

Minerals and Mining Overview

House Resources Committee



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DGGS Minerals and Mining Overview



- Tracking the mineral industry in 2024
 - Eight operating mines: seven lode, one coal
 - About 150 placer gold mines
 - About 65 exploration projects
 - 80 active sand and gravel operations
- Geologic mapping to survey mineral potential
 - Major effort to map Interior Alaska began in federal FY2019
 - Modern interpretation of geology and mineral potential
- New airborne geophysical surveys stimulate exploration
 - Geophysical data “sees” below vegetation and thin surface sediments
- Enhancing Alaska’s geological database
 - Quality of DGGS’s Alaska geological database rated number one in U.S. by Fraser Institute’s 2023 Annual Survey of Mining Companies



DGGS: Division of Geological and Geophysical Surveys



2024 Alaska Mineral Industry Highlights

- Total estimated value of Alaska's mineral industry was (estimated) \$4.5 billion
(exploration and development expenditures plus the estimated first market value of the commodities produced)
- Red Dog is the largest critical mineral mine in the United States and the second-largest silver producing mine in the United States
- Greens Creek is the largest silver producing mine in the United States
- Fort Knox is the fourth largest gold mine in the United States
- Gold replaced zinc as the top metal produced

Alaska's mineral resources compared globally

17%	7.4%	7%	1.7%	7%	12.4%	16%
coal	zinc	gold	lead	silver	copper	molybdenum

Values compiled and estimated by DGGs from industry and agency sources





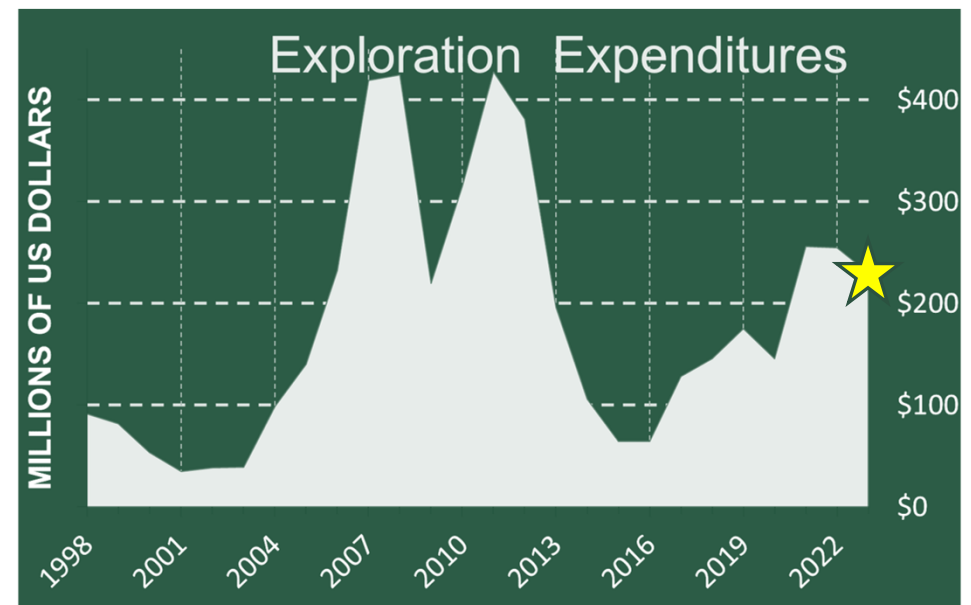
2024 Alaska Mineral Industry Values

2024 Production Value
\$4.0–\$4.1 billion estimated

2024 Exploration Spending
\$225 million estimated

2024 Mineral Production (Estimated)	
Zinc (Zn)	663,731 tons
Lead (Pb)	138,548 tons
Gold (Au)	844,631 troy ounces
Silver (Ag)	15.7 million troy ounces
Copper (Cu)	1,874 tons
Coal	~1,000,000 tons
Industrial Minerals	~750,000 tons rock, 6.5 million tons sand and gravel

