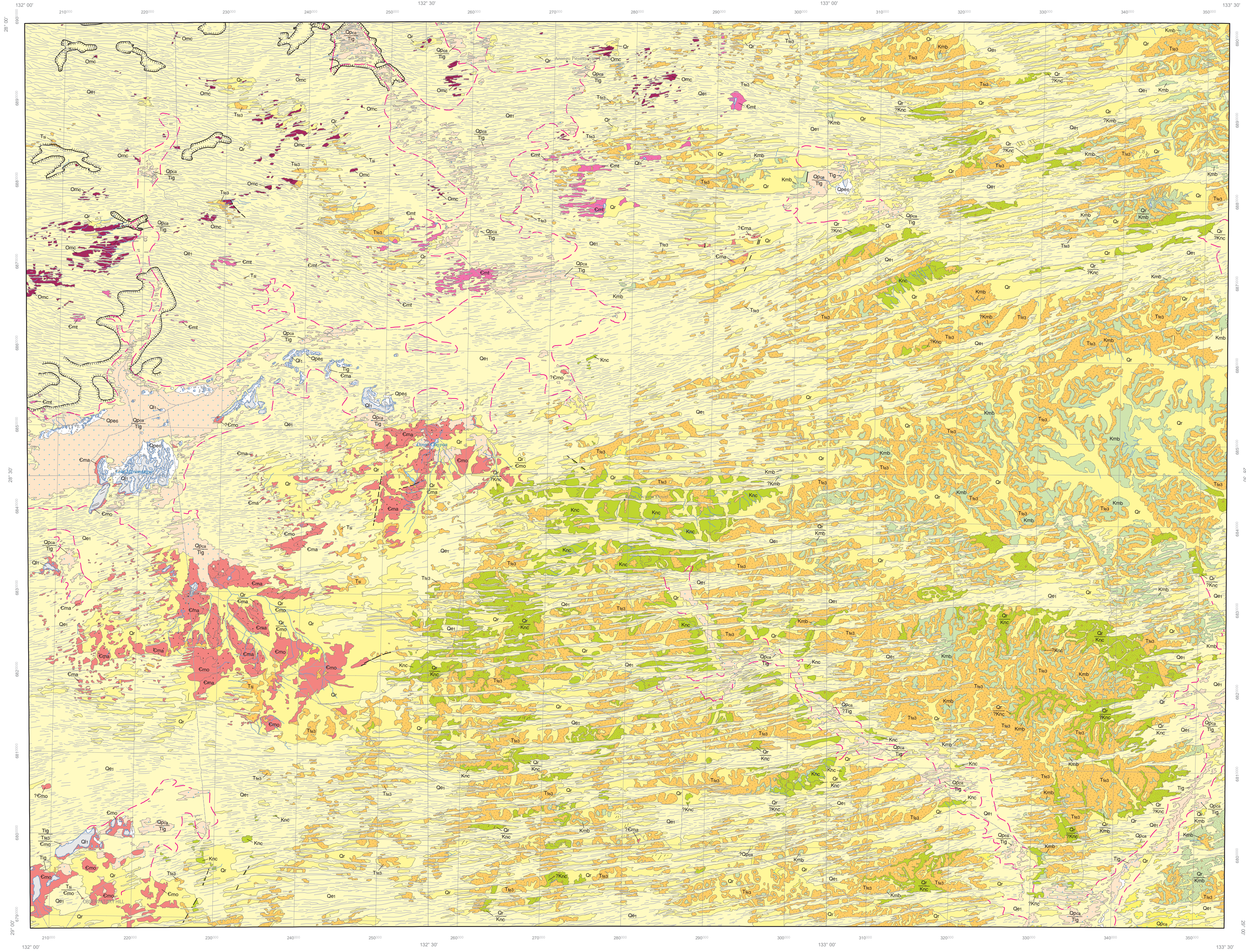


# GILES

GEOLOGICAL SURVEY OF SOUTH AUSTRALIA  
DEPARTMENT FOR ENERGY AND MINING

