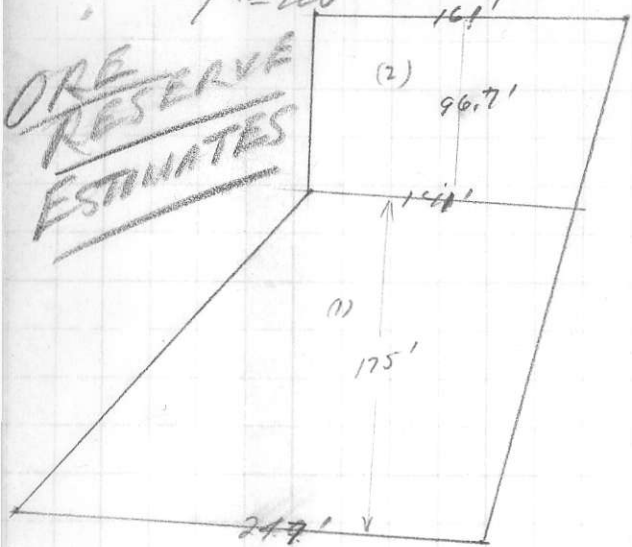


East Ore Block

1" = 100'

ORE RESERVE ESTIMATES



$$\text{Area (2)} = 96.7 \times 150 = 14,505 \text{ } \overset{200}{\text{ft}^2}$$

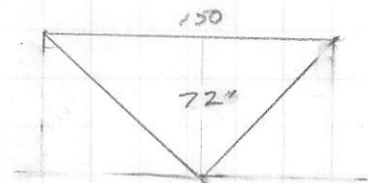
$$\text{Area (1)} = 175 \times 192 = 33,550 \text{ } \overset{350}{\text{ft}^2}$$

$$\text{Total} = 48,050$$

$$\text{Vol} = 48,050 \times 4.0 = 192,200$$

$$\text{WT} = 19,220 \text{ Tons}$$

NE Ore Block, 1" = 100'



$$\text{Area} = 150 \times 36 = 5400$$

$$\text{Vol} = 5400 \times 5 = 27,000$$

$$\text{WT} = 2700 \text{ Tons}$$

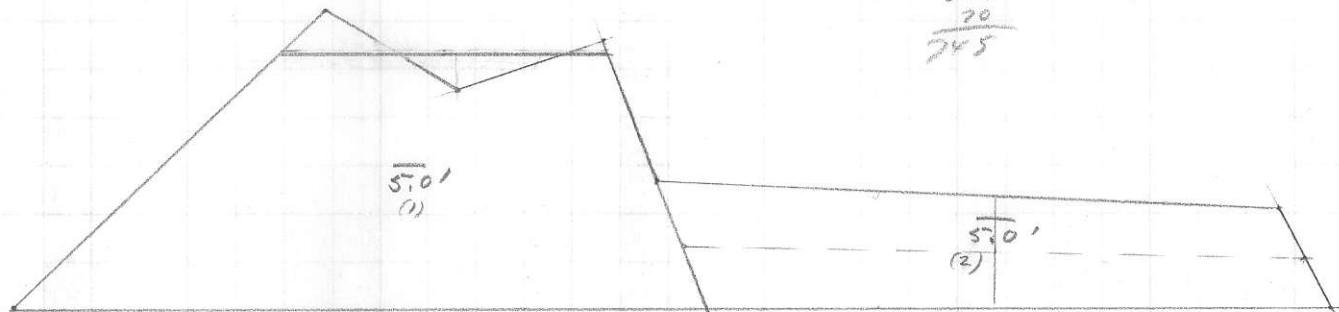
801200

West Ore Block, 1" = 100'

$$\begin{array}{r} 360 \\ 170 \\ 2 \overline{) 530} \\ \underline{265} \end{array}$$

$$\begin{array}{r} 53866 \\ 655 \\ \hline 216 \end{array} \quad \begin{array}{r} 34980 \\ 140 \\ \hline 35120 \end{array}$$

$$\begin{array}{r} 675 \\ 20 \\ \hline 745 \end{array}$$



$$\text{Area}_1 = 265 \times 132' = 35,120 \text{ sq}'$$

$$\text{Area}_2 = 322 \times 58 = \frac{18,746}{53,866} \text{ sq}'$$

$$\text{Vol} = 53,866 \times 5.0 = 269,330$$

$$\text{Tons} = 26,933 \text{ Tons}$$

Silmonac

April 11/77.

West Block

14 ddd A's.

