

San Manuel's Smelter Complex

memorialized at train museum

Jennifer Carnes Pinal Nugget

San Manuel's smelter complex has been gone for years. In January 2007, BHP completed the shutdown, which began nearly a decade earlier, when the twin smokestacks were demolished. The destruction forever altered the skyline of the Pinal County community.

NUGGET

Covering the Copper Corridor Communities of Globe, Miami, Superior, Kearny, Hayden, Winkelman, Dudleyville, Aravaipa, Mammoth, San Manuel, Oracle, SaddleBrooke and Catalina.

James Carnes	Publisher
Jennifer Carnes	Managing Editor
Michael Carnes	
Mila Besich	
John Hernandez	

Email:

Editorial: jenniferc@MinerSunBasin.com Advertising & Questions: michaelc@MinerSunBasin.com

CopperArea.com

Find us at Facebook.com/PinalNugget Follow us on twitter.com/CopperAreaCom

Published one to three times a year. Business office is located at 139 8th Ave, P.O. Box 60, San Manuel, AZ 85631.

Telephone

San Manuel Office: (520) 385-2266 San Manuel Office Fax (520) 385-4666 Kearny Office: (520) 363-5554 Kearny Office Fax (520) 363-9663

"We sure could use a little good news today."

— Anne Murray

Advertising Information

For a free media kit, call Mila at (520) 827-0676 or go online to: CopperArea.com and click on "Advertise With Us."

But several members of the Gadsden Pacific Division Toy Train Museum in Tucson felt the smelter complex needed to live on, just in a much smaller scale.

"Using pictures obtained from the San Manuel Historical Society and other sources we have attempted as best as possible to build the dumper, crusher, concentrator, smelter building, and sulphuric acid purifier," explained Bob Grassi, a member of the O guage layout team at the museum. "We have added a slag pile. The two smokestacks are also present. The buildings are close together since there was no way we could model the vast space the original





MEET THE DESIGNERS

Four of the six members who worked on the project are, from left: Ivan English, Bob Grassi, Don Drakulich (co-chair of the layout and supervisor of the project) and Dave Carter. Two members, Frank Shore and Tony Adessa, are not pictured.



smelter complex occupied. The same is true of the smokestacks. They are 4 feet high on our layout. If they were true scale size, they would be over 11 feet high and unable to fit in our building. We are also building a display case with a picture of the original smelter complex, and explanation of its operation, and samples of locomotives and ore cars used to transport the ore."

Member working on the display included: Don Drakulich, Co-Chair of the O gauge committee who supervised construction of the smelter complex, Bob Grassi, Tony Adessa, Ivan English and Dave Carter.

Grassi has ties to the San Manuel community.

"I worked as a school psychologist in the Mammoth-San Manuel School District from 1992 to 1999. I then counseled students in the district one day a week up until 2015," Grassi said.

The group began working on the complex in June 2023 and completed it at the end of August.

"All of the buildings were built by hand," Grassi explained. "The complex is a permanent addition to the layout. The smelter building has a Magma Copper Company sign on it. We believe this was its actual name during many of the years it was in operation."

The museum will also have a separate display about the real smelter.

The O gauge layout is large. The north side of the

Continued on page 4

→ MODELING MAGMA **↑**

The San Manuel Smelter Complex on display at the Gadsden Pacific Division Toy Train Museum in Tucson.





ON DISPLAY (1)

A photo of the original San Manuel Smelter Complex is on display at the Gadsden Pacific Division Toy Train Museum in Tucson.

Trains

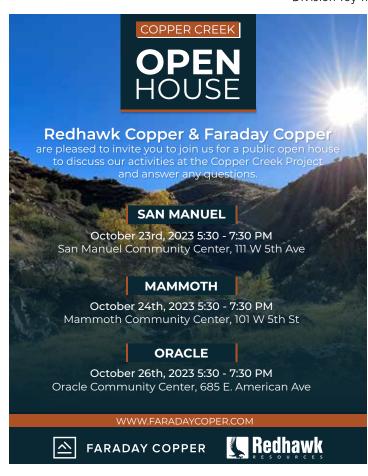
Continued from page 3

layout runs 70 feet. At the far end is a mountain with an open pit mine. A mine train runs from the mine to the smelter 70 feet away. The committee decided to build the present smelter complex to replace a small one that had been in the spot for years.

