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I.C. 6995 (1938)

Humboldt County Item 6

VIRGIN VALLEY DISTRICT

The Virgin Valley opal field is in an isolated desert area sparsely populated 25 miles southwest of Denio, Oreg. Precious opal was first discovered here in 1907, and a number of claims were located. The opal field lies within an area approximating 2 miles wide and 10 miles long in certain beds outcropping along the walls and slopes of Virgin Creek Valley. No figures are available on the yield of precious opal, but the quantity has not been large. Exploitation of the deposits has been done intermittently by various individuals from time to time. As far as the writer is aware, no attempt has ever been made to mine the deposit on an extensive scale.

The geology of the Virgin Valley opal field has been described by Merriam[23] and by Kunz[24]. According to Merriam, the formations consist of volcanic ash, tuff, and mud, originally deposited in shallow lakes. The sediments are in part overlain by lava flows. The sedimentary beds have been divided into the upper, middle, and lower divisions. The upper beds contain fossil remains in the form of bones and teeth of mastodons, camels, and other fauna, while the middle beds contain silicified wood and plant remains. It is principally in these middle beds that the opal occurs associated with petrified wood. The gem variety of opal is irregularly distributed and comprise but a small portion of the deposit.

The Virgin Valley opals are of exceptional quality and noted for their brilliance of fire and color; some of the varieties are peculiar to this region and cannot be duplicated elsewhere. They occur in a variety of shapes, chiefly as cast of twigs and branches of trees and as coatings and fillings in petrified wood. The color of the material ranges from deep black to almost transparent white and shows considerable variation in fire and effect. It is said that one large black opal, weighing 17 troy ounces, was found in 1919; the specimen was rated as flawless and the largest black opal known. Much of the opal is checked and of little value for gem purposes. It generally contains an excess of moisture when taken from the deposit, and unless it is carefully cured before it is exposed continuously to the air, it is liable to crack or check and loose some of its beauty. The curing process consists of imbedding the rough opals in balls of clay and storing them under ground or under conditions of partial humidity, so that the drying-out process can proceed slowly.

Mining operations have been confined largely to shallow pits, trenches, and open cuts. The volcanic ash beds in which the gems are found will not support much weight and caves easily, and several miners have lost their lives owing to carelessness in respect to proper timbering of the workings.

23/ Merriam, J. C.: Science, N. S., vol. 26, 1907, pp. 380-382.
24/ Kunz, G. F., On the Occurrence of Opal in Northern Nevada and Idaho: Abstract, N. Y. Acad. Sci. Annals, 21, 1912, pp. 214-215.