



MINING MATTERS

A QUARTERLY PUBLICATION

Mining...It's Essential For Your Life

Also in This Issue

- Letter from the Chairman
- Upcoming Events
- Committee News
- Company Member News
- Company Spotlight: Total Power, Inc.



Brett Morey
North American
Director of Sales,
Total Power, Inc.
and His Extraordinary
Community Outreach Efforts

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Founding Member Company



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ASARCO, LLC

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Producer Director



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Producer Director



Tim Ralston
Capstone/Pinto Valley Mine

Producer Director



Brock Johnston
KGHM, Inc./Carlota Copper

Developer Director



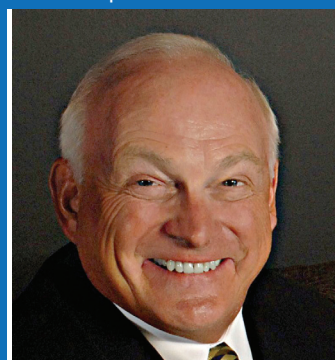
Stephen Twyerould
Excelsior Mining Corp

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 CHAIRMAN:

AMA Chairman of the Board



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

The Importance of Environmental, Social and Governance (ESG) Guidelines

Mining is essential to every individual around the world – whether they realize it or not. Today's society enjoys 21st century transportation, shelter, technology, medicine, electricity and more. All of which are thanks to resources mined here in Arizona, in the United States and around the world. As a result of mining, we have seen advances in medicine, delivery of food and goods, and the ability to stay connected safely with people during a pandemic.

Mining's contribution to the world is taken for granted while at the same time continuously challenged and misunderstood. Often, I have reflected on this dichotomy of views and pondered what we could do to improve people's opinion of mining. In thinking about this, I placed myself in the shoes of those who benefit from mining but don't necessarily like how mining is done. Then, I asked myself: "What is it they don't like about mining?"

I believe it boils down to two primary reasons: (1) mining impacts the environment, and (2) mining affects communities around the operations. These two factors have led to the rise of Environmental, Social and Governance (ESG) guidelines within the industry.

Implementing ESG into our operations is a way for companies to establish policies, develop goals and benchmark progress against their past practices in the areas of environmental performance and community impact. ESG addresses directly the two main concerns the public has with mining. It provides a forum from which companies can demonstrate how they are addressing the concerns by meeting the highest standards of environmental stewardship, respecting human rights and prioritizing the health, safety and well-being of our workforce and host communities where we operate.

Many investment funds, industry analysts, governments and non-governmental organizations or NGOs are now requiring mining companies to have clear and measurable ESG policies. Some of these institutions also require reporting to verify companies are adhering to the priorities and goals set under ESG programs. I view this as a positive practice for the industry and would hope all Arizona Mining Association members look to understand ESG more fully and embrace the practices and goals within their own companies.



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

CONVEYOR SYSTEMS

Conveyor systems are an important method of material haulage at many surface and underground mines. They range from a single belt to a series of belts spanning miles. All conveyor systems have inherent dangers while in motion. Fatal accidents related to working near, inspecting, adjusting or maintaining conveyor belts occur each year at underground and surface mines. The risk to workers can be reduced by following safe work practices during operation and maintenance and by installing proper physical safeguards on the equipment.

MSHA provides resources and tips to help miners stay safe around conveyor systems.

Key Safety Practices:

- Ensure that power is disconnected during maintenance and repairs by locking out and tagging out energy at the source. It's best if the person doing the work personally disconnects and locks the power and restores it following the work.
- Ensure that adequate guarding is installed to prevent any contact between miners and moving parts of a conveyor, including rollers and head and tail areas.
- Install pull cords for emergency stops at strategic locations to prevent or minimize injury after accidental contact.
- Never attempt to cross a moving conveyor belt except at suitable crossings.
- Install practical and usable belt crossing facilities at strategic locations, including near controls, when height allows.
- Install audible and visible warning systems to signal the start of the conveyor.
- Establish policies and procedures for performing specific tasks on conveyor belts and ensure all miners are trained.

SEAT BELT USAGE

One of the easiest things an equipment operator can do to stay safe is to fasten his or her seat belt. Wearing a seat belt protects against injury in the event of a serious accident. It can also help the operator maintain control during sudden extreme movement. Nevertheless, we continue to see serious injuries and fatalities resulting from lack of seat belt usage. MSHA engineers estimate that 3-4 miners' lives could be saved each year if seat belts were used universally. MSHA regulations require the use of seat belts in most equipment and circumstances. Seat belt design is evolving in terms of operator comfort and responsiveness. For example, some will tighten when equipment reaches a critical tilt point. There are also a growing number of tools available to ensure that seat belts are used by operators and visible to supervisors. These range from standard reminder chimes to cab-top lights that change color when the seat belt is buckled. What's important is that functioning seat belts are made available and are used by all equipment operators at all times.

(Credit to MSHA.gov)



“THE AMA WELCOMES OUR NEWEST MEMBERS”

SUPPLIERS:

Porta Kleen Industrial Services – Specializing in modern restroom trailers, private mobile showers, and heavy-duty laundry trailers.

BuildWitt – A construction and mining marketing agency.

Clear Flow Group – RX and equipment. We provide unique environmentally friendly products for erosion control

Salt River Environmental & Industrial Services – Provides comprehensive environmental transportation and waste management services to a wide variety of customers and industries.

ISM Group – Security and janitorial services.

Durus Industrial – Precision millwright services, laser alignment, field machining, pump installation, cooling tower repairs, welding and fabrication, HDPE pipe installation, power and process generation, tub repairs, replacements.

“Welcome to our newest AMA members.
We look forward to working with you this year.”

- Steve Trussell, AMA Executive Director



We like things
just the way
they aren't.

If you're looking to innovate in mining, we're working on the solutions that don't exist yet.

Ausenco



VIRTUAL MSHA SPRING THAW

FRIDAY, MAY 7, 2021
9:00AM - 11:30AM



Other Happenings For 2021:

- *ACMA Climate Statement*
- *Economic Impact Study*
- *Copper Facts Book*

*September 22-24, 2021
The Westin La Paloma
Tucson, Arizona*



AMA ANNUAL MEETING & GOLF TOURNAMENT
INFO COMING SOON

AMA COMMITTEE & SUBCOMMITTEE UPDATES

❖ Air Quality Subcommittee Update

The AMA Air Quality Subcommittee has been hard at work during their meetings. They are currently working on the following items:

1. AMA Climate Change Statement
2. Revision to ADEQ Operating Permit Program Rules – issues, questions, concerns with “insignificant activity” and “trivial activity” definitions
3. Meeting with ADEQ to understand how they intend to address EPA’ concerns regarding Regional Haze/Article 6 – acceptable dust control measures
4. Continued monitoring of air quality regulatory actions

❖ Water Quality Subcommittee Update

The AMA Air Quality Subcommittee has been hard at work during their meetings. They are currently working on the following items:

- The AMA WQSC continues to monitor Arizona’s proposed program to regulate waters of Arizona (WoAZ) that are no longer covered under the new WOTUS definition. AMA representatives have taken part in stakeholder advisory group meetings, provided statements of support and proposed revisions to draft legislation language. As the legislation for development of this program is due to be signed soon, AMA representatives continue to provide feedback and concerns on the implementation of the program including with regards to assigning flow regimes, particularly ephemeral and intermittent designations.
- AMA is continuing to work with the new State Abandoned Mines Remediation Program to assist with technical support from industry mining remediation experts. Representatives from the program will give semi-regular updates to the committee members as projects progress.
- AMA representatives continue to monitor ADEQ’s application of surface water quality standards to stormwater discharges.
- AMA is monitoring ADEQ’s development of rules to support a request for primacy to implement the federal Underground Injection Control (UIC) permit program in lieu of EPA. AMA members have submitted comments on the developing rules and participated in stakeholder meetings.