SA GEOLOGICAL ATLAS SERIES SHEET SH5301

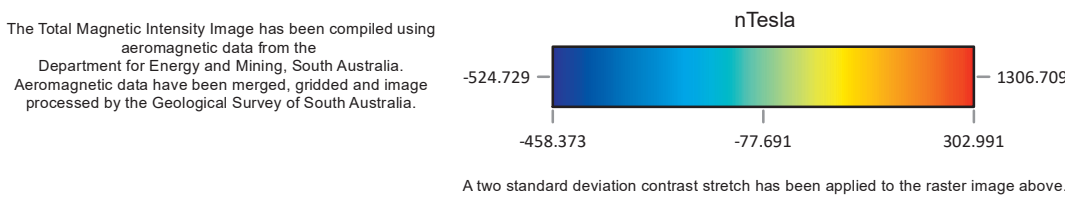
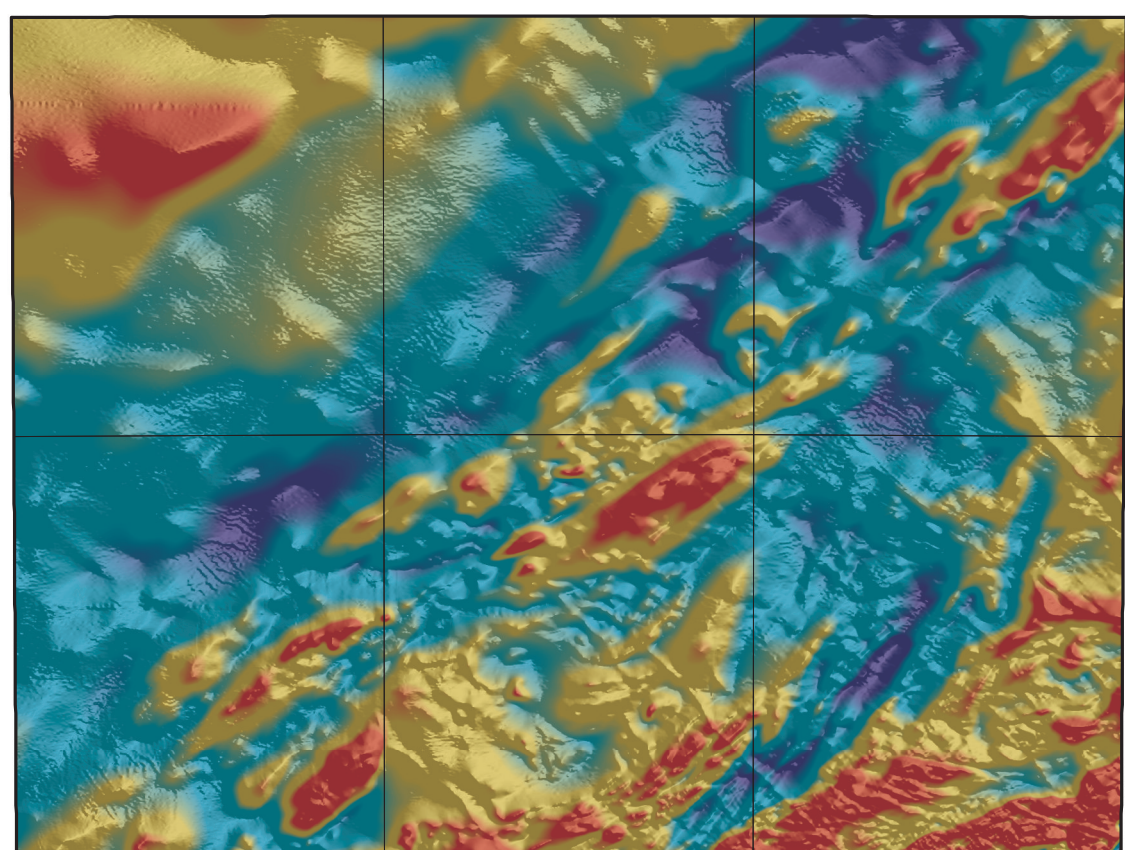
AUSTRALIA 1:250 000



