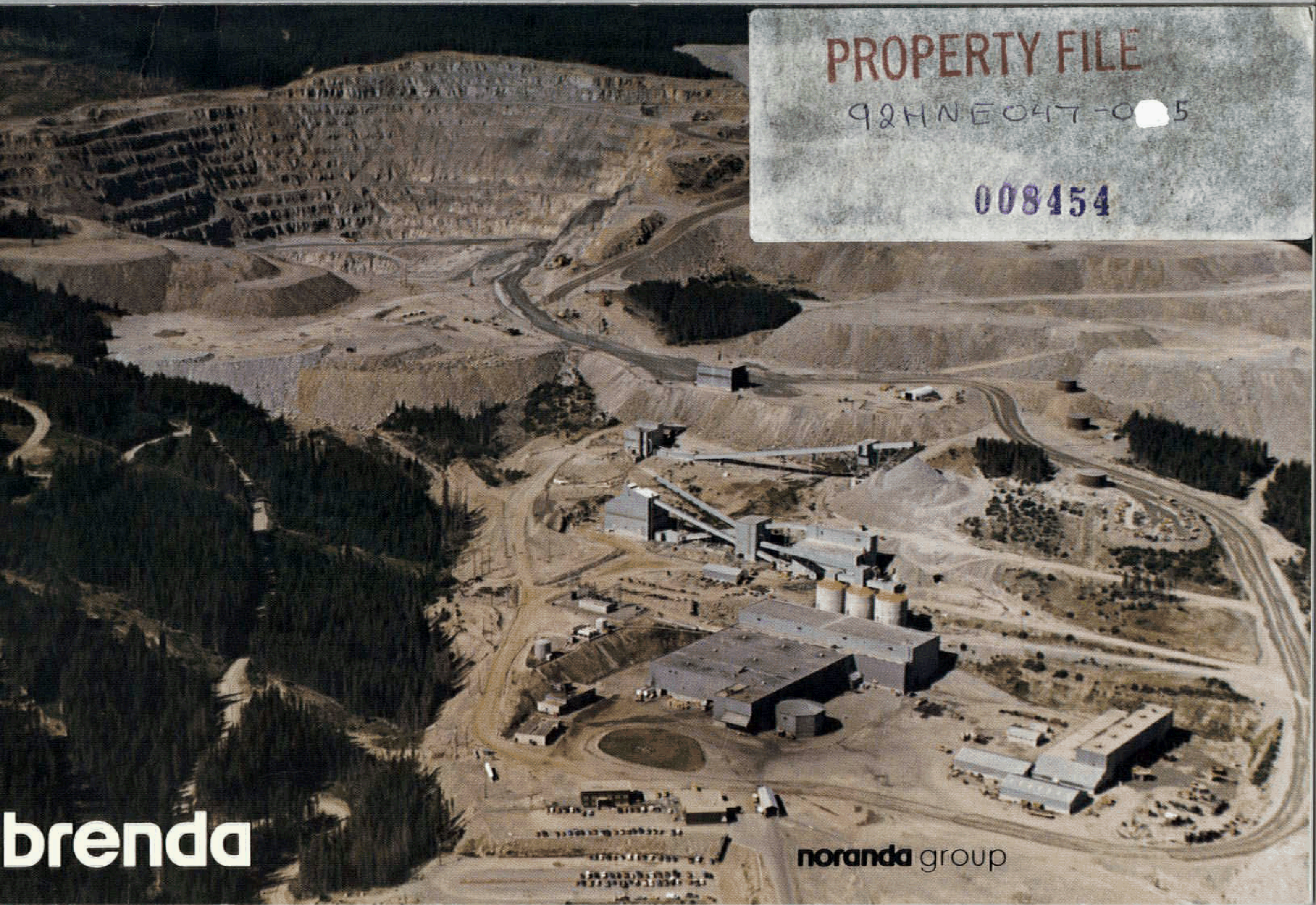


brenda

noranda group

E. Macgregor
31/5/78

brenda MINES LTD.

P.O. Box 420
Peachland, B.C., Canada
V0H 1X0

noranda group

Location, Access and Climate

The Brenda deposit is 140 miles east-northeast of Vancouver and 14 miles northwest of Peachland in the southern interior of British Columbia. The area around the deposit is typified by gentle rolling, tree-covered upland with scattered glacially rounded outcrops.
Fourteen miles of paved and 4 miles of gravel road connect the property to Highway 97N at Peachland.
Temperatures at the mine site reach a maximum of 30°C in the summer months and a minimum of −30°C in the winter. Mean daily temperatures approximate 15°C during July and August and −8°C during December and January. Freezing conditions are experienced from mid-September to mid-April. Annual precipitation is in the order of 18", of which 90%+ is in the form of snow.

History and Ownership

During the late 1930's and early 1940's, the Sandbergs of Kelowna worked on their "Copper King" property exploring a 12" chalcopyrite-molybdenite bearing quartz vein. They abandoned their claims in the early 1940's and the property lay dormant until it was re-discovered in 1954 by Bob Bechtel, a weekend prospector from Penticton. Between 1954 and 1964, several examinations and test drillings of the property were conducted but the low copper and molybdenum grades and lack of demand for molybdenum discouraged the investigators. During this period, Mr. Bechtel was encouraged and assisted by Messrs B. O. Brynelsen and M. M. Menzies, then manager and assistant manager, respectively, of the Noranda Exploration Co. Ltd. offices in Vancouver. Brenda Mines Ltd. was formed in 1964 under the guidance of Brynelsen and Menzies. With funds obtained from Nippon Mining Company and private individuals, a detailed exploration and feasibility program was initiated in 1965. Noranda Mines Limited began providing major financing for the feasibility project in June 1966 and, in the spring of 1967, formalized later by agreement dated 4 January 1968, management control was assumed by Noranda. Today, Noranda holds 50% of the issued common shares.
At start-up in early 1970, the Brenda orebody had proven reserves of 177,000,000 tons grading 0.183% Cu and 0.049% Mo at a cut-off of 0.300% equivalent Cu (eCu) where eCu = % Cu + (3.45 x % Mo). As of 1 January 1977 reserves were 117,687,300 tons at .171% Cu and .043% Mo.
A total capital outlay of some $63.5 million was required to bring the Brenda property to production.

brenda

Geology

The Brenda orebody is located within the Brenda Stock, a quartz diorite of Jurassic age which intrudes the stratified tuffs, tuff breccias, argillites, and limestones of the Nicola Group (Upper Triassic).

