

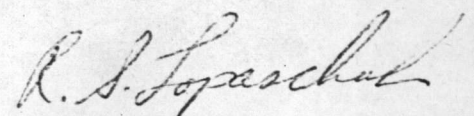
FEED GRADES FOR THE MONTH OF DECEMBER, 1979

TONNAGE AND GRADE COMPARISONS	Tons (000's)	% Pb	% Zn	Comb.
Tonnage and Grade Model	298	2.5	4.8	7.3
Blasthole Assays	305	2.9	5.4	8.3
Metallurgical Balance	305	2.9	5.1	8.0
Calculated Balance	305	2.9	5.3	8.2
Fourth Quarter Review	318	2.5	5.0	7.5
Variance (Blasthole vs. Model)	+2%	+16%	+12%	+14%
Variance (Met. Balance vs. Model)	+2%	+16%	+6%	+10%
Variance (Calculated Balance vs. Model)	+2%	+16%	+10%	+12%
Variance (Calculated Balance vs. Blasthole)	0	0	-2%	-1%
BLASTHOLE ASSAYS				
3630 E	33	2.8	5.2	8.0
3630 F	11	3.1	6.2	9.3
3630 G	36	3.9	6.5	10.4
3630 H	108	3.2	6.0	9.2
3630 I	102	2.6	4.8	7.4
3630 J	15	2.0	3.2	5.2
TOTAL	305	2.9	5.4	8.3
MINE MODEL				
3630	298	2.5	4.8	7.3

Remarks:

The mine model and blasthole tonnages compared favourably, but the mine model significantly underestimated the grades.

The variance between the calculated balance and the blasthole assay data was negligible.

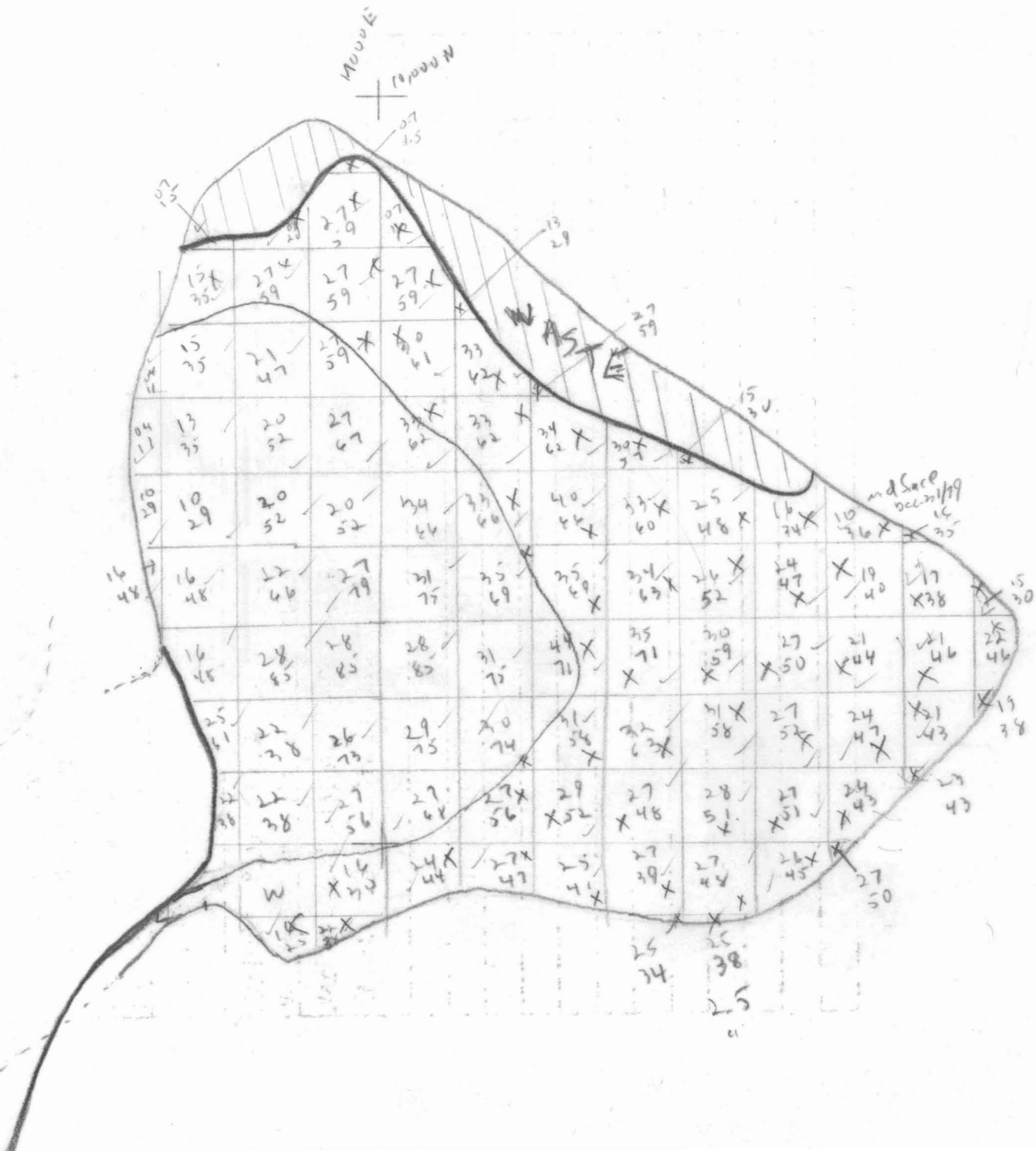


R. Lopaschuk  
Geological/Geotechnical Engineer

RL/mm

cc. J. Purkis  
D. Gregoire

Zone 1 redline 3630



14500 E  
10000 N

19  
502, 414, 50 Total  
2.4  
5.5

298, 000 SOT  
2.5 1.14  
4.8 1.2

+

FEED GRADES FOR THE MONTH OF NOVEMBER, 1979

TONNAGE AND GRADE COMPARISONS	Tons (000's)	% Pb	% Zn	Comb.
Tonnage and Grade Model	271	2.2	5.2	7.4
Blasthole Assays	151.5	2.8	5.2	8.0
Metallurgical Balance	294	2.8	4.8	7.6
Calculated Balance	294	3.3	5.2	8.5
Third Quarter Review	307.5	2.5	4.8	7.3
Variance (Blasthole vs. Model)	-79	+21	0	+7
Variance (Met. Balance vs. Model)	+8	+21	-8	+3
Variance (Calculated Balance vs. Model)	+8	+33	0	+13
Variance (Calculated Balance vs. Blasthole)	+48	+15	0	+6
BLASTHOLE ASSAYS				
3650 K	23.5	2.9	5.5	8.4
3630 D	30	2.7	4.8	7.5
3630 E	98	2.8	5.2	8.0
TOTAL	151.5	2.8	5.2	8.0
MINE MODEL				
3650	34	1.6	2.8	4.4
3630	237	2.3	5.5	7.8
TOTAL	271	2.2	5.2	7.4

Remarks:

The negative variance in tonnage between the blasthole assay data and the mine model is due to more waste received along the ore/waste contact of 3630 bench than predicted. This was especially the case with 3630 D blast where the model had predicted all ore but only a small amount of ore actually existed. There was a positive variance in feed grades between blasthole assays and mine model because the model predicted areas of low grade ore that actually were waste.

The large positive variance in tonnage between the calculated balance and the blasthole assay data can be attributed to a net decrease of 122,000 tons of Zone 1 CFSP during the month.



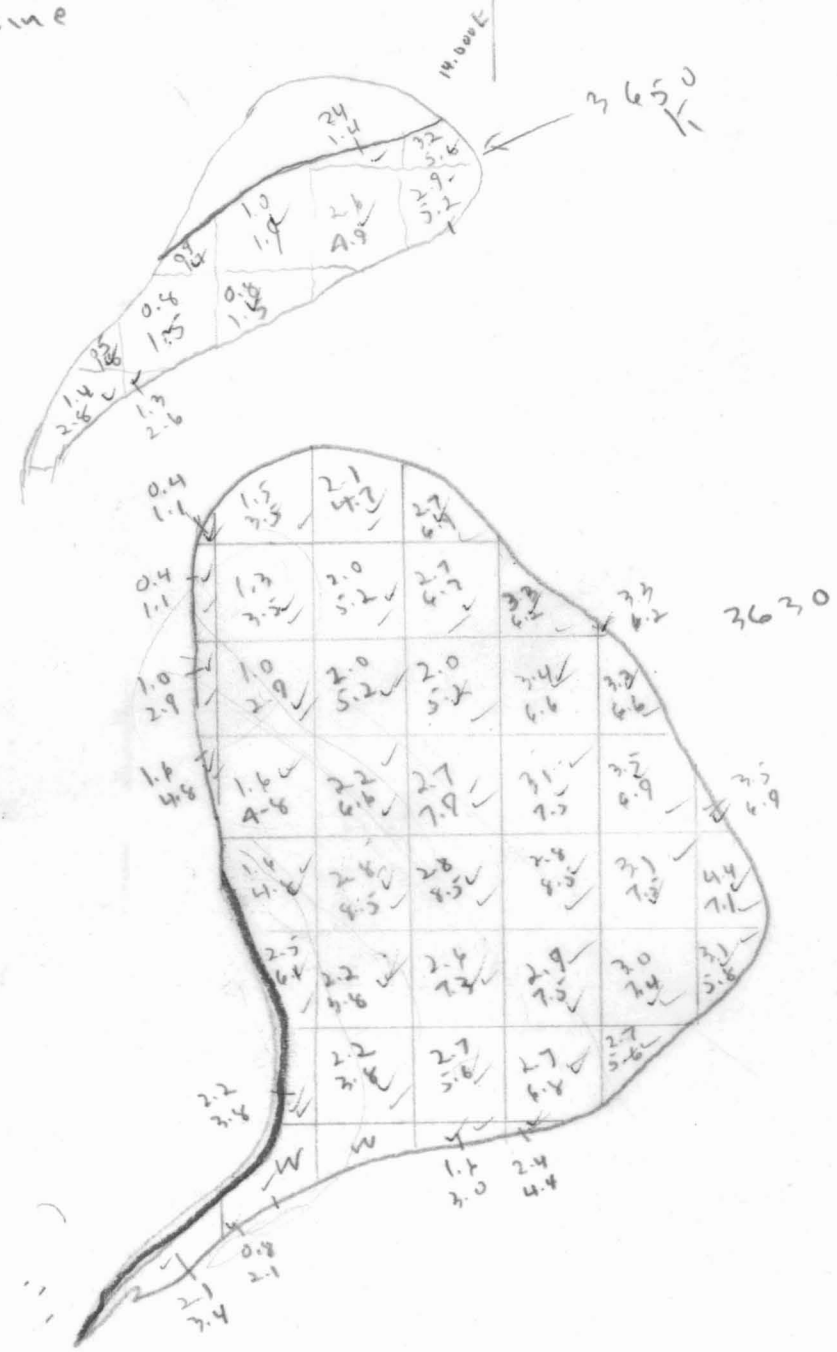
R. Lopaschuk  
Geological/Geotechnical Engineer

