



Access to Resources Enterprise Infrastructure

*RDC – Putting New Mines into Production
2017 NOV 16*



- Alaska – A Connected Economy
- Overview of AIDEA
- Enterprise Infrastructure
 - Example: Access to Mined Resources

Alaska – A Connected Economy

Red Dog Mine

Exports

China	5%
Europe	37%
Australia	8%
Japan	5%
Korea	15%
Vancouver, BC	30%

Maritime

Shipping ports in Seattle, Vancouver, Canada, and California are essential for delivering goods and services. It is often cheaper to ship via barge versus air or freight. The Port of Anchorage receives an average of 450 vessel calls per year, most of which pass through or originate in the Pacific Northwest.

Refineries

Though Alaska has one small refinery, the majority of oil produced is refined in plants on the West Coast of the U.S. Approximately 180,000 barrels were sent via barge to refineries in California, Hawaii, and Washington in 2014. Alaska also receives most of its oil products for consumption from the same refineries.

Workforce

Alaska attracts professionals from all over the country, in particular the medical, education, oil and gas, academic, environmental, and legal industries. In 2014, more than 60% of Alaskans were born outside the State.

Investments

Commodities, in particular natural resources but also technology, and research are funded through financing activities in NYC and the New York Stock Exchange (NYSE). The Alaska Permanent Fund Corporation is responsible for investing oil sale returns through the NYSE.

Policy

Federal regulations affecting maritime traffic, natural resource development and leasing, environment, education, health care, are implemented through the political process in Washington, DC and through advocacy by Alaska's Congressional Delegation.

Ship Building

While Alaska has active shipyards, much of the commercial production occurs in Southeast states- Louisiana, Alabama, Mississippi, Florida, private ship building contributed \$9.8 billion in GDP in 2011 to the U.S. economy. International shipping companies operating in Alaska spend in the billions of dollars on new ship builds each year.

- Development finance authority for the State of Alaska
- Provide long-term capital to support economic growth, diversity, and job creation.
- Debt/Loans, Preferred Equity, Conduit Revenue Bonds
- AIDEA is self funded - receiving no General Funds
- Revolving Fund \approx \$1.3 billion in assets.
- Standard & Poor's AA+ credit rating



