# LITHOGRAPHIC STONE.

## OCCURRENCE.

Deposits of the peculiar variety of limestone adapted to the lithographer's art have been reported in several localities of the United States. Lithographic stone is found in Arizona, Arkansas, Illinois, Kentucky, South Dakota, Texas, Utah, and Virginia; but while some stone has been taken out in various places for experimental purposes, and with reported satisfactory results, no commercial product has been obtained. If indications are to be believed, however, lithographic stone from American quarries will be included in the mineral production for 1897. In the latter part of 1896 a lithographic stone quarry was reported to have been opened on the eastern slope of the Verde range of mountains, in a section known as Sycamore Creek, about 40 miles from Prescott. This stone is said to have been tested, and to have furnished printed work that would compare favorably with work done on Bavarian stone. Professor Blandy, formerly Territorial geologist, in one of his reports says that this stone is uniform in character and of very fine grain, and expresses the opinion that stone of any desirable size may be obtained. Water is said to be available in sufficient quantities for the power necessary to saw the stone and otherwise prepare it for market.

South Dakota also promises to furnish lithographic stone for market during 1897. To Mr. W. R. Bond, of Custer City, belongs the credit of the discovery. The deposit is located near Pringle station, Custer County. Mr. Bond has had specimens of this stone tested in Omaha with such excellent results that he was able, with little difficulty, to secure the cooperation of some Omaha business men in the organization of a company to develop the property. Some of the Omaha parties are engaged in lithographic business in that city, and their association with the enterprise is a hopeful indication. The company (known as the Lithograph Mining Company) owns claims covering about 1,000 acres, and claim the ability to supply the entire demand when the property is developed, a consummation that is expectantly looked for before the close of the present year.

Several attempts have been made in the last ten years to develop lithographic stone quarries said to exist in Kentucky, but without successful result. Interest has again been recently aroused by the announcement of the organization of the North American Lithographic

Stone Company, of Bowling Green, for the purpose of developing a quarry near that city.

Mention has been made in previous volumes of Mineral Resources of the deposits of lithographic stone in Arkansas, Texas, Utah, and Virginia. The Arkansas deposits are remote from railroad transportation and have not been developed. Some stone was quarried near Marble Falls, Texas, but the quality of the stone obtained was marred by the presence of quartz crystals and other defects, which rendered it practically useless. No attempt has been made to quarry any stone at this place for several years. The Utah deposits have been permanently abandoned as worthless for lithographic purposes. St. Louis parties are interested in a quarry in Alexander County, Illinois, but no work was done on the property in 1896. It is probable that the depressed business conditions have discouraged active development of new enterprises of this nature. To the same cause, added to remoteness from railroads, is probably due the fact that the quarries in Botetourt County, Virginia, have had no work done upon them in the last four years, but the owners express the hope of being able to proceed with development work at an early date.

The American market, not having had any domestic supply from which to draw, has always depended for its lithographic stone upon the well-known Bavarian quarries. These quarries have, indeed, supplied the world since printing from stone was invented. Efforts have been made to substitute metals for lithographic stone, but it has been only partially successful. Aluminum and zinc plates, more especially the latter, are quite generally used in the larger printing establishments and on rather coarse grades of commercial work. Zinc plates are also used by reason of their small bulk for preserving original matter, transfer being made to stone as requirements for printing arise.

## PRICES.

It is not possible, with the information at hand, to show what is the value of lithographic stone per ton or square foot or by any other unit of measurement except as to its cost to the consumer. The reports to the Bureau of Statistics of the Treasury Department show only the values. No quantities are given. As fairly indicative of the cost to the consumer, it may be stated that the Geological Survey is in itself a large user of lithographic stone for the printing of its topographic sheets and geologic folios. The prices paid for stone by the Survey in 1896 were as shown in the following table. Specifications call for "best yellow, subject to inspection and rejection and return at cost of bidder; subject, also, to selection at bidder's place of business." Gray stones are a little higher in price, usually about 10 per cent, though some of the larger stones sell for as much as 40 cents per pound. It will be noticed that in lithographic stone, as with mica and diamonds, the price per unit of weight increases with the size of the stone.

*Prices for lithographic stone paid by the Geological Survey.*

| | Size. | Price per pound. | | Size. | Price per pound. |
|---|---|---|---|---|---|
| | | *Cents.* | | | *Cents.* |
| 1 | 18×22 | 3 | 10 | 26×38 | 9 |
| 2 | 18×24 | 4 | 11 | 28×36 | 8 |
| 3 | 20×26 | 5 | 12 | 30×40 | 12 |
| 4 | 20×30 | 4½ | 13 | 30×44 | 12 |
| 5 | 22×38 | 6 | 14 | 32×40 | 12 |
| 6 | 24×30 | 6½ | 15 | 34×48 | 14 |
| 7 | 24×32 | 7½ | 16 | 36×52 | 12 |
| 8 | 24×36 | 8 | 17 | 40×60 | 18 |
| 9 | 24×43 | 11 | 18 | 42×63 | 15 |

## IMPORTS.

The following table exhibits the value of lithographic stone (all Bavarian) imported into the United States since 1867. The quantities have not been reported by the Bureau of Statistics of the Treasury Department:

*Lithographic stone imported into the United States from 1868 to 1896.*

| Year ending— | Value. | Year ending— | Value. |
|---|---|---|---|
| June 30, 1868 | $13,258 | June 30, 1883 | $104,313 |
| 1869 | 17,044 | 1884 | 128,035 |
| 1870 | 14,225 | 1885 | 54,022 |
| 1871 | 21,311 | 1886 | 71,009 |
| 1872 | 36,146 | Dec. 31, 1887 | 83,182 |
| 1873 | 44,937 | 1888 | 113,365 |
| 1874 | 36,902 | 1889 | 78,077 |
| 1875 | 41,963 | 1890 | 105,288 |
| 1876 | 47,101 | 1891 | 107,339 |
| 1877 | 44,503 | 1892 | 107,777 |
| 1878 | 42,700 | 1893 | 91,849 |
| 1879 | 37,746 | 1894 | 74,454 |
| 1880 | 56,310 | 1895 | 107,670 |
| 1881 | 77,894 | 1896 | 74,044 |
| 1882 | 111,925 | | |