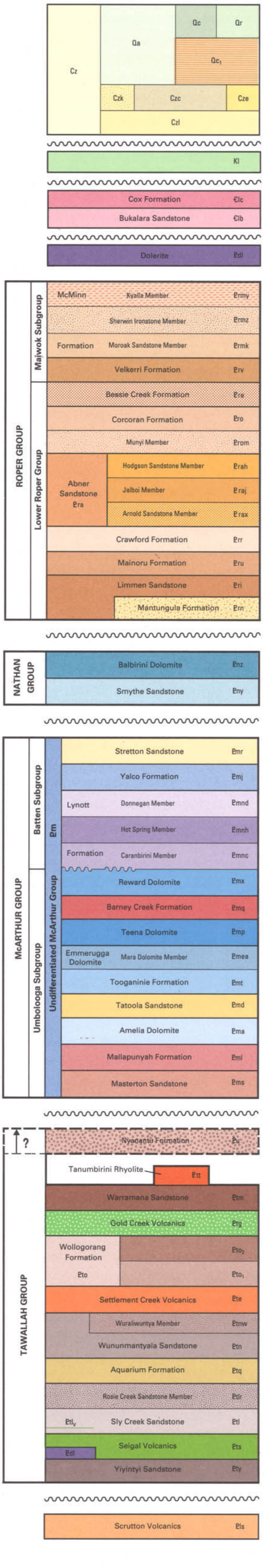

Qr *Sand, shelly sand: beach ridges*

Qc *Sand, silt, clay: active coastal alluvium*

Qc_1 *Shelly silt and clay: incised vegetated coastal alluvium*

Qa *Gravel, sand, silt: alluvium*

Cz *Undifferentiated alluvial, colluvial and eluvial deposits: unconsolidated gravel, sand, silt, clay, ferruginous cemented detritus, minor calcrete, silcrete and ferricrete*

Cze *Massive oolitic fossiliferous limestone: Beatrice Island limestone*

Czc *Sand deposits with distinct linear elements*

Czk *Calcrete*

Czl *Ferricrete*

Kl *Lithic sandstone, quartzarenite, muddy sandstone, conglomerate, sandy mudstone, commonly ferruginised and silicified; mudstone contains bivalve and brachiopod shell impressions, ammonite and belemnite casts; sandstone commonly contains plant debris casts and leaf imprints; rare airfall tuff*

€lc *Fine-grained, usually micaceous sandstone, siltstone and shale; laminated siltstone, and red and green shale*

€lb *Fine- to very coarse-grained friable sandstone; thin to-very thick-bedded, low-angle cross-stratification; trace fossils*

Ɛdl *Dolerite sills*

Ɛrmy *Fine-grained, thin-bedded to flaggy, in places ferruginous, micaceous sandstone with mudstone interbeds; minor sedimentary ironstone beds*

Ɛrmz *Ferruginous sandstone, sandy ironstone and hematitic shale interbedded with micaceous sandstone and mudstone, and beds of silicified and ferruginous ooids*

Ɛrmk *Mainly fine-grained sandstone, in places ferruginous; thin-bedded to flaggy with some interbedded coarse-grained sandstone and minor conglomerate*

Ɛrv *Flaggy, fine-grained sandstone and siltstone, commonly micaceous*

Ɛre *Quartzarenite, ferruginous in places, medium grained with some thin quartz granule beds; medium-bedded; common trough cross-beds and lesser tabular and herring bone cross-beds; ripples, desiccation cracks and mud clasts in places, karstically weathered, strongly jointed*

Ɛro *Fine grained sandstone, medium- to coarse-grained ferruginous sandstone, ferruginous and in places micaceous mudstone, silicified and partly ferruginous oolitic beds; mudstone intraclasts, syneresis cracks, trough and hummocky cross-beds and symmetrical ripples*

Ɛrom *Fine- to coarse-grained sandstone and mudstone; Basal and near basal thin granule conglomerate beds*

Ɛra *Undifferentiated Abner Sandstone, Symbols indicate members present where unit cannot be divided at map scale.*

