

Twenty-First Annual

American Mining Hall of Fame Awards Presentation and Banquet

December 6, 2003

Sheraton Tucson, Tucson, Arizona



2003 Program

6:30 p.m.

7:15 p.m.

8:30 p.m.

Reception

Banquet Dinner

Ceremony

Welcoming Remarks:

Donald Earnest

Introduction of Head Table
and Other Honored Guests:

Donald Earnest

Awards Presentation:

Roshan Bhappu

Presentation of 2003
Inductees From
Mining's Past:

Tom Walsh

Presented by

Donald F. Earnest

James Boyd

Presented by

Walter E. Heinrichs

Presentation of 2003
Medals of Merit:

James Wm. White

Presented by

William H. Dresher

Stanley Dempsey

Presented by John Lacy

Presentation of 2003
Industry Partnership Award:

Aker Kvaerner

Presented by

Martin C. Kuhn

Presentation of 2003
Inductee:

Thomas J. O'Neil

Presented by

Roshan Bhappu

Featured Address:

Thomas J. O'Neil

Adjournment:

Donald F. Earnest



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Phelps Dodge Corporation

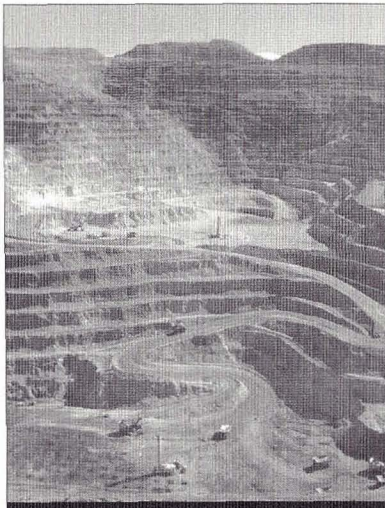
URS

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Mining Foundation of the Southwest

Mission and Accomplishments

The Mining Foundation of the Southwest was incorporated in 1983. The purpose of the Foundation is to promote public understanding and education related to the mining industry, both in the U.S. and abroad. Toward this goal, the Foundation has been able to help fund a number of projects each year from donations and fund-raising activities, the most recent of which include:

- Funding for philanthropic projects at the University of Arizona, Colorado School of Mines, Mackey School of Mines at the University of Nevada, New Mexico Tech, La Universidad de Sonora in Hermosillo, Sonora, Mexico, and Arizona Historical Society Museum;
- Funding and materials for recruiting posters to benefit the University of Arizona Mining and Geological Engineering Department;
- Funding for transportation of school children to the ASARCO Mineral Discovery Center south of Tucson;
- Funds for the preparation of self-guided tour brochures for the University of Arizona Mineral Collection at the Flandrau Science Center;
- Funding to La Asociación de Mineros de Sonora to help sponsor the First Gem and Minerals Exhibition in Hermosillo, Sonora, Mexico;
- Funding for a cooperative effort with the U. S. Forest Service for installation of geology-related interpretive signs on the Mount Lemmon Highway near Tucson.

In addition the Foundation has published a three-volume set of the History of Mining in Arizona, as well as provided guest speakers on geology and mining-related topics for southern Arizona schools and other organizations.

December 6, 2003 marks the 21st Anniversary of the Foundation's American Mining Hall of Fame Awards Ceremony and Banquet. The American Mining Hall of Fame serves to educate the public about prominent persons associated with the mining industry in both past and present times by inducting three living honorees, two deceased luminaries, and one supporting organization or person into the Hall of Fame each year. Including this year's inductees, 108 persons and organizations have been honored by the Foundation. Plaques commemorating each of these inductions are on display at the Arizona Historical Society Museum at 949 East Second Street, Tucson, Arizona.



