PHANEROZOIC

CENOZOIC

Unassigned

Cf | W | Wt | Wf | Wk | Wq | Ad | L | Et

Colluvial unit

Cf — Ferruginous rubble and scree

Sheetwash units

W — Sandy and clayey distal sheetwash and slope deposits; no clearly defined drainage
Wt — Silt and sand; surface characterized by shallow depressions aligned perpendicular to slope; supports banded mosaic vegetation ('tiger bush')
Wf — Low-gradient deposits of ferruginous sand, silt, and gravel
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

Alluvial unit

Ad — Unconsolidated, fine-grained deposits in alluvial drainage depressions, claypans, ephemeral lakes, and swamps; low-lying areas with internal drainage; typically thickly vegetated

Lacustrine unit

L — Unconsolidated, fine-grained deposits in claypans, ephemeral lakes, and swamps; low-lying areas with internal drainage; typically thickly vegetated

Eolian unit

Et — Semi-consolidated fine-grained eolian sand over older alluvium

QUATERNARY

C1 | C1c | C1f | C1k | C1q | C1z | A1 | A1c | A1f

Colluvial units, third generation

C1 — Quartz and rock fragments in an unconsolidated silt and sand matrix; includes ferruginous deposits
C1c — Clay, quartz sand, and deeply weathered rock fragments; reworked saprolite and saprock
C1f — Unconsolidated ferruginous rubble and scree
C1k — Quartz and rock fragments in an unconsolidated silt and sand matrix; contains calcrete cutans and carbonate cement
C1q — Unconsolidated quartz fragments in a silt and sand matrix; derived from quartz veins and quartzose rocks
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 — Unconsolidated silt, sand, and minor gravel in floodplains adjacent to present-day drainage

C2 | C2c | C2f | C2q | A2 | E2t

Colluvial units, second generation

C2 — Quartz and rock fragments in a partly consolidated silt and sand matrix
C2c — Deeply weathered rock fragments in a partly consolidated clay and sand matrix; reworked saprolite and saprock
C2f — Partly consolidated ferriginous 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

Eolian unit, first generation

E2t — Consolidated fine-grained eolian sand over older alluvium

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 | Rg | Rk | Rl | 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
Rk — Calcrete, developed in, and adjacent to, alluvial channels; carbonate and vuggy opaline silica; dissected by major present-day drainage
Rl — Saprolite and saprock of uncertain protolith
Rz — Silcrete and brecciated siliceous caprock

zq

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

995–955 Ma — Thirty Three Supersuite

Edmundian Orogeny (1030–950 Ma[2])

ᴾTT-gmlt | ᴾTT-gmpt | ᴾTT-gpvt | ᴾTT-jmgmt-m

ᴾTT-gmlt — Leucocratic, medium-grained, muscovite–tourmaline(–biotite) monzogranite; equigranular to porphyritic
ᴾTT-gmpt — Medium-grained, coarsely porphyritic, biotite–tourmaline monzogranite; massive
ᴾTT-gpvt — Muscovite–tourmaline pegmatite; some rare-element bearing
ᴾTT-jmgmt-m — Foliated leucocratic muscovite(–tourmaline) metamonzogranite and foliated leucocratic biotite–muscovite(–tourmaline) metamonzogranite; locally layered; inclusions of pelitic schist, quartzite, and amphibolite

PALEOPROTEROZOIC–MESOPROTEROZOIC

Mutherbukin Tectonic Event (1280–1250 Ma)

c. 1465 Ma

ᴾnr-od — **NARIMBUNNA DOLERITE:** dolerite and gabbro sills intruded into **Edmund Group**

Bangemall Supergroup — Edmund Group

ᴾMEk-sl — **KIANGI CREEK FORMATION:** siltstone; minor fine-grained sandstone

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

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

EDMUND BASIN

ᴾmodGA — Massive metadolerite and foliated amphibolite; fine and medium grained

PALEOPROTEROZOIC

Mangaroon Orogeny (1680–1620 Ma[3])

1680–1620 Ma[3] — Durlacher Supersuite

ᴾDUda-mgmu | ᴾDUtl-mgt | ᴾDU-mgm | ᴾDU-mgmb | ᴾDU-mgml | ᴾDU-mgmt | ᴾDU-mgms | ᴾDU-mgn | ᴾDU-mgnl | ᴾDU-mu | ᴾDUdi-grpv | ᴾDU-gmvt | ᴾDU-gpt

