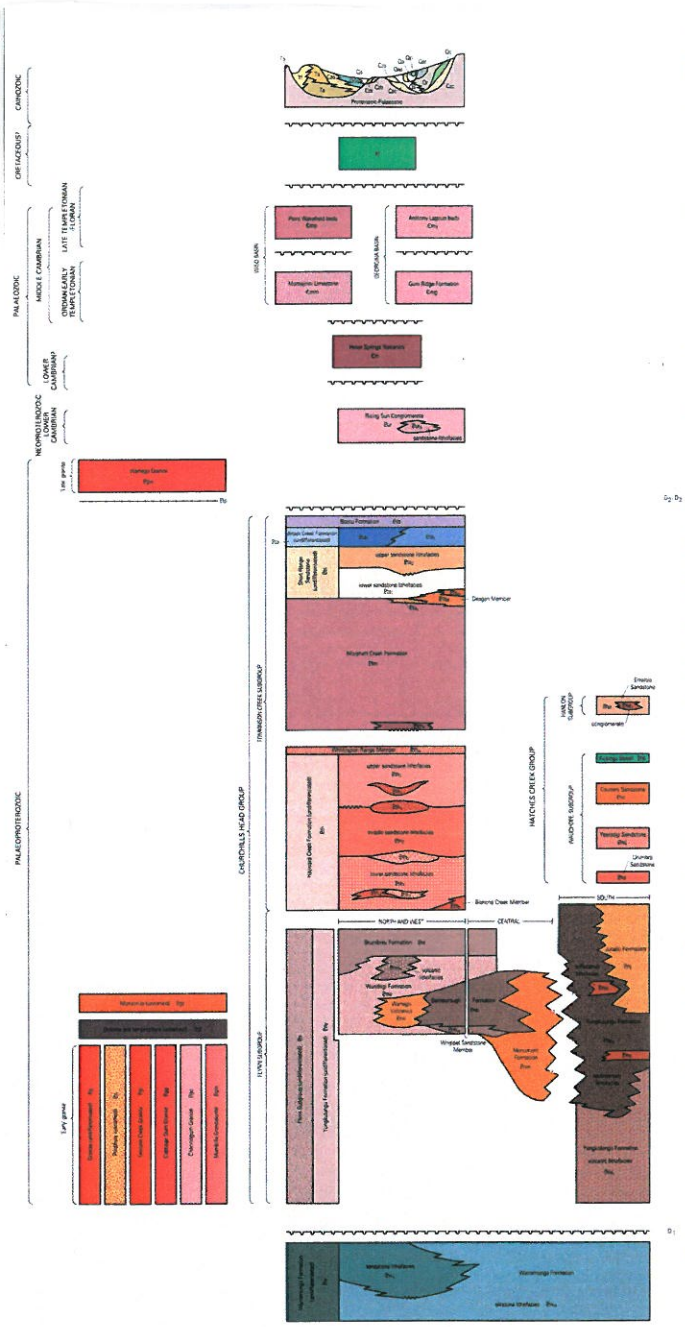


Ga Alluvial deposits in active channels and on floodplains
Qr Red earth soils; may have ferruginous pisolites
Qw Alluvial red soil plains
Qs Sheet and dune sand; sandy soil
Qsa Relict fluvial system; sand covered
Qc Calcium; scree
Qcs Quartz-rich colluvium and scree
Qs Clayey; clay soil in poorly drained depression
Cs Sheet sand or sandy soil on rise overlying subcrop
Cc Dissected colluvial fan deposits
Cas Quartz-rich dissected colluvial fan deposits
Cn Calcrete
Cp Black soil
Ts Silcrete silicified rock
Tf Ferricrete/ferruginised rock; laterite
Tg Deeply weathered rock

K Sandstone and interbedded siltstone; medium bedded and cross-laminated; plant macrofossils

Cmc Brown and white claystone; red to white micaceous sandstone; red-brown and white micaceous siltstone and claystone; minor local conglomerate; fossiliferous

Cmm Grey bioclast, stylolitic, oriented, mottled, ribbon and cryptomicrobial limestone and dolostone; minor maroon silicoclastic and yellow-grey calcareous mudstone; chert and evaporite nodules; local basal breccia; chertified at surface; fossiliferous

