Department of Infrastructure Energy and Resources
MINERAL RESOURCES TASMANIA

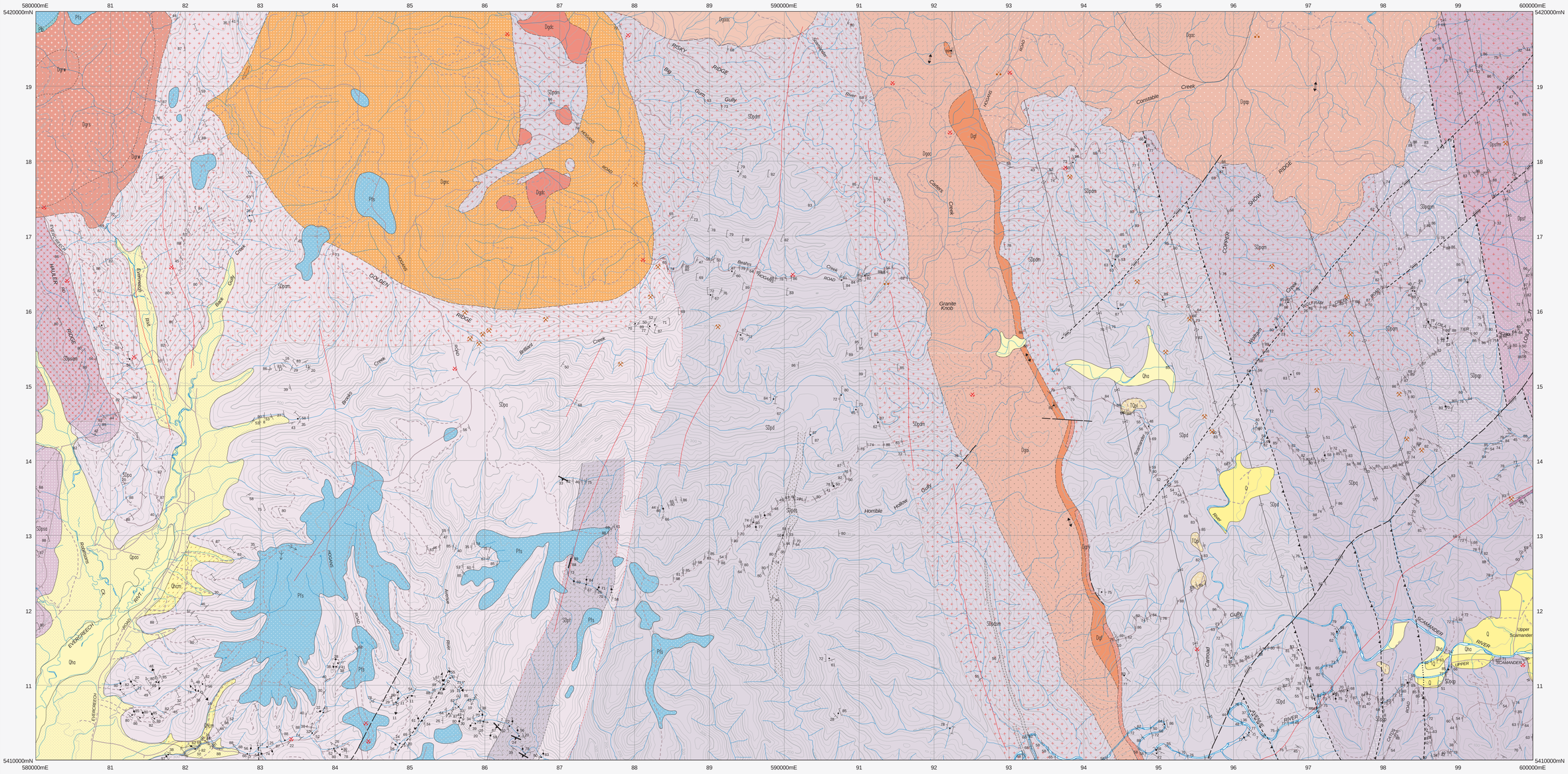
DIGITAL GEOLOGICAL ATLAS 1:25 000 SCALE SERIES
BRILLIANT, SHEET 5841

BRILLIANT

Scale: 1:25 000

0 500 1000 1500 2000 2500m

Tasmania
Explore the possibilities



CENOZOIC

QUATERNARY

HOLOCENE (Q)

- **Qha** — *Stream alluvium, swamp and marsh deposits (Qha).*
- **Qhcm** — *Colluvium, derived from Mathinna Supergroup (Qhcm).*
- **Qpao** — *Older alluvium of river terraces (Qpao).*

PLEISTOCENE

- **TQpl** — *Gravel, sand and derived lag (TQpl).*

Unconformity.

