

Report on Permo-Carboniferous Rocks in Tasmania.

Very few areas of Permo-Carboniferous rocks have been visited and so the amount of information available is relatively small particularly as regards printed reports.

The most important report is Geological Survey Mineral Resources No. 8 Volume 1 - The Oil Shale Resources of Tasmania by A. McIntosh Reid. This deals with the Railton-Latrobe and adjacent areas in north-western Tasmania. The report deals particularly with the Permo-Carboniferous rocks and the contained seams of Tasmanite shale. Excellent sections of the strata are given in the records of the numerous bore holes which have been sunk in the district. The investigation proved the shale seam and containing Permo-Carboniferous rocks to be much more extensive than previously anticipated. (Within the past few weeks other discoveries of Tasmanite shale have been made at Chudleigh prove the seam to be still more extensive). The shale occupies an horizon in a continuous series of marine rocks passing from the Lower Marine to the Upper Marine series. Coal seams are not found in areas in which Tasmanite occur and vice versa. The coal seams when present occupy an horizon between the Upper and Lower Marine Series and it is concluded that the Tasmanite occupies a similar horizon in the continuous marine series.

Another report is that entitled "Note on a Cliff Section near Cape Paul Lamnon" by A.N. Lewis, in the Proc. Royal Society Tasmania, 1924. In this section, Lewis found glacial beds overlying, and containing fragments of fossiliferous Permo-Carboniferous limestones. The evidence in this section is not definite as to whether the limestones are the main zone as developed on the East Coast and the glacial beds at a new horizon above them or alternately whether the glacial beds represent part of the Basal series the limestone being a new horizon developed below them. In either case the limestones certainly represent an interglacial epoch not previously recorded in Tasmania. The thickness of the glacial beds is at least 800 feet - the greatest recorded in south-eastern Tasmania.

Another report is that entitled "Notes on a Geological Reconnaissance of the Lake St. Clair District" by W.H. Clemes in Proc. Royal Society, Tasmania, 1924.

Permo-Carboniferous and Trans-jura rocks are stated to occur extensively in this district. It is also stated that "Traces of the Permo-Carboniferous glaciation are to be found in the boulders of coarse conglomerate among the Marainal material of Cuvier Valley, and south of Cynthia Bay".

A forth-coming report (Geological Survey Underground Water Supply Paper No. 4) describes the Permo-Carboniferous rocks of the Avoca-St. Marys district in Eastern Tasmania. These rocks have been previously described but a complete section is given in this publication.

From past and present field trips, several features are to be noted in connection with the thickness and section of the Permo-Carboniferous rocks.

- (1) The limestones are not present in the north-western districts. They appear at Lilydale and occur at localities such as St. Marys, Fingal, Dalmayne, Mt. Peter, and Maria Island, down the East Coast.

The thickness increases from north to south, being a few feet at Lilydale, 120 at St. Marys, 200 at Dalmayne, 270 at Mt. Peter and several hundred feet at Maria Island. They also occur in south-eastern Tasmania but are much thinner than on the East Coast.

- (2) Coal or Tasmanite seams appear in the Greta series at Preolenna, Barn Bluff, Mersey, St. Marys, and Bruny Island.
- (3) Coal or oil shale seams appear at the Tomago horizon at Preolenna, Barn Bluff, St. Marys.
- (4) The basal conglomerates (generally found to be of glacial origin) are thickest in the north-western (Preolenna-Wynyard) and Maria Island areas, and are very thin in the north-eastern area.

P. B. Nye.  
GOVERNMENT GEOLOGIST.

Hobart.

11th May, 1926.