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NOTES ON EXPLORATION POTENTIAL  
SUQUASH COAL PROSPECT  
VANCOUVER ISLAND, B. C.

Perusal of unpublished reports on Vancouver Island coal deposits and an old map of the Suquash coal area on file with the B. C. Department of Mines in Victoria has shed some additional light on the distribution of coal within Cretaceous rocks on Vancouver Island which has particular relevance with respect to exploration in the Suquash area.

The reports indicate that coal seams mined in the Nanaimo and Comox fields to the south of Suquash (Cretaceous age) were generally economic for one to two miles down-dip from the outcrop but at that point the coal generally became dirty with a high proportion of waste rock. Mining down dip generally ceased at an economic limit based on the proportion of waste rock. The coal was subject to some variation laterally along strike, locally becoming shaly, but mining was usually resumed on the other side of the shaly zone and the coal was, in general, remarkably consistent along strike. It seems evident that the best coal was deposited in swampy, lagoonal areas along the west edge of the Cretaceous basin and that sediment was accumulating too rapidly in the center of the subsiding basin to allow deposition of thick layers of organic material.

In the Comox field, the coal was located near the base of the Cretaceous sequence and "highs" on the basement surface in places cut out the lowest, and locally all, of the coal seams.

The map of the workings driven by Pacific Coal Mines Ltd. in 1908-1914 indicated that the shaft was sunk near the beach and that a pair of inclines were driven to the east partially down dip (strike approximately N60W, dip Northeast) along the coal seam encountered at 173 feet at the shaft for approximately 1,350 feet. Approximately 1,140

feet of the down-dip driving was under the ocean. In addition, inclines were driven largely updip along the seam to the south for 1,300 feet and longwall mining was practised along the west wall of the drifts for the last 800 feet.

It is reported that the slopes driven partially down-dip under the ocean encountered "dirty" coal with a high proportion of waste rock. The quality of coal increased, however, and the proportion of waste rock decreased to a large extent in the drifts driven partially up-dip to the south of the shaft and reportedly the best coal was found near the south end of the workings.

The inference at Suquash is, of course, that the shaft may have been driven at a point down-dip where the main seam is becoming shaly and that the down-dip workings encountered poorer and poorer coal as would be expected from experience at Nanaimo and Comox. The improvement in quality and thickness of coal to the south and southwest may indicate that the quality is improving on the updip side toward the outcrop of the seam. If this is true, two things are obvious; 1) the main area of interest is definitely on the mainland side of the beach extending to the southwest edge of the Cretaceous rocks and, 2) the Cretaceous rocks in the same portion of the Cretaceous section on Malcolm Island would have little promise for commercial coal. It is possible, however, that stratigraphically higher rocks on Malcolm Island may have coal potential if coal-forming conditions migrated outward into the basin through time. All known coal deposits in the Vancouver Island area appear to be located near the base of the Cretaceous section, however, and possibilities on Malcolm Island appear to be definitely speculative.

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M. J. Fitzgerald

SUQUASH COAL PROSPECT

EXPLORATION PROGRAMME and BUDGET ESTIMATE

The exploration programme recommended for the Suquash coal prospect would include one month's field mapping by a geologist and assistant and the drilling of 12 drill holes under close supervision by the geologist. The planned drilling depth would be 400 feet and it is estimated that the holes would be drilled at the rate of one per week. A diamond drill would be used and HQ size core would be taken to give the largest possible sample of each coal horizon.

Provision is made for extensive testing of the recovered coal including analyses for volatile matter, fixed carbon, moisture, ash and sulfur. Washing tests to determine the washability of the coal and determination of the free swelling index (in order to evaluate amenability to coking) would also be included.

Accommodation for geologist, assistant, and drill crew would be in Port Hardy as the prospect is easily accessible.


Cost of the proposed programme is estimated at \$104,087. A detailed breakdown of the budget is as follows:

Geologic Mapping - 1 month		
Geologist @ \$3000/month		\$3,000
Assistant @ \$750/month		750
Drilling		
12 drill holes to 400 ft.		
\$4800 @ \$13 overall		\$62,400
Geologic supervision, core logging, sample shipment, geologic correlation		
2-1/2 mos @ \$3000/month		7,500

SUQUASH COAL PROSPECT

Exploration Programme and Budget Estimate  
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Freight	\$2,000
Engineering supplies, photo's, maps, equipment	1,500
Bulldozer work (trenching, drill sites, roads)	4,000
Coal Tests	
4 Tests/drill hole @ \$100/test	
\$400 per hole @ 12 drill holes	4,800
Air Fares	1,000
Truck Rental	
3-1/2 months @ \$400/month	1,400
Accomodation & Meals for Geologist and Assistant	
4-1/2 man months @ \$16/day	
30 days/month	2,160
SUBTOTAL	\$90,510
10% allowance for contingencies	9,051
5% for administration	4,526
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	\$104,087

  
W. D. Thompson

SUQUASH PROSPECTING SYNDICATE

Coal Licence Applications, Suquash Area, Rupert Land  
District

Application 19/2/71	13,838 acres
Application 26/2/71	2,373 acres
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Total applied for	16,211 acres
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