



Thirtieth Annual
American Mining Hall of Fame



**Awards
Presentation**
BANQUET & FUNDRAISER

Saturday, December 1st, 2012
JW Marriott Starr Pass Resort & Spa, Tucson, Arizona

Program

6:15 p.m. **RECEPTION**
 7:00 p.m. **BANQUET**
 7:45 p.m. **CEREMONY**

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- Welcoming Remarks: **JAMES WM. WHITE**, PRESIDENT, MFSW
- Introduction of Head Table
and Other Honored Guests: **JAMES WM. WHITE**
- Introduction of Inductees: **CORI HOAG**, VICE PRESIDENT, MFSW
- Presentation of Inductees
From Mining's Past: **WILLIAM OTIS**
(1814-1839)
- PRESENTED BY **WILLIAM PHIPPS BLAKE**
CORI HOAG AND WILLIAM DRESHER (1826-1910)
- JOHN MURCHISON SULLY**
(1868-1933)
ACCEPTED BY HIS SON, JOHN SULLY
- THOMAS G. CHAPMAN**
(1886-1965)
ACCEPTED BY HIS FORMER STUDENT, JACK MCDUFF
- KENNETH L. POWER**
(1924-1978)
- Presentation of **DAVID C. LINCOLN**
Medal of Merit: PRESENTED BY CORI HOAG
- Presentation of **MATTHEW D. LENGERICH**
Medal of Merit Under age 40: PRESENTED BY CORI HOAG
- Presentation of **KOMATSU AMERICA CORP.**
Industry Partnership: ACCEPTED BY DAVID W. GRZELAK, CHAIRMAN OF KAC
- Presentation of **ASARCO LLC**
Special Recognition: ACCEPTED BY MANUAL RAMOS, COO & PRESIDENT, ASARCO
- Grand Door Prize: **JAMES WM. WHITE**
- Presentation of Inductee: **GREGORY H. BOYCE**
PRESENTED BY JAMES WM. WHITE
- Featured Address: **GREGORY H. BOYCE**
- Adjournment: **JAMES WM. WHITE**



DIAMOND

Friends Arizona Mining & Mineral Museum

PLATINUM

ASARCO

Caterpillar

Freeport McMoRan Copper & Gold

Independent Mining Consultants, Inc.

Joy Global

Komatsu America Corp.

Mintec, Inc.

M3 Engineering & Technology Corporation

Newmont Mining Corporation

SRK Consulting

GOLD

Ames Construction, Inc.

Atlas Copco Construction Mining Technique USA LLC

Barrick Gold

MWH, Global

Modular Mining Systems Inc.

SILVER

DeConcini McDonald Yetwin & Lacy, P.C.

Empire Southwest

FLSmidth, Inc.

Golder Associates

Lowell Mineral Exploration

Minas de Oro Nacional

Montgomery & Associates

Mountain States R&D International, Inc.

National EWP

RDE Evaluations Ltd.

Skyline Assayers & Laboratories

Sonoran Process Equipment Company Inc.

Tetra Tech

Thomas Albanese

Mining Foundation of the Southwest

The Mining Foundation of the Southwest (MFSW) was incorporated in 1993 by combining the Mining Club of the Southwest and the Mining Club of the Southwest Foundation. The purpose of the Foundation is to promote public understanding and education related to mineral resources and the mining industry. Toward this goal, the Foundation has been able to fund a number of projects each year in the southwest, including Mexico, from donations and fund-raising activities.

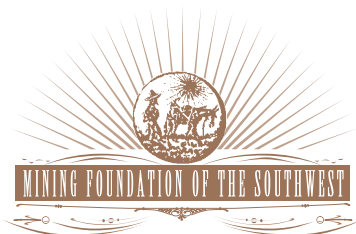
Beginning in 2008, the Foundation embarked on a major fundraising activity for the purpose of developing a MFSW Educational Outreach program. The program focuses on educating students and adults about mining and the importance of mineral resources in modern life. In March of 2009, Pamela A. K. Wilkinson was selected to fill the position of Outreach Education Coordinator. The position was originally supported through the Arizona Department of Mining & Mineral Resources and later through the Arizona Geological Survey. The position is currently supported through the Lowell Institute for Mineral Resources at The University of Arizona.

