



MINING FOUNDATION OF THE SOUTHWEST
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CONCENTRATES

2021 American Mining Hall of Fame Slate of Honorees

Main Inductee:



Robert Friedland
Chairman
Ivanhoe Group of Companies



Medal of Merit:



Sydney Hay
President
AMIGOS



Sarah Strunk
Chair and Partner
Fennemore

Medal of Merit under 40:



Angela Watt
Underground
Manager
South 32



**Industry
Partnership:**

**Special
Citation**



Hall of Fame Chairman

Amanda Best, Associate/Sr. Environmental Specialist, Westland Resources

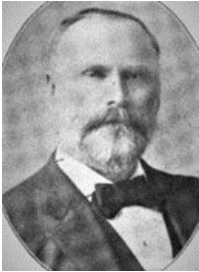


Greetings and Happy Summer!

The 39th annual American Mining Hall of Fame Banquet is fast approaching and it's beginning to look like we should be able to have an in-person celebration at our Annual Mining Foundation of the Southwest Hall of Fame Banquet this December. I am very excited about this, and I can't wait to see you all there. There is still a lot of work to do between now and then, and we need sponsors! Early sponsorships for the banquet will help to fund our education outreach at the U of A this year. Thank you for all of your support and I look forward to seeing everyone at our 2021 banquet!



2021 Inductees from Mining's Past



Robert Metcalfe (1825 -1905) (Explorer and Miner) One of the discoverers of the Morenci ore bodies. Sold his interests to the Lesinsky interests. Robert and his brother James Metcalf were soldiers and came to the area now known as Clifton-Morenci from New Mexico. They discovered copper in the area. They returned later in the hopes of discovering gold with little luck but established the first mining claims in the area called the Longfellow, Arizona Central, and Metcalf.



George H. Dern (1872 – 1936) (Mining Man and American Politician). Manager of the Mercur (Utah) gold mine. In conjunction with his metallurgist, Daniel Jackling, designed the mill which was one of the first and largest to use cyanidation, and was also one of the first to be powered by electricity. After the Mercur operation was exhausted, he moved on to the silver mines at Park City. He also served as the sixth Governor of Utah for eight years, from 1925 to 1933.



Francis W. MacLennan (1876 – 1947) (Underground Miner) Originator of the high block caving method, which extended the life of the Miami Copper Co. mine by over 30 years. Prior to this innovation, block height ranged from 60 to 100 feet. MacLennan caved blocks over 300 feet in height, thus saving a lot of development and consequently, lowering the ore grade necessary to make a profit.



Frederick Gardner Cottrell (1877 - 1948) (inventor and Philanthropist.) American physical chemist, inventor and philanthropist is best known for his invention of the electrostatic precipitator, one of the first inventions designed to eliminate air pollution and widely used in smelters as first line of defense in pollution control - and for establishing the Research Corporation for Science Advancement, a foundation that has funded scientific research since 1912.

JW MARRIOTT TUCSON STAR PASS



Plan to join the Mining Weekend (12//4 - 12/6/2021) cohosted by MFSW, SME Arizona Conference, UA SME Students and AMIGOS. Attendees will be extended a special room rate of \$146.00 + tax + a discounted Resort Fee of \$7.50 + tax per night; discounted \$90 golf rate and a 20% spa only discount. The contracted cutoff date for reservations at the group rate is Friday, Nov. 4th. Reservations Link: <https://book.passkey.com/go/MFSW2021> or call 877-622-3140

President's Corner

MESSAGE FROM PRESIDENT, Andrew Soderman



With the recovery from the COVID pandemic in full swing I think it is important to focus on why we do what we do. Miners provide the needed resources that power and advance the world we live in. There is a huge coordinated effort that goes into supplying these resources in a safe, environmentally friendly and cost-effective manner. This is a message that is very familiar to most of us reading this newsletter. Regretfully much of the public does not truly understand the importance of what the Mining industry does to support the society that we live in.

The Mining Foundation of the Southwest focuses on telling the positive story of the mining and mineral industry. The official mission of the Foundation is to enlighten the public about the vital importance of the mining industry, promote its value, honor its past and ensure its future. Our all-volunteer board believes the best and most effective way to communicate our message is through education. Towards this end, the MFSW funds the position of the Outreach Education Coordinator employed through the Lowell Institute for Mineral Resources of the University of Arizona. The MFSW funds the Outreach Coordinator's total expenses inclusive of salary as well as all other related program fees estimated at \$86,000 for 2021. Additionally, funds are donated to numerous student chapters at various universities and other mining organizations. Members of the MFSW are key to the success of the foundation. Our current membership is at 121 members. This is little lower than last year. I encourage all of you to visit our website and review the various membership levels. The extent of our outreach is only limited by the funds raised from membership, donations, and sponsorships to our annual American Hall of Fame Banquet. I truly hope that the mission of the MFSW is something that you agree with and will compel you to becoming a member and getting involved with the Foundation.

HALL OF FAME MEETING

Date: Wednesday, June 09, 2021

Time: 3:30 p.m. — 4:30 p.m.

