OTTAWA, January 27th 1919

REPORT OF ANALYSIS 1378.

TEST NO. 108

ORE DRESSING AND METALLURGICAL LABORATORY.

Description of Sample:- Fluorspar, British Columbia
Head Sample, per Dr. Ferrier.

		Per Cent.
CaF_2 - Calcium Fluoride		47.20
$CaCO_3$ - Calcium Carbonate		2.50
$SrSO_4$ - Strontium Sulphate		32.30
SiO_2 - Silica		6.50
FeS_2 - Iron Sulphide		3.70
Al_2O_3 - Alumina		3.00
Magnesia		present
Undetermined		4.80

Note:- This analysis is to be considered
only approximate, but as accurate
as our laboratory appliances will
permit.

Chief of Division.

REPORT OF ORE DRESSING AND METALLURGICAL LABORATORIES.

Test No. 108

A small sample of 10 pounds of Fluorite was received on November 18th from Dr. Ferrier, of the Canadian Munition Resources Commission.

This sample was crushed to 50 mesh and a small sample taken for analysis which gave the following:-

Calcium Fluoride - CaF_2 - 47.80%

Calcium Carbonate - $CaCO_3$ - 2.50%

Strontium Sulphate - $SrSO_4$ - 33.30%

Silica   - SiO_2 - 6.50%

Iron Sulphide   - FeS_2 - 3.70%

Alumina   - Al_2O_3 - 3.00%

Magnesia   - present.

Undetermined   - 4.80%

As the analysis shows, 3.70% of Iron Sulphides were present. Small tests were made by table concentration and flotation to remove these sulphides.

Analysis of the Table product showed:-

Fe - 0.90% - FeS_2 - 1.94%

Analysis of the Flotation product showed:-

Fe - 0.50% - FeS_2 - 1.07%

Table

Table concentration removed the coarse pyrite but a percentage of the fine pyrite slimed and was carried over into the fluorite product.

Flotation concentration removed the fine pyrite but a percentage of the coarse pyrite was too heavy to float satisfactorily and remained in the fluorite product.

A combination of Table and Flotation Concentration should give satisfactory results.