



THE GEOLOGY OF THE ADELAIDEAN-KANMANTOO GROUP  
SEQUENCES IN THE EASTERN MOUNT LOFTY RANGES

by

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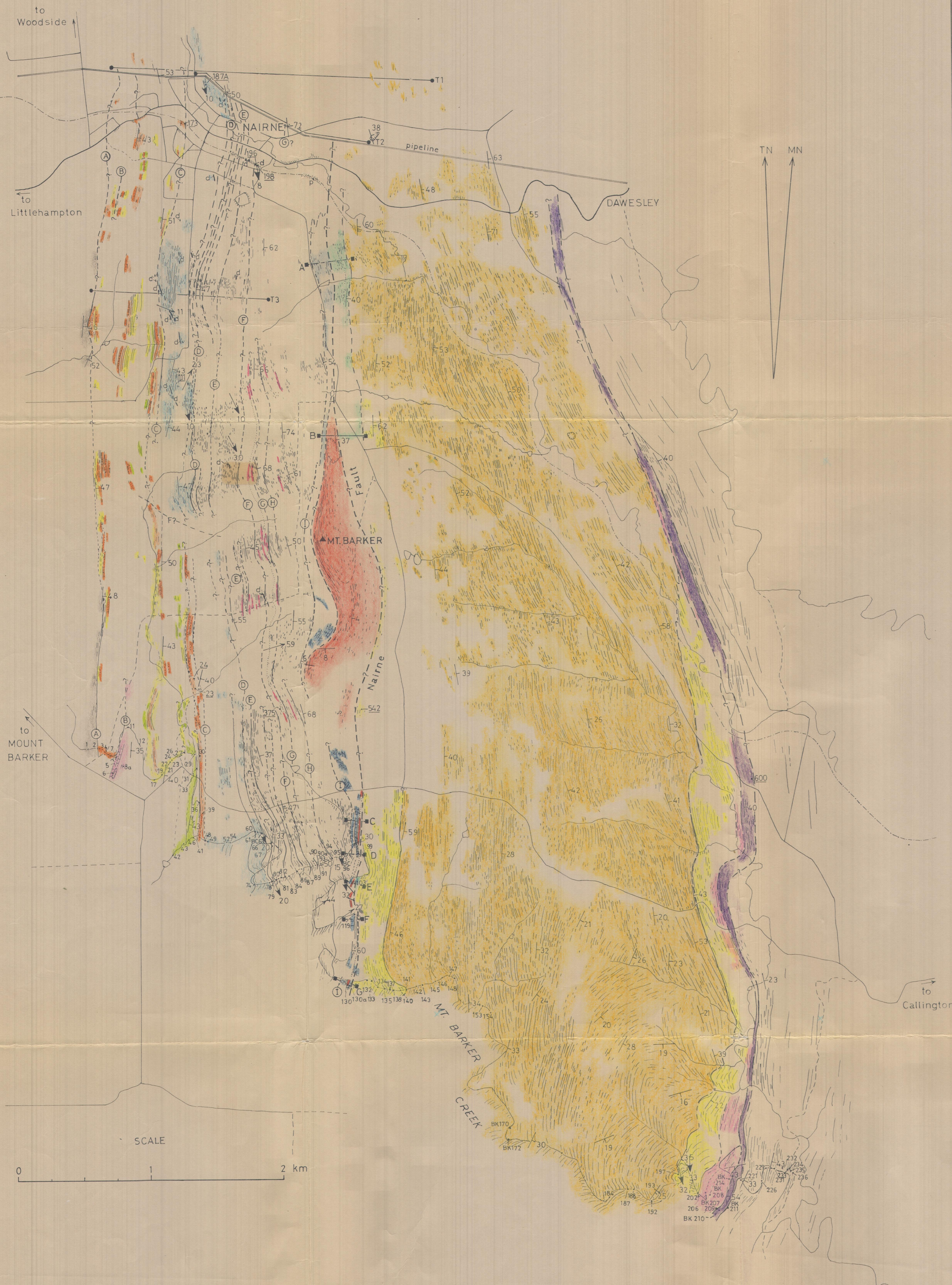
Department of Geology and Mineralogy,  
University of Adelaide.


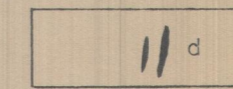
November, 1977.