❖ Suppliers Committee Update

2021 has brought more of the same to the Arizona Mining Association Committees and Subcommittees; COVID-19 distancing, Zoom, and Microsoft Teams meetings.

Despite the distancing, Ernie Smith, AMA Suppliers Committee Chair, and Jim Norine, Vice-Chair, have stepped up to bring the committee mining updates from the AMA Exploration Mining members.

This year, the Suppliers have met online with Doug Pitts of Hawkstone Mining, Marty Weems of Western Rare Earths, and Rick Trotman of Barksdale Resources. Other visitors to the Committee, last month, included Chuck Podolak, Policy Advisor, Natural Resources from Governor Doug Ducey’s office. Jerry Bustamante rounded out the quarter with an update on Hudbay Minerals and the Rosemont Project.

The AMA Suppliers Committee is grateful for all who shared their projects and information.

❖ Government Affairs Committee Update

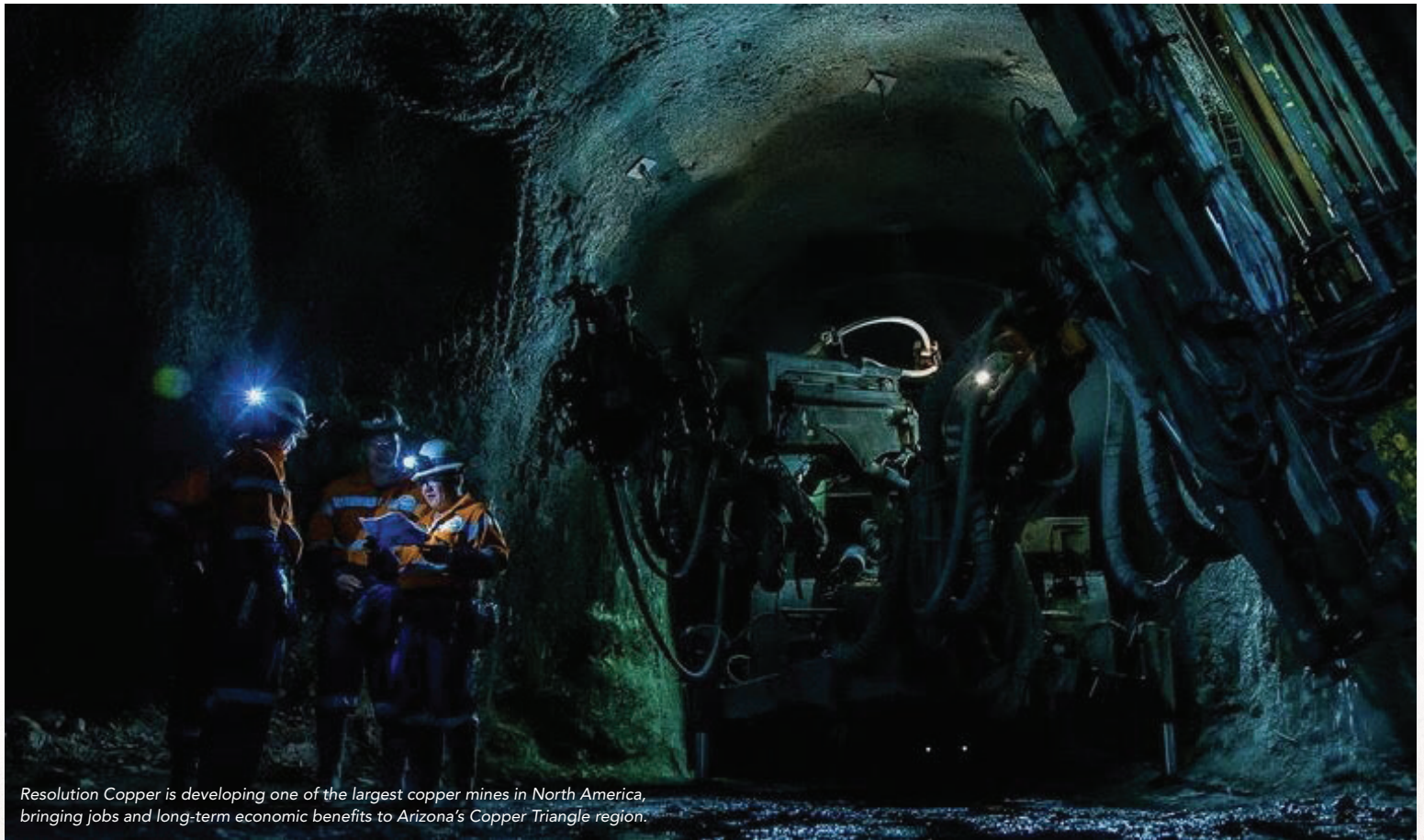
The Government Affairs Committee has been implementing the Board approved legislative agenda this session and has been quite successful. Here is the status of the AMA bills:

- H2033: STATE MINE INSPECTOR; QUALIFICATIONS – **Signed!**
 - o This bill broadens the work experience and knowledge requirements for the State Mine Inspector Office, instructs candidates to attest that they fulfill these requirements and directs this official to annually complete continuing education on mine safety and health regulations.
- H2056: WATER CONSERVATION NOTICE; NO FORFEITURE– **Signed!**
 - o This bill allows those who are entitled to use water to file a conservation plan notice describing conservation measures that they will implement which will exempt the water rights and claims in this notice from abandonment or forfeiture.
- H2042: AQUIFER PROTECTION PERMITS; INJECTION WELLS – **Signed!**
 - o This bill clarifies that class V wells that have permits under ADEQ or EPA Underground Injection Control (UIC) permit programs are not exempt from aquifer protection permit requirements.
- S1370: ENVIRONMENTAL QUALITY PROGRAMS; TERMINATIONS; REPEAL – **Signed!**
 - o This bill repeals the termination dates for several programs that are administered by the ADEQ including the VRP, which codifies the Executive Order issued this summer to extend the program.
- HCR2009: SUPPORTING; HARDROCK MINING – awaiting action in the Senate.
 - o This resolution declares the Legislature’s recognition of the hard rock mining industry and support for involving Arizona’s government and mining industry in regulatory changes to ensure that operations remain safe and productive.

Beyond the approved agenda, the AMA GA Committee engaged on the following bills:

- SB1062: ENGINEERING DEFINITIONS
 - o This bill creates a definition of ‘professional engineer’ and redefines other terms relating to certification and regulation by the Arizona Board of Technical Registration (ABTR).
 - o We were able to successfully add an amendment to this bill that retained a mining engineering exemption and has been signed into law.
- HB2691: ADEQ; WATER QUALITY PROGRAMS; WOTUS
 - o This bill authorizes ADEQ to create a new program to regulate waters that are no longer considered “waters of the United States.”
 - o We have been supporting ADEQ on this bill through the stakeholder and legislative process. The bill is currently awaiting floor action in the Senate.
- HB2702: FEDERAL GOVERNMENT; LAND ACQUISITION; CONSENT
 - o This bill would have required consent of the Governor and State Legislature before any Arizona lands transfer to a federal agency if the transfer negatively affects state or local property tax rolls.
 - o We were able to successfully, thus far, prevent this bill from moving forward.

ARIZONA MINING INDUSTRY STEPS UP TO MEET SKYROCKETING DEMAND FOR COPPER



Resolution Copper is developing one of the largest copper mines in North America, bringing jobs and long-term economic benefits to Arizona's Copper Triangle region.