cc. D. Gregoire  
J. Purkis

Mine Model - Acid-line

Z71

alway



FEED GRADES FOR THE MONTH OF OCTOBER, 1979

TONNAGE AND GRADE COMPARISONS	Tons (000's)	% Pb	% Zn	Comb.
Tonnage and Grade Model	298	2.6	5.0	7.6
Blasthole Assays	338	3.0	5.2	8.2
Metallurgical Balance	199	3.0	5.3	8.3
Calculated Balance	199	3.3	4.9	8.2
Third Quarter Review	318	2.9	5.1	8.0
Variance (Blasthole vs. Model)	+12%	+13%	+4%	+7%
Variance (Met. Balance vs. Model)	-50%	+13%	+6%	+8%
Variance (Calculated Balance vs. Model)	-50%	+21%	-2%	+7%
Variance (Calculated Balance vs. Blasthole)	-70%	+ 9%	-6%	0
BLASTHOLE ASSAYS				
3650 G	34	2.5	4.4	6.9
3650 H	104	2.8	5.4	8.2
3650 I	36	3.3	6.0	9.3
3650 J	79	3.2	5.0	8.2
3650 K	68	2.9	5.5	8.4
3890 A-2	17	3.5	4.3	7.8
TOTAL	338	3.0	5.2	8.2
MINE MODEL				
Zone 1 - 3650	275.5	2.6	5.0	7.6
Zone 2 - 3890	22.5	2.4	5.3	7.7
TOTAL	298	2.6	5.0	7.6

Remarks:

The positive variance in tonnage between the blasthole assays and the mine model is due to extra ore received along the north wall that was predicted as waste by the mine model. The grades received over most of the 3650 bench were also higher than predicted by the mine model.

The large negative variance in tonnage between the calculated balance and the blasthole information can be attributed to the net increase during the month of 134,000 tons in the Zone 1 CFSP. There was no variance in the combined grade.



R. Lopaschuk  
Geological/Geotechnical Engineer

cc. D. Gregoire  
J. Purkis

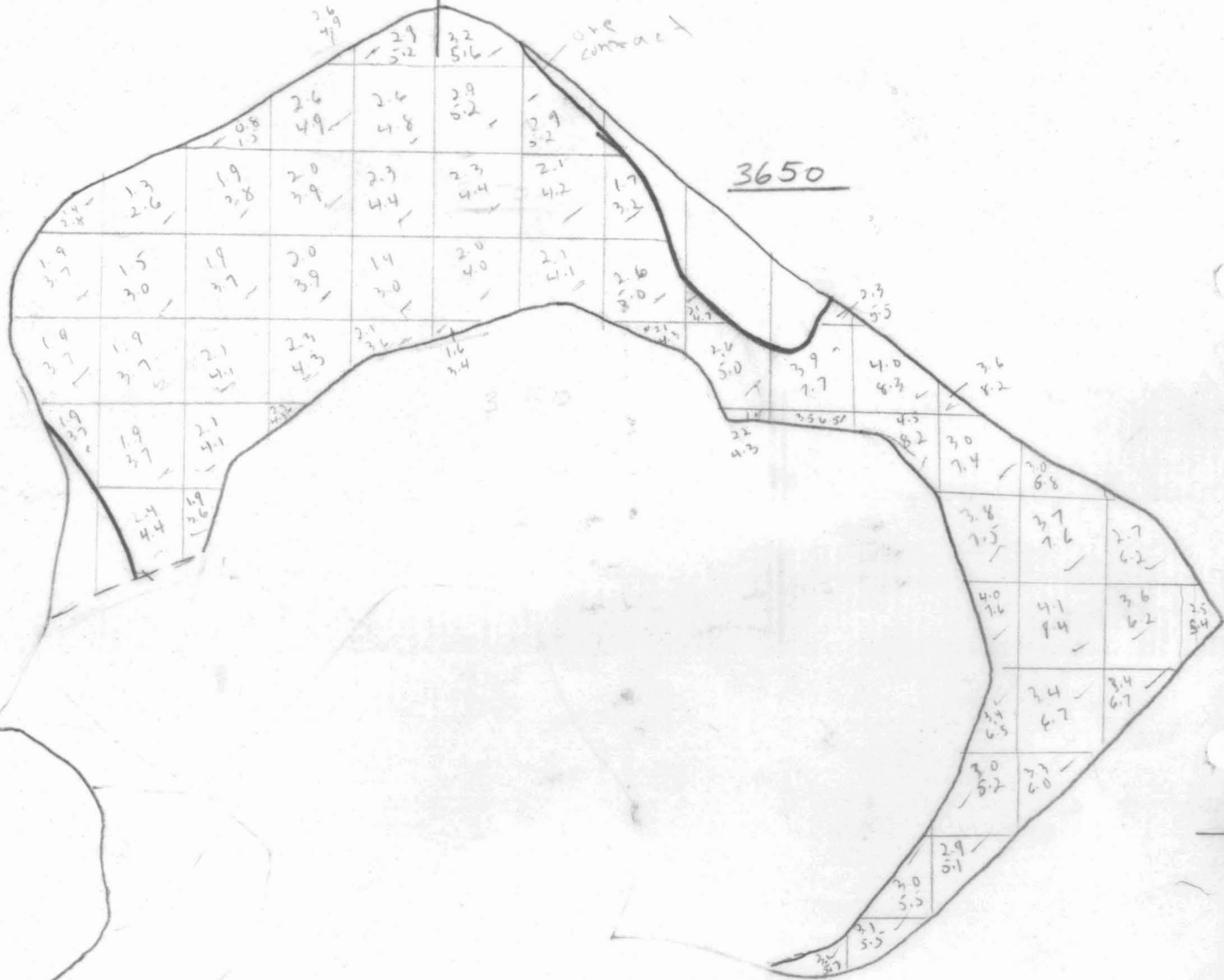


9,500  
13,500

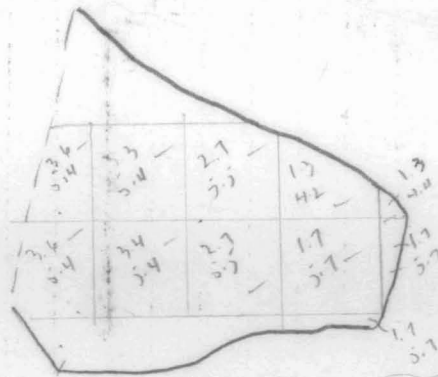
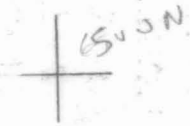
3630

3650

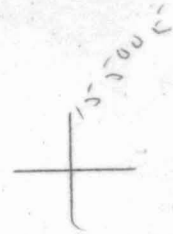
0.1  
CUMULATIVE



ZONE 2



3890



FEED GRADES FOR THE MONTH OF SEPTEMBER, 1979

TONNAGE AND GRADE COMPARISONS	Tons (000's)	% Pb	% Zn	Comb.
Tonnage and Grade Model	192	2.6	5.1	7.7
Blasthole Assays	174	2.4	4.3	6.7
Metallurgical Balance	<del>146</del> 161	2.5	4.2	6.7
Calculated Balance	<del>146</del> 161	2.2	4.7	6.9
Third Quarter Review	308	2.5	4.8	7.3
Variance (Blasthole vs. Model)	-10%	- 8%	-19%	-15%
Variance (Met. Balance vs. Model)	-31%	- 4%	-21%	-15%
Variance (Calculated Balance vs. Model)	-31%	-18%	- 8%	-12%
Variance (Calculated Balance vs. Blasthole)	-19%	- 8%	+ 8%	+ 3%
BLASTHOLE ASSAYS				
3650 F	20	2.8	4.5	7.3
3650 G	154	2.4	4.3	6.7
MINE MODEL				
Zone 1 - 3650	192	2.6	5.1	7.7

Remarks: (Production to Midnight September 16th.)

The negative variance in tonnage between the mine model and blasthole assays is due to localized pockets of sub cut-off material in the 3650 G blast which were not predicted by the model.

Zinc grades in the mine model in the 3650 G area were influenced in derivation by two outlying DDH's with intersections of 8% Zn - values which have not been fully reflected in the material mined to date.

Variation in tonnage between the calculated balance and blastholes is due to a net increase in the Zone 1 CFSP of 10,000 tons and 15,000 tons in coarse and fine ore storage.

