

# State Department of Geology and Mineral Industries

702 Woodlark Building  
Portland, Oregon

## BURNS PUMICE

## HARNEY COUNTY

Owner: E.L. Davidson, Oregon and Western Colonization Company,  
1314 - 1315 Pioneer Building, St. Paul, Minnesota. Lo-  
cated at Burns, Oregon.

Location: Sec. 3, T. 24 S., R. 30 E.,  $\frac{1}{4}$  mile north of Highway #54  
at a point 6.3 miles west of Burns, Oregon.

General Description: A small knoll, perhaps 30 feet high, lies  
a quarter mile north of the highway. It is about 400 feet  
long and 200 feet wide, and seems to be more or less com-  
pletely composed of pumice, in pieces up to 10 inches in  
diameter, although the average size is from  $\frac{1}{2}$  to 1 inch  
in diameter.

On the surface of the knoll a well-compacted calcareous  
crust covers the deposit, and dirt is somewhat mixed in  
to a depth of a few inches. On the flanks, erosion has  
exposed more or less pure lump pumice.

According to J. A. Adams (letter of April 28 to Davidson)  
"This pumice would no doubt be very satisfactory for an  
admixture to concrete, or for the manufacture of pumice tile  
or building block or if it was processed in a grinding  
and air operation plant, it might find some use as an  
abrasive. However, upon examining the pumice under the  
microscope, we come to the conclusion that it is not es-  
pecially good quality for abrasive purposes and will not  
be able to compete with higher grade pumice along this line."

April 22, 1941  
John Eliot Allen  
Geologist

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Portland 5, Oregon

Burns Pumice

Harney County

Foreword: This is a supplement report to a report under the above title by John Allen, April 22, 1941.

Lessee: Don. Robbins, Harney Concrete Tile Company, Burns, Oregon.

Owner: Mr. B. B. Clark, Burns, Oregon.

Location: T. 23 S., R. 30 E., sections 27, 33 and 34, and T. 24 S., section 3. This location is just west of Hines on the north side of Central Oregon highway No. 20.

Area: Five separate occurrences are known to exist at this time. All of these are on deeded land according to the information currently available although some portions of some occurrences may overlap on to government land.

History: The first known commercial development of this pumice was made by the Harney Concrete Tile Company which started operations in the spring of 1948. A small but steady production of block aggregate has been made ever since with the output going to various block plants in Baker, John Day, Ontario and Nampa as well as to a company owned plant in Burns.

General: The location and approximate extent of the currently known occurrences is shown on the aerial photograph accompanying this report. These are numbered for reference purposes.

No's 1-2. No. 1 is believed to be the occurrence described in the Allen report and all past production has originated from this and the No. 2 occurrence. The original prospect workings on these occurrences has been obliterated by the mining operations and all subsequent prospecting has consisted merely of the stripping of overburden in narrow belts adjacent to the operating pit, a little at a time as mining has progressed. Neither of the occurrences are therefore adequately exposed for an overall appraisal of potential reserves and the outline of the areas as shown on the accompanying map represents inference based mostly on the observation of pumice float and topographic configuration. Dips in the surrounding area are to the east and a plunging pay horizon with attendant overburden problems can be visualized with continuing excavation in that direction, but both pits were still free of such difficulty at the time of examination, and in each case it seemed evident that expansion along a north-south line would be possible for an appreciable distance without encountering adverse mining conditions. In this respect both pits are now somewhat better than half again as large as they were when the pictures were taken.

No. 3. This occurrence is opened up by four shallow dozer cuts as shown on the map. These in no way prove the width, depth and continuity of the pumice body, but they do indicate the pumice to be of good hard, sharp quality and quite white in color. From the general lay of the land there would appear to be a good sized deposit here and much of it free of more than a token of overburden. Prospecting with depth will be necessary, however, to establish the thickness and the situation as regards interbedded ashy horizons.

No. 4. No prospecting had been done on this deposit and it was not visited accordingly. The outline shown on the map is based on the topography and Mr. Robbin's reported observations.

No. 5. The pumice in this occurrence is definitely off color to the point of being non acceptable as a block aggregate under the present standards which call for fairly white product. Otherwise it is fresh and hard. Prospecting consists of one dozer cut the length of which was not measured, but the depth of which was 21 feet at the deepest point. The length is estimated as 150 to 200 feet. Pumice was revealed from the grass roots to the bottom except for an irregular horizon of ash and clay which varied from 2 to 5 feet in thickness and which occurred at a depth of about 5 feet. Basalt and hard tuff flank the pumice on the south end and how this stands in relation to the pumice occurrence isn't clear unless it is the flank of a depositional basin.

Economics: Good aggregate pumice is to be had here and the Harney Concrete Tile Company plans to improve their crushing and screening plant during the coming season with the view of expanding the aggregate shipment phase of their business. Of more immediate interest, however, are negotiations for large scale exploitation of the off-colored pumice of pit No. 5 for use on the Hines Lumber Company's logging roads as surfacing material. No final contracts had been signed at the time of this examination, but available reports were that the loggers in the Bend area were experiencing exceptionally gratifying results in the use of pumice surfacing when it was kept wet down and packed.

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Report by: N.S. Wagner  
Date: May 29, 1953  
Date of exam: April 30, 1953  
Informant: Don Robbins

Delano Flight ----7-18-50 #HII-1-6  
P.M.A., 167 West Second South, Salt Lake City, Utah.

