

MINNOVA

MEMORANDUM

DATE: March 9, 1989
 A TO: A. J. Davidson
 COPIES A TO: I. D. Pirie, G. S. Wells
 COPIES TO: J. D. Kapusta
 DE FROM: J. D. Kapusta
 SUJET SUBJECT: Lara Property - Mineralized Stockpile from Abermin's Underground Exploration Program: Grade and Tonnage; Possible

LARA
 827417
 92B/13

Transport to Buttle Lake

The following table is an initial grade and tonnage calculation for the mineralized material, that was excavated by Abermin/Laramide's underground exploration program of 1988. This material is presently stockpiled at the Portal site.

Heading*	Cu %	Pb %	Zn %	Ag oz/ton	Au oz/ton	S.G.	Short Tons	Cu lbs	Pb lbs	Zn lbs	Ag oz	Au oz	Tons x S.G.
Medium Grade Pile	0.32	0.46	2.17	1.11	0.051	2.88	2565.80	16421.12	23605.38	111355.72	2848.04	130.86	7389.50
3675 RSE	1.14	1.83	9.90	4.30	0.131	3.18	131.42	2996.38	4809.97	26021.18	565.11	17.22	415.29
3602 RSE	0.50	0.58	4.01	2.10	0.049	2.89	79.64	796.40	923.82	6387.13	167.24	3.90	230.18
3577 RSE	0.28	0.52	1.88	1.23	0.066	2.93	173.09	869.30	1800.14	6508.18	212.90	11.42	507.15
3577 F. RSE	0.40	0.45	2.16	1.27	0.050	2.96	138.73	1109.84	1248.57	5993.14	176.19	6.94	410.64
Average Grade	0.36	0.52	2.53	1.29	0.050	2.90	3088.68	22293.04	32387.85	156285.33	3969.48	170.34	8952.74
Low Grade Pile	0.11	0.15	0.62	0.41	0.022	2.88	10060.00	22132.00	30180.00	124744.00	4124.60	221.32	28972.80
Average Grade	0.17	0.24	1.07	0.82	0.030	2.88	13148.68	44425.04	92587.85	281009.33	8094.08	391.66	37925.54

* each heading is piled separately

The next table of calculations is based on the following criteria:

Metal Prices (\$US)

Cu \$0.975/lb
 Pb \$0.35/lb
 Zn \$0.475/lb
 Ag \$7.20/oz
 Au \$400/oz

Recoveries

Cu - 90%
 Pb - 50%
 Zn - 80%
 Ag - 80%
 Au - 65%

Treatment Charges (\$US)

Cu - \$0.423/lb
 Pb - \$0.300/lb
 Zn - \$0.336/lb
 Ag - \$1.257/oz
 Au - \$19.41/oz

US \$ = 1.25 CAN \$

Heading	Value Per Ton		Recovered Value Per Ton		NSR Per Ton		Tons	NSR Value	
	CAN	US	CAN	US	CAN	US		CAN	US
Medium Grade Pile	\$73.09	\$58.47	\$54.21	\$43.37	\$32.65	\$26.12	2565.8	\$83,773.38	\$67,018.70
3675 RSE	\$265.65	\$212.52	\$200.54	\$160.43	\$108.84	\$87.07	131.42	\$14,303.43	\$11,442.74
3602 RSE	\$108.29	\$86.63	\$83.83	\$67.06	\$46.05	\$36.84	79.64	\$3,667.43	\$2,933.94
3577 RSE	\$77.78	\$62.22	\$56.64	\$45.31	\$36.79	\$29.43	173.09	\$6,367.55	\$5,094.04
3577 FRSE	\$75.76	\$60.61	\$56.69	\$45.35	\$34.29	\$27.43	138.73	\$4,756.70	\$3,805.36
Average Grade	\$82.48	\$65.99	\$61.50	\$49.20	\$36.63	\$29.30	3088.68	\$113,122.91	\$90,498.32
Low Grade Pile	\$26.05	\$20.84	\$18.91	\$15.13	\$12.29	\$9.83	10060	\$123,612.25	\$98,889.80
Average Grade	\$39.54	\$31.63	\$29.44	\$23.55	\$18.46	\$14.77	13148.68	\$242,757.50	\$194,206.00

During December of 1988, two local contracting companies on Vancouver Island were contacted (Hub City Paving of Nanaimo and Johel Brothers of Lake Cowichan) and asked to supply a quote for loading and hauling the stockpiles from the protal site to Westmin Resources at Buttle Lake. This would be a total distance of 301 km (21 km of which would be off-road).

Only Hub City Paving responded with a quote of \$36.00 per ton. This price includes loading, hauling and maintenance surcharges on the Copper Canyon mainline, based on a minimum of 10,000 tons.

Considering that the entire stockpile is an estimated 13,148.68 tons, this would then cost \$473,351.48 to transport to Buttle Lake assuming that Westmin would pay back the NSR value of \$18.46 (\$242,724.63), this would leave Minnova with a short fall of \$230,627.85. Needless to say, this is unacceptable.

A second possible option would be to transport only the 3088.68 tons of higher grade material at a cost of \$111,192.48 (using \$36 per ton shipping charge) and again assuming that Westmin would pay back the NSR value of \$36.63 CAN (\$113,138.35), this would leave Minnova with a potential net gain of \$1945.87. If the remaining 10,060 tons of low grade material was offered to MacMillan Bloedel for road fill at no cost and they accepted, it would eliminate the problem. This would appear a better option than the first, but may still be a bit to close to the chest to be comfortable with.

A third possible option would be to notify Laramide that under the terms of their deal with Abermin, they are liable for the

disposal of this material especially since it was excavated prior to any deal being made with Minnova, who should not be encumbered with the disposal of this white elephant. Also the sale of the stockpiles by Minnova to a third party may be in contradiction to the terms as outlined in the deal made between Minnova and Laramide (with reference to paragraph B, subsection (d) in a letter dated September 30, 1988 to Minnova from Laramide).

Under the terms of the agreement between Abermin and Laramide dated September 12, 1988 one of the conditions of sale under paragraph 1, (c) is that the property be "free and clear of all encumbrances save and except for obligations of Abermin under the Lara Agreement occurring after the Closing Date which Laramide will assume". One of the obligations, a condition set forth by the Provincial Government prior to commencement of the underground program, of Abermin was that the mineralized material not be left uncovered for longer than one year, pending review of monitoring data. If AMD (acid mine drainage) is discovered earlier a cover should be placed over the material. Removal of the ore or permanent capping will still be required in the long term to prevent AMD production. Another point was that neutralization chemicals for the treatment pond must be stored onsite for use in the treatment pond. These chemicals were never purchased by either Abermin or Laramide.

Also the water quality monitoring program being carried out by Hatfield Consultants for the period between October 1 and December 31, 1988 (third quarterly report) has noted "that the bulk ore stockpile has gone acid, the pH of the runoff has dropped to 3.91". A copy of Hatfield's report should have been forwarded to Mr. Robert Bone, District Inspector of Mines by Laramide.

It is my opinion that we should pursue the third option. Of course, legal counsel will be required for this but if we can turn this potentially costly problem back onto Laramide's plate we should.