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February 2022 Volume 50, Number 2

ALASKA MINERS ASSOCIATION

THE ALASKA MINER

Journal of the Alaska Miners Association

Usibelli Coal Mine remains a vital cog in Alaska industry, providing needed low-cost coal that powers the Interior. Read more on Page 3.

Powering the Interior's Way of Life

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Usibelli Coal Mine Details Vital Impact of Coal in Interior

Usibelli Coal Mine contracted with the McKinley Research Group to produce a report analyzing the importance of coal in Interior Alaska. McKinley's predecessor, the McDowell Group, had produced similar reports in 2014, 2015 and 2018.

The updated report, Energy and Economic Impacts of Coal in Interior Alaska, highlights the Interior's energy infrastructure and supply and environmental considerations, compares fuel sources, discusses employment and community statistics, and analyzes the future of coal in energy production.

Among key points defined in the report:

- Coal accounts for approximately 43 percent of Golden Valley Electric Association's electricity generation.
- Including the military bases, coal accounted for 50 percent of electricity generation in the Interior.
- Coal continues to be Interior Alaska's lowest-cost source of energy.
- Coal provides stability in energy rates.
- If coal were removed from the grid entirely, Interior Alaska would face a rate increase of about $242 million annually for electric generation.

The complete report is available online at: usibelli.com/pdf/2022-Economic-Impacts-of-Coal.pdf

Several key factors make coal well-positioned to continue meeting the energy needs of Interior Alaska:

- Coal is Interior Alaska's lowest-cost source of energy. As a reliable and low-cost source of energy, coal supports stable consumer prices relative to heating oil, naphtha, or natural gas. With hundreds of years of coal resources available and established infrastructure, coal prices in the Interior are likely to remain stable into the future.
- Proximity of Golden Valley Electric Association's (GVEA's) plants to the mine and other power plants' ability to stockpile coal are important to the region's energy security.
- The Interior has the advantage of access to high-quality, ultra-low sulfur coal and improvements in coal technology now offer more efficient, cost-effective ways to use the resource.

"We hope this report helps educate policy makers, rate payers, and other stakeholders about the importance of coal in Interior Alaska," Usibelli Vice President Lorali Simon said.

"Because of our close association in the business community, we would like to make sure you have this information at your fingertips.

"This is the third update to this report," Lorali said. "It's an excellent tool to tell the great story about coal in Alaska, our mine, and our economic impact in the state."

Often the discussion of transitioning from fossil fuels highlights a readily available alternative. While Gov. Dunleavy's recent focus on new energy sources, both renewable and nuclear, might seem contrary, the governor remains a proponent of Alaska coal.

"Make no mistake, Gov. Dunleavy understands the importance of coal in Alaska," she said.

The price advantage of coal over other fuels helps to stabilize energy rates in the region. In 2020, fuel costs averaged $0.06 per kilowatt hour (kWh) at GVEA's coal-fired plants, compared to $0.15/kWh for diesel.

The report is a useful tool for educating more Alaskans about the importance of coal, she added.

"The answer to Interior Alaska's energy needs is hidden in plain sight. Coal has provided reliable, affordable fuel for heat and power to the Interior for nearly 80 years. Government intervention, whether that be subsidies for other fuel sources like natural gas, or renewable energy portfolio standards, only drive up the price of energy and pick winners and losers in the market."

In business since 1943, UCM has long generated economic activity in Interior Alaska.

The mine employs a 100 percent Alaskan workforce and UCM jobs are especially important in Healy where mine employees represent 10 percent of the community's population.

- In 2020, the mine spent $28.4 million with more than 285 Alaska vendors to purchase goods and services. About 90 percent of in-state spending was with companies or organizations based in the Interior or Anchorage area.
- Shipping coal from the mine to power producers is an important part of the Alaska Railroad Corporation's (ARRC's) freight business. In 2020, 690,000 tons were shipped via rail, 27% of total tonnage moved by ARRC.
- As UCM pays employees and spends money in the Alaska economy, the mine creates indirect and induced economic impacts. Including all direct, indirect, and induced employment in 2020, UCM accounted for about 464 jobs and $42.8 million in annual wages in Interior Alaska. Statewide, the mine's impact included a total 554 jobs and $48.6 million in wages.
- UCM's economic impact includes financial support of nonprofit organizations through The Usibelli Foundation (TUF), which contributed $120,000 to more than 100 nonprofits in 2020.

Dear Alaska Miners, Members, Supporters and Friends:

Happy February!

While it has been a cold and blustery winter, the issues we are facing are heating up on many fronts.

In Juneau, the Legislature and Governor are continuing work toward resolving ongoing budget challenges, while working to fend off Federal efforts to restrict mining in Alaska. Thanks to the Juneau Branch and Governor Dunleavy's Chief of Staff Randy Ruaro for an excellent statewide Zoom recently to outline the work they are doing.

