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February 24, 1984

Mr. R.M. Kadenhe,  
Manager,  
The Roasting Plant,  
KWEKWE, Zimbabwe

Dear Mr. Kadenhe:

Re: Treatment of Arsenical Gold Concentrates

We have read with interest your letter of February 13, 1984 and are pleased to advise you that we are indeed prepared to provide you with a 'design package' of fluosolids technology as practiced at our mine.

Due to the increasing interest in fluosolids technology, Giant Yellowknife Mines Limited has, in conjunction with our parent company Falconbridge Limited, recently begun marketing the expertise we have gained over many years of fluosolids roasting of arsenical ores. Fortunately, we have experienced the conversion from Edwards type roasters to dual stage fluosolids roasters at our own plant and so are aware of many of the potential difficulties.

Given the variety of concentrates treated, your queries regarding fluctuating feed compositions and effects of high antimony concentrations are questions that we too would be most likely to seek answers to in considering changes such as you propose. As you are no doubt aware, the subject is quite complex and would perhaps be better addressed during your visit this summer. A few general observations may however be appropriate.

As a general rule fluosolids roasters do not respond as well to abrupt changes in feed characteristics as do the Edwards type. The important feed characteristics to consider from an operating aspect are particle size, sulphur content, moisture content, specific gravity and antimony concentration. Since the fluosolids roaster is less flexible in responding to changes in feed conditions it is likely that very careful blending of the various concentrates will be required. In this regard too, it has been our experience that antimony levels in excess of 1% in the feed over a period of a few days will result in serious roaster upsets requiring replacement of the bed.

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We would be happy to host a visit of representatives from your plant and, if desired, could arrange a tour of the Falconbridge roasting plant as well. Please let us know your wishes on this matter.

I have forwarded a copy of your letter and this response to Mr. P.J. Raleigh, Head of the Falconbridge Engineering Group, who will contact you directly to discuss how we could best be of assistance in developing a suitable design package for your requirements.

Yours truly,

GIANT YELLOWKNIFE MINES LIMITED



K.S. Morton  
Mill Superintendent

KSM:jh

c.c. K. Blower  
T. Riordon  
P.J. Raleigh