

THE OIL SHALE DEPOSITS
OF TASMANIA.

The oil shale deposits of Tasmania occur in the north western districts. The most important are those of the Mersey or Railton-Latrobe district. This district was visited by the late W.H. Twelvetees in 1911 and his report thereon is included in Geological Survey Bulletin No. 11. The estimates of reserves were as follows:-

Mersey District	- 7,600,000 tons
Nook	- 800,000 tons
Minnow	- 3,600,000 tons

Since then, oil shale has been found in other districts such as Quamby Bluff and Oonah.

In 1923, Mr. A. McIntosh-Reid made a complete examination of the deposits of the Mersey district and the report thereon is included in the Mineral Resources No. 8 Volume I. The tonnage of shale in the several areas is estimated as follows:-

	<u>Actual Reserve Tons</u>	<u>Probable Reserve Tons</u>
Latrobe-Railton	6,260,000	3,460,000
Other areas		3,865,000
Native Plain	3,000,000	4,500,000
Kimberley		2,026,000
Merseylea		4,500,000
Quamby Brook	211,250	1,043,000
Beulah	387,400	1,490,000
Nook	260,000	3,620,000
Paramatta	22,250	2,400,000
	<u>10,140,900 tons</u>	<u>26,904,000 tons</u>

The Tasmanian oil shale occurs in a seam from 3 to 6 feet thick with generally a thin bed of poor quality in the centre. The yield of oil, varies with the different areas and ranges from about 20 to 65 gallons per ton. The average especially for the important Railton-Latrobe field is considered to be 40 gallons per ton. On fractionation the crude oil yields 11% to 16% benzine, 18 to 25% kerosene, and 55% to 64% fuel or lubricating oils.

The Oonah field was not completely examined, but this will be completed at an early date and a report thereon published. From the preliminary survey the reserves are estimated at 6,000,000 tons.

Since the publication of the report an important development has taken place in the Railton-Latrobe field. In consequence of the 1923 report submitted to the State Development Advisory and the resulting discussions, negotiations etc, the Australian Shale Oil Corporation Ltd. were attracted to Tasmania. An agreement was arranged between the Company and the State Government in February 1925 and operations began shortly afterwards. A systematic drilling campaign was begun and a good area of shale was revealed. The seam is from 6 to 7 feet thick and is of good quality. This area has already appreciably increased the known reserves of shale and will further do so when more drilling is carried out. A single retorting (Bronder type) unit of commercial size has been

almost completely erected and will shortly begin the testing of the shale on a commercial basis. If successful a further four retorts will be erected making a full bench of five retorts.

The Southern Cross Motor Fuels are also contemplating operations again with a new type of retort. This company is operating on leases held by the Railton-Latrobe Oil Shale Company.

The Tasmanian Cement Company which has erected a cement plant at Railton intended to utilise shale in its process, by distilling it and using some of its products as a source of heat.

The importance of the oil shale deposits will be realised when the above figures are considered. The estimated probably reserve is 42,800,000 tons, (now appreciably increased by the work of the Australian Shale Oil Corporation Limited) in all known fields. The average oil yield is 40 gallons per ton. The total reserves of crude oil is therefore 1,713,000 gallons from which will be obtained, by fractionation, approximately 220,000,000 gallons of benzine, 360,000,000 gallons of kerosene and 1,000,000,000 gallons of fuel oil or lubricating oil base.

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13th February, 1926.

- (1) 7 E 1.
- (2) Southern Cross Motor Fuels Limited. (Railton-Latrobe)
- (3) Tasmanite Oil Shale.
- (4) 4,080,000 tons
- (5) 950,000 tons.
- (6) 4 feet thick outcropping at surface.
- (7) 1 retort for low temperature distillation.
- (8) 30 tons per day.
- (9) Unknown.
- (10) 8 miles by pipe line route to Devonport and thence by boat to Launceston 60 miles.
- (11)
 - (a) Colour, light yellow to brown. Lustre, resinous to pearly.
 - (1) Texture, finely laminated, fissile. Fracture, uneven across bedding. Specific Gravity from 1.2 to 1.6. Hardness, average 1. Fusibility, the shale ignites readily with a match.
 - (2)

Moisture.	V.M.	F.C.	Sulphur.	Ash
1.40	22.00	6.40	2.44	70.20
 - (3) 39 gallons per ton.
 - (4) 51.7 gallons per ton
 - (5) 21.625 B.T.U.
 - (6) Spent shale for agricultural purposes.
 - (b)
 - (1) 64% lubricating oil, 25% lighting oil and 11% benzine. The proportion of vaseline and mineral waxes is small.
 - (2) Nitrogen, 0.31, Carbon 79.34, Hydrogen 10.41, Oxygen 4.93. Sulphur 4.93.
 - (3) 21.625 B.T.U.
- (12) Tasmanian Geological Survey. Mineral Resources no. 8

- (1) 8.B1.
- (2) Unleased private property Quamby Brook Area.
- (3) Tasmanite Oil Shale
- (4) 211,250 tons.
- (5) 1,043,000 tons.
- (6) 100 ft. deep, 2'6" to 5' thick.
- (7) Nil.
- (8) Nil.
- (9) Unknown.
- (10) 45 miles by road to Devonport.
- (11)

(a)

- (1) Colour, light yellow to brown. Lustre resinous to pearly. Texture, finely laminated, fissile. Fracture, uneven across bedding. Specific gravity from 1.2 to 1.6. Hardness, average 1. Fusibility. The shale ignites readily with a match.
- (2) Moisture, 1.40, V.M. 22.00 F.C. 6.40, Sulphur 2.44, Ash 70.20.
- (3) 39 gallons per ton.
- (4) 51.7 gallons per ton.
- (5) 21.625 B.T.U.
- (6) Spent shale for agricultural purposes.

- (b)(1) 64% lubricating oils, 25% lighting oil, and 11% benzine. The proportion of vaseline and mineral waxes is small.
- (2) Nitrogen 0.31, Carbon 79.34, Hydrogen 10.41, Oxygen 4.93, Sulphur 4.93.
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