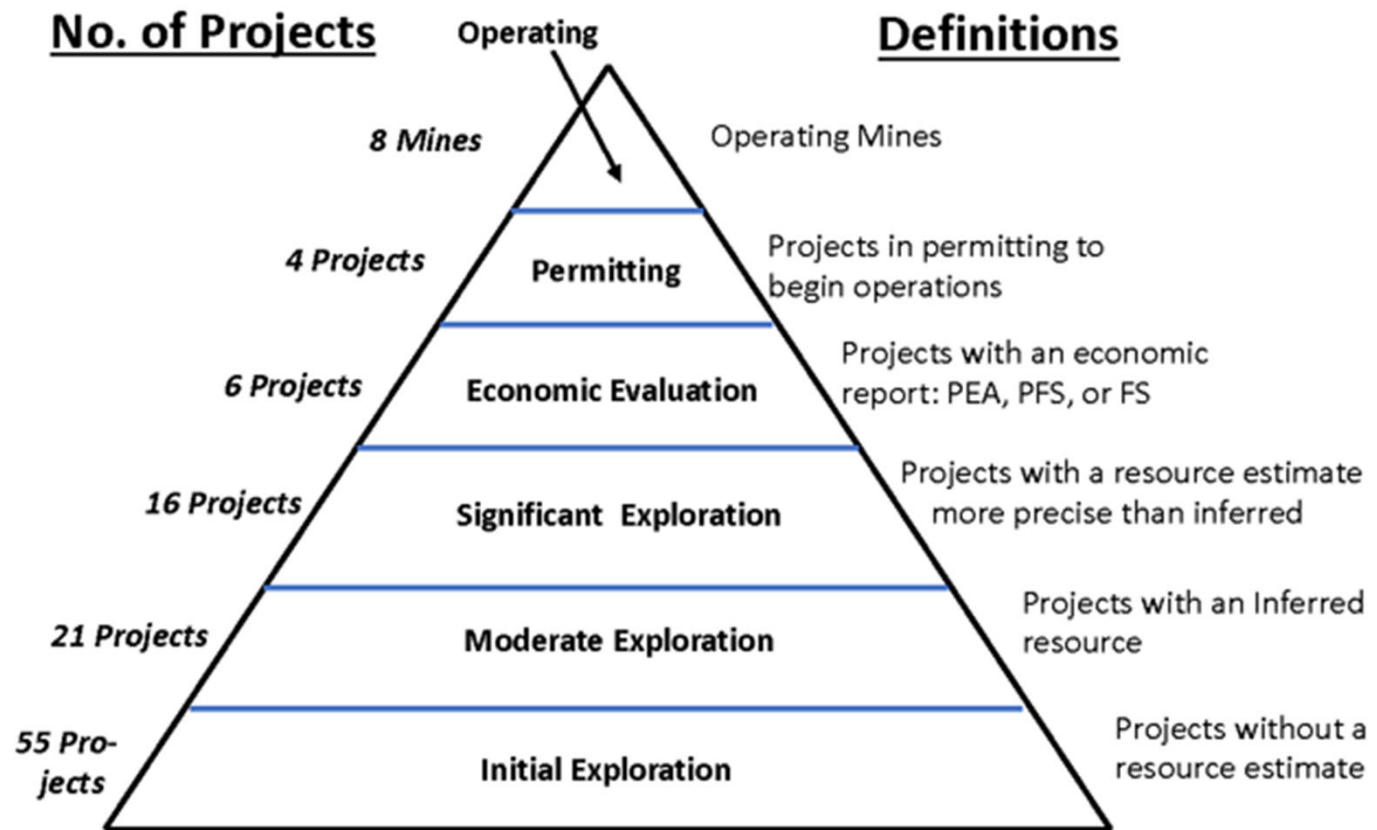
Values compiled and estimated by DGGs from industry sources