This month, AMA was in Juneau, for the first time in almost two years! It was wonderful to reconnect with our branch members, see our friends in the Legislature, and connect with sister organizations.

We held our co-hosted reception with our partners at the Contractors and the Truckers. It felt like old times! We had a great time catching up with members of the Legislature, Administration, staff, and our friends in the Juneau Community.

We are continuing the ongoing Zoom meetings where we can all join. You can check our webpage for ongoing updates on speakers for virtual and in-person. Your respective branch leaderships are monitoring local situations and working on getting to in-person meetings. Several branches have begun in-person meetings.

I was pleased to join an industry panel at the Southeast Conference mid-session summit recently. Prior to the panel, Raincoast Data shared economic information including a survey point that mining has the best outlook in the Southeast Alaska economic sectors. I discussed mining's role in their theme "getting back to business" and how we are a foundation of the Southeast economy. I was really thrilled that Brian Erickson, General Manager of Greens Creek, and Mark Kiessling, General Manager of Kensington were there to share amazing data. And they were able to introduce Heather Nelson (Greens Creek) and Rochelle Lindley (Kensington) to the community.

The AMA State Oversight Committee has finalized our 2022 Issues of Concern. There was a lot of thoughtful deliberation on updating some positions and adding some new. The AMA State Oversight Committee meets weekly on Thursdays at 9 a.m via Zoom. To see this year's Issues of Concern, as all committee communications and efforts throughout the session, like submitted comment letters and testimony, see: www.alaskaminers.org/state-issues.

As you can no doubt imagine, the AMA Federal Oversight Committee's plate stays quite full. We recently submitted comments on the Step One Proposal for definition of the Waters of the United States. Our comments focused on a third rule change in 10 years, specific principles to keep in mind considering the uniqueness of Alaska, referencing our past comments, and endorsing the nationwide support comments by National Mining Association and American Exploration & Mining Association. Importantly, we also told the agencies to hit pause as the United States Supreme Court again heard the Sackett case and deliberates waters of the US.

You can see AMA's comments at www.alaskaminers.org/federal-issues.

Also, we are collaborating with Senator Murkowski's office, Alaska DEC, and others to plan for an upcoming roundtable with EPA officials on this issue. We also submitted comments in support of Peak Gold's (Manh Choh) 404 wetlands permit. We know many of you did as well, on your own or using our click to comment tool. Thank you!

On the Manh Choh issue, a few updates. First, early in the month the Fairbanks North Star Borough Assembly took up a resolution by David Guttenberg to expand the comment period and hold more hearings, clearly to delay this process. Efforts underway to discuss the ore transportation plan as part of the 404 permitting process are obviously inappropriate, and many of you attended the meeting or sent in communications saying as much. Unfortunately, the resolution is being brought back up and we are going to continue to need our members to push back on the attack on mining and our way of life in Interior Alaska.

You can learn more at manhchoh.com.

Read more in this Journal about the report Usibelli Coal Mine released, conducted by McKinley Research, analyzing the importance of coal in Interior Alaska. Impacts of Coal highlights:

- Coal accounts for approximately 43 percent of GVEA's electricity generation.
- Including the military bases, coal accounted for 50 percent of electricity generation in the Interior.
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- Coal provides stability in energy rates.
- If coal were removed from the grid, Interior Alaska would face a rate increase of about $242 million annually.

By now I hope you've had the chance to look through our Winter Alaska Miner magazine. It is one of my favorite issues we have done, as it profiles our full board of directors. It is so entertaining and fascinating to read about this talented group that serves as your board. It is online at www.alaskaminers.org/alaska-miner-magazine.

Remember, our ongoing advocacy work (and there is much of it) is possible thanks to your membership and financial support through the Durability Project. We are so thankful for our Hard Hat Heroes, Core Supporters, and Blast Buddies that are continuing to step up to help us keep going. Please see the list of these companies and individuals in this Journal and thank them for their support.

Deantha Skibinski, Executive Director

The Alaska Miner is the official journal of the Alaska Miners Association, published eight times a year exclusively to our members.

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We actively seek contributions from our members and the mining industry. Please email story ideas and photos to Lee Leschper.

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DGGS Releases New Magnetic, Radiometric Geophysical Surveys

The Alaska Division of Geological & Geophysical Surveys has published two new airborne magnetic and radiometric geophysical surveys – one for the White Mountains north of Fairbanks and one near the community of Eagle east of Fairbanks.