Thomas J. O'Neil recently retired as the President and Chief Operating officer of Cleveland-Cliffs Inc. and President of the Cleveland-Cliffs Iron Company and Cliffs Mining Company. Prior to joining Cleveland-Cliffs, Dr. O'Neil spent 10 years with Cyprus Minerals Company and its previous owner, Amoco Minerals Company, where he served in various capacities including Vice President, Engineering and Development, Vice President and General Manager, Cyprus Sierrita Corporation and Vice President, South Pacific Operations, stationed in Sydney, Australia.

Before joining Amoco, Dr. O'Neil was Professor and Head of the Department of Mining and Geological Engineering at the University of Arizona where he was a faculty member for 13 years. He is currently President of the Society for Mining, Metallurgy and Exploration (SME) and was elected to the National Academy of Engineers in 1999. He is also a director and Chairman of the American Iron Ore Association and a director of the National Mining Hall of Fame and Museum as well as the Mineral Information Institute.

Dr. O'Neil holds a B.S degree in Mining Engineering from Lehigh University, a master's degree from Pennsylvania State University and a Ph.D. degree from the University of Arizona. His individual specialty is the theory and practice of mineral economics in mineral development and operations. He is the co-author of the book, "Mine Investment Analysis," published by SME and used as a text worldwide in the teaching of mineral economics.

Dr. O'Neil received the William Lawrence Saunders Gold Medal award of the AIME in 2003 recognizing distinguished service in mining other than coal. He had previously been awarded the Robert Peele Award of SME in 1970 and was elected AIME Henry Krumb distinguished Lecturer in 1982. He was elected Centennial Fellow, College of Earth and Mineral Sciences, Pennsylvania State University in 1996.



Thomas J. O'Neil

**2003
Inductee and
Guest of Honor**





Thomas F. Walsh
(1850-1910)

2003
Inductee from
Mining's Past

Tom Walsh, a staunch, hard working Irishman with a handsome red moustache, was born in Clonmel, County Tipperary. He apprenticed as a millwright and became a jack of all trades carpenter. At 19 he migrated to Massachusetts, then to Golden, Colorado, where he worked for the Colorado and Southern Railroad for two years and caught "the mining fever," as he always called it. In 1874, he joined the Black Hills, South Dakota gold rush and there met Smokey Jones, who offered him half interest in his Deadwood prospect. On the advice of experienced mining friends, Walsh turned down Jones' offer, only to later find out that it had become the fabulous Homestake gold mine. This was a lesson he was never to forget.

In 1877 Walsh bought the Grand Hotel in Leadville, Colorado, married, sold the hotel and then moved to Denver. By now, with improved knowledge, experience and a keen mining intuition, he decided to move to Ouray, Colorado. High above Ouray, in Imogene Basin, there were a number of "barren" silver claims. Here in 1881 Walsh recognized a rich gold telluride vein in an old tunnel on the Gertrude claim. This represented his discovery of the rich Camp Bird gold mine.

In 1902, the mine was sold to a London syndicate for cash plus ore, plus stock, and the Walshes on the urging of John Hayes Hammond moved to Washington, D.C., and became national and international celebrities. Walsh's daughter, Evalyn, married Edward Beal McLean, heir to the Washington Post and Cincinnati Enquirer and they became co-owners of the infamous Hope diamond. The Walshes were friends of presidents and kings and Mr. Walsh represented the United States with his family at the World Exposition in Paris having been appointed to that position by the President.

The town of Ouray and Tom Walsh had become wealthy together. While owner of the Camp Bird, he saw to it that his miners were compensated better than what any union could assure. Before he died, he endowed the town a beautiful stocked library and saved the community hospital from financial ruin.