"A number of us did research to help with the project," Grassi said. "We all came away deeply impressed by the complexity of the operations and the extensive manpower needed to keep Mammoth-San Manuel mining going."

About the Museum

The Gadsden Pacific Division Toy Train Operating Museum is a nonprofit organization located at 3975 N. Miller Ave in Tucson. They are open from 1 to 4 p.m. every Sunday except for a few holidays. In addition to the O gauge layout, there six more of varying sizes, an outdoor ride on train, and a caboose. They have a webpage, gpdtrains.org, and are on Facebook and Instagram.





ASARCO MINERAL DISCOVERY CENTER & MINE TOURS



COME VISIT AMODERN MINE



COPPER!

It's a primary metal in the:

- hospital where you were born
- electricity in your home
- tools that farm your food
- transportation that powers your next adventure









LOOKING TO EARN A DEGREE OR VOCATIONAL TRAINING?

Let's work together to make that goal a reality!



You're not ready to give up on your dreams. And you shouldn't.

Chicanos Por La Causa (CPLC), together with BHP, can help you with college tuition, skills training, completion of a certification program, or new tools for your career.

You'll change your life and your community.

Scholarships and grants available to residents of the Copper Corridor, age 16 years and above.

Take the first step toward the career of your dreams. Apply now.

Visit CPLC.org/scholarships for more information.

Miami, AZ residents will receive priority. Funding is limited.





Copper updates



(†) VOLUNTEERS

A Capstone employee works to protect Pinto Creek after a fire and summer storms damage the area.

Capstone Pinto Valley

Protecting our Local Lands and Waters

Taking care of the environment is ingrained in the hearts and minds of Capstone's employees.

During the summer of 2021, Arizona had a wildfire that burned through more than 180,000 acres, followed by intense rainstorms that caused flash floods over the scarred land. The US Forest Service wanted to ensure that contaminated runoff water wouldn't be released into Pinto Creek, harming the waterway and recreation values.

Capstone's Pinto Valley team wanted to do their part. They quickly assembled a team for a soil stabilization project on an area identified by the US Forest Service. Over two days, they rebuilt an access road, taking care to keep water channels open, and trucked in loads of straw wattles – like thick ropes of straw – to slow the runoff and prevent further erosion. Then, on their day off, 13 volunteers pitched in to place and secure the wattles.

Pinto Valley's Senior Mine Coordinator Dave Grove, a thirdgeneration miner, was one of the volunteers. He explained how it felt to work hand in hand with the US Forest Service to protect the local environment.

"People may not realize that historically mines around here didn't

take such good care of the land," he said. "So you can make yourself proud as a miner when you see yourself as a steward of the environment. People here like to go out in the hills for recreation. It was a big sense of accomplishment to protect that and to see the US Forest Service so pleased with how we did the job."

Pinto Valley is currently the only operating mill located in the historic Globe-Miami mining district of Arizona, one of the oldest and most productive mining districts in the US. Since its first recorded production in 1975, Pinto Valley has produced more than 4 billion pounds of copper,

Continued on page 16





WOMEN IN MINING



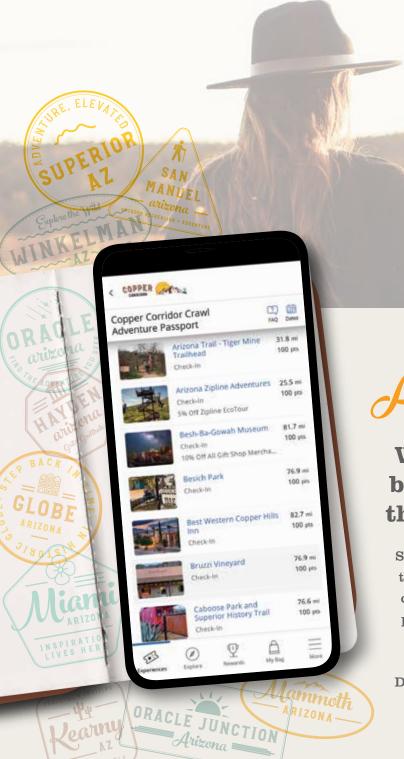












COPPER CORRIDOR— CRAMIL

Adventure Passport

We are highlighting all the best things to see and do all through the Copper Corridor.