Shareholders

- Population of Alaska 735,000



Shareholder Representatives

- Governor of Alaska
- Alaska Legislature



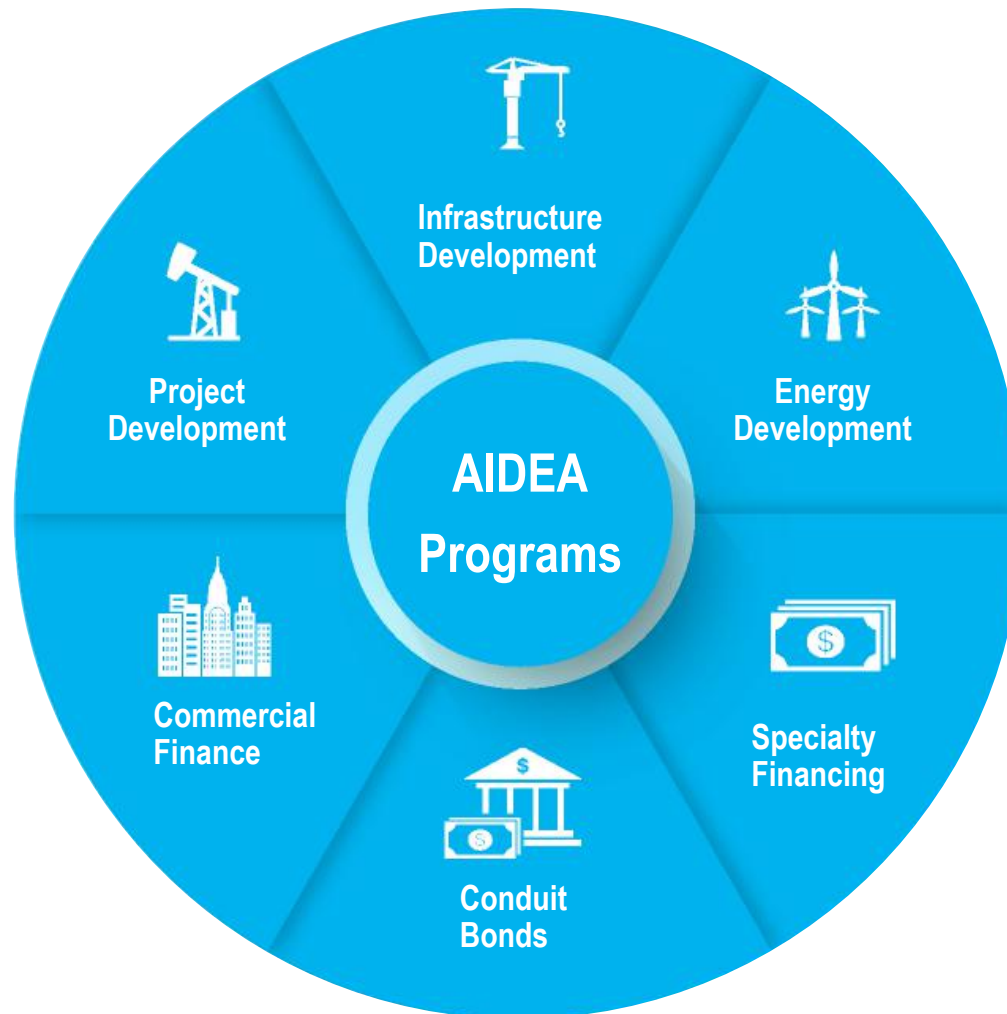
AIDEA Board

- Commissioner - Dept. of Revenue
- Commissioner - DCCED
- 5 successful Alaska business people



