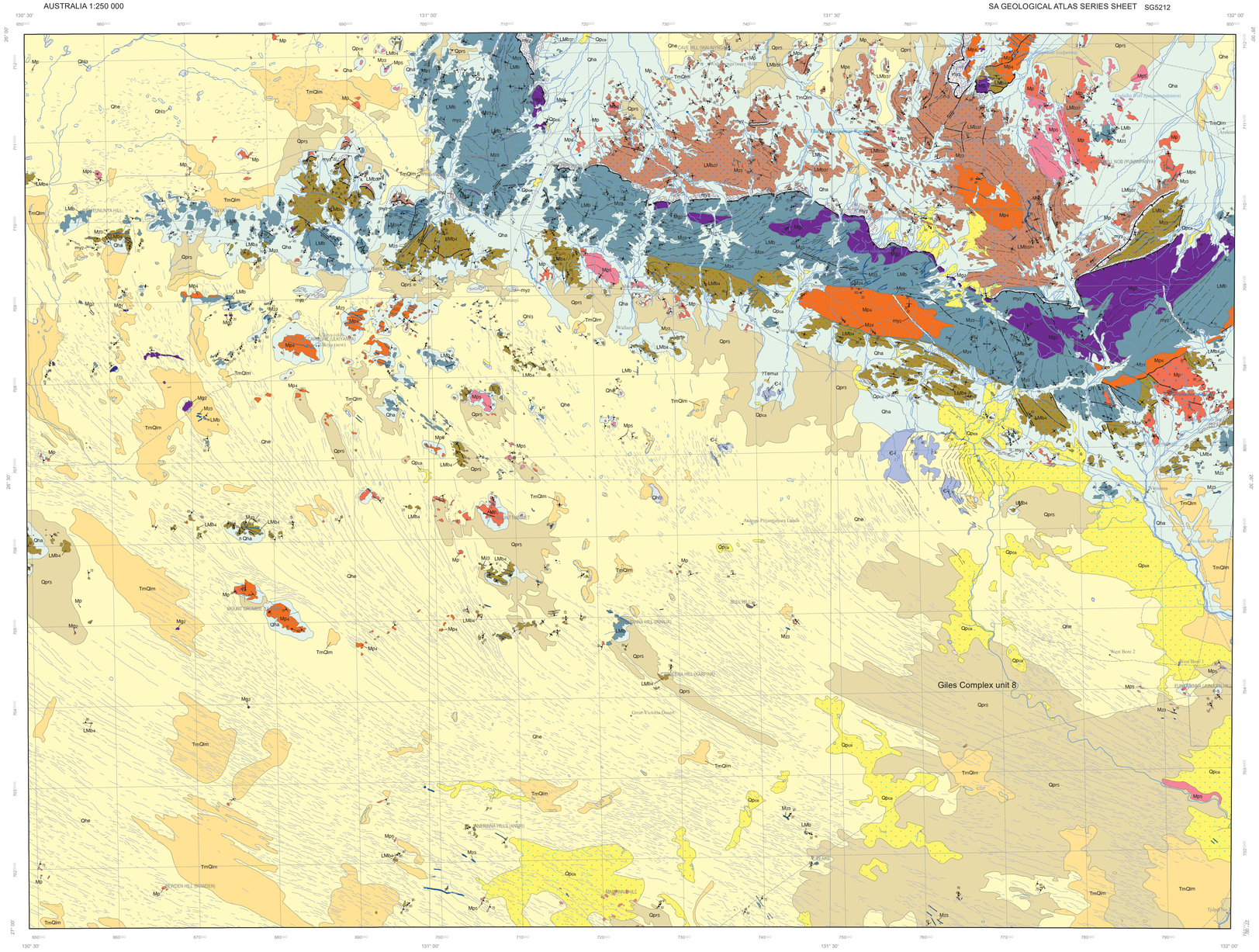
WOODROFFE

GEOLOGICAL SURVEY OF SOUTH AUSTRALIA
DEPARTMENT FOR ENERGY AND MINING

AUSTRALIA 1:250 000

SA GEOLOGICAL ATLAS SERIES SHEET SG5212



REFERENCE

HOLOCENE

- Qha — HOLOCENE ALLUVIAL/FLUVIAL SEDIMENTS: Undifferentiated Holocene alluvial/fluvial sediments.
- Qha_8 — HOLOCENE ALLUVIAL/FLUVIAL UNIT 8: Holocene low angle slope deposits, gibber outwash.
- Qhe — HOLOCENE AEOLIAN SEDIMENTS: Undifferentiated Holocene aeolian sediments.
- Qhl_3 — HOLOCENE LACUSTRINE/PLAYA UNIT 3: Holocene claypan and lagoonal sediments.

