

## 5. GEOLOGY

The geology of the area of E.L. 15/76 was described by Blissett (1962). This has recently been revised by Brown (1982). While auger sampling has provided more detail on lithological variations, the general geology is similar.

Briefly, the area is composed of the basal Proterozoic Oonah Formation (and correlates) overlain by the Eocambrian Success Creek Group and Crimson Creek Formation and the Cambrian Dundas Group. The Oonah Formation and Success Creek Group are composed of mudstones, siltstones, sandstones, quartzites and conglomerates with dolomites and only a minor volcanic component. The Crimson Creek Formation and Dundas Group contain similar rocks but with a higher proportion of tuffaceous and volcanoclastic material.

In the southeastern portion of the Licence the Proterozoic and Cambrian rocks form rugged hills in which strikes trend northwards towards Dundas. Near Dundas geological trends swing northwesterly to the highway and then swing northwards through the Cuni area.

The southwestern part of the Licence is underlain by a basin of shallow water Ordovician, Silurian and Devonian sediments which include the Gordon Limestone. Alluvium-covered topographic lows tend to form on this limestone unit.

Quaternary morainal material covers some of the steep country in the southeast of the Licence and the topographic lows on the Gordon Limestones. Remnant morainal gravels also form high level heavy mineral rich cappings on the Oonah Formation rocks.

The Proterozoic-Cambrian rocks are tightly folded and were apparently deposited into unstable environments. The Ordovician-Devonian sediments were deposited under more stable conditions and contain only open folding.