

ization of a mining area usually does not happen overnight. He traces long periods of contraction for each company. Then he turns to the post-World War II development of Copper Range's White Pine mine, undertaken when most of the other mines in the area were shutting down.

The re-emergence of mining in this area suggests that it may be wrong to always think in terms of strict divisions between industrial and post-industrial eras. As Lankton shows, the process of de-industrialization is often tentative, haphazard, and incomplete. Instead of shutting down operations entirely, a company might keep a mine running at a far reduced rate when facing tough economic times, a recalcitrant workforce, or inefficient technologies. Even if one mine closed, a nearby mine might open at the same time, sustaining the industrial era, even if on a smaller scale. As Lankton puts it, "mines tended to die in fits and starts." If you want to get a good sense of the birth and death of the copper industry in upper Michigan, *Hollowed Ground* will serve as a good guide.

Brian Leech

Augustana College

Donald L. Hardesty. *Mining Archaeology in the American West: A View from the Silver State*. Lincoln: University of Nebraska Press and the Society for Historical Archeology, 2010; 220 pp., numerous b&w illus., tabs., ref., ind., cloth, \$45. ISBN: 9780803224407

One always welcomes the return of a classic. During the tumultuous times of the 1970s and 1980s, when compliance with new Federal preservation laws required new guidelines on historic mining site documentation and evaluation, Professor Donald L. Hardesty of the University of Nevada-Reno threw us all a life-line with his much needed: *The Archeology of Mining and Miners, A View from the Silver State*, a special publication of the Society for Historical Archeology in 1988. This became the handbook for a genera-

tion of field archeologists, historians, and others. Now the University of Nebraska Press, in concert with the Society of Historical Archeology, has produced a revised edition of this valued guide to the archeology of mining sites, not just in Nevada, but the American West and beyond.

A former president of the Mining History Association, Hardesty has added much new material, photographs, and sources to the work, but keeps its core contributions. The book begins with a discussion of the standard sources one would use in researching a mining site: deeds and company records, photographs and maps, censuses and government records, technical journals, and so on—the "literature search," if you will, of a good mining site Cultural Resource Management project.

In the second chapter he details how to evaluate the technology of a mining site from what is evident on the ground—a primer for field work. Mining sites are complex systems, with most having multiple layers or generations of technology. His focus is on mining feature systems, and this is important. He breaks the discussion down into the multiple systems of extraction, including hoisting and delivery systems; and beneficiation systems, including crushing, milling, concentration, and the multitude of processes used in Nevada and elsewhere to separate metal from waste rock.

The third chapter moves more to the human element, the settlements and households, the workers and transients. Again, he uses many Nevada mining camp examples, but focuses on the details of the short-lived Gold Bug mining camp. It is a model to emulate in documenting the slice of time in which these people called their ephemeral camp home. Hardesty uses not just the artifact assemblages, but historic records to flesh out the story.

He also discusses anthropological ideas to understanding the mining West within the "world system" view of Immanuel Wallerstein. These "mining islands" were part of the global network, with transport and economic systems connecting

them to the wider world. The artifact record is rich because virtually everything used in the camp was bought from distant markets and rarely carted out—except during war-time scrap drives, and by later “bottle collectors.”

The work is enhanced by photographs of many sites, but especially of the Cortez district, Nevada, a typical mining region, where Hardesty conducted archeological field work. His field data help us understand not only Cortez, but mining sites more generally, since his archeological work at this central Nevada mining district serves as a model for documenting mining districts throughout the West.

The most evident change in this revised edition is Hardesty’s thoughtful conclusion. The mining West was a scene of rapid change, alteration, and adaptation to new technology, similar to the present computer-age technology’s rapidly paced changes. Hardesty discusses well these adaptations and coping strategies.

Since the mining West continues to be the scene of superfund site clean-ups, federally mandated mining operation plans that include CRM, and other activities that impact the archeological record of historic mining sites, this will continue to be a must-have book for those in the field. All I can add for anyone doing such work is that Don Hardesty has set a high standard. Go and do likewise.

Robert L. Spude
National Park Service, Santa Fe

Steven T. Mitchell. *Nuggets to Neutrinos: The Homestake Story*. Bloomington, IN: Xlibris, 2009; 738 pp., numerous b&w illus., maps, glos., notes, bib., ind., cloth \$35, paper \$24. ISBN: 9781441570666.

The Homestake Mine in Lead, South Dakota, is certainly one of the greatest and most profitable mines of the United States. One might not be too far afield to claim it is one of the world’s greatest

mines. The life of a typical mine is measured in, at most, a few decades; the Homestake produced gold for over a century. Now the mine has become a base for scientific study.

Author Steven Mitchell had worked for the Homestake for nearly a generation when it finally closed in 2001. Mitchell’s long, detailed book covers every aspect of the operation, as well as the important individuals who are a part of this fascinating story. He focuses not only on the mine, but also on the development of the Black Hills around this mining operation.

The first ninety pages cover the era before the prospectors and settlers arrived, then attention shifts to the mine, its miners, and its people. After that the focus shifts completely to the Homestake and its fascinating story into 2009. The last chapter covers “Some Early Homestake VIPs.” Photographs add tremendously to this book. The reader will get an excellent vision of the mine and its people, from miners to staff to officials. A variety of tables are also included.

For those interested in this fascinating mine, and in mining, Mitchell covers its every aspect in great detail. Therein, however, lies a major problem. Detail after detail piles up on top of the details from previous pages. It will take a determined reader to make it through, even during a long, cold winter of reading. *Nuggets to Neutrinos* is not for a Sunday afternoon of relaxing with a book.

Duane A. Smith
Fort Lewis College

Sheila Kelly. *Treadwell Gold: An Alaska Saga of Riches and Ruin*. Fairbanks: University of Alaska Press, 2010; 271 pp., 103 illustrations, 3 maps, time line, notes, bib., ind., cloth \$35, paper \$18. ISBN: 9781602230750

To many readers, the mention of gold mining in Alaska brings to mind images of the frantic Klondike gold rush of 1896 to 1899 and that long