*Peter Clarke*

P. I. Clarke  
Mine Geological Engineer

FEED GRADES FOR THE MONTH OF

AUGUST 1979

TONNAGE AND GRADE COMPARISONS	Tons (000's)	% Pb	% Zn	Comb.
Tonnage and Grade Model	328	3.2	4.5	7.7
Blasthole Assays	304.5	3.6	4.9	8.5
Metallurgical Balance	281.5	3.2	4.8	8.0
Calculated Balance	281.5	3.4	4.9	8.3
Third Quarter Review	318	2.9	4.7	7.6
Variance (Blasthole vs. Model)	-7%	+11%	+8%	+9%
Variance (Met. Balance vs. Model)	-16%	0	+6%	+4%
Variance (Calculated Balance vs. Model)	-16%	+6%	+8%	+7%
Variance (Calculated Balance vs. Blasthole)	-8%	-6%	0	-2%
BLASTHOLE ASSAYS				
3650 C	35	3.3	5.6	8.9
3650 D	85	4.9	5.4	10.3
3650 E	87.5	3.0	4.9	7.9
3650 F	68	2.8	4.5	7.3
3910 C2 & D2	29	3.7	4.1	7.8
MINE MODEL				
Zone 1 - 3650	282	3.1	4.5	7.6
Zone 2 - 3910	46	3.5	4.3	7.8
TOTAL	328	3.2	4.5	7.7

Remarks:

The negative variance in tonnage between the blasthole assays and the mine model is due to a large pocket of waste in the 3650 F blast that the mine model did not predict. The blasthole assays turned out quite a bit higher than expected from the mine model.

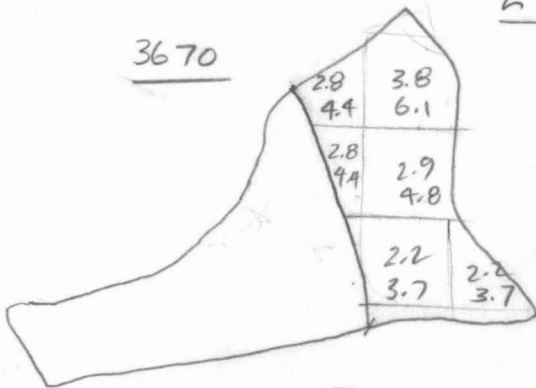
The negative variance in tonnage between the calculated balance and the blasthole information is due to a net increase, during the month of 23,000 tons in the Zone 1 CFSP. Some waste dilution in the ore is probably responsible for the calculated balance being lower than the blasthole assays.

c.c. D. Gregoire  
J. Purkis

  
R. Lopaschuk  
Geological/Geotechnical Engineer

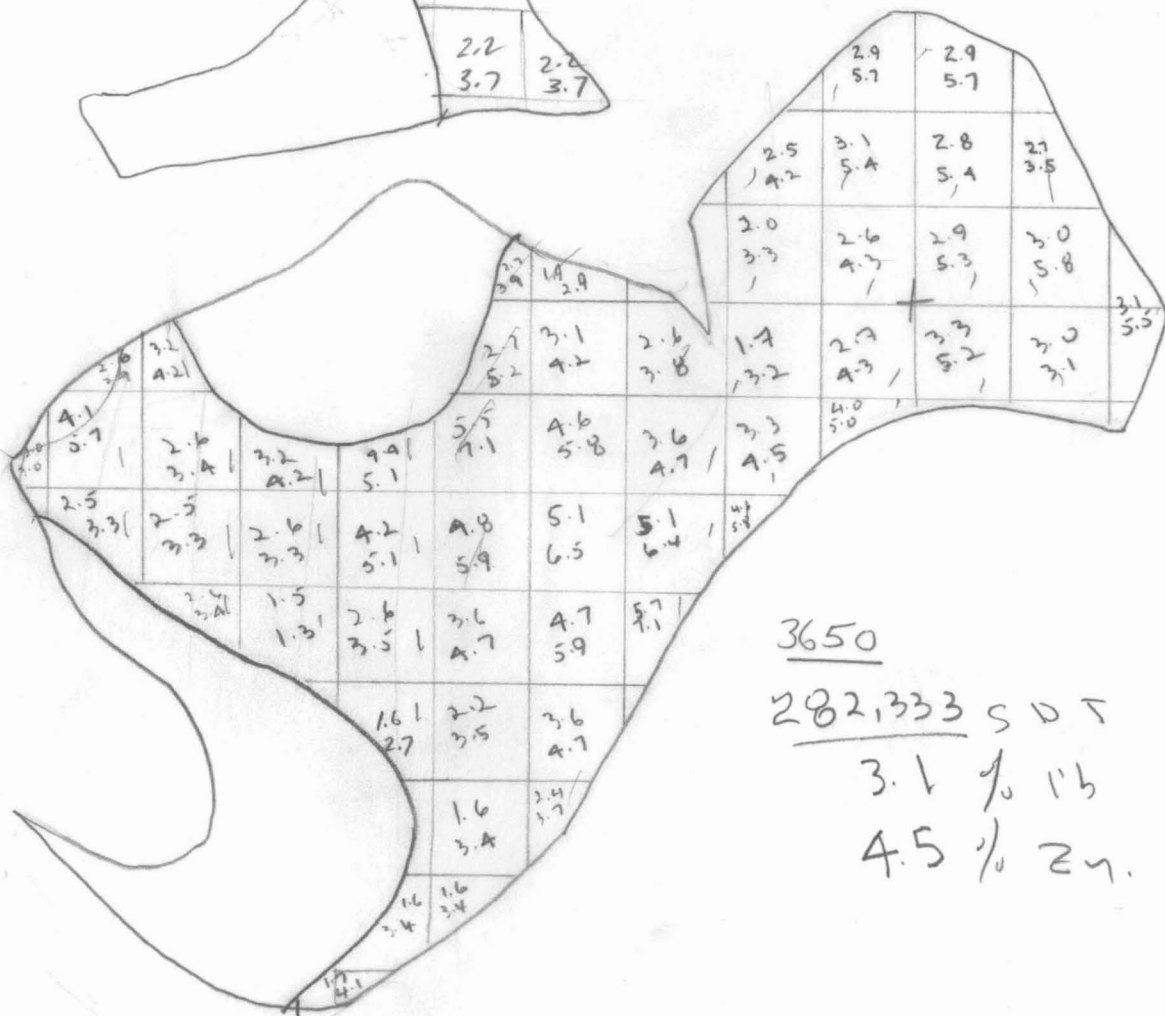
3670 + 3650 MINE MODEL

3670



27,222 SPT  
2.6 % Pb  
4.2 % Zn

+



3650

282,333 SPT  
3.1 % Pb  
4.5 % Zn

+

+ 9,000 N  
 14,000 E

FEED GRADES FOR THE MONTH OF JULY, 1979

TONNAGE AND GRADE COMPARISONS	Tons (000's)	% Pb	% Zn	Comb.
Tonnage and Grade Model	342.5	2.2	4.0	6.2
Blasthole Assays	350	2.9	4.2	7.1
Metallurgical Balance	303.7	2.84	4.54	7.4
Calculated Balance	303.7	3.07	4.46	7.5
Second Quarter Review	318	2.9	4.6	7.5
Variance (Blasthole vs. Model)	+2%	+24%	+5%	+13%
Variance (Met. Balance vs. Model)	-11%	+22%	+12%	+16%
Variance (Calculated Balance vs. Model)	-11%	+28%	+10%	+17%
Variance (Calculated Balance vs. Blasthole)	-13%	+5%	+6%	+5%
BLASTHOLE ASSAYS				
3650 A	13	2.5	3.6	6.1
3650 B	36	2.7	4.4	7.1
3670 V	23	2.2	4.2	6.4
3670 U	58	2.7	4.1	6.8
3670 T	55	2.7	4.7	7.4
3670 S	40	3.2	4.9	8.1
3930 B-2	75	3.0	3.8	6.8
3910 A-2	50	3.7	3.7	7.4
TOTAL	350	2.9	4.2	7.1
MINE MODEL				
Zone 1 - 3670	298	2.1	3.9	6.0
Zone 2 - 3930	44.5	3.0	4.5	7.5
TOTAL	342.5	2.2	4.0	6.2

Remarks:

The tonnage predicted by the mine model compared favourably with the tonnage indicated by the blasthole data but the predicted grades were much lower than those actually received from blasthole assays. This is partly due to the fact that the mine model had predicted a larger area of internal pyrite waste with surrounding ore of lower grades than was actually received.

The negative variance in tonnage between the calculated balance and the blasthole assays is due to the 40,000 tons of Zone 2 ore that was stockpiled. This stockpiling of lower grade 3930 Zone 2 ore also accounts for the positive variance between the calculated balance and blasthole assays.

cc. D. Gregoire  
J. Purkis

*M. M.*  
R. Lopaschuk  
Geological/Geotechnical Engineer

ZONE I BLASTS

3650	B	36,000	S.D.T.	2.7 / 4.4
3650	A	13,000	S.D.T.	2.5 / 3.6
3670	V	23,000	S.D.T.	2.2 / 4.2
3670	U	58,000	S.D.T.	2.7 / 4.1
3670	T	55,000	S.D.T.	2.7 / 4.7
3670	S	40,000	S.D.T.	3.2 / 4.9