Including the 2012 inductees, 171 mining luminaries and organizations have been inducted into the American Mining Hall of

Fame. The American Mining Hall of Fame serves to educate the public about prominent persons associated with the mining industry in both past and present by inducting one living honoree and up to five deceased luminaries, awarding medals of merit to outstanding individuals, and honoring one or more supporting organizations. Commemorative plaques awarded through 2010 are on display in the mining exhibit area at the Arizona Historical Society Museum at 949 E. 2nd Street in Tucson.

As wall space is not available for additional plaques, MFSW is in the process of completely revamping the method of displaying information about the honorees. Touch screen video displays will free up museum wall space and allow for an interactive display of all past and future honorees. This will increase visitor interest and allow for additional visual and historical content.

As the public attention continues to focus on the dual objectives of mineral sufficiency and environmental protection, MFSW is committed to support mineral and mining education for schoolchildren, college students, and the general public, and to honor the achievements industry leaders through the American Mining Hall of Fame Annual Awards, MFSW's website, and publications. *Thank you for your continued support!*



Gregory H. Boyce



MFSW announces **Greg Boyce**, Chairman and CEO of Peabody Energy, as our 2012 Inductee to the Hall of Fame. Under Mr. Boyce's leadership, Peabody has become one of the leading investment opportunities in the world with his vision to eradicate global energy poverty. Boyce is the only CEO to be named among the top chief executives for both the energy and mining sectors, garnering recognition from Institutional Investor magazine and the Global Energy Awards. Most recently, Boyce was named one of America's Most Valuable CEOs by Chief Executive magazine, ranking 36th among S&P 500 chief executives.

Boyce trained as a mining engineer and gained extensive management, operating and engineering experience around the world during a three-decade career in the mining and energy industry. He

joined Peabody Energy in 2003 as President and Chief Operating Officer, assumed responsibility for the company as President and Chief Executive Officer in 2006, and became Chairman the following year.

Prior to joining Peabody, Boyce served as Chief Executive Officer – Energy for the international mining company Rio Tinto in London, with responsibility for a worldwide coal and uranium portfolio. Other prior positions include President and CEO of Kennecott Energy Company, President of Kennecott Minerals Company and Executive Assistant to the Vice Chairman of Standard Oil of Ohio.

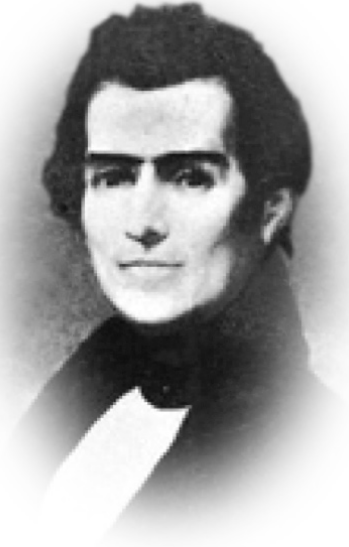
Boyce holds a Bachelor of Science degree in Mining Engineering from the University of Arizona and an Advanced Management Program degree from Harvard University's Graduate School of Business. His leadership positions include Chairman of the National Mining Association and Deputy Chairman of the Coal Industry Advisory Board of the International Energy Agency. He is a member of The Business Council, Business Roundtable and the National Coal Council, where he was Study Chair of the council's report, "Coal: America's Energy Future." He is a member of the Board of Directors of Marathon Oil Corporation. In addition, he is a member of the Board of Trustees of St. Louis Children's Hospital and Washington University in St. Louis, and is a member of the Advisory Council of the University of Arizona's Department of Mining and Geological Engineering.

William Smith Otis (1813-1839)

Inventor of the steam shovel. Born in Pelham Massachusetts and cousin of the famed Elisha Otis of elevator fame, **William Smith Otis** was drawn at an early age to earthworks and mechanics. At the age of 22, he created the first steam-powered mechanical excavator even though throughout the early part of the 19th century there was little demand for power excavators. Cheap pick-and-shovel labor was adequate for most excavating where horse drawn scrapers could not be used.