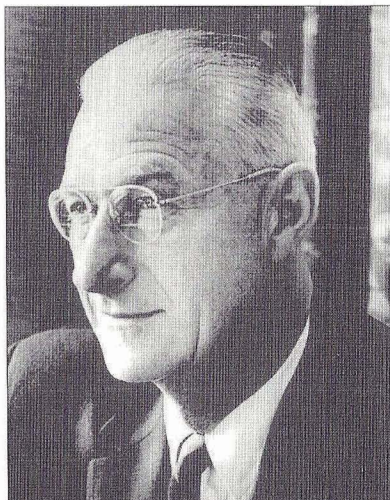


Dr. Boyd was born in Kanowna, Western Australia. He received a B.S. in Engineering and Economics from the California Institute of Technology in 1927 and his M.Sc. in Geophysics and D.Sc. in Geology, at Colorado School of Mines, where he subsequently taught until 1941. During WWII, he served on the Army and Navy Munitions Board and the War Production Board, including a term as Executive Director of the Industry Division of the Office of the Military, Government for Germany.

In 1946, Dr. Boyd became Dean of Faculty of Colorado School of Mines. In 1947, he was appointed director of the U.S. Bureau of Mines. In 1951 he took the position of Vice President, Exploration of Kennecott Copper Corporation. In 1960, he became president of Copper Range Company and then Chairman of the Board of Directors in 1970. The following year he was appointed Executive Director of the National Commission on Materials Policy, and subsequently he was appointed chairman of the Materials Advisory Panel of the Congressional Office of Technology Assessment.

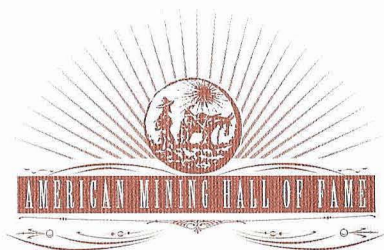
During his career, Dr. Boyd was the recipient of awards from American Society of Mechanical Engineers, the American Institute of Mining, Metallurgy and Petroleum Engineers, and from his two alma maters, Cal. Tech and Colorado Mines. He delivered distinguished and memorial lectures to AIME, ASM, TMS and the American Ceramic Society, and received the Parker Medal of AIPG, of which he was Vice President in 1966. In 1967 he was elected to the National Academy of Engineering.

Dr. Boyd served as a director of Detroit Edison, New Jersey Zinc, Felmont Petroleum, the Copper Development Association and International Copper Research Association.



James Boyd
(1904-1987)

2003
Inductee from
Mining's Past





**Stanley H.
Dempsey**

**2003
Medal of
Merit Recipient**

Stan Dempsey is the founder of Royal Gold, Inc., and the Denver Mining Finance Company of which he currently serves as Chairman and President, respectively. Royal Gold is a public company that provides an innovative method for investors to obtain direct exposure to the precious metal markets through the acquisition of mineral royalties while the Denver Mining Finance Company provides merchant banking services for the mining industry.

Mr. Dempsey began his career as an independent mining operator and in 1960 went to work as an engineer for Climax Molybdenum Company before a hiatus to attend law school. After graduation from law school he continued his association with Climax and rose through the ranks within the legal department of AMAX, Inc., who had by that time acquired Climax.

Beginning in the mid-1960s, Mr. Dempsey organized an environmental compliance group for Climax and gradually developed this concept throughout the AMAX organization as he rose through successive positions of Director of Environmental Affairs for the Western Area of AMAX, Inc., Vice President and Director of Environmental Affairs, AMAX, Inc., and Vice President, Director of Environmental Affairs and Deputy Director, Office of Communications and Public Affairs, AMAX Inc., during 1970-1981. Mr. Dempsey then became responsible for AMAX's interests in Australia, Papua New Guinea and parts of Indonesia, practiced law between 1983 and 1986 and formed Royal Gold in 1987.

Mr. Dempsey's direct efforts in the area of environmental compliance has provided the model for the mining industry throughout the world. His personal influence with local and national political leaders on behalf of AMAX, the Mineral Information Institute and the National Mining Association has been a significant contribution to the credibility of the minerals industry.