TOTAL - 225,000 S.D.T. @ 2.7 / 4.42 Z<sub>w</sub>

ZONE II BLASTS

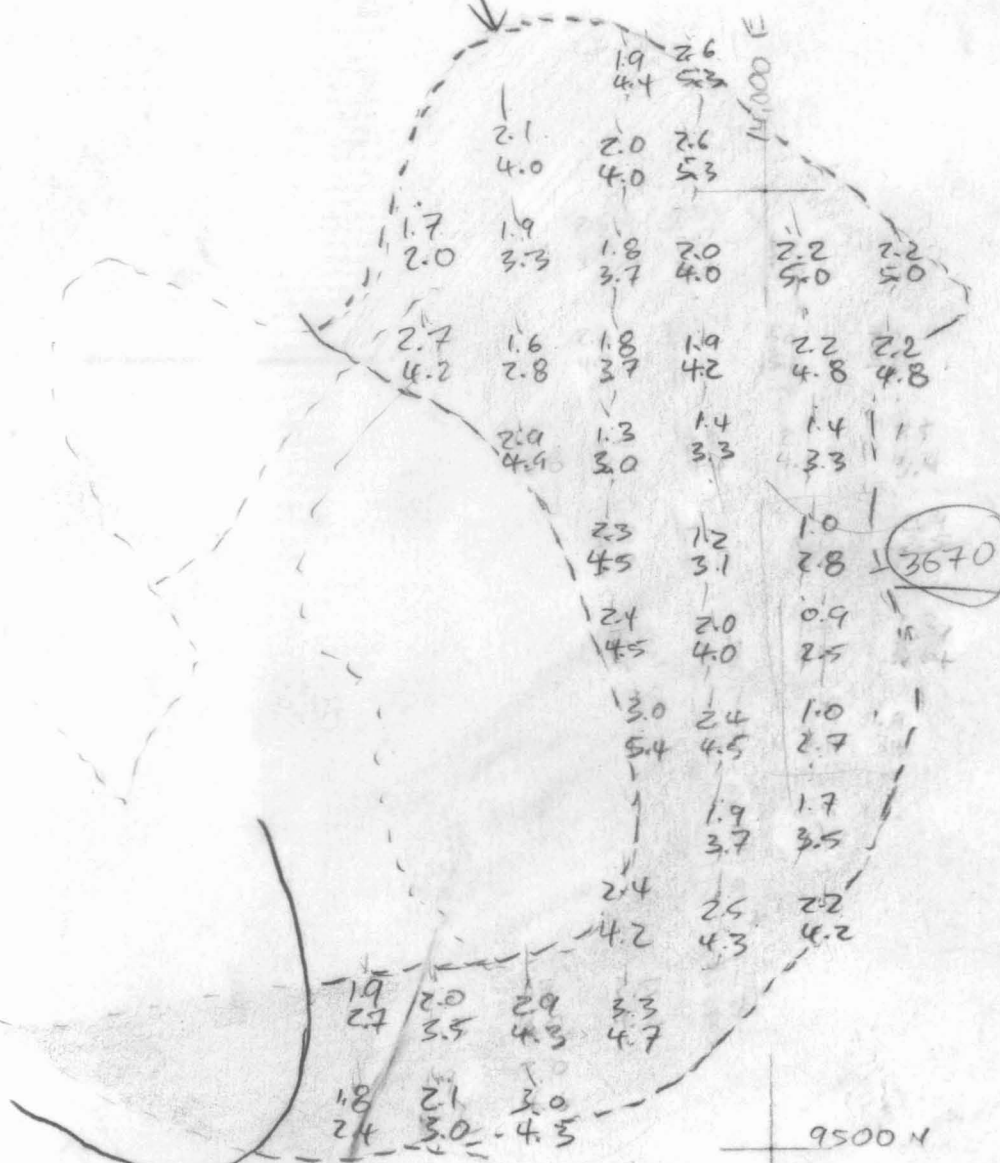
3930	B <sub>2</sub>	75,000		3.0 / 3.8
3910	A <sub>2</sub>	50,000		3.7 / 3.7

TOTAL - 125,000 3.3 / 3.8

July TOTAL - 350,000 2.9 / 4.2

13,500 E  
10,000 N

11.0



3670

9500 N

424

Zone I  
Total — 298,148 tons.  
2.05 Pb  
3.90 Zn

1" = 100'

AUG - 1 - 79

P.G.O.

3650

NONE!

W

3650  
o/w

O

COURTNEY

KOOTENAI

ZONE II

44,500 S.D.T. (3930)

	29	35		
	45	45		
24	27	37	42	
45	45	45	45	
24	27			
45	45			

3.0 Pb

4.5 Zn

3910

The surface... in contact between the...  
... internal... that...  
... will not change

NONE

K. Lopasch  
Geologist

MEM ADDRESS

cc  
date

FEED GRADES FOR THE MONTH OF JUNE, 1979

TONNAGE AND GRADE COMPARISONS	Tons (000's)	% Pb	% Zn	Comb.
Tonnage and Grade Model	327.5	3.1	5.5	8.6
Blasthole Assays	344.8	3.0	5.4	8.4
Metallurgical Balance	329.5	2.9	5.3	8.2
Calculated Balance	329.5	3.1	5.6	8.7
First Quarter Review	307.5	3.1	5.0	8.1
Variance (Blasthole vs. Model)	+5%	-3%	-2%	-2%
Variance (Met. Balance vs. Model)	0	-6%	-4%	-5%
Variance (Calculated Balance vs. Model)	0	0	+2%	+1%
Variance (Calculated Balance vs. Blasthole)	-4%	+3%	+4%	+3%
BLASTHOLE ASSAYS				
3670 M	35	2.9	4.8	7.7
3670 N	43.5	2.9	4.4	7.3
3670 O	34	2.9	3.4	6.3
3670 P	59	2.8	5.5	8.3
3670 Q	41	3.1	6.7	9.8
3670 R	104.8	3.3	6.1	9.4
3670 S	27.5	3.2	4.9	8.1
TOTAL	344.8	3.0	5.4	8.4
MINE MODEL				
3670	327.5	3.1	5.5	8.6

Remarks:

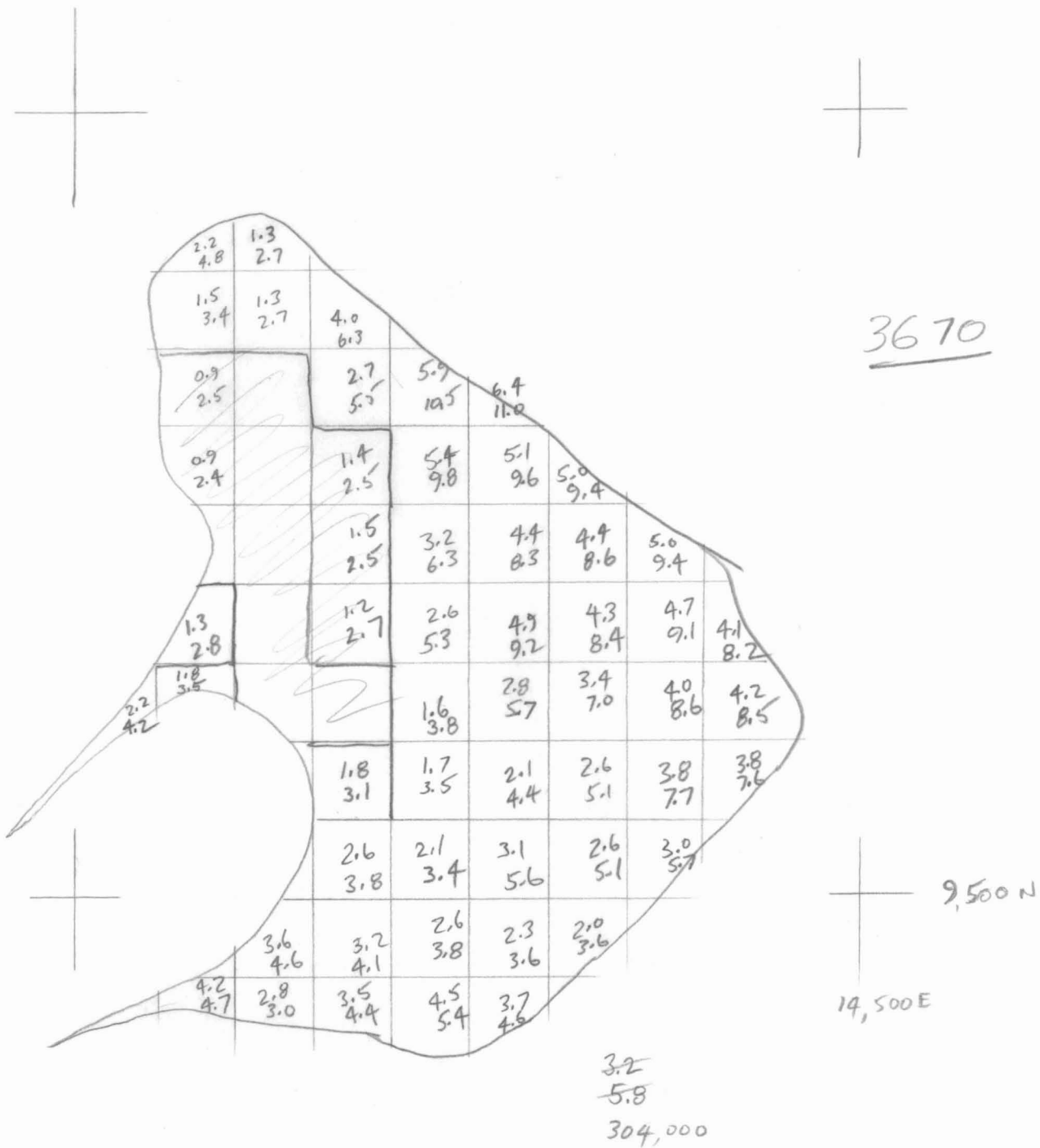
The positive variance in tonnage between the blasthole data and mine model resulted from receiving less internal pyrite waste than expected from the NE corner of the pit. The CFSP did not change significantly over the month.

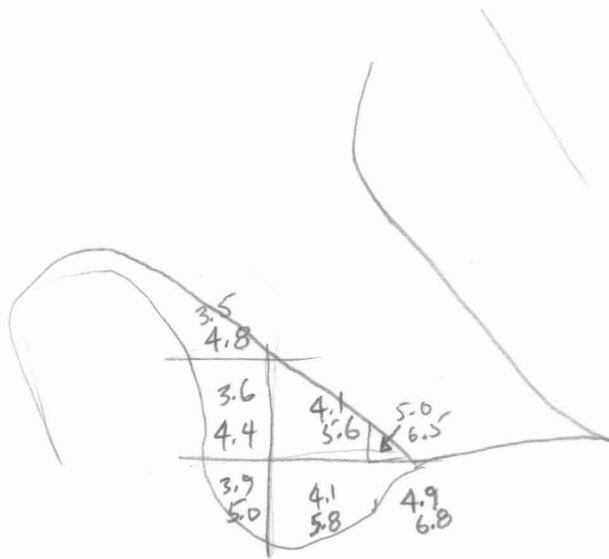
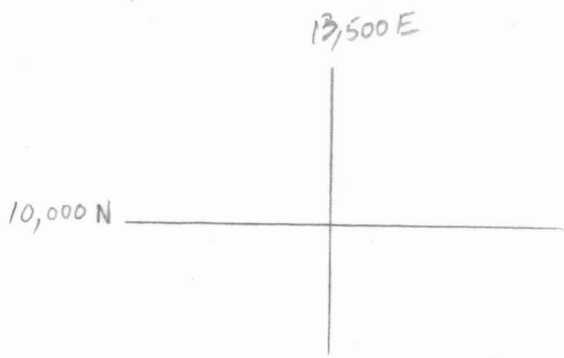


