

To: W. M. Sirola From: J. K. Carrington
MINES LTD
Subject: Swim Lakes and Vangorda Reassessment Date: January 26, 1978

Bill:

This will outline what we have in mind regarding a review of our Swim Lakes and Vangorda deposits by Jim and Alex. I see that this work can be a part of the regional assessment Dave has asked for, but Bud has reminded me that he wishes a detailed look at Swim and Vangorda by Alex and Jim, and their efforts should not be diverted to the regional picture until this has been done. Obviously, there will be considerable overlap between the two studies and I am not suggesting they be done each to the exclusion of the other.

As you know, I am not very familiar with the details of either Swim or Vangorda, or with the amount and quality of information we have on them. What we want to do is to take a look at the existing data in the light of what we know about the Grum. This could lead to a completely new geological interpretation at one extreme to no change at all at the other. I daresay we'll end somewhere in between. We want to know what additional work, short of going underground, is required to bring these properties to a reasonable level of knowledge, re the geology, tonnage and grade. If we were to start looking at these properties in earnest, what would be the next steps in their evaluation?

I agree with your suggestion that an overall regional metric map system be investigated, but, as you say, we should not replot all the existing cross-sectional data onto metric sections at this time.

Should questions arise as this develops, please do not hesitate to contact me.

Regards,



J. K. Carrington

JKC:LFR

cc: D. A. Lowrie

KERR ADDISON MINES LIMITED

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Vangorda
7
APR 28 1977

To J.K. Carrington From W.M. Sirola

Subject VANGORDA MINERAL RESERVE CALCULATIONS Date April 25, 1977

J.B.B.	✓
A.H.C.	
P.S.C.	
W.L.	
S.P.	
M.S.P.	
J.B.S.	
FILE	

I asked Jim Paxton to do a quick estimate on the higher grade sections of the Vangorda deposit because I felt that this would be useful both from your standpoint and mine.

These calculations were based on cross sections drawn in 1966 at this office by Clyde Smith and were considered more likely to be representative of the shape of the structure than the horizontal rectangular forms used by Prospectors Airways. Jim's estimate of the higher grade mineralization is 7.66 million tons at 8.67% combined lead-zinc. The estimate made by Prospectors Airways was 9.4 million tons of 8.16% combined lead-zinc.

None of the sections we have on hand show the assay values of the lower grade mineralization, but Jim has assumed a grade of 3% (presumably by looking over a clutch of assays in the drill log file). He estimates that there are 10.45 million tons with an assumed grade of 3% Pb and Zn, making a grand total of 18.11 million tons of 5.39% combined lead-zinc.

It would be a relatively simple matter to plot the lower grade intersections on Clyde Smith's structural sections and do a better estimate of the lower grade portions of the deposit, but I think this should only be done after we have made our own set of cross sections, many of which have already been completed. In other words, it is a low priority item.

If indeed serious consideration is being given to the Vangorda property as a possible source of early mill feed, then we are certainly justified in producing at least a pencilled set of cross sections oriented in the manner of the Grum cross sections and drawn to the same scale. As I mentioned over the phone, this procedure had already been started by Jim when I returned from a week off.

To summarise then, our next order of business will be to draw these sections which will show both structure and grade for at least as much of the Vangorda deposit as might be considered mineable as a source of early mill feed. The Vangorda deposit has been drilled over a total length of 6,000 ft. and, consequently, there are in excess of 30 cross sections to be drawn. Despite the despatch with which both Jim and Alex produce these sections, I can appreciate that it could take two months to come up with a reliable mineral reserve estimate and, hopefully, a meaningful structural concept.

