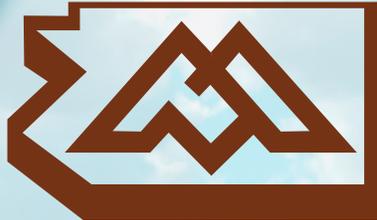


MINING MATTERS

A QUARTERLY PUBLICATION

September
2020



ARIZONA
MINING ASSOCIATION

IN THIS ISSUE:

Member Profiles: "More
Than Just a Member"

New AMA Leadership

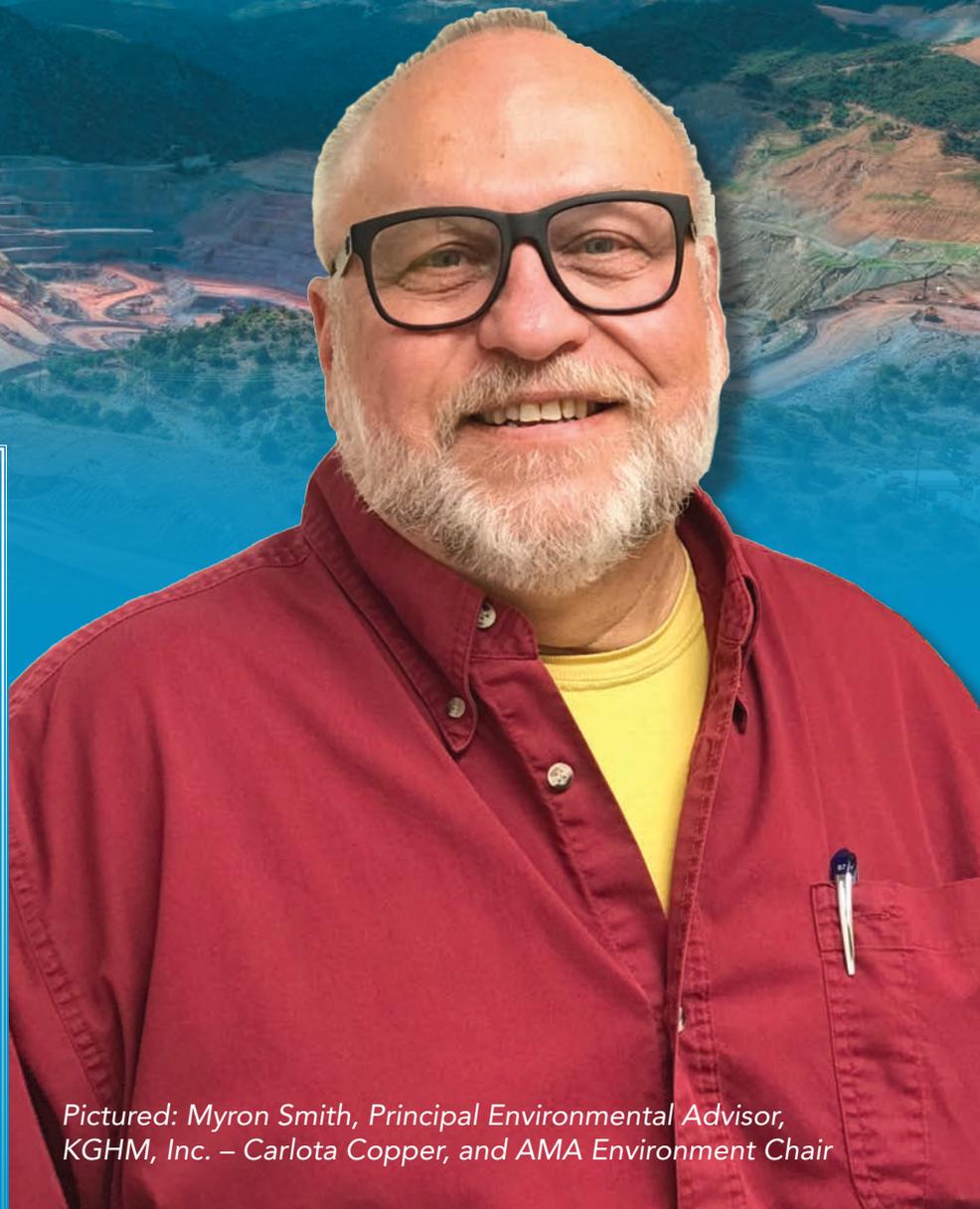
Committee Updates

Company Milestones

ADEQ Moving Forward

A Message from
US Senator Martha McSally

A Message from State
Representative Gail Griffin



*Pictured: Myron Smith, Principal Environmental Advisor,
KGHM, Inc. – Carlota Copper, and AMA Environment Chair*

BOARD OF DIRECTORS:

AMA Vice-President of the Board
Founding Member Company



James Stewart
ASARCO, LLC

(Primary)
Founding Member Company



Sig Weidner
BHP Billiton

(Alternate)
Founding Member Company



Kate Sommerville
BHP Billiton

AMA Treasurer



Dan Johnson
Wood PLC

Attorney for the AMA Board



Luke Narducci
Snell & Wilmer

Producer Director



Tom Lowry
CalPortland

Producer Director



Joe Bardswich
Golden Vertex

Producer Director



Bill Mackey
Granite Construction

Producer Director



Brent Berg
Florence Copper

Producer Director



Tim Ralston
Capstone-Pinto Valley Mine

Producer Director



Brock Johnston
KGHM, Inc.-Carlota Copper

Developer Director



Stephen Twyerould
Excelsior Mining Corp

Developer Director



Andrew Lye
Resolution Copper Company

Explorer Director



Douglas Pitts
Hawkstone Mining

Consultant Director



Adam Hawkins
Global External Relations

Supplier Director



Clint Sunt
Sundt Construction

MISSION STATEMENT:

To be the primary advocate of the Arizona mining industry through: promoting sound public policy at all levels of government; educating the public about the benefits of mining; and supporting the sustainability of a safe and responsible mining industry.



MESSAGE FROM THE AMA CHAIRMAN OF THE BOARD:

In the face of a pandemic, changes in industry fundamentals, significant downsizing, and an uncertain future, the Arizona mining industry has proven its incredible resiliency. Mining companies, suppliers, consultants and advisors to the industry have all come together to support our communities, continue operations, and look to the future of our great industry. Yes, times are difficult and uncertain, but through experience and knowledge, the Arizona mining industry is emerging stronger than it was before the pandemic. The Arizona Mining Association has proven its strength as well by seamlessly transitioning to video conferencing, remote meetings, and on-line activities to continue operations while protecting against the spread of COVID-19. As a demonstration of this strength, our committee chairs are already looking to the next state legislative session and planning our strategies for improving the legal environment in which we operate. We continue to work with state agencies to advance the needs of the industry and meet with them often, via teleconferencing. We are looking forward and continuing to set our sights on how we can support good laws and good regulations that support our industry.

To prevent the spread of COVID-19, the Board of Directors decided to not hold our annual general meeting. While disappointing, we must do our part to ensure the health and safety of those in our industry. We look forward to our annual general meeting in 2021 where we will be able to reunite and plan how best to support the mining industry. As a benefit to existing members, the Board of Directors also voted to implement a one-year moratorium on dues paid to the Association. This is to provide relief to our members who may be struggling financially where all of us can remain members without the uncertainty of having to pay dues. This is a true benefit of the Association's financial discipline and strength.

I want to thank all of you who have worked hard to keep the Association moving forward through this trying time. Once again, I believe that we have maintained our programs and our commitments throughout this time and the Association is well positioned to move forward with our initiatives and efforts. Thank you.

Mr. Francis McAllister
Vice President, Land & Water
Freeport-McMoRan

AMA Chairman of the Board
Founding Member Company



Francis McAllister
Freeport-McMoRan



Join AMA on Social Media!

Facebook: www.facebook.com/azmining
Twitter: <https://twitter.com/azmining>
Instagram: www.instagram.com/azminingassociation
LinkedIn: www.linkedin.com/company/azmining

Like and follow AMA and we will like and follow your company in return!

