

28 APRIL 1988

MEMORANDUM

TO: ENGINEERING SUPERVISOR  
 FROM: Mine Geologist  
 RE: SOURCES OF ACID NEUTRALIZING LIMESTONE

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**INTRODUCTION**

Equity Silver Mine obtains calcined limestone from Texada Lime Ltd, Vancouver B.C. Limestone is mined from a quarry on Texada Island, calcined to produce calcium oxide and shipped by rail and truck to the minesite. Total shipping cost to the minesite is \$132.17 per tonne.

Inquiries into alternate sources of limestone have been made and are summarized below. They are listed in order of decreasing preference.

**SUMMARY AND RECOMMENDATIONS**

The following alternate sources of limestone are recommended and are listed here in order of decreasing preference:

1. Melissa May marl quarry: This property is owned by Paul Wadsworth (Dunairo Resources Ltd.) of Usk, B.C., is located approximately 36km north of Terrace and has a surface area of 2.2 hectares. The deposit is a fine grained marl (marl is defined as an intimate mixture of calcite and clay, usually a calcareous clay with the calcareous portion derived from shell fragments) and has been drilled to a depth of 28 feet. The marl can be dug with a loader and dries to a fine white powder. Tests conducted on this marl and material from Texada Lime gave the following results:

	Texada Lime	Terrace Marl
+10 mesh	35.8%	0%
-10 mesh	64.2%	100%
Ca (by A.A.)	61.3%	32.8%
Fe (by A.A.)	500ppm	3280ppm
Acid neutralization	31.5megHCl/g	17.8megHCl/g
Insol	2.45%	6.43%
CaO (A.A.Ca)	85.7%	-
CaO (Acid Neut.)	88.3%	-
CaCO <sub>3</sub> (A.A.Ca)	-	81.9%

CaCO<sub>3</sub> (Acid Neut.) - 89.1%

Initial results show that the calcium carbonate marl compares favourably with the calcined material from Texada Lime. A trip has been arranged for Friday, April 29 to tour the property, collect samples and take pictures.

2. Terrace Calcium Products Ltd. limestone quarry: This quarry was worked on a limited basis during 1972 and 1973. It is located on Copper Mountain about four and a half miles east of Terrace. The tenure lease to this property was dropped in February, 1987. Attempts are currently being made to acquire this property by applying for a Section 10 short term tenure which would allow exploration and sampling to be conducted for about a year. Initial inquiries have revealed that, although the tenure has been dropped, the mineral claim on the property may still be valid. This information will be known definitely tomorrow. If the claim has been dropped, it is recommended that we stake the ground, then make application for a temporary tenure. Cost of application for temporary tenure is \$50.00 and the cost of the tenure itself is another \$50.00.
3. Necoslie River Limestone: This is a small limestone quarry which is located about 8 miles southeast of Fort St. James. The property was held by Dantar Chemicals of Montreal and was worked briefly in 1970. Initial investigations have revealed that all mineral claims in this area have been cancelled, indicating that the ground is open. Drawbacks to this property are that, in addition to the material having to be drilled and blasted, transportation costs may be significantly higher than those of the two above properties. This option will be pursued if we cannot acquire the Terrace Calcium Products property.
4. Dahl Lake quarry: This property is located 22 miles southwest of Prince George. It is an active quarry with the product used mainly in pulp mills. The property is owned by Northrock Industries Ltd. of Prince George (ref. 1974 "Geology, Exploration and Mining in British Columbia"). No further research has been conducted on the potential of this property.

J. Cyr

cc. Mine Manager

Mine Geologist