

### **Fifteenth Annual**

# American Mining Hall of Fame Awards Presentation and Banquet

**December 6, 1997**The Westin La Paloma, Tucson, Arizona

**Sponsored by Mining Foundation of the Southwest** 

### **PROGRAM**

Reception ...... 6:30 p.m.

Banquet Dinner ... 7:30 p.m.

Ceremony ...... 9:00 p.m.

Welcoming Remarks: William H. Wilkinson

Introduction of Head Table

and Other Honored Guests: William H. Wilkinson

Awards Presentation: Herbert E. Welhener

Presentation of 1997 Inductees: John Van Nostrand Dorr

Presented by Walter E. Heinrichs, Jr.

Frederick L. Ransome

Presented by Robert E. Metz

Presentation of 1997 Medals of Merit: Hugo T. Dummett

Presented by Dave Spatz

Spencer R. Titley

Presented by William H. Wilkinson

Presentation of 1997 Industry

Partnership Award: Colorado School of Mines

Presented by Martin C. Kuhn

Presentation of 1997 Recipient: James R. Moffett

Presented by Herbert E. Welhener

Milton H. Ward

Featured Address: James R. Moffett

Adjournment: William H. Wilkinson



# RECEPTION HOSTED BY

AIME	ASARCO Incorporated
Bateman Engineering	Bechtel
BHP Mineral Exploration	Boart Longyear Company
Bucyrus International, Inc.	Call & Nicholas, Inc.
Carlota Copper Company	Cimetta Engineering & Construction Co., Inc.
Cominco American Inc.	Cutler-Hammer/Westinghouse
Cyprus Climax Metals Co.	Dames & Moore
Empire Machinery	Filtemps Sales, Inc.
Freeport McMoRan Copper & Gold, Inc.	Frontier-Kemper Constructors, Inc.
Geotemps, Inc.	Henkel Corporation
Independent Mining Consultants, Inc.	Industrial Motor & Control, Inc.
KD Engineering Co., Inc.	Komatsu Mining Systems, Inc.
Lang Exploratory Drilling	Lowell Mineral Exploration
ME International	M3 Engineering & Technology, Inc.
Mintec	Modular Mining Systems
P & H MinePro Services	Phelps Dodge Exploration
Pioneer Equipment	Southwest Energy
Sundt Corporation	T. A. Caid International, Inc.
The Winters Company	TIC
US Electrical Motors	Wells Fargo
Western States Engineering	William Detroit Diesel
Woodward-Clyde Consultants	



The goal and purpose of the Mining Foundation of the Southwest is to promote public understanding of and education related to the mining industry. Toward this goal, the Foundation has funded a number of projects from donations and fund-raising activities.

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 projects of the Foundation.

The Mining Foundation of the Southwest was incorporated in 1993 with the merger 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.

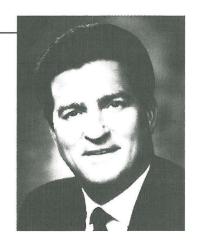
The Hall of Fame honorees, both living and deceased, now number 64. The plaques which commemorate their induction are on display at the Arizona Historical Society's Museum at 949 East Second Street in Tucson.



#### 1997 RECIPIENT

### **JAMES R. MOFFETT**

ames R. Moffett was born in Houma,
Louisiana in 1938 and raised in Houston, Texas.
He received a Bachelor of Science degree with special honors in Geology from the University of Texas at Austin in 1961 and a Masters of Science in Geology from Tulane University in 1963.



From 1964 through 1969, he was a consulting geologist. In 1969 he and two associates founded

McMoRan Oil & Gas Co. which developed into one of America's leading independent oil and gas companies. In 1981, Moffett put together the merger of McMoRan Inc., one of the world's leading natural resource companies. Moffett was named chairman and CEO in 1984.

Moffett is presently Chairman and Chief Executive Officer of Freeport-McMoRan Copper & Gold Inc. He also serves as President Commissioner for P.T. Freeport Indonesia Company. Freeport-McMoRan Copper & Gold Inc. is engaged in the exploration, mining and milling of copper, gold and silver in Irian Jaya, Indonesia where their operations rank among the largest in the world. In addition the company is engaged in the smelting and refining of copper concentrates in Spain.

Moffett serves on the board of numerous professional, civic, and philanthropic organizations. He has received many awards, including the 1990 Horatio Alger Association of Distinguished Americans Award.



#### **INDUCTEE FROM MINING'S PAST**

### JOHN VAN NOSTRAND DORR 1872-1962

John Dorr was born in Newark, New Jersey on January 6, 1871. His early education came at a private school conducted by his mother after the death of his father.

At seventeen , he went to work for Thomas A. Edison at his New Jersey Laboratory, becoming an "Edison Pioneer". Recognizing he needed more technical education, he entered Rutgers University and graduated in 1894.



Dorr's early career, after college, began in Colorado and the Black Hills at small gold mines, where he learned that marginal economics can be the mother of invention. His 1904 invention of the Dorr classifier, financed by associates savings and funds borrowed from a miners union, avoided high cost, batch operation by allowing continous processing. Since then, his inventions including the Dorr agitator and thickener have gone into world wide use in mining, chemical, water supply, and sanitary industries.

