

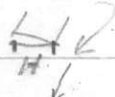
801308
Silver star

5900 ASSAY CALCULATIONS
Slide-rule

Jan/69 (1)

LENGTH	x Au =	x Ag =	x Pb =	x Zn =
3.6 ¹	x 0.28 = 1.010 ⁸⁹⁵	x 2.00 = 7.20 ¹⁰⁸³	x 2.78 = 10.00 ¹⁰⁸²	x 1.05 = 3.78 ⁹⁷²
1.2	x 0.36 = 0.432	x 6.80 = 8.15	x 10.7 = 12.82	x 6.1 = 7.30
1.7	x 0.38 = 0.645	x 9.35 = 15.90	x 14.8 = 25.18	x 17.18 = 29.20
2.0	x 0.22 = 0.440	x 22.40 = 44.80	x 28.75 = 57.50	x 10.10 = 20.20
3.0	x 2.92 = 8.760	x 14.05 = 42.15	x 17.50 = 52.50	x 14.4 = 43.20
1.7	x 0.30 = 0.510	x 40.3 = 68.50	x 45.0 = 76.40	x 7.6 = 12.90
2.5	x 0.80 = 2.000	x 31.45 = 78.60	x 30.40 = 76.00	x 22.4 = 56.00
2.3	x 0.16 = 0.368	x 14.85 = 34.15	x 19.60 = 45.00	x 27.40 = 63.00
1.7	x 0.08 = 0.136	x 10.95 = 18.60	x 18.80 = 32.00	x 21.60 = 36.75
2.0	x 0.40 = 0.800	x 5.2 = 10.40	x 11.3 = 22.60	x 11.00 = 22.00
2.1	x 0.31 = 0.650	x 4.8 = 10.10	x 9.35 = 19.60	x 7.15 = 15.00
0.7	x 0.54 = 0.378	x 10.25 = 7.18	x 28.7 = 20.10	x 13.80 = 9.65
1.1	x 2.74 = 3.015	x 19.25 = 21.20	x 24.50 = 26.95	x 33.70 = 37.00
2.1	x 0.68 = 1.430	x 27.70 = 58.20	x 12.60 = 26.75	x 39.60 = 83.00
1.33	x 0.66 = 0.877	x 23.35 = 31.05	x 27.40 = 36.40	x 25.55 = 34.00
1.25	x 0.30 = 0.375	x 14.10 = 17.60	x 18.90 = 23.60	x 18.95 = 23.70
2.6	x 0.24 = 0.624	x 9.00 = 23.40	x 11.15 = 29.00	x 16.40 = 42.10
3.5	x 0.39 = 1.362	x 11.00 = 38.50	x 17.60 = 61.50	x 29.60 = 103.50
3.15	x 0.86 = .271	x 17.05 = 53.60	x 27.45 = 86.40	x 26.15 = 82.50
1.75	x 1.41 = 2.470	x 6.60 = 10.55	x 15.20 = 26.60	x 17.00 = 29.75
3.0	x 0.74 = 2.220	x 7.50 = 22.50	x 12.65 = 37.95	x 13.60 = 40.80
(22) 2.0	x 0.09 = 0.180	x 0.30 = 0.60	x 0.50 = 1.00	x 0.55 = 1.10
46.28	28.953	622.93	825.85	796.43

wtd. "H"
Avg 2.10' 0.64 oz/T 13.80 oz/T 18.3% 17.6%



Expanded
to 2.68' (cf wtd) 0.51 oz/T 10.8 oz/T 14.3% 13.8%

w.s/c. 160' x 2.68' @ 0.524 Au; 10.8 Ag; 13.5 Pb, 16.6 Zn. - Block A.

5900 ASSAY CARC'S - W.M.S SAMPLES (1-a)
Jan/69

Length	x Au =	x Ag =	x Pb =	x Zn =
3.3	0.18 = 0.594	1.65 = 5.45	3.95 = 13.00	0.12 = 0.40
2.5	0.19 = 0.475	5.90 = 14.72	1.39 = 3.40	40.30 = 101.00
2.1	0.67 = 1.408	6.15 = 12.91	11.25 = 23.60	11.57 = 24.28
1.2	0.36 = 0.432	15.90 = 19.10	11.40 = 12.50	36.00 = 43.20
2.2	0.27 = 0.594	15.40 = 33.85	13.95 = 30.70	18.08 = 39.80
3.0	0.61 = 1.830	14.80 = 44.40	12.30 = 36.90	41.95 = 125.85
2.2	1.20 = 2.640	20.30 = 46.80	17.95 = 39.50	38.50 = 84.60
1.7	1.36 = 2.315	10.35 = 17.60	16.55 = 28.20	21.65 = 36.80
18.2	10.288	194.83	187.80	455.93

2.28' ↓	0.565 g/t	10.7 g/t	10.35%	25.1%
2.68' - e	0.565 g/t	10.7 g/t	10.35%	25.1%

Block 'A' 5900 Sill take @ 9.25 c.f./Ton

Weighted average $\frac{C.L \times 3}{W.D \times 1}$; for 2.68' thickness.