In 1835, 23-year old Otis became a partner in the Philadelphia contracting firm of Carmichael & Fairbanks, which engaged in the new and promising field of railroad construction. Here, he developed a new type of excavating machine—the power shovel. Better known as the steam shovel, reflecting its power source, this apparatus was designed to perform the same actions as a person with a shovel.

Otis later worked with Joseph Harrison to construct a prototype and pre-production model in 1836. He received a patent in 1836, but the engineering specifications were lost during a fire. Patent # 1089 was issued on February 24, 1839 for the “Crane-Excavator for Excavating and Removing Earth”. The drawing shows a crane mounted on a railroad car. A load of earth could be lifted by the bucket, raised by the crane, and dumped into railcars using a system of pulleys to move the crane arm and bucket. His machine was the first to employ the principal of a single-bucket excavator swung from the center and provided with a power thrust for adjusting the radial thickness of the cut. The first steam



shovel could move 380 cu meters of earth a day, with a 1.1-cu meter capacity shovel and a 180 degree slewing wooden jib.

After receiving the patent for his innovative shovel in 1839, Otis died a few months later of typhoid fever at age 26. Carmichael & Fairbanks, the firm in which Otis was a partner, continued to develop the machine and use it in their work. Daniel Carmichael, Otis' uncle by marriage, obtained a seven year-extension on the patent in the name of Otis' widow prior to its expiration,

The steam shovel did not win early widespread acceptance because it competed with cheap immigrant labor. By the 1870s, however, the steam shovel became a major force behind America's westward expansion and mining operations.

William Phipps Blake (1826-1910)



William Phipps Blake was born in New York City on June 1, 1826. He attended Yale as an undergraduate, and then obtained his advance degree in 1852 from the College's "School of Applied Chemistry," later known as Sheffield Scientific School.

Blake enjoyed, according to his friend Rossiter W. Raymond, "a long, honorable, laborious and useful career" as geologist, writer and teacher. Persuaded in 1853 by geologist Josiah D. Whitney to join the R.S. Williamson government expedition charged with location of a railroad route from the Mississippi River to the Pacific Ocean, the new graduate made the first of many transcontinental journeys "geologizing," as he put it. Returning from California in November, 1854, Blake finished his report, and married Caroline Hayes on Christmas day of the following year. They made their home in Mill Rock, Connecticut, near New Haven, with "Professor" Blake making New Haven home base while embarking on

frequent geological consulting trips throughout the American West, and to Japan and Russian Alaska.

Blake found himself almost constantly in demand by mining companies engaged in mineral litigation, especially "apex" cases, throughout the West, consulting in places like Tombstone and Bisbee, Arizona, Eureka and Virginia City, Nevada and Leadville, Colorado. His 320 notebooks (1847-1910), now housed at the Arizona Historical Society, Tucson, offer an unsurpassed glimpse into the

life of a peripatetic geological professional, one of the "lace-boot brigade," to use historian Clark Spence's label. Selected shortly after graduation to serve as commissioner to a New York City scientific fair, Blake did similar duty at international expositions at Paris (1867 and 1878), Vienna (1873) and the Philadelphia Centennial Exposition in 1876.

Author of numerous reports for government agencies and private clients, Blake also contributed heavily to the professional publications of the day, particularly the *Engineering and Mining Journal* and *Mining and Scientific Press*. Blake taught geology and related subjects at several institutions, rounding out his academic career at University of Arizona beginning with the 1895-1896 at the School of Mines. He died, at almost 84 years of age, just a few days after accepting an honorary degree from a former employer, the University of California, Berkeley.

John Murchison Sully (1868-1933)



Born in 1868 in Dedham, Massachusetts, an affluent suburb of Boston, **John Murchison Sully** graduated from the Massachusetts Institute of Technology (MIT) in 1888. With his Bachelor of Science degree in mining engineering, he headed west to Butte, Montana where he worked two years for the Boston & Montana Consolidated Silver & Gold Mining Co.

