

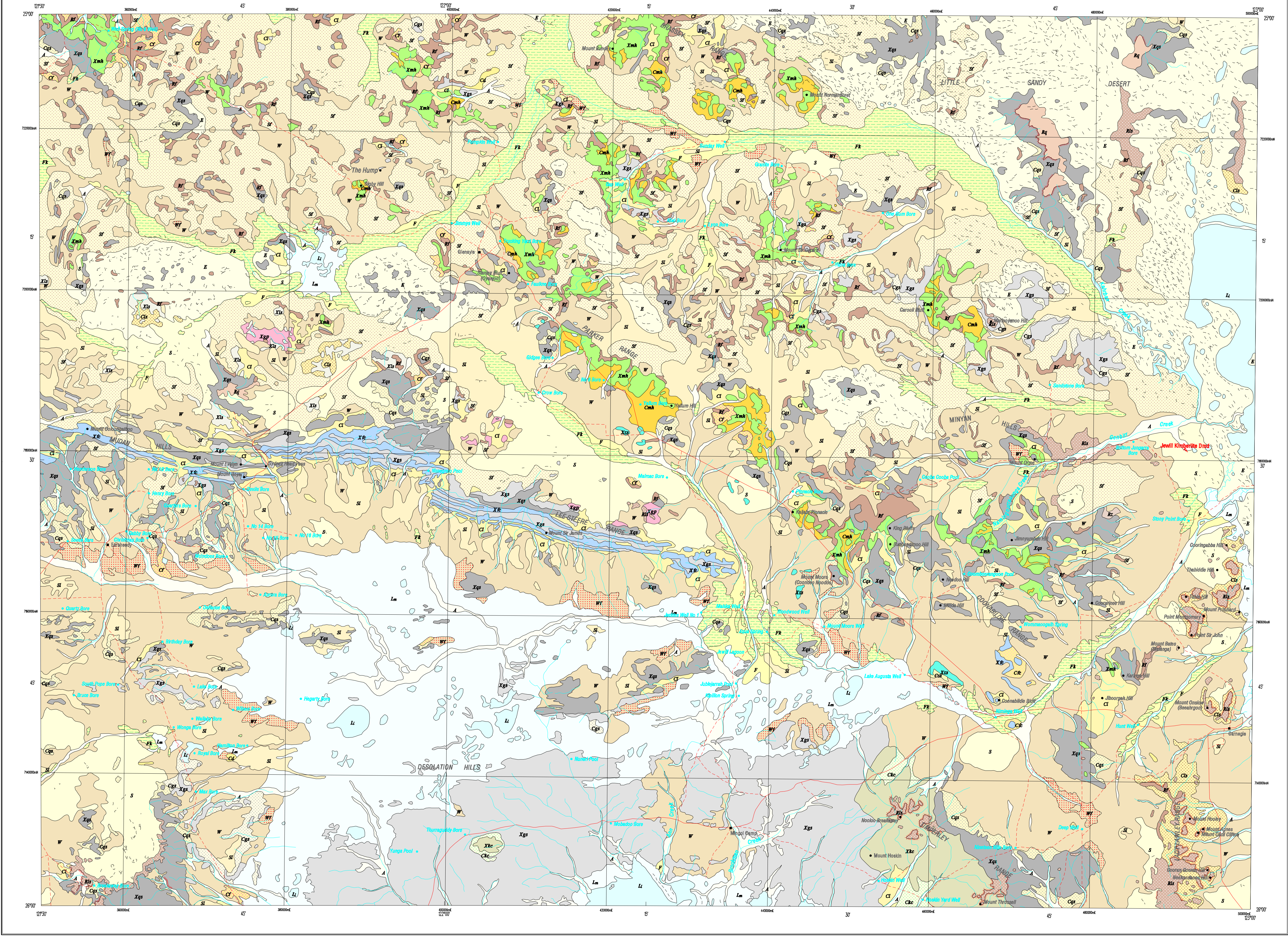
REGOLITH MATERIALS

REFERENCE

- RESIDUAL (R) -** Residual sand, duricrust, and proximal reworked material derived by weathering in situ
- Rf comprising mainly iron-rich material (ferrosite)
  - Rls derived from mixed sedimentary rock (Paterson Formation); locally silicified
  - Rq comprising mainly quartz-rich material
  - Rz comprising mainly silica-rich material (silicite)
- EXPOSED (X) -** Outcrop of bedrock, subcrop, and apron with locally derived sand, silt, clay, and rubble
- Xf derived from iron-rich chemical sedimentary rock (pelletal and banded iron-formation, hematitic shale, and chert)
  - Xgp derived from quartzofeldspathic plutonic rock (granitoid rock)
  - Xgs derived from quartzofeldspathic siliciclastic sedimentary rock (sandstone, siltstone, and shale)
  - Xlc derived from carbonate-rich biochemical sedimentary rock (limestone, calcarenite, and dolomite)
  - Xls derived from mixed metamorphosed sedimentary rock
  - Xmh derived from ferromagnesian hypabyssal rock (dolerite and metadolerite)
  - Xqs derived from quartz-rich siliciclastic sedimentary rock (sandstone and mudstone)
  - Xsa derived from silica-rich sedimentary rock
- COLLUVIAL (C) -** Unconsolidated and semi-consolidated silt, sand, gravel, and rubble; small rock outcrops may be present
- Cd undivided
  - Cf comprising iron-rich material
  - Cfb derived mainly from iron-rich chemical sedimentary rock (pelletal and banded iron-formation, hematitic shale, and chert)
  - Cgs derived mainly from quartzofeldspathic sedimentary rock (sandstone, siltstone, and shale)
