Scranton.

Ore Estimates

May /67 (A)

801304
Scranton

Sunrise Basin block. Ag Pb. Zn

15000 Tons x 0.029 Au = 435 ; x 6.9 = 103,500 ; x 4.9 = 73,500 ; x 2.0 = 30,000

S.W Sunrise

12,000 Tons x 0.057 = 684 ; x 2.32 = 27,840 ; x 9.1 = 109,200 ; x 5.1 = 61,200

27,000 Tons 1119 131,340 182,700 91,200

Tot. Prob. Ore

27,000 Tons Au, 0.04 oz/t; Ag, 4.9 oz/t; Pb; 6.8%; Zn; 3.4%.

Possible Ore:

Sunrise Basin, prelim estim based dd. & expt & depth extns

7500 Tons @ 0.029 Au, Ag, 6.9 oz; Pb, 4.9%, Zn, 2.0%.

above grades conservative in re. past production over [illegible] Sunset,

Prob addnl in Pontiac N.E extns; Sunset Sill and

sub-level extensions, and below ore block in

S.W Sunrise - however nothing yet on which to

base a tonnage estimate, hence this is classed

as geologically inferred ore.

Cost. Can Min Journal, Table II 1966

Deer Horn @ 94 Tpd. Tot mining costs, shrink & hoist - " 13.24

Tot Milling - -

Langis Silver @ 140 T.pd - Tot Mining Shrink, stull & oper. 11.15

	Au	Ag		
45	50			
20	25	86.	94	2000
	25	6	1	.07
		92%		140.00
			88.6	
			3.0	
			91.6 92	
			90	

Concentrate Calcs; Scranton — Work Sheet ①

May/67

Pres. Ore reserves; grade :- Tabulate w/o open detail

Au; 0.04 oz/ton Ag, 4.9 oz/ton; Pb, 6.8%; Zn 3.4% metal

100 Tons Ore contain 4 oz Au:
- 50% Pb Cons -- 2.0 oz ✓
- 25% Zn Cons -- 0.5 oz
- 25% lost --

4.

490 — 490 oz Ag.:
- 86% Pb Cons -- 420 oz ✓
- 6% Zn Cons - 30 oz.
- 8% lost -

6.8 T — 6.8 Tons Pb:
- 94% Pb Cons - 6.4 tons ✓
- 1% Zn Cons 0.07 tons
- 5% lost -

3.4 T. 130# — 3.4 Tons Zn:
- 90% Zn Cons 3.06 tons
- 2% Pb Cons. 0.07 tons ✓
- 8% lost

90% + 136# Cd (recov.) → Zn Cons -- 130 lbs

(A) assume Pb Cons @ (75)% Pb = 0.75 Tons Pb / Ton Pb Cons

∴ Total Pb Cons produced = $\frac{6.4}{.75}$ ≃ 8.5 tons Pb Cons (dry) ✓

8.5 Tons Pb Cons; 2.0 oz Au, 420.0 oz Ag., 6.4 tons Pb., 0.07 tons Zn — 1 Tons Pb Cons -- 0.236 oz Au, 49.5 oz Ag., 1500# Pb., 6.5# Zn.

(B) assume Zn Cons @ 55% Zn = 0.55 Tons Zn metal / ton Zn Cons.

∴ Total Zn Cons produced = $\frac{3.06}{.55}$ ≃ 5.5 tons Zn Cons (dry)

(A+B) Ratio of Concn = $\frac{100}{14}$ = 7.15 : 1 Tons Ore : Tons Conc. (Pb+Zn)

Computed Smelter Settlement 8.5 dry T Pb Cons (8% H_2O 9.25 wet tons) (2)

assume trucking @ .05/ton mile = 80 x .05 = 4.50 per dry ton

	\$ Can.			\$ Can
Gold	37.87	less \$1.25 ; net		36.62 /oz
Silver	1.405	less \$0.02 ; net		1.385 /oz
lead	0.14	less 0.6¢ ; net		0.134 /lb
zinc	0.1375	less 5.5¢ net ;		0.0825 /lb.