2020-2021 AMA Committee Meeting Schedule

Committee	Chair	Company	Meets On	Time
*Air Quality Sub Chair	Kami Ballard	Resolution Copper	Meets 3rd Friday - Monthly	10am - 12pm
Air Quality Sub Vice-Chair	Amanda Reeve	Snell & Wilmer		
**Biodiversity Sub Chair	Jeremiah Armstrong	ASARCO LLC	Meets 2nd Tuesday - Monthly	10am - 11:30am
Biodiversity Sub Vice-Chair	David Cerasale	WestLand Resources		
Communications/Education Chair	Stacy Gramazio	Florence Copper	Meets 2nd Wednesday - Monthly	11am - 1pm
Communications/Education Vice-Chair	Jerry Bustamante	Hudbay Minerals		
Environment Chair	Myron Smith	KGHM, Inc.-Carlota	Meets as needed	Varies
Environment Vice-Chair	Scott Thomas	Fennemore Craig		
Environment Vice-Chair	Ned Hall	Freeport-McMoRan		
Government Affairs Chair	Rebecca Hudson-Nunez	Freeport-McMoRan	Meets every Monday while in Legislative Session	9:30am - 10:30am
Government Affairs Vice-Chair	Jeremy Browning	GovGroup LLC		
Lands Chair	Chris Franks	Freeport-McMoRan	Meets 2nd Tuesday - Monthly	12pm - 2pm
Lands Vice-Chair	Eric Mears	Haley & Aldrich		
*Solid Waste Sub	Austin Jones	Freeport-McMoRan	Meets as needed	
Suppliers Chair	Ernie Smith	Code Steel Inspections	Meets 3rd Wednesday - Monthly	11am - 1pm
Suppliers Vice-Chair	Jim Norine	Ausenco		
Tax Taskforce (AD HOC)	Varies	N/A	Meets as needed	Varies
Water Policy (AD HOC)	Sandy Fabritz	Freeport-McMoRan	Meets as needed	Varies
*Water Quality Sub Chair	William Hart	Freeport-McMoRan	Meets 3rd Friday - Monthly	12pm - 2pm
Water Quality Sub Vice-Chair	Lee Decker	Freeport-McMoRan		

* These Subcommittees overseen by Environment Committee

**This Subcommittee overseen by Lands Committee

Meeting dates are subject to change based on availability of the chairs and agenda items

SAFETY SHARE

“TIPS TO IMPROVE MINE HEALTH & SAFETY”

Tip on Electrical Safety

Most mining environments have many different pieces of electrical equipment that are used on a regular basis. The issue is, these devices may need to be moved to all different locations both inside and out of the mine itself.

This often means that there will be electrical cords stretched along many areas of the mine. This can cause electrocution hazards, as well as trip and fall risks. You should always have policies in place about how and when extension and other electrical cords should be used so people are aware of them and can take the proper electrical safety precautions.

Tip on Fire Safety

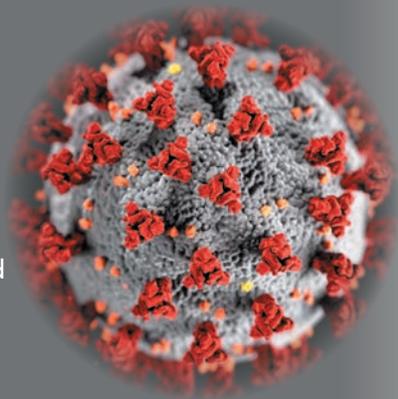
Another major safety issue with mining is that of fires. Fires can come from a variety of sources at mining sites. For example, there may be natural gas that begins to seep into the mine. The fuel used to power specific machinery could ignite too. There are many other potential sources for fire, so you need to do all you can to minimize this risk. Due to the nature of this type of workplace, you may not be able to have a traditional fire suppression system installed, which makes it even more important to take fire safety seriously. Watching out for fire hazards at all times is a key component of the overall mining health and safety program.

(Credit to creativesafety.com)

AMA MEMBERSHIP

“DUES HOLIDAY” REMINDER

We all know that COVID-19 has created stressful times, both logistically and financially, for all our company members. If you have been an AMA Member longer than 2020, your company is eligible for a “Dues Holiday.” In a unanimous decision at the AMA Board meeting in April 2020, the board created a “Dues Holiday” for our AMA Members. If your company already paid membership dues for 2020, your dues for 2021 have been waived. If your company had not paid for membership, as of April 2020, then your dues holiday is for 2020. If you have any questions about when your membership is due, please contact the AMA office at 602.266.4416 or email Terrie Britton at terrie@azmining.org.



7TH ANNUAL MINING DAY AT THE CAPITOL

WEDNESDAY, MARCH 17, 2021



NEW MEMBERS SPOTLIGHT

THE AMA WELCOMES OUR NEW MEMBERS FOR THE 2020 YEAR

SUPPLIERS:

- D2000 Safety, Inc.** – Safety & Rescue Training
- ProSeal Corp** – ProSeal ECCO - SealECCO Pro, Green, Tailings, Toxic Leachate Containment
- Wanzek Construction** – Quality heavy industrial construction and specialty services
- Minet Lacing Technology** – Innovative conveyor belt fastener solutions for mining and aggregate operations.
- CGS Mule LLC** – Mining & Geology Suppliers
- VEGA Americas** – Manufactures and sells instruments that measure level in production processes.
- Composite Construction LLC** – Structural strengthening, corrosion protection, seismic retrofit and blast resistant systems.
- Controls AZ** – Innovative automation solution
- Turner Mining Group** – Contract mining services
- ME Elecmetal** – Total solutions for mineral processing worldwide
- World Oil Environmental Services** – Sustainable solutions for hazardous waste

Sandvik Mining and Rock Technology – Engineering group in mining and rock excavation, metal-cutting and materials technology.

CAP Logistics – Freight services, supply chain analysis, and integrated software

CONSULTANT MEMBERS:

Pray & Company – Human Resources and Communications services in the mining and industrial sector

Hanlon Engineering & Associates – Engineering consulting and contracting company that services the mining and mineral processing industries globally.

MINING EXPLORATION MEMBERS:

Arizona Metals Corp. – Owns the Kay Mine Project (Yavapai County)

GMV Minerals – A junior gold development company focused on the Mexican Hat project, located in southeast Arizona

COMMITTEE PROFILES

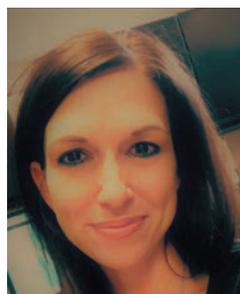
AIR QUALITY SUBCOMMITTEE

The Air Quality subcommittee continually monitors and addresses all federal, state and county regulatory air quality issues, as necessary. Where valuable, the committee works through and provides feedback to the agencies, in an effort to clarify, support or oppose relevant issues. Currently, the committee is focused on the following:

- Monitoring the USEPA's proposed decision to retain the 2015 Ozone National Ambient Air Quality Standards and any potential subsequent legislation challenging the decision;
- Participating with ADEQ in developing a Regional Haze Program;
- Collaborating with ADEQ to clarify the New Source Review Permit Program Operating Rules; and

- Supporting and assisting with the Arizona Chamber's amicus brief supporting the USEPA's attainment determination for the 2008 Ozone Standard in Maricopa County.

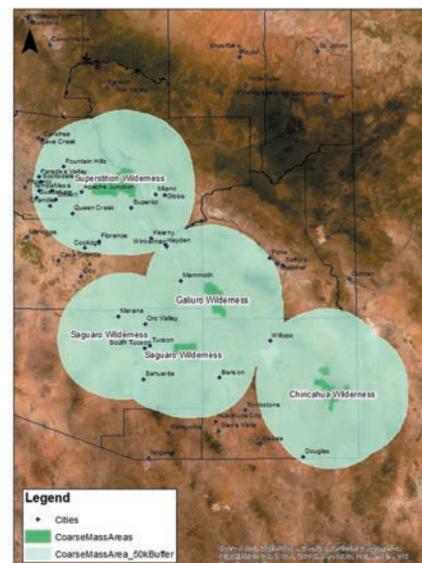
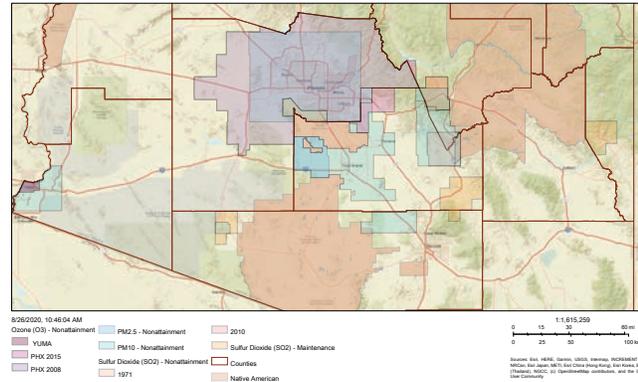
The committee gives careful consideration to all issues of current or future potential relevance to the mining industry in Arizona and engages appropriately.



Kami Ballard, Resolution Copper, AMA Air Quality Subcommittee Chair

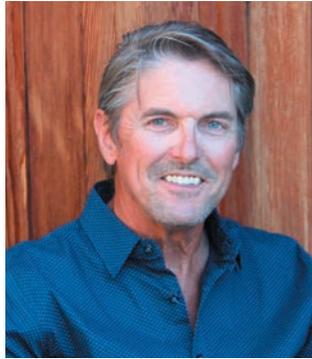


Amanda Reeve, Snell & Wilmer, AMA Air Quality Subcommittee Vice-Chair



WATER QUALITY SUBCOMMITTEE

In addition to tracking the subject of waters in Arizona issue, the AMA Water Quality Subcommittee continues to monitor and participate in (1) implementation of the new "waters of the US" or WOTUS rule in Arizona, including its impact on mine expansions and AZPDES permits held by mining operations; (2) ADEQ's newly-reissued stormwater general permits, including the 2019 Mining Multi-Sector General Permit (MSGP) and 2020 Construction General Permit; and (3) ADEQ's efforts to obtain primacy to implement the federal Underground Injection Control (UIC) program in lieu of EPA.



