

NANA

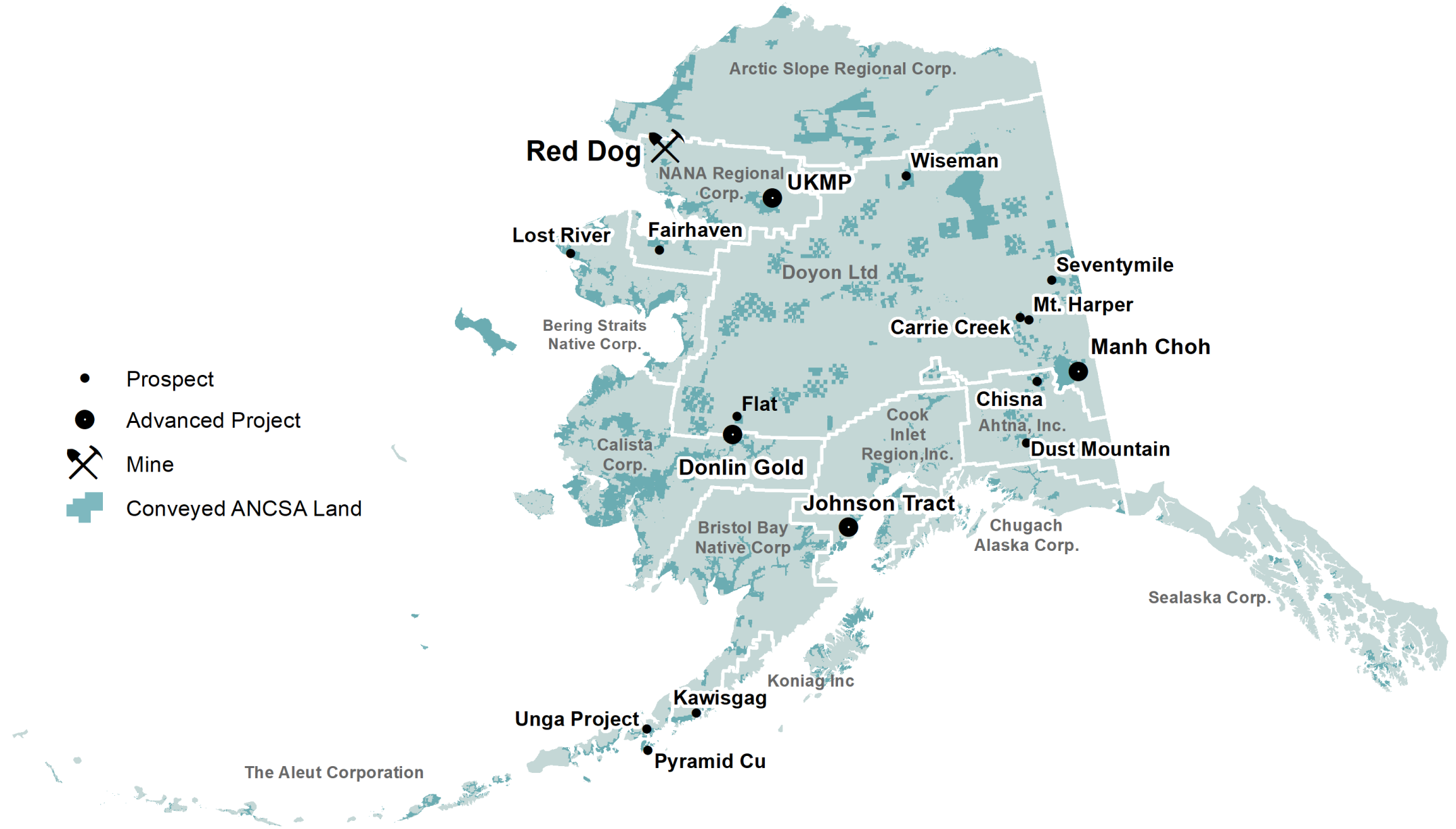


# Overview panel

*Lance Miller, Ph.D, NANA Regional Corporation*



# ANCSA Lands: 44 Million Acres of Sustainability



# Red Dog: A Critical Minerals Mine (Zn-Pb-Ag-Ge)

“With zinc added to the list of minerals and metals critical to the U.S., world-class mine in Northwest Alaska is now top dog”

*- North of 60 Mining News – March 4, 2022*



# Many CM & REE's are Byproducts of Major Metal Production – they are not economic to mine in their own right & markets are small!!!

**Table 1.1** By-product metals derived from the production of selected major industrial metals (top row, bold). Those metals shown in italics may also be produced from their own ores. (PGM, platinum-group metals; REE, rare earth elements.)

<b>Copper</b>	<b>Zinc</b>	<b>Tin</b>	<b>Nickel</b>	<b>Platinum</b>	<b>Aluminium</b>	<b>Iron</b>	<b>Lead</b>
<i>Cobalt</i>	Indium	<i>Niobium</i>	<i>Cobalt</i>	Palladium	Gallium	<i>REE</i>	<i>Antimony</i>
<i>Molybdenum</i>	Germanium	<i>Tantalum</i>	<i>PGM</i>	Rhodium		<i>Niobium</i>	Bismuth
<i>PGM</i>	Cadmium	Indium	Scandium	Ruthenium		Vanadium	Thallium
Rhenium				Osmium			
Tellurium				Iridium			
Selenium							
Arsenic							

Graedel et. al., 2014

NANA



# Perspectives on workforce, community & societal considerations

*Lance Miller, Ph.D, NANA Regional Corporation*



# Alaska Native Claims Settlement Act Review

1867

**The Treaty of Cession: The U.S. purchases Alaska from Russia**

Treaty outlines terms for sale of Alaska from Russia to the U.S. U.S. pays \$7.2M for Alaska. Native land claims left unresolved in sale.

1912

**The Second Organic Act for Alaska, now a territory**

Establishes Alaska as an incorporated U.S. Territory, establishes a territorial government.

1959

