March 1, 2024

Senator Click Bishop, Co-Chair
Senator Cathy Giessel, Co-Chair
Senate Resources Committee
Alaska State Capitol
Juneau, AK 99801

Dear Co-Chair Bishop and Co-Chair Giessel:

Thank you for the opportunity to present the mining industry update on Monday, February 26, 2024. We are writing to provide further information in response to several questions from committee members during the presentation.

Alaska Metal Mines, formerly the Council of Alaska Producers, is a professional trade association formed in 1992 to represent the interests of large metal mines and advanced projects in Alaska. Our purpose is to inspire Alaskans to support a growing mining industry that produces essential minerals while prioritizing safe operations, community partnerships, and environmental protection.

The Alaska Miners Association is a professional membership trade organization established in 1939 to represent the mining industry in Alaska. AMA's more than 1,400 members come from eight statewide branches: Anchorage, Denali, Fairbanks, Haines, Juneau, Kenai, Ketchikan/Prince of Wales, and Nome. Alaska's miners are individual prospectors, geologists, engineers, suction dredge miners, small family mines, junior mining companies, major mining companies, Alaska Native Corporations, and the contracting sector that supports Alaska's mining industry.

The National Mining Association's mission is to build support for public policies that will help Americans fully and responsibly benefit from our abundant natural resources. Our objective is to engage in and influence the public process on the most significant and timely issues that impact mining's ability to safely and sustainably locate, permit, mine, transport and utilize the nation's vast resources.

How many mines were mining during World War Two in the United States and how many mines are mining today?

Unfortunately, we have been unable to locate an exact number due to the difficulty in accessing data from the 1930s and 40s. These two sources may have the relevant information but we have not been able to obtain the documents:

- Numbered reports on domestic minerals vital to the prosecution of World War II ("War Mineral Reports"), 1942-45
- Draft of "History of Bureau of Mines Activities during World War II", 1944–1945

It doesn't appear that much of these materials have been digitized or made available outside the labyrinth National Archives facilities. Additional difficulties are posed by the closure of the U.S. Bureau of Mines.

We have been able to locate some World War II Alaska specific data that the Bureau of Mines must have shared with the state and that the state digitized. These materials are available at https://dggs.alaska.gov/pubs/series/usbm/war-minerals-report. It is possible that other states similarly received data from the Bureau of Mines but we have not been able to locate readily available sources.

While the following documents may not exactly answer your question, we wanted to provide these links as they have useful information about the importance of domestic mining in support of the U.S. World War II efforts:

- Minerals, lands, and geology for the common defense and general welfare, Volume 3, 1904-1939 : A history of geology in relation to the development of public-land, federal-science, and mapping policies and the development of mineral resources in the United States from the 25th to the 60th year of the U.S. Geological Survey
- Minerals, lands, and geology for the common defense and general welfare, Volume 4, 1939-1961: A history of geology in relation to the development of public-land, federal science, and mapping policies and the development of mineral resources in the United States from the 60th to the 82d year of the U.S. Geological Survey
- Statistical Abstract: Historical Statistics of the US, 1789-1945: Minerals and Power Chapter
- Anthracite coal: The Fuel that Won the War
- Strategic Minerals in the New World Order
- Critical Minerals in WWII

Finally, the National Mining Association has reached out to the U.S. Geological Survey to see if they have a more precise answer to your question and we will follow up if we receive relevant information.

How much of our mineral wealth from the State of Alaska goes to China, one of our largest trading partners?

- According to Special Report 76 Alaska's Mineral Industry 2022,[1] Alaska exported ores, concentrates, and other mining products worth $1.36 billion in 2020. 12% of the concentrates went to China.

[1] Twelker, Evan, Werdon, M.B., and Athey, J.E., 2022, Alaska's Mineral Industry 2020: Alaska Division of Geological & Geophysical Surveys Special Report 76; Table 13 page 45. https://doi.org/10.14509/30848

What would it take to get the refining capacity in the State of Alaska to allow us to refine here rather than export raw materials?[2]

- There are multiple challenges to developing a mineral processing industry in Alaska.
- Most mining companies are not vertically integrated so Alaska would need to compete with other jurisdictions in attracting refineries or smelters.
- Base metal smelters are highly specialized by mineral type so no single smelter could serve all of Alaska mines. To be economically feasible, a smelter in Alaska would likely need to attract customers from elsewhere in the world.
- The current cost of energy in Alaska and the environmental permitting requirements would also be significant barriers to attracting this investment and making the processors competitive with other jurisdictions.

Where are the good mineral prospects to mine and are they predominantly on federal land, Native Corporation land, or state land?

- There are high potential prospects on all types of land in Alaska and much of the state remains unexplored. We have attached a document with the land status of producing mines and advanced exploration projects, many of which comprise more than one type of land status.
- Early stage exploration activity summary by land status
  Please note: This list is intended to be inclusive of all early stage projects with current activity, however, it may not be exhaustive. Also note, advanced exploration projects and land status appear on the attached summary map. Finally, aside from ANCSA land-status projects, this summary does not include activity on patented/private lands.