Mr. Sully held positions of increasing importance from 1890 through 1904 in Tennessee, Missouri, California, Alabama and West Virginia. In 1904, he accepted employment in New Mexico where he remained the rest of his life. He was the Assistant Superintendent in Hanover, New Mexico for the Hermosa Copper Co., a subsidiary of the General Electric Co.

He was asked by GE in 1906 to examine the nearby Santa Rita, New Mexico copper deposit for possible purchase. After taking

thousands of samples and much research, Sully recommended the acquisition. For some reason, GE did not follow up on the advice and Mr. Sully quit soon after.

Realizing the importance of this huge low-grade copper deposit, Sully was almost single handedly responsible for putting together the financing and the forming of the Chino Copper Co. in 1909. Using large steam shovels, steam locomotives and churn drills, Mr. Sully, as general manager, developed Santa Rita into one of the largest open-pit copper mines in the United States.

A shortage of coal needed for the mining machinery and nearby concentrating mill caused Sully to purchase the Gallup American Coal Co. where he became the Vice-President and Managing Director.

Sully passed away in July 1933 at his beloved Santa Rita, New Mexico. He had been general manager of Chino for over two decades. A Master Mason, he was buried in the Silver City Masonic Cemetery. His copper casket was carried by eight pallbearers and thousands attended the funeral. A huge boulder was brought over from the Kneeling Nun Mountain, which overlooks the Chino pit, and placed for his headstone.

Sully was a lifetime member of the American Institute of Mining & Metallurgical Engineers (AIME) and the American Mining Congress.

Still operating today, and known as the Chino Mines, the Santa Rita copper deposit has become a major player in the world metal market. John Murchison Sully was truly the "Father of Chino."

Thomas Garfield Chapman (1886-1965)

Extractive metallurgist, inventor, and professor. **Thomas G. Chapman** was born in Spring Hill, Nova Scotia, Canada on September 21, 1886. He grew up in Boston and graduated from the Massachusetts Institute of Technology with a B.S. in Metallurgy in 1909.

He started his career as an Instructor at MIT for three years, and then joined the Michigan College of Mines (now Michigan Technological University) as an Instructor, then Assistant Professor of Metallurgy. Four years later, in 1916, he moved to Tucson as Assistant Professor of Mining & Metallurgical Engineering at the University of Arizona. After completing the requirements for a Master's of Science degree at the University of Arizona in 1924, he was granted a sabbatical leave for the academic year 1924-1925 to complete his doctorate at MIT. In 1925 he was awarded a Sc.D. from MIT. Dr. Chapman was appointed head of the University of Arizona Department of Mining Engineering and Metallurgy in 1928 and became Dean of the Graduate College in 1938.

In 1914, at the time of the establishment of colleges at the University, since mining and metallurgy were both engineering programs, the School of Mines became the College of Mines and Engineering. In 1940, the Phelps Dodge Corporation requested that a College of Mines be created with Engineering as a separate college with Dr. Chapman as Dean of the new college. Thus, in 1940, Chapman became Dean of the College of Mines and Director of the Arizona Bureau of Mines, positions he held until 1957 when he retired after 40 years of service.

Owing to his extensive knowledge of chemical metallurgy, Chapman established a Chemical Engineering degree program in the College of Mines – a program that had been turned down

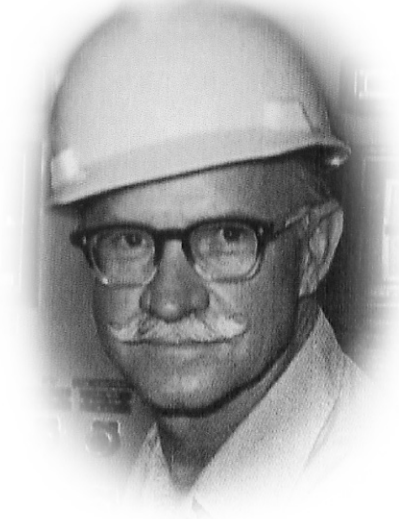


by the College of Engineering due to the lack of a chemical industry in the State.

