

RG-1438

- Page 1 of 4 -

RAPIFAX

October 2, 1985

Dr. D.J. Emery  
Mr. K. Blower  
Giant Yellowknife Mines Limited  
Rapifax: (403) 873-2980

Re: As<sub>2</sub>O<sub>3</sub>

P.J. Raleigh  
Falconbridge, Toronto

(K) PJR-309



## FALCONBRIDGE

## Memorandum

Date: October 1, 1985

To: File

Copies to: P. J. Raleigh

From: T. J. Desanti

Subject: Giant Yellowknife -  $As_2O_3$ 

A proposal has just been received from Tom Robson of Blythe and Company regarding the proposed U.S. joint company to produce copper arsenate using the Applied Research process. The proposal is general in its outline and a number of questions have to be answered before Giant can give serious consideration to participating in the joint company. Comments below:

1. ORIGINAL PLAN

Giant Yellowknife	40%
Hicksons	40%
W. Drinkard	20%

Giant to put up 50% of financing  
and get 40% of profits

REVISED PLAN

Giant Yellowknife	40%
ARGI	60%

Giant to put up 40% of financing  
and get 40% of profits

2. The original plan was to give Drinkard 20% of the profits without providing any equity funds in return for the use of his process in the joint company. This was indicated as unacceptable and the revised plan removes the obstacle.

3. Blythe suggest the initial equity capitalization be US \$500,000 split 60% ARGI and 40% Giant. This investment would cover the cost of the test work to be done by Blythe on the Giant crude  $As_2O_3$ .

Question: How will Blythe invoice the joint company for test work done by Blythe; i.e. should this charge not be confined to costs plus some reasonable profit margin to ensure Giant doesn't finance more than its share of the test work. Alternately, Giant could argue that they should not put up any development money; i.e. ARGI would fund the full cost of the test work.

4. Reference is made to the objective of maximizing loan financing for the joint venture subject to U.S. Federal law. Assuming a US \$5 million capital cost figure for the U.S. production facility, how much would be loan funds; i.e. Giant needs to know at the outset what it will have to invest as equity funds.

- 2 -

5. We need a plan for the test work to be done by Blythe including the objectives and the costs of achieving these objectives in reasonable detail.
6. During our last Toronto meeting on August 29, we were advised the capital cost of building a plant to produce about 15 million pounds per year of CA would approximate US \$5 million. The 15 million pounds of CA annually would be equivalent to about 30 million pounds per year of CCA or 30% of the U.S. market. This plant would consume 5,000 STPY of Giant crude  $As_2O_3$ , assaying 85%  $As_2O_3$ .

Question: If the test work planned is successful, would the joint venture plan to construct a facility to produce the equivalent of 30 million pounds per year of CCA. Does the US \$5 million cost appear to be a reasonable estimate. What would be the timing regarding (i) completion of the planned test work, (ii) engineering of the U.S. facility, (iii) initial construction of the U.S. facility, (iv) completion of the U.S. facility, and (v) expected date of the availability of saleable product.

7. What is the joint company's long term objective; i.e. the initial target is to capture 30% of the U.S. CCA market. What approximate net profit margin (before and after taxes) is expected to be earned by the joint venture company operating at the 15 million pounds per year CA rate. Will the joint company pay out 100% of all net profit after taxes annually to the joint company shareholders.

8. The initial target of 30% of the U.S. market will require 5,000 STPY of Giant crude  $As_2O_3$ . Giant has a total underground stockpile of 206,546 ST of crude  $As_2O_3$ , and 160,000 ST with a gold content over 0.35 oz/ST. The 160,000 ST is sufficient to sustain a 5,000 STPY rate for 32 years. Hickson's request that Giant not supply crude  $As_2O_3$  to any other refiner is therefore unreasonable because the liquidation of Giant's crude  $As_2O_3$  inventory will take too long. Giant has to maintain the right to sell its crude to a maximum of two other refiners; i.e. Koppers and/or Cominco. The joint company will not be able to control the U.S. market and consequently there should not be any serious market disruption in Giant selling crude to two well established companies such as Koppers and/or Cominco.

9. There should be a charge to the joint venture by Giant for  $As_2O_3$  contained. Hickson's request the crude  $As_2O_3$  be supplied free FOB trucks Giant Yellowknife. Since Giant gets the gold bearing residue back free of charge delivered Giant, the charge for the  $As_2O_3$  contained should be low; i.e. say a price of US 5¢/lb FOB Giant. At 5,000 STPY and 85%  $As_2O_3$  content, this is equivalent to annual revenue of US \$425,000 (CDN \$560,000). This would add US 2.75¢/lb to the operating cost for CA produced by the joint venture. The US 5¢/lb would be explained as the cost to recover, store and handle underground material.

