

Huckleberry Project Information Brochure

October, 1997

Introduction

The Huckleberry Mine is an open pit copper/molybdenum mine resting on a small plateau on the south slope of Huckleberry Mountain north of Tahtsa Reach on the Nechako reservoir in west-central British Columbia, Canada. The mine commenced commissioning in preparation for commercial production in September, 1997 and has a scheduled mine life of 16 years of continuous production through to the year 2013. The Huckleberry Mine is owned and operated by Huckleberry Mines Ltd. (HML), which is in turn 60% owned by Princeton Mining Corporation of Vancouver, B.C. and 40% owned by a consortium of Japanese companies, including Mitsubishi Materials Corporation, Dowa Mining Co. Ltd., Furukawa Co. Ltd. and Marubeni Corporation.

Location and Access

The Huckleberry Mine is located approximately 130 km due south of Smithers and 86 km southwest of Houston, in west-central British Columbia. The property is situated at approximately 53°40' North Latitude and 127°10' West Longitude, at an approximate elevation of 1000m above mean sea level.

Road access to the site is southward from Highway 16 at Houston via 113 km of existing Forest Service Roads plus an 8 km connector road constructed by HML in 1996 around the east side of Huckleberry Mountain.

A 1500m airstrip was constructed approximately 13 km north of the minesite to accommodate chartered air service to facilitate the movement of personnel and supplies through the construction phase of the Project. The airstrip is scheduled to be decommissioned and reclaimed following the commencement of operations. Regularly scheduled commercial air service is available from Vancouver to Smithers on a daily basis.

Travel time by air from Vancouver to either Smithers or the minesite is approximately 1 ¹/₂ hours. Travel by road is approximately 45 min. from Smithers to Houston, and 2 hours from Houston to the minesite depending on road conditions and traffic.

Power is supplied from the B.C Hydro substation in Houston via a 122 km., 138 kilovolt powerline constructed by HML.

History and Ownership

The Huckleberry Main Zone deposit was originally discovered by Kennco Explorations Ltd. in 1962 following investigation of anomalous stream sediments collected during a regional geochemical survey in 1960.

Despite extensive drilling programs through the 1960's and 70's by Kennco and Granby Mining, the East Zone deposit was not discovered until 1993 by New Canamin Resources Ltd. who were conducting exploration under option from Kennecott Canada.

In June 1995, New Canamin Resources amalgamated with Princeton Mining Corporation of Vancouver, and Huckleberry Mines Ltd. was formed as a whollyowned subsidiary of Princeton to develop the Huckleberry Project.

In June 1996, following receipt of the government project development approvals, a production decision was made and a strategic alliance finalized with a consortium of Japanese companies resulting in Huckleberry Mines Ltd. being 60% owned by Princeton Mining Corporation and 40% owned by Mitsubishi Materials Corporation, Dowa Mining Co. Ltd., Furukawa Co. Ltd. and Marubeni Corporation (the "Japan Group").

Initial site development activities commenced in March, 1996 with setting up of the temporary construction camp at Whiting Creek, site logging and access road construction. Construction of the permanent camp, mill facilities, tailings dam and powerline commenced following the production decision in June, 1996.

Stockpiling of ore began in July, 1997 and the primary crusher commenced operation in August. Mill production commenced in mid September slightly ahead of the original September 27, 1997 project schedule target date.

Project Economics and Financing

A positive feasibility study of the Project was completed by H.A Simons in September, 1995 with costs to develop the Project estimated at Cdn. \$137 million. Cash production costs, net of byproduct credits, are expected to average U.S.\$0.65 per pound over the first 10 years.

To finance the Project, Princeton reached an agreement with the Japan Group, whereby the Japan Group made available a U.S.\$60 million loan. Princeton and the

Japan Group also contributed a total of U.S.\$26.7 million on a pro-rata basis as additional equity to the Project. In addition, the B.C. Provincial Government made available a Cdn.\$15 million commercial loan for the development of infrastructure associated with the Project.

Environment

Detailed environmental examinations, including studies of archaeology, climate, water quality, hydrology, fisheries, vegetation, wildlife and waste rock characterization, were begun at Huckleberry in 1992. These studies formed the basis for the development of the mine plans and for submissions to the federal and provincial governments in support of project development approvals. A "Pre-Prospectus", as required under the Mine Development Assessment Act, was submitted to government authorities in January, 1993, followed by a "Pre-Application" in October, 1994.

Finally, following review of these initial submissions, a comprehensive 8-volume, 1100 page "Application for a Mine Development Certificate" was submitted on May 19, 1995 triggering the commencement of the environmental assessment process for the Huckleberry Project.

