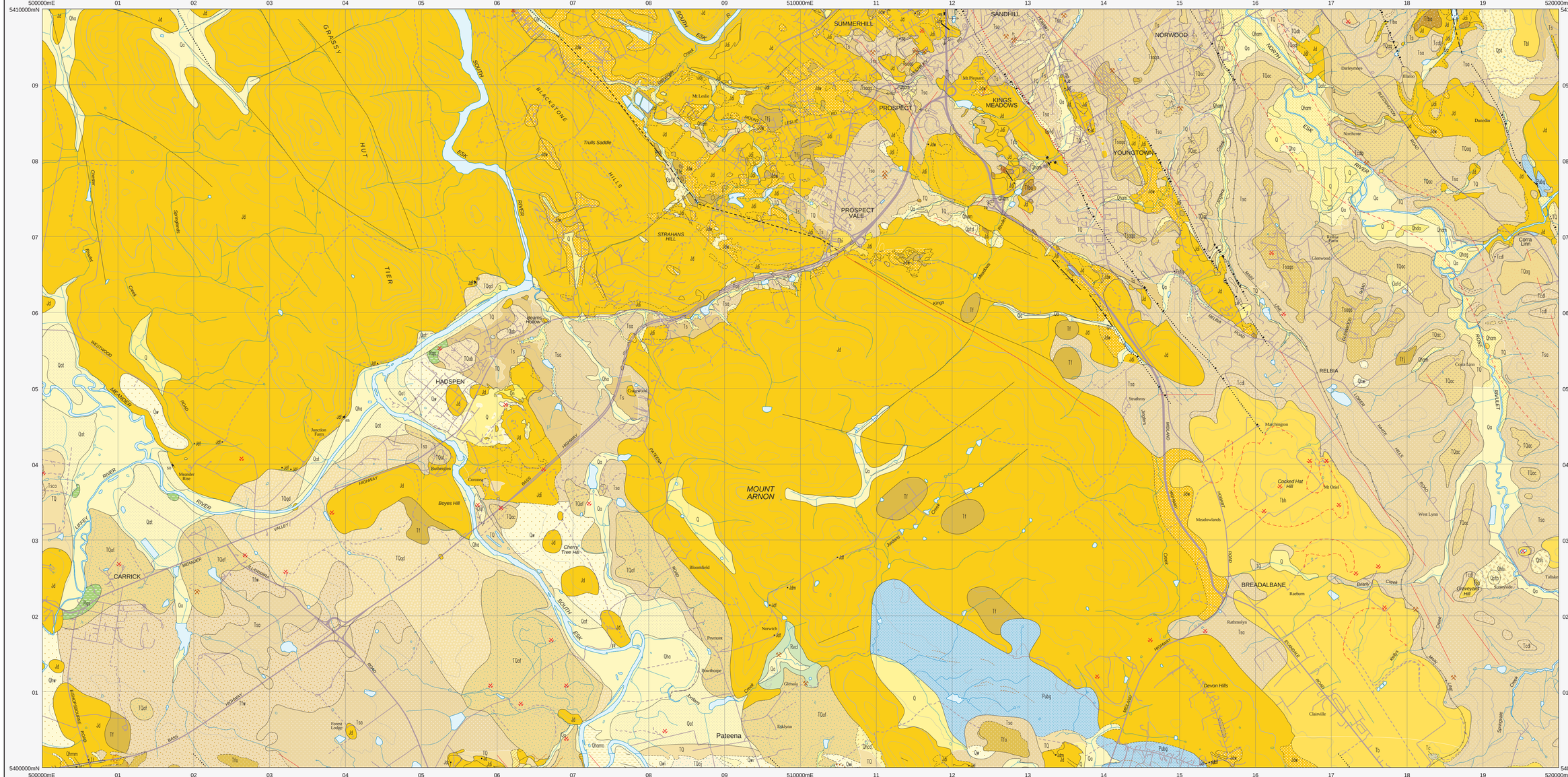
PROSPECT

Scale: 1:25 000

0 500 1000 1500 2000 2500m

Tasmania
Explore the possibilities

500000mE 01 02 03 04 05 06 07 08 09 510000mE 11 12 13 14 15 16 17 18 19 520000mE
5410000mN 09 08 07 06 05 04 03 02 01 5400000mN