It has the highest recycling rate of any engineering metal, every child born today will use about 1,500 pounds of it, between 500 and 600 pounds of it were used to make billions of doorknobs in the United States, and the Statue of Liberty is plated with upwards of 179,000 pounds of it.

"It" is copper.

From consumer goods to crafting American icons to operating power plants and sustaining green energy, the demand for copper is growing at greater rates than ever.

Recent reports demonstrate that the global need for copper is anticipated to rise by as much as 50 percent over the next two decades. And, guess which corner of the world holds 27.1 percent of the global market size in copper? The United States. Zooming in closer, you'll see that Arizona accounts for 75 percent of the copper mined in the U.S.

So, the million-dollar question — or perhaps, more appropriately, the 28-million-tonnes question (28 million tonnes is the annual amount of copper in demand) is — will Arizona rise to meet the growing demand for copper?

Arizona's mining experts collectively say, "yes." After all, the state hasn't earned the moniker "Copper State," without reason. As the need for minerals grows, Arizona's mining industry is not only poised to fulfill current and future demand, but to also benefit from it.

❖ Mineral mining economic impact

"Mining has always been a large contributor to Arizona's economy and I see that contribution growing larger over time," says Brock Johnston, general manager at Carlota Copper Co. "With the increased demand for minerals, there will be an increase in the number of direct and indirect jobs associated with the mining industry in Arizona."

Johnston predicts that the local economy will benefit, in particular, from the increasing demand for copper to produce electric vehicles and possibly lithium for batteries used in both EVs and electric utility storage.

Steve Higgins, senior vice president and chief administrative officer for Freeport McMoRan, agrees. "Freeport-McMoRan's Arizona operations had a \$2.9 billion direct and indirect economic impact to the local economy (in 2019), according to the L. William Seidman Research Institute at Arizona State University," he says.

Additionally, Freeport-McMoRan employed 9,482 people last year. The ripple effect of that employment created another 17,926 jobs in Arizona (yielded from these employees' wages and taxes, plus the services purchased), according to Higgins.

It's also important, Higgins explains, to understand the Arizona mining industry's position as an export business in benefitting the state's economy.

"Most people might be surprised to learn that metal ores were the third-largest Arizona export of goods after semiconductors and aerospace in 2018, according to the Business Roundtable," Higgins says, "bringing in money from outside our state to generate local economic activity and jobs."

❖ Renewable energy and mineral demand

And that economic impact is only expected to flourish.

"Major forecasted shifts, such as the transition to a low-carbon future and development of green technologies, will only increase our need for copper mining over the coming decade in order to collect and store energy sourced from renewable resources," says Carson Richardson, senior research scientist for the Arizona Geological Survey for the University of Arizona. "Not only will we see an increased need for mined copper, but also a myriad of other mineral resources."

One of the other coveted minerals for which Richardson refers is molybdenum. Molybdenum is a versatile element with diverse applications in the chemical, engineering and petroleum industries. Molybdenum and its alloys are key components in chemical and metallurgical applications.

"We produce molybdenum at three of our Arizona operations as a copper byproduct," Higgins says, "and our company is the world's leading producer and supplier of the metal."

Following copper and molybdenum, Arizona's top-mined minerals include crude perlite, silver, and zeolites.

But, because of its versatility and value across multiple industries, copper remains top-tier in mineral demand.

"Copper is key," Higgins says, "in enabling material for decarbonization."

In terms of renewable energy generation for wind and solar, four to six times more copper is used compared with what's required for traditional energy generation. Additionally, according to Higgins, electric vehicles can consume as much as four times more copper than traditional internal combustion engines.

"I think green energy is going to increase the demand for copper even more," says Dr. Brad Ross, director of the Geotechnical Center of Excellence at the University of Arizona. "And, we should expect the demand for copper from Arizona to continue, and even increase. Mines like Resolution, Rosemont and others are essential because our society demands more copper, and will demand more copper because of the clean energy issues."

❖ Copper in consumer markets

It's important to remember that while macro applications and utilities like wind and solar renewable energy will continue to require high copper yields, so will consumer goods and products like electrical vehicles (which we briefly touched on), electronics (phones, laptops, and more), and the infrastructure of most homes.

"Within our homes today, we've gone wireless as far as our networks, but the energy part of it hasn't," Ross says. "My home, when we built it, was fitted with special lines to put in solar panels. All these add up in terms of (the demand for) copper."

An average 2,100-square-foot house, for example, contains the following amount of copper:

- 195 pounds of building wire
- 51 pounds of plumbing tube, fillings, and valves
- 47 pounds in built-in appliances
- 24 pounds of plumbers' brass goods
- 12 pounds in builders' hardware
- 10 pounds of other wire and tubing

"Nearly 70 percent of copper is used in electrical applications across construction, automotive, and power markets, and virtually all consumer electronics," Higgins says.

"Copper is crucial to our modern way of life since it's used in everything that has any kind of wiring in it," Johnston adds. "A few examples include electric motors, power generators, wiring for buildings, marine vessels, aircraft, vehicles, and every electronic device you can think of."

❖ Meeting demand

"To the extent these technologies are increasingly adopted," Higgins says, "the demand for copper will grow — perhaps slowly initially, but much more rapidly over time. In addition, building renovations, motor and transformer upgrades, 5G installations, and the expected U.S. and global infrastructure programs will further add to copper demand."

For example, Richardson points out that "trends elsewhere, such as the UK's recent announcement of a ban on sales of new combustion-engine vehicles starting in 2030, may be predictive of what we can expect in the U.S. over the next decade."

Experts says this is a major opportunity for Arizona mines to support the demand. And the favorable market, according to Higgins, will help support mining in Arizona going forward and be a huge catalyst for Arizona's economic expansion.

(Special thanks to AZBigMedia and Erin Thornburn for the use of this online article)

Governor Ducey Expresses Disappointment as Final EIS is Rescinded



DOUGLAS A. DUCEY
GOVERNOR

STATE OF ARIZONA
OFFICE OF THE GOVERNOR

EXECUTIVE OFFICE

March 16, 2021

The Honorable Tom Vilsack
Secretary
U.S. Department of Agriculture
1400 Independence Avenue, S.W.
Washington, DC 20250

Dear Secretary Vilsack,

I was very disappointed by the Department of Agriculture's (Department) actions on March 1st to direct the U.S. Forest Service (USFS) to reverse completed federal actions for the Resolution Copper Mine and Land Exchange Project.

Resolution Copper is a vital project for economic development that will also ensure a reliable supply of copper and other critical minerals for the nation. The project is estimated to be able to supply up to 1 billion pounds of copper annually, which represents 25% of the U.S. domestic demands. The Draft Environmental Impact Statement (EIS) prepared by the U.S. Forest Service (USFS) estimates that the total direct and indirect economic impacts to the State of Arizona will total \$1 billion per year.

Arizona state agencies have been closely involved in the lengthy and thorough process that produced the Final Environmental Impact Statement (FEIS) and Draft Record of Decision. I have high confidence in the process and the resulting documents. The unprecedented retroactive step of rescinding a FEIS is very troubling and has implications beyond this single project. The vast amount of Federal land in Arizona means that federal actions, such as the completion of an EIS, are a fact of life for many large and important projects in our state. Discretionary retroactive decisions such as this one will cast a shadow on any large infrastructure project in the state and create uncertainty for these projects. Such actions cannot continue.

I respectfully request an opportunity to discuss with you the timeline for the Department to get the project back on track, as well as how the Department will treat other existing permits and projects in Arizona. Thank you for your consideration.

