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PROGRESS REPORT ON DRILLING OPERATIONS AT

THE LATROBE SHALE FIELD

During the progress of the investigations of the Tasmanian Shale Oil Enquiry Committee and following the short boring campaign carried out by the Mines Department in 1932, it became evident that further information was essential in connection with the extent and the geological structure of the shale field at Latrobe. The investigations of other features of the shale oil industry e.g. retorting and refining had advanced considerably during the past few years, whereas that of the extent of the deposits had not done so to the same extent.

To enable this investigation of the extent of the shale and the structure of the field to be pursued, the Commonwealth Government made available £1000 to the Hon. the Minister for Mines.

All available data were collected and considered by the Department and a general scheme for testing the Latrobe shale field (i.e. the field adjacent to the plant of the Tasmanite Shale Oil Co. Ltd.) by drilling was prepared.

Boring operations with the Victoria (Calyx) drilling plant commenced on the 24th February on the lease of the Tasmanite Shale Oil Co. Ltd. The operations have been continuous and up till the present nine holes have been put down, all of which have intersected the shale seam.

The details of the holes are as follows:

Number	Total Depth	Depth to Shale	Thickness of shale.
1	226' 6"	215' 0"	4' 9"
2	205' 0"	198' 6"	5' 6"
3	178' 0"	170' 0"	7' 6"
4	189' 0"	183' 6"	5' 1"
5	197' 0"	190' 9"	5' 3"
6	308' 0"	302' 6"	4' 7"
7	236' 0"	228' 0"	5' 4"
8	275' 0"	268' 2"	4' 4"
9		273' 7"	6' 8"
10	295' 4"	288' 6"	2' 11"

The above represents a total depth drilled of approximately 2095 feet. It is worthy of note that No.6 hole represented the extension of one sunk in 1932 to shallow depths without cutting shale, while No. 9 represents the deepening of an old hole sunk by the Tasmanian Cement Company over 10 years ago but which did not go deep enough.

The holes have verified the geological structure as outlined in the report of 26/10/32, particularly as regards the fault occurring between the Goliath mine and the Tasmanite mine. In the vicinity of Bore No. 6

this has a downthrow of 250 feet to the west. The holes also prove that there is little if any faultinga associated with the basalt dyke.

The drilling campaign has proved that the shale seam extends over a considerable area to the north of the Tasmanite mine (without apparently being faulted to any considerable extent) and has an average thickness of 5'6". The seam extends over 70 acres at least between the Tasmanite mine and the basalt dyke which gives a reserve of approximately 1,000,000 tons of shale.

The drilling is now being carried out in the region north of the basalt dyke and has proved at least 60 acres to be shale-bearing while 90 acres could be relied upon with a fair degree of certainty. Thus a further reserve of at least 1,000,000 tons exists to the north of the dyke. This has by no means proved the extent of this field and further drilling to the north-west, north and north-east would be necessary to effect the complete testing of this field.

The cores from the first five holes have been tested in the laboratory up till the present time with the following results. It must be realised that the whole of the shale does not always provide a core, hence the partial results for some holes and the apparent thinness of the seam in some holes.

		Thickness of core	Oil yielded, Gals. per ton	
			Mines Laboty. determination	Deduced from Kurth's Graph
No.1	Top Shale	2' 3"	30.2	33.0
No.2	Top Shale	1' 2"	30.2	34.0
	" "	0' 4"	N.D.	7.5
	" "	1' 5"	N.D.	19.2
		0' 3"	39.2	42.0
	Middle band	1' 0"	N.D.	6.5
	Bottom shale	1' 4"	15.68	
	Average top shale	3' 2"		23.1
	Average top and bottom shale	4' 6"		20.75
	" whole seam	5' 6"		17.86
No. 3	Top shale	10"	N.D.	5.5
	" "	11"	N.D.	13.9
	" "	3"	N.D.	7.3
	" "	22"	38.1	41.5
	Middle band	13"	N.D.	6.25
	Bottom shale	18"	28.0	29.6
	" "	13"	N.D.	6.6
No. 4	Top shale	5"	N.D.	5.5
	" "	16"	53.7	59.4
	Middle band	13"	N.D.	8.5
	Bottom shale	5"	38.0	39.2
	" "	12"	14.6	Not applicable
No. 5	Top shale	3"	N.D.	4.6
	" "	8"	N.D.	24.7
	Middle band	12"	N.D.	7.0
	Bottom shale	30"	36.4	36.2

The averages for the varous portions of the seam and the whole seam are are as follows:

No.1 (Only partly cored and so averages cannot be calculated).

No. 2	38"	2.78	2.18	23.1
	12"	2.68	2.56	6.5
	16"	2.70	2.32	15.68
	54"	2.76	2.23	20.75
	66"	2.74	2.29	17.86

No.3 (omitting the top 10" of top shale and lower 13" of the bottom shale)

36"	2.47	2.12	28.59
13"	2.68	2.54	6.25
18"	2.70	2.10	29.6
54"	2.55	2.11	29.27
67"	2.58	2.20	23.82

No.4 (omitting upper 5" of top shale)

Top shale 20"	2.56	1.78	53.7
Middle band 13"	2.46	2.47	8.5
Bottom shale 23"	2.30	2.18	24.74
Top and bottom shale 43"	2.41	2.00	36.76
Whole seam 56"	2.42	2.11	22.95

No. 5.(omitting upper 3" of top shale)

10"	1.98	2.14	24.7
12"	1.56	2.53	7.0
38"	2.27	2.00	36.2
48"	2.21	2.03	33.6
60"	2.05	2.13	27.3

The drilling campaign has been very successful up till the present, as every hole has intersected the shale seam and the extent of the seam is gradually being proved so that its area, thickness etc. is becoming known definitely.

The sum of £1000 available is almost used up and probably it will be expended after one more hole has been completed. The completion of this hole will not mean that this particular field has been tested to its boundaries and further drilling would be necessary to prove it completely. In order to enable this drilling to be carried out, further sums of money would have to be provided.

signed
P.B. NYE
GOVERNMENT GEOLOGIST.

Mines Department,
Hobart,
1st December, 1933