<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Location</th>
<th>Remarks</th>
<th>Laboratory Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Eagle's Nest (Paisley Perlite)</td>
<td>Sec. 26,27,34,35 T. 34 S., R. 19 E.</td>
<td>Complete report being sent from Portland office</td>
<td>(See Remarks)</td>
</tr>
<tr>
<td>2</td>
<td>No Name</td>
<td>Sec. 26, T. 37 S., R. 18 E.</td>
<td>Perlite occurs on both sides of NE trending rhyolite dike. Perlite is from light gray to dark gray opened by several cuts.</td>
<td>3 samples submitted. No results</td>
</tr>
<tr>
<td>3</td>
<td>Glass Slipper</td>
<td>Sec. 14, T.37S., R.18E.</td>
<td>Light gray perlite occurs on north flank of large rhyolite dome. Where exposed by dozer cuts the perlite breaks down into translucent sand. Obsidian common as Apache tears.</td>
<td>2 samples submitted.</td>
</tr>
<tr>
<td>4</td>
<td>Lucky Day 00</td>
<td>Sec. 26,35,T.37S., R.18E.</td>
<td>Light gray perlite along northwest edge of small plug like mass of flow banded glassy rhyolite. Results from 1 sample.</td>
<td>Expansibility 50.0%</td>
</tr>
<tr>
<td>5</td>
<td>Drews Valley Ranch</td>
<td>Sec. 16,17,T.38S., R.17E.</td>
<td>Large mass of light gray perlite and glassy dacite occurs in low rounded hills just north of U.S. Hwy.66. See separate sheet for results of 4 samples. Obsidian is common to abundant in some zones. If most of this material is useable this would be an inexhaustable supply.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Roselite</td>
<td>Sec. 5,T.38S.,R.17E.</td>
<td>Mainly glassy rhyolite-dacite, light gray to green, perlitic structure.</td>
<td>No samples submitted.</td>
</tr>
<tr>
<td>7</td>
<td>No Name</td>
<td>Sec. 25,T.37S.,R.16E.</td>
<td>Not visited. Perlite reported to be here in large quantities.</td>
<td>No samples submitted.</td>
</tr>
<tr>
<td>8</td>
<td>No Name</td>
<td>Sec. 30,T.37S.,R.16E.</td>
<td>Pinkish-gray glassy dacite(?), perlitic structure. Occurs in prominent rounded outcrops just north of U.S. Hwy. 66.</td>
<td>1 sample submitted. No results.</td>
</tr>
<tr>
<td>9</td>
<td>No Name</td>
<td>Sec. 24,T.37S.,R.15E.</td>
<td>Medium gray dacite perlite-sugary texture contains common to abundant crystals of feldspar &amp; biotite. Outcrops weather low and rounded &amp; occur over a wide area indicating a large amount.</td>
<td>1 sample submitted. No results.</td>
</tr>
</tbody>
</table>
Description:

(1) UG-188 Chip across 30' in small borrow pit.
(2) UG-189 Chip across 8' flow banded outcrop.
(3) UG-190 Chips from float rock top of knoll.
(4) UG-191 Grab of perlite sand from shallow excavation SW side.

Materials crushed and screened through 20, on 28 fraction
REQUEST FOR SAMPLE INFORMATION

The State law governing analysis of samples by the State assay laboratory is given on the back of this blank. Please supply the information requested herein fully and submit this blank filled out along with the sample.

Your name in full: Willis Schmiedel

Street or P.O. Box: 2690 Prairie Road
City & State: Eugene, Oregon

Are you a citizen of Oregon? Yes
Date on which sample is sent: 1-16-61

Name (or names) of owners of the property: Matlock

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

Name of claim sample obtained from: Unknown

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: 34 S.
Range: 19 E.
Section: 25
Quarter section:

How far from passable road? On Name of road: Private farm

Channel (length) Grab Assay for Description
Sample no. 1 X Expansion -20 +28 mesh
Sample no. 2 X Expansion -10 +20 mesh

(Samples for assay should be at least 1 pound in weight)

(Signed) Willis Schmiedel

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

Sample Description: Perlite. Expanded product very light colored.

