The Blanchard Mine: the little mine that couldn't ore

Erin Delventhal

40th Annual New Mexico Mineral Symposium November 9-10, 2019,Socorro, NM pp.30-31

Downloaded from:https://geoinfo.nmt.edu/museum/minsymp/abstracts/home.cfml?SpecificYear=2019

The annual New Mexico Mineral Symposium provides a forum for both professionals and amateurs interested in mineralogy. The meeting allows all to share their cumulative knowledge of mineral occurrences and provides stimulus for mineralogical studies and new mineral discoveries. In addition, the informal atmosphere encourages intimate discussions among all interested in mineralogy and associated fields.

The symposium is organized each year by the Mineral Museum at the New Mexico Bureau of Geology & Mineral Resources.



Abstracts from all prior symposiums are also available: https://geoinfo.nmt.edu/museum/minsymp/abstracts

This page is intentionally left blank to maintain order of facing pages.

The Blanchard Mine: The Little Mine That Couldn't Ore

-Erin Delventhal

The Blanchard Mine, located in the Hansonburg District in the northern portion of the Oscura Mountains, Socorro County, New Mexico, has earned its place as a classic New Mexican locality through the production of widely available, high-quality mineral specimens - most notably the "Blanchard blue" fluorite (often associated with galena) as well as the discovery of some of the world's largest known linarite crystals. However, the rich mineralization at the Blanchard Mine produces a suite of other minerals that appeal to many varieties of collecting styles.



Fluorite - Ray DeMark: Fluorite on quartz • 21 cm x 10 cm x 8 cm • 5.4 cm edge on large crystal • Across from the ore bin • Ray Demark specimen • Erin Delventhal photograph

The history of the Blanchard Mine reaches into Indigenous Peoples and Spanish colonial history, but large-scale development began in the early 1900s. Numerous attempts were made to develop an economic source of lead at the Blanchard, but all were victim to the trials found in mining in a harsh and remote



Ora Blanchard at the rock shop in Bingham, circa 1967. Photograph by Vera Jones, courtesy of Vera Jones and the New Mexico Bureau of Geology and Mineral Resources, Historic Photograph Archives, Socorro, NM 87801.

desert. Throughout the years, the Blanchard has been utilized as a "collector's dream," with visitors arriving from around the globe to be lead through the property by characters such as Ora Blanchard ("The Lady on the Mountain"), Sam "Rattlesnake" Jones, and, in present times, Ray DeMark, Mike Sanders, and Brian Huntsman.

The Sierra Oscura Mountains consist of basement Proterozoic granites and gneisses with overlying Pennsylvanian formations of marine limestone and shale with interbedded arkosic sandstone. Mineral deposits at the Blanchard Mine are concentrated as open-space fillings in fissures, fault breccia, and solution cavities that are primarily concentrated in the Council Springs limestone. The Blanchard Mine and the Hansonburg District have been the subject of numerous academic studies as one of the most prominent of the Rio Grande Rift deposits.



View of Western Mineral Product Co.'s mill looking north, circa 1916. Photograph courtesy of Wally Clark, St. Joe American Corp., Tucson AZ, New Mexico Bureau of Geology and Mineral Resources, Historic Photograph Archives, Socorro, NM 87801.

References

Allen, B. A., 1964, The Nature and Content of Certain Trace Elements in Selected Galenas (thesis): University of Arizona.

Basic Earth Science Systems, Inc, 1972, The Hansonburg Mining District, Socorro County, New Mexico.

Bohlke, J.K., Irwin, J.J., 1992, Brine history indicated by argon, krypton, chlorine, bromine, and iodine analysis of fluid inclusions from the Mississippi Valley type lead-fluorite-barite deposits at Hansonburg, New Mexico: Earth Planet. Sci. Lett.,v. 110, p. 51-66.

Clippinger, D. M., 1949, Barite of New Mexico: State School of Mines Mineral Resources Survey of New Mexico, Circular 21.

DeMark, R. S., 1987: Mining Development and Minerals of the Hansonburg Mining District, Socorro, New Mexico (abstract): 8th Annual New Mexico Mineral Symposium.

DeMark, R. S., 2003, Fluorite from the Blanchard Mine Group, Hansonburg Mining District, Socorro County, New Mexico: Rocks & Minerals, Vol. 78, No. 6.

Elstone, E. F., 1958, A Memorandum of Data and Observations on Lead-Barite-Fluorite Deposits, Hansonburg Mining District, Socorro County, New Mexico.

Elstone, E. F., 1959, Water Supply Problems Near the Bingham Project.

Elstone, E. F., 1961, Facts, Data, and Estimates - Bingham Project of Sunshine Mining Company, Socorro County, New Mexico.

Evans, D. L, 1957, An Appraisal: Portales Mining Company Tailings, San Antonio, Socorro County, New Mexico.

Eveleth, R. W., 2000, The Lady on the Mountain: My Personal Reminiscences of Ora W. Blanchard (draft).

Eveleth, R. W., Lueth, V. W., 2009, Old Hansonburg, one of New Mexico's forgotten mining camps: New Mexico Geological Society 60th Annual Fall Field Conference Guidebook: Geology of the Chupadera Mesa.

Eveleth, R. W., 2018, Chronology of the Hansonburg Mining District (working notes).

Johnston, W. D. Jr., 1928, Fluorspar in New Mexico: State School of Mines Mineral Resources Survey of New Mexico, Bulletin 4.

Jones, F. A., 1904, New Mexico Mines and Minerals - World's Fair Edition.