Sincerely,

A handwritten signature in black ink that reads "Douglas A. Ducey".

Douglas A. Ducey
Governor
State of Arizona

Cc: Vicki Christiansen, Chief, U.S. Forest Service

1700 WEST WASHINGTON STREET, PHOENIX, ARIZONA 85007
602-542-4331 • www.azgovernor.gov

2020 YEAR IN REVIEW:

“Through Its Rise to Prominence in 2020, the Moss Mine Earned the Distinction of Arizona’s Largest Pure Gold and Silver Producer”

A Message to Shareholders from Ken Berry, President & CEO: “It is a pleasure to provide a recap of 2020 and what was truly a remarkable year of achievements for Northern Vertex and the Moss Mine. Building a successful mining entity is an evolving process that requires the highest degree of teamwork. The success we achieved in 2020 is clearly a testament to the hard work and diligence of our entire Northern Vertex management and operations team in Arizona. It is with great anticipation that we approach the year ahead. Based on our success to date, we have established a strong foundation for future growth and expansion, and we look forward to providing you with further updates as we carry this momentum into 2021.”

Recapping A Breakthrough Year Of Record Gold Production And Revenues:

- Revenues of US\$84.3 Million
- Gold production of 42,116 ounces
- Silver production of 361,135 ounces

2020 CORPORATE AND OPERATIONS HIGHLIGHTS:

- Received U.S. Federal permitting to proceed to Phase III mining and expand exploration onto a large land package surrounding the Moss mine

- Launched a multi-phase 32,000 meters drilling and resource expansion program
- Total debt repayment of US\$11.7m; saving dilution of approximately 37 million shares
- Connected to grid power, projected to save US\$20m over life of mine
- Crushing size increased from 1/4” to 3/8” allowing higher throughput
- Announced Northern Vertex (NEE) / Eclipse (EGLD) merger; supported by \$22.5M financing, syndicate of five brokerage firms, added the Hercules property in Walker Lane Trend; strengthening Board by adding Doug Hurst and Marcel de Groot post-merger.

“Safety and Social Responsibility Remain a Top Priority for Northern Vertex as it Enters a New Year of Gold Production and New Resource Expansion”

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

MINING COMPANY PROFILES: TURNER MINING GROUP AWARDED 5-YEAR TAILINGS FACILITY EXPANSION PROJECT

March 12, 2021 – Turner Mining Group breaks ground on a new tailings facility expansion project starting March 2021 with scheduled completion in 2025. The project consists of 1.5 mile primary access road relocation and extensive piping system construction along with crushing, mass excavation and earthwork activities for a downstream embankment expansion, and reclamation activities. A seasonal operation, the work will take place April – September over the course of the next five years.

“This is an excellent opportunity for Turner Mining Group to construct an expansion on a tailings facility while tackling technical challenges such as a remote location with environmental restrictions, necessity for precision and seasonal work periods,” said Senior Vice President Lennie Boteilho.

The project expands Turner Mining Group’s portfolio, moving into civil construction activities by providing the mining industry with infrastructure service and support.

“This is yet another example of Turner being able to deliver a full suite of capabilities to the mining sector. With collective team

experience, we’re able to deliver a new type of work to a new set of clients under the Turner banner,” notes Chief Operating Officer Thomas Haun.

The selection of Turner Mining Group was attributed to the team’s deep expertise and creative solutions brought to the table during the bidding process. The client felt confident in Turner’s execution plan, expedited project schedule and history of project delivery, seeing the proposal as the best value among bidders.

“This project is yet another exciting chapter in the Turner Mining Group story. We have made investments to put the highest caliber team in place to perform contracts of this magnitude and complexity. We are excited to continue building the runway to deliver the quality work expected from a full-service provider. This win is a great addition to our next phase of growth already underway,” said Founder and President Keaton Turner.

Turner Mining Group is North America’s trusted mining services contractor. With headquarters in Indiana and Utah, Turner Mining Group performs a full suite of services for the mining sector

HAWKSTONE MINING AMA EXPLORATION MINING MEMBER

Hawkstone Mining is a US-focused diversified explorer, currently developing its Big Sandy Sedimentary Lithium Project near Wikieup, Arizona. The BLM leases hold Indicated and Inferred Resources for a total of 32.5 Million tonnes (Mt) grading 1,850 parts per million (ppm) Li or 320,800 tonnes Lithium Carbonate Equivalent (LCE) with only 4% of the resource drilled. Metallurgical testing is underway and the company plans further drilling in 2021 pending an imminent POE approval from the BLM.

Hawkstone aims to commence construction in 2022-23 with the mine operational in 2025. The company's products will support the Biden administration's focus on a carbon-free future and the security of lithium as a critical US mineral. In addition to providing jobs and economic development for Mohave County and the rest of Arizona, Big Sandy will also provide a critical supply chain link on the expanding use of lithium-ion batteries in Arizona for electric vehicles and storage for renewable energy.

Hawkstone's membership in the Arizona Mining Association has been a critical factor in the company's success to date. It has provided the opportunity to present Big Sandy to the AMA Annual Meeting and the Suppliers Committee, and to utilize their excellent Suppliers Portal. Hawkstone looks forward to a growing relationship with AMA and its Suppliers Group as the company accelerates development in 2021-22. To see a drone video tour of Big Sandy, follow this link or type into your web browser:

<https://vimeo.com/502068030>

COURT OF APPEAL DECIDES IN FAVOR OF FLORENCE COPPER

The **Arizona Court of Appeals** issued a decisive verdict in support of Florence Copper's right to mine.

The decision by the court was unequivocal:

- the appellate court rejected every argument made by the lawyers representing the Town of Florence
- the court upheld Florence Copper's right to mine its private property within the Town
- the court confirmed the awarding of \$1.7 million in legal fees and costs to Florence Copper
- Here is a link to the court decision as well as a media release issued by Taseko – Florence Copper, follow this link: <https://florencecopper.com/resources/news-releases/taseko-mines-court-of-appeal-decides-in-favor-of-florence-copper>

The decision ends the multiple legal challenges initiated over many years by previous Town Councils, every one of which has concluded in Florence Copper's favor. While defending ourselves against these aggressive lawsuits, we were also busy building and operating a test facility and proving to residents and to state and federal regulators that our project is safe and reliable.

Florence Copper produced on million pounds of copper. Test facility is a known and proven success. They are on track to securing their one remaining commercial operating permit and – as you will read in our [media release](#), they are taking the necessary steps in preparing for construction and commercial scale operations. For the media release, follow this link: <https://florencecopper.com/resources/news-releases/taseko-mines-court-of-appeal-decides-in-favor-of-florence-copper>

Florence Copper is justifiably pleased with what has been accomplished. And now, with the Town's legal challenges in the rearview mirror, they can focus on what they do best – make copper.

Finally, they wish to thank everyone for following all of their updates over many years of effort and hop you will continue to do so in the exciting years ahead.

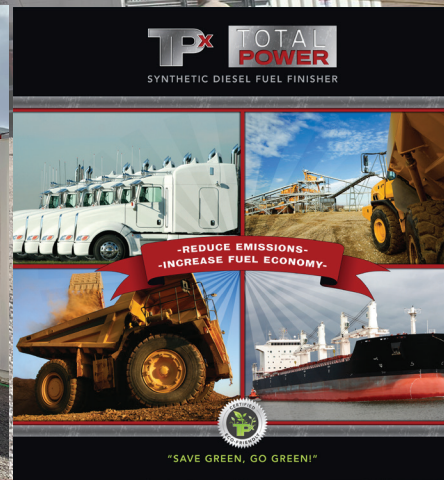
To read the full release, visit: <https://bit.ly/3slyHCd>

(Thank you to Florence Copper)

TOTAL POWER, INC.