ᴾDUda-mgmu — **DAVEY WELL GRANITE:** schistose, coarse-grained, strongly porphyritic biotite metamonzogranite; round phenocrysts of K-feldspar up to 6 cm in diameter
ᴾDUtl-mgt — **TETLOW GRANITE:** aegirine–augite- or hornblende-bearing metamorphosed quartz diorite and metatonalite; scattered inclusions of amphibolite
ᴾDU-mgm — Massive to foliated, medium-grained, porphyritic biotite metamonzogranite to metagranodiorite
ᴾDU-mgmb — Foliated, medium-grained and fine- to medium-grained equigranular or sparsely porphyritic biotite(–muscovite) metamonzogranite; commonly with igneous banding
ᴾDU-mgml — Foliated, leucocratic muscovite(–biotite) metamonzogranite; medium grained; equigranular
ᴾDU-mgmt — Foliated leucocratic muscovite(–tourmaline) metamonzogranite; locally coarse grained
ᴾDU-mgms — Schistose, mesocratic biotite metamonzogranite and metagranodiorite; fine to medium grained
ᴾDU-mgn — Gneissic to schistose biotite metamonzogranite and metasyenogranite; fine and medium grained; pegmatite banded
ᴾDU-mgnl — Gneissic to schistose, leucocratic biotite–muscovite metamonzogranite and metasyenogranite; fine and medium grained; pegmatite banded
ᴾDU-mu — Meta-ultramafic rock; medium to coarse grained; includes tremolite–clinopyroxene(–quartz) schist
ᴾDUdi-grpv — **DINGO CREEK GRANITE:** porphyritic biotite–muscovite monzogranite to syenogranite; fine- to medium-grained with thin, tabular K-feldspar phenocrysts defining a trachytic texture
ᴾDU-gmvt — Leucocratic, medium-grained muscovite–tourmaline(–biotite) monzogranite; locally garnet bearing
ᴾDU-gpt — Tourmaline–muscovite pegmatite and coarse-grained granite, and fine-grained, leucocratic tourmaline–muscovite monzogranite

Pooranoo Metamorphics

ᴾPO-mkq — Calc-silicate gneiss composed of actinolite–quartz–plagioclase–clinopyroxene–epidote–titanite; minor dolomitic quartz-granule metasandstone; medium to coarse grained; locally with graded bedding

1760–1680 Ma — 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-mqef — Coarse-grained, granule- and pebble-rich feldspathic metasandstone; minor quartz–muscovite schist

ᴾPOb-mlpc | ᴾPOb-mlsm | ᴾPOb-mxq

ᴾPOb-mlpc — Phyllite and slate; locally chlorite rich with magnetite porphyroblasts
ᴾPOb-mlsm — Biotite–quartz–muscovite schist and quartz–muscovite–biotite schist
ᴾPOb-mxq — Cobble and boulder metaconglomerate; strongly foliated; locally includes quartzite and muscovite–quartz(–biotite) schist

Capricorn Orogeny (1820–1770 Ma[4])

1820–1775 Ma — Moorarrie Supersuite

ᴾMOru-mgm | ᴾMO-mgn | ᴾMO-mgnl | ᴾMO-mgsl | ᴾMO-mog | ᴾMO-xmg-m | ᴾMOdu-ggp | ᴾMOsc-gm | ᴾMO-gge | ᴾMO-gmeb | ᴾMO-gmp | ᴾMO-gmvl

ᴾMOru-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
ᴾMO-mgn — Pegmatite-banded gneissic and foliated granite; protoliths include gneissic, mesocratic biotite-rich metamonzogranite to metagranodiorite, foliated porphyritic metamonzogranite, and minor foliated, leucocratic garnet metagranite and metapegmatite
ᴾMO-mgnl — Leucocratic granitic gneiss and foliated leucocratic metagranite; derived from biotite monzogranite and granodiorite
ᴾMO-mgsl — Schistose, leucocratic muscovite(–biotite) metamonzogranite
ᴾMO-mog — Massive, subophitic metagabbro; medium grained; amphibolite; minor hornblende schist
ᴾMO-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
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
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-gge — Equigranular to sparsely porphyritic, medium-grained biotite(–muscovite) granodiorite
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

GASCOYNE PROVINCE

1840–1810 Ma — Leake Spring Metamorphics

ᴾLS-mhs | ᴾLS-mlsg | ᴾLS-mlsm | ᴾLS-mlst | ᴾLS-mts | ᴾLS-mk | ᴾLS-mwa | ᴾLS-mus

ᴾLS-mhs — Pelitic and psammitic schist; quartz–biotite–muscovite–feldspar schist, quartz–sericite–biotite schist, quartz–sericite–chlorite schist; minor metasandstone and granule metaconglomerate
ᴾLS-mlsg — Pelitic schist and gneiss; muscovite–biotite–quartz–plagioclase–garnet–iron-oxide and staurolite–muscovite–biotite–quartz(–garnet) rock
ᴾLS-mlsm — Pelitic schist; muscovite–quartz–biotite–plagioclase–magnetite and quartz–muscovite–biotite–plagioclase schist
ᴾLS-mlst — Pelitic and semipelitic schist; staurolite–garnet–biotite–muscovite(–andalusite) schist
ᴾLS-mts — Psammitic schist; quartz–chlorite–muscovite schist
ᴾLS-mk — Calc-silicate gneiss and schist; fine grained
ᴾLS-mwa — Amphibolite and actinolite–plagioclase schist
ᴾLS-mus — Actinolite schist and actinolite–chlorite–sericite schist after ultramafic rock

Glenburgh Orogeny (2005–1950 Ma[5])

2080–2000 Ma

ᴾmwaGAG — Amphibolite

2240–2125 Ma — Moogie Metamorphics

ᴾMG-mkk | ᴾMG-mkq

ᴾMG-mkk — Marble; dolomite(–quartz) and dolomite–calcite–forsterite–clinohumite–serpentine rock; locally contains garnet
ᴾMG-mkq — Calc-silicate gneiss; pargasite- or diopside-bearing quartz–plagioclase–epidote(–titanite) rock; tremolite–diopside(–garnet) calc-silicate rock with minor marble

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

Glenburgh Terrane

ARCHEAN–PROTEROZOIC

2555–2430 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