R. Lopaschuk  
Geological/Geotechnical Engineer

RL/mm

cc. D. Gregoire  
J. Purkis





0.9

3.8 Pb  
 5.1 Zn  
 23,000

3680

FEED GRADES FOR THE MONTH OF                      MAY, 1979

TONNAGE AND GRADE COMPARISONS	Tons (000's)	% Pb	% Zn	Comb.
Tonnage and Grade Model	238	3.4	5.5	8.9
Blasthole Assays	214	3.2	5.4	8.6
Metallurgical Balance	346.5	3.3	5.3	8.6
Calculated Balance	346.5	3.4	5.5	8.9
First Quarter Review	317.75	3.1	4.7	7.8
Variance (Blasthole vs. Model)	-10%	-6%	-2%	-3%
Variance (Met. Balance vs. Model)	+31%	-3%	-4%	-3%
Variance (Calculated Balance vs. Model)	+31%	0	0	0
Variance (Calculated Balance vs. Blasthole)	+38%	+6%	+2%	+3%
BLASTHOLE ASSAYS				
3690 U	64.7	3.3	6.1	9.4
3690 V	8.3	3.5	6.0	9.5
3670 J	54	3.8	5.5	9.3
3670 K	42	3.1	5.2	8.3
3670 L	45	2.6	4.5	7.1
TOTAL	214	3.2	5.4	8.6
MINE MODEL				
3690	114	3.4	6.4	9.8
3670	124	3.5	4.7	8.2
TOTAL	238	3.4	5.5	8.9

Remarks:

The negative variance in tonnage between the mine model and the blasthole data resulted mainly from the pyrite waste found in 3690 V blast in the NE corner that was not predicted by the mine model.

The large positive variance in tonnage between the calculated balance and the blasthole data is due to a net decrease of 126,500 tons in the CFSP over the month.

*R. J. Lopaschuk*  
R. Lopaschuk  
Geological/Geotechnical Engineer

cc. D. Gregoire



FEED GRADES FOR THE MONTH OF APRIL, 1979

TONNAGE AND GRADE COMPARISONS	Tons (000's)	% Pb	% Zn	Comb.
Tonnage and Grade Model	254	3.7	6.1	9.8
Blasthole Assays	229.3	3.8	5.9	9.7
Metallurgical Balance	244.6	3.7	5.7	9.4
Calculated Balance	244.6	3.6	5.6	9.2
First Quarter Review	307.5	3.4	5.2	8.6
Variance (Blasthole vs. Model)	-10%	+3%	-3%	-1%
Variance (Met. Balance vs. Model)	-4%	0	-7%	-4%
Variance (Calculated Balance vs. Model)	-4%	-3%	-8%	-6%
Variance (Calculated Balance vs. Blasthole)	+6%	-5%	-5%	-5%
BLASTHOLE ASSAYS				
3690 S	62	3.5	5.2	8.7
3690 U	5	2.7	5.5	8.2
3690 V	70.3	3.0	5.8	8.8
3670 H	61	4.3	6.3	10.6
3670 I	28	5.3	7.0	12.3
3670 J	3	3.8	5.5	9.3
TOTAL	229.3	3.8	5.9	9.7
MINE MODEL				
3690	15.5	3.0	4.9	7.9
3670	99	4.8	8.1	12.9
TOTAL	254	3.7	6.1	9.8

Remarks:

The negative variance in tonnage between the mine model and the blasthole data resulted from 25,000 tons of mainly pyrite waste found in the 3690 S and V blasts that were not predicted by the model. The mine model and blasthole grades compared quite favourably with only a 1% variance.

The positive variance in tonnage between the calculated balance and the blasthole data is mainly due to a net decrease of 26,000 tons in the CFSP over the month. This stockpile ore had a lower grade (3.3, 5.3) than the ore delivered from the pit and this accounts somewhat for the negative variance in grade between the calculated balance and the blasthole data.



R. Lopaschuk  
Geological/Geotechnical Engineer

cc. D. Gregoire

BLAST HOLE INFO APRIL - '79

3690	S	BLAST.	62,000	3.5	5.2
3690	V	BLAST	70,325	3.0	5.8
3690	W	BLAST.	5,000	2.7	5.5 APRIL-25 <sup>TH</sup>

3670 H - 61,000 4.3 Pb 6.3 Zn

3670 I - 28,000 5.3 Pb 7.0 Zn.

3670 J - 3,000 3.8 Pb 5.5 Zn

TOTAL - 229,300 S.D.T. 3.8 Pb / 5.9 Zn

MODEL INFO APRIL - '79

3690 - 155,000 TONS 3.0 Pb 4.9 Zn.

3670 - 99,000 TONS 4.8 Pb 8.1 Zn

MODEL TOTAL - 254,000 S.D.T. 5.7 Pb 6.1 Zn.

155,425 TONS.

30 Pb  
4.9 Zn

3690 APRIL-30

5.45

OCT-22

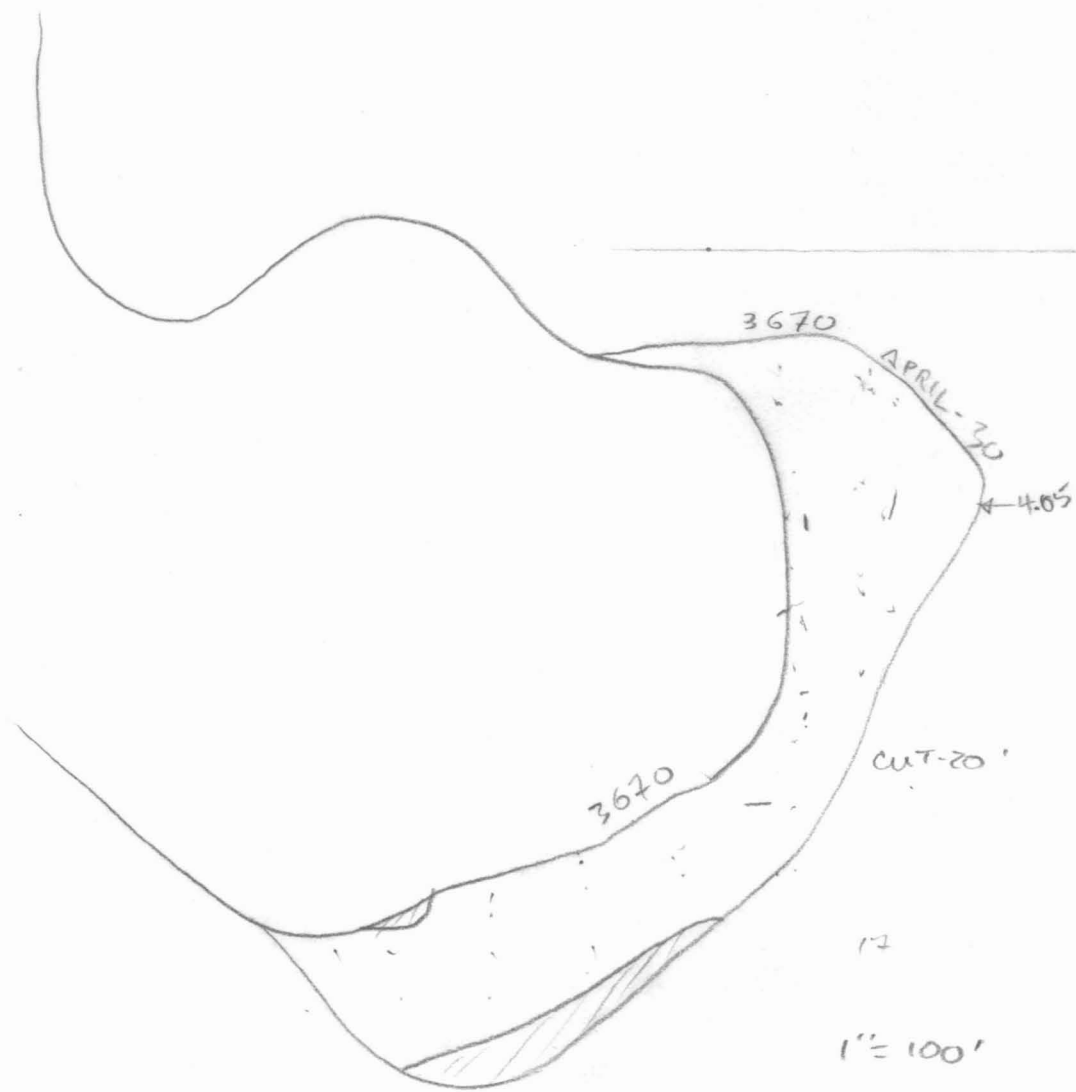
9,500 N

3.0  
4.9

1" = 100'

