

Lee P.

005136

OCTOBER 9, 1986

TO: LIST

FROM: G. GRAMS

RE: OXIDE STOCKPILE DATA

ACTUAL MILL RESULTS

Mill feed	69,101 tonnes @	2.29% TPb, 4.14% TZn, 24 g/t TAg
CAMC estimate of grade:		2.9 % Pb, 4.7 % Zn, 33 g/t Ag
Curragh blast holes, top 30' lift		2.64% Pb, 3.29% Zn, (total metal)
	bottom 30' lift	2.71% Pb, 4.01% Zn, (total metal)

Sulphide assays of the blast holes were determined by subtracting the assays of non-sulphide metals. This can normally be expected to be a reasonable indication of head grade. Results are:

Top lift non-sulphide metal:	1.40% Pb,	0.78% Zn
Top lift sulphide metal:	1.24% Pb,	2.51% Zn
Proportion of non-sulphide metal:	53% Pb,	24% Zn
Bottom lift non-sulphide metal:	1.25% Pb,	0.79% Zn
Bottom lift sulphide metal:	1.46% Pb,	3.22% Zn
Proportion of non-sulphide metal:	46% Pb,	20% Zn

However, actual non-sulphide assays from the mill run of oxide were 0.80% Pb, 0.43% Zn. The proportion of non-sulphide metal in the mill feed was 35% Pb, 10% Zn, which is significantly lower than the blast holes indicate. The non-sulphide metal in the reverse circulation drill assays in the area of the 1986 oxide feed was approximately 30%, which is not inconsistent with actual non-sulphide realized. Thus the non-sulphide assays of the blast holes must be viewed with skepticism. It is doubtful that oxidation has increased that much in four years.

The most likely cause of the increased non-sulphide assay in the blast hole drilling would be due to drilling through broken material. Larger, less oxidized particles tend to be displaced and the finer particles encountered by the hole would be bailed to the cuttings pile at the hole collar. The fines are more highly oxidized, resulting in the cuttings piles being non-representative of the material drilled.

The CAMC grade estimates were based on assays of reverse

circulation drill holes. The holes were drilled with a down-hole-hammer and were cased, the casing being pulled upon completion of each hole. Drilling density was not great; 21 holes were drilled to estimate the grade of approximately 2.4 million SDT (2.2 million tonnes). This was prior to processing of approximately 800,000 tonnes of oxide in 1982. Assays of individual holes were erratic, with no pattern evident, either laterally or down the hole.

The assays are also erratic in the blast holes, with no apparent relationship between the upper and lower lifts. Both drill programs indicate that the oxide stockpile probably does not grade better than 7.5% combined Pb-Zn. Further, no zonation is apparent, i.e. there does not appear to be any sortable high or low grade zones. Some grading of material may be possible on the basis of reagent consumption as indicated by met tests on the blast hole cuttings, i.e. high lime consumption (~ 20 kg/t lime) material probably will not improve with screening, thus should be put aside.

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