

IN TASMANIA

As far as the present knowledge extends the geological conditions in Tasmania are unfavourable for the occurrence of petroleum.

The geological structure of Tasmania varies considerably in different parts of the Island. The Western part is occupied by the Pre-Cambrian and Lower Palaeozoic sedimentary formations which have been intensely folded and faulted, and also intruded on a large scale by Devonian igneous rocks. The North-eastern portion consists of Cambro-Ordovician slates and sandstones together with intrusive granite of Devonian age. The earth movements up to and including the Silurian were principally of a compressional type resulting in intense folding and fracturing of the strata. These strata are devoid of organic or carbonaceous matter. The Midland and South-eastern parts are occupied by nearly horizontally bedded strata of the Permo-Carboniferous and Triassic systems which have been intruded on a large scale by Upper-Mesozoic dolerite. The same strata also occur along portions of the Northern coast.

The Permo-Carboniferous system consists of conglomerates, sandstones, limestones and mudstones. It contains beds of coal, oil shales and carbonaceous shales at two horizons.

The Triassic system consists of grits, sandstones and mudstones. It contains coal seams in the felspathic sandstone series.

Tertiary strata of lacustrine origin occupy the Macquarie River basin and similar strata of lacustrine and marine origin fringe the north coast and also the shores of Macquarie Harbour on the West Coast.

The strata consist generally of horizontally bedded clays and sands. Brown coal and lignite occur in parts of the Macquarie River Basin, at Macquarie Harbour and elsewhere, while carbonaceous clays also occur, principally in the Sassafras (north west) district. The greatest thickness (up to 1000 feet) of tertiary strata occur in the Macquarie River and Sassafras areas.

Since the beginning of the Permo-Carboniferous period the earth movements have been entirely tensional with resulting block faulting and movements of direct uplift and downthrow, so that the rock structures are unsuitable for the formation of oil reservoirs.

Surface Prospecting

Interest has been directed to numerous parts of the State mainly in connection with discoveries of asphaltum, cannel coal, pelionite and other hydro-carbons. Such localities include Port Davey, New Tiver, King Island, Barn Bluff, Macquarie Harbour, Bruny Island, and the Mersey Valley. The prospecting has generally resolved itself into the pegging of licences and leases, collection of samples, and in a few cases geological reports have been obtained. The expenditure in this manner has been small and probably does not exceed £10,000 - £20,000.

Drilling

The only locality where any considerable amount of drilling has been carried out is the Mersey Valley district. The Mersey Valley Oil Company Limited drilled nine holes (total depth 5,781 feet) and a ten inch "well". Apparently about £50,000 have been spent.

The Adelaide Oil Exploration Company has drilled at least 12 holes with an aggregate depth of 8,507 feet. The expenditure by this Company in Tasmania can only be estimated as between £20,000 and £40,000.

On Bruny Island one hole was drilled to 430 feet depth in 1915. Several shallow holes were drilled in 1930.

In round figures it would appear, therefore, that the expenditure on oil prospecting has not exceeded £100,000.

No flow oil has been discovered within the State.

ACTING GOVERNMENT GEOLOGIST

The Mines Department,
HOBART

26th July, 1939.