  - Ckc derived mainly from carbonate-rich biochemical sedimentary rock (limestone, calcarenite, and dolomite)
  - Ct derived from mixed parentage
  - Cls derived mainly from mixed sedimentary rock
  - Cmh derived mainly from ferromagnesian hypabyssal rock (dolerite)
  - Cqs derived mainly from quartz-rich siliciclastic sedimentary rock (sandstone and mudstone)
  - Csa derived mainly from silica-rich sedimentary rock
- DISTAL SHEETWASH (W) -**
- W Sand- and clay-dominated colluvium or sheetwash
  - Wf Sand- and clay-dominated colluvium or sheetwash with abundant iron-rich material
- ALLUVIAL (A) -**
- A Cobbles, gravel, sand, silt, and clay in alluvial channels
- FLOODPLAIN (F) -**
- F Overbank deposits; sand- or clay-rich alluvium and colluvium on floodplains
  - Fc Overbank deposits; sand- or clay-rich alluvium and colluvium on floodplains containing carbonate-rich material (valley calcrete)
- LACUSTRINE (L) -**
- L Clay, silt, sand, and evaporitic material; locally saline and gypsiferous
  - Lc in playas and claypans
  - Lm in mixed dune and playa terrain proximal to lakes
- SANDPLAIN (S) -**
- S Residual and eolian sand; dominated by undulating sandplain and eolian dunes
  - Sf Colluvial and residual sand with abundant iron-rich material; locally eolian
  - Sr Sandplain with clay-rich colluvium and sheetwash; minor eolian reworking
- EOLIAN (E) -**
- E Dominantly eolian sand; extensive dunes

SYMBOLS

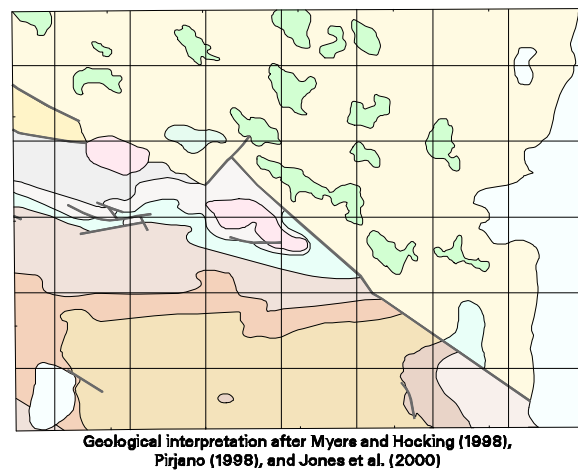
- Regolith boundary
- Breakaway
- Sand dune
- Formed road
- Track
- Watercourse
- Pool, spring, bore, well
- Earnheedy
- Mount Royal
- Jewell Kimberlite
- Dmd
- Homestead
- Locality
- Prospect
- Diamond



