

Schmidt

888336

**SURF INLET MINES LTD.**

**PROJECT NO. 998-266**

**APRIL, 1986**

by  
Wright Engineers



## 1.0 INTRODUCTION

This project has been valued using a discounted cashflow approach. This method of valuation requires projecting yearly cashflows (revenue) and subtracting yearly cash outflows (operating costs, capital costs, interest, taxes, etc.). Each of the components of the cashflow is discussed below, followed by a summary and explanation of results.

## 2.0 ASSUMPTIONS

### 2.1 Reserves

Base Case:	400,000 tons
Sensitivities:	300,000 tons
	500,000 tons

### 2.2 Milling Rate

300 tons per day starting January 1, 1987.

### 2.3 Gold Grade

The gold grade varies between .06 ounces per ton and .10 ounces per ton. Sensitivity analysis has been performed on this range.

### 2.4 Gold Recovery

Testing to date indicates recoveries of between 78.8% and 83.2% on grades varying from .067 ounces per ton to .151 ounces per ton. An average recovery rate of 80% has been assumed.



**2.5 Pay Factor**

Pay factor of 91% (pay for 93% at 98% of price)

**2.6 Smelter Charges**

Smelter charges of \$150/ton were used which assumes the iron content is not too high and there are no other penalties or credits.

**2.7 Freight**

Barge from Surf Inlet to Vancouver  
\$8,000/barge = \$ 57 /ton

Truck from Vancouver to Trail \$ 34 /ton

Insurance and miscellaneous \$ 9 /ton

\$100 ton

**2.8 Price**

Base Case \$350 US/ounce

Sensitivity \$400 US/ounce

**2.9 Exchange Rate**

\$.72 US/Cdn.

**2.10 Operating Costs**

\$11.14/ton (as outlined in Table 4 of the report)



**2.11 Capital Costs**

Plant	\$ .867 million
Camp	\$1.133 million
Hydro	<u>\$2.140</u> million

\$4.140 million (as outlined on Page 15 of the report)

**2.12 Working Capital**

\$300,000 (or about 3 months of operating costs.)

**2.13 Taxes**

Federal and B.C. income tax and B.C. mineral resources tax. (Detailed tax calculations will be provided upon request.)

**2.14 Debt and Interest**

None, 100% equity.

**2.15 Inflation**

None on price, operating cost or capital cost.

**2.16 Discount Rate**

5%, 10%, 15% and 20% are shown on the cashflow output. However, the appropriate discount for this project would be the after tax weighted average cost of capital (debt plus equity) which would probably be between 5% and 10% real, depending on the debt/equity ratio.



