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SEYMOUR COAL MINES.

R E P O R T

-by-

W. H. C U N D Y.

MINING ENGINEER.

Sept. 30th, 1931.

**MICROFILMED**

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SITUATION -

The property is situated on the East coast of Tasmania, north and south of the township of Seymour, which is some 17 miles by road south of the town of St. Mary's.

AREA - The total area comprises approximately 1,900 acres, the eastern areas abutting on to the coast line of McLean's Bay. This area is all freehold land.

BRIEF GEOLOGICAL INFORMATION.

The coal measures in the locality lie to the east of a north and south belt of igneous diabase rock forming the coastal range. The coal seams are deposited in layers, at irregular distances apart, in a grey fine grained sandstone, which forms the foothills of the range sloping away to the coast line. Though the whole area has not been systematically bored, numerous outcrops, shafts, and some bores, clearly show that an immense area of coal awaits development.

A very important fact is generally overlooked when comparing the well-known coal deposits near St. Mary's worked by the Mt. Nicholas, Cornwall, and Jubilee Companies 17 miles further north, with those of Seymour. The latter coal deposits are in an horizon of stratification over 1,000 ft. below those at St. Mary's and actually 180 ft. below sea level. In composition the two series vary considerably, the upper, or St. Mary's series, being of a dull grey colour with a comparatively low calorific value and excessive ash, whilst the Seymour series is a lustrous jet black coal with a higher calorific value and a less ash content. These differences might naturally be expected, when it is considered that the upper series of St. Mary's are of much more recent origin than the Seymour series - therefore the latter is older and should be the better quality coal.

COAL SEAMS AND WORKINGS - On the Seymour areas there are three seams:

No. 1	- 35 ft.	vertical depth	4'6"	thick
No. 2	-165 ft.	"	"	4'10" "
No. 3	-185 ft.	"	"	"

No. 3 seam has only been touched by a blind shaft from the No.2 seam workings and little is known as to thickness or value, but stated to be better even than No. 1 or 2.

NO. 1 SEAM: Though 4'6" thick has a band composed of shale, mudstone, and coaly matter which discounts its value to an extent. In view of the No.2 seam being so much better, this seam for the present can be left for future development. It must be mentioned, however, that there is a probability of the band mentioned gradually disappearing as the seam is followed to the west and north west, as is the case with the smaller band associated with No. 2 seam.

NO. 2 SEAM:

Is remarkable in thickness varying from 3'9" to 5'6" with an average of 4'10" set between particularly smooth walls forming the floor and roof of the deposit. The main heading has extended 670 ft. in a north westerly direction and north and south headings for a width of about 500 ft. This work has been skilfully laid out on the board and pillar system - main headings 22 yds. x 22 yds. back headings 16 yds. x 14 yds. - which will admit of the coal being mined under the best economic conditions. The present headings have developed 33,000 tons of coal - from this 5,000 tons approximately have been mined, leaving 33,000 tons in sight.

In the old workings from No. 1 seam some 6 ac. have been taken out and from the No. 2 seam about 8 ac.

The floor of this seam has a very slight rise going in a westerly direction, but sufficient to admit of the skips gravitating right from the faces to the bottom of the Dip Tunnel.

The scheme for ventilating the mine has been carefully thought out and arranged to admit of direct and return currents being regulated to the best advantage. Later on the installing of a "Sirocco" Fan will still further assist ventilation.

The floor and roof are of hard sandstone and ideal conditions exist for the use of mechanical coal cutters, and it would be difficult to find a coal pit which lends itself so readily to economical mining conditions.

The Main Dip Tunnel is 11'6" x 5'9" in the clear and 830 ft. deep on a slope of 1 in 5, passing through No. 1 seam at 140 ft. Some 4 chains to S.W. from Main Tunnel is the old original bricked circular shaft, which is now used to take the water of the mine and act as a means of ventilation.

The mine water is not heavy making at the rate of about 2,500 gals. an hour - this is easily handled leaving the main workings on No. 2 seam practically dry.

Some few weeks ago, I furnished a report on the mine workings, and there is no necessity to repeat my remarks here, only to say that the conditions are as they were at that time so far as the opening up of the coal seams is concerned. The old Cameron pump has been taken out of the Circular Shaft and the water is gradually rising. However, it is much cheaper to let the water rise and take it out again when operations are resumed, than keep engine drivers and some miners on continuously to keep the water

003

down and mine coal for fuel purposes. The water in the mine is, however, comparatively light only making some 2,500 gals. per hour.