3 x 0.51 = 1.530	3 x 10.8 = 32.4	3 x 14.3 = 42.90	3 x 13.8 = 41.4
1 x 0.565 = 0.565	1 x 10.7 = 10.7	1 x 10.35 = 10.35	1 x 25.1 = 25.1
2.095	43.10	54.25	66.5
160' x 2.68' @ 0.524 g/t	10.8 g/t	13.5%	16.6%

Block 'B' 5900 Sill : take @ 10 c.f./Ton.

4.5 x 0.57 = 2.57	x 0.85 = 3.83	x 0.40 = 1.80	x 0.01 = 0.045
3.0 x 0.75 = 2.25	x 6.70 = 20.10	x 4.17 = 12.50	x 0.01 = 0.030
2.0 x 0.20 = 0.40	x 0.40 = 0.80	x 0.35 = 0.70	x 0.15 = 0.300
1.8 x 0.11 = 0.20	x 4.75 = 8.55	x 10.25 = 18.45	x 9.3 = 16.700
1.0 x 0.36 = 0.36	x 24.7 = 24.70	x 38.4 = 38.40	x 13.6 = 13.600
1.15 x 0.48 = 0.55	x 12.25 = 14.10	x 12.75 = 14.67	x 31.18 = 35.800
0.75 x 0.60 = 0.45	x 18.35 = 13.77	x 20.4 = 15.30	x 30.86 = 23.200
1.75 x 0.07 = 0.12	x 8.75 = 15.30	x 2.14 = 3.75	x 5.10 = 8.920
15.95	6.90	101.15	105.57
2.0' @ Au, 0.433 g/t	Ag, 6.35 g/t	Pb, 6.6%	Zn, 6.2%
2.5' x 100' c Au, 0.40 g/t	Ag, 6.0 g/t	Pb, 6%	Zn, 6%

incl. H.W. Au-Ag

SCRANTON ORE RESERVE CALC'S - FEB. 1969.
(Assigned grades on conservative side.)

I INDICATED ORE: (w. avg width = 3.2')

Block	Dimensions	Tons	Au %	Ag %	Pb %	Zn %
BLOCK 'A'	160' x 200' x 2.68'	9,500	0.524	10.8	13.5	16.6
<small>(5900)</small>	<small>9.0</small>					
BLOCK 'B'	100' x 155' x 2.5'	3,875	0.40	6.0	6.0	6.0
<small>(5900)</small>	<small>10.0</small>					
BLOCK 'C'	180' x 170' x 5.4'	15,000	0.03	6.9	4.9	2.0
<small>(Summit Basin)</small>	<small>11.0</small>					
BLOCK 'D'	175' x 275' x 2.5'	12,000	0.092	3.27	9.1	5.1
<small>(S.W. Summit)</small>	<small>10.0</small>					
BLOCK 'E'	150' x 100' x 2.5'	3,750	0.20	10.0	8.0	6.0
<small>(Summit sub-steps)</small>	<small>10.0</small>					

avg width = 3.2'; 44,125 S.D.T. @ 0.235; 7.0; 9.1; 7.6 (+Cd).

II FIRMLY INFERRED ORE. (per direct estimation) wtd-avg width = 4.0'

$(115 \times 230 + 175 \times 100) \times 5.0 = 219,750 \text{ cu. ft.} \div 11 = 18,000 \text{ tons}$

BLOCK 'F'	18,000 tons	Au, 0.03; Ag, 6.9; Pb, 4.9; Zn, 2.0 (+Cd)
<small>(Summit Basin)</small>	<small>(5.0')</small>	
BLOCK 'G'	12,500 tons	(148,800 cft. = 12,500 tons)
<small>(3.0')</small>		
BLOCK 'G'	12,500 tons	Au, 0.13; Ag, 4.2; Pb, 6.3; Zn, 5.0 (+Cd)

III GEOLOGICALLY INFERRED ORE. (generally 3.0' width inferred)

BLOCK 'H'	75,000 cu. ft.	7,500 tons @ Au, 0.06; Ag, 2.32; Pb, 9.1%; Zn, 5.1%
<small>(2 parts)</small>	<small>10</small>	
BLOCK 'I'	49,320 cft.	5,500 tons @ Au, 0.50; Ag, 10.0; Pb, 12.0; Zn, 15.0
<small>(9.0)</small>		
BLOCK 'J'	21,500 cft.	2,150 tons @ Au, 0.40; Ag, 6.0; Pb, 6.0; Zn, 6.0
<small>(100)</small>		
BLOCK 'K'	45,000 cft.	4,500 tons @ Au, 0.20; Ag, 10.0; Pb, 8.0; Zn, 6.0
<small>(10.0)</small>		
BLOCK 'L'	66,300 cft.	6,000 tons @ Au, 0.20; Ag, 8.0; Pb, 6.5; Zn, 4.2
<small>(11')</small>		
BLOCK 'M'	45,000 cft.	4,500 tons @ Au, 0.25; Ag, 10.0; Pb, 10.0; Zn, 8.0
<small>(10)</small>		
BLOCK 'N'	1/2 (148,500 cft.)	6,750 tons @ Au, 0.10; Ag, 7.5; Pb, 7.0; Zn, 6.0
<small>(11)</small>		
BLOCK 'O'	1/2 (144,000 cft.)	6,600 tons @ Au, 0.15; Ag, 8.5; Pb, 8.5; Zn, 8.0
<small>(11)</small>		
BLOCK 'P'	159,500	14,500 tons @ Au, 0.10; Ag, 8.5; Pb, 6.0; Zn, 3.0
<small>(11)</small>		