Each of the submissions were made available to the public and open houses were held in local communities following the release of each document to keep the public informed on the status of the project and allow for public comment and input to the review process. Public response in the local communities was very positive and supportive.

The B.C. Environmental Assessment Act process was completed on December 22, 1995 with the issuance of the Project Approval Certificate. The Canadian Environmental Assessment Act process was completed on March 25, 1996 and the required Section 35(2) authorization under the Fisheries Act was issued on May 17, 1996.

Key components of the approved mine plan are the sequence of mining activities and the provision for containment of mine wastes. Materials identified during waste characterization studies as potentially problematic due to elevated levels of sulphides, will be permanently flooded at mine closure within engineered impoundments. This preventative approach will ensure that these materials are not exposed to the air and cannot oxidize, thereby preventing the leaching of metals from the rock. By mining the Main Zone deposit early in the mine life, the mined out open pit can be back-filled with potentially reactive waste from the East Zone prior to flooding. This has an additional benefit in that the majority of the waste rock from the Main Zone has been classified as non-reactive and can therefore be utilized in construction of the tailing dam. Huckleberry is unique for an open pit mine in that there will be no exposed waste rock dumps at the time of mine closure. All such dumps will be submerged by the lake contained within the tailing impoundment and Main Zone pit areas.

The tailing dam has been designed and constructed with an impervious clay-till core to minimize seepage from the impoundment. The construction schedule for the dam has been set so as to ensure that the impoundment is operated as a closed system with no discharge of supernatant to the environment. Supernatant from the tailing impoundment is reclaimed to the concentrator to the maximum extent practical.

The mine plan has been designed to ensure that at the end of the mine life the mine footprint can be reclaimed to a productive wildlife habitat end land use and to ensure the protection of the environment in the long term. Prior to the commencement of production, HML had posted \$935,000 as security for reclamation of disturbed areas associated with project development, with provision for an additional \$1,275,000 scheduled for deposit following the commencement of operations, bringing the total for reclamation bonding to \$2.21 million. Additional funds will be deposited as required over the life of the mine to offset increasing reclamation liability as development proceeds.

Reserves and Mine Plan

Copper (Cu) mineralization at Huckleberry is associated with biotite-feldspargranodiorite porphyries and occurs primarily as chalcopyrite (CuFeS₂). Molybdenum (Mo), in the form of molybdenite (MoS₂), occurs as secondary mineralization, and gold (Au) and silver (Ag) values are of lesser significance. The property occurs within the Middle Jurassic volcanics of the Hazelton Group which have been intruded by Late Cretaceous Bulkley Intrusives.

The mine plan consists of the development of two open pits, the Main Zone and the East Zone. Open pit mining is accomplished by conventional blasting, loading and hauling using electric drills and shovels, and 86 tonne diesel powered haul trucks.

The Main Zone contains mineable ore reserves, based on a 0.30% Cu cutoff, of 24.2 million tonnes grading 0.484% Cu, 0.013% Mo, 0.066 g/t Au and 2.181 g/t

Ag, with a strip ratio of 0.80:1 waste to ore, including overburden. The Main Zone pit will be mined from year 2 through year 7 to the 860m elevation for an approximate pit depth of 180m.

The East Zone contains mineable ore reserves, based on a 0.30% Cu cutoff, of 66.1 million tonnes grading 0.523% Cu, 0.014% Mo, 0.061 g/t Au and 3.043 g/t Ag, with a strip ratio of 1.23:1 waste to ore, including overburden. The East Zone pit will be mined initially up to year 2 and again from year 7 to year 16, to the 788m elevation on the west end and the 844m elevation on the east end, for a depth of 225m.

Total mineable reserves are 90.3 million tonnes grading 0.513% Cu with a strip ratio of 1:1.

Milling

Milling is accomplished by conventional grinding and flotation processes. Ore from the open pits feeds the primary crusher at a rate of approximately 18,000 tonnes per day. The primary crusher produces an approximate 6 inch product for delivery by conveyor to the 175,000 tonne mill stockpile with a 20,000 tonne live capacity. Apron feeders located beneath the coarse ore stockpile direct crushed ore to the 9.75 metre diameter Semi-Autogenous Grinding (SAG) mill in the concentrator (mill) building. The SAG mill, which revolves like a giant rock-tumbler, contains steel balls to assist in grinding down the ore. Following a second stage of grinding in one of two ball mills, ground ore the consistency of fine sand mixed with water, is directed to the flotation circuit as a slurry where the metal bearing minerals float to the top, are skimmed off, collected and concentrated. The concentrate is then dewatered, filtered and dried.

