PHANEROZOIC

CAINOZOIC

QUATERNARY

Qaa | Qal | Qao | Qaoc | Qab | Qw | Qws | Qc | Qs

Qaa Alluvium — sand and gravel in rivers and creeks; clay, silt, and sand in channels and on floodplains
Qal Alluvial sand and gravel levees, and sandbanks
Qao Alluvial sand, silt, and clay in floodplains
Qaoc Mixed floodplain deposits with numerous small claypans
Qab Alluvial sand, silt, and clay in floodplains, with gilgai surface in areas of expansive clay
Qw Low-gradient sheetwash deposits — silt, sand, and pebbles in distal outwash fans; no defined drainage
Qws Sand in distal outwash fans; no defined drainage
Qc Colluvium — sand, silt, and gravel in outwash fans; scree and talus; proximal mass-wasting deposits
Qs Eolian sand — red-yellow, wind-blown sand; local ridges

Czag | Czaq | Czcb | Czrf | Czrfb | Czrk | Czru

Czag Gravel deposits; unrelated to recent drainage; dissected
Czaq Gravel deposits; dominated by vein-quartz debris; unrelated to recent drainage; dissected
Czcb Colluvium; dissected gravel deposits derived from **Fortescue Group**
Czrf Ferricrete; includes ferruginous and pisolitic ironstone; residual origin; dissected by present-day drainage
Czrfb Ferruginous caprock over basalt
Czrk Calcrete; massive, nodular, and cavernous limestone; mainly silicified; residual origin
Czru Siliceous caprock over ultramafic rock

d | q

d Dolerite and gabbro dykes; interpreted from aeromagnetic data where dashed
q Quartz vein

HAMERSLEY BASIN

Mount Bruce Supergroup — Fortescue Group

c. 2760 Ma

AFt — **TUMBIANA FORMATION:** mafic to intermediate volcaniclastic sandstone, tuffaceous siltstone, argillite, tuff, and stromatolitic dolomite and limestone; minor basalt and chert

AFk — **KYLENA FORMATION:** massive and amygdaloidal basalt, basaltic andesite, and dacite; local high-Mg basalt and rhyolite

AFh — **HARDEY FORMATION:** sandstone, conglomerate, siltstone, shale, and tuff

AFhc — Conglomerate; polymictic

AFhs — Medium- to coarse-grained, poorly sorted sandstone, and well-laminated siltstone

AFhu — Tuff, tuffaceous sandstone, siltstone, and shale; interbedded; local conglomerate

c. 2770 Ma

AFr — **MOUNT ROE BASALT:** massive, vesicular, and glomeroporphyritic basalt

AFrs — Laminated shale, siltstone, and poorly sorted tuffaceous sandstone

Aqt — Quartz–tourmaline vein or replacement tourmalinite

AgYic | AgYug | AgYpo | AgYpoa | AgYpop | AgYpoq | AgYpos | AgYmu | AgYmux

YULE GRANITOID COMPLEX

c. 2930 Ma AgYic **PILBARA CREEK MONZOGRANITE: biotite-bearing monzogranite and syenogranite; leucocratic; weakly foliated to massive; metamorphosed**
c. 2935 Ma AgYug **MUNGARINYA MONZOGRANITE:** biotite-bearing monzogranite and syenogranite; weakly foliated to massive; metamorphosed
AgYpo **POWDAR MONZOGRANITE:** biotite-bearing monzogranite and syenogranite; weakly foliated to massive; metamorphosed
AgYpoa Aplite
AgYpop Porphyritic monzogranite
AgYpoq Weakly porphyritic monzogranite; medium- to fine-grained
AgYpos Seriate-textured monzogranite
c. 2945 Ma AgYmu **MUNGAROONA GRANODIORITE:** mesocratic to leucocratic hornblende(–biotite)-bearing granodiorite and monzogranite; foliated to massive; metamorphosed
AgYmux Hornblende(–biotite)-bearing granodiorite and monzogranite with abundant greenstone and gneissic rafts and xenoliths; metamorphosed