Total III (Geol. Inferred) -

Note 1948-53, 5600 Tons @ Au, 0.22; Ag, 10.0; Pb, 11.9; Zn, 10.6

I - INDICATED ORE ($\bar{w} = 3.2'$) $\frac{\text{ore tons}}{\text{Pb+Zn content}} = \frac{4}{1} = \text{ratio of concentration (+cd)}$

	Au	Ag	Pb	Zn
A ²¹ 9,500 x 0.524 = 4970	x 10.8 = 102,600	x 13.5 = 128,100	x 16.6 = 157,800	
B 3,875 x 0.40 = 1550	x 6.0 = 23,250	x 6.0 = 23,250	x 6.0 = 23,250	
C* 15,000 x 0.03 = 450	x 6.9 = 103,300	x 4.9 = 73,500	x 2.0 = 30,000	
D ^{u.s. w.p.} 12,000 x 0.092 = 1130	x 3.27 = 39,200	x 9.1 = 109,200	x 5.1 = 61,100	
E 3,750 x 0.20 = 750	x 10.00 = 37,500	x 8.0 = 30,000	x 6.0 = 22,500	
	(8850)	(305,850)	(364,050)	(294,650)
44,125 S.D.T. @ 0.20 Au	6.9 Ag	8.25 Pb	6.67 Zn (+cd)	
44,125 " @ 0.235 wtd.	wtd. 7.0 " (FX)	wtd. 9.1 " (FX)	wtd. 7.6 " (+cd)	

II FIRMLY INFERRED ORE $\bar{w} = 4'$ (all adjacent to rd. long. Scranton Basin sheet) (conservative estimate of grade)

(A) ⁴ 18,000 x 0.03 = 540	x 6.9 = 124,000	x 4.9 = 88,100	x 2.0 = 36,000	
(B) 12,500 x 0.13 = 1,625	x 4.2 = 52,400	x 6.3 = 78,600	x 5.0 = 62,500	
(C) 30,500 S.D.T. @ 0.071	5.8	5.5%	3.24%	
(D) 30,500 S.D.T. @ 0.09 Au	5.8 Ag	5.7 Pb	3.7 Zn (+cd)	

III GEOLOGICALLY INFERRED ORE (generally w. inferred as 3.0')

(H) ⁵⁴¹ 7,500 x 0.06 = 450	x 2.32 = 17,400	x 9.1 = 68,200	x 5.1 = 39,250	
(I) ^(2 parts) 5,500 x 0.50 = 2750	x 10.0 = 55,000	x 12.0 = 66,000	x 15.0 = 82,500	
(J) 2,150 x 0.40 = 860	x 6.0 = 12,900	x 6.0 = 12,900	x 6.0 = 12,900	
(K) 4,500 x 0.20 = 900	x 10.0 = 45,000	x 8.0 = 36,000	x 6.0 = 27,000	
(L) 6,000 x 0.20 = 1200	x 8.0 = 48,000	x 6.5 = 39,000	x 4.2 = 25,200	
(M) ^{1,125} 4,500 x 0.25 = 1125	x 10.0 = 45,000	x 10.0 = 45,000	x 8.0 = 36,000	
(N) 6,750 x 0.10 = 675	x 7.5 = 50,600	x 7.0 = 47,250	x 6.0 = 40,500	
(O) ^{1,650 (0.20)} 6,600 x 0.15 = 990	x 8.5 = 56,100	x 8.5 = 56,100	x 8.0 = 52,800	
(P) 14,500 x 0.10 = 1450	x 8.5 = 123,000	x 6.0 = 87,000	x 3.0 = 43,500	
	10,400	453,000	457,450	359,650
58,000 S.D.T. @ 0.18	7.8	7.9	6.2 (+cd)	

SUMMARY (132,625 Tons)

I = 44,125 S.D.T. @ Au, 0.235 oz/T	Ag, 7.0 oz/T	Pb, 9.1%	Zn, 7.6% (+cd)
* II = 30,500 " @ Au, 0.09 oz/T	Ag, 5.8 oz/T	Pb, 5.7%	Zn, 3.7% (+cd)
* III = 58,000 " @ Au, 0.18 oz/T	Ag, 7.8 oz/T	Pb, 7.9%	Zn, 6.2% (+cd)

Conservative estimate for this much again on basis of reported lead area & apparent frequency of favorable structural situation

above all conservative estimates of grade = dilution, all can be up-graded by selective mining, * no allow for possible scheelite content.

