

MEMORANDUM

002152

TO: D. W. Philip FROM: D. J. Hanson
 SUBJECT: "WET" STOCKPILE OXIDIZATION DATE: June 17, 1974

History:

During January and February 1974, we stockpiled an estimated 160,000 to 200,000 tons of wet and/or frozen ore from the 3790 bench. This material averaged 4.8% Pb and 6.8% Zn from blasthole assays.

Observations:

On June 15, 1974 a shovel cut 110 feet directly into a "wet" stockpile and encountered frozen and wet ore. An examination of the face showed that only minor oxidization of the sulfides had occurred during 5½ months. This contradicts the observation that a "red" stockpile was severely oxidized after only 4 months.

The "red" stockpile contains visible pyrrhotite which oxidizes quickly to a distinct orange-brown colour. Minor pyrrhotite was observed in the "wet" stockpile.

Conclusions:

- 1) Pyrrhotite rich ore should not be stockpiled under any circumstances.
- 2) It is possible that wet/frozen ore oxidizes more slowly than dry ore. Ice and water may inhibit air from coming in contact with sulfide particles.

D. J. Hanson

D. J. Hanson
 Mine Geologist

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