MENZIES

AUSTRALIA 1:250 000 GEOLOGICAL SERIES | **GEOLOGICAL SURVEY OF WESTERN AUSTRALIA** | **SHEET SH 51-5**

SYMBOLS

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

Fault
- exposed
- concealed
- concealed, interpreted from aeromagnetic data

Fold, showing axial trace and generalised plunge direction
- anticline, exposed, concealed
- syncline, exposed, concealed

Bedding, showing strike and dip
- inclined
- vertical
- trend of bedding

Igneous layering, showing strike and dip
- inclined

Way-up indicator
- igneous layering
- pillow structure
- sedimentary structure
- graded bedding

Metamorphic foliation, showing strike and dip
- inclined
- vertical
- trend of foliation

Mineral lineation, showing trend and plunge
- inclined
- horizontal

Axis of cremulation, showing trend and plunge
- inclined

Bedding–cleavage intersection lineation, showing trend and plunge
- inclined

Aeromagnetic lineament

Airphoto or satellite lineament
- fracture pattern in granitoid rock

Isotopic age determination site with identification number — 1887R

Highway

Formed road; unsealed

Track

Railway, with siding — Malitz

Woodline, abandoned

Powerline

Landing ground

Townsite
- population less than 1 000 — Menzies, Riverina

Homestead — Butterfly

Locality

Building

Yard — Yard

Microwave repeater station

National Park boundary

Horizontal control, major, minor

Sand dune

Watercourse with ephemeral pool or waterhole

Gnamma hole, rockhole — Gnamma hole, Rockhole

Soak — Soak

Pipeline — pipeline

Bore, well — Bore, Well

Windpump

Dam, tank — Dam, Tank

Abandoned; position doubtful — (abd), (PO)

Mineral field boundary

Mineral field district boundary

Mining centre — COMET VALE

Mining locality — COPPERFIELD

Deposit or occurrence — Ulysses

Battery or treatment plant, abandoned

Subsurface data from drillhole, costean, or shallow shaft — Ab

MINERAL OCCURRENCES

MINERALIZATION STYLES*
- Porphyry, pegmatite, greisen, and skarn
- Orthomagmatic mafic and ultramafic
- Vein and hydrothermal
- Stratabound volcanic and sedimentary
- Stratabound sedimentary and/or sedimentary banded iron-formation
- Regolith hosted
- Undivided