Total Power, Inc. is a California based manufacturer keen on development of strategic fuel solutions. Total Power is focused on three main products: 1- TPx Synthetic Fuel Additives used to improve the reliability of fuel systems while decreasing fuel consumption and exhaust emissions; 2- FMx Fuel Management Systems keep mining operations aware of their fuel transactions in real time; and 3- PSx Pit Stop Modular fueling stations which store and dispense fuel and lubricants to haulage equipment at extremely fast speeds and at optimum mine locations.

Since 1997, Total Power proudly works with mining companies in Arizona, North and South America, Europe, and Africa. Total Power supplies mining clients deep underground in Spain, high above in the Peruvian Andes and as far as South Africa. Total Power is a proud member of the Arizona Mining Association and is appreciative of the kindness and cooperation of its membership. For more information, please contact Total Power at info@tpxtech.com or visit our website: www.tpxtech.com



WHY DO I NEED AN AZPDES INDUSTRIAL STORMWATER MINING MULTI-SECTOR GENERAL PERMIT (MSGP)?

This permit is for stormwater discharges associated with sites of specific mining industry activity, to waters of the U.S. Permit eligibility is limited to discharges from facilities of industrial activity in Sectors G and J, based on Standard Industrial Classification (SIC) codes and Industrial Activity Codes.

The MSGP is valid for five years. An initial fee is due at the time the operator submits the Notice of Intent (NOI) fee to ADEQ, and is based on the amount of acreage at the site. Permittees must also pay an annual registration fee based on the acreage of their facility, and fees continue until the industrial activity ceases or the facility closes, at which time the operator files a Notice of Termination (NOT) to end coverage.

Learn more about MSGP at the following link: <https://www.azdeq.gov/node/685>



RESPONSIBLY FUND ARIZONA STATE AND LOCAL TRANSPORTATION



As the state of Arizona makes big decisions regarding transportation, planners, decision makers, and leaders look toward the rapidly growing population and private sector investments to make appropriate adjustments. Currently, the state population is over 7.5 million people and climbing daily with an influx of people from the west coast coming to Arizona, not to mention the high-tech industry that is expanding its footprint here. The recent announcements of a Taiwanese microchip processing company selecting a prime location with room for expansion in the West Valley and the \$20 billion dollar expansion of Intel's Chandler facility have us expecting impacts to our supply chains, logistics, and freight. All these critical components are of paramount importance to the state's economy. A tremendous amount of planning and foresight has contributed to getting us to this point in Arizona's story, but leave us all questioning where we go from here.

Arizona must continue to rev its economic engines, and the speed of our state's success is predicated on our functional multi-modal transportation system, continued planning, and adoption of technologies that will allow us to move people and goods in an efficient and cost-effective way. We must acknowledge that, at a statewide level, the system is inadequately funded with only the minimum needed for operations and maintenance. We must be honest with ourselves about how long this minimal contribution can sustain our growing state.

There is no debate, and we all agree we must maintain what we have. The gas tax – the sole purpose of which is to maintain roadways – is considered a user fee that has not been raised or adjusted in more than 30 years. As technologies have changed,

including the efficiency of the traditional automobile, you and I are contributing even less to the state's transportation funds than in years past. Couple this challenge with alternative fuel vehicles that contribute nothing into the system and yet continue to use the road and we have a challenge that must be addressed. Would you be able to live on your same salary from 30 years ago? Neither can our transportation system.

The argument could be made that federal relief packages will provide the state with an influx of cash. While valuable to build new roads and bridges, it's important to remember that federal money is one-time money and has the potential to add to our funding challenges as those new roads and bridges will need to be included in the operations and maintenance funding on an annual basis. The source of those O&M dollars is still largely made up of the antiquated and perpetually scarce gas tax.

Key commerce corridors are critical and in desperate need of development and upgrades including the incorporation of new technologies such as broadband and other infrastructure for our rural communities. The success of rural Arizona will have a major impact on the more urban Maricopa, Pinal, and Pima counties.

Our cities and counties play a critical role in infrastructure development and it is important to keep the decision making local regarding what projects and modalities are appropriate for specific regions. Maricopa County has been the fastest growing county in the country for the last three years. We cannot keep this pace without building new key commerce routes and upgrading existing ones. Building the system is one thing; maintaining the system is a whole different commitment. Decision makers in local communities working together know what is best for their region, but we cannot lose sight of the fact that those decisions impact the larger Arizona economy. We can't afford to get it wrong.

Our economic growth and development will depend on proper future planning and funding. Maricopa County Proposition 400, the sales tax levy approved by the voters for transportation, will expire in 2025. Maricopa County is not unique. Other counties and even cities will have to make important decisions on how to address funding for their municipality, county, or region. Over the next two to four years, citizens will be asked through the ballot box if they want to increase capacity, maintain status quo, or ignore future needs.

It is foresight that got us to this point, and we must continue to look ahead. Without future planning we will suffer at every level – state, county and local. Our growing population, our businesses and our industry can't afford that – and neither can our citizens. Pay now through a responsible tax and a measured approach or pay later with inordinate costs, lack of opportunity, and a state in decline. Our goal is to maintain and continue to improve our state's business and family-friendly environment. Arizona needs and deserves a long-term sustainable funding source that will meet the needs now and into the future.

- Steve Trussell is the Executive Director of the Arizona Mining Association

GOVERNOR DUCEY SIGNS BIPARTISAN, UNANIMOUS LEGISLATION CONFORMING ARIZONA'S TAX CODE

News Release

April 14, 2021

Provides \$600 Million In Tax Relief For Taxpayers And Small Businesses

PHOENIX — Governor Doug Ducey today signed bipartisan, unanimous tax relief, aligning the state's tax law with federal law and resulting in \$600 million in savings for Arizona taxpayers.

"Arizona taxpayers and small businesses were able to weather the unprecedented economic hardship last year during the pandemic in part to action taken by our federal partners," said Governor Ducey. "By conforming our tax laws to the federal code in a bipartisan manner, we're delivering millions in state income tax relief to our workers and small businesses who've played an essential role in getting our economy back on track and fueling our recovery. Thank you Senator Vince Leach and Representative Ben Toma for your leadership in delivering relief for everyday Arizonans."

Senate Bill (SB) 1752 conforms Arizona's state tax code to the changes made to federal tax law to help taxpayers and small businesses navigate the COVID-19 pandemic.

In addition to the \$600 million tax cut, businesses will be provided immediate relief for any losses suffered during the pandemic, full conformity to federal tax treatment of Paycheck Protection Program loans to exempt them from state income tax, and a state income tax exemption for the first \$10,000 in unemployment insurance benefits received in 2020.

Read this press release here: <https://azgovernor.gov/governor/news/2021/04/governor-ducey-signs-bipartisan-unanimous-legislation-conforming-arizonas-tax>

(credit to Arizona Governor Ducey's Office)

ARIZONA CONFORMS TO FEDERAL TAX CODE, PPP LOAN FORGIVENESS

April 15, 2021, 8:08 PM EDT

Arizona will fully conform to the newest federal coronavirus tax policies, including exempting from the state's commercial activity tax the Paycheck Protection Program loan amounts that were forgiven under federal law, under legislation signed by the governor.

S.B. 1752, signed by Republican Gov. Doug Ducey on Wednesday, conforms Arizona's tax code to provisions in the [Coronavirus Aid, Relief and Economic Security Act](#) and the [Consolidated Appropriations Act of 2021](#). Those changes include fully exempting Paycheck Protection Program loans from income tax and providing immediate relief for businesses for any losses suffered during the pandemic.

