

# COBAR REGOLITH LANDFORMS

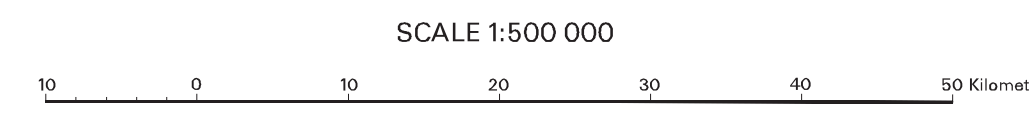
## TRANSPORTED REGOLITH

- Alluvial sediments**
- Aaf1** Floodplain deposits of the Darling/Bogan River system. Grey, pink and black clayey silt and mud, minor loamy sand, up to 10 m thick. Overlies up to 130 m of older Cainozoic alluvial sand, gravel, silt and clay.
  - Aaf2** Older tracts of alluvium of the Darling/Bogan River system characterised by abandoned meander belts. Reddish brown sandy alluvium. Overlies up to 130 m of older Cainozoic alluvial sand, gravel, silt and clay.
  - Aaf3** Alluvium of active major stream channels. Bedload of sand and gravel, overbank deposits of sand, silt and clay.
  - Aap1** Alluvium of minor watercourses and alluvial valley plains. Few active channels; deposition largely from sheet flow during periods of heavy rain. Sand, silt and clay, minor gravel. Gravel component includes detrital magnetite pisoliths. May include some aeolian, colluvial, and residual materials. Thickness varies from less than 1 m in minor watercourses to around 100 m in broad alluvial areas in the south.
  - Aap2** Slightly undulating plains with 0.5-1 m of possible alluvial red-brown sandy clay and thicker sand drifts, overlying 2-3 m of green-grey plastic clay with gypsum nodules. Abundant small internal drainage areas with lunettes on their eastern sides. Cainozoic and possibly Mesozoic sediments present at depths up to 60 m.
  - Aap3** Alluvial sediments probably partly reworked by wind, with arcuate vegetation zones.
- Eroded alluvial sediments**
- Aer1** Poorly consolidated alluvial sediments of Tertiary and possibly Cretaceous age, forming capris and erosional rises. Poorly consolidated sandstone, conglomerate, siltstone and clays.
  - Aer2** Silcrete and siliceous hardpan cappings on rises. Mostly formed in old alluvial sediments, but also in weathered Palaeozoic bedrock.
- Aeolian sediments**
- ISul1** Aeolian sandplain, characterised by longitudinal dunes. Reddish aeolian sand and silt.
  - Iu1** Lunettes, consisting of sand and panna on eastern rims of claypans. Locally gypsiferous.
- Lacustrine sediments**
- Lpp1** Lacustrine clay, silt and fine sand in claypans. May include an aeolian derived sand component. Locally gypsiferous.
- Colluvial and residual sediments**
- Ctc1** Talus slopes, forming especially around steep hills of Palaeozoic sandstone and conglomerate. Colluvial sand and gravel overlying mostly slightly weathered bedrock.
  - Chpd1** Gently sloping colluvial plains low in the landscape, with sheet flow colluvial sediments and possibly alluvium to about 6 m thick, overlying slightly to highly weathered bedrock.

## IN SITU REGOLITH

- Residual**
- Rer1** Ferruginous gravel lag and ferruginised saprolite. Includes minor areas of possible lacustrine chemically precipitated ironstone.
- Weathered bedrock**
- Sep1** Erosional plains on weathered Mesozoic rocks of Eromanga Basin with surface veneer of residual, colluvial and aeolian sediments. Alluvial and lacustrine sediments locally present.
  - Sep2** Erosional plains forming drainage headwater areas high in the local landscape. Typically bounded by minor erosional scarps where more active drainage is consuming the plains by headward erosion. Mobile zone around 1 m thick (residual, colluvial and aeolian fine sediments, and lag) overlies slightly to highly weathered bedrock. Local alluvium.
  - Ser1** Rises, low hills and plains of Tertiary lavas, mainly olivine leucite. Generally slightly weathered. Lavas overlie variably weathered bedrock, and locally, old alluvial sediments.
  - Ser2** Undulating rises of highly to slightly weathered Palaeozoic rocks overlain by a thin (mostly < 1 m) mobile veneer of residual, colluvial and fine aeolian sediments, and lag. Regolith carbonate and alluvium locally present.
  - Ser3** Undulating rises of highly to slightly weathered Palaeozoic rocks overlain by a thick (mostly > 1 m) mobile veneer of residual, colluvial and fine aeolian sediments, and lag. Regolith carbonate and alluvium locally present.
  - Ser4** Undulating rises of highly to slightly weathered Palaeozoic rocks overlain by a thick (mostly > 1 m) mobile veneer of residual, colluvial and fine aeolian sediments, and lag. Regolith carbonate and alluvium locally present.
  - Ser5** Rises of highly weathered bedrock with mobile veneer of residual, colluvial and aeolian sediments. Numerous small areas of ferruginised saprolite, cappings of silcreted old alluvial sediments and bedrock, and dispersed clasts from old alluvial sediments. Regolith carbonate locally present.
  - SSel1** Steep low hills and hills of slightly weathered Devonian Mulga Downs Group. Transported regolith veneer of colluvium and local alluvium.
  - SSel2** Low hills and hills of slightly weathered Palaeozoic bedrock older than Mulga Downs Group. Transported regolith veneer of colluvium and local alluvium. Elevation and relief increases to the south.

