PHANEROZOIC

CENOZOIC

Unassigned

C | Cf | W | Wf | Wk | Wq | Wt | A | Ad | Af | Av | S

Colluvial units

C	Quartz and rock fragments in a silt and sand matrix; includes ferruginous deposits
Cf	Ferruginous rubble and scree

Sheetwash units

W	Sandy and clayey distal sheetwash and slope deposits; no clearly defined drainage
Wf	Predominantly iron-rich sand and silt, derived from relict ferruginous deposits
Wk	Distal sheetwash with calcrete cutans and carbonate cement
Wq	Predominantly quartz-rich silt, sand, and gravel derived from quartz veins and quartz-rich rock
Wt	Silt and sand; surface is characterized by shallow depressions aligned perpendicular to the slope; supports banded mosaic vegetation ('tiger bush')

Alluvial units

A	Silt, sand, and gravel in drainage channels and adjacent to floodplains; includes ferruginous deposits
Ad	Unconsolidated, fine-grained deposits in alluvial drainage depressions, claypans, perennial lakes, and swamps; low-lying areas with internal drainage; typically thickly vegetated
Af	Unconsolidated, fine-grained deposits on floodplains
Av	Fan-shaped deposits of unconsolidated, fine-grained sand to boulders in fine-grained matrix on steep hill slopes

Sandplain unit

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

QUATERNARY

C1 | C1c | C1cb | C1f | C1q | A1 | A1cb

Colluvial units, third generation

C1	Quartz and rock fragments in an unconsolidated silt and sand matrix; includes ferruginous deposits
C1c	Unconsolidated deeply weathered rock fragments in a partly consolidated clay and sand matrix; reworked saprolite and saprock
C1cb	Swelling clay (gilgai) and rock fragments, mostly developed over dolerite
C1f	Unconsolidated ferruginous rubble and scree
C1q	Unconsolidated quartz fragments in 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
A1cb	Swelling clay (gilgai) developed on alluvial flats

C2 | C2f | 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

Alluvial unit, second generation

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

C3 | A3 | A3ti

Colluvial unit, first generation

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

Alluvial units, first generation

A3	Weakly cemented and compacted silt, sand, and gravel; deeply dissected by present-day drainage
A3ti	Sand and gravel with ferruginous cement; deeply dissected by present-day drainage

Rf | Rk | Rz

Residual or relict units

Rf	Ferruginous deposits, including lateritic, ferruginous, and manganiferous duricrust
Rk	Calcrete, developed in, and adjacent to, alluvial channels, carbonate and vuggy opaline silica; dissected by major present-day drainage lines
Rz	Silcrete and brecciated siliceous caprock

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

MESO–PROTEROZOIC

NEOPROTEROZOIC

Mulka Tectonic Event (*c.* 570 Ma)

c. 755 Ma[1] — ᴱMW-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)

c. 1465 Ma — ᴱnr-od — NARIMBUNNA DOLERITE: dolerite and gabbro sills intruded into Edmund Group

PALEOPROTEROZOIC–MESOPROTEROZOIC

Bangemall Supergroup; Edmund Group; EDMUND BASIN

c. 1465 Ma — ᴱMEl-sl — ULLAWARRA FORMATION: siltstone; subordinate fine-grained sandstone, dolostone, and chert; locally intruded by numerous dolerite sills

ᴱMEl-sf — Siltstone and thin- to thick-bedded sandstone

ᴱMEv-kd — DEVIL CREEK FORMATION: laminated dolostone and dolomitic siltstone; local thick-bedded dolorudite

ᴱMEv-sl — Siltstone, dolomitic siltstone, and dolostone

ᴱMEd-cl — DISCOVERY FORMATION: massive or laminated chert, silicified mudstone, and siltstone; local silicified sandstone and conglomerate

ᴱMEk-sf — KIANGI CREEK FORMATION: siltstone, mudstone, and thin- to very thick-bedded quartz sandstone; minor dolostone and conglomerate

