Book Reviews

Homer E. Milford and William "Bill" Baxter (comp. and ed. by Paul R. Secord). *The Cerrillos Hills and Mining.* Cerrillos, NM: Amigos de Cerrillos Hills State Park, 2019; 369 pp., b&w photos, maps, append., ref., paper, $24.95. ISBN: 9781099924750

Homer E. Milford, William Baxter, Phyllis C. Ludi, and David P. Staley (comp. and ed. by Paul R. Secord). *Dolores, New Mexico, the West's First Gold Rush.* Albuquerque: Secord Press, 2019; 204 pp., b&w photos, maps, append., ref., paper, $21.48. ISBN: 9781079339697

Paul R. Secord and Homer E. Milford (comp. and ed. by Paul R. Secord). *Thomas A. Edison and the Golden Dream: Dolores, New Mexico*. Albuquerque: Secord Books, 2020; 80 pp., b&w photos, maps, append., ref., paper, $5.38. ISBN: 9798639499753

Homer E. Milford, with contributions by Elias Clark, Charles R. Keyes, and Robert Eveleth (comp. and ed. by Paul R. Secord). *Silver-Plated Deceit, the Story of Mining in Lake Valley, New Mexico.* Albuquerque: Secord Books, 2019; 342 pp., b&w photos, maps, append., ref., paper, $25.95. ISBN: 9781691285860

During the lifetime of the Surface Mining Control and Reclamation Act of 1977 (SMCRA), not many people realized what an extraordinary amount of mining history it funded. It is not merely that its mandated Abandoned Mine Land's (AML) state programs documented mine sites, SMCRA (irreverently pronounced "Smakra") guidelines also required history evaluations under historic preservation laws, the results of which, unfortunately, remain mostly in the dusty files of government grey literature accessed by few. An exception in reaching the public is the recent publication of several reports by Homer E. Milford, one-time environmental coordinator for the New Mexico state AML program.

A biologist by training, Milford became a mining historian after he undertook the writing of mine histories for the AML program, which included new material far beyond the requirements of the job. He passionately collected historic mining documents and memorabilia and presented papers at geology and mining history conferences. With retirement he planned to revise, polish, then publish these histories, but illness and then death in April 2019 ended his plans. His friend and colleague, Paul Secord, took over the cause, began editing and compiling Milford's AML reports with copies of notes and documents from his files. The resultant three books and one booklet under review here provide a glimpse of New Mexico mining from prehistoric times to the twentieth century.

The Cerrillos Hills and Mining combines text and documents about this mining region fifteen to twenty miles southwest of Santa Fe. Milford starts with its prehistoric turquois mines. Mount Chalchihuitl is fabled for its turquois and the open-cut mine from c. 1000 that supplied the great Chaco Culture trade network at its peak. This was followed by Pueblo peoples' mining of galena, c. 1300-c. 1700, for their lead-glaze pottery of the Rio Grande Valley. Milford's weaving of archeological evidence (on-site stone hammers and mauls, dateable pottery sherds, etc.) with contact period records reveals the importance of the mines by the time of the arrival of the Spanish in the 1500s, who, not surprisingly, would mine the Cerrillos Hills as well.

Teasing out the incomplete documentary

record, Milford has separated out much myth from what records suggest is a complex tale of the opening of the silver-lead mines by the Spanish, the working by primitive smelters, and the use of Tlaxcalan miners (of central Mexico) starting in 1598, when Juan de Onate, funded by his silver mines in Zacatecas, brought settlers into New Mexico. Milford provides a needed discussion of continued mining, the designation of El Real de Los Cerrillos in 1696, and the sporadic efforts through the rest of the Spanish colonial and, later, Mexican republic periods.

The early American period is well known, mostly because of ghost town or tourist literature on the Cerrillos Mining District boom of 1879-1884. Milford's corrective details are supplemented by Bill Baxter's nine-page light narrative of when a rush of miners staked 1,200 claims, the railroad arrived, smelters were built, and the mining camps of Carbonateville and Bonanza City thrived. Milford's history text ends with chronicles about individual mine openings using the type of physical history descriptions one would expect in an AML report meant to guide mine closure and safing.