- LANDFORMS**
- DEPOSITIONAL LANDFORMS**
- af Alluvial flood plain
  - ap Alluvial plain
  - ul Aeolian sand plain
  - lu Lunette
  - lp Lacustrine plain
  - lc Colluvial fan
  - pd Depositional plain
- EROSIONAL LANDFORMS**
- ep Erosional plain (< 9 m relief)
  - er Erosional rise (9-30 m relief)
  - el Low hill (30-90 m relief)



UNIVERSAL TRANSVERSE MERCATOR PROJECTION  
 LATITUDE OF ORIGIN: 0° LONGITUDE OF ORIGIN: 147°  
 AMG grid ticks and values are shown in grey at 50 kilometre interval

Compiled by D.L. Gibson (CRC LEME/AGSO) 1995  
 Revised by D.L. Gibson (CRC LEME/AGSO) 1998  
 Cartography I.B. Hartig (AGSO), 1995, and L.M. Agostini (AGSO), 1998

It is recommended that this map be referred to as:  
 D.L. Gibson, 1998 - Cobar Regolith Landforms  
 (1:500 000 map scale). Cooperative Research Centre for Landscape Evolution and Mineral Exploration, (CRC LEME) Perth/Canberra

The author acknowledges the assistance of Dr K. McQueen (CRC LEME/University of Canberra) in the compilation of this map

Regolith landform polygons based on interpretation of 1:80 000 panoramic aerial photographs and published geological data, with limited field checking. This map provides a broad overview of regolith landforms around the Broken Hill area. Boundaries and polygon descriptions are generalised to show the main regolith type and physical processes

Copies of this map may be obtained from:  
 CRC LEME  
 c/- CSIRO Division of Exploration and Mining  
 Private Mail Bag  
 Post Office, WEMBLEY W.A. 6014  
 Tel:(09) 387 0272, Fax: (09) 387 0146

©CRC LEME 1998  
 This work is copyright. Apart from any fair dealings for the purpose of study, research, criticism or review, as permitted under the Copyright Act, no part may be reproduced by any process without written permission. Copyright is the responsibility of the Director, CRC LEME. Inquiries should be directed to:

Business Manager  
 CRC LEME  
 c/- CSIRO Division of Exploration and Mining  
 Private Mail Bag  
 Post Office, WEMBLEY W.A. 6014  
 Tel:(09) 387 0272, Fax: (09) 387 0146

CRC LEME does not warrant that this map is definitive, nor free from error and does not accept liability for the loss caused or arising from reliance upon information provided herein

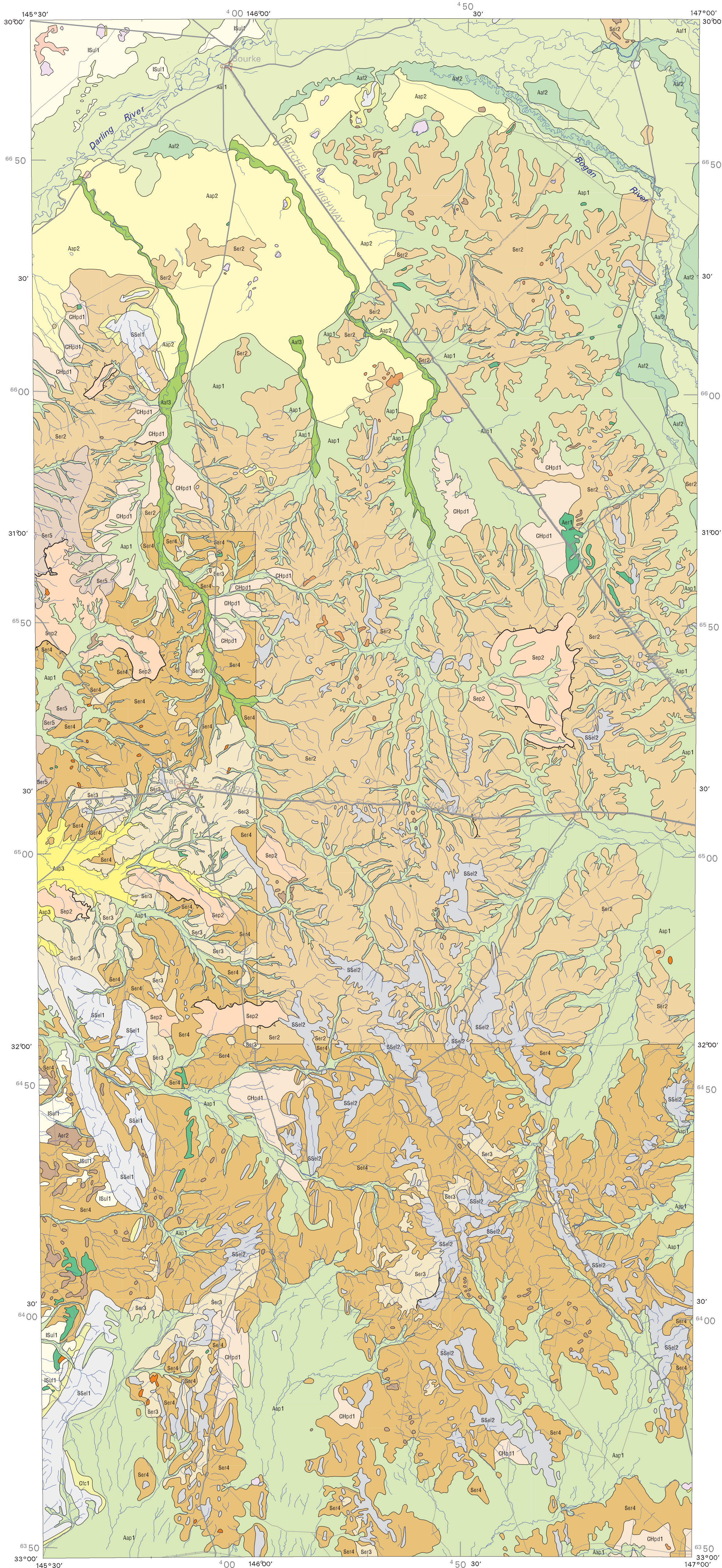
Published by CRC LEME, Canberra, Australia.  
 Produced by Cartographic Services Unit, AGSO, Canberra, Australia  
 Topographic information shown on this map is Crown Copyright and has been reproduced by permission of the Australian Surveying and Land Information Group, Department of Administrative Services, Canberra