Jones, F. A. 1915, The Mineral Resources of New Mexico: State School of Mines Mineral Resources Survey of New Mexico, Bulletin 1.

Kottlowski, F. E., 1953, Geology and Ore Deposits of a Part of the Hansonburg Mining District, Socorro County, New Mexico: State School of Mines Mineral Resources Survey of New Mexico, Circular 23.

Kottlowski, F. E., Steensma, R. S., 1979, Barite-fluorite-lead mines of Hansonburg mining district in central New Mexico: New Mexico Geology Vol. 1, No. 2.

Lasky, S. G., 1932, The Ore Deposits of Socorro County, New Mexico: State School of Mines Mineral Resources Survey of New Mexico, Bulletin 8.

Lasky, S. G., Wootton, T. P., 1933, The Metal Resources of New Mexico and Their Economic Features: State School of Mines Mineral Resources Survey of New Mexico, Bulletin 7.

Lewchalermvong, C., 1973, Investigation and Evaluation of the Royal Flush and Mex-Tex Mines, and Adjacent Area, Hansonburg Mining District, Socorro county, New Mexico (thesis): New Mexico Institute of Mining and Technology.

Lindgren, W., Graton, L. C., Gordon, C. H., 1910, The Ore Deposits of New Mexico: United States Geological Survey Professional Paper 68.

Lueth, V. W., Rye, R. O., Peters, L., 2005, "Sour gas" hydrothermal jarosite: ancient to modern acid-sulfate mineralization in the souther Rio Grande Rift: US Geological Survey: Geochemistry of Sulfate Minerals: A Tribute to Robert O. Rye. McCarthy, M. S., private report for the Western Mineral Products Company, undated (maps within dated 1918).

McLemore, V. T., Giorando, T. H., Lueth, V. W., Witcher, J. C., 1998: Origin of Barite-Fluorite-Galena Deposits in the Southern Rio Grande Rift, New Mexico: New Mexico Geological Society Guidebook, 49th Field Conference, Las Cruces Country II.

McMillan, N. J., Dickin, A. P., Haag, D., 2000, Evolution of Magma Source Regions in the rio Grande rift, southern New Mexico: GSA Bulletin, October 2000, v. 112, no. 10.

Norman, D. I., Ting, W., Putnam, B. R. III, Smith, R. W., 1985, Mineralization of the Hansonburg Mississippi-Valley-Type Deposit, New Mexico: Insight from Composition of Gases in Fluid Inclusions: Canadian Mineralogist, Vol. 23.

North, R. M., 1983, History and geology of the precious metal occurrences in Socorro County, New Mexico: New Mexico Geological Society 34th Annual Fall Field Conference Guidebook, Socorro Region II.

Ostrom, Gerry, 1983, untitled symposium notes.

Paddison, L. F., 1932, Notes on the McCarthy Mine.

Partey, F., Lev, S., Casey, R., Widom, E., Lueth, V. W., Rakovan, J., 2009, Source of Fluorine and Petrogenesis of the Rio Grande Rift-Type Barite-Fluorite-Galena Deposits: Society of Economic Geologists, Economic Geology vol, 104.

Peters, E. D., 1882, Notes on the Oscura Copper-Fields, and Other Mines in New Mexico: The Engineering and Mining Journal.

Putnam, B. R. III, Norman, D. I., Smith, R. W.: Mississippi Valley-type lead-fluorite-barite deposits of the Hansonburg mining district, New Mexico: New Mexico Geological Society 34th Annual Fall Field Conference Guidebook.

Rakovan, J., Partey, F., 2009, Mineralization of the Hansonburg Mining District, Bingham, New Mexico: New Mexico Geological Society 60th Annual Fall Field Conference Guidebook: Geology of the Chupadera Mesa.

Rocks and Minerals magazine, December 1936, Vol. 11, No. 11.

Roedder, E. Heyl, A. V., Creel, J. P., 1968: Environment of Ore Deposition at the Mex-Tex Deposits, Hansonburg District, New Mexico, from Studies of Fluid Inclusions: Economic Geology Vol. 63.

Rothrock, H. E., Johnson, C. H., Hahn, A. D., 1946, Fluorspar Resources of New Mexico, State School of Mines Mineral Resources Survey of New Mexico, Bulletin 21.

Smedley, J., 1961, Ora Blanchard's Mine: Rocks & Minerals 36:5-6, 254-269.

Smith, C. T., 1981, Feasibility Estimate for Hansonburg Mining District.

Stacey, J. S., Hedlund, D. C., 1983, Lead-isotopic compositions of diverse igneous rocks and ore deposits from southwestern New Mexico and their implications for early Proterozoic crustal evolution in the western United States.

Steensma, R. S., 1979, Feasibility of gravitational ore separation, Hansonburg mining district, central New Mexico: New Mexico Geology.

Stratton, P. A., 2001, untitled recollections.

Strong, M. F., 1964, The Blanchard Claims, Bingham, New Mexico: The Mineralogist Vol. 32, No. 3.

Sun, M., 1957, Minerals of the Hansonburg Mining District, Socorro County, New Mexico: Rocks and Minerals Magazine.

Taggart, J. E. Jr., Rosenzweig, A., Ford, E. E., 1989, The Hansonburg District, Bingham, New Mexico: Mineralogical Record, Vol. 20.

Talmage, S. B., Wootton, T. P., 1937, The Non-Metallic Mineral Resources of New Mexico and Their Economic Features: State School of Mines Mineral Resources Survey of New Mexico, Bulletin 12.