*T. J. Desanti*  
T. J. Desanti

*This is what we have to be concerned.  
If we do not receive payment for CA, we  
add V doesn't distribute earnings - what's the  
point?  
Also, we can make a  
business like this in our  
own best interests.  
I believe!  
We will know the  
cost shortly.  
i.e. Nov. '85*

FOR THE ATTENTION OF MR PAT RALEIGH

COPPER ARSENATE PRODUCTION FROM GIANT YELLOWKNIFE ARSENIC TRIOXIDE

OUR PROPOSAL IS AS FOLLOWS:-

1. JOINT VENTURE BETWEEN GIANT MINING AND HICKSON INTERNATIONAL INC SUBSIDIARY APPLIED RESEARCH (ARGI) TO DEVELOP AND EXPLOIT ARGI COPPER ARSENATE TECHNOLOGY IN N. AMERICA, *worldwide*

2. SHAREHOLDING IN THE JOINT VENTURE *Company* WILL BE DIVIDED -

400 GIANT MINING  
600 ARGI

INITIAL EQUITY CAPITALISATION WILL BE U.S. 7500,000 WHICH WILL BE SUBSCRIBED BY THE PARTNERS IN RELATION TO THEIR PERCENTAGE SHAREHOLDINGS,

I.E. GIANT U.S. 7200,000  
ARGI U.S. 7300,000

ALL ADDITIONAL FINANCING IN THE FORM OF EQUITY OR LOAN WOULD BE IN THE SAME PROPORTION. OUR OBJECTIVE WOULD BE TO MAXIMISE LOAN FINANCING SUBJECT TO U.S. FEDERAL LAW.

3. IT IS ANTICIPATED THAT THE ARSENIC TRIOXIDE PROCESSING PLANT WILL BE ESTABLISHED IN OR NEAR NORTH CAROLINA AND THAT IT WILL BE MANAGED BY ARGI.

4. ARSENIC TRIOXIDE RAW MATERIAL WILL BE SUPPLIED TO THE JOINT COMPANY ON AN EXCLUSIVE BASIS BY GIANT, I.E. THE JOINT COMPANY WILL NOT PROCESS ARSENIC TRIOXIDE FROM ANY OTHER SOURCE AND GIANT WILL NOT SUPPLY ARSENIC TRIOXIDE TO ANY OTHER CUSTOMER OR PROCESSOR. GIANT AGREE TO SUPPLY A QUANTITY OF ARSENIC TRIOXIDE PER ANNUM WHICH MATCHES THE PLANT CAPACITY REQUIREMENTS. THE ARSENIC TRIOXIDE WILL BE SUPPLIED ON A FREE EX MINE YELLOWKNIFE BASIS WITH BULK VEHICLES ARRANGED BY THE JOINT VENTURE.

5. THE GOLD BEARING RESIDUE WILL REMAIN AT ALL TIMES THE PROPERTY OF GIANT AND THE JOINT VENTURE COMPANY WILL UNDERTAKE TO RETURN IT FREE OF CHARGE TO YELLOWKNIFE IN BULK TRANSFER VEHICLES. THE EXPECTED QUALITY OF RESIDUE WILL BE DETERMINED AND AGREED FOLLOWING PILOT PLANT WORK.

6. THE SALES VALUE OF THE COPPER ARSENATE PRODUCT WILL BE DETERMINED EITHER ON THE BASIS OF COST PLUS OR IN RELATION

TO THE LOWEST PRODUCTION COSTS OF AN EQUIVALENT PRODUCT MADE BY THE BEST TECHNOLOGY KNOWN TO THE PARTNERS. A REALISTIC APPROACH TO THIS WILL BE POSSIBLE FOLLOWING THE PILOT PLANT WORK.

7. THE DEVELOPMENT COSTS INCURRED FROM SEPTEMBER 1ST 1985 IN RELATION TO THE PROJECT WILL BE FINANCED BY THE JOINT

VENTURE EQUITY CAPITAL REFERRED TO UNDER 2. ABOVE.

YOU WILL NOTE THAT FOLLOWING OUR DISCUSSION, OUR PROPOSALS ARE DIFFERENT TO THOSE PUT FORWARD IN TORONTO IN REGARD TO SHAREHOLDING AND FINANCING.

WE HAVE RECEIVED A SMALL SAMPLE OF MATERIAL FROM GIANT AND WE EXPECT 9 TONNES TO BE DELIVERED IN A CONTAINER DURING THE LAST WEEK IN OCTOBER. AS A RESULT, THE START OF OUR MAIN PILOT WORK HAS BEEN DELAYED BUT JEFF AND HIS TEAM ARE KEEN TO GET STARTED ON YOUR MATERIAL.

REGARDS

TOM ROSSON  
NN

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