



Eleventh Annual

American

Mining Hall of Fame

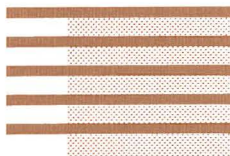
Awards Presentation

and Banquet

December 4, 1993

Sponsored by
Mining Foundation of the Southwest

The Westin La Paloma, Tucson, Arizona



PROGRAM

Reception 6:30 p.m.

Banquet Dinner 7:30 p.m.

Ceremony 9:00 p.m.

Welcoming Remarks: *Herb E. Welhener*

Introduction of Head Table and Other
Honored Guests: *Michael Arnold*

Remarks by Congressman Jim Kolbe

Presentation of 1993 Inductees: Meyer Guggenheim and George Hearst
Presented by Herb Welhener

Presentation of 1993 Medal of Merit: Walter E. Heinrichs, Jr.
Presented by Martin Kuhn

Willard C. Lacy
Presented by John Lacy

Introduction of 1993 Recipient: Milton H. Ward
Introduced by Michael Arnold

Featured Address: Milton H. Ward

Adjournment



RECEPTION HOSTED BY

ASARCO Incorporated

Cyprus Copper Company

Empire Machinery Company

Henkel Corporation

Industrial Motor & Control, Inc.

Magma Copper Company

Modular Mining Systems

Peabody Western Coal Company

Purcell's Western States Tire Company

Bank One Arizona

E.L. Montgomery & Associates

Harnischfeger Corporation

Independent Mining Consultants

M3 Engineering & Technology, Inc.

Mintec, Incorporated

National Bank of Arizona

Phelps Dodge Corporation



MINING FOUNDATION OF THE SOUTHWEST

The goal and purpose of the Mining Foundation of the Southwest is to promote public understanding and education related to the mining industry. Toward this goal, the Foundation has several philanthropic activities which are funded by donations and fund-raising activities. The foundation has identified three projects in which to participate that will further the public understanding of mining:

- 1) The upgrade of the audio system at the mining exhibits at the Arizona Historical Society Museum in Tucson.
- 2) The continuation of the oral history project in conjunction with the Historical Society. This project interviews prominent members of the mining industry to preserve their impact on the history of Arizona.
- 3) The support of the Mining and Geological Engineering Department at the University of Arizona and the San Xavier Experimental Mine used by the mining and geology students at the University.

The Hall of Fame Awards Banquet serves a dual purpose in educating people about prominent persons associated with the mining industry, both present and past, and raising funds to continue the philanthropic projects of the Foundation.

The Mining Foundation of the Southwest was incorporated in 1993 with the combination of the Mining Club of the Southwest and the Mining Club of the Southwest Foundation. The Mining Club was started in 1971 and the Club's Foundation began in 1983 with the first American Mining Hall of Fame Awards.

The Hall of Fame honorees, both living and deceased, now number 50. The plaques which commemorate their induction are on display at the Arizona Historical Society's Museum at 949 East Second Street in Tucson.



AMERICAN MINING HALL OF FAME

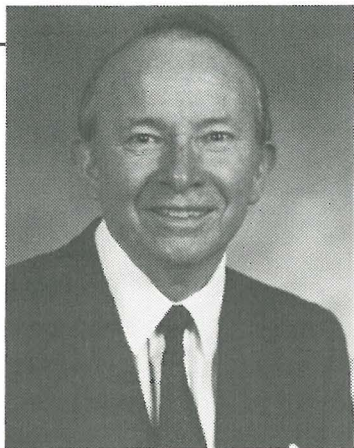
1993 RECIPIENT

MILTON H. WARD

Milt Ward began his mining career in 1955 when he joined the San Manuel Copper Corporation after earning a Bachelor of Science from the University of Alabama. His career has since taken him to Kerr McGee, where he rose to division engineer, the United Nuclear-Homestake Partners for Homestake Mining Company as general manager, to Ranchers Exploration and Development Corporation where he served as vice president of operations, and to Freeport Minerals where he advanced to president and Chief Operating Officer and was eventually the CEO of several of the Freeport-McMoRan divisions.

On May 14, 1992, Ward was appointed Chairman, President, and Chief Executive Officer of Cyprus Minerals Company, where he has undertaken a vigorous streamlining effort of the company as well as overseeing a plan of merger with Amax, Inc. Under Ward's leadership, Cyprus has been refocused on expanding its core business in copper and coal and is now recognized as one of the largest mining companies in the world.

