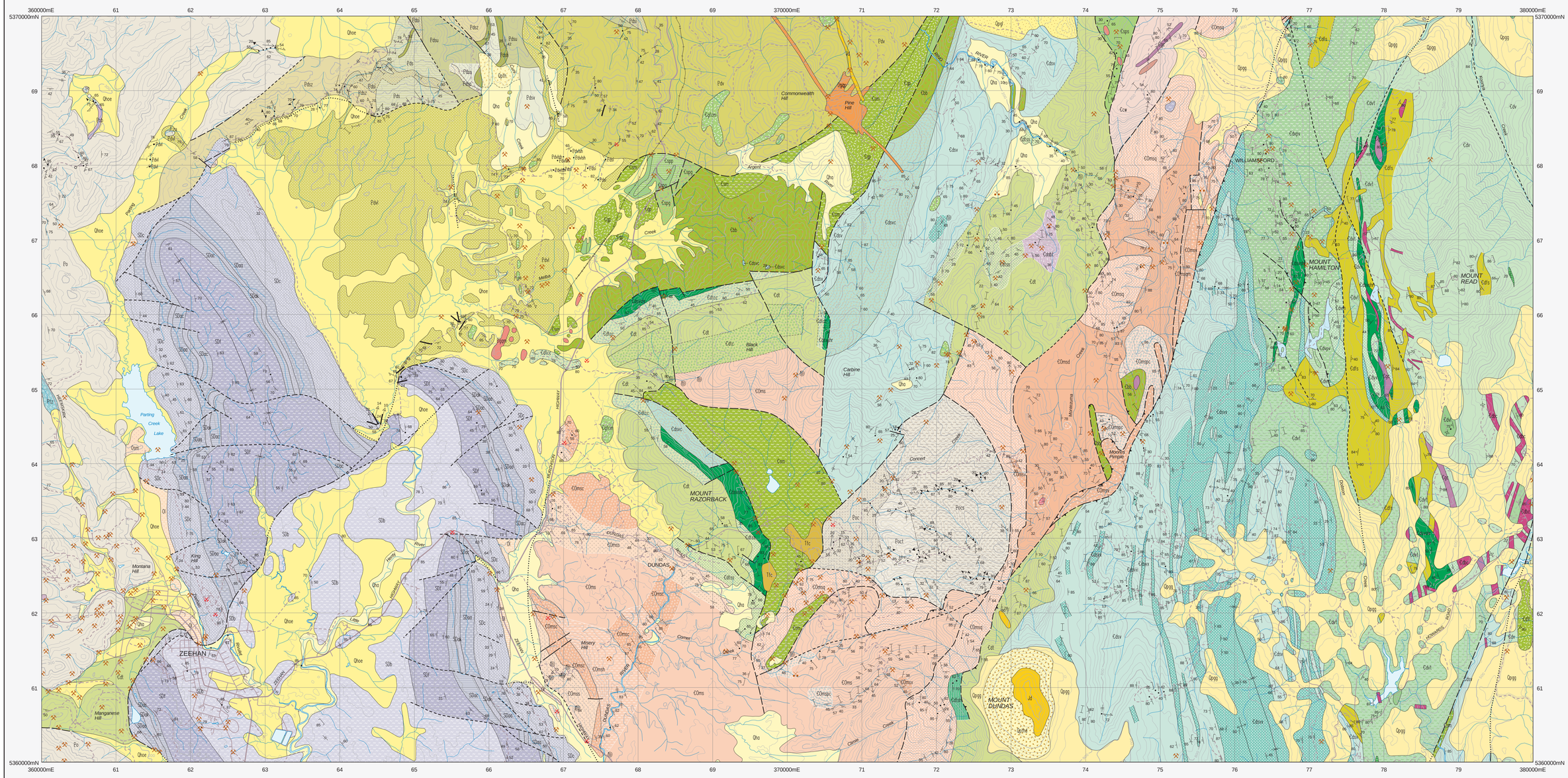
Department of Infrastructure Energy and Resources
MINERAL RESOURCES TASMANIA

DIGITAL GEOLOGICAL ATLAS 1:25 000 SCALE SERIES
DUNDAS, SHEET 3636

DUNDAS

Scale: 1:25 000

0 500 1000 1500 2000 2500m



PALEOZOIC

CENOZOIC

HOLOCENE

- **Qha** — *Stream alluvium, swamp and marsh deposits (Qha).*
- **Qpth** — *Talus (Qpth), composed dominantly of dolerite (Qpthd).*

QUATERNARY

- **Qhoe** — *Older alluvium, marsh deposits and elluvium (Qhoe).*

PLEISTOCENE

- **Qpgg / Qpgl** — *Pleistocene glacial and glacigene deposits (Qpgg); fluviglacial and lacustrine deposits (Qpgl).*

TERTIARY

- **Tfc** — *Ironstone capping developed on massive serpentinite (Tfc).*

Unconformity.