Sign up for this mobile-friendly adventure passport that invites visitors on a guided crawl through the corridor. By checking in on locations listed on the passport you will earn points for prizes and enjoy savings and discounts all the while supporting family owned businesses and local attractions.

Discover more of rural Arizona! Dig deeper to shine brighter on the Copper Corridor Crawl!





Scan the QR code to sign up & start earning points!



discovercoppercorridor.org

Earn points to Win Prizes!

Women in Mining in **Arizona's Copper Corridor**

Looking back at mining for the past hundred years, it was not always common place to have women working in mining or what was often termed "non traditional" workforce for women. Some of the first women to work in mining were in coal mines in the east, and as more women entered the workforce in the 1970s, more women found careers throughout the mining industry from metallurgists, engineering, project directors, community and administrative work – there are a variety of skill sets and careers available in mining.

"The Copper Mining industry is part of who we are as a state and it feels great to be connected on that level while at the same time knowing the global needs and impact of the mining industry as a whole," said Sherry Lynn Powell, a recruiter for Capstone Mining. For many women working in the industry there are a variety of reasons they have found the industry to be a fulfilling career.



Sherry Lynn Powell

Sherry Lynn Powell works for Capstone Mining at Pinto Valley. She is a recruiter in the human resources department. In her position she connects people and potential employees with the industry, she also helps to support employees at Capstone Mining. She began her career by taking an internship during college as a mechanical engineer and has worked in mining for 15 years. She enjoys connecting with others and helping others.

"Mines have limitless opportunities. Go for it," she says to anyone considering a career in mining.



Lyndsay Potts

Lyndsay Potts, is the General Manager for Capstone Pinto Valley Mine. She is the person in charge of seeing the day-today operations of the overall workforce to support the site in safely producing profitable copper. In other words, Lyndsay is responsible for the entire operation, leading and directing all of the managers and directors under her authority. She has worked across the globe in mining and has been working in the industry for 18 years. Working in mining has allowed her to travel the world which also created opportunities for more adventures. She shares that mining has been part of her family and that is what inspired her to enter the mining industry. Her favorite part of the job, working with people and she shared that "every day is different." Her advice for those considering a career in mining: "Mining offers so many opportunities no matter what your interest there are roles available. It is also an industry that allows you to change and develop through your career, no shortage of opportunities and challenges."





.

Lingyu Zhang

Lingyu Zhang works as a Senior Metallurgist for Florence Copper. She has worked in mining for 10 years. Her job is to provide tech services and support to the operations and management teams.

"I do daily data monitoring, data analysis, troubleshooting, and root cause analysis. I also do plant process optimization by using Lean Six Sigma tools to promote continued process improvement," she explained.

She was inspired to work in the mining industry because "the mining industry is a very important and dynamic industry. Our work has a big impact on local communities and society as a whole. Copper supports cutting edge technologies, including semiconductors, electrical vehicles, smart phones, and other products crucial to our everyday lives. Mines also provide job opportunities for local communities, develop young professionals, and give back to the communities where they are located, so I think that this is a very meaningful job and industry."

What does a Senior Metallurgist do? "Many assume that all jobs in the mining industry are outside, require hard physical labor, or require you to work underground all day. Our operation and the industry as a whole are different than what people expect. In my position, I do data analysis and data-driven work, with a lot of my time spent in the office. That's different than what people assume. The modern mining industry employs advanced technologies and focuses a lot on innovation and process control. It's very different than the traditional historical picture that people have in their heads when they think of mining," she said.

Her advice to those wanting to join the mining industry: "The mining industry has a long history of being a male-dominated industry. With that in mind, I want to provide the following advice, especially to young girls considering entering the mining industry: Don't hesitate to speak up. Don't be afraid to be the first of anything."

