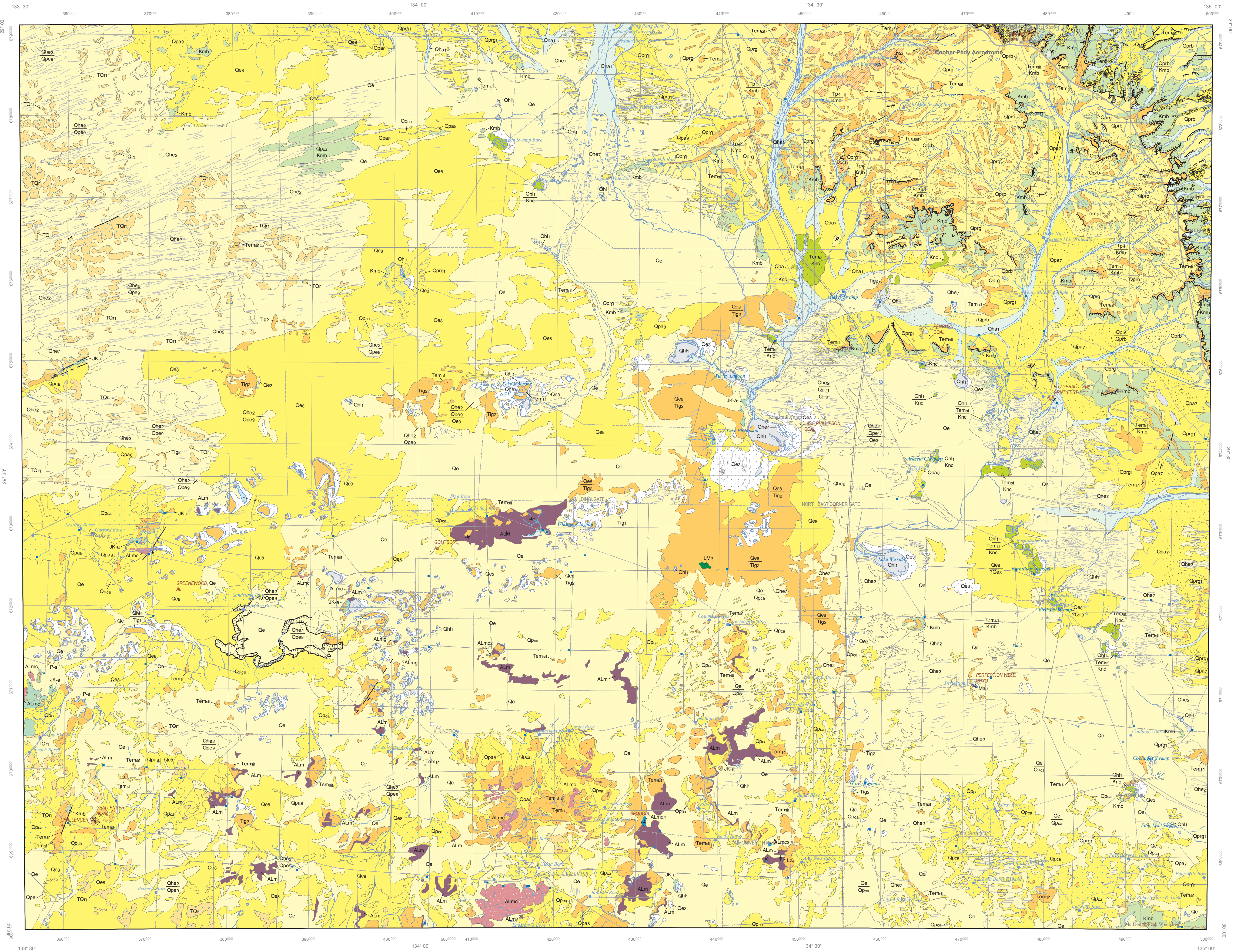


COOBER PEDY

GEOLOGICAL SURVEY OF SOUTH AUSTRALIA
DEPARTMENT FOR ENERGY AND MINING

AUSTRALIA 1:250 000

SA GEOLOGICAL ATLAS SERIES SHEET SH5306



REFERENCE

HOLOCENE

- OH₁ HOLOCENE ALLUVIAL/FLUVIAL UNIT 1: Present day Holocene alluvium; current landscape.
- Qh₁ HOLOCENE AQUEOUS SEDIMENTS: Un differentiated Holocene aeolian sediments.
- Qh₂ HOLOCENE AQUEOUS UNIT 2: Holocene aeolian dunes in dune fields.
- Qh₃ HOLOCENE AQUEOUS UNIT 4: Holocene aeolian dunes/ridges.
- Qh₄ HOLOCENE AQUEOUS UNIT 7: Holocene aeolian dunes, with appreciable drainage influence. Based on Qh₁, COOBER PEDY.
- Qh₅ HOLOCENE LACUSTRINE PLAIN UNIT 1: Holocene playa sediments.

PLEISTOCENE-HOLOGENE

- Q₁ QUATERNARY AQUEOUS SEDIMENTS: Un differentiated Quaternary aeolian sediments.
- Q₂ QUATERNARY AQUEOUS UNIT 3: Quaternary aeolian dunes/ridges.
- Q₃ QUATERNARY AQUEOUS UNIT 4: Quaternary aeolian dunes, orange-brown to red-brown, calcareous and very sandy in part. Based on Q₁, COOBER PEDY.
- Q₄ QUATERNARY REGOLITHICOLLOIDAL UNIT 1: Quaternary grey-banded calcareous. Based on Q₁ on MURDOCKPINE.

PLEISTOCENE

- PL₁ PLEISTOCENE ALLUVIAL/FLUVIAL UNIT 3: Pleistocene high-level alluvial fan gravel. Based on Q₁ on preliminary WARRINA.
- PL₂ PLEISTOCENE ALLUVIAL/FLUVIAL UNIT 7: Pleistocene floodplain deposits, clay, sand, silt, gravel. Based on Q₁, ABERNATHY, COOBER PEDY.
