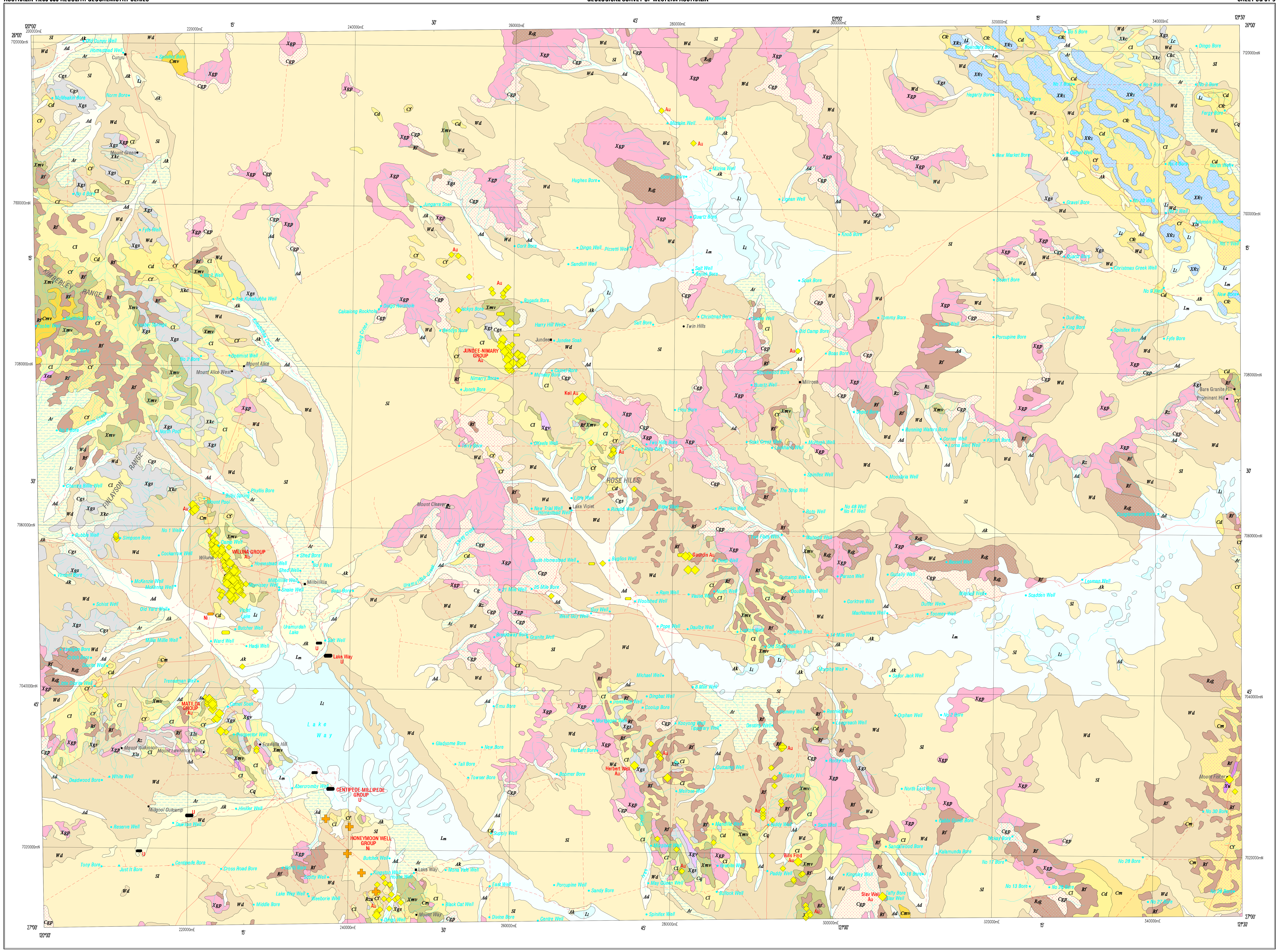
WILUNA

GEOLOGICAL SURVEY OF WESTERN AUSTRALIA



REGOLITH MATERIALS

REFERENCE

RESIDUAL (R) Residual sand, duricrust, and gravel derived by weathering in situ; includes proximal reworked material

- *Rf* comprising mainly iron-rich material (ferricrete)
- *Rsg* comprising sand derived from quartzofeldspathic rock
- *Rz* comprising mainly silica-rich material (silcrete)
- *Rzu* comprising mainly silica-rich material (silcrete) developed over ultramafic rock

EXPOSED (X) Outcrop of saprock, and bedrock, with locally derived sand, silt, clay, and rubble