Nearly two thirds of the volume is given to a compilation of materials from Milford's and others' collections: copies of photos and stock certificates, mining district record books, an 1880 map and guide, Cerrillos town ordinances and church records, and copies of land records (indicative of the many lawsuits) of mine acquisitions by the 1880s British Cerrillos Mining Company, Ltd. One questions if all of this material is necessary. It also indicates that this book was a work in progress, which Milford never finished as a complete narrative.

The next volume, *Dolores, New Mexico, the West's First Gold Rush*, is a similar mix of history text with copies of material from various collections. About five miles south of Cerrillos, up the steep slope of the Ortiz Mountains, El Real de Dolores' narrative is skillfully reconstructed by Milford as the site of the first gold rush in what would become the American West. After Mexican Independence, gold was discovered, *placeros* with their *bateas* worked the gulches, and the small community of El Real de Dolores grew as an administrative and commercial town. With the discovery of hard rock veins, *arastras* lined the gulches and produced a million dollars' worth of gold within a few years.

As in the Cerrillos volume, Milford delves into the myths of Real de Dolores. Legends of lost Spanish mines and of hidden Mexican gold still feed the allure and mystery of the region. Milford contrasts this with the reality of the operations at Dolores from the 1820s to the 1840s, which were important as stimulus for the Santa Fe Trail trade, for the golden dreams of Americans about expansion into what became the Southwest after the War with Mexico (1846-1848), and for the development of experienced miners who left to join the rush to California. Co-author and archeologist David Staley adds details about the physical remnants from the early technology at mine sites and of mining camp structures.

In section 4, Milford unravels some of the complexity of mineral land laws. The Ortiz Mine at Dolores, an 1833 Mexican mining grant, was purchased by arriving American officials, who, during the 1850s, convinced the surveyor general and then the U.S. Congress to award them 69,500 acres, an expansive fee simple land transfer unlike any other under U.S. mining law. Milford's history is supplemented by Phyllis Ludi's forty-four-page master's thesis on the 1860s Ortiz Mine's operation, a good example of the Civil War-era speculations and flops during the early Rocky Mountains gold boom. The appendices of copies of Milford's notes indicate that this volume was a work in progress as well.

In 1900, the Ortiz Mine's owners leased mining rights to Thomas A Edison, the famed inventor. In a booklet about *Edison and the Golden Dream* operation, Secord has combined the text of the 1994 paper on Edison that Milford presented at the International Mining History Congress

with copies of letters, reports, and photographs about the attempt to work a placer mine near Dolores. Edison had invented a method to work low-grade placer gravels with a wind blower and electro-magnet. In 1900, a pilot plant was built, which quickly showed that Edison may have been "salted" by the vendor, the gravels proving less rich than originally sampled. The copies of letters and Milford's narrative also show that the inventor and his crew were overly optimistic about his mining innovation.

The final volume, *Silver-Plated Deceit, the Story of Mining in Lake Valley,* is the most polished, and focused. In south-central New Mexico, a silver excitement in the Black Range brought prospectors to Lake Valley, where miners discovered bodies of high-grade silver ore, including the million-dollar Bridal Chamber a mere fifty feet from the surface. Milford's story focuses on the 1880s stock promotions of old Nevada and Colorado speculator George Roberts and the rising promoter J. Whitaker Wright. Using mining engineers' correspondence, and materials from a wide range of sources, he proves that this was a stock job from the outset, snaring even poet Walt Whitman among its gullible investors.

The first few years of production—a mill, railroad branch, and hoists were operating by 1883—equaled a healthy five million dollars' worth of silver, but stock companies unloaded stock of inflated value (an estimated eighty million dollars' worth of shares were printed, although the amount sold was probably much lower). Roberts and Wright made their profits and resigned before the inevitable collapse, much to the embarrassment of scientists like chemist Benjamin Silliman, Jr., of Yale and paleontologist Edward Cope who wrote glowing geological reports. The long decline followed with revivals to try new technologies or during high mineral market prices. The last resident left in 1993. The Lake Valley volume also includes appendices of previously published early geological reports, which seems unnecessary because of their availability online.

Milford's history of Lake Valley has in-depth research into original documents and a definitive narrative. The Lake Valley AML report and his other reports have and will continue to influence other writers thanks to the production of these volumes. Unfortunately, the works on Cerrillos and Dolores are incomplete, their narratives supplemented by helpful appended materials. His collections will continue to be useful to researches at the University of New Mexico, Special Collections, Albuquerque, and the Museum of New Mexico, Santa Fe, where they have been deposited.

