

CAVEY - 688-6738
Bacon - ~~879-8461~~ - 277-2322
-AST.-

830450

REPORT
ON
THE
OPERATION
OF
HOPE PLACER MINES
HOPE, B.C.

LATITUDE 49°25'N
LONGITUDE 120°25'W
92H/6

NEW WESTMINSTER MINING DIVISION

Richard E. Arndt, P.Eng., P.Geol.

March 15, 1989

SUMMARY

The Hope Placer Mines property is located on the west bank of the Fraser River three miles upstream from the town of Hope, B.C. in the New Westminster Mining Division.

The property consists of three placer leases, plus a Crown Grant of 160 acres known as "Union Bar". The gravels on the property have been worked since 1858. Grades of gravels have varied from 0.06 oz/cu.yd. Au to 0.77 oz/cu.yd. Au from gravel "pay" depths of 8 feet to 39 feet.

Currently the operation consists of a screening plant consisting of a trommel, jigs and a concentrating table capable of handling 25 cubic yards per hour. It is anticipated that money currently being raised will be used to expand the setup to a full scale production operation of 75 cubic yards per hour, 24 hours per day.

Approximately 400,000 cubic yards of gravel have been exposed from an eight acre area, with grades running 0.06 oz/cu.yd. Au to 0.08 oz/cu.yd. Au.

A milling building has been purchased near Hope to upgrade the black sand containing both gold and platinum. A furnace will also be used to pour dore bars.

An exploration program is also included as an Addendum.

TABLE OF CONTENTS

Summary	
Introduction	1
Property Description	1
Location and Access	1
Property Status	2
History and Previous Work	2
Geology	3
Current Operations	3
Future Mining Plans	4
Discussion	5
Recommendations	5
Certificate of Qualifications	

Richard E. Arndt, P.Eng., P.Geol.

LIST OF FIGURES

Figure 1	Location Map	Following Page 1
Figure 2	Budget For Full Operation	Following Page 4

LIST OF APPENDICES

Appendix A	Addendum - Exploration and Bulk Sample Program
------------	--

INTRODUCTION

At the request of Mr. D.J. Livesey, on behalf of Harvey Smith, the writer was asked to examine a placer gold property near Hope, B.C. and determine its potential for profitable operation.

The property, held by Hope Placer Mines and managed by Mr. Don Dolan of Hope, is on the west side of the Fraser River in the New Westminster Mining Division of British Columbia.

