

D 82FNW064

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March 31, 1950.

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A brief examination of the Van Roi Mine was made on March 20, 21, & 22, 1950 in the company of Mr. N. F. Brookes. The purpose of the examination was to check the tonnage and grade of ore blocked out.

The following table summarizes the positive ore reserves. The location of the ore blocks is shown on the accompanying map.

Block No.	Tons	Lead %	Grade	
			Zinc %	Silver Oz/Ton
A	2000	2.7	10.8	7.4
B	2700	2.7	10.8	7.4
C	12400	5.0	8.0	5.0
D	1680	3.1	4.0	11.6
E	2620	2.6	4.1	6.3
F	3600	2.7	5.8	15.3
G	2800	4.2	8.7	8.8
Total	27800	3.2	7.7	7.7

Based on prices of 10¢ per lb. for lead, 10¢ per lb. for zinc, and 73¢ per oz. for silver and on mill recoveries of 96% for lead, 80% for zinc and 90% for silver the ore would have a net value in place as follows:

	Grade	Estimated Mill Recovery	Value/Ton
Lead	3.9%	96%	\$ 6.27
Zinc	7.7%	80%	8.11
Silver	7.7 Oz/ton	90%	5.20
			<u>19.58</u>
		Cadmium	0.75
			<u>20.33</u>
		Freight & Treatment of Concentrate	3.10
		Net Value in Place	\$17.23

(2)

Grades of ore in the table are based on averages of samples taken by Van Roi Mines (1947) Limited in the course of development and by A. Lakes in an examination made in 1943 and on check samples taken by the writer.

Block A. Grade - Average of A. Lakes samples taken from the back of A Level drift 140' of 4.0' wide = 2.7% Pb. = 10.8% Zn. = 7.4 Oz. Ag. checked as follows:

At	No.	Width	Western E. Samples			A. Lakes Samples		
			Pb.	Zn.	Ag.	Pb.	Zn.	Ag.
14.5' E of A.10	801	3.5'	0.2	4.4	2.0	1.5	9.1	3.1
40.5' W of A.10	802	1.6'	20.1	13.5	20.4	16.8	17.1	22.2
7.5' W of A.10	803	2.5'	6.8	15.5	7.2	0.7	9.9	5.4
46.0' E of A.10	804	4.0'	0.2	22.0	8.2	0.6	27.2	15.8

$$\text{Tonnage} = \frac{140 \times 40 \times 4.0}{11} = 2100 \text{ Tons}$$

Block B. Grade - as Block A

$$\text{Tonnage} = \frac{145 \times 50 \times 4.0}{11} = 2700 \text{ Tons}$$

Block C. Grade - Average of Van Roi Samples on West Wall of 351 Raise: 210' of 5.0' wide @ 6.5% Pb. = 8.4% Zn. = 6.5 Oz. Ag. W. E. Samples on bottom @ End of 351 W. Stope

No.	Width	Pb.	Zn.	Ag.
808	2.2'	10.5	17.1	8.4
810	1.7'	3.0	17.1	4.8
Average	2.0'	6.8	17.1	6.6
Expanded to	4.5'	3.0	7.6	2.9

Grade assumed for block:-

$$4.5' @ 5.0\% \text{ Pb.} = 8.0\% \text{ Zn.} = 5.0 \text{ Oz. Ag.}$$

$$\text{Tonnage} = \frac{145' \times 210 \times 4.5}{11} = 12,400 \text{ Tons}$$

A grab sample of the broken Ore in 351 - E Stope on the East Side of 351 Raise taken by the writer assayed 4.9% Pb. = 12.0% Zn. = 4.0 Oz. Ag. and indicates some tonnage on the east side of the 351 Raise. This ore may connect through to a length of marginal ore (60' of 2.0' wide @ 3.4% Pb. 8.3% Zn. 6.7 Oz. Ag.) indicated by A. Lakes sampling on 1 Level East of 351 Raise.) The East Wall of 351 Raise is lagged over and was not examined or sampled.

Visual inspection of the drift back for 40 - 50' West of the old stope on 1 Level indicates low grade ore may extend for this distance west of the assumed boundary of Block C. No. samples were taken here.

(3)

Block D. Grade - Average of Van Roi Stope. samples taken during mining 3.1% Pb.
4.0% Zn. - 11.6 Oz. Ag.

Tonnage remaining - 1680 Tons

Block D. Grade - Western Ex. Samples in 355 #3 Raise

No.	Width	Pb.	Zn.	Ag.
811	2.1	4.9%	9.2%	3.2 Oz/T.
812	2.6	2.6	5.2	3.4
Average @ 4.0'		2.1	4.1	1.95
Average of Van Roi Stope Samples		3.1	4.0	11.6
Grade of Block 410'		2.6	4.1	6.8

Tonnage - 2620 Tons

Block E. - Finished except for a small tonnage in sill pillars.

Block F. Grade - Average of A. Lakes and Van Roi Samples in 3 Level Drift 175' of
4.5' wide @ 2.7% Pb. - 5.8% Zn. - 15.3 Oz. Ag.

Tonnage - $\frac{175 \times 50 \times 4.5}{11} = 3600$ Tons

Block G. Grade - Average of Van Roi Samples in 3 Level Drift
137' of 2.8 @ 6.8% Pb. - 14.1% Zn. - 14.2 Oz/Ton Ag.
expanded to 4.5' @ 4.2% Pb. - 8.7% Zn. - 8.8 Oz/Ton Ag.

Tonnage - $\frac{137 \times 50 \times 4.5}{11} = 2800$ Tons

A visual examination of the drift back on 1 Level in the vicinity of the West through raise to A. level indicates a possible tonnage of a fair grade of zinc Ore.

R. P. Mason
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R. P. Mason, Mining Engineer