ACG - 162, 163
Expansibility

STATE OF OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
1069 State Office Building - Portland, Oregon 97201

REQUEST FOR SAMPLE INFORMATION

The State law governing free analysis of samples sent to State Assay Laboratories requires that certain information be furnished the laboratory regarding samples sent for assay or identification. A copy of the law will be found on the back of this blank. Please fill in the information requested completely, and submit it along with your sample. Keep a copy of the information on each sample for your own reference.

Norman V. Peterson
D.O.G.A.M.I.
P.O. Box 417
Grants Pass, Oregon 97526
Please print your name and address in space above

Date sample is sent: Aug. 26

Name of claim sampled:

Name of property owners U. S.

Are you hiring labor? no Are you milling or shipping ore? no

Location of property or source of sample. (If legal description is not known, give location with reference to known geographical point.)

County Klamath Lake Mining district

Township 37S Range 11E ? 8E ? 18E Section 17 8 Quarter section

How far from passable road and name of road both samples along logging roads

Bly Mountain Pass

	Channel (length)	Grab	Assay for	Description
Sample No. 1			Expansibility	
Sample No. 2			"	

(Samples for assay should be at least 1 lb. in weight; clay samples for ceramic testing at least 5 lbs.) IMPORTANT: A vein sample should be taken in an even channel across the vein from wall to wall. Location of sample in the workings, together with the width measured, should be recorded.

(Signed) Norman V. Peterson

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Description Both samples perlitic rhyodacite

Sample Number	GOLD		SILVER		EXPANSION			
	oz./T.	Value	oz./T.	Value	AT 1850° F			
P-33117 ACG-162	- -	- -	- -	- -	180%	- -	- -	- -
P-33118 ACG-163	- -	- -	- -	- -	220%	- -	- -	- -

Report mailed 8-30-68

ABG - 188
Expansibility

STATE OF OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
1069 State Office Building - Portland, Oregon 97201

REQUEST FOR SAMPLE INFORMATION

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N. V. Peterson
P.O. Box 417
Grants Pass, Oregon 97526

Please print your name and address in space above

Date sample is sent: 10/13/67

Name of claim sampled:

Name of property owners

Are you hiring labor? _____ Are you milling or shipping ore? _____

Location of property or source of sample. (If legal description is not known, give location with reference to known geographical point.)

County Lake Mining district

Township 41 S Range 18 E Section 5 Quarter section

How far from passable road and name of road Along logging road

	Channel (length)	Grab	Assay for	Description
Sample No. 1		x	Expansibility	
Sample No. 2				

(Samples for assay should be at least 1 lb. in weight; clay samples for ceramic testing at least 5 lbs.) IMPORTANT: A vein sample should be taken in an even channel across the vein from wall to wall. Location of sample in the workings, together with the width measured, should be recorded.

(Signed) N. V. Peterson

DO NOT WRITE BELOW THIS LINE - FOR OFFICE USE ONLY - USE OTHER SIDE IF DESIRED

Description Massive perlite

EXPANSION

Sample Number	GOLD oz./T.	GOLD Value	SILVER oz./T.	SILVER Value	20-28 mesh 1850° F.			
P-32287 ABG-188	- -	- -	- -	- -	100%	- -	- -	- -

Report mailed 10-19-67

References – Calif. Div. of Mines Bull 176 p. 433
USBMines Bull.

Ore-Bins –
Stein H.A., and Mudsky 1955 the processing of Perlite – Calif. Journ. Mines and Geol. Vol 51, No. 2. p. 105-116

Calif Div Mines
p. 433

Perlite –

"Perlite strictly defined, is a glassy volcanic rock characterized by an "onion skin" fracture, and which breaks into minute spherical fragments. Perlite as well as many other silicous volcanic glasses will, upon rapid controlled heating, expand into a frothy, white material that resembles pumice and is valued as a light weight aggregate. In an industrial sense, all expandible volcanic glass is referred to as perlite. In general the chemical composition of perlite range from rhyolite to dacite; and most perlite contain from 3 to 5 percent water. It is usually pale gray, but some is black, reddish-brown, or even green. Phenocrysts of quartz, feldspar, biotite, and hornblende commonly are present, and in some deposits are abundant enough to render the perlite unsuitable to commercial use.

Many deposit are flows associated with thick accumulations of tuffs and flows of other volcanic rocks. In most places, flows of perlite bearing rocks are so recent that they are nearly horizontal, but locally they are moderately deformed. Individual flows of perlite range in thickness from a few feet to several ten of feet ~~to~~ and commonly cover several square miles. Bodies of perlite also occur as domes, dikes, and selvages bordering andesitic and rhyolitic intrusive bodies.

Most perlites are formed from obsidian or other glassy volcanic rock by a process of "perlitization". By this process a volcanic glass, originally containing only a few hundredths percent water, becomes fractured and brecciated, and hydrated to perlite. The completeness of the hydration of the glass depends on the degree of access permitted the water vapor. The water necessary for perlitization appears to have been derived partly from the intruded rocks and partly from rhyolite bodies that were being emplaced nearby (?)

In 1956 – ground perlite rock ready for expansion sold at the plant for about 6.00 per ton – Expanded, in 1954 the price was about $43.00 per short ton

and some surplus is again created. While future exploration and recovery of ores may be more costly than previous operations, there is a strong feeling by some that significant additional low-cost uranium will be found.

[redacted]

Perlite

Feb. 1968
Mining Engineering
p. 124

"The production of crude and expanded perlite was expected to reflect an upward trend on both a domestic and world-wide scale.

Domestic production increased from: 414,000 - 1967
404,000 - 1966

leading producers - 1 New Mexico
2 Arizona
3 California
4 Nevada

Greece (Islands of Milos) Produces - 100,000 tpy.
Japan "

plaster use is declining but still ~~is an~~ important volume

Masonry fill
Cryogenic insulation in storage vessels is gaining acceptance

silicone treatment to improve water repellancy

Horticultural uses are increasing
Carrier for fertilizers
Structural concrete - lightweight

Portable Expanders for job site expansion.

"Predictions are that within 10 years bulk delivery of perlite aggregate will be the most popular method of handling.