In addition to his academic work, during his career he was a consultant to the US Bureau of Mines, American Smelting and Refining Co., Phelps Dodge Corp., and Calumet & Arizona Mining Co.

Professionally he made significant contributions in mineral processing of low-grade copper ores and extractive metallurgy, especially in the field of hydrometallurgy. He received three patents (one solely in his name, two others in collaboration with others) for the recovery of gold from cyanide solutions using carbon. His work laid the groundwork for CIL (carbon-in-leach) and CIP (carbon-in-pulp) - technologies used today in gold recovery. A scholarship in his name exists today in The University of Arizona College of Engineering from funds donated by his former students.

Kenneth L. Power (1924-1978)



Kenneth L. Power received his degree in Metallurgical Engineering from The University of Arizona in 1947, with a professional degree of Metallurgical Engineer from the same institution in 1959.

Power began his career with the Anaconda Company, and then moved to Inspiration Consolidated Copper Co, where he served as concentrator superintendent. He left Inspiration for American Smelting and Refining (ASARCO) at Silver Bell near Tucson, Arizona. There, he became a proponent of a proposed copper recovery program—Liquid-Liquid extraction of copper, better known today as solvent extraction/electrowinning (SX/EW). His report to management was received with the comment that the company was a smelting company and didn't want to spend money on competing technology.

Shortly after this, in 1968, Ken met with Maxie Anderson, President of Ranchers Exploration & Development Co, who in 1967 had already decided to utilize SX/EW at their Bluebird Mine in Miami, Arizona, where design and construction was underway. He was hired as General Manager of the Bluebird Mine and successfully oversaw the world's first commercial operation of SX/EW in the copper industry. First solutions were run through the new plant in March, 1968. In a few months, regular production of 30,000 pounds of copper per day was achieved.

During the ten years he was with Ranchers, he became recognized as an authority on the leaching of copper oxide ores and the application of solvent extraction-electrowinning technology to the production of cathode copper. Aside from being General Manager of the Bluebird, he also served as Project Manager of Ranchers Durita (uranium) operation.

Although Kenneth L. Power's career was cut short when he died from an aortic aneurysm at age 53 while working at the Durita project, the influence he had on developing and popularizing the SX/EW processing method as a cost-effective and efficient recovery technology is still recognized today.

David C. Lincoln

David C. Lincoln was born in Cleveland, Ohio, in 1925. He received his B.S. and M.S. engineering degrees from California Institute and thereafter worked in the aerospace industry. In 1945, the Lincoln family acquired controlling interest in Bagdad Copper Company which was a 2500 ton per day underground operation. In that same year, Bagdad converted to an open pit, and capacity was gradually increased to 6000 tons per day. David became President and Chairman of the Board of Bagdad Copper in 1959, after the death of his father, John C. Lincoln, a 1998 Inductee from Mining's Past into the American Mining Hall of Fame.

The oxide part of the overburden was stockpiled for later leaching. In 1960 David obtained a \$1.5 million loan for construction of a leach/precipitation plant so the oxide portion of the ore body could be recovered. Initially this was recovered as cement copper by iron precipitation. ChemMetals, a joint venture with Gulf States Land was formed to convert cement copper to high purity copper powder and sold for friction and molding applications. This operation was marginal due to sundry problems.

Based on the enthusiastic recommendation of his staff, a pilot plant for application of solvent extraction/electrowinning to copper recovery was built. The first commercial SX/EW operation was built at the Ranchers Blue Bird Mine in 1968. Bagdad's plant was built in 1970 and is still in use. The Chemetals joint venture was dissolved and the plant dismantled and sold when SX/EW came on stream.

A retirement plan for all employees was implemented; additionally, the long standing bonus program for all employees was continued. To even out the effects of wide market swings experienced by the copper market, Bagdad started diversifying, first by purchasing Garland Steel in 1967, followed by the formation of Bagdad Plastics Company. In 1969, Bagdad Copper was listed on the American Stock Exchange.

