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Surf Inlet Mines Ltd. (1)

Mineral Exploration Incentive Program

Preliminary Technical Information Required

Main Target of the Program: Pugsley Mine; clean up the 900 adit level to allow mapping and sampling to the face of the south exploration cross-cut 1525 meters from the portal. Surf Mine; open the blocked portal and clean up the 900 adit level to allow mapping and sampling. Evaluate the mill tailings from the former operation amounting to approximately 1,000,000 tons, also the condition of the hydroelectric dam and mill foundations.

Property Name: Surf Inlet Property

Location, Access and Mining Division: The property is located on Princess Royal Island near the head of Surf Inlet approximately 580 km northwest of Vancouver and 170 km southeast of Prince Rupert. Access is by boat to the head of Surf Inlet, about 6 km south of the property or by float plane or helicopter to Bear Lake. The property is in the Skeena Mining Division.

Number and Type of Claims or Leases: 9 Mineral Claims (118 units), 21 Crown granted mineral claims and 11 reverted Crown granted mineral claims.

Brief Details of Option Agreements and Contractual Obligations: Surf Inlet Mines Ltd. has an option agreement with Matachewan Consolidated Mines Ltd. whereby the company can earn a minimum 70% or a maximum 85% interest in the property by spending \$1,400,000 on exploration and development prior to January 3, 1989.

Regional Geology: Princess Royal Island lies near the western boundary of the 200 km wide Coast Crystalline Belt. Princess Royal Island is composed principally of a moderately dark hornblende-biotite quartz diorite pluton, either a massive or gneissic variety of early to middle Cretaceous age. Local geology; <u>The ore deposits of Surf</u> <u>Inlet on the north and Pugsley on the south are in quartz</u> <u>pyrite veins along a complex fault zone with a general</u> north-south strike and a westerly dip between 45° and

Surf Inlet Mines Ltd. (2)

60°. The fault zone is along or near the east side of a screen of metasediments and volcanics contained within the Coast Plutonic Complex which is mainly composed of quartz diorite and bordering gneisses.

Current Status of Exploration: Previous production was in excess of one million tons averaging 0.45 oz/ton gold. 1981 exploration consisted of widespread shallow diamond drilling for bulk tonnage. Present work is focussing on stockpiles, tailings and detailed underground exploration.

Recommended Program: Pugsley; clean up the open 900 adit level, extend ventilation to the face of the south exploration cross-cut to allow mapping and sampling. Surf Mine; open up the collapsed portal, clean up and ventilate the 900 adit level to allow sampling and mapping. Evaluate tailings by drilling, examine mill foundations and dam.

Estimated Start Date: September 1, 1986

Estimated Finish Date: November 1, 1986

Bibliography (partial and abbreviated):

Bell, D.R., Ore Potentials of the Surf Inlet Mine, February 18, 1986, 6 pp.

Dolmage, V., Report on Surf Inlet Consolidated Gold Mines, June 1939, 5 pp.

Dolmage, V., Report on Surf Inlet Consolidated Gold Mines, July 8, 1946, 11 pp.

Freeze, A.C., Exploration and Development Recommendations, Surf Inlet, March 10, 1986, 12 pp.

Gill, J.E., Surf Inlet Consolidated Mines Property, August 1, 1941, 29 pp.

Honsberger, J.C., Report on Former Surf Inlet Consolidated Gold Mines Ltd., July 20, 1973.

Mentzel, C., Surf Inlet Consolidated Gold Mines Ltd., yearly report, June 30, 1941, 56 pp.

Shearer, J.T., Geological Report, Surf Inlet, Pugsley Mines, June 25, 1985, 26 pp.

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6. DESCRIPTION OF BUSINESS AND PROPERTY OF ISSUER

Description of Business

The Issuer was incorporated on March 18, 1986 under the Company Act of British Columbia.

The Issuer's principal business is to engage in the evaluation, acquisition, exploration and development of mining properties. The Issuer's initial efforts will be directed towards the development of the Surf Inlet Mineral Property and the Issuer intends to bring this property into commercial production prior to searching for or acquiring other mineral properties.