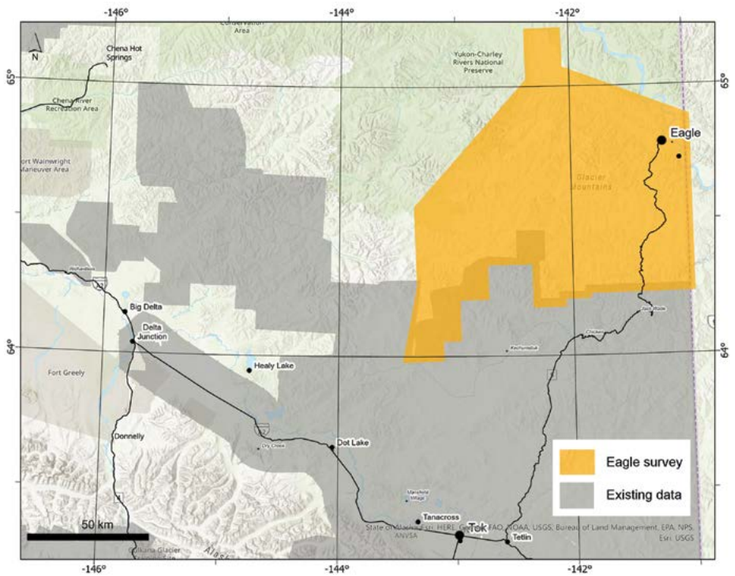
The White Mountains survey covers 5,200 sq mi and includes a broad area of high mineral potential, including the Livengood gold deposit and the Shorty Creek copper-gold-silver-tungsten exploration project. Parts of the area have high potential for critical minerals including rare earth elements and tin. The area adjoins the previously surveyed Fairbanks and Circle mining districts.

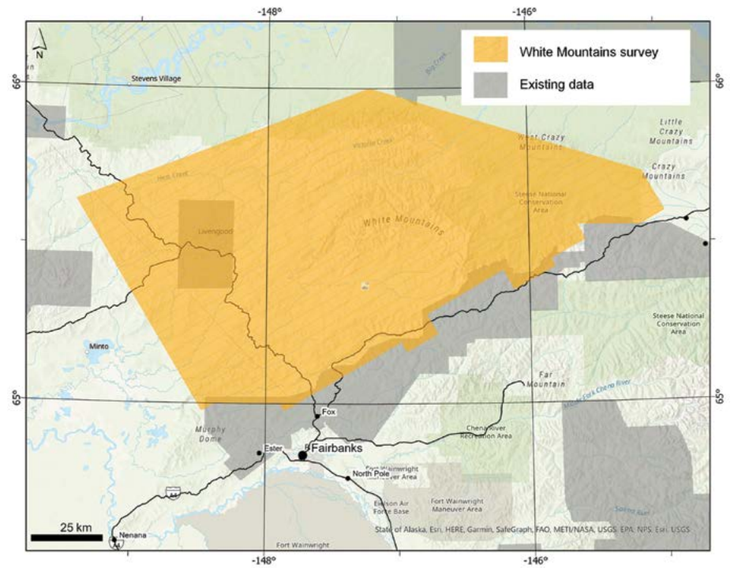
The survey near Eagle covers 3,757 sq mi and includes portions of the Fortymile and Eagle mining districts. The area includes the lode gold prospects of the Seventymile area and the lead-zinc-silver prospects of the Mount Veta area, including the LWM deposit.

“The data from both surveys will be used to better the understanding of the geology and mineral potential, promoting resource exploration,” said geophysicist Abraham Emond with DGGS’s Mineral Resources Section.

“The release of this geophysical data is an exciting step forward in driving critical mineral exploration and development in Alaska,” added DNR Commissioner Corri Feige. “As our nation’s storehouse of critical minerals, Alaska’s contribution to our national security and geopolitical strategy can’t be overstated. Alaska is open for business and eager to see the exploration activity that this data will help attract.”

These data are a part of the planned continuous regional magnetic data coverage of the Yukon Tanana Uplands. The White Mountains survey connects the existing Rampart, Circle, and Fairbanks-area surveys while the Eagle survey extends the coverage of magnetic data northward towards the Yukon River building on existing geophysical surveys in the region.





The public can view the KMZ archive with Google Earth or other KML viewer, look at the PDF format maps, and for the more adventurous, load the geographically registered PDFs on a mobile device and go exploring with current location showing on the data map.

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The White Mountains survey data can be found at https://doi.org/10.14509/30756

The Eagle survey data can be found at https://doi.org/10.14509/30755.

The public can view the KMZ archive with Google Earth or other KML viewer, look at the PDF format maps, and for the more adventurous, load the geographically registered PDFs on a mobile device and go exploring with current location showing on the data map.

NOVAGOLD Reports Successful 2021 Drilling Program

NOVAGOLD RESOURCES INC. (“NOVAGOLD” or “the Company”) has released its 2021 year-end financial results and an update on its Tier One 1 gold development project, Donlin Gold, which NOVAGOLD owns equally with Barrick.