Dr. White is the cofounder and current Chairman of Modular Mining Systems, Inc. (Modular). Modular, founded in 1979, has grown until it is now the world leader in mine management system technology. Headquartered in Tucson, Arizona, Modular has regional offices in Australia, Brazil, Canada, Chile, China, Indonesia, Peru, and South Africa. Beginning with the development of an innovative mine haul truck dispatching system, Jim led the company to develop and offer a totally integrated mine management system called IntelliMine®. With over 6000 Modular field computer systems deployed, clients report increases in mine productivity from 5 to 32%.

In 1996, Komatsu America International Company purchased a controlling interest in Modular. This enabled the company to expand its product lines. Together with Komatsu, Ltd. of Tokyo and Komatsu America Corporation of Illinois, Modular is about to deploy its newest product – an autonomous (driverless) haulage truck system. This “Nonstop Haulage” system integrates the latest in high-precision Global Positioning System (GPS), vital signs monitoring, and safety technologies. Modular’s mine management system, including its truck dispatch feature, acts as the real-time supervisory system for this advanced technology. Autonomous haul trucks are a logical and important next step toward increased efficiency, reduced labor and maintenance costs, and productivity gains.

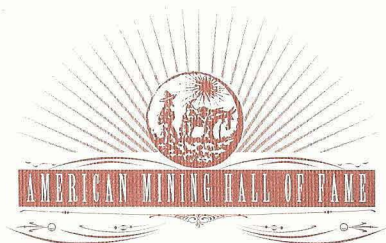
Jim White received a B.S. in Chemical Engineering at the University of Delaware and an M.S. and Ph.D. in Chemical Engineering at the University of Wisconsin. He began his technical career in 1968 as a Senior Project Engineer working for Rohm and Haas Co., a large chemicals and plastics manufacturer. He resigned as head of their Research Computing Center in 1971 to join the University of Arizona, College of Mines, as an Associate Professor of Chemical Engineering. He quickly began applying his computer knowledge and talent to problems and opportunities in the mining industry. He left the University in 1981 to head up Project Engineering at Modular Mining Systems, Inc.

Dr. White is also a Director of the National Mining Hall of Fame and Museum and a member of the Engineering Advisory Committee of the Arizona State Board of Technical Registration.



**James William
White, Ph.D., P.E.**

**2003
Medal of
Merit Recipient**



AKER KVAERNER™

Aker Kvaerner™

**2003
Industry Partnership
Award**

The Mining Industry is evolving a new look as more and more of the US mining companies are concentrating on off-shore projects and consolidating operations to ensure a future position in the industry. Major engineering and construction firms are also moving off-shore and consolidating to meet the needs of their clients. The MFSW Industry Partnership Award recognizes companies and individuals that are an integral part of the Mining Industry service sector and who have made significant contributions over the years.

Aker Kvaerner has evolved from A.G. McKee to Davy-McKee to Kvaerner and now to Aker Kvaerner. Aker Kvaerner and its predecessor companies have played an important role in the engineering, construction and start-up of numerous successful projects throughout the world and more specifically in the southwestern US and South America. Some historical projects of notable interest are the Magma (now BHP) Smelter, the Cyprus (now Phelps Dodge) Miami Smelter and SX-EW plant and the Anaconda-Twin Buttes oxide leach/SX/EW plant, since removed and relocated in part at Phelps Dodge Sierrita. Some recent projects of importance are the Phelps Dodge-Bagdad concentrates leach plant and SX/EW expansion and the BHP-Tintaya, Peru heap leach/SX/EW plant.

Aker Kvaerner continues to be a leader in the engineering and construction of precious metals, soda ash, concentrating, smelting, leaching, solvent extraction and electrowinning projects throughout the world. Aker Kvaerner executes mining projects from offices in California, Arizona, Utah, Chile, Canada, Australia and the UK.



