

ACCESS

The coal seams occur at Kaoota, a hamlet about four miles South West of Sandfly. Kaoota may be reached from Longley, on the main Hobart - Huonville road, by following a rough metal road for five miles, or from Margate on the Channel road, which is seven miles by rough metal road. Steep grades occur on both these bye-roads. Within the area itself, no possible workings need be more than a hundred yards or so from a road.

PRESENT WORKINGS

At the present time coal is being won by three men employed under contract by E.W. Fogarty. Their output amounts to about five tons per day. The workings are situated on land for which Fogarty has an application for a lease of 60 acres. All the country under which the seams are likely to occur is purchased property in the name of various persons.

TOPOGRAPHY

This is comparatively youthful, so that steep sided valleys occur. The coal seams outcrop on a hillside, the average slope of which is 15 - 20 degrees and they dip into the hillside at angles of about 10°.

GEOLOGY

The coal seams occur in the typical Triassic Felspathic Sandstone Series. Although the main beds are sandstones, mudstones and shales also occur. Usually associated with the coal seams are beds of blue or yellow mudstones and bands of clay. The seams as originally deposited were fairly uniform in thickness and extent but two influences have disturbed their regularity. First, the intrusion of Jurassic dolerite has caused warping and minor faulting and secondly, the earth movements of Miocene times have produced larger faults. The dip of the beds and hence the coal seams is to the North West at angles from 4 - 14°. Although the general direction of dip is regular, faulting has twisted the beds in close proximity to the faulted areas so that variations both in strike and dip occur within a small compass. Dolerite has been intruded into the sediments in the form of sills and dykes. The dolerite occurring immediately above the present workings is in the form of a sill, but dykes may be met with below the surface in this area.

THE COAL SEAMS

The authors of the "Coal Resources of Tasmania" list eight coal seams, four of which are of workable thickness. As far as the present investigation is concerned it is the seams containing low volatile coal which are important. Of these, the most important, and that from which present production is obtained, is the so-called Eta Seam. An analysis of coal from a 45" seam in the working face showed 11.5% of Volatile Hydro-carbons and 64.2% of Fixed Carbon.

Half a mile South West of the present workings, is an old adit, known locally as Barker's Adit, in which a 36" seam was sampled. This showed 17.4% of Volatile Hydro-carbons and 58.5% Fixed Carbon. Now, although the percentage of volatiles is higher than in Fogarty's Workings this can still be classed as a low volatile coal.

A further thirty chains to the South West is an

old adit, now completely collapsed at the portal but from which some 500 tons of coal were obtained in the early part of the century. An analysis of coal from here is published in the "Coal Resources" and shows that a 36" seam gave 17.46% Volatiles and 60.88% Fixed Carbon.

RELATIONSHIP OF COAL IN FOGARTY'S WORKINGS, BARKER'S ADIT AND OLD NO. 7 WORKINGS

For any future development of the low volatile coal a correlation must be attempted between the seams revealed in the abovementioned workings. In the past it has been assumed that these are the same seam, the "Eta" seam. Consider first the relationship between the seam at Fogarty's and adjacent workings and at Barker's Adit. The theoretical position of the outcrop measured from the former is about seventy feet above the coal revealed in Barker's Adit. This of course may be due to down faulting to the South West, somewhere between the two lots of workings, and indeed some evidence of faulting is apparent on the surface in this area. On the other hand, in the present workings, an upper seam occurs eight feet above that which is being utilised, but in the vicinity of Barker's Adit, there is no sign of this upper seam. The identification of the seam at these two localities must, therefore, be regarded with caution, until more intensive work has been done.

The relationship of the seam at Barker's and the No. 7 Workings, however, is much clearer. The results of analysis show that the coal in both places is almost identical in composition and, moreover, the theoretical outcrop, taken from Barker's Adit, passes approximately through the coal exposed in No. 7 Workings. This, then, presupposes that there is no extensive faulting between the two outcrops and it is in this area that boring is recommended. By analogy with other workings in the vicinity it is almost certain that some faulting of a minor nature has occurred and, before any actual mining is done, it is most necessary that an intensive boring scheme be instituted so that minor faulting may be determined.

BORING CAMPAIGN

A boring campaign should be carried out according to the following pattern and as indicated on the accompanying plan. It is usual to initiate such a campaign by drilling three holes at the apicies of an equilateral triangle, in order to determine the direction and amount of dip, but as these seem fairly regular in this area, these initial three bores may be dispensed with. A short line of bores at 100' intervals should be put down along the dip and then a long line along the strike, or better still, parallel to the theoretical outcrop, so that coal may be met with at a comparatively shallow depth. This should mean a considerable reduction in footage and yet should indicate the position and extent of any possible faults.

The boring campaign may later be extended to the North East of Barker's Adit in the direction of the present workings.

CONCLUSION

It would appear that adequate amounts of low volatile coal are available in the Kaoota area. Whether this can be mined economically is a matter that can be determined after the completion of a planned boring campaign.

Present investigations seem to indicate that faulting in the suggested area is not sufficient to preclude the economic recovery of the coal.

RESULTS OF ANALYSES

	Moisture at 105°	V.C.M.	F.C.	Ash	S.	Cal. Value B.Th.U	Sp. G.
<u>Present Workings</u>							
Floor - 15"	2.7	11.0	64.2	22.1	0.47	11170	1.50
15" - 30"	2.2	12.3	65.1	20.4	0.45	11400	1.51
30" - 45"	1.7	11.2	63.3	23.8	0.44	10900	1.56
Average	2.2	11.5	64.2	22.1	0.45	11156	1.52
<u>Barker's Adit</u>							
Floor - 18"	1.9	17.2	60.7	20.2	0.4	11540	1.49
18" - 36"	1.8	17.6	56.2	24.4	0.32	10740	1.57
Average	1.85	17.4	58.5	22.3	0.36	11140	1.53
<u>No. 7 Workings</u>							
0" - 36"	2.9	17.46	60.88	18.76	0.41	10981	1.50

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