William "Bill" Hart, Freeport-McMoRan Water Quality Subcommittee Chair

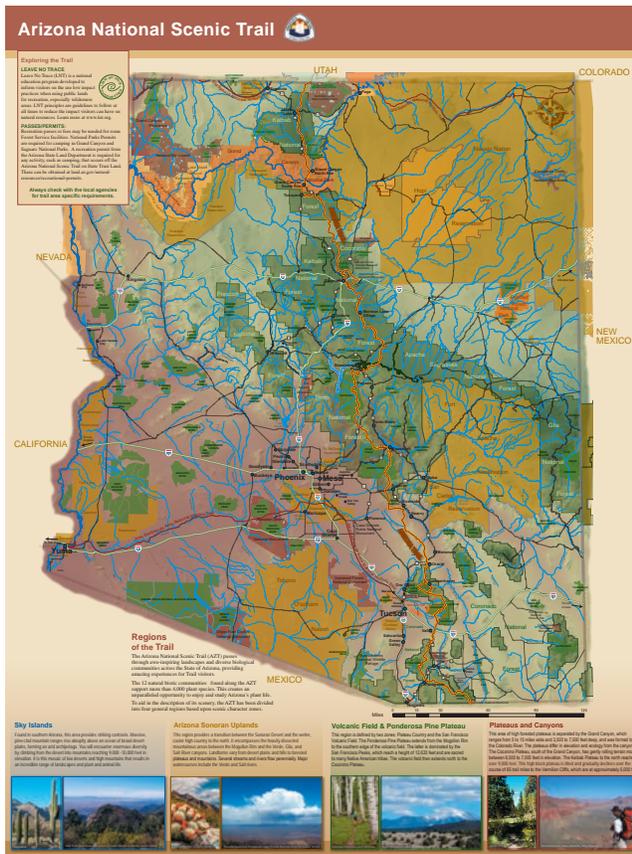
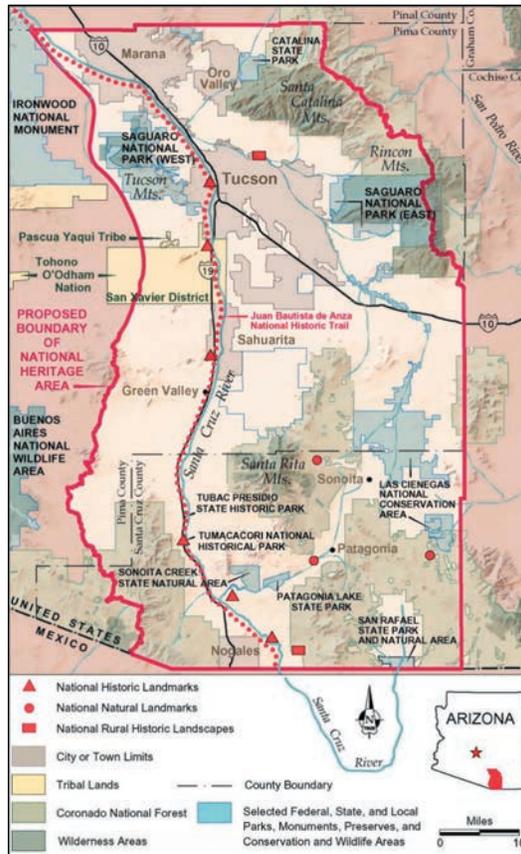
LANDS COMMITTEE

AMA's Lands Committee's recent focus has been on 1) proposed revisions to the Tonto National Forest Plan, 2) Santa Cruz Valley National Heritage Area proposed Comprehensive Plan, 3) Arizona National Scenic Trail Comprehensive Plan and 4) NEPA Reform.

The plans have direct impact on AMA members. The Lands Committee worked together to comment effectively on these plans at the ground floor level and continues to press for engagement and support of its concerns at the gubernatorial level. Substantial comment letters were

submitted to the USDA, Forest Service regarding the Forest Plan and AMA was successful in removing several areas that were proposed for Land With Wilderness Characteristics that did not meet the science and data required for designation. These designations severely hamper AMA members with unnecessary additional regulations and restrictions for expansions. The Lands Committee is constantly monitoring preparation of the first Arizona Scenic Trail Comprehensive Plan which is proposing a wider corridor and expanded viewsheds which also will hamper exploration and greenfield

operations. The first Santa Cruz Valley National Heritage Area Comprehensive plan is being prepared, calling for policies and strategies regarding land and water management in Pima and Santa Cruz County. AMA Lands also worked with the AMA Environment Committee to submit joint comments supporting the Council on Environmental Quality's Notice of Proposed Rulemaking entitled, "Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act, e.g., NEPA reform."



Carolyn Loder, Freeport-McMoRan, AMA Lands Committee Chair

SUPPLIERS COMMITTEE

As COVID-19 has impacted communications with mines and suppliers alike, the AMA has created a portal system which will allow the AMA mining community to continue to have access to AMA suppliers and consultants. Each portal is designed for communication.

The AMA Mining Company Portal connects with a personal login and password, usually held by procurement. Please note that a mining company can have multiple logins and passwords for multiple procurement employees. The mining company can search under supplier company names or keywords for goods, professional and trade services, or equipment required. Procurement would then send an email, through the portal, to those suppliers

for an RFQ. The suppliers would then have access to a live project or sales opportunity.

The AMA Supplier Portal has created opportunities for each supplier and producer to learn about each other and, by doing so, it can create business within the membership. Suppliers can also reach out to other suppliers and consultants within their portal.

While the AMA Suppliers Committee is aware that these portals may not replace a mining company's current system, it is AMA's hope that these additional portals will enhance systems that are already in place and give the mines an alternate opportunity to reach suppliers that may or may not be in their current system.

AMA believes that our mining companies and suppliers will enjoy this one-of-a-kind tool available on the AMA website at www.azmining.org and an exclusive 'member's only' benefit.



Ernie Smith, Code Steel Inspections,
AMA Suppliers Committee Chair

WE BID A FOND FAREWELL AND THANK YOU AS TWO OF OUR COMMITTEE CHAIRS RETIRE

Carolyn Loder and **Tim Gibson** have been around the AMA for quite a while. We wanted to send them off with a fond farewell and a heartfelt 'Thank You' for their tireless dedication to the mining industry.

Carolyn is Manager of Mineral Rights and Public Lands for Freeport-McMoRan. She has served as Chair of the Arizona Mining Association's Lands Committee since 2015 and possesses more than 30 years of senior professional experience in the public and private sectors in Mining, Mineral Rights Management, Land Management and Tribal Relations in the United States.

She served as President of Sonora Mining Corporation and Vice President of the Sonora Mining Corporation/Jamestown Mine Joint venture between Northgate Exploration and Pathfinder Gold (Cogema). The Jamestown Mine was North America's largest gold flotation facility. She served two terms as President of the California Mining Association, the first woman President in its hundred-year history.

Carolyn received numerous awards for mineral reserve acquisition both at the corporate and Tribal level, including completion of a landmark land exchange in New Mexico returning aboriginal lands to two federally recognized tribes while securing mining rights.

She was invited to address the United Nations, Special Rapporteur and High Commissioner of Human Rights regarding Indigenous Rights and the Extractive Industries. Three Secretary of Interior's appointed her to the federal Bureau of Land Management Resource Advisory Council. She served for nine years on their Council and served as



Tim Gibson, Water Resources Manager,
Freeport-McMoRan, AMA Outgoing Water Policy
Chair

Vice-Chair and Chair of the Council's Mining Sub-Committee. She was Executive Director of a Council of Governments in California directing all land management activities for ten years.

Carolyn was honored by the National Association of Women in Construction with their Person-of-the-Year Award, as a non-member, for her accomplishments and support of the mining industry. She was named Person-of-the-Year by the New Mexico Mining Association and the Arizona Rock Products Association. She served on both boards for 10+ years.

Carolyn holds a master's degree in Physical Geography from California State University, Fresno and a master's degree in Indian Law from the Sandra Day O'Connor School of Law, Arizona State University

Tim has previously chaired the Arizona Mining Association Water Policy Committee from 2011 to 2016, taking over again in 2019.

He is currently employed as a Water Resource Manager for the Corporate Land and Water Department at



Carolyn Loder, Manager-Mineral Rights & Public Lands,
Freeport-McMoRan, AMA Outgoing Lands Committee
Chair

Freeport-McMoRan, and his areas of management responsibility include mine operations in the southwestern United States.

Tim has worked in various water planning and management capacities for Freeport-McMoRan and its predecessor, Phelps Dodge Corporation, for the past 20 years. Prior to employment in the mining industry, Tim worked as a Water Resource Specialist at the Arizona Department of Water Resources for 5 years. He also served as an Arizona Legislative Intern during the 1995 Legislative Session on the House Environment Committee.

Tim earned his Bachelor of Arts Degree from the University of Arizona (1990) and has been an Arizona resident since 1975.