- *Xes* derived from evaporite-rich sedimentary rock (microbial laminate with barite and anhydrite nodules)
- *Xfci* derived from ferruginous chemical sedimentary rock (banded iron-formation and ferruginous siltstone)
- *Xgp* derived from variably metamorphosed quartzofeldspathic plutonic rock (granitoid rock, granodiorite, monzogranite, and syenite)
- *Xgs* derived from quartzofeldspathic sedimentary rock
- *Xgv* derived from quartzofeldspathic volcanic rock
- *Xkc* derived from chemically precipitated carbonate rock
- *Xls* derived from mixed sedimentary rock
- *Xmv* derived from ferromagnesian igneous rock (basalt, dolerite, and gabbro)
- *Xu* derived from ultramafic rock (peridotite, talc-chlorite schist, and pyroxenite)
- *Xzc* derived from siliceous chemical sedimentary rock (chert)

COLLUVIAL (C) Unconsolidated and semi-consolidated silt, sand, gravel, and rubble

- *Cd* undivided
- *Cf* derived mainly from ferruginous rock
- *Cfc* derived mainly from ferruginous sedimentary rock
- *Cg* derived from quartzofeldspathic rock
- *Cgp* derived mainly from quartzofeldspathic plutonic rock (granitoid rock, granodiorite, monzogranite, and syenite)
- *Cgs* derived from quartzofeldspathic sedimentary rock
- *Ckc* derived from chemically precipitated carbonate rock
- *Cl* derived from mixed rock types
- *Cm* derived from mafic rock
- *Cmv* derived from ferromagnesian igneous rock (basalt, dolerite, and gabbro)
- *Cq* derived mainly from quartz-rich rock

LOW-GRADIENT SLOPE (W) Sand- and clay-dominated colluvium and sheetwash

- *Wd* undivided

ALLUVIAL (A) Cobbles, gravel, sand, silt, and clay in alluvial channels and on floodplains

- *Ad* undivided
- *Ar* floodplain deposits
- *Ak* carbonate-rich alluvium in drainage channels

LACUSTRINE (L) Clay, silt, sand, gravel, and evaporitic material

- *Ll* in lakes and large playas
- *Lm* in mixed dune and playa terrain
- *Lc* clay-rich material in playas

SANDPLAIN (S) Eolian and residual sand

- *Sl* in mixed sandplain, colluvium, and sheetwash terrain, with local eolian reworking

SYMBOLS

- Regolith boundary
- Formed road
- Track
- Watercourse
- Pool, rockhole, spring, bore, well, soak
- Jundee — Homestead
- Mount Cleaver — Locality
- Slav Well — Mineralization site name

MINERAL OCCURRENCES

MINERALIZATION STYLES

- Mineralization in regolith
- Orthomagmatic mafic and ultramafic - komatiitic or dunitic
- Vein and hydrothermal mineralization

MINERAL AND ROCK COMMODITY GROUPS

- Precious metal
- Steel industry metal
- Energy mineral

MINERAL COMMODITY

Gold........ Au
Nickel........ Ni
Uranium........ U

Mineralization sites are from the WAMIN database and include operating and abandoned mines, deposits, prospects, and occurrences. Larger symbols show WAMIN sites that are also MINEDEX sites.

Edited by G. Hall, C. Brien, and K. Greenberg

Cartography by M. Vicentic, and E. Theedom

Topography from Australian Surveying and Land Information Group, and Department of Land Administration Sheet SG 51-9

