IL MINING CORPORATION LIMITED

MEMORANDUM

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TO: J. Keily FROM: P.M. Pettigrew

SUBJECT: DELETERIOUS ORE IN MILL FEED DATE: August 30, 1972

The mill seems to alarmed with two conditions of ore which they regard as deleterious: oxidized ore and pyritic ore. The former is almost entirely restricted to stockpiled ore and affects the mill only once in about six months. Pyritic ore on the other hand is quite common, so much so that the writer feels that most of the low grade ore to the east of a line through 70 - 6 and 66 - 49 diamond drill holes is rich in massive, granular pyrite. This material is seen in bands up to 4' thick on 3910 and is observed in 72 - 7 to be 150' thick with two 10' bands of +9% ore enclosed.

The following approaches seem necessary to delineate this material and to warn the mill of possible problems:

1. LONG TERM - Assuming $<4\%$ combined in a 5' intersection of massive sulphides = massive pyrite, it is possible with the help of D.D.H. logs to delineate occurrences of same and incorporate this into bench plan data.

2. SHORT TERM - The blast hole samplers could report on apparent pyrite percentage by examining a cross-section of the cuttings, presuming the proper technique of sampling is followed. Some training would perhaps be required with say, any hole intersecting $\geq 10\%$ pyrite being reported appropriately. Included in this report should be whether it appears to be banded, massive or desseminated.

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3. IMMEDIATE - Ore control could monitor the pyrite content of active faces daily. It would appear to be necessary, as far as possible, for the Mine Department to keep ore control aware of the possible degree of sorting of the pyritic material as these bands tend in longitudinal section to be fairly laminate but in transverse section to be somewhat doomed. This results frequently in constant variation from hour to hour in pyrite content.

It would also appear to be necessary that the Mine Dept. keeps Ore Control aware of areas to be mined as crusher feed during a shift and some idea of the likely ratio's if more than one face is involved.

Despite these problems, a generalised statement could be made if some assistance is given by the Mine Dept. where necessary. As this is already usually supplied willingly there would appear to be no obstacle provided they are made aware of whatever decisions are made in this regard.

P. M. Pettigrew.

P. M. Pettigrew
Ore Control Geologist.