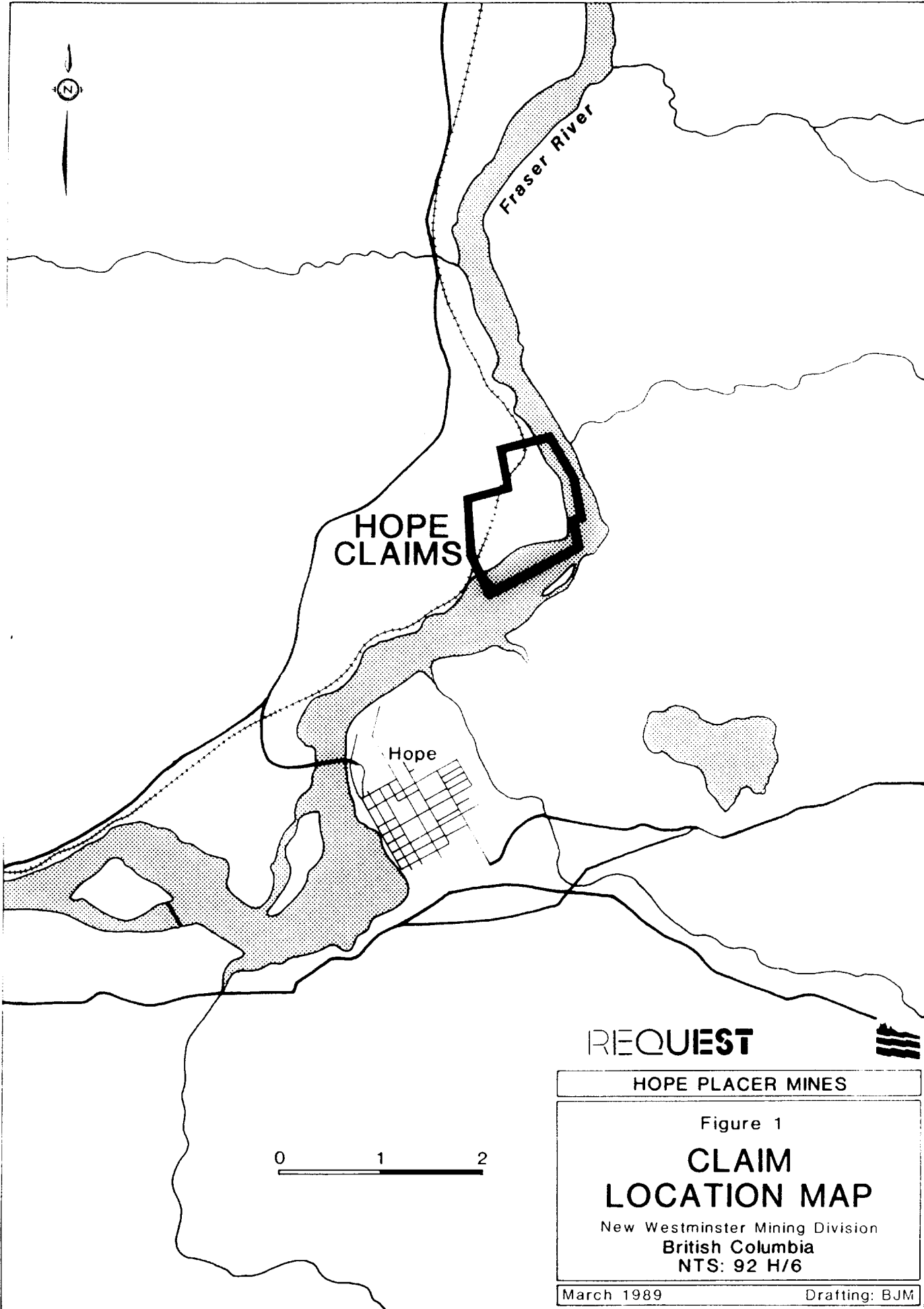
After reviewing data on the property supplied by Mr. Livesey, including an Engineers Report on the production feasibility of the placer claims done in November, 1988 by Mr. G.M. Byerlay, the writer visited the property with Mr. Livesey on March 12, 1989. The visit included viewing the plant operating on the site as well as a tour of the newly purchased future mill/refinery facility just west of Hope.

While on the site, Mr. Dolan, along with Mr. Byerlay gave this author a guided tour of the property as well as describing past, current and future operations and answering all questions pertaining to the operation.

PROPERTY DESCRIPTION

Location and Access

The Hope Placer Mines property is located on the west bank of the Fraser River approximately 2000 feet upstream from the confluence with the Coquihalla River on the east bank, and three miles upstream from the town of Hope in the New Westminster Mining Division of B.C. (Figure 1).



REQUEST

HOPE PLACER MINES

Figure 1

**CLAIM
LOCATION MAP**

New Westminster Mining Division
British Columbia
NTS: 92 H/6

March 1989

Drafting: BJM

The property is accessed by a two mile, recently constructed, four-wheel drive dirt road from the Trans Canada Highway. The highway is approximately 400 feet above the "main" or "upper" bench on the claims.

Property Status

The property consists of three placer leases encompassed by an 160 acre Crown Grant (Lot 57, Group 1, Yale Land District) known as "Union Bar". These leases and land status have not been checked but come from Byerlay's report.

HISTORY AND PREVIOUS WORK

Starting in 1858, the lower bar (below high water of the Fraser) has been worked by individuals for years. Mr. J. Murphy, the original locator of the property worked the upper end of the lower bar and stripped several hundred feet of bedrock with pick and shovel. Old records show the grade of the lower gravels to have been in the order of 0.77 oz/cu. yd.

The high bar, the one presently being worked, has an overburden cover of from 8 to 12 feet and in the 1860's gave values of 11 to 12 cents per cubic yard or 0.01 oz/cu.yd for this overburden.