- PL₃ PLEISTOCENE ALLUVIAL/FLUVIAL UNIT 8: Pleistocene alluvial fan deposits, clay, sand and gravel with some silt. Based on Q₁, COOBER PEDY.
- PL₄ PLEISTOCENE ALLUVIAL/FLUVIAL UNIT 9: Pleistocene red-brown sand, clay, silt, with boulders of gravel and some silt. Based on Q₁, COOBER PEDY.
- PL₅ PLEISTOCENE AQUEOUS UNIT 1: Pleistocene dune core sand.
- PL₆ PLEISTOCENE AQUEOUS UNIT 2: Pleistocene pale sand, calcareous in part. Based on Q₁, TALLARINGA.
- PL₇ PLEISTOCENE AQUEOUS UNIT 3: Pleistocene red-brown sand associated with terrigenous and volcanic deposits, boulders of coarse gravel. Based on Q₁, COOBER PEDY, TALLARINGA.
- PL₈ PLEISTOCENE REGOLITHICOLLOIDAL UNIT 5: Pleistocene red sand with magnetic gravel veneer, typically ridge-covered.
- PL₉ PLEISTOCENE REGOLITHICOLLOIDAL UNIT 6: Pleistocene ironstone gravel veneer on alluvium and calcareous. Based on Q₁ on KINGSWOOD.
- PL₁₀ BENTON CLAY: Clay, red-brown to brown, silty.
- PL₁₁ WINTRENA FORMATION: Sand, brown and orange-brown sand, dunes, scoria.
- PL₁₂ GODDARD FORMATION: Clay and silt, red, gravelly and sandy in part, moderately calcareous.
- PL₁₃ GODDARD FORMATION UNIT 1: Sandy loess associated with Mesozoic calcareous. Based on Q₁ on COOBER PEDY.
- PL₁₄ PLEISTOCENE CALCAREOUS: Un differentiated Pleistocene calcareous.
- PL₁₅ PLEISTOCENE GYPHORE: Un differentiated Pleistocene gypshores.