<table>
<thead>
<tr>
<th>Sample number</th>
<th>Sample</th>
<th>GOLD</th>
<th>SILVER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>oz./T. Value</td>
<td>oz./T. Value</td>
</tr>
<tr>
<td>P-26137</td>
<td>#1</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>P-26138</td>
<td>#2</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>


VOLUME INCREASE

<table>
<thead>
<tr>
<th>Sample number</th>
<th>Sample</th>
<th>On 28 mesh @ 1850° F.</th>
<th>On 28 mesh @ 1600° F.</th>
<th>On 20 mesh @ 1850° F.</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-26137</td>
<td>#1</td>
<td>650%</td>
<td>200%</td>
<td>---</td>
</tr>
</tbody>
</table>
| P-26138       | #2     | ---                    | ---                    | 700%                   | ---

Sir-5
REQUEST FOR SAMPLE INFORMATION

The State law governing analysis of samples by the State assay laboratory is given on the back of this blank. Please supply the information requested herein fully and submit this blank filled out along with the sample.

Your name in full: N. V. Peterson
Street or P.O. Box: General Delivery City & State: Lakeview, Oregon
Are you a citizen of Oregon? Date on which sample is sent:
Name (or names) of owners of the property:
Are you hiring labor? Are you milling or shipping ore?
Name of claim sample obtained from: Glass Slipper prospect
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: Range: Section: Quarter section:
How far from passable road? Name of road:

<table>
<thead>
<tr>
<th>Sample no.</th>
<th>Channel (length)</th>
<th>Grab Assay for Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Expansibility Glass Slipper, lower cut</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Glass Slipper, upper cut</td>
</tr>
</tbody>
</table>

(Signed) N. V. Peterson

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

Sample Description:
#1 Perlite sand - translucent, occasional obsidian fragments (this sample shattered badly).
#2 Dark gray banded perlite from upper cut.

<table>
<thead>
<tr>
<th>Sample number</th>
<th>GOLD</th>
<th>SILVER</th>
<th>Vol. increase @ 1900°F</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-25602</td>
<td>-</td>
<td>-</td>
<td>350%</td>
</tr>
<tr>
<td>#1</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>P-25603</td>
<td>-</td>
<td>-</td>
<td>200%</td>
</tr>
<tr>
<td>#2</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Report issued: Card filed: Report mailed: 9-13-60 Called for
REQUEST FOR SAMPLE INFORMATION

The State law governing analysis of samples by the State assay laboratory is given on the back of this blank. Please supply the information requested herein fully and submit this blank filled out along with the sample.

Your name in full
N. V. Peterson

Street or P.O. Box
General Delivery
City & State
Lakeview, Oregon

Are you a citizen of Oregon? Date on which sample is sent

Name (or names) of owners of the property

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

Name of claim sample obtained from

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
37 S.
Range 18 E.
Section 21 - 28
Quarter section

How far from passable road? Name of road

Channel (length) Grab Assay for Description
Sample no. 1 3 Expansability West side ridge

Sample no. 2 4 West side ridge
(Samples for assay should be at least 1 pound in weight)

5 West side ridge

(Signed) N. V. Peterson

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

Sample Description
#3 Dark gray banded perlite.
#4 Dark gray-green vitreous perlite (?).
#5 Light gray banded perlite.

Through 20 - on 28 mesh

<table>
<thead>
<tr>
<th>Sample number</th>
<th>GOLD</th>
<th>SILVER</th>
<th>Vol. increase @ 1900°F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>oz./T.</td>
<td>Value</td>
<td>oz./T.</td>
</tr>
<tr>
<td>P-25604</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>#3</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>P-25605</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>#4</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>P-25606 #5</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Report issued</td>
<td>Card filed</td>
<td>Report mailed 9-13-60 Called for</td>
<td></td>
</tr>
</tbody>
</table>
REQUEST FOR SAMPLE INFORMATION

The State law governing analysis of samples by the State assay laboratory is given on the back of this blank. Please supply the information requested herein fully and submit this blank filled out along with the sample.