After a life-long friendship with Edwin L. Oliver, who had made contributions similar to Dorr's in filtration processing, the Dorr Company and Oliver United Filters merged in 1955 to form the present Dorr-Oliver Incorporated.

Dorr received many medals, awards and honorary degrees and founded the Dorr Foundation. Noting the increasing part played by catalysis in modern industry, he suggested that the foundation might play a role using resources comprised largely of brains and imagination. The right shoulder safety guide line markings on highways, now used widely in the U.S. and Europe, was a Dorr Foundation promoted development, first used on the Merritt Parkway in Connecticut.

In 1949 a Chemical Engineering magazine editorial said, "The contribution which Dorr's inventions have made to mankind are probably greater than those of any other chemical or metallurgical engineer of our times".



#### 1997 INDUCTEE FROM MINING'S PAST

### FREDERICK LESLIE RANSOME 1868-1935

ansome was born in Greenwich, England,
December 8, 1868, to a Quaker family. His father
emigrated to San Fransisco in 1870 and became a
concrete industry pioneer and founder of Ransome
Concrete Machinery Company. In 1896, Ransome
obtained his Ph.D. in geology from the University of
California, and instructed there and at Harvard
University before joining the U.S.G.S. in 1897,
eventually becoming Geologist in Charge. In 1924 he



became Professor of Economic Geology at the University of Arizona, a position he held until 1927, when he assumed the same title at California Institute of Technology.

As a dean of American economic geology, Ransome's papers span four decades from 1893 to 1934 and include the clasical reference on numerous major mining districts of the western United States. In later years he consulted on geology of sites like the Hoover Dam and the Southern California Colorado River Aqueduct and wrote several notable publications on occurrences of mercury deposits.

Ransome belonged to many prestigious and technical societies including the Society of Economic Geologists of which he was President in 1927. He supplied many and verified all of the geological definitions in Webster's Unabridged Dictionary.

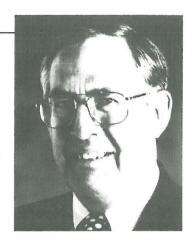
Ransome's contribution to the advancement of the field of applied economic geology cannot be overemphasized. Most of his writings will never become obsolete.



#### **1997 MEDAL OF MERIT RECIPIENT**

### **HUGO T. DUMMETT**

ugo T. Dummett received his Bachelor of Science in 1964 from the University of Witwatersrand in Johannesburg, South Africa. He worked as an exploration geologist for Anglo American Corporation and Selection First in Africa until 1965 after which he worked in Canada for Placer and Amax. He emigrated to Australia in 1970 where he worked for Theseus Exploration. From 1973 through 1977 he attended the University of Queensland for postgraduate studies.



Dummett joined Superior Oil's Minerals Division as a Senior Geologist in 1977 and moved to the United States. He left Superior in 1985, joining Westmont Mining where he was Manager of the Southwest U.S. Exploration until 1989 when he joined his present employer BHP.

Dummett joined BHP as Manager, Exploration for the U.S. and Central America and has since been promoted to Vice President, Exploration, BHP Minerals in 1994 and to Senior Vice President and Group General Manager, Exploration in February, 1996. During his tenure with BHP he has guided the team that discovered the diamond deposits of the Northwest Territories in Canada. BHP Minerals' Exploration group is recognized as one of the best minerals exploration companies worldwide and current programs explore for base and precious metals, diamond and coal in 30 countries and employs a staff of approximately 700.

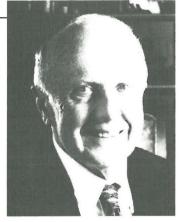
Mr. Dummett is a member of several professional societies and has received numerous awards including: the Thayer Lindsley Distinguished Lecturer for 1998 by the Society of Economic Geologist and the William L. Saunders Gold Medal for 1997 by the Society of Mining, Metallurgy and Exploration (SME of AIME).



#### 1997 MEDAL OF MERIT RECIPIENT

### **SPENCER ROWE TITLEY**

S pencer Titley was born September 27, 1928 in Denver, Colorado. He was raised there, graduated from East High in 1946 and spent the summers of 1947 and 1948 as underground miner for Front Range Mines and joined New Jersey Zinc at Gilman, Colorado as a Junior Geologist.



After serving in the Korean War, he returned to
Gilman as a Staff Geologist until 1955, when he
began graduate work at the University of Arizona, earning his Ph.D. in 1958. From 1958
to 1960, he continued as Regional Exploration Geologist for New Jersey Zinc in
Arizona and New Mexico. In 1960 he joined the University of Arizona faculty as

Assistant Professor, progressing to present Full Professor in Geology and Geosciences.