Cmn Chertified limestone or dolostone including oval and flat pebble intraclast limestone, calcimudstone; quartz sandstone

Cmg Chertified bioclast, oriented and cryptomicrobial limestone; many calcimudstone; minor silicoclastic mudstone, carbonate and evaporite nodules; basal maroon-purple sandstone and maroon-brown silicoclastic mudstone; fossiliferous

Cn Weathered vesicular basalt; minor felsic volcanic and volcaniclastic rocks, pebble conglomerate and lithic arenite

Cu Conglomerate and sandstone; micromictic and polymictic orthoconglomerate; channel cross-bedded; Quartz arenite predominantly medium bedded; parallel, or cross-bedded

Cv Quartz arenite; unfossiliferous

Cpn Granite; Twaimitia; corundum-bearing; granite and granodiorite; coarse grained, equigranular; massive; Pegmatite segregations; greenstone; quartz biotite metamorphic aureole

Cp Lamprophyre

Cp Quartz arenite and sublithic arenite; medium to coarse grained, parallel, or cross-bedded; thin to medium bedded; rippled; Siltstone; Ridge forming

Cpu Undifferentiated; dolostone and limestone; siltstone; quartz arenite and sublithic arenite

Cpu Dolostone and limestone; cryptomicrobial bioruptions and stromatolitic brokerites; cold and pisoid dolostone; laminated and cross-laminated sandy dolostone

Cpu Siltstone and chert siltstone; cross-laminated quartz arenite; laminated mudstone

Cpu Undifferentiated; quartz arenite; sublithic and lithic arenite; feldspathic subtitharenite; siltstone

Cpu Quartz arenite; sublithic and lithic arenite; feldspathic subtitharenite; beds in thick to massive sets; trough cross bedding near base; predominantly planar; laterally persistent bedding; laminated and cross-laminated; minor ripples increasing in abundance towards top of unit

Cpu Quartz arenite; sublithic arenite and feldspathic subtitharenite; siltstone; Thin to medium bedded; beds in medium sets; abundant ripples

Cpu Quartz arenite and minor pebbly sandstone; planar; grain size laminated and bedded; tabular; abundant weathered out shale clasts

Cpu Siltstone; thin bedded with subordinate interbedded sandstone

Cpu Conglomerate; local, laterally persistent, pebble, cobble and boulder-orthoconglomerate; predominantly monomictic; sandstone and rare black chert clasts; Coarse grained to granular, pebble-bearing quartz arenites

Cpm Sublithic and lithic arenite; feldspathic litharenite; siltstone, dolostone and sandy dolostone; Arenite; coarse to fine grained; thin; medium and minor thick to massive beds; moderately sorted and rounded; Dolostone and siltstone thin bedded and laminated; including cryptomicrobial dolostone

Cpm Conglomerate

Cpu Interbedded leached white and pink calcareous shale and fine grained arenite; quartz arenite; green mudstone; chertified stromatolitic bioherms; deeply weathered volcanic rocks including vesicular lava; Predominantly laterised

Cpu Sublithic arenite; fine to medium grained; well sorted and rounded; medium to thick bedded or massive; becoming thinner bedded towards top of unit; pebbly arenite; minor conglomerate; locally at base of unit; silicified; ridge forming; intermediate volcanic rocks; laterised and recessive

Cpu Acid to intermediate volcanic rocks; deeply weathered and ferruginised; recessive

Cpu Lithic and sublithic arenite; volcanic arenite; feldspathic subtitharenite; pebbly arenite; Medium to coarse grained; thin to medium bedded; planar; and shallow angle cross bedded; rippled; dissected and discontinuous ridges

Cpu Shale and siltstone; thin; planar bedded; recessive

Cpu Lithic to sublithic arenite; volcanic arenite; pebbly arenite; Fine to medium grained; medium to thick bedded; planar; and shallow angle, cross-beds; Ridge forming; Minor thin; planar bedded fine grained sandstone and siltstone (parallelite) at top of unit; Recessive

Cpu Undifferentiated lithic and sublithic arenite; feldspathic subtitharenite; pebbly arenite; shale; deeply weathered; acid to intermediate volcanic rocks

Cpu Polymictic orthoconglomerate; in local channels

Cpu Undifferentiated; felsic ignimbrite, tuff, lapilli tuff, and lava; chert (silicified tuff); lithic and sublithic arenite; lithic wacke; shale and mudstone; minor pebble beds; conglomerate and breccia

