

probably are the variations in spelling of Tarbet (pp. 48, 127). This is somewhat unfortunate, because *Flagstaff Silver Mining Co. v. Tarbet* almost certainly is the Utah apex law case cited most widely in the domestic mining literature. The index is rather thin, as is the glossary, which, in particular, could have benefitted from more geology. A one-page summary of the cases is included, giving a clear overview of the mining districts where each originated, and of the associated legal issues.

Overall, this is a very nice contribution that will be of great interest to a variety of people: anyone interested in the history of the apex and lateral rights aspects of mining law, in Utah and Utah mining history, or in the relation between mining, geology, and law. The book includes insightful sections on the development of major metal-mining districts in Utah. The remarkably clear and concise presentation of ore deposit geology, geometry, and its legal implications, should be of considerable value to anyone interested in the development of mining in the West. But while the importance of apex and lateral rights law will be obvious to mine historians, it may not be to the public at large. I wish the author had briefly indicated why this issue had such major legal, and hence economic, social, and historical, implications throughout the metal-mining West.

One may hope that this book will be made widely available, e.g. at national and state park shops, and maybe in shops at the ski resorts built in old mining districts. It should be readily accessible to readers at large. It gives an excellent introduction to one of the major forces in the development of the West, and of Utah in particular.

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Ronald H. Limbaugh and Willard P. Fuller, Jr. *Calaveras Gold: The Impact of Mining on a Mother Lode County*. Reno: University of Nevada Press, 2004; 404 pp., 76 b&w photos, 6 maps, 6 charts, 2 tables, notes, glossary, suggested readings, index, cloth, \$39.95.

Ronald Limbaugh, a prolific historian, and Willard Fuller, a mining geologist, engineer, and consultant, combine their respective talents to produce a model of mining history. Focused on a single county in California's mother lode region, they tell the story of mines, miners, and environmental damage from placer mining days to the present era of environmental regulation.

Surface placer mining lasted but a brief moment in the 1850s. Miners soon discovered placers buried in ancient rivers. Drift and hydraulic mining quickly replaced the pan and rocker. Hydraulic mining went the way of history when federal court injunctions stopped the environmentally destructive practice.

Lode mining in the period from 1850 to 1885 included copper. In the 1860s copper mining boomed due to demand. Capitalists experimented with smelting, but falling prices and increasing costs after the Civil War terminated the experiment. At Copperopolis, miners deployed heap roasting with all of its environmental devastation. By 1867 the copper boom was over. Geology and technology also hampered the growth of mining through the 1880s.

Mining dramatically impacted American Indian life. The authors follow the reactions of the Miwok as mining communities forced their migration. So too other ethnic groups experienced the movements charged by mining ventures and economics. Mining also impacted economic development in the county. Merchants, farmers, loggers, shippers, and industrialists provided for the needs of the mining industry and diversified the county's economy.

Modern mining technology changed the face of Calaveras mining at the turn of the century.

By 1890 less than ten percent of the population was employed in the industry. Technology had replaced manpower. Hydraulic mining went the way of the lawsuit and dredge mining visited the county's watercourses. Larger stamps, vanners, and chemistry concentrated ores for smelting.

These innovations resulted in a very productive period between 1901 and 1916. But the 1920s and 30s saw the industry grind in slow gear. That trend has continued to the present, with metal prices, production costs, and environmental litigation slowing the lode mining enterprise. Today the new mother lode industries are recreation and retirement homes.

The authors meticulously follow the industry and all of its component parts in incredible detail. Readers will find this volume heavily illustrated. Maps fix locations in the mind and the glossary makes the technology and nomenclature of mining accessible to any reader. Further, the notes reveal meticulous research in primary sources. This book is clearly a model for mining history and a book that every western historian should read to understand the industry.

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Duane A. Smith. *Henry M. Teller: Colorado's Grand Old Man*. Boulder: University Press of Colorado, 2002; 264 pages, 35 b&w photos, map, cloth, \$29.95.

Henry Teller was a household name in Colorado a century ago. Today his name is found in places where he made his mark, but few people really know who he was or what he contributed to Colorado. Teller was born in Illinois in 1830, studied law there, and relocated to Central City, Colorado, in 1861, where he set up a law office with partner Hiram Johnson. He got involved in politics early in Colorado and supported Union efforts during the Civil War. In 1864, he sup-

ported a movement to gain statehood for Colorado that was part of an effort to be sure that Lincoln had enough electoral votes to be reelected. However, most people in Colorado Territory were not ready for statehood, and his efforts in favor were defeated at the time.

When statehood did come in 1876, Teller played an active role in establishing the new state government, and its Republican legislature elected him as one of Colorado's U.S. senators in 1877. At that time state legislators elected senators, so Teller did not have to face voters as one would today. In the 1876 presidential election, Colorado played a key role in electing Republican Rutherford B. Hayes president; without its electoral votes, the election would have gone to Samuel Tilden. Democrats accused Teller and other Colorado Republicans of using their influence and power to decide the election in Hayes' favor. At no other time has Colorado played such an important role in a presidential election.

Teller effectively represented Colorado's mining interests during his first term as senator. In 1882, he was appointed secretary of the interior by President Chester A. Arthur, ending, for the moment, his senate career. Teller's role as an advocate for Colorado's mining interests is one thing he is still remembered for, and his fight to protect the mining industry is well documented here. A significant contribution this book makes is putting Teller's time as interior secretary into context.

Teller had an undeserved reputation of being anti-Native American. In the context of today's cultural and political climate, that reputation might be warranted, but in his day he held progressive views. He believed in "civilizing" the Native American through education, so that he could make a living. Teller did believe that Native American cultural beliefs and languages had to be suppressed, and that English would be an important means of assimilation, but his views on these issues were mainstream for the time.