020693

November 2, 1964.

TO: Mr. W. S. Row

FROM: C. K. Wilton

RE: Arsenic Content of the Vangorda Mineralization

Sirola's comment that "the arsenic content of the Vangorda mineralization necessitates a more involved assay procedure" may refer to the samples having been assayed by a polarograph, an instrument which was not in general use when this deposit was drilled off.

The Vangorda records have several references to the arsenical content of the ore. E.O. Chisholm's report of May 18th, 1956, on page 2 says that "sulphide content is variable but might average 60% overall" of which arsenopyrite would be 5%.

However the head sample chemical analysis of metallurgical test lots, give the arsenical content (in a report dated August 1956) as follows:

	Sample 1	Sample 2
As %	0.12	0.10

The report MD 3071 by the Dept. of Mines and Technical Surveys shows that metallurgical tests were run on 3 samples. Samples 1 and 2 were drill core rejects and sample No. 3 was a special sample consisting mostly of mineralized graphitic schist. Head sample analyses were in part as follows:

	As %
Sample No. 1	---
Sample No. 2	---
Sample No. 3	0.23

Arsenic or arsenopyrite are not mentioned in the section on microscopic examination of two polished sections from sample No. 1. There is no mention in the report of arsenic having a bad effect on the recovery in tests on sample No. 3.

A metallurgist friend of mine tells me that arsenic is objectionable in zinc concentrates. He also says that Normetal ores have some arsenic which they selectively suppress by high alkalinity. He says that the association of the arsenopyrite with the sphalerite and galena and the grain size of all three would have a bearing on whether the arsenic would cause trouble in the metallurgical processing of the ore.

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CKW:dh