1.5 x 28.2 =	42.30	x 0.9 =	38.07	x 2.1 =	76.4
3.7 x 15.6 =	57.72	x 3.1 =	11.47	x 3.7 =	13.69
1.5 x 82.2 =	123.30	x 4.43 =	6.64	x 10.7 =	16.05
2.6 x 38.0 =	98.80	x 19.7 =	51.22	x 6.1 =	15.86
2.5 x 11.0 =	27.50	x 4.0 =	10.00	x 6.0 =	15.00
6.4 x 6.5 =	41.60	x 11.4 =	72.96	x 4.0 =	25.60
5.0 x 15.5 =	77.50	x 3.5 =	27.50	x 6.0 =	30.00
2.5 x 6.8 =	17.00	x 5.7 =	14.25	x 1.9 =	4.75
8.5 x 52.9 =	449.65	x 0.4 =	3.40	x 19.8 =	168.30
5.2 x 44.0 =	228.80	x 17.5 =	91.00	x 4.9 =	25.48
3.5 x 35.2 =	123.20	x 12.9 =	45.15	x 11.7 =	40.95
3.2 x 71.0 =	227.20	x 29.1 =	93.12	x 9.0 =	28.80
3.5 x 9.5 =	33.25	x 3.8 =	13.30	x 2.6 =	9.10
3.0 x 21.0 =	63.00	x 8.5 =	25.50	x 8.8 =	26.40

52.6'	161.082	46.6186	430.163
3.76' @	30.63	8.87	8.19

For true avg. thickness take $3.76 \times \sin 55^\circ = 3.76 \times 0.8 = 3.0'$ and $\frac{3.0}{3.75} = 0.8$

Weight avg. of true mound thickness:

<u>3.0'</u> @	<u>30.6</u>	<u>8.9</u>	<u>8.2</u>
---------------	-------------	------------	------------

And average mound width:

5.0' @	18.4	5.3	4.9
-------------------	-----------------	----------------	----------------

And with allowances for core loss and offset relationship to main West mounds.
Compute & calculate tonnage and grade = avg. of past production:

26,933 dry tons @ 16.43 oz/ton Ag, 5.8% Pb, 5.9% Zn.

Silmonac.

April 11/77

6 ddh A.S. Sine
3 drift sections

EAST BLOCK

1.5 x 64.1 =	²²² 96.15	x 34.1 =	¹¹¹ 51.15	x 6.3 =	²²¹ 9.45
3.8 x 34.4 =	130.72	x 19.7 =	74.86	x 8.2 =	31.16
1.0 x 32.3 =	32.30	x 4.2 =	4.20	x 21.9 =	21.90
4.0 x 22.1 =	88.40	x 8.3 =	33.20	x 8.4 =	33.60
3.3 x 14.5 =	47.85	x 7.1 =	23.43	x 4.4 =	14.52

13.16. 395.42 186.84 110.63

Avg. 3.0' @ 29.07 oz/tm Ag. 13.74% Pb. 8.13% Zn
 Cut 5.0' @ 17.4 " " 8.24 " " 4.9 " "

Hence, with same allowances as for West Block.

19,222 dry tons @ 16.43 oz/tm, 5.8% Pb, 5.9% Zn.

Similarly for N.E. Block.

2700 dry tons @ 16.43 oz/tm, 5.8% Pb, 5.9% Zn.

<u>Silmonac</u>	End reading	-	3192	
<u>Silmonac (center)</u>	Reg.	"	2006	
	Cross hole area	-	1186	$\Sigma = 1186$ hole area
<u>Segment</u>	less Developed Area	-	2249	
		-	2112 - 137	-137
	net Unexp/Under Area Silmonac Seg	-		-1049 plan. units
	End reading	-	3044	
"Silmonac Segment"	Reg.	"	3038	6
Area areas	End reading	-	3433	
	Reg.	"	3430	2
	End reading	-	3461	
	Reg.	"	3460	1
	End reading	-	3483	
	Reg.	"	3476	7 16
Probable Ore Reserve	End 2707	End 2952		
	Reg. 2704	Reg. 2950		
	3	2	5	21

Accept 600 w estimate: 25% of presently ^{applied} develop area of Silmonac hole is in ore.

<u>East Segment</u>	End reading	-	8263	
Hope - 5 sm - R.E.	Reg.	"	7042	
	Cross hole Area	-	1161	$\Sigma = 1161$
	End reading	-	7920	
One areas.	Reg.	"	7910	10
	End - "	-	7872	
	Reg.	"	7862	10
	End - "	-	2292	
	Reg.	"	2288	4
	End - "	-	2143 ³³	
	Reg.	"	2145 ³²	2080 ³⁰ 32
	End - "	-	2429 ⁴⁸	
	Reg.	"	2381	2333 48
	End - "	-	2515 ¹⁷	
	Reg.	"	2498 ¹¹	2449 ²⁹
	End - "	-	2487 ¹¹	2427 ²⁰ 20
	Reg.	"	2465 ²²	124

813.70
32
50

46

45
400' decline
@ 8' = 50'sh = 25 days
@ 9' = 45'sh = 22

900' - 1.12"
1170' - 1.76"
370' = .46"

6.4
51.200

develop / 25'

Assets + haul = work left.

