# DUKETON

**AUSTRALIA 1:250 000 GEOLOGICAL SERIES** | **GEOLOGICAL SURVEY OF WESTERN AUSTRALIA** | **SHEET SG 51-14**

## SYMBOLS

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

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

Small-scale fold axis, showing trend and plunge
- minor fold
- minor synform
- minor antiform
- Z-vergence
- S-vergence
- M-vergence

Bedding, showing strike and dip
- inclined
- overturned

Igneous layering, showing strike and dip
- inclined

Way-up indicator
- cross-bedding

Foliation, showing strike and dip
- inclined
- vertical

Mineral lineation, showing trend and plunge
- inclined
- axis of cremulation

Joint, showing strike and dip
- inclined

Aeromagnetic lineament

Formed road
Track
Homestead — Bunjarwarra
Locality — Perigo
Building
Yard
Microwave repeater station
Aboriginal reserve boundary
Horizontal control, minor
Breakaway
Sand dune

Watercourse, pool
Gnamma hole, rockhole — GH, RH
Soak — Sk
Bore, well — B, W
Windpump
Dam, tank — D, T
Abandoned — (abd)
Position doubtful — (PD)

Mineral field boundary
Mineral field district boundary
Mining centre — DUKETON
Mining locality — Russell Find
Mine (gold, unless otherwise stated) — Famous Blue
Opencut
Prospect
Battery, abandoned
Mineral occurrence
- Fluorite — Fl
- Gemstone — Gs
- Gold — Au
- Gravel — Gr

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1:100 000 maps shown in black
Published 1:100 000 Geological Series maps used in compilation
Published 1:250 000 Geological Series maps shown in brown
See current GSWA map catalogue for full range of published products

The lines indicate magnetic declination, 1998
• means declination is east and correction must be added to compass bearing to give true bearing
• declination is west and correction must be subtracted from compass bearing to give true bearing
Annual change is 1° easterly

**Compiled by T. R. Farrell 1997**

**Geology by T. R. Farrell 1994-96,**
**and after GSWA and AGSO maps (see sheet index)**

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## REFERENCE

**PHANEROZOIC — CAINOZOIC — QUATERNARY**

Qc — Alluvium—clay, silt, sand, and gravel in channels and floodplains
Qoc — Clay and silt in claypans

Czb — Ephemeral lake and dune deposits—clay, silt, and sand in drainage basins adjacent to playa lakes
Czd — Dune deposits—sand, silt, gypsum, and carbonate in stabilized dunes adjacent to playa lakes
Czp — Playa deposits—saline and gypsiferous evaporites, clay, and sand in playa lakes

Czs — Sheetwash deposits—clay, silt, and sand as extensive fans
Czs — Sandplain deposits—unconsolidated sand; includes stabilized dunes

Czc — Colluvium—silt, sand, and rock debris as proximal sheetwash and scree
Czcq — Quartz vein debris
Czf — Ferruginous rubble and colluvium—ferruginous rock and ironstone rubble
Czg — Sand over granitoid rock—quartzofeldspathic sand; includes some areas of low outcrop

Czk — Calcrete
Czl — Ferruginous duricrust and ferricrete
Czh — Massive ironstone
Czu — Silica caprock over ultramafic rock
Czz — Silcrete

**PHANEROZOIC — PALAEOZOIC — PERMIAN**

**PATERSON FORMATION**
Pzf — Sandstone; minor pebbly sandstone, conglomerate, and siltstone; fluvial
Pzg — Conglomerate; includes some sandstone and siltstone; glaciogene
Pzl — Claystone and siltstone; lacustrine

**PROTEROZOIC — EARAHEEDY BASIN — Earaheedy Group**

Ebf — **FRERE FORMATION:** ferruginous sandstone, siltstone, and shale (simplified geology only)
Ebfs — Laminated siltstone
Ebfo — Oolitic sandstone and siltstone; ferruginous
Eby — **YELMA FORMATION:** arenite, stromatolitic dolomite, and associated chert breccia (simplified geology only)
Ebyr — Feldspathic sandstone; pebbly at base
Ebyc — Dolostone; minor dolomitic siltstone; stromatolitic

Eby — Mafic dyke

$ / P / Q — Veins and dykes; g — granitoid, p — pegmatite, q — quartz

Ag — Granitoid rock, undivided
Agh — Granitoid rock with lenses of mafic rock; foliated
Agf — Foliated granitoid rock; minor quartzofeldspathic gneiss
Agg — Granodiorite
Aggh — Hornblende granodiorite
Agl — Fine-grained, leucocratic granitoid rock
Agm — Biotite monzogranite
Agmf — Foliated biotite monzogranite; porphyritic; contains pegmatite and aplite veins
Agmg — Granitoid rock and quartzofeldspathic gneiss
Agmq — Quartz monzonite to monzogranite