Mineralization of economic grade occurs in a strongly fractured area 2600 feet long and 1500 feet wide near the west margin of the Brenda Stock, approximately 800 to 1,000 feet from the contact with the Nicola Group. (Figure 1.) Ore grade mineralization extends to depths exceeding 900 feet. A belt of much lower grade non-economic mineralization up to 2,000 feet wide extends north-northeasterly almost to Long Lake.

The ore minerals, chalcopyrite and molybdenite, along with minor pyrite and occasional magnetite, occur as fillings within fractures. Disseminations are rare except in areas of intense hydrothermal alteration. The grade of the orebody is a function of fracture density and of mineralogy of the filling material. Filling material, in addition to the sulphides, may be either biotite, quartz + potash feldspar, or quartz.

Property Operations

Under a resident Mine Manager, the operating crew is divided into three departments — Mine Operating, Mill Operating and Plant. Administrative services are provided by the Accounting Personnel and Purchasing departments.

As of 1 January 1977, the employees were distributed as follows:

	Hourly Rate	Staff	Total
Mine Operating	86	19	109
Mill Operating and Maintenance	132	42	174

	Hourly Rate	Staff	Total
Plant Department	110	30	140
Administration		20	20
TOTALS	328	111	439

During 1976, a total of 11,075,602 short tons of ore grading 0.167% Cu and 0.045% Mo were treated in the Brenda concentrator. The concentrates produced contained 16,053 tons of copper and 4,009 tons of molybdenum. Operating costs were distributed as follows:

	% per Short Ton Milled
Mining	32
Milling	51

	% per Short Ton Milled
Plant	3
Administration	14
	100%

Figure 2 depicts the general arrangement of the Brenda Mine.

brenda

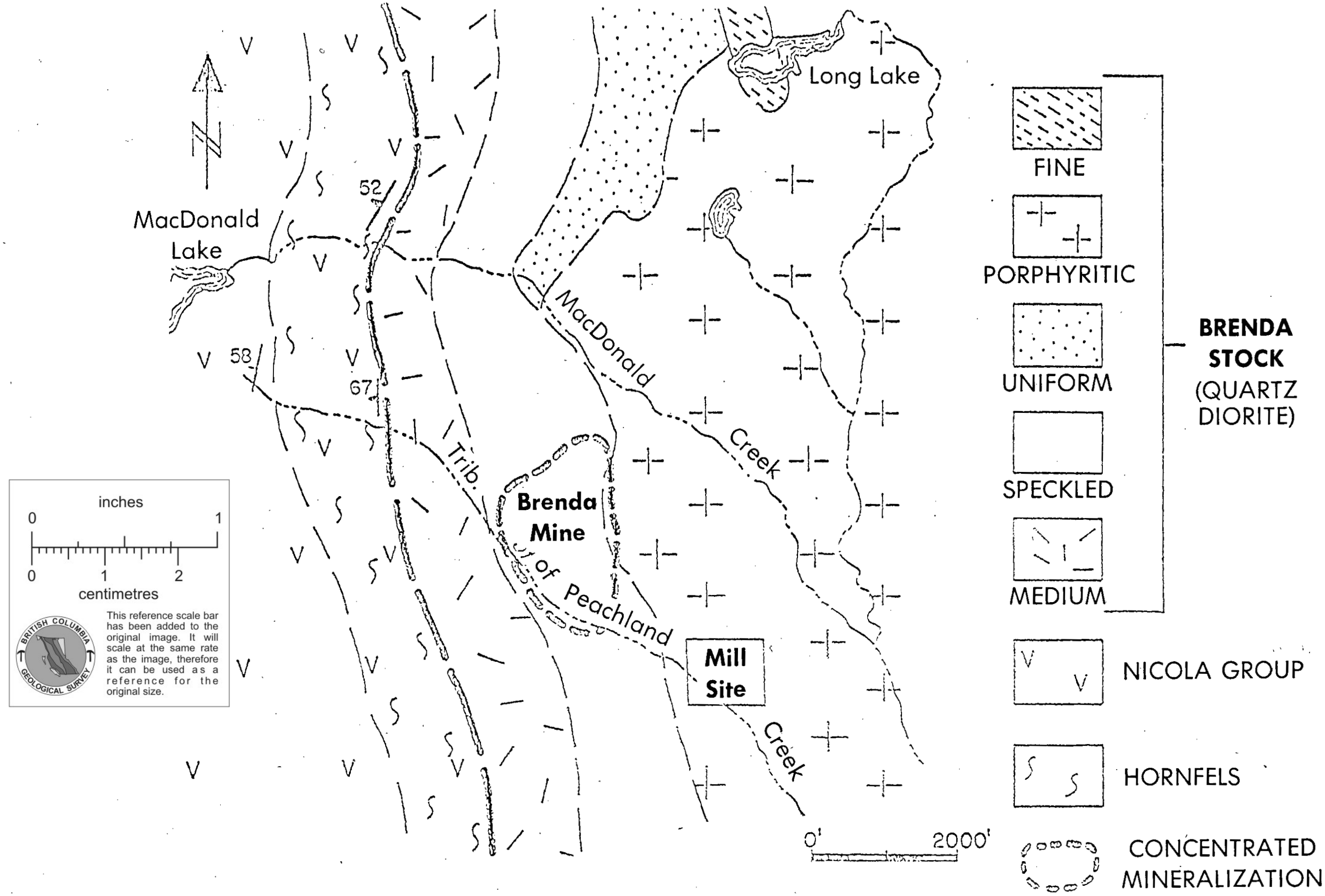


FIGURE 1

BRENDA MINE — GENERAL GEOLOGY

(Modified after Carr, 1967)

Mining Operation

The open pit presently encompasses an area of approximately 145 acres with another 198 acres cleared for waste and low grade stockpile dumps. Pit depth varies from 700 feet on the north wall to 250 feet on the south wall.

Daily production during 1976 averaged 30,668 tons of mill feed and 15,746 tons of waste/low grade. An average of 815 tons per manshift (hourly pit personnel) was achieved in 1976. The pit operates 7 days per week, 3 shifts per day.

Design Parameters

Bench height	50 feet	Overall pit slope (excl. roads)	45°
Berm width	50 feet	Road width	80 feet

Blast hole patterns: 12 ¼" diam. holes, 30' spacing, 24' burden, 8' sub-grade.