Drilling around the Bagdad Mine proved a large orebody, justifying an expansion from 6,000 tons/day to 40,000 tons/day. After extensive study, it became obvious that the best way to



accomplish this expansion was by merging with another well capitalized company. This led to the merger of Bagdad Copper with Cyprus Mines in 1973, under terms that were advantageous to the Bagdad stockholders and its employees.

David Lincoln was very thoughtful about all aspects of the Bagdad operation and concerned about the Bagdad employees. He made sure that when a merger took place with Cyprus Mines, that Bagdad employees wouldn't be replaced by outsiders.

Mr. Lincoln continued as an active member of the Cyprus board until Cyprus was acquired by Standard Oil Company of Indiana in 1980. Robert Bogart had been assistant manager of Bagdad and was promoted to general manager by Cyprus. He very skillfully managed the expansion which was successfully completed. The mine has undergone additional expansions and continues as a very viable operation.

Since his retirement from management of Bagdad Copper, Mr. Lincoln resides in Phoenix with his wife Joan. They have four children. Mr. Lincoln is currently involved in a variety of profit and not for profit endeavors.

Matthew D. Lengerich

Matthew (Matt) Lengerich, Mine General Manager of Kennecott Utah's Bingham Canyon Mine, is being recognized by MFSW for his demonstrated leadership in the mining industry as a young professional under the age of 40. Born in Anchorage, Alaska in 1978, Matt's career interest in engineering is attributed to the influence of his father Ronald Lengerich, who was a petroleum engineer, and to his high school teacher, Mike Thomas who exposed him to underground hard rock mining and to the discipline of mine engineering. Matt attended the Colorado School of Mines and graduated with a BSc in Mining Engineering in 2000.

Matt began his mining career as an intern with Kennecott Energy's Colowyo Coal Mine in Craig, Colorado. He returned after graduation as a full-time mining engineer and filled several roles in operations, technical and asset management. In 2006, Matt and his young family moved to Weipa, Australia to work at Rio Tinto's Weipa aluminum bauxite mine in the Far North Queensland, Australia. Their three years in Weipa were filled with adventure, and the opportunity to work in a remote aboriginal environment provided Matt with a deeper understanding of the challenge facing future mining operations.

In 2009, Matt returned to the U.S. as Production Support Manager at Rio Tinto's largest copper asset – the Kennecott Utah Bingham Canyon Mine. He was promoted in 2010 to Mine



Operations Manager and since 2012 has enjoyed the technical and business challenges of being Mine General Manager.

Matt is a Colorado-registered Professional Mining Engineer and an active member of the Society of Mining, Metallurgy & Exploration Geology. Matt and his wife Heather were married in 2000 and enjoy spending time with their two children Samantha (9) and Tyler (4). When time permits, Matt is an avid fisherman, rock climber, mountain biker, and musician.

Komatsu America Corp.

Komatsu America Corp., a U.S. subsidiary of Komatsu Ltd., is being honored with an Industry Partnership Award by Mining Foundation of the Southwest in recognition of Komatsu's role as one of the world's leading manufacturers and suppliers of construction, mining and compact construction equipment. Komatsu America Corp. also serves the forklift and forestry markets. Through its distributor network, Komatsu offers a state-of-the-art parts and service program to support the equipment. Komatsu has been providing high-quality reliable products for nearly a century.

Known globally for its first-class mining tools, Komatsu America Corp. designs, manufactures and supports the super-large off-highway mining trucks from its Peoria, Illinois facility. The Komatsu trucks use up to 3,500 horsepower diesel engines to generate power for rear-mounted electric motors, capable of driving the vehicles up to 40 mph. With a payload of up to 360 short tons, these trucks are designed to operate 24/7/365 for ten years. Shipped around the world, the trucks compliment the Komatsu hydraulic shovels, wheel loaders, and tracked dozers that are built and supported by a global network of manufacturing and distribution facilities.

