

Pb Conc -

Smelted Treatment - \$180 US / dwt @ $\frac{2485}{16}$ lb Pb
 average price 28¢ US / lb = \$617 US / t Pb

95% of Pb content (min ded 3 limits)
 95% of Ag (min ded 1 oz)

Ag refining charge \$7 / 1kg of ^{pure} Ag.

Faro Inhouse 100 t of ore.

F				Ass			Per		
	wt	wt%	Pb	Zn	Ag	Pb	Zn	Ag	
FED	100	100.	3.25	5.38	50.5				
Pb Conc	3.54	3.54	66		900	72		63	
Zn Conc	8.18	8.18		50			76		
TG									

Modified

Fuel	100	100	3.25	5.38	50.5			
Pb Conc	4.12	4.12	67		900	85		74
Zn Conc	8.37	8.37		54			84	
TG								

Difference 0.58 t @ +1% grade.
 0.19 t @ +4% grade.

Puro Flow

Pb Conc Payment

a) Metal Payment

$$\begin{aligned}
 \text{Pb Value} &= (2205 \times 3.54) (.66) (.95) = 4894 \text{ lbs.} \\
 &= (4894 \times 20.24) = 98998.76 \text{ US.} \\
 \text{Ag Value} &= \left(3.54 \times \frac{900}{31.1} \right) (.95) = 97.3 \text{ oz.} \\
 &= (97.3 \times 4.08) = 396.98 \text{ US.} \\
 \text{TOTAL} &= 98998.76 + 396.98 = 99395.74 \text{ US.}
 \end{aligned}$$

b) Charges

$$\begin{aligned}
 \text{Smelter Treatment Rate} &= 185.00 \text{ US.} \times 3.54 = 654.90 \\
 \text{Shipping + Waste} &= 70.00 \text{ US.} \times 3.54 = 247.80 \\
 \text{Ag Refining} &= 24.21 \text{ US.} \\
 \hline
 &= 926.91
 \end{aligned}$$

c) "Net Back" Value

$$\begin{aligned}
 &99395.74 \\
 &- 926.91 \\
 \hline
 &= 98468.83
 \end{aligned}$$

Zn Conc Payment

a) Metal Payment

$$\begin{aligned}
 \text{Zn Value} &= (2205 \times 8.18) (.50) - (2205 \times .08 \times 8.18) = 7575.5 \\
 &= (7575.5 \times .60) = 4544.30 \text{ US.}
 \end{aligned}$$

b) Charges

$$\begin{aligned}
 \text{Smelter Treatment Rate} &= 233.72 \text{ US.} \\
 \text{Shipping + Marketing Cost} &= 70.20 \text{ US.} \\
 \hline
 \text{Total} &= 303.92 \times 8.18 = 2484.40
 \end{aligned}$$

c) "Net Back"

$$\begin{aligned}
 \text{Value} &4544.30 \\
 \text{Chg} &- 2484.40 \\
 \hline
 &2059.9
 \end{aligned}$$

China

$$\begin{aligned}
 &1323 @ 60\% \\
 &1150 \\
 \hline
 &175
 \end{aligned}$$

$$\begin{aligned}
 \text{Total} &2059.90 \\
 &644.63 \\
 \hline
 &2704.53
 \end{aligned}$$

80
 $2704.53 / 100 \text{ t} = 27.0453 \text{ US/t}$
 $\approx 32.45 \text{ US/t}$

$$\begin{aligned}
 &190 \\
 &19.5 \\
 &24.22 \\
 \hline
 &233.72 \\
 &1.28
 \end{aligned}$$

Modified
Pb Conc.

a) Metal Payment

$$\begin{aligned}
 \text{Pb Value} &= (2205 \times 4.12)(.67)(.95) = 5782. \\
 &= (5782 \times .24) = 1387.76 \\
 \text{Ag Value} &= \left(4.12 \times \frac{940}{21.1}\right)(.95) = 113.26 \\
 &= (113.26 \times 4.08) = 462.1 \\
 \text{Total} &= 1849.96
 \end{aligned}$$

b) Charges

$$\begin{aligned}
 \text{STC} &= 185.00 \times 4.12 = 762.20 \\
 \text{S\&M} &= 70.00 \times 4.12 = 288.40 \\
 \text{Ag Ref} &= 28.18 = 28.18 \\
 &= 1078.78
 \end{aligned}$$

c) Net Back

$$\begin{array}{r}
 \text{Metal Value} \quad 1849.96 \\
 \text{Charges} \quad \underline{1078.78} \\
 \hline
 771.08
 \end{array}$$

a) Metal Payment

$$\begin{aligned}
 \text{Pb Value} &= (2205 \times 8.37)(.54)(.85) = 8471.2 \\
 &= (8471.2 \times .60) = 5082.74
 \end{aligned}$$

b) Charges

$$\begin{aligned}
 \text{STC} &= 233.72 \times 8.37 = 1956.23 \\
 \text{S\&M} &= 70.40 \times 8.37 = 585.90 \\
 &= 303.72 \quad \underline{2542.13}
 \end{aligned}$$

5176.4

c) Net Back

$$\begin{array}{r}
 \text{M.V.} \quad 5082.74 \\
 \text{CA.} \quad \underline{-2542.13} \\
 \hline
 2540.61
 \end{array}$$

$$\begin{array}{r}
 \text{Total} \quad 2540.61 \\
 \underline{771.08} \\
 1769.53 / 100\% = 17.69\%
 \end{array}$$

= \$33.12 / t mill feed.

= \$39.74 CDA/t mill feed

Diff \$17.29/t

453

Power - 450 HP Ball mill
 600 HP Pump
 300 HP Conditioners
 1850 H.P. Total

.706

~~load factor =~~

$$1000 \text{ kWh} \times 24 \times 365 \times .90 \times .05 = \$394,200/\text{ann.}$$

= .08

4.8:

Operating Cost \$/t

Consumables = 50,000

Repair = 60,000

Power = 394,000

$$\frac{\$504,000/\text{A.}}{5000 \text{ t}} = \$.10 / \text{t milled}$$

Capital Cost = \$ 3,144,000

Op' Cost = .504,000

\$ 3,648,000

"NB" Current Value = \$ 7.29 / t mill or 500,000 t of mill feed.

If mill operations ^{performance was only} only yield 50% of the anticipated metallurgical improvement then 1,000,000 t of mill feed will return the total cap & op cost or 2.5 months of full scale mill production.

13,150

861,000 t
 65
 30