In 2021, NOVAGOLD achieved the following milestones:

NOVAGOLD and Barrick successfully completed the 2021 drilling at Donlin Gold:

- Seventy-nine core holes, upsized from the original work plan, were drilled in the ACMA and Lewis pit areas. The total drill program encompassed 24,264 meters.
- With extensive communication and the application of health and safety protocols, COVID-19 cases at site were minimal and there were no Lost-Time Incidents.

To date, Donlin Gold has reported assays for 36 complete and 22 partial holes from the 2021 drill program, encompassing approximately 65 percent or 15,700 meters of length drilled. Assays continue to support the global resource estimate, recent modelling concepts, and strategic mine planning work.

Donlin Gold strives to aid local communities with support and resources, particularly when health and safety are of concern, along with other areas, such as environmental management, training, and education, as well as cultural initiatives in the Yukon-Kuskokwim (Y-K) region. Specifically, Donlin Gold worked with its Alaska Native partners, Calista Corporation (“Calista”) and The Kuskokwim Corporation (TKC), as well as other key representatives of Y-K communities to:

- Sponsor the Calricaraq team from the Yukon-Kuskokwim Health Corporation to travel to area villages to support residents and families who have lost loved ones to suicide – a heightened challenge in remote villages, especially during the COVID-19 pandemic.
- Partner with KSKO Radio to purchase hand-held radios for five middle Kuskokwim villages. This initiative expands the reach of public radio to communities where internet connectivity is lacking.
- Enter a sponsorship agreement with the Alaska School Activities Association to underwrite statewide sports.

With key Federal and State permits in hand, Donlin Gold advanced additional State permits:

- In November 2021, the ADF&G issued two Special Area Permits required for pipeline facilities located within the Susitna Flats State Game Refuge.
- In December 2021, the ADEC approved a third extension of the air quality permit to June 30, 2023.

Presenting Opportunities for Alaska Miners at Southeast Conference

Executive Director Deantha Skibinski tells delegates at the recent Southeast Conference about the challenges, and opportunities, ahead for Alaska miners in 2022. The pending Federal revisions yet again of the Roadless Rule could challenge several potential mining projects in Southeast Alaska.

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Dunleavy Introduces Legislation Aimed at Renewable Energy

From the Office of the Governor:

Gov. Mike Dunleavy has introduced his second bill from a package of energy legislation intended to promote energy independence, long-term cost reductions and competitive markets in both urban and rural Alaska.

House Bill 301 and Senate Bill 179 will allow Alaska to join 30 states and two territories in creating a renewable portfolio standard in the Railbelt. A key element of the governor's RPS is a firm commitment to transitioning to 30 percent sustainable power by 2030 and 80percent by 2040.

"The trends are clear: For over 30 years, natural gas prices have only risen in the Cook Inlet while the cost of renewable generation has plummeted. With unrest in Eastern Europe rising and natural gas prices skyrocketing around the world, it's time for Alaskans to consider where we want to be 20 years from now," Dunleavy said.

"While we must continue to aggressively develop our oil and gas exports, remaining captive to a costly and unpredictable energy source at home is not an option. It's time to cut the talk and put Alaska on a path toward energy independence."

In preparation for the legislative session, the Dunleavy administration worked with the National Renewable

Energy Laboratory to demonstrate that the 80 percent target is highly achievable and will result in $426 million to $506 million in annual fuel savings by 2040. Possible scenarios range from the completion of a large hydroelectric project in Southcentral to the deployment of significant wind and solar resources supported by tidal and geothermal output.

The NREL study also determined that transmission capacity upgrades will be needed from Willow to Healy along the Alaska Intertie. Planned upgrades between the Kenai and Anchorage will also benefit the Railbelt's renewable capacity.

Dunleavy said he is committed to working with the Railbelt utilities, the Legislature, and the Alaska Energy Authority to fund and complete these necessary upgrades in parallel to the RPS.

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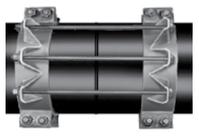
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Ambler Metals Budgets $28 Million for 2022

By Shane Lasley

North of 60 Mining News

A field program scheduled to get underway in June will include up to 10,000 meters of drilling at Arctic and exploration targets across Ambler Metals' wider UKMP property.

2022 is shaping up to be a pivotal year for unlocking the world-class potential of the Ambler Mining District in Northwest Alaska.

Toward realizing this potential, Ambler Metals LLC, a joint venture equally owned by Trilogy Metals Inc. and a subsidiary of South32 Ltd., has budgeted $28.5 million for 2022. This program is slated to include drilling, engineering studies, and the initiation of permitting for Arctic, the first mine to be developed on its Upper Kobuk Mineral Projects, a 427,690-acre package of state, patented and NANA-owned Alaska Native lands that blanket a large portion of the Ambler District.