Property of the Issuer

Description of Property

Surf Inlet Mineral Property consists of three separate The groups of claims. The first group of claims, known as the Matachewan Property, consists of 21 crown grants, 3 mineral claims totalling 50 units, 4 surface leases, 2 water licenses and 1 foreshore lease, all of which are located at the head of Surf Inlet in the Skeena Mining Division, British Columbia. The second group of claims, known as the Placer Property, include 4 mineral claims and 11 reverted crown grants totalling 81 units located at the head of Surf Inlet in the Skeena Mining Division, British Columbia. The third group of claims, known as the Surf 1 and Surf 2 Property consists of 2 mineral claims totalling 2 units and are located at the head of Surf Inlet in the Skeena Mining Division, British Columbia. These properties are referred to on an individual basis as the Matachewan Property, Placer Property and Surf 1 and Surf 2 Property, and are collectively referred to as the Surf Inlet Mineral Property.

The Surf Inlet Mineral Property:

- was operated profitably prior to 1940, being historically the 8th largest gold producer in British Columbia;

- possessed historical records of excellent gold and silver development and recovery;
- offers favourable geological conditions for a substantial reserve tonnage;
- offers a year-round access and operating conditions along with nearby hydro-power dam;
- allows for the economical transportation of ores and concentrates.

Terms of Acquisition

<u>Matachewan Property</u> - Pursuant to an agreement made effective the 30th day of April, 1986 between the Issuer, Tadeusz F. van Wollen and Murray McClaren, the Issuer acquired an option to earn up to an 85% interest in the Matachewan Property. The option requires the Issuer to expend \$1,400,000.00 on exploration and development of the Surf Inlet Mineral Property prior to January 3, 1989. Matachewan Consolidated Mines, Limited has retained a 30% working interest in the property which may be diluted to a 15% carried interest Should this company not wish to participate in financing development of the property after the option has been exercised.

Both the original Option Agreement dated November 20, 1985 between Matachewan Consolidated Mines, Limited, Tadeusz van Wollen and Murray McClaren and the Assignment Agreement dated April 30, 1986 in favour of Surf Inlet Mines Ltd. have been registerd with the Skeena Mining Division.

<u>Placer Property</u> - Pursuant to an agreement made effective the 30th day of April, 1986 between the Issuer, Tadeusz F. van Wollen and Murray McClaren, the Issuer acquired an option to earn up to a 97% interest in the Placer Property. The option requires the Issuer to maintain the claims in good standing until January 3, 1989. Placer Development Limited has retained a 3% carried interest in this Property.

Both the original Option Agreement dated March 1, 1986, between Placer Development Limited, Tadeusz van Wollen and Murray McClaren and the Assignment Agreement dated April 30, 1986 in favour of Surf Inlet Mines Ltd. have been registered with the Skeena Mining Division.

- 7 -



<u>Surf 1 and Surf 2 Property</u> - The Issuer has acquired ownership of the Surf 1 and Surf 2 mineral claims from Johan T. Shearer for his costs of staking these claims.

Location and Access

The Surf Inlet mines located near the head of Surf Inlet on Princess Royal Island approximately 160 km southeast from Prince Rupert. Access is by air or sea.

Butedale, 16 km east of the mine site, is a port with docking facilities for ocean going ships.

The Surf and Pugsley ore bodies located on the Surf Inlet Mineral Property are 11 km from a wharf and hydroelectric power site. In the past, electric locomotives and barges formed the supply link from tidewater to the mine site.

Development History

Gold was discovered in the Surf Inlet area in the late 1800s. The first claims, located in 1898, the oldest in the Skeena Mining Division, were initially owned by Surf Inlet Mines Ltd. The property produced on a continuous basis approximately 850,000 tons of ore from 1917 to 1926. The ore graded .425 ounces of gold, .3 ounces of silver and 6 pounds of copper per ton. The recovery of gold was in the 90% range.

The operations resumed in 1936. The shortage of labour and war time restrictions resulted in the closure of the mine in 1940.

The total recorded production from the property amounted to approximately 1.1 million tons of ore, from which 382,000 ounces of gold, 200,000 ounces of silver and 6,000,000 pounds of copper were recovered. This production made the Surf Inlet Mineral Property the eighth largest gold producer in British Columbia. The current underground ore reserves determined after the completion of the 1946-47 work program were 14,000 tons of proven ore and 57,000 tons of probable ore grading at .35 to .40 ounces per ton gold. The potential for expanding ore reserves has been noted by Dolmage (1946), Honsberger (1973), Freeze (1986) and Bell (1986) as excellent.