Not satisfied with simply providing world-class equipment, Komatsu America Corp. includes Modular Mining Systems as the capstone to its mining tool portfolio. Modular is the premier supplier of data-driven mine management solutions with a vision to revolutionize the way the mining industry operates in real-time.

Combined with the mining trucks from Peoria, control systems and product leadership from Japan, Modular supplies the site-supervisory system for Komatsu's Autonomous Haulage System (AHS). Operating a production fleet of driverless mining trucks Komatsu's Frontrunner® system is reshaping the mining industry.

The success of Komatsu's mining customers stands as proof of the commitment to high quality tools and support that exceed expectations.

KOMATSU®



ASARCO LLC

The **Mining Foundation of the Southwest** is proud to present a Special Citation to **ASARCO LLC** and its employees for their 100 years of copper mining and processing operations in Arizona.

Beginning in 1912, the year Arizona became a state, the American Smelting and Refining Company opened the Hayden Smelter to process ore concentrates from the Ray Consolidated Copper Company mine located east-southeast of Phoenix – a mine that was later purchased by ASARCO in 1986 and that has operated for more than 100 years. The smelter has operated nearly continuously since its foundation, updating technology through the years to increase efficiency and environmental controls. It is one of three remaining smelters in the United States and produces copper anodes primarily from internal concentrates.

In addition to the smelter, ASARCO has other facilities in the southwest including the Ray, Silver Bell, and Mission Mines in Arizona and the copper electro-refinery and rod plant in Amarillo, Texas. ASARCO has more than 2,700 employees including those at the Tucson corporate office, the mining and processing facilities, the Copper Basin Railway from Ray to Hayden, and Amarillo, Texas. Annual production in 2011 was 409 million pounds of refined copper making ASARCO the third largest producer in the U.S. with significant reserves and exploration potential. ASARCO also produces sulfuric acid.

Throughout its history, ASARCO and its employees have persevered during periods of economic downturn, and have striven to improve operational, environmental, and safety performance in 2009, ASARCO emerged from a 4-year bankruptcy proceeding that enabled its creditors to be paid in full plus interest and funds to be set aside to completely resolve its legacy environmental obligations. Owing to a strong copper market, ASARCO's copper production is at capacity, employment levels are high, and operations upgrades and expansions are in progress.



ASARCO
GRUPO MEXICO



American Mining Hall of Fame

Inductees (1983-2011)

1983	George E. Atwood	1998	Charles G. Preble
1984	Charles F. Barber	1999	Irl F. Engelhardt
1985	George B. Munroe	2000	Ronald C. Cambre
1986	John C. Duncan	2001	A. Dan Rovig
1987	Plato Malozemoff	2002	J. David Lowell
1988	Simon D. Strauss	2003	Thomas J. O'Neil
1989	G. Robert Durham	2004	J. Steven Whisler
1990	Harry M. Conger	2005	Pierre Lassonde
1991	Kenneth J. Barr	2006	Jack E. Thompson, Jr.
1992	T S Ary	2007	Dennis R. Washington
1993	Milton H. Ward	2008	Timothy R. Snider
1994	J. Burgess Winter	2009	Tom Albanese
1995	Douglas C. Yearley	2010	Richard C. Adkerson
1996	Richard de J. Osborne	2011	Laurence Golborne Riveros
1997	James R. Moffett		



Industry Partnership Awards (1995-2011)

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
2004	Mining and Metallurgical Society of America
2005	Northwest Mining Association
2006	Mountain States Legal Foundation
2007	M3 Engineering & Technology Corporation
2008	Atlas Copco
2009	Boart Longyear Company
2010	Prospectors and Developers Assoc. of Canada
2011	Chilean Government/Industry Partnership

American Mining Hall of Fame

Medal of Merit Recipients (1989-2011)

