to all of the major U.S. mining firms in Mexico. Williams knew the major players at these companies, expresses his opinions of them (such as the James Douglas family), and recounts adventures on trains, in brothels, and at New York City offices. His strong will and bi-national abilities made him an asset to the company; but instead of joining headquarters in New York, Williams went off on his own.

He worked in ranching as well, and, with Bill Greene (son of Col. Greene of Cananea fame), bought the biggest spread along the border. During World War II, he helped smuggle optical calcite out of Mexico to help the war effort. He owned a number of mines from the 1930s through the 60s; the richest, the Guadalupe near Nacozari, Sonora, made him a fortune during the high copper prices of the Korean War. He also had some down turns, such as a failed tungsten property in Sonora and his half-successful attempt to convert copper leach water from the Bisbee precipitation plants into fertilizer.

Williams is as honest as a denim work shirt, and can get just as dirty. Some of his tales one should take with a good shaker of salt—was he an accessory in the theft of Pancho Villa's head for the Skull and Bones club at Yale?

All three of these books are worthy additions to the mining historian's library. They are much more than regional books; since the mining world is international, lessons learned from one area help one understand what was going on generally everywhere. Photographs are reproduced in the Lenon and Williams volumes, though because they are self-published, the quality is about that of a copy machine. Wolff's book is the most polished, thanks, obviously, to the outstanding production team at the University of Oklahoma Press.

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John L. Ninnemann and Duane A. Smith. ***San Juan Bonanza: Western Colorado's Mining Legacy.*** Albuquerque: University of New Mexico Press, 2006; 85 pp., 71 b&w photos, map, ind., cloth, $24.95. ISBN: 0826335780

What mining history enthusiast doesn't enjoy a good pictorial history, and what better subject could there be for such an undertaking than Colorado's majestic San Juans? This slim volume consists of an essay by Duane Smith, and seventy-one black and white photographs by John Ninnemann, both on the faculty of Fort Lewis College, in Durango, Colorado, the southern gateway to the San Juans.

The essay is, as Smith indicates, a topical sketch of the history of the San Juans. It reiterates several themes that Smith has espoused in other venues. Foremost among these is that the San Juans developed as an urban frontier. Smith discusses the social lives of the San Juans' towns and camps, frequently mentioning the evanescence of most of these settlements and briefly discussing the legacies of their development. The dean of Colorado's mining historians concludes with a poignant epilogue acknowledging the ongoing and inevitable loss of the physical remains of the San Juans' mining history, thanks to the depredations of tourists and of time.

Ninnemann contributes beautiful black and white photos, interspersed throughout the text, of the remains of old sites, physical features, and of pieces of mining history remaining in the San Juan towns now prospering as resorts. That no color photos are included is unsurprising, given the costs involved, but their absence goes unlamented. Is this because one thinks of the mining activities of a century ago in black and white to begin with, or is it because granite and glaciers and weathered wood lend themselves to the high contrast that is black and white's forte? Whatever the reason, these excellent photos of the modern San Juans make pleasant viewing. That the locations of some of the subjects are omitted

is unfortunate, but perhaps this can be ascribed to a justifiable concern for the security of these dwindling remnants of the San Juan Bonanza.

This volume certainly is not a comprehensive history of mining in the San Juans. Printed on pleasingly thick ten-by-seven-inch stock, it is more like a pocket-sized coffee table book, and as such a very pleasant diversion.

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Patricia Roppel. ***Striking it Rich!: Gold Mining in Southern Southeast Alaska.*** Greenwich, CT: Coachlamp Productions, 2005; 286 pp., b&w ill., maps, bib., ind., ref., paper, $24.95.

For years whenever I needed details on some facet of mining in Southeast Alaska, I would take one of Patricia Roppel's books down from my shelf and, more often than not, quickly find what I needed. *Striking it Rich!* expands her earlier work—especially *Fortunes from the Earth*, a study of base and industrial metal mines—by addressing gold mines in the southern part of Alaska's rainforest coast. Unfortunately, *Striking it Rich!* is an uneven study: While the descriptions of the various districts and individual mines are often exhaustive and illuminating, the treatment of mining and milling techniques is sometimes confusing and misleading.

If one needs a quick and useful introduction to the mines around Hollis or Hyder, this study is the place to go. If the complex sequence of occupations at the Sea Level mines on Thorne Arm is in question, there is no better place to start than with *Striking it Rich!* In short, Roppel makes the history of the Alaskan mining districts tributary to Ketchikan abundantly available to the researcher and the general public.

As the gold rushes moved north in the 1860s, placer miners worked areas on either side of the undefined border between Alaska and British Columbia. The great rushes to the Yukon and Alaska at the turn of the last century also brought people with dreams of gold into Southeast Alaska, where the hunt for lode gold properties continued for nearly fifty years, until World War II. These strenuous efforts met with varying degrees of success. Roppel's narratives are liberally salted with phrases like "no new gold was found," "the mine lay idle," and "the option was dropped." Some efforts did produce gold, pay wages, and reward investors. Many did not. In that light, Roppel's study better illustrates the nature of gold mining prior to 1945 than many of the more spectacular successes elsewhere.

The discussion of gold mining technology has a number of problems that taint the larger work, however. For example, amalgamation does not "mean to separate the mercury from the gold (58)." The recovery of the gold from the amalgam is only part of a larger process. Blake crushers and Chilean mills are not generally viewed as interchangeable tools (60). The first is more suited to coarse crushing, while the second is best applied to fine grinding. The confusion surrounding tools and techniques suggested by these examples unfairly detracts from the larger study.

Striking it Rich! is a useful companion piece to *Fortunes from the Earth*. Jointly, they allow a close look at mining in one corner of Alaska. Studying less spectacular, work-a-day mining districts, in Alaska and elsewhere, provides a useful entre to a parallel part of the industry often overshadowed by the large industrial mining complexes that emerged after 1900. Small tonnage mills, perched over uncertain deposits and financed by a small number of investors dreaming of riches, were common features of the mining landscape until quite recently. Roppel takes the reader into that world.

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