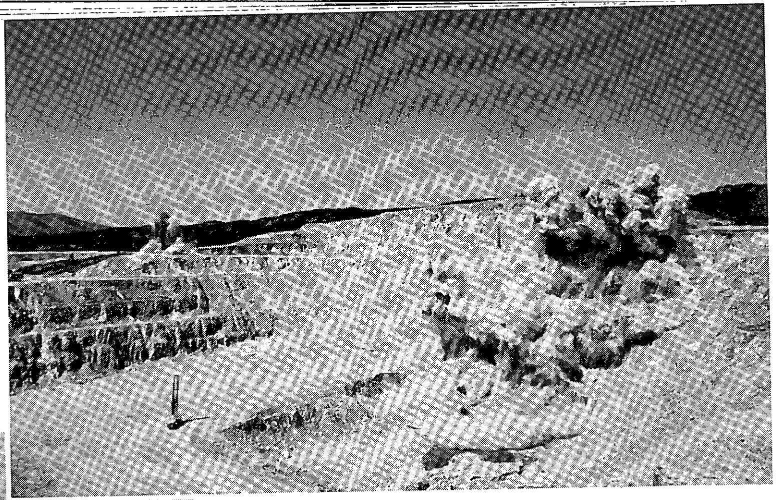
Table 1 contains details on current mining equipment.

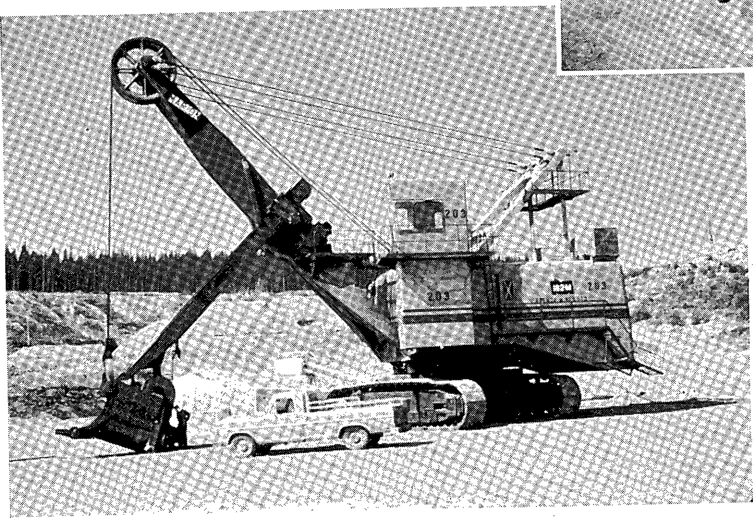
Tabulation of Mine Operating Statistics:

Production

1. Pre-production (Nov. 1967 through Nov. 1969)	
overburden	456,300 yards
waste rock	7,403,100 tons
stockpiled low grade	Nil
stockpiled ore	52,300 tons
2. Production Phase (Dec. 1969 through Dec. 1976)	
overburden	1,410,000 yards
waste rock	38,683,600 tons
stockpiled	18,696,400 tons
mill feed	66,105,500 tons
3. Production for 1976	
overburden	14,100 yards
waste rock	4,529,300 tons
stockpiled low grade	1,219,500 tons
mill feed	11,224,500 tons