Copper concentrate, produced at the rate of approximately 11,500 tonnes per month, is shipped by 40 tonne B-train trucks to the Port of Stewart for storage and shipment to Japan by ocean going vessels in lots of 10,000 to 15,000 tonnes. The copper concentrate contains approximately 27% copper which, over the first two years of production, equates to a total copper metal production of 37,000 tonnes or 80 million pounds per year. The mill also produces a separate concentrate containing 1.48 million pounds of molybdenum metal annually, in addition to the 380,000 ounces of silver and 7,000 ounces of gold which will be contained within the copper concentrate, and for which credits will be received from the smelter in Japan.

Workforce

At full production the mine directly employs 170 people. An additional 40 people are employed indirectly under full time contracts for camp catering, explosives manufacturing, bus transportation and concentrate haulage to Stewart. The mine operates year round, 24 hours per day, 7 days a week, with employees working shift rotations of 4 days in and 3 or 4 days out. A 250 person camp accommodation complex complete with kitchen and recreation facilities is located on site. Each employee has their own private room with separate communal washroom facilities for males and females. Bus transportation from Houston to the site is provided in conjunction with shift changes. A staffed office trailer and car park are available in Houston.

At the time of start-up, approximately 50% of the employees had been hired from local communities within the nearby Bulkley Valley, such as Houston, Smithers, Granisle, and Burns Lake, and 75% had chosen to make their home in these same communities. As of mid-September, 1997, 16 of the total 152 employees, or just over 10%, were members of local First Nations.

Socioeconomic Effects

The Huckleberry Mine will generate substantial positive economic benefits well beyond the projected return to the shareholders of the Company. It is estimated that over the life of the mine the Company will directly pay approximately \$150 million in taxes to the various levels of government. In addition, approximately \$43 million will be paid out in employee income tax deductions and another \$15 million will be paid jointly by the Company and employees in CPP and EI payments.

The Company payroll totals approximately \$12 million a year in salaries and benefits, much of which will be realized as net pay by the employees and will be available to flow back into the local communities in which they live. As well, the mine will purchase goods and services in the amount of approximately \$24 million per year, of which approximately \$4 million worth are expected to be acquired through local suppliers.

An employment multiplier of 2:1 is commonly accepted as representative of the mining industry in predicting that for every job at the minesite one other job is created locally and another created elsewhere in the British Columbia or Canada.

HUCKLEBERRY MINES LTD.

Huckleberry Mine Facts Sheet

Location:	 130 km south of Smithers 86 km SW of Houston, B.C. 127 ° 10' Longitude 53 ° 40' Latitude 	Power Supply:	Extension of the BC Hydro grid from Houston, BC.
Exploration History:	Kennco Explorations Ltd. 1962-1971 (\$ unknown) Granby Mining Company	Access:	Via 113 km of graveled public forest access road and 8 km of private road
	1972-1974 (\$1,000,000) New Canamin Resources Ltd. 1992-1994 (\$6,600,000)	Operations Workforce:	170 direct employees 40 sub-contractors
Budgeted		Work	12 hr. shift, 4 days on/4 days off
Total Capital		Schedule:	with bussing from Houston
Cost:	Cdn. \$137 million		
		Ownership:	60% Princeton Mining Corp.
Minerals:	Chalcopyrite, Molybdenite & minor recoverable amounts of gold & silver		Dowa Mining Co. Ltd., Furukawa Co. Ltd., & Marubeni Corp.of Japan.
Mining Method:	Open Pit, Truck/Shovel 18,000 tonnes/day ore Avg. strip ratio 1:1	General Manager: E. Brokx	
Process Plant/Mill:	Conventional primary crushing, SAG mill-ball mill grinding, flotation for recovery of minerals.	F Prin 2000	or Further Information: neeton Mining Corporation 0 - 1055 West Hastings Street
Annual	137,000 t conc. @ 27% Cu		Vancouver, B.C.
Production	37,000 tonnes copper metal		Phone: (604) 688-2511
Rate:	670 tonnes molybdenum		Fax: (604) 688-4772
	7000 oz gold		TSE:PMC
	380,000 oz silver		
Proposed	Production start - Sept.'97		or
Mine Life:	16 years		Huckleberry Mines Ltd.
	•		P.O. Box 3000
Estimated	24.2 million tonnes at 0.48%		Houston, B.C.
Mineable	copper in the Main Zone,		Phone: (604) 517-4700
Keserves:	and 66.1 million tonnes at		Fax; (604) 517-4701
	0.5270 copper in Last 20110.		





CONCENTRATOR SIMPLIFIED PROCESS FLOWSHEET



