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SUMMARY REPORT

- for -

MT. ROSE MINING CO. LTD.

1350 Rainbow Drive
North Vancouver, B.C.

KRAN, DAVID &
ASSOCIATES

#1 - 219 VICTORIA ST

ICANWILL - 1980

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A report prepared to summarize expected volume and impurity content of a limestone deposit located 4 miles northwest of Armstrong, B.C.

Submitted by:

John Kerr
683-3809



736-9808

March, 1971

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FIGURE 215-1: Location of Drill Holes and
Blocked Out Reserves
1":50'

SUMMARY

A drill programme and evaluation of a limestone deposit, 4 miles northwest of Armstrong, B.C., was undertaken by Versatile Mining Services Ltd. for Mount Rose Mining Co. Ltd. to prove the existence of 1,250,000 tons of a saleable limestone product. Results of the drilling indicate the following reserves:

Proven Limestone Reserves	1,100,000 tons
Probable	<u>500,000 tons</u>
Total	1,600,000 tons

Based on chemical analysis of all the core, an Fe_2O_3 content of greater than 0.10% was considered waste material. An average of 0.08% Fe_2O_3 , or 0.055% contained Fe, was calculated for the total reserves. Other impurity contents are given in the text of the report.

From the results of drilling, the iron content in limestone appears to be increasing with depth, and to the southwest of the property. One drill hole suggests the existence of sporadic pods of high content impurities. With the above exceptions, virtually unlimited reserves of untested limestone are available. If the impurity content of the limestone meets sales specifications, the required tonnages of limestone exist on the property.

INTRODUCTION

At the request of Mr. Howard Powell, Manager of Mount Rose Mining Co. operations in Vernon, a drill programme and evaluation of a limestone deposit, 4 miles northwest of Armstrong, B.C., was completed by Versatile Mining Services Ltd., Kamloops, B.C. The objective of the programme was to outline 1,250,000 tons, and investigate the impurity content of the limestone. The drilling was completed during November, 1970, and the chemical analysis and evaluation was prepared in March, 1971.

EVALUATION PROGRAMME

A block of limestone 600 feet by 500 feet, drilled to a depth of 50 feet, would prove the existence of 1,250,000 tons of limestone. Eleven vertical holes, spaced at approximately 200 foot intervals were considered sufficient to prove this volume. The holes were drilled with a Boyles X-ray portable diamond drill, collecting 1X size core. Core samples were collected every 10 feet along each hole, and analyzed for the following at the Vancouver laboratories of Bondar-Clegg & Co. Ltd.

- CaO
- MgO
- Fe₂O₃
- Al₂O₃
- K₂O
- Na₂O
- Loss on ignition
- Acid insoluble material

The laboratory report and an average of drill hole chemical analysis are attached as Appendix A.

GEOLOGY

The limestone deposit is a small lense or pod within the Cache Creek group of sediments. The size of the pod is unknown; however, believed to be less than 1 square mile. No reference of limestone in this area is found on Geological Survey of Canada maps. Three small plugs of granite intrude the sediments, 2 - 3 miles to the south. Limestone bedding planes were measured to have a north-northwesterly strike, with low dip angles to the west.

In the area of the potential economic zones, the limestone is pure white to dark grey interbanded, coarsely recrystallized, 98 - 99% pure CaCO_3 . Trace impurities of Fe, SiO_2 , MgCO_3 , Al_2O_3 , Na_2O and K_2O have been chemically analyzed in the rock. These are probably the results of secondary mineral alteration along fracture planes. Muscovite, quartz, pyrite, and iron oxide minerals are observed in hand specimens.

ECONOMIC POTENTIAL

All the rock encountered in the drill holes is limestone. Impurity bands are noted in diamond drill logs. Chemical analysis indicated a quantitative measurement of the trace impurities. Iron content is apparently the most critical and undesirable trace element for the proposed use of limestone. Therefore, tonnage calculations were based on a cut-off of 0.10% Fe_2O_3 (0.07% contained iron). Limestone with greater than 0.10% Fe_2O_3 content was excluded from the tonnage calculations.

Figure 215-1 shows the drill hole layout and the blocked out economic reserves. These may be considered as proven economic limestone, with the following reservations:

1. Small lenses, bands or pods of impure limestone may occur in the deposit; which, with the exception of drill hole #11, were not intersected in the drill holes. Hole #11 was not included in tonnage calculations.
2. The average impurity content of the block meets required specifications for the use of the limestone products.