Place: M3 Engineering and/or via Zoom

RSVP: admin@miningfoundationsw.org or 520-577-7519



LOWELL INSTITUTE FOR MINERAL RESOURCES



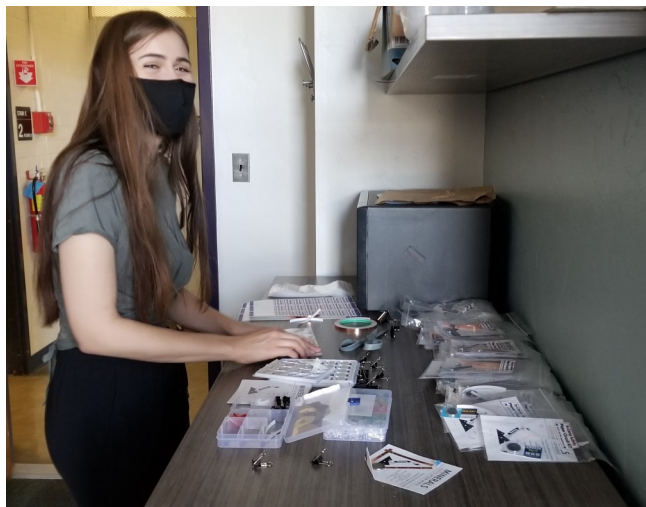
OUTREACH CORNER BY CHRIS EARNEST

What a year it has been. The past year saw the outreach program make a pivot into the digital space. During difficult times for students across the state we have created multiple ways for the program to engage students. YouTube videos, Google Earth tours, resource websites, virtual STEM fairs, and virtual classroom presentations have each helped to show students the importance of mining and mineral resources to their lives. All our virtual resources have been created with an eye toward supporting, expanding, and improving in person outreach once we are in the clear to resume in-person outreach events.

We are pleased to announce that as of May, in-person outreach has been resumed. Schools, students, and parents are still trying to navigate these difficult times, but the outreach program is ready to present to classes while following each school's safety precautions. Our first in-person and socially distanced presentation was to 7th and 8th graders at Utterback Middle School in Tucson Arizona. The students were very excited to be doing something that did not involve a screen. Some of the students were meeting each other in-person for the first time during the presentation. As the school year winds down in many parts of the state, we will continue to offer both online and in-person versions of our presentations.



Chris presenting to Utterback MS 7th graders on May



LIMR intern Claire assembling the "paper circuit" activity kit for SEA 2021.

Outreach Corner Cont.

This year's Summer Engineering Academy (SEA 2021) has been sold out! All slots have been filled for the "Engineering Our Earth" week of Summer Engineering Academy, and all other weeks as well, and the waiting list has enough space to fill the camp again. The Mining Engineering Day will be on June 28th. Camp participants will learn the importance of mineral resources to their lives and then participate in a series of activities exploring different aspects of mine planning engineering, mineral processing, geotechnical engineering, and sustainable development.

Last week the Lowell Institute for Mineral Resources (LIMR) outreach team, the interns, and some student volunteers completed assembly of the Mining Engineering Activity kits for camp participants to use. The kit includes three activities, two in-camp activities and one pre-camp activity. Before camp, participants will dig out their own mineral resource samples using the "You Dig It" mineral kit. The mineral resources in the kit were chosen to show the many different resources Arizona mines provide. Calcite to represent the cement industry, scoria to represent the aggregate industry, marble to represent the building materials industry, malachite to show oxide copper and for use in the SXEW experiment, chalcopryrite in matrix to show how ore must be separated from gangue, and metallic copper to show the final product. Participants will identify and learn about these mineral resources during the camp. They will see how some of the minerals are used in a paper circuit activity and use the copper oxide and copper metal in an SXEW experiment.



Mineral Resources placed into the You Dig It Mineral kits



Chris Casting You Dig It mineral kits

Outreach Corner Cont.

For more information about the Mining Engineering portion of SEA 2021, please visit

<https://minerals.arizona.edu/engagement/summercamp>

The website will be updated with information and instructions for camp participants as the activity kits began shipping.

The outreach program would like to thank Andrew Soderman of Freeport McMoRan for providing samples of chalcopyrite on monzonite from the Sierrita mine, Rodney Saulters of Freeport McMoRan for providing copper scrap, Pam Wilkinson for providing scoria from Flagstaff, and Will Wilkinson for providing chrysocolla which allowed us to use our remaining stock of malachite in the kits. It is with all of YOUR support that we are able to provide this year's camp participants with a unique and exciting experience in face of the challenges posed by a virtual environment.



LIMR outreach team, interns, and volunteers doing final QA check on Activity Kits.



LOWELL INSTITUTE FOR
MINERAL RESOURCES





Foresight Committee Visits

Alfie Norville University of Arizona Gem and Mineral Museum



Will Wilkinson arranged for several members of the Foresight Committee to tour the Alfie Norville University of Arizona Gem and Mineral Museum on April 15 including Don Earnest, Larry Dykers, Chris Wilson, Tom Aldrich and Will Wilkinson. The group was guided by Museum Manager Eric Fritz. The Committee is looking for ways the MFSW might expand its education program by working with other organizations.

The Alfie Norville Gem & Mineral Museum is dedicated to providing public education, the preservation of minerals and meteorites while also serving the research needs of professionals, students and collectors. The collection is world-wide in scope, but with specific emphasis on minerals from Arizona and Mexico. From turquoise mined by indigenous people in Arizona to rocks

found on asteroids within the solar system, minerals tell a story.

With its expanded space to over 11,000 square feet and upgraded collection, the University of Arizona Gem and Mineral Museum aims to tell this story, bringing the Tucson community together to learn about the influence that minerals have on the planet, the environment and life itself. The museum is located in the historic Pima County Courthouse in the heart of downtown Tucson. The courthouse is also the new home of Southern Arizona Heritage and Visitor Center which just recently opened to the public.



MEMBERS CORNER

*We welcome 1 new member, James Harris,
Business Development Manager,
Southwest Industrial Rigging*



New Member Recruitment



**Thank you all for your support of the MFSW.
Help us get bigger and stronger and healthier.
Go out and find a new member!**



Annual membership renewal is past due. If you have not yet renewed, please renew online or send your payment to the Foundation Office.