MINERAL RESOURCES TASMANIA

Tasmania

AGSO

NGMA TASGO PROJECT

SUB PROJECT 1 - GEOLOGICAL SYNTHESIS

STRATOTECTONIC ELEMENTS MAP

Compiled by: D. B. Seymour and C. R. Calver 1995

SCALE 1:500000

0 10 20 30 40 50 km

Grid: Australian Map Grid, Zone 55.

QUATERNARY — Q — Unconsolidated clastic sediments.

Erosional surface.

TERTIARY — Ts / Tb — Consolidated and unconsolidated sediments (Ts); basaltic volcanics (Tb).

Erosional surface.

LATE CARBONIFEROUS - TRIASSIC — CR — Shallow marine to non-marine, dominantly clastic sedimentary sequences (Parmeener Supergroup).

Erosional surface.

LATE MIDDLE DEVONIAN — Terrestrial cavern-filling deposits (Eugenana Beds).

Angular unconformity.

EARLY MIDDLE DEVONIAN — Dpq — Felsic pyroclastic rocks (St Marys Porphyrite).

Angular unconformity

LATE CAMBRIAN - EARLY DEVONIAN — ECd / CDw — Non-marine to marine, clastic and carbonate, dominantly shelf sequences (Mt Wright Supergroup and correlates) (ECd); marine quartzwacke turbidite sequences (Upper Dundas Group and correlates) (Cwd).

Angular unconformity in some areas, apparent conformity in others.

MIDDLE - LATE CAMBRIAN — Cd / Cx — Conglomeratic turbidite sequences, including lower Dundas Group and correlates (Cd); felsic to intermediate volcanic and associated volcanosedimentary sequences, including Mt Read Volcanics (Cx).

Erosional surface of Cd on Cum; angular unconformity of Cx on Pm.

EARLY - MIDDLE CAMBRIAN — Cum / Cg / Cl — Mafic-ultramafic complexes (Cum); dominantly clastic sedimentary rocks (Cg); mafic volcanics (Cl). Structurally emplaced, probably allochthonous.

NEOPROTEROZOIC — Ps — Clastic and carbonate shelf, and volcaniclastic rift-related sequences (Ps) (Rocky Cape Group, Success Creek Group and Crimson Creek Formation and correlates).

Angular unconformity of Ps on Pu and Pm.

Pu — Quartzwacke turbidite sequences (Donah and Burnie Formations and correlates).

MESOPROTEROZOIC - ?NEOPROTEROZOIC — Pgm — Metamorphosed, mafic, pelitic and quartzitic sequences and amphibolite, (Arthur Metamorphic Complex:- metamorphic equivalents of Pu + Ps +/- Pm +/- Pp).

MESOPROTEROZOIC — Pp / Pm — Relatively unmetamorphosed, dominantly sandstone/mudstone sequences (Pp); metamorphosed, dominantly pelitic and quartzitic sequences and amphibolite (Pm).

UNDIFFERENTIATED UNITS

Ps +/- Cd. — P Cls u — Undetermined basaltic and mafic volcaniclastic sequences of either rift or allochthonous association (Ps +/- Pb +/- Cs +/- Cl).

IGNEOUS INTRUSIVE ROCKS

CRETACEOUS — Ks — Syenite.

JURASSIC — Jd — Dolerite.

Jd — Dolerite dykes.

LATE CARBONIFEROUS - DEVONIAN — Gd — Granitoids.

MIDDLE CAMBRIAN — Granitoids.

Dolerite dykes.

NEO-PROTEROZOIC — Granitoids.

Undefined boundary.

Conformable boundary.

Angular unconformity.

Disconformity or erosional surface.

Transitional boundary.

Intrusive boundary.

Fault, nature unspecified.

Normal fault, downthrown side indicated.

Wrench fault, relative movement indicated.

Thrust fault, teeth on upper plate.

Trend of lithological layering.

AXIAL TRACES OF MAJOR FOLDS

Anticline, age unspecified.

Syncline, age unspecified.

Overturned syncline, age unspecified.

Overturned anticline, age unspecified.

Dip direction of axial surface indicated.

Devonian fold, generation unspecified.

Western Tasmania Devonian fold – earlier generation.

Western Tasmania Devonian fold – later generation.

Mega-kink boundary – position approximate.

Mega-kink boundary – inferred.

GEOPHYSICAL LINEARS

Major magnetic lineament or gradient – direction towards lower values indicated where applicable.

Major gravity lineament or gradient – direction towards lower values indicated where applicable.

Devonian granitoid intrusives – 2km contour at depth, derived from geophysical interpretation.

Du — Deep drillhole, basement lithology indicated.

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The geological data for this map were compiled from Tasmanian Geological Survey Geological Atlas 1:250,000 digital series maps and other sources.

Digital base information from Land Information Bureau, Department of Environment and Land Management.

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Source data correct as at August 1995

GUIDE MAP TO ELEMENTS SHOWN ON TIME- SPACE DIAGRAM

- King Island.
- Rocky Cape Element.
- Dundas Element.
- Sheffield Element.
- Tyennan Element.
- Adamsfield - Jubilee Element.
- Northeast Tasmania Element.
- Tasmania Basin and younger cover sequences (Main areas only shown).
- Concealed Element boundary.

(Plate 2 of Tasmanian Geological Survey Record 1995/01)