SUMMARY SCRANTON - 1952-53 PRODUCT
PB CONCENTRATES - produced by Western (Glenville)

LOT NO.	DRY TONS.	PB CONCENTRATES							
		OZ/T Ave	OZ/T AG	% WET PB	% Zn	% S	% SiO ₂	% FE	% CaO
1+2	14.7180	1.880	56.10	62.8	7.6	20.7	1.5	6.3	0.5
3+6	17.4405	1.682	57.95	61.9	6.8	20.9	2.0	6.8	0.3
4	21.0810	1.189	69.00	70.0	3.7	18.3	1.6	5.1	0.4
4	21.0810	1.189	69.00	70.0	3.7	18.3	1.6	5.1	0.4
5	25.7510	1.725	63.50	65.1	5.5	19.9	2.2	5.9	0.3
7	15.5980	1.613	65.95	65.6	5.4	20.4	1.8	6.2	0.2
8	12.6270	1.330	67.70	67.0	4.3	19.6	2.0	6.4	0.4
9	22.3840	1.373	63.85	66.1	4.4	20.0	1.9	6.5	0.1
10	28.1580	1.259	53.50	64.6	6.4	21.0	1.0	6.4	0.3
11	21.1380	1.580	53.95	65.3	5.2	20.5	1.0	6.8	0.4
12	17.4765	0.685	50.02	55.8	6.9	23.6	1.7	10.5	0.3
13	17.0015	1.366	50.40	54.5	7.5	23.6	2.0	10.3	0.2
14 } 15 } + 16 }	19.7170	2.235	55.18	55.5	6.2	23.9	1.7	11.0	0.3
(Σ = 13)									

TOTALS	254.17	19.106	776.10	824.2	73.6	270.7	22.0	65.3	4.1
		1.47	59.8	63.4	5.66	20.85	1.7	5.03	0.3
Rounded	AVG SCRANTON PB-CONC'TS via Western mill (rel. pos)	1.50	60.0	63.5	5.7	(20.1)	1.7	5.0	0.3

Above are largely derived from ore containing a significant amount of partly oxidized, near surf. ore; hence assume fresh "Glenville" ore would yield following PB Concentrates.

- Ave, - 1.60 oz/T.
- AG, - 60.0 oz/T.
- PB, - 65.0% - PB₅ = 75.0% containing 95% of total PB.
- Zn, - 5.0% Zn₅ = 7.5% "
- SiO₂, - 1.7% SiO₂ = 1.7% "
- CaO, - 0.3% CaO₃ = 0.5
- Fe, - 5.0 Fe₅ = 10.7% 95.4

Western Mines - 1123 Tons milled.
Glenville - 474 " "

Feb/69 (5)

SUMMARY: SCRANTON 1952-53 PRODUCTION

LOT No.	Dry Tons	Zn CONCENTRATES - (produced by Western (Kerrville))								
		oz/T Au	oz/T AG	% Pb	% Zn	% S	% SiO ₂	% Fe	% CaO	% Cd
1	4331 17,500	376 0.310	3 4.6	2 2.2	54 56.9	35 31.9	4 1.9	6 4.8	4 0.6	2.3 1.26
2	49,270	0.185	5.3	3.0	54.0	32.5	2.1	6.1	0.5	1.24
2		0.185	5.3	3.0	54.0	32.5	2.1	6.1	0.5	1.24
3+4	19,010	0.568	9.2	4.3	55.9	32.3	0.7	4.8	0.2	1.21
5	50,475	0.378	7.2	2.7	55.3	32.8	1.3	5.9	0.4	1.24
5		0.378	7.2	2.7	55.3	32.8	1.3	5.9	0.4	1.24
5		0.378	7.2	2.7	55.3	32.8	1.3	5.9	0.4	1.24
6	49,642	0.197	5.1	2.2	55.2	33.0	1.5	6.4	0.2	1.24
6		0.197	5.1	2.2	55.2	33.0	1.5	6.4	0.2	1.24
7+8+9	24,844	0.158	5.5	2.1	53.5	32.1	2.1	7.6	0.4	1.14
10+11	13,282	0.352	4.9	1.5	51.6	34.3	1.4	9.4	0.3	1.10
#	3,651	-	-	-	-	-	-	-	-	-
	"	3.286	66.6	28.6	602.2	360.0	17.2	69.3	4.1	13.39
TOT/AVG.	227,674	0.299	6.05	2.6	54.8	32.7	1.565	6.3	0.37	1.22
	"Rounded" to	0.30	6.0	2.5	55.0	33.0	1.6	5.2	0.4	1.22

Zn Concentrate: representative of {Sunset} ore:

Au, 0.30 oz/T

AG, 6.0 oz/T

Pb, 2.5%

PbS = 2.9%

Zn, 55.0%

ZnS = 82.0%

containing - 90% total Zn.