Rose Marie Alonzo

Rose Marie Alonzo is the Senior Corporate Safety Manager for all four ASARCO properties (Ray, Hayden, Mission and Silverbell). She has worked in the mining industry for 15 years. She started in an entry level position and worked her way into a management position. Her responsibilities as a Corporate Safey Manager, includes ensuring all mine personnel follow company and regulatory policies and procedures.

"I like to approach safety with a streamlined, innovative process to ensure everyone is safe and goes home to their families," she said.

She was inspired to work in the mining industry after growing up in a small town where mining was a big industry that offered competitive pay and benefits with many career paths. She chose mining because it was a career that would be challenging and different every day. She enjoys building and maintaining relationships inside and outside of the company.

"The job is different every day, and it is interesting to see the product from the beginning to the end," she said.

Her advice to those considering a career in mining: "If you have a willingness to learn and the drive to work in a fast-paced environment, there are several opportunities working at the mines. Mining is a process that takes skill and dedication to safely produce copper and the jobs require adaptability to change, but it is very rewarding," she said.

Florence Copper ASARCO-Grupo Mexico Continued on page 14



COPPER STRONG.

At Resolution Copper, women are leading efforts to support nearly 25% of U.S. copper demand annually. From our President and General Manager to miners to geologists to engineers to underground electricians, women across Resolution Copper are making a difference in Superior every day.

Hard hats off to the women of Resolution Copper who are making their mark on the mining industry in Arizona.



READ MORE ABOUT THE WOMEN OF RESOLUTION COPPER







Jessica Castillo

Jessica Castillo is an Executive Assistant at Resolution Copper. Her job entails working as the assistant to several members of the Resolution Copper Senior Leadership team.

"As the Executive Assistant I have learned many aspects of the mining industry due to the nature of my position. It is hard to describe what I do in a few sentences, as I work with many different leaders on the senior leadership team. I do what I can to help make their job easier. This can entail of lot of duties in one day. I am also a part of the Emergency Response Team onsite. This team is surface based and will be called out in the event of an emergency onsite."

Jessica's family has had many long roots in the mining industry. Her father moved their family to Superior to work for Magma Copper and she had always wanted to have a role in the mining industry. She enjoys working for Resolution Copper and representing her family and community in her role.

"Being a part of this amazing company has made me appreciate the efforts it takes to build a mine," she said.

Her advice to those wanting to have a career in mining: "Don't give up and don't be afraid to apply for a position you are unsure of! There are a lot of mines within the copper corridor and in Arizona, all it takes is that one person to believe in you and your ability."

Resolution Copper

Janeen Duarte

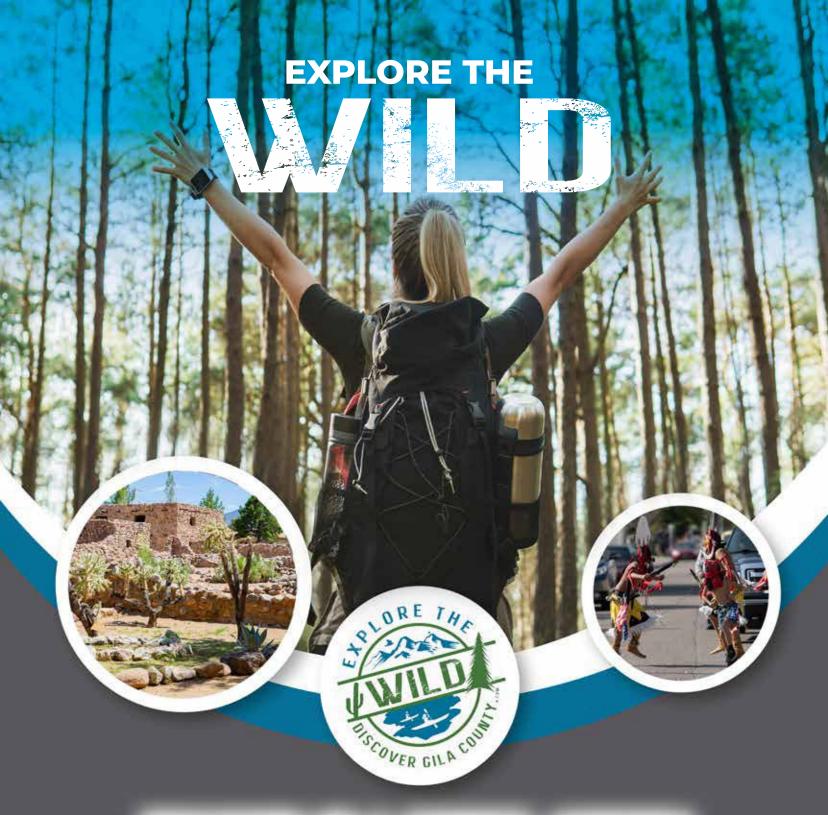
Janeen Duarte is a Principal Advisor – CSP Technical. In her role with Resolution Copper, she supports the Native Affairs team in outreach to all of the Arizona tribal communities.