PLIOCENE

- PL₁₆ PLEIOCENE UNIT 4: Pliocene calcareous pebbles, gravel, Jasper breccia, brown. Based on Q₁ on COOBER PEDY.
- PL₁₇ PLEIOCENE CALCAREOUS UNIT 1: Pliocene pedogenic and groundwater calcareous. TALLARINGA sheet.

OLIGOCENE-PLIOCENE

- OL₁ OLIGOCENE FORMATION: Conglomerate sand, clayey sand and breccia. Poorly sorted.

Eocene-Pleistocene

- EL₁ GARFORD FORMATION UNIT 1: White, green, dolomitic, argillaceous or calcareous clay. Based on T₁ on COOBER PEDY, TALLARINGA.
- EL₂ GARFORD FORMATION UNIT 2: White, fossiliferous dolomitic limestone, dolomite and calcareous clay. Based on T₁ on COOBER PEDY, TALLARINGA.
- EL₃ FORDIA FORMATION: Siliceous, carbonaceous, light, sand, calcareous. Palaeochannel fill.

Eocene-Miocene

- EM₁ EOCENE-MIOCENE UNIT 2: Eocene to Miocene poorly sorted sand, conglomerate sand, calcareous silt, clay, breccia. Based on T₁, COOBER PEDY.
- EM₂ EOCENE-MIOCENE CALCAREOUS-CHERT. Un differentiated Eocene to Miocene calcareous.
- EM₃ EOCENE-MIOCENE CALCAREOUS UNIT 1: Regionally older calcareous, approx. Late Eocene-Mid Miocene.

TERTIARY-PLEISTOCENE

- TP₁ TERTIARY-PLEISTOCENE REGOLITHICOLLOIDAL UNIT 1: Terrigenous, massive, nodular, plastic, calcareous or variegated, variably discoloured and weathered, often with terrigenous clay, terrigenous gravel, sand, silt and clay. Alluvial, calcareous to regolith origin. Early Tertiary to Pleistocene.

CRETACEOUS-PALEOCENE

- CP₁ CRETACEOUS-PALEOCENE DEEP WEATHERING: Un differentiated deep weathering.

CRETACEOUS

- CR₁ BULLDOG SHALE: Mudstone, grey, indurated, fossiliferous and shaly; most all to very fine grained sandstone intervals.
- CR₂ BULLDOG SHALE UNIT 1: Dark brown claystone, "cone-in-cone" structure, this conglomeratic sandstone, characterized by big knobby beds. Based on Q₁, based on AL, MURDOCKPINE.
- CR₃ CRETACEOUS FORMATION: Sandstone, fine grained, with coarse-grained sandstone beds, and pale grey, argillaceous, minor conglomerate.

JURASSIC-CRETACEOUS

- JC₁ ALGEROCKING SANDSTONE: Sandstone, fine to coarse grained, with gravel and pebbles, and small concretions. Greenish-brown.

PERMIAN

- P₁ STUART RANGE FORMATION: Shale, homogeneous massive, with minor siltstone and sandstone. Disrupted in a light water restricted marine environment.

MESOPROTEROZOIC

- M₁ EALBARA RHYOLITE: Rhyolite, flow banded, rhyolitic (granitic), tuff.

PALAEOPROTEROZOIC-MESOPROTEROZOIC

- PM₁ PALAEOPROTEROZOIC-MESOPROTEROZOIC UNIT 2: Un differentiated Eoarchaean and Neoarchaean. Based on P₁ on TALLARINGA.