W.M. Sirola
W.M. Sirola

Encl.: Check Calculation - Vangorda Ore Zone
April 22, 1977

WMS:meb

CHECK CALCULATION

VANGORDA ORE ZONE

APRIL 22, 1977

WINGOKUM LIKE ZONE - SUMMARY

SECTION	LOW GRADE		HIGH GRADE		
	TONS	TONS	GRADE	G x T	
4W	80,000	—		(000)	
2W	568,000	96,000	8.4	806.4	
0	188,000	864,000	8.3	7171.2	
2E	1,328,000	880,000	8.9	7832.0	
4E	1,160,000	1,424,000	8.0	11392.0	
6E	1,184,000	744,000	9.2	6844.8	
8E	968,000	848,000	9.6	8140.8	
10E	664,000	384,000	8.0	3072.0	
12E	368,000	168,000	6.7	1125.6	
14E	432,000	344,000	9.3	3199.2	
16E	400,000	232,000	6.2	1438.4	
18E	376,000	260,000	9.3	2604.0	
20E	208,000	256,000	9.3	2380.8	
22E	72,000	440,000	8.8	3872.0	
24E	640,000	488,000	9.8	4782.4	
26E	1,128,000	176,000	8.0	1408.0	
28E	392,000	32,000	9.4	300.8	
30E	296,000	8,000	9.0	72.0	
	10,452,000	7,664,000		66442.4	

$$\frac{66,442,400}{7,664,000} = 8.67\%$$

7.66 million tons @ 8.67% Pb+Zn

10.45 million tons @ assumed grade 3.0% Pb+Zn

18.11 million tons @ 5.39% Pb+Zn

Notes on Calculations

1. Sections and geological interpretations used were those made by C.L. Smith Jan 25 1966.
2. Scale of sections was $1" = 200'$
3. Areas were calculated by laying a sheet of 10x10 inch cross section tracing paper over each sections and counting squares. Each square = 400 ft^2
4. High grade intersections only were shown on the sections. No check was made on the method of calculating these intersection grades.
5. It was assumed that the deposit would be mined by open pit. Ore zones that were obviously small, deep, low grade etc. were excluded.

J. Pastor Peng

April 22 1977

Based on sections by Clyde Smith 1966

SECTION 0

HIGH GRADE AREAS			LOW GRADE AREAS			HIGH GRADE AREA 43200
N ^o	Sq	AREA FT. ²	N ^o	Sq	AREA FT. ²	HIGH GRADE VOLUME 86400
1	108	43,200	1	7	1400	HIGH GRADE = 8.34%
			2	38	7600	HIGH GRADE TONS = 8640
			3	2	400	LOW GRADE AREA 9400
					9400	LOW GRADE VOLUME 18800
						LOW GRADE (ASSUMED) =
						LOW GRADE TONS = 18800

AREA N ^o	HOLE N ^o	WIDTH (FT.)	GRADE (Pb+Zn)	WXG	WEIGHTED GRADE	AREA FT ²	VOLUME FT ³	Ton (10.0 T)
1	4	18	15	270.0				
	1	74	6.8	503.2				
	1	14	10	140.0				
	26	66	8.1	534.6				
	27	46.7	8.29	387.1				
	27	15	7.88	118.2				
	143	10	8.0	80.0				
		243.7		2033.1				
			2033.1	8.34				
			243.7					
TOTALS								

Based on sections by Clyde Smith 1966

SECTION 6E

HIGH GRADE AREAS			LOW GRADE AREAS			HIGH GRADE AREA 37200
N ^o	Sq	AREA Ft. ²	N ^o	Sq	AREA Ft. ²	HIGH GRADE VOLUME 744000
1	57	22800	1	51	20400	HIGH GRADE = 9.17
2	29	11600	2	97	38800	HIGH GRADE TONS = 74400
3	2	800	3	Too	Small	LOW GRADE AREA 59200
4	5	2000	4	Too	Small	LOW GRADE VOLUME 1184000
		37200			59200	LOW GRADE (ASSUMED) =
						LOW GRADE TONS = 118400

AREA N ^o	HOLE N ^o	WIDTH (Ft.)	GRADE (Pb+Zn)	W X G	WEIGHTED GRADE	AREA FT ²	VOLUME FT ³	TONS (10.0%)
1	20	18	16.4	295				
	95	65	12.8	838				
	47	95	8.0	760				
	94	40	8.4	336				
2	96	15	6.5	97				
	95	20	8.8	176				
	47	15	7.4	111				
	94	40	8.4	336				
	35	10	6.1	61				
	126	15	10.5	158				
3	47	15	8.6	129				
4	96	15	6.5	97				
	20	15	5.0	75				
		378		3469				
			$\frac{3469}{378} = 9.17$					
TOTALS								

