



Twelfth Annual

American

Mining Hall of Fame

Awards Presentation

and Banquet

December 3, 1994

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: *Ray W. Ballmer*

Introduction of Head Table
and Other Honored Guests: *Ray W. Ballmer*

Awards Presentation: *Martin C. Kuhn*

Presentation of 1994 Inductees: Joseph Austin Holmes
Presented by William Wilkinson

Nellie Cashman
Presented by John C. Lacy

Presentation of 1994 Medal of Merit: J. David Lowell
Presented by Walter E. Heinrichs, Jr.
Ronald R. Swanson / Donnell W. Agers
Presented by R. Brantley Sudderth

Presentation of Special Recognition: The Honorable Senator Dennis DeConcini
Presented by Martin C. Kuhn

Presentation of 1994 Recipient: J. Burgess Winter
Presented by Martin C. Kuhn

Featured Address: *J. Burgess Winter*

Adjournment



RECEPTION HOSTED BY

AGRA E & E

Bank One Arizona

BHP Minerals

Corrosion Technology Inc.

Errol L. Montgomery & Associates

Frontier-Kemper

Henkel Corporation

Independent Mining Consultants

Industrial Motor & Control, Inc.

Magma Copper Company

Modular Mining Systems, Inc.

Phoenix Fuel Companies

Rooker Tornberg Engineering Inc.

Sundt Corporation

The Winters Company

Western States Engineering & Const., Inc.

ASARCO Incorporated

Bechtel

BKS Engineers Inc.

Cyprus Climax

Empire Machinery Company

Harnischfeger Corporation

Homestake Mining

Industrial Compliance

M3 Engineering & Technology, Inc.

Mintec

Phelps Dodge Corporation

QUADNA, Inc.

Southwest Energy

The Park Company

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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

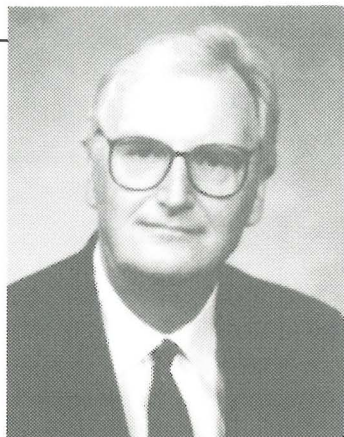
1994 RECIPIENT

J. BURGESS WINTER

Burgess Winter graduated from Ireland's Belfast College of Technology in 1956 and began his mining career in 1959 in the Copper Belt of Northern Rhodesia. In Northern Rhodesia he worked for Anglo American Corporation, beginning in research and technical positions then to operations management and then to Anglo's head office in 1973, where he was with the Base Metals and International Projects Division until 1976. In this position, Mr. Winter did consulting work for diamond mines in the Republic of South Africa, iron ore and vanadium operations in Swaziland and South Africa and copper operations in both Brazil and the United States.

After moving to the United States in 1976, Mr. Winter was appointed General Manager and Vice President of Inspiration Consolidated Copper Company's Arizona operations and served in that position until Inspiration was sold in 1983. From 1983 to 1988, Mr. Winter served as Senior Vice President of Operations of BP Minerals America (previously Kennecott Minerals Company).

Mr. Winter has been President, Chief Executive Officer and a Director of Magma Copper Company since August 29, 1988, and under his leadership, has implemented innovative labor and management cooperation that has resulted in significantly increased worker productivity and lower production costs. He is a director of the American Mining Congress, the American Business Conference, the National Mining Hall of Fame and the Tucson Electric Power Company.



AMERICAN MINING HALL OF FAME

1994 INDUCTEE

NELLIE CASHMAN

1849-1925

Nellie Cashman was born in Ireland in 1849 and came to America in the 1860s. Miss Cashman's sense of wanderlust and adventure first took her to the mining camps of the Washoe District and Canada where she operated boarding houses and raised money for hospitals when she wasn't prospecting, and first gained fame when she mounted a rescue mission to save an isolated camp dying from scurvy. She arrived in Tucson in 1879 where she operated Delmonico's Restaurant, then moved to Tombstone to oversee the Russ House, a boarding house and restaurant, and later worked in Prescott, Globe and the Harquahala District in Arizona while at the same time taking on ventures in Baja California in 1883 and Kimberly, South Africa, in 1889.

