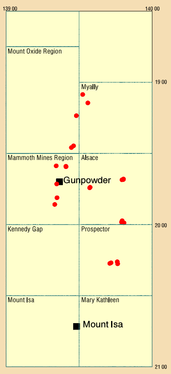


AMIRA P552 PROJECT

JJ/00/07

Scale: 1:1000

EASTING: 349303

NORTHING: 7881838

DATA TYPE: Measured Section

MAP SHEET: Myally

LOCATION: SE of Morella

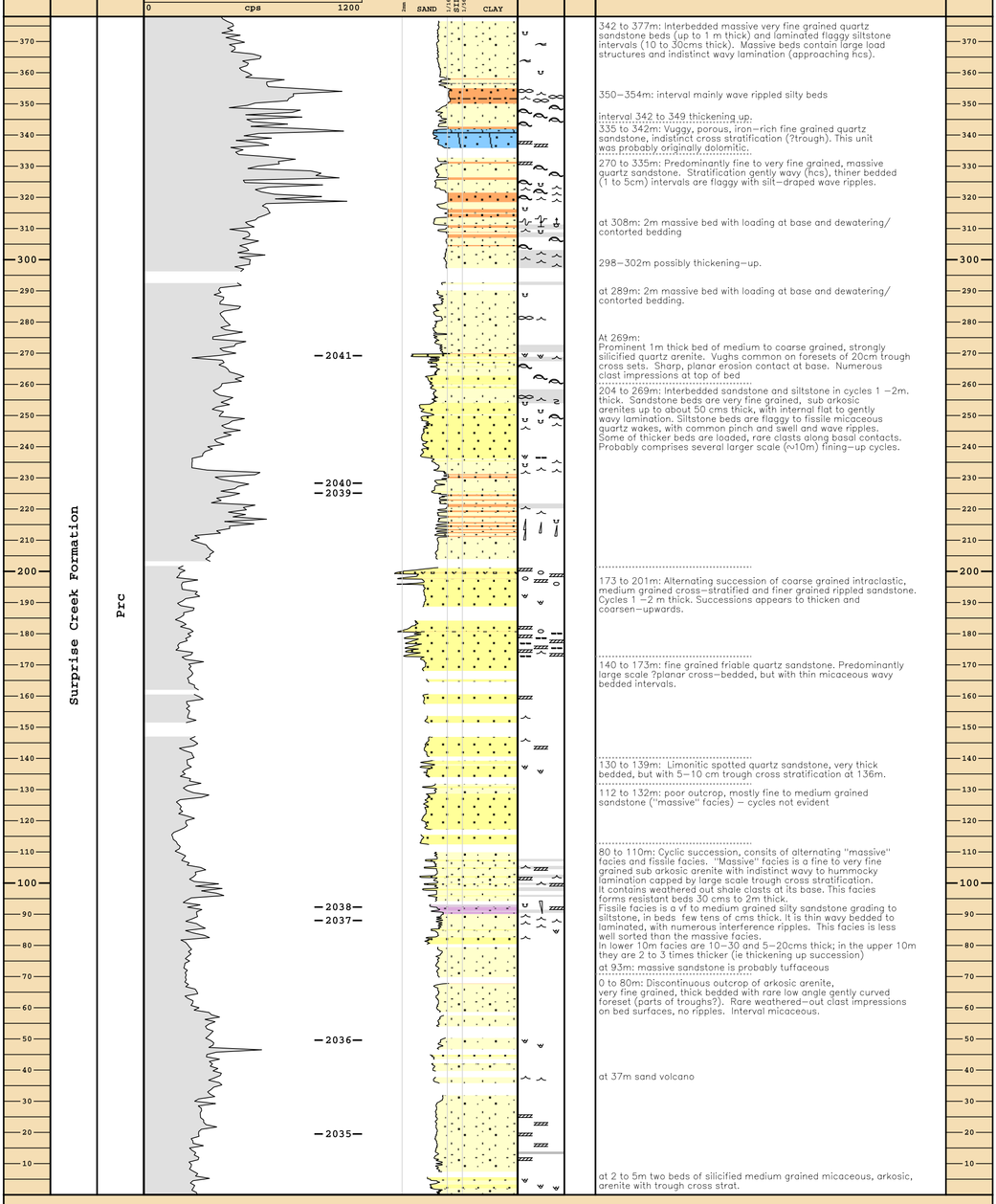
GEOLOGY: MJ Jackson and PN Southgate

GEOLOG COMPILATION: KW Barnett

AUSTRALIA

GEOSCIENCE AUSTRALIA

Queensland Government Natural Resources and Mines



342 to 377m: Interbedded massive very fine grained quartz sandstone beds (up to 1 m thick) and laminated flaggy siltstone intervals (10 to 30cms thick). Massive beds contain large load structures and indistinct wavy lamination (approaching hcs).

350–354m: interval mainly wave rippled silty beds

interval 342 to 349 thickening up.
335 to 342m: Vuggy, porous, iron–rich fine grained quartz sandstone, indistinct cross stratification (?trough). This unit was probably originally dolomitic.

270 to 335m: Predominantly fine to very fine grained, massive quartz sandstone. Stratification gently wavy (hcs), thiner bedded (1 to 5cm) intervals are flaggy with silt–draped wave ripples.

at 308m: 2m massive bed with loading at base and dewatering/ contorted bedding

298–302m possibly thickening–up.

at 289m: 2m massive bed with loading at base and dewatering/ contorted bedding.

