

**FALCONBRIDGE NICKEL MINES LIMITED****INTER-OFFICE MEMORANDUM**

DATE: November 30, 1979

TO: D.J. Emery

COPIES TO:

FROM: P.J. Raleigh

SUBJECT: Arsenic Production

Work on the project has progressed since our April submission with significant development in the following areas.

1. Pilot Plant Tests
2. Flow Sheet Development and Capital Cost Estimates
3. Direct Shipping of Baghouse Product

The report covering the results of this years pilot plant work, indicates that a hot water leach can produce, a granular product meeting the specifications set by the Falconbridge Marketing Department.

Close co-operation between the project group at the mine and in Toronto allowed a process flow sheet and equipment list to be prepared. The scheme incorporates the experience developed at Giant and at Struthers Wells, for the purification and crystalizing of the product. The process is considered to be energy efficient and is shown on flow sheet #SKGY 111479 Rev. 0.

Estimates of equipment supply and installation have been obtained from suppliers and from our in house pricing data. The project as depicted is estimated at a cost of \$2,200,000 based on the equipment being housed in a new building.

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The costs estimated are substantially over those reported previously and are accounted for as follows:

1. Increased Energy Efficiency
2. A new building
3. Increased automation for operating ease
4. Additional process steps for increased recovery of  $\text{As}_2\text{O}_3$

The project will require additional work to reduce capital requirements.

The plant at Giant is currently producing a high quality arsenic bearing dust, and attempts have been made to interest potential buyers in the unrefined product. Interest in purchasing all the available production is currently being expressed by at least one group.

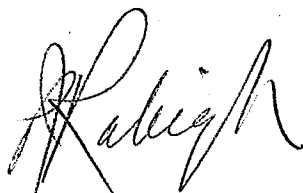
It is proposed that the following items of expenditure be approved.

1. Install the  $\text{As}_2\text{O}_3$  Shipping and Loading facility.

To take advantage of the strong market for arsenic that exists currently, the storage and shipping facility which is required for any of the schemes studied to date, be approved for immediate construction. This will allow crude arsenic to be shipped to interested users and will be available for the purified material when production is started. Cost is estimated at \$150,000.

2. Proceed with additional Engineering and Planning.

To allow for additional test work and engineering to proceed on the product purification system so as a definitive schedule and construction cost estimate can be prepared for further review.



PJR:md