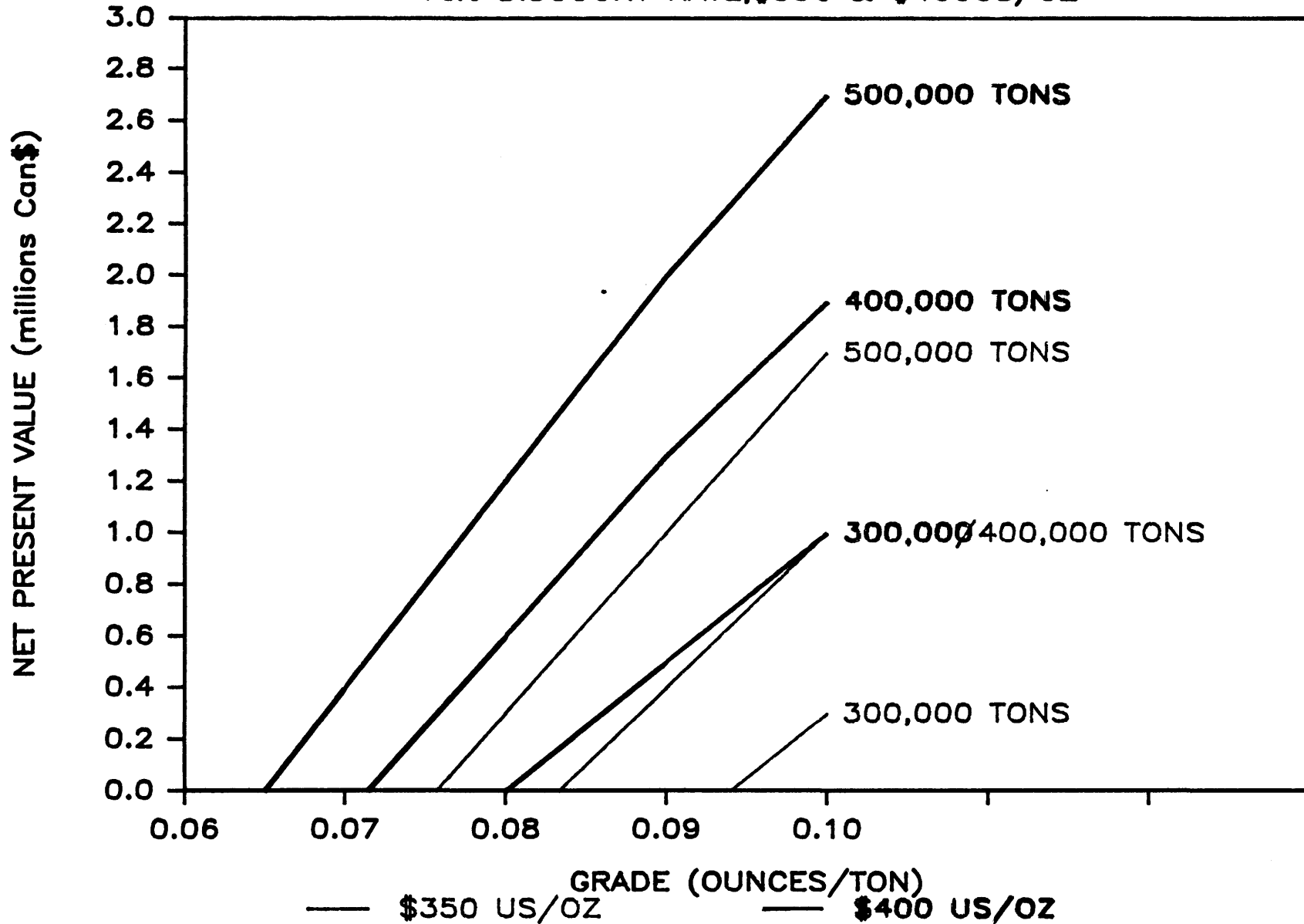
### 3.0 RESULTS

<u>Reserves (tons)</u>	<u>Grade (%)</u>	<u>Price of Gold (US \$/Ounce)</u>	<u>Net Present Value (million Cdn.\$) at real discount rates of</u>		
			<u>5%</u>	<u>10%</u>	<u>15%</u>
300,000	.09	\$ 350	0.1	-0.2	-0.5
	.10	\$ 350	0.6	0.3	-0.1
	.09	\$ 400	0.9	0.5	0.1
	.10	\$ 400	1.4	1.0	0.6
400,000	.07	\$ 350	-0.4	-0.8	-1.1
	.08	\$ 350	0.3	-0.2	-0.5
	.09	\$ 350	0.9	0.4	0.0
	.10	\$ 350	1.6	1.0	0.6
	.07	\$ 400	0.4	-0.1	-0.4
	.08	\$ 400	1.1	0.6	0.2
	.09	\$ 400	1.8	1.3	0.8
	.10	\$ 400	2.6	1.9	1.4
500,000	.05	\$ 350	-2.2	-2.5	-2.7
	.06	\$ 350	-0.9	-1.3	-1.6
	.07	\$ 350	0.1	-0.4	-0.8
	.08	\$ 350	0.9	0.3	-0.1
	.09	\$ 350	1.7	1.0	0.5
	.10	\$ 350	2.4	1.7	1.1
	.05	\$ 400	-1.1	-1.5	-1.8
	.06	\$ 400	0.1	-0.4	-0.8
	.07	\$ 400	1.0	0.4	0.0
	.08	\$ 400	1.8	1.2	0.7
	.09	\$ 400	2.7	2.0	1.4
	.10	\$ 400	3.5	2.7	2.0



# NET PRESENT VALUE vs GRADE & TONS

10% DISCOUNT RATE, \$350 & \$400 US/OZ



**4.0**      **CONCLUSIONS**

This project has a net present value of \$1.0 million at \$350 US/ounces and 10% real discount rate assuming 400,000 tons of reserves and an average grade of .10 ounces per ton.

The breakeven grade at \$350 US/ounce and a 10% real discount rate varies depending on the reserves as shown below:

<u>Reserves</u>	<u>Breakeven Grade</u>
300,000 tons	.094 ounces/ton
400,000 tons	.083 ounces/ton
500,000 tons	.075 ounces/ton

It should be noted that even at breakeven the capital cost is recovered plus a 10% return on this capital. No allowance has been made either for future production or for salvage value.