We all agree that Carolyn and Tim have both had long and successful careers. The staff and all the AMA members wish Carolyn Loder and Tim Gibson the very best as they begin their new adventures!

Delivering value to all stakeholders is what makes our mining clients win

Business success for mining operations hinges on productively partnering with governments, agencies, and community advocacy groups to satisfy stakeholders' needs. Our mining consultants work alongside your internal teams and stakeholders to not only minimize permitting, regulatory, and community outreach obstacles, but to find win-win solutions for you, regulators, and the communities in which you operate.

For more information, contact:

Eric Mears, R.G.

Market Segment Leader, Mining

emears@haleyaldrich.com | (602) 760.2422

haleyaldrich.com

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- HDPE Pipe Fusion
- Pre-Production Stripping
- Leach Pad Development
- Tailings Impoundment Construction
- Material Production
- Environmental Reclamation/Remediation

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FEDERAL ISSUES

Trump Administration Proposes to Obtain a Fair Return for America's Mineral Resources

Date: Friday, August 7, 2020
Contact: Interior_Press@ios.doi.gov

Proposed rule will help promote energy independence and economic growth

WASHINGTON – Advancing President Trump's agenda to promote energy independence and economic growth, the Department of the Interior will publish a proposed rule to amend portions of the Office of Natural Resources Revenue's (ONRR) regulations. The proposal would eliminate complexity and bring greater clarity and certainty for our public and private partners.

The proposed amendments will update ONRR's regulations for valuing oil and gas produced from Federal land, valuing coal produced from Federal and Indian land and assessing civil penalties for violations of certain statutes, regulations and orders associated with mineral leases. The changes mark a return to time-tested, well-understood principles for valuing the Nation's mineral resources.

"This proposal provides regulatory certainty and clarity to States, Tribes and stakeholders, removing unnecessary and burdensome regulations for domestic energy production," said U.S. Secretary of the Interior David L. Bernhardt. The proposed amendments to the 2016 Consolidated Federal Oil & Gas and Federal & Indian Coal Valuation Reform Rule ("2016 Valuation Rule") will specifically:

- Simplify processes, provide clarity regarding royalties owed and better explain ONRR's civil penalty practices;
- Better align ONRR regulations with multiple executive orders, including Promoting Energy Independence and Economic Growth ([Executive Order 13783](#)), Implementing an America-First Offshore Energy Strategy ([Executive Order 13795](#)), and [Secretary's Order 3350](#), which promotes the America-First Offshore Energy Strategy; and
- Respond to a recent court decision regarding the 2016 Valuation Rule that temporarily enjoined the coal portions of that rule.

The proposed rule is available for viewing at https://www.onrr.gov/Laws_R_D/2020ProposedValRule.pdf

The proposed rule will be published in the Federal Register and accessible via www.regulations.gov.

Public comments on the new rule will be accepted for 60 days from the date of publication in the Federal Register. All comments will be carefully considered before any final rule is published.

(Courtesy of the Department of Interior)

THE BUREAU OF LAND MANAGEMENT'S HEADQUARTERS OFFICIALLY ESTABLISHED IN GRAND JUNCTION, COLORADO

Relocation of staff resources enhances the Bureau's ability to serve the American public

Grand Junction, Colo. – On Monday, August 10, 2020, U.S. Secretary of the Interior David Bernhardt signed [Secretary's Order \(SO\) 3382](#) formally establishing the Bureau of Land Management's (BLM) headquarters in Grand Junction, Colorado. The formal designation completes the process of relocating the federal agency headquarters closer to both the land it administers and to its employees.

"This relocation strengthens our relationship with communities in the West by ensuring decisionmakers are living and working closer to the lands they manage for the American people. This effort will also save a great deal of money that can be reinvested in our field operations," said **Secretary Bernhardt**.

"Day after day our BLM leadership team is called on to make decisions that impact the lives of families in the West. There are neither maps nor memos that replace the wisdom gained by putting your feet in the dirt of the land you manage and speaking face-to-face with the individuals who must live with

the consequences of those decisions. This is how you build trust with those we serve," said **Casey Hammond, Principal Deputy Assistant Secretary of the Interior for Land and Minerals Management**.

"The BLM strives to be a good neighbor and responsible steward of America's public lands. Relocating our headquarters West furthers that effort," said **Deputy Director for Policy and Programs, exercising the authority of the Director, William Perry Pendley**. "We also worked hard to ensure that each of those employees unable to move found a job in the Washington, D.C. metro area. And the folks who wanted to move West are—or soon will be—settled in various Western cities."

By the end of August, most assigned staff will be on duty in the headquarters office.

(Courtesy of BLM.gov)

Safely building Mines since 1939



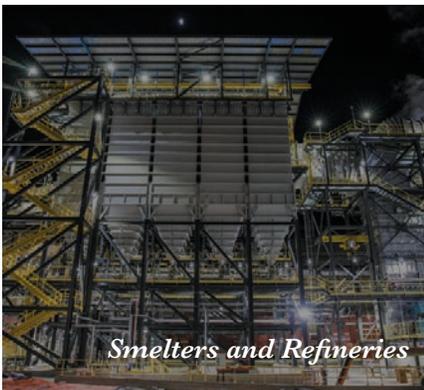
Support Facilities



Fine Crusher Circuits



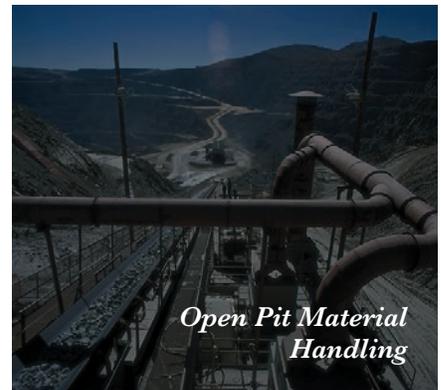
Specialty Process Facilities



Smelters and Refineries



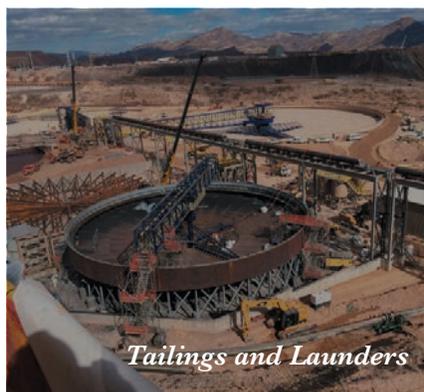
Primary and Secondary Crushers



Open Pit Material Handling



Flotation Facilities



Tailings and Launderers



Filter Buildings



Carbon In Column Leach



Headframes and Collars



Bulk Material Handling

OTHER FEDERAL ISSUES



CEQ Publishes Final NEPA Rule

The White House's Council on Environmental Quality (CEQ) this month published its final rule to modernize its implementing regulations for the National Environmental Policy Act (NEPA). A long-time priority for AMA and our members, this is the first time NEPA regulations have been updated in more than 40 years, and this overhaul took three years to finalize. If the rule stands, it will make great progress in streamlining the federal environmental review process. The rule is scheduled to go into effect on September 14, 2020. As expected, lawsuits challenging the rule already have been filed.

Global Tailings Standard Set for Release

The Global Tailings Review announced that they will launch their Global Industry Standard for Tailings Management. The launch took place on August 5th. The Global Tailings Review was formed as a result of the tailings dam failure near Brumadinho, Brazil and other tailings management concerns around the world, and seeks to establish an international standard for the safe design, construction, and management of tailings storage facilities. To learn more about the launch, or about the Global Industry Standard for Tailings Management, visit www.globaltailingsreview.org.

EPA Temporary Enforcement Policy Sunsetting Soon

In response to the COVID-19 pandemic, EPA issued a temporary enforcement policy, that began in March. On June 29th, EPA issued a memorandum on a termination addendum to that policy. The termination date is August 31, 2020. If you have questions, please visit EPA's page on COVID-19 Enforcement and Compliance Resources.

(Thank you to the American Exploration & Mining Association for this contribution)

NWPR Implementation Tools

The Navigable Waters Protection Rule (NWPR) went into effect nationwide on June 22 (with the exception of Colorado). The Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps) recently posted implementation tools and materials on their respective websites, including, PowerPoint presentations, webinar recordings, guidance memos, and Jurisdictional Determination forms and manuals.

Access the EPA page:

<https://www.epa.gov/nwpr/training-and-implementation-materials>

Corps page:

https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/juris_info/

Additional implementation resources:

<https://www.epa.gov/nwpr/implementation-resources>



Introducing...

The AMA Mining Company Portal on the AMA Home Page!

<http://www.azmining.com>

AMA Mining Company Members, the Mining Company Portal is now open for business! You may remember the demonstration at the 2019 AMA Annual Conference and, after months of preparation, it is finally here for your company's use.