A feasibility study finalized in 2020 details a financially robust mining operation at Arctic that would produce 1.9 billion pounds of copper, 2.3 billion pounds of zinc, 388 million pounds of lead, 386,000 ounces of gold, and 40.6 million ounces of silver over an initial 12-year mine life.

This operation is based on 43 million metric tons of reserves averaging 2.32 percent copper, 3.24 percent zinc, 0.57 percent lead, 0.49 grams per metric ton gold, and 36 grams per ton silver.

While high-grade volcanogenic massive sulfide deposits such as the one hosting the rich ore at Arctic are typically mined from underground, the feasibility study details a lower cost open-pit mine feeding a 10,000-metric-ton-per day mill.

The Arctic mine project going into permitting is based on the operation detailed in this study.

Following an independent review of the permitting package for Arctic, Ambler Metals expects to file the permitting application, which will start the formal permitting process for the Arctic Project, with the United States Army Corps of Engineers early this year.

Given the key federal permit needed for developing a mine at Arctic falls under the jurisdiction of Army Corps, this agency will serve as the lead for the permitting process to be carried out in accordance with the National Environmental Policy Act.

In addition to federal authorization, Ambler Metals will need state permits issued by the Alaska Department

Arctic Mine Project Permitting Process Likely to Take Two Years

of Environmental Conservation, Alaska Department of Natural Resources, and Alaska Department of Fish and Game, as well as other permits issued by the Northwest Arctic Borough.

Trilogy expects the permitting process to take a little over two years to complete, putting the Arctic Mine project on track to be permitted sometime in 2024.

"We are pleased that we are continuing to make progress on de-risking the Arctic project and that we are now very close to commencing the formal permitting activities," said Trilogy Metals President and CEO Tony Giardini.

As Ambler advances Arctic permitting, crews in the field will continue to explore the wider potential at UKMP.

After reviewing the technical data available from the 2021 program, Ambler Metals approved a 2022 field program that is expected to include up to 10,000 meters of helicopter-supported diamond drilling.

This program is expected to include resource development drilling at Arctic, scout drilling of both volcanogenic massive sulfide targets at Arctic and across the wider Ambler Belt, and carbonate-hosted copper targets around Bornite and the Cosmos Hills.

Located about 16 miles (26 kilometers) southwest of Arctic, Bornite hosts 6.4 billion pounds of copper and 77 million pounds of cobalt in near-surface and underground deposits.

At a cut-off grade of 0.5 percent, the open-pit portion of Bornite hosts 40.5 million metric tons of inferred resource averaging 1.02 percent (913 million pounds) copper; and 84.1 million metric tons of indicated resource averaging 0.95 percent (1.77 billion pounds) copper.

At the same cut-off grade, the Bornite open-pit also hosts 124.6 million metric tons of inferred resource averaging 0.017 percent (45 million pounds) cobalt.

The below-pit portion of Bornite, at a cut-off grade of 1.5 percent, hosts 57.8 million metric tons of inferred resource averaging 2.89 percent (3.68 billion pounds) copper and 0.025 percent (32 million pounds) cobalt.

Outside of Bornite itself, the Cosmos Hills have not been systematically explored since historical work was carried out by Kennecott in the 1990s. However, several copper-cobalt targets similar to Bornite, including Aurora and Pardner Hill, about three miles to the west, have been identified.

Northern Star Resources: Gold Production Up at Pogo Mine

By Tim Bradner

Australia-based Northern Star Resources expects to produce 220,000 ounces to 250,000 ounces of gold at its underground Pogo Mine east of Fairbanks in the company's current fiscal year, which began in July.

That is an increase from 204,000 ounces produced last year.

The company is now working toward a goal of 300,000 ounces in annual production that it plans to achieve next year.

Pogo is an underground mine, meaning that its ore body is reached through adits, or tunnels, which allow access for equipment and mine employees, and for the ore to be moved out of the mine to a nearby processing mill where gold is removed from the ore, essentially leaving rock as a waste product.

Now the only underground mine in Interior Alaska, Pogo produces ore from three underground ore deposits. The company is exploring for more gold deposits in the immediate area which could be reached by expanding its underground infrastructure.

Pogo is notable for its paste backfill system, where about 20 percent of the mine's tailings from which gold has been extracted are mixed with cement and then pumped back underground to support further excavation.

This has the additional environmental benefit of reducing the amount of tailings that need to be stored on surface, minimizing the footprint of the mine's tailings storage facility.

Northern Star Resources has also expanded its workforce to 525 employees, up from 320 prior to Northern Star's purchase of the mine from Sumitomo Heavy Metals, a Japanese company that originally discovered the gold at Pogo and developed the mine.