PERMIAN

- **Pfs** — *Dominantly well-sorted quartz sandstone, usually cross-bedded and commonly with interbedded and interlaminated carbonaceous shale, lesser conglomerate and rare coal (Pfs).*
- **Plb** — *Poorly sorted pebbly mudstone, sandstone and minor conglomerate, marine fossils present in places (Plb).*

Unconformity.

PALEOZOIC

SILURIAN(?)–DEVONIAN

LUDLOW(?)–LOWER DEVONIAN

- **Dpsf, Dpsfm** — *Undifferentiated Upper Panama Group sandstone, siltstone, and mudstone, primarily turbiditic in origin. Contains graptolite fossils of Ludlow age (SDpo). Metamorphosed by granitoid intrusion (SDpsm). Dominantly medium- to fine-grained turbiditic quartz-rich sandstone, with some interbedded siltstone. Rare vascular plant fossils (possible correlate of Sideling Sandstone) (SDpsq). Metamorphosed by granitoid intrusion (SDpsm). Turbidite succession dominated by quartz-rich sandstones with minor siltstone and mudstone. Current related sedimentary structures abundant. Contains Devonian marine macrofossils, graptolites and vascular plant fossils (Dpsf). Metamorphosed by granitoid intrusion (Dpsfm). (Dpsf, Dpsfm: Scamander Formation).*
- **SDpap, SDpapm, SDpq, SDpgm** — *Turbidite succession dominated by quartz-rich sandstone with interbedded massive grey mudstones which locally predominate. Current related sedimentary structures common in coarser sandstones. No fossils recorded (SDpq). Metamorphosed by granitoid intrusion (SDpm). Mappable mudstone within SDpq (SDpap). Metamorphosed by granitoid intrusion (SDpgm).*
- **SDpd, SDpdsm, SDpdm, SDpds** — *Turbidite succession of fine-grained sandstone and cleaved siltstone. Subordinate very thick bedded massive sandstone increases toward west. Current related sedimentary structures common. No fossils recorded (SDpd). Metamorphosed by granitoid intrusion (SDpdm). Massive sandstone unit within SDpd (SDpds). Metamorphosed by granitoid intrusion (SDpdsm).*
- **SDpf** — *Dominantly foliated grey siltstone, with slate and rare fine-grained sandstone (SDpf).*

PANAMA GROUP — MATHINNA SUPERGROUP

IGNEOUS ROCKS

DEVONIAN(?)

- **Dd** — *Dolerite dykes (Dd).*

MINOR GRANITIC INTRUSIONS

- **Dgm** — *Fine-grained quartz monzonite (Dgm).*
- **Dgf** — *Quartz-feldspar porphyry (Dgf).*

BLUE TIER BATHOLITH

DEVONIAN

MIDDLE DEVONIAN

- **Dgoac** — *Coarse-grained, porphyritic (K-feldspar) to equigranular biotite-minor muscovite monzogranite (Dgoac) (Poimena Granite; I-type).*
- **Dgnc** — *Coarse-grained, equigranular to porphyritic (K-feldspar) biotite +/- hornblende monzogranite/granodiorite (Dgnc) (Halleys New Country Granite; I-type).*
- **Dgrv** — *Coarse- to fine-grained, variably porphyritic biotite-hornblende granodiorite (Dgrv) (Scamander Tier Granodiorite; I-type).*

LOWER DEVONIAN

- **Dgac** — *Coarse-grained, porphyritic to seriate to equigranular biotite-minor muscovite monzogranite (Dgac).*
- **Dgal** — *Coarse-grained, porphyritic to seriate to equigranular biotite-minor muscovite monzogranite, with numerous intrusions of fine- to medium-grained pink biotite granite (Dgal). (Dgac, Dgal - Mt Pearson Granite; I-type).*
- **Dgap** — *Generally pink coarse-grained porphyritic to seriate to equigranular biotite-minor muscovite syenogranite/alkali feldspar granite, with abundant minor intrusions of fine-grained pink biotite granite (Dgap) (Constable Creek phase of Mt Pearson Granite; I-type).*
- **Dgrs** — *Medium-grained, equigranular to rarely porphyritic (K-feldspar), hornblende-biotite granodiorite. Locally with a strong grain foliation. Variable but usually strongly magnetic (susceptibility typically .002 to .008 SI) (Dgrs).*
- **Dgrw** — *Medium-grained, equigranular to rarely porphyritic (K-feldspar), hornblende-biotite granodiorite. Locally with a strong grain foliation. Weakly magnetic (susceptibility < .0005 SI) (Dgrw). (Dgrs, Dgrw - Pyengana Granodiorite; I-type).*
- **Dgdc** — *Coarse-grained diorite, consisting of amphibole, biotite +/- plagioclase +/- clinopyroxene +/- orthopyroxene +/- olivine or quartz, occurring with SDpdm as possible rafts in Dgnc (Dgdc) (Hogans Road Diorite).*

