

MEMORANDUM

TO: W. Krats FROM: P. M. Pettigrew

SUBJECT: SUGGESTED MODIFICATION TO Pb-GRADE DATE: July 31, 1973

FOR 1974 PIT

Introduction:

The most likely pit plan to be followed next year is "Alternate 3." This involves a total of 3,650,000 tons of ore being fed to the mill, the DDH-estimated and rotary drill hole-estimated grades being 3.7% Pb and 5.9% Zn.

On the basis of past experience these grades are not realistic: the Pb is almost certainly underestimated and the Zn overestimated. The present study attempts to correct the Pb. A previous report outlines an approach to Zn-corrections (June 29, 1973).

Historical Approach:

In 1972 the DDH-estimated Pb-grade was 3.7%; in fact, based on reported mill feed for the year and rotary drilling of the LG stockpiles a grade of 4.1% was experienced. During the first five months of 1973, in which emphasis was placed on sub-zone A as a source of feed (see report May 8, 1973), the DDH-estimated vs mill/rotary drill hole-reported grades were 3.4% and 4.5% respectively.

An analysis of 1972 feed reveals a broad mining of sub-zones A and C which explains the less drastic increase in Pb over the DDH-estimated value. 1974 places a similarly weighted emphasis on sub-zones A and C.

Zonal Weighting Approach:

The writer examined the ore scheduled for mill feed in 1974 and increased the Pb/Zn ratio to 1.0 or just under this value in tonnage blocks, which appears to be in sub-zone A (based on past experience and the values reported from 1972 DDH's crossing sub-zone A and C). No 1972 values were altered as they appear to be valid. A maximum value of 7.0% Pb was exercised based on frequency distributions for 1972 and 1973 blast holes. Stockpile values were not changed for a variety of reasons (including the fact that they were tested as recently as 1973 and that low grade/red and yellow ore largely derives from sub-zone C).

This approach coincidentally increased the planned Pb-grade to 4.1% from 3.7% exactly as was experienced in 1972.

Recommendation:

Corrected grades for 1974 are as follows:

Pb: 4.1%

Zn: 5.7%*

* This includes allowance for a maximum Zn of 7.5% per tonnage block.

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