

on the
MOUNT NICHOLAS COAL FIELD.

OBJECT OF THE INVESTIGATIONS

This is the first of a series of preliminary reports to be published preparatory to the issue of a complete account of the coal resources of the State. The coal-fields will be investigated in more or less small areas, and a preliminary report will be published on the completion of each stage of the work. The final publication, it is hoped, will deal in detail with the whole of the coal-fields of the State. This report deals in particular with the Mount Nicholas Range area, and summarises the conclusions arrived at as the result of investigations carried out between the 17th May and the 7th August. The special object of the work in this case was to determine firstly the nature of the Igneous rocks of the area and their bearing, if any, on the quality and quantity of the coal in the various seams; to delineate the actual coal bearing area and to determine the total number of seams, thus enabling an estimation of the coal reserve of this area to be made.

AREA COVERED

The area here dealt with covers some fifty square miles and is situated a little to the north of the Fingal Railway having as its centre the Mount Nicholas Range.

RELATION OF DIABASE TO COAL MEASURES

The Mount Nicholas Range is capped with diabase, which diabase has in all previous reports been regarded as a dyke passing up through the strata of the Range. Were this the case the quantity of coal available would be seriously affected for the seams of coal would then be broken by this intrusion. I have come to the conclusion that the diabase in this area is not a dyke but is an intrusive sheet or sill from which the overlying strata have been eroded. The coal measures are underlying this sill of diabase and are continuous from South to North right through the Range. Outcrops of coal have in many cases been found on the north side of the Range to correspond with outcrops found on the south side.

A second sill of diabase has been proven to exist at an altitude of some five hundred feet below the coal seams. This second sill exists only in the eastern portion of the area.

In each case these sills of diabase are too far distant to seriously affect the quality of the coal. In no case have any of the mines found variations in their coal which could definitely be attributed to the diabase.

FAULTING

Faulting has occurred in the area to a fairly great extent, and three big faults have been located. The faulting has been of the nature of trough faulting with the axis or centre of faulting near the western

end of the range. These faults are in each case of the order of 200 feet.

NUMBER OF SEAMS

It has been definitely shown that eight seams of coal exist in the Mount Nicholas Range. These seams vary in thickness from two feet to fourteen feet. Variation in thickness from place to place in each seam has also been noted, and in one case a seam has been shown to have petered out altogether. Of these eight seams only two are at present being worked. I am of the opinion that at least two other seams could be worked and must be regarded as a coal reserve. As regards the four remaining seams the factors operating against their exploitation are their thickness and quality. Of these four there is no doubt that some are of very poor quality but portions of these seams may at some later period be worked. Very little prospecting has been done in the area with the view to proving any of these seams.

QUALITY OF COAL

There is very little variation in the quality of the coal from one end of the range to the other. A series of analyses are at present being done but these will not be published till the completion of the work on the coalfields of the State.

PRESENT OUTPUT

The present output from all the mines in the Mount Nicholas Range is about 250 tons per day.

COAL RESERVE

Calculations has shown that the area over which the coal extends occupies some 5,000 acres, which area will be the means of giving a coal reserve of approximately 100,000,000 tons of coal.

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