"Our team is focused on developing long-term relationships with Arizona tribes, educating them about the project and working towards establishing agreements that bring true value to their communities," she explained.

Janeen has been working in the mining industry for 21 years, and she shared that her family has always worked in mining. And despite her father not wanting his daughters working in mining, she and her sister enjoy careers in the mining industry. Her two sons have also joined the mining workforce in the trades.

Her advice for anyone wanting to enter the mining industry: "Don't hesitate. It's a rewarding career that offers so many different opportunities to so many people. Whether you're straight out of high school, or a seasoned professional, there is a place for you. You can be a part of something that brings so much value to our world and the communities we work in."

Resolution Copper



DISCOVER GILA COUNTY, ARIZONA

TRAILS

100s of Miles of Beautiful, History Packed Trails Waiting to be Explored!

NATURAL ATTRACTIONS

Discover Besh Ba Gowah, Camp in Pine Forests, Fish in Rivers & Streams!

HISTORY

Walk Where Native Americans, Cowboys, Miners & Pioneers walked!



(O)





Updates

Continued from page 7

including 0.5 billion pounds of copper cathode. https://capstonecopper. com/operations/pintovalley/

Asarco-Grupo Mexico

The Ray Operations consists of an open pit mine with a concentrator and a solvent extractionelectrowinning operation, and associated maintenance, warehouse and administrative facilities. Cathode copper produced in the SX-EW operation is shipped to outside customers and to the Amarillo Copper Refinery.

Ray is located in Pinal County, just 18 miles to the west of the Hayden Operations. The Hayden Operations and General Administrative Offices are located 70 miles northeast of Tucson and 64 miles southeast of Phoenix (Pinal and Gila Counties).

A local railroad, Copper Basin Railway, transports ore to the Ray concentrator to the smelter, and sulfuric acid to the leaching facilities.

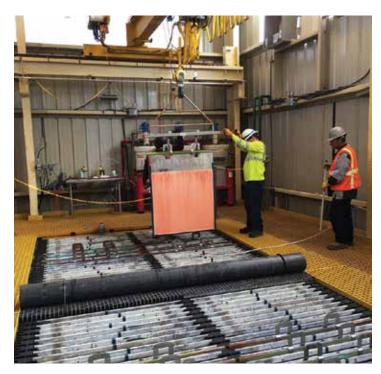
The mine dates back to the late 1800s, when it was called the Mineral Creek Mining Company. It operated as an underground mine until the 1950s when open pit mining began. The open pit mine continues today.

https://www.asarco.com Florence Copper

Taseko Mines announces receipt of final permit for Florence Copper Project

Taseko Mines is pleased to announce that the US **Environment Protection** Agency has issued a final **Underground Injection** Control Permit for the Florence Copper Project.

Stuart McDonald, President and CEO of Taseko, commented, "Receipt of this final permit is an exciting milestone for Taseko and a







Florence Copper's first copper cathode is harvested in April 2019.

testament to the project's strong environmental attributes. We now have one of a very few constructionready, fully permitted copper projects in North America. With approvals in place from the Arizona Department of Environmental Quality and now the EPA, we can commence construction of the Florence Copper commercial production facility. This achievement is a major stride forward and a result of Taseko's longterm approach to project development, environmental protection, and community engagement."

