# **Mount Polley Mine**

# General

September 13, 1997 marked the official opening of the Mount Polley open pit gold/copper mine, located 56 kilometres northeast of Williams Lake in central British Columbia.

The property is owned 55% by Imperial who is the operator, and 45% by SC Minerals Canada Limited, a wholly owned subsidiary of Sumitomo Corporation. Sumitomo provided Imperial with a loan facility of \$54 million for the construction of Mount Polley, and a \$7 million line of credit for working capital purposes, secured by Imperial's share of the concentrate produced at the mine.

The first shipment of Mount Polley concentrates left Vancouver Wharves on October 6, 1997 bound for the Nippon Mining and Metals Co. Ltd. smelter in Japan. Completion under the terms of the Sumitomo Loan Agreement (converting the \$54 million loan to a project loan) was achieved on December 7, 1997, and acknowledged by Sumitomo on February 23, 1998.

From commencement of commercial production on August 1, 1997 to December 31, 1997, 12,823 tonnes of gold-copper concentrate were produced, containing 17,866 ounces of gold and 7,908,928 pounds of copper.

## Mining

With the drop in gold prices early in 1997, mine production was concentrated in the north portion of the Cariboo Pit, a less oxidized area that provides better copper recovery but contains less gold. In October 1997, due to falling copper prices, the mine plan was changed to focus primarily on high value ore. By February, 1998, ore was being mined from the southern, high oxide, high gold portions of the Cariboo Pit. The decision to mine high value ore was a direct response to the drastic drop in gold and copper prices from the feasibility study levels of US\$380 per troy ounce of gold and US\$1.00 per pound of copper to levels at the time of writing of US\$310 and US\$0.85 for gold and copper respectively.

To further reduce costs, mining operations consisting of ore and waste hauling, drilling and blasting were taken over from a contract miner. The transfer went smoothly and mining operations have proceeded very well, with an average mining rate of 24,100 tonnes being achieved in two  $9\frac{1}{2}$  hour shifts per day. In April 1998 the mine will begin operating around the clock at an anticipated rate of 40,000 tonnes per day.

The feasibility study mineable reserve estimate is 82.3 million tonnes grading 0.417 grams per tonne gold and 0.3% copper containing 1.1 million ounces of gold and 544 million pounds of copper. The stripping ratio for this open pit mineable reserve is 1.12 tonnes of waste for each tonne of ore.

# **OPERATIONS**

Imperial achieved a major milestone in its corporate plan to become a producing mining company when on June 19, 1997 the first tonne of ore passed through the newly constructed Mount Polley concentrator. Following the closure of Imperial's Goldstream operation in January 1996, our construction team pushed hard to get Mount Polley completed as soon as possible. Just over a year after building commenced on May 29, 1996, Mount Polley was producing gold and copper.

While the construction schedule was accelerated, costs were kept under control. The capital cost to build Mount Polley was Cdn\$115 million, approximately 6% under budget. This cost works out to approximately US\$4,100 per short ton of daily capacity, among the lowest of any recently constructed plant of its type.

After year end, Imperial's production was again increased through the Huckleberry mine acquisition. Imperial now operates two significant mines in British Columbia. Due to their similarities (both open pit, both in British Columbia, both producing concentrates for sale to smelters in Japan) we will be able to achieve cost and operational synergies by sharing information and expertise between the two mines.

#### Milling

The plant start-up and commissioning took place in June 1997 with the first tonne of ore treated in the Mount Polley concentrator on June 19, 1997. Throughput increased toward full design capacity to the end of the year, processing a total of 2,209,818 tonnes for the period August 1 to December 31, 1997, or 2,449,825 tonnes including start-up production from June and July.

Mining and crushing are both achieving or exceeding design capacity. Grinding operated at 81% of design capacity for the period from June to December 1997 with further improvement anticipated in the months ahead. Copper recoveries are as predicted, and are dependent on the level of oxidation, while gold recovery has been approximately 10% less than anticipated. Testing is currently being carried out on a number of fronts to increase gold recovery.

The mill produces a clean copper concentrate with copper grades in the range of 26-30% copper. Gold in concentrate ranges from 30 to over 200 grams per tonne depending on the mining area, making this a highly saleable concentrate.

In March 1998, the plant produced a record 1.4 million pounds of copper and 9,000 ounces of gold. The plant is on schedule to exceed this level of production in April.

#### **Production Statistics**

(For the period August 1 to December 31, 1997, representing 100% of mine production, 55% of which is allocable to Imperial)

Ore Milled (tonnes)	2,209,818
Ore milled per calendar day (tonnes)	14,443
Ore milled per operating day (tonnes)	18,187
Copper content (%)	0.266
Copper recovery (%)	61.75
Gold content (g/t)	0.366
Gold recovery (%)	67.72
Concentrates produced (tonnes)	12,823
Concentrate grade (% Cu)	27.98
Concentrate grade (g/t Au)	43.33
Copper produced (lbs)	7,908,928
Gold produced (ounces)	17,866

#### **Exploration**

Mount Polley has excellent potential for expansion of ore reserves and the discovery of new resources elsewhere on the property. Drilling has focused on the Cariboo, North and West orebodies which host all of the current mineable ore reserve. All three zones remain open to depth with many drillholes terminating in economic mineralization. In addition, drilling adjacent to these zones, as well as further out, has shown mineralization continuing beyond the current open pit design.

### General

The Huckleberry open pit copper/molybdenum mine, located approximately 123 kilometres southwest of Houston, British Columbia, was officially opened on October 1, 1997. The total capital cost to construct, install and commission the facilities was approximately \$142 million.

In June 1996 the Japan Group, which consists of Mitsubishi Materials Corporation, Marubeni Corporation, Dowa Mining Co. Ltd. and Furukawa Co. Ltd. purchased a 40% equity position in Huckleberry and entered into an agreement to provide project loan financing in the amount of US\$60 million. Mitsubishi Materials Corporation, Dowa Mining Co. Ltd. and Furukawa Co. Ltd. have also entered into a long term contract for the purchase of all copper concentrates from Huckleberry with fixed terms for the first five years of production.

In addition, the British Columbia government provided financial assistance in the form of a \$15 million loan for infrastructure including roads, power lines and port facilities. On November 17, 1997, Marubeni Corporation provided an additional US\$10 million working capital loan.

#### Mining

The feasibility study estimated mineable reserves at the Huckleberry project using a 0.30% copper cutoff grade are 90.4 million tonnes with a grade of 0.513% copper, 0.062 grams per tonne gold, 2.81 grams per tonne silver and 0.014% molybdenum, containing 1,021 million pounds of copper, 0.18 million ounces of gold, 8.17 million ounces of silver and 27 million pounds of molybdenum. The mineable reserves include material classified as proven and probable. The average strip ratio including overburden and waste rock is 1:1.

Mining is scheduled to take place in three phases to allow for higher grade material to be removed in the initial years, and backfilling of the Main Zone with East Zone waste to minimize potential environmental impact.

In February 1997 the Huckleberry mining fleet commenced preproduction mining activities. From February to September 1997, the mining fleet removed a total of 2,198,600 tonnes of waste rock and overburden while stockpiling 399,500 tonnes of ore.