- If your company is in the portal and you do not have your information, contact the AMA for a login and password to utilize this valuable tool today. If you are not yet registered, contact us to get started - there's no cost!
- Locate AMA supplier members that have the equipment, goods and services that you need. Search by keywords, company name, or view our entire supplier list
- Email suppliers directly from the portal and save time and effort. Our Suppliers are so supportive of this industry and they are standing by, ready to serve
- Not a replacement of your current system, but an enhancement for your company

FROM ARIZONA STATE SENATOR MARTHA MCSALLY

.....

American Minerals are the Foundation of National Security and Economic Recovery

U.S. Senator Martha McSally

The coronavirus pandemic has plunged the country and the world into an unprecedented crisis that stems far beyond just our physical health and wellness. The pandemic has also wreaked havoc on our economy - forcing business closures, job losses, and severe supply chain disruptions.

These disruptions have highlighted the significant risk of overreliance on China for critical supply chains that we need for public health and national security. We should not be dependent on an adversary for protective equipment needed to keep our health care heroes and workers safe in this pandemic, lifesaving pharmaceuticals, or the critical minerals and manufacturing components required for military hardware.

It is troubling to look at the list of rare earths and critical minerals that are needed to build the A-10 Warthog I flew in the Air Force and see that we are almost completely reliant on volatile regimes like the Congo or outright competitors like China to source them.

In the Senate, I have the unique opportunity to serve on both the Armed Services Committee and the Energy and Natural Resources Committee, where I have been directly involved in policy development at the intersection of national security and mineral security.

The United States should never be reliant on a communist adversary for critical components

of our health care system, technology, or military hardware. That's why I have worked tirelessly to advance crucial regulatory reforms like those in the American Mineral Security Act to remove barriers to domestic mineral production and processing and bring critical supply chains home.



Arizona State Senator Martha McSally

An updated, modern regulatory environment that prioritizes safety and environmental protection while also incentivizing domestic production is win-win. In addition to improving our national security, a robust American mining industry can also be an economic engine as we work to re-build the economy from the stress caused by the pandemic.

Arizona's moniker as the Copper State is not just a reference to the state's mining legacy, it is a recognition of the essential role the industry continues to play in the state's economy. Arizona is home to more than 18,000 mining employees and the industry supports more than 72,000 direct and indirect jobs across the state, contributing over \$13 billion to Arizona's GDP. I recognize the critical importance of a robust American mining industry to both our national security and our economy. I will continue to push Congress for commonsense federal policies that support bringing home more mining jobs with our gold-standard environmental protections for America's security, health, and prosperity.

AMA RECOGNIZES ARIZONA'S LEGISLATIVE "FRIENDS OF MINING"

The Arizona Mining Association (AMA) and its members have bestowed Arizona Legislators with the "Friend of Mining" distinction

This designation is based on their exemplary voting record on key policy matters along with an outstanding level of engagement and knowledge of natural resources issues. The "Friend of Mining" recipients include:

Representatives:

John Allen, Nancy Barto, Leo Biasiucci, Walt Blackman, Shawna Bolick, Rusty Bowers, Noel Campbell, Frank Carroll, Cesar Chavez, Regina Cobb, David Cook, Tim Dunn, Diego Espinoza, John Fillmore, Mark Finchem, Travis Grantham, Gail Griffin, John Kavanagh, Anthony Kern, Jay Lawrence, Becky Nutt, Joanne Osborne, Kevin Payne, Warren Petersen, TJ Shope, Lorenzo Sierra, Bob Thorpe, Ben Toma, Kelly Townsend, Michelle Udall, and Jeff Weninger.

Senators:

Sylvia Allen, Sean Bowie, Paul Boyer, Kate Brophy-McGee, Lupe Contreras, Karen Fann, David Farnsworth, Eddie Farnsworth, David Gowan, Rick Gray, Sine Kerr, Vince Leach, David Livingston, Tyler Pace, Frank Pratt, Rebecca Rios, Michelle Ugenti-Rita, Heather Carter, J.D. Mesnard, and Sonny Borrelli. Also included were The Honorable Judy Burges and Brenda Barton.

We are grateful for their time and efforts and selfless service to Arizona.

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ARIZONA STATE REPRESENTATIVE GAIL GRIFFIN



Re: AMA Newsletter:

I am proud to support an industry that continues to bring much needed jobs and generate a positive economic impact to Arizona. During these hard-economic times, mining continues to drive our economy. Regrettably, the COVID-19 pandemic resulted in a unique end to the 2020 legislative session. As a result, and in collaboration with industry, ADEQ, and the Governor's Office, it was necessary to pursue an Executive Order to extend several environmental programs through March 31, 2021 to allow the Legislature to act on a permanent solution early next session to continue the Voluntary Remediation Program, the Monitoring Assistance Program, and the Total Maximum Daily Load Program. Additionally, I will be reintroducing the following legislation, all of which passed unanimously out of the House:

- HB 2747 which removes duplicative regulation by ADEQ for UIC wells that are permitted by the EPA and eliminates the automatic stay of the effective date for AZPDES permits during any court proceedings.
- HB 2218 relating to minimum qualifications of the State Mine Inspector.
- HB 2819 relating to conflicting statutes on who appoints the State Geologist.
- Additional measures to support the natural resource industry and protect private property and water rights.

I look forward to working with you in January 2021 to enact these bills (and others) to create a positive working environment to get people back to work! Arizona's future is tied to jobs. The economic security of our communities, especially in rural Arizona, is a must. Thank you for all you do to create these jobs.

Sincerely,

A handwritten signature in cursive script that reads "Gail Griffin".

Representative Gail Griffin
Legislative District 14



Arizona State House of Representatives,
The Honorable Gail Griffin

MEET MYRON SMITH: “MORE THAN JUST A MEMBER”



“If your actions inspire others to dream more, learn more, do more and become more, you are a leader.”

- John Quincy Adams

Meet Myron Smith, who is the Principal Environmental Advisor for Carlota Copper Company, a wholly owned subsidiary of KGHM International.

He graduated from Colorado State University with a BSc in Geology and a minor in Chemistry. He is also a Registered Professional Geologist (RG).

Myron has had 14 years of manager/project management experience in precious and base metal exploration and mining, oil & gas exploration, production, and reservoir quality analysis. Add to that, 32 years' experience in environmental investigations, remedial remedies, reclamation of mining and oil/gas properties, acquisition/divestment due diligence and site wide environmental compliance for all media such as air, water, and waste, etc. His work assignments have been both domestic and foreign along with 9 years of employment with Carlota Copper Company.

Myron has been actively involved with the Arizona Mining Association committees and subcommittees for the last 8½ years. He was Chair of the Water Quality Subcommittee for 5 years and now holds the position of Chair of the Environment Committee which oversees the Air Quality Subcommittee, Solid Waste Subcommittee and the

Water Quality Subcommittee. Myron has said, “My past experiences in the AMA gives me a good perspective on what it takes to be successful as an effective committee member, but also as a leader. I am a self-starter, collaborator, and enjoy being a team leader. I also like the people in my sandbox!”

As Myron looks to the future and approaching retirement, travel is his number one item. “Mostly in this country, with my Raptor, on the dirt backroads of America and Canada! My first three big travel points to start with are the Dalton, Dempster and Trans Labrador highways.”

The AMA staff has nothing but praise for Myron's character and work ethic. Myron has always volunteered his time during the Annual Meeting & Golf Tournament and his continuous care for this association shines through all of his efforts. His colleagues think highly of him as well.

“I will always remember Myron (and Courtney) for the kindness they extended to me when I planned a move to Phoenix in 1994. I was introduced to Myron by a mutual business associate from Oregon and Myron went out of his way to help me. This included a very gracious invitation to his home for a BBQ that included a large group of industry folks working with him and later he actually referred me to my future employer. There have been many more BBQs since then and Myron and his wife have always been close by. Those that have spent any time with Myron know immediately that he is a generous, thoughtful and highly ethical member of the mining community and those that have met his wonderful wife Courtney know implicitly that he married way out of his league.” – Eric Mears, Vice President, Haley & Aldrich and AMA Lands Committee Vice-Chair.

“In my time working with Myron, I have greatly appreciated his team-oriented approach as chair of the Water Quality subcommittee. We have an active subcommittee with lots of good minds and voices. Myron is inclusive and has encouraged all participants to be heard. He also has a big heart for people while still keeping us on track and focused on the important matters facing mining in the water quality space. I'm glad we have Myron now serving as Environment Committee chair and look forward to his continued involvement as he begins his transition into retirement.” – Ned Hall, Regional Environmental Manager, Freeport-McMoRan, and AMA Water Quality Vice-Chair.

“It has been the greatest pleasure to work with Myron, first as he chaired the AMA Water Quality Subcommittee and currently, as he leads the AMA Environment Committee. Myron is the consummate professional and leader, but more importantly he sincerely cares about people and building quality and long-lasting relationships. I wish him and his family the best as he moves forward with the better things in life.” – D. Lee Decker, Attorney, Gallagher & Kennedy, and AMA Environment Committee Vice-Chair

“Myron was a pleasure to work with during his time as chair of the Water Quality Subcommittee and, currently, the Environment Committee. He took the time to dig into the, sometimes complicated issues, solicited opinions from all members, and worked to build consensus positions. And he was terrific to work with on a personal level as well.”