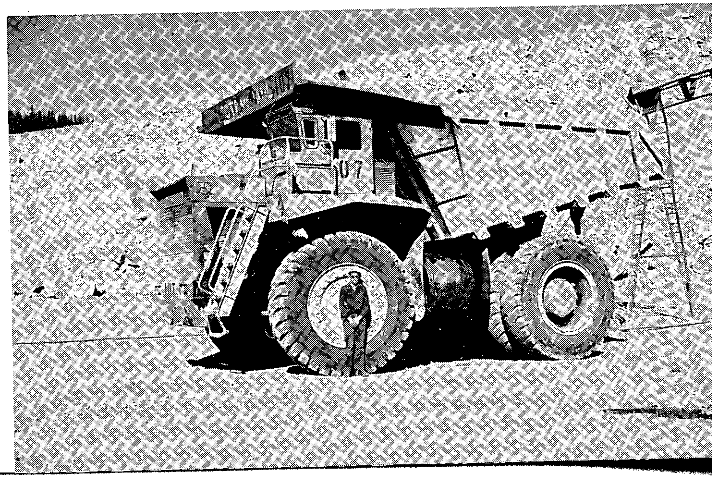
Blast

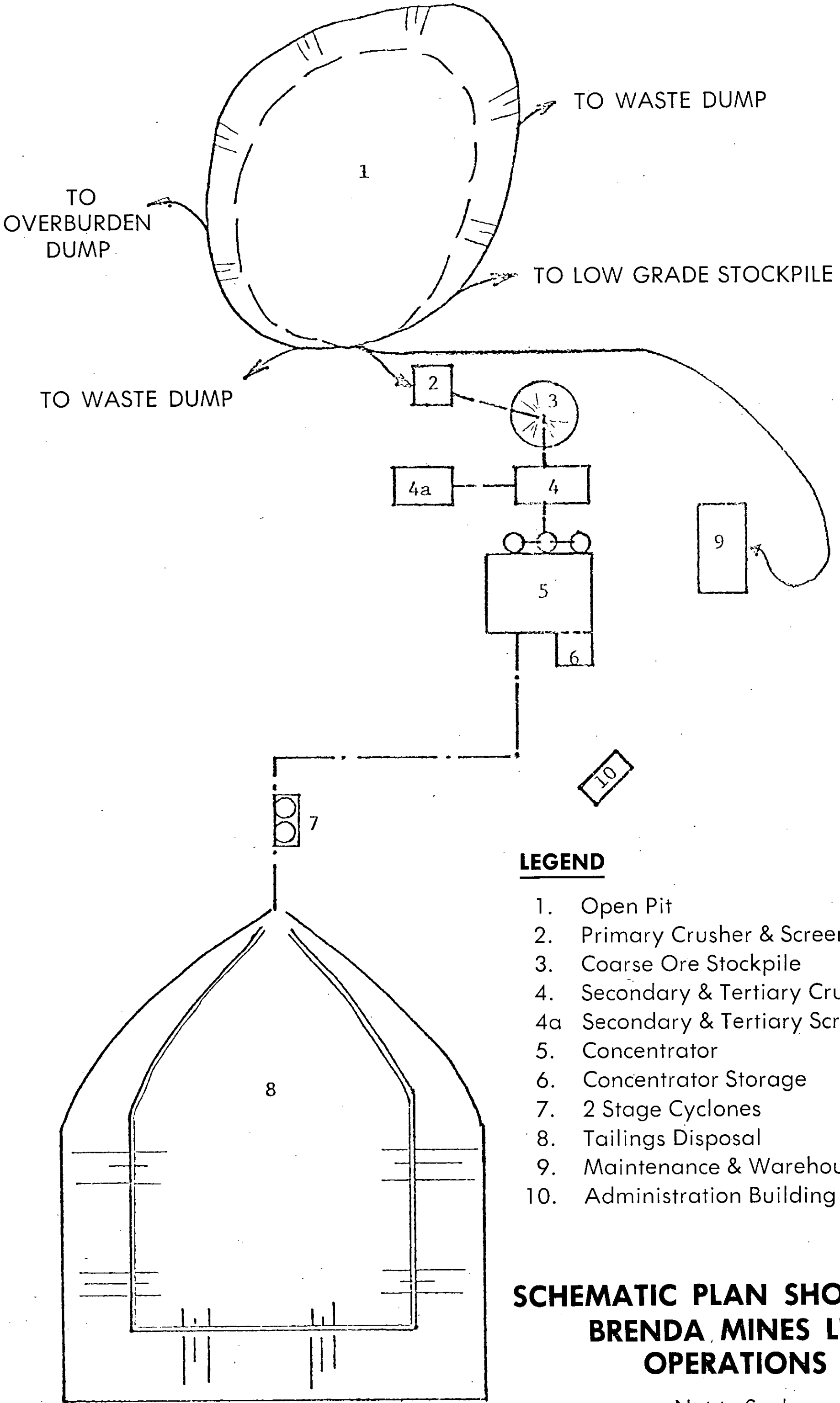




Marion Shovel

100 Ton Truck





LEGEND

1. Open Pit
2. Primary Crusher & Screening
3. Coarse Ore Stockpile
4. Secondary & Tertiary Crushing
4a Secondary & Tertiary Screening
5. Concentrator
6. Concentrator Storage
7. 2 Stage Cyclones
8. Tailings Disposal
9. Maintenance & Warehouse Bldg.
10. Administration Building

SCHEMATIC PLAN SHOWING BRENDA MINES LTD. OPERATIONS

Not to Scale

FIGURE 2

TABLE 1

MINE PRODUCTION EQUIPMENT

FUNCTIONS	TYPE	NO. OF UNITS	SCHEDULED PER SHIFT	SHIFTS PER DAY	OPERATORS PER UNIT	PERFORMANCE PER OP. HR.
Drilling, Primary	B.E. 60-R Electric	2	1	3	2	60.9 ft/hr
Drilling, Secondary	Gardner Denver ATD 3100 Airtrac	1	as required		1	11.7 ft/hr
Loading	Marion 191M 15 cu. yd.	1	as required	3	2	N/A
	Marion 182M 11 cu. yd. Electric	3	2	6	2	1310 tons/hr
Loading, Secondary	B.E. 150	1	as required		2	800 tons/hr
Haulage	Unit Rig M-100 63 cu. yd. struck box, diesel-electric	12	8	24	1	290 tons/hr
Shovel Cleanup	Cat 824B Rubber-tired dozers	2	2	6	1	
Dump Maintenance	Cat D-9 tracked, u-blades & ripper	3	2	6	1	
Road Maintenance	Cat 14-E	2	as required	3	1	
	Cat 631 tractor and 10,000 gal. tanker	1	as required	3	1	
	Cat 769 (35 ton) sand truck	1	as required	3	1	
Miscellaneous	Cat 988 F.E. Loader	1	as required	3	1	
	Cat 769 (35 ton)	1	as required	3	1	

Consumed Supplies for 1976

1. Blasting	
ANFO	3.6 million pounds
Slurries	3.5 million pounds
Powerfrac	Nil thousand pounds
Forcite	4.7 thousand pounds
2. Diesel Fuel	870,222 gallons
3. Tires 24.00 x 49.00	204
4. Electric Power (Total Plant)	195.8 million kwh

Mine Department Personnel

Four crews working a 7-1, 7-2, 7-4 shift schedule keep the pit operating 7 days a week, 24 hours per day.

	Hourly	Staff
Drilling	9	
Blasting	5	
Loading	16	
Hauling	40	
Dozers, graders, etc.	16	
Pit Supervision**		10
Surveyors		4
Engineers*		3
Superintendent*		1
Clerk Draughtsman*		1
	86	19

* day shift, 5 days per week

** 8 shift foremen, 1 Mine Training Supervisor, 1 General Mine Foreman.

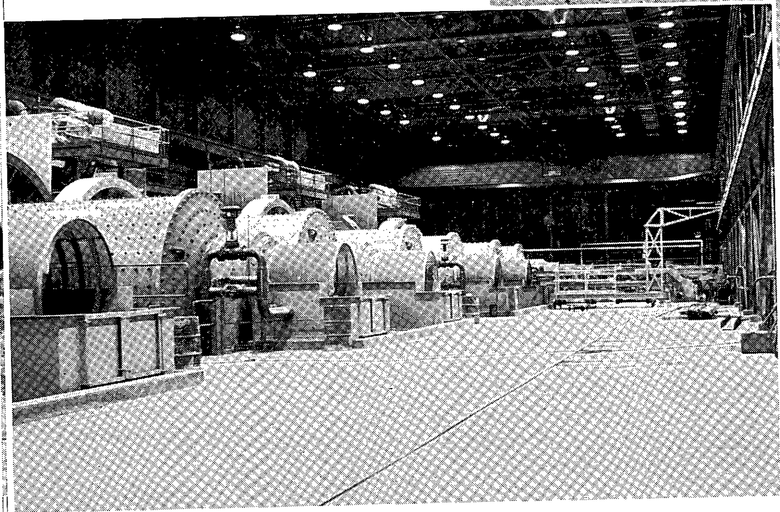
The Total Cost of Mining, including maintenance, for the 16,987,400 million tons of rock and overburden moved during 1976 is distributed as follows:

	% per ton mined		% per ton mined
Hauling	34	General (Power distrib., dewatering, roads, etc.)	28
Drilling	6	Engineering	2
Blasting	15		
Loading	15		100%

brenda

Primary Crusher (left)
Primary Screening (lower right)

Concentrator
Grinding Bay



Moly Flotation

Mineral Processing

The crushing and concentrating facilities are designed to treat a minimum of 24,000 tons per day from the low grade copper-moly orebody, and the current level of operations is approximately 30,000 tons per day. During 1976, the concentrator averaged 156.2 tons of copper concentrate assaying 28.1% copper and 19.7 tons of molybdenum concentrate assaying 55.6% molybdenum per day. The copper concentrate is sold in Quebec, and the molybdenum concentrate is marketed primarily in Europe, but lesser amounts are shipped to Japan and eastern Canada.