Alaska Mine Development Pyramid



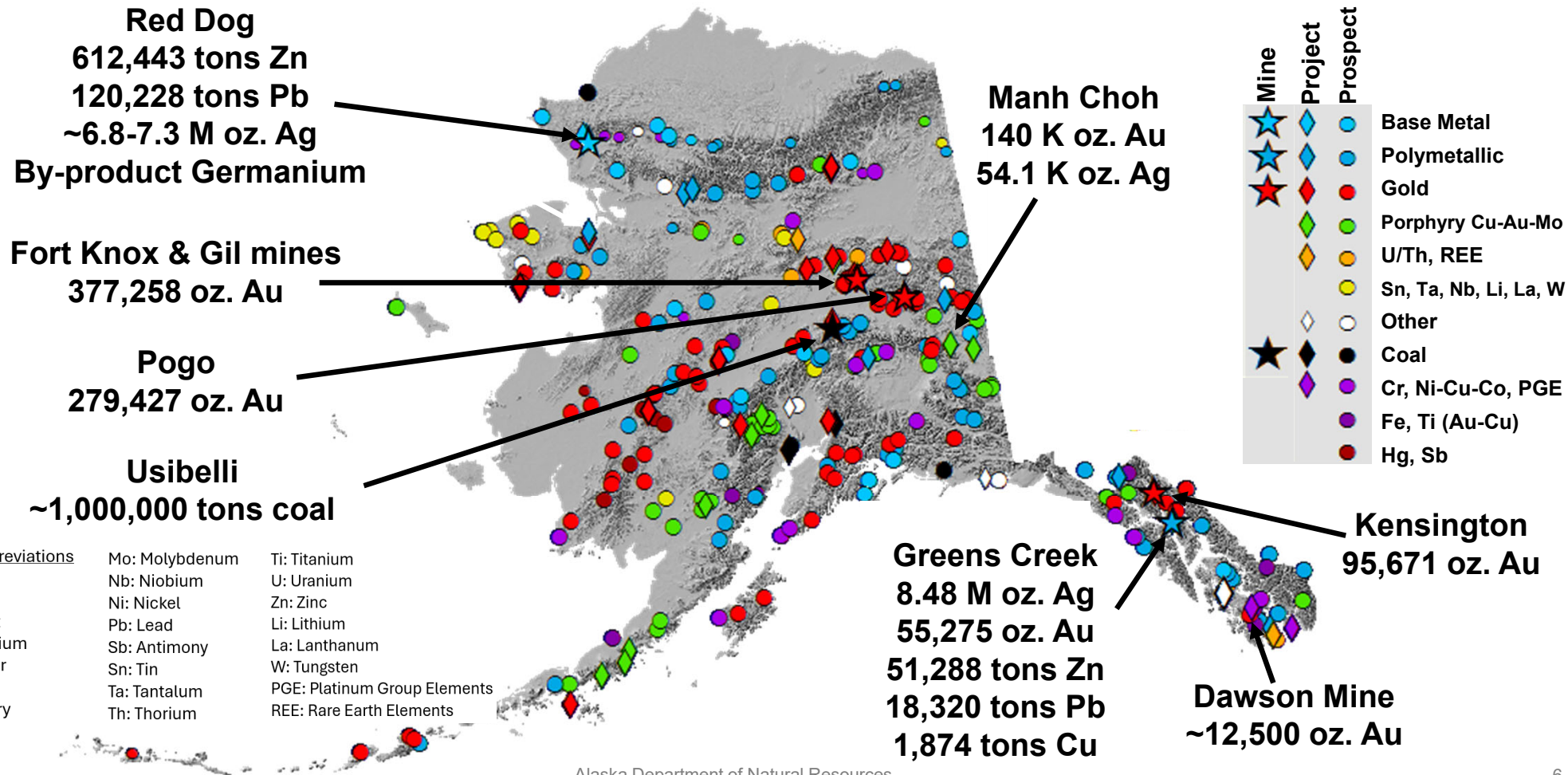
- Significant investment needed to move a project up the pyramid
- Large number of mineral exploration projects needed to overcome low odds of an eventual mine developing