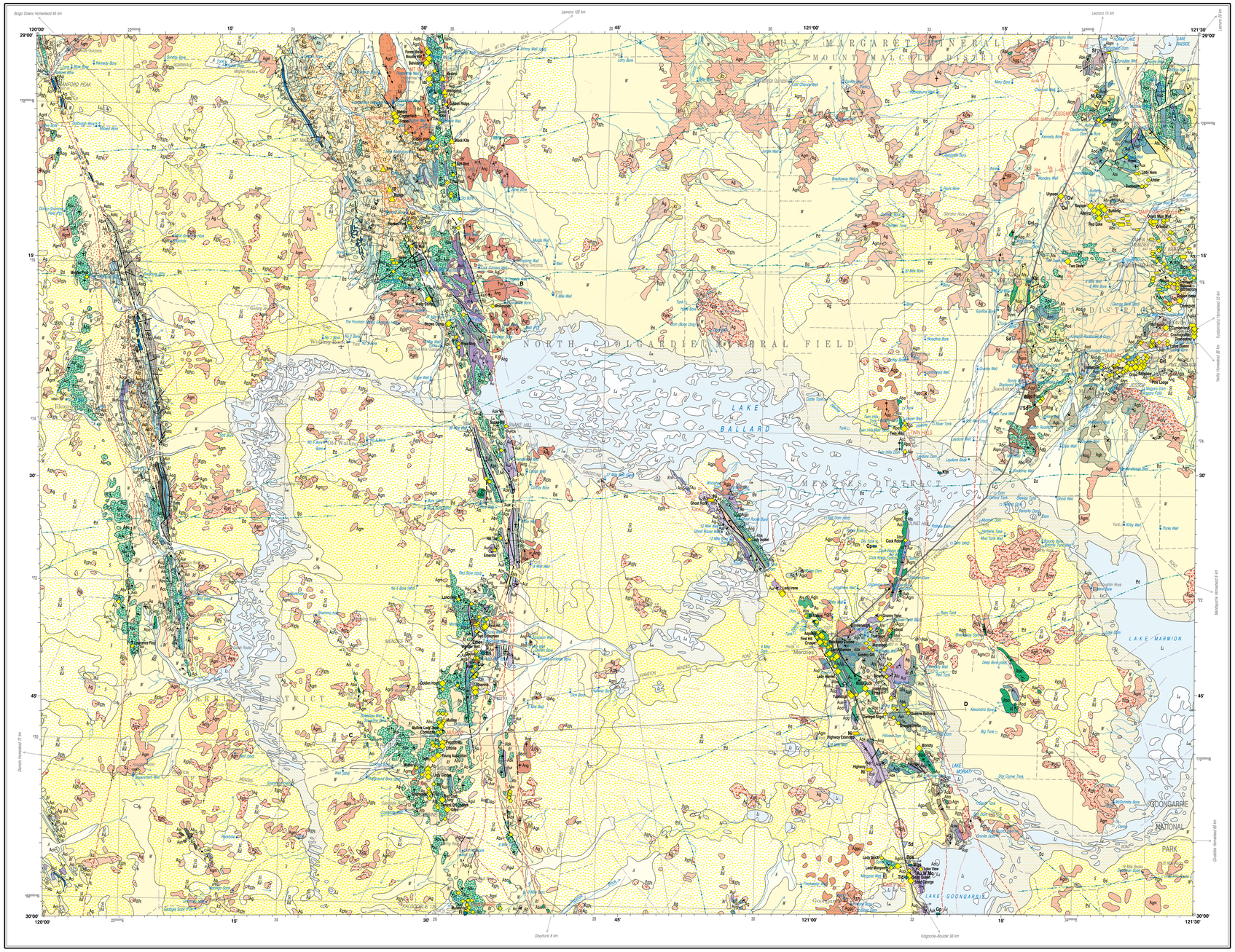
MINERAL AND ROCK COMMODITY GROUPS
- Precious mineral
- Precious metal
- Steel industry metal
- Specialty metal
- Base metal
- Iron
- Industrial mineral
- Construction material

MINERAL AND ROCK COMMODITIES

Commodity is gold unless otherwise indicated on the map

Beryl	Bri
Basalt	Bas
Clay	Cy
Copper	Cu
Emerald	Emer
Fluorite	Fl
Gold	Au
Gravel	Gvl
Gypsum	Gp
Iron	Fe
Kaolin	Kln
Lithium	Li
Magnesite	Mgs
Molybdenum	Mo
Nickel	Ni
Prase	Pras
Sand	Sd
Slate	Sl
Talc	Tlc
Tungsten	W

Mineral occurrences are from the GSWA WAMIN database.
*Larger symbols represent mines or deposits also in the DoIR MINEDEX database.



REFERENCE

PHANEROZOIC — CAINOZOIC

Colluvial units
- C — Gravel and debris as proximal talus; includes sand and silt; locally ferruginous
- CY — Ferruginous gravel and reworked duricrust

Sheetwash units
- W — Clay, silt, and sand; locally ferruginous
- WC — Clay-rich sheetwash
- WF — Sheetwash deposits with abundant ferruginous grit
- Wq — Sheetwash deposits with abundant quartz-vein debris

Alluvial units
- A — Clay, silt, and gravel in drainage systems
- Ap — Clay and silt in claypans

Lacustrine units
- La — Dune and lake deposits; active systems within and adjacent to playo lakes
- Li — Saline playo lake deposits
- Lm — Mixed dune, evaporite, and alluvial deposits adjacent to playo lakes

Sandplain units
- S — Residual and eolian quartz sand
- Sl — Yellow sand with minor ferruginous gravel, silt, and clay

