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CALIFORNIA MINERAL INDUSTRIES CTIVITIES OF THE STATE DIVISION OF AINES AND GEOLOGY CTIVITIES OF THE U.S.

ACTIVITIES OF THE U.S.
GEOLOGICAL SURVEY
IN CALIFORNIA

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Sulfur

Nearly all the sulfur ore mined in California in recent years came from the open pit Leviathan mine in Alpine County. This mine, located 9 miles east of Markleeville, consists of masses, stringers and veins of sulfur in a gray altered porphyritic andesite. The sulfur content (about 30 percent) was converted into sulfuric acid at Weed Heights, Nevada, and used to leach a low-grade copper carbonate ore from a deposit near Yerington, Nevada. The mine was shut down in 1962.

A small production of sulfur ore was made from the Crater claims east of Big Pine, Inyo County; from the Sulphur Bank mercury mine and the S-Bar-S deposit in Lake County; and from the New Elgin mine near Wilbur Springs, Colusa County. All this material was used as a soil additive.

By-product sulfur was produced from petroleum refineries in Contra Costa, Los Angeles and San Luis Obispo Counties; by-product hydrogen sulfide from petroleum refineries in Contra Costa and Los Angeles Counties; and liquid sulfur dioxide and sulfuric acid from a lead smelter in Contra Costa County.

Talc, Soapstone, and Pyrophyllite

Talc is a distinct mineral with a definite chemical composition $(Mg_3Si_1O_{10}(OH)_2)$. In commercial usage, however, the term "talc" includes other high magnesium silicates as calcium, aluminum and iron silicates. Commercial talcs, therefore, differ considerably in composition. "Soapstone", usually refers to impure, blocky talc. Pyrophyllite is an aluminum silicate which closely resembles talc in its physical properties, and which can be used for many of the same purposes as talc.

The talc, soapstone and pyrophyllite produced in California during 1962 totaled 117,912 short tons valued at \$1,339,000 compared with 161,068 short tons valued at \$1,524,000 in 1961 and to 130,539 short tons valued at \$1,395,722 in 1960. Virtually all this material was ground by producers or shipped to grinding plants.

Crude talc was produced at 18 mines in Inyo County and 16 mines in San Bernardino County; crude soapstone was produced from Amador, El Dorado, and Los Angeles Counties; crude pyrophyllite was won from Mono, San Diego, and San Bernardino Counties.

Preliminary figures for talc production in 1963 are 120,452 short tons valued at \$1,427,000.

The consumption of ground talc, soapstone, pyrophyllite for various