Cpu Lithic and volcanic arenite; heavy mineral bearing quartz arenite; granule and pebble beds; felsic tuff; Arenite; fine to coarse grained; thin to medium bedded

Cpu Sublithic and lithic arenite; siltstone; shale; Medium to thick bedded; Minor thin to medium bedded tuff; chert (silicified tuff)

Cpu Rhyolitic lava and ignimbrite; tuff and silicified tuff (chert)

Cpu Chert (silicified tuff); tuff; white weathering siltstone and shale; fine grained sublithic arenite; thin to medium bedded; laminated

Cpu Felsic crystal-lithic tuff; ignimbrite; lapilli tuff; and lava (?); chert; Siltstone; shale and fine grained lithic arenite and wacke; thin bedded and laminated

Cpu Lithic arenite; siltstone and shale; medium to coarse grained sandstone; pebble beds and granule conglomerate; thin to thick bedded or massive; heavy mineral-bearing laminae; cross-laminated or cross-bedded; trough cross-bedded; rippled

Cpu Rhyolitic and rhyodacite lapilli; siliceous sandstone and siltstone; chert; shale; Thin to medium bedded; parallel, or cross-laminated

Cpu Quartz arenite; lithic/feldspathic arenite

Cpu Conglomerate

Cpu Amygdaloidal massive basalt with minor interlayered arenite

Cpu Quartz arenite; lithic/feldspathic arenite; minor siltstone

Cpu Lithic/feldspathic/micaceous arenite; greywacke; siltstone

Cpu Quartz arenite and lithic/feldspathic arenite; commonly pebbly

Cpu Lithic arenite and volcanic arenite with interbedded laminated siltstone and mudstone; cross-bedded; thin to thick bedded; Rhyodacitic lava; crystal-lithic tuff and lapilli tuff; and ignimbrite; Volcanic breccia in drill core

Cpu Undifferentiated; lithic arenite including volcanic arenite; siltstone and shale; felsic lava and minor tuff

Cpu Quartz magnetite heavy mineral-bearing lithic to sublithic arenite and volcanic arenite; siltstone and shale; medium to coarse grained sandstone; pebble beds with rhyolitic clasts; thin to thick bedded or massive; magnetite laminae; cross-laminated and cross-bedded; Interbedded felsic tuff; siltstone and fine grained volcaniclastic rocks; thin to medium bedded; parallel and cross-laminated

Cpu Welded and non-welded felsic crystal-lithic tuff and lapilli tuff; minor felsic volcanic lava and ignimbrite

Cpu Felsic crystal-lithic tuff and lapilli tuff; Rhyolitic and rhyodacitic lava; foliated to massive and porphyritic; Felsic ignimbrite; Volcanic arenite with interbedded siltstone; Medium to thick bedded

Cpu Monzonite and quartz monzonite intersected in drill core; quartz diorite forming small plutons or dykes

Cp Dolerite and minor lamprophyre

Cp Felsic porphyry; quartz and/or feldspar phenocrysts in a felsic aphanitic groundmass; massive to foliated

Cpu Granite; Biotite-bearing; sensite porphyritic to equigranular; medium to coarse grained and massive; Rapakivi texture; and blue-oval quartz; Foliated to sheared in part; locally greasier; Locally abundant porphyritic granite enclaves; minor metasediment; and dolerite xenoliths; Marginal alteration including silicification and tourmalinisation (minor tuxulitanite) and alkali metasomatism; (Cpu, Tennant Creek Granite at Red Bluff)

Cpu Granite; Biotite-bearing; sensite porphyritic to equigranular; medium to coarse grained and massive; Rapakivi texture; in drill core; foliated to sheared in part; locally greasier; Minor metasediment xenoliths

Cpu Granite; Biotite bearing; sensite porphyritic to equigranular; medium to coarse grained and massive; Minor rapakivi texture; Minor metasediment and dolerite xenoliths; rare porphyritic enclaves; Alteration including silicification, albitisation and tourmalinisation (minor tuxulitanite)