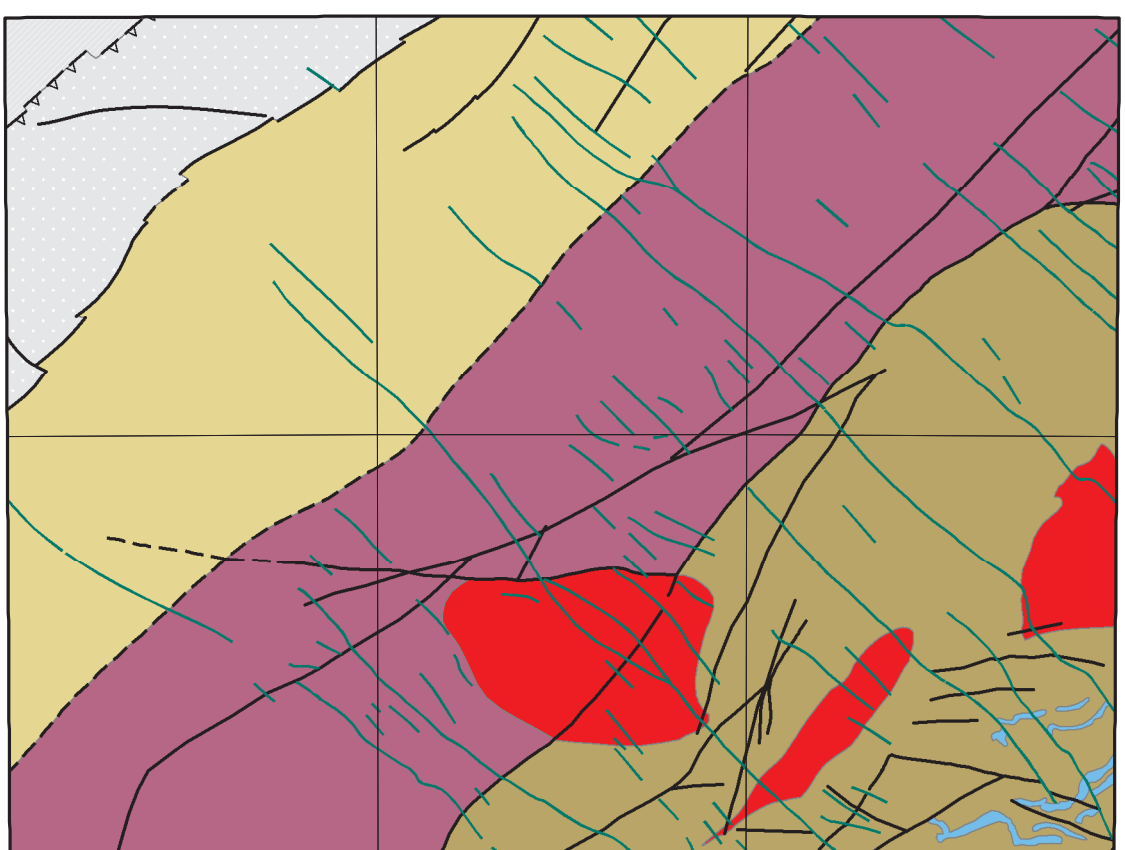
## REFERENCE

PLEISTOCENE-HOLOCENE	
Qh <sub>1</sub>	QUATERNARY AECIUM UNIT 1: Quaternary dunefield sands.
Ql <sub>1</sub>	QUATERNARY LACUSTRINE/PLAYA UNIT 1: Quaternary plays and lacustrine.
Qr	QUATERNARY REGOLITH/COLLUVIAL SEDIMENTS: Undifferentiated Quaternary colluvial/regolith sediments.
PLEISTOCENE	
Qp <sub>1a</sub>	PLEISTOCENE CALCRETE: Undifferentiated Pleistocene calcrete.
Qp <sub>1b</sub>	PLEISTOCENE AECIUM UNIT 6: Pleistocene gossiflorous and quartz sand in lunettes. BARTON sheet.
EOCENE-PLEISTOCENE	
Tg	GARFORD FORMATION: Mudstone, carbonate, stromatolitic, oncoid and calcic, gypsiferous, minor sandstone and grit horizons. Upward change from argillaceous to carbonate mudstone. Luccombe to flood plain.
TERTIARY	
Ts	TERTIARY SILTCLITE: Undifferentiated Tertiary siltclite.
Tm <sub>1</sub>	TERTIARY FERRUGINEOUS UNIT 3: Tertiary ferruginous duricrust of the Carradine Surface, developed on Mesozoic and Palaeozoic units.
CRETACEOUS	
Kmb	BULLDOGS SHALE: Mudstone, grey, bituminated, fossiliferous and shaly; minor oil to very fine-grained sandstone intervals.
K-c	CADAM-OWIE FORMATION: Sandstone, fine-grained, with coarse-grained sandstone beds, and pure grey siltstone, minor conglomerate.
CARBONIFEROUS-PERMIAN	
CPb	SOUTHAMPTON FORMATION: Diastrophite with shale intercalations in the basal unit, the upper unit with rhyolite dykes and fine-grained sandstone. Subsequent deposition of glacial debris transported as mud flows.
ORDOVICIAN-SILURIAN	
On	MOUNT CHANDLER SANDSTONE: Quartz sandstone, well rounded, fine to medium-grained, white, cross-bedded with heavy internal erosion. Sandstone, siltstone, limestone, orange to reddish, minor layers of dolomite and quartz pebbles.
CAMBRIAN	
Em	EMU SANDSTONE: Sandstone, well-sorted, lenticular, siltstone, calcareous, white, grey, red-brown, siltstone and claystone, calcareous, well-sorted, pebbly horizons.
Em <sub>1</sub>	ARCOSCELLINA SANDSTONE: Sandstone, red-brown, very fine to medium-grained, moderately well-sorted and immature, interbedded with claystone and siltstone. Also minor pebbly horizons. Clasts of quartzite.
Em <sub>2</sub>	OBSERVATORY HILL FORMATION: Siltstone and claystone, micaceous, calcareous and dolomitic in part, minor sandstone, limestone and dolomite. Minor chert.