CARBONIFEROUS–PERMIAN

- **P / Ptz** — *Undifferentiated Permo–Carboniferous sedimentary deposits (P). Tillite and associated glacigene rocks (correlate of Wynyard Tillite) (Ptz).*

Unconformity.

DEVONIAN

- **SDb** — *Grey or greenish grey interbedded laminated mudstone, siltstone and minor fine–grained quartz sandstone (Bell Shale) (SDb).*
- **SDf** — *Generally pale grey, fine–grained quartz sandstone with subordinate interbedded greenish grey siltstone (Florence Quartzite and correlates) (SDf).*

SILURIAN

- **SDac** — *Greenish–grey and bluish–grey laminated siltstone and minor interbedded fine–grained quartz sandstone (Austral Creek Siltstone correlates) (SDac).*
- **SDak** — *Pale grey to white, generally fine–grained quartz sandstone (Keel Quartzite and correlates) (SDak).*
- **SDaa** — *Siltstone and shale – correlate of Amber Slate (SDaa).*
- **SDc** — *Generally pale grey and in part pink, commonly current–bedded, fine–to coarse–grained quartz sandstone with common pebble conglomerate layers and minor interbedded pale green mudstone and siltstone (Crotty Quartzite and correlates) (SDc).*

ORDOVICIAN

- **Ol** — *Dark grey carbonate rocks, calcareous mudstone, minor quartz sandstone and black clay weathering products. In part fossiliferous. (Gordon Limestone) (Ol).*
- **Osm** — *Pale grey to pink commonly cross–bedded quartz sandstone, coarse and pebbly toward base and with tubicular trace fossils in horizons of upper sequences (correlate of Moina Sandstone) (Osm).*

LATE CAMBRIAN

- **€Oms** — *Marine sandstone–siltstone–conglomerate sequences, siliciclastic to polymict, with Late Cambrian fossils in places. Includes Upper Dundas and Rosebery Group. (Correlates of Owen Group) (€Oms).*
  - **€Omss** — *Dominantly interbedded sandstone and siltstone (€Omss).*
  - **€Omsc** — *Conglomerate, pebble to boulder grade, with interbedded pebbly sandstone and lithicwacke (€Omsc).*
  - **€Omsh** — *Mainly siltstone and mudstone with some interbedded sandstone (€Omsh).*
  - **€Omspc** — *Polymict conglomerate, typically calcareous, with fuchsite in places (€Omspc).*
  - **€Omsd** — *Dolomitic mudstone, siltstone and sandstone, with some volcaniclastic conglomerate and sandstone in places (€Omsd).*
  - **€Omsq** — *Micaceous quartzwacke sandstone–siltstone–conglomerate sequence (correlates of Stitt Quartzite) (€Omsq).*
  - **€Omsqm** — *Unit of dominantly siltstone and mudstone (€Omsqm).*
  - **€Omsv** — *Felsic volcaniclastic sandstone and breccia units (€Omsv).*
  - **€Omsa** — *Andesite lava (€Omsa).*

PALEOZOIC — MIDDLE CAMBRIAN

ELDON GROUP

- **€dt** — *Volcaniclastic to polymict sandstone–siltstone–mudstone–conglomerate–breccia sequences, typically quartz–feldspar–phyric, with minor felsic to andesitic lavas and late Middle Cambrian fossils in places. Includes part of lower Dundas Group, most of Huskisson Group (correlates of Tyndall Group) (€dt).*
  - **€dtss** — *Dominantly volcaniclastic sandstone, typically felsic with interbedded siltstone and minor conglomerate (€dtss).*
  - **€dtsh** — *Mainly interbedded mudstone and siltstone (€dtsh).*
  - **€dabt** — *Andesitic to basaltic volcanics, highly altered in part (includes Curtin–Davis volcanics) (€dabt).*
  - **€dtc** — *Dominantly conglomerate, volcaniclastic to polymict, with interbedded sandstone (€dtc).*
  - **€dtcc** — *Dominantly chert–rich conglomerate and pebbly sandstone, with interbeds of volcaniclastic sandstone (Razorback Conglomerate and correlates) (€dtcc).*
  - **€dtl** — *Felsic lava, typically quartz–feldspar–phyric, commonly flow–banded and autobrecciated (€dtl).*
  - **€dtm** — *Mainly crystal–rich volcaniclastic sandstone and breccia, typically banded pink and green, quartz–feldspar–phyric, with minor siltstone and conglomerate (Mt Julia Member or Middle Tyndall Group) (€dtm).*

