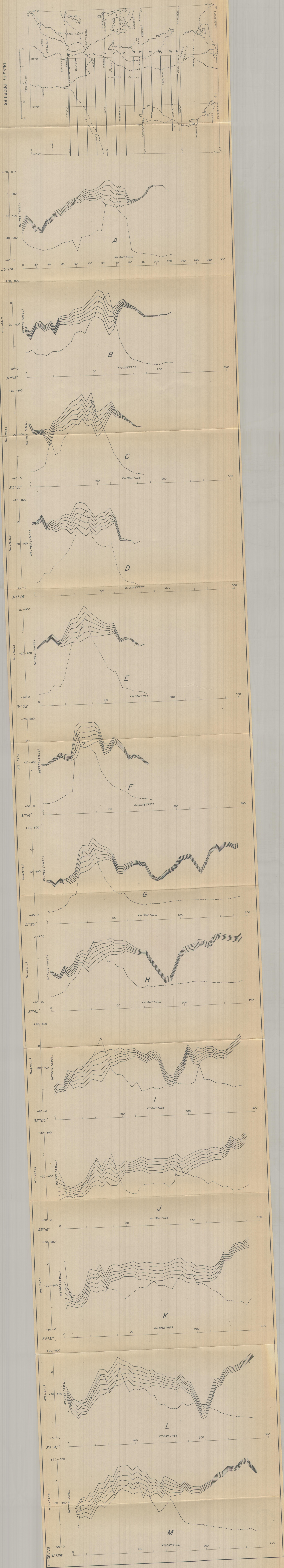


Fig. 8.3





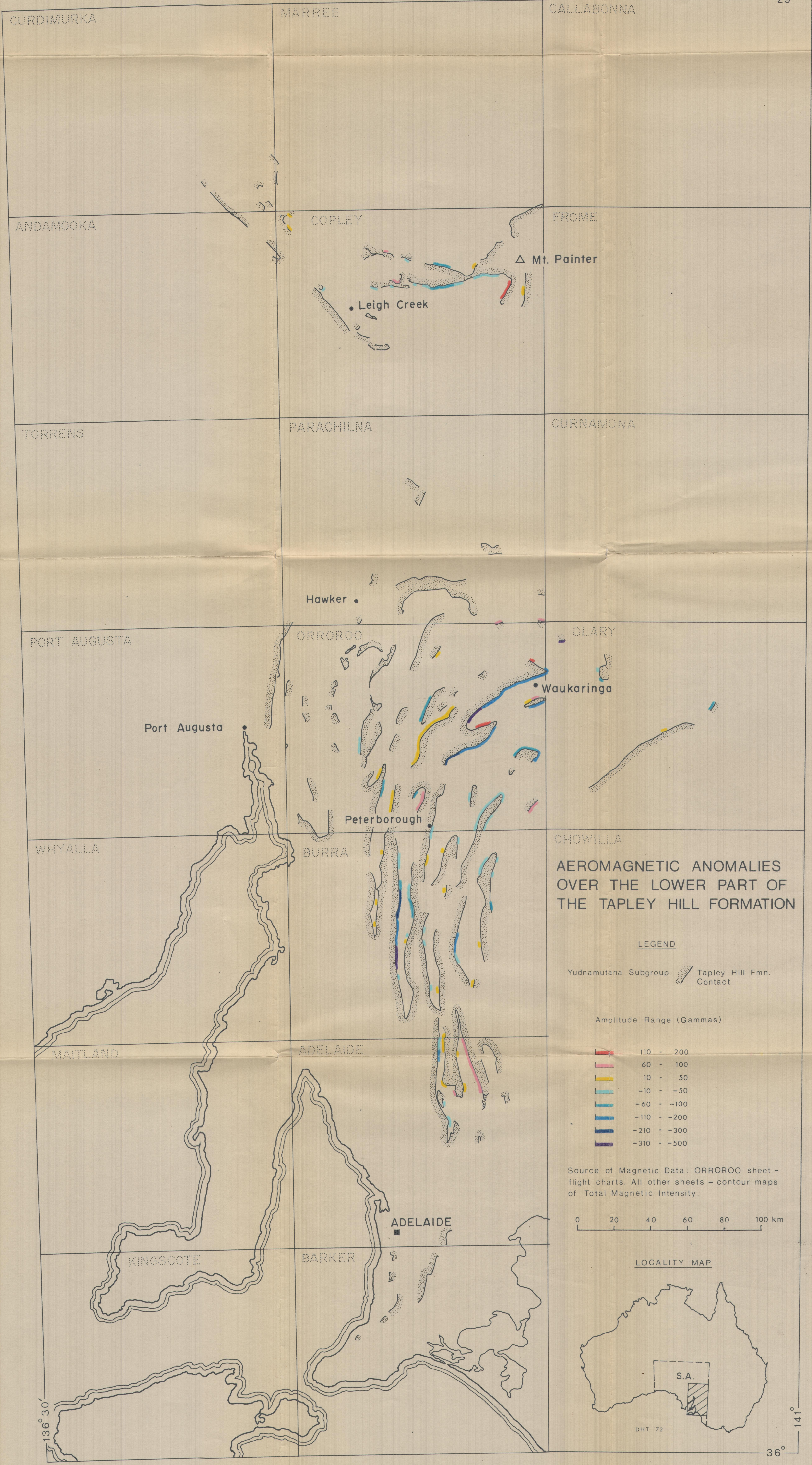