Quartzofeldspathic gneiss

Ac — Layered chert; metamorphosed
Aci — Banded iron-formation; metamorphosed

As — Metasedimentary rock, undivided
Asc — Polymictic conglomerate; metamorphosed
Ascb — Conglomerate and pebbly sandstone with mafic clasts; metamorphosed
Ascf — Conglomerate and pebbly sandstone with granitoid clasts; metamorphosed
Ash — Mudstone and siltstone; metamorphosed
Asq — Quartz-rich siltstone; metamorphosed
Ass — Sandstone and minor siltstone; metamorphosed

**ARCHAEAN — NORTH MARVEL LOCH GREENSTONE BELT**

Af — Metamorphosed felsic rock, undivided
Afd — Metamorphosed dacite
Afi — Intermediate volcanic rock; metamorphosed
Afr — Porphyritic rhyolite-dacite lava; sparsely spherulitic; metamorphosed
Afs — Felsic schist; derived from felsic volcanic or volcaniclastic rocks
Aft — Felsic tuff; metamorphosed
Afv — Felsic volcanic rock; metamorphosed

Ao — Metamorphosed medium- to coarse-grained mafic rock, undivided
Aog — Metagabbro

Ab — Metamorphosed mafic rock, undivided
Abo — Amphibolite
Abdg — Metabasalt with chuncinct layers and lenses of metagabbro
Abm — Komatiitic basalt; relict pyroxene spinifex texture; metamorphosed
Abp — Porphyritic basalt; metamorphosed
Abs — Mafic schist; chlorite-rich
Aby — Amygdaloidal basalt; metamorphosed

Au — Metamorphosed ultramafic rock, undivided
Auc — Talc–carbonate schist
Aud — Serpentinised dunite
Auk — Komatiite; relict olivine spinifex texture; metamorphosed
Aup — Serpentinised peridotite
Aur — Tremolite schist; after ultramafic rock or high-Mg basalt
Aut — Talc–chlorite schist
Aux — Pyroxenite; metamorphosed

## SIMPLIFIED REGOLITH

Czp — Playa deposits
Czs, Czc — Sandplain deposits; Colluvium and sheetwash deposits
Czk, Czl — Calcrete; Ferruginous duricrust
Pz — Permian sedimentary rocks
Pr — Proterozoic sedimentary rocks
Ag — Archaean granitoid rock and associated alluvium
Ab — Archaean greenstone

SCALE 1:1 000 000
0 10 20 30 40 50 Kilometres

## SIMPLIFIED GEOLOGY

Pz — Paterson Formation
Ebf, Eby — Earaheedy Group
Ebf — Frere Formation
Eby — Yelma Formation
Eby / — Mafic dyke
p / q,r — Veins and dykes: p — pegmatite, q — quartz
Ag, Agh, Agmq — Archaean granitoid rocks
Agmq — Granitoid rock and quartzofeldspathic gneiss
Quartzofeldspathic gneiss dominant
As, Asc, Ac / Aci — Archaean supracrustal rocks
As — Metasedimentary rock dominant
Asc — Conglomerate; metamorphosed
Ac — Chert and layered chert, metamorphosed
Aci — Banded iron-formation; metamorphosed
Af / — Metamorphosed felsic rock dominant
Aog — Metagabbro
Ao, Aoo, Abdg, Abm, Ab–Abo — Archaean mafic rocks
Ab — Metamorphosed mafic rock dominant
Abo — Amphibolite
Abdg — Metabasalt and metagabbro
Abm — High-Mg basalt; metamorphosed
Ab–Abo — Mixed sequence of metamorphosed mafic and sedimentary rocks
Au / — Metamorphosed ultramafic rock dominant

Earaheedy Group — EARAHEEDY BASIN
NORTH MARVEL LOCH GREENSTONE BELT — YILGARN CRATON

SCALE 1:1 000 000
0 10 20 30 40 50 Kilometres

## DIAGRAMMATIC SECTIONS

NATURAL SCALE





GOVERNMENT OF WESTERN AUSTRALIA
HON. NORMAN MOORE, M.L.C.
MINISTER FOR MINES

DEPARTMENT OF MINERALS AND ENERGY
L. C. RAMPONI, DIRECTOR GENERAL

AGSO — GEOSCIENCE AUSTRALIA

NGMA
PRODUCT OF THE NATIONAL GEOSCIENCE MAPPING ACCORD

GEOLOGICAL SURVEY OF WESTERN AUSTRALIA
DAVID BUGHT, ACTING DIRECTOR


SCALE 1:250 000

5000 0 5 10 15 20 25 30
Metres — TRANSVERSE MERCATOR PROJECTION — Kilometres

Grid lines indicate 20 000 metre interval of the Australian Map Grid Zone 51

# DUKETON

**SHEET SG 51-14**

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