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BURNABY ISLAND IRON PROPERTY, Q. C. I.

103B/6

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GENERAL PLAN:

Stage 1

At the conclusion of surface exploration diamond drilling, if the economics of this feasibility report appear attractive, it is planned to enter into Stage 2.

Stage 2.

This involves sinking a three compartment shaft to a depth of 350', crosscutting through the ore zone a distance of 920 ft. at the 300' level, and drifting north and south along the hangingwall side of the ore zone approximately 500' and 300' for a total of 820'.

From this drift a total of 25,000' of underground diamond drilling will be completed to outline the extent of the ore zone indicated by surface drilling, and to explore the second outermost magnetic anomaly.

The three compartment shaft will be of minimum dimensions, but of such a size that it could be used subsequently as a service shaft for the handling of men and materials for a 2,000 short ton per day mine operating to a depth of 1,000'.

Stage 3

Should Stage 2 produce results attractive enough to warrant production, Stage 3 will be undertaken. A second shaft, 100' to 300' from No. 1 would be opened by raising from the 300' level, and sinking to the 500' level. A concentrate, capable of treating 2,000 short tons of ore containing a recoverable amount of 47% soluble Fe., and producing about 1,500 short tons (or approximately 1,350 long tons per day) per day of concentrate assaying 62% Fe. will be constructed.

A diesel electric power plant with a total installed rating of 2,000 to 2500 K.W. will be constructed, together with other plant services, such as a machine shop and a warehouse.

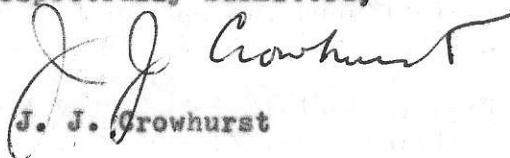
A camp capable of accommodation for 35 married personnel and 165 single men will be built. Auxiliary services will include a small hospital, a store, a small recreation hall and an administrative building.

A dock will be constructed capable of accommodating 5,000 ton coastal freighters such as those operated by Northern Navigation. Concentrates will be handled by barge to a stockpile established at Jedway, from whence they will be transferred to ocean vessels via the Jedway loading system.

Long hole shrinkage stoping, with underlying slusher drifts scraping directly into ore trains will constitute the mining method employed. Pillars occupying 20% of the total ore zone will be left to support the overlying rock. Fill will be introduced where necessary.

A water line, $4\frac{1}{2}$ miles in length and approximately 10" in diameter, capable of handling 1,000 U.S. G.P.M. will be constructed to draw from a stream lying to the northwest, which flows out from a small lake. This project would be delayed until alternative fresh water sources encountered by underground work can be evaluated.