PLEISTOCENE-HOLOCENE

- Qa — QUATERNARY ALLUVIAL/FLUVIAL SEDIMENTS: Undifferentiated Quaternary alluvial/fluvial sediments.
- Qe — QUATERNARY AEOLIAN SEDIMENTS: Undifferentiated Quaternary aeolian sediments.

PLEISTOCENE

- Qpr_5 — PLEISTOCENE REGOLITH/COLLUVIAL UNIT 5: Pleistocene red sand with maghemite gravel veneer, typically mulga-covered.
- Qpca — PLEISTOCENE CALCRETE: Undifferentiated Pleistocene calcrete.

MIOCENE-PLEISTOCENE

- TrmQlm — MANGATITJA FORMATION: Limestone to dolostone, micritic, cream, fossiliferous, often with chalcedonic cap; lacustrine. Sandy clay to sandstone, red-brown, calcareous, gritty; granule conglomerate, kaolinitic, arkosic; clay, mottled red and green, alluvial. Palaeochannel fill.

EOCENE-MIOCENE

- ?Temal — EOCENE-MIOCENE SILCRETE UNIT 1: Regionally older silcretic; approx Late Eocene-Mid Miocene.

CAMBRIAN

- C-l — LEVENGER FORMATION: Shale, red; siltstone, laminated; sandstone, arkosic; conglomerate.

MESOPROTEROZOIC

- Mp_{23} — MESOPROTEROZOIC UNIT 23: Undifferentiated dolerite/gabbroic dykes of the Musgrave Block.
- Mp_{24} — MESOPROTEROZOIC UNIT 24: Altered basic dykes in shear zones, Musgrave Block. Based on green unit on WOODROFFE.
- Mp_6 — GILES COMPLEX UNIT 1: Ultrabasic rocks: pyroxenite, picrite. Based on purple unit on WOODROFFE.
- Mp_8 — GILES COMPLEX UNIT 2: Basic rocks: norite, gabbro, anorthosite, troctolite; norite dykes. Based on pale mauve units on WOODROFFE.
- Mp_{12} — PITJANTJATJARA SUPERSUITE: Alkali granite to diorite, primarily quartz monzonite, with orthopyroxene, clinopyroxene, hornblende or biotite, commonly porphyritic, foliated to massive. A to I-type, ~1220-1120 Ma, syn- and post-Musgravian Orogeny.
- Mp_{13} — PITJANTJATJARA SUPERSUITE UNIT 4: Hypersthene adamellite (charnockite). Based on red unit on WOODROFFE and Davies 1-mile (MANN).
- Mp_{25} — PITJANTJATJARA SUPERSUITE UNIT 5: Gneissic granite. Based on pink unit with lines on WOODROFFE.
- Mp_{26} — PITJANTJATJARA SUPERSUITE UNIT 6: Granite with accessory allanite. Based on pink unit with dots on WOODROFFE.

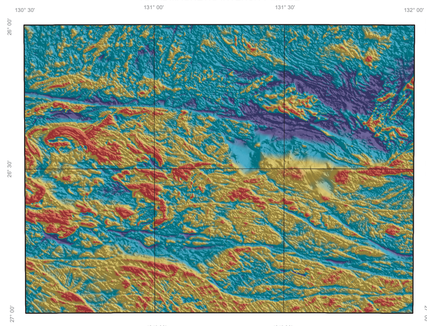
PALAEO-MESOPROTEROZOIC

- LMb — BIRKSGATE COMPLEX: Gneiss, quartzofeldspathic; orthogneiss, felsic to ultramafic; paragneiss, pelitic to calcic; iron formation. Granulite to amphibolite facies. Protolith ages ~1680-1550 Ma.
- LMb_4 — BIRKSGATE COMPLEX UNIT 4: Altered granulite and gneissic granulite.
- LMb_{37} — BIRKSGATE COMPLEX UNIT 37: Altered granulite and gneissic granulite.

MISCELLANEOUS

- my_2 — MYLONITE UNIT 2: Shear zones, mylonite, cataclasite of Musgrave Block.

TOTAL MAGNETIC INTENSITY IMAGE



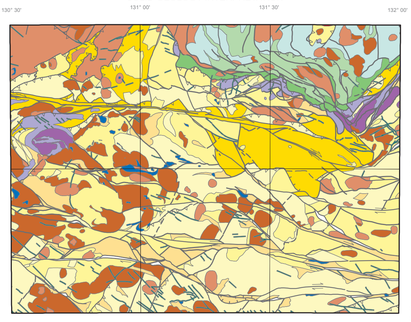
SCALE 1:1000000

The Total Magnetic Intensity Image has been compiled using aeromagnetic data from the Department for Energy and Mining, South Australia. Aeromagnetic data have been merged, gridded and image processed by the Geological Survey of South Australia.

nTesla: -5103.733 | -732.66 | 23.082 | 778.824 | 4736.282

A two standard deviation contrast stretch has been applied to the raster image above.