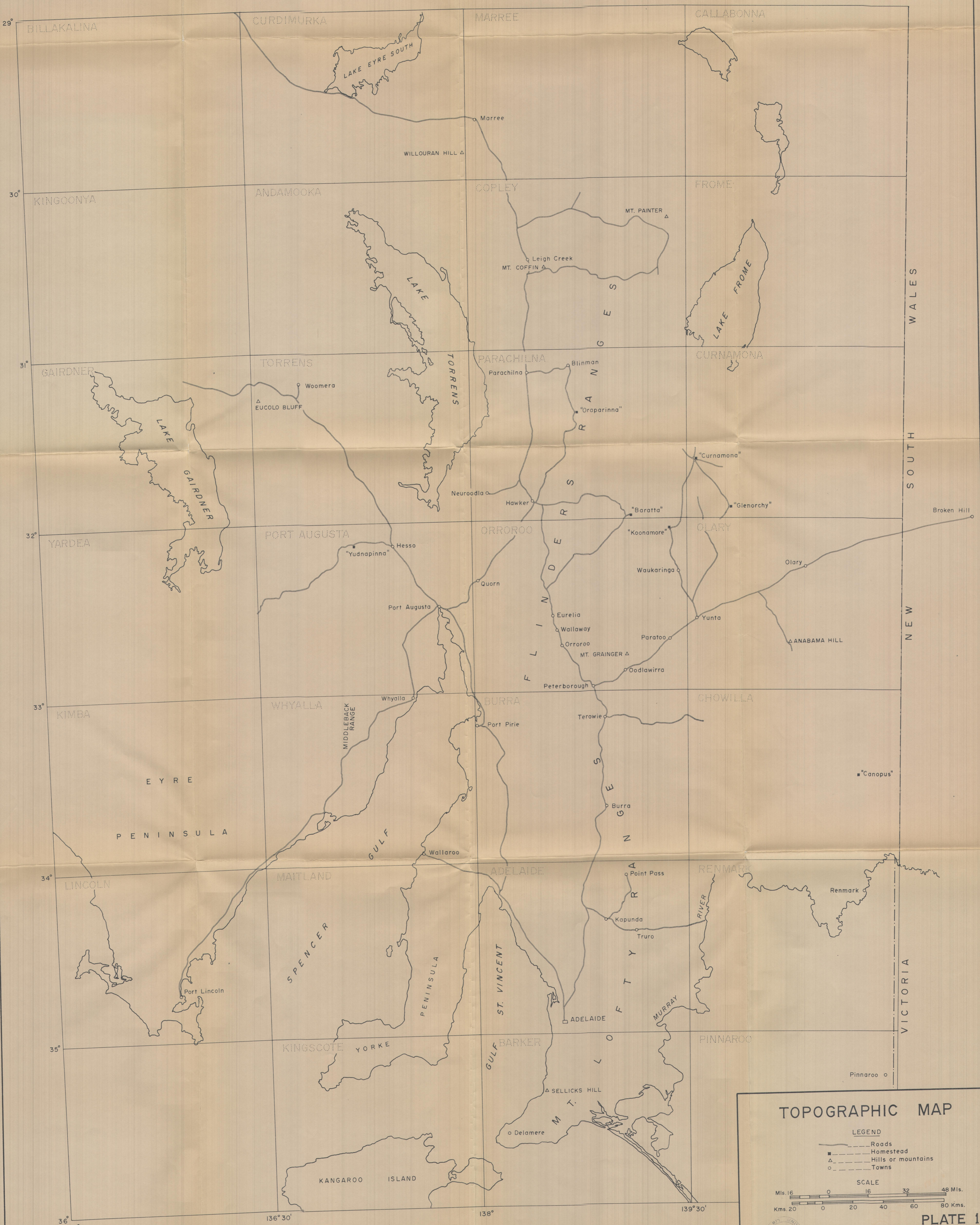


Fig. 5-1 (Pocket)