AIDEA Staff

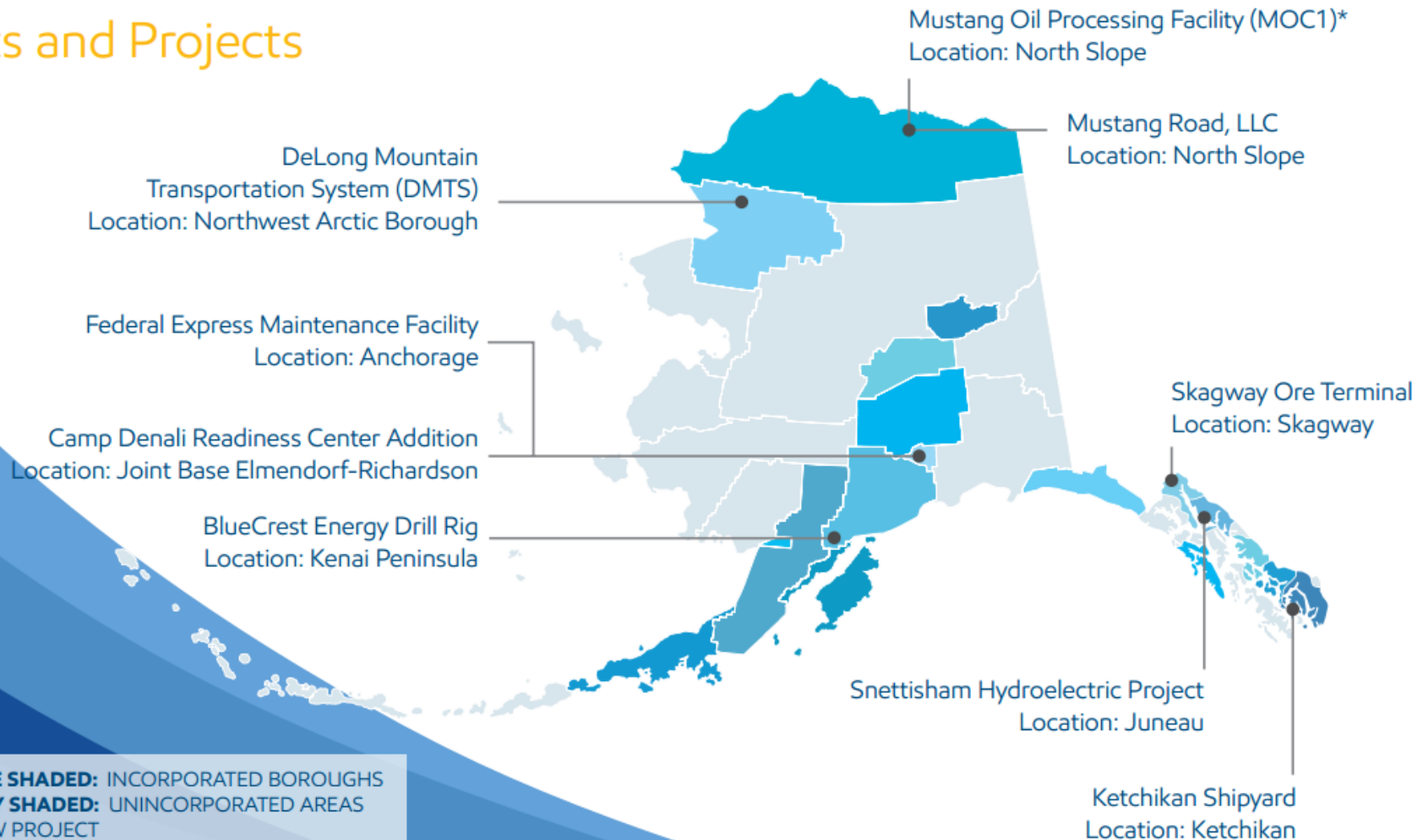
Well Stocked Tool Box



AIDEA Infrastructure Assets



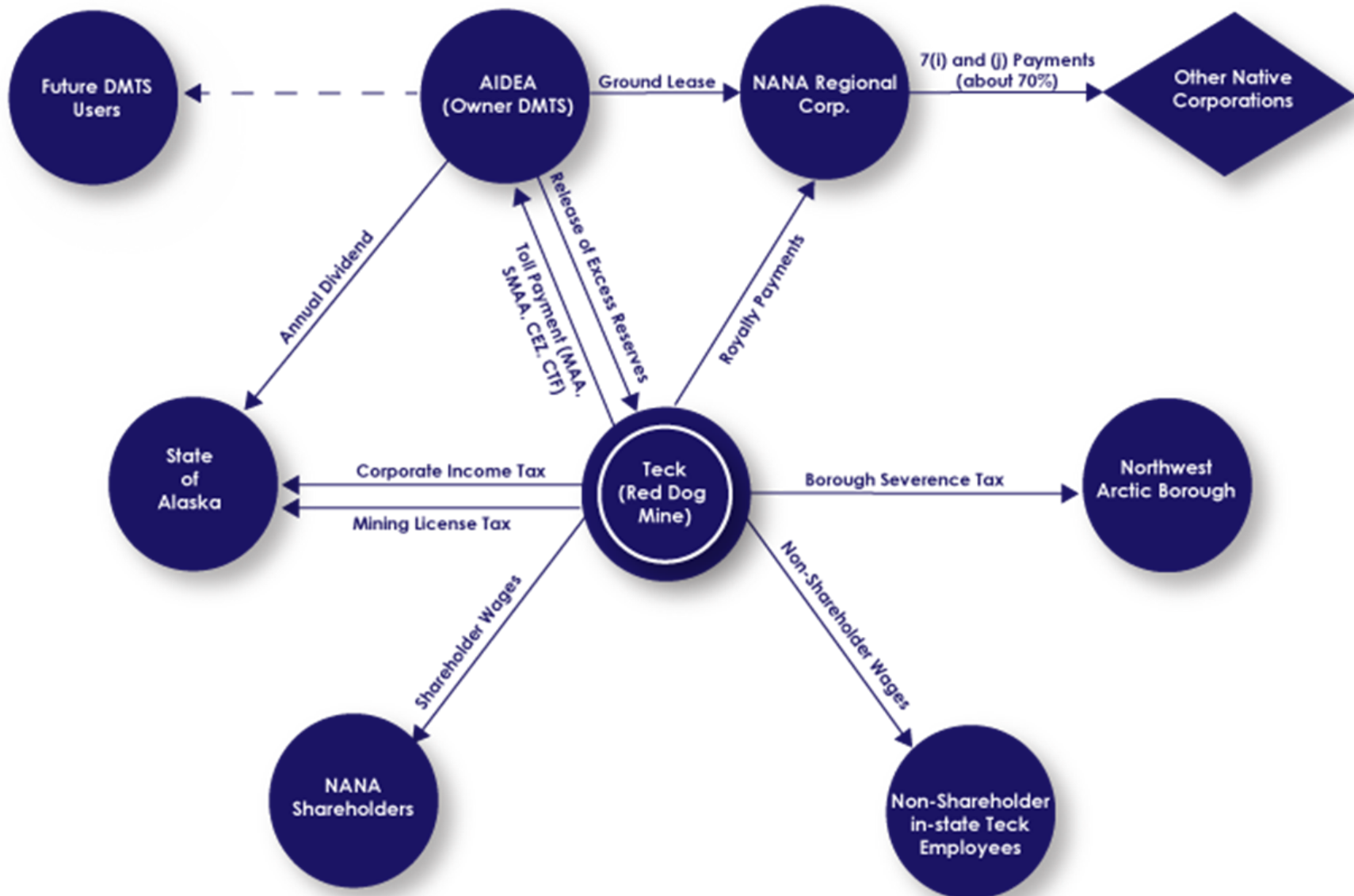
Assets and Projects



DeLong Mountain Transportation System servicing the Red Dog Mine



The DMTS consists of a 52-mile long industrial road, an offshore conveyor system to load ore concentrates, ore storage capacity up to 1.2 million tons, a shallow water dock for fuel and other supplies, and on-site