REPORT ON ESPIE'S COAL PROSPECT AT YORK PLAINS.

LOCATION AND ACCESS.

The prospect occurs on north side of Coal Mine Hill, on J.H.K. Espie's Closer settlement leases, about one mile west from York Plains railway station. Access is gained by way of a road deviating from Hobart - Launceston road and passing through York Plains to Eastwood.

GEOLOGY.

Trias-Jura:- The rocks consist of felspathic sandstones and interbedded shales (coal measures) in faulted relation with normal sandstones of the lower series.

Upper Mesozoic:- A narrow dyke of diabase up to 10 feet in width and coursing north-north-westerly, intrudes felspathic sandstones, 3 to 4 chains west of coal outcrops.

Tertiary:- A basalt flow overlies the sandstones and the diabase dyke on Coal Mine Hill, in the south-west of the area.

Structure:- A defined fault trends parallel to diabase dyke at 2 to 3 chains east of coal outcrops. Normal sandstones appear on east side of fault and felspathic sandstones on the west.

The strata dip at approximately 2° to the north-north-east.

COAL SEAMS.

Two seams of coal outcrop on lower northern slope of Coal Mine Hill in a faulted block of felspathic sandstones. They probably correspond with the two seams opened up at York Plains Coal Mine on south side of hill.

An old shaft 35 feet deep (now waterlogged) situated 12 chains north of southern boundary and ½ a chain west of eastern boundary of Espie's 157½ acre block; is reported to have exposed the following section of strata from top to bottom:-

Felspathic sandstone	15 feet
Clay	4 "
Shale	1 foot 3 inches
Coal	0 " 6 to 9 inches
Shale band	0 " 12 inches
Coal	0 " 3 to 4 inches
Shale below	

Small amounts of hard coal with several small bright bands occur on shaft dump.

In an open cut, 75 feet to the north-west of shaft and 30 to 40 feet lower, a band of what appears to be completely.decomposed coal occurs in the form of black clay material under-lying shales. This probably represents the outcrop of upper coal seams.

Lower coal seam outcrops at 15 chains north-west of shaft, with approximately 60 feet of strata between it and upper seam. The following section is exposed in a small open cut at outcrop.

Felspathic sandstones	4 feet 0 inches.
Black Shale	2 " 0 "
Brown "	0 " 4 "
Black "	0 " 3 "
Weathered coal	18 "
Brown shales below	

QUALITY OF COAL

No samples were taken in view of upper seam being inaccessible at shaft and lower seam being weathered at outcrop.

In a recent test carried out in a hop kiln with coal from upper seam it is reported that the coal was smokeless, economical in operation and suitable for hop drying.

QUANTITY OF COAL AVAILABLE.

From the little data available no accurate estimate of the quantity of coal is possible. The seams have not been exposed beyond the above prospecting works, in Espie's property, but it is probable that they extend under the hill south-easterly to York Plains Coal Mine.

Felspathic sandstones occur on west side of dyke but coal has not been proved to exist in that direction.

It would thus appear that the quantity of coal available in the partly proved area of Espie's property is small.

CONCLUSIONS.

Two seams of coal, 12 inches and 18 inches respectively in thickness, have been opened up over a few feet near outcrops.

To determine the extent, quality, and thickness of the seams in Espie's property it would be necessary to test the felspathic sandstone area to west offault line by means of a series of bore holes, above the level of lower outcrop. However, as indications at outcrops tend to prove that the seams in the vicinity are below the critical thickness (30 inches) at which coal can be profitably extracted, drilling is not recommended.

(F. Blake)
Signed
ACTING GOVERNMENT GEOLOGIST.

Mines Department,
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