Based on sections by Clyde Smith 1966

SECTION 10E

HIGH GRADE AREAS			LOW GRADE AREAS			HIGH GRADE AREA 19200	
NO	SQ	AREA FT. ²	NO	SQ	AREA FT. ²	HIGH GRADE VOLUME 3840000	
1	21	8400	1	83	33200	HIGH GRADE = 8.01	
2	10	4000				HIGH GRADE TONS = 384000	
3	7	2800				LOW GRADE AREA 33200	
4	10	4000				LOW GRADE VOLUME 6640000	
		<u>19200</u>				LOW GRADE (ASSUMED) =	
						LOW GRADE TONS = 664000	

AREA NO	HOLE NO	WIDTH (FT)	GRADE (Pl:Z)	WXG	WEIGHTED GRADE	AREA FT ²	VOLUME FT ³	TONS (10.0 T/FT)
1	50	76	9.0	684.0				
2	50	15	6.3	94.5				
3	50	29	6.8	197.2				
4	60	14	7.0	98.0				
		<u>134</u>		<u>1073.7</u>				
			<u>1073.7</u>	<u>8.01</u>				
			<u>134</u>					
TOTALS								

Based on sections by Clyde Smith 1966

SECTION 12E

HIGH GRADE AREAS			LOW GRADE AREAS			HIGH GRADE AREA 8400			
Nº	Sq	AREA Ft. ²	Nº	Sq	AREA Ft. ²	HIGH GRADE VOLUME	AREA	VOLUME	Ton
1	3	1200	1	46	18400	168000			
2	18	7200	2	5	Not Recov.				
3	2	Not Recoverable	3	15	Not Recov.				
4	3	Not Recoverable	4	16	Not Recov.				
		8400							
						HIGH GRADE = 6.73			
						HIGH GRADE TONS = 168000			
						LOW GRADE AREA 18400			
						LOW GRADE VOLUME 36800			
						LOW GRADE (ASSUMED) =			
						LOW GRADE TONS = 36800			

AREA Nº	HOLE Nº	WIDTH (Ft.)	GRADE (Pb+Zn)	W X G	WEIGHTED GRADE	AREA Ft. ²	VOLUME Ft. ³	Ton (100T)
1	57	10	6.5	65				
2	63	35	6.8	238				
		45		303				
			303 / 45	= 6.73				
TOTALS								

Based on
sections by
Clyde Smith 1966

SECTION 1A E

HIGH GRADE AREAS			LOW GRADE AREAS			HIGH GRADE AREA 17200			
Nº	SQ	AREA FT. ²	Nº	SQ	AREA FT. ²	HIGH GRADE VOLUME 344000			
1	4	1600	1	16	6400	HIGH GRADE = 9.30			
2	35	14000	2	38	15200	HIGH GRADE TONS = 344000			
3	4	1600	3	14	Not Recoverable	LOW GRADE AREA 21600			
		17200	4	2	"	LOW GRADE VOLUME 432000			
			5	2	"	LOW GRADE (ASSUMED) =			
			7	4	21600	LOW GRADE TONS = 432000			

AREA Nº	HOLE Nº	WIDTH (FT.)	GRADE (Pb+Zn)	WX G	WEIGHTED GRADE	AREA FT ²	VOLUME FT.3	TON (10.0 Ft)
1	40	9	19.0	171				
2	98	12	12.0	144				
	52	50	7.2	360				
	97	20	10.3	206				
	56	19	8.4	159				
3	98	9	7.5	67				
		119		1107				
			1107 =	9.30				
			119					
TOTALS								

Based on sections by Clyde Smith 1966

SECTION 18E

HIGH GRADE AREAS			LOW GRADE AREAS			HIGH GRADE AREA 14 000
N ^o	Sq	AREA FT. ²	N ^o	Sq	AREA FT. ²	HIGH GRADE VOLUME 28 000 000
1	2	800	1	47	18800	HIGH GRADE = 9.28
2	22	8800	2		Not Recov.	HIGH GRADE TONS = 290,000
3	11	4400	3		"	LOW GRADE AREA 18,800
		<u>14000</u>	4		"	LOW GRADE VOLUME 376 000
			5		"	LOW GRADE (ASSUMED) =
						LOW GRADE TONS = 376 000