– Scott Thomas, Of Counsel, Fennemore Craig, and AMA Environment Committee Vice-Chair

ADEQ MOVING FORWARD

In our efforts to conduct government at the speed of business and provide our customers with convenient and efficient services, the Arizona Department of Environmental Quality (ADEQ) has been implementing and expanding our online services for years. Having online services available is more important and relevant today than ever before.

Since 2014, ADEQ has migrated 82 services online. That is 47 percent of all ADEQ services. These online services allow regulated businesses to manage their environmental obligations effectively. Our customers can obtain permits, submit compliance reports, and pay fees securely, online, and 24/7.

Today, businesses in the mining industry are using ADEQ's online services to manage their stormwater permits and submit their Air Title V source compliance reports. Technology projects of this scale require the legislature's support through general funding. ADEQ appreciates industry's continued support in helping us further expand online services to make the business of protecting public health and the environment easier for everybody— Edwin Slade.



*Edwin Slade, Administrative Counsel,
Arizona Department of Environmental Quality*



THE AMA AND ADEQ ON WATERS OF ARIZONA (WOAZ)

Waters of Arizona

Recently, the AMA met in a conference call with ADEQ on WOAZ. Below are the highlights of the conversation.

Early on in the federal agencies' (i.e., EPA and the Army Corps of Engineers) process of developing a new "waters of the United States" ("WOTUS") definition under the federal Clean Water Act ("CWA"), Governor Ducey submitted a letter to the agencies in June 2017 expressing support for a narrowed definition of WOTUS, including an exclusion for ephemeral waters from federal CWA protection. At the same time, the June 2017 letter recognized and committed to protecting surface waters in Arizona that may no longer be subject to federal CWA protection because of a narrowed WOTUS definition. Based on the June 2017 letter, ADEQ initiated efforts to evaluate and develop a regulatory program to protect non-WOTUS surface waters in Arizona ("WOAZ") by holding broad stakeholder meetings in November 2019 and February 2020 and convening a Stakeholder Advisory Group ("SAG"), which held meetings from April through June 2020. ADEQ's plan and schedule going forward is to put together a proposed WOAZ program outline by the end of the 2020 summer for public review and comment. The Arizona Mining Association ("AMA") actively participated in the prior stakeholder and SAG meetings. More recently, on July 17, 2020, the AMA submitted positions on various aspects of ADEQ's development WOAZ program to ADEQ senior management.

– Lee Decker, Gallagher & Kennedy, AMA Water Quality Subcommittee Vice-Chair

FLORENCE COPPER RECEIVES DRAFT AQUIFER PROTECTION PERMIT

The Arizona Department of Environmental Quality (ADEQ) has now issued Florence Copper a draft [Aquifer Protection Permit](#), one of two key permits required to advance to commercial production of copper.

This is welcome news and we are pleased this important step has now been taken. The sole purpose of building and operating the Production Test Facility (PTF) was to prove its environmental safety. It has operated continuously now for over 18 months and the results have been an unqualified success. ADEQ's draft permit reflects that achievement.

Under the careful and watchful eyes of ADEQ and the federal Environmental Protection Agency (EPA), the copper extraction process has met every production and environmental protection expectation.

- There has been no negative impact on drinking water.
- The process is proven to be environmentally sound.
- Mining solutions have always been controlled.
- The science, the engineering and the modelling predictions have all proven to be accurate.

One state official described the Florence Copper project as the most regulated, controlled, monitored, and studied piece of property in the state.

Moving to commercial production is where the full collective value and community benefit will finally be realized.

Opportunities like this are rare. The deposit can produce 85 million pounds of copper each year for the next 25 years. This means lasting opportunity for the residents of Florence -- high-paying jobs and millions in revenues generated each year for our local economy.

We hope to be able to count on you again during this final public hearing process. **It's important your voice is heard**, either in writing or "in-person" during the virtual public hearing on September 9th.

There are two ways you can participate in the public comment process.

1. [Attend the virtual public hearing](#) on Wednesday, Sept. 9th at 6 PM. (Mtg has taken place. Thanks to those who attended)
Meeting ID: 476-087-715
Register to Join via GoToWebinar: <https://register.gotowebinar.com/register/8499401213131968269>

1. Write a letter to ADEQ by Sept. 11th.
By Mail (Postmarked by Sept. 11, 2020):

ADEQ, Maribeth Greenslade, Groundwater Section
1110 W. Washington St., MC5415B-3
Phoenix, AZ 85007

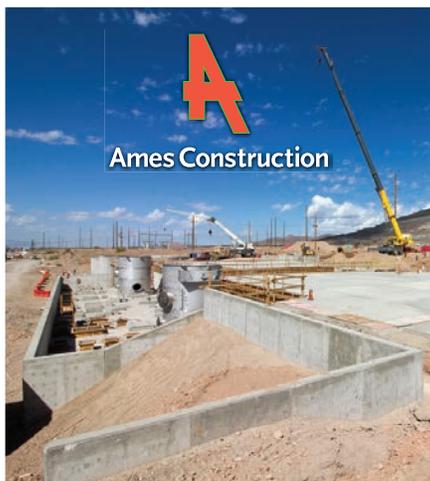
By Email: florencecopperapp@azdeq.gov

We are proud of the many people like you who have helped make our success possible, and we are looking forward to this next critically important phase in our development.

I am available to answer your questions or help you in any way I can. Call 520-316-3713 or email me at stacygramazio@florencecopper.com.

Sincerely,

Stacy Gramazio, Manager of Communications & Public Affairs
Florence Copper
1575 W Hunt Highway
Florence AZ 85132
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TRUMP ADMINISTRATION DELIVERS ARIZONA LAND EXCHANGE WITH ASARCO LLC - AFTER 26 YEARS

PRESCOTT, Ariz. – At the Yavapai County Courthouse on May 22, 2020, Secretary of the Interior David L. Bernhardt was joined by Congressman Paul Gosar, Bureau of Land Management (BLM) Arizona State Director Ray Suazo and other public and private representatives to announce the transfer of lands between the Bureau of Land Management and the private sector company ASARCO through the Ray Land Exchange. This final step allows for the expansion of hunting and recreation access, responsible mineral development and significant benefits for endangered species, riparian habitat and established wilderness areas in Pinal, Gila, and Mohave Counties.

“President Trump knows that public lands must be managed in a way that provide opportunities for communities to thrive,” said Secretary Bernhardt. “This action allows for the hundreds of mining jobs to continue to produce American-made minerals – reducing our dependence on foreign producers – while also enhancing recreational and hunting access on public lands in the West.”

“The BLM is pleased to complete the Ray Land Exchange,” said BLM Arizona State Director Ray Suazo. “This land exchange balances the public need for hunting and recreation access, the mining company’s need to continue responsible mineral development and Arizona’s need for continued economic viability.”

“This administrative land exchange, which began 26 years ago, is a prime example of an equitable exchange that provides many benefits to the public. ASARCO is pleased to finalize this exchange and would like to thank President Trump, Secretary Bernhardt, his staff, and the BLM for all the hard work that was required to complete this exchange,” said ASARCO LLC, Vice President and CFO, Oscar Gonzalez Barron.

The Ray Land Exchange received strong support from elected officials and local administrators due to the potential for job creation and economic benefits. Sportsmen, recreational users, and ranchers will also yield significant benefits, including increased access, from the lands conveyed to the United States by ASARCO. The majority of input received during the comment period strongly supported this land exchange.

The BLM issued two patents transferring 9,339 acres of public land adjacent to ASARCO’s Ray Mine Complex and Copper Butte properties for mine expansion. This includes 7,196 acres of full estate and 2,143 acres of subsurface mineral estate, the surface of which is already owned by ASARCO.

In exchange, the BLM acquired 7,298 acres of ASARCO-owned land in Pinal and Mohave Counties through a general land deed, consolidating checkerboard land ownership in those areas, allowing better management of wildlife migration corridors, and improving access to existing public lands for hunting and other family recreation.

Federal law requires that the lands exchanged be equal in value, with no more than a 25% cash equalization payment included. In addition, ASARCO spent over \$15,000,000 to finalize the land exchange, \$12 million of which was directed to the BLM and BLM required 3rd party contractors.

Ultimately, it took 26 years to complete the Ray Land Exchange. During this time, frivolous litigation, and a 10-year National Environmental Policy Act (NEPA) process unnecessarily delayed hundreds of jobs and a minor expansion of an existing mine from taking place until now.

The Department has made significant strides under the Trump Administration to streamline NEPA reviews, stemming from President Trump’s [Executive Order \(E.O.\) 13807: Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects](#). The Department issued [Secretary’s Order 3355](#) in accordance with E.O. 13807, which implemented a new, streamlined process for infrastructure and energy projects.

The Order requires that environmental impact statement (EIS) documents be completed in one year and in less than 150 pages with exceptions for those that are unusually complex or in coordination with other Federal agencies. To achieve improved efficiency without sacrificing any science, quality, or legal sufficiency, the Department’s Solicitor’s Office is involved in each EIS from day one, and the Department’s Bureaus review each EIS in a concurrent briefing format rather than linearly. This has reduced EIS timelines by years per project.