Your name in full: N. V. Peterson

Street or P.O. Box: P.O. Box 417

City & State: Grants Pass, Oregon

Are you a citizen of Oregon? Yes Date on which sample is sent ________________

Name (or names) of owners of the property: Lucky Day 00 - Don Tracy

Are you hiring labor? Yes Are you milling or shipping ore? ________________

Name of claim sample obtained from: Lucky Day 00

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: Thomas Creek

Township: 37 S. Range 18 E. Section 35

How far from passable road? Road to: Name of road: Mine road

Channel (length) Grab Assay for Description

Sample no. 1 X Expansibility

Sample no. 2 (Samples for assay should be at least 1 pound in weight)

(Signed) N. V. Peterson

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

Sample Description: White light gray perlite. Crushed and screened through 20, on 28 mesh fraction.

Sample number GOLD SILVER INCREASE

<table>
<thead>
<tr>
<th>Sample number</th>
<th>value</th>
<th>value</th>
<th>@ 1900°C F.</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-25567</td>
<td>-</td>
<td>-</td>
<td>50.0%</td>
</tr>
</tbody>
</table>

Report issued Card filed Report mailed 8-29-60 Called for
# STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
## PROJECT SAMPLE RECORD

**SAMPLES SUBMITTED BY:** Norman V. Peterson (DOGAMI)  
**ADDRESS:** P.O. Box 417 Grants Pass, Ore.  
**DATE:** 8/1/60

**Sample No.** | **Mine or Prospect** | **Type** | **District** | **S.** | **T.** | **R.** | **Assay For** | **Description** | **Results**
--- | --- | --- | --- | --- | --- | --- | --- | --- | ---
UG-188 | Drews Valley Ranch | chip sample | Lake County | 17-16 | 38 S | 17 E | Expansibility | 1. Chip across 30° in small borrow pit. |  
UG-189 | | | | 16-17 | 38 S | 17 E | Expansibility | 2. Chip across 8' flow banded outcrop. |  
UG-190 | | | | 16-17 | 38 S | 17 E | Expansibility | 3. Chips from float rock top of knoll. |  
UG-191 | | grab | | 16-17 | 38 S | 17 E | Expansibility | 4. Grab of perlite sand from shallow excavation SW side. |  

**Descriptions:**
1. **UG-188**  
   - Chip across 30° in small borrow pit.  
   - Gray perlite with Common obsidian

2. **UG-189**  
   - Chip across 8' flow banded outcrop.  
   - Gray glassy rhyolite

3. **UG-190**  
   - Chips from float rock top of knoll.  
   - Gray perlite sand

4. **UG-191**  
   - Grab of perlite sand from shallow excavation SW side.

**Results:**

<table>
<thead>
<tr>
<th>Sample</th>
<th>Volume Increase</th>
<th>Temp.</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-25488 UG-188</td>
<td>125%</td>
<td>1850° F.</td>
<td>30 seconds</td>
</tr>
<tr>
<td>P-25489 UG-189</td>
<td>25%</td>
<td>1850° F.</td>
<td>30 seconds</td>
</tr>
<tr>
<td>P-25490 UG-190</td>
<td>550%</td>
<td>1850° F.</td>
<td>30 seconds</td>
</tr>
<tr>
<td>P-25491 UG-191</td>
<td>550%</td>
<td>1850° F.</td>
<td>30 seconds</td>
</tr>
</tbody>
</table>
Perlite Samples from Clarence Dallas - Sunny Valley Area

1. Sample taken near boron pit - composite of solid and loose material across about 30' - there are zones in which the material is almost 1/3 obsidian.

2. Chip sample - 8" in glassy flow banded rock with perlite structure.

3. Assorted sled rocks from top of Knoll - see sketch - finely flow banded almost jermine in some places - no appreciable obsidian.

4. Perlite-obsidian sand from shallow excavation on side of table at Knoll - just west of fence line.
REQUEST FOR SAMPLE INFORMATION

The State law governing analysis of samples by the State assay laboratory is given on the back of this blank. Please supply the information requested herein fully and submit this blank filled out along with the sample.