Agsap | Agsae

SATIRIST GRANITE

c. 2930 Ma Agsap Metamorphosed biotite(–hornblende)-bearing porphyritic granite
c. 2940 Ma Agsae Metamorphosed biotite(–hornblende)-bearing equigranular granite

c. 2940 Ma

Afp | Apf

Afp Plagioclase–hornblende porphyry; metamorphosed
Apf Quartz–feldspar porphyry; metamorphosed

c. 2950 Ma

Agpe | Agpee | Agpes | Agg | Agdme | Agdms

Agpe **PEAWAH GRANODIORITE:** metamorphosed hornblende–biotite granodiorite and tonalite; mesocratic
Agpee Medium- to coarse-grained, equigranular diorite; metamorphosed
Agpes Seriate to porphyritic (plagioclase) diorite; metamorphosed
Agg Hornblende–biotite granodiorite; medium- to coarse-grained; metamorphosed
Agdme High-Mg diorite; medium- to coarse-grained; equigranular; metamorphosed
Agdms High-Mg diorite; seriate to porphyritic (plagioclase); metamorphosed

ARCHAEAN

PILBARA CRATON

Aog | Aoge | Aogep | Aogh | Aoghp | Aogq | Aogs

Aog Metamorphosed medium- to coarse-grained gabbro; foliated to massive
Aoge Melanogabbro and pyroxenite; locally porphyritic (plagioclase); foliated to massive; metamorphosed
Aogep Porphyritic melanogabbro; foliated to massive; metamorphosed
Aogh Medium-grained gabbro; acicular hornblende; foliated to massive; metamorphosed
Aoghp Coarse-grained (locally pegmatoidal) gabbro; acicular hornblende; foliated to massive; metamorphosed
Aogq Quartz gabbro; weakly foliated to massive; metamorphosed
Aogs Schistose gabbro; plagioclase–hornblende–actinolite–epidote schist

AaMoe | AaMog | AaMu | AaMus

Millindinna Intrusion

AaMoe Actinolite–chlorite(–epidote) rock after pyroxenite
AaMog Actinolite–chlorite–epidote–plagioclase rock after melanogabbro
AaMu Ultramafic rock, tremolite- and serpentine-rich; after peridotite, pyroxenite, and gabbro; massive to schistose
AaMus Serpentinite and serpentine–tremolite(–talc–carbonate–chlorite) schist after dunite or lherzolite

Afd — Metamorphosed dacite; locally spherulitic

< 2990 Ma

De Grey Group

ADm — **MALLINA FORMATION:** interbedded shale, siltstone, and medium- to fine-grained wacke; minor layers of chert; metamorphosed

ADch | ADcs | ADcq | ADcc

CONSTANTINE SANDSTONE

ADch Shale, commonly ferruginized and/or silicified; lesser interbeds of poorly sorted arkose; minor iron formation; metamorphosed
ADcs Poorly sorted subarkose and wacke; lesser interbeds of shale; metamorphosed
ADcq Poorly sorted subarkose; rare graded beds; metamorphosed
ADcc Conglomerate, pebbly sandstone, and coarse-grained lithic sandstone; metamorphosed

Unassigned De Grey Group

AD(q) | AD(qc) | AD(t) | AD(tqc) | AD(tqp) | AD(r) | AD(s)
AD(h) | AD(he) | AD(hil) | AD(hs) | AD(dm) | AD(bm) | AD(bmx) | AD(bms) | AD(us)

AD(q) Medium-grained, poorly sorted subarkose; metamorphosed
AD(qc) Coarse-grained, poorly sorted subarkose; metamorphosed
AD(t) Turbiditic wacke; locally subarkosic; fine- to coarse-grained; well-developed graded units; minor pebble beds and shale; metamorphosed
AD(tqc) Turbiditic wacke; locally subarkosic; coarse-grained; abundant chert clasts; locally with pebble beds; metamorphosed
AD(tqp) Polymictic conglomerate; metamorphosed
AD(r) Tourmalinized fine- to coarse-grained wacke; metamorphosed
AD(s) Metamorphosed fine- to medium-grained wacke; locally interleaved with abundant iron formation, ferruginous siltstone, and serpentine- and tremolite-rich schist
AD(h) Laminated shale; includes minor beds of poorly sorted subarkose; metamorphosed
AD(he) Ferruginous siltstone, shale, and iron formation; metamorphosed
AD(hil) Laminated shale and siltstone metamorphosed; locally ferruginous and/or chlorite-rich; includes layers of iron formation, chlorite–quartz schist, chert, and wacke
AD(hs) Finely laminated siliceous siltstone; metamorphosed
AD(dm) Dolerite; locally with pyroxene spinifex texture; metamorphosed
AD(bm) High-Mg basalt; locally with pyroxene spinifex texture; metamorphosed
AD(bmx) Hyaloclastite breccia; metamorphosed
AD(bms) High-Mg basalt interleaved with shale and wacke; metamorphosed
AD(us) Chlorite–actinolite–serpentine–epidote schist after high-Mg basalt, and komatiite locally; with pseudomorphed pyroxene or olivine spinifex textures locally

