

SUPPLEMENTARY REPORT

on

THE JUBILEE COAL MINESINTRODUCTION

This report, supplementary to that furnished by H.G.W. Keid (Assistant Government Geologist) appearing in Mineral Resources No. 7, is designed to convey an idea of the nature and value of a seam (Beta) of coal recently opened by the Jubilee Coal Mining Company. It is the result of an enquiry by the Commissioner of Railways for further information following an application by the Directors of the Company for an extension of the Fingal Railway to the Company's Leases.

NUMBER AND AREA OF LEASE

The Company holds under lease 8713M an area of 429 acres for the single purposes of Coal Mining. This lease comprises portions of small areas held years ago by the late Company together with the old Cardiff area.

EXTENT AND METHOD OF MINING OPERATIONS:

Attention has been concentrated largely upon the opening and Mining of Delta seam, the thickest and best of the eight seams that make up the complete series. Delta seam has been the most prolific here as elsewhere and the coal has proved suitable for steaming and household purposes. It has been opened by way of a dip adit at a point on the hillside high above the valley floor. The adit workings extend far into the hill and from it leadings have been driven at intervals right and left. Through this opening the whole output of coal is brought to surface.

As regards the Beta seam this is being opened in a dip adit nearby and will be worked in a manner similar to that on the Delta seam. It is rather thin for economical working.

COAL SEAMS REPRESENTED.

The whole of the series of eight seams are represented here, but three only, namely: Beta, Gamma and Delta have been examined. Beta seam is about to be opened and mined on a commercial scale. It lies about 60 feet above Delta seam and with the others is contained in the felspathic sandstone member of the Trias-Jura formation.

Other seams may prove of commercial value and may be opened when the market warrants it. The seams are from 8 inches to 12 feet in thickness.

QUALITY AND SIZE OF BETA SEAM

This 28 to 36-inch seam of bandless coal is of good quality for domestic use and should prove equally efficient for steaming. Its appearance produced by alternating dull and bright luminations indicates a coal suitable for steaming. That is borne out by the following analysis which shows the composition of a bulk sample taken from a face 20 feet from the outcrop.

Volatile hydro-carbon.....	28.1	Per cent	British
Fixed Carbon.....	50.5	" "	Thermal
Ash.....	15.9	" "	Units
Sulphur.....	0.75	" "	11,200
Moisture at 105° C.....	5.50	" "	

Moreover, the coal is hard and compact; it breaks down in large masses with the production of a low proportion of slack; and it is capable of withstanding the shock of sever handling. The ignition point is fairly low, and in the furnace after a little preliminary crackling due to contained moisture it burns freely giving out great heat in the process.

The coal is of the humic type; but it varies in quality, the upper bands containing more bright laminations than the lower which consist of a dense hard unlaminated variety with occasional bright streaks. It possesses a bright to dull colour, brown streak, dull to brilliant lustre, and dense texture. The fracture is brittle lackly, and in the lower banks is conchoidal. Pyrites in insignificant amount occurs as films between laminae.

The coal bed is overlain by felspathic sandstone which forms a firm sound roof free from rolls or other irregularities. The floor of the seam consisting of firm grey fireclay rests upon felspathic sandstone.

PRODUCTION

The rate of production under existing conditions is 70 tons per day. That is the limited output as determined by the carrying capacity of the aerial ropeway.

QUANTITY OF COAL AVAILABLE.

It has been estimated (authority: H.G. W. Keid) that coal extends over 300 acres of this property, and that the eight seams are represented. Keid based his calculation upon a total thickness of 16 feet, a figure much too low. However, on that basis he gives the reserve as 5,740,000 tons.

TOPOGRAPHY IN RELATION TO MINING

The rugged nature of the country is due in part to the erosion of the unprotected coal-bearing and associated sedimentary rocks and in part to the great earth movements that accompanied and followed the intrusion of diabase. The resultant effects of the elevation of the land surface and the dislocation of the strata were the beginning of a long cycle of erosion and the defining of the line of drainage. Since that time has been developed the great rift valley of South Esk River and minor valleys along the courses of connecting faults.

Today the coal seals lie hundreds of feet above the broad valley floor and the sandstones in which they are contained are covered with a great thickness of erosion - resisting diabase. In some parts erosion agents acting on the soft felspathic sandstones and shales has produced cliffs in the overlying diabase, a deep talus from which covers up the outcrops in the coal-bearing strata underneath.

Owing to the high altitude of the Mine and the rugged nature of the country direct railway connection cannot be considered, but the railway could with advantage be extended to the foot of the mountain. The configuration is such as to allow of operation through dip-adits.

TRANSPORTATION

At present coal is carried from the mine bins to the railway siding on an aerial ropeway over two miles in length. The carrying capacity of the line is 70 tons per day which therefore limits the output to that quantity. Under existing conditions it is impossible for the Company to extend their operations.

Furthermore, the aerial ropeway requires constant attention to prevent breakdowns and to effect repairs to those parts that suffer damage under ordinary conditions of wear and tear. In effect the transport system is inefficient and unsuitable for the handling of coal in large quantities.

It is proposed by the Company that the Fingal Railway be extended to the foot of the mountain and that a self-acting tramway be laid down to connect the mine with the railway. The Company is prepared to construct the tramway and erect bins at the terminus, but asks the Government to extend the railway. It is understood that the line of the proposed railway has already been surveyed.

This is the only scheme worthy of consideration. It will not only reduce the cost of transport, but allow the Company to operate on a much larger scale. Whether the scheme is economically sound is a question difficult of answer. The success of such a scheme would depend largely upon the market for coals of the type produced by the Jubilee Company.

MARKETING.

On the authority of one of the Directors of the Company, Tasmanian markets can be found for an output of 200 tons per day. If the prices obtainable for Delta and Beta coals are satisfactory and if the Company is preparing to work up to an output of 200 tons per day then the granting of the request of the Company might be regarded as justifiable.

GENERAL REMARKS.

Accepting Keid's estimate of 5,740,000 tons of coal available this Company has a very long lease of life at an output of 200 tons per day. From the Mining aspect the application of the Company is apparently a very sound one, but whether the prospective railway revenue justifies the necessary expenditure for the railway extension is another question. The claim of the Company to equal consideration to that granted to others similarly placed is not without foundation for other companies have received such transport facilities.

A. McIntosh Reid.
DIRECTOR OF MINES.

HOBART. 9/1/1929.