There is no current information available on wages paid in Alaska, but when Pogo employed 320 a few years ago, its workers earned about $44 million a year, according to the Alaska Miners Association.

Pogo is east of Fairbanks and northwest of Delta Junction and its discovery was interesting to geologists because it was in a remote area where a major minerals find was considered unlikely.

The mine is now reached from a 50-mile private industrial road from the Richardson Highway, which connects Delta and Fairbanks. Resource development industrial roads can be politically sensitive in Alaska because public access to lands can lead to environmental damage.

In developing the mine Sumitomo opted to build and pay for it mainly so that access could be controlled and limited to industrial use. The company made a special allowance, however, for owners of recreation cabins in the Goodpaster River area who are given special rights to use the road.

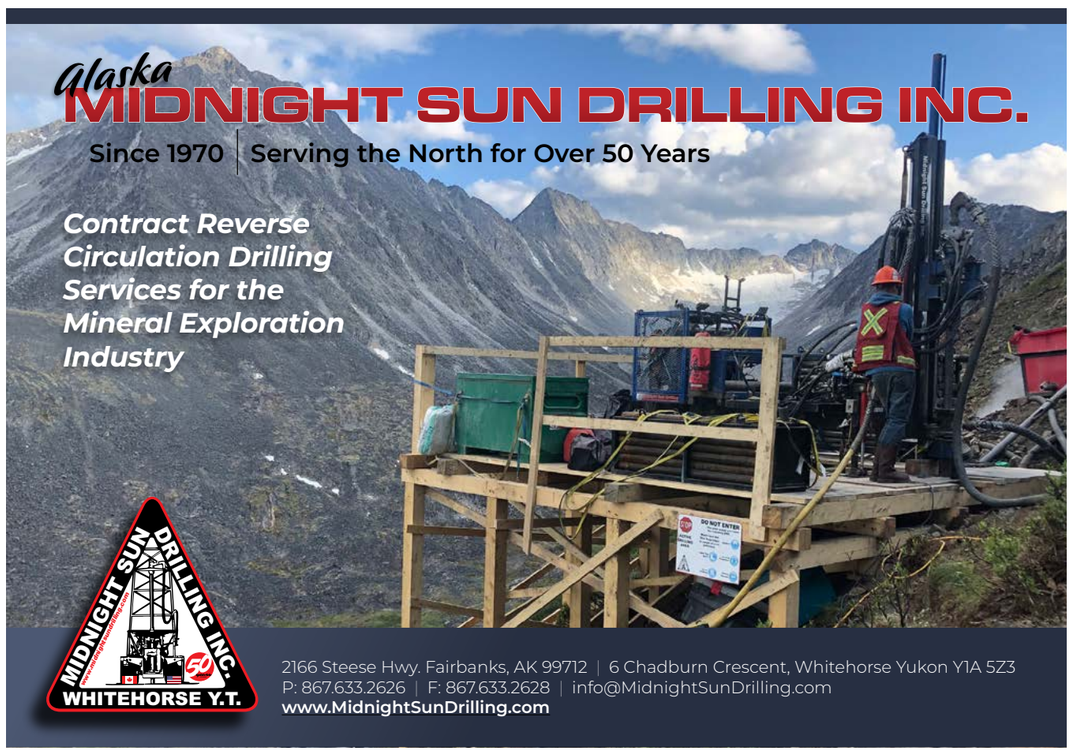
The higher gold production at the mine is now made possible by a $36 million capital project that has just been completed. Improvements at the mill allow more ore to be processed, which results in more gold production.

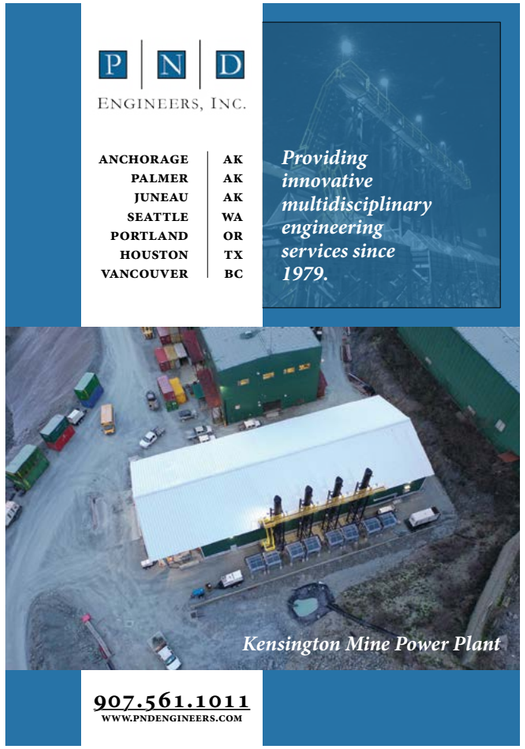
In addition to Pogo's employees there are about 150 contractor workers engaged at the mine.