INTRUSIVE ROCKS

CENOZOIC — TERTIARY
- Tbb — *Intrusive basalt (Tbb) at 517650mE, 5407855mN, 519055mE, 5405555mN and 519055mE, 5402835mN.*

MESOZOIC — JURASSIC
- Jd — *Dolerite (Jd). Dolerite of grainsize 0.7–15mm (Jdf); 1.5–3mm (Jdm); 3–6mm (Jdc) indicated. Predominantly deeply–weathered dolerite (Jdw), inferred dolerite beneath soil or Cainozoic deposits (Jds).*
- Jdw — *Predominantly deeply–weathered dolerite (Jdw).*

CENOZOIC — QUATERNARY — HOLOCENE
- Qhmm — *Man made deposits including some levee banks interpreted from 1966 aerial photography (Qhmm).*
- Qhls — *Landslip and debris flow deposits (Qhls).*
- Qhamt — *Stream alluvium, swamp and marsh deposits (Qha). Alluvium of floodplain terraces adjacent to current stream channels including levee? deposits in some areas (part of Canola Surface) (Qhamt).*
- Qhama — *Alluvium related to former channel locations and commonly exhibiting multiple levee? ridges and channel furrows that have resulted from progressive channel migration (Qhama).*
- Qham — *Alluvial and swamp deposits of gravel, sand, silt and clay, commonly with organic–rich top layer (Qham); alluvial gravel deposits (Qhag).*
- Qhc — *Colluvial deposits of gravel, sand and clay (Qhc); clayey gravel derived from dolerite (Qhcd); with dolerite clasts derived from Tertiary dolerite conglomerate (Qhcc); with siliceous clasts derived from Cainozoic deposits (Qhcs).*
- Qhda — *Photo–interpreted dune form (Qhda).*
- Qn — *Pisolitic ironstone gravel, cemented in places, of lag, alluvial and colluvial origin (Qn).*
- Qln — *Selected lag deposits of ferruginous pisoliths and ferricrete fragments (Qln).*
- Qa — *Alluvial gravel, sand and clay (Qa).*
- Qat — *Low (<5m above present stream) alluvial terraces of sand, silt and clay (Qat).*
- Qafd — *Alluvial fan deposits predominantly of dolerite clasts (Qafd); alluvial fan deposits predominantly of mud, silt and sand, with pebbles in some areas (Qafc).*
- Qw — *Aeolian deposits and locally derived sand (Qw); windblown and locally derived sand (Qhe); Photo–interpreted aeolian deposits predominantly of sheet or low hummocky form (Qwi).*
- Qlss — *Lag deposit of quartz sandstone and pebbly sandstone, possibly derived from Tertiary sandstone (Qlss).*
- Qpad — *Alluvial terrace deposits predominantly composed of dolerite cobbles (Qpad).*
- Qpao — *Older alluvium of minor stream terraces (Qpao).*
- Qpt — *Talus composed predominantly of Jurassic dolerite (Qptd); of Tertiary basalt (Qptb).*

CENOZOIC — QUATERNARY — PLEISTOCENE
- TQaa — *Late Cainozoic terrace deposits of siliceous pebble gravel and sand cemented by iron oxides in places, 5–10m above sea level, loose to poorly consolidated, clast composition poorly known, dominantly siliceous in some areas of probable Pleistocene age (TQaa).*
- TQab — *Late Cainozoic terrace deposits of siliceous pebble gravel and sand cemented by iron oxides in places, ~20m above sea level or local base level, of probable Pleistocene age (TQab).*
- TQac — *Late Cainozoic terrace deposits of siliceous pebble gravel and sand with rare boulder–sized clasts, cemented by iron oxides in places, 25–40m and ~50m above sea level or local base level (TQac).*