**TOPOGRAPHIC MAP**

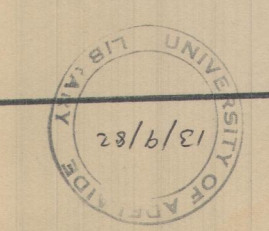
**LEGEND**

- Roads
- Homestead
- △ Hills or mountains
- Towns

**SCALE**

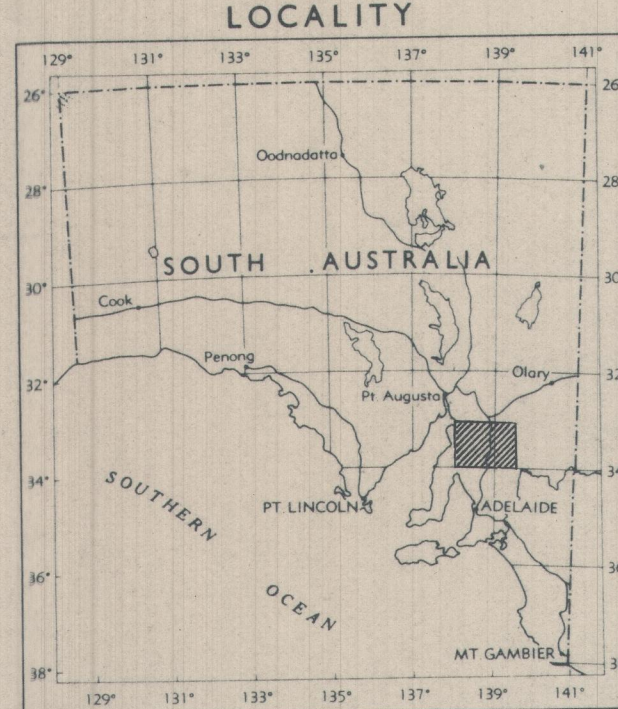
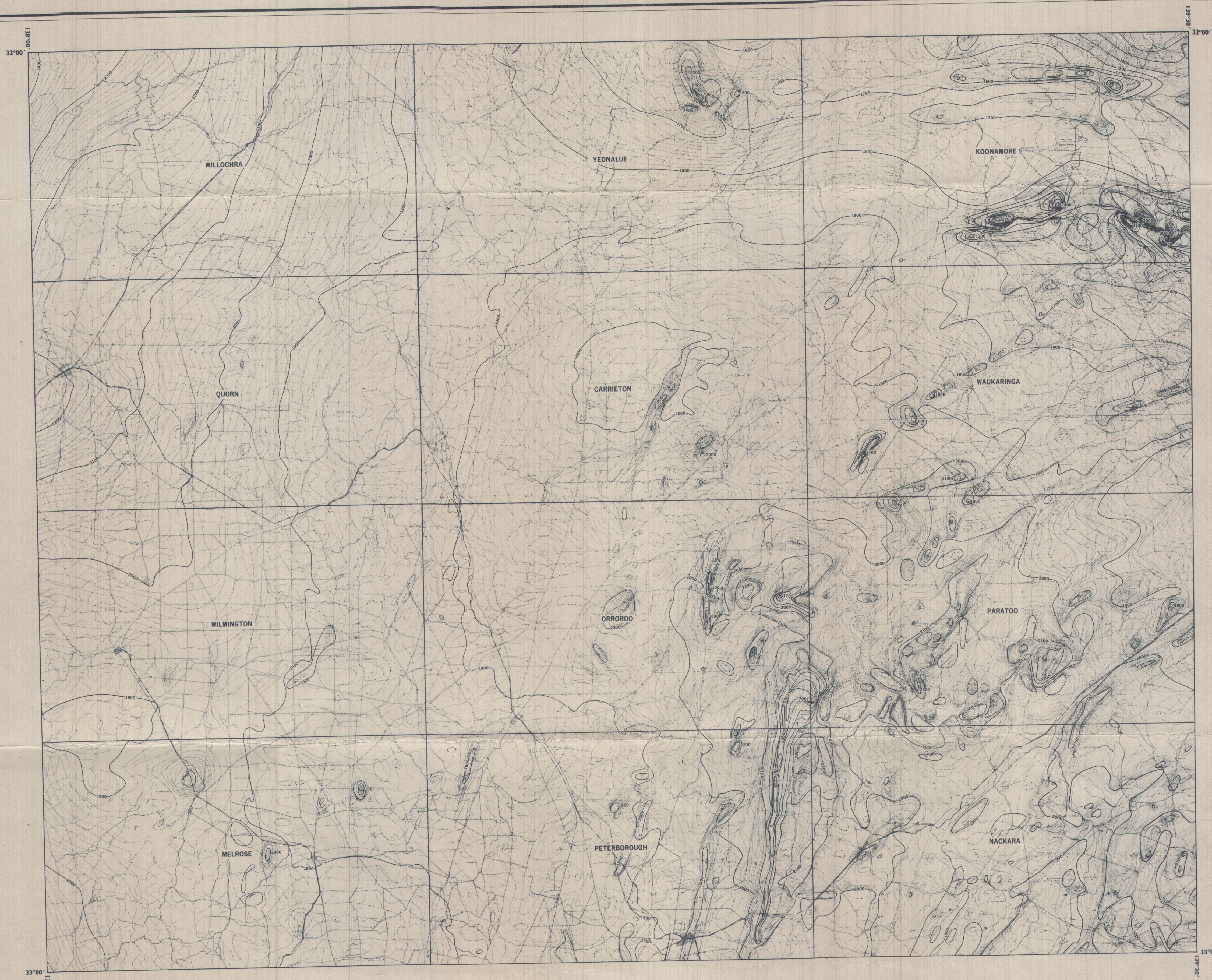
Mls. 16 0 16 32 48 Mls.  
Kms. 20 0 20 40 60 80 Kms.

