

003255

CASL # 8(369)(c)

To

J. F. Oik

Date

January 28, 1976

From

J. C. Devitt

Subject AFE 75001

I present the following comments regarding the draft of AFE 75001. Comments are number coded to correspond with circled areas in the attached xerox copy.

- 1) Estimate should be plural.
- 2) Laurich-Kennedy did not design a final pit for the Zone 1 and 3 orebodies. They were given the configuration of the 1973 Cyprus Anvil design, to which they made very minor modifications for ramp locations. Their instructions were to produce a mining schedule for this pit configuration. They calculated the ore and waste volume remaining from that date (July 1, 1974) incidental to the production of the mining schedule. They did not design a pit or establish a reserve estimate as such for the Zone 1 and 3 orebody.

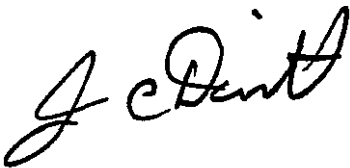
They did, however, design a pit for Zone 2. This pit was simply designed to mine all the ore then known, and did not involve an actual economic analysis.

- 3) The Engineering Staff did not prepare an estimate of mineable reserves based on the Pennebaker ore interpretations. Our estimate is based on experienced geological interpretation of the orebody, historical production comparisons, and a correlation with mining methods. All our interpretations are based on cross-sectional projection onto bench plans and established rules of ore grade projection onto those plans. Our estimate excludes all external dilution. Internal dilution of grade occurs, but no volume of internal dilution, per se, is included.

Attached

Mr. Pennebaker calculated his estimate strictly from projections from cross-sections - an entirely different method than that used by us. His estimate included partial benches of ore on the outside of the orebody which could not physically be separated in the mining process. His method, by including some ore on the outer fringes that cannot be mined, and are therefore not included in the Cyprus Anvil estimate, results in a slightly higher tonnage and lower grade. However, the metal content of both estimates is almost identical. His computation, from basic data, using an entirely different method, affirmatively checks the Cyprus Anvil estimate. The use of our figures is recommended because they are calculated by a method consistent and conformable with the mining method and plans and realistically reflect the tons and grade of ore actually recoverable by present mining methods.

- 4) The material included averages 4.6%, and requires a mining cut-off grade of 4% combined to recover this material.
- 5) 1975 drilling results not used for modification.
- 6) The need for slope flattening was realized based on recent experience, but the actual design and additional volumes resulting from it were derived from the detailed slope stability analysis done this past year by Piteau, Gadsby, Macleod Ltd.
- 7) This 75% refers to a "mining recovery" of the piles. Since part of the piles are diluted with waste on the bottom, spilled over onto berms, rough ground, etc., it was felt prudent to assume that only 75% of the actual volume of the stockpiles can be recovered by mining.
- 8) Again, 1975 drilling not included in changes, as results have not yet been analyzed and integrated into the orebody model.
- 9) As shown.
- 10) Should be 6,600,000, to be consistent with Case I.
- 11) Can continue until early 1978.
- 12) Should be twelve years.



J. C. Devitt
Chief Mining Engineer

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