Gordon GROUP

- **€dv** — *Dominantly feldspar–phyric volcanic and volcaniclastic rocks (€dv).*
  - **€dfs** — *Feldspar–quartz porphyry, typically with spherulitic groundmass. Intrusive to partly extrusive (€dfs).*
  - **€dvt** — *Mainly felsic volcaniclastic and pyroclastic rocks, dominantly feldspar–phyric, including pumice–bearing units (€dvt).*
  - **€dvpx** — *Pumice–bearing volcaniclastic rocks, usually with eutaxitic texture (€dvpx).*
  - **€dvbr** — *Lithic breccia (€dvbr).*
  - **€dvx** — *Crystal–rich tuffaceous sandstone, well–bedded in places (€dvx).*
  - **€dvm** — *Fine–grained vitriclastic mudstone (€dvm).*
  - **€dvl** — *Felsic lava, typically feldspar +/– quartz–phyric, rhyolitic to dacitic (€dvl).*
  - **€dvs** — *Siltstone–sandstone–shale unit (€dvs).*

OWEN GROUP

PROTEROZOIC

MIDDLE CAMBRIAN

WESTERN VOLCANO-SEDIMENTARY SEQUENCE — MOUNT READ VOLCANICS

- **Ꞓdsv** — *Interbedded volcaniclastic sandstone, breccia, siltstone, mudstone and conglomerate, with minor andesitic to basaltic volcanics and intrusive–extrusive porphyries. Includes parts of White Spur Formation, Hercules hanging wall sequence, lower Dundas Group and lower Huskisson Group (Ꞓdsv).*
  - **Ꞓdsvshr** — *Mainly laminated siltstone and mudstone with minor sandstone (includes Hodge Slate, Hercules Shale, Jones Creek Shale) (Ꞓdsvshr).*
- **Ꞓdsvc** — *Dominantly conglomerate volcaniclastic to polymict (includes Red Lead Conglomerate (Ꞓdsvc).*
  - **Ꞓdsvx** — *Mainly volcaniclastic sandstone, typically crystal–rich (quartz–feldspar), with some siltstone and mudstone (Ꞓdsvx).*

ALLOCHTHONOUS SEQUENCES

- **Ꞓbb** — *Low Ti tholeiitic and boninitic lavas (Ꞓbb).*

EARLY CAMBRIAN

- **Ꞓcw** — *Basaltic lithicwacke, siltstone and red to green mudstone, with minor basalt and mafic intrusive rocks (correlate of Cleveland–Waratah Association) (Ꞓcw).*
  - **Ꞓcwb** — *Areas of tholeiitic basalt lava (Ꞓcwb).*

PROTEROZOIC — NEOPROTEROZOIC

CRIMSON CREEK FORMATION

- **Pdv** — *Dominantly mafic volcaniclastic lithicwacke with siltstone and carbonate beds (Crimson Creek Formation) (Pdv).*
  - **Pdvl** — *Interbedded volcaniclastic lithicwacke, siltstone and vitric–lithic tuff. Tectonic affinity uncertain. Possible correlate of Crimson Creek Formation (Pdvl).*
  - **Pdvls** — *Local more felsic unit with shards (Pdvls). Also small outcrops of laminated siltstone and lithicwacke (Pdvlsh).*

SUCCESS CREEK GROUP

- **Pdsv** — *Shallow water quartz sandstone and siltstone with carbonate and chert beds (Pds); dominantly laminated grey siliceous siltstone with minor quartz sandstone and conglomerate horizons (Pdsu).*
  - **Pdsu** — *White well sorted quartz sandstone (Pdss).*
  - **Pdss** — *Pink well sorted quartz sandstone (Pdsp).*
  - **Pdsp** — *Red to purple hematitic siltstone (Pdsh).*
  - **Pds** — *Possible stratigraphic horizons of sheared carbonaceous siltstone with phacoids of broken sandstone beds, forming tectonic intrusions into Pdsu and Pdsz (Pdss).*
  - **Pdsh** — *Dominantly quartz sandstone with laminated grey siltstone and mudstone, and locally pebbly sandstone and conglomerate, including a basal sequence with carbonate beds, thin tuffaceous horizons and conglomerate beds (Pdsz).*
  - **Pdsl**
  - **Pdsz**
  - **Pdsl**

Unconformity.

