

State Department of Geology and Mineral Industries

1069 State Office Building
Portland 1, Oregon

CARLTON (TUCKER) PUMICE QUARRY

Unclassified Mining District
Jackson County

Lessee: Pacific Portland Cement Company, Gold Hill, Oregon.

Owner: Nion Tucker, Prospect, Oregon

Area: 5 acres leased. Full extent of deposit unknown. Patented land.

Location: West $\frac{1}{2}$ of SE $\frac{1}{4}$ of NE $\frac{1}{4}$ sec. 23, T. 33 S., R. 1 E. The deposits border the north and west side of State Highway 62 one-tenth mile southwest of Lost Creek. The quarry is 12 miles southwest of Prospect and 10 miles north-east of Trail.

History: The quarry was opened in 1930 when the property was owned by Mr. T. A. Carlton. It was leased to the Pacific Portland Cement Company for 10 years and in 1940 was re-leased for 10 years. In 1945 the property was sold to Mr. Nion Tucker. Production was sporadic up to 1942 at which time it ceased altogether. Total production is unknown but must amount to several thousand tons. The Pacific Portland Cement Company plant at Gold Hill has been the sole user.

Topography: Elevation 1630.

The pumice occurs as a bench or terrace approximately 60 to 70 feet above the cultivated terraces of the Rogue River. It abuts against the lavas and agglomerates which form this part of the Cascades,

Development work: See map

One open cut in the shape of a mitten.

Maximum measurements would be approximately 150 feet long by 120 feet wide by 45 feet deep.

Geology: In his "Reconnaissance Geologic Map of the Butte Falls Quadrangle" Wilkinson has mapped this area as Older Basalt Flows of the Tertiary Volcanics. He shows an agglomerate or tuff underlying the basalts and exposed in the small valley formed by Lost Creek, a stream a few hundred feet northeast of the quarry.

In U. S. Geological Survey Bulletin 875, "Nonmetallic Mineral Resources of Eastern Oregon," B. N. Moore classifies this deposit as belonging to the Older Pumice of Crater Lake and gives for the mechanical analyses of the finer portions of a sample from this quarry the following: 64-32 mm. - 3.4%, 32-16 mm. - 1.4%, 16-8 mm. - 0.9%, 8-4 mm. - 1.4%, 4-2 mm. - 2.0%, 2-1 mm. - 3.4%, 1-0.5 mm. - 6.5%, 0.5-0.25 mm. - 12.6%, 0.25-0.125 mm. - 13.0%, less than 0.125 mm. - 55.4%. Moore also gives a chemical analysis of a sample of lump pumice of the Older Pumice.

Howell Williams in his map on the "Distribution and Thickness of Crater Lake Pumice" considers the pumice of this area as part of a pumice flow (Nuse's Ardents).

A composite section of the quarry is as follows (all percentages are estimated):

	<u>Feet</u>	<u>Inches</u>
1. Pumiceous soil.		3
2. Pumice and some soil. Pebbles up to 1 inch. Fines..99%	2	2
3. Pumice pebbles with cobbles up to 20" in diameter - 19%. Fines..80%. Charred wood..1%	20	0
4. Well rounded pumice pebbles from 1"-10" in diameter - 85%. Charred wood (pieces up to 12" x 20")..3-4%. All in a pumiceous soil matrix..11-12%	10	0
5. Well rounded pumice pebbles up to 8" in diameter in a matrix of fine pumice. Base not exposed	12	0
Total . . .	44	5

There is a pronounced break in the section between 3 and 4. This is due to a higher degree of rounding, the uniformity of size and greater percentage of pebbles, and the higher percentage of charred organic matter of the material of 4 in contract to 3.

Although the base of the section was not seen it is not likely that it attains a depth much greater than that recorded. Moore gives 60 feet as the maximum depth of pumice fall in the Rogue Valley. Also, north of the quarry and on the bench formed by the pumice there are occasional hillocks capped with sizeable pieces of basalt float. It is very possible that these mark contacts with the underlying basalt a very short distance below the surface. In any event an irregular surface below the pumice would be expected.

Laterally the pumice of this deposit should extend, with occasional gaps, of course, northeast to Crater Lake proper. Both Moore and Williams show it thus and outcrops along the highway indicate it. Southwest along the highway pumice is seen for approximately 1000 feet; this is the continuation of the flat in which the quarry is located. Beyond this, outcrops along the highway become scarce and are seen after approximately one mile. Therefore it is thought that this quarry marks the first accessible deposit from Medford of the pumice flow from Crater Lake.