TOTAL MAGNETIC INTENSITY IMAGE



SOLID GEOLOGY INTERPRETATION

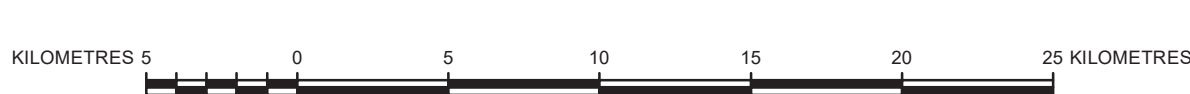


Solid Geology	
Mh	Hibba Suite
LM10	Palaeoproterozoic-Mesoproterozoic unit 10
LM9	Palaeoproterozoic-Mesoproterozoic unit 9
AM1	Archean-Mesoproterozoic unit 1
L40	Palaeoproterozoic unit 40
L38	Palaeoproterozoic unit 38
L39	Palaeoproterozoic unit 39
Gd	Gairdner Dolomite

Solid Geology - Linear Structure

Fault position accurate	—
Fault position approximate	- - -
Fault reverse approximate triangles upthrown side	▲
Fault reverse verges upthrown side	▲

SCALE 1:250,000



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

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

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Gray 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.

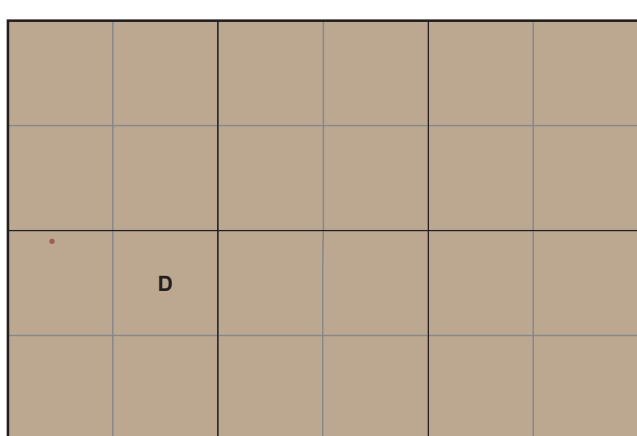
Mapping and Compilation by G.W. Knap, B.Sc.(Hons), and P.A. Rogers, B.Sc.(Hons)

R.C. Colborn, 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



Giles sheet published 1998  
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 1:2000000

INDEX TO 1:100 000 SHEETS

Meramangye S341	Wiliari S441	Mamallia S541
Emu S340	Tarlina S440	Alinya S540

INDEX TO ADJOINING 1:250 000 SHEETS

LINDSAY	EVERARD	WINTINNA
WELLS	GILES	MURDOCKVILLE
MAURICE	TALLANGA	ODDERFELD



CULTURAL FEATURES

VEHICULAR TRACKS	.....
IDENTIFIED POINT	●
YARDS	□
LANDING GROUND	×

LINEAR STRUCTURES

ESCARPMENT	=====
ESCARPMENT APPROXIMATE, TOPOGRAPHIC	=====
DEPRESSION	=====
FAULT POSITION ACCURATE	=====
FAULT POSITION APPROXIMATE	=====
PALEOCHANNEL TRACE	=====
TREND-LINE	=====

HYDROGRAPHIC AND GEOMORPHIC FEATURES

INTERMITTENT LAKE	=====
MINOR WATERCOURSE	=====
SAND RIDGE	=====

GEOLOGICAL BOUNDARY

GEOLOGICAL BOUNDARY POSITION ACCURATE	=====
GEOLOGICAL BOUNDARY POSITION APPROXIMATE	=====

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