Recently the Cominco-Placer Joint Venture tested the property in 1981 for the large tonnage low grade potential, concluding there was no possibility to develop a deposit amenable to open pit mining.

During mine operation, power was generated by hydroelectric plant using a 45 foot high reinforced concrete dam and 900 kw powerhouse. The 1985 inspection by the provincial government inspectors confirmed the dam was in reasonable condition. This power facility is located on the Property and is available for use by the Issuer.

Work Done by the Issuer

Surf Inlet Mines Ltd. has retained the services of several experts from the mining industry to assess the economic potential of the property and to determine the most efficient approach to resumption of the mining activities on the property.

Approximately \$75,000 has been spent to date on acquisition of the Surf 1 and Surf 2 Property, as well as a wide range engineering assessments of the Surf Inlet Mineral OT hydroelectric power study; Property which include: metallurgical testing; modular (300 T/day) mill design; study; geological, geochemical and environmental mineralographic studies; underground reserves potential study; preparation of topographic map and orthophoto of the property. The emphasis of this work has been on the mine order to prove their commercial viability, dumps in resulting in the determination of their net present value by Wright Engineers Limited.

The proposed financing for the recommended work program would allow the Issuer to complete the second stage of the overall development program planned for the property, being the evaluation of potential extraction of gold from mill tailings located on the Surf Inlet Mineral Property.

Project Valuation

The mine dumps have been valued by Wright Engineers Limited using a discounted cashflow approach. The valuation was based on the mine dumps only, which have been determined to contain 400,000 tons. Sensitivity analysis has been performed on 300,000 to 500,000 tons of dump reserves and on 0.06 opt to 0.1 opt of contained gold. The mine dumps have a determinate value of \$1.0 million at \$350 U.S./ounce and a 10% real discount rate. The breakeven grade for 400,000 tons is .083 opt. It should be noted that at this, grade the capital cost is recovered plus 10% return on this capital. Also, the Issuer's sampling of the mine dumps showed an average grade of .109 opt of contained gold.

Neither the proven underground reserves nor the potential net value of the mill tailings have been included in the net present value arrived at by Wright Engineers Limited. The current underground ore reserves were determined to be 14,000 tons of proven ore and 57,000 tons of probable ore grading at .35 to .40 ounces per ton gold. The potential for expanding ore reserves has been noted by Dolmage (1946), Honsberger (1973), Freeze (1986) and Bell (1986) as excellent. The Issuer, based on evaluations made to date, believes that the mill tailings could represent significant additional gold reserves:

Recommended Work Program

The proposed work program calls for evaluation of the extraction of gold from mill tailings and rehabilitation of other operational sites located on the property.

The proposed work program is part of the overall development program planned for the property and is intended to be the next phase in the resumption of the mining activities on the Surf Inlet Mineral Property.

The results obtained from the proposed program would allow the Issuer to determine the sequence of the development program and the extent of the required production financings. The \$99,000 work program proposed by A.D. Drummond, Ph.D., P.Eng., and J.G.B. Michell, P.Eng., is based upon site visits by Drummond and Michell, and a study of various reports and engineering assessments on the subject property. Samples taken by TRM Engineering Ltd. from dump mine material averaged .109 opt. Metallurgical test on these samples demonstrated viability of flowtation concentration with an average recovery of 80% of contained gold.

The program will assess commercial viability of the mill tailings and the amount of work necessary to rehabilitate the mill site, the camp site and the dam site areas.

The development strategy and the required production financing will be determined based on the final economic analysis performed on data obtained from the proposed work program. The intended sequence of operations is illustrated below:

Stage 1	-	feasibility of mine dumps (completed)
Stage 2		feasibility of mill tailings (proposed)
Stage 3		construction of access road to the mine site
Stage 4	-	underground ore reserve development
Stage 5	-	mill construction

Stage 6 - production

The Issuer intends to proceed with Stages 3, 4, 5 and 6 whether or not positive results are obtained in Stage 2.

- 11 -