A Notice of Decision was published on Nov. 4, 2019 initiating a 45-day protest period for the land exchange decisions. The BLM received and resolved three protests. The documents, maps and other information about the approved land exchange are available online at : <https://go.usa.gov/xEnKR>.



Department of the Interior, Secretary David Bernhardt, Representative Paul Gosar, and BLM State Director Raymond Suazo meet with Oscar Gonzalez Barron, Vice President and CFO of ASARCO LLC, Robin Barnes, ASARCO LLC, and Dawn Meidinger, Fennemore Craig

NORTHERN VERTEX INTERCEPTS HIGH GRADE MINERALIZATION AT MOSS MINE, ARIZONA

NEWS PROVIDED BY Northern Vertex Mining Corp.
Aug 12, 2020, 11:40 ET

Ken Berry, President & CEO stated: "We are very pleased to report high-grade gold results and widespread gold and silver mineralization from our current drilling and resource expansion program at Moss. Importantly, results from the Gold Bridge and Ruth Vein areas underscore the potential for the unification of the west and center pits and expansion of the center pit to the south to incorporate the former producing, high-grade Ruth Vein. Moreover, results within the West Extension show good continuity to the current resource with sporadic higher-grade intersections along a strike-length of more than 1.2 kilometers. We believe continued drilling within this area has the potential to add significant gold ounces to the Moss Mine Resource. Results at West Oatman show excellent potential for both high-grade and bulk tonnage mineralization. This area is considered as a prime target for a maiden resource and expansion of active operations as the emerging West Oatman trend is only two kilometers south of the active leach pad."

Initial results from Northern Vertex's drill campaign, follows three consecutive quarters of increased gold production and record revenues for the quarter ended June 30, 2020 at the Moss Gold Mine (see news release dated July 14, 2020). To date, the Company has completed 54 holes from its ongoing drill program totaling 6,902 meters and has received results from 34 holes thus far. To read the complete press release, go to: <https://northernvertex.com/site/assets/files/2187/2020-08-05-nr-nee-jm8b0014sg.pdf>

ON BEHALF OF THE BOARD OF NORTHERN VERTEX
"Kenneth Berry"
President & CEO

(Thank you to Northern Vertex for the use of this partial press release)

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Resolution Copper Pledges \$780,000 to Community COVID-19 Response and Recovery in 2020

Superior, Ariz., Aug. 25, 2020 - Resolution Copper today announced a commitment to donate \$780,000 in 2020 to assist organizations throughout the broader community during the ongoing COVID-19 crisis.

"Resolution Copper is committed to investing in our community. Especially during this challenging time, we want to ensure support for our neighbors, local businesses and social programs," said Andrew Lye, Resolution Copper Project Director. "Our goal is to help our neighbors and the local economy emerge from this crisis stronger and even more resilient."

Nearly half of the funds pledged have already gone to community organizations with a focus on four key areas: education, health and wellbeing, vulnerable populations, and economic resiliency. These funds have provided personal protective equipment (PPE) to communities, first responders, and tribal nations, as well as childcare funding for essential workers and emergency medical service professionals. We've also helped provide grants to local small businesses, expanded school access to remote learning technology, and supported domestic violence shelters.

Many groups have received Resolution Copper's COVID-19 relief funds, including Local First Arizona, Cobre Valley Youth Club, Community Alliance Against Family Abuse (CAAF), Gila Safe Haven Domestic Violence Safe Home, Hayden Senior Center, and others.

"We are incredibly grateful for Resolution Copper's support as we face a growing need," said Claudia DalMolin, Gila House Inc./Gila Safe Haven Domestic Violence Home Executive Director. "When we might otherwise have to close our doors, we're instead able to do more to help residents during this pandemic and continue our mission of breaking the cycle of violence in the Globe, Miami and San Carlos communities."

Resolution Copper partnered with United Food Bank, the Mesa Chamber of Commerce and Can'd Aid to distribute roughly 233,000 meals and more than 50,000 cans of clean drinking water to those in need.

"Across Arizona United Food Bank has seen an unprecedented need, with long lines and families struggling especially in our rural communities in Eastern Arizona because of the COVID-19 crisis," stated Dave Richins, CEO of United Food Bank. "Resolution Copper has given us the opportunity to serve thousands of families in need in a very COVID safe environment in several towns and Native American Reservations."

Resolution will announce further investments over the next few months.

About Resolution Copper

The Resolution Copper project is operated by Resolution Copper Mining, which is a limited liability company owned 55 percent by Resolution Copper Company (a Rio Tinto PLC subsidiary) and 45 percent by BHP Copper Inc. (a BHP PLC subsidiary).

Contacts

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Gila Safe Haven Domestic Violence Home
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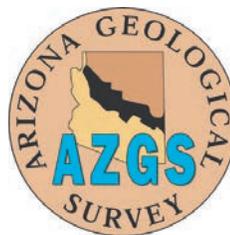
ARIZONA GEOLOGICAL SURVEY: ONGOING & UPCOMING PROJECTS



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The Mineral Resources program at the Arizona Geological Survey (AZGS) has been busy over the past year. AZGS has been conducting bedrock and surficial mapping in the historic Wallapai mining district, located in the southern Cerbat Mountains between the Mineral Park mine and Kingman. Fortunately, mapping and camping are social distancing activities, so we were able to continue working through the onset of the COVID-19 pandemic. Starting in September, we will begin two complementary geologic mapping projects near Wikieup through cooperative agreements with the U.S. Geological Survey. The first project will include bedrock and surficial mapping of southern Big Sandy Valley and the flanking mountains, host to several porphyry copper prospects, REE-bearing pegmatites, Au-Ag epithermal veins, and the recently defined Big Sandy sedimentary lithium deposit. The second project is centered on the Kaiser Spring-Burro Creek area, which hosts another sedimentary lithium deposit, known as Burro Creek East. We suspect that rhyolitic volcanic rocks in the Kaiser Spring area are the lithium source rocks for both the Big Sandy and Burro Creek East deposits. Our mapping will test this idea, as well as develop a model for how sedimentary lithium mineralization occurred and where additional mineralization could be located.

In addition to mapping news, we've been conducting a student-driven project to develop digital access to AZGS drill core. Student workers have spent much of last year scanning and digitizing ~120 drill holes from the Courtland-Gleeson area that represent ~160,000 feet of drilling. The Courtland-Gleeson drill hole database will be released later this year as an interactive online map, where users can select each drill hole to quickly browse or download the data and access the original logs and assays. This project was accomplishable due to the abundance of drill logs, assays, and reports that accompanied the physical core in the former AZGS Core Repository. Where drill core has accompanying paper records, we hope to digitally restore access in future projects (e.g., Red Mountain in the Patagonia Mountains). Much of the drill core, however, has no accompanying documentation beyond the physical core and remains inaccessible. That being said, AZGS is always willing to discuss our drill core with interested parties and potential ways that access could be restored.

Lastly, we are currently conducting a search for an additional staff member to contribute to our economic geology and bedrock mapping efforts, and hopefully will have more exciting news as we continue to build up the program!

By Carson Adam Richardson
Arizona Geological Society



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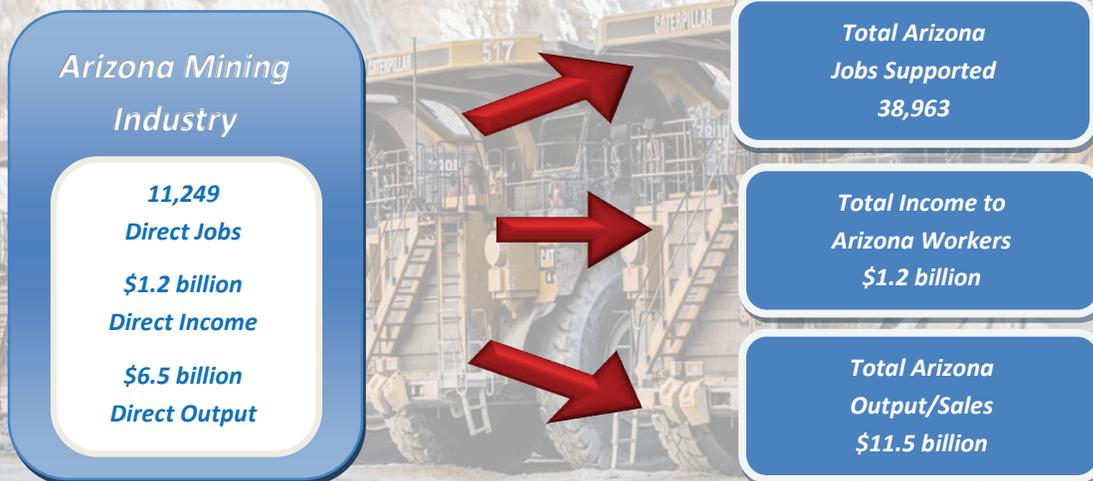
PROMOTING THE INDUSTRY - FACTS, ECONOMICS AND KEY STATISTICS



ARIZONA MINING...ECONOMIC IMPACTS

Mining...It's Essential for Your Life - The Arizona mining industry includes copper and molybdenum, lead, zinc, gold, silver, uranium, and other metal ore producers, as well as coal. Electric power generators use large stators and rotors that are wound in copper. Wind energy is produced by turbines that contain copper and molybdenum - alloy steels. Uranium, molybdenum and copper are all used in the production of nuclear power. Everywhere you look, our lives are steeped in the rich Arizona history of mining. From our homes to office buildings, toothbrushes and PCs, to our air conditioners and cell phones; All of these items and more require mining. Only the sun and the natural air we breathe are untouched by mining. Mining truly is essential for our lives.

