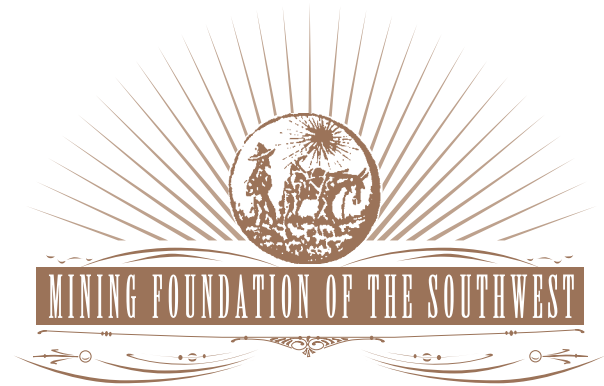




**Mining Foundation
of the Southwest**

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Twenty-Second Annual

**American
Mining Hall of Fame
Awards Presentation
and Banquet**

December 4, 2004

The Westin La Paloma, Tucson, Arizona



2004 Program

6:30 p.m. Reception
7:00 p.m. Banquet Dinner
8:30 p.m. Ceremony

Welcoming Remarks: **Donald Earnest**

Introduction of Head Table
and Other Honored Guests: **Donald Earnest**

Awards Presentation: **Roshan Bhappu**

Presentation of 2004
Inductees From
Mining's Past: **Georges Ordoñez**
Presented by
Robert A. Metz

Frank W. Archibald
Presented by
Charles G. Preble

Presentation of 2004
Medals of Merit: **Edward S. Frohling**
Presented by
Gene Dewey

Joaquin Ruiz
Presented by
Terry McNulty

Presentation of 2004
Industry Partnership Award: **Mining and Metallurgical
Society of America**
Presented by
Martin C. Kuhn

Presentation of 2004
Inductee: **J. Steven Whistler**
Presented by
Roshan Bhappu

Featured Address: **J. Steven Whistler**

Adjournment: **Donald Earnest**

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.

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American Mining Hall of Fame

Medal of Merit Recipients

Medal of Merit Recipients (1989-2003)

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
2003	Stanley H. Dempsey
2003	James William White



GOLD

*Freeport-McMoran Copper & Gold Inc.
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AMIGOS
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Emerson/US Motors
Glamis Gold Ltd.
Golder Associates Inc.
Hanlon Engineering & Associates, Inc.
Independent Mining Consultants, Inc.
Industrial Motor & Control
J. S. Hardy
KD Engineering Co. Inc.
Komatsu America Corporation
Lowell Mineral Exploration
Meridian Engineering Co.
MWH
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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 4, 2004 marks the 22nd 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, 114 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.



Inductees From Mining's Past (1983-2003)

Maxie L. Anderson	1934-1983
James Boyd	1904-1987
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
Thomas F. Walsh	1850-1910
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

Inductees and Industry Partnership Awards

Inductees (1983-2003)

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
2003	Thomas J. O'Neil

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
2003	Aker Kvaerner

J. Steven Whisler was born in 1954 and was raised in Colorado Springs, Colorado. He holds a B.S. degree in business (accounting) from the University of Colorado, a J.D. degree from the University of Denver College of Law, and an M.S. degree in mineral economics and a D. Sc. degree in engineering (Hon.) from the Colorado School of Mines. Mr. Whisler also attended the Harvard Business School's Advanced Management Program. He is admitted to the bar of the State of Colorado, various federal courts and the United States Supreme Court. He is a Certified Public Accountant in the State of Arizona.

Steve joined Phelps Dodge's corporate office in New York in 1981 and since then he has served as counsel for the company's exploration group, as president of the Mining Company, as president and chief operating officer of the Phelps Dodge Corporation, and currently as Chairman and Chief Executive Officer.

Steve has been instrumental in rebuilding Phelps Dodge and his career at Phelps Dodge has established him a mining industry leader. Throughout his career he has been passionate about safety with his declaration that Phelps Dodge is morally obligated to ensure that no employee will be harmed in the process of producing PD products. To this end, he has developed a program called "Zero and Beyond" in which no goal other than zero occupational illness and workplace injuries is acceptable at Phelps Dodge.

Steve's other major initiative within PD called "Quest for Zero" is a performance system for creating sustainable operational improvements by achieving zero environmental incidents, zero variability in production processes and costs, zero waste, and zero product defects.

Mr. Whisler is a director of the Phelps Dodge Corporation (Phoenix, Arizona), the Burlington Northern Santa Fe Corporation (Fort Worth, Texas), the America West Holdings Corporation and its principal subsidiary, America West Airlines, Inc. (Tempe, Arizona), the National Mining Association (Washington, D. C.), the International Copper Association (New York, New York), and the Copper Development Association (New York, New York). He is also a member of the Business Council.

Mr. Whisler is a member of the Colorado Bar Association, Arizona Society of CPAs, American Institute of Certified Public Accountants, the Society for Mining, Metallurgy and Exploration, AIME, and the Mining and Metallurgical Society of America. Mr. Whisler has been awarded the Colorado School of Mines' Distinguished Achievement Medal for career accomplishments.



