

015437

MR. W. S. ROW

TORONTO OFFICE

RE: YOUR G-136-D FEB.17

HEAD SAMPLE

PERCENT OR OZS

AU	TRACE
AG	1.80
PB	2.80
ZN	5.55
FE	20.6
S	20.58
CU	0.16
SI02	34.6
CAO	2.8
MGO	1.37
AL2O3	1.21
AS	0.031
SB	0.035

HEADS CALCULATED FROM TEST PRODUCTS HAVE AGREED WELL EXCEPT FOR CU AND PB BOTH OF WHICH HAVE TENDED TO BE ERRATIC AND GENERALLY HIGHER THAN THE VALUE OF THE PREPARED HEAD. ASSAY CHECKS ON PB CONFIRMED INITIAL REPORTED VALUES

• IN THE INTEREST OF RETARDING SAMPLE OXIDATION WE CRUSH TO MINUS 4 MESH. IT MAY BE THAT THE PB IN THIS CASE IS SUFFICIENTLY MASSIVE TO REQUIRE FINER CRUSHING FOR MORE CONSISTENT SAMPLE REPRODUCTIBILITY.

BEST LAB RESULTS HAVE BEEN WITH PRIMARY GRIND OF 92 PERCENT MINUS 200 MESH FOLLOWED BY CONCENTRATE REGRIND AND CLEANING. REAGENTS AS OUTLINED IN D-42-G, FEB.3 APPLY.

AVERAGED RESULTS OF 3 SUCH DUPLICATE TESTS GIVE CONC ASSAYS AND RECOVERIES OF

	PERCENT OR OZS	PERCENT RECY
AU	0.076	
AG	8.36	77.0
FE	11.8	
CU	1.07	62.6
PB	21.3	92.5
ZN	30.1	86.1
AS	0.028	
INSOL	3.3	

THE HEAD WAS REPORTED AS TRACE AU HENCE NO RECOVERIES SHOULD BE CONSIDERED AT THIS TIME.

THE EX ABOVE RESULTS ON FRESH ORE COMPARE AS FOLLOWS WITH BULK FLOTATION TESTS COMPLETED ON THE OLD ORIGINAL D.D. CORE (SAMPLE 1) RESULTS ARE AN AVERAGE OF 6 DUPLICATE TESTS.

	PERCENT OR OZS	PERCENT RECY
AU	0.096	67.3
AG	7.5	73.0
CU	1.4	72.3
ZN	28.5	82.1
PB	22.0	85.7
FE	13.1	6.6

Conc. Ratio
 $\frac{28.5}{.821555} = 6.735:1$
 $\frac{22.0}{.8572220} = 2.566:1$

CONSIDERING THE AGE OF THE ORIGINAL SAMPLE, AGREEMENT IS ACCEPTABLE. ACTUAL DUPLICATION OF RESULTS IS GOOD BUT FE REJECTION IS INCONSISTENT. THUS IN THE LATEST WORK FE CONTENT OF THE 3 CLEANED CONCENTRATES WAS 10.2, 12.1 AND 13.3 PERCENT FOR AN AVERAGE OF 11.3

IRON REJECTION IS MADE DIFFICULT BY THE FACT THAT REAGENTS THAT ARE GOOD PYRITE AND PYRRHOTITE DEPRESSANTS ALSO DEPRESS ZN. HIGH LIME ALKALINITY WHICH DEPRESSES FE IN THIS FORM (BUT NOT SPHALERITE) WILL DEPRESS PB VERY DRASTICALLY. ADDITIONALLY. THE FE CHEMICALLY COMBINED WITH ZN IS PROBABLY HIGH.

SOME INDICATION OF THE AX ZN-FE INTERDEPENDENCE IS ILLUSTRATED IN THE RESULTS OF TEST 93 WHICH FOLLOW:

CL CONC	PERCENT WT	ASSAYS PERCENT				DISTN PERCENT			
		CU	PB	ZN	FE	CU	PB	ZN	FE
#4	11.0	1.53	26.7	33.1	8.2	58.7	84.4	66.4	4.4
#3	12.1	1.44	25.1	32.2	9.3	60.8	37.3	71.1	5.5
#2	14.5	1.27	21.9	29.9	11.8	64.3	91.4	79.1	8.3
#1	18.3	1.05	17.9	25.5	15.3	67.1	94.4	85.1	13.6
ROUGHER	35.6	0.59	9.70	14.9	23.3	73.0	99.3	96.9	40.2

BASED ON LABORATORY RESULTS THE FOLLOWING GRADES AND RECOVERIES ARE SUGGESTED FOR PRACTICAL CONSIDERATION.

	PERCENT	PERCENT RECOVERY
CU	1	60
PB	21	86
ZN	29	82
AG	7.5 OZS	73
FE	13 MIN	
	15 MAX.	

Conc. Ratio
 Pb 21 / 186 x 280 = 6.89 : 1
 Zn 29 / 87 x 355 = 6.35 : 1
 Ag 7.5 / 1.8 x 73 = 5.7 : 1

IT IS NOTED THAT THESE ARE BASED ON CAREFULLY CONTROLLED LABORATORYL ~~TESTS AND DO NOT NECESSARILY REPRESENT OR FORECAST OF AA~~ TESTS AND DO NOT NECESSARILY REPRESENT A FORECAST OF ACTUAL OPERATING RESULTS. SUCH A FORECAST COULD ONLY BE MADE AFTER COMPLETING LAB CYCLE TESTS, ESTIMATING, CIRCULATING LOADS, FINENESS AND EMK DENSITIES, ETC.

AW... W. HRYNEWICH

Mesh - 150 mesh 95%

Zn activater CaSO_4

Roughing Na_2CO_3 2 KG/t
 Ca(OH)_2 1 KG/t
PH 10.

Cleaning PH 9.5 - 8.0 by regulating amount
of Ca(OH)_2

Amount of reagent used

Previous Sample 9,360 g/t (for semi-bulk
flotation)

Recent Sample 3,900 g/t (for bulk
flotation)

Test result (without regrinding)

	(1)	(2)		
	Content	Recovery	Content	Recovery
Pb	20.4%	78.2%	19.5%	75.4%
Zn	35.6 <i>56%</i>	92.3	30.3	88.7
Fe	8.0		8.7	6.5

Remark: The research is still progressing
and any better result will be
readily reported.

No regrinding

February 18th, 1965.

VANGORDA

White Pass and Yukon Rates

Freight rates on rail haul from Whitehorse to Skagway on New
Imperial concentrates would be:

Copper Concentrates 25% Cu = \$7.70 / S.D.T.

Iron Concentrates 68% Fe = \$5.10 / S.D.T.

A new quotation has been asked on copper concentrate only, which
is expected to be above \$7.70.

From Pitts to Kavanagh - February 18th, 1965.

Phone Pitts CH 7-2193

EF:sr