

R E P O R T

OR

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Submitted by

MORNING STAR (FAIRVIEW) GOLD MINES LIMITED

## INTRODUCTION

Six specimens of ore were submitted by Mr. Charles C. Starr. We were asked to report on:

- (a) Whether or not there are evidences of secondary enrichment.
- (b) Whether or not there are two generations of quartz and sulphides.

A brief study of the polished sections showed that all the minerals are primary and hypogene. There is no evidence of secondary supergene enrichment.

The important minerals occurring are quartz, two generations, pyrite, galena and sphalerite.

(a) Quartz: The earlier variety of quartz is milky and contains little sulphide. The second is black and clearer than the milky variety. The black quartz can in one section be seen cutting the milky variety leaving no doubt as to the relative ages of the two types of quartz.

(b) Pyrite: Most of the pyrite has been intensely shattered and the fractures healed with the dark variety of quartz which is associated with the galena and sphalerite. The pyrite was probably introduced at the same time as the milky quartz.

(c) Galena & Sphalerite: These minerals are approximately of the same age and are later than the pyrite. Both are fresh and afford no sign of any surface alteration.

(d) Chalcopyrite. One small speck of chalcopyrite was found.

PARAGENESIS:

The order of crystallization is as follows: Quartz with possibly some pyrite, pyrite, quartz, galena and blende.

SUMMARY and CONCLUSION:

There is no evidence of any surface enrichment. The gold values which you are obtaining are due to primary hypogene gold, apparently associated with the massive pyrite.

There is direct evidence of two generations of quartz, one before the main introduction of pyrite and one after. It is possible that a little pyrite was introduced prior to the first generation of quartz but there is no proof of this in the specimens submitted.

Signed on behalf of  
LANGLEY & WARREN.

(Signed)

Harry V. Warren