

- 4 treatment vats 12 feet in diameter, 18 inches deep.
- 4 sump tanks, 6 feet diameter, 6 feet deep.
- 2 storage tanks, 6 feet diameter, 6 feet deep.
- 2 zinc boxes.
- 1 acid clean-up tank.

Two men, one on each shift, look after the concentrators and run the cyanide plant. One man is employed, on day shift, to load and unload the tanks.

It is the intention of the company to install at an early date a plant for the recovery of the arsenic.

The following table gives a summary of results for the past year:

Month.	Tons of Ore Milled.	Value Recovered in Mill.	Tons of Concentrates Treated.	Value Recovered in Cyanide Plant.	Total Value Recovered.
May, 1906	3,258	\$8,041.00	82.02	\$ 807.50	\$ 8,848.50
June, 1906	3,345	8,601.75	76.48	778.75	9,380.50
July, 1906	2,964	7,072.84	78.25	722.16	7,795.00
August, 1906 ..	3,939	9,310.17	82.72	646.83	9,957.00
Sept., 1906 ...	3,441	9,082.87	32.78	439.13	9,522.00
October, 1906 .	4,014	10,735.22	98.58	1,344.28	12,079.50
Nov., 1906 ...	4,326	9,186.72	132.11	1,847.78	11,034.50
Dec., 1906 ...	3,873	5,743.41	93.80	1,901.09	7,644.50
January, 1907 .	3,024	6,493.08	134.03	1,933.24	8,426.32
February, 1907	3,283	7,517.23	143.03	2,610.72	10,127.95
March, 1907 ..	3,717	8,514.09	150.57	2,289.90	10,803.99
April, 1907 ..	3,837	9,612.03	185.12	2,044.29	11,656.32
	43,021	\$99,910.41	1,289.49	\$17,365.67	\$117,276.08

The average cost of mining—operation and maintenance—during this time was \$135 per ton, and it must be borne in mind that this cost covers, not merely the ore milled, which includes only about one-half the ore broken in the mine, but also the remainder which is left in the mine as filling until such time as the stopes in that portion of the mine are worked out. Thus at the present time there are over 20,000 tons of broken ore in the mine ready to be hoisted.

The above cost includes also the cost of all development and prospecting, sinking an incline shaft 22 feet x 10 feet for a depth of 400 feet from the 400-foot level to the 550-foot level, driving the greater portion of a 500-foot cross-cut and driving the levels and raises necessary to mining.

The average cost of Milling—operation and maintenance—for the year was 0.33 per ton. The average cost of cyaniding for the past six months was \$2.37 per ton of concentrates, or \$0.08 per ton of ore milled. The following cost of supplies and scale of wages is given in order that the reader may intelligently compare the above costs with those in other places:

- Coal, average cost, \$4.00 per ton.
- Dynamite, average cost, \$0.20 per pound.
- Wages—Drillmen, \$1.75 per day.
- Helpers, \$1.50 per day.
- Trammers and muckers, \$1.50 and \$1.35 per day.
- Millmen, \$40.00 to \$65.00 per month.
- Cyanide men, \$2.00 per day.
- Hoistmen, \$2.00 per day.
- Engineers, firemen and machinists, \$1.65 per day.
- Blacksmiths, \$1.75 to \$2.50 per day.
- Carpenters, \$1.60 to \$1.75 per day.
- Laborers, \$1.35 per day.

The high price of coal may not be, as some of our authorities declare, the reason of the decline of the gold mining industry in Nova Scotia; but it certainly tends to greatly increase the cost of mining and milling.

The Boston Richardson Mining Company intend to greatly enlarge their milling capacity at an early date; indeed, ten extra stamps and accessories are now on the ground.

The Company also intend to change their system of power to electricity or gas, which will materially reduce costs.

My thanks are due to Mr. H. S. Badger, superintendent of the Boston Richardson Mine, for his kind assistance in the preparation of this paper.

PIG LEAD ANALYSES

The following is a list of analyses made by the Osaka (Japanese) Technical Analyzing Department. The Trail brand is electrolytic lead, produced by the Consolidated Mining & Smelting Company of Canada, Limited:—

Selby—Per cent. lead, 99.9579; per cent. insolubles, 0.0040; per cent. bismuth, 0.0300; per cent. cadmium, trace; per cent. nickel, 0.0001; per cent. cobalt, none; per cent. silver, 0.0010; per cent. manganese, 0.008; per cent. copper, none; per cent. antimony, none; per cent. tin, 0.0004; per cent. arsenic, 0.0024; per cent. zinc, 0.0003; per cent. iron, 0.0027.

Trail—Per cent. lead, 99.9890; per cent. insolubles, trace; per cent. bismuth, none; per cent. cadmium, none; per cent. nickel, trace; per cent. cobalt, none; per cent. silver, 0.0025; per cent. manganese, none; per cent. copper, 0.0003; per cent. antimony, none; per cent. tin, 0.0007; per cent. arsenic, 0.0020; per cent. zinc, 0.0002; per cent. iron, 0.0053.

Smelter—Per cent. lead, 99.9762; per cent. insolubles, trace; per cent. bismuth, 0.0046; per cent. cadmium, 0.0002; per cent. nickel, trace; per cent. cobalt, trace; per cent. silver, trace; per cent. manganese, 0.0003; per cent. copper, none; per cent. antimony, 0.0137; per cent. tin, none; per cent. arsenic, 0.0090; per cent. zinc, trace; per cent. iron, 0.0039.

English Chemical—Per cent. lead, 99.9693; per cent. insolubles, trace; per cent. bismuth, trace; per cent. cadmium, 0.0007; per cent. nickel, 0.0003; per cent. cobalt, trace; per cent. silver, 0.0020; per cent. manganese, none; per cent. copper, 0.0097; per cent. antimony, 0.0149; per cent. tin, none; per cent. arsenic, 0.0002; per cent. zinc, trace; per cent. iron, 0.0029.

B. H. P.—Per cent. lead, 99.9853; per cent. insolubles, trace; per cent. bismuth, none; per cent. cadmium, trace; per cent. nickel, none; per cent. cobalt, none; per cent. cobalt, trace; per cent. silver, 0.0009; per cent. manganese, none; per cent. copper, none; per cent. antimony, 0.0108; per cent. tin, 0.0004; per cent. arsenic, none; per cent. zinc, 0.0001; per cent. iron, 0.0025.

Enthoven—Per cent. lead, 99.9851; per cent. insolubles, trace; per cent. bismuth, 0.0048; per cent. cadmium, trace; per cent. nickel, trace; per cent. cobalt, trace; per cent. silver, 0.0015; per cent. manganese, none; per cent. copper, none; per cent. antimony, 0.0160; per cent. tin, none; per cent. arsenic, none; per cent. zinc, trace; per cent. iron, 0.026.

Note.—Selby and Smelter are American; Trail, Canadian; Enthoven and Chemical, English; B. H. P., Australian.