



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1605 EVANS AVENUE
RENO, NEVADA

CRATERS OF THE MOON NM

November 4, 1955

Memorandum

To: Regional Director, Region II
From: Chief, Division of Mineral Technology, Region II
Subject: Sample from the National Park Service

Reference is made to your memorandum of September 7, 1955, and the precipitate from lava tubes in the Craters of the Moon National Monument, Idaho.

The predominant constituent of this material was determined to be a white, fluffy product identified as the mineral thenardite (sodium sulfate) along with a minor amount of finely divided calcite (calcium carbonate). In addition, there were a few small nodules of off-white calcite and black to brown crusty, cellular fragments of ferruginous and slightly manganiferous secondary silica.

Semi-quantitative spectrochemical analysis showed the following approximate elemental composition:

Sodium	15 - 25%	Magnesium	0.1 - 1%
Calcium	5 - 10%	Aluminum	0.1 - 1%
Silicon	5 - 10%	Manganese	0.01-0.1%
Iron	0.1 - 1%	Boron	Trace

The elements carbon, sulfur, and oxygen are not determined by spectrochemical analysis.

T. R. GRAHAM

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