Residual or relict units
- Rd — Siliceous and ferruginous duricrust; undivided
- Rf — Ferruginous duricrust; includes iron-cemented reworked products
- Rgy — Quartzofeldspathic sand over granitoid rock, with sparse granitoid outcrop
- Rk — Calcrete
- Rz — Siliceous duricrust
- Rzu — Siliceous cap rock over ultramafic rock
- Rt — Sandstone and silcrete; coarse, angular, poorly sorted quartz in a clay-rich matrix; partly silicified

PROTEROZOIC

Dd — Mafic to ultramafic dykes; interpreted from aeromagnetic data where dashed

- q — Quartz vein
- p — Pegmatite vein

c. 2640 Ma — Agck — **CLARK WELL MONZOGRANITE:** biotite monzogranite
c. 2632 Ma — Agul — **ULARRING MONZOGRANITE:** biotite monzogranite

Ag — Granitoid rock, undivided; includes deeply weathered rock and local silcrete
Agb — Granitoid rock interlayered with subordinate greenstone
Agcf — **COPPERFIELD MONZOGRANITE:** biotite monzogranite with prominent mineral lineation
Agcs — **CARPET SNAKE SYENOGRANITE:** biotite-muscovite syenogranite
Agcv — **COMET VALE MONZOGRANITE:** porphyritic biotite monzogranite
Agdc — **DAIRY MONZOGRANITE:** biotite monzogranite
Agg — Granodiorite, monzogranite, tonalite, and diorite; c. 2678 Ma† at Day Rock
Aggl — **GALAH MONZOGRANITE:** biotite monzogranite
Aggo — **GOONGARRIE MONZOGRANITE:** biotite monzogranite
Agjo — **JORGENSON MONZOGRANITE:** biotite monzogranite
Agm — Monzogranite, massive to foliated, fine- to coarse-grained; c. 2621 Ma† at Hospital Rocks
Agmf — Strongly foliated monzogranite
Agmy — **MYSTERY MONZOGRANITE:** fine-grained biotite monzogranite
Agn — Gneissic granitoid rock; strongly foliated granitoid rock with local gneissic banding
Agnt — **OLIVER TWIST GRANODIORITE:** biotite–hornblende granodiorite
Agp — Syenogranite to alkali-feldspar granite

Ang — Granitoid gneiss
Anm — Mafic gneiss

ARCHAEAN

c. 3304 Ma† — Aqm — Quartz-mica schist
Alu — Fuchsite–quartz and andalusite–fuchsite–quartz rock

As — Metamorphosed sedimentary rock, undivided
Ash — Metamorphosed shale and siltstone
Asp — Metamorphosed sandstone and conglomerate
Asf — Metamorphosed fine- and medium-grained sandstone
Astq — Medium- to coarse-grained, quartz-rich sandstone; metamorphosed; common micaceous interwbs; locally fuchsitic; local quartzite
Asw — Metamorphosed wacke and arkose
Asc — Banded chert and ferruginous chert; metamorphosed
Asi — Metamorphosed banded iron-formation and minor banded chert

Af — Metamorphosed felsic volcanic and volcaniclastic rock, undivided
Afi — Metamorphosed feldspar porphyry of intermediate composition
Afp — Metamorphosed quartz-feldspar porphyry; c. 2700 Ma† from near 51 Mile Well
Afs — Felsic schist; c. 2681 Ma† at Ghost Rocks
Afv — Metamorphosed felsic volcanic rock; c. 2681 Ma† from near Carpet Snake Sook
Afx — Metamorphosed felsic breccia

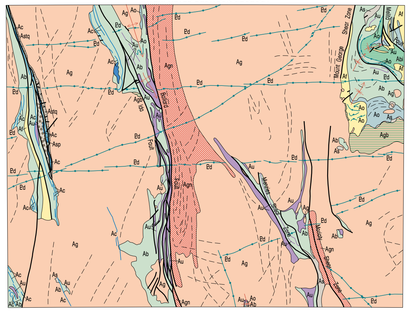
Ao — Medium- and coarse-grained mafic rock; metamorphosed
Aod — Medium-grained mafic rock; metamorphosed
Aofb — **FOREST BELLE GABBRO:** coarse-grained gabbro with clinopyroxene oikocrysts; metamorphosed
Aog — Metagabbro
Aol — Leucogabbro and leucodiorite; metamorphosed
Aon — Norite and gabbronorite; metamorphosed
Aonv — Olivine gabbronorite; metamorphosed
Aogx — Pyroxene-rich gabbro; metamorphosed

