PHANEROZOIC

CENOZOIC

QUATERNARY

Unassigned

W | A | Ak | S

Sheetwash unit

W Sandy and clayey distal sheetwash and slope deposits, no clearly defined drainage

Alluvial units

A Clay, silt, sand, and gravel in channels and on floodplains

Ak Calcrete developed in and adjacent to alluvial channels

Sandplain unit

S Quartz sand of mixed origin; includes residual and eolian sands

C1 | C1q | A1 | A1c | A1f

Colluvial units, third generation

C1 Quartz and rock fragments in an unconsolidated silt and sand matrix; includes ferruginous deposits

C1q Quartz fragments in an unconsolidated silt and sand matrix; derived from quartz veins and quartzose rocks

Alluvial units, third generation

A1 Silt, sand, and gravel in active drainage channels and floodplains; includes ferruginous deposits

A1c Unconsolidated silt, sand, and gravel in stream channels

A1f Unconsolidated silt, sand, and minor gravel in floodplains adjacent to present-day drainage

C2 | A2

Colluvial unit, second generation

C2 Quartz and rock fragments in a partly consolidated silt and sand matrix

Alluvial unit, second generation

A2 Partly consolidated silt, sand, and gravel; partly dissected by present-day drainage

Rf | Rg | Rz

Residual or relict units

Rf Ferruginous deposits, including lateritic, ferruginous, and manganiferous duricrust

Rg Weathered quartzofeldspathic rock with locally derived sand and sandy clays

Rz Silcrete and brecciated siliceous caprock

PALEOZOIC

CARBONIFEROUS–PERMIAN

Lyons Group

CPLY-sepg — Undivided; diamictite, sandstone and siltstone (locally calcareous), shale, and boulder beds and lags; glacigene

SOUTHERN CARNARVON BASIN

zq — Quartz vein or pod; massive, crystalline, or brecciated; age uncertain

od — Dolerite dykes, sills, or plugs; fine- to medium-grained dolerite; age uncertain

PROTEROZOIC

NEOPROTEROZOIC

Mulka Tectonic Event (c. 570 Ma)

c. 755 Ma[1] — ᴾMW-od — MUNDINE WELL DOLERITE SUITE: dolerite dykes, sills, and small intrusions with locally abundant xenoliths and potassic alteration of wallrocks; includes minor quartz diorite, syenite, tonalite, and biotite monzogranite

Edmundian Orogeny (1030–955 Ma[2])

PALEOPROTEROZOIC–MESOPROTEROZOIC

Mutherbukin Tectonic Event (1280–1250 Ma)

Bangemall Supergroup — Edmund Group

ᴾMEi-kd — IRREGULLY FORMATION: stromatolitic and non-stromatolitic dolostone, dolomitic siltstone, quartz sandstone, and conglomerate

ᴾMEi-st — Sandstone, conglomerate, siltstone, and dolostone

<1620 Ma — ᴾMEy-st — YILGATHERRA FORMATION: sandstone; subordinate siltstone, conglomerate, and dolostone

EDMUND BASIN

Mangaroon Orogeny (1680–1620 Ma[3])

Pooranoo Metamorphics — Mount James Subgroup

1782–1677 Ma — ᴾPOs-mtqs — SPRING CAMP FORMATION: quartzite and quartz–muscovite schist; foliated; quartz metasandstone, feldspathic metasandstone, and quartz-lithic metasandstone; locally ripple marked and cross-bedded

1758–1677 Ma — ᴾPOb-mtef — BIDDENEW FORMATION: feldspathic metasandstone and minor feldspathic pebbly metasandstone; medium to coarse grained; locally ripple marked and cross-bedded

ᴾPOb-mlpc — Phyllite and slate; locally chlorite rich with magnetite porphyroblasts

ᴾPOb-mxq — Cobble and boulder metaconglomerate; strongly foliated; locally includes quartzite and muscovite–quartz(–biotite) schist

Capricorn Orogeny (1820–1770 Ma[4])

1811–1799 Ma — Moorarie Supersuite

ᴾMOsc-gm | ᴾMOdu-ggp | ᴾMO-ggev | ᴾMO-mgmz | ᴾMO-gmeb | ᴾMO-gmp | ᴾMO-gmvl | ᴾMO-gp

ᴾMOsc-gm SCRUBBER GRANITE: porphyritic to equigranular, coarse-grained, biotite- and muscovite-bearing monzogranite, syenogranite, and pegmatite; locally tourmaline bearing

ᴾMOdu-ggp DUMBIE GRANODIORITE: porphyritic, fine- to medium-grained granodiorite; minor monzogranite; medium to coarse tabular phenocrysts of K-feldspar; locally magnetite and allanite bearing

ᴾMO-ggev Leucocratic, equigranular biotite–muscovite granodiorite; fine to medium grained; massive to weakly foliated

ᴾMO-mgmz Altered granite; consists of quartz–sericite–pyrite; locally foliated

ᴾMO-gmeb Massive, equigranular to sparsely porphyritic biotite monzogranite; medium and coarse grained; minor muscovite in places; includes some granodiorite and minor leucocratic tonalite

ᴾMO-gmp Massive, medium-grained, porphyritic biotite monzogranite; round phenocrysts of K-feldspar up to 5 cm in diameter; minor fine- to medium-grained, sparsely porphyritic biotite monzogranite

ᴾMO-gmvl Medium- to coarse-grained, even-textured, leucocratic, biotite-poor muscovite monzogranite; locally foliated and metamorphosed

ᴾMO-gp Porphyritic to equigranular, coarse-grained, biotite- and muscovite-bearing monzogranite, syenogranite, and pegmatite; locally tourmaline bearing

Glenburgh Orogeny (2005–1950 Ma)

c.1945 Ma — Bertibubba Supersuite — ᴾBB-gtl — Fine-grained, massive, leucocratic tonalite and granodiorite

PALEOPROTEROZOIC

2002–1974 Ma — Dalgaringa Supersuite

ᴾDAnα-mgt | ᴾDAnα-mgtl | ᴾDA-mgml | ᴾDA-mgtw | ᴾDA-xmgt-mgm | ᴾDA-xmgg-mwo | ᴾDA-xmgt-mgg | ᴾDA-xmgml-mgg | ᴾDA-mgp | ᴾDA-moα

ᴾDAnα-mgt NARDOO GRANITE: foliated, medium-grained biotite metatonalite and meta quartz diorite; equigranular or porphyritic; abundant small mafic clots

ᴾDAnα-mgtl Foliated, medium-grained, weakly porphyritic, leucocratic biotite metatonalite and minor metagranodiorite

ᴾDA-mgml Medium-grained, leucocratic biotite metamonzogranite; foliated; commonly with clots of biotite after garnet

ᴾDA-mgtw Fine-grained mesocratic metatonalite; minor fine-grained metamonzogranite and leucocratic metatonalite, medium-grained metatonalite and metagranodiorite, and leucocratic metamonzogranite and metagranodiorite

ᴾDA-xmgt-mgm Interlayered, fine-grained mesocratic metatonalite and fine-grained, pale grey, biotite metamonzogranite and leucocratic metatonalite; commonly with clots of biotite after garnet

ᴾDA-xmgg-mwo Foliated metagranodiorite and metamonzogranite sheets, with abundant layers of mafic granulite; minor pelite, including diatexite migmatite

ᴾDA-xmgt-mgg Interlayered medium-grained metatonalite and metagranodiorite together with leucocratic biotite metamonzogranite and metagranodiorite; subordinate fine-grained metatonalite and metamonzogranite; gneissic to weakly foliated

ᴾDA-xmgml-mgg Interlayered medium-grained, leucocratic biotite metamonzogranite and metagranodiorite; commonly with clots of biotite after garnet

ᴾDA-mgp Coarse-grained leucocratic metapegmatite and metagranite; commonly with clots of biotite after garnet

ᴾDA-moα Amphibolite; locally mafic granulite

Glenburgh Terrane

GASCOYNE PROVINCE

Unassigned

2083–1997 Ma

ᴾmiGAG | ᴾmliGAG | ᴾmwαGAG | ᴾmogGAG | ᴾmusGAG

ᴾmiGAG Metamorphosed banded iron-formation

ᴾmliGAG Migmatitic pelitic gneiss (diatexite migmatite)

ᴾmwαGAG Amphibolite

ᴾmogGAG Plagioclase–actinolite–tremolite gneiss; after gabbro

ᴾmusGAG Fine- to medium-grained actinolite(–clinozoisite–albite–titanite) and tremolite(–serpentine–talc–calcite) schist

2240–2125 Ma — Moogie Metamorphics

ᴾMGm-mls — Pelitic schist commonly with chloritoid; locally with relict garnet porphyroblasts

ᴾMGm-mtsf — MUMBA PSAMMITE: quartzofeldspathic psammitic schist commonly with chloritoid; local minor pelitic schist and quartzite

ᴾMGm-mtq — Metamorphosed quartz sandstone, granule metaconglomerate, and quartzite gneiss, locally micaceous; minor psammitic schist; locally with relict cross-bedding

ᴾMG-mkq | ᴾMG-mkk

ᴾMG-mkq Calc-silicate gneiss; pargasite- or diopside-bearing quartz–plagioclase–epidote(–titanite) rock; tremolite–diopside(–garnet) calc-silicate rock with minor marble

ᴾMG-mkk Marble; dolomite(–quartz) and dolomite–calcite–forsterite–clinohumite–serpentine rock; locally contains garnet

ARCHEAN–PROTEROZOIC

2663–2429 Ma

Æha-mgn | Æha-mgnl | Æha-mgnw

Æha-mgn HALFWAY GNEISS: interlayered leucocratic and mesocratic granitic gneiss, pale-grey granitic gneiss and foliated metagranite, and gneissic to foliated porphyritic metagranodiorite

Æha-mgnl Leucocratic granitic gneiss and foliated leucocratic metagranite; derived from biotite monzogranite and granodiorite

Æha-mgnw Mesocratic granitic gneiss; derived from variably porphyritic tonalite