

"ANTHRACITE" COAL AT CATAMARANINTRODUCTION:

The following report is the result of an examination of coal seams at Catamaran made in connection with prospecting recently undertaken by local miners in Government employ.

About 1924, Mr. Gard, then manager of Catamaran Mine, had sunk numerous pits in the locality, and, although it was stated that seams of "anthracite" coal had been revealed, more precise information was not available. In the intervening years the prospect holes had caved but the spoil dumps still showed small quantities of loose coal and it was decided to sink further holes to again expose the seams for inspection and sampling.

LOCATION AND ACCESS:

The area is situated immediately east of centre of the west boundary line of old section 8879/M, 19 acres, later incorporated in 19471/M, 400 acres, and leased up to 1938 by New Catamaran Collieries Pty. Ltd.

Access is gained by way of the old tram route (2700/M) leaving Hobart-Catamaran road on north side of Catamaran River, and proceeding to Catamaran Mine. From there a track deviates in a general westerly direction along an old tram route past "Anthracite" adit to the area.

THE COAL SEAMS:

Three seams, separated by beds of black shales, occur at vertical intervals of 10 to 12 feet.

- (1) The lowest or "Athracite" seam is partly exposed at intervals in seven pits over a distance of 15 chains in a general north-westerly direction. The best exposure occurs at the eastern end in a pit sunk to a depth of eleven feet and shows the following section:-

Dark grey shales	-	8 feet
Dull coal	-	10 inches
Mudstone band	-	1 inch
Dull coal	-	4 inches
Mudstone band	-	1 inch
Bright anthracite coal- 18 to 22 inches		

Proximate analyses of samples of the three portions of this section, excluding mudstone bands, gave results as under:-

Reg. No.	Section	Constituents	Per Cent
960	Bottom 18" - 22" Anthracite coal	Moisture at 105°C	0.86
		Volatile matter	7.28
		Fixed carbon	86.22
		Ash	5.64
		Sulphur	0.38
Calorific Value 14,250 British Thermal Units - Fuel Ratio 11.8			
961	Centre 4" Semi-anthracite	Moisture at 105°C	1.48
		Volatile matter	12.68
		Fixed carbon	76.78
		Ash	9.06
		Sulphur	0.29
Calorific value 13,260 British Thermal Units - Fuel Ratio 6.			
962	Top 10" Semi-bituminous coal	Moisture at 105°C	1.70
		Volatile matter	14.44
		Fixed carbon	67.90
		Ash	15.96
		Sulphur	0.32
Calorific value 11,910 British Thermal Units - Fuel Ratio 4.7			

The seam in this locality dips to the north at about 1 in 4.

In most westerly pit the two thin upper bands of coal are absent, but the lowest (anthracite) is exposed to a thickness of 17". It dips at 1 in 4 towards the north-east on a bearing of 64°, this being a distinct change from the dip direction recorded to the east.

An analyses of a sample taken at this point gave the following result:-

Reg.No.	Section	Constituents	Per cent
	17" Anthracite coal	Moisture at 105°C	1.32
		Volatile matter	4.20
		Fixed carbon	87.34
		Ash	7.14
		Sulphur	0.46

Fuel Ratio 20.7

(2) The middle seam is approximately 4 feet in thickness and is now exposed in one opening only, at one chain north of the western anthracite pit. The angle of dip and direction are similar to that of the "anthracite" seam in the locality. The latter underlies the middle seam from which it is separated by 10 to 12 feet of shales.

The following result was obtained from treatment of a sample taken across the middle seam:-

Section	Constituents	Per cent
4' 4"	Moisture at 105°C	2.92
Bituminous coal	Volatile matter	20.74
	Fixed carbon	54.80
	Ash	21.54
	Sulphur	0.32
Fuel Ratio		2.6

A band of mudstone 1½ inches in thickness, separates the middle seam from an underlying bed of coal, 9 inches thick.

(3) An upper seam of coal with thickness of one foot is reported to overlie the middle seam but this is not now exposed to view.

From the evidence available these coal seams appear to continue without interruption from the outcrop as far north as No. 3 Bore hole at least, a distance of about 18 chains. In No. 3 Bore hole coal was encountered at 248 feet from surface and this point corresponds with the calculated position of the seams, using a dip of 1 in 4 as recorded at outcrop.

CONCLUSIONS:

A seam of anthracite coal, outcropping over a distance of 15 chains and extending along the dip for 18 chains has been proved to exist.

Owing to the small thickness of the seam (17 to 20 inches) it is extremely doubtful whether the coal could be extracted economically. Great care would be essential to ensure the overlying shales, some of which must necessarily be broken out in mining, are not mixed with the anthracite. Mining would entail operations by way of dip adits at an angle of 14° and pumping costs would be high.

Apart from the above considerations markets for the particular class of coal have yet to be established.

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11th September, 1939.