A small block of what is considered probable economic limestone, underlies the proven reserves. Drilling on the first row of holes was completed to the same elevation as the depth limit of the probable reserves; however, more work is considered necessary to classify this as proven reserves.

Results of the tonnage calculations are as follows:

Proven Reserves	1,100,000 tons
Probable Reserves	<u>500,000 tons</u>
Total "	<u>1,600,000 tons</u>

NOTE: 30,000 tons were subtracted from the reserves as drill hole #1 encountered high iron at a depth of 20 feet.

Unlimited untested reserves remain on the property.

The average composition and impurity content of the reserves have been averaged from chemical tests as follows:

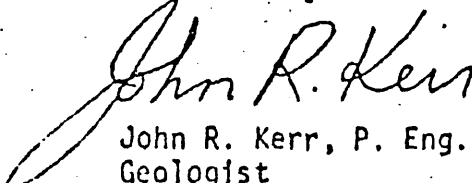
CaO	-55.30%
Calculated CaCO ₃ - <u>98.8%</u>	
Fe ₂ O ₃	0.08%
contained Fe - <u>0.055%</u>	
MgO	0.15%
Al ₂ O ₃	0.20%
K ₂ O	0.06%
Na ₂ O	0.04%
Acid Insoluble Mat. (mainly SiO ₂)	0.67%
Loss on Ignition	<u>43.50%</u>
Total	100.00%

Drill holes #1, 3, and 9 encountered high iron content over considerable lengths of core. Holes #1 and 3 suggest an increasing iron content with depth, and hole #9 suggests an increasing iron content to the southwest. Footage 10 - 20 feet of drill hole #11 suggests a band of high iron content. To extract limestone above and below this band would require selective mining methods, and therefore this portion was not included in reserve calculations. There is a possibility that other impurity bands exist in the blocked out reserves, and not encountered in drill holes. Therefore, it is recommended that some development drilling be completed during mining to test for any additional impurity bands, and the underlying probable ore reserves.

The following observations of the results are worthy of
comment:

1. The Fe_2O_3 and insoluble material contents are generally proportional, suggestive that iron alteration, in the form of pyrite, was introduced at the same time as quartz alteration.
2. Mr. R. Sawyer, chemist of Bondar-Clegg and Co. Ltd., advises that the material was dissolved in a strong nitric-perchloric acid solution. All pyrite would be dissolved in this solution and the iron reported in Fe_2O_3 analysis would represent the total iron in the rock.
3. Unless additional impurity bands are encountered during mining, costs of breaking and hauling the rock should be kept at a minimum. As most of the rock around the blocked-out reserves is virtually untested, it can be expected that very little of the material handled during mining will have to be wasted.

Respectfully submitted,


John R. Kerr, P. Eng.,
Geologist

VERSATILE MINING SERVICES LTD.



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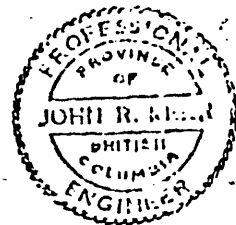
STATEMENT OF QUALIFICATIONS

I, JOHN R. KERR, of Kamloops, B.C., HEREBY CERTIFY THAT:

- 1) I am a member of the Association of Professional Engineers in the Province of British Columbia.
- 2) I am a geologist residing at 295 Greenstone Drive, Kamloops, B.C., and am employed by Versatile Mining Services Ltd., P.O. Box 609, Kamloops, B.C.
- 3) I have practiced as a geologist for 7 years since graduation from the University of British Columbia in 1964 with a B.A.Sc. in Geological Engineering.
- 4) The work completed and described in this report was supervised by myself. I compiled and interpreted the technical data.

John R. Kerr

John R. Kerr, P. Eng.,
VERSATILE MINING SERVICES LTD.



March, 1971.
Kamloops, B.C.



BONDAR-CLEGG & COMPANY LTD.

geologists • geochemists • analysts • ass.

1500 PEMBERTON AVENUE, NORTH VANCOUVER, B.C.

Phone 988-5315

CERTIFICATE OF ANALYSES

TO Versatile Mining Services Ltd.

