



*Joe B. Rosenbaum*

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1912-1987

By Milton E. Wadsworth

Joe B. Rosenbaum, a long-term pioneer in the nation's metallurgical industry and a key figure in the industrial development of the domestic uranium industry, died of cancer September 12, 1987, at the age of seventy-five. During the previous thirteen years, Joe Rosenbaum had been an active consulting engineer in the metallurgical industry, in addition to serving both as an adjunct professor for the Department of Metallurgical Engineering and as a member of the Advisory Council of the College of Mines and Minerals Industries for the University of Utah, Salt Lake City, Utah.

Joe Rosenbaum was born March 1, 1912, in Denver, Colorado, the second of four children of Zelich and Rachel Greenblatt Rosenbaum. Joe was the first of their children to be born in America. He developed a hunger for reading at an early age. Because his elementary school had so few books, he would play "hooky" from school and go to the public library to read. His interest in engineering and technical matters was already being established. He attended Manual Training High School in Denver where he excelled in math and science and participated in football, track, and boxing. He graduated from high school in 1929.

In the fall of 1929 he enrolled at the Colorado School of Mines with a scholarship and an ambition to become a

metallurgist. In 1932 he had to leave school for a year to work before returning to finish his degree in metallurgical engineering in 1934 during the depths of the depression.

Several months after graduating, Joe obtained a job with the Public Works Administration in Denver. Although the job was engineering, it was hardly metallurgy. A major compensation, however, was that Greta Fredrickson also worked in the office. Over the course of about eighteen months, they fell in love and were married on New Year's Eve in 1935.

In 1937 Joe decided he'd stayed away from the mineral business long enough. He began the operation of a mica mine in the hills west of Denver using a converted 1920 LaSalle limousine to haul ore. He soon tired of this noneconomic operation and obtained a job as a flotation helper for the Walker Mining Company at Walkermine, California, now a ghost town about fifty miles from Reno. By the time he left Walkermine in 1941, Joe had worked his way up through ball mill operator and shift boss to company metallurgist. He had finally achieved stature in his chosen field of metallurgy; he never again left the field, though for a few years his role was more administrative than technical.

His next stop was Boulder City, Nevada, where he joined the U.S. Bureau of Mines as a junior metallurgist. His tenure in Boulder City, however, was interrupted by the war. He entered the Army Corps of Engineers as a first lieutenant in May 1942 and in 1943 was sent to serve in the South Pacific. In 1946 he was released from active duty with the rank of major, and resumed his research career in Boulder City. There he worked on a variety of projects, the most important of which was the processing of manganese ore and winning of chromium from domestic, low-grade ores.

In 1952 he was transferred to the Salt Lake City Metallurgy Research Center where he remained for ten very productive years. The work he directed in uranium and vana

dium extraction from complex ores earned him international recognition. He developed successful procedures for both acid and alkaline leaching of uranium and subsequent purification techniques that were incorporated in uranium processing plants. This did much to produce a uniform uranium product from widely dissimilar ores. His well-known papers on solvent extraction of uranium were published during this time. In addition he contributed to the literature in beryllium, rhenium, and thorium recovery, and became expert in solvent extraction and several applications of electrometallurgy.

He declined job offers in Washington, D.C. several times before accepting the position as chief metallurgist of the U.S. Bureau of Mines in 1962. In 1963 he was given the dual assignment of director of metallurgy research and acting assistant director of mineral research. He held the latter position while a permanent director was sought, and was commended by members of congress for the lucid and soft-spoken answers given while presenting the two separate budgets for the three successive years 1963-1965. His leadership in welding four dissimilar research groups, of different disciplines and with different objectives, into an integrated group and other similar accomplishments was well recognized. Although he enjoyed many aspects of this position, he found that he preferred to be closer to actual research. When the position became vacant in 1967, he was appointed research director of the Salt Lake City Metallurgy Center and stepped down in Washington, D.C.

His excellent organizational and leadership skills enabled him to administer his duties as research director while permitting him time to get involved with the technical details of several projects until his retirement in 1974. By 1970 he had developed impressive skills in such areas as ion exchange processing of gold and uranium and extractive processing of titanium and aluminum. During this period, he also worked on sulfur recovery from smelter stack gases.

Joe Rosenbaum received many honors during his career.

Until his death, he was adjunct professor of metallurgy and member of the College of Mines and Mineral Industries Advisory Council at the University of Utah. He was elected a fellow of the American Association for the Advancement of Science, a distinguished member of the Society of Mining Engineers, a member of the American Society for Metals, and a member of the National Academy of Engineering. His many awards include the Distinguished Achievement Award from the Colorado School of Mines, a Presidential Citation for Efficiency in Research Management, the Distinguished Service Award from the U.S. Department of the Interior, and the James Douglas Gold Medal for distinguished achievement in nonferrous metallurgy from the American Institute of Mining, Metallurgical and Petroleum Engineers (AIME). He was a Henry Krumb Lecturer for AIME, and authored or coauthored over sixty publications.

Joe and Greta had three children—Karen, Richard, and John. Karen is a teacher of English and creative writing at Ohlone College in Fremont, California. Richard is a pediatrician and is the founder of Babymed International in Denver, Colorado. John is a research engineer at Chevron Research and Technology Company in Richmond, California. In addition, Joe and Greta had three granddaughters and three grandsons.

In addition to his imposing technical and administrative skills, Joe was a warm, loving person, and his gentle, but firm, manner endeared him to his friends, family, and coworkers, all of whom miss this hard-working and honest gentleman.