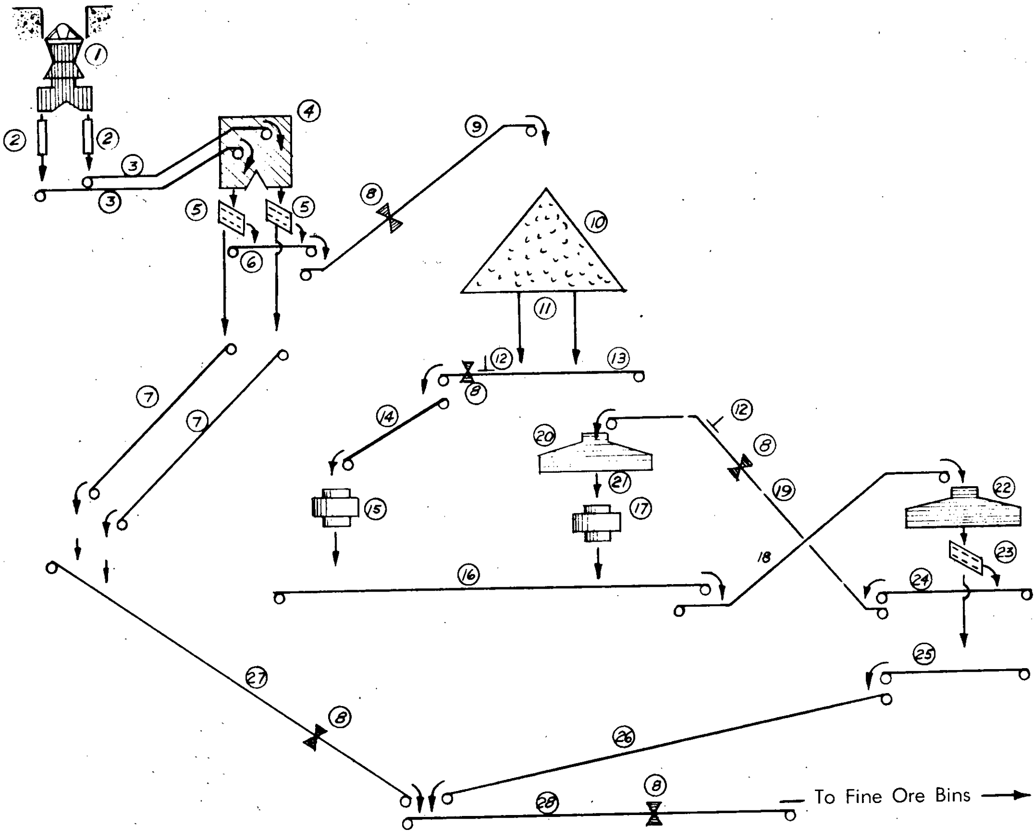
The flowsheets of the crushing and concentration operations are included in figures 3, 4 and 5.

The primary crusher is a 60″ x 89″ gyratory crusher driven by a 700 H.P. motor, and it is capable of reducing mine-run ore to minus 7″ size at a rate of 3,000 tons per hour. The crushed product falls to two 72-inch apron feeders, and is then discharged to two conveyor belts and two 8′ x 20′ double deck vibrating screens. The undersize from the screens (−¾″) is conveyed to the mill fine ore bins, and the product of both screen decks is conveyed to a 45,000 ton live load stockpile via a 72-inch conveyor belt equipped with dual drives totalling 750 H.P.

Coarse ore from the stockpile is reclaimed by vibrating feeders and two conveyor belts operating in concrete tunnels below it. The conveyors feed the secondary crushing plant which consists of two 7-foot standard cone crushers set at 1¼ inches in open circuit, and the product is conveyed to five 8′ x 20′ double deck vibrating screens. The minus ⅝ inch undersize from the lower deck is conveyed to the fine ore bins, and the product of both screen decks is returned to four 7-foot Short Head cone crushers which operate in closed circuit with the screens. Secondary-tertiary crushing plant output averages 1,400 tons per hour.

The concentrator is designed with four parallel circuits each of which handles approximately 7,500 tons per day. Each circuit consists of a 13′6″ diameter by 18′0″ long rod mill driven by a 1,950 H.P. motor, and the rod mill discharge is pumped to a cluster of four 30-inch diameter cyclone classifiers. Classifier underflow enters a 13′6″ diameter by 22′0″ long ball mill driven by a 2,750 H.P. motor, and the ball mill discharge is returned to the cyclones. The cyclone overflow,