MODEL

14,500 E



48 Pb  
8.08 Zn

99,000 TONS

MODEL

3.4 Pb  
6.4 Zn

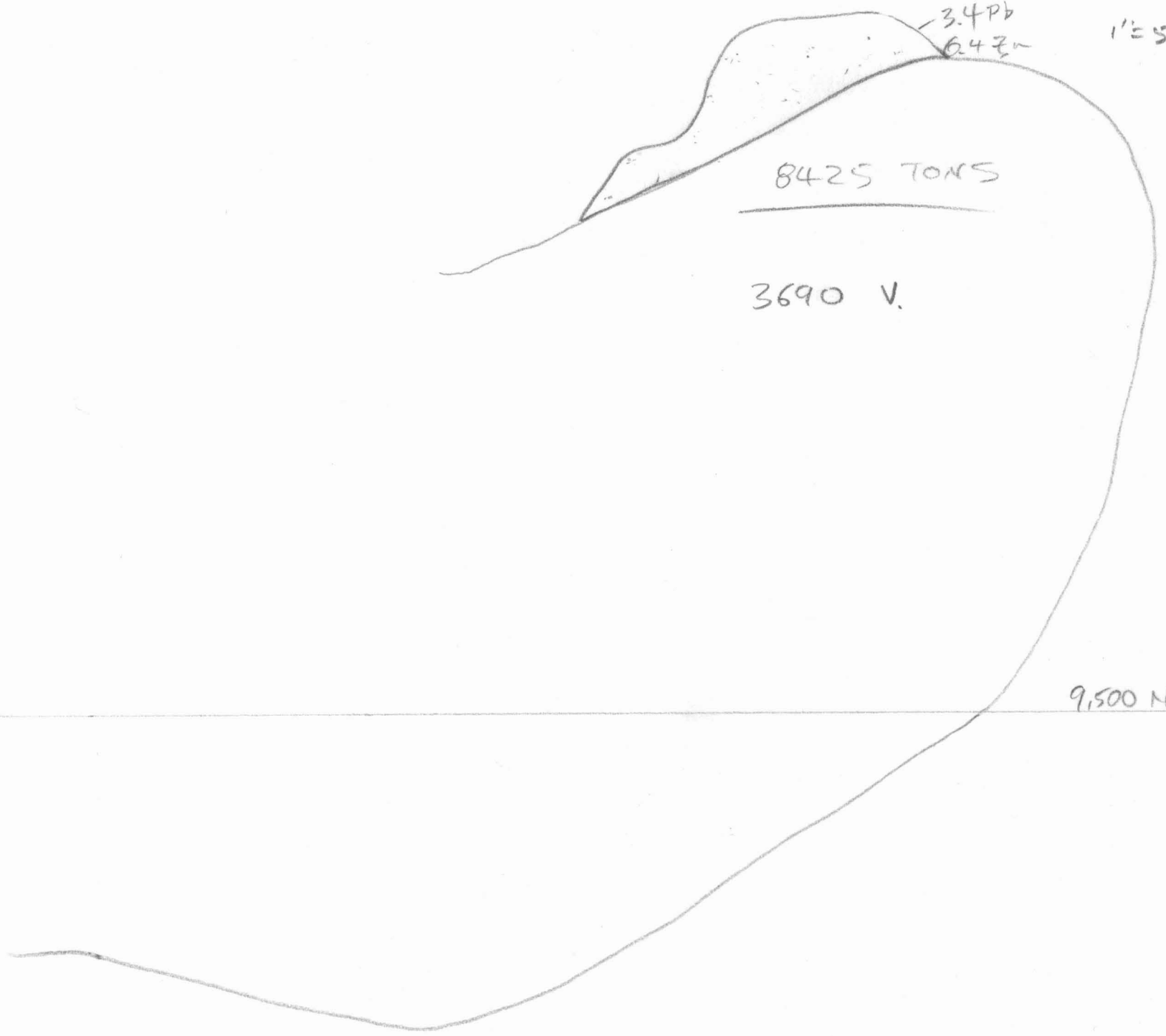
1" = 50'

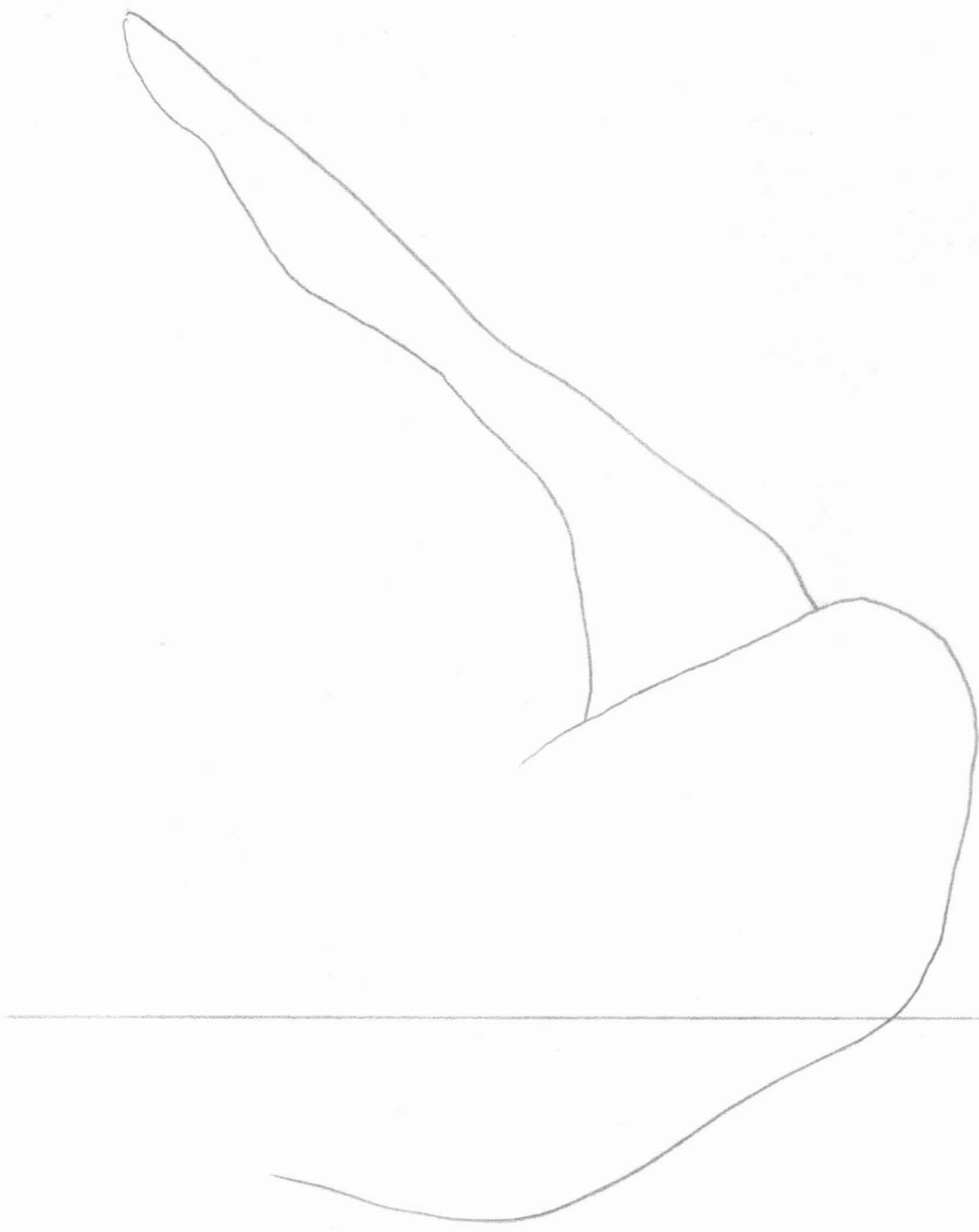
8425 TONS

3690 V.

9,500 N

14,500 E.





14,500 E

9,500 N

FEED GRADES FOR THE MONTH OF MARCH, 1979

TONNAGE AND GRADE COMPARISONS	Tons (000's)	% Pb	% Zn	Comb.
Tonnage and Grade Model	287.8	3.9	6.3	10.2
Blasthole Assays	347.2	3.8	6.0	9.8
Metallurgical Balance	263.7	3.8	5.7	9.5
Calculated Balance	263.7	3.8	5.7	9.5
First Quarter Review	318	3.7	5.4	9.1
Variance (Blasthole vs. Model)	+17%	-3%	-5%	-4%
Variance (Met. Balance vs. Model)	-8%	-3%	-9%	-7%
Variance (Calculated Balance vs. Model)	-8%	-3%	-9%	-7%
Variance (Calculated Balance vs. Blasthole)	-24%	0	-5%	-3%
BLASTHOLE ASSAYS				
3670 H	21	4.5	6.5	11.0
3670 G	50	4.6	6.4	11.0
3670 F	54.8	3.4	5.6	9.0
3670 E	89	4.4	6.5	10.9
3670 D	22	4.7	6.8	11.5
3690 R	80.4	2.7	5.0	7.7
3690 Q	30	3.6	6.5	10.1
TOTAL	347.2	3.8	6.0	9.8
MINE MODEL				
3670	173.7	4.6	7.2	11.8
3690	114.1	2.9	5.0	7.9
TOTAL	287.8	3.9	6.3	10.2

Remarks:

The positive variance in tonnage between the model and blasthole data resulted from more tonnage being recovered in the southwest corner of the 3670 bench than had been predicted by the model. The negative variance in grades is due to receiving lower zinc grades on 3670 than predicted by the model.

