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ALL OFFICIAL CORRESPONDENCE
SHOULD BE ADDRESSED TO THE DIRECTOR.

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OTTAWA, Ont., July 29th, 191 8.

Report of Ore Dressing and Metallurgical Laboratories.

Test No. 99

On July 15th, 1918, a shipment of Molybdenite Ore was received from the Wood Molybdenite Co., Ottawa, Ont. This shipment was from Masham, Que., and consisted of 18 cans:-

Gross Wt.----------2065.5 lbs.

Net Wt.----------1968.5 lbs.

Analysis----------MoS_2--------1.97%.

Content----------MoS_2--------38.78 lbs.

The Molybdenite in the ore was of the flake variety in a heavy sulphide gangue of Pyrohotite and Iron pyrites with a little pyroxenite. The ore for the most part was pure sulphides. Traces of Arsenic are present.

Tests were conducted on the laboratory flotation machines to determine the adaptability of the ore for concentrations by Oil Flotation.

The results of the test work are contained in the following table.

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Test No.	Machine Used.	Wt. of Ore Taken Grams.	Oil Mixture Pine Oil Per ton.Lbs.	Coal Oil per ton.Lbs.	Mesh Ore Crushed to.	Concentrates Wt. Grams	Analysis % MoS_2	Content grams.MoS_2	%age of MoS_2 Values	Middlings Wt. Grams	Analysis of MoS_2	Content grms.MoS_2
1	Callow	1000	½	1	48	9.0	81.50	7.34	41.9	94	5.93	5.57
2	Janney	1000	½	1	48	24.0	23.86	5.73	33.6	183	4.49	8.22
3	Callow	1000	1	2	48	7.5	67.69	5.08	28.8	178	4.93	8.78
4	Callow	1000	1	2	65	11.0	53.13	5.84	35.8	186	3.69	6.86

%age of MoS_2 Values	Tailings Wt. Grams	Analysis % MoS_2	Content grams MoS_2	%age of MoS_2 Values	Total Recovery figuring 70% of MoS_2 in Middling Recovered.
31.9	897	0.51	4.57	26.2	64.2
48.3	793	0.39	3.09	18.1	67.4
49.6	814.5	0.47	0.47	21.6	63.5
42.1	803	0.45	3.61	22.1	65.3

Conclusions:-

Flotation Results on this ore are not satisfactory. Tailings look clean with the naked eye but on examination under the microscope contain Molybdenite included in the pyrites. Fine crushing does not seem to assist the concentration to any appreciable extent as shown in No.4 test.