brenda

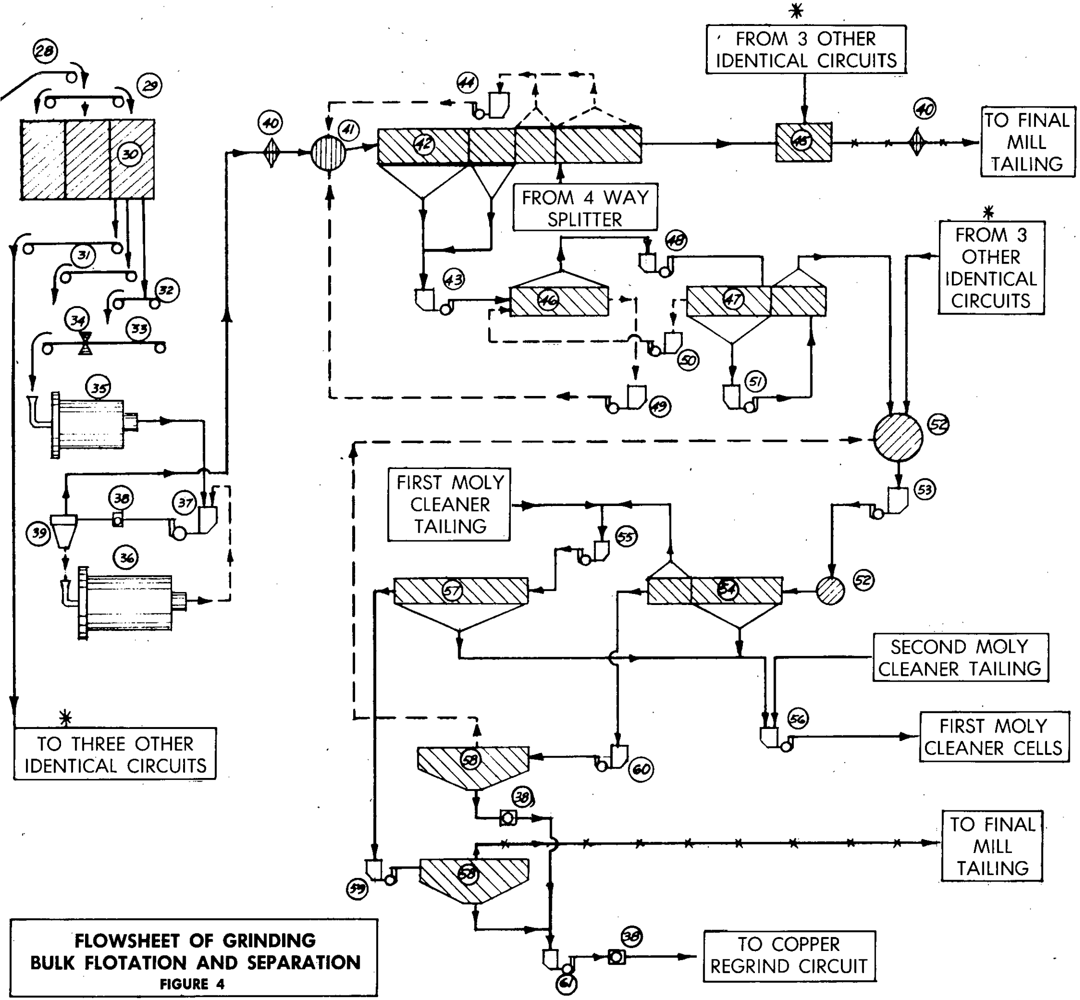


LEGEND

Item	No. Units	Description
1	1	Primary crusher 60″ x 89″
2	2	Apron feeders 72″ x 22′0″
3	3	Conveyor 54″ w.
4	1	Surge Bin
5	2	Primary screens 8′0″ x 20′0″
6	1	Conveyor 72″ w.
7	2	Conveyors 36″ w.
8		Weightometer
9	1	Conveyor 72″ w.
10	1	Coarse Ore Stockpile
11	8	Vibrating feeders 48″ x 72″
12		Metal detector
13	2	Conveyor 48″ w.
14	2	Conveyor 54″ w.
15	2	Secondary crusher 7′ std.
16	1	Conveyor 72″ w.
17	4	Tertiary crushers 7′ s.h.
18	1	Conveyor 60″ w.
19	1	Conveyor 48″ w.
20	1	Surge Bin
21	4	Vibrating feeders 60″ x 90″
22	1	Surge Bin
23	4	Secondary screens 8′0″ x 20′0″
24	1	Conveyor 60″ w.
25	1	Conveyor 48″ w.
26	1	Conveyor 48″ w.
27	1	Conveyor 36″ w.
28	1	Conveyor 54″ w.