Ward is active with the American Mining Congress, having served as chairman and director from 1989 to 1992; he has received the Distinguished Member Award and the Saunders Gold Medal from the AIME and is the past president and a member of the executive committee of the Mining and Metallurgical Society of America.



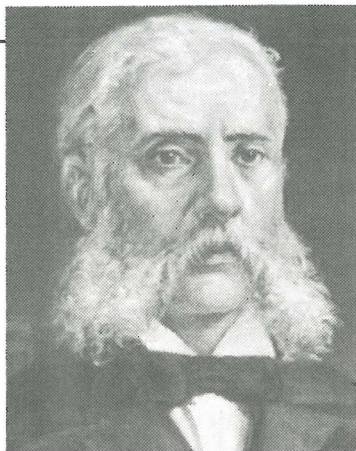
AMERICAN MINING HALL OF FAME

1993 INDUCTEE

MEYER GUGGENHEIM

1825-1905

Meyer Guggenheim, a consummate salesman, immigrated to the United States from Switzerland in 1848 and eventually built one of the world's greatest mining and smelting companies. His career began selling stove polish, then soap, lye, and coffee, railroad stock investments and eventually imported lace and embroidery. His accumulated capital was then used to purchase two flooded mines in Colorado's Leadville District that turned out to be bonanzas. Guggenheim's next enterprise was the six-stack smelter of the Philadelphia Smelting & Refining Co. in Pueblo, Colorado, completed in 1889. The passage of the McKinley Tariff by the United States Congress in 1890 was, in part, an attempt by competitors to stem the supply of rich Mexican silver from Guggenheim's smelter. The ultimate effect, however, encouraged Guggenheim to build smelters in Aguascalientes and Monterey, Mexico, from which he flooded the world's silver market. In 1899, when the major smelters and mining industrialists combined to form the American Smelting and Refining Company, Guggenheim refused to join and, during the next year, not only out-produced the trust but also bought up a major interest in it. Eventually, five of Meyer's seven sons were elected to the board of directors of the American Smelting and Refining Company and the trust would be most remembered for its association with the Guggenheim family.



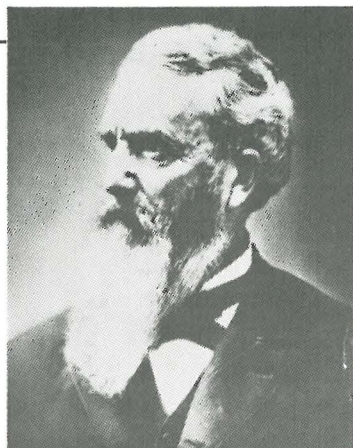
AMERICAN MINING HALL OF FAME

1993 INDUCTEE

GEORGE HEARST 1820-1891

George Hearst, the son of a Missouri farmer, came to California during the gold rush with no formal education and began his mining career in placer mining, unsuccessfully, at Hangtown, Jackass Gulch and then Nevada City. His fortune was made after he made a deal to purchase a one-half interest in the Gould and Curry mine followed by the purchase of a one-sixth interest in the Ophir mine for \$3,000. These two mines proved to be the richest of all the Comstock mines. When Hearst sold his Comstock holdings, he reinvested his profits into the Ontario Mine in Utah, the Homestake Mine in Lead, South Dakota, and the Anaconda copper mine in Butte, Montana, and thereby became one of the richest men in mining. In 1866, he was appointed United States Senator from California and became one of mining's most active spokesmen.

Hearst's mining fortune also purchased the San Francisco Daily Examiner, the first block of what would become the Hearst Publishing Empire, headed by his son, William Randolph Hearst.



AMERICAN MINING HALL OF FAME

1993 MEDAL OF MERIT RECIPIENT

WALTER E. HEINRICHS, JR.

Walt Heinrichs was born in Superior, Arizona, and was raised in the mining camps of the Western United States and in the Philippines. He graduated from the Colorado School of Mines in 1940 as a geological engineer with a geophysics major, and, after service in the U.S. Navy's early Gulf Coast off-shore aerial magnetometer experiments, he worked as a geophysicist with the U.S. Bureau of Reclamation and then with Newmont Mining Corporation.