power generation. This project provides access to markets for the zinc and leads ores produced by the Red Dog Mine.



“Table Stakes” for Infrastructure Financing



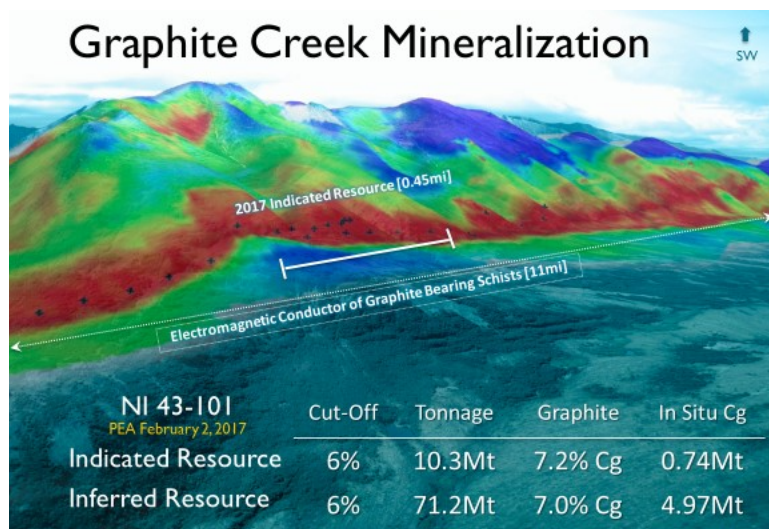
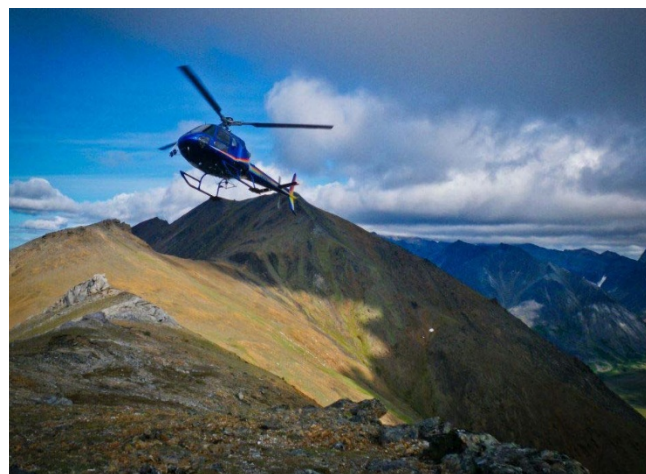
- Mine Developer
 - Netback Pricing Analysis
 - Long Term Contracts
 - Revenue Stream
- Project Financed Infrastructure
 - Revenue from Tolls/Assessments
 - Assets/Collateral
 - Counterparty with Balance Sheet