It was not uncommon for Miss Cashman to grubstake miners, visit and work the claims with them, or take care of them if they fell upon hard times. Miss Cashman followed the rush to the Klondike in 1897, where she was a store owner and grubstaker once again. At age 69, she set a record as a champion woman musher, taking her team 750 miles in 17 days. Miss Cashman died in Coldfoot, Alaska's northernmost mining camp in 1925. She was known as the "miner's angel," as well as as an independent entrepreneur, adventurer and humanitarian, and typifies a significant contribution made by women in the western mining frontier.



AMERICAN MINING HALL OF FAME

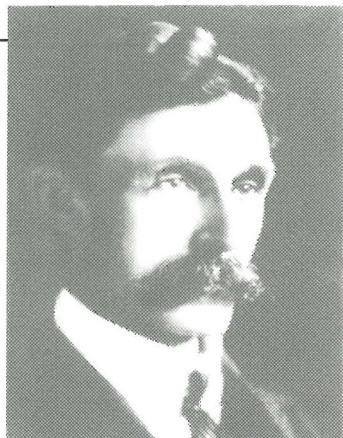
1994 INDUCTEE

JOSEPH AUSTIN HOLMES 1859-1915

Joseph A. Holmes was born in Laurens, S.C., and was graduated from Cornell University with a B.S. degree in 1881. Holmes's career began as a professor of geology and natural history at the University of North Carolina, during which time, largely through his efforts, the North Carolina legislature created a Geological Survey for the state, to which he was appointed as director in 1891. He performed his duties at this position, in addition to his teaching, until 1905.

After directing the Department of Mines and Metallurgy at the St. Louis World's Fair in 1904, he was appointed by President Theodore Roosevelt as chief of the U.S.G.S. laboratories for testing fuels, which under Holmes's leadership became a focal point of many of the conservation efforts of the Roosevelt and Taft Administrations related to development of this country's coal resources. When the U.S. Bureau of Mines was established, Holmes was named as its first director.

Under Holmes's leadership, the Bureau of Mines revolutionized the safety practices in the mining industry in the United States. The safety records of today's mines are in large measure a tribute to the practices promoted by Joseph Holmes.



AMERICAN MINING HALL OF FAME

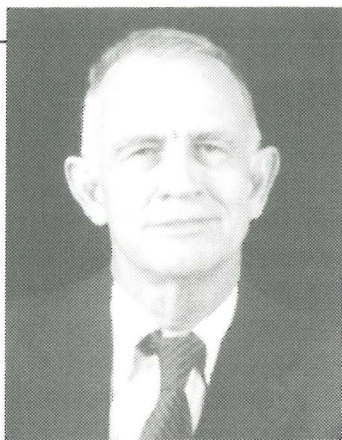
1994 MEDAL OF MERIT RECIPIENT

J. DAVID LOWELL

Dave Lowell was born on a ranch in Southern Arizona in 1928. He graduated from the University of Arizona, B.S. Mining Engineering, 1949, Stanford University, M.S. Geology, 1957, and was awarded the University of Arizona's Professional Engineer of Geology in 1959.

He has worked with ASARCO Inc., USAEC, Ventures Ltd., and Utah Construction as mine engineer, foreman, small mine manager, geologist, district geologist and chief geologist. Since 1961 he has been a private consultant working for more than 100 companies and governments and managed projects that discovered a number of major deposits, including Kalamazoo and Casa Grande West in Arizona and La Escondida, Zaldivar and San Cristobal in Chile. He is presently conducting mineral exploration in Peru, funded by Arequipa Resources and is associated with Tucson's Mineral Advisory Group. Dave's insight into porphyry copper geology has been universally recognized as having revolutionized mineral exploration practices.

Dave has received AIME's Jackling Award, Society of Economic Geology Silver Medal, the University of Arizona's Distinguished Citizen Award, was CIMM Distinguished Lecturer, and SEG's Thayer Lindsley Lecturer.



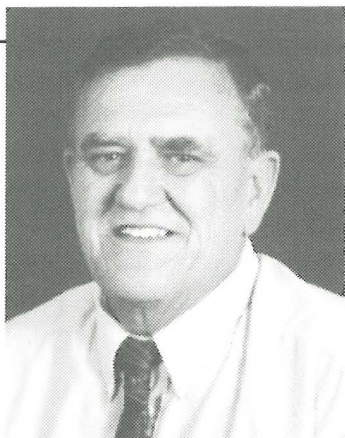
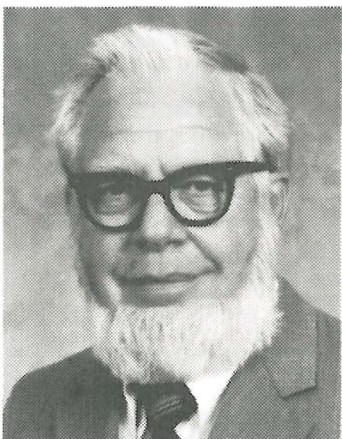
AMERICAN MINING HALL OF FAME

1994 MEDAL OF MERIT RECIPIENTS

DONNELL W. AGERS **RONALD R. SWANSON**

Don Agers and Ron Swanson were two of the key persons who recognized the potential for a new technology to replace the copper cementation process, and, during 1962, first developed a technology that has become universally known as the SX-EW process for copper recovery.