The bill also exempts from state income the first \$10,000 in unemployment insurance benefits received in 2020.

Ducey, in a statement, said that conforming Arizona's tax laws to the federal code will deliver a \$600 million tax cut and it will provide state income tax relief to workers and small businesses.

By [Asha Glover](#), <https://www.law360.com/tax-authority/articles/1375628/ariz-conforms-to-federal-tax-code-ppp-loan-forgiveness>

(credit to Law360.com for this article)

AMERICA'S ENERGY FUTURE IS GREEN WITH ARIZONA'S COPPER



Andre Lauzon serves as a vice president with Hudbay Minerals based in Tucson, Arizona. Lauzon is responsible for Hudbay's strategic initiatives in the western U.S., including the development of the Rosemont Copper project in Arizona and the Mason Copper project in Nevada.

America's energy future is green. Electric vehicles are projected to overtake gasoline-powered cars by 2040. And with new government incentives for renewable energy production and electric vehicles, the speed of the transition will only accelerate.

That green future, however, is simply not possible without copper. From solar panels to electric vehicles, the products of tomorrow depend on copper's highly efficient and stable energy conduction.

Meanwhile, the United States does not produce enough copper to support current domestic needs, let alone the rapid growth of the green energy economy. We are already using almost 40% more copper than we produce, and that gap will only increase without an increase in domestic production.

In fact, the World Bank has predicted that demand for copper could increase 10 times over by 2050 due to increased demand from the renewable energy sector, which can use up to 12 times more copper than traditional energy production.

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Unless we rapidly increase domestic copper extraction efforts, the U.S. will be left vulnerable to the shifting realities of foreign trade, putting our market at risk for price hikes, geopolitical disruptions and unfair trading practices.

Rapidly increasing global demand for copper will lead to spiking prices, and countries that are unable to meet their own needs will be forced to pay ever-rising rates.

We've seen this before. Think of the 1973 oil crisis. The impacts on America's economy were devastating.

The national security implications of relying on foreign powers are also a major concern. The shift to renewables

and electrification, without a corresponding increase in U.S. copper mining, will exacerbate these economic and national security risks.

Domestic copper mining will also return control over environmental impacts of the mining process to the United States. Carbon emissions are a global problem, and relying on foreign mining means that the U.S. has little ability to ensure that extraction is performed safely and sustainably.

Some copper-producing countries have substandard regulatory environments that can result in environmental damage and inefficient use of resources, which is clearly counterproductive to the holistic goals of the green energy movement.

And that's not all. American consumers have shown time and time again that they consider not only environmental, but also social impacts when making purchasing decisions.

Under-regulated mining is often dangerous and can lead to a serious human cost in parts of the world where worker safety is not valued and protected. Modern markets rightfully favor responsible production of everything from coffee to diamonds to T-shirts, and minerals will be no different.

Domestic copper extraction will not only create new, well-paying American jobs, but will also promote fair, safe labor practices around the world.

Arizona has been America's largest copper supplier since the 19th century — and today the state's abundant natural resources are more important than ever.

While Arizona already produces over 60% of America's copper output, the state's untapped potential is vast enough to turn the tide away from reliance on foreign minerals.

Projects like Florence Copper and Rosemont Copper will help put Arizona on par with major copper-producing countries and support a sustainable energy future.

And there's no time to waste. The climate is changing, demand for renewable energy solutions is skyrocketing, and domestic production isn't keeping up. But a sustainable future is still possible — and it starts with Arizona's copper.

The preceding column is the opinion and analysis of the writer By Andre Lauzon Special to the Arizona Daily Star

(Credit to Andre Lauzon, Hudbay Minerals)

MEMBERS WHO SHINE - THE EXTRAORDINARY OUTREACH EFFORTS OF BRETT MOREY

“Brett Morey is an exceptional example for us all to follow. His involvement with his community and his business ethics are proven daily. Brett’s passion for Total Power, their fuel solutions, and the mining industry is to be admired.”

- Ernie Smith, Code Steel Inspections



Though he offers a friendly smile and solid handshake, Brett Morey is much more than your typical salesperson. Brett’s exceptionalism stems not only from his career as North American Sales Director for Total Power, Inc. and his background in the automotive and banking industries, but also from his lifelong passion for helping others. His steadfast

commitment to ethics, friendships, service, and community betterment are what make him a great. And he surfs!

Brett has been tasked with introducing Total Power’s core competency of manufacturing synthetic fuel additives to the US market, an enormous undertaking, to say the least. Over the past 10 years, he has connected with maintenance managers, reliability engineers, and mine directors all while building strong and meaningful relationships. He excels at trade shows because he truly enjoys meeting people and getting to know their story. Clients quickly appreciate Brett’s knowledgeable and upfront approach. Mining companies throughout the US know Brett not only from his enthusiasm about TPx Synthetic Fuel Additives and FMx Fuel Management Systems, but also in his desire to give back to the community. Brett is the only person we know that routinely carries steel toe boots and a surf board! He makes a lasting impression. As much as Total Power appreciates Brett’s steadfast dedication to his clients during his day job, we are most proud of his work while “off the clock.”

Brett is constantly involved in community service activities, often taking a leading role. To begin with, he is an active participant in Rotary, having held such positions as Community Service Director, Youth Service Chair, and President of the local Rotary Club. He mentors youths through Boys to Men Mentoring, addressing the needs of fatherless and high-risk teenage boys. On weekends, you will likely find him inspiring physically handicapped people by helping them surf, in support of the Life Rolls On Foundation, Christian Surfers International and his own non-profit, Surfers Unite Rotarian Fellowship. Did we mention he surfs?

On top of all his commitments, he is, at his core, a family man. He cherishes his wonderful children, his grandchild, and above all, his lovely wife and partner Holly (she also surfs!). Next time you see Brett, give him a ‘hang-loose’ sign as a way of saying thanks for all that he has done to bring communities together and for helping guide the youth that will soon be tomorrow’s future.



“I have met a lot of people throughout my career. I can confidently say that Brett Morey stands out as one of the most genuine, engaged, and passionate people I have met. His energy is infectious, and his humor... well, it depends on the day I guess 😊” - Mark Murdza, Southwestern Scale

Rotary



ARIZONA MINING, MINERALS, AND COPPER

Arizona is a major producer of non-fuel minerals. The future of Arizona mining rests on the following fact: each American uses more than 45,000 pounds of newly mined minerals annually!

A Primer

The earliest miners in what is now Arizona were Native Americans who chiefly mined surface outcrops of salt, clays, hematite, quartz, obsidian, stone, turquoise, and coal. In the late 1600s, Spanish explorers hunted for metallic deposits with especial interest in gold and silver. Antonio de Espejo made the first major silver discovery south of the San Francisco Peaks in May 1583, near what some believe is present-day Jerome, Arizona. By the late 17th Century, Spanish prospectors had engaged in extensive mining in the mountains bordering the Santa Cruz River and its tributary Sonoita Creek. Rare discoveries of sheets or "planchas" of silver – one sheet reportedly weighted 2700 pounds – fired the imaginations of several generations of miners.

(Image to left: Early day miners stand in front of a mine portal near Morenci, AZ)



In 1854, in Ajo, Arizona, the Arizona Mining and Trading Company launched the modern era of hard-rock mining. A burgeoning mining industry stimulated early growth in the Arizona Territory, and by 1864 nearly 25 percent of the male, non-native populace was prospectors. By the 1870's a plethora of hardrock mines were yielding prodigious volumes of copper, lead, zinc, silver and gold ore. In 1912, the newly christened state of Arizona supported 445 active mines, 72 concentrating facilities, and 11 smelters with a gross value of nearly 67 million dollars -- equivalent to 1.4 billion dollars in 2006 dollars.