*Awarded December 1978*

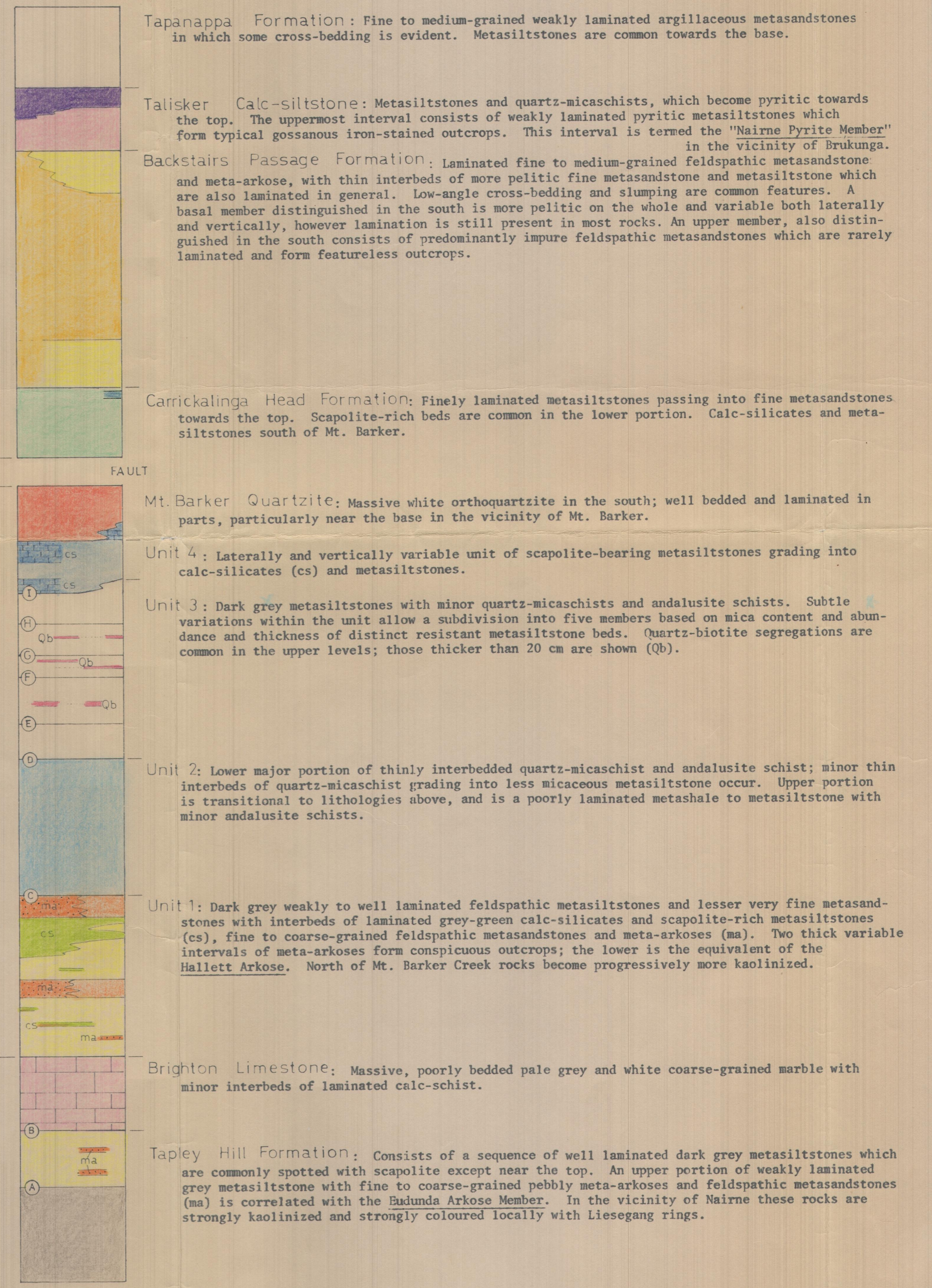


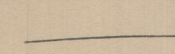
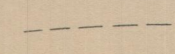
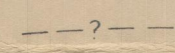
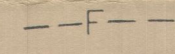


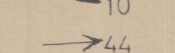
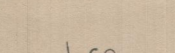
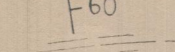
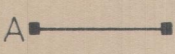
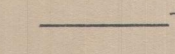
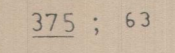
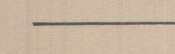

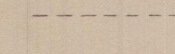
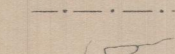

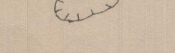
# GEOLOGY of the NAIRNE-MT. BARKER CREEK AREA



-  Pegmatite
-  Metadolerite dyke

CAMBRIAN GROUP  
 LOWER KANMANTOO  
 UPPER PRECAMBRIAN  
 MARINO  
 STURT GROUP



- Geological boundary
  - observed 
  - approximate 
  - inferred 
- Fault 
- Breccia 
- Fold
  - plunge of F<sub>2</sub> fold axis 
  - plunge of post-F<sub>2</sub> fold axis 
- Bedding
  - orientation 
  - trend 
- Location of detailed section 
- Location of geophysical traverse 
- Locality 
- Main road 
- Secondary road 
- Track 
- Railway 
- Stream; dam 
- Quarry 