Heinrichs is one of the pioneers of modern mining geophysical exploration and is credited with being a key member of the United Geophysical Company team under Herbert Hoover, Jr., that discovered the Pima mine using geophysics in an area long considered to be "non-mineral." In 1955, he was the co-recipient of the AIME's Robert Peele Memorial Award for his part in a paper related to the discovery of the Pima Mine and in that same year received the Colorado School of Mines first Van Diest Award for outstanding work during the first 15 years following graduation.

In 1958 he co-founded Heinrichs GEOEXploration Company which he still owns and manages. GEOEX continues to provide geophysical consulting services in water, energy, minerals and environmental matters.



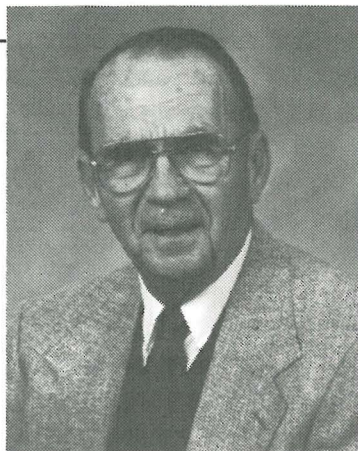
AMERICAN MINING HALL OF FAME

1993 MEDAL OF MERIT RECIPIENT

WILLARD C. LACY

Bill Lacy, the son of missionary parents, grew up in China, and first gained prominence as Chief Geologist of Cerro de Pasco Corporation's operations in Peru where he participated in the discovery of some of the most famous and productive copper mines in the world. In 1955 he began an academic career at the University of Arizona, and, as Head of the Department of Mining and Geological Engineering, brought an approach to teaching premised upon a grasp of the overall picture. In 1971 he took a new position as Foundation Professor of Geology at James Cook University in Townsville, Queensland, where he taught mineral economics, economic geology and geotechnical engineering as well as establishing and supervising an innovative work-study master's degree program. Dr. Lacy retired from full-time teaching in 1981 but continues an active practice of mineral consulting and lecturing for private clients, governments and educational institutions throughout the world.

Dr. Lacy was selected as the Essington Lewis Lecturer by AusIMM in 1971; the Henry Krumb Lecturer by SME/AIME in 1985, and elected as a Distinguished Member of the SME/AIME in 1987. In addition to more than 60 papers, monographs and books, Dr. Lacy did the background research, outline and site selection for the television series "Out Of The Fiery Furnace" for Australian television that has since been broadcast throughout the world.



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Herb Welhener

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AMERICAN MINING HALL OF FAME

1983 Recipient

George E. Atwood

1984 Recipient

Charles F. Barber

1985 Recipient

George B. Munroe

1986 Recipient

John C. Duncan

1987 Recipient

Plato Malozemoff

1988 Recipient

Simon D. Strauss

1989 Recipient

G. Robert Durham

1990 Recipient

Harry M. Conger

1991 Recipient

Kenneth J. Barr

1992 Recipient

T S Ary

1983-1992 Inductees

Maxie L. Anderson 1934-1983	Hal W. Hardinge 1855-1943	Rossiter W. Raymond 1840-1918
Williams Andrews Clark 1839-1925	Herbert C. Hoover 1874-1964	Robert H. Richards 1844-1945
James Douglas 1837-1918	Daniel C. Jackling 1869-1956	Thomas A. Rickard 1864-1953
James Stuart Douglas 1868-1949	Ira B. Joralemon 1884-1975	Louis D. Ricketts 1859-1940
Charles F. Fogerty 1921-1981	Henry Krumb 1875-1958	Reno H. Sales 1876-1969
Antoine M. Gaudin 1896-1974	Waldemar Lindgren 1860-1939	Fred Searls, Jr. 1888-1968
Wesley P. Goss 1899-1985	Curtis H. Lindley 1850-1920	Arthur F. Taggart 1884-1959
William C. Greene 1853-1913	John William Mackay 1831-1901	William Boyce Thompson 1869-1930
John C. Greenway 1872-1926	Seeley W. Mudd 1861-1926	Arthur Redman Wilfley 1860-1927
	Charles Debrille Poston 1825-1902	

Medal of Merit Recipients

Ralph J. Roberts, 1989
Victor H. Verity, 1989
John S. Livermore, 1990

George D. Argall, Jr., 1991
Arthur A. Brant, 1992
William C. Epler, 1992





**Mining
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of the
Southwest**

XI