CRUSHING & SCREENING FLOWSHEET

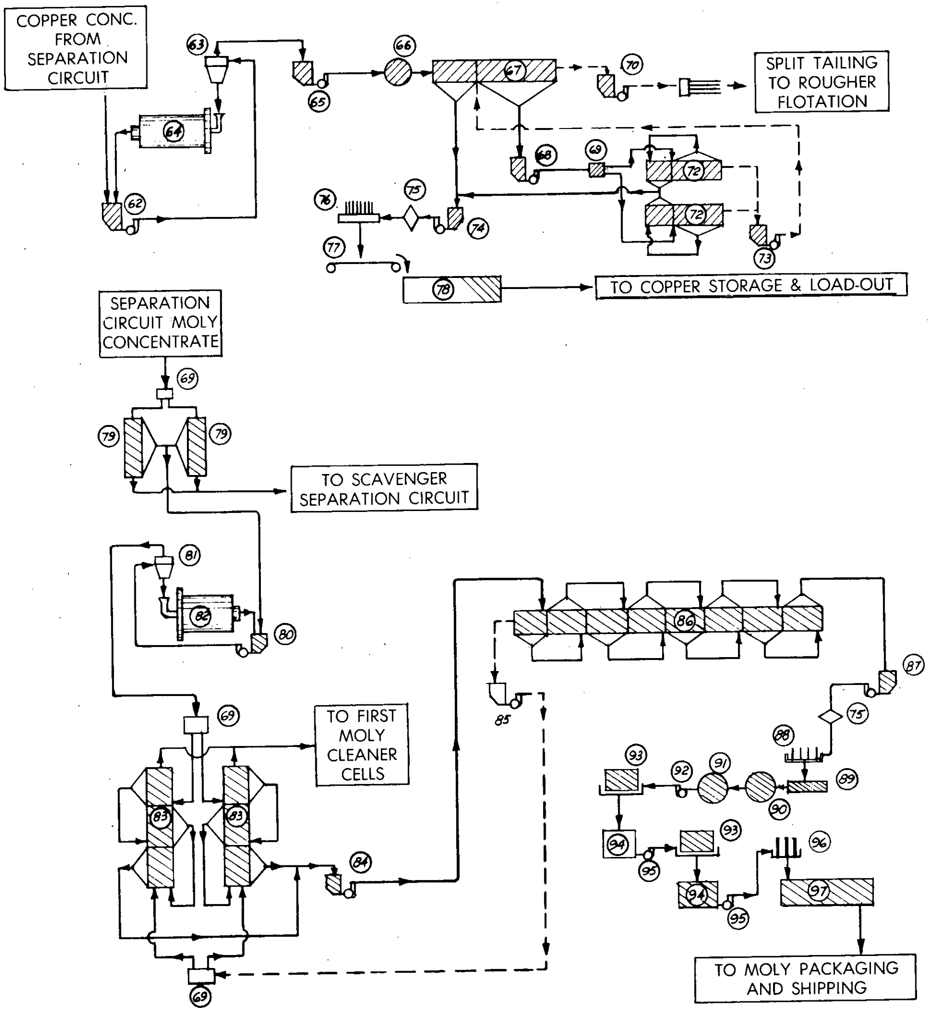
FIGURE 3



FLOWSHEET OF GRINDING BULK FLOTATION AND SEPARATION
FIGURE 4

LEGEND

Item	No. Units	Description
28	1	Conveyor 54″ w.
29	1	Conveyor—reversible 54″ w.
30	3	Fine ore bins, 5,000 tons cap.
31	8	Conveyors, vari-speed, 36″ w.
32	4	Conveyors 36″ w.
33	4	Conveyors 30″ w.
34		Weightometers
35	4	Rod mills 13′6″ ø x 18′0″
36	4	Ball mills 13′6″ ø x 22′0″
37	8	Pumps, cyclone feed 14″ x 12″
38		Density gauges
39	16	Cyclones, 4 per circuit 30″ o
40		Samplers
41	4	Conditioners 10′0″ ø x 10′0″
42	60	Rougher scav. cells, 10′ x 10′ x 3′
43	8	Pumps, rougher conc. 6″
44	4	Pumps, scav. conc. 10″ x 8″
45	1	Tailing box
46	56	1st bulk cleaner cells, 100 cu. ft.
47	48	2nd & 3rd bulk clnr. cells, 100 cu. ft.
48	8	Pumps, 1st bulk clnr. conc. 3½″
49	4	Pumps, 1st bulk clnr. tail, 10″ x 18″
50	4	Pumps, 2nd bulk clnr. tail, 3½″
51	4	Pumps, 2nd bulk clnr. conc. 3½″
52	2	Conditioners 8′0″ ø x 8′0″
53	2	Pumps, combined 3rd bulk clnr. conc. 3½″
54	20	Moly rougher separation cells, 100 cu. ft.
55	1	Pump, moly roughers scav. conc., 12″ x 10″
56	1	Pump, rougher Moly conc., 12″ x 10″
57	20	Moly 1st clnr. scav. cells 100 cu. ft.
58	2	Thickeners, 70′0″ ø x 15′0″
59	1	Pump, moly scav. tail., 10″ x 8″
60	1	Pump, moly rougher tail., 10″ x 8″
61	2	Pumps, copper conc., 3″ x 3″



LEGEND

Item	No. Units	Description
62	2	Pumps, Copper Regrind Cyclone Feed, 3" x 3"
63	2	Cyclones 10" ø, (one operating)
64	1	Regrind ball mill 9'0" x 14'0"
65	2	Pumps, cyclone overflow 3" x 3"
66	1	Conditioner 5'0" ø x 7'0"
67	12	Copper conc. 1st cleaner cells, 100 cu. ft.
68	2	Pumps, 1st cleaner scav. conc. 5" x 4"
69	4	2-way splitter boxes
70	2	Pumps, copper conc. tailing, 5" x 4"
71	1	4-way splitter box
72	12	2nd & 3rd Cu. conc. cleaner cells, 100 cu. ft.
73	2	Pumps, 2nd Cu clnr. tail 5" x 4"
74	2	Pumps, final cu conc. 3½" vertical
75	2	Samplers
76	1	Disc filter 8'6" ø x 8 disc
77	1	Conveyor 42" wide
78	1	Cu conc. dryer c/w scrubber
79	20	1st Moly cleaner cells, 100 cu. ft.
80	1	Pump, 1st moly clnr. conc. 6" vert.
81	8	Cyclones, 6" ø (2 operating)
82	2	Regrind ball mills, 6' ø x 14' (one spare)
83	12	2nd, 3rd & 4th moly clnr. cells, 50 cu. ft.
84	2	Pumps, 4th moly clnr. conc. 2½"
85	1	Pump, 5th moly clnr. tail., 8" x 6"
86	10	5th to 12th moly clnr. cells, 50 cu. ft.
87	2	Pumps, 12th moly clnr. conc. 3½"
88	1	Disc filter 6'0" ø x 4 disc
89	1	Screw conveyor, movable
90	3	Glass lined reactors, 1,000 gal.
91	1	Glass lined cooling vessel, 2,000 gal.
92	1	Pump, cooling vessel discharge
93	2	Drum filters, 4'0" ø x 8'0"
94	2	Repulper Tanks
95	2	Pumps, repulper discharge
96	1	Disc filter, 6'0" ø x 3 disc
97	1	Dryer, gas-fired infra-red

COPPER AND MOLYBDENUM SEPARATION CONCENTRATE TREATMENT **FIGURE 5**

approximately 45% solids and 40% minus 200-mesh, flows by gravity to a conditioner and rougher flotation.

Rougher, or bulk flotation, is performed in four parallel circuits each of which consists of three five-cell groups of No. 120 Agitair flotation cells. The bulk rougher concentrate is first cleaned in No. 24 Denver DR cells after which it undergoes two more stages of cleaning in No. 24 Denver Sub A cells. At this point, the concentrate from all four units is combined for conditioning with sodium hydrosulphide in order to depress copper in the first step of the copper-moly separation process. The concentrate is then differentially flotated in one 20-cell row of No. 24 Denver DR cells.

The tailing from these cells is pumped to a 70 foot thickener, and the overflow is recycled to the bulk concentrate conditioner to minimize sodium hydrosulphide consumption. The tailings from the moly first cleaner scavenger circuit are also pumped to a thickener, and the overflow is discarded with the final mill tailing. The thickener underflows are combined to form the copper rougher concentrate. This concentrate is pumped to a 9′ diameter 14′ long regrind ball mill (600 H.P.), in closed circuit with a 10 inch diameter cyclone. Regrinding is followed by copper cleaner flotation to produce the final copper concentrate, and this product assays approximately 27.3% copper and is 95% passing 325 mesh. It is then filtered to approximately 12% moisture on an 8-foot diameter vacuum filter, and then dried to 6% moisture in a rotary kiln type of dryer. The concentrate is shipped in 25-ton truckloads to the rail head in Kelowna, and then travels by rail to Vancouver to await boat shipment to Japan or rail shipment to eastern Canada.

The moly rougher concentrate and moly scavenger concentrate, from the separation circuits, are combined and pumped to the first cleaning stage which consists of two 10-cell rows of No. 24 Denver Sub A cells. The concentrate product is pumped to a regrind ball mill (250 H.P.) in closed circuit with a cluster of 6-inch cyclones. The reground concentrate undergoes a further eleven stages of cleaning in No. 21 Denver Sub A cells to produce the final molybdenum concentrate.

While the flotation process produces a molybdenum concentrate of sufficiently high grade, it does not decrease certain impurity levels (copper and lead) within the specification limits required for a primary molybdenum product. For this

$FeCl_3$

reason a hot chloride leaching process, developed by Noranda Research Centre, is the next step in the mill process.

Leaching reduces the copper content of the concentrate from an average 0.337% to less than 0.07%, and the lead content is reduced to less than 0.05% at those times that lead is present.

The molybdenum concentrate is then filtered, dried, and stored in bins to await packaging in 33-US gallon containers. Four containers are strapped to a pallet and represent approximately one ton of concentrate. The concentrate is shipped to Vancouver in 20-ton truck loads to await a vessel to transport it to European or Japanese roasting facilities.