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IT 21-22

MARKED	L.O.I.	CaO	HgO	Al ₂ O ₃	Fe ₂ O ₃	Na ₂ O	K ₂ O	Acid Insol				
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
13420	43.6	55.9	0.14	0.11	0.07	0.03	0.06	0.24	20-30			
13421	43.6	55.5	0.16	0.18	0.07	0.03	0.07	0.43	30-40			
13422	43.9	55.8	0.11	0.03	0.04	0.02	0.03	0.11	40-50			
13423	43.7	55.5	0.20	0.19	0.04	0.02	0.06	0.47	0-10			
13424	43.8	55.6	0.16	0.14	0.05	0.02	0.04	0.34	10-20			
13425	43.6	55.5	0.16	0.26	0.07	0.02	0.02	0.64	20-30			
13426	43.7	55.8	0.10	0.09	0.05	0.01	0.01	0.41	30-40			
13427	43.8	55.8	0.13	0.07	0.04	0.02	0.02	0.20	40-50			
13428	43.5	55.6	0.08	0.16	0.07	0.05	0.02	0.85	0-10	117		
13429	43.5	55.4	0.11	0.27	0.07	0.06	0.02	0.80	10-20			
13430	43.6	55.6	0.10	0.19	0.07	0.03	0.05	0.61	20-30			
13431	43.1	55.2	0.08	0.36	0.11	0.02	0.10	1.04	30-40			
13432	43.2	54.8	0.07	0.64	0.09	0.02	0.12	1.28	40-50			
13433	43.6	55.4	0.10	3.27	0.08	0.05	0.04	0.62	0-10			
13434	43.7	55.6	0.06	0.19	0.07	0.04	0.05	0.45	10-20			
13435	43.5	55.2	0.08	0.14	0.06	0.05	0.03	0.93	20-30			
13436	43.6	55.4	0.14	0.25	3.15	0.05	0.05	0.59	30-40	118		
13437	43.4	55.2	0.26	0.14	0.06	0.08	0.06	0.80	0-10			



CERTIFICATE OF ANALYSES

TO Versatile Mining Services Ltd.

Page 3 cont'd.

IT 21-22

MARKED	L.O.I.	CaO	MgO	Al ₂ O ₃	Fe ₂ O ₃	Na ₂ O	K ₂ O	Acid Incol.				
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
13433	43.0	54.8	0.26	0.29	0.09	0.04	0.05	1.76	10-20	<u>REMARKS</u>		
13439	43.5	55.4	0.19	0.27	0.12	0.03	0.06	0.60	20-30			
13440	43.5	55.4	0.14	0.25	0.03	0.02	0.05	0.57	30-40			
13441	43.7	56.0	0.16	0.12	0.07	0.02	0.04	0.49	40-50	* = Summation does not equal 100%. Material probably includes elements not included in assay.		
13442	43.4	55.3	0.13	0.22	0.09	0.04	0.06	1.06	0-10			
13443	43.4	55.3	0.12	0.30	0.10	0.04	0.08	0.97	10-20			
13444	42.7	54.4	0.11	0.06	0.20	0.02	0.04	2.64	20-30			
13445	41.3	52.7	0.14	0.06	0.16	0.02	0.04	5.84	30-40			
13446	43.0	54.9	0.14	0.12	0.11	0.03	0.06	1.82	40-50		** = True silica value.	
13447	43.1	54.7	0.18	0.24	0.14	0.03	0.06	1.75	0-10	Determination because of high percentage.		
13448	43.6	55.3	0.14	0.21	0.09	0.02	0.06	0.77	10-20			
13449	43.0	55.4	0.30	0.24	0.08	0.04	0.06	0.61	20-30			
13450	43.6	55.2	0.19	0.24	0.06	0.07	0.06	0.71	30-40			
13451*	43.2	53.4	0.20	0.40	0.10	0.03	0.15	1.40	40-50			
13452	43.5	55.3	0.11	0.22	0.08	0.06	0.06	0.95	0-10			
13453	30.1	38.5	0.10	3.80	0.28	1.20	2.00	20.6*	10-20			
13454*	43.2	54.9	0.15	0.40	0.08	0.13	0.12	1.38	20-30			
13455	43.6	55.4	0.15	0.21	0.06	0.07	0.05	0.66	30-40			
13456	43.8	55.4	0.11	0.16	0.07	0.04	0.04	0.49	40-50			