CONTENTS & VALUE (8.5 tons Pb Cons)

Gold ;	2.0 oz	x 95% x \$36.62	=	69.58
Silver ;	420.0 oz	x 95% x \$1.385	=	552.00
lead (6.4 T)	12,800#	x 92.5% x \$0.134	=	1585.00
zinc ;	140#	x 50% x 0.0825	=	5.78
		Total Gross Value		\$2212.36
less handling + treatment @ Smelter ; 8.5/.92 = 9.25 w.t. @ 16.00			=	148.00
				2064.36
less trucking, mill-smelter ; 9.25 W.T. x \$4.50				41.62
8.5 dry tons Pb Cons ; Net Smelter Value				\$2022.74

deduct gold & silver — 621.58

net S.V. 'Bare' lead in ore — \$1401.16

Net Smelter Value Pb (Zn) in ore) = $\frac{1401.16}{6.8 \text{ tons}}$ = 10.3¢ / lb. ← (no allce Au - Ag)

Net Smelter value Au/ore

Pb c) Oz (ore) x 50% x 95% x 36.62

Zn c) Oz (ore) x 25% x 80% x 36.62

} = 67.5% x Oz. x \$36.62 ←

Net Smelter value Ag/ore

Pb C) Oz (ore) x 86% x 95% x \$1.385

Zn C) Oz/ore x 6% x 80% x 1.385

} = 89.6% x \$1.385 ←

\$791.03

Net Smelter Zn (Pb) in ore — → − 47.89

deduct Au & Ag

= 743.14

net Smelter value Zn (Pb) (Cd) in ore = $\frac{743.14}{3.4 \text{ Tons}}$ = 10.9¢/lb. ← no (allce Au-Ag)

May /67

Computed Smelter Settlement;

5.5 dry Tons Zinc Conc (@ 10% H_2O) = 6.1 wet Tons

	$ Con			
Gold	37.87	less $1.25;	net =	$ 36.62
Silver	1.405	less 0.02,	net =	1.385
Lead	0.14	less 0.0335	net =	0.1065
Zinc	0.1375	less 0.026,	net =	0.1115
Cadmium	2.60		net	2.60

CONTENTS & VALUE. (5.5 dry Tons Conc.)

Gold -	0.5 oz.	× 80%	× 36.62	$ 14.65
Silver	30.0 oz.	× 80%	× 1.385	33.24
Lead	140 lbs.	× 52½%	× 0.1065	7.83
Zinc	6120 lbs.	× 83%	× 0.1115	566.31
Cadmium	130 lbs.	× 50%	× 2.60	169.00

Total Gross Value. $ 791.03

Less handling + treatment @ Smelter (Trail) 15.00

$ 776.03

Less trucking mill-Smelter 6.1 wt T × $4.50 27.45

For 5.5 dry Tons Zn Conc, Net Smelter Value $ 748.58

Net Smelter Value ore = per Pb Conc = 2022.74

" " " " " Zn Conc = 748.58

net Smelter value Pb-Zn ore $ 2771.32 - 100 Tons

* Net Smelter value per Ton Scranton ore @ Au 0.04; Ag, 4.9; Pb, 6.8; Zn, 3.4 + Cd. after milling, trucking Conc + Smelter Charges = $ 27.71 per dry Ton.

Doug's copy CM & S. lead settlement, Emerald Glacier; - Dec 15/66 Feb 10/67

Railway : Terrace - Trail = $23.76 / T.
(Base $100 T)

LEAD CONCENTRATE

Quotations

	$ U.S.	Exchange		$ Can
Gold	$35.00	@ 8.25%	less $1.25	net - $36.6375 / oz.
Silver N.Y.	$1.293	@ 8.25%	less $0.02	net - 1.37967 / oz.
Lead	11.097¢ / lb		less 0.6¢	net - 10.497¢ / lb.
Zinc P.W.	12.612¢ / lb.		less 5.5¢	net 7.112¢ / lb.