Mining: Mining is very simple. A bulldozer is used to push the pumice down to the mouth of the cut where it is put into the storage bin by a continuous bucket elevator. The buckets are 10" x 16". Capacity of bunker is unknown

(see map for size). Large "cattle" trucks are loaded at the bunker for transportation of the rock to Gold Hill. Fifteen to twenty tons are hauled each load. One truck can make two trips a day.

Remarks: According to Mr. C. W. Martin of the Gold Hill plant the pumice is used as an admixture in the preparation of a "special" plaster cement which they formerly produced. Due to governmental restrictions and the great demand for ordinary cement the plant is not producing "specials" at the present. Therefore they are not operating the quarry. The value of this deposit as an admixture for cement is not only for the pumice but for the charred organic matter which is mixed with it. The proportions of pumice to charred organic matter are such that it not only gives added strength to the cement but it also makes it easier to apply when made into a plaster.

- References:
1. Reconnaissance Geologic Map of the Butte Falls Quadrangle, D. W. Wilkinson and others.
 2. U. S. Geological Survey Bulletin 875.
 3. Map of the Distribution and Thickness of Crater Lake Pumice, by Howel Williams.

Informants: Mr. T. A. Carlton
Mr. C. W. Martin

RECORD IDENTIFICATION

RECORD NO..... M061971
RECORD TYPE..... X1N
COUNTRY/ORGANIZATION. USGS
MAP CODE- NO. OF REC..

REPORTER

NAME SMITH, ROSCOE M.
DATE 78 08
UPDATED..... 81 01
BY..... FERNS, MARK L.; (BROOKS, HOWARD C.)

NAME AND LOCATION

DEPOSIT NAME..... CARLTON
SYNONYM NAME..... TUCKER, LOST CREEK PUMICE

COUNTRY CODE..... US
COUNTRY NAME: UNITED STATES

STATE CODE..... OR
STATE NAME: OREGON

COUNTY..... JACKSON
DRAINAGE AREA..... 17 ROGUE RIVER
PHYSIOGRAPHIC PRDV..... 13 WEST CASCADES
LAND CLASSIFICATION..... 40

QUAD SCALE QUAD NO OR NAME
1: 62500 BUTTE FALLS

Unclassified Dist

LATITUDE LONGITUDE
42-41-23N 122-39-34W

UTM NORTHING UTM EASTING UTM ZONE NO
4726200. 527900. +10

TWP..... 33S
RANGE..... 01E
SECTION.. 23
MERIDIAN. WB & M

ALTITUDE.. UNDER WATER

LOCATION COMMENTS: SE 1/4 NE 1/4 . NOW UNDER LOST CREEK RESEVOIR. NOW UNDER LOST CREEK RESEVOIR

COMMODITY INFORMATION

COMMODITIES PRESENT..... PUM

EXPLORATION AND DEVELOPMENT
STATUS OF EXPLOR. OR DEV.

4
PROPERTY IS INACTIVE

DESCRIPTION OF DEPOSIT

DEPOSIT TYPES:

VOLCANIC

FORM/SHAPE OF DEPOSIT:

SIZE/DIRECTIONAL DATA

SIZE OF DEPOSIT..... SMALL

DESCRIPTION OF WORKINGS

COMMENTS(DESCRIP. OF WORKINGS):

QUARRY 120X150X45

PRODUCTION

YES

SMALL PRODUCTION

CUMULATIVE PRODUCTION (ORE, COMMOD., CONC., OVERBUR.)

ITEM	ACC	AMOUNT	THOUS. UNITS	YEAR	GRADE, REMARKS
15	PUM EST	005.000+	TONS	1930-1942	PLASTER AGGREGATE
23		5,000 PLUS	MINUS	1930 - 1942	PLASTER AGGREGATE

GEOLOGY AND MINERALOGY

AGE OF HOST ROCKS..... HOLD

HOST ROCK TYPES..... NUE ARDENTE DEPOSIT

LOCAL GEOLOGY

NAMES/AGE OF IGNEOUS UNITS OR IGNEOUS ROCK TYPES

1) NAME: MAZAMA PUMICE (OLDER PUMICE)

AGE: HOLD

GENERAL REFERENCES

1) MOORE, B.N., 1937, NONMETALLIC RESOURCES OF EASTERN OREGON; USGS BULL. 875, P.174

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Report by H. M. Dole
September 13, 1946

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