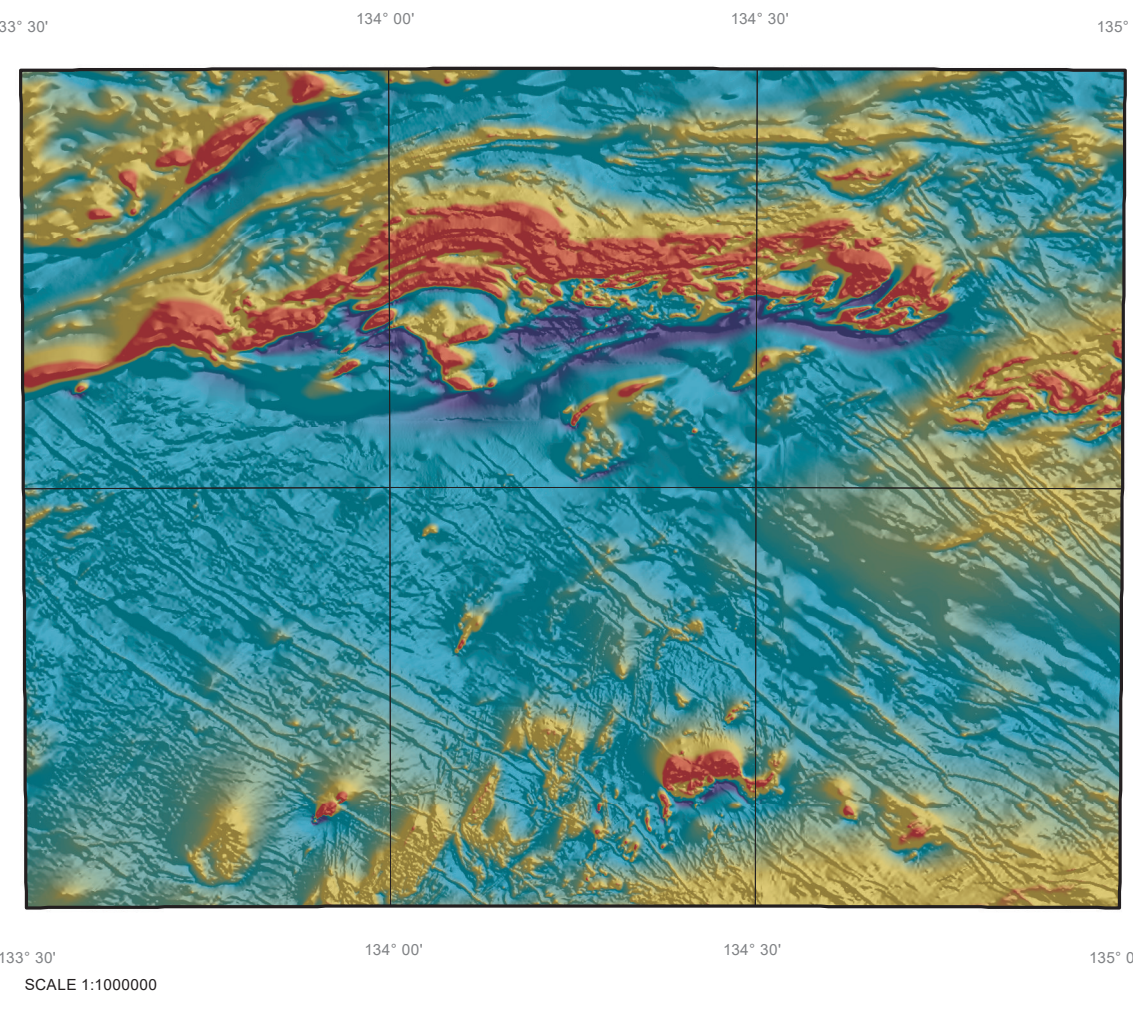
PALAEOPROTEROZOIC

- PP₁ PALAEOPROTEROZOIC UNIT 60: Gneiss, amphibolite dykes, metamorphosed with L&S, L&S, B&O, and L&S.