Cd, 1.22%

CdS = 1.57%

SiO₂, 1.6%

SiO₂ = 1.60%

CaO, 0.4%

CaCO₃ = 0.71%

Fe, 5.2%

FeS₂ = 11.0 100%

Mill Statistics

Summary Mill Cons - Granton Feb/09. 76 (6)
Western Mill Production

Heads			Pb. Cons.		Zn Cons.			Tails	
Pb [%]	Zn [%]	Fe [%]	Pb [%]	Zn [%]	Zn [%]	Pb [%]	Fe [%]	Pb [%]	Zn [%]
5.0	3.5	"	66.0	5.8	51.0	0.8		0.25	0.30
6.8	6.2	"	66.6	8.6	56.4	1.0		0.25	0.20
4.8	5.0	"	74.0	2.0	58.0	1.4		0.20	0.85
7.0	6.2	"	66.8	9.1	56.0	1.0		0.25	0.45
7.2	7.2	"	71.0	8.5	56.0	4.0		0.40	0.90
7.2	6.6	"	75.0	4.4	57.0	0.4		0.25	0.50
12.8	9.6	"	70.6	9.3	57.0	4.0		1.20	1.25
7.6	6.8	"	78.0	3.0	55.4	3.2		0.30	0.65
10.6	8.7	"	68.8	9.6	56.0	4.0		0.65	0.65
12.0	9.0	"	67.0	8.5	55.2	4.0		0.50	0.75
12.8	9.7	"	68.4	10.8	57.2	2.8		1.00	2.00
8.0	8.5	"	68.0	10.2	55.0	3.6		0.85	0.75
11.4	10.2	"	79.2	4.2	55.0	6.0	6.2	0.60	0.70
11.2	9.9	"	75.6	6.0	56.0	5.6	5.2	0.75	0.95
9.5	9.4	"	77.0	3.8	55.6	6.8	5.2	0.80	0.80
12.5	10.0	"	76.4	3.6	54.6	6.0	5.6	0.70	1.20
12.9	10.2	"	76.4	3.7	56.6	4.8	5.0	0.75	2.60
9.8	7.5	"	77.8	2.8	48.0	6.4	9.8	0.40	0.70
10.1	8.2	"	70.4	8.6	52.5	6.2	7.0	0.50	0.50
11.5	8.9	"	72.8	7.4	53.0	9.8	5.0	0.70	0.80
12.1	9.0	"	69.2	8.4	54.4	6.8	5.2	0.20	0.50
9.5	8.0	"	70.2	5.8	53.2	8.4	5.1	0.20	0.40
11.0	7.8	"	70.5	7.6	53.8	5.2	5.8	0.70	0.70
9.3	6.3	"							
12.2	9.2	5.6	70.2	10.2	54.8	6.4	5.8		

244.8	201.6		1725.9	161.9	1317.7	108.6	10.20	12.25
9.8%	8.1%		72.0%	6.75%	56.0%	4.53%	0.50%	0.6%

run of Smelter returns that Pb circuit sampling only done when it 'looked good'!! 8 1/2% diff on avg.

compares better w. Smelter samples.

These are based on assays rel. to the class I (currently indicated) ore tonnage and grade derived from mil of 5900 ore blocks A+B.

* 40,125 Tons @ Au, 0.235 oz/t; Ag, 7.0 g/t; Pb, 9.1% ; Zn, 7.6%
(+ Cd equiv.)

To produce:

(A) Lead Concentrate assaying: + insol @ 4.6% → 100%
 Au, 1.6 oz/t; Ag, 60.0 oz/t; Pb, 65.0%, Zn, 5.0%, SiO₂ = 1.7%, CaO = 0.3, Fe = 50
1st step for Pb conc.

(B) Zinc Concentrate assaying:
 Au, 0.30 g/t; Ag, 6.0 oz/t; Pb, 2.5%; Zn, 55.0%; Cd, 1.22%; SiO₂, 1.6%; CaO, 0.4%
1 step for Zn Fe, 5.2%, + insol mat.

* 100 Tons of Ore contain:

Component	Grade	Allocation	Result
Au, 23.5 oz.		→ 75% to Pb Conc.	Au, 17.625 oz
		→ 15% to Zn Conc.	" , 3.525 oz
		→ 8% to Py Conc. (tails)	" , 1.88 oz
Ag, 700 oz		→ 80% to Pb Conc.	Ag, 616.0 oz
		→ 8% to Zn Conc.	" 56.0 oz
		→ 4% to Py Conc. (tails)	" 28.0 oz
Pb, 9.1 Tons		→ 92% to Pb Conc. @ 65%	Pb 8.372 Tons ✓
		→ 4% to Zn Conc.	" , 0.364 Tons
		→ 2% to Py Conc. (tails)	" , 0.182 Tons
Zn, 7.6 Tons		→ 90% to Zn Conc. @ 55%	Zn, 6.84 Tons ✓
		→ 4% to Pb Conc.	" , 0.304 Tons
		→ 2% to Py Conc. (tails)	" , 0.152 Tons

$\frac{Cd}{Zn} = \frac{1.22}{55.00} = 2.22\%$ of Zn in Zn Conc'ts.