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Milton H. Ward

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William H. Wilkinson

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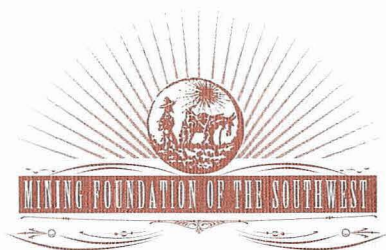
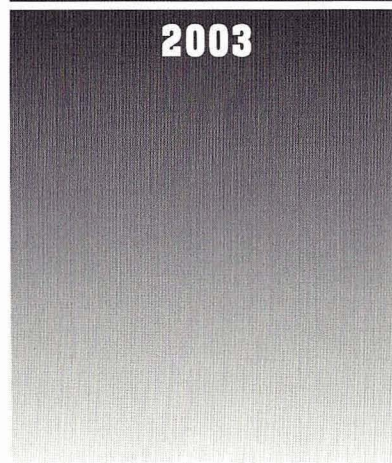
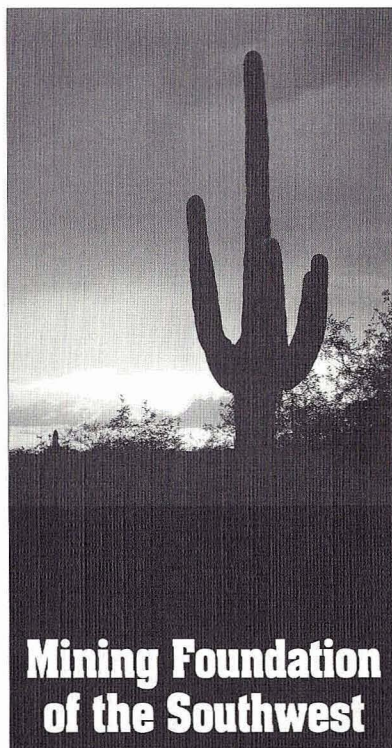
Silver Members

John C. Lacy

R. Brantley Sudderth

Frank R. Milliken

Susan F. Wick





American Mining Hall of Fame

Inductees and Industry Partnership Awards

Inductees (1983-2002)

1983	George E. Atwood
1984	Charles F. Barber
1985	George B. Munroe
1986	John C. Duncan
1987	Plato Malozemoff
1988	Simon D. Strauss
1989	G. Robert Durham
1990	Harry M. Conger
1991	Kenneth J. Barr
1992	T S Ary
1993	Milton H. Ward
1994	J. Burgess Winter
1995	Douglas C. Yearley
1996	Richard de J. Osborne
1997	James R. Moffett
1998	Charles G. Preble
1999	Irl F. Engelhardt
2000	Ronald C. Cambre
2001	A. Dan Rovig
2002	J. David Lowell

Industry Partnership Awards (1995-2002)

1995	Caterpillar, Inc. - Glen A. Barton
1996	Amigos (Arizona Mining & Industry Gets Our Support)
1997	Colorado School of Mines
1998	Stephen D. Bechtel, Jr. and Bechtel Corporation
1999	Mineral Information Institute
2000	Modular Mining Systems, Inc.
2001	Mintec, inc.
2002	Senator Larry Craig



Inductees From Mining's Past (1983-2002)