SOLID GEOLOGY INTERPRETATION



SCALE 1:1000000

Modified from Interpreted Crystalline Basement Geology Of The Gawler Craton (Fairclough et al. 2003)
Interpreted Solid Geology Of The Curnamona Province (Burtt and Betts, 2003),
Musgrave Block, Central Australia: regional geology from interpretation of aeromagnetic data (Rankin and Newton, 2002), Solid Geology South Australia (Cowley, 2006).

Solid Geology

MN3	Mesoproterozoic-Neoproterozoic unit 3	Mp12	Pitjantjatara Supersuite unit 12	Mr26	Unnamed GIS Unit - see description
MN4	Mesoproterozoic-Neoproterozoic unit 4	Mp13	Pitjantjatara Supersuite unit 13	L-o2	Unnamed GIS Unit - see description
Mr1	Angatja Granite	Mr23	Unnamed GIS Unit - see description	L-o3	Unnamed GIS Unit - see description
Mp8	Giles Complex unit 8	Mr24	Unnamed GIS Unit - see description	L-o4	Unnamed GIS Unit - see description
Mp9	Giles Complex unit 9	Mr25	Unnamed GIS Unit - see description	my2	mylonite unit 2

Solid Geology - Linear Structure

- Fault position accurate
- Fault position approximate
- Fault normal ticks on younger rocks
- Fault reverse approximate triangles upthrown side
- Fault wrench dextral
- Fault wrench dextral approximate
- Fault wrench sinistral
- Fault reverse triangles upthrown side

SCALE 1:250,000

KILOMETRES 5 0 5 10 15 20 25 KILOMETRES

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2020

Topographic detail based on TOPO-250K GEODATA (source scale 1:250 000) supplied by Geoscience Australia - National Mapping Division, ACT. The relationship between this data and DEM data is not guaranteed.

Computer generated from SA_GEOLOGY database
(Digital data available upon request)
Current version 2018.Digital

Product of Spatial Information Services.
Published by, and with the authority of, the Department for Energy and Mining SA.

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.

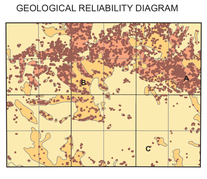
Mapping and Compilation by R.B. Flint, B.Sc.(Hons), J.E. Johnson, B. Leeson, B.Sc.(Hons), and R.C. Mirams, B.Sc.

R.C. Cobcroft, 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



Woodroffe sheet published 1967 SCALE 1:2000000

Geological Field Observations

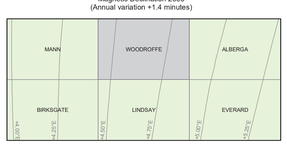
A: Detailed ground traverses
B: Image interpretation with limited ground traverses
C: Image interpretation with potentially some minor ground traverses
D: Image interpretation only

INDEX TO 1:100 000 SHEETS

Caroline 5045	Davenport 5145	Woodroffe 5245
Crombie 5044	Carbeena 5144	Eunyarinna 5244

INDEX TO ADJOINING 1: 250 000 SHEETS

Magnetic Declination 2000
(Annual variation +1.4 minutes)



DIGITAL EDITION

SUBJECT TO AMENDMENT

See published printed map for further information

GEOLOGICAL BOUNDARY

- GEOLOGICAL BOUNDARY POSITION ACCURATE
- GEOLOGICAL BOUNDARY POSITION APPROXIMATE

LINEAR STRUCTURES

- FAULT INFERRED
- FAULT POSITION ACCURATE
- FAULT THRUST TRIANGLES ON UPTHROWN SIDE
- FOLD AXIAL LINES POSITION ACCURATE
- FOLIATION TREND METAMORPHIC
- SHEAR ZONE
- TREND-LINE

STRUCTURAL FEATURES

- ORIGINALLY HORIZONTAL SEDIMENTARY BEDDING
- LINEAR STRUCTURAL ELEMENT - HORIZONTAL
- LINEAR STRUCTURAL ELEMENT
- TECTONIC FOLIATION - HORIZONTAL
- TECTONIC FOLIATION - VERTICAL
- TECTONIC FOLIATION
- Z-STYLE STRATIGRAPHIC FOLD AXIS

CULTURAL FEATURES

- ANTICLINE
- FAULT DISPLACED RELATIVE HORIZONTAL - LEFT, RIGHT
- FAULT DISPLACED RELATIVE HORIZONTAL - RIGHT, LEFT
- SYNCLINE
- MINOR ROADS
- VEHICULAR TRACKS
- FENCE
- IDENTIFIED POINT
- LANDING GROUND

HYDROGRAPHIC AND GEOMORPHIC FEATURES

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

Government of South Australia
Department for Energy and Mining

GDA2020

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