Metallic Commodities

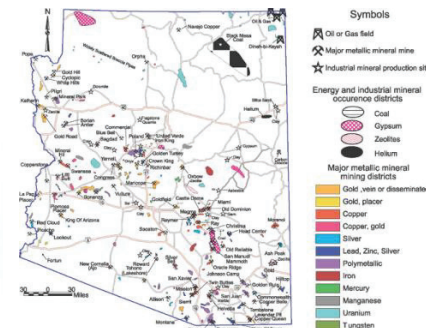
The important metallic commodities of Arizona, listed in order of decreasing value, include copper, gold, silver, molybdenum, and lead. Non-metallic (industrial) minerals produced -- listed in order of decreasing value -- include sand and gravel, crushed stone, clay, cement, gypsum, lime, perlite, pumice, and salt. Arizona's is world-famous for its turquoise, peridot, petrified wood, azurite, and malachite; turquoise, azurite and malachite are copper-bearing minerals. Arizona also produces energy resources such as coal and small quantities of petroleum and natural gas.

Arizona's Metallic Mining Districts

Mining districts in Arizona are categorized by the specific geologic environment in which the mineral deposit formed - see the accompanying mineral resource map. Base- and precious-metal mining districts are classified by the dollar value of metals produced. Only those **metallic mining districts** with total reported values greater than \$500,000 (based on 1996 metal prices) in the production of copper, lead, zinc, gold, or silver are shown. Manganese, uranium, and tungsten districts have had significant production. Iron and mercury mineral districts yielded minor quantities. Locations of economically or historically significant mines appear on the mineral resource map

A northwest-trending belt of metallic mineralization across the state is a striking feature on the map. The southeastern part of this belt is dominated by porphyry copper (red on map) and associated lead, zinc, gold, and silver deposits (blue and purple on map). These deposits are largely associated with granitic rocks intruded 70 to 55 million years (m.y.) ago. A number of important deposits in central Arizona are associated with Precambrian (1,750 to 1,650 m.y. ago) volcanic rocks. The western end of the belt is dominated by gold deposits (orange on map), mostly related to volcanic activity between 25 and 15 m.y. ago.

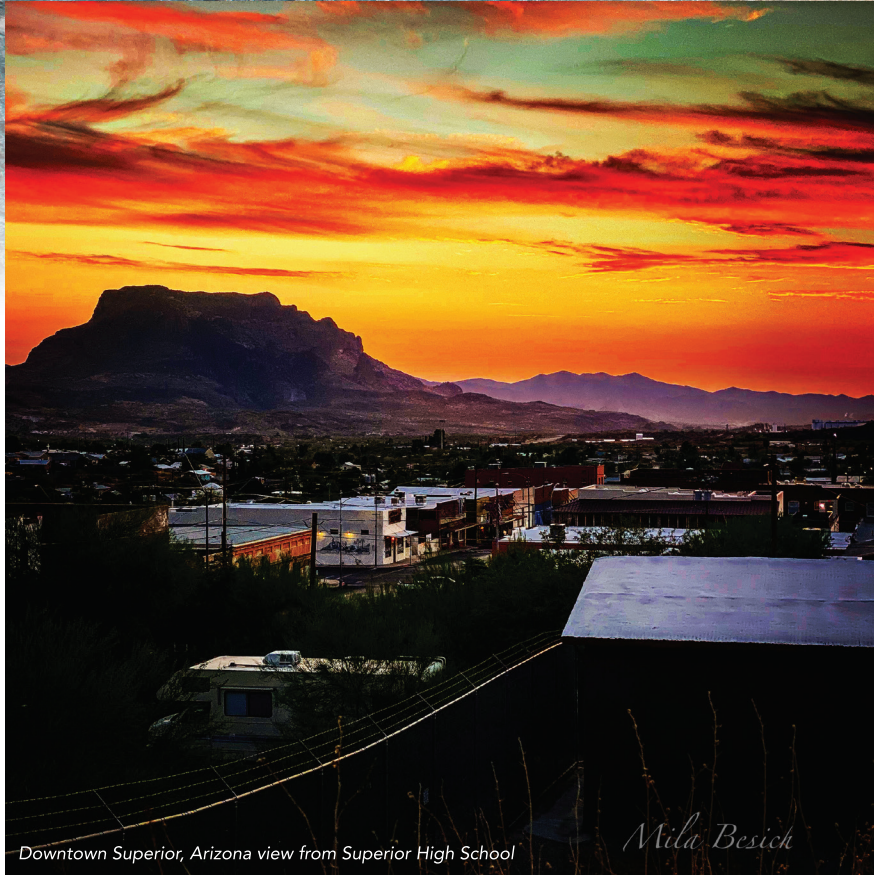
2015 Arizona Major Mines



In addition, economically significant uranium deposits (light blue on map) are concentrated in northeastern Arizona. Locations from which a commodity has been produced are designated by stars. Arizona is believed to have potential for undiscovered metallic, non-metallic, and other resources, including oil and gas, coalbed methane, helium, carbon dioxide, and geothermal.

(Credit to the University of Arizona and the Arizona Geological Survey)

MINING MATTERS TO THE COPPER CORRIDOR



Downtown Superior, Arizona view from Superior High School

The month of March had more surprises for the communities of Arizona's Copper Corridor. While most of us were celebrating that COVID-19 vaccinations were readily available and Spring was quickly approaching, no one expected the announcement from the Biden Administration that the Resolution Copper FEIS would be rescinded. This unexpected action caused other adverse impacts as well. The release of the Capstone FEIS also was left in limbo as was the travel management plan for the Tonto National Forest. Each of these Final Environmental Impact Statements has a tremendous effect on the lives and livelihoods of the residents, businesses and local governments of our region.

This announcement created the opportunity for leaders across the Copper Corridor to join together to share our voices about why mining is important to our region and our state. The Administration did not consult with the elected officials who actually are responsible for running our communities and counties. But by working together with the values and interests we share, we are making sure that our voices will be heard, and that the voices of the people who choose to live and operate businesses in this copper-producing region also are heard.

Our first ever Mining Matters Summit was held virtually via Zoom and our first action step was to send a joint letter to the White House asking that the FEIS's for Resolution Copper and Capstone Mining be put back on track, and with urgency.

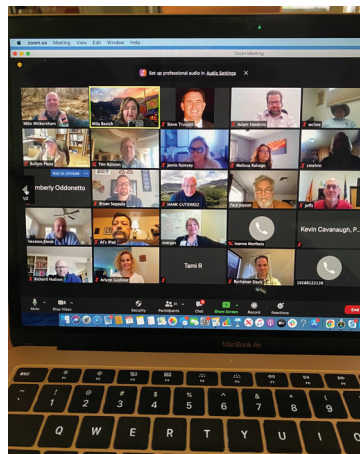
Controversy historically accompanies large mega-projects such as these proposed mining operations. And typically, those with the loudest voices are those who will be impacted the least. Their objections to these mining projects are shared in ways that trigger the emotions of people across the globe, while the interests of the communities most impacted by projects like Resolution Copper are either ignored or forgotten.

Last week Governor Ducey added a sixth "C" to the five "C's" of Arizona's economy: chips (as in silicon chips). These chips and the technology they enable require rare earth metals. As a state, we have the opportunity to strengthen the production of chips and the devices they power by ensuring Arizona's copper is mined, processed and makes it into end-use products. The critical need for copper needs to be understood clearly by the consumer as well as by the government bureaucrat who is tasked with making decisions about these mining projects.