Graphite Creek Deposit



“America’s highest grade and largest known, large flake graphite deposit”

- A vertically integrated enterprise to mine, process and manufacture high grade Coated Spherical Graphite primarily for the electric vehicle lithium-ion battery market.
- Located on the Seward Peninsula, 37 miles north of Nome
- Requires all season access road, power, port facilities, and possibly a manufacturing facility and associated infrastructure

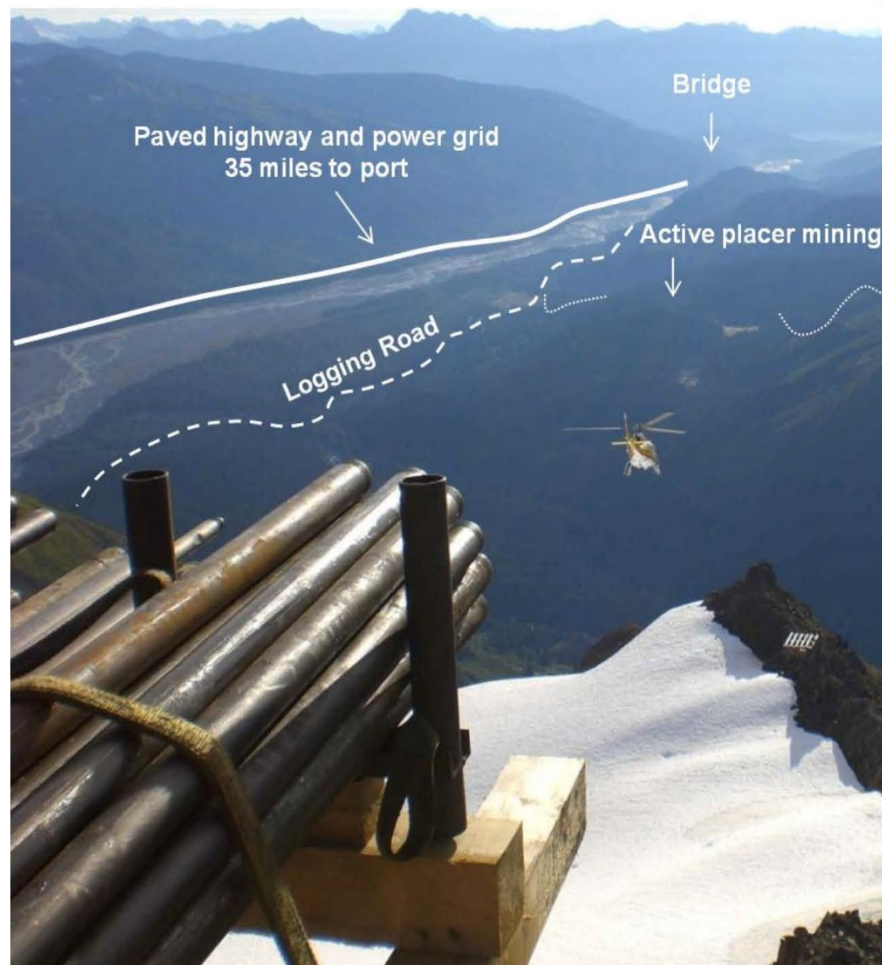


Palmer VMS Deposit



Potential District Scale Development

- High grade copper-zinc rich deposit discovery with tremendous expansion potential
- Joint Venture partnership between Constantine (51%) and Dowa Metals & Mining Co., Ltd. (49%), with Constantine as operator.
- Located less than two miles from the Haines Highway, which links to the deep-sea port of Haines
- Requires additional road access, power, and port facilities



Bokan Mountain – Dotson Ridge



“Highest Grade Heavy Rare Earth Deposit in U.S.”

- Legislature approved up to \$145 million in AIDEA bonding authority
- High paying jobs for a region with high unemployment
- Decrease US dependence on Chinese REE
- Pilot – SuperLig[®] Molecular Recognition Technology for REE separation was successful - in the 99% range
- Infrastructure development at the mine site and/or Gravina Island Industrial Complex in Ketchikan



Alaska Industrial Development and Export Authority

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www.aidea.org



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