Mr. McDonald continued, "With procurement well advanced, the next steps will be mobilization of contractors for the wellfield and SX/EW plant construction. We continue to advance discussions with potential lenders and royalty providers for the remainder

of the project financing package and expect to have additional commitments in place before construction spending ramps up."

When commercial operations begin, Florence Copper will have an annual production capacity of 85 million pounds of copper at US\$1.11 per pound C1 cash costs over a 22-year mine life. Based on a March 2023 Technical Report for the Project, which is supported by results from the successful operation of a production test facility, the Project has an after-tax NPV (8%) of US\$930 million at a copper price of US\$3.75 per pound.

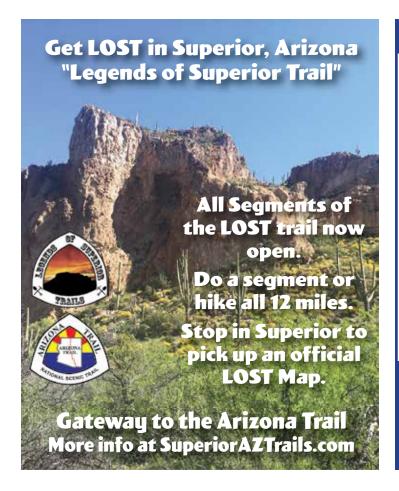
"The Florence Copper Project is one of the least capital-intensive copper projects in the world and will have an environmental footprint smaller than any conventional open-pit

Continued on page 20



NEAR KEARNY (1)

ASARCO-Grupo Mexico's Ray Operations near Kearny.



What do you need to ship?

MAIL WELL SHIPPING

15270 N Oracle Rd, Ste. 124 in Catalina (NE corner of Bashas' at Golder Ranch Rd)

520.818.0660

Authorized shipping center for:









DOMESTIC • INTERNATIONAL • GROUND • AIR

- Mail Box Rentals Packing Picture Framing
 - Knife Sharpening Document Shredding
 - Document Faxing Document Scanning
- Document Next Day Shipping
 Document Copies Document Printing





DIESEL ELECTRIC

520-896-2144 • 1535 W. AMERICAN AVE.

REPAIRS ON

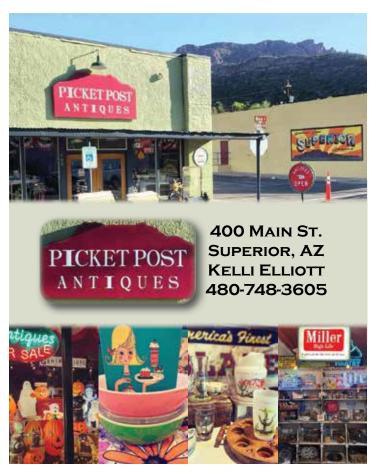
Equipment · A/C · Generators **Light & Heavy Construction Equipment**

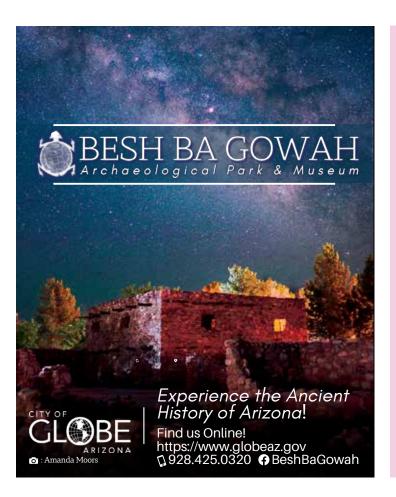
Oracle Auto Repair, Parts, Inc.



520.896.2600 for Parts 520.896.9110 for **Auto Care**

1535 W. American Ave., Oracle www.oracleauto.com





18





SUPERISE ENTERPRISE CENTER

The mission of Superior Enterprise Center is to serve as a transformative catalyst to diversify Superior's economy through business services and workforce training. A one-stop shop for resources, training and information. A hub of connectivity and learning. The Center strives to enrich the community through engagement, education and opportunity.