For the Town of Superior, the Resolution Copper FEIS gave us a unique and once-in-a-lifetime opportunity to plan for our Town's future, identify critical areas of concern and funding needs. Almost everyone in our region - from our local residents to business owners to elected leaders - learned that we must work much more closely with our extraction industry leaders to ensure that our municipalities can thrive through the booms and busts that are often experienced. We should look at this complex process to make mining better and ensure that our communities that have stood by the industry for generations are not left to wither away. The work that Resolution Copper and the Town of Superior have done can be a model example for making systemic changes to how the industry as whole can operate within their communities.

As a region, we anxiously await a reply from the White House, and we stand ready to support the industry to ensure that the voices of our residents, workforce and businesses who are connected to and depend upon the mining supply chain are not forgotten.

By, Mila Besich, Mayor of Superior, Arizona



Members who attended Arizona's Copper Corridor meeting in March 2021

ROSEMONT MINE WINS BIG LEGAL VICTORY DUE TO TRUMP ADMINISTRATION RULE CHANGES

The proposed Rosemont Mine has won a big victory on the regulatory front, with a new agency decision it no longer needs a federal Clean Water Act permit.

The U.S. Army Corps of Engineers decided Wednesday that the mine no longer is covered by the Clean Water Act because of Trump administration changes to what's been known as the federal "Waters of the U.S." rule.

Those changes, approved in June 2020, meant development of ephemeral washes that only run after storms is no longer regulated under the act.

The Corps says the streams that would be affected by mine construction are mostly ephemeral, and that those that do sometimes carry water have no connection in normal years to rivers such as the Santa Cruz. So now, no permit is needed.

A Clean Water Act permit had been considered a crucial permit for the mine because to build the project, the mining company would have to discharge 42 acres of dredge and fill material from those washes, essentially covering some of them up.

The decision doesn't mean the mine is home free, however. Hubday Minerals Inc., which proposes to build it in the Santa Rita Mountains southeast of Tucson, still must get a higher court to overturn a U.S. District Court ruling from July 2019. A federal judge in Tucson threw out the U.S. Forest Service's approval of the \$1.9 billion project. That case is now awaiting a ruling from the 9th Circuit Court of Appeals.

If Hubday wins that case, it must also secure federal sign-off on a new biological opinion covering Rosemont's impacts on imperiled species. The District Court also overturned approval of an earlier biological opinion, which must be rewritten because Hubday only appealed part of the ruling.



Computer rendering of the pit and tailings pile at Rosemont Mine in the Santa Rita Mountains. The proposed Rosemont Mine has won a big legal victory, with a new agency decision that the mine no longer needs a federal Clean Water Act permit.

HUBBAY ANNOUNCES POSITIVE PRELIMINARY ECONOMIC ASSESSMENT FOR ITS MASON COPPER PROJECT



APRIL 6, 2021

- 27-year mine life with average annual copper production of approximately 140,000 tonnes over the first ten years of full production.
- Mason has the potential to more than double Hudbay's current copper production levels, and if brought into production, Mason is expected to become the third largest copper mine in the United States.
- After-tax net present value (10%) of \$519 million and 13.7% internal rate of return at \$3.10 per pound copper, which increases to \$773 million and 15.4%, respectively, at \$3.25 per pound copper.
- Mine plan assumes the construction of a 120,000 tonnes per day conventional flotation concentrator and an initial capital cost estimate of approximately \$2.1 billion.
- The mine plan includes 1.1 billion tonnes at 0.34% copper-equivalent, 98% of which is from the measured and indicated categories.
- Mason's 2.2 billion tonne measured and indicated resource estimate is one of the largest greenfield copper projects in the Americas.
- Opportunities to further enhance project economics through exploration for higher-grade satellite deposits on Hudbay's prospective land package in Nevada.
- Mason is a viable long-term option for potential future development and a strong component of Hudbay's pipeline of long-term growth opportunities in mining friendly jurisdictions.

TORONTO, April 06, 2021 (GLOBE NEWSWIRE) -- Hudbay Minerals Inc. ("Hudbay" or the "company") (TSX, NYSE: HBM) today announced the results of its preliminary economic assessment ("PEA") of its 100%-owned Mason copper project located in Nevada, United States. All dollar amounts are in US dollars, unless otherwise noted.

"The Mason PEA demonstrates the success of Hudbay's consistent growth strategy and our team's ability to create value from accretive acquisitions of high-quality copper projects in mining-friendly jurisdictions," said Peter Kukielski, Hudbay's President and Chief Executive Officer. "We added Mason to our development pipeline portfolio in 2018 and have since leveraged our integrated core competencies of exploration, mine planning and project development to demonstrate that Mason is a quality

long-term development project in our robust organic growth pipeline."

Hudbay's Mason Development Strategy

The Mason project is a large greenfield copper deposit located in the historic Yerington District of Nevada and is one of the largest undeveloped copper porphyry deposits in North America. Mason's measured and indicated mineral resource estimates are approximately twice the size of Hudbay's Constanca and Rosemont deposits. Hudbay views the Mason project as a long-term option for future development and a strong component of its pipeline of long-term growth opportunities in mining friendly jurisdictions.

In 2017, Hudbay made a \$2 million toe-hold equity investment in Mason Resources Corp., the entity that owned the Mason project at that time. In October 2018, Hudbay entered into an agreement to acquire the remaining 86% of the issued and outstanding common shares of Mason Resources Corp. that it didn't already own for approximately \$15 million. The acquisition of Mason was completed by way of a plan of arrangement in December 2018. Since acquiring Mason, Hudbay has consolidated a prospective package of patented and unpatented mining claims contiguous to the Mason project in two private transactions in 2019 and 2020, including a property called Mason Valley. In March 2021, Hudbay announced an updated measured and indicated resource estimate of 2.2 billion tonnes at 0.29% copper at Mason, based on a revised resource model and an updated mine plan constructed by Hudbay personnel using the same methods applied at Constanca. The company has also advanced a number of technical studies to support the completion of its 2021 PEA.

Mason 2021 PEA Summary

The 2021 Mason PEA contemplates a 27-year mine life with average annual copper production of approximately 140,000 tonnes over the first ten years of full production. At a copper price of \$3.10 per pound, the after-tax net present value using a 10% discount rate is \$519 million and the internal rate of return is 13.7%. The valuation metrics are highly sensitive to the copper price and at a price of \$3.25 per pound, the after-tax net present value using a 10% discount rate increases to \$773 million and the internal rate of return increases to 15.4%.

Next Steps

Given the very positive results from last year's drill program, Hudbay initiated a second phase of exploration drilling in 2021 with a 70,000 foot follow-up drill program and has doubled the number of drill rigs operating at site to six. The 2021 program will focus on developing an understanding of the full extent of the mineralization at the Copper World deposits and potentially defining initial mineral resource estimates. Mineralogical studies and metallurgical testing have also been initiated and are expected to continue in the coming months. Geophysical surveys are underway to assist in generating further targets in this prolific region. Hudbay has a current exploration budget of approximately \$10 million for its Arizona properties in 2021 which is likely to increase with further exploration success. Hudbay will review the results from its 2021 exploration program to determine the next steps for its Copper World properties and the potential synergies with Rosemont.

To read this, and other press releases from Hudbay Minerals, follow this link:

<https://hubbayminerals.com/news-media/default.aspx#2021#Hudbay-Announces-Positive-Preliminary-Economic-Assessment-for-its-Mason-Copper-Project>



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