

Kendall W. Brown. *A History of Mining in Latin America: From the Colonial Era to the Present*. Albuquerque: University of New Mexico Press, 2012; 280 pp., 15 b&w illus., 3 maps, 3 graphs, notes, glos., bib., ind., paper, \$35. ISBN: 9780826351067

This book aims to discuss in two hundred pages a span of five hundred years and more than a dozen countries, and does a remarkably good job of it. In the prologue, Kendall Brown makes his disclaimer: "This volume makes no pretense of being a complete, thorough study of the industry from the arrival of Columbus."

Four of the eight chapters are devoted to the colonial period that lasted about three centuries. Other chapters examine the adjustments that followed achieving independence from Spain and Portugal, the introduction of modern technologies, and the social and ecological consequences of mining. The book contains some illustrations, along with comprehensive endnotes, a bibliography, a glossary, and an index. Brown develops two themes throughout the book: the inexorable "proletarianization" of the workers, leading to rebellion and revolutions; and the environmental damage done by the industry.

Brown begins with the story of Columbus taking gold from the Caribbean islands. Then he chooses the Potosi mine in Bolivia, which he considers the archetype for the Latin American production and export of silver and gold which stimulated markets in Europe and the rest of the world in the colonial period. The export of minerals financed the import of goods, such as textiles, that hurt local markets. Potosi also exemplifies the later shift to production of copper, tin, and other industrial minerals.

Using Potosi as his example, Brown examines the development and influence of the patio process for amalgamation of gold and silver, and the critical importance of the availability of mercury, primarily imported from Almaden in Spain, and

Huancavelica in Peru. The patio process had severe consequences for the environment and for the health of workers.

The author thoroughly examines the various ways in which workers were recruited and paid, varying from the forced seasonal mita system of Bolivia, to the importation of African slaves in Brazil, to the Mexican custom of allowing workers to take for themselves part of the ore that they mined. Brown compares and contrasts the societies from which workers came, and finds a significant difference between laborers who could return periodically to their home agricultural communities and those who remained exclusively in the mines. In Bolivia, mine owners had to accommodate local customs that are discussed in detail. The concepts of indigenous peoples regarding disturbance of the natural world are sympathetically presented.

For Mexico, the Valenciana silver mine in Guanajuato serves as Brown's primary representative for the colonial period, and the Cananea copper mine is his contemporary example. For Chile, Brown discusses the Chuquicamata mine, as well as the historically significant nitrate mining. For Peru, Brown examines the Cerro de Pasco mine and the smelter at La Oroya, and mentions Toquepala and Cuajone (misspelled). Brown uses mining in the lowland jungle of Brazil to provide a contrast with Potosi. He omits other countries in South America and all of Central America from his discussion. The shift from royal sponsorship to private investment, and to investment from Britain and North America, is also beyond the scope of Brown's book, but is briefly indicated.

Brown closes the book with an account of the dramatic rescue in 2010 of thirty-three Chilean miners entombed for more than two months by a cave-in. This illustrates what Brown refers to as the "Latin America miners' bargain with the devil." Although he closes with this negative figure of speech, Brown's book is generally even-handed in tone, and provides a good overview of the his-

tory of mining in Latin America, while telling in more detail the story of Potosi, the Cerro Rico (Rich Hill) of Bolivia.

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Christopher J. Huggard and Terrence M. Humble. *Santa Rita del Cobre: A Copper Mining Community in New Mexico*. Boulder: University Press of Colorado, 2012; 252 pp., 128 b&w photos and illus., 7 maps, notes, append., bib., ind., cloth, \$45. ISBN: 9781607321521

Santa Rita del Cobre is a mining town that now resides in space. Founded in 1803 for the extraction of copper ores, by 1970 the town had been consumed by the Chino open pit copper mine. Its former location now lies hundreds of feet above the pit floor. Former residents of Santa Rita have found some humor in this situation, forming the Society for People Born in Space, whose exclusive membership includes one person who has also been to outer space—the geologist and NASA Apollo astronaut Harrison Schmidt.

What makes Santa Rita del Cobre a choice subject for mining history is not its unusual fate but its long life, which spans the entire period of mining in the West. Discovered in 1799 by a Spaniard, the copper ores were intermittently worked by Spanish colonists, Mexican nationals, and early American settlers, amidst much danger from Apaches. Then, in 1909, eastern investors transformed the area into one of the original porphyry copper operations—industrial-scale copper mines complete with concentrating and smelting works. Today, the Chino mine is one of seven large copper mines operated in the southwest by Freeport-McMoRan Copper and Gold, Incorporated.

To produce a thorough history of Santa Rita and the Chino mine, mining historian Christopher Huggard teamed up with Terrence Humble, a Santa Rita native and retired Chino miner.

Humble has spent many years acquiring information on the history of Santa Rita, including an astounding collection of photographs. Representing all periods of Santa Rita's history since photography became locally available, these photographs are a treasure that bring alive what has been lost—topography and all. These images are supplemented by numerous maps, copious notes, and an appendix containing a series of tables that document copper production, mine fatalities, employment, and even the steam shovels, drills, and locomotives used at the mine.

The chief strengths of this history are that it is thorough, meticulously researched, well-balanced by subject matter, and artfully presented in a way that documents the complex linkages between geology, mining, labor, ethnicity, social life, management culture, and government policy at Santa Rita. Ethnicity is a central theme. The camp started as a completely Hispanic settlement and Hispanics have been a mainstay of the community and mine labor force ever since. Racial discrimination in pay and job assignments was long a feature of the Chino mine, but crumbled in the face of increased labor militancy and changing social attitudes after the Second World War.

Santa Rita was a company town, and a fairly large one with many amenities. Divided by ethnicity and race into different neighborhoods, the town featured a full complement of shopping and entertainment, services, religious institutions, and various types of housing. Each of these elements is explored, providing a comprehensive look at life at Santa Rita. The sole reason for the town, as well as the ultimate cause of its demise, was the Chino mine and associated concentrator and smelter. Almost the entire time span of porphyry copper mining is captured here, with numerous technical advancements, many locally developed.

The first chapter of this book is a comprehensive and detailed account of Spanish and Mexican mining at Santa Rita. Subsequent chapters cover underground mining in the late 1800s; the development and history of the Chino open pit mine;