ORE RESERVE ESTIMATES Planimeter Areas

Simonsac - Probable Ore Area. \rightarrow Planimeter Area Units.

Simonsac (Centre) Segment.

Explored + Develop. Area, Mine. - - - - - 137 plani-area units.

~~Total Area, Opened + Probable Ore Area = 21~~

Proportion of Ore + Probable Ore = $\frac{21}{137} = 15.3\%$

Estimate A

Basis: $\frac{\text{Production area Develop}}{\text{Rem Underly Area}} = \frac{x \text{ Tons possible ore.}}{\text{Rem Underly Area}}$

$\frac{136,039}{137} = \frac{x}{1049}$

possible Ore Simonsac Seg - = $x = 1,042,000$ Tons.

Factor = $\frac{\text{Struct. - Favourable beds}}{\text{Total Unexplored beds Area}} = \frac{1}{2}$ or 0.5 (per East Seg.)

possible Ore Simonsac Segment = $\frac{1}{2} (1,042,000) \text{ Tons} = 521,000 \text{ Tons}$.

* In Preamble - - Note by General Appraisal indicates 50% or 1000'/2000' probably productive.

Take 500,000 Tons as P & L or Prob'l ore Estimate -
(On Unpure basis of 2 checks out of 3 estimates)

992,9854 =

Silmonac Possible Ore Reserve

Estimate B.

Basis - Total Product main beds + Probic - 1,445,576 Tons
Total Optimum Area main beds

1574
1186
1161
3921 planar units.

Unexplored/Under Ore Silmonac beds = 1049 planar units.
Probable Ore Silmonac.

$$X = \frac{\text{Possible Ore Silmonac Segment}}{\text{Unexplored Area Silmonac Seg.}} = \frac{1,445,576 + 48,855 \text{ Tons}}{\text{Gross m.k. product + Prob Ore Silmonac}} \div \frac{\text{Gross area main beds}}{\text{Gross area main beds}}$$

$$\frac{X}{1049} = \frac{1,494,431}{3921}$$

$$X = 399,000, \text{ say } 400,000 \text{ Tons.}$$

Silmonac Possible Ore Reserve

W - 12,400' = 2.35 mi

Center = 10,500' = ± 2.0 mi

E - 8,100' = 1.53 mi

L = 31,000 = 5.9 mi

Estimate C:

WILLIAM M. SHARR, M.A.S.C. P. ENG.
CONSULTING GEOLOGICAL ENGINEER
1000 B.L. BLVD. VANCOUVER, B.C. V6M 1R8

Basis: Possible Ore Silmonac Undercliff Seg. per
Production main hole per 1000' Main hole.

Total length West (Stand main hole) Seg = 12,400'

" " Center (Silmonac) Seg = 10,500'

" " East (Hope-R.E) Seg = 8,100' 31,000'

Total production main hole + Prob Ore = 1,494,431 tons.

Total strike length main hole = 31,000 ft.

Avg. Product main hole = $\frac{1,494,431}{31} = 48,200 \text{ tons} / 1000'$

Gross possible Ore Silmonac Seg = 10.5 x 48,200 = 506,000 tons

Constant, beam = 96.24 ft

<u>Selmonac</u> Σ code	End reading = 2862	
<u>West Area</u> - (Standard Mammoth)	Reg. reading = 1262	1660
<u>Cross hole area</u>	End reading - 4436	
	Reg. " - 2862	$\Sigma = 1574$ ← mean (gross hole)
		1574
	End reading - 5982	
	Reg. reading - 4436	1546
		1546

West Area
 Σ one area.

	End reading 1298	
	Reg. reading 1296	2
	End reading - 7320	
	Reg. " - 1311	9
1373	End reading - 1373	
1322	Reg. " - 1323	50
51		
	End reading - 2008	
	Reg. " - 2000	8
	End reading - 2076	
	Reg. " - 2042	34
		34

$\Sigma = 103$

Scale 1" = 800'

$.7854 d^2 = 1,000,000$ that circle equiv to 1000' x 1000' square.

$d^2 = 1,272,000, d = 1127.7'$ ($d = 1.41'' = 0.1'' = 800'$)
 $r = 0.705'' @ 1'' = 800'$

24 x 24 square @ 1" = 800'
 1600' x 1600 = 2,560,000 sq ft.

End. 1890
 Beg. 1622
268 ←
 End. 2162
 Beg. 1890
272
 End. 2425
 Beg. 2159
266

∴ 266 count = "
 1/planimeter-count = $\frac{2,560,000}{266} = 9624$

9,624

266 | 2,560,000.00
 2394 xx
 1660
 1596
 640
 532
 1 1980
 1,000,000.00
 100

1.1 2 7.7

1,272,000.00

21 | 27
 21

222 | 6.20
 444

2247 | 176.00
 15729
 1871.00

1.409

800 | 1127.7
 800
 3277
 3200
 7700
 2200