Ɛrah *Quartzarenite, medium-grained, well sorted, rare thin quartz granule beds; medium- to very thick-bedded, planar and trough cross-bedded, karstically weathered, strongly jointed*

Ɛraj *Quartzarenite and sublitharenite, very fine- to medium-grained with thinly interbedded, commonly micaceous siltstone and mudstone; common mudstone intraclasts and cross-beds*

Ɛrax *Quartzarenite, medium-grained, well sorted, occasional quartz pebble chains; medium- to very thick-bedded, trough and planar cross-bedded, karstically weathered, strongly jointed*

Ɛrr *Fine- to medium-grained glauconitic and micaceous sandstone; siltstone and mudstone, commonly ferruginous and in places micaceous; thin- to medium-bedded, planar and trough cross-beds and hummocky cross-stratification, mudstone/siltstone intraclasts, wave ripples, toolmarks and convolute beds*

Ɛru *Interbedded red-brown to purple mudstone and very fine- to fine-grained sandstone both commonly micaceous and glauconitic, minor dololutite and dolomitic mudstone; ubiquitously laminated, low angle and hummocky cross-beds, flaser-linsen bedded, soft sediment deformation features*

Ɛri *Predominantly fine- to medium-grained, thin- to medium-bedded quartzarenite with thin interbeds of micaceous mudstone; minor poorly sorted, coarse-grained pebbly (quartz) sandstone; basal sandstone conglomerate in places; trough and hummocky cross-beds, abundant bedding parallel mudclasts, current ripples, tool marks and load casts*

Ɛrn *Red-brown micaceous and rarely glauconitic mudstone and fine-grained sandstone; thin-bedded laminated and cross-laminated, convolute bedding, load casts and toolmarks; occasional basal conglomerate/breccia*

Ɛnz *Dololutite, stromatolitic and cross-bedded; dolomitic, lithic and feldspathic sandstone; dolarenite; dolomitic mudstone and muddy dololutite frequently containing evaporite pseudomorphs; conical, large columnar, stratiform and domal stromatolites; diagnostic silicified ooid beds; common pink ?tuffaceous mudstone*

Ɛny *Massive, coarse polymict conglomerate, pebbly lithic sandstone, dolomitic sandstone and dolarenite; typically poorly sorted and trough cross-bedded with frequent ripples*

Ɛm *Undifferentiated McArthur Group*

Ɛmr *Very fine- to medium-grained, thin- to medium-bedded quartzarenite, in places micaceous or glauconitic; distinctive wavy bedding, small ripples and toolmarks, mud clast casts, desiccation cracks, convolute bedding, and hummocky cross-stratification*

Ɛmj *Thinly interbedded chertified stromatolitic dolostone, dololutite, dolarenite and minor sandstone with abundant chert nodules and laminae and intraclast chert breccia; common diagnostic small domal stromatolites, desiccation cracks, tepee structures, gypsum pseudomorphs; minor botryoidal quartz nodules (enterolithic chert)*

Ɛmnd *Dolomitic mudstone, fine- to coarse-grained dolomitic sandstone and lesser sandy dolarenite; thin-bedded, cross-bedded, common ripples, polygonal shrinkage cracks small botryoidal quartz nodules (cauliflower and enterolithic chert)*

Ɛmnh *Thin-bedded dolomitic mudstone, dololutite and muddy dololutite with interbeds of fine- to coarse-grained sandstone, dolarenite, sandy dolarenite and dolomitic sandstone, and chertified stromatolitic dolostone, minor silicified pink ?tuffaceous mudstone; mudstone and dololutite commonly contain chert pods and pseudomorphs after sulphate evaporites and halite; sandstones are rippled and cross-bedded; stromatolites are mainly stratiform conical and domal; common desiccation cracks, tepee structures, and some botryoidal quartz nodules (enterolithic chert)*

Ɛmnc *Thin-bedded mudstone and dolomitic mudstone, partly carbonaceous and pyritic; dololutite and ?tuffaceous mudstone and minor fine-grained dolarenite; common intraformational and slump breccia;*

Ɛmx *Dololutite, algal laminated dololutite, muddy dololutite and dolarenite with lesser mudstone, and pelletal dolarenite; laminated to massive, and brecciated; small silica spheroids*