1989	Ralph J. Roberts	2001	William H. Dresher
1989	Victor H. Verity	2001	Warren E. Fenzi
1990	John S. Livermore	2002	Richard D. Call
1991	George O. Argall, Jr.	2002	Kenneth L. Zonge
1992	Arthur A. Brandt	2003	Stanley H. Dempsey
1992	William C. Epler	2003	James William White
1993	Walter E. Heinrichs, Jr.	2004	Edward S. Frohling
1993	Willard C. Lacy	2004	Joaquin Ruiz
1994	Donnell W. Agers	2005	Larry McBiles
1994	J. David Lowell	2005	Wayne C. Hazen
1994	Ronald R. Swanson	2006	Leonard R. Judd
1995	Warren Kay Pincock	2006	Roshan B. Bhappu
1996	Richard W. Hutchinson	2007	William G. Davenport
1996	Charles L. Pillar	2007	Harry Parker
1997	Hugo T. Dummett	2008	Barbara A. Filas
1997	Spencer Rowe Titley	2008	Paul Arthur Hodges
1998	David N. Skillings, Jr.	2009	Mary M. Poulton
1998	José Rubén Velasco Rodríguez	2009	Jean Michel Rendu
1999	Paul S. Allen	2010	Terence P. McNulty
1999	William C. Peters	2010	Nyal Niemuth
2000	Leonard Harris	2011	Marco T. Einaudi
2000	Pedro Sánchez-Mejorada	2011	Ralph B. Sievright

American Mining Hall of Fame

Inductees from Mining's Past (1983-2011)

Maxie L. Anderson	1934-1983	Curtis H. Lindley	1850-1920
Frank William Archibald	1920-1987	Thomas S. Lovering	1896-1991
Allan B. Bowman	1911-1982	John William Mackay	1831-1901
James Boyd	1904-1987	Hugh Exton McKinstry	1896-1961
Bert S. Butler	1877-1960	Donald H. McLaughlin	1891-1959
Nellie Cashman	1849-1925	Frank Wood McQuiston	1904-1987
Louis S. Cates	1881-1959	Charles Meyer	1915-1987
J. Parke Channing	1863-1930	Seeley W. Mudd	1861-1926
William Andrews Clark	1839-1925	Samuel Newhouse	1853-1930
James Colquhoun	1857-1954	Georges Ordoñez	1907-1982
James Harold Courtright	1908-1986	Jorge Larrea Ortega	1912-1999
Arthur C. Daman	1889-1968	Charles F. Park, Jr.	1903-1990
John Van Nostrand Dorr	1872-1962	Richard Alexander Penrose, Jr.	1863-1931
James Douglas	1837-1918	Charles Debrille Poston	1825-1902
James Stewart Douglas	1868-1949	Frederick Leslie Ransome	1868-1935
Herman Ehrenberg	1818-1866	Rossiter W. Raymond	1840-1918
Charles F. Fogerty	1921-1981	Kenyon E. Richard	1915-1993
Antoine M. Gaudin	1896-1974	Robert H. Richards	1844-1945
Wesley P. Goss	1899-1985	Thomas A. Rickard	1864-1953
William C. Greene	1853-1913	Louis D. Ricketts	1859-1940
John C. Greenway	1872-1926	Bernhardt Rohe	1909-1992
Meyer Guggenheim	1825-1905	Reno H. Sales	1876-1969
Hal W. Hardinge	1855-1943	Harrison Ashley Schmitt	1896-1966
George Hearst	1820-1891	Fred Searls, Jr.	1888-1968
Samuel Peter Heintzelman	1805-1880	Antonio Siraumea	1710-1760
Earl C. Herkenhoff	1915-2002	Arthur F. Taggart	1884-1959
Joseph Austin Holmes	1859-1915	William Boyce Thompson	1869-1930
Herbert C. Hoover	1874-1964	Howard Allen Twitty	1909-1989
Daniel C. Jackling	1869-1956	Stewart R. Wallace	1919-2009
H. Myles Jacob	1913-1997	Thomas F. Walsh	1850-1910
Ira B. Joralemon	1884-1975	Norman L. Weiss	1902-1986
Henry Krumb	1875-1958	Arthur Redman Wilfley	1860-1927
Thomas H. Leggett	1859-1935	Forbes Kingsbury Wilson	1910-1990
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Waldemar Lindgren	1860-1939	Pope Yeatman	1861-1953

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