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REPORT ON THE ESPERANCE OR STRATHBLANE COAL MINE.

The mine is situated near the northern end of the Strathblane field, south-west of Dover. It is included in lease 10941/M, of 5 ac. held by W.J. Forster.

The mine is connected with the Hobart road 2 miles from the mine, and also with a shipping port at the head of Port Esperance, by a wooden tramway.

MINE WORKINGS.

The first working consisted of a deep trench and small open cut which exposed the outcrop of the seam. The next working was an adit (No. 1) started from a point south-east of the open cut. This adit was begun below the coal and is stated to have the seam at 75 feet after which it followed the coal on the dip. Prospecting shafts Nos. 1 and 2 were also sunk about this time.

Later a large adit (No. 2) was started to the north-west of the open cut. It started in the bottom of the seam and at a distance of 43 feet had exposed the whole of the seam and was then turned into a dip adit to follow the coal.

Still later another adit (No. 3) was started to the north-west of No. 1 and was started below the coal and was sited to cut it at a distance of about 300 feet. This adit is 250 feet in length and a rise from the end cut the coal seam 26 feet above the adit. Later a shaft was sunk from the surface to connect with this rise.

THE COAL SEAM.

The seam was first found in the trench and small open cut, and 3'7" of coal was exposed resting on white weathered mudstones. This may represent the bottom section of the seam though the floor seemed different to that in the adit.

The No. 1 adit cut the seam but owing to adit being filled with water, the section could not be inspected.

The No. 1 shaft was 18 feet and was stated to have cut the lower 3' band of the coal seam. The No. 2 shaft is stated to have been 21 feet deep and to expose 7 feet of the seam.

The No. 2 or dip adit first interesected the lower band of the coal seam and later the whole seam. About 10 feet down the dip the section was:

4'0"	Upper band of coal
1'0"	White mudstone band
5'0"	Middle band of coal
0'6"	Soft white mudstone band
3'0"	Lower band of coal
	Fine sandstone or shale floor.

Further down the dip, the middle coal decreased in thickness while the lower mudstone band increased. The lower coal was cut off abruptly, but the upper coal continued without change but increased its dip (giving the appearance of a roll) and came down onto the sandstone floor. Still

further down it is stated that diabase (dolerite) came down vertically across the face and cut off the coal. It is also stated that a winze was 14 feet and picked up the top of the coal which was followed a short distance under the diabase.

Owing apparently to the above down-throw, and consequent drainage and haulage troubles, the lower rock (or No. 3) adit was driven. This has not yet cut the coal though a rise above the end cut the seam 26' above the adit, but apparently the seam had been almost entirely removed by denudation and a maximum of 20" of coal being obtained, and superficial deposits.

A lower seam was picked up in the mouth of the No. 3 adit and gradually dipped below adit level. A short drive south was driven on it and further in a 20' winze was sunk to cut it.

Coal has been mined on the south-eastern side of the No. 2 adit and more recently it has been mined on the north-western side of the No. 1 adit. It is stated that the coal on the south-eastern side of No. 1 adit is of poor quality.

Quantity of Coal.

The coal has not been exposed beyond the above workings so that it has been proved to exist over a small area only. No doubt it will extend under the hill to the south and south-west of the workings, but under what conditions (particularly with regard to its relationship to the diabase) cannot be stated..

Quality.

During previous visits the seam was too near the outcrop to warrant systematic sampling and during the recent visit, no faces were available for sampling.

A quantity of screened coal lying under the screens and two samples were taken No. 1 sample was taken from the larger pieces (up to 3" or 4" in size) and No. 2 from the fine coal from which all above ¾" had been screened out. The latter was only supplied to blacksmith's and would naturally be poorer in quality than the larger coal and this is borne out by the following analyses.

	No. 1 1274/33	No. 2 1275/33
Moisture	0.64%	0.74%
Volatile combustible matter	28.64%	26.12%
Fixed carbon	57.46%	55.04%
Ash	13.26%	18.10%
Sulphur	0.42%	0.57%
Colorific value B.T.U.	12,400	11,510.

These results indicate a coal generally similar to other Mesozoic coals in Tasmania. It is slightly better than the East Coast coals, having a slightly lower ash content and a slightly higher volatile content. The colorific value is also appreciable higher.

Samples submitted to the Railway Department in 1931

were apparently suitable for railway purposes, as the Department were prepared to buy small quantities of the coal if up to the standard submitted.

Future Development.

The past workings have been unfortunate in that they have not permitted of the extraction of any quantity of coal. The No. 1 adit apparently has only poor coal to the south-east of it and it is too narrow to extend to greater depths and be used as a main haulage way. Further it will cut the diabase and downthrow stated to have been met with in No. 2 adit.

The No. 2 adit was designed to act as a main working and haulage way, but the downthrow rendered it of little use unless the adit was continued through the diabase and at a steeper angle. The drainage arrangement (by siphone) was also upset.

The No. 3 adit was driven at a lower level apparently to overcome these difficulties and to open up a somewhat larger area of coal. It was badly sited particularly with regard to the tramway and was driven in a westerly direction instead of W.S.W to S.W. It was 52 feet below the level of the No. 2 adit.

A much more convenient site would have been the "Proposed Adit" as shown on the plan. This would have been 290 feet in length and though it would have been only 40.7 feet below No. 2 adit, it would have intersected the downthrown block of coal just to the S.W. of the downthrow.

The position now arises as to whether the No. 3 adit should be continued or the "Proposed Adit" driven. The No. 3 adit would have to be extended at least 132 feet in a W.S.W direction, or at least 142 feet in a westerly direction. On the other hand, the proposed adit would require to be driven 290 feet. However a much greater length of tramway would have to be altered in the former case and the difference in costs would not be great. The above estimated lengths are dependent on uniformity of dip, absence of faults &c., which factors cannot be allowed for.

Conclusions.

This mine is not opened up sufficiently to reach the productive stage. In the first place it will require the No. 3 adit to be driven further until the coal is cut. Further the tramway would need altering near the mine, the bin and screens shifting, and also hauling and pumping (or other) plant installed. A fair amount of capital expenditure would therefore be necessary.

The question of markets has also to be considered to ensure that the output could be sold.

P.B. Nye (Sgd)
GOVERNMENT GEOLOGIST.

Mines Department,
Hobart.
1/2/34.