The Enterprise Center plays a vital role in bolstering workforce development in the area as well as, providing programming and resources to the small businesses and entrepreneurs in the area. It conducts direct marketing and outreach to registered businesses in the Town of Superior and keeps abreast of the needs of the community through its Small Business Meetups, one-on-one time, and the Enterprise Center monthly newsletter.

If you have any questions, contact: Arlynn Godinez – arlynn@rebuildsuperioraz.org



We've been there since the very beginning of the Copper Corridor ...



from Superior ...



to San Manuel.

BHP

Updates

Continued from page 16

or underground mining operation of comparable size. Low water use, low energy consumption and low carbon emissions make Florence Copper an exceptionally green project that will supply refined copper to the rapidly growing US domestic market," concluded Mr. McDonald.

The Florence Copper NI 43-101 technical report is available on www.sedar.com or the Company's website at www.tasekomines.com.

Florence Copper will soon be a large-scale, commercial mining facility operating in Florence, Arizona that will produce over one billion pounds of high-quality copper cathode using revolutionary technology called "in-situ copper recovery" (ISCR).

The facility will set a new standard for conservation and environmental protection in copper mining. https://www.florencecopper. com

Faraday Copper

Faraday Copper announces results of final drill holes in Phase II of testing

Faraday Copper is pleased to announce the final two drill hole results from the Phase II program at the Copper Creek Project, located in Arizona, U.S. ("Copper Creek"). These two holes were drilled to test vertical extension of high-grade breccia mineralization above the American Eagle underground footprint and target previously undrilled areas.

Paul Harbidge, President and CEO, commented, "The final results from our Phase II drill program have continued to show the upside to the existing resource that formed the basis for the PEA. It is particularly exciting to see the high-grade results in the Bald breccia, which is located above the American Eagle porphyry. This highlights the potential to identify additional vertically-

EXAMINATION

Thomas Bissig, a geologist, checks drill core at Faraday Copper's San Manuel location.







PRESIDENT

Victoria Peacey was named President and General Manager of the Resolution Copper Project in March 2023.

extensive mineralized zones on the project, similar to Mammoth-Keel. We intend to further test this area as part of our Phase III drill program, which is expected to commence in the fourth quarter of this year."

Copper Creek is a vast, 3-kilometer-long porphyry copper deposit located in Pinal County, less than two hours northeast of Tucson, Arizona.

The property is located in the heart of the prolific southwestern North America porphyry copper province, the Copper Corridor. It lies at the intersection of a major northwest-trending belt, which includes the well-known copper mines in the Miami-Globe and Ray mining districts, with a major east-northeast trending copper belt made evident by the former BHP Kalamazoo Mine in San Manuel, Arizona. The exploration site is approximately 16 square miles and has a rich history of exploration and mining across patented and unpatented claims. The area is politically secure and has access to established mining infrastructure.

https://faradaycopper.com

Resolution Copper

The Resolution Copper project is still held up in the federal permitting process.

In March of 2021, the Biden Administration pulled the Final Environmental Impact Statement for additional reviews and tribal consultation. The project is also awaiting a ruling from the 9th Circuit Court En Banc hearing that was held in March to determine if the court rules in favor of Apache Stronghold/Becket Fund that the project is a violation of the San Carlos Apache religious freedoms.

Despite the challenges Rio Tinto continues to make significant investment in the project and recently additional shaft development work was completed, under the leadership of local Superior resident AJ Quiroz.

This year Rio Tinto named Victoria Peacey as the project director for the mine. Peacey has been with the project for an extensive period of time managing permitting and environmental regulations. She is now fully responsible for the entire project and seeing the permitting process to its completion. https://resolutioncopper.com



BOYCE THOMPSON ARBORETUM



engage
WITH YOUR
SURROUNDINGS BY
SIGNING UP FOR TOURS
AND CLASSES.



enjoy
SHADED TRAILS,
HISTORIC
BUILDINGS, PICNIC

AREAS, AND MORE.



explore
THE NATURAL
LANDSCAPES
OF THE
SONORAN DESERT.

immerse yourself

in the year-round beauty of the desert at Arizona's largest and oldest botanical garden. With 105 acres of gardens, five miles of trails, 4,025 taxa, and 20,000 different plants, it is a must see destination for families and nature lovers.

