SAMPLING OF TASMANITE SHALE AT CHINA FLATS, RAILTON

In October, 1937, the Tasmanite oil shale seam in the northern area at China Flats near Railton on Section 6641/M, was sampled in three places. The openings in the shale in this area include 4 shafts, Nos. 1, 2, 4 and 5 on "B" Line, sunk by Latrobe Shale and Oil Company in 1910, and an old shaft (not previously recorded) at approximately 8 chains north-west of No.2 shaft. In addition, two open cuts and a shaft occur to the east of "B" Line of shafts and bores. Of these, the only openings available for sampling the full section of the seam were No.s 2 and 5 shafts and the shaft situated at 17 chains east of "B" Line (north of east end main open-cut).

In each sample the shale was saturated with moisture owing to water standing in the shafts. In the case of Nos. 2 and 5 shafts the shale showed signs of weathering after exposure to atmospheric agencies over the past 27 years.

The content of ash and sulphur and the specific gravity of the samples were determined by the Government Chemist and Assayer. The oil yield was deducted from the ash content of the shale by means of a graph prepared by Dr. E.E. Kurth of the Hobart Technical College.

Results of the sampling, analysis and deducted oil yield for each sample, together with the averages for each shaft, are contained in the following tables:

No. 2 SHAFT

Depth of shaft 21 feet: Top of Shale 15 feet 9 inches from surface.
The seam was sampled in one section, from top to bottom, as the grade appeared to be even throughout and no middle band was distinguishible.

Section of Seam	Registered No.	Ash Per Cent	Sulphur Per Cent	Specific Gravity	Thickness	Oil Yield Gals. per ton
Whole Seam	1475	80.32	2.70	2.16	5'0"	23.6

No. 5 SHAFT

Depth of shaft 14 feet 7 inches: Top of shale 9 feet 4 inches from surface
Seam sampled in two sections. Bottom section includes a clay band 1 inch thick.

Section of seam	Registered No.	Ash Per cent	Sulphur Per cent	Secific Gravity	Thickness	Oil Yield Gals. per ton
Top shale	1473	64.62	2.58	1.77	1'6"	58.00
Bottom shale	1474	84.92	3.33	2.35	3'5½"	15.50
Whole seam			3.10	2.17	4'11½'	27.4

SHAFT NORTH OF EAST END MAIN OPEN CUT

Depth of shaft 18 feet 3 inches: Top of shale 13 feet 8 inches from surface.

Section of seam	Registered No.	Ash Per cent	Sulphur Per cent	Specific Gravity	Thickness	Oil Yield Gals. per ton
Top Shale	1478	68.00	2.53	1.85	1'8½"	49.50
Middle band	1477	91.80	2.09	2.53	0!5"	5.00
Bottom shale	1476	80.54	2.66	2.20	1'6"	23.00
Whole seam			2.53	2.12	3'7½"	30.9

The latter results compare favourably with those of samples taken from the same shaft in August 1937, by Mr. A. Walker, which were as follows:-

Section of Seam	Reg. No.	Ash Per cent	Sulphur Per cent	Specific Gravity	Thickness ft. in.	Oil Yield Gals. per ton
Top shale	1093	58.42	2.59	1.67	0'8½"	74.50
	1094	78.32	2.62	2.13	0'11½"	27.40
Middle band	1107	91.32	2.12	2.55	0'5"	5.80
	1108	73.58	2.81	2.01	1'5"	37.30
Bottom Shale	1109	87.56	2.00	2.46	0'5"	11.50
Whole seam			2.56	2.08	3'11"	31.50

The averaging of the results of the above four samplings suggests that the oil yield from the northern area at China Flats will be 28 gallons per ton.

A sample taken from a 25 ton parcel (representative of the whole seam) recently secured at the quarry in southern area at China Flats for use in the Bitumen Pilot Plant, gave the undermentioned results:

Section of seam	Reg. No.	Ash Per cent	Sulphur Per cent	Specific Gravity	Thickness ft. in	Oil Yield Gals. per ton
Whole seam	1472	77.26	2.43	2.07	---	29.60

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