Respectfully submitted,


J. J. Crowhurst

JJC:c

BURNABY ISLAND

	MONTH											TOTAL
	1	2	3	4	5	6	7	8	9	10	11	
A 1 Shaft Sinking (350')	1,300.	1,300.	15,850.	30,250.	28,650.	18,650.	650.	650.	650.	650.	650.	99,250.
2 Drifting & Crosscutting (820') (920')	-	-	-	-	-	33,000.	33,000.	33,000.	-	-	-	99,000.
3 Diamond Drilling (25,000')								3,500.	9,000.	25,000.	25,000.	62,500.
4 Powerhouse & Mechanical	600.	600.	2,950.	5,200.	5,200.	5,200.	6,100.	6,100.	6,400.	6,100.	6,100.	50,550.
5 Metallurgy & Assaying	-	-	-	-	-	-	-	1,000.	2,000.	3,000.	2,000.	8,000.
6 General Engineering	1,000.	1,000.	1,000.	1,000.	1,000.	1,000.	2,000.	2,000.	3,000.	3,000.	3,000.	19,000.
<u>ADMINISTRATION - MINE</u>												
B-1 Supervision	2,000.	2,000.	2,000.	2,000.	2,000.	2,000.	2,000.	2,000.	2,000.	2,000.	2,000.	22,000.
2 Mine Office	1,000.	1,000.	1,000.	1,000.	1,000.	1,000.	1,000.	1,000.	1,000.	1,000.	1,000.	11,000.
3 Cookhouse Loss @ \$2.50	2,000.	2,000.	2,000.	2,500.	2,500.	2,500.	2,500.	3,000.	3,500.	2,500.	2,500.	27,500.
4 Camp Operation	10,950.	10,950.	4,450.	5,750.	5,750.	5,750.	5,750.	5,750.	7,050.	5,750.	5,750.	73,650.
5 Insurance	2,000.	2,000.	2,000.	-	-	-	-	-	-	-	-	6,000.
6 Travel and transportation	3,000.	1,000.	1,000.	1,000.	1,000.	2,000.	1,000.	2,000.	2,500.	1,000.	3,500.	19,000.
7 General expense	1,000.	1,000.	1,000.	1,000.	1,000.	1,000.	1,000.	1,000.	1,000.	1,000.	1,000.	11,000.
<u>ADMINISTRATION - VANCOUVER</u>												
C- 1 Service fee	500.	500.	500.	500.	500.	500.	500.	500.	500.	500.	500.	5,500.
2 Expediting	500.	500.	500.	500.	500.	200.	200.	200.	200.	200.	200.	3,700.
3 Tel., Tel., and Postage)												
4 Travel and transporta.)	500.	500.	500.	500.	500.	500.	500.	500.	500.	500.	500.	5,500.
5 General expense)												
6 Legal and Incorporation	5,000											5,000.
TOTAL EXPENSES	31,350.	24,350.	34,750.	51,200.	49,600.	73,300.	56,200.	62,200.	39,300.	52,200.	53,700.	528,150
CAPITAL EXPENDITURES per schedule	40,000.	60,000.	17,000.	-	-	-	25,000.	-	-	-	-	142,000.
Contingencies 10%	71,350.	84,350.	51,750.	51,200.	49,600.	73,300.	81,200.	62,200.	39,300.	52,200.	53,700.	670,150.
	7,150.	8,650.	5,250.	5,300.	5,000.	7,300.	8,300.	6,200.	3,900.	5,200.	5,300.	67,550.
TOTAL	78,500.	93,000.	57,000.	56,500.	54,600.	80,600.	89,500.	68,400.	43,200.	57,400.	59,000.	737,700.
CUMULATIVE	78,500.	171,500.	228,500.	285,000.	339,600.	420,200.	509,700.	578,100.	621,300.	678,700.	737,700.	

BURNABY ISLAND IRONI. TIME SCHEDULE -Month

1, 2, & 3

- (a) Purchase second hand D-7 type tractor, transport to property and clear shaft and camp area. Transport and install 35 man camp.
- (b) Purchase shaft sinking equipment and materials, principally power and compressed air supply, oil storage and headframe, and negotiate shaft sinking contract.
- (c) Transport equipment in (b) to property.
- (d) Collar shaft and sink 10 - 12 feet.
- (e) Erect hoist and headframe and set up diesel plant.

4, 5, & 6

Sink three compartment shaft to 350', cutting minimum station at 150' level and pumping station at 320' level. Cut 300' station, install spill pocket, lip chute, pumps, etc.

7, 8, & 9

Drive crosscut 920' easterly through ore zone, and drive drift 300' north. Cut diamond drill stations at crosscut - drift intersection, and at 100 foot intervals. Ore extracted in the crosscut will be bulk sampled for metallurgical work.

Drive hanging wall drift 250' south, cutting diamond drill stations at 100 foot intervals.

Complete diamond drilling on 100 foot spacing - total of 4,500 feet - using one machine - 3 shifts for one month (3,000') and second machine - 3 shifts for two weeks (1,500')

10 & 11

Finish drifting to total of 500' south. Complete diamond drilling 20,500 feet or grand total of 25,000 feet - using three machines - three shifts.

II. CREW REQUIRED -Month

1, 2, & 3

1 Manager
 (1 Timekeeper
 (1 Foreman
 1 Engineer (draftsman & surveyor)
 1 Tractor driver
 4 Carpenters
 1 Mechanic
 1 Miner
 2 Cookhouse
6 General labour

TOTAL 19

4, 5, & 6

1 Manager
 1 Foreman
 1 Timekeeper
 1 Engineer
 1 Tractor driver
 2 Mechanic - powerhouse operators
 18 Shaft crew - 12 on bottom
 3 hoistmen
 1 mechanic - steel sharpener
 1 General labour
 1 Shaft captain