Dr. Titley, besides being a licensed commercial pilot, is a prolific writer, prodigious scholar, prized consultant and teacher. The list of accomplished students, clients, grants, awards and honors, only reflect on his stature as a world authority of porphyry copper systems, metal provinces and metallogenesis. Titley is a geologist's geologist, a student's

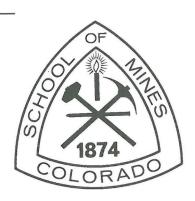
teacher and a client's consultant.



#### 1997 INDUSTRY PARTNERSHIP AWARD

### **COLORADO SCHOOL OF MINES**

n 1874 the Colorado Territorial
Legislature appropriated \$5,000 to found the Territorial School of Mines in or near Golden,
Colorado. In 1876 Colorado achieved statehood and the Colorado School of Mines (CSM) received its current name. The first diploma was awarded in 1882, and through May of 1996 CSM has graduated a total of 19,350 students.



These graduates have fanned out throughout the world making significant contributions to the development of the earth's natural resources. Natural resources are the building blocks of our modern society and the Colorado School of Mines has provided industry, academia, government and nations with the human resources necessary to extract, refine, shape and produce the metals and products from these resources.

The school has grown and prospered since opening its doors in 1874 and is today larger and stronger than ever as a degree granting institution providing people and technology for the natural resource community worldwide. The school's historical contributions merit significant recognition and its current health ensures a bright future for continued contributions to the industry and societies around the globe.



#### Board of Governors

William H. Wilkinson - President Milton M. Evans - Vice President Susan Armijo Wick - Secretary/Treasurer Nick Balich R. W. Ballmer A. Frederick Banfield Roshan Bhappu Wayne H. Burt William H. Dresher Jane Eppinga Larry D. Fellows Walter E. Heinrichs, Jr. Marvin A. Hustad Martin C. Kuhn John C. Lacy James D. Loghry Robert A. Metz William C. Peters Charles R. Sewell Everett Smith David M. Spatz Thomas Lyle Taylor Jack E. Thompson Herbert E. Welhener Gordon W. Wieduwilt

#### Hall of Fame Committee

Herbert E. Welhener - Chairman
R. W. Ballmer
William H. Dresher
Milton M. Evans
Walter E. Heinrichs, Jr.
Martin C. Kuhn
John C. Lacy
Robert A. Metz
David M. Spatz
Jack E. Thompson
William H. Wilkinson

### Sustaining Member

Geotemps, Inc.

### Gold Members

A. Frederick Banfield Glen Barton Milton M. Evans Jack E. Thompson Milton H. Ward William H. Wilkinson

### Silver Members

George J. Allen Wayne Burt John C. Lacy Dave Parnell



1983 Recipient	1988 Recipient	1993 Recipient
George E. Atwood	Simon D. Strauss	Milton H. Ward
1984 Recipient	1989 Recipient	1994 Recipient
Charles F. Barber	G. Robert Durham	J. Burgess Winter
1985 Recipient	1990 Recipient	1995 Recipient
George B. Munroe	Harry M. Conger	Douglas C. Yearley
1986 Recipient	1991 Recipient	<b>1996 Recipient</b>
John C. Duncan	Kennth J. Barr	Richard de J. Osborne
1987 Recipient Plato Malozemoff	1 <b>992 Recipient</b> TS Ary	

### 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 Donnell W. Agers, 1994 J. David Lowell, 1994

Ronald R. Swanson, 1994 Warren Kay Pincock, 1995 Richard W. Hutchinson, 1996 Charles L. Pillar, 1996

### Industry Partnership Award

Caterpillar, Inc. - Glen A. Barton, 1995 Amigos (Arizona Mining & Industry Gets Our Support), 1996



### 1983-1996 Inductees

1983-1996 Inductees		
Maxie L. Anderson	Meyer Guggenheim	Seeley W. Mudd
1934-1983	1825-1905	1861-1926
Bert S. Butler	Hal W. Hardinge	Charles Debrille Poston
1877-1960	1855-1943	1825-1902
Nellie Cashman	George Hearst	Rossiter W. Raymond
1849-1925	1820-1891	1840-1918
Louis S. Cates	Joseph Austin Holmes	Robert H. Richards
1881-1959	1859-1915	1844-1945
William Andrews Clark	Herbert C. Hoover	Thomas A. Rickard
1839-1925	1874-1964	1864-1953
James Douglas	Daniel C. Jackling	Louis D. Ricketts
1837-1918	1869-1956	1859-1940
James Stewart Douglas	Ira B. Joralemon	Reno H. Sales
1868-1949	1884-1975	1876-1969
Charles F. Fogerty	Henry Krumb	Fred Searls, Jr.
1921-1981	1875-1958	1888-1968
Antoine M. Gaudin	Waldemar Lindgren	Antonio Siraumea
1896-1974	1860-1939	1710-1760
Wesley P. Goss	Curtis H. Lindley	Arthur F. Taggart
1899-1985	1850-1920	1884-1959
William C. Greene	John William Mackay	William Boyce Thompson
1853-1913	1831-1901	1869-1930
John C. Greenway	Donald H. McLaughlin	Arthur Redman Wilfley
1872-1926	1891-1959	1860-1927



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





### Mining Foundation of the Southwest

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