PHANEROZOIC

CAINOZOIC

Unassigned

W | Wk | Wq | L

Sheetwash units

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

Lacustrine unit

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

QUATERNARY

C1 | C1cb | C1f | A1

Colluvial units, third generation

C1 Quartz and rock fragments in an unconsolidated silt and sand matrix; includes ferruginous deposits
C1cb Swelling clay (gilgai) and rock fragments, mostly developed over dolerite
C1f Unconsolidated ferruginous rubble and scree

Alluvial unit, third generation

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

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

C3 | A3

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 unit, first generation

A3 Weakly cemented and compacted silt, sand, and gravel; deeply dissected by present-day drainage

Rf | Rk | Rz | Rzi

Residual or relict units

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

zq Quartz veins, of various ages

od Dolerite dykes, sills, and small intrusions, of various ages; one suite dated at *c.* 755 Ma[1]; includes minor quartz diorite, tonalite, and biotite monzogranite

Edmundian Orogeny (*c.* 1070–755 Ma[2])

MESOPROTEROZOIC

$Pod_{1,2}$ Dolerite and gabbro sills intruded into **Edmund Group**; oldest suite (Pod_1) dated at *c.*1465 Ma[3,4], and youngest suite (Pod_2) dated at *c.*1070 Ma[3,4]

PROTEROZOIC

PALAEOPROTEROZOIC – MESOPROTEROZOIC

Bangemall Supergroup

Edmund Group

EDMUND BASIN

PMEi-s **ULLAWARRA FORMATION:** siltstone, fine-grained sandstone, dolostone, and chert; intruded by numerous dolerite sills ($Pod_{1,2}$)

PMEv-k **DEVIL CREEK FORMATION:** laminated dolostone and dolomitic siltstone; local thick-bedded dolorudite

PMEd-c **DISCOVERY FORMATION:** massive or laminated chert, silicified mudstone, and siltstone; local silicified sandstone and conglomerate

PMEd-sl Siltstone

PMEk-s **KIANGI CREEK FORMATION:** siltstone, mudstone, and thin to very thick bedded quartz sandstone; minor dolostone and conglomerate

PMEk-st Medium to very thick bedded quartz sandstone and siltstone

PMEp-k **CHEYNE SPRINGS FORMATION:** dololutite, dolarenite, dolorudite, mudstone, siltstone, and minor sandstone

PMEp-ss Thin- to thick-bedded sandstone and siltstone; minor dolostone

PMEb-st Medium- to thick-bedded sandstone and siltstone; locally sulfidic

PMEb-sl **BLUE BILLY FORMATION:** siltstone and mudstone; minor thin- to thick-bedded sandstone; locally sulfidic

PMEg-s **GOORAGOORA FORMATION:** fine- to coarse-grained sandstone and siltstone; minor conglomerate, dolostone, and dolomitic siltstone

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

PMEi-ss Sandstone and siltstone; minor dolostone

PMEi-sl Siltstone, sandstone, and dolostone

PMEi-st Sandstone, conglomerate, siltstone, and dolostone

PMEy-sl Siltstone and sandstone

PMEy-s **YILGATHERRA FORMATION:** sandstone, siltstone, conglomerate, and dolostone

*c.*1620 Ma[5]

Mangaroon Orogeny (1680–1620 Ma)

PALAEOPROTEROZOIC

GASCOYNE COMPLEX

c. 1685–1620 Ma[6]

Durlacher Supersuite

PU-ggp | PU-gmp | PU-gmv | PU-gmvt | PU-gpt | PUdi-grpv | PUpi-gmg | PU-og

PU-ggp Grey, massive, medium-grained, porphyritic biotite granodiorite
PU-gmp Cream, massive, medium-grained, porphyritic biotite(–muscovite) monzogranite
PU-gmv Cream, medium-grained muscovite–biotite granodiorite and monzogranite; equigranular or weakly porphyritic
PU-gmvt Cream, medium-grained muscovite–tourmaline(–biotite) monzogranite; locally garnet bearing
PU-gpt Tourmaline–muscovite pegmatite and fine-grained, leucocratic tourmaline–muscovite monzogranite
PUdi-grpv **DINGO CREEK GRANITE:** porphyritic biotite–muscovite granite; fine to medium grained with thin, tabular K-feldspar phenocrysts defining a trachytic texture (Section only)
PUpi-gmg **PIMBYANA GRANITE:** massive, medium-grained, megacrystic and porphyritic biotite(–muscovite) monzogranite; tabular megacrysts of K-feldspar up to 7-cm long
PU-og Massive metagabbro with xenocrysts of quartz and K-feldspar

*c.*1680 Ma[7]

Pooranoo Metamorphics

Mangaroon Zone

PP-mln | PP-mtf | PP-mtq

PP-mln Pelitic gneiss and granofels composed of biotite–muscovite–quartz–plagioclase–sillimanite; also includes minor migmatitic pelitic gneiss
PP-mtf Metamorphosed feldspathic sandstone and psammitic schist; includes interbedded pelite, quartzite, and metamorphosed granule conglomerate
PP-mtq Metamorphosed cobble and pebble conglomerate, quartz sandstone, and pebbly quartz sandstone

Capricorn Orogeny (1830–1780 Ma[8])

Boora Boora Zone

c. 1806–1794 Ma[6]

PmggGAB | PmgmGAB

PmggGAB Foliated and gneissic granodiorite and tonalite; weakly pegmatite banded
PmgmGAB Pale grey, foliated and gneissic monzogranite

PmlsGAB | PmiGAB | PmkqGAB | PmwaGAB

PmlsGAB Pelitic to psammitic schist; includes muscovite–quartz–andalusite–garnet–plagioclase–biotite schist
PmiGAB Metamorphosed banded and granular iron formation
PmkqGAB Calc-silicate gneiss and schist
PmwaGAB Amphibolite and hornblende schist