Book Reviews

William R. Haycraft. *Yellow Steel: The Story of the Earthmoving Equipment Industry*. Urbana: University of Illinois Press, 2000.

What does mining have in common with canal development, highway construction, and dam building? All move huge quantities of earth, and this require efficient earthmoving equipment. The typical strip or open pit mine often employs a variety of equipment, such as excavators, scrapers, and huge trucks. Although the earthmoving industry got its start long before the first open pit mines began to transform the landscapes of the Lake Superior iron ranges in the 1890s, this book credits the mining industry there with helping to stimulate the development of the modern earthmoving equipment industry. Of Phelps Dodge's Morenci (Arizona) operation, Haycraft notes that "no construction earthmoving project in history has ever approached such volumes on a sustained basis." (p.29)

Although this book is a history of the earthmoving industry since its inception in the early 1800s, it focuses mostly on the late twentieth century; hence, the discussion of "the beginnings" of the industry is condensed into one chapter treating the entire period from 1831 to 1945! Nevertheless, that chapter is quite informative in setting the scene for the development of today's huge machines by Euclid (GM), Caterpillar, International Harvester, Allis-Chalmers, R.G. LeTourneau, Clark, and other companies. It should be noted that corporate and industry history – not the earthmoving equipment itself – is the book's focus; yet, many of the machines and projects (such as open pit mines, and the Suez and Panama Canals) are illustrated and discussed.

Author William Haycraft was an International Marketing Manager for Caterpillar during the last half of the twentieth century. After retiring, Haycraft set out to tell the complex story of the industry. He waves the corporate history seemlessly into major world economic and political events worldwide as only an industry insider can. The book covers not only the U.S. but also Europe and Japan (helping to explain why some of the equipment in mines today bears the names Volvo and Komatsu). Concluding in the 1990s, Haycraft also discusses the industry's relationship to the environmental movement and international free trade. Mining historians will be most interested in the earthmoving equipment for that industry, but this book also rightly recounts the role of farming, dam, and highway construction in stimulating the earthmoving equipment industry. Although only a few multi-page sections of this book deal directly with mining, those that do are very informative. Ironically, there is no entry under "mining" in the index: the patient reader will encounter mining-related information throughout the book in sections covering specific companies or periods in the industry's history. Toward the end of the book, Haycraft observes that although the increasing size and power of equipment has not reduced costs in highway construction (due in part to labor costs) it has helped the mining industry reduce operating costs. He observes that "one can infer from the low grades of ore now being mined profitably, particularly in copper and gold, that the [mining] industry has been able to hold the line or even reduce unit costs . . . ," concluding that "it would have been out of the question to attempt to mine such grades with 1960s equipment." (p. 382)

Skeptical at first that this would be a tribute to big machines and bigger men, this reviewer found himself drawn into Haycraft's fascinating discussion of the industry. Read this book and you will better understand the technology, economy, and politics of an industry that enables modern mining to ever more aggressively transform the face of the earth.

Richard V. Francaviglia
The University of Texas at Arlington