OCNAN FORMATION

- **Po / Pob** — *Undifferentiated Oonah Formation. Dominantly quartzwacke turbidites (Po). Mafic vesicular lava (Pob).*

CONCERT CREEK AREA

- **Poc / Pocf / Pocs** — *Quartzwacke with siliceous siltstone and pelite (K–Ar age 684 +/– 10Ma) (Correlate of Oonah Formation) (Poc), showing metamorphic transition (Pocf) into fine quartz–mica +/– chlorite schist (Pocs).*

INTRUSIVE ROCKS

MESOZOIC — JURASSIC

- **Jd** — *Dolerite (Jd).*

PALEOZOIC — DEVONIAN

- **Dgqp** — *Quartz porphyry (Dgqp).*
- **Dgqm** — *Red and/or white massive quartz bodies (Dgqm).*

PALEOZOIC — MIDDLE CAMBRIAN

MOUNT READ VOLCANICS

- **€dbc** — *Basaltic dykes, typically chlorite–altered (€dbc).*
- **€dfs** — *Feldspar–quartz porphyry, commonly spherulitic (€dfs).*
- **€gc** — *Gabbro, typically coarse–grained (€gc).*

PALEOZOIC — EARLY CAMBRIAN

ALLOCHTHONOUS SEQUENCES

- **€gp** — *Massive and multiple–intrusive two–pyroxene, granular textured gabbro (€gp).*
- **€spg** — *Serpentinised peridotite with intrusive gabbro (€spg).*
- **€spp** — *Serpentinised orthopyroxene–rich peridotite (€spp).*
- **€spo** — *Serpentinised olivine–rich peridotite (€spo).*
- **€gfcm** — *Fine to coarse–grained mafic gabbro (€gfcm).*
- **€sps** — *Serpentinised layered peridotite and pyroxenite (€sps).*
- **€sm** — *Massive serpentinite (€sm).*

Geological boundary – position accurate or approximate
Geological boundary – inferred
Geological boundary – transitional
Fault – position accurate or approximate.
Fault – unspecified type, inferred
Fault – unspecified type, concealed
Thrust fault, position accurate or approximate, teeth on upper plate
Axial surface trace of major antiform
Axial surface trace of major synform
(white line) Limit of mapping of sub–unit within undifferentiated rock units.

Strike and dip of bedding, facing known – right way up; overturned.
Dip of geological contact of unspecified type.
Strike and dip of bedding, facing unknown – dipping; vertical.
Strike and dip of igneous banding – dipping; vertical.
Strike and dip of cleavage, type and relative age unspecified – dipping; vertical.
Trend and plunge of bedding / primary cleavage intersection lineation (L1).
Strike and dip of cleavage, relative local age S1 – dipping; vertical.
Strike and dip of cleavage, relative local age S2 – dipping; vertical.
Strike of vertical cleavage, relative local age S3.
Trend and plunge of hingeline of minor fold; with dip and dip direction of axial surface indicated; vertical axial surface.
Trend of horizontal minor fold hinge line, unspecified relative age.
Trend and plunge of minor fold hinge line, relative local age F2.
Strike and dip of outcrop–scale fault of unspecified relative age, type unspecified.
Trend and plunge of slickensides, sense of movement unspecified; HW relative movement up–plunge.
Field station for adjacent readings on the map.
Notable small outcrop with rock unit indicated
Macrofossil locality.
Mineral deposit location – hardrock
Mineral deposit location – alluvial
Construction materials location

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

REFERENCE THIS MAP AS:

SEYMOUR, D.B. and McMCLENAGHAN, M.P. (compilers) 2003. Digital Geological Atlas 1:25 000 Scale Series. Sheet 3636. Dundas. Mineral Resources Tasmania.

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

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Compiled by D.B. Seymour, B.Sc.(Hons), Ph.D. and M.P. McClenaghan, B.Sc.(Hons), Ph.D., 1997 from the following sources (see responsibility diagram):

A BROWN, A.V., FINDLAY, R.H., GOSCOMBE, B.D., McCLENAGHAN, M.P., and SEYMOUR, D.B., 1994. Zeehan. Geological atlas 1:50,000 series sheet 50 (7914S). Department of Mines, Tasmania.

B CORBETT, K.D., 1986. Map 3. Geology of the Henty River–Mt Read area. Mt Read Volcanics Project. Department of Mines, Tasmania.

C Unpublished data, Pasminco Exploration.

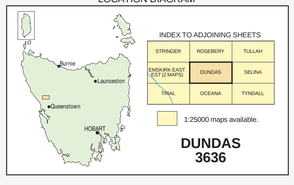
Updated by:

D K.D. Corbett, 2003 as part of the Western Tasmanian Regional Minerals Program.

RESPONSIBILITY DIAGRAM

A,D	B,C,D

LOCATION DIAGRAM



INDEX TO ADJOINING SHEETS

STRINGER	ROSEBERY	TULLAH
EMSKIRK EAST (EST 12 MAPS)	DUNDAS	SELINA
TRIAL	OCEANA	TYNDALL

1:25000 maps available.

DUNDAS 3636

Plotfile for this map generated from digital data as at: 19-JAN-2010

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