# PRELIMINARY REPORT ON THE MUENNA COAL MINE

This report embodies the results of observations made during a very hurried visit to the area one day during November, last year. The report is of necessity brief and inconclusive, but it may serve to convey an idea of the nature of the coals, their extent, and value - the purpose of the Coal Mining Syndicate in making their request.

## Area, Situation etc.

The properties of the syndicate are held under lease 49P/M of 365 acres, which includes lands owned by W.A. Stuart, and H.E. McKenzie. This property fronts on Flowerdale River and extends up the hill to Preolenna Railway which connects with Western Railway at the township of Flowerdale.

## The Coal seams

These coal seams belong to the Preolenna series of the Permo-Carboniferous formation. Three of the five seams outcropping at Preolenna have been located on the Muenna property and probably the others will be unearthed as development proceeds. The nature of the coals in the several seams does not vary appreciably from point to point, therefore, the analysis of the preolenna coals as given in the Geological Survey Bulletin No. 13 may be accepted as indicative of the quality of the coals in the same seams on the Muenna property. The lowest of the three seams outcrops a few feet above river level at the mine openings, the other two are 30 and 40 feet higher. They have been explored to a point half a mile upstream or along their strike, but 100 feet only on their dip. Where exposed they appear 18 inches to 24 inches thick and are separated from the hard sandstone roof and floor by narrow bands of shale.

As the whole area is occupied by the productive beds of the Permo-Carboniferous formation, the seams extend throughout, and except where dislocated by faults, are connected with the corresponding seams on the Preolenna Coal Company's properties. It is difficult to locate the faults because the greater part of the surface is occupied by basaltic lava. However, faults of small displacement are to be expected.

## Quality of the Coal

The coals are characterised by the fact that without exception they belong to the kerogenites or humic kerogenites; that is: they are oil producing coals. One or two of the seams contain lenses of high grade kerosene shale which appears and disappears in a manner characteristic of this class of coal.

These are the highest grade class of coals found in Tasmania, being much superior to those of the Trias-Jura formation in every respect. Their only disadvantage is caused by the presence of a large proportion of extrinsic sulphur in the form of pyrite or marcasite. But for that constituent they would be in great demand for gas-making and steam raising as well as for household purposes.

They are especially suitable for use as a fuel in powdered form in the manufacture of Portland Cement. Perhaps their greatest utility, however, lies in their suitability for the production of oils by destructive distillation at low temperature. The value of the coal for gas making is shown by the yield of over 12,000 cubic feet of gas per ton. The kerosene shale contains 75 to 90 gallons of crude oil per ton.

Marketing

At present Muenna coal is used on a minor scale for household purposes in the neighbourhood. It is reported that the retail price is 38/- per ton and that a large proportion of the output - when the Syndicate is producing 100 tons per week - can be marketed locally.

Its usefulness as a fuel in cement making has recently been demonstrated at the Tasmanian Portland Cement Company's works near Railton. This market is open if the run-of-mine coal can be produced and delivered at twenty eight shillings per ton.

Development

It has become axiomatic that the first operation in the development of a coal field is that of drilling. This is a necessary preliminary to the exploitation of coal in the Muenna area: first, to determine the average dip of the seams and the positions of faults; then to arrive at the best sites for the mine openings and to determine the kind of opening most suitable for mining the coal.

In the end of the main opening of the uppermost of the three seams the dip is at an angle of 12 degrees. This may indicate the approach to a roll in the seam or to a fault. In any case it is hazardous to proceed further with that work until drilling has provided the necessary information as to the behaviour of the seams. If the dip flattens, it may be found advisable to sink a vertical shaft at the railway siding and through that opening, deliver the coal direct into railway bins, or it may be possible to work to the rise by operating from the other side of the hill.

Mining the Coal

The seams are so thin that mining by hand is slow, costly and inefficient. Miners object to the discomfort and the misuse of human energy that would result from operating under that condition. The use of cutting machines would reduce the cost of excavation by half, and at the same time quadruple the productive power of each miner. Moreover, favourable working conditions tend to produce a contented service.

General Remarks

The reasons for the failure of the early operators may be summarised as follows:-

1. Insufficient Capital.
2. The lack of a systematic plan of development and mining.
3. Difficulty of access.
4. A limited market.
5. Comparatively high cost of production
6. Heavy freights.

Production and marketing are determined largely by two factors, namely:-

a. the thinness of the seams, and
b. the high proportion of sulphur.

The present effects of these can be reduced by using cutting machines in mining and washing machines to remove portion of the sulphur.

Many of the difficulties under which the Syndicate operated are now removed, and the prospects of successful operation are much brighter.

A. McIntosh Reid,
Government Geologist.

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