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BASIN AND ENVIRONS - GEOLOGICAL HISTORY

(a) Precambrian

The earliest rocks exposed in the Launceston Basin Catchment area are probably of Upper Proterozoic age and outcrop over an area of 2-3 square miles, five miles south of Deloraine, in the Meander River drainage. These are NW trending quartz-mica schists and quartzites which are possibly related to similar rocks found in the west of Tasmania (Wells, 1957).

(b) Cambrian

Unconformably overlying the Precambrian are rocks of Cambrian age. These outcrop in scattered areas making up 3-5 square miles in the Lake River drainage, about eleven miles south of Cressy and as larger areas south and west of Deloraine in the Meander River drainage. The rocks near Deloraine are a 7000 ft. sequence of slates, phyllites, greywackes, siltstones and acid and basic volcanics which are broadly classified as quartz keratophyres and spillites (Wells, 1957). The rocks near Cressy appear similar and probably represent a continuance of the south easterly trend, only relatively recently exposed beneath the younger rocks.

These rocks were folded and metamorphosed at the end of the Cambrian during the Tyennan Orogeny, and appear to be an expression of the eastern limb of the north-south Tyennan Geanticline which probably acted as a landmass up until the Permian.

(c) Ordovician

The Precambrian-Cambrian rocks near Deloraine are overlain by a 2300 ft. sequence of conglomerate, sandstone and limestone of Ordovician age. These rocks are exposed over a significant area in the Meander drainage where they appear strongly folded and metamorphosed.

(d) Silurian

An extensive belt of rocks of this age, the Mathinna Beds, exists to the east of the basin area and is drained by the upper South Esk system and by the North Esk System.

Arenaceous and argillaceous sediments of considerable thickness were laid down in geosynclinal conditions, often as turbidites, (Banks, et al, 1962), and are of upper Devonian - lower Silurian age. During the Tabberabberan Orogeny of the middle Devonian, the rocks were intensively folded along NW trending axes and subjected to low grade regional metamorphism resulting in cleaved phyllites and slates plus massive quartzite.

(e) Devonian

During the upper Devonian to lower Carboniferous, granite intrusion took place in the area about Avoca (now outcropping over 40-50 square miles to the north and southeast of Avoca). This body, the Ben Lomond Granite, is