 2 General labour
3 Cookhouse and bunkhouse

TOTAL 30

7, 8, & 9

4 Manager, foreman, engineer, and timekeeper
 3 Tractor, mechanic and powerhouse
 12 Drift crew - 6 in face
 3 hoistmen
 1 mechanic - steel sharpener
 1 General labourer
 1 Shift boss

2 General labour
3 Cookhouse & bunkhouse

TOTAL 24

Part of 8
and all 9

Plus 12 diamond drillers:

TOTAL 36

II. CREW REQUIRED (Continued)

Month

10 & 11

- 4 Manager, foreman, engineer - geologist,
timekeeper
- 3 Tractor, mechanic, and powerhouse
- 15 Diamond drill crews:
 - Drillers 9
 - Helpers 5
 - Toreman 1
- 6 General labour
- 4 Cookhouse and bunkhouse

TOTAL 32

III. CAPITAL EXPENDITURES.

<u>Months 1 - 6</u>	<u>Landed Cost</u>	<u>Wt. Tons</u>
(1) × 1 - 10 KW Light plant	\$ 2,000.	0.25
(2) × 1 - D-7 type Tractor, secondhand with angle blade & hoist	10,000.	20.00
(3) × 2 - Chain Saws -new -with accessories	1,000.	-
(4) × 1 - flat deck 5 ton truck-secondhand	3,000.	3.00
(5) × Bunkhouse & cookhouse eqpt. for 40 men, including camp stove	2,000.	2.00
(6) × 1 - 500 ton capacity wooden scow - secondhand	8,000.	-
(7) ✓ 1 - 125-150 KW Diesel Elec. Set on skids, secondhand "bonded" buy - with switchboard & distribution	10,000	7.00
(8) ✓ 1 - 40" diam. (approx:) single or double drum -direct driven diesel powered sinking hoist -secondhand	18,000.	10.00
(9) 2 - 600 cfm, secondhand, portable diesel driven Air compressors	25,000.	(20.00?)
(10) ✓ 1 - Air receiver -3000 cu.ft. capacity or equivalent -used - with fittings	1,000.	2.00
(11) × 1 - BB Hoist -5 ton with wire rope, etc.	1,000.	0.25
(12) ✓ 2 - 48" to 60" diam. Sheaves	1,000.	0.25
(13) ✓ 3 - sinking (submersible) Pumps either air or electric - new	2,000.	-
(14) ✓ 2 - Station Water pumps -200 gpm @ 400' head -with accessories & electrics	4,000.	0.50
(15) 3 - 12,000 gal. Oil storage Tanks or equivalent	6,000.	3.00
(16) ✓ 3 - Ventilation Fans with electrics	5,000.	0.50
(17) ✓ Shaft signal system	1,000.	-
(18) 1 - 2 ton Skip to hoist drift rock	2,000.	1.75
(19) 1 - Stoper -secondhand -with steel	1,000.	-
(20) ✓ 1 - Great Pump -6"x2½"x6" with accessories -secondhand	2,000.	0.50
(21) 1 - Water Pump system for camp	1,000.	0.25
(22) 1 - 50' Head Frame - 15,000 FBM lumber with framing & bolts	5,000.	25.00
Totals - Carried forward	111,000.	96.25

CAPITAL EXPENDITURES (cont'd)

	<u>Cost</u>	<u>Wt. tons</u>
Carried forward -	111,000.	96.25
(23) Dump and safety doors, pistons - small tugger buckets - minimum rental charge, incl. frt.	6,000.	6.75
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	117,000.	104.00

CAPITAL EXPENDITURES (cont'd)

<u>Months 7 & 8</u>	<u>Cost</u>	<u>Wt. Tons</u>
(1) 1 - 350 portable diesel-driven Air Compressor -secondhand	6,000.	6.00
(2) 3 - air legs - new -@ \$1300.ea. with bit grinder, etc.	5,000.	0.25
(3) 1 - Einco 21 Mucking machine - secondhand	5,000.	2.50
(4) 1 - Universal Air Locomotive - secondhand	1,500.	1.50
(5) 6 - 2 ton rocker side drop ore cars	2,500.	10.00
(6) 1 - Gardner DenverRock Drill #123 long hole machine - new - with accessories	4,000.	0.25
(7) Assay office equipment & sample preparation -secondhand	1,000.	0.25
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Totals	25,000.	20.75