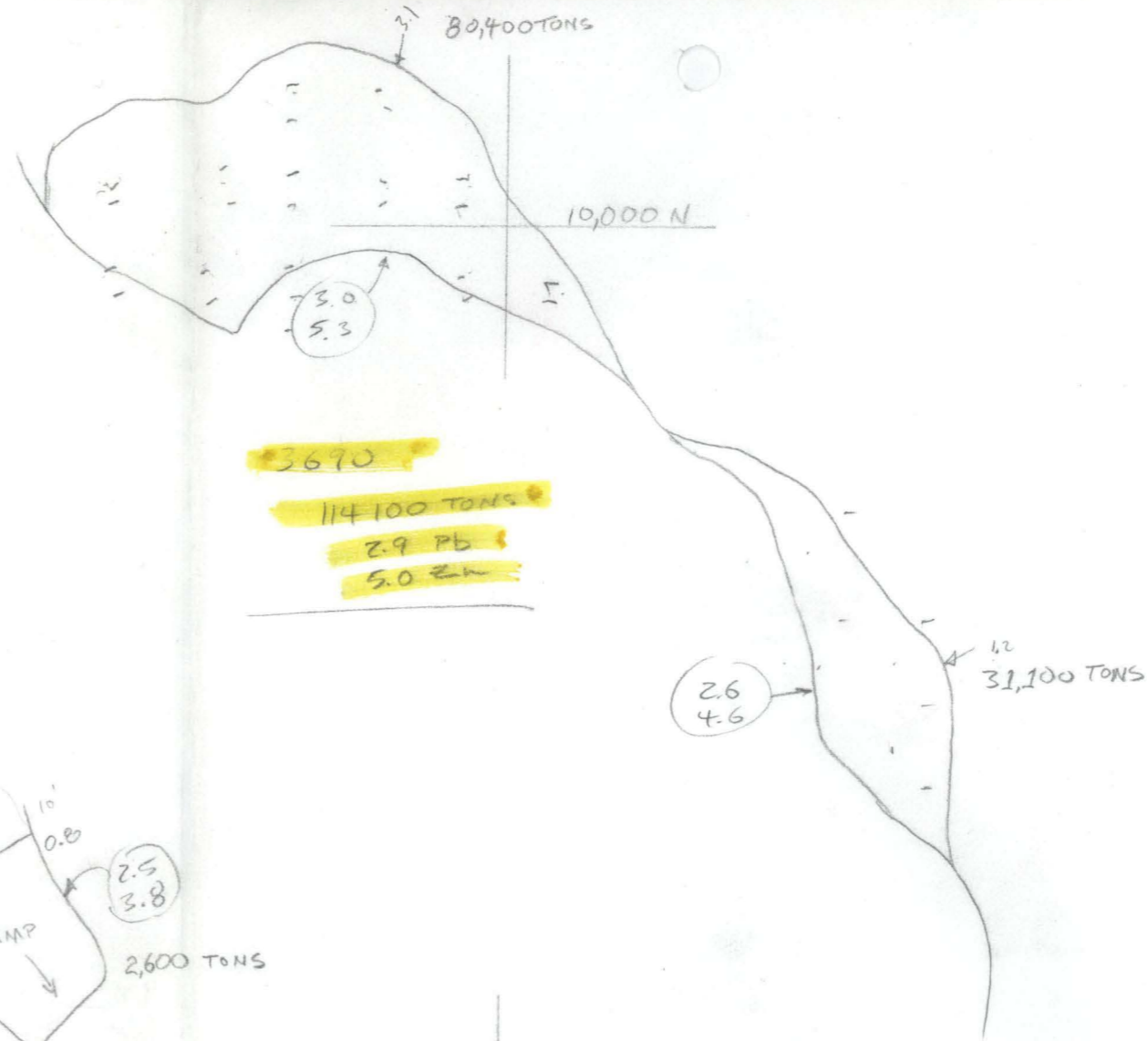
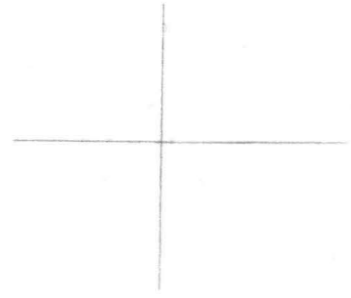
The large negative variance in tonnage between the calculated balance and the blasthole data is mainly due to a net increase of 90,000 tons in the CFSP over the month.



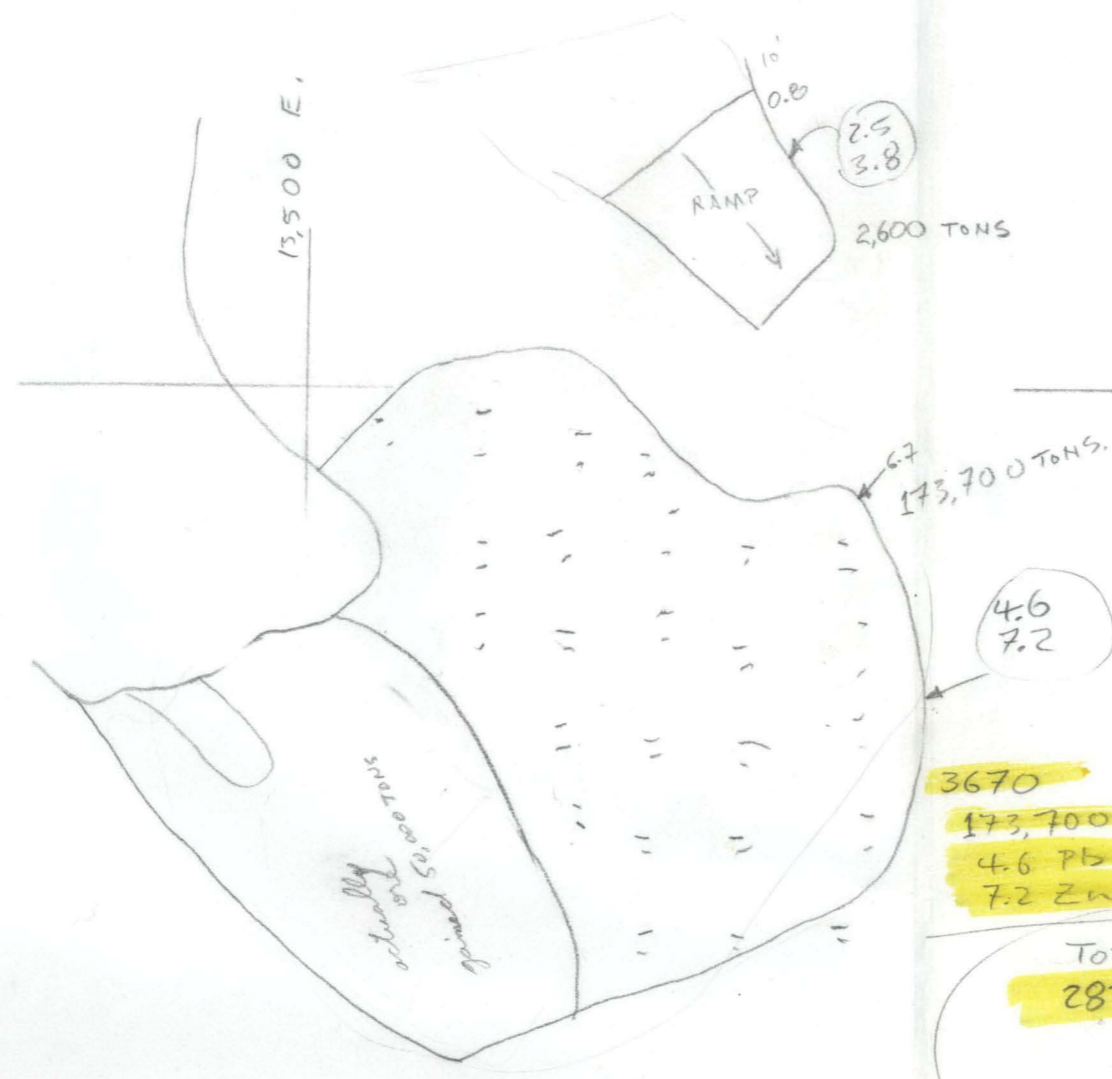
R. Lopaschuk  
Geological/Geotechnical Engineer

cc. D. Gregoire





3670  
 114,100 TONS  
 2.9 Pb  
 5.0 Zn



3670  
 173,700  
 4.6 Pb  
 7.2 Zn

TOTAL  
 287,800 TONS  
 3.9 Pb  
 6.3 Zn

1" = 100'  
 APRIL - 1 - '79

MARCH MODEL INFORMATION

To

D. Gregoire

Date

March 7, 1979

From

R. Lopaschuk

Subject

FEBRUARY FEED GRADES

Tonnage and grade comparisons for February are summarized below:

	<u>Tons (000's)</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Comb.</u>
Tonnage and Grade Model	184	2.7	4.6	7.3
Blasthole Assays	147	3.3	4.7	8.0
Metallurgical Balance	87.4	2.60	4.49	7.09
Calculated Balance	87.4	2.86	5.38	8.24
Third Quarter Review	287	3.4	5.4	8.8
Variance (Blasthole vs. Model)	-20%	+18%	+ 2%	+ 9%
Variance (Met. Balance vs. Model)	-52%	- 4%	- 2%	- 3%
Variance (Calculated Balance vs. Model)	-52%	+ 6%	+14%	+11%
Variance (Calculated Balance vs. Blasthole)	-40%	-13%	+13%	+ 3%

Attached is a breakout for blasthole and mine model sources.

The negative variance in tonnage between the model and blasthole data resulted from 20,000 tons of pyrite waste in 3690 P blast and a loss of 20,000 tons on the 3670 ramp that was predicted by the model but was not there. The positive variance in grades resulted from receiving higher grades than expected in the 3670 C and 3690 Q blasts.

The large negative variance in tonnage between the calculated balance and blasthole data is partially due to a net increase of 50,000 tons in the CFSP over the month. Approximately 5,000 tons of oxidized stockpile material were delivered to the mill on the last day of the month.



R. Lopaschuk  
Geological/Geotechnical  
Engineer

RL/mm

Attach.

**CYPRUS ANVIL**

BLASTHOLE ASSAYS

<u>Blast</u>	<u>Tons</u>	<u>Pb %</u>	<u>Zn %</u>	<u>Comb.</u>
3670 C	19,000	5.4	6.6	12.0
3690 M & K	45,000	2.8	3.0	5.8
3690 P	65,000	2.9	4.9	7.8
3690 Q	15,000	4.1	7.1	11.2
3690 R	<u>3,000</u>	<u>2.0</u>	<u>4.0</u>	<u>6.0</u>
Total	147,000	3.3	4.7	8.0

MINE MODEL

3690	146,000	2.6	4.8	7.4
3670	<u>38,000</u>	<u>3.0</u>	<u>4.0</u>	<u>7.0</u>
Total	184,000	2.7	4.6	7.3