For comparative purposes the following analyses show the values of the N.S.W. coals from three main centres with that of Seymour:-

	<u>Moisture</u>	<u>Ash</u>	<u>Vol.</u> <u>Matter</u>	<u>Fix.</u> <u>Carbon</u>	<u>Sulphur</u>	<u>B.T.U.</u>
Greta )						
Division)	1.96	6.73	40.57	50.74		13055
Newcastle	2.58	11.59	30.03	52.80		11624
Bulli	0.63	11.00	23.29	65.05		13093
X Seymour	1.99	11.58	33.00	52.65	0.82	12620

COAL STORAGE BINS -

Mr. Morton's report deals with this matter, and I regret to say his remarks are justified.

It appears the mine manager designed and erected the first Bin - estimated to hold 500 tons - and even went so far as to go into the bush with a gang of miners and cut the timber for the job instead of letting the work to skilled timber getters at a very much less cost.

It is regrettable that the partly erected new Bin - also to hold 500 tons - is also faulty in construction from the very foundations to the skeleton superstructure.

Barsby was supposed to overlook Rapp's work, but a sorry mess has been made of what should have been an easy job. The old Bin is altogether too weak and will need strengthening, whilst Rapp's work is much stronger but the work is thrown together.

COMMISSIONER OF RAILWAYS: L. D. St. Hill - Hobart -

Explained how his Department was situated in regard to Cornwall, Mt. Nicholas, and Jubilee Co's. to take coal seeing that it meant considerable revenue for freight on the Government Railway to St. Mary's. But said that the Railways would certainly use the Seymour Coal, if regular supplies could be maintained, in view of the fact that the coal was superior in quality to the Tasmanian coals.

MR. BENNETT, CHIEF MECHANICAL ENGINEER, LAUNCESTON:-

004

Had long conversation with him on the results of practical trials by his Department with Seymour coal, and with small parcels sent for analysis. It was pointed out that all the samples of coal sent were from that part of the mine near the bottom of the Main Dip Shaft and other places adjacent, and consequently in the influence of the band of mudstone rock, etc., a portion of which would decrease the value of the coal and increase the ash contents. The rock band has now gradually risen on its course to the north west until it forms the roof of the seam, and consequently the coal can be mined practically clean.

He said it was evident the coal had been badly handled, not picked over, and consequently there was an excess of small coal. One sample only showed 10,840 B.T.U., which is low in calorific value, but all subsequent samples are over 12,000 and up to 12,600 B.T.U.

He said the Seymour coal would certainly be used by his Department, but more care must be exercised in keeping it clean and no rough handling. If clean coal is sent, it could be used exclusively on some of the Tasmanian lines.

A large amount of information was given to me by the Railway Commissioner and his assistant, Mr. Bennett, in connection with the Rails and Rolling Stock generally, which they have on hand from the discarded 2 ft. gauge railways on the West coast of Tasmania. This information is of value to the Company in view of the possibility of the Cole Bay Scheme being entertained as a port for the shipping of coal. A special reference will be made to this matter elsewhere in this report.

TRANSPORT AND MARKETING THE COAL -

During my visit to Hobart, I interviewed leading firms and others and the summarised results are as follows:-

HENRY JONES & CO.- represented by Mr. E. Palfreyman and the General Manager, Mr. Peacock.

Mr. Peacock pointed out that the manufacturing industry was in a bad way in Tasmania and the Hobart market for coal was a limited one, and that 350 tons per week was the limit.

To this Mr. Palfreyman dissented, and said that if an energetic canvass were undertaken he thought the market would take 700 tons a week.

PIER AND SEA TRANSPORT:

The recent damage to about 180 ft. of the pier is fully reported upon by Mr. Morton, and his strong comments on the careless construction of the last 200 ft. will be noticed.

Personally, I do not think the Pier, even if reconstructed will ever be efficient as a means of shipping coal in other than small quantities. After exhaustive enquiries from competent authorities and the captains of two vessels that took several shipments away from Seymour, it is evident that there is too much uncertainty, from weather and sea conditions, of getting into and lying at the pier. Captain Whitton, of the "Gundiah", a vessel of just under 200 tons, said that it was seldom he could take his ship straight in to the pier, and it was usual to have to stand off a day or two, and on one occasion he was waiting for 7 days - the trip from Hobart and return taking  $8\frac{1}{2}$  days.

Under the best of conditions, only small vessels can be used on this trade and a local market might be maintained, but this would not be sufficient to adequately repay the Company. It is essential, I consider, to look for a deep sea port and the East Coast Development Company's railway line with the port at Cole's Bay at once suggests itself. This Company under an Act of Parliament was granted certain right for land and to transport coal from the Dalmayne Coal Mine to Cole Bay. The construction works, cuttings, and culverts have been completed for 16 miles from Cole's Bay, leaving another 16 miles yet to be completed to reach a point near the Seymour Coal Mine. In the meantime the Government spent some £12,000 to £14,000 in building a substantial jetty and approaches thereto.

Though it may appear a long distance (about 33 miles) to transport coal, still I think this scheme will ultimately be adopted, that is if the Seymour Co. is to develop and open up an extensive trade with Victoria, South Australia as well as Hobart, Launceston, and the North West ports of Tasmania.

