



### **Norman L. Weiss (1902–1986)**

2006 Inductee from Mining's Past

Norman L. Weiss, former Director of Milling for American Smelting and Refining Company, joined ASARCO in 1924 and retired in 1967 after 43 years, excluding a brief leave of absence with Dow Chemical. Norman received his B.S. degree in Metallurgical Engineering from M.I.T. This was followed by a year at Pennsylvania State University as Graduate Assistant to E. A. Holbrook and Instructor in mine safety and ventilation, ore dressing and coal preparation, including original research in cleaning and analysis of coals using heavy media separation. His first 22 years were spent with ASARCO, where he served in a number of capacities. During this period, he made many contributions to the milling of complex base and precious metal ores and was particularly proud of safety and labor management records.

Norm took a brief leave of absence as Field Metallurgist with Dow Chemical from 1946-1947 and wrote a complete report on Cerro de Pasco milling operations, which resulted in significant improvements. He returned to ASARCO in 1947 as Chief Milling Engineer of Western Mining Department in Salt Lake City with responsibility for all milling activities in the Western Hemisphere except Mexico. In 1962 as Director of Milling, he assumed responsibility for all ASARCO milling worldwide, including testing, research, design start ups, and operation. In the period 1947-67, he designed and placed in operation a score of concentrators and major enlargements. The best known of these were Toquepala, Silver Bell, and Mission. He was lent by ASARCO to other associated companies for design of Triumph mill in Idaho, Mount Isa #2 in Australia, and major changes to Granby Consolidated primary crushing plant at Copper Mountain and mill at Allenby. Also, when Toquepala became Southern Peru Copper Company, he was lent to the latter in 1956 to supervise preparation of construction drawings from his earlier designs.

Norman opened an office in Tucson for consulting practice after retirement and performed advisory and design services for more than 50 mining and mine-associated firms. Norm was a member of SME-AIME as well as Canadian Institute of Mining and Metallurgy, and was a

Mining Foundation of the Southwest  
American Mining Hall of Fame

registered professional engineer in Colorado, Arizona, and California. He was the recipient of the "Roberts H. Richards Award" of AIME in 1960, "Legion of Honor" in 1974, and "Honorary Member" of AIME in 1980. His major contribution to SME-AIME includes Editor of the SME Mining Engineering Handbook and SME Mineral Processing Handbook. His final contribution to the mining library is his classic book, *Memoir of a Mill Man*.