520.689.2723

37615 E. Arboretum Way Superior, Arizona 85173

btarboretum.org

ONE SIMPLE CALL TO 811 GETS UNDERGROUND UTILITY-OWNED LINES MARKED FOR FREE.

Whether you're a homeowner or professional excavator, every digging job requires a call — even small projects — so be sure to:

- Call 811 at least two working days before starting any digging project
- Wait for the site to be marked
- Respect the marks
- Dig with care

NOT CALLING CAN BE LIFE THREATENING AND COSTLY.

You can harm yourself or others, disrupt natural gas service to an entire neighborhood, and potentially be responsible for injuries, repair costs, and criminal penalties.

Natural gas lines can be buried anywhere. If you ever suspect a natural gas leak, call **911** and Southwest Gas at **877-860-6020** immediately, whether you're our customer or not.

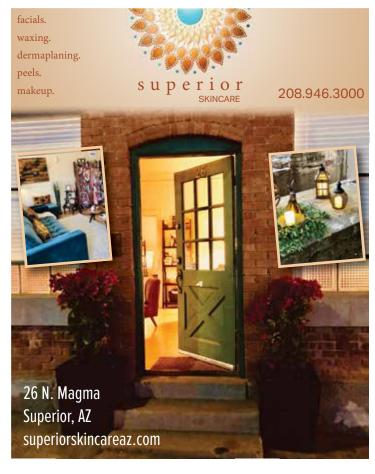
For more information about natural gas safety, visit swgas.com/safety or call 877-860-6020.

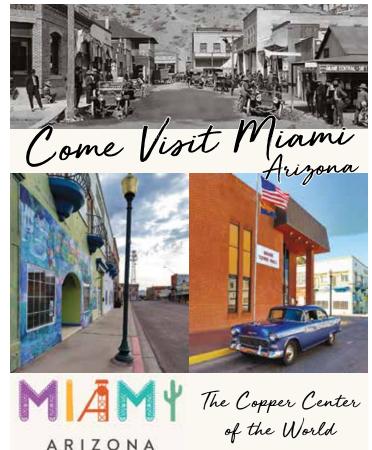












Arizona Mining Association Salutes Women in Mining Resolution Copper in the Copper Triangle



Lillian Wavering, Sr. Engineer

Bridget Panate, Ops/Maint

Victoria Peacey, President/GM

Wendy Stanfel, Electrician

Jessica Castillo, Executive Asst

"Join us in celebrating the incredible women making their mark in mining and shaping the future of the industry one breakthrough at a time."

Once in operation, Resolution Copper mine could supply up to one-quarter of the nation's copper demand.

So what does that mean for the people of Arizona? For starters, it will create thousands of new jobs. That will boost economic growth and provide taxes to fund vital services. When the mine is fully operational, Resolution Copper expects to directly employ about 1,500 workers and generate approximately 2,200 indirect jobs with an estimated \$136

million in compensation, meaning it could support some 3,700 jobs and \$270 million per year in total compensation at full production. Resolution Copper is also committed to training local workers in the Resolution Copper Apprentice Program at Central Arizona College to fill highly-skilled positions at a state-of-the-art mine.

Arizona Mining Association 916 W Adams St Ste 2, Phoenix AZ 85007

602.266.4416 | azmining.com







Save up to 23% when you bundle home and auto!



Matthew Storms, Agent 186 N Broad St Globe, AZ 85501 (928) 425-8543 mstorms@amfam.com amfam.com





Scan the QR code or call to get a quote today.

*Customers who bundle auto and home insurance policies may save up to 23% on both policies together (as of July 2022). Discounts may vary by state property, policy form and company underwriting the auto and/or home policy. Discounts may not apply to all coverages on an auto or home policy.

American Family Mutual Insurance Company, S.I. & its Operating Companies, 6000 American Parkway, Madison, WI 53783

(\$2703.2 1885 – \$1/23. – 1994;55.14