Edited by M. Tetlow, K. Greenberg, and G. Loen  
Cartography by M. Violette  
Topography from Australian Surveying and Land Information Group, and Department of Land Administration Sheet SG 51-6  
This map was compiled and produced using a Geographic Information System (ArcInfo), and the data are available in digital form  
Published by the Geological Survey of Western Australia. Copies of this map, or extracts of the data, are available from the Information Centre, Department of Minerals and Energy, 100 Plain Street, East Perth, W.A., 6004. Phone (08) 9222 5459, Fax (08) 9222 3444

Compiled by S. A. McGuinness and A. J. Sanders 2000  
Field observations 1989 by S. A. McGuinness and J. Downing (GSWA), and A. Why, J. Moore, S. Bonaparte, J. Hannon, and S. Blackmore  
Compiled using Landsat TM images (1985 data), 1986 black and white, and 1987 color aerial photography, published Geological Survey of Western Australia Geological Series maps, and field observations 1989  
The recommended reference for this map is:  
McGUINNESS S. A. and SANDERS A. J. 2000, Regolith Materials, Stanley, W.A. Sheet SG 51-6 in Geological mapping of the Stanley 1:250 000 sheet by P. A. MORRIS, S. A. McGuinness, A. J. SANDERS, and J. COKER, Western Australia Geological Survey, 1:250 000 Regolith Geochemistry Series Explanatory Notes, Plate 3

SIMPLIFIED GEOLOGICAL INTERPRETATION



- PHANEROZOIC**
- PERMIAN
    - PATERSON FORMATION: fluvial and fluvio-glacial sandstone, conglomerate, and siltstone
    - Dolerite
  - Triassic
    - Sunbeam Group
      - Sandstone, siltstone, conglomerate, shale, mudstone, dolomite, and oolite
    - Collar Group
      - Sandstone with minor shale and siltstone
    - Scorpion Group
      - Sandstone, shale, conglomerate, and dolomite
  - Triassic-Jurassic
    - Earnheedy Group
      - Metamorphosed shale and sandstone; minor chert
      - MULBARRA SANDSTONE: quartz sandstone; with minor shale and limestone
      - KULELE LIMESTONE: stromatolitic limestone, calcarenite, and mudstone; minor sandstone
      - WONGAWOL FORMATION: very fine-grained sandstone, shale, and minor carbonate-rich rocks
      - CHALL FORMATION
        - Princess Range Member: quartz arenite and minor siltstone
        - Wandewere Member: sandstone, siltstone, and shale; locally glauconitic basal conglomerate
        - FRIERE FORMATION: granular iron-formation, hematitic shale, chert, and siltstone
        - YELMA FORMATION: sandstone and shale; minor chert and stromatolitic carbonate
  - Triassic
    - Granitoid rock
- ARCHEAN**
- Geological boundary
  - Fault

SCALE 1:250 000

UNIVERSAL TRANSVERSE MERCATOR PROJECTION  
HORIZONTAL DATUM: GEOCENTRIC DATUM OF AUSTRALIA 1994  
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM  
Grid lines indicate 20 000 metre interval of the Map Grid Australia, Zone 51

The Map Grid Australia (MGA) is based on the Geocentric Datum of Australia 1994 (GDA94)  
GDA94 positions are compatible within one metre of the datum WGS84 positions



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DEPARTMENT OF MINERALS  
AND ENERGY  
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GEOLOGICAL SURVEY OF  
WESTERN AUSTRALIA  
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REGOLITH MATERIALS

REGOLITH GEOCHEMISTRY SERIES

STANLEY

SHEET SG 51-6

FIRST EDITION 2000

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