Your name in full  N. V. Peterson

Street or P.O. Box General Delivery City & State  Lakeview, Oregon

Are you a citizen of Oregon? Date on which sample is sent Nov. 1960

Name (or names) of owners of the property  Government

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

Name of claim sample obtained from  Open ground

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

County  Lake and Klamath  Mining District  Quartz Mountain

Township  37 S  Range  15 E.  Section  24  Quarter section

How far from passable road? ½ mile  Name of road  U.S. Highway 66

Channel (length)  Grab  Assay for Description

Sample no. 1  X  Expansibility  

Sample no. 2  X  Expansibility  (Samples for assay should be at least 1 pound in weight)

(Signed)  N. V. Peterson

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

Sample Description  

(1) Pinkish-gray plagioclase dacite  (2)  - common feldspar & biotite crystals.  

(2) Medium gray pelitic dacite  - "

<table>
<thead>
<tr>
<th>Sample Number</th>
<th>GOLD oz./T. Value</th>
<th>SILVER oz./T. Value</th>
<th>INCREASE at 1850° F.</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 P-25653</td>
<td>- -</td>
<td>- -</td>
<td>500% White with few black specks.</td>
</tr>
<tr>
<td>#2 P-25654</td>
<td>- -</td>
<td>- -</td>
<td>700% Very white.</td>
</tr>
</tbody>
</table>

Report issued Card filed Report mailed 12/5/60 Called for  

SIR-5
<table>
<thead>
<tr>
<th>Locality No.</th>
<th>Name</th>
<th>Sample No.</th>
<th>Fused Color</th>
<th>Expanded Volume</th>
<th>Temp.</th>
<th>Time</th>
<th>Minus</th>
<th>Plus</th>
<th>Sample Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Eagles Nest Perlite</td>
<td>P-26137</td>
<td>Very light</td>
<td>200%</td>
<td>1600°F</td>
<td>20</td>
<td>28 mesh</td>
<td></td>
<td>Perlite.</td>
</tr>
<tr>
<td>2</td>
<td>Glass Slipper</td>
<td>P-25602</td>
<td>Very light</td>
<td>350%</td>
<td>1900°F</td>
<td>20</td>
<td>28 mesh</td>
<td></td>
<td>Perlite sand. Translucent, occasional obsidian fragments (this sample badly shattered). Dark gray banded perlite from upper cut.</td>
</tr>
<tr>
<td>3</td>
<td>No Name</td>
<td>P-25604</td>
<td>Very light</td>
<td>25.0%</td>
<td>1900°F</td>
<td>20</td>
<td>28 mesh</td>
<td></td>
<td>Dark gray banded perlite. Dark gray-green vitreous perlite(?) Light gray banded perlite.</td>
</tr>
<tr>
<td>4</td>
<td>Lucky Day 00</td>
<td>P-25567</td>
<td>Very light</td>
<td>100%</td>
<td>1900°F</td>
<td>20</td>
<td>28 mesh</td>
<td></td>
<td>White to light gray perlite.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>P-25489</td>
<td>gray</td>
<td>25%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P-25490</td>
<td>White</td>
<td>550%</td>
<td></td>
<td></td>
<td>400% 1700°F</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P-25491</td>
<td>White</td>
<td>550%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Roselite</td>
<td>P-25653</td>
<td>No data</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Light gray-green perlitic rhyolite.</td>
</tr>
<tr>
<td>7</td>
<td>No Name</td>
<td>P-25653</td>
<td>White w/few blk. specks</td>
<td>500%</td>
<td>1850°F</td>
<td>30 sec.</td>
<td></td>
<td>PINKISH-GRAY PERLITE COMMON FELDSPAR &amp; BIOTITE CRYSTALS.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>No Name</td>
<td>P-25654</td>
<td>Very white</td>
<td>700%</td>
<td>1850°F</td>
<td>30</td>
<td></td>
<td></td>
<td>Medium gray perlite, common feldspar.</td>
</tr>
</tbody>
</table>
Perlite occurrences in Southeastern Klamath and Southwestern Lake Counties, Oregon

by

Norman V. Peterson*

A preliminary study of perlite occurrences in southeastern Klamath and Southwestern Lake Counties was made by the writer during 1960 while extending the reconnaissance mapping of the Lakeview uranium area. Large bodies of glassy rhyolite-dacite rocks with associated perlite were found to be widely distributed in Klamath and Lake Counties. This distribution and the possibility of new and larger markets in the lightweight aggregate industry and increasing use of perlite as a filtering medium, made it desirable to locate and sample the perlite occurrences and to indicate areas of possible commercial importance.

