

State Department of Geology and Mineral Industries

702 Woodlark Building
Portland, Oregon

JOHN HERMAN LABORATORY
771 San Julian Street
Los Angeles, California

Certificate of SPECTROGRAPHIC QUALITATIVE ANALYSIS

Made for Adelmann Brothers Date February 19th, 1943.

ELEMENT	ESTIMATED QUANTITY
Silicon-----	10.0%
Iron-----	10.0%
Aluminum-----	10.0%
Sodium-----	1.0 to 10.0%
Potassium-----	1.0 to 10.0%
Calcium-----	1.0%
Magnesium-----	0.1 to 1.0%
Manganese-----	0.1%
Zirconium-----	0.1%
Copper-----	0.01 to 0.1%
Chromium-----	0.01 to 0.1%
Titanium-----	0.01%
Lead-----	0.001 to 0.01%
Vanadium-----	0.001 to 0.01%
Nickel-----	0.001 to 0.01%
Strontium-----	0.001 to 0.01%
Tin-----	0.001%
Gallium-----	0.001%
Molybdenum-----	0.001%
Cobalt-----	0.001%
Barium-----	0.001%
Silver-----	0.0001 to 0.001%

S.K. Atkinson
#1

John Herman
Chemist

Certificate of Assay CHEMICAL ANALYSIS

Made for Adelmann Bros. Date April 18, 1943

S.K. Atkinson	Sodium Nitrate-----	None
	Potassium Nitrate-----	None
	Calcium Chloride-----	None
	Calcium Compounds (Total CaO)-----	0.5%
	Barium Compounds-----	0.01%
	Magnesium-----	0.10%
	Vanadium-----	0.001%
	Iodine-----	None

\$ Paid

John Herman

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702 Woodlark Building
Portland, Oregon

United States
DEPARTMENT OF THE INTERIOR
Bureau of Mines

Western Region

Salt Lake City, Utah
April 6, 1943

Mr. S. K. Atkinson,
Boise, Idaho.

Dear Mr. Atkinson:

Examination of your sample indicates that it is a partially disintegrated rhyolite. Qualitative tests made on this sample confirm the presence of nitrates but the amount present appears to be relatively small. It is quite possible that the nitrate content of this type of rock may vary considerably as is the case with similar deposits that have been observed in Utah.

The possibilities of this material as a source of nitrates depend on many factors and it would be a difficult matter to advise you definitely on the commercial possibilities of such a deposit. As suggested by Mr. Zimmerly in his letter of March 30, it would be advisable to arrange with Mr. R. G. Ivarson for investigation of the deposit to determine its possible extent and nitrogen content.

Very truly yours,

R. E. Head,
Microscopist,
Western Region.

Extracts from a letter from Wallace D. Lowry, Assistant Geologist,
State Department of Geology and Mineral Industries, April 15, 1943.

"Insel is largely feldspar, partly malinized—the solute gives a good SO_4 and Cl test. No Nitrate reaction what so ever could be present in small amount. Also no carbonate reaction to speak of. The spectroscope shows both Na and Ca. Evaporation of the solute shows theardite (Na_2SO_4) is the predominate salt."