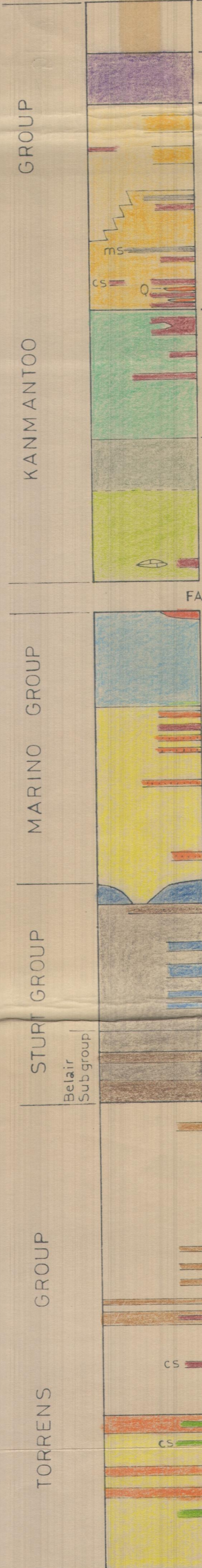
# GEOLOGY of the BIRDWOOD - BRUKUNGA AREA



## REFERENCE

- Metadolerite Dykes
- Pegmatite

CAMBRIAN  
LOWER  
PRECAMBRIAN  
ADELAIDE GROUP



**Tapanappa Formation:** Impure poorly laminated metasandstones.

**Talisker Calc-siltstone:** Pyritic metasilstones and metashales forming iron stained gossanous outcrops. Equivalent to "Nairne Pyrite Member" in this area.

**Backstairs Passage Formation:** Massive laminated fine to medium-grained feldspathic metasandstones and meta-arkoses with thin interbeds of laminated metasilstone grading to quartz-mica schist. Common x-beds lower portion of very micaceous (impure) fine to medium feldspathic metasandstone grading to metasilstone. Thick metasilstone and quartz-mica schist units (ms) and common interbeds of less micaceous feldspathic metasandstone and arkose. Layered calc-silicates (cs) prominent in northern half of area. Thin lenticular quartzites (Q) near base in vicinity of Mt. Charles.

**Carrickalinga Head Formation**  
**Campana Creek Member:** Finely laminated metasilstones and minor quartz-mica schists. Calc-silicate interbeds, some with associated scapolite-rich metasilstones.

**Blowhole Creek Siltstone:** Locally laminated metasilstones and quartz-mica schists. Minor andalusite schists and phyllite horizons. Common weakly laminated massive metasilstone to fine metasandstone interbeds in upper portion. Marble and calc-silicate lenses near Mt. Torrens.

**Lower portion of andalusite schists and quartz-micaschists:** Metasilstones with minor andalusite schists and quartz-micaschists in the upper portion. Lenticular glassy Mt. Barker Quartzite at the top.

**Laminated metasilstones and fine feldspathic metasandstones:** Interbedded units of fine to coarse meta-arkoses and layered calc-silicate (includes "Hallett Arkose equivalent").

**Brighton Limestone equivalent:** Layered calc-silicate. Fine to coarse meta-arkoses and arkosic quartzites ("Eudunda Arkose Member" equivalent) below.

**Topley Hill Formation:** Laminated metasilstones with scapolite-rich beds. Interbedded layered calc-silicates.

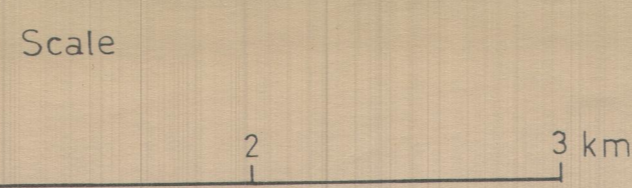
**Felspathic fine to medium quartzites with interbedded metasilstones and fine metasandstones.**

**Saddleworth Formation:** Feldspathic metasilstones with quartz-mica schists. Well laminated in most horizons. Interbedded medium to coarse-grained quartzites. Lowest quartzites at Mt. Torrens interbedded with layered calc-silicates (cs).

**Below Mt. Torrens Quartzites:** well laminated fine metasilstones with interbedded thin quartz-mica schists and lenticular metasandstones and calc-silicates.

**Stoneyfell Quartzite:** Interbedded units of feldspathic medium-grained quartzites and metasilstones. Common layered calc-silicate units (cs).

- Geological boundary
  - observed
  - approximate
  - inferred
- Fault
- Breccia
- Fold
  - plunge of F<sub>2</sub> fold axis
  - plunge of probable post-F<sub>2</sub> fold axis
- Cleavage
- Bedding
  - orientation
  - trend
- Locality
- Main road
- Secondary road
- Track
- Railway (disused)
- Stream
- Quarry



Orkneying 1:50,000 Sheet