**PLATE 1**



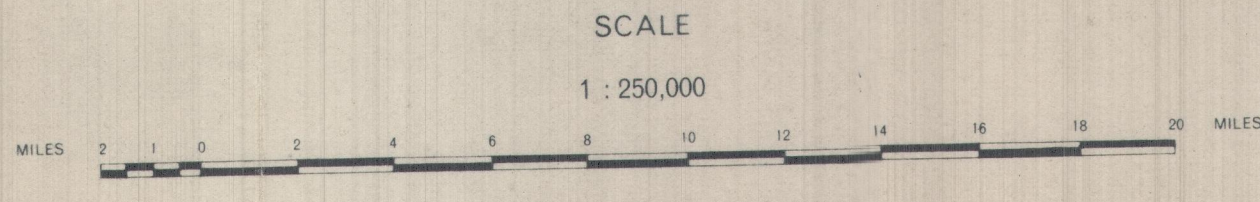
23/6/01  
1631  
Hd60





**INDEX TO ADJOINING SHEETS**

TORRENS	PARACHILNA	CURNAMONA
PORT AUGUSTA	ORROROO	OLARY
WHYALLA	BURRA	CHOWILLA



**AEROMAGNETIC MAP  
 OF TOTAL INTENSITY**

**NOTE**  
 This map is compiled from airborne magnetometer surveys conducted by the Bureau of Mineral Resources for the S.A. Department of Mines.  
 The total magnetic intensity at 500 feet above ground level was recorded continuously. The contours are corrected for normal regional gradient. Uncontoured photographic assemblies were used to navigate flight lines and controlled base maps indicate aircraft's actual flight course as recorded on photographs taken with a 35 mm. camera.  
 Results reduced by S.A. Dept. of Mines, Exploration Geophysics Section, under the control of the Supervising Geologist.  
 Compiled under the direction of T. A. Barnes, M.Sc., Government Geologist.  
 Issued under the authority of the Honourable S. C. Bevan, M.L.C., Minister of Mines.

**LEGEND**  
 MAGNETIC CONTOURS (values in gammas)   
 Roads shown thus:

G. F. Whitten, M.Sc., Supervising Geologist

This 1 : 250,000 map reduced by the S.A. Dept. of Mines from published 1 mile sheets.