Don Agers, a graduate of the Missouri School of Mines at Rolla with a degree in metallurgical engineering, was a key link between General Mills Chemicals, Inc., and the mining industry during the inception and first commercial uses of the technology. Until 1975, he managed the applications laboratories and people in Tucson who successfully introduced this technology to the copper industry through extensive on-site pilot plant projects and liaison with the chemical research division. The first commercial application was in 1968 at the historic Bluebird mine of Ranchers Exploration and Development Company in Miami, Arizona.



Ron Swanson, a graduate of the University of Minnesota with B.S. and M.S. degrees in chemistry, was the senior research chemist for General Mills Chemicals who developed the first commercially used SX reagents for copper recovery, and those chemicals formed the basis for the technology as it is employed today. At his retirement, Ron was Principal Scientist for Henkel Corporation, the successor to General Mills Chemicals. He holds 17 patents in the field of copper and other metal extraction by this process and has published numerous articles on the subject.

This technology, totally unrelated to copper extractive metallurgy at its inception, now forms the basis for a revitalized copper industry throughout the world.



AMERICAN MINING HALL OF FAME

SPECIAL RECOGNITION

DENNIS DeCONCINI

Dennis DeConcini was born and raised in Tucson and graduated from the University of Arizona College of Law in 1962. After service in the United States Army Adjutant General's Corps for three years he returned to Tucson and private law practice. In 1972 he was elected Pima County Attorney and then to the United States Senate in 1976.

During his 18 years in the United States Senate, Senator DeConcini has been an important friend to the mining industry, and from his position in the Senate, with an understanding of both the significance of the industry and the economy of the State of Arizona, has sponsored legislation and otherwise provided a critical voice in the debates of great importance to the mining industry.

These contributions have included: helping found two Senate coalitions, the Copper Caucus and the Western States Senate Coalition, to work on issues important to the copper industry and Western issues; initiating efforts to create stockpiles for copper and sponsorship of legislation and numerous diplomatic initiatives to help level the international trading field for U.S. copper producers; providing guidance and assistance in placing reasonable limitations on Arizona wilderness legislation to balance protection of sensitive areas with the potential for mineral development; and sponsoring legislation to provide funding assistance to enable the conduct of field studies and experiments on *in situ* leaching of copper. Finally, Senator DeConcini has been an effective voice and has used his influence to craft reasonable compromises in the debate over changes in the mining law legislation before Congress.



AMERICAN MINING HALL OF FAME

Presented to Dennis DeConcini, United States Senator from Arizona, 1978-1994, by your friends in the mining industry of the United States in grateful recognition for 18 years of public service to the State of Arizona and the minerals industry.

Mining Foundation of the Southwest, Inc. • Tucson, Arizona, December 3, 1994



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

Keneth J. Barr

1992 Recipient

T S Ary

1993 Recipient

Milton H. Ward

1983-1993 Inductees

Maxie L. Anderson

1934-1983

Williams Andrews Clark

1839-1925

James Douglas

1837-1918

James Stuart 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

Herbert C. Hoover

1874-1964

Daniel C. Jackling

1869-1956

Ira B. Joralemon

1884-1975

Henry Krumb

1875-1958

Waldemar Lindgren

1860-1939

Curtis H. Lindley

1850-1920

John William Mackay

1831-1901

Seeley W. Mudd

1861-1926

Charles Debrille Poston

1825-1902

Rossiter W. Raymond

1840-1918

Robert H. Richards

1844-1945

Thomas A. Rickard

1864-1953

Louis D. Ricketts

1859-1940

Reno H. Sales

1876-1969

Fred Searls, Jr.

1888-1968

Arthur F. Taggart

1884-1959

William Boyce Thompson

1869-1930

Arthur Redman Wilfley

1860-1927

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

Walter E. Heinrichs, Jr., 1993

Willard C. Lacy, 1993



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