The flaws in the volumes are the same as those of other self-published books. The many typos, errors in sentence placement, and grammatical errors reveal the need for a good copy editor. Other complaints include: no indexes, incomplete lists of references, poor-quality photo reproductions, and useless maps. Mention of nonexistent maps or tables or figures in the text happens too often. Some appendixes are unnecessary; 1840s-1860s book excerpts, nineteenth-century American Institute of Mining Engineers transactions, U.S. Geological Survey publications, etc., are available online.

Because these compilations include an odd mix of previously published materials, attribution is a problem. Who wrote what? It appears that compiler Paul Secord was unsure whom to include on the title pages of these books. For example, Milford's 1994 essay on Edison is the verbatim narrative for most of the booklet *Edison and the Golden Dream*, but the title page author is Secord with the added line "based on the work of Homer E. Milford." Milford should be listed as co-author (as the reviewer has done above) with Secord. Each volume has other authors or contributors on the title page, without clarifying who did what or if they even need be included on the title page.

These complaints aside, the admirable research and narratives by Homer Milford compiled by Paul Secord in this stack of mining history

books are worthy contributions to understanding the Cerrillos Hills, the Real de Dolores, and Lake Valley, as well as the broader view of New Mexico's mining, especially the Spanish and Mexican periods and the speculative boom of the 1880s. Mining historians, specialists interested in the Southwest, and general readers interested in these locales' histories will welcome these additions to the too-short shelf of New Mexico mining history books.

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Evan Y. Jones and York F. Jones. *Iron Mining and Manufacturing in Utah: A History.* Cedar City, UT: Southern Utah University Press, 2019; 484 pp., 111 b&w illus., 3 append., gloss., notes, bib., ind., paper, $24.99. ISBN: 9780935615547

York Jones, former mine manager of an iron-ore mine in Utah (deceased), and his son Evan have compiled the history of iron mining and manufacturing in Utah from its geological origins through discovery and the ups and downs of the industry to final closures. That history begins with the geological formation of the host rock, followed by the igneous sourcing of the iron deposits in what was to become southwestern Utah. Although the iron outcrops were prominent, travelers through what is now Iron County, Utah, did not recognize the formations for what they were until members of a group in 1849 noted the existence of iron ore in the area.

The second and third chapters relate the early efforts to establish an iron mining and smelting industry in Iron County. Brigham Young and other leaders of the LDS Church desired for Utah to be self-sufficient to the extent possible. With the realization that iron deposits existed in the southwestern corner of the state, along with the presence also of coal and limestone, the leaders organized travel to and settlement of the area near the deposits, so that iron mining and smelting could commence.

Early mining of the iron ore was simple, as several deposits outcropped at the surface. Iron manufacturing was much the same as it had been for several centuries. In 1852 the first iron was produced by the Iron County residents, who had settled the area in 1850. The group continued its attempts at iron smelting with more failure than success due to a lack of capital and expertise. In 1858, Brigham Young suggested that the effort be abandoned, and the community's energies directed to other pursuits. In 1868 a new company was formed to pursue iron manufacturing in Iron County. After some success, financial difficulties ended this venture in 1877. Another company formed to manufacture iron in 1881 but never became operational and was dissolved in 1885.

From 1885 until 1923 no physical activity occurred in Iron County to produce iron. Mining claims were made on the iron ore resource, as people speculated that someday the industry would return to the area. Beginning in 1921 all of the elements for an iron industry in Utah began to come together. The construction of a railroad into Iron County, the construction of a state-of-the-art blast furnace in Utah at Ironton, and growing demand for steel created a long-term future for iron mining and manufacturing in the state.

Columbia Steel Corporation, one of the primary investors, operated the blast furnace at Ironton and the first mine, located at Iron Springs. Although the ore was close to the surface, the mining venture depended heavily on human and horse power. Tunnels were driven under the ore body, and the ore was pulled down into glory holes and loaded into mine cars in the tunnels for transport to the railroad loading facility.

In 1924 the Milner brothers began developing their mining claims on a large iron-ore reserve called Desert Mound, using open-pit mining methods with one steam shovel and one electric shovel. Gasoline-powered trucks hauled away the waste, while rails were laid into the pit for trans-