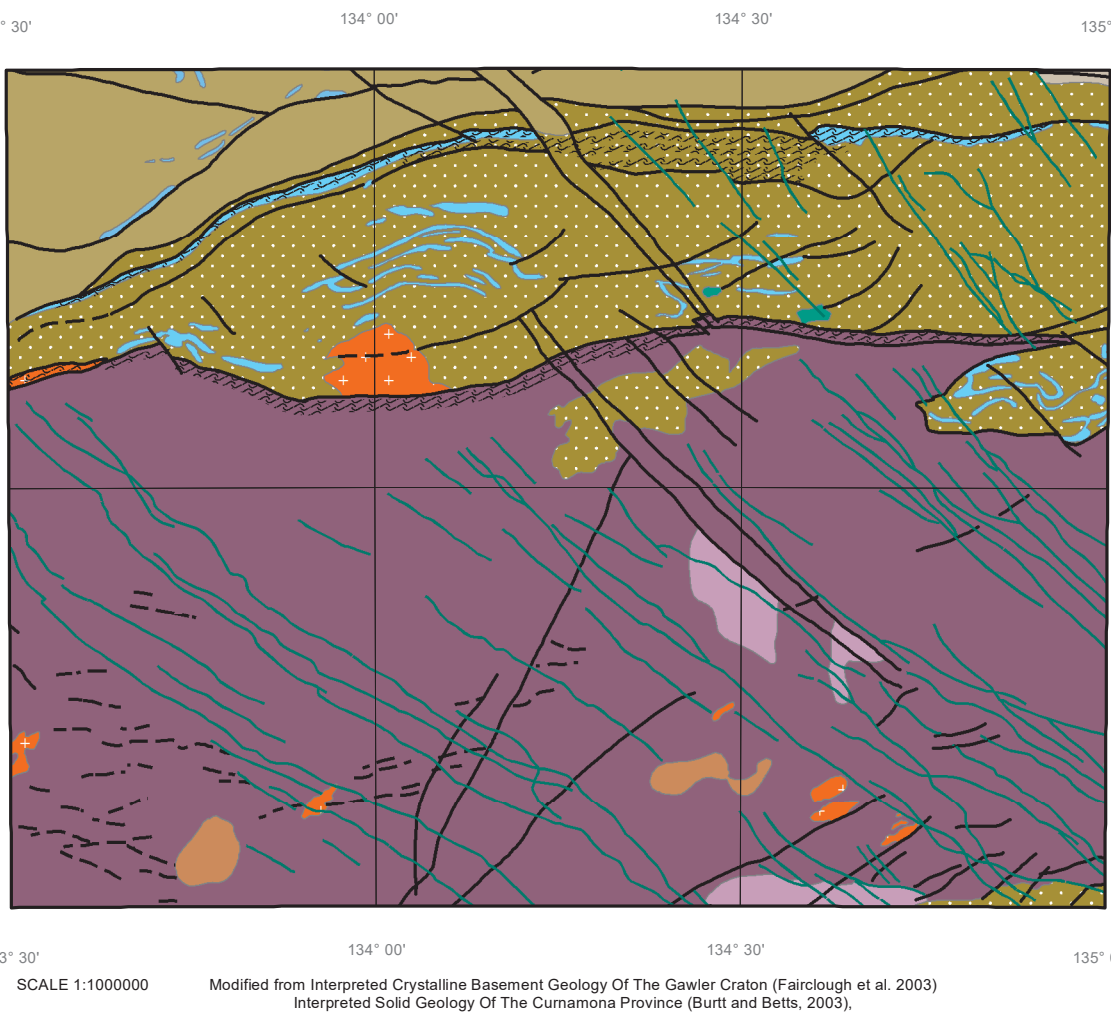
ARCHAEO-PALAEOPROTEROZOIC

- AP₁ MULLAGHING COMPLEX: Paragneiss, anorthositic and aluminous; iron formation, gneiss, granite, and mafic dykes, and intrusive rocks. Granitoid to amphibolite facies. Proterozoic ~2500-2600 Ma.
- AP₂ CHERT: Gneiss: Gneiss with magnetite layers, argillaceous, carbonaceous, calcareous, quartzite. Age 3.0-3.2 Ga. W&S, based on W&S.
- AP₃ CHERT: Gneiss: Gneiss with magnetite layers, argillaceous, carbonaceous, calcareous, quartzite. Age 3.0-3.2 Ga. W&S, based on W&S.
- AP₄ GLENELG GRANITE: Granite, granodiorite, pink-brown to grey, quartz, monzonite and gneissoid. With remnants of gneiss and biotite and hornblende schists. ~2500-2600 Ma.