CENOZOIC — TERTIARY
- TQag — *Late Cainozoic terrace deposits of siliceous pebble gravel and sand with rare boulder–sized clasts, cemented by iron oxides in places, ~70m above sea level (TQag).*
- TQaj — *Erosional/depositional terrace cut in Tertiary strata, generally lacking fluvial morphology, may include undifferentiated alluvium of minor streams and piedmont gravels derived from adjacent lateral slopes (probably mostly part of Brumby Terrace) (TQaj).*
- TQaf — *Late Cainozoic terrace deposits of siliceous pebble gravel and sand cemented by iron oxides in places, siliceous pebble gravel and sand with little or no dolerite; part of 'Brickendon soil association' (TQaf).*
- TQqd — *Partly consolidated gravel of cobbles of predominantly weathered dolerite and lesser quartzite, and sand; with surficial siliceous gravel lag (TQqd).*
- TQse — *Ferruginous cemented sandstone (TQse).*
- TIw — *Insitu lateritic profile, lag and dispersed ferruginous ferricrete fragments and pisoliths, locally may include pallid part of profile or lower horizons, distribution indicated by soil maps ('Woodstock soil association') (TIw).*
- Tf — *Ferricrete, laterite and bauxite with cemented and soft layers (Tf). Lateritic profile, bauxite or other ferricrete inferred from limited outcrop or loose ferricrete fragments (Tf). Lower remnants of lateritic profile grading down to very weathered rock lacks silicastone and generally lacks substantial occurrences of ferricrete; commonly developed over dolerite (Tfe).*
- Tfo — *Selected miocene? ferruginous laterite profile with ferricrete masses, clay with ferruginous pisoliths and younger essentially lag deposits of ferruginous pisoliths (part of Woodstock Surface) (Tfo).*
- Tc — *Undifferentiated conglomerate, gravel and grit (Tc).*
- Tb — *Basalt (Tb); inferred basalt beneath soil or Cainozoic deposits (Tbi); tholeiitic basalt (Tbs); limburgite (Tbl); basalt displaced downslope (Tbz); hawaiite (Tbh).*
- Tsco — *Inter–and sub–basalt gravels of predominantly quartzite pebbles (Tsco).*
- Ts — *Undifferentiated Tertiary sediments; non–marine sequences of gravel, sand, silt, clay and regolith (Ts).*
- Tsaqb — *Partly consolidated clay, silt, and clayey labile sand with rare gravel and lignite; some iron oxide–cemented layers and concretions; some leaf fossils (Tsq); poorly consolidated quartz–rich micaceous sandstone and conglomerate interbedded with siltstone and mudstone, commonly with some ferruginous and rarely siliceous cement (Tsaqa); underlying Tertiary basalt at Abels Hill (Tsaqb).*
- Tsa — *Moderately consolidated, dominantly cobble grade with lesser pebble and boulder grade dolerite conglomerate, some sandstone and rare siltstone; common zeolite and calcite cements (Tcdl); dominantly of cobble conglomerate and sandstone with lignite and carbonaceous beds containing Lygistepollenites balmei Zone palynoflora of Palaeocene age (Tcdp).*
- Tcdl
- Tcdp
- Tfba — *Bauxite profile developed on pre–Tertiary rocks and overlain by Tertiary rocks (Tfba).*

MESOZOIC–PALEOZOIC — TRIASSIC / PERMIAN — PARMEENER SUPERGROUP
- Rvcl — *Dominantly lithic sandstone with minor mudstone and coal (Rvcl).*
- Rt — *Undifferentiated Upper Parmeener Supergroup rocks below coal measures (Rt).*
- Rqs — *Cross–bedded quartz sandstone, feldspathic sandstone and shale (Rqs).*
- Pubg — *Unfossiliferous pebbly siltstone, siltstone and sandstone (Bogan Gap Group) (Pubg).*