J. Steven Whisler

2004 Inductee and Guest of Honor





Georges Ordoñez
(1907-1982)

2004
Inductee from
Mining's Past

Georges Ordoñez was a member of the generation of visionary, strong-willed and hard working professionals in the mid-20th century who were directly responsible for the abundant development of the world's mineral resources. Born in Mexico City, Mexico, on March 20, 1907, he graduated from the Colorado School of Mines in 1929 with an Engineer of Mines (EM) degree. Early in his career (1929-1939) he was involved with petroleum exploration and production in the United States, followed by tenures with the Lagos Petroleum Company in Venezuela, and later in Mexico as Superintendent of the El Ebanó oil field for Pemex. After marrying Angelina Cortés Cortés in 1938, he returned to the U.S. to work for Standard Oil Corporation. The following year, he relocated to Mexico City, established a consulting practice, and then joined Kennecott Copper Corporation in 1940. For the next 21 years he was instrumental in the development of several copper districts in the southwest US, and also in the discovery of the copper porphyry belt in Puerto Rico.

After leaving his position as Chief Geologist with Kennecott in 1961, Mr. Ordoñez returned to Mexico City, where he remained very active as a mineral exploration consultant in Latin America and the Caribbean. He served on the faculties at the universities in Mexico City and in Guanajuato, and was an active member of the boards of directors for numerous mining companies and a director of the Mexican Chamber of Mines. Throughout his career, he enjoyed working with young people, both in the classroom and in the field, serving as a mentor to many fine young geologists and mining engineers. His many honors include the Medal of Distinguished Achievement from the Colorado School of Mines in 1964, and the Minero Distinguido (Distinguished Miner) from the Mexican Chamber of Mines in 1984. He was an active member of the Mexican Mining Association, the Geological Society of Mexico, the Geochemical Society, the Society of Economic Geologists (SEG), the Geological Society of America (GSA), and A.I.M.E.

Georges Ordoñez died prematurely in 1982 while still an active, energetic professional and a happy family man. He is survived by his three sons - Jorge Ezequiel, Pablo Andrés, and Luis Felipe, and numerous grandchildren.



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Mining Foundation
of the Southwest

2004





Mining and Metallurgical Society of America

2004 Industry Partnership Award

The Mining and Metallurgical Society of America (MMSA) since its founding in 1908 seeks as its primary objective to serve the National Welfare of the United States of America as it relates to the Mineral Industries. Regular membership of the Society consists of individuals qualified by knowledge, experience and honorable standing to advance the objectives of the Society, who shall be proposed for and elected into membership.

MMSA officers and members have served the industry since the early 1900's and continue to monitor and contribute to the general welfare of natural resource based industries. MMSA helped found and has outlived the U. S. Bureau of Mines. In these times of industry consolidation and shrinking of the U.S. based natural resource segment of our society, MMSA has provided steadfast leadership and financial resources for the advancement of the National Welfare of the United States.

MMSA is the single largest supporter of the Minerals Information Institute, provides strong leadership in support of Minerals Education and develops position papers on mining issues for presentation to local, state and federal governments. MMSA provided financial support to the Colorado Mining Association, the Western Mining Museum, National Energy Foundation, Tucson Unified School District, the University of Arizona, and numerous other organizations over the years. The Society is sponsoring a "Careers in Mining" web site and working closely with the Northwest Mining Association and the Society for Mining, Metallurgy and Exploration (SME) on issues of mutual interest.



Frank Archibald dedicated most of his professional life to Southern Peru Copper Corporation. He began his career as a metallurgist with ASARCO in 1940. After serving in the Navy during WW II and returning to ASARCO, in 1957 he became the Superintendent of the Ilo smelter of the newly formed Southern Peru Copper Corporation. He was promoted to the position of General Manager and shortly after, in 1960, he was promoted to President of Southern Peru. In 1968 he was made President and CEO of Southern Peru and Vice President of ASARCO, a title he held until he retired in 1984.

Frank was not only present when Southern Peru began to operate the Toquepala mine; he also presided over the company's growth to a major copper producer when the Cuajone unit came into production in 1976. He led the Company through its survival of some extremely difficult periods in Peru. The Cuajone agreement was negotiated during the democratically elected government of Fernando Belaunde; however, it was not until December 1969, during the military government of General Juan Velasco, that a final agreement with the government was reached and a contract was signed. The nationalistic actions of General Velasco created tremendous uncertainty for Southern Peru making the financing of the Cuajone Project extremely difficult. Only after almost five years of negotiations led by Frank was a contract signed and the financing put into place.

Frank's intelligence and tenacity during the negotiations were just two factors that helped him to successfully conclude them. His reputation as a person very concerned for Peru and above all for all those working for Southern Peru earned him the admiration of the government's negotiators, especially the military. More than likely, the good relationship that he enjoyed with all governments certainly facilitated the opening of many doors and probably helped to avoid a military takeover during the Velasco regime.