The "upper pay" gravels, just under this overburden and averaging 9 to 12 feet thick, was tested from many shafts sunk on the property to locate the "pay" channel. Average values were in the order of 0.07 oz/cu. yd.

The upper channel was determined to be 1500 feet wide, 1800 feet long and consist of 39 feet of "pay" depth.

The only map of the property available is one made in 1862 and updated periodically.

In 1965, a dragline was used to strip across the channel into 13 feet of upper gravels. The sluiced material returned values from 0.018 to 0.026 oz/cu.yd.

Geology

The Fraser River flows through many various rock types during its course, but the only one of importance to placer gold near Hope appears to be the Ladner Slate. C.E. Cairnes in his 1924 Geological Survey Memoir #139 on the Coquihalla Area discusses the geology of the area in detail.

Current Operations

During the site visit on March 12th, the operation consisted of a screening plant complete with trommel, jigs and a concentrating table. This setup was capable of handling 25 cubic yards of gravel per hour using a front-end loader to dig the gravels and load the hopper. The water used came from the Fraser River using a 800 gpm pump and the used process water went into a holding pit, where it was to be pumped into a trench to percolate into the ground.

This operation has just started up, and is operating on an exploration permit and has therefore not produced much product. Since Hope Placer Mines started up last year, most of their effort has been to build a road (very steep and rough when wet) from a dump near the highway to the site, to strip 8 acres of overburden in order to expose the gravels (this also included cutting trees and removing a homestead) and to construct the screening plant. Hope Placer Mines, took several

bulk samples last fall, supervised by G.M. Byerlay. They ranged from three cubic yards to several hundred cubic yards. The samples were said to have come from pits at a depth of 8 to 12 feet in the cleared area, while one 74 yard sample came from the 20 foot level. Recoveries averaged 0.10 oz/cu.yd (\$41.00 based on a gold price of \$400.00 U.S.). The 74 yard sample produced 1300 pounds of wet concentrate (17 pounds per yard).

Hope Placer Mines have been working on the extraction of gold and platinum (which has a ratio of gold to platinum in the concentrate of approximately 5:1) from the black sands.

At present, the owners have exposed the gravels to give an accessible reserve of 400,000 cubic yards of gravel which appears to average 0.06 to 0.08 oz/cu.yd. gold, with a fineness of 900-910 (this seems a bit high when the historical production figures of 860-880 fineness are recorded).

Future Mining Plans

At present, the owners hope to raise \$300,000 (Figure 2) in order to upgrade their exploration setup into a full scale production plant capable of washing 75 yards per hour on a 24 hour basis (1500 to 1800 cubic yards per day). This money includes purchase of a dragline, pumps, tables, screens, jigs and various other items.

A 7500 square foot building near Hope will be used to upgrade the black sands using classifiers, concentrating tables and a furnace to pour Dore bars of gold and platinum.

FIGURE 2
BUDGET FOR FULL OPERATION
BY
HOPE PLACER MINES

BLACKSAND METAL RECOVERY INC.

Revenue: \$300,000

Expenditures: (Purchases - Equipment & Labour)

Trommel Screen	\$	10,000
Drag Line		35,000
Pumps		10,000
Four Concentrating Tables		36,000
Water Tanks at Shop		10,000
Concentrating Accessories		10,000
Current Debts		50,000
Bank		20,000
Doug Livesey		10,000
Payments on Leased Equipment		20,000
Set-Up Labour, Mill & Mine		25,000
Payment on Jigs (Purchase Lease)		<u>10,000</u>
Total:		\$246,000
Working Capital:		<u>54,000</u>
		\$300,000

Pre-Production Costs: \$ 38,000

Hydro Deposits	\$	600
Condor (Rob Jupe)		5,000
Mill Building (Rental Purchase)		7,500
Loan to Hope Placer		21,800
Travel		<u>3,100</u>
Total:		\$ 38,000

Note! These figures have been prepared by Hope Placer Mines

The operation will run 24 hours per day 7 days per week at the mine for at least 10 months, per year. The mill will operate one shift per day, all year long if possible. The mill will have 3 or 4 - 6'x12' concentration tables, each capable of handling 10 tons of concentrate per day.

