THE CATAMARAN COALFIELD

Owing to its remote position from the regular ports of call for boats plying from Hobart, the almost impassable condition of the only connecting road and the lack of other means of access, the recent investigation of this coalfield was attended with considerable difficulty. Nevertheless sufficient information relating to the structural geology and the nature of the coal was obtained to form an idea of the possibilities of the chief mine.

The discovery of coal in this field dates back to 1900. Since that time the Catamaran mine has been explored intermittently by several syndicates, and during the last decade considerable development work has been accomplished. These workings have been sufficient to prove the uninterrupted extension of the seam over 120 acres, and its occurrence in faulted position far beyond the confines of the present leases. The quantity of coal recovered in these operations and shipped to market amounts to 4,000 tons.

The workings comprise a well-timbered, main shaft and many shallow shafts and dip tunnels along the outcrop. In addition to these exploratory works several bore holes were sunk along the strike of the seam near the outcrop, but not one in a position to prospect the seam on the dip.

The seam outcrops on the eastern and southern sides of a rather extensive swamp under which it dips in a north westerly direction at an inclination of 10 to 11 degrees. The surface is covered with alluvium to depths of 10 to 30 feet, and below this are found the felspathic sandstones and fire clays containing the coal seams. Not many chains westward of the new main shaft is a fault which forms the limits of the workable ground from the mine. The seams, however, recur at a higher elevation westward and outcrop at several points on the hillside. There they appear to be rather dirty and small, but not sufficient work has been done to determine their value.

In the swamp lands of the coal mine massive diabase does not outcrop, but it lies at no great depth as shown by boring. Some distance back this intrusive protrudes on all sides and evidently its influence on the coal, though not apparent, will prove considerable.

The physical and chemical properties of this coal are such that it may be regarded as the best of its kind in Tasmania. It is a rather bright bituminous to sub-bituminous variety showing alternate dull and bright laminations. It is soft and brittle and inclined to slack, and could not be shipped long distances without crumbling badly and otherwise deteriorating. The tender nature of the coal is due to the effects of weathering agencies either by exposure or by water percolation. The bed is under thin cover and weathering by water percolation from the swamps has doubtless been i in slow progress for a very long time. It is noteworthy that the hardness of the coal increases with depth, showing that the excessive brittleness is due to weathering.

It was quite impossible to obtain samples from the seams as the outcrops are covered with alluvium and, at the time of this investigation, the workings were under water; but a bulk sample of the coal from the old opening was taken from stocks in one of the bins. This coal,

although affected somewhat by surface exposure for some years, fairly well represents the average grade of material shipped to market. In this heap it was noticed that thin bands of white fireclay had been mined with the coal and this impurity increased the natural ash content considerably.

The analysis reveals a somewhat superior composition to the best Cornwall coals. With care in mining the ash content could be appreciably reduced. The ash is milk-white in colour, friable and free from clinker.

The coal burns very quietly without the slightest decrepitation and makes a very good household fuel. It is highly prized also by blacksmiths and finds a ready market for steaming purposes. For special uses this coal should command higher prices than the ruling rates.

A section of the seam exposed in the Pump Shaft shows:-

Clay Roof				
Bright Coal	0 feet	11 ins.	)	
Fireclay	o "	1 "	)	
Coal	0 "	9 "	)	4' 6"
Stony Coal	0 "	4 "	)	
Bright Coal	2 "	5 "	)	
Clay Floor				

Over 400 yards away in the New Main Shaft the seam consists of:-

Small Band of Coal for Roof				
Stony Material	0 feet	8 ins.	)	
Bright Coal	0 "	6 "	)	
Stony Material	0 "	2 "	)	
Bright Coal	0 "	6 "	)	4' 9"
Stony Material	0 "	4 "	)	
Bright Coal	2 "	7 "	)	

It will be noted that although the seam is of fair thickness the average width of workable coal is only 2' 6". Even if a greater depth is mined for convenience of working the increased quantity recoverable is almost negligible. In order to provide a safe working margin the average thickness for purpose of calculation of quantities is put at 30 inches. On this basis the quantity of available coal in this mine amounts to a maximum of 360,000 tons.

Owing to a number of reasons, the chief being the extreme wetness of the mine and the softness of the roof and floor of the seam, the exploitation of the coal will be attended with considerable difficulty, and the resultant increase in cost of extraction will largely offset any advantage this mine may possess over others less favourably situated. The porosity of the surface alluvium and the underlying rocks precludes the possibility of draining off all the surface water, a considerable quantity of which ultimately finds its way into the mine workings and increases as the workings approach the outcrop. The large quantity of timber required and the necessity for putting in box sets and close packs will appreciably affect the rate and cost of production.

Notwithstanding these disadvantages the mine is one, by reason of its convenient situation and the high grade quality of its coal, possessing decided possibilities and, under skilful operators, should prove a profitable enterprise.

It may be mentioned, in concluding these remarks that there are several extensive undeveloped coalfields in the neighbourhood of Catamaran.

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