AREA N ^o	HOLE N ^o	WIDTH (FT.)	GRADE (Pb:Zn)	WXG	WEIGHTED GRADE	AREA FT. ²	VOLUME FT. ³	TONS (10.0 FT.)
1	109	15	10.5	157				
2	109	20	10.5	210				
	72	15	8.0	120				
	12	33	8.0	264				
	11	12	9.9	119				
	14	5	7.0	35				
3	11	14	10.7	150				
	14	4	10.1	40				
		<u>118</u>		<u>1095</u>				
			10.95	= 9.28				
			<u>118</u>					
<u>TOTALS</u>								

Based on sections by Clyde Smith 1966

SECTION 20E

HIGH GRADE AREAS			LOW GRADE AREAS			HIGH GRADE AREA 12,800
N ^o	Sq	AREA FT. ²	N ^o	Sq	AREA FT. ²	HIGH GRADE VOLUME 256000
1	20	8000	1	3	1200	HIGH GRADE = 9.34
2	2	800	2	15	6000	HIGH GRADE TONS = 256000
3	10	4000	3	8	3200	LOW GRADE AREA 10,400
		12800	4	10	Not Recov.	LOW GRADE VOLUME 208000
					10400	LOW GRADE (ASSUMED) =
						LOW GRADE TONS = 208000

AREA N ^o	HOLE N ^o	WIDTH (FT.)	GRADE (Pb+Zn)	W X G	WEIGHTED GRADE	AREA FT ²	VOLUME FT. ³	TONS (10.0 FT)
1	8	10	7.8	78				
	5	16	13.0	208				
	75	20	6.8	136				
2	5	5	9	45				
	3	5	14	140				
			65		607			
			607	9.34				
			65					
TOTALS								

Based on sections by Clyde Smith 1966

SECTION 24E

HIGH GRADE AREAS			LOW GRADE AREAS			HIGH GRADE AREA 24400	
N ^o	Sq	AREA FT. ²	N ^o	Sq	AREA FT. ²	HIGH GRADE VOLUME 488000	
1	61	24400	1	6	2400	HIGH GRADE = 9.81	
			2	25	10000	HIGH GRADE TONS = 488000	
			3	49	19600	LOW GRADE AREA 32000	
			4	74	NOT RECD.	LOW GRADE VOLUME 6400000	
					32000	LOW GRADE (ASSUMED) =	
						LOW GRADE TONS = 640000	

AREA N ^o	HOLE N ^o	WIDTH (FT.)	GRADE (Pb:Zn)	W X G	WEIGHTED GRADE	AREA FT. 2	VOLUME FT. 3	TONS (10.0 FT.)
1	54	11	8.7	95.7				
	93	12	8.3	99.6				
	91	40	8.8	352.0				
	81	33	8.9	293.7				
	81	30	12.9	397.0				
	80	22	10.2	224.4				
		148		1452				
			1452	9.81				
			148					
TOTALS								

Based on
sections by
Clyde Smith 1966

SECTION 26E

HIGH GRADE AREAS			LOW GRADE AREAS			HIGH GRADE AREA 8800	
N ^o	SQ	AREA FT. ²	N ^o	SQ	AREA FT. ²	HIGH GRADE VOLUME	
1	1	400	1	105	42000	HIGH GRADE =	7.97
2	1	400	2	36	14400	HIGH GRADE TONS =	176000
3	2	800	3	38	Not Rec'd	LOW GRADE AREA	56400
4	2	800				LOW GRADE VOLUME	1128000
5	7	2800				LOW GRADE (ASSUMED) =	
6	9	3600				LOW GRADE TONS =	1128,00
		8800			56400		

AREA N ^o	HOLE N ^o	WIDTH (FT.)	GRADE (Pb+Zn)	WXG	WEIGHTED GRADE	AREA FT ²	VOLUME FT ³	TON (10.0 F)
1	102	4	25.0	100				
2	120	3	7.8	23				
3	112	25	10.8	270				
4	112	25	4.9	122				
5	55	38	7.7	293				
6	55	40	6.7	268				
		<u>135</u>		<u>1076</u>				
			<u>1076</u>	<u>7.97</u>				
			<u>135</u>					
TOTALS								