09PH  
1891  
v.2  
c.2

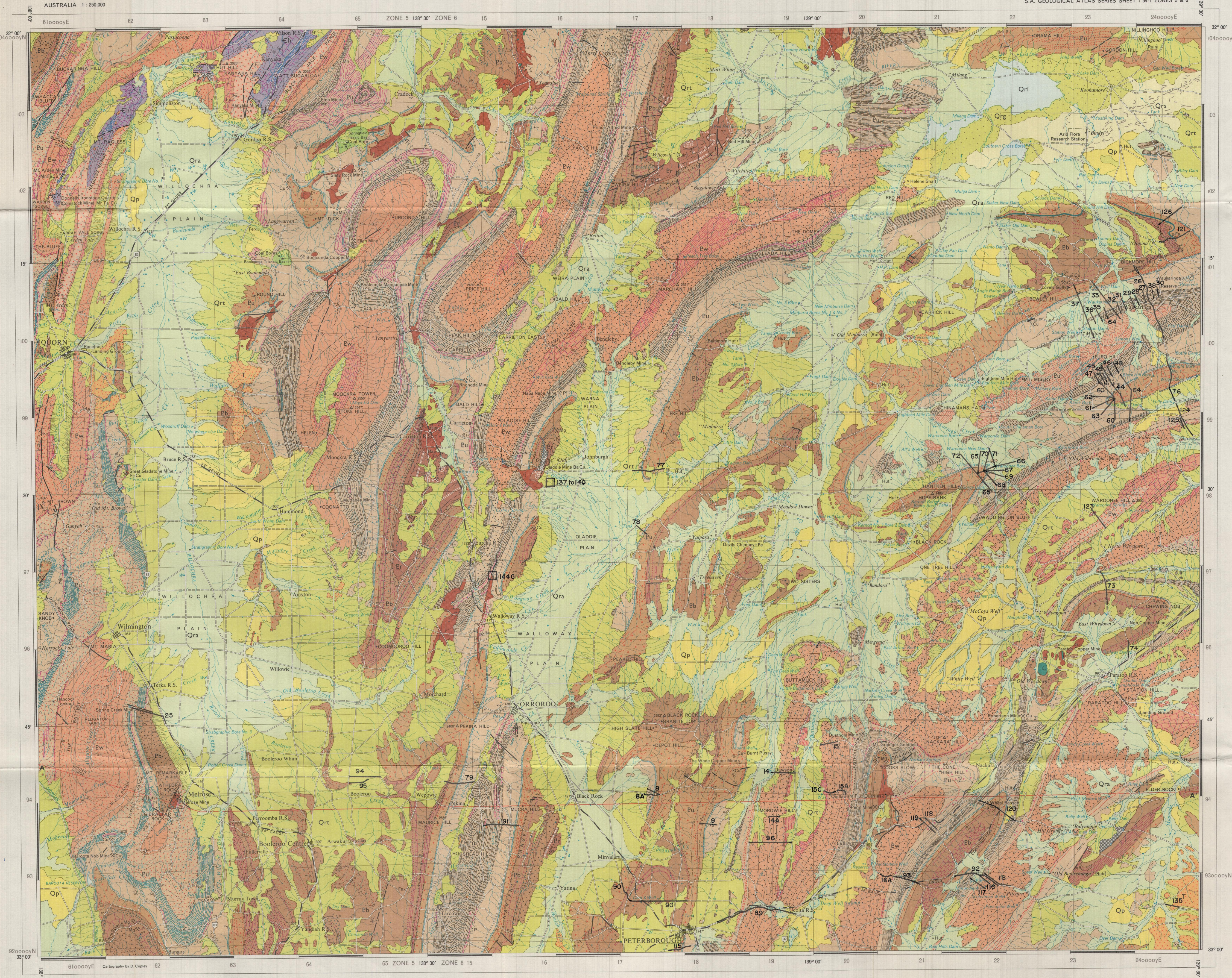


# ORROROO

GEOLOGICAL SURVEY OF SOUTH AUSTRALIA  
DEPARTMENT OF MINES ADELAIDE

S.A. GEOLOGICAL ATLAS SERIES SHEET 1 54-1 ZONES 5 & 6  
1:250,000

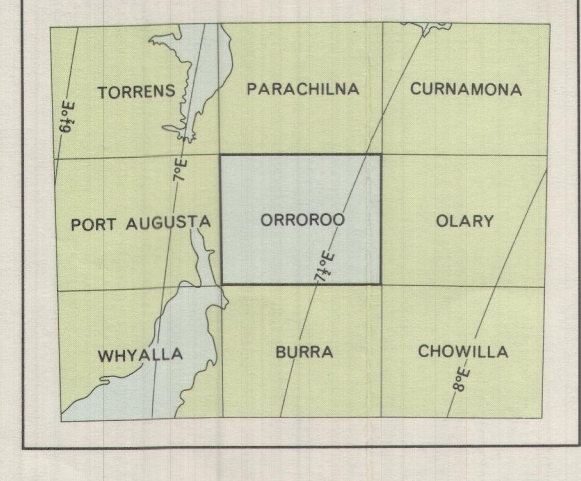
FIRST EDITION 1968



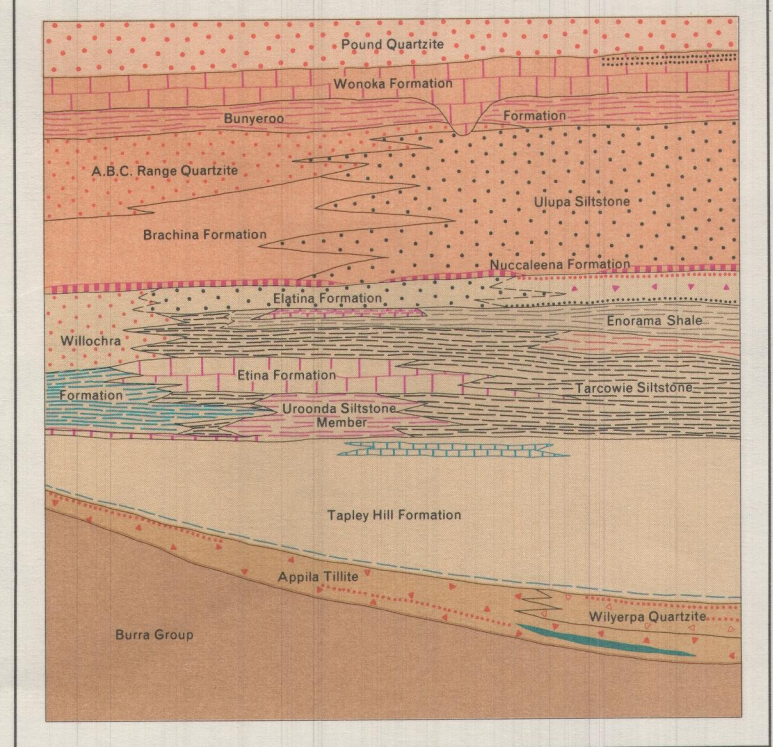
### REFERENCE

Qrl	Gypsiferous clays, silts and quartz sands of lakes (normally dry).
Qra	Alluvium of drainage channels and flood plains.
Qrt	Low angle slope deposits.
Qrs	Scree deposits.
Qrg	Dune sands and sand spread.
Qp	Gypsiferous sands and silts.
T	TELFOUR GRAVEL: Dissected gravels, frequently cemented by calcareous, covering red-grey mottled clays.
T	High level silcreted gravels. Latentes in south-eastern corner.
T	White sands and silts, locally coarse-grained and cross-bedded; ferreticreted and silcreted.
R	Carbonaceous shales and argillites with impure coal seams and interbedded fine-grained sandstone. Local conglomerates at base.
Ch	ORAPARINA SHALE: Grey-green shale with minor limestone lenses.
Ch	PARARA LIMESTONE: Dark, flaggy and silty limestones with interbedded shales.
Ch	WILKAWILLINA LIMESTONE: Massive grey limestone with <i>Archaeocyathus</i> .
Ch	PARACHILINA FORMATION: Argillaceous sandstone with oolitic and shaly lenses.
Ch	POUNDQUARTZITE: Massive white quartzite above red feldspathic sandstone. White quartzite above red-grey siltstone at Waroonee Hill.
Ch	WONOKA FORMATION: Grey calcareous siltstones and shales with flaggy limestone interbeds. Thin beds of white quartzite near by around Waroonee Hill. Local sedimentary discordances with underlying units near Mt. Brown, Panatta Pass, and east of Paratoo Hill. Slump conglomerates locally near base.
Ch	BUNYEROD FORMATION: Red-brown, finely-laminated shale.
Ch	A.B.C. RANGE QUARTZITE: White quartzite with interbedded red-brown and grey-green siltstones near base. Thinly bedded to east.
Ch	ULUPA SILTSTONE: Red-brown weathering, grey-green siltstone and minor sandstone. Thin bands of white sandstone near top around Buttermilk Hill.
Ch	BRACHINA FORMATION: Reddish, well-laminated siltstone and shale occurring in west of area.
Ch	ULUPA SILTSTONE.
Ch	NUCCAENA FORMATION: Lenticular, buff-weathering pink dolomite.
Ch	GRAMPUS QUARTZITE: Feldspathic, off-white sandstone, locally arenaceous.
Ch	PEPIARTA TILLITE: Grey-green massive siltstone, local occurrences of boulder tillite.
Ch	GUARDHOUSE MEMBER: White feldspathic sandstone.
Ch	TREZONA FORMATION: Grey limestone with red shale flake breccia north of Marchant Hill.
Ch	ENORAMA SHALE: Green, well-laminated calcareous shale and siltstone.
Ch	WAKARINGA SILTSTONE MEMBER: Blue-grey, well-laminated siltstone with limestone interbeds near base.
Ch	ETINA FORMATION: Buff-weathering, grey, sandy and oolitic limestone.
Ch	WONOKA SILTSTONE MEMBER: Grey-green, poorly-bedded siltstone and fine-grained sandstone. Local thin interbeds of red-brown shale.
