



MINING FOUNDATION OF THE SOUTHWEST

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APRIL, 2016

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CONCENTRATES

2016 EXECUTIVE COMMITTEE



Eben Robinson - President Robinson received his Mining Engineering degree from the University of Arizona and has worked for Asarco Silverbell, IMC/Mosaic Potash Carlsbad, Phelps Dodge/Freeport-McMoRan, and Marco Crane. He has been with Southwest Energy for six years and is now the Innovation Manager working on new technologies to insure that every hole drilled gets loaded, and every hole loaded fires properly. He also works on other Continuous Improvement projects for Southwest Energy and provides ongoing support at the mines for electronic detonators, seismographs, and general blast consulting.

Thomas L. Aldrich - Vice President & Hall of Fame Chair Aldrich received his Metallurgical Engineering degree from South Dakota School of Mines and Technology and has been an ASARCO employee for the past 40 years. Prior to being appointed as Vice President in 2002, Aldrich served as President of Hydrometrics in Montana. His present responsibilities include all environmental matters for ASARCO's operations in Arizona and Texas as well as all lobbying activities and community involvement. Aldrich was the recipient of the Distinguished Citizen Award presented by the Municipal League of Tacoma-Pierce County in 1997 for representing ASARCO during the mediation of the Tacoma smelter.

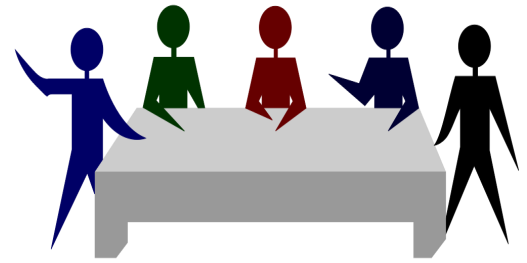


John Fenn—Treasurer Fenn received his B.S. in Mining Engineering from the University of Arizona. He worked for various national and international mining companies both in the U.S. and abroad including Duval Corporation, Cyprus Minerals Company, Cyprus AMAX, ASARCO, Phelps Dodge Mining Company, and Freeport-McMoRan Inc. His last assignment prior to retiring was serving as Division President, Africa, for Freeport-McMoRan. Fenn was an Adjunct Professor at the University of Arizona, College of Engineering, and was also a Director on the Boards of the Arizona and Colorado Mining Associations. He is now a consultant in the mining industry.

Andrew Soderman - Secretary Soderman received his Mining Engineering degree from the University of Arizona and following graduation was employed by Cyprus Miami Mining as an entry level Mine Engineer. In 2004, he joined Phelps Dodge as a Senior Mine Engineer and since then has been with Freeport-McMoRan entrusted with increasing responsibilities beginning as the Chief Mine Engineer at the Bagdad operations, to becoming the Technical Services Superintendent in Chile, to serving as the Senior Superintendent of Mine Operations in Tyrone, to being named the Mine Manager first at Safford and now at Freeport-McMoRan's Sierrita Operations.



President's Corner by Eben Robinson



The question on everyone's mind as I sit to write this column is, of course, "When is this downturn going to end?" I was in a meeting a couple of weeks ago, and the discussion, as usual, turned toward commodity prices and volatility. Someone cracked, "You watch, six months from now, we'll be talking about the next Super Cycle." I don't know any better than anyone else but according to the International Energy Agency, there are still 1.2 billion people that don't have electricity. I can only imagine that they would like to have it, and mining will always come back as long as there are people worldwide trying to break the grip of poverty. The commodities industries are the underpinning of a life not dominated by the search for food, clothing, and shelter.

Mining's opponents have one thing right: mining damages the environment. From the bottom of any pit that any of us has ever been in, this is undeniable. Those coordinates will never be the same as they were before the first drill steel hit the ground. However, everyone with a refrigerator and clean running water accepts and funds this tradeoff with their actions (if not their words) on a daily basis. Limited (that's our job) environmental devastation is what keeps the iPads humming in the swanky coffee shops. If the damage caused by mining is irrefutable, it is also undeniable that placing pavement on top of what used to be natural vegetation will damage that environment for as long as the pavement is maintained; I haven't yet seen the reclamation plan for Los Angeles. Yes, we have changed the environment, and we have changed it for the betterment of mankind. Across the globe, untold square miles are now dry and climate controlled in spite of whatever the weather is doing outside. Would we trade that for all the holes in the ground and piles of broken rock that made it possible? Mining keeps humanity from freezing in the snow through the measured extraction of resources from the earth. This doesn't come without a price, but our detractors don't account for the benefits when opposing every new mining project that is proposed.