- *Geological boundary – position approximate.*
- *Geological boundary – position inferred.*
- *Geological boundary – inferred from airborne magnetic and/or radiometric data.*
- *Unconformable boundary – position accurate or approximate.*
- *Intrusive boundary – position accurate or approximate.*
- *Metamorphic boundary – position approximate.*
- (white line) *Limit of mapping of sub-unit within undifferentiated rock unit.*
- *Lineament visible in airborne magnetic data.*
- *Fault – position approximate.*
- *Fault – concealed.*
- *Thrust fault (teeth on upper plate) – inferred.*
- *Strike-slip fault (sinistral) – position accurate or approximate.*
- *Strike-slip fault (sinistral) – inferred.*
- *Axial surface trace of major F1 anticline.*
- *Axial surface trace of major F1 syncline.*

- *Strike and dip of bedding – right way up; vertical, facing indicated by single tic; overturned; facing unknown; vertical.*
- *Strike and dip of cleavage of unspecified type and relative age; vertical.*
- *Strike and dip of cleavage – relative local age S1; S2.*
- *Strike and dip of penetrative cleavage; vertical.*
- *Trend and plunge of lineation L2 formed by intersection of cleavages or foliations of relative local ages S1 and S2.*
- *Trend and plunge of minor fold hinge line with dip and dip direction of axial surface – relative local age F1; relative local age F2.*
- *Trend and plunge of minor fold hinge line, unspecified relative age, with dip and dip direction of axial surface, vergence dextral; sinistral.*
- *Trend and plunge of minor fold hinge line, symmetrical; with dip and dip direction of axial surface.*
- *Trend and plunge of minor fold hinge line with dip and dip direction of axial surface – chevron.*
- *Trend and plunge of minor fold hinge line, unspecified relative age; with dip and dip direction of axial surface; antiform; with dip and dip direction of axial surface.*
- *Strike and dip of outcrop – scale fault of unspecified relative age – thrust; type unspecified.*
- *Generalised palaeocurrent direction, showing sense of movement.*
- *Strike and dip of foliation due to alignment of K-feldspar phenocrysts in granitic rock.*
- *Trend of preferred orientation of K-feldspar phenocrysts in granitic rock.*
- *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 M.P. McClenaghan, B.Sc. (Hons), Ph.D. 2004 from the following sources (see responsibility diagram):

A McCLENAGHAN, M.P., EVERARD, J.L.E., GOSCOMBE, B.D., FINDLAY, R.H. and CALVER, C.R. 1993. Geological Atlas 1:50 000 Series. Sheet 40 (8415S), Alberton.

B McCLENAGHAN, M.P., TURNER, N.J. and WILLIAMS, P.R. 1987. Geological Atlas 1:50 000 Series. Sheet 41 (8515S), St. Helens.

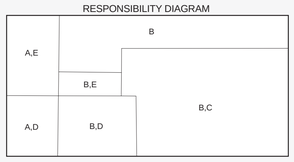
Updated by:

C M. Worthing 2008 – 2010: Stratigraphic revision and re-mapping of Mathinna Supergroup, supported by airborne geophysical data, as part of the TasExplore Project. Mineral Resources Tasmania.

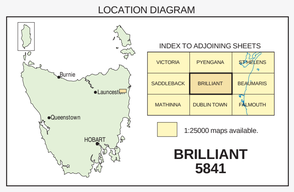
D I. Woolward 2008 – 2010: Stratigraphic revision and re-mapping of Mathinna Supergroup, supported by airborne geophysical data, as part of the TasExplore Project. Mineral Resources Tasmania.

E I. Woolward 2008 – 2010: Minor modifications to previous mapping, supported by airborne geophysical data.

RESPONSIBILITY DIAGRAM



LOCATION DIAGRAM



REFERENCE THIS MAP AS:

WORTHING, M.A. and WOOLWARD, I.R. (compilers) 2010. Digital Geological Atlas 1:25 000 Series. Sheet 5841 Brilliant. Mineral Resources Tasmania.

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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

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