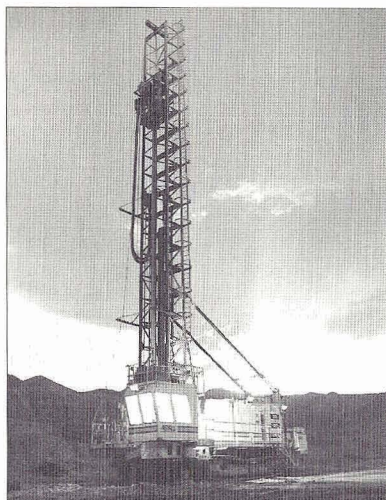
Maxie L. Anderson	1934-1983
Bert S. Butler	1877-1960
Nellie Cashman	1849-1925
Louis S. Cates	1881-1959
William Andrews Clark	1839-1925
James Colquhoun	1857-1954
James Harold Courtright	1908-1986
John Van Nostrand Dorr	1872-1962
James Douglas	1837-1918
James Stewart Douglas	1868-1949
Charles F. Fogerty	1921-1981
Antoine M. Gaudin	1896-1974
Wesley P. Goss	1899-1985
William C. Greene	1853-1913
John C. Greenway	1872-1926
Meyer Guggenheim	1825-1905
Hal W. Hardinge	1855-1943
George Hearst	1820-1891
Joseph Austin Holmes	1859-1915
Herbert C. Hoover	1874-1964
Daniel C. Jackling	1869-1956
H. Myles Jacob	1913-1997
Ira B. Joralemon	1884-1975
Henry Krumb	1875-1958
John Cromwell Lincoln	1866-1959
Waldemar Lindgren	1860-1939
Curtis H. Lindley	1850-1920
John William Mackay	1831-1901
Donald H. McLaughlin	1891-1959
Seeley W. Mudd	1861-1926
Jorge Larrea Ortega	1912-1999
Charles Debrille Poston	1825-1902
Frederick Leslie Ransome	1868-1935
Rossiter W. Raymond	1840-1918
Kenyon E. Richard	1915-1993
Robert H. Richards	1844-1945
Thomas A. Rickard	1864-1953
Louis D. Ricketts	1859-1940
Bernhardt Rohe	1909-1992
Reno H. Sales	1876-1969
Harrison Ashley Schmitt	1896-1966
Fred Searls, Jr.	1888-1968
Antonio Siraumea	1710-1760
Arthur F. Taggart	1884-1959
William Boyce Thompson	1869-1930
Howard Allen Twitty	1909-1989
Arthur Redman Wilfley	1860-1927
Edward H. Wisser	1895-1970



American Mining Hall of Fame

Inductees from Mining's Past





American Mining Hall of Fame

Medal of Merit Recipients

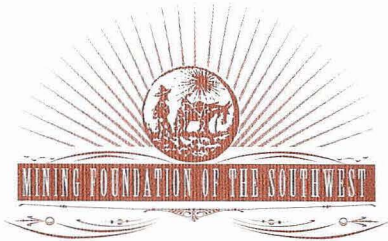
Medal of Merit Recipients (1989-2002)

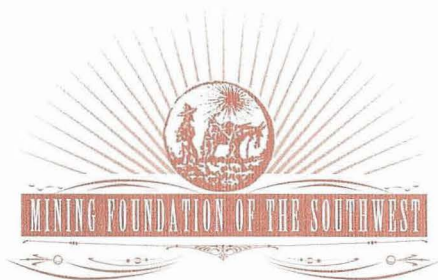
1989	Ralph J. Roberts
1989	Victor H. Verity
1990	John S. Livermore
1991	George O. Argall, Jr.
1992	Arthur A. Brandt
1992	William C. Epler
1993	Walter E. Heinrichs, Jr.
1993	Willard C. Lacy
1994	Donnell W. Agers
1994	J. David Lowell
1994	Ronald R. Swanson
1995	Warren Kay Pincock
1996	Richard W. Hutchinson
1996	Charles L. Pillar
1997	Hugo T. Dummett
1997	Spencer Rowe Titley
1998	David N. Skillings, Jr.
1998	José Rubén Velasco Rodríguez
1999	Paul S. Allen
1999	William C. Peters
2000	Leonard Harris
2000	Pedro Sánchez-Mejorada
2001	William H. Dresher
2001	Warren E. Fenzi
2002	Richard D. Call
2002	Kenneth L. Zonge



The American Mining Hall of Fame Committee of the Mining Foundation of the Southwest would like to thank Modular Mining Systems, Inc. for its continued support by typesetting/design and printing this evening's programs. Modular has provided this contribution for many years.

Special Thanks





Mining Foundation of the Southwest

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