The company has a $55 million capital budget for this year that includes some expenses for the mill upgrade as well as improvements to the underground and surface infrastructure.

Increased Gold Output Made Possible By Capital Improvement Project

Photo Courtesy Northern Star Resources





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Please support and thank these companies who have renewed their support and corporate membership in AMA. Their continued support makes possible all the work we do in and for the mining industry.

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Thank you to all the AMA corporate and individual members who joined or renewed their membership to the association in November and December. You make AMA possible!

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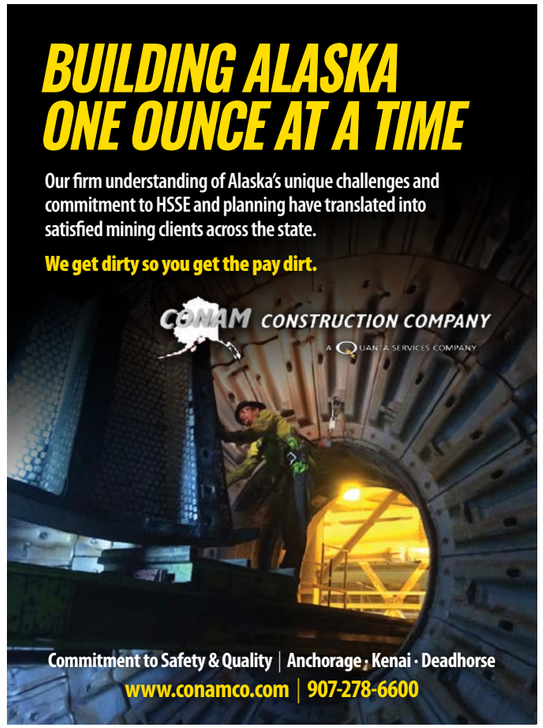
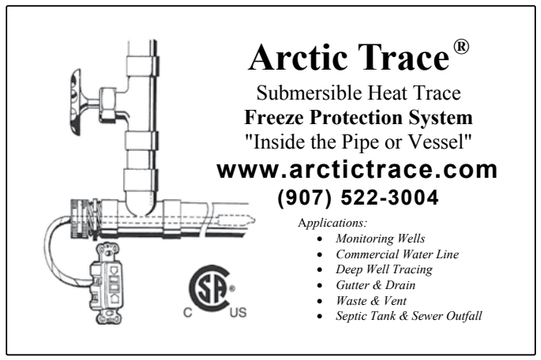
Not yet a member of the Alaska Miners Association? Or have not yet renewed your membership for 2022? Renew today so you don't miss a single issue of The Alaska Miner or this year's 2022 Alaska Miners Handbook and Service Directory, available only to AMA members. Call or email Jennifer Luiten, Membership and Fundraising Director 907-270-9232. jennifer@AlaskaMiners.org.





Missed an issue of The Miner Journal?
All editions of The Alaska Miner Journal are online at the Alaska Miners Association website: alaskaminers.org/monthly-journal. Help us spread good news about mining in Alaska!

AMA Statewide Vice President Blake Bogart and wife, Kelly, welcomed Kinley Ann on Feb. 9 at 4:40 pm.

She weighed 7 pounds, 4 ounces, and is 19.5 inches long.

Kinley, Kelly, Blake, and big sisters Kyla and Kourtney are all doing great. Congrats to the Bogart family!

Alaska Mining Calendar

- **Institute of the North ANILCA training:** The ANILCA 2022 training will take place online, via Zoom, daily from 8:30 a.m. to 1 p.m., from Tuesday, April 5 through Friday, April 8. Register by March 7 to ensure enough time to distribute curriculum materials in advance.

No in-person ANILCA Trainings are scheduled until further notice due to COVID-19.

More information: institutenorth.org/engage/events/anilca-training

AMA Branch Meetings

- AMA continues to meet virtually via Zoom. AMA Branch Meetings are being held together as one statewide meeting every other Friday at 7 a.m. Alaska time. Individual branches may hold in-person meetings at each branch's discretion and when scheduled, updates will be emailed to AMA members and posted at AlaskaMiners.org.
- The Juneau Branch is meeting biweekly in-person! Please check the schedule at www.alaskaminers.org/ama-member-branches.
- Visit AlaskaMiners.org for more updates on events through the rest of 2022.

