

*MET ENGINEERS LTD**File B-0-510*

To W.N. Wallinger

Copy to L.P. Taggart  
G. Biles  
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From P.J. Brown

Date January 18, 1982

Subject PLANT VISIT JANUARY 3-12, 1982

The purpose of my visit to the minesite was to observe the response of the oxide ore to the lime treatment system and also to coordinate the efforts of the metallurgical group.

Oxide Ore Plant Test

The objectives of the plant test were to determine the metallurgy of the oxide ore with a lime system, to estimate the reagent cost of the lime flotation treatment and to verify that the lime delivery system was adequate for continuous operation. The test commenced on January 4th and was effectively concluded on January 8th when crusher problems forced the abandonment of the test program.

A detailed report of the test is being prepared by S. Chmelyk and K. Kleinschrott who provided the on-shift control. The following points however should be noted:

- a) The lime delivery system to the rod mills is totally inadequate. I have discussed remedial measures with both Stan and Garry including changes in the pipework and automatic pH control for the lead roughers.
- b) In general lead metallurgy was better than expected and the lead cleaners functioned well with lime. However, for extended plant operation with oxide, I suggest that automatic pH control for the lime be set up for the cleaner circuits too.
- c) The zinc metallurgy was adversely influenced by a voluminous froth condition which prevailed throughout the test. This condition was the result of a reagent imbalance and would probably have been corrected had the test been extended for a few days.
- d) Overall the test suffered as the result of reagent shortages, especially collector, very heterogeneous feed material and wide swings in lead circuit pH control. These are all correctable and the next test should not be attempted until all concerned are certain of smooth plant operation during the test period.

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- e) The single largest failing of the test was that the lime grinding and storage system was not taxed. Thus it is still not known if the proposed system will work continuously to supply adequate quantities of lime when treating oxide ore.

In conclusion, and despite the many problems encountered during the test, I would like to commend those involved. To mill a foreign ore type with a completely new reagent scheme is technically very difficult. Many system bugs have been disclosed and will be corrected. Also, I am confident that oxide treatment costs will be lower than plan and metallurgy somewhat above plan.

#### Metallurgical Program

Acting on your instructions I met with the various people in, and concerned with, the plant metallurgical group. As we agreed I split the personnel into small groups each dealing with a specific aspect of the metallurgy. The following summarizes the activities currently underway.

a) Plant Metallurgy

S. Chmelyk and W. Kleinschrott will continue their excellent work in plant control. The primary objectives here are to ensure that all shifts are operating under a very specific set of parameters. As the onstream analyser becomes functional they will provide additional operating guidelines by modifying the plant control parameters.

b) Grinding Circuit

R. Muruaka has been assigned to continue the work on optimizing the grinding circuits. His field of study will include mill loads, cyclone parameters and routine calculation of theoretical work indices.

c) Laboratory Work

Bonny Davia will, on her arrival, commence work which will lead to a distinct improvement in laboratory capacity including daily cyclosizing, standard laboratory tests and special laboratory investigations. She will direct and work with two technicians in pursuit of her goals.

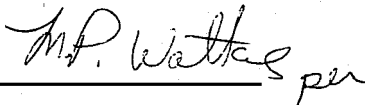
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d) Instrumentation

Glenn Piowar and Ken Power will devote their time to the task of bringing the x-ray analyser on stream. In this project they will receive the active cooperation of Gary Chapman in providing control assays for calibration of the x-ray.

I have arranged to stay in contact with all concerned by telephone. Any technical difficulties which arise will be handled by me. Other problems will be directed to Peter Taggart or Garry Biles.

PJB/mw

  
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P.J. Brown