CONTENTS & VALUE. Value

Gold; Total oz. × 95% × $36.6375 - - - - ~~~~
Silver; Total oz × 95% × $1.37967 - - - ~~~~
Lead ; Total lbs. × 92.5% × $0.10497 - - - ~~~~
Zinc ; Total lbs × 62½% × 35% × 7.112 - - - ~~~~

Total Gross Value - - ~~~~

* Less Treatment @ ($12.83) × dry Tons = ~~~~
~~~~

Less; Trucking. - - - =
Switching - - - - =
Freight wet tons × $23.76 = → ~~~~

* Treatment rate

Base charge - $ - - - - $15.00
Less Iron - Zinc penalty (less nil) - - =
Less Arsenic Antimony " (less nil) =
Less moisture @ 20¢/unit over 5 units - =
" Extra Handling - (neither) - =
Lead Or/Dr @ 10¢/unit over/under 30% Pb. =
Silica - lime credit; @ 14¢/unit - - - =
(SiO2 + CaO total)
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Doug's copy. Cominco Zinc Settlement, Emerald
Glacier Zinc Conc - Dec. 15/66.

Rly Freight rate @ $17.83/T
(based on $50.00/T)

Quotations

Assays

(Gold .012 ; Ag: 5.7 ; wet Pb; 2.1%, Zn: 51.3%; Silica 3.4%; iron 8.2%
lime 0.4% ; Cd: 0.24%.)

		Exchange		
GOLD	$35.00		less $1.25	nil here.
SILVER N.Y.	$1.293	8.34375%	less 0.02	$1.38088
LEAD	11.097¢	"	less 3.35¢	7.747
ZINC	12.612		less 2.6	10.012
CADMIUM				

CONTENTS & VALUE

Total Oz Gold	nil		=
" " Silver × 80% =	× 1.38088		=
" lbs Lead × 52½% =	× 7.747¢		=
" lbs Zinc × 81% =	× 10.012¢		=
	Total Gross Value		=
	* Less Treatment @ 15.10		=

Less Trucking }
Switching }
Freight }

Net Value -

(* Treatment Rate:
Base Charge - $13.00
Iron Penalty - (x% - 5%) × 0.50
Moisture (x% - 5%) × 0.20)

October 17/66

Pilot Plant Brenda Mines Ltd.
@ 100 Tons per day Cu - Mo S_2 flotation
total cost ---- $250,000

Indic. $250/T-day for small milling plants
" $200/T-day " larger "

Ammo 8.3.15/hr
Crew = 25.20

COST ESTIMATES SCRANTON DRIFT

2 miners + face + main advance duties,
1 designated as back-up for trams, track, steel sharp, powder prep, etc.

leadman @

Cycle: Muck out 5' round & advance track — 2 hrs.

(2 men)	Drill-off 5' round (25')	1½ hrs.
	Load & blast w/ lunch	1 hrs
	Total	4½ hrs

Steel
2.65
5.25
7.95

This allows 1½ rds/shift @ 7½' avg — may be pulled in one 7½' round per shift (Vme. – Silmonac)

(39.44)

COSTS (5' rd)
26 holes
6.5 x 7.5'
= 1.8 cy/l.f.
$14.00/cs.
28.¢/lb

Basic labour rate	3 @ 25.20	75.60
Board	3 @ 6.00	18.00
Steel 26 x 5.25 = 136 x 0.12 (22.00/200')		16.32 x
Powder 1.8 x 5' x 6# (rain) x $0.28		15.12 x
gel. (≈ 1½ cs @ 18.00)		
(amex @ 15¢/lb – 72# x $0.15 = 10.80)		
(?) Blast supp. 22 x 8' = 176' x 5¢		8.00 x
Total		$133.04

x ≈ $8.00/ft — C.E.B. quote 14/cs of 50#

For (—) 5' / gel. powder $26.50 / l.f. ←

With amex, deduct 15.12 − 10.80 = $4.32/l.f.

.90

For 5' / amex — $25.60 / l.f. ←

As contractors will estimate earnings on advances of say 7.5'–10' /shift, get comparative "bids"

List JCB Silmonac Costs.