PHANEROZOIC

CAINOZOIC — QUATERNARY

Qa — Alluvium—unconsolidated silt, sand, and gravel in channels and floodplains
Qc — Colluvium—unconsolidated rock fragments in soil; scree deposits

Czb — Black soil—clay and silt
Czc — Colluvium and rubble—sand, gravel, conglomerate, and sedimentary breccia forming sheetwash fans and scree slopes
Czcv — Colluvium and alluvium—clay, silt, sand, and gravel forming dissected valley-fill deposits
Czk — Calcrete—sheet carbonate associated with alluvium and colluvium
Czn — Unconsolidated and partly consolidated sandplain deposits
Czs — Alluvium and colluvium—partly consolidated clay, silt, sand, and gravel; adjacent to drainage; local calcrete

q — Quartz veins, of various ages; youngest generation postdates Devonian

PALAEOZOIC — LATE DEVONIAN — FRASNIAN — Mahony Group

DMb — **BOLL CONGLOMERATE:** pebble to boulder conglomerate, pebbly sandstone, quartz arenite, and minor siltstone
DMg — **GLASS HILL SANDSTONE:** medium- to fine-grained quartz arenite; minor pebbly sandstone, conglomerate, and siltstone

MIDDLE CAMBRIAN — BOOMERANGIAN–TEMPLETONIAN — ORDIAN — Goose Hole Group — Elder Subgroup / Negri Subgroup

Ꞓ̀Go — **OVERLAND SANDSTONE:** lithic arkose (section only)
Ꞓ̀Ge — **EAGLE HAWK SANDSTONE:** medium- to fine-grained quartz arenite, minor pebbly sandstone, conglomerate, and siltstone
Ꞓ̀GN — **UNDIVIDED NEGRI SUBGROUP:** siltstone, mudstone, limestone, and minor sandstone (section only)
Ꞓ̀Gh — **HEADLEYS LIMESTONE:** grey massive to laminated limestone; minor chert and stromatolites locally
Ꞓ̀ar — **Blackfella Rockhole Member:** fine-grained basalt and basaltic breccia
Ꞓ̀a — **ANTRIM PLATEAU VOLCANICS:** massive or amygdaloidal, locally porphyritic basalt, and basaltic breccia; thin interbeds of sandstone, siltstone, and stromatolitic chert

ORD BASIN

EARLY CAMBRIAN

d — Dolerite dyke
p — Pegmatite dyke
u — Ultramafic rock of unknown age intruded into Red Rock Formation

PROTEROZOIC — Albert Edward Group

ꝐL — Undivided; sandstone, argillite, dolomite, and conglomerate (section only)
ꝐLb — **BOONALL DOLOMITE:** yellow or grey laminated dolomite, dolorudite, and argillite
ꝐLe — **ELVIRE FORMATION:** thin-bedded argillite and minor quartz sandstone
ꝐLo — **MOUNT FORSTER SANDSTONE:** fine- to medium-grained quartz sandstone; minor pebbly sandstone and conglomerate

c. 610 Ma — Duerdin Group

ꝐEo — **RANFORD FORMATION:** thin-bedded siltstone and thin- to thick-bedded quartz sandstone, dolomitic quartz sandstone, and dolomite
ꝐEoe — **Johnny Cake Shale Member:** green to reddish purple siltstone, locally micaceous; minor thin-bedded, fine-grained quartz sandstone and mudstone
ꝐEoj — **Jarrad Sandstone Member:** thin- to thick-bedded, fine- to medium-grained, dolomitic sandstone and quartz sandstone; siltstone and mudstone
ꝐEm — **MOONLIGHT VALLEY TILLITE:** massive, matrix-supported, polymictic pebble to boulder conglomerate and poorly sorted, massive sandstone; larger clasts in conglomerate are polished and striated locally
ꝐEk — **FRANK RIVER SANDSTONE:** poorly sorted lithic sandstone and dolomitic sandstone, pebble to cobble sandstone, conglomerate, siltstone, mudstone, and minor thin-bedded dolomite
ꝐEka — Thin-bedded mudstone, siltstone, fine- to coarse-grained sandstone, and dolomitic mudstone
ꝐEf — **FARGOO TILLITE:** massive, matrix-supported, polymictic pebble to boulder conglomerate and poorly sorted, massive sandstone; larger clasts in conglomerate are polished and striated locally

WOLFE CREEK BASIN

c. ?800 Ma

Ꝑh — **HELICOPTER SILTSTONE:** green and grey micaceous siltstone, fine- to medium-grained quartz sandstone, and mudstone
ꝐEhs — Thin- to thick-bedded, fine- to medium-grained quartz sandstone; siltstone and mudstone
Ꝑf — **AHERN FORMATION:** fine- to coarse-grained quartz sandstone; minor pebbly sandstone, conglomerate, and siltstone

Ꝑs — **WADE CREEK FORMATION:** fine- to coarse-grained quartz sandstone, lithic quartz sandstone, pebbly sandstone, conglomerate, siltstone, and mudstone
Ꝑsj — **Mount John Member:** green-grey siltstone, mudstone, and fine- to coarse-grained sandstone
Ꝑsa — Siltstone and thin-bedded sandstone
Ꝑsc — Chert breccia; angular to rounded chert fragments in a ferruginous chert-sandstone matrix

VICTORIA RIVER BASIN

Ꝑu — **BUNGLE BUNGLE DOLOMITE:** thin- to thick-bedded dolarenite, dololutite, and dolorudite; commonly stromatolitic; dolomitic quartz sandstone, siltstone, and stromatolitic chert
Ꝑus — Thin- to medium-bedded, fine- to medium-grained quartz sandstone
Ꝑua — Green-grey mudstone, siltstone, and thin-bedded quartz sandstone
Ꝑuc — Chert breccia; angular fragments of laminated and stromatolitic chert in a silicified sandy matrix; commonly ferruginous; quartz sandstone locally
Ꝑt — **MOUNT PARKER FORMATION:** fine- to coarse-grained quartz sandstone, pebbly sandstone, and conglomerate
Ꝑta — Green-grey mudstone, siltstone, and thin-bedded quartz sandstone
Ꝑto — Poorly sorted, oligomictic pebble to boulder conglomerate, pebbly sandstone, and coarse-grained sandstone; quartz sandstone clasts

OSMOND BASIN

Ꝑx — **TEXAS DOWNS FORMATION:** fine- to coarse-grained quartz sandstone, pebbly sandstone, conglomerate, siltstone, mudstone, basalt flows, and basaltic breccia
Ꝑxa — Mudstone, siltstone, and thin- to thick-bedded quartz sandstone; massive to amygdaloidal basalt flows locally
Ꝑxb — Massive to amygdaloidal basalt flows and basaltic breccia, dolerite, minor sandstone, siltstone, and mudstone
Ꝑxo — Poorly sorted, pebble to boulder conglomerate, pebbly sandstone, and coarse-grained sandstone; quartz sandstone clasts

TEXAS DOWNS BASIN

Ꝑk — **RED ROCK FORMATION:** fine- to coarse-grained lithic quartz sandstone, pink feldspathic quartz sandstone, pebbly sandstone, conglomerate, siltstone, mudstone, basalt flows, and basaltic breccia
Ꝑkb — Massive to amygdaloidal basalt flows and basaltic breccia, and dolerite; minor lithic sandstone, siltstone, and mudstone
Ꝑka — Mudstone, siltstone, thin- to thick-bedded lithic or feldspathic quartz sandstone; massive to amygdaloidal basalt flows locally

RED ROCK BASIN

c. 1835—1805 Ma — Sally Downs supersuite

ꝐgSg — Undivided granitoid rock
ꝐgSkd — **KEVINS DAM MONZOGRANITE:** medium-grained, even-textured and weakly porphyritic biotite monzogranite
ꝐgShl — **McHALE GRANODIORITE:** medium-grained, even-textured biotite-hornblende tonalite and biotite granodiorite; extensive magmatic brecciation and associated alteration
ꝐgSmd — **MABEL DOWNS TONALITE:** fine- to medium-grained, foliated hornblende-biotite tonalite; minor biotite-bearing quartz diorite and porphyritic biotite granite; extensive recrystallization
ꝐgSms — **MAGOTTY SPRINGS MONZOGRANITE:** medium- to coarse-grained, porphyritic biotite monzogranite; medium-grained, even-textured hornblende-biotite granodiorite
ꝐgSvv — **VIOLET VALLEY TONALITE:** massive to weakly foliated, medium-grained biotite tonalite and granodiorite; local hornblende
ꝐgSp — Medium- to coarse-grained, porphyritic biotite monzogranite and granodiorite
ꝐgSob — Biotite-bearing norite, olivine gabbronorite, gabbronorite, and minor gabbro; olivine websterite
ꝐgSog — Biotite-bearing norite, olivine gabbronorite, gabbronorite, and minor gabbro with veins of intermediate hybrid rock; mafic and intermediate hybrid rock cut by abundant veins of pegmatite, coarse-grained porphyritic tonalite, and gabbronorite

Bow River batholith

c. 1840 Ma — Sally Malay intrusions

Ꝑaym — Ilmenite- and titaniferous magnetite-bearing gabbro, and orthopyroxenite
Ꝑaya — Leucogabbro, leucogabbronorite, anorthosite, and biotite gabbro; rhythmic cycles
Ꝑayt — Troctolite, olivine gabbro, olivine leucogabbro, and olivine gabbronorite; rhythmic cycles
Ꝑayg — Olivine gabbro, olivine gabbronorite, gabbronorite, and leucogabbro; weakly layered
Ꝑayp — Peridotite, dunite, wehrlite, harzburgite, and olivine gabbro

Ꝑi — **WINNAMA FORMATION:** metamorphosed (low- to medium-grade) greywacke, lithic sandstone, siltstone, mudstone, basalt, dolerite, and minor carbonate rock
Ꝑic — Metamorphosed carbonate rock, calcareous siltstone and sandstone

Tickalara Metamorphics

ꝐmTh — Quartz-K-feldspar-plagioclase-biotite-cordierite-andalusite(-muscovite) hornfels and hornfelsic schollen (raft) migmatite
ꝐmTgs — Strongly sheared granitoid rocks; mylonitic

c. 1850 Ma

ꝐmTgd — **DOUGALLS TONALITE:** foliated and metamorphosed hypersthene-hornblende-biotite tonalite; abundant inclusions of pyroxene amphibolite and country rock
ꝐmTgk — **CORKWOOD TONALITE:** foliated and metamorphosed biotite(-hornblende) tonalite and granodiorite; locally garnet-bearing
ꝐmTgl — **FLETCHER CREEK MONZOGRANITE:** foliated and metamorphosed leucocratic biotite-muscovite(-garnet-magnetite) monzogranite; rounded to angular inclusions of amphibolite and country rock
ꝐmTgm — **MONKEY YARD TONALITE:** foliated and metamorphosed hornblende-biotite(-epidote) tonalite; inclusions of epidote amphibolite
ꝐmTfn — Quartz-K-feldspar-plagioclase-biotite-sillimanite(-andalusite-cordierite) felsic gneiss
ꝐmTog — Amphibolite and dioritic to gabbroic granulite; cut by abundant veins of metatonalite and metatrondhjemite

ꝐmToa — Amphibolite; includes garnet or clinopyroxene; relict primary layering and gabbroic textures
ꝐmTon — Clinopyroxene-orthopyroxene-plagioclase-quartz(-hornblende-biotite) mafic granulite; local relict gabbroic textures
ꝐmTao — **Norton intrusion:** clinopyroxene-orthopyroxene-magnetite-plagioclase-quartz(-hornblende-biotite) mafic granulite; metamorphosed gabbro

c. 1865 Ma

ꝐmTn — Migmatitic pelitic gneiss; interlayered with mafic granulite
ꝐmTa — Amphibolite; interlayered with pelite and psammite, banded iron-formation, calc-silicate rock, and marble
ꝐmTan — Amphibolite; interlayered with migmatitic pelitic, psammitic, and calc-silicate gneiss
ꝐmTpa — Interlayered pelite and psammite, with banded iron-formation, calc-silicate rock, and marble, minor amphibolite; includes crenulated garnet-biotite-muscovite-quartz schist
ꝐmTpc — Calc-silicate rock and marble; minor banded iron-formation, quartzite, and amphibolite
ꝐmTpn — Biotite-plagioclase-quartz(-K-feldspar-sillimanite-garnet-cordierite-spinel) migmatitic pelitic gneiss; numerous layers, pods, and angular to rounded schollen (rafts) of mafic granulite and amphibolite, psammitic gneiss, and calc-silicate rock; intruded by discontinuous syn- to post-metamorphic mafic to intermediate dykes
ꝐmTps — Interlayered pelite and psammite, with banded iron-formation, calc-silicate rock, and marble, minor amphibolite; includes sillimanite-biotite-muscovite-quartz(-staurolite-kyanite-garnet) schist

Central zone

c. 1845 Ma — Halls Creek Group

ꝐHo — **OLYMPIO FORMATION:** metamorphosed (low- to medium-grade) thin- to very thick-bedded, fine- to coarse-grained quartz wacke, greywacke, lithic sandstone, siltstone, mudstone, and minor pebbly sandstone and felsic volcaniclastic rocks
ꝐHoc — Grey dolomite, commonly jaspilitic; metamorphosed and recrystallized

Eastern zone

Lamboo Complex