Ch	WILLOCHRA FORMATION: Unnamed upper member: Red-brown and blue-grey sandstone, minor siltstones with lenses of granular sand and sandy limestone.
Ch	TARCOWIE SILTSTONE: Grey-green, well-bedded siltstone and minor sandstone, frequently ripple-marked. Local thin interbeds of red-brown shale in west of area.
Ch	WILLOCHRA FORMATION: Unnamed lower member: Flaggy red-brown siltstone with ripple-marked shale partings. Thin interbeds of green sandstone and sandy limestone.
Ch	Pink and grey dolomite and limestone with algae. Locally sandy.
Ch	TAPLEY HILL FORMATION: Flaggy, well-laminated, blue-grey siltstone. Calcareous near top with thin bands of interbedded limestone, closely laminated beds with interbedded breccia bands south-west of Orans Hill. Slump conglomerates and breccia bands locally near base. Thin sandstone band at top near Waskaranga.
Ch	TRIDELPINA SHALE MEMBER: Finely-laminated, carbonaceous and argillaceous shales with thin dolomite interbeds near base.
Ch	WILYERPA QUARTZITE: Pale-grey, feldspathic sandstones with interbedded argillaceous and tillite bands.
Ch	APPIA TILLITE: Massive boulder tillite with interbedded siltstones and sandstones.
Ch	HOLOWILENA IRONSTONE: Hematite and magnetite siltstone.
Ch	Grey, green-grey laminated siltstone and minor dolomite (TADLUNG SLATE).
Ch	Pale-grey, fine to medium-grained quartzite; partly laminated (GILBERT RANGE QUARTZITE).
Ch	Grey, green-grey siltstone, partly sandy, boldly outcropping, partly laminated; minor fine-grained quartzite (TINTARO SHALE).
Ch	Grey, green-grey laminated siltstone and dolomite (SADDLE-WORTH FORMATION EQUIVALENT).
Ch	MINBURRA QUARTZITE: Pale-grey to brownish, fine to medium-grained, cross-bedded quartzite (possible upper member of AUBURN DOLOMITE).
Ch	NACKARA DOLOMITE: Dark-grey laminated dolomite, grey siltstone, minor quartzite in some areas.
Ch	CRADOCK QUARTZITE: Pale-grey, medium to coarse-grained clayey and feldspathic quartzite, siltstone, silty dolomite (probable equivalent of WATERVALE SANDSTONE MEMBER of AUBURN DOLOMITE).
Ch	Grey, green-grey cross-bedded siltstone, dolomite and quartzite (lower AUBURN DOLOMITE EQUIVALENT).
Ch	UNDALYA QUARTZITE: Pale-grey, medium and coarse-grained feldspathic quartzite, minor siltstone and dolomite.
Ch	SKILLOGALE DOLOMITE: Upper part mainly dark-grey dolomite, chert, magnetite conglomerate, lower part siltstone, pale-grey dolomite and quartzite.
Ch	RHYNE SANDSTONE: Pale-grey, pinkish medium-grained, feldspathic quartzite with minor siltstone; interbedded dolomites locally; cross-bedding, ripple marks, multi-colored laminae (EMEROD QUARTZITE, YEDNALLE QUARTZITE, NELSHABY SANDSTONE, WILKAWILLINA FORMATION EQUIVALENT).
Ch	Grey laminated siltstone, dolomite and minor quartzite.
Ch	Pale-grey, feldspathic quartzite (TINGOMAR QUARTZITE).
Ch	Dark-grey, cherty dolomite and feldspathic quartzite (BLYTH DOLOMITE BEDS).
Ch	Diapiric breccia with carbonate matrix; raft of concretioned siltstones, sandstones and dolomites (CALLAUNA BEDS).
Ch	Dolrites intruding diapirs.
Ch	Crush zone.