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 Mineral and Petroleum Resources, 100 Plain Street, East Perth, WA, 6004. Phone (08) 9222 3459, Fax (08) 9222 3444
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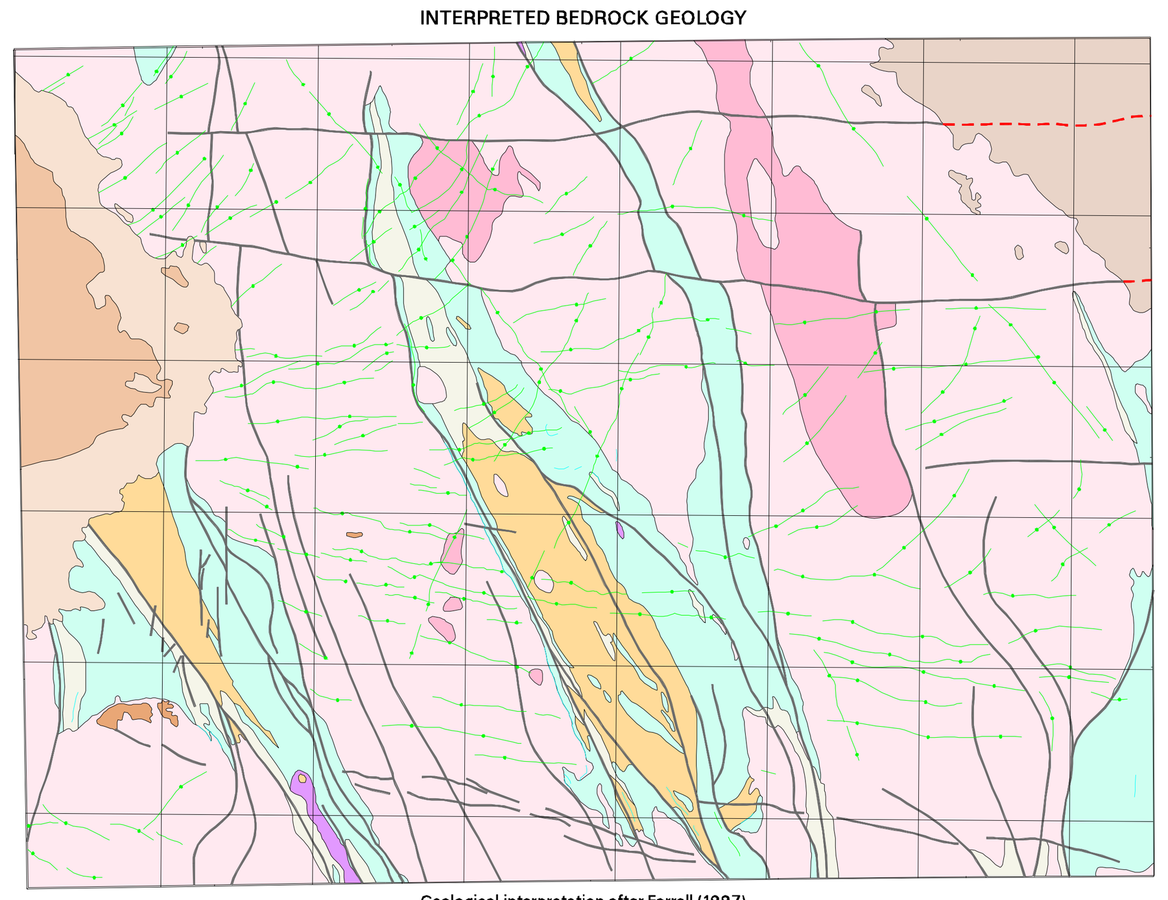
Compiled by P. A. Morris 2002

Compiled using: Landsat TM images 741 (1994 data); FARRELL, T. R., 1997, Wiluna, W.A. Sheet SG 51-9 (2nd edition): Western Australia Geological Survey, 1:250 000 Geological Series.

The recommended reference for this map is:
MORRIS, P. A., 2002, Regolith materials, Wiluna, W.A. Sheet SG 51-9: Western Australia Geological Survey, 1:250 000 Regolith Geochemistry Series.

INTERPRETED BEDROCK GEOLOGY



Geological interpretation after Farrell (1997)

Scale 1:1 000 000

PROTEROZOIC — PALAEOPROTEROZOIC

- Unassigned sedimentary rock
- Earaheedy Group: Sedimentary rock (EARAHEEDY BASIN)
- Yerrida Group (YERRIDA BASIN):
  - Mooloogool Subgroup: sedimentary rock, and mafic volcanic and intrusive rocks
  - Windplain Subgroup: sedimentary rock

ARCHAEAN — YILGARN CRATON

- Mafic dyke
- Granitoid rock, syenite, monzonite, diorite; locally interleaved with mafic rock
- Gneiss, granitoid rock, monzogranite, and mafic rock; locally layered
- Metasedimentary rock
- Chert and banded iron-formation
- Felsic rock, including porphyritic dacite and andesite
- Mafic volcanic rock and gabbro
- Ultramafic rock

- Geological boundary
- Fault
- Fault, concealed, interpreted from aeromagnetic data

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Department of Mineral and Petroleum Resources

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MINISTER FOR STATE DEVELOPMENT

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DIRECTOR GENERAL

Geological Survey of Western Australia

TIM GRIFFIN
DIRECTOR

SCALE 1:250 000

5000 METRES 0 5 10 15 20 25 30 KILOMETRES

UNIVERSAL TRANSVERSE MERCATOR PROJECTION
VERTICAL DATUM: AUSTRALIAN HEIGHT DATUM
HORIZONTAL DATUM: GEOCENTRIC DATUM OF AUSTRALIA 1994
Grid lines indicate 2 000 metre interval of the Map Grid Australia, Zone 51

GDA 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

REGOLITH MATERIALS

REGOLITH GEOCHEMISTRY SERIES

WILUNA

SHEET SG 51-9

FIRST EDITION 2002

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