



To: Dr. J. T. Fyles
Sr. Assistant Deputy Minister

018633 Date: 14 December 1979

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Our File	SENIOR ASSISTANT DEPUTY MINISTER E. M. & P. R.
REC'D	DEC 14 '79
REFERRED TO	DATE
INITIALS	

Re: Dolly Varden Access Road

The following comments pertain to the ore reserves and mineability of Dolly Varden Resources Ltd. properties and the mineral potential of the upper Kitsault valley area generally.

Dolly Varden Resources Ltd. (95% controlled by Yorkshire Securities) holds 91 mineral claims situated between 27 and 32 km north of Alice Arm. The mineral claims are located east and west of the Kitsault River.

The original road follows the route of the Dolly Varden railway constructed in 1919. The tracks were torn up in the late 1940's and the road constructed to provide access to the Torbrit mine which operated until 1958. From then until about 1973, the road was maintained to about mile 20 by Dept. of Highways (partly funded by Mines?) to provide access for various exploration and development projects. Very little work of this nature has gone in the area in recent years except for a geochemical program conducted by Dolly Varden in 1978.

Significant silver price increases have led Dolly Varden to seriously consider placing the properties into production. Proven and probable ore reserves are 1.7 million tons of 9.5 ounces silver per ton with recoverable values in lead (0.5%), zinc (0.8%), cadmium and possibly barite. These reserves are contained in four deposits as follows:

Dolly Varden	47,433 tons
North Star	253,212 "
Torbrit	866,812 "
Wolf	534,969 "

PROPERTY FILE
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The first three are contiguous properties while the Wolf is situated 3 km north. The original mining plan involved development of the Wolf first, but access problems have led the present company to consider the North Star - Dolly Varden vein system as the initial operation. Another factor is higher than average grades at these two deposits (16 ounces per ton silver at Dolly Varden).

All of these deposits would be mined by underground methods. Feasibility studies indicate the Wolf to be amenable to trackless ramp mining. Dolly Varden and Torbrit have been mined previously and this would necessitate perhaps more costly methods.

Mr. Duguid's projection of annual value of production is based on \$10 per ounce (Canadian) silver, so that at the present prices of near \$20 per ounce these figures could be doubled. While this does not appreciably alter his projected benefits to the Province, it undoubtedly makes the properties more attractive for development.

Estimated operating costs in 1973 were \$9.07 per ton based on a 1000 tpd mill. This figure would be at least double at the present time and probably higher. Gross value per ton is in the order of \$165, making the proposed development an attractive situation.

The present company's plans initially call for a 150 tpd mill in Alice Arm which would operate year-round. The mine would operate only in the snow-free 6 months and this would necessitate the trucking of about 300 tons per day. Definitely a better road than the original one would be required. I would concur with Ministry of Highways estimates of \$3-\$4 million to provide such a road.

Exploration potential of the 91 Dolly Varden claims has not been fully tested. Numerous adjacent properties have small reserves of reasonable silver grades, and it is a fair statement that the potential for additional reserves is reasonably good.

Conclusions

Dolly Varden Resources' properties present a viable mining operation at present day silver prices. The proposed operation however, is subject to the granting of necessary permits by Environment Canada and various Provincial agencies. Obviously, the viability of the operation also depends on the construction of a road (paid for by the Province) which would allow the trucking of about 300 tons of ore a day over a 27 km distance.

Access to the upper Kitsault would permit exploration of the adjacent area at a reasonable cost and which could result in the discovery of additional reserves of mineable ore.



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