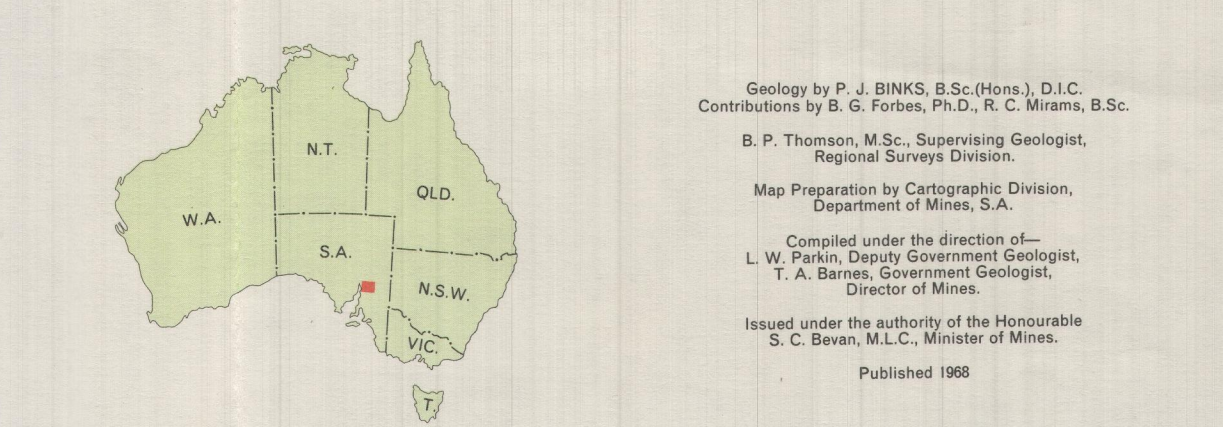
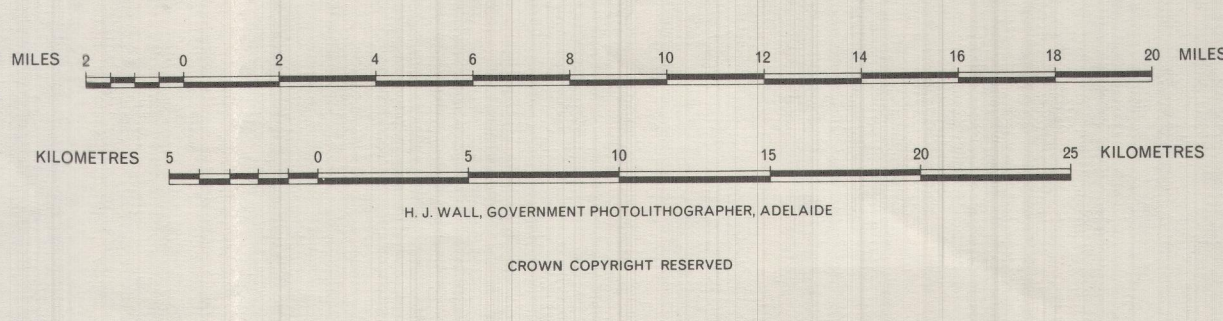
INDEX TO ADJOINING SHEETS  
Showing Magnetic Declination