At 269m:
Prominent 1m thick bed of medium to coarse grained, strongly silicified quartz arenite. Vughs common on foresets of 20cm trough cross sets. Sharp, planar erosion contact at base. Numerous clast impressions at top of bed

204 to 269m: Interbedded sandstone and siltstone in cycles 1 –2m. thick. Sandstone beds are very fine grained, sub arkosic arenites up to about 50 cms thick, with internal flat to gently wavy lamination. Siltstone beds are flaggy to fissile micaceous quartz wakes, with common pinch and swell and wave ripples. Some of thicker beds are loaded, rare clasts along basal contacts. Probably comprises several larger scale (~10m) fining–up cycles.

173 to 201m: Alternating succession of coarse grained intraclastic, medium grained cross–stratified and finer grained rippled sandstone. Cycles 1 –2 m thick. Successions appears to thicken and coarsen–upwards.

140 to 173m: fine grained friable quartz sandstone. Predominantly large scale ?planar cross–bedded, but with thin micaceous wavy bedded intervals.

130 to 139m: Limonitic spotted quartz sandstone, very thick bedded, but with 5–10 cm trough cross stratification at 136m.

112 to 132m: poor outcrop, mostly fine to medium grained sandstone ("massive" facies) – cycles not evident

80 to 110m: Cyclic succession, consits of alternating "massive" facies and fissile facies. "Massive" facies is a fine to very fine grained sub arkosic arenite with indistinct wavy to hummocky lamination capped by large scale trough cross stratification. It contains weathered out shale clasts at its base. This facies forms resistant beds 30 cms to 2m thick.
Fissile facies is a vf to medium grained silty sandstone grading to siltstone, in beds few tens of cms thick. It is thin wavy bedded to laminated, with numerous interference ripples. This facies is less well sorted than the massive facies.
In lower 10m facies are 10–30 and 5–20cms thick; in the upper 10m they are 2 to 3 times thicker (ie thickening up succession)

at 93m: massive sandstone is probably tuffaceous

0 to 80m: Discontinuous outcrop of arkosic arenite, very fine grained, thick bedded with rare low angle gently curved foreset (parts of troughs?). Rare weathered–out clast impressions on bed surfaces, no ripples. Interval micaceous.

at 37m sand volcano

at 2 to 5m two beds of silicified medium grained micaceous, arkosic, arenite with trough cross strat.

Sedimentary Structures and Bedding

BEDDING

Laminated (<1cm) | Thin bedded (1–10cm) | Medium bedded (10–30cm) | Thick bedded (>30cm)

SEDIMENTARY STRUCTURES

Planar X–stratification
Large scale trough X–stratification
Small scale trough X–stratification
Hummocky cross–stratification
Pinch & swell/wavy bedding
Flaser/lenticular bedding
Wispy lamination
Large asymmetrical ripple
Small asymmetrical ripple
Symmetrical ripple
Normally graded bed
Inversely graded bed
Fining–upward trend
Coarsening–upward trend
Scour and fill
Sole marking
Slumping
Contorted bedding
Flute cast
Gutter cast/microchannel
Load cast
Synaresis crack
Dewatering structure
Teepee
Desiccation crack
Sedimentary breccia
Sedimentary concretion
Palaeocurrent azimuth (east)
Palaeocurrent azimuth (north)
Palaeocurrent azimuth (south)
Palaeocurrent azimuth (west)
Palaeocurrent azimuth (NE)
Palaeocurrent azimuth (NW)
Palaeocurrent azimuth (SE)
Palaeocurrent azimuth (SW)
Palaeocurrent trend (north–south)
Palaeocurrent trend (east–west)
Halite cast/mould
Crystal pseudomorph
Cauliflower chert
Intraclast
Pebbles
Imbricated clasts
Rosette
Oolite/oolitic
Peloid/peloidal
Small domal stromatolite
Large domal stromatolite
'Organ–pipe' stromatolite
Small columnar stromatolite
Large columnar stromatolite
Conical stromatolite
Stratiform stromatolite
Fenestrae
F Fault
Pyrite
Cpy Chalcopyrite
Gl Glauconite
Ph Phosphate
Py Pyrite
Sp Sphalerite
Gn Galena

Lithology Legend

SILICICLASTICS QUARTZO–FELDSPATHIC | SILICICLASTICS LITHIC | SILICICLASTICS TUFFACEOUS | SILICICLASTICS CARBONACEOUS (VARIABLY DOLOMITIC) | DOLOMITIC SILICICLASTICS | CARBONATES

Conglomerate granule to boulder | Dolorudite granule to boulder
Sandstone medium to very coarse | Dolarenite medium to very coarse
Sandstone very fine to fine | Dolarenite very fine to fine
Sandy siltstone | Silty dolarenite
Siltstone mineralogy undifferentiated | Dolosiltite
Shale mineralogy undifferentiated | Dololutite

TUFF | CHERT | CRYSTALLINE CARBONATES | BRECCIA | IGNEOUS | METAMORPHIC

Sequence Hierarchy

F* — Approximate location of significant flooding or deepening.

S* — Approximate location of significant erosion surface (?Sequence Boundary).

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