IV. SUPPLIES - SHAFT SINKING

<u>Months 4, 5 & 6</u>		<u>Cost</u>	<u>Wt. tons</u>
(1)	2 lengths 3/4" diam.(?) Wire rope 600' ea.	2,000.	3.00
(2)	45,000 FBM Lumber for shaft & bearer sets (75 @ 600 FBM ea.) @ \$130/M - framed in Vancouver ✓	6,000.	70.00
(3)	60,000 FBM Lumber as follows:-		
	Lining, manway & skip compt.	6,000. $\times 162\% = 9720$	
	Lagging @ 1/3 all around	18,000. $29,160$	
	Ladders & platforms (40@200)	8,000. $12,960$	
	Blocking	5,000. $8,100$	
	Station sets	5,000. ✓	
	Misc: shaft & camp	<u>18,000.</u>	
	Total 60,000 @ \$100/M del. ✓	6,000.	90.00
(4)	4,000 FBM Lumber for guides @ \$200/M	1,000.	6.00
(5)	500' -4" light wall water pump line with fittings	700.	2.00
(6)	500' -6" light wall airline with fittings	900.	3.00
(7)	500' - 2" light wall water line with fittings plus 1000' of 1" hose & main water line	1,000.	1.50
(8)	500' - 24" ventilation pipe with fittings & couplings	2,000.	3.00
(9)	Hanging bolts & other shaft hardware including spill pocket, lip chute, etc. ✓	10,000.	5.00
(10)	Cement - 800 sacks - approx:	1,000.	40.00
(11)	Small Tools & miscellaneous	1,000.	0.50
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		31,600.	224.00

V. SUPPLIES - DRIFTING & CROSSCUTTINGMonths - 7 - 9 $\frac{1}{2}$

	<u>Cost/ft.</u>	<u>Wt. per ft. of Advance - lbs.</u>
(1) Air line - 6" light wall	1.40	12.00
(2) Water line - 2" " "	0.50	3.00
(3) Vent Pipe - 24", galv: -8'6" lengths	3.00	12.00
(4) Rail - 20# @ \$170/ton del'd	1.14	14.00
(5) Ties - 60 pcs. 4"x6" every 100' or 360 FBM @ \$100/M del. is \$36. or per ft.	0.36	100.00
(6) Track spikes & bolts & fish plates	0.30	1.00
(7) Rental of dump doors & safety doors or purchase	1.00	-
Totals	7.70	142.00

APPENDIX

(A)

VI. SHAFT SINKING.

<u>Month</u>	<u>Labour</u>	<u>Supplies</u>	<u>Other (rentals, etc.)</u>	<u>Contractor's charge</u>	<u>Total</u>
1 (2)	1,300				
2	1,300				
3	5,850	10,000			
4	650	11,600		18,000	
5	650	10,000		18,000	
6	650			18,000	
7	650				
8	650				
9	650				
10	650				
11	650				
12	-				
	<u>13,650</u>	<u>31,600</u>		<u>54,000</u>	<u>\$ 99,250</u>

APPENDIX

(B)

VII. POWERHOUSE & MECHANICAL

<u>Month</u>	<u>Labour</u>	<u>Supplies</u>	<u>Other</u>	<u>Total</u>
1	-	500	100	
2	-	500	100	
3	1,950	700	300	
4 (2)	1,300	3,500	400	
5	1,300	3,500	400	
6	1,300	3,500	400	
7	1,300	4,200	600	
8	1,300	4,200	600	
9	1,300	4,500	600	
10	1,300	4,200	600	
11	1,300	4,200	600	
12	-	-	-	
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	12,350	33,500	4,700	\$ 50,550

APPENDIX

(c)

VIII. CAMP OPERATION

<u>Month</u>	<u>Labour</u>	<u>Supplies</u>	<u>Rentals</u>	<u>Other</u>	<u>Total</u>
1	8,450	1,000	1,500		10,950
2	8,450	1,000	1,500		10,950
3	1,950	1,000	1,500		4,450
4 (5)	3,250	1,000	1,500		5,750
5	3,250	1,000	1,500		5,750
6	3,250	1,000	1,500		5,750
7	3,250	1,000	1,500		5,750
8	3,250	1,000	1,500		5,850
9 (7)	4,550	1,000	1,500		7,050
10	3,250	1,000	1,500		7,750
11	3,250	1,000	1,500		5,750
					<hr/>
					<u>73,650</u>