

SUPERIOR PUMICE DEPOSIT

Sweetwater  
County

The pumice deposit is located in the NE<sup>1/4</sup> of Section 15, T. 21 N. R. 102 W. This deposit occurs as a detached exposure of the Leucite Hills. The pumice is found in the remanent of an ancient volcanic cone. The cone, which is composed of fragmental pumice and cellular scoria, rests upon nearly flat lying lava flows composed primarily of leucite. The central part of the cone is composed of a resistant neck of nonporous acidic volcanic rock.

Another cone with slightly more relief and volume occurs in the N. W. corner of Section 14, adjacent to the deposit. This cone has not been exploited, but probably contains similar material.

The deposit is accessible by way of an unimproved road and is located approximately 3.5 road miles northeast of Superior, Wyoming. A spur of the Union Pacific Railroad connects with Superior. Topographically, the deposit lies on a mesa several hundred feet above the surrounding terrain. The elevation of the cone is 7,385 feet. No streams drain from the immediate area, although intermittent Black Rock Creek is located 2.5 miles north.

The pumice is found as small rounded masses (average diameter 2") which are loosely welded together. A few larger and somewhat angular fragments (up to 2' in diameter) lie interspersed within the finer material. Unconsolidated fine material fills the void space between many of the fragments. The pumice varies from a light tan to dark grey brown and even red in a few cases. The pre-

don't you mean  
leucite-bearing rock

dominant color is tan. It is often light in weight, extremely cellular and resistant, but is occasionally impervious and very heavy.

The deposit has been explored with an open trench which strikes N. 70° E. Across the south side of the cone. Pumice is exposed for a vertical distance of 25 feet. The pit extends several hundred feet across the edge of the cone.

[ Pumice reserves have been estimated at 40 million cubic yards. } *By whom?*

This estimate apparently includes the adjacent cone but is still quite high when the massive central neck and waste are taken into consideration. Total reserves are probably nearer 10 million cubic yards.

The pumice was mined and produced during the years 1951-52-53-54. During this time, 5201 tons were shipped to points in South Dakota, North Dakota, Nebraska and adjacent towns in Wyoming.

The pumice is considered a suitable aggregate for light weight structural concrete and block manufacture and has been tested and analyzed by the Civil Engineering Department at the University of Wyoming and by an engineering firm in Chicago.

Recommendation: The pumice has excellent qualities and occurs in an easily accessible deposit of large size. Further development

will depend upon an increased demand for the material in nearby areas. No further evaluation is necessary. The deposit is presently controlled by the Union Pacific Railroad.

Deposit Examined, 6/27/58

Ben Short  
Geologist

# SUPERIOR

## DURABILITY

## FLEXI

**Superior Pumice**, quarried and processed at Superior, Wyoming, has been proven the ideal, natural, light-weight aggregate for concrete. Pumice is a volcanic rock which became impregnated with air while in molten condition. This molten rock solidified, entrapping the air, resulting in a cellular product. This volcanic rock, because of the entrained air, has a unit weight much less than solid rock. **Superior Pumice** is widely used for concrete because it makes possible a reduction of about one-third in unit weight of the finished concrete, thereby permitting economy not only in material costs but in structural design. Pumice aggregate concrete is more resistant to shock or vibration than ordinary concrete and has considerable more insulating value. It is resistant to high temperatures.

**The Superior Pumice Company's** quarries at Superior, Wyoming, are located in one of the world's greatest deposits of this valuable natural product. Informed sources, including the United States Geological Survey, disclose that no pumice deposits have thus far been found in continental United States east of the Superior quarries. The favorable location of these quarries offers more of an advantage of lower freight rates than do competitive quarries, which makes it possible for construction contractors, concrete manufacturers, block fabricators, and builders, from the Rocky Mountains to the Atlantic coast, to avail themselves of the use of **Superior Pumice**.

**Superior Pumice** is processed at the quarries—and can be supplied to you in any quantity—crushed and screened to your specifications. Let us figure with you on your requirements. Give us an opportunity to demonstrate to you the economy and advantages of **Superior Pumice** as a light-weight aggregate. We can refer you to the experience of others in the use of **Superior Pumice**. Samples of **Superior Pumice** will be gladly submitted for inspection and test without obligation.

# PUMICE

## VERSATILITY

BILITY

### *Physical Properties of Superior Pumice*

Unit Wt. (lbs. per cu. ft.)	Constant dry loose
1½" to No. 4	48.2
¾" to No. 4	43.7
No. 4 to dust	64.2

#### Bulk Specific Gravity—Saturated surface dry

1½" to No. 4	1.60
¾" to No. 4	1.62
No. 4 to dust	2.20

### *Concrete Mix Data*

#### *100% Superior Pumice Aggregate*

Maximum size aggregate .....	¾"	¾"	¾"	1½"
Sacks cement per cu. yd. concrete...	6	7	8	7
Slump .....	3"	3"	2.75"	3.25"
Wt. per cu. ft. (saturated) .....	103.00	105.29	108.64	104.87
Compressive strength— 7 days .....	1928	2340	3290	2452
Compressive strength—28 days .....	3060	3437	4485	3461
Wt. per cu. ft. (constant dry) .....		99.52		99.08
Modulus of elasticity .....		1,566,700		1,458,800
Thermal conductivity (K. factor) .....		3.15		

The above findings were made by the Hunt Testing Laboratories, Chicago, Illinois. Complete report is on file and open to inspection at our General Office, Sheridan, Wyoming.

Pumice, which is actually solidified lava, naturally impregnated with air, is not a new material in the building field. The Romans used it, in fact it is found in great quantities today in the remains of the great buildings of that era, having stood the ravages of time and the elements down through the ages. Its strength coupled with its light weight made the material popular with the great architects and builders of the past.

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**Superior Pumice** is quarried—and can be cut or sawed into blocks or slabs. Its natural color is a beautiful pinkish brown varying from almost white to a dark pink. It can be furnished in a rough finish or sawed. Its light weight and moderate cost makes it a practicable product for decorative purposes—such as outdoor trim, fireplace facing and use where the weight or insulating quality of material used are prime factors. **Superior Pumice** contains a small amount of flake golden mica—which gives it, when used in its natural state or sawed, a scintillating sparkle—an ideal decorative material. Its low thermal conductivity and porous structure gives it high rating as an insulated building material.

Our representative will be glad to confer with you on architectural or engineering uses of pumice. Samples of granulated or quarried pumice will be sent to you on request. We will appreciate an opportunity to tell you all about **Superior Pumice**—and how you may build better and more economically by using **Superior Pumice**.

#### SUPERIOR PUMICE COMPANY

General Offices,  
~~Sheridan, Wyoming~~  
~~P. O. Box 1045~~

Quarried at  
Superior, Wyoming

P. O. Box 1045  
Rock Springs, Wyoming

THE ILLUSTRATION ON THE COVER OF THIS  
FOLDER SHOWS SUPERIOR PUMICE ACTUAL SIZE