270

Brenda for typing & forwarding to Mr. Craggs

019589

The Milling of Oxidized Ore at Cyprus Anvil

The Faro orebody subcropped and was thus exposed to weathering and oxidation through the overburden. In tropical climates this ore would have become true "oxide" ore, but in the cold Yukon Climate the sulphide minerals became weathered or tarnished, essentially only surface oxidation took place. The oxidized ore is thus a weathered sulphide ore and not an "oxide" ore as it is mistakenly called at times.

This oxidized sulphide ore has been milled in the Cyprus Anvil mill and the metallurgical results although poorer than the "fresh" sulphide ore, was considerably better than that achieved at other sites of difficult sulphide metallurgy (eg New Brunswick ores) and truly oxide ores.

In the attached table are outlined the metallurgical results actually achieved in the mill on oxidized ores during the first half of 1982. It should not go without note that there were many serious problems in the mill at this time, including a chronic water shortage, that are outlined elsewhere. From these results one can see that the metallurgical performance approaches that of a more complex (than Faro) sulphide ore rather than an "oxide" ore. It should not be lost on the reader that typical sulphide flotation techniques were used.

In summary, the Faro oxidized ore represents an ore for which the metallurgical results are less attractive than for the unweathered sulphide ore, but nonetheless acceptable.

John Fraser

John Maissan

Mill Operations Manager

MARCH 12, 1985

Metallurgical Results of Oxidized Ore - 1982

A// SULPHIDE + 4 DAYS OXIDIZED ORE - JANUARY 1982

PRODUCT	TONNES	GRADES			DISTRIBUTIONS		
		% Pb	% Zn	gpt Ag	Pb %	Zn %	Ag %
FEED	307,675	2.9	5.3	32.3			
Pb CONC		60.9	6.3	504.1	79.7	4.5	57.4
Zn CONC		2.2	50.3	43.8	6.7	82.8	11.8
TAILS		0.5	0.8	11.4	13.6	12.7	30.8

B// OXIDIZED ORE JANUARY 4-8, 1982

PRODUCT	TONNES	GRADES			DISTRIBUTIONS		
		% Pb	% Zn	gpt Ag	Pb %	Zn %	Ag %
FEED	31,526	2.93	4.65				
Pb Conc		64.44	5.52		71.01	3.83	
Zn Conc		2.86	46.87		6.25	64.58	
TAILS		0.74	1.63		22.73	31.59	

C// OXIDIZED ORE MARCH 10 to MAY 20, 1982

PRODUCT	TONNES	GRADES			DISTRIBUTIONS		
		% Pb	% Zn	gpt Ag	Pb %	Zn %	Ag %
FEED	785,037	2.91	4.88	35.47			
Pb CONC		58.93	6.14	504.12	65.8	4.3	48.3
Zn CONC		2.62	48.42	59.88	6.7	73.8	12.5
TAILS		0.80	1.20	15.54	24.5	21.9	39.1