Assume Pb. Conc. = 65% Pb. = 0.65 Tons Pb per 1.0 Tons Pb. Conc.

(A) Total wt. LEAD CONCENT from 100 T ore = $\frac{8.372}{0.65} = 12.9$ dry Tons Pb. Conc.
 or, 12.9 S.D.T. LEAD CONCENT. CONTAINING: Au, 17.625 oz; Ag, 616.0 oz; Pb, 8.554 TONS; Zn, 0.304 TONS.
65%
 (Au, 1.37 oz; Ag, 48.0 oz; Pb, 65.0%; Zn, 2.5%)

(B) Total wt. of Zn CONCENT from 100 T ore = $\frac{6.84}{0.55} = 12.44$ dry Tons Zn. Conc'ts
 or 12.44 S.D.T. ZINC CONCENT. CONTAINING: Au, 3.525 oz; Ag, 56.0 oz; Pb, 0.364 TONS; Zn, 6.84 TONS.
55%
 (Au, 0.283 oz; Ag, 4.5 oz; Pb, 2.9%; Zn, 55.0%; Cd, 1.22%)

(C) Ratio of Conc'n = $\frac{A+B}{100} = \frac{25.34}{100} = 1:4$ Tot conc/ore
 250 T Pb Conc/Mo require ± 2000 T ore / mo. 90 T.d. - 22 dry + 67 T.d. - 30 d

EVALUATION OF CONCENTRATES

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LEAD CONCENTRATES - B.M.C. Purchase Agreement

PER TON Pb. CONCT: ref. 44,125 Indicated 1000
Au; 1.37 oz/t Ag; 48.0 oz/t; Pb, 65.0%; Zn, 2.5% (+ Cd) ^{incr. on the price}

PAYMENTS: Au, 1.37 oz x 90% = 1.233, x \$42.00 x 1.08 = \$55.92 ^{on the price}

(to Can. banks.) Ag, 48.0 oz x 95% = 45.6 oz x (1.96 - .01) x 1.08 = \$96.03 Can.

Pb; (65 - 1.5%) = 1270# x 95% = 1206.5# ^(0.1225) x 1.08 = 159.61 Can.

Zn (2.5% - 2.5%) - - - - - nil = nil Can.

Gross Payments - - - - - \$311.56 Can.

DEDUCTIONS:

Treatment, (1969 sched) = 25.55 x 1.08 = 27.59 Can.

Duty, (65% - 2%) = 63%, or 1240# x .0075 x 1.08 = 10.04 " \$37.63

NET VALUE per S.D.T. - F.O.B. smelter Bradley - - - \$273.93 Can.

Cont Freight, Answorth Bradley - range \$20.70 - 25.70 ^{per W.S.T.} = 22.00

NET VALUE PER S.D.T. - F.O.B. ANSWORTH = 251.93 Can.

(Total of Treatment + Duty + Freight = \$59.63

ZINC CONCENTRATES - B.M.C. purchase agreement

PER TON ZN CONC'T. - representing 44.125 tons indicated ore

Au, 0.283 oz/t; Ag, 4.5 oz/t; Pb, 3.0%; Zn, 55.0%
Cd, 1.22%

PAYMENTS:

Au, $0.283 \text{ oz.} \times 80\% = 0.226 \text{ oz.} \times 42^{\text{00}} \times 1.08 - - - = \10.25 Con.

Ag, $4.5 \text{ oz.} \times 80\% = 3.6 \text{ oz.} @ 1.96 \times 1.08 - - - = \7.61 "

Pb, $3.0\% \text{; less } 1\% = 2\% \text{ or } 40^{\text{00}} \times 50^{\text{00}} = 20^{\text{00}} \times 0.14 \times 1.08 - - = 3.02 \text{ "}$

Zn, $\left\{ 55.0\% \text{ or } 1100^{\text{00}} \times 85\% = 935^{\text{00}} \times 0.135 \times 1.08 \right\} = 126.22 \text{ "}$

Cd, $\left\{ 1.22\% \text{, or } 24.4^{\text{00}} - 3^{\text{00}} = 21.4^{\text{00}} \times 70\% \times (2.65 - .40) \right\} = 33.70 \text{ "}$

(avg content all Zn conc.)

GROSS PAYMENT - - - - - \$180.80 Con.

DEDUCTIONS

Treatment (1969 sched.) $\times 1.08 - - - \$61.43$

Duty $(55 - 6) = 49\% \text{ or } 980^{\text{00}} @ 0.0067 \times 1.08 = 7.08 \text{ } \68.51

NET VALUE per S.D.T. - F.O.B. SILVER KING - \$112.29 Con.