Credit: Loeffler and Watson

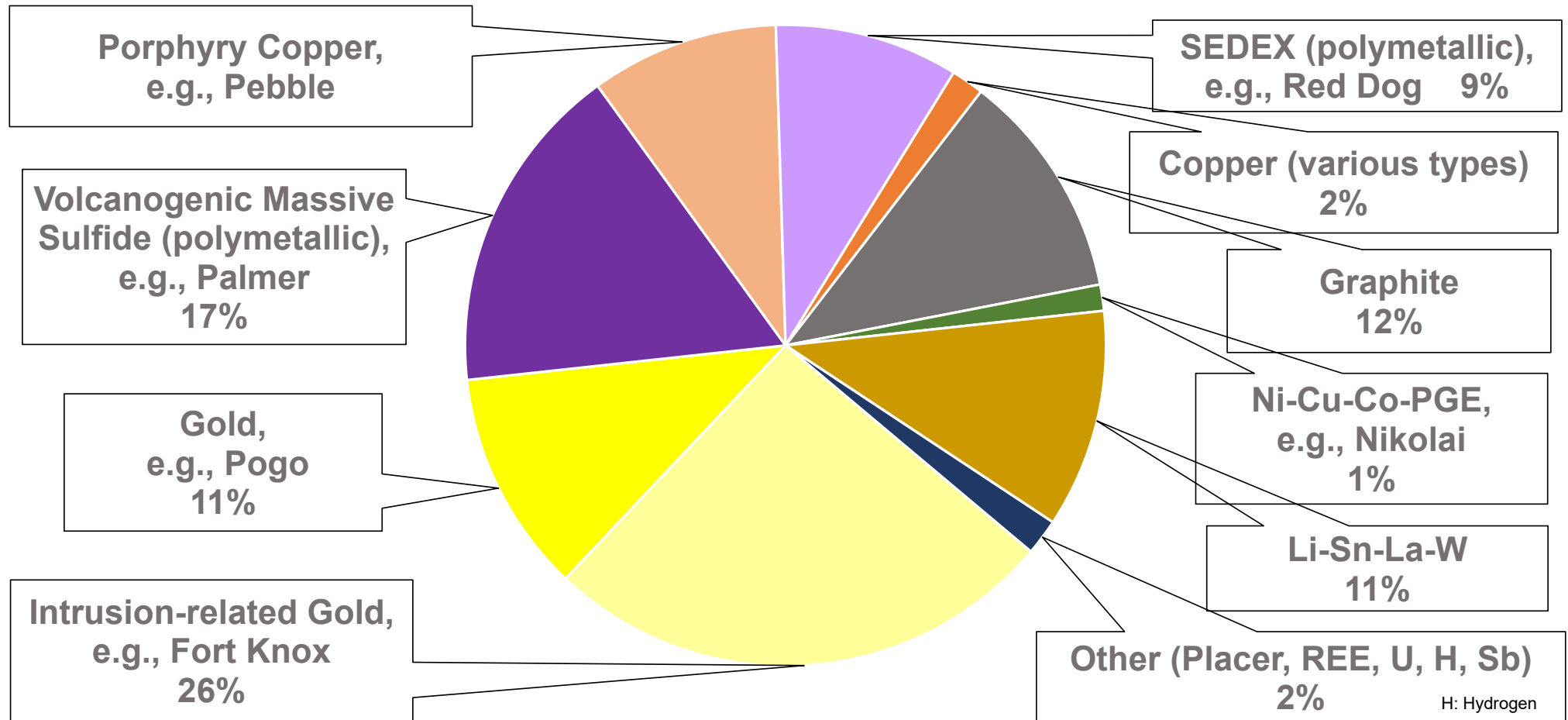


2024 Alaska Mines Production Summary





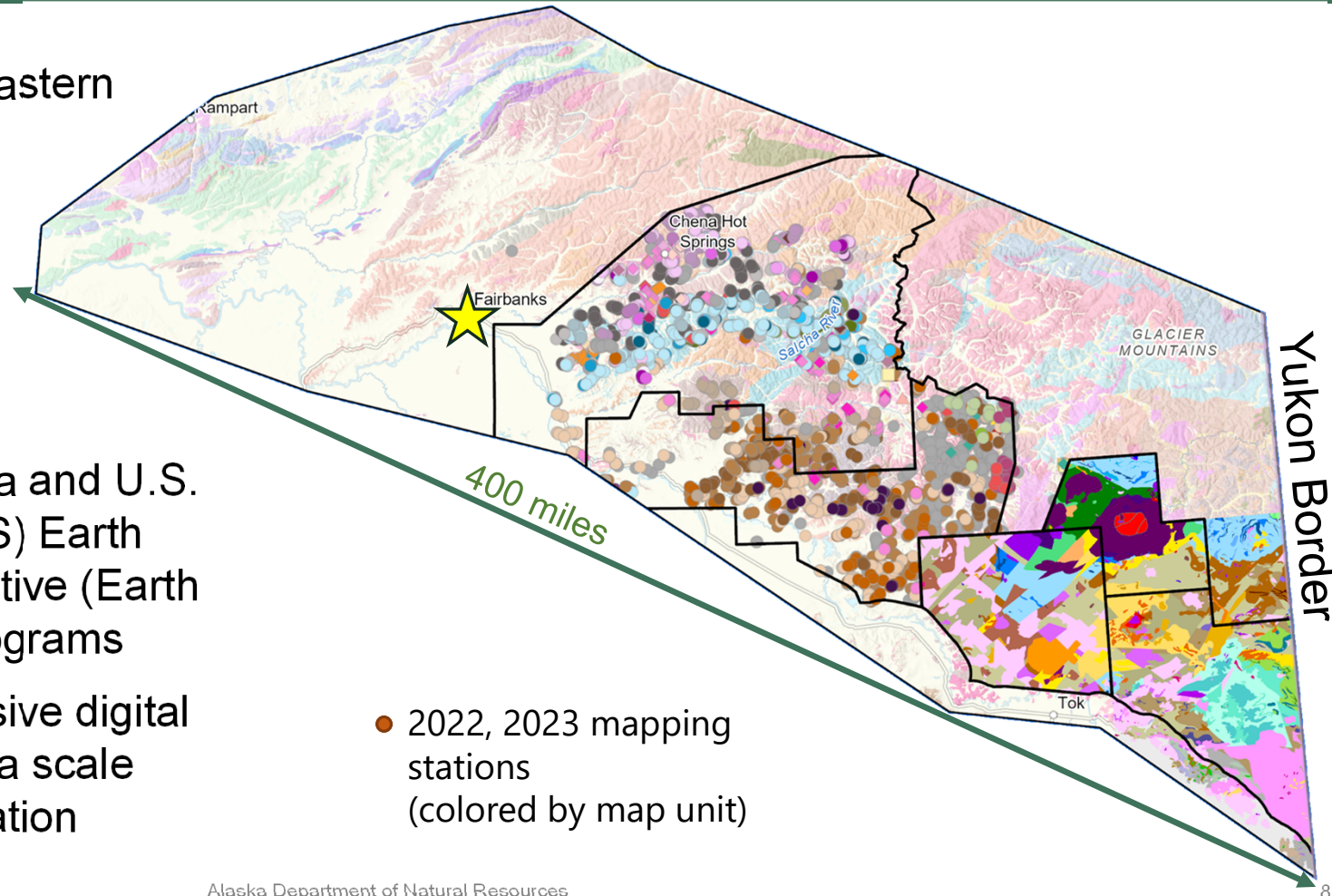
2024 Exploration by Deposit Type





Mineral Assessment Geologic Mapping

- Large map area across eastern Interior Alaska
- 16,662 square miles
- 1,980 person days
- Mixed compilation and six years of new mapping
- Funded by State of Alaska and U.S. Geological Survey (USGS) Earth Mapping Resources Initiative (Earth MRI) and STATEMAP programs
- Multi-year goal of a cohesive digital bedrock geologic map at a scale useful for industry exploration