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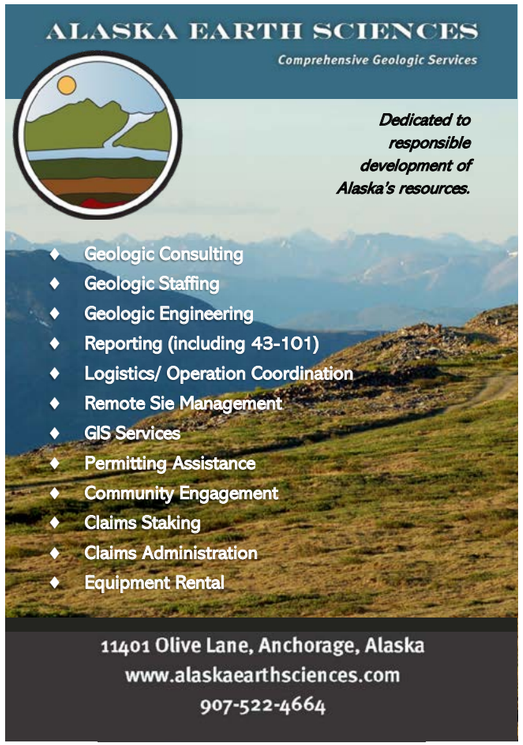
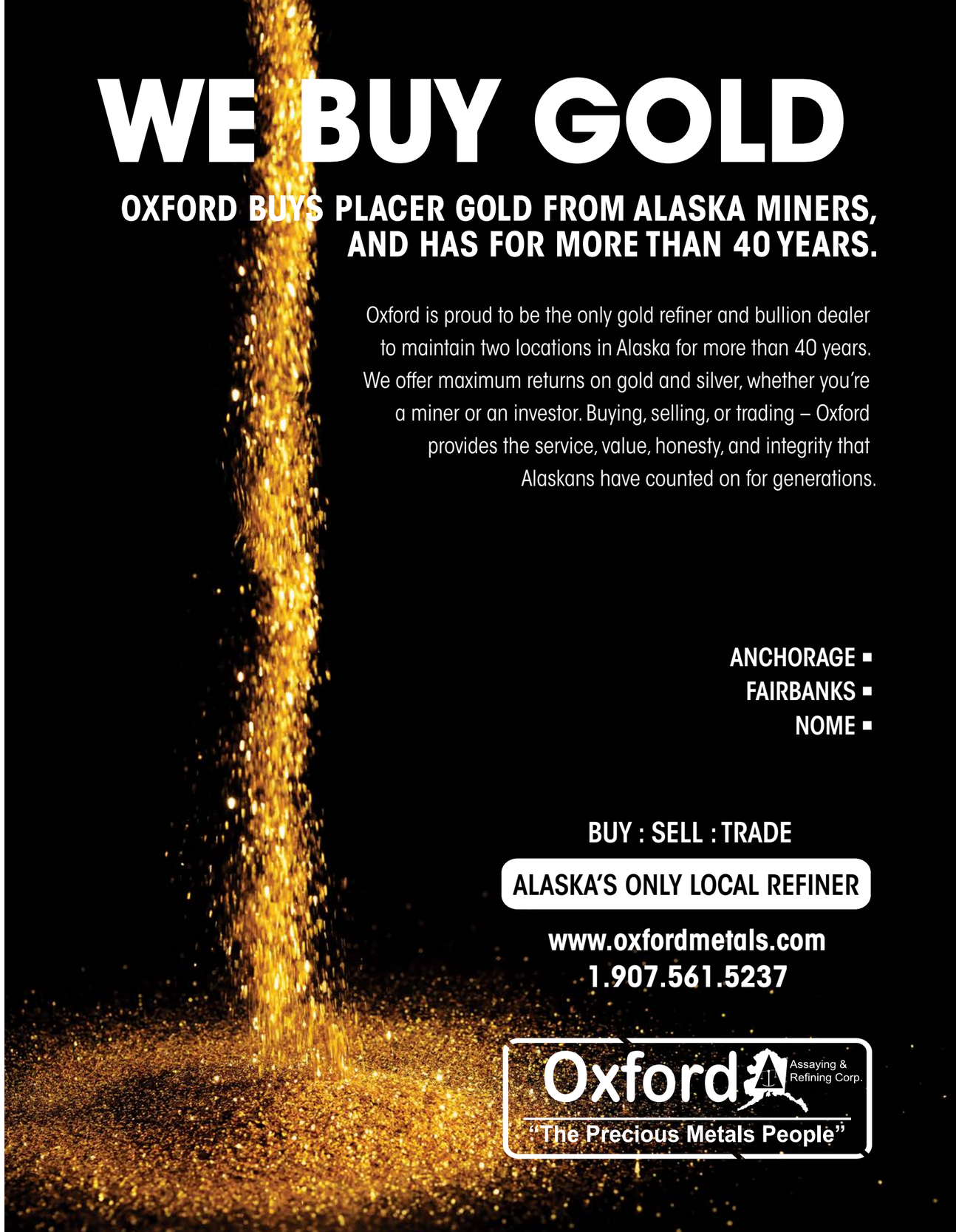
And on Facebook: AlaskaMiners





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