The mapping of the rhyolite-dacite rocks was limited generally to the Lakeview uranium area in Lake County and to accessible areas adjacent to Oregon Highway 66 to the west near Ely and Beatty in Klamath County. More detailed work will surely show more outcrops of the glassy rhyolite-dacite rocks and associated perlite occurrences.

Definition of perlite

Strictly defined, perlite is a volcanic glass having numerous concentric cooling cracks which give rise to a perlitic structure. Most perlites have a higher water content than normal obsidian and have a rhyolitic to dacitic composition. Perlite ranges in color from light gray to almost black and has a waxy to pearly luster. Owing to its high water content, perlite, when crushed, sized, and heated quickly to its softening temperature, expands into fluffy pellets that resemble pumice.

Commercially the term perlite refers to any naturally occurring glass of igneous origin that will expand when quickly heated and yield a frothy, light colored mass of glass bubbles. The expanded product is also called perlite.

Perlite Industry

Since perlite is a low-cost industrial mineral, economic production requires cheap mining methods and low transportation costs. Most deposits are quarry-type operations where bulldozer ripping, carryall or power-shovel loading methods are used. Crude perlite is usually crushed and screened at or near the quarry and then shipped to a processing plant for drying, pre-heating, and expansion. The expansible properties of different perlites are seldom the same so that the processing plant design is based on trial tests of the perlite for:

1. Physical characteristics, mainly fracture.
2. The temperature at which the perlite expands.
3. The extent to which water vapor has been driven out of the perlite particles before the softening temperature has been reached.
4. The size distribution of the perlite fed to the furnace.

Vertical and horizontal oil or gas fired furnaces of several designs are used, and after expansion the hot "perlite" is cooled and separated into various size fractions by a series of cyclones. The sized product is then bagged or sent to bulk storage.
Perlite can be made in a variety of densities, it is chemically inert, flame-proof, mildew-proof, does not disintegrate when wet and has excellent heat and sound insulating properties. The most important uses from a rapidly growing list are shown below.

**Plaster aggregate:** As an aggregate "perlite" makes a plaster that is lightweight, has good acoustic and thermal insulating properties, is fireproof, resilient, nailable, sawable, and has good bonding properties.

**Lightweight concrete aggregate:** Used in roof decks, beams, building blocks, prefabricated units and floors, modern curtain-wall construction.

**Loose-fill insulation:** Between wall studs, around steam pipes, in refrigeration cars, and deep freezers. As a loose fill medium for imbedding hot steel ingots during shipping.

**Fillers:** Perlite fines are used in rubber goods, cleansers, paints, glazed tile, glazes, plastics, resins, and metal surface plaster. Also used as a porous support for catalysts and chemicals in gaseous reactions.

**Industrial filtering:** For filtering juices, dry cleaning compounds, alcoholic beverages, and other chemicals.

**Oil well cementing and grouting.**

**Refractory:** Used in medium temperature range refractory brick.

**Horticultural applications:** Soil conditioning, as a plant propagating medium, packing material for shipping, and as a diluent in insecticides.

**Klamath & Lake County Occurrences**

In Southeastern Klamath County and Southwestern Lake County, the perlite
occurrences are almost always found as a selvage zone around glassy flow-banded rhyolite-dacite rocks. Pumiceous tuffs and breccias are almost always associated. The zones of perlitic rocks vary from a few feet thick to large dome-shaped masses that cover several acres.

On the accompanying map, rocks of predominantly rhyolitic to andesitic composition have been generally outlined. Previously known perlitic occurrences and others found during this study are also shown on the map. No detailed study of any occurrence was attempted, but, when feasible, samples were taken and submitted to L. L. Hoagland of the Department's Portland office for preliminary expansion tests (see table). Brief descriptions of eight individual occurrences are given below:

**Locality 1 -- Eagles Nest (Paisley Perlite)**

The Eagles Nest or Paisley Perlite is located along the crest and east flank of Tucker Hill in secs. 25 and 36, T. 34 S., R. 19 E., about 10 miles southeast of Paisley in Lake County. The Eagles Nest deposit is being developed by A. M. Matlock of Eugene, Oregon.