Conit Freight, Ainsworth & Silver King
 (range 12.85 - 17.65) - - - - - 15.00

NET VALUE per S.D.T. - F.O.B. AINSWORTH \$97.29 Con.

(Total of Treatment, Duty, & Freight = \$83.51)

MILLHEAD NET VALUES OF ORE METALS

(ALL CAN. FUNDS)

(Over product costs - per ton basis - mining
- ore haul
- milling
- indirect, gen)

METAL IN Pb. CONCT	LESS: MARKETING (= \$59.63) PROPORTION FOR TREATMENT, DUTY, & FREIGHT	VALUE, CAN. \$ NET SMELTER
AU: 1.3702 FOR \$55.92	$-\frac{55.92}{311.56} \times 59.63 = -\10.69	\$45.23
AG: 48.002 " \$96.03	$-\frac{96.03}{311.56} \times 59.63 = -18.38$	\$77.65
PB: 1270# " \$159.61	$-\frac{159.61}{311.56} \times 59.63 = -30.56$	\$129.05
ZN: $2\frac{1}{2}\%$ on 50# " 0.00	$-\frac{\quad}{\quad} \times \frac{\quad}{\quad} = \quad$	—
	(311.56)	

METAL IN ZN CONCT.	LESS - MARKETING (= \$83.51) (PROPORTION FOR TREAT, DUTY, & FREIGHT)	"
AU: 0.28302 FOR \$10.25	$-\frac{10.25}{180.80} \times 83.51 = -\4.74	\$5.51
AG: 4.502 " \$7.61	$-\frac{7.61}{180.80} \times 83.51 = -3.52$	\$4.09
PB: 2.9% on 58# " \$3.02	$-\frac{3.02}{180.80} \times 83.51 = -1.40$	\$1.62
ZN (+ CD) 1100# $\frac{126.22}{33.70} = 59.92$	$-\frac{59.92}{180.80} \times 83.51 = -\73.85 (83.51)	\$86.07
	(180.80)	

(A) Total gold in conc. = 1.653 oz totals \$50.74 → Au @ \$30.70 per oz.
 " silver " " = 52.5 oz " \$81.74 → Ag @ \$1.56 per oz.
 " lead " " = 1328# " \$130.67 → Pb @ \$0.0984 per lb.
 " (zinc in mill) = 1150# " \$86.07 → Zn @ 0.0749 per lb.

see p-10a for revised
calc. for H.M.V

NET MINE VALUES OF ORE METAL (= net smelter, incl. treatment chg. but excluding, duty & freight chgs.)

METAL IN PB CONC'TS :	LESS TREATMENT @ 27.59	Can. #.	NET MINE VALUE, DUTY + FREIGHT	reducible
AU; 1.37 oz FOR \$55.92	- $\frac{55.92}{311.56} \times 27.59 = -4.94$	\$50.98	\$5.75	
AG; 48.0 oz. " \$96.03	- $\frac{96.03}{311.56} \times " = -8.56$	\$87.47	\$9.82	
PB; 1270 # " \$159.61	- $\frac{159.61}{311.56} \times " = -14.09$	\$145.52	\$16.47	
Zn; $2\frac{1}{2}\%$ @ 50# " \$0.00 (311.56)	- $\frac{00}{311.56} \times " = -$ (27.59)	0.00	0.00	
		(\$283.97)	(\$32.04)	
METAL IN ZN CONC'TS :				
	LESS TREATMENT @ 61.43			
AU; 0.283 oz FOR \$10.25	- $\frac{10.25}{180.80} \times 61.43 = -3.80$	\$6.45	\$0.94	
AG; 4.5 oz " \$7.61	- $\frac{7.61}{180.80} \times " = -2.56$	\$5.05	0.96	
PB; 2.9% @ 58# " \$3.02	- $\frac{3.02}{180.80} \times " = -1.02$	\$2.00	0.38	
"Zn + Cd"; 1100# $\frac{126.22}{33.70} = 159.92$ (180.80)	- $\frac{159.92}{180.80} \times " = -54.05$ (61.43)	\$105.87	\$19.80	
		(\$119.37)		

VALUE TOTAL METAL IN CONCT	TOTAL NET MINE	NET MINE PER UNIT ^{after treatment} only.	TOTAL DUTY + FREIGHT ON CONC. METAL	per unit of metal/ton
AU, 1.653 oz	\$57.43	\$34.80 per oz.	\$6.69	\$4.05
AG, 52.5 oz.	\$92.52	\$1.77 per oz.	\$10.78	\$0.20
PB, 1328 #	\$147.52	\$0.111 per lb.	\$16.85	\$0.012
ZINC, INCL. CD = 1150 #	\$105.87	\$0.092 per lb.	\$19.80	\$0.017
	403.34			

NET MINE VALUE OF INDICATED ORE PER TON: (Indicated reserve, 44,125 tons)

AU @ 0.235 oz.	@ 34.80 =	\$8.18
AG @ 7.0 oz.	@ 1.77 =	12.39
PB @ 9.1% @ 182 #	@ 0.111 =	20.20
ZN @ 7.6% INCL. CD @ 152 #	@ 0.092 =	13.98

Total - \$54.75 per ton. on 44,125 tons

(Step development)
Mining @ (12-15%)
ore haul @ 2.00
Milling @ 6.50
Conct. freight @ RC = 4:1
Duty -
allow for return on develop ore @ 100% dil'n

(see diluted grade p.11)

also compute value blocks 5900 blocks

w = 3.2'

PRODUCTION ESTIMATES

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Possible Dilution - Indicated Ore - Blocks A & B, plus extensions.