There has been discussion about how the MFSW should proceed during these uncertain times. Should we be cutting back, trying to conserve funds? Perhaps Pam Wilkinson's teaching schedule should be reduced to part time, and Amanda Brick's hours should be pared. Perhaps our donations to the mining schools, SME student chapters, museums, and the AZGS should be suspended. I respectfully disagree with such ideas. The mining industry has a poor track record of burning the furniture to heat the building in the winter, then having nowhere to sit in the spring. There are glaring gaps in the demographics of mining professionals because the industry was unwilling or unable to suck it up in the hard times, support the mining schools, and hire or keep employed the fledgling white collar miners who then left the industry to work for Raytheon. The leadership of the Foundation (before my time) did a great job with frugality during the good times. By not overextending during the boom, MFSW has prepared for this downturn. Even with reduced income from our annual banquet, we can run the same way we have been for quite a while. This year, the shortfall between our 2015 banquet income and our 2016 expenses was about \$30k. The Board of Governors has approved a transfer from our investments to our checking account to maintain operations for 2016. The funding we have was given to us by our donors because they value the work that Pam does in educating young people about the importance of the mining industry in everyday life. We're going to spend it doing just that.

Other members serving on the Governing Board with their respective terms of service:

Term expiration: February, 2017

Thomas Aldrich
Douglas C.J. Austin
John Fenn
Corolla Hoag
Terry McNulty
Eben Robinson
James W. White
William H. Wilkinson

Term expiration: February, 2018

Theodore H. Eyde
Nancy Gracia-Gungor
William E. Hawes
Martin C. Kuhn
Robert A. Metz
Nyal Niemuth
David Travis
Rod Woodcock

Term expiration: February, 2019

Jean Austin
Mark Baker
Roshan Bhappu
Larry Dykers
Donald Earnest
Ronald Roman
Fermin Samorano
Andrew Soderman
Susan Wick

OUTREACH CORNER by Pam Wilkinson

MFSW Outreach Coordinator Activities: January-March 2016

The program has been highlighted in the news this year: the front page of the Mohave Valley Daily News had an article about the program at Fox Creek Junior High (http://www.mohavedailynews.com/news/fox-creek-students-hunt-for-treasure-ua-geologist-tells-about/article_ab28c764-cb1b-11e5-91fc-9b2868acdcd2.html), I was on the early morning edition of 12 News in Phoenix during Mining Day at the Capitol, and Mike Conway interviewed me for the AZGS.

Fox Creek Junior High, Bullhead City:



Mining BBs out of sand: Mining Day at the Capitol:

Live interview: Mining Day at the Capitol:



Interview with Arizona Geological Survey:



School visits have been consuming most of my time this semester, over 3100 students and 30+ teachers participated in activities and received presentations the first three months of this semester (see details below). Approximately 200 students with teachers and chaperones participated in the activity during mining day at the capitol.

I have been invited to the NV Mining Association teacher workshop in Reno this summer, where I will train teachers on my Rock Cycle and Mineral Deposits activity. I hope to train at least 30-60 teachers during this event.

OUTREACH CORNER, Cont.

During the national SME meeting in Phoenix Arizona I was awarded the prestigious Ivan B. Rahn Education Award for years of dedicated effort to educate the students and adults of Arizona about the facts of responsible mining and the role minerals play in our daily lives. Thank you to the members of the Mining Foundation for supporting the program that provides me with the resources to do what I do.



School	City	Students	Adults	Date	Days	Classes
Miami HS	Miami	100	2	1/5/2016	1	5
Casteel HS	Chandler	138	1	1/6-7/2016	2	5
Southern AZ Academy	Tucson	60	4	1/13/2016	1	1
Andrada Polytechnic HS	Vail	100	2	1/15/2016	1	5
Sunnyside HS	Tucson	135	1	1/19-20/2016	2	6
Sunnyside HS	Tucson	53	2	1/26-27/2016	2	4
Fox Creek Jr Hi	Bullhead City	259	1	23-4/2016	2	10
Emily Gray Jr Hi	Tucson	144	1	2/8/2016	1	6
Magee MS	Tucson	131	1	2/15/2016	1	5
Prescott HS	Prescott	193	2	2/17-18/2016	2	10
Alta Loma K-8	Peoria	195	1	2/29/2016	1	7
Western Peaks MS	Surprise	126	1	3/3/2016	1	5
Brophy HS	Phoenix	125	2	3/4/2016	1	4
Snowflake HS	Snowflake	357	2	3/8-9/2016	2	12
Round Valley Jr Hi	Springerville	80	1	3/10/2016	1	4
Blue Ridge Jr Hi	Pinetop	65	1	3/11/2016	1	3
Flowing Wells Jr Hi	Tucson	394	4	3/15-18/2016	4	13
Centennial MS	Ahwatukee	125	1	3/21/2016	1	4
Summit Academy	Chandler	55	1	3/22/2016	1	2
Amphitheater Jr Hi	Tucson	120	1	3/30/2016	1	6
Walden Grove	Sahuarita	200	2	3/31-4/1/2016	2	10
Total		3155	34		31	127