BLASTHOLE INFO FEB - '79

3670 "C" BLAST 19,000 TONS  
5.4  
6.6

3690 M+K 45,000  
2.8  
3.0

3690 P 65,000  
2.9  
4.9

3690 Q 15,000  
4.1  
7.1

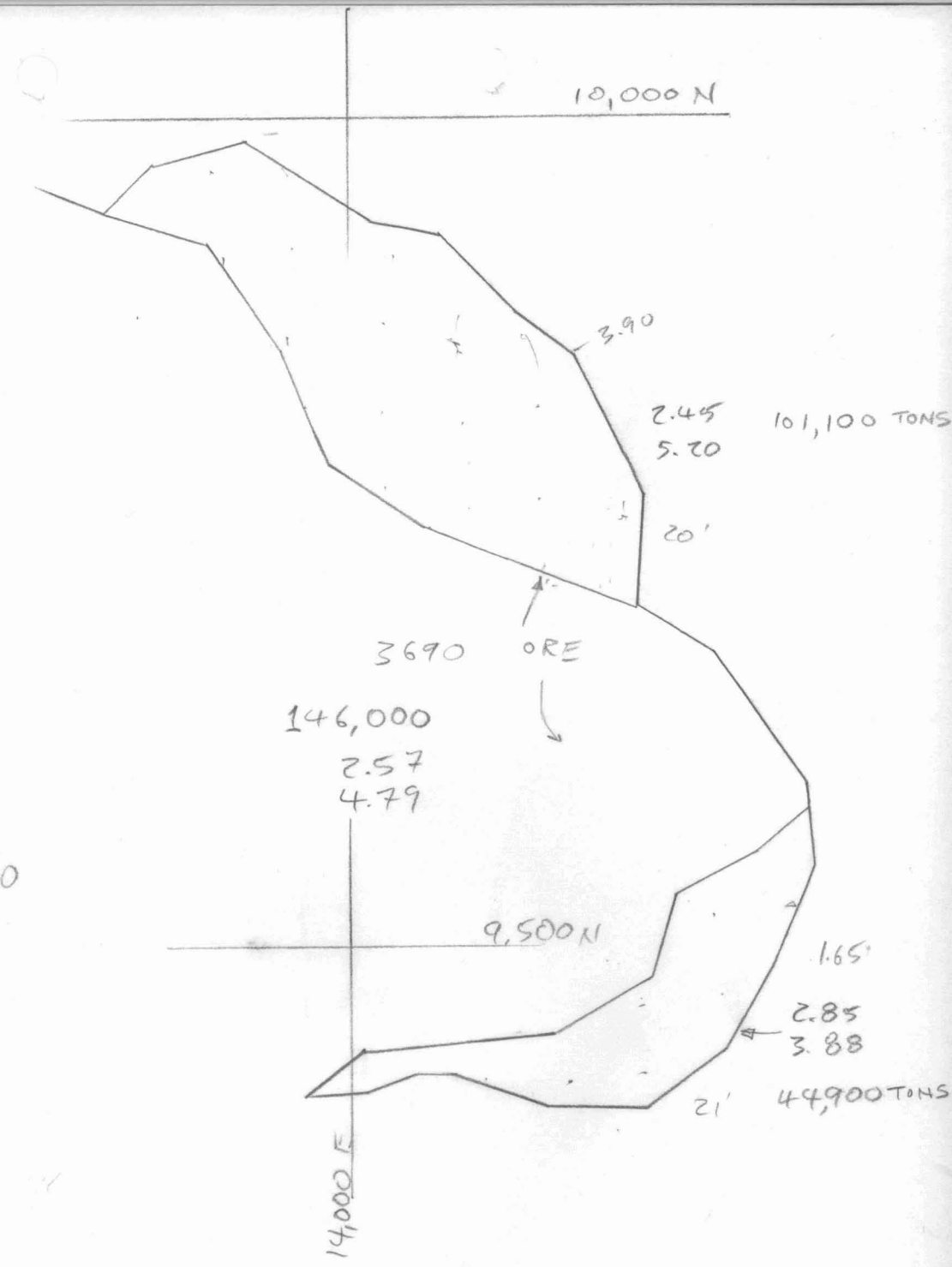
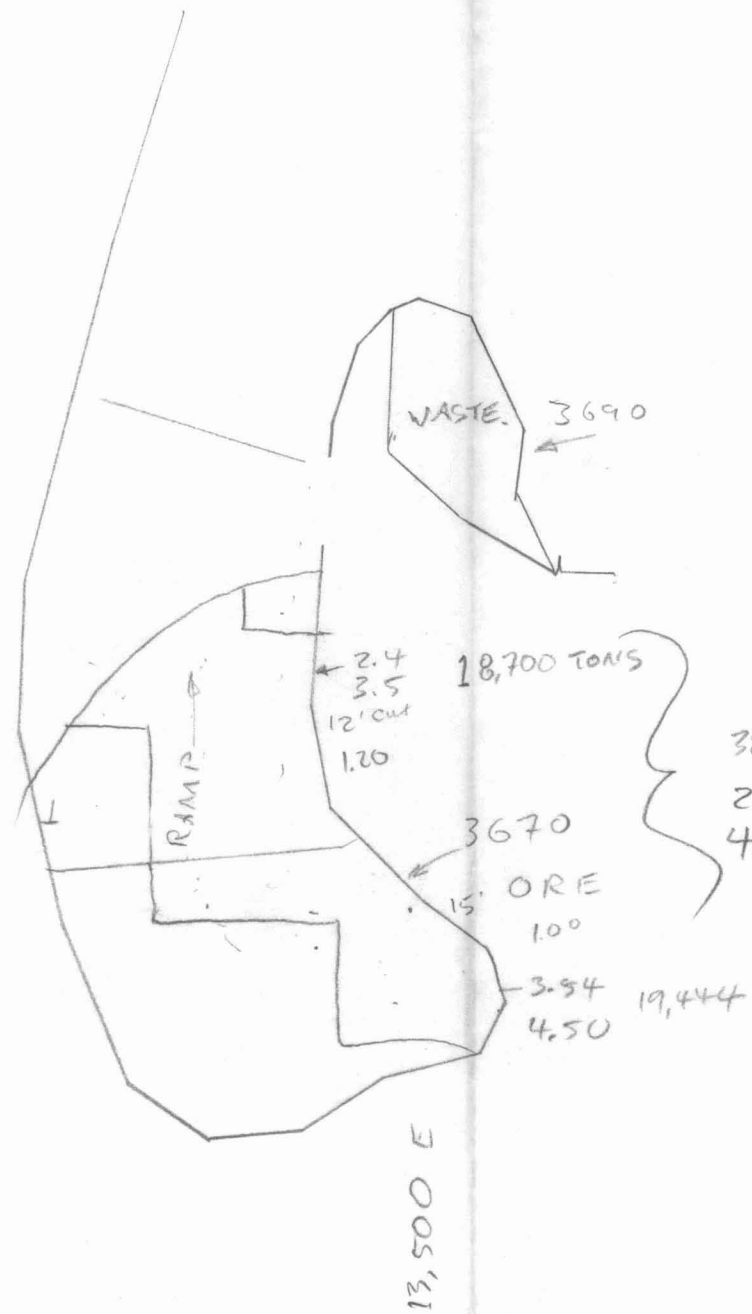
3690 R 3,000  
2.0  
4.0

TOTAL TONS 147,000

3.3 Pb

4.7 Zn

+ 50,000



MODEL DATA FOR END OF FEB -79

TOTAL TONS 184,100 TONS.  
 2.65 Pb  
 4.62 Zn

CFSP 50,200 INCREASE.

To D. Gregoire

From R. Lopaschuk

Subject JANUARY FEED GRADES

Date February 9, 1979

Tonnage and grade comparisons for January are summarized:

	<u>Tons</u> <u>(000's)</u>	<u>% Pb</u>	<u>% Zn</u>	<u>Comb.</u>
Tonnage and Grade Model	410	3.0	4.4	7.4
Blasthole Assays	318	3.9	5.8	9.7
Metallurgical Balances	295.5	3.8	5.8	9.6
Calculated Balance	295.5	3.8	5.7	9.5
Third Quarter Review	318	3.4	5.4	8.8
Variance (Blasthole vs. Model)	-22%	+23%	+24%	+24%
Variance (Met. Balance vs. Model)	-28%	+21%	+24%	+23%
Variance (Calculated Balance vs. Model)	-28%	+21%	+23%	+22%
Variance (Calculated Balance vs. Blasthole)	- 7%	- 3%	- 2%	- 2%

Attached is a breakout for blasthole and mine model sources.

The negative variance between the model and blasthole data resulted from 56,000 tons of pyrite waste on 3690 and 30,000 tons of muscovite-biotite schist waste not predicted by the mine model. The negative variance in the grades is due to receiving higher grades than expected in the NW corner of 3690 bench.

The negative variance in tonnage between the calculated balance and blasthole data is partially due to a net increase of 17,500 tons in the CFSP. There is very little variance in the grades.



R. Lopaschuk  
Geological/Geotechnical  
Engineer

RL/mm

Attach.

**CYPRUS ANVIL**

BLASTHOLE ASSAYS

<u>Blast</u>	<u>Tons</u>	<u>Pb %</u>	<u>Zn %</u>	<u>Comb.</u>
3690 K	42,300	5.0	6.6	11.6
3690 L	28,600	3.7	6.0	9.7
3690 M & K	84,400	2.5	4.4	6.9
3690 J	121,700 <i>55,000</i>	4.6 <i>4.4</i>	6.6 <i>6.4</i>	11.2
3690 I	7,000	5.5	8.5	14.0
3690 G - Ramp	<u>33,700</u>	<u>3.0</u>	<u>4.5</u>	<u>7.5</u>
Total	317,700	3.9 <i>3.6</i>	5.8 <i>5.5</i>	9.7

MINE MODEL

3690	410,000	3.0	4.4	7.4
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# ORE Comparison

Blast hole Info JAN - '79

3690 L 28,600 TONS  
3.7  
6.0

3690 K 42,300 TONS.  
5.0 Pb  
6.6 Zn

3690 M+K 84,400 TONS  
2.5 Pb  
4.4 Zn

3690 "J" BLAST 121,700 TONS  
4.6 Pb  
6.6 Zn

3690 "I" 7000 TONS  
5.5 Pb  
8.5 Zn

3690 RAMP  
old - G - blast - 33,700  
3.0 Pb  
4.5 Zn

TOTAL TONS 317,700 3.9 % Pb  
5.8 % Zn

CFSP GAINED 17,500 TONS.

13,500

~~3.0~~  
1.5 in<sup>2</sup>

4.8  
5.0 in<sup>2</sup>

3.2 Pb  
4.4 Zn

RAMP

plumbivibent

60

7.1 in<sup>2</sup>

PUSH RAMP

2.5 in<sup>2</sup>

3.0 Pb  
4.4 Zn

3690 M.B

3670  
ORE COMP  
MODEL

410,000 TONS.

~~3.0 Pb~~

1.20