CRC LEME acknowledges the support of the NSW Department of Mineral Resources (Discovery 2000 Initiative) in the production of this map

CRC LEME is an unincorporated joint venture between the Australian National University, University of Canberra, Australian Geological Survey Organisation and CSIRO Exploration and Mining, established and supported under the Australian Government's Cooperative Research Centres Program

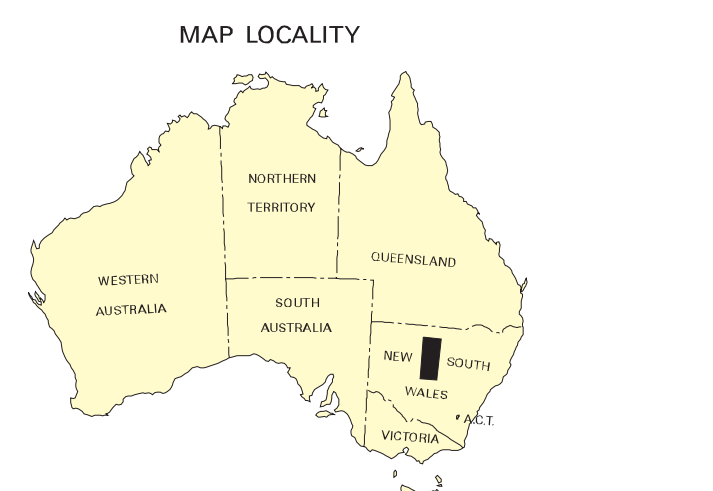
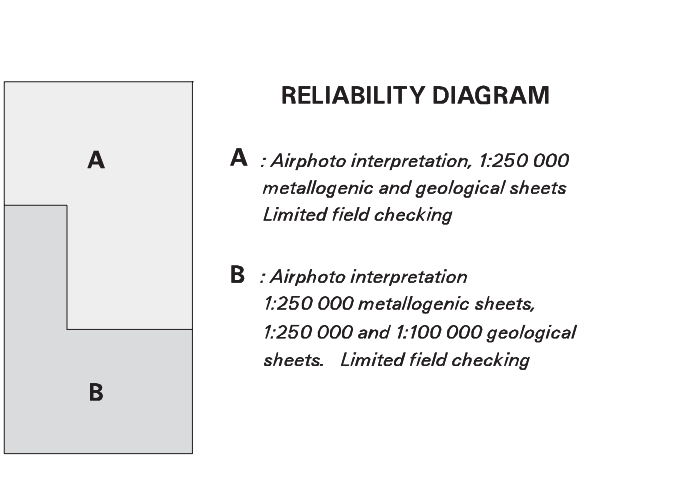


**COBAR**  
**REGOLITH-LANDFORMS**  
 1:500 000 SPECIAL  
 REVISED MAP SEPTEMBER 1998  
 SUBJECT TO AMENDMENT



**INDEX TO ADJOINING MAPS**  
 1:500 000 special map shown in blue

LOUTH SH55-09	BOURKE SH55-10 <b>COBAR</b>	WALGETT SH55-11
BARNATO SH55-13	COBAR SH55-14 <b>REGOLITH</b>	NYNGMAN SH55-15
IVANHOE SH55-01	NYMAGEE SH55-02 <b>LANDFORMS</b>	NARROMINE SH55-03



WARNING: Colour may deteriorate with prolonged exposure to light and moisture