

The PreCambrian rocks exposed south of the E.L. consist of quartzites and schists which have been severely deformed. Regionally they have been divided into three units based on lithological characters.

These are:

- 1) Howell Group - interbedded quartzite, quartz-mica and garnet-mica schists.
- 2) Fischer Group - thinly bedded massive and laminated quartzite with interbedded quartz-mica schists.
- 3) Dove Group - quartz-mica and garnet-mica schists with little or no quartzite.

Limestone/dolomitic units are known in the PreCambrian in the Granite Tor area and a possible outcrop near the Lone Pine Granite (Jennings, 1963).

The Cambrian rocks occur mainly in the north of the licence as part of a major E-W anticlinorium, and also as minor exposures throughout the rest of the area. Because of patchy outcrop, some uncertainty exists as to the geological succession. In the south two main units are recognised, the Lorinna Greywacke and the Bull Creek Porphyry. In the north, possible Lorinna Greywacke equivalent is exposed together with a large area of un-named volcanics near Black Bluff.

The Lorinna Greywacke consists of a mixed assemblage of greywacke, chert, porphyry, conglomerate and quartzite. The formation is tightly folded and has suffered considerable dynamic and hydrothermal alteration.

The Bull Creek Porphyry is a complex assemblage of quartz-feldspar porphyry and sediments. This formation also has suffered from dynamic and hydrothermal alteration.