

M E M O R A N D U M

TO: M. O. Hampton
FROM: P. M. Pettigrew
SUBJECT: TONNAGE COMPARISONS, MILL FEED FROM MARCH 1970 TO AUGUST 1971

Attached is a graph directly comparing the calculated tonnage milled per day based on data received from both the mine and the mill. The "feed reported by the mine" is that reported on the last day of a preceding month to the second last day of the month (inclusive). The period March 1970 to August 1971 inclusive was examined on a monthly basis in this manner.

The straight line is, of course, the ideal case: perfect correlation between the mine and the mill. It appears that there was good agreement in April, May, October and November 1970. At other times there was considerable variation from this e.g. a +11.4% discrepancy in March 1971 and a -26.9% discrepancy in March 1970.

From the data plotted it seems that during the months preceding September 1970 the mill was reporting fairly erratic tonnages which were "corrected" in November and December of the same year in the wrong direction. From then on the tonnage reported was consistently lower than the mine reported, presumably based on what was thought to have been experienced in 1970.

The dashed line represents the average condition for the months October 1970 to August 1971 inclusive. It is suggested that, by using its displacement from the ideal condition at any point, it is possible to derive corrected tonnages which are closer to a good agreement with the mine's reported tonnages. Suggested corrections based on this displacement (deviation) are shown outlined by a faint dashed line.

As the figures quoted have already been corrected by the mine it is not really practical to take this any further but it can be pointed out that a formula in the form of an arithmetic progression could be devised to correct any given tonnage. Note that at around 5700 t.p.d. to 6000 t.p.d. no significant correction has to be made.

P.M. Pettigrew 11.9.71

P. M. Pettigrew
Ore Control Geologist

pp/pp

cc: J. W. Mossop
N. G. Cornish
C. H. Jakins

Mine reported tons per day (thousands)

ABOVE SOLID LINE
MILL REPORTS
LOWER
TONNAGE

BELOW
SOLID LINE
MILL REPORTS
HIGHER
TONNAGE

4

5

6

7

mill reported (tons per day (thousands))

7

Jul

Mar

Feb

May

Aug

Apr

Jun

Jan

Dec

Nov

Oct

Apr

Sep

Jul

May

Aug

Jun

Mar

"average condition" October 1970 - August 1971

condition of perfect correlation

- 1970 figures ○ } compared with mill monthly reports
- 1971 figures ○ } compared with mill heat feed rate
- direction of correction for Nov and Dec 1970
- suggested correct based on deviation of "average condition" from perfect correlation

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ANVIL ADM FARO

-ANVIL VCR

8/31/71

TO: R E THURMOND

FROM: J F OLK

SUBJECT: ORE COMPARISON STUDY BY P FORREST

ALTHOUGH THERE ARE A FEW TECHNICAL DETAILS IN THIS STUDY THAT I WOULD LIKE TO CLARIFY ON MY NEXT VISIT TO FARO, IN GENERAL I THINK THIS IS A VERY GOOD REPORT. SPECIFIC COMMENTS ARE:

1. SINCE IT IS APPARENT FROM THIS THAT THE RELIABILITY IS IMPROVING AS WE GO LOWER, PERHAPS CONSIDERATION SHOULD BE GIVEN TO NOT INCLUDING BENCHES ABOVE A CERTAIN LEVEL IN THE FEED-IN DATA.
2. ALONG THE SAME LINES, WAS THE DATA AVAILABLE FOR THE UPPER BENCHES COMPLETE AND RELIABLE, AS I AM AWARE THAT A GOOD DEAL OF SEARCHING HAD TO BE DONE IN GATHERING DATA IN THE EARLY STAGES OF ORE MINING.
3. IF THE FACTOR DEVELOPED BY THIS STUDY IS APPLIED TO THE 1972 ORE SCHEDULE, WHAT IS EFFECT ON OVERALL GRADE? ALSO REMAINING RESERVE?
4. IF THIS SYSTEM IS TO BE EFFECTIVE, I AGREE THAT THE DATA COLLECTION SYSTEM SHOULD BE REVISED AND MAINTAINED AND THE COMPARISON STUDY UP-DATED PERIODICALLY. I HOPE THAT THIS IS BEING FOLLOWED UP.
5. WITH REGARD TO PURSUING OTHER METHODS OF ANALYSIS, I WOULD RECOMMEND THAT ONE OR TWO BENCHES BE SELECTED FOR COMPARISON AND ANOTHER METHOD APPLIED AND COMPARED WITH THE METHOD USED. IF THERE IS REASONABLE AGREEMENT, I WOULD THINK THAT THEY WOULD GIVE AN INDICATION THAT THIS METHOD IS RELIABLE, AND BE CONTINUED. AS MORE DATA IS DEVELOPED, PERIODIC CHECKS COULD BE MADE ON THE RELIABILITY.

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ANVIL ADM FARO

CC - JM
NGC
MOH
B.F. P.F.
J.M.C.
Please submit your comments on these points to me P Forrest
B. Foster
P Forrest