A large amount of light-gray perlite has been explored along the east flank of the large elongated dome-shaped mass of glassy flow-banded rhyolite that makes up Tucker Hill. Perlitic structure is well developed and the rocks break down into perlite sand with common to abundant obsidian cores (Apache tears). This deposit was studied in some detail by N. S. Wagner (1950).

Samples of perlite from the Eagles nest submitted to the State Department of Geology and Mineral Industries for preliminary expansion tests show the perlite to have good to excellent expandable properties and a

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#Laboratory - Expansion tests are made by grinding and screening to obtain a + 28 mesh and -20 mesh sample. A known volume of the sample is placed in an electric muffle furnace heated to 1600°F to 1850°F for a specific time. The expanded volume is measured after cooling and listed as a percentage increase in volume.
Perlite occurrences

very light-colored expanded product.

Locality 2 — Glass Slipper

This occurrence, in sec. 14, T. 37 S., R. 18 E., was discovered adjacent to the Marty K uranium prospect in 1955. The perlite is light to dark gray and occurs at the contact of a large rhyolite dome and massive pumice tuffs. Where it has been exposed in several bulldozer cuts the perlite breaks down into a translucent sand. Obsidian is common as "Apache tears".

Two samples, one of the perlite sand with occasional obsidian and the other a dark-gray banded perlite showed volume increases of 350 percent and 200 percent when tested for expansibility.

Locality 3 — No Name

In sec. 26, T. 37 S., R. 18 E., perlite occurs on both edges of a northeast trending rhyolite dike. Several bulldozer cuts made while exploring for uranium minerals expose perlitic rocks. The perlite varies from light gray to dark gray and grades into a pink and green glassy rhyolite.

Three samples from the west edge of the dike showed a 25 percent to 100 percent volume increase when expanded.

Locality 4 — Lucky Day 00

The Lucky Day 00 is a uranium prospect in sec. 35, T. 37 S., R. 18 E. Here again perlite is found at the contact of a small rounded mass of glassy flow-banded rhyolite and volcanic tuffs. Light gray perlite has been exposed in a shallow bulldozer cut on the northwest edge of the rhyolite plug.

One sample of almost white perlite showed a volume increase of 50 percent when tested.
Perlite occurrences

Locality 5 — Drews Valley Ranch

Just north of U. S. Highway 66 on Drews Valley Ranch in secs. 16 and 17, T. 38 S., R. 17 E., there is a large mass of light gray perlitic rock. The perlite and glassy dacite with zones of obsidian occur in low rounded hills that are possibly remnants of a thick flow. This appears to be a large deposit.

Four samples were taken from widely separated points on the low hills. The expanded products ranged from light gray to very white with volume increases up to 550 percent.

Locality 6 — Roselite

Quicksilver exploration in sec. 5, T. 38 S., R. 17 E. has exposed flow-banded, light gray to green glassy rhyolite. Where opalization and clay alteration is not present the rocks have a perlitic structure. Drill holes are reported to have encountered perlite for considerable depth. No samples were submitted from this occurrence.

Locality 7 — (No name)

Pinkish-gray glassy biotite dacite(?) with a perlitic structure occurs in prominent rounded outcrops just north of Oregon Highway 66 in NW₄ sec. 30, T. 37 S., R. 16 E. This occurrence is very close to the western border of Lake County. Small crystals of feldspar and biotite mica are common to abundant in the sugary textured massive rock.

One sample expanded 500 percent and the product was white with a few black specks.

Locality 8 — (No name)

On the eastern edge of Klamath County in sec. 24, T. 37 S., R. 15 E.
medium-gray perlite rocks crop out over a wide area. The sugary-textured rocks weather easily into low-rounded outcrops. Feldspar and biotite are common to abundant. The widespread outcrops indicate a large quantity of perlite material.

One sample chipped from several outcrops showed a very white expanded product with a volume increase of 700 percent.

During this preliminary study the individual occurrences were not mapped in detail, completely sampled, nor were tonnages calculated. The study does indicate that large amounts of perlite that has good to excellent expansible properties are available. If the problem of cost of transportation to market can be worked out there certainly is a good possibility of finding a suitable, adequate source of perlite in this area.

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