TOTAL MAGNETIC INTENSITY IMAGE



SOLID GEOLOGY INTERPRETATION



SCALE 1:250,000

KILOMETRES 0 5 10 15 20 25 KILOMETRES

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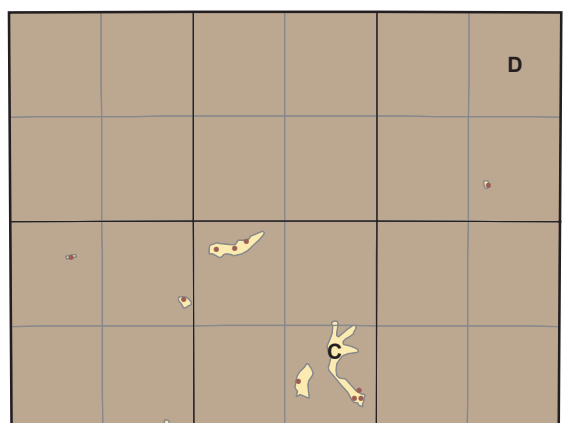
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Computer generated from SA GEOLOGY database (Digital data available upon request)
Current version 2018 Digital

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Grey numbered lines indicate the 10000 metre Map Grid.
Transverse Mercator Projection, Geocentric Datum Australia, 2020.

The lake boundaries displayed on this map may have been derived from geological interpretation and may not match lakes interpreted by topographic mapping authorities. Not all structures are represented on this particular map.
Mapping and Compilation by M.C. Benbow, B.Sc. with contributions by V. Vitols, B.Sc., L.C. Barnes, B.Sc. (hons), G.W. King, B.Sc. (hons), P.A. Rogers, B.Sc. (hons), G.M. Pitt, B.Sc., and A.P. Crooks, B.Sc.

R.C. Coburn, Director, Geological Survey of South Australia.
Geological boundaries displayed on this map have been derived from geological interpretation and are not intended to be used for navigational purposes.
Copies of this map can be obtained from the Department for Energy and Mining SA, Adelaide, 2020.

GEOLOGICAL RELIABILITY DIAGRAM



Coober Pedy sheet published 1981
Geological Field Observations
A: Detailed ground traverses
B: Image interpretation with limited ground traverses
C: Image interpretation with potentially some minor ground traverses
D: Image interpretation only

SCALE 1:250,000

INDEX TO 1:100 000 SHEETS

Yarada 5639	Phillipson 5739	Coober Pedy 5839
Jumbuck 5638	Woorong 5738	Ingomar 5838

INDEX TO ADJOINING 1:250 000 SHEETS

GLEES	MURDOCKPINE	WARRINA
TALLARINGA	COOBER PEDY	BLA BLA
BARTON	TARCOOLA	KINGSWOOD



DIGITAL EDITION
SUBJECT TO AMENDMENT
See published printed map for further information

GEOLOGICAL BOUNDARY

- FLOOD PLAIN
- ESCARPMENT
- GEOLOGICAL BOUNDARY POSITION ACCURATE
- GEOLOGICAL BOUNDARY POSITION APPROXIMATE
- MINING
- DEPOSIT - NO MINING
- MINE - METALS AND INDUSTRIAL MINERALS
- QUARRY - CONSTRUCTION MATERIALS (HARD ROCK)
- DIGGINGS - ALLUVIAL GOLDGEMS

LINEAR STRUCTURES

- ALLUVIAL FAN
- FAULT POSITION ACCURATE
- FAULT POSITION APPROXIMATE
- GILGAI

STRUCTURAL FEATURES

- TECTONIC FOLiation - VERTICAL

CULTURAL FEATURES

- PRINCIPAL ROAD
- SECONDARY ROAD
- MINOR ROADS
- VEHICULAR TRACKS
- OPERATIONAL RAILWAY
- FENCE
- IDENTIFIED POINT
- BUILDING
- YARDS
- LANDING GROUND

HYDROGRAPHIC AND GEOMORPHIC FEATURES

- INTERMITTENT LAKE
- MAJOR WATERCOURSE
- MINOR WATERCOURSE
- FLOODPLAIN
- SWAMP
- WATERHOLE
- BORE
- WATER TANK
- SAND RIDGE

COMMODITIES

- Ag Silver
- ALU Alunite
- COAL Coal
- Fe Iron
- PEST Inert materials - construction materials
- GRNT Granite
- ORAL Opal
- RHYO Rhyolite