Cpu Granodiorite; ranges from tonalite to granite; Biotite-bearing; megacrystic; sensite porphyritic to equigranular; coarse; very coarse grained and massive; Strongly foliated to sheared in part; Locally abundant porphyritic enclaves with rapakivi texture and blue-oval quartz; Abundant metasediment xenoliths; Localised alteration including silicification, albitisation and tourmalinisation

Cpu Undifferentiated granite

Cpu Undifferentiated; lithic arenite including volcanic arenite (metagreywacke); siltstone, shale, slate and terrigenous mudstone; 'haematite shale'; minor phyllite; chert including jasper

Cpu Lithic arenite including volcanic arenite (metagreywacke); coarse grained; medium to thick bedded or massive; predominantly graded and parallel bedded; Subordinate fine grained sandstone; siltstone and terrigenous mudstone including 'haematite shale'; slate; medium or thin bedded; parallel, or cross-laminated; Sole and ripple marks; Chert including jasper; Partial or complete Bouma sequences

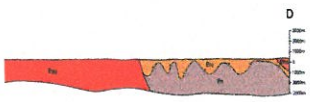
Cpu Fine to medium grained lithic arenite including volcanic arenite (metagreywacke); siltstone, shale, slate and terrigenous mudstone; minor phyllite; red, green and purple weathering shale; pencil slate; thin to medium bedded; parallel or cross laminated; Lithic arenite subordinate or subequal to siltstone and shale; 'Haematite shale'; Partial Bouma sequences

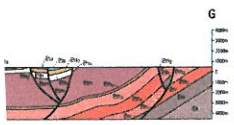
TOPOGRAPHICAL SYMBOLS

- Highway
- Sealed road
- Unsealed road
- Vehicular track
- Fence
- Built-up area
- Trigonometric station
- Spot Elevation
- Landing ground
- Yard
- Building/Homestead
- Pipeline
- Lake, mainly dry
- River, intermittent
- Creek, intermittent
- Waterhole
- Windsurfs
- Bore with windpump

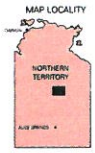
GEOLOGICAL SYMBOLS

- Geological boundary, position approximate
- Fault; solid line, observed; broken line, approximate; short dashes, concealed; overlaid, inferred (all concealed faults are inferred, to quartz infill)
- Thrust fault showing dip of fault plane recent earthquake scarps
- Fault showing relative horizontal displacement
- Strike and dip of strata
- Strike of vertical strata
- Strike and dip of inverted strata
- Horizontal strata
- Vein or dyke, predominantly quartz unless otherwise specified; Ep-felsic porphyry; Ed-dolerite; Ep-lamprophyre; spl-spilite
- Strike and dip of cleavage (slaty, crenulation or fracture cleavage)
- Strike of vertical cleavage
- Strike and dip of slaty alignment
- Strike and dip of foliation
- Strike of vertical foliation
- Strike and dip of strata, dip 5° to 15° (photo-interpreted bedding)
- Strike and dip of strata, dip greater than 45° (photo-interpreted bedding)
- Shearing showing latest stage of movement in map view
- Shear zone
- Anticline; position accurate; position approximate
- Syncline; position accurate; position approximate; concealed
- Minor anticline showing plunge
- Minor syncline showing plunge
- Kink fold showing plunge
- Minor fold showing plunge and vergence to left (first folding episode or episode not specified)
- Minor fold showing plunge and vergence to left (second episode folding)
- Minor fold showing plunge and vergence to right (first folding episode or episode not specified)
- Minor fold showing plunge and vergence to right (second episode folding)
- Plant fossil locality, macrofossil locality and reference number, respectively
- Unconformity (legend only)
- Facies change (legend only)



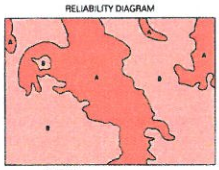


MAP LOCALITY



INDEX TO ADJOINING MAPS

RELIABILITY DIAGRAM



A : Detailed traverses

B : Airphoto interpretation with limited traverses generally poor outcrop

Geology: First edition: BMR
Second edition: NTGS
1989 N. Donnellan, K.J. Hussey, D.I. Scott
1990-1993 N. Donnellan, B.S. Morrison, K.
Palaeozoic: 1991 P.D. Krose, N. Donnellan
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C. A. Mulder, Director, Northern Territory Geological Survey

TENNANT CREEK

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