State of Alaska lands exploration

<u>Northwest Alaska</u>
Sun and Smucker deposits; Ambler Mining District
Aktigiruq-Anarraaq Extension Project; Red Dog Mine
Nome offshore claims exploration

<u>Southcentral Alaska</u>
Whistler Copper and Gold; West Susitna
Estelle; West Susitna

<u>Interior Alaska</u>
Illinois Creek; Galena
SAM; Delta Junction
White Rock Red Mountain; Denali
Golden Zone; Denali
Stellar Project; Alaska Range
Nikolai; Denali Highway
Valdez Creek; Talkeetna Mountains
Kenorland; Tanacross

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[2] This question is paraphrased.

Alaska Native Corporation (ANCSA) lands exploration:
Doyon:
Wiseman and Sithylemenkat; northern Interior
American Creek; eastern Interior
Flat; southwest Interior

CIRI:
Johnson Tract; West Cook Inlet

Calista:
Nyac; southwest Alaska

Federal
Herbert Gold; Juneau
Su-Lik; Red Dog Mine

How does 2023 exploration spending compare with the year before?
- A chart showing exploration from 1998-2023 is attached.[3]

We would like to correct a statement made about Coeur Alaska's Kensington Mine. Coeur Alaska previously had a sales agreement with China National Gold (CNG), but that agreement was dissolved several years ago. Currently, none of Kensington's concentrate is sold directly to China.

Thank you for this opportunity to provide further information about the mining industry.

Sincerely,

Karen Matthias	Deantha Skibinski	Katie Sweeney
Executive Director	Executive Director	Executive Vice President & COO

[3] Alaska Department of Natural Resources presentation on Resource Development Activity to House Resources, January 19, 2024

MINING IN ALASKA

LARGE PRODUCING MINES

Au

FORT KNOX AND GIL / Gold
- Operated by Kinross Alaska
- Land ownership: State/Alaska Mental Health Trust/federal
- Produced 291,375 oz. of gold
- 713 employees and 84 contractors
- Spent $293 million with 327 Alaska companies

Ag Zn Au Pb

GREENS CREEK / Silver, zinc, gold, lead
- Owned and operated by Hecla
- Land ownership: Private/federal
- Produced 9.7 million oz. of silver
- 474 employees
- Spent $65 million with 371 Alaska Vendors

Au

KENSINGTON / Gold
- Operated by Coeur Alaska
- Land ownership: Private/federal/state
- Produced 109,061 oz. of gold
- 402 employees
- Spent $52.8 million with 168 Alaska companies

Au

POGO / Gold
- Operated by Northern Star Resources
- Land ownership: State
- Produced 242,808 oz of gold
- 610 employees
- Spent $209 million with 164 Alaska companies

Zn Pb Ag Ge

RED DOG / Zinc, lead, silver, germanium
- Operated by Teck Alaska
- Land ownership: NANA Regional Corporation
- Produced 1,146,439 metric tonnes of zinc concentrate
- 603 employees and 702 contractors
- Spent $286 million with 493 Alaska companies

COAL

USIBELLI / Coal
- Operated by Usibelli Coal Mine
- Land ownership: State
- Produced 1 million tons
- 100 employees
- Spent $30.5 million with 292 Alaska companies

(2022 data for production, employment, and local spending unless noted)

PROJECTS IN OR NEAR DEVELOPMENT

Au

DONLIN GOLD / Gold
- Developed by NovaGold and Barrick Gold
- Land ownership: Calista Corp. and The Kuskokwim Corp.
- $7.4 billion initial capital costs
- Up to 1,000 potential production jobs

Au Ag

MANH CHOH / Gold, silver
- Developed by Kinross Alaska and Contango ORE
- Land ownership: Native Village of Tetlin
- $150 million projected capital costs
- 500 potential production jobs

Cu Au Mo Ag Re Pd

PEBBLE / Copper, gold, molybdenum, silver, rhenium, palladium
- Developed by Northern Dynasty Minerals
- Land ownership: State
- $6.05 billion projected initial capital costs
- 850 potential production jobs

ADVANCED EXPLORATION PROJECTS

Au

GOLDEN SUMMIT / Gold
- Developed by Freegold Ventures
- Land ownership: State/federal/private/Alaska Mental Health Trust

GRAPHITE

GRAPHITE CREEK / Graphite
- Developed by Graphite One
- Land ownership: State
- $499 million projected initial capital costs in Alaska
- 371 potential production jobs in Alaska

Au

LIVENGOOD / Gold
- Developed by Tower Hill Mines
- Land ownership: State/Alaska Mental Health Trust/federal
- $1.9 billion projected initial capital costs
- 331 potential production jobs

Cu Au Zn Ag

NIBLACK / Copper, gold, zinc, silver
- Developed by Blackwolf Copper and Gold
- Land ownership: State/federal

Cu Zn Au Ag Ba

PALMER / Copper, zinc, gold, silver, barite
- Developed by Dowa Metals & Mining and American Pacific Mining
- Land ownership: State/Alaska Mental Health Trust/Federal
- $278 million projected pre-production costs (2019 PEA)

Cu Zn Au Ag Pb Co

UPPER KOBUK MINERAL PROJECTS
(Arctic and Bornite) / Copper, zinc, gold, silver, lead, cobalt
- Developed by Ambler Metals
- Land ownership: State/private
- $905.6 million initial capital costs (Arctic)
- 400 potential production jobs (Arctic)

2023 Exploration Expenditures All Projects

Estimated $230 million for Alaska's 2023 mineral-exploration spending