



December 18, 1989  
Project Number: 60619

Chief Mines Safety Officer  
Yukon Justice  
Box 2703,  
Whitehorse, Yukon  
Y1A 2C8

Attention: Mr. R.N. Prasad, P.Eng.

Dear Sir,

**RE: FARO UNDERGROUND, REPORT ON GROUND STABILITY  
OF THE MINING METHOD**

Enclosed is a copy of Steffen, Robertson and Kirsten Report # 60610; Preliminary Evaluation Of Underground Mining At The Faro Pit. The report, prepared in December 1988, is a geotechnical study of the proposed mine using all data available at that time. No additional data has been produced.

The three main sections in the study are:

- description of the geotechnical environment
- rock mass analysis
- mining analysis

The general conclusion is that the ore can be developed using room and pillar mining at approximately 75% extraction. The extent of the installed support may range from pattern bolting to bolting with mesh and shotcrete. The size of the rooms and pillars will depend on the economics of roof support with large rooms and a high percentage extraction compared with smaller rooms and a lower percentage extraction. However, the available data was insufficient for detailed planning as underground exposure is essential.

The conclusions of this report have been incorporated into the recent mine plan which is based on 73% extraction.



It is recognised that all openings must remain stable for the life of the mine and therefore the following additional work is planned for in the mine geotechnical program.

- geotechnical logging of all boreholes drilled for ore delineation during the development period
- rock strength testing of samples collected from boreholes
- geotechnical mapping of all underground openings during the development period and as required during the life of the mine
- monitoring of the installed ground support and blasting technique during initial development in all rock types
- delineation of areas of potentially poor ground conditions for predicting support requirements

As the mine is developed the geotechnical information will immediately be used to update the planning parameters on which the overall extraction is based. Adjustments to the mine plan can then be made, in a timely fashion. These adjustments may include: modifying the ground support, changing the extraction ratio, or altering the extraction layout.

We hope that the attached report and this letter is sufficient for your purpose. Please contact us if you have any further questions.

Yours very truly,

STEFFEN, ROBERTSON AND KIRSTEN (B.C.) INC.



M.J. Brodie, P.Eng.

mjb

encl.

c.c. L. Hwozdyk