\$11.5 Billion Total Economic Impact



Direct Impact of the Mining Industry

In 2018, the mining industry produced direct output valued at \$6.5 billion, and there were 11,249 direct mining jobs. As mining firms purchased intermediate goods and services and workers spent their incomes, an additional \$5.0 billion of indirect Arizona output was created, along with another 27,714 jobs. The total economic impact of the Arizona mining industry was \$11.5 billion of output and 38,963 total jobs.

Photos courtesy of Aaron Witt. Opening statement sourced from: Minerals Education Coalition (in part).

This Economic Report was produced by L. William Seidman Research Institute, W.P. Carey School of Business, Arizona State University

ANTIMICROBIAL PROPERTIES OF COPPER

ARIZONA'S U.S. SENATORS LEAD THE CHARGE TO SUPPORT COPPER IN HIGH-TOUCH AREAS

Antimicrobial metals like copper, silver, gold and zinc are found in every hospital room and in much of the equipment and medicines that help the nation's doctors and nurses save lives. Mining and

mined materials are playing a vital role in helping the nation weather this storm, but it will be after the crisis that the nation's miners can provide the foundation for our recovery.

United States Senate
WASHINGTON, DC 20510

May 7, 2020

The Honorable Alex Azar
Secretary
U.S. Department of Health & Human Services
200 Independence Avenue, S.W.
Washington, DC, 20201

Dear Secretary Azar:

Thank you for your work to combat the COVID-19 pandemic during these uncertain times. Your efforts to help provide Americans with the necessary resources and aid is a difficult but important task. This pandemic has heightened the need to readjust our current thinking about preventing the spread of not only the current virus, but also other bacterial and viral pathogens that threaten our health, safety, and, frankly, our way of life.

As you oversee the disbursement of COVID-19 relief funds to hospitals and other healthcare providers, we urge you to support the use of antimicrobial surface materials in high-touch areas such as door hardware, bed rails, faucets, and work stations, if they so choose. Providing facilities and healthcare providers with incentive and guidance for deploying this additional line of defense that does not rely on human behavior will continuously decrease the amount of disease-causing bacteria and viruses that normally exist in healthcare settings, leading to a significant positive impact on public health.

Studies have shown that minerals, such as copper¹, silver², zinc³ and others have antimicrobial properties that can lead to reductions in the spread of infection causing viruses and bacteria. For example, the use of silver-coated breathing tubes⁴ has shown to reduce the incidences of ventilator-associated pneumonia, microbiologic burden, and device-related adverse events among adult patients. For copper, a randomized control trial⁵ from July 12, 2010 to June 14, 2011 funded by the U.S. Department of Defense (DoD), six common highly touched objects in intensive care unit rooms were replaced with items made from antimicrobial copper alloys. This resulted in the reduced risk of hospital-acquired infections (HAI) by more than 50 percent at all study sites. Further, a study⁶ recently conducted by the National Institutes of Health (NIH) and the Centers for Disease Control and Prevention (CDC) reported that the SARS-CoV-2 virus (which causes the disease COVID-19), remained viable for up to 72 and 48 hours respectively, on plastic and stainless steel surfaces, but less than four hours on copper surfaces.

As healthcare providers move forward and work to ensure patient outcomes in their facilities, as well as prepare for future pandemics, we urge you to ensure COVID-19 relief funds remain eligible for the purchase and installation of antimicrobial surface products in their facilities. It is important that facilities and providers have the resources and flexibility to support a systems-based approach to mitigate the spread of infection causing bacteria and viruses.

Thank you for your consideration of this important request during these difficult times. Such actions will provide facilities and providers with additional options in their fight to improve public health.

Sincerely,



Martha McSally
United States Senator



Kyrsten Sinema
United States Senator



SUPPLIERS PROJECTS – PAST YEAR

The AMA's Supplier committee, which has over 75 active members, has given generously through their personal time and monetary contributions to give back to mining communities.

In mid-2019, the suppliers generously contributed to the Globe-Miami's High School football team with a brand-new set of jerseys. The jerseys sported teal and copper colors to honor and support the mining industry.

At the Annual Meeting in 2019, we held a Silent Auction with funds going to the Suppliers Community Outreach Projects. The auction raised approximately \$1,000 for the Outreach Projects.

With 2020 being the year of an international virus shut down, the group has been very limited as to what they have been able to contribute. The year started with the Florence high school's girls' softball teams ready to receive a brand-new score board. This was a project spearheaded prior to the shutdown. The last of the funding required will be for the installation of the scoreboard and we are hoping to have this finalized as soon as possible. The committee will, once again, add more events and contributions to show their support of the great mining communities of Arizona when COVID-19 has been defeated and the communities are safely opened.



Ernie Smith, Code Steel Industrial Inspections – AMA Suppliers Committee Chair

MINING & GEOLOGICAL ENGINEERING ALUMNI PHOTO CONTEST



THE UNIVERSITY OF ARIZONA
Lowell Institute
for Mineral Resources



COLLEGE OF ENGINEERING
Mining & Geological
Engineering

Hey there!

We hope that you and your loved ones are doing well during these trying times.

We asked alumni of the programs to submit photos that best capture the University of Arizona Mining, Geological Engineering & Economic Geology alumni experience. We wanted to see where their career has taken them, some of the unique and exciting opportunities they have been a part of, and the things that make them love their jobs. This year, we received a number of remarkable images from our alumni and had many participants vote for their favorite finalist.

Congratulations to Alumna Danielle Taran for winning our first alumni photo contest! Danielle's photo will be framed and displayed in the Mining and Metallurgy building at the University of Arizona!

Thank you! We want to thank everyone that participated and submitted their photos. We also want to thank students, faculty, alumni, and the community that participated by voting. Be on the lookout for next year's contest.

Stay safe and healthy!
The Lowell Institute Team

(Contribution by Bill Mackey, Granite Construction)



Alumna Danielle Taran (Class of 2015) on an educational trip to Salt Lake City, Utah. Danielle currently works for Granite Construction. One of her favorite things about the industry is that the locations are often in major cities, and she doesn't have to give up city life for her career. During this trip, she visited about 6 quarries all nestled along the mountains surrounding the city. This photo shows the view from the top of the asphalt silos where you could see most of the plant and the adjoining quarry.

EARTH DAY CAPITOL GARDENS



“Visitors are encouraged to come down and enjoy the spaces as they enjoy the Arizona State Capitol. The landscape design created by Mary Estes of Norris Design requires little irrigation and features native desert species. Even within our urban centers, it is so nice to be reminded of how incredible nature is.”

- Steve Trussell, AMA
Executive Director

The Arizona Mining Association has partnered with the Arizona Department of Administration, The Arizona Nursery Association, the Arizona Chapter of the American Society of Landscape Architects, the Wildlife Habitat Council, and the Arizona Rock Products Association to plant native pollinator gardens at the State’s Capitol Mall. One is located near the Joint Legislative Budget Council building and the other is behind the Code Talkers Memorial in Wesley Bolin Plaza. Pollinator gardens are vital to a healthy ecosystem, providing homes and food for bees, bats, butterflies, moths and hummingbirds, all of which are in decline across the globe due to habitat loss. Fortunately, pollinator gardens are one of the easiest and most cost-effective ways to enhance conservation on corporate lands.

The project was an effort to enhance the spaces for both visitors and native species. The pollinator planting event marks the celebration of the 50th anniversary of Earth Day, showcasing our industry’s commitment to biodiversity and the community in Arizona. Thank you to AMA members: Greg Arbizio with D2000 Safety Inc., Denise Ernst with ISCO who came out with her 11-year old granddaughter, Sadie Burleson, as well as ARPA members. Thank you all for all your hard work in making this community project possible!



Each plant species is identified by signage in the gardens



Pollinator Garden Sign posted at Legislative Budget Council building and Wesley Bolin Plaza



Arc Planter directly behind Code Talker Memorial



View of Code Talkers Planter and Arc Planter in Foreground



AMA & ARPA Members planting pollinator garden at the Joint Legislative Budget Council building



Completed Planting of the JLBC Gardens



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Open Enrollment classes are held at the University of Arizona's San Xavier Underground Mining Laboratory in Sahuarita, AZ.

 Lowell Institute for Mineral Resources



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