In 1976 the government of Peru awarded Frank the highest award that can be bestowed upon a civilian – *El Gran Comentario*. In 1986 the Copper Club in New York named him as the *Copper Man of the Year*.



Frank William Archibald
(1920-1987)

2004 Inductee from Mining's Past





Edward S. Frohling

**2004
Medal of
Merit Recipient**

Edward S. Frohling was born in Princeton, New Jersey in 1924 and served in the United States Army Corps of Engineers in Europe during World War II. He received his B.S. Metallurgy, 1948 from the Massachusetts Institute of Technology, Cambridge, MA and started work with the Atomic Energy Commission as a Research Engineer. In 1949 he joined the Climax Molybdenum Company as a Plant Metallurgist. In 1951 he joined Western Machinery Company, Birmingham, AL as a Field Sales Engineer advancing to Regional Sales Manager by 1962. In 1962 he joined the Parsons-Jurden Corporation as Vice President and Manager of Business Development Mining and Metallurgy Division.

In 1969 he formed and became President of Mountain States Mineral Enterprises, Inc. (MSME), a major U.S. engineering-construction firm serving the mining industry. He and his company have been recognized with cover stories in three national magazines, and he is a frequent spokesman on behalf of the mining industry. Under his leadership, MSME was instrumental in installations of processing facilities in copper, molybdenum, uranium, gold, etc., throughout the world and especially in Mexico, Peru, Philippines, Australia, Saudi Arabia, Yugoslavia and the United States. In its August 1976 issue, Tucson Magazine designated him "Industrialist of the Year."

Many of his professional accomplishments and volunteer activities have been honored, including recipient of the 1982 Charles F. Rand Memorial Gold Medal Award of the American Institute of Mining, Metallurgical and Petroleum Engineers; recipient of the 1975 Distinguished Citizen Award of the College of Mines and the Alumni Association of the University of Arizona; a Distinguished Member for 1979 by the Society of Mining Engineers of the American Institute of Mining Engineers (AIME). He was named "1975 Man of the Year" by the Tucson Advertising Club and was appointed by the Secretary of the Interior to the Advisory Committee on Mining and Research.

He was a member of the Tucson Airport Authority and was on the Industrial Advisory Council for the College of Engineering and the College of Business and Public Administration. He was Treasurer of the Arizona Association of Industries and a member of the Board of Directors, the 1983 National President of the Associated Builders and Contractors (ABC), Washington, D.C. and was a Governor of the American Mining Congress Manufacturers Division. Frohling's affiliations include membership in the Society of Mining & Metallurgical Engineers (Past Director), Tucson Country Club, Shinnecock Hills Golf Club, Old Pueblo Club, University Club of New York and MIT Club of Tucson.

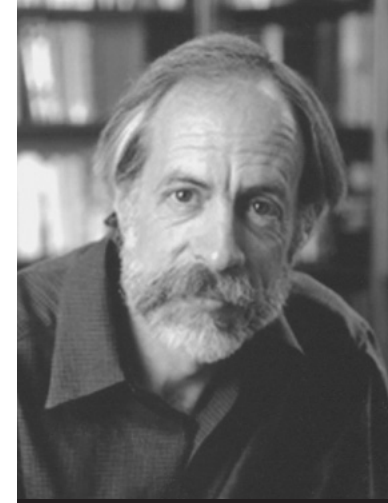


Dr. Joaquin Ruiz was born in Mexico City in 1951 and resided there until several years after completion of his Bachelor of Science degree in chemistry at the Universidad Nacional Autónoma de Mexico. Chemistry was for him a new way of exploring the world, and his deepening interest in that field was nurtured by his professors' love for their discipline.

For a few years after graduation, Joaquin taught high school and found it rewarding. However, he then assisted a cousin with carbon-14 dating of pyramids in southern Mexico as part of her doctoral thesis and had an epiphany that revealed his true calling. He was fascinated by the notion that chemistry could be used as a tool to determine something's age and resolved to pursue post-graduate studies, earning his Ph.D. degree in geochemistry from the University of Michigan. He worked briefly as an assistant professor at the University of Miami and joined the Geosciences Department at the University of Arizona in 1983.

Joaquin has remained at the U of A, where he is a full professor of geochemistry, having served as Head of the Geochemistry Department. In 2000, he was appointed Dean of the College of Science and has had a profound influence in strengthening the College and in building its prominence as a center for education and research. His personal interest in research continues unabated and he is highly regarded by those of us in the mining industry for his extensive work on porphyry copper deposits, especially in the use of molybdenum and rhenium as tracers.

So here we have a true man for all seasons, equally comfortable as teacher, research scientist, and steward of a world-class educational enterprise. He believes in the importance of making a difference in the world and recognizes that professional excellence is the key ingredient. He has sought to have a positive and constructive impact on society and has been immensely successful in his quest.



Dr. Joaquin Ruiz

**2004
Medal of
Merit Recipient**

