



Charles M. Brinckerhoff

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1901-1987

By Plato Malozemoff

Perhaps the most succinct tribute to Charles M. Brinckerhoff was the citation of the award in 1968 of the most prestigious honor in the mining industry, the William Lawrence Saunders Gold Medal for distinguished achievement in the field of mining, given by the American Institute of Mining, Metallurgical and Petroleum Engineers "for his outstanding administrative and technical ability and for discerning foresight and leadership in the minerals industry."

At the time of this award, he was chairman of the board and chief executive officer of one of the then two largest copper mining companies in the world, The Anaconda Company. This warm-hearted, gentle, fair-minded man of strong principles and vast experience, with over forty years of active participation in the mining industry, was admired and loved by his many friends and associates, and by the working men in the mines with whom he came in contact. He always listened with respect and attention to the opinions expressed by others, and was interested in and solicitous of their problems and misadventures. Yet he was firm and just in his decisions affecting people subordinate to him, which gained him universal respect. He was keenly interested in the young engineers entering the industry and helped them at every opportunity. He possessed a keen intelligence

that gave him the ability to analyze a situation correctly, be it political, technical, financial, or organizational. He was dedicated to innovation in these fields.

Charles Brinckerhoff, born on March 15, 1901, was a graduate of Columbia University in New York City, having received his B.A. at Columbia College in 1922, and his metallurgical engineering degree from the Columbia University's School of Mining in 1925. During the first year out of college he was a cost engineer at Morenci, Arizona, for Phelps Dodge Corporation. He felt, however, that he should learn practical mining from scratch and moved to the Inspiration underground copper mine in Arizona, owned partially by The Anaconda Company. There he worked as a miner side by side with other workmen in drilling, blasting, and timbering. In those days drilling was done dry, without water that is used today, and this created rock dust-laden air in the workplace. This affected Charles' lungs, and he developed silicosis, which eventually was the cause of his death many years later. This impairment did not prevent him from having an illustrious career in mining during some fifty years. It was not until after his retirement in 1969 that the affliction began to affect his activities.

After a stint as a miner, he was made a mine foreman; then, an engineer. He worked at Inspiration from 1926 to 1935. The mine employed the so-called caving mining system, a method that calls for undercutting a block of ore, causing it to break up as it fills the void created by undercutting. This allows the broken ore to be drawn out without requiring drilling and blasting. The drilling and blasting are done only for undercutting and driving development and haulage headings as well as for sinking shafts and forming stations and other installations underground. With an acute perception of the mechanics of mining, Charles introduced numerous improvements in the practice of caving, which were employed by caving operations throughout the world.

In 1935 he was sent by The Anaconda Copper Company to Chile, where he took the position of an assistant mine

superintendent from 1935 to 1937 at the Potrerillos mine of the Andes Copper Company, a subsidiary of Anaconda. Before he embarked for Chile, he married Florence Andreen, his lifetime loyal and charming companion. They had one daughter, Carol Kietzman.

He made steady progress in Chile from 1937 to 1948, becoming mine superintendent, then assistant to the general manager, and finally general manager of Andes Copper Mining Company. From 1948 to 1955 he served as the general manager of Chile Exploration Company, another subsidiary of Anaconda, which owned the Chuquicamata mine, the largest copper mine in the world. It was during this period that he directed the expansion of Chuquicamata, doubling its production.

The 1955 discovery of a new deposit, El Salvador, only twenty miles from the Potrerillos mine, led to the development of this mine by the Andes Company. The caving method was used at this mine but not very successfully. Charles, always looking for better solutions, established the practice of weakening the vertical boundaries of the block to be caved by driving raises and fan drilling the boundaries from the raises. This solved the main problem of this difficult orebody. He also made a number of other improvements in the operations, resulting in lower costs.

It was in the early 1950s that plans took shape to develop the great Toquepala orebody, one of three orebodies owned by Southern Peru Copper Corporation in Peru, the shareholders of which were American Smelting and Refining Company, Phelps Dodge Corporation, Cerro Corporation, and Newmont Mining Corporation. These shareholders were looking for a general manager and president for Southern Peru Copper Corporation who would be the best mining man available with experience in large-scale construction. Charles Brinckerhoff, everyone agreed, would be the ideal choice. He was interested, and a contract was drawn up with terms agreed on by everyone. On the morning Charles was to sign the agreement, he felt obliged before doing so

to tell of his interest in this job to Clyde Weed, the chief executive officer (CEO) of Anaconda. When he did so early that day, Weed blew up and disclosed to Charles that he was destined eventually to become the CEO of Anaconda. He wanted Charles to stay with Anaconda, and Charles advised the Southern Peru shareholders that he felt he could not accept their offer after all.

Promotions at Anaconda followed rapidly until in 1958 he was made the president and in 1964 the chief executive officer.

After retirement in 1969, he was active as a consultant for several of the prominent mining companies in the United States. He was also a consultant to the Shah of Iran, who after expropriating the rights of Selection Trust of London to develop the great Sar Chesma copper mine decided to have Iran develop it. Charles advised him to hire the group of engineers who worked at the Chuquicamata mine and were then idle because the Chilean Communist government led by Allende had just expropriated it. The Shah agreed, and the Chuquicamata engineers designed the mine and facilities (mill, smelter, and refinery as well as the railroad and port). Charles undertook to negotiate an agreement on behalf of Iran with the contractors to do the construction. This took over two years to complete because all the terms had to be approved by the mine minister, who was very busy. During this time Charles commuted from New York to Iran every two months or so. With infinite patience and skill, he finally had the agreement approved by the minister, and construction started. By then Charles had had enough of Iran.

The Columbia Engineering School Alumni Association awarded Charles the Eglestone Medal:

. . . for distinguished engineering achievement as a metallurgical engineer, mining engineer, executive and director of companies in the field of world metal resources, particularly as president of The Anaconda Company—devoted to the betterment of inter-American

relations in the finest traditions of the engineer-diplomat; industrial representative for twenty three years in Latin America, enhancing both personal and corporate integrity in those countries where he served; holder of international honors in his field; devoted alumnus of Columbia University and member of the Columbia Engineering Council; steeped in the best tradition of his profession and ambassador without portfolio for that profession and the United States, both here and abroad, for the achievement of human welfare and human relations.

I always looked up to Charles Brinckerhoff as a beacon to be guided by. He pursued patient but steady progress in his career, which was deservedly crowned with one of the highest posts among the leading mining companies in America. Yet personally, and with his friends, he never changed—one felt he was always the Charles we knew before, attentive, interested in his friends, warm, and kind. I feel privileged to have known him for so long.