MEMBERS' CORNER

Membership drive is off to a good start and MFSW has gained 8 new members since February 1. Some of our new members are now serving on our Board and several others have graciously agreed to serve on the Hall of Fame committee, chaired by Tom Aldrich of ASARCO. On behalf of Eben Robinson, our 2016 President, the Foundation wishes to extend a warm welcome to :

Manuel Ramos - President & COO, ASARCO LLC

Ramos received his undergraduate degree from San Luis Potosi State University and his MBA from Chihuahua State University. Ramos has worked in the mining industry since 1974 with Grupo Mexico and was rapidly promoted to positions with progressively greater responsibility during his tenure. Ramos was appointed VP of Lead and Specialty Metals when Grupo acquired ASARCO in 1999 and 10 years later was appointed to his current position after ASARCO emerged from bankruptcy. Under Ramos' leadership, ASARCO has witnessed increased productivity always operating under Ramos' motto "Do it Safe, Do it Right!" Ramos is a board member of SALC and despite his work demands, somehow still finds time to enjoy numerous outdoors activities.

Nancy Johannesmeyer - Manager, Environmental Services Corporate Manager of Permitting, ASARCO LLC

Johannesmeyer received her Civil Engineering degree from Purdue University and is a registered professional engineer in Arizona and California. At ASARCO, she oversees all large capital projects and preparation of all submittals for environmental permits and development and implementation of new compliance programs. Prior to joining ASARCO, Johannesmeyer worked for ARCO Oil and Gas Company and for RAM Environmental Engineering. Johannesmeyer is the current Chair of the Biodiversity subcommittee for the Arizona Mining Association and a SME member.

Robin E. Barnes - Corporate Land Manager, ASARCO LLC

Barnes received her undergraduate degree in Range Management from the University of Arizona and obtained her A.A.S. Legal Assistant and Petroleum Land Management Certificates from Pima Community College and from the University of Houston, Downtown, respectively. At ASARCO, Barnes is responsible for the management of all company land, title and water records, owned or leased and serves as the company's liaison with government agencies and landowners. Prior to her employment with ASARCO, Barnes worked as a paralegal for DeConcini McDonald Yetwin and Lacy and Quarles & Brady providing legal assistance and landman services in mining law, natural resources, water rights etc.

Robert J. Miller - Project Manager, ASARCO LLC

Miller received his degree in Geology from the University of Wisconsin at Oshkosh and is a professional hydrologist. He has worked as a project and corporate manager for the past 37 years and has managed major development assignments at several mining CERCLA and RCRA projects throughout the U.S. Currently he is overseeing hydrology projects at ASARCO mines in Arizona and serving as site manager for a CERCLA project at Hayden.

Rod Woodcock - Chief Engineer, Chino Operations, Freeport McMoRan, Retired

Woodcock received his Mining Engineering from the New Mexico Institute of Mining & Technology and retired from Freeport-McMoRan in 2015. He was the Mill/Concentrator Operations Superintendent at Phelps Dodge, Bagdad when Freeport acquired the company and retired when serving the company as Chief Engineer at the Chino Operations. Before joining Phelps Dodge, Woodcock worked for Cyprus Amax Minerals, U.S. Bureau of Mines, Sharon Steel Corporation, Pathfinder Mines Corporation and Kerr McGee Nuclear Corporation. Woodcock is a new Board of Governor and is also serving on the 2016 Hall of Fame Committee.

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ANNOUNCEMENTS

2016 Arizona Geological Society Spring Trip

Date: 4/30 to 5/1/2016

Topic: An Introduction to the Pinal Schist in Southern Arizona

Field Leader: Arend Meijer

Guide Book and Lunch Costs: \$50 for members and guests, free for students

To register or for additional information: Contact sefan@portoftucson.com, 520-668-6667

2016 Arizona SME Annual Spring Meeting Field Trip Hosted by Asarco, Silver Bell Mining

Date: 4/23/2016

Arrival & Check In: 8:30am

Silver Bell Overview: 8:45 –9:30am

Tour: 9:30—11:30am

Lunch: 11:30am—12:30pm

Contact: Nancy Johannesmeyer, njohannesmeyer@asarco.com, 520-682-2420, ext. 4821 if you have not rsvp by April 8th.

2016 American Mining Hall of Fame Banquet

Those of you present at the 2015 awards banquet must have noticed the drop in attendance from the previous year. Faced with the current challenges with the mineral industry and hoping to improve on 2015 fundraising results, Tom Aldrich, on behalf of the Hall of Fame committee, would like to encourage all of you to reach out to your contacts to consider sponsoring the 2016 event. As you are all aware, the MFSW covers all expenses for the Outreach Education Program from donated funds generated from the annual banquet and we hope this vital program aimed to promote awareness in mining will be continued without disruption.