Ɛmq *Siltstone and mudstone, thin-bedded to laminated, variously dolomitic, carbonaceous and pyritic; dololutite, pink and green ?tuffaceous mudstone, rare breccia and sandstone*

Ɛmp *Light grey recrystallised dolostone. Dololutite and crystalline dolostone, light grey, massive to thin-bedded with radiating needle-like gypsum crystal pseudomorphs normal to bedding; minor dark grey mudstone; rare dolarenite; common thin interbeds of pink silicified and green ?tuffaceous mudstone. Does not outcrop*

Ɛmea *Dololutite, stromatolitic dololutite, dolomitic mudstone, dolarenite and dolomitic breccia; domal and conical stromatolites, common halite casts and saccharoidal chert after evaporites*

Ɛmt *Dololutite, stromatolitic dololutite (stratiform, domal, columnar and conical forms), red-brown dolomitic mudstone, ripple marked and cross-bedded dolarenite, sandy dolarenite and sandstone; common desiccation cracks and pseudomorphs after gypsum and halite; breccia beds and ooids in dolarenites*

Ɛmd *Dominantly white flaggy fine-grained sandstone and lesser mudstone, in places dolomitic; common tool marks, syneresis cracks, runzel marks, low angle cross-beds and some mud clasts; lesser dolostone, in places silicified and stromatolitic with interbedded medium- to coarse-grained, medium-bedded dolomitic sandstone, typically vuggy, cross-bedded and ripple marked*

Ɛma *Stromatolitic dololutite (stratiform, domal, conical and columnar forms) and muddy dololutite with interbeds of dolarenite, mudstone and rare fine-grained sandstone; ooidal, brecciated and conglomeratic intervals common; often chertified; localised development of sideritic 'marble' after sulphate evaporite*

Ɛml *Interbedded red to purple dolomitic mudstone and variably dolomitic cross-bedded sandstone; stromatolitic dolostone, flat-pebble breccia and rare carbonaceous shale and pink tuffite; common botryoidal quartz nodules (cauliflower chert), ripples, slumping, desiccation cracks, and gypsum and halite casts and moulds*

Ɛms *Quartzarenite, white to pink, locally red-purple, fine- to medium-grained, well-sorted, thin- to medium-bedded, cross-bedded, extensively rippled with common mud clast impressions; minor intervals of very fine-grained flaggy sandstone and mudstone; distinctly ferruginous mottled sandstone with halite and gypsum casts and pseudomorphs occurs mainly in uppermost beds; common basal sandstone conglomerate*

Ɛu *Coarse-grained pebbly sandstone and cobble-boulder conglomerate; immature, poorly sorted, lithic with abundant angular to rounded pink spherulitic rhyolite clasts; minor red aphanitic rhyolite lava, flow banded*

Ɛtt *Porphyritic rhyolite lava with phenocrysts of quartz and feldspar set in a spherulitic groundmass. Does not outcrop*

Ɛtm *Lower red hematitic medium- to thick-bedded litharenite, separated from upper white thin- to medium-bedded sublitharenite and minor litharenite by a thin ferruginous interval, or rarely by pisolitic and massive ironstone; abundant trough cross-beds, mudstone-dolostone intraclasts, ripple marks, discoidal gypsum pseudomorphs, liesegang banding; pseudo-karstic weathering pattern*

Ɛtg *Amygdaloidal basalt lava; dolerite dykes and sills; minor intercalated medium-grained sandstone; hyaloclastic breccia (pépérite) with basalt blocks in a sandy matrix*

Ɛto *Undivided Wollogorang Formation (cross-section only)*

$Ɛto_2$ *Interbedded fine-grained flaggy sandstone and red-brown mudstone, micaceous and dolomitic; abundant soft sediment deformation features, flaser bedding, evaporite casts and mud clasts. White, fine- to coarse-grained, thin- to medium-bedded, lithic and feldspathic sandstone; trough cross-beds, ripple marks and mud clasts; rare basal polymict conglomerate*

