

# OPEN FILE

NOTES ON

COAL PROPERTY AT

NANOOSE, B.C.

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

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## NANOOSE COAL PROPERTY, NANOOSE, B.C.

### LOCATION:

The property consists of a coal area of approximately 1500 acres located at Nanoose Bay, Vancouver Island, B.C. It comprises Indian Reserve #1 of about 250 acres held under agreement with the Indians and the Department of Indian Affairs Ottawa and the balance a submarine area held under Provincial Government regulations. The property is coloured red in the Nanoose District on the map of Vancouver Island issued by the Department of Lands.

### ACCESSIBILITY:

The area is situated about 12 miles north-west of Nanaimo and is intersected by both the Island highway and the E & N Railway. The property fronts the protected waters of Nanoose Bay which is safe and navigable at all tides. Excellent transportation facilities are therefore available by road, rail and water.

### GEOLOGY:

The Nanaimo Coal field, the oldest and most productive on the Coast, has been in operation for many years and has produced over 40,000,000 tons of high grade steam and domestic coal, most of which came from the submarine area. The Wellington and Ladysmith coal areas carry three workable seams, known as the Douglas, Newcastle, and Wellington. The District has been reported on by Dr. Geo. M. Dawson and Professors Clapp and Richards of the Dominion Geological Survey. The Douglas is the upper seam and its varying thickness averages 6 feet; the Newcastle seam averages 3 feet and the Wellington seam 6 feet; a total of 15 feet or approximately 15,000 tons per acre. The coal measures at Nanoose are resting on the Departure Bay axis, pitching North-east and should carry all three seams of the Nanaimo series. The Geological Survey Map #196A shows the formation of the Nanaimo coal field, this proves coal bearing formation includes the Nanoose Indian Reserve and the other property mentioned above.

### PROPOSED DEVELOPMENT:

The proving and preliminary development of this property presents very little difficulty, the easy accessibility reducing the transportation expense of the equipment to a minimum.

It is proposed to drill two and possibly three diamond drill holes, the first to determine the depth and thickness of the seam and the further drilling to determine the pitch, etc. It is presumed from all available data, that the coal seam will be encountered at a depth of between 180 and 250 feet, this depth will depend somewhat on the overburden which has considerable variation in depth in the District. From prices obtained, this drilling can be done for approx. \$1,250.00 per hole.

When the seam has been proven, it is proposed to open up a mine to produce 200 tons per day. This will require the sinking of one shaft which will serve until the underground workings demand a second shaft for ventilating purposes, etc. The surface steam plant to include hoist, pumps, fan etc. does not present a heavy initial cash expenditure, but a good substantial wharf about 250 feet long should be constructed to efficiently take care of scow shipments.

The estimated cash requirement to prove and open up this property to produce 200 tons per day, is as follows:-

|  |          |                  |
|--|----------|------------------|
| 3 Diamond Drill holes.....   | 3,750.00 |                  |
| Engineering & Contingencies.....   | 250.00   | 4,000.00         |
| Shaft 250 feet deep.....   | 7,500.00 |                  |
| Surface Steam Plant.....   | 5,000.00 |                  |
| Wharf 250 feet long.....   | 5,000.00 |                  |
| Tools and equipment.....   | 2,500.00 |                  |
| Preliminary Expense, Engineering,<br>Margin for Contingencies, and<br>Working Capital..... | 5,000.00 | 25,000.00        |
| Cash required to prospect and develop<br>property to produce 200 tons per day.....         |          | <u>29,000.00</u> |

With careful management, after the initial expenditure for opening up on a 200 ton basis as above, future development and additional plant and equipment can be taken care of by the operation, and in estimating the production cost, this reserve has been duly considered and an operation maintaining an output of 200 tons per day should be possible without further capital expenditure. Any extensive increase in the daily output would put the proposition in a different class of mining and should not be considered under the capital expenditure outlined in this write-up.

MINING AND PRODUCTIVE COST:

The estimated cost of producing coal is based on a similar operation in the Nicola Valley Field and also upon known charges directly concerning the proposed operation:-

|   |               |
|---|---------------|
| Contract digging.....                       | .70           |
| Timbering.....                              | .45           |
| Underground Haulage.....                    | .50           |
| Hoisting, ventilating & pumping..           | .50           |
| Cleaning and shipping.....                  | .30           |
| Royalties:- Provincial ....                 | 10            |
| Indians.....                                | 15     .25    |
| Cost F.O.B. Scow or Car.....                | 2.70          |
| Engineering and Overhead.....               | .30           |
| Depletion Reserve.....                      | .50           |
| Total Cost F.O.B. Scow or Car.....          | <u>3.50</u>   |
| Estimated Towage etc. Vancouver or Victoria | .75           |
| Estimated cost delivered Vanc'r or V'ria    |               |
|   | <u>\$4.25</u> |

The statutory Royalty payable to the Indians is 12¢ per ton but 15¢ has been shown in the estimate, the extra 3¢ being an estimate to reimburse the Indians for any damage to the surface of the Reserve.

The Depletion Reserve of 50¢ per ton is a reserve set up for current and future development, also the purchase of equipment to maintain the daily tonnage at the estimated amount of 200 tons.

RESUME:

The Property described in this write-up is practically the only unencumbered piece of coal land on the south end of Vancouver Island and fronting the shore, all other property carrying the reservation for minerals to the E & N Railway and now owned by the Canadian Collieries Ltd. With its exceptional transportation facilities, the proposition offers an attractive opportunity to develop a profitable mine with a small outlay.

Compared with older established mines on Vancouver Island some of which have been in operation for over 80 years, with deep and difficult workings, long haulage, heavy pumping and ventilating costs, the operation of a mine on the Nanoose property has many distinct advantages.