Cole's Bay is a well protected harbour and fairly large ships can get in and out at practically all times of the year. The jetty is already built (see Public Works tracing plan) with deep water 26 to 28 and up to 40 ft. in depth with deep water channels to approach it.

The East Coast Development Co. had in view the construction of a 3'6" gauge Railway, but a 2 ft. gauge tramway would meet all requirements and cost much less. As pointed out elsewhere, the Tasmania Government has on hand the complete Rolling Stock, Rails, and general gear, from its discarded West Coast 2 ft. gauge railway, and which, I am informed, can be purchased at lower prices and on favourable terms.

It should also be pointed out that though the facilities for loading ships were crude at the time the "Gundiah" - a vessel of about 200 tons - loaded 150 tons of coal in 50 minutes. No extra gear was used but the loaded trucks were ready and tipped into movable chutes to the ship's hold. In fine weather this good work could be repeated, and probably improved upon by adding a little inexpensive gear.

W A G E S.

The present ruling rates of wages for the Coal Mining Districts in Tasmania are as undermentioned. There is a movement on foot in Tasmania to endeavour to bring about a reduction:

Face Miners		19/11	per shift,	
Wheelers		17/6	" "	
Surface Labour		17/6	" "	
Engine Drivers		20/3	" "	
Blacksmiths		19/11	" "	
Boys	from	6/-	" "	to 18 years of age.
Bin Hands		14/-	" "	do.

C O S T S.

The Mine Manager informs me that by actual experience, on an output of only 30 tons a day, forked coal was mined and landed at the end of the Pier for 12/9 per ton. At that time there were no storage bins and the slack was left in the mine.

Each man on an average can break shovel coal at the rate of 5 tons a day.

Machine cut coal on an output of 250 tons a day will cost 10/- a ton.

The same output (250 tons) by hand cutting will cost 12/4 a ton.

Machine cut coal on an output of 500 tons a day will cost 9/3 a ton.

The same output (500 tons) by hand cutting will cost 10/4 a ton.

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MARKETS FOR COAL: Allowing that the required capital is raised, the mine and transport arrangements placed on a firm basis, to admit of a continuous output the property should be looked at in a bigger way than formerly, and whilst a much increased output should be absorbed in Tasmania, there are wider markets to be found in Victoria and South Australia. To firmly establish these markets a vigorous canvass and propaganda campaign should be undertaken.

Plans, Reports and Statements are attached.

(Signed)

W. H. CUNDY.

Mining Engineer.

Melbourne,  
Sept. 30th, 1931.

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**SEYMOUR COAL MINE****Long and Chequered History****Comments 64 Years Ago**

"Tahune" writes:—

"The recent announcement that the Seymour coal mine is to cease operations ends another page in its long and chequered history. It has been before the public for many, many years—a good trier, but apparently never a stayer, though, after all, its true destiny is always to 'end in smoke.' This by the way. Many of the readers of 'The Mercury' may not know that kerosene was retorted at Seymour over 60 years ago, and the following excerpt from the 'Tasmanian Times' of June 18, 1868, may be of informative interest:—

"The mines of the Seymour Coal Company now wound up, are being worked by the private individuals who purchased the plant, etc., and the city is again supplied with this favourite coal. Efforts are being made to extend the consumption of the coal to Victoria; and Mr. Swifte, a gentleman employed on the Australian Coal and Kerosene Company's works on the adjoining land, has recently visited Victoria with the express object of inducing capitalists there to go largely into coal working operations at Port Seymour. We are happy to be able to state that his efforts have been successful. On his representations of the real value of the coal, substantiated by sufficient trial tests, a firm in Melbourne largely interested in the New Zealand trade (Messrs. Spence and Co.), have determined to lay on three or four vessels to call regularly at Port Seymour for coal, to be shipped to other markets. Port Seymour is much nearer Melbourne than Newcastle, and Melbourne would take the Tasmanian article readily, and in large quantities, once ensured of a regular supply of really good coal at a reasonable figure. These conditions Mr. Swifte maintains can be fulfilled without any difficulty, and he estimates that Seymour coal could be easily landed in Melbourne or Hobart Town at eighteen shillings a ton. The kerosene works of the before-mentioned company, for the production of kerosene produced from the Seymour coal and shale by Lieutenant-Colonel Chesney's patent have proved a complete success thus far. Some six hundred gallons of crude oil, retorted at Seymour, have been forwarded to Melbourne to be refined; and we are informed that the Coal and Kerosene Company consider that they have produced a good useful oil, capable of entering into successful competition in the Australias with the imported article. We have not had an opportunity of seeing a sample of this Tasmanian kerosene in use. Mr. Swifte states that it is quite equal, if not superior, to that obtained from the Hartley Shale Works in New South Wales."

(1932.)

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