Labour will consist of 6 to 8 men per shift at the mine and a few at the mill. Anticipated operating costs will be in the order of \$3.00 to \$4.00 per cubic yard. Plans call for producing between 90 and 120 ounces of raw gold per day.

DISCUSSION

After having seen the operations, talked to the people on site and listened to their plans for a full scale placer production I have several comments:

- 1) The property appears to be well located in a historically active placer mining area.
- 2) The land picture look attractive, and there is a good supply of pay gravels available, including the 400,000 cubic yards already stripped.
- 3) The present setup is only for pilot testing, but looks well thought out for this type of operation.
- 4) The people operating seem capable of running a placer operation effectively.
- 5) The general grades of 0.06 to 0.08 oz/cu.yd., if realistic, are enough to support an operation of the kind planned.
- 6) The future plans are feasible from a technical viewpoint.
- 7) Record keeping and plans and maps are almost non-existent. This includes cost data, mining plans and property maps.

RECOMMENDATIONS

The following recommendations come from a brief overview of the Hope Placer Mines current and future plans.

- 1) As in any mining operation, a set of controls must be implemented and adhered to in order to run efficiently.

- 2) There must be plans and maps of the operation including past, present and future work.
- 3) There must be a "Mine Plan", in writing, laying out methods of production, amounts of material moved, sizes of equipment, labour and material requirements, capital and operating costs, permits in place and those needed for any contingencies planned.
- 4) Samples of a given yardage must be run or supervised by an independent contractor in order to give credibility to the results. These bulk runs must include amounts of black sand produced plus gold fineness and gold sold.

APPENDIX A

ADDENDUM TO REPORT
EXPLORATION AND BULK SAMPLE PROGRAM

INTRODUCTION

To help determine the amount of grade of gravel reserves available on the Hope Placer Mines leases, the "paying" channel must be run with proper records kept outlining where the samples are taken, how much material is put into the screening plant and the amount of various products produced, such as concentrate, middlings, and tailings. The recovered gold must be accurately weighed and refinery records used to determine the gold fineness and amount of platinum or other platinum group metals (PGM). It is important to keep in mind that this is a gold recovery operation primarily, and any recovery of other precious metals is secondary.

Surveying/Mapping

Before any drilling of bulk sampling can begin, the property must be surveyed and an accurate map produced showing the property limits, present pit, high water limits of the Fraser River, CPR tracks, and location of proposed drill holes. This map will be invaluable for present and future operations as well as any exploration work.

Drilling

Past records show the gold bearing channel to be 1500 feet wide by 1800 feet long on the upper bench of the leases. Since only eight acres have been stripped and cleared to date, approximately 54 acres of assumed channel must have its "pay" dimensions delineated and the depth to bedrock determined.

The quickest way to do this is by initiating a drilling program (rotary reverse circulation with a large diameter bit).

Bulk Sampling

Along with the drilling, a careful bulk sampling program must be done and overseen by an independent third party. This bulk sampling should include measured amounts of gravel run through a clean screening plant and have the plant products weighed and the gold fineness determined along with any other valuable minerals in the PGM. It is important to be able to relate the concentrate, middlings and tailings values to the pay gravel yardage. A value of "x" oz/t Au in the concentrate is meaningless unless one can relate it to the original material in the ground.

The bulk program should consist of several samples in the order of 100 cubic yards per sample or up to 1000 cubic yards per sample. They can be taken using the present equipment on site; backhoe or front end loader, along with the proposed dragline. The operation must be supervised closely in order to insure accurate sample location, amount of sample, amount of products, and assay of final product for refinery. The plant must be cleared after every sample run.

Proposed Budget

This budget covers a program to define reserves over the present 400,000 cubic yards, but includes work needed regardless of any major exploration phase.

Surveying and Mapping	\$ 2,000
Engineering and Geology (includes monitoring bulk sampling and drilling)	10,000
Report	2,000
Bulk Sampling (four runs to include three at 100 cubic yards and one at 1000 cubic yards)	2,000
* Drilling (60 holes averaging 35 feet deep, for a total of 2100 feet)	<u>25,000</u>
Subtotal	\$41,000
Contingency @ 15%	<u>6,000</u>
Approximate total	\$47,000

Measurement Data