Mineral Processing Operating Statistics

The milling statistics for the twelve month period ending 31 December are as follows:

Working Days	366
Total Mill Feed	11,075,602 million tons (0.167% Cu; 0.045% Mo)
Overall Copper Recovery & Grades	86.71%; 28.08% Cu; 0.203% Mo
Overall Molybdenum Recovery & Grades	80.36% unleached 0.363% Cu, 54.5% Mo leached 0.059% Cu, 55.6% Mo
Power Consumption (Mill & Crushers)	17.6 kw Hours per ton of ore
Grinding Media	1.88 lbs./ton ore

Reagent Usages:

Collectors	
Potassium Amyl Xanthate	0.012 lb/ton ore
Fuel Oil	0.034 lb/ton ore
Frother (MIBC)	0.041 lb/ton ore

brenda

Depressants	
Sodium Hydrosulphide	0.191 lb/ton ore
Sodium Cyanide	0.021 lb/ton ore
Leach Chemicals	
Sodium Chloride	0.101 lb/ton ore
Ferrous Chloride	0.062 lb/ton ore
Chlorine	0.013 lb/ton ore
Filter Aids	
Surfactant	0.003 lb/ton ore
Flocculant	0.001 lb/ton ore

Mineral Processing Department — Personnel

	Hourly Rated	Staff	Totals
Mill Operation	67	11	78
Maintenance, Mechanical	30	3	33
Maintenance, Planning	—	3	3
Maintenance, Electrical	12	1	13
Instrumentation	6	1	7
Assaying	—	11	11
Metallurgical	—	7	7
Clerical	—	1	1
General Foreman	—	1	1
Superintendent	—	1	1
Crusher Maintenance	17	2	19
TOTAL	132	42	174

Mineral Processing Operating Costs

	% per ton mill feed
Operating Labour (incl. supervision and engineering)	16
Operating Supplies	37
Power	14
Maintenance, Labour	9
Maintenance, Supplies	20
Other Charges	4
	100%

Fresh Water System

Fresh water is stored behind a 350,000 cubic yard granular shell-clay core earth dam confining 10,000 acre-feet of fresh water.

This water, collected during spring runoff from four separate watersheds, is the only economical source of make-up, domestic and fire water available to the mill. The only other source would have been Okanagan Lake, fourteen miles distant and 4,000 feet below mill elevation.

Two (originaly four) eleven stage, 400 H.P. vertical turbine pumps pick up an average of 700 U.S. g.p.m. The water is pumped three miles through a 1,000-foot lift to the 400,000 gallon fresh water tank and to the 300,000 gallon fire water tank, both uphill from the mill.

One of the streams, totally diverted, provided a dry, steep walled valley suitable for development of a tailings reservoir.

Tailings - Reclaim Water Systems

Tailings, mill water and local surface runoff water are totally enclosed in a dam-reservoir complex downstream from the concentrator.

The main tailings dam, built from the coarse fraction of the tailings, provides storage space for the total enclosure of the fine fraction of the tailings, recycled mill water and local surface runoff.

This dam, upon the completion of mining, will problably contain upwards of 30 million tons of sand. Crest length will exceed 6,000 feet with a maximum height exceeding 400 feet.

Tailings and mill water are fed directly from the concentrator to 10,000 feet of 30 inch diameter, gravity flow, wood stave pipeline.

The mill water-tailings mixture is maintained at a pulp density close to 35% solids by weight.

The pipeline delivers the mill waste to a battery of cyclones situated above the left abutment of the tailings dam. Twelve 24-inch Dorrclons in the primary system and six more in the secondary system split the 25,000 - 28,000 tons per day dry weight of tailings into two equal parts.

The coarse fraction, with a limiting fineness of 10% passing the 70 micron (#200) sieve size, is produced at 70% solids by weight. This is diluted to 50% density and then delivered by 14 inch diameter plastic pipes to various locations on the damsite.

The fine fraction plus most of the mill water is delivered by 19 inch and 20 inch diameters plastic pipelines to the upstream edge of the dam crest. From there, the mixture is spigotted into the developing tailings reservoir.

Clarification of the mill water occurs as it migrates through the 2,000 acre-foot, one-month-retention tailings pond.

At the other end of the pond two floating barges, each containing two 300 H.P. vertical turbine pumps, pick up the clarified water. The water is delivered to the first four-pump booster pumphouse through flexible hoses connected to two separate steel land lines. From there a 24" buried steel pipeline and duplicate booster pumphouse deliver approximately 7,000 U.S. g.p.m. of recycled mill water to the 500,000 gallon wood stave tank. From there the water is delivered by gravity flow to the mill.

The dilution and transport water used to deliver sand to the tailings dam is also obtained from the main reclaim pipeline. This water is encouraged to drain out of the sand fill.

Immediately downstream of the tailings dam, the water is gathered into a reservoir. From there, by a battery of three seven-stage, vertical turbine pumps, and a buried 16" diameter steel pipeline, the water is returned to the main tailings pond.

The drainage of the sand fill is a very critical factor in maintaining the stability of the relatively uncompacted sand fill.

Between the years 1899 and 1963, the area has been within the zone of influence of 1,671 recorded earthquakes. Twelve of these were of a magnitude great enough to trigger some liquefaction and possible slumping in a saturated sand fill. Such slumping could not be tolerated in the tailings dam. This explains the requirement for a permeability of at least six inches per hour in the main dam fill.

The design and operation of the tailings-reclaim system was based on the premise that adequate storage space would be developed by the production of sand.

At present, this production is the most critical problem. Consequently, the operation is continued on a year-round basis. Winter temperatures with a monthly mean minimum ranging around zero degrees Fahrenheit have caused inconvenient working conditions. However, to date, no delay in the production has occurred that could be ascribed to the cold weather.

Plant Department

The warehousing, services, and maintenance functions are grouped under the Plant Department. Personnel within the department are distributed as follows:

	Hourly	Staff	Total
Pit Shop, Mechanical	60	7	67
Pit Shop, Electrical	12	1	13
Surface	15	1	16
Tailings	13	1	14
Boiler	4	1	5
Warehouse (includes Purchasing)	6	7	13
Planning	—	6	6
Maintenance Staff, including Superintendent	—	6	6
TOTAL	110	30	140

Maintenance and warehousing facilities are located in a 29,000 square foot building one mile from the open pit. Seven service bays are provided, one for tire changing, one for welding shop, four for general repairs and one for a wash bay.

brenda

Lithographed in Canada
WAYSIDE PRESS LTD.
VERNON, B.C.