the reader having to flip back many chapters. I frequently reexamined certain illustrations in light of the text to ensure my own proper understanding. The author admits to the speculative nature of some of his understanding of the personalities involved and their motives, but those speculations make the story all the more intriguing. What conclusion would I draw about someone's motives after a careful examination of a large set of extant legal records with its own gaps and limitations?

The author is keenly aware of the likelihood of errors of fact or interpretation creeping into his writing amidst the abundant details. References at the end of each of the thirty-six chapters indicate the sources of facts and testimonies. Despite perceiving a few inaccuracies, this reviewer is pleased that Dunn undertook this task, and certainly recommends this series. If you want to know about the origins of New Jersey Zinc from the earliest days through the nineteenth century, and how the mining landscape at Franklin and Sterling Hill relates to mining companies and historical personalities, this is the work and I know of no other. Pete Dunn leaves a detailed twentieth-century history untold. Surely, a dedicated historian should pursue that endeavor in the future.

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Harvey N. Gardiner. ***Mining Among the Clouds, The Mosquito Range and the Origins of Colorado's Silver Boom***. Denver: Colorado Historical Society, 2002; 136 pp., 40 b&w illustrations, notes, bib., ind., paper, $12.95.

In *Mining Among the Clouds*, Harvey Gardiner capably describes the boom and bust of the high altitude mines on the eastern flank of Colorado's Mosquito Range. The mining activity was located near the summits of Mount Lincoln (14,286 ft.), Mount Cameron (14,238 ft.), and Mount Bross (14,172 ft.). The elevation of the mines themselves ranged from 13,200 feet at the Lincoln Mine to 14,157 feet at the Present Help Mine, which holds the distinction of being the highest producing mine ever worked in Colorado.

Problems traditionally encountered in mining—isolation, transportation difficulties, weather conditions, and elevation—were amplified to extremes at these mines. *Mining Among the Clouds* is primarily the story of the Moose Mine. Located at 13,700 feet, this was the largest producer of all the mines in the area. The story of the Moose begins in 1868, with the discovery of an outcrop of silver at 13,600 feet on Mount Bross by Daniel Plummer and Joseph Myers, and runs through the sale of the Moose estate in 1883 at a public auction in New York City for ten thousand dollars.

The Mount Bross discovery of 1868 ignited a flurry of activity in the area, even though prospectors were initially unaware of the unusual occurrence of the silver there. This first discovery was an outcrop in a horizontal stratum of limestone, not in a fissure vein in granite. The Mount Bross find marked the first time that silver was discovered in limestone in Colorado. Here silver men began to realize that an impermeable grey porphyry, called the Lincoln Porphyry, caps the summit of Mounts Bross, and that Lincoln Limestone, or blue lime, lies immediately beneath the Lincoln Porphyry.

This limestone is brittle and soluble, with fractures and faults breaking it into fragments. As ore-bearing solutions rose to the level of the Lincoln Porphyry, the porphyry forced the solutions to spread laterally into the shatter zone, slowly dissolving and replacing the limestone. In its place, the solutions left behind silver-ore deposits of varying sizes. These deposits became known as replacement deposits, because the silver-ore-bearing solutions literally replaced the limestone.

The contact between the porphyry and the

limestone is one of the most favorable conditions for ore deposition, but miners and prospectors had to learn the significance of this geological feature. They would slowly find that most of the silver replacement deposits were at or near this contact. In *Mining Among the Clouds*, the discussion of the geology of the limestone and porphyry contact was confused by the inclusion of a historical cross-section inconsistent with the text, which shows a sandstone layer between the limestone and the porphyry.

The book presents a good explanation of the problems that occurred in locating and recording mining claims on the eastern slope of the Mosquito Range. The terms "lode" and "vein" simply did not apply to the horizontal replacement deposits there; nor could these deposits be considered placers. The mining laws in place at the time were not equipped to deal with this newly-discovered type of mineral occurrence. The Mining Law of 1872 made the situation even more confusing by requiring the prospector or miner to locate his claim at the apex, or top, of the lode.

While there was silver in the high altitudes of the Mosquito Range, there was initially no market for it because of the exorbitant cost to transport the ore to existing smelters and the absence of local mills and smelters. *Mining Among the Clouds* details the starts and stops of a number of small mountain smelters in Park County that sprang up to serve an ore market. It would have been helpful in understanding the area's geography, transportation issues, and such, if one or more detailed maps had been included to show the location of the smelters that were built, and the more significant town sites, creeks, and claims discussed.

This well-researched volume reveals the role that the development of the Moose Mine and others in the area played in recognizing the significance of the horizontal silver deposits in limestone in Park County. Extrapolating Park County's geology to Lake County, on the other side of the Mosquito Range, pointed the way to the fabulous silver deposits of Leadville, arguably the beginning of Colorado's silver boom.

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Andrew C. Isenberg. ***Mining California: An Ecological History***. New York: Hill and Wang, 2005; 242 pp., illus., map, bib., ind., cloth, $27.

The late historian Carl Becker's famous remark that "every generation writes its own history" is exemplified in this postmodernist interpretation of California's nineteenth-century industrial development. Mining, logging, ranching, and land-grabbing are familiar themes to students of western American history, but Isenberg's refreshing new look deconstructs old themes to analyze the consequences of exploitation both on Native Americans and on the landscape they inhabited long before the Euro-American invasion.

Cause and effect are juxtaposed in a methodology bordering on environmental determinism in this selective study that focuses primarily on hydraulic mining, redwood logging, cattle ranching in the gold rush era, and the Modoc War of 1872-3. This is ironic, since the author's favorite whipping boy, Frederick Jackson Turner, saw a linear development of the frontier through a deterministic lens that started with "wilderness" and ended, after a steady "march of progress," in civilization.

Instead of a linear progression, Isenberg draws a retrograde picture of nineteenth-century California, beginning with a congested and degraded foothill landscape in the gold rush era that quickly gave way to corporate mining. Before farming came urbanization, if one can use that term to characterize the filthy streets of Sacramento and other "collection points for raw materials" that made up California's coastal and riverine trade centers.