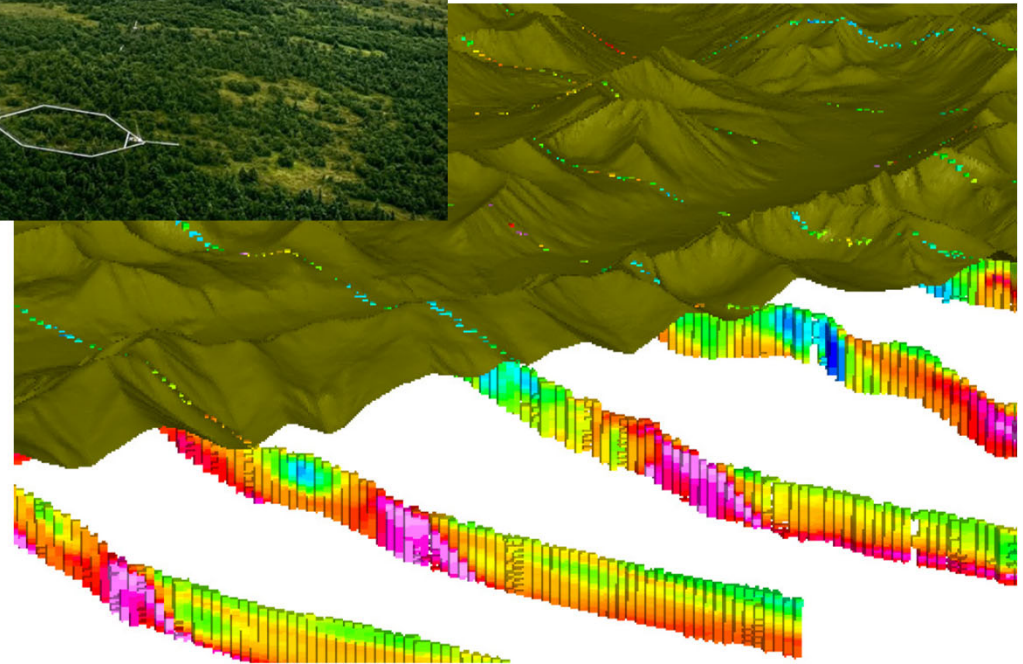
Mineral Assessment Geophysics



- Measures different properties of the earth from an aircraft
- Used for geologic mapping and targeting mineralization
- Data collection in Interior, Southwest Alaska, and Seward Peninsula
- Funded by State of Alaska and USGS Earth MRI program
- Reduced cost of data collection through industry partnerships



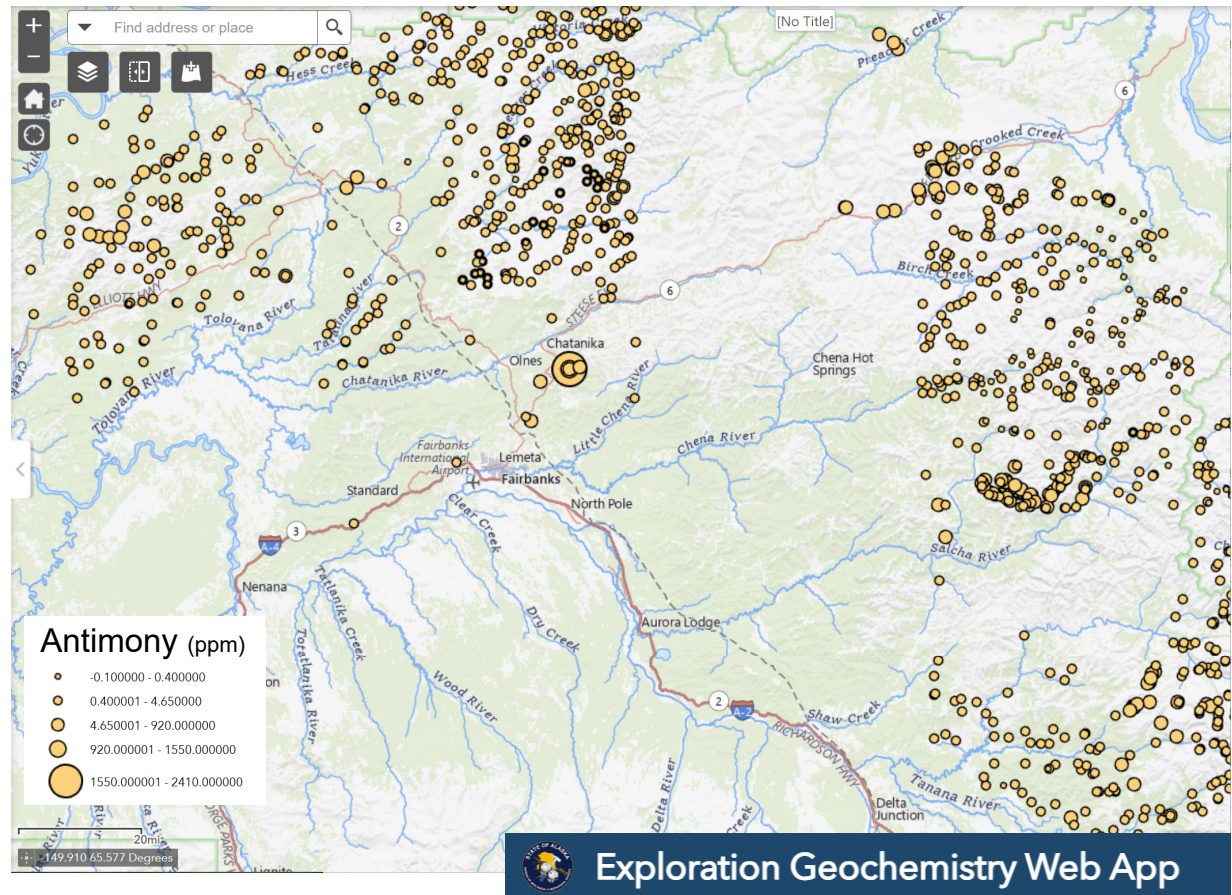
Photo: An airborne electromagnetic data acquisition (credit: Frederic Ladouceur, SkyTEM Canada Inc.)