ᴱMEk-st — Medium- to very thick-bedded quartz sandstone and siltstone

ᴱMEk-sl — Siltstone; minor fine-grained sandstone

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

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

ᴱMEi-sl — Siltstone, sandstone, and dolostone

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

MOUNT AUGUSTUS BASIN

ᴱau-sp — MOUNT AUGUSTUS SANDSTONE: sandstone, pebbly sandstone, and conglomerate; minor siltstone

ᴱau-st — Sandstone; minor pebbly sandstone, siltstone, and conglomerate

Mangaroon Orogeny (1680–1620 Ma[3])

GASCOYNE PROVINCE

Durlacher Supersuite

1677–1619 Ma[3] — ᴱDU-gmvt | ᴱDU-gpt

ᴱDU-gmvt	Leucocratic, medium-grained muscovite–tourmaline(–biotite) monzogranite; locally garnet bearing
ᴱDU-gpt	Tourmaline–muscovite pegmatite and coarse-grained granite, and fine-grained, leucocratic tourmaline–muscovite monzogranite

Capricorn Orogeny (1820–1770 Ma[4])

Moorarie Supersuite

1817–1776 Ma — ᴱMO-gmeb | ᴱMOmi-mgmn | ᴱMOmi-mgmy | ᴱMO-mgg | ᴱMOru-mgm | ᴱMO-xmg-m

ᴱMO-gmeb	Massive, equigranular to sparsely porphyritic biotite monzogranite; medium- and coarse-grained; minor muscovite in places; includes some granodiorite and minor leucocratic tonalite
ᴱMOmi-mgmn	MIDDLE SPRING GRANITE: pale-grey, gneissic to foliated metamonzogranite; derived from medium-grained equigranular to sparsely porphyritic biotite monzogranite
ᴱMOmi-mgmy	Pale-grey, recrystallized mylonitic metamonzogranite; derived from medium-grained equigranular to sparsely porphyritic biotite monzogranite
ᴱMO-mgg	Fine-to medium-grained, foliated metagranodiorite; locally porphyritic
ᴱMOru-mgm	RUBBEROID GRANITE: pale-grey, medium- to coarse-grained, seriate to porphyritic metamonzogranite; typically with well-developed igneous layering; commonly with mingled pegmatite veins; minor mesocratic metagranodiorite; locally schistose
ᴱMO-xmg-m	Mesocratic biotite metagranodiorite to metamonzogranite and pale-grey, layered biotite(–muscovite) metamonzogranite; commonly schistose; includes rafts of schist, amphibolite, calc-silicate rock, and quartzite

Leake Spring Metamorphics

1842–1807 Ma[5] — ᴱLS-mhs | ᴱLS-mlsm | ᴱLS-mts | ᴱLS-mk

ᴱLS-mhs	Pelitic and psammitic schist; quartz–biotite–muscovite–feldspar schist, quartz–sericite–biotite schist, quartz–sericite–chlorite schist; minor metasandstone and granule metaconglomerate
ᴱLS-mlsm	Pelitic schist; muscovite–quartz–biotite–plagioclase–magnetite and quartz–muscovite–biotite–plagioclase schist
ᴱLS-mts	Psammitic schist; quartz–chlorite–muscovite schist
ᴱLS-mk	Calc-silicate gneiss and schist; fine grained

Glenburgh Orogeny (2005–1950 Ma)

Glenburgh Terrane

Unassigned

2083–2002 Ma — ᴱmusGAG — Fine- to medium-grained actinolite(–clinozoisite–albite–titanite) and tremolite(–serpentine–talc–calcite) schist

Moogie Metamorphics

2240–2125 Ma — ᴱMG-mkq — Calc-silicate gneiss; pargasite- or diopside-bearing quartz–plagioclase–epidote(–titanite) rock; tremolite–diopside(–garnet) calc-silicate rock with minor marble

ARCHEAN–PROTEROZOIC

2663–2429 Ma — Æha-mgn | 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-mgnw	Mesocratic granitic gneiss; derived from variably porphyritic tonalite