

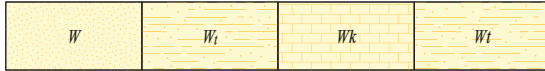
PHANEROZOIC

CENOZOIC

QUATERNARY



**Alluvial unit**  
*Au* Superficial channel



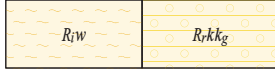
**Sheetwash units, age undivided or unassigned**

*W* Clay, silt, and sand in sheetwash fans  
*Wt* Sheetwash plain with tiger bush pattern  
*Wk* Sheetwash with carbonate material  
*Wl* Sheetwash with lithic fragments



**Eolian units, age undivided or unassigned**

*Ed* Eolian dunefield  
*Er* Eolian sandplain



**Residual units, age undivided or unassigned**

*Riw* In situ weathered rock  
*Rrkk* Groundwater calcrete; locally forms low mounds; nodular to massive; commonly with alternating layers of carbonate and chalcidony

**Petermann Orogeny (570–530 Ma<sup>1</sup>)**



**Buldya Group**  
 EBU-xs-k Undivided sedimentary rocks; sandstone, siltstone, shale, dolomite, limestone, evaporites (halite, gypsum, anhydrite) in subsurface and diapirs (section only)

EBUw-stz **TOWNSEND QUARZITE:** laminated to very thickly bedded, well-sorted, medium- to coarse-grained quartz arenite and feldspathic arenite; minor conglomerate and shale beds; medium- to large-scale cross-bedding; commonly intensely silicified



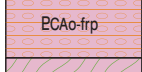
Pod Dolerite dyke, sill, or plug; fine- to medium-grained dolerite and gabbro

**Giles Event (1085–1040 Ma<sup>1,2,3</sup>)**

c.1057 Ma

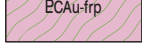


**THOMAS RHYOLITE:** porphyritic rhyolite with minor trachyte and dacite; massive to flow-banded and locally spherulitic vitric lavas; subhedral to euhedral alkali-feldspar phenocrysts; locally abundant fiamme (section only)



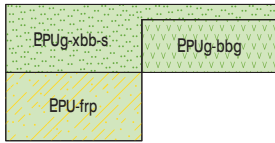
**GOMBUGURRA RHYOLITE:** microcrystalline, feldspar-porphyritic, flow-banded rhyolite containing up to 7% euhedral feldspar, phenocrysts up to 3 mm in size; locally spherulitic (section only)

c.1065 Ma



**WURURU RHYOLITE:** porphyritic rhyolite; massive to flow banded

1071–1047 Ma



**EPUg-xbb-s** **GLYDE FORMATION:** typically vesicular and amygdaloidal basalt, and minor basaltic andesite; interbedded with fine- to coarse-grained siliciclastic rocks; epidotized

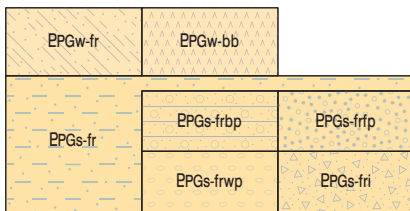
**EPUg-bbg** Vesicular and amygdaloidal basalt, basaltic andesite, and andesite; locally plagioclase porphyritic; epidotized (section only)

c.1065 Ma



**EPU-frp** Quartz-feldspar-porphyritic rhyolite; subvolcanic intrusion; rounded quartz and alkali-feldspar phenocrysts up to 8 mm; fine-grained micrographic to felsitic groundmass

1077–1063 Ma



**MOUNT WAUGH FORMATION**

**EPGw-fr** Rhyolite; typically flow banded and sparsely quartz- and feldspar-phyr; locally abundant fiamme

**EPGw-bb** Amygdaloidal basalt, with quartz-filled amygdales locally 5 mm in size

**EPGs-fr** **SCAMP FORMATION:** rhyolite; possibly lava flows and pyroclastic rocks, but may include subvolcanic intrusions; typically shows a fine- to coarse-grained granofelsic texture, indicating weak to moderate recrystallization

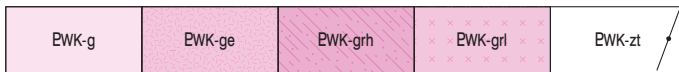
**EPGs-frbp** Aphyric, pumiceous rhyolite; typically flow folded

**EPGs-frfp** Pumiceous rhyolite; massive; aphyric to sparsely porphyritic (up to 5%); locally flow folded

**EPGs-frwp** Very fine grained to microcrystalline, spherulitic, pumiceous, feldspar-porphyritic rhyolite; locally with eutaxitic textures or rheomorphic flow bands

**EPGs-fri** Rhyolitic pyroclastic block breccia; poorly sorted; crystal poor; locally flow banded

1078–1060 Ma



**EWK-g** Granitic rock, undivided

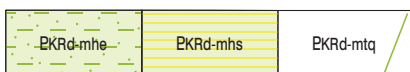
**EWK-ge** Fine- to medium-grained quartz syenite; contains K-feldspar phenocrysts up to 5 cm; locally with rapakivi texture

**EWK-grh** Medium-grained, hornblende-bearing syenogranite; moderately to strongly foliated; typically contains mafic enclaves

**EWK-grl** Fine- to medium-grained, porphyritic- to seriate-textured syenogranite; leucocratic, but typically with mafic xenoliths; locally abundant K-feldspar phenocrysts up to 1 cm; rare rapakivi texture

**EWK-zt** Coarse-grained tourmaline vein; foliated

>1078 Ma



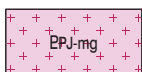
**MACDOUGALL FORMATION**

**EKRD-mhe** Muscovite(-garnet-kyanite) granofels; metamorphosed arkose; quartzofeldspathic gneiss

**EKRD-mhs** Interlayered medium- to coarse-grained quartzite and muscovite(-garnet-kyanite) schist; local quartz-pebble conglomerate

**EKRD-mtq** Medium- to coarse-grained quartzite; locally with muscovite and garnet (section only)

**Musgrave Orogeny (1220–1150 Ma<sup>4</sup>)**



**EPU-mg** Metagranite and gneiss (section only)

PROTEROZOIC

MESOPROTEROZOIC

NEOPROTEROZOIC

OFFICER BASIN

BENTLEY BASIN

BENTLEY BASIN

MUSGRAVE PROVINCE

Pitjantjatjara Supersuite