Serving Geologic Data to the Public

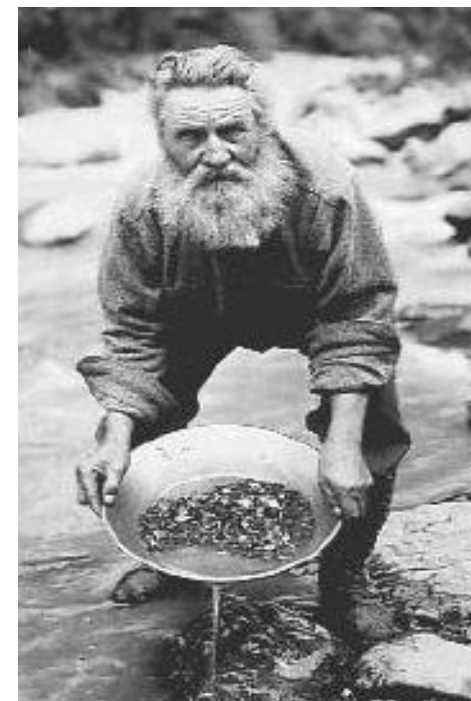
- 30 terabytes of digital geologic information served from the DGGS website in 2024
- Annual Alaska's Mineral Industry reports and presentations
- Exploration Geochemistry app receives 42,000-plus views per year
- Four mineral-related geologic maps published in 2024
- Two geophysical surveys published in 2024



DMLW Mining Section Overview



- Mineral Property Management Unit
 - Manage 40,114 mining claims for mineral exploration and development
 - 51 offshore and 65 mining leases
- APMA (Application for Permits to Mine in Alaska) Unit
 - 717 APMAs for hard rock exploration and placer mining
 - Approval of plans of operations for upland, offshore, and millsite leases
- Large Mines Unit
 - Oversees statewide reclamation requirements and large mines
- Coal Permitting and Compliance Unit
 - 30 Coal Leases
- Abandoned Mine Lands Unit
 - Regulates reclamation and removes hazards from past mining operations



DMLW: Division of Mining, Land, and Water

OPMP Mining Overview



- OPMP provides a coordination framework for advanced exploration and mining projects
 - Multi-agency permit coordination through the Large Mine Permitting Team (LMPT) model to achieve defensible, transparent, and timely permit decisions
 - OPMP coordinator to serve as the main point of contact and facilitate communication between regulators and applicants
 - Identify and resolve issues quickly
- Coordinated engagement under the National Environmental Policy Act (NEPA) review process:
 - OPMP represents the State of Alaska as a formal cooperating agency
 - OPMP coordinates the state agencies' review and delivers a consolidated State of Alaska position to assist the lead federal agency

OPMP: Office of Project Management and Permitting

OPMP Mining Overview



- Directed resources through coordination agreements
 - OPMP coordination is an optional service
 - Each project elects to enter into coordination by signing an memorandum of understanding
 - Annual financial agreements are developed based on the project scope of work
 - OPMP and other state agencies are reimbursed for time spent on eligible activities
- Projects with OPMP coordination agreements:
 - Exploration: Arctic Deposit, Anarraaq-Aktigirug Extension Project, Graphite One Project, Johnson Tract Project, Livengood Gold Project, Niblack Project, Palmer Project, Pebble Project
 - Permitted, not yet constructed: Donlin Gold Project
 - Operating Mines: Fort Knox Gold Mine, Gil Mine, Greens Creek Mine, Kensington Gold Mine, Mahn Choh Project, Pogo Mine, Red Dog Mine

Thank you



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