

# Zinc Mining in New Mexico

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Almost all of the zinc mined in New Mexico has come from Grant, Socorro and San Miguel Counties. Zinc deposits in New Mexico are of two types: they occur as replacements in limestone beds and as vein deposits.

Records indicate that mining zinc ore in New Mexico began in the early 1890's from deposits about 15 miles east of Silver City. Here, in the dry and sunny foothills of the Pinos Altos Range, deposits occurred at Hanover. Although these deposits had been known for many years, it was not until the Atchison, Topeka and Santa Fe Railway reached the area in 1891 that the deposits became economically feasible.

Production proceeded slowly at first and remained relatively small. The production of 1,285,500 pounds in 1910 probably exceeded the previous total. Grant County, by late 1964, had yielded more than 900,000 short tons of zinc, and more than two-thirds of the total for New Mexico.

The Empire zinc mines at Hanover have dominated zinc mining in New Mexico. These mines have been operating since 1902 except for several periods when the demand for zinc was low. The mines at Hanover were distinctive in another way. For about 30 years, beginning in the early 1920's, mules were used as the power source for all underground hauling. In spite of stiff competition from newly developed trolley systems and battery locomotives, the mules held stubbornly to their jobs.

Although the first recorded production of zinc in New Mexico was in Grant County in the early 1890's, mining in quantity did not begin until the realization in 1903 and 1904 that massive deposits of zinc carbonate, an oxidized zinc ore found extensively at Magdalena, were valuable for use in paint manufacture. For many years prior to 1900 the mines in the Magdalena area had been important producers of gold, silver and lead, and large quantities of zinc carbonate, whether recognized or not, had been removed as waste and thrown over the dump. In 1903 a discovery was made of especially rich zinc carbonate ore bodies as replacements in limestone. An attempt followed to find a market for the ore, and samples were taken to Joplin, Missouri smelter. It was determined that the material was suitable for the manufacture of zinc pigment, and large bodies of zinc carbonate ore began to be worked in the two important mines of the Magdalena area, the Kelly and the Graphic. The Kelly mines were major producers of zinc ore in the area until June 1949. Production was high throughout the period of World War II. Ore from the Kelly, Lynchburg and other mines has added substantially to the zinc output of the district.

Since 1903 zinc mining in the Magdalena area has followed the pattern of other zinc camps in the west. Production fluctuates with prices.

San Miguel County ranks next to Grant in production of Zinc. All of it came from the Pecos mine during 12 years of intensive operation from 1927 to 1939. It is interesting to note that the Pecos mine operated throughout the depression years, when the price of zinc reached the 20th century low figure of 2.9 cents per pound and the average price was probably less than 5 cents per pound.

Present estimates indicate that there may be about three-quarters of a million tons of unmined zinc in New Mexico. The reserves of the Central district in Grant County (the area most intensely studied to date) account for the major part of this estimate. Other regions with significant potential are in Socorro, Sierra, Santa Fe, Luna, Hidalgo, Otero and Catron Counties. Basic geologic studies now in progress, and exploration using modern or yet-to-be-developed techniques, could markedly expand the present known reserves.