H.W.	2.3'	@ 0.02 = 0.046	@ 1.80 = 4.14	@ 1.70 = 3.91	@ 0.01 = 0.023
"	1.2'	@ 0.03 = 0.036	@ 0.75 = 0.90	@ 0.35 = 0.42	@ 1.00 = 1.20
F.W.	2.0'	@ 0.01 = 0.020	@ 0.10 = 0.20	@ 0.25 = 0.50	@ 0.01 = 0.02
H.W.	1.5'	@ 0.12 = 0.180	@ 1.50 = 2.25	@ 0.77 = 1.15	@ 0.01 = 0.015
6040	2.0'	@ 0.04 = 0.080	@ 1.85 = 3.70	@ 0.30 = 0.60	@ 0.01 = 0.02
5)	9.0'	0.362	11.19	6.58	8.46
	1.8'	@ 0.04	1.24	0.73	0.94

Per 5900-6040 sect possible $\frac{1}{3}$ dilution = 0.9' (1' Ho. width) for net
 more value of Au, 0.04 x 34.80 = 1.39
 Ag, 1.24 x 1.77 = 2.20
 Pb, 14.6# x 0.111 = 1.61
 Zn, 18.8# x 0.092 = 1.73

Total 5900' wall matl - \$6.93 per ton net mine value

Assume possible dilution operations on the following indicated reserve ore blocks:

A	160' x 200' x 1' c.f.	= 32,000
B	100' x 150' x 1' c.f.	= 15,000
D	175' x 275' x 1' c.f.	= 48,000

at 12 c.f.t, 95,000 c.f. → 7900 tons @ 6.93

44,125 S.D.T @ \$54.75 = 2,415,000
 7,900 " @ \$6.93 = 54,800
 52,025 S.D.T INDICATED ORE (2,469,800) @ 47.50 N.M.V. per ton

5900 Ore Blocks - Diluted Value

Possible dilution = $\frac{47000}{12} = 3900$ tons ≈ 4000 tons*
 Reserve block A: 9500 tons @ 97.77 (N.M.V.) = 928,000 T-4
 " " B: 3875 tons @ 48.89 (N.M.V.) = 189,500 "
 Total A+B 13,375 tons @ 83.30 per ton
 Possible dil. 4,000* tons @ 6.93 " "
 Dil. Blocks A+B = 17,375 tons @ \$65.80 per ton N.M.V. ←
 (INDIC. ORE)

Note 52,025 S.D.T. Gross Indicated ore @ 47.50 per ton includes 17,375 tons @ 65.80 per ton N.M.V.

PRODUCTION ESTIMATES.

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GENERAL NOTE:

Based on development and extraction of initial ore blocks (A & B, plus extensions) of grade conservatively estimated as average of over-all indicated ore reserve, at

- (a) Minimum dilution: 44,125 Tons @ \$54.75/ton
- (b) $\frac{1}{3}$ dilution (gross 3.5') 52,025 Tons @ \$47.50/ton

Mine rate 100 T. ore per day @ 22 days/mo; Mill, 73 T. p.d @ 30 days/mo

Total Stage II & III horiz. & vert. development, estim. \$437,000

Portion ($\frac{1}{3}$) of develop. costs applicable to blocks A + B = \$131,500

DETAIL:

Development: total direct less develop ore credits	\$4.00	per ton ore
Stope Preparation $\frac{580' \times 12.50}{17,375}$	0.40	"
Mining, direct	5.00	"
Mining, general	2.00	"
Surface, general	1.00	"
Plant additions, mill preparation $\frac{\frac{1}{3} \times 27,000}{17,375}$	0.50	"
Main road construction	0.50	"
Ore haul	2.00	"
Milling, total	6.50	"
Concentrate freight & duty - ore basis	4.70	"
Total Product, Costs - \$26.60 per ton		

Indicated range gross profit: (a) per ton ore mined - \$28.15
 (b) " " " " " " \$20.90

Indicated Cash Flow: (a) per month - \$61,930
 (gross op. profit) (b) " " " " " " \$45,980
 (a) per year - \$743,160
 (b) " " " " " " \$551,760

Prelim. estimates re duration of operation:

1. Per Indicated + Firmly Inferred Ore Reserves - 3 years
2. Per Indicated, Firmly Inferred, & Geologically Inferred - $5\frac{1}{4}$ years
3. Per foreseeable total ore reserves (138,000 + 58,000) - $7\frac{1}{2}$ years.