- *Geological boundary – position accurate or approximate.*
- *Geological boundary – position inferred.*
- *Dune crest.*
- *Slope break.*
- *Scarp.*
- *Fault – inferred.*
- *Fault – concealed.*
- *Fault – normal – position accurate or approximate.*
- *Fault – normal – concealed.*
- *Fault – concealed, inferred from airborne magnetic data.*
- *Lithological trend line.*
- *Lineament visible on aerial photographs.*
- *Magnetic gradient or lineament (direction towards lower values indicated.*
- *Lineament visible in airborne magnetic data.*
- (White line) *Limit of mapping of sub–unit within undifferentiated rock unit ('Colour boundary').*

- *Strike and dip of bedding – right way up.*
- *Strike of vertical bedding, facing indicated by single tic.*
- *Generalised palaeocurrent direction, showing sense of movement.*
- *Strike and dip of dominant joint set – dipping; vertical.*
- *Strike and dip of outcrop–scale fault of unspecified relative age.*
- *Notable small outcrop with rock unit indicated.*
- *Field station for adjacent readings on the map.*
- *Mineral deposit location – hardrock* } *Data derived from Mineral Resources Tasmania DEPOSITS data base. Data point position has not been verified in every case.*
- *Construction materials location –*

Compiled by S.M. Forsyth, B.Sc, and C.R. Calver, B.Sc.(Hons), Ph.D., 2005 from the following sources (see responsibility diagram):

A C.R. Calver, 2001–2003, 1:25 000 mapping.

B FORSYTH, S.M. 1996, Geology map, Launceston area, Urban Engineering Geology Series, Tasmanian Geological Survey (recompiled 2005).

C Moore, W.R. 1989, Slope stability and engineering geology of the Blackstone Heights area. Compilation report. Department of Mines unpublished report 1989/06.

D FORSYTH, S.M. 1:25 000 mapping 1991–1993; with reference to Blake, F. 1959, Longford 1:63 360 Geological Map.

E C.R. Calver, 2004, 1:25 000 mapping; with reference to BLAKE, F. 1959, LONGFORD 1:63 360 Geological Map, and Nicolls, K.D. 1957, Longford Reconnaissance Soil Map, CSIRO Division of Soils.

F BLAKE, F. 1959, Longford 1:63 360 Geological Map, with minor revision by C.R. Calver.

G LONGMAN, M.J.; MATTHEWS, W.L.; ROWE S.M.; 1963 Launceston 1:63 360 Geological Map; minor revision by C.R. Calver.

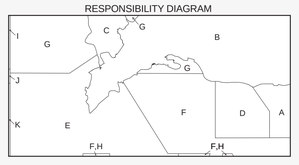
H S.M. Forsyth, 2004, new geological mapping.

I GULLINE, A.B., BRAVO, A.P. and NAQVI, I.H., 1973. Geological atlas 1 mile series. Sheet 38 (8215S) Frankford. Tasmania Department of Mines.

J BARTON, C.M., BRAVO, A.P., GULLINE, A.B., LONGMAN, M.J., MARSHALL, B., MATHEWS, W.L., MOORE, W.R., NAVQI, I.H. and PIKE, G.P., 1969. Geological atlas 1 mile series. Sheet 46 (8214N) Quamby. Tasmania Department of Mines.

K MATHEWS, W.L., 1983, Geology and groundwater of the Longford Tertiary basin. Bull.Geol.Surv.Tasm. 59.

RESPONSIBILITY DIAGRAM



LOCATION DIAGRAM

INDEX TO ADJOINING SHEETS

BRIDGENORTH	LAUNCESTON	NUNAMARA
WESTBURY	PROSPECT	BLESSINGTON
CLUAN	LONGFORD	EVANDALE

1:25000 maps available.

PROSPECT 5040

REFERENCE THIS MAP AS:

FORSYTH, S.M. and CALVER, C.R. (compilers) 2005. Digital Geological Atlas 1:25 000 Scale Series. Sheet 5040. Prospect. 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.

GDA

Plotfile for this map generated from digital data as at: 01-FEB-2010

WARNING:INKS ARE LIGHT SENSITIVE