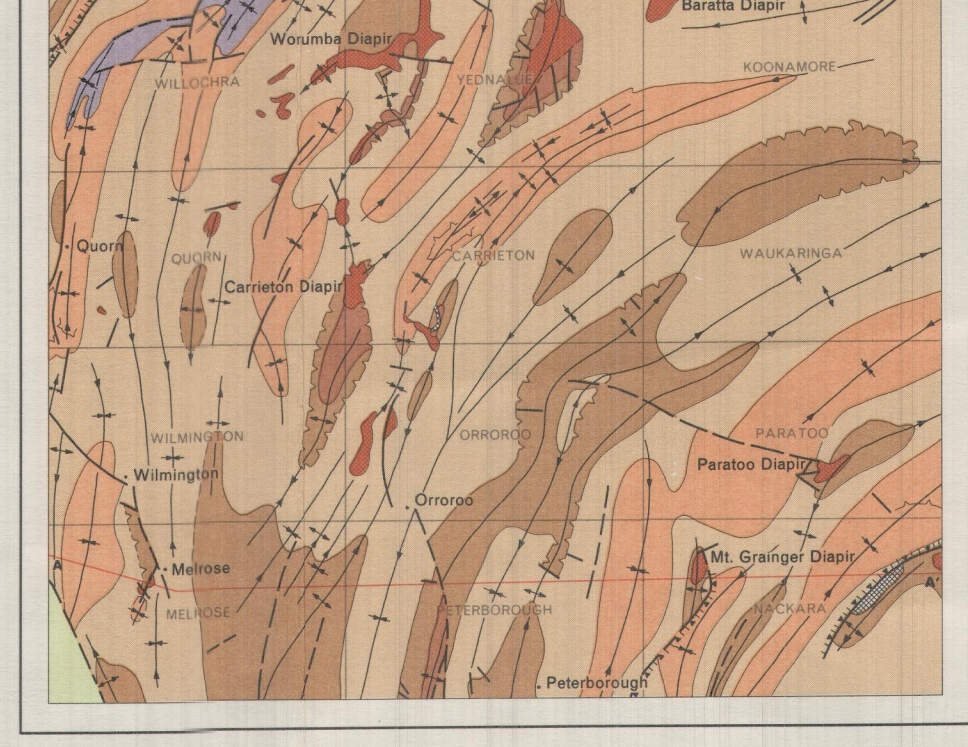
ROCK RELATION DIAGRAM  
UMBERTANA AND WILPENA GROUPS



SCALE  
MILES 0 2 4 6 8 10 12 14 16 18 20  
KILOMETRES 0 5 10 15 20 25



TECTONIC SKETCH



Quaternary	.....
Cambrian System	.....
Lower Cambrian Series (Hawker Group)	.....
Adelaide System	.....
Marmoron Series (Wilpena Group)	.....
Sturtian-Marmoron Series (Umbertana Group)	.....
Torrensian-Sturtian Series (Burra Group)	.....
Willochra Series (River Waikaranga Group)	.....
Calliana Beds	.....
Diapirs	.....
Crush zone	.....
Fault	.....
Reverse fault (diapir on downthrow side)	.....
Anticline	.....
Syncline	.....
Stratigraphic discordance	.....
Disconformity	.....
Geological Section	.....
BOUNDARY FENCE	.....
TRIANGULATION STATIONS	.....
EPHEMERAL STREAM	.....
LAKES	.....
SWAMPS	.....
WATER FEATURES	.....
DIRE	.....
SPRING	.....
WATERHOLE	.....
WELL	.....
EARTH TANK OR DAM	.....
QUARRY	.....
MINERAL OCCURRENCE	.....
COPPER	.....
IRON	.....
MANGANESE	.....
PHOSPHATE	.....
BARYTES	.....
GOLD	.....
MAGNESITE	.....
PHOSPHATE	.....
QUARTZ	.....

Copies of this map may be obtained from the Geological Survey of South Australia, Department of Mines, Adelaide, or the Bureau of Mineral Resources, Geology and Geophysics, Canberra, A.C.T. Printed for the Geological Survey of South Australia by a contributor to the Geological Map Series of the Commonwealth.

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S. C. BEVAN, M.L.C., Minister of Mines.  
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ORROROO  
SHEET 54-1