

town has to offer: the five hundred-seat auditorium showing the latest theatricals, concerts, and moving pictures; the library; two full-sized bowling alleys; a billiard parlor; a tiled, steam-heated salt-water natatorium; a two-story emporium filled with the largest stock of merchandise in Alaska at the time; and the dining rooms, which could each seat four hundred to five hundred miners and served meals comparable to those offered at a fine hotel.

We read about baseball games, family picnics, and the grand celebrations on Independence Day, but also about the grueling life of the hardrock miners: the explosions, accidents, cave-ins, and deaths. And Kelly tells the story of the hard life of the mules and horses that lived and worked underground, often until they died. She covers labor troubles and the Western Federation of Miners, and writes about the native Tlingits who worked in the mines but lived in a separate community. Through first-person accounts we also experience the catastrophes that brought the mines and town down. In the epilogue we learn what happened to the place, the major players, and the gold after the twin disasters of the cave-in and the later fire that destroyed the mines and the town.

This book has a few minor problems. Although well illustrated, the illustrations are not numbered and there is no list of illustrations. It would also have been nice if some of the excellent photographs had been enlarged to full-page sized. The book does have a great two-page drawing of the process of turning rock into gold “taken from the dance program of the 1910 Cyanide Ball, which celebrated the start up of the new cyanidation plant.” If one wants a detailed description of the gold mining process and machines, however, one might want to look elsewhere.

Instead, Kelly chooses to immerse us in the place, the period, and the people. Her book is well researched, well written, and well illustrated,

with many photographs from the author’s own family albums. It is a fascinating, detailed, and very human account of this long-neglected piece of Alaskan history.

Karl Gurcke
Klondike Gold Rush
National Historical Park, Skagway

Ronald H. Limbaugh. *Tungsten in Peace and War, 1918-1946*. Reno: University of Nevada Press, 2010; 284 pp., 12 b&w illus., graphs, notes, bib., ind., cloth, \$45. ISBN: 9780874178203

Ron Limbaugh’s *Tungsten* is a major new work in mining history, well deserving of the Clark C. Spence Award it earned from the MHA in 2011. He masterfully situates a metal and its producers in overlapping technological, commercial, and geopolitical contexts, deftly moving from scales as small as a one miner in a stope in the Nevada desert to those as large as global trade and wartime manufacturing. Limbaugh weaves together compelling and complicated themes to produce an extensively researched and well-written example of mining history.

One of Limbaugh’s themes is the industrial uses of tungsten. The metal’s use in incandescent light bulb filaments is well known, but surprisingly accounted for only about ten percent of the total consumption of tungsten throughout the twentieth century. The rest was used in the steel industry, where the addition of tungsten—or other metals, such as manganese, chromium, or vanadium—created a stronger, more durable product perfect, nay essential, to producing the weapons of mechanized warfare instrumental in fighting two global conflicts, as well as a host of civilian technologies.

A second theme of the book relates directly to the first: Given the importance of tungsten in

the production of war materials, the metal was of strategic importance, so securing supplies of it and denying them to one's enemies became a part of twentieth-century geopolitics.

American war planners had to delicately balance the need to remove foreign sources of ore from the market through purchase, while simultaneously encouraging domestic production from both large and small companies. Tungsten was important enough and rare enough to require this balancing act in the name of victory, but also common and widespread enough to make it difficult to ensure a continuous, profitable market for the metal.

These two threads are brought to life through a careful and detailed history of the leading tungsten producing company and the businessman at its helm. Through the skillful use of extensive surviving archival material, Limbaugh tells the story of Charles H. Segerstrom, a Sonora, California, banker and businessman whose involvement in the important tungsten mines in Pershing County, Nevada, stretched from 1917 to the end of his life in 1946.

The demand for tungsten associated with World War I created a boom in northern Nevada when the claims were discovered there in 1917. Segerstrom was a major investor in the Pacific Tungsten Company formed to develop them. When war contracts were abruptly canceled after the Armistice in November 1918, the domestic tungsten mining industry, already facing overseas competition, mostly collapsed. The bankrupt Pacific Tungsten was reorganized in 1924 and 1925 as the Nevada-Massachusetts Company, and Segerstrom, a "consummate utilitarian," piloted that firm to continuous, though always fragile, success throughout the stormy markets, lean times, and explosive wartime demand of the next two decades.

It is difficult to imagine how an author could engage so many topics without losing focus, but

Limbaugh does a truly admirable job of weaving the threads together into a carefully constructed narrative. In his skillful hands, Segerstrom and Nevada-Massachusetts become the leading characters in a broader story about government policy, business economics, and strategic war planning on a global scale, but these broad themes never swamp the interesting story of Segerstrom and his company trying to survive and prosper.

To choose but one example, Limbaugh does excellent work capturing the frenzied ebb and flow of wartime planning and commodity production. His narrative is firmly grounded in Segerstrom's correspondence and government planning documents, giving his readers a vivid sense of the seemingly endless twists and turns, each with the potential for profit or ruin, as Segerstrom directly experienced them. However, even as the author threads the reader through this confusing time, he effectively steps back and provides context, allowing the reader to enjoy the historical perspective that comes with a longer-term view.

Limbaugh also deserves praise for his tone. Though it is clear that he admires Segerstrom's competence and pluck, Limbaugh is judiciously critical of his main character when necessary. It is all too easy for a book-length treatment of a person or mining company to slip into a protracted attack or defense of its primary subject, and Limbaugh carefully avoids either extreme. The mining industry and government planners receive even-handed treatment as well. I was also impressed by Limbaugh's ability to deftly handle technical and policymaking language. His prose is clear and explanatory, neither getting submerged in wonky detail nor "dumbing down" the technical content, which is refreshing.

In short, this is an excellent book, one that should serve as an inspiration and model for future mining historians.

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