Pilbara Supergroup — Gorge Creek Group

c. 3020 Ma

AGlc | AGlcx | AGli | AGlix

CLEAVERVILLE FORMATION

AGlc Chert; white and grey; locally banded; minor jasperlite and iron formation; metamorphosed
AGlcx Chert breccia; clast supported; metamorphosed
AGli Banded iron-formation; metamorphosed
AGlix Iron formation, tremolite schist, talc schist, and banded iron-formation; metamorphosed

Unassigned

AG(f) | AG(fy) | AG(sfc) | AG(sfs) | AG(shg)

AG(f) Felsic rock, undivided; metamorphosed; typically silicified
AG(fy) Trachyte; metamorphosed; typically silicified
AG(sfc) Felsic volcaniclastic conglomerate and pebbly sandstone; metamorphosed
AG(sfs) Felsic volcaniclastic sandstone; metamorphosed
AG(shg) Carbonaceous shale and siltstone; metamorphosed

No stratigraphic subdivision

As | Asb | Asc | Asf | Ash | Asq | Asqb | Assq | Ac | Af

As Sedimentary rock, undivided; metamorphosed
Asb Mafic volcaniclastic conglomerate, sandstone, and siltstone; metamorphosed
Asc Conglomerate; metamorphosed
Asf Felsic sandstone and volcaniclastic rock; metamorphosed
Ash Shale and siltstone; metamorphosed
Asq Quartz–muscovite schist and quartzite
Asqb Quartz–muscovite schist and quartzite; includes abundant mafic schist and amphibolite locally
Assq Fine-grained quartz sandstone and siltstone; minor shale and chert; metamorphosed
Ac Chert; metamorphosed
Af Felsic rock, undivided; metamorphosed; typically silicified

Ab | Aba | Abaz | Abm | Abmf | Abmz | Abx | Abi | Aby | Abu | Abz

Ab Mafic rock, undivided; metamorphosed
Aba Amphibolite
Abaz Amphibolite; partially silicified
Abm Variolitic high-Mg basalt; commonly with pyroxene spinifex texture; local pillow structures; metamorphosed
Abmf Strongly foliated, variolitic high-Mg basalt; metamorphosed
Abmz Silicified, variolitic high-Mg basalt; metamorphosed
Abx Mafic volcaniclastic breccia; metamorphosed
Abi Mafic to intermediate rock; metamorphosed
Aby Amygdaloidal basalt; metamorphosed
Abu Interleaved mafic and ultramafic rocks, undivided; metamorphosed
Abz Strongly silicified mafic rock; includes silicified sedimentary rock and chert

Aogz — Strongly silicified gabbro; metamorphosed

Au | Aud | Auk | Aup | Aur | Auxo

Au Ultramafic rock, undivided; metamorphosed
Aud Dunite; serpentinized
Auk Serpentine–talc–tremolite rock after komatiite; pseudomorphed olivine spinifex textures
Aup Metaperidotite; serpentinized
Aur Tremolite-rich schist; probably after ultramafic rock
Auxo Olivine pyroxenite; metamorphosed

AgYel | AgYya | AgYchm | AgYchn | AgYchp | AgYchx | AgYla

YULE GRANITOID COMPLEX

AgYel **ELLAWARRINA MONZOGRANITE:** biotite-bearing monzogranite; metamorphosed
AgYya **YANDEEARRA GRANODIORITE:** biotite-bearing granodiorite; weakly to strongly foliated; metamorphosed
CHEEARRA MONZOGRANITE
AgYchm Monzogranite; moderately to strongly foliated
AgYchn Monzogranitic to granodioritic, gneissic granitoid rock
AgYchp Porphyritic (K-feldspar) monzogranite and granodiorite; foliated
AgYchx Monzogranitic to tonalitic, gneissic granitoid rock; locally contains abundant greenstone rafts and xenoliths
AgYla **YALLINGARRINTHA TONALITE:** biotite–hornblende-bearing tonalite; moderately to strongly foliated; metamorphosed

c. 3420 Ma

undivided granitoids

Ag | Agd | Agl | Agmh | Agp

Ag Metamorphosed granite, undivided
Agd Diorite; mesocratic to melanocratic; hornblende–(biotite)-bearing; weakly foliated to massive
Agl Leucogranite
Agmh Monzogranite; hornblende(–biotite)-bearing
Agp Pegmatite