Ab — Metamorphosed mafic rock, undivided; commonly weathered
Abo — Fine- to medium-grained amphibolite, foliated
Abg — Mafic rock interlayered with minor granitoid rock; metamorphosed; massive to strongly foliated; local amphibolite
Abi — Basaltic andesite and basalt; metamorphosed
Abk — Metamorphosed komatiite; basalt with pyroxene spinifex texture
Abs — Mafic schist with interlayered metasedimentary rocks
Abv — Metabasalt; massive to foliated

Au — Metamorphosed ultramafic rock, undivided; commonly weathered
Auk — Metakomatiite, with relic olivine spinifex texture
Aup — Peridotite; metamorphosed
Aur — Tremolite–chlorite(–talc) schist
Aux — Medium- to coarse-grained pyroxenite; metamorphosed; minor metagabbro

YILGARN CRATON

INTERPRETED BEDROCK GEOLOGY



SCALE 1:100 000
Kilometres

Bd / f

Ag — Agb — Agc

- Ag — Granitoid rock
- Agb — Granitoid rock with interlayered greenstone
- Agn — Gneissic granitoid and granitoid gneiss

As — Asp — Astq — Asq — Ac

- As — Metamorphosed clastic sedimentary rocks dominant
- Asp — Metamorphosed conglomerate and sandstone
- Astq, Asq — Quartzite and micaceous quartzite
- Ac — Metamorphosed banded iron-formation and chert

Af — Metamorphosed felsic volcanic and local sedimentary rocks

Ao / f — Metamorphosed gabbro and dolerite

Ab — Abs

- Ab — Metamorphosed mafic rock dominant
- Abi — Metamorphosed andesitic basalt

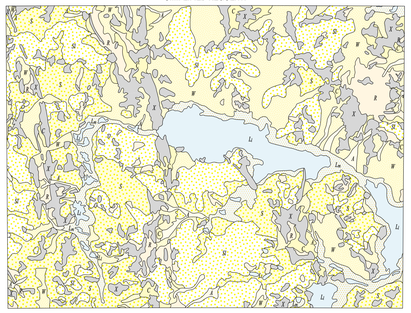
Au / Aup — Metamorphosed ultramafic rock dominant

SOUTH YILGARN

- Fault
- Fold axes
- Structural trend

For further details, refer to main reference

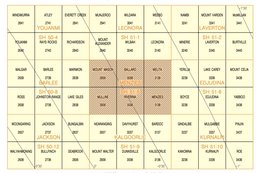
SIMPLIFIED REGOLITH



SCALE 1:100 000
Kilometres

- C — Colluvium
- W — Sheetwash
- A — Alluvium
- Li — Lm — Playo deposits; Mixed playo deposits
- S — Sl — Sandplain, residual and eolian; Sandplain over duricrust
- R — Residual units
- X — Exposed and weathered rock, and dassocited eluvium

SHEET INDEX


WANDANDJA
YOUANMI
EYLEWIN
LEONORA
LAWRENCE
LAVERTON
WILUNA
NINGAN
MOUNT MAGNET
MOUNT ALBIDON
MOUNT LEAKE
MOUNT WITHNELL
MOUNT CROSSLAND
MOUNT MAUDIE
MOUNT SALMON
MOUNT MALCOLM
MOUNT ROBINSON
MOUNT ELIZABETH
MOUNT WALTER
MOUNT WILSON
MOUNT JACKSON
MOUNT KEITH
MOUNT SEMPLE
MOUNT MARTIN
MOUNT DENISON
MOUNT MARION
MOUNT MANN
MOUNT MARSHALL
MOUNT EGERTON
MOUNT JAMES
MOUNT DAVIES
MOUNT MORGANS
MOUNT MARGARET
MOUNT MALCOLM
MOUNT ROBERTS
MOUNT ROBERTSON
MOUNT MONGER
MOUNT MOORE
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