PHANEROZOIC

CENOZOIC

Unassigned

S | W | Wq | Wt

Sandplain unit

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

Sheetwash units

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

Wq Predominantly quartz-rich silt, sand, and gravel derived from quartz veins and quartz-rich rock

Wt Sheetwash deposits of silt and sand characterized by banded mosaic vegetation ('tiger bush'); banding is normal to slope

QUATERNARY

C1 | C1z | A1 | A1c | A1f

Colluvial units, third generation

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

C1z Unconsolidated rubble and scree of silcrete and brecciated siliceous caprock

Alluvial units, third generation

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

A1c Unconsolidated silt, sand, and gravel in stream channels

A1f Silt, sand and gravel as stream bank deposits marginal to active channels, incised by modern drainage

C2 | C2f | C2q | A2

Colluvial units, second generation

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

C2f Partly consolidated ferruginous rubble and scree

C2q Quartz fragments in a partly consolidated silt and sand matrix, derived from quartz veins and quartzose rocks

Alluvial unit, second generation

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

C3

Colluvial unit, first generation

C3 Quartz and rock fragments in a weakly cemented and compacted silt and sand matrix; deeply dissected valley-fill deposits

Rf | Rz

Residual or relict units

Rf Sandy and clayey distal sheetwash and slope deposits; no clearly defined drainage

Rz Silcrete and brecciated siliceous caprock

NEOGENE — PLEISTOCENE / ?MIOCENE

Nna-klul — **NADARRA FORMATION:** silty micritic limestone; includes minor calcrete; muddy, commonly silicified; lacustrine

Nmpi-sr — **PINDILIYA FORMATION:** poorly sorted sandstone, commonly lithic, and granule to pebble conglomerate; generally very silicified

PALEOZOIC

PERMIAN

Byro Group (lower)

PBYm-ss — **MALLENS SANDSTONE:** fine- to medium-grained sandstone; minor siltstone; characteristically intensely bioturbated

PBYc-sf — **COYRIE FORMATION:** black shale, siltstone, and sandstone in coarsening-upward succession

Wooramel Group

PWOb-sf — **BILLIDEE FORMATION:** grey siltstone, fine- to medium-grained sandstone; lesser black shale; minor granule to pebble conglomerate

PWOm-st — **MOOGOOLOO SANDSTONE:** fine- to very coarse-grained quartz sandstone; minor siltstone and granule to pebble conglomerate

CARBONIFEROUS

Pca-kt — **CALLYTHARRA FORMATION:** fossiliferous calcareous siltstone to calcisiltite; interbedded hard fossiliferous calcarenite

Lyons Group

PLYc-sf — **CARRANDIBBY FORMATION:** grey-green shale and siltstone, coarsening and more calcareous upwards; local dropstones

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

PROTEROZOIC

NEOPROTEROZOIC

c. 755 Ma [1]

Mulka Tectonic Event (c. 570 Ma)

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])

Mutherbukin Tectonic Event (1280–1250 Ma)

PALEOPROTEROZOIC–MESOPROTEROZOIC

<1620 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

ᴾMEy-st — **YILGATHERRA FORMATION:** sandstone; subordinate siltstone, conglomerate, and dolostone

EDMUND BASIN

Mangaroon Orogeny (1680–1620 Ma[3])

PALEOPROTEROZOIC

1677–1604 Ma — Durlacher Supersuite

ᴾDU-gmv — Leucocratic, medium-grained muscovite–biotite granodiorite and monzogranite; equigranular to weakly porphyritic

1787–1677 Ma — Pooranoo Metamorphics — Mount James Subgroup

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

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])

1820–1778 Ma — Moorarie Supersuite

ᴾMO-gp | ᴾMOsc-gm | ᴾMO-gmeb | ᴾMOdu-ggp

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

ᴾMOsc-gm **SCRUBBER GRANITE:** biotite(–tourmaline) monzogranite, fine- to medium-grained, equigranular, commonly with abundant clusters of tourmaline; locally nodular texture; massive to weakly 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

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

Glenburgh Orogeny (2005–1950 Ma)

2003–1977 Ma — Dalgaringa Supersuite

ᴾDA-xmgt-mgg | ᴾDA-xmgml-mgg | ᴾDA-mgp | ᴾDA-moa

ᴾDA-xmgt-mgg Interlayered, medium-grained metatonalite and metagranodiorite, 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-moa Amphibolite; locally mafic granulite

2430–1965 Ma — Unassigned units

ᴾmwaGAG | ᴾmusGAG

ᴾmwaGAG Amphibolite

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

2377–2120 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

Glenburgh Terrane

GASCOYNE PROVINCE

ARCHEAN–PROTEROZOIC

NEOARCHEAN–PALEOPROTEROZOIC

2670–2425 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 monzongranite and granodiorite

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