$Ɛto_1$ *Mainly dololutite, dark grey-weathered, thin-bedded with characteristic ovoid nodules, sometimes pyritic or stromatolitic; flat pebble breccia; mudstone, partly tuffaceous, sometimes carbonaceous and pyritic, rare evaporite mineral casts and sulphides; rare coarse-grained dolomitic sandstone; rare red aphanitic, flow banded or vesicular, rhyolite lava; localised ferruginised felsic pyroclastic flow, fall and surge deposits*

Ɛte *Basaltic-doleritic lavas, reddish-brown to dark grey spheroidally-weathering, massive to amygdaloidal, generally potassium metasomatised; rhyolite lava and autobreccia, red, flow banded and aphanitic*

Ɛtnw *Fine-grained and rarely medium-grained sandstone and mudstone; mottled brown to fawn, very thin- to medium-bedded, typically flaggy; variably glauconitic, feldspathic, lithic and micaceous; soft sediment deformation features, ripple and tool marks, runzel marks, flute casts*

Ɛtn *Quartzarenite and sublitharenite, red-brown to purple, hematitic, mainly medium-grained, moderately- to well-sorted and thin- to medium-bedded with bedding laminations, planar and trough cross-beds, abundant ripples and mud clasts, syneresis cracks; thin, red-brown mudstone interbeds*

Ɛtq *Upper part: dolostone, red-purple and grey, sometimes stromatolitic, in places recrystallised, ooidal or chertified; thin-bedded dololutite, muddy dololutite and fine- to medium-grained dolarenite, subordinate flat pebble breccia and coarse-grained dolomitic sandstone; thin- to medium-bedded, in places wavy and cross-bedded; mudstone. Lower part: interbedded red and green mudstone and fine-grained sandstone; variably dolomitic, ripples, planar cross-beds, hummocky cross-stratification, flaser bedding, soft sediment deformation features, tool and runzel marks; sandstone contains shale clasts, minor glauconite and is micaceous in places, rare halite casts; rare red aphanitic rhyolite lava*

Ɛtlr *Sandstone, very fine- to very coarse-grained and rarely conglomeratic; generally moderately- to poorly-sorted, sometimes bimodally-sorted, in places feldspathic, ferruginous, micaceous or glauconitic; mud clast impressions, ripples, planar and trough cross-beds, rare syneresis cracks, botryoidal quartz nodules (cauliflower chert), gypsum and halite pseudomorphs; mudstone, red, ferruginous and micaceous, commonly laminated*

Ɛtl *Quartzarenite, white to pale pink, mainly fine- to medium-grained and thin- to very thick-bedded with rare quartz pebble beds, medium- to large-scale trough cross-beds and channels, channels lag deposits, ripples, mud clasts, rare desiccation cracks and herringbone cross-stratification; minor thin-bedded mudstone, commonly micaceous; minor basalt lavas.* $Ɛtl_v$ *: Massive and foliated basaltic lavas, partly amygdaloidal; pillow structures*

Ɛts *Basalt lava, amygdaloidal and massive, in part hyaloclastic.* Ɛdl *: Dolerite and gabbro sills and dykes*

Ɛty *Quartzarenite and lesser sublitharenite and litharenite; fine- to coarse-grained, moderately- to poorly-sorted with scattered quartz pebbles and minor conglomerate; thin- to very thick-bedded with medium- to very large-scale trough cross-beds and large channels, rippled in place*

Ɛls *Rhyolitic to rhyodacitic ignimbrite and accretionary lapilli-bearing airfall tuff; dacitic pyroclastics, lavas, sills and dykes; basalt lavas; rare dolerite intrusions; intercalated immature, feldspathic, fine- to medium-grained volcaniclastic sandstone*

QUATERNARY		CAINOZOIC	
QUATERNARY AND OLDER CAINOZOIC			
EARLY CRETACEOUS		MESOZOIC	
EARLY CAMBRIAN		PALAEOZOIC	
? ECTASIAN - CALYMMIAN		MESOPROTEROZOIC	PROTEROZOIC
CALYMMIAN			
STATHERIAN	1640 ±7 Ma (Ɛmq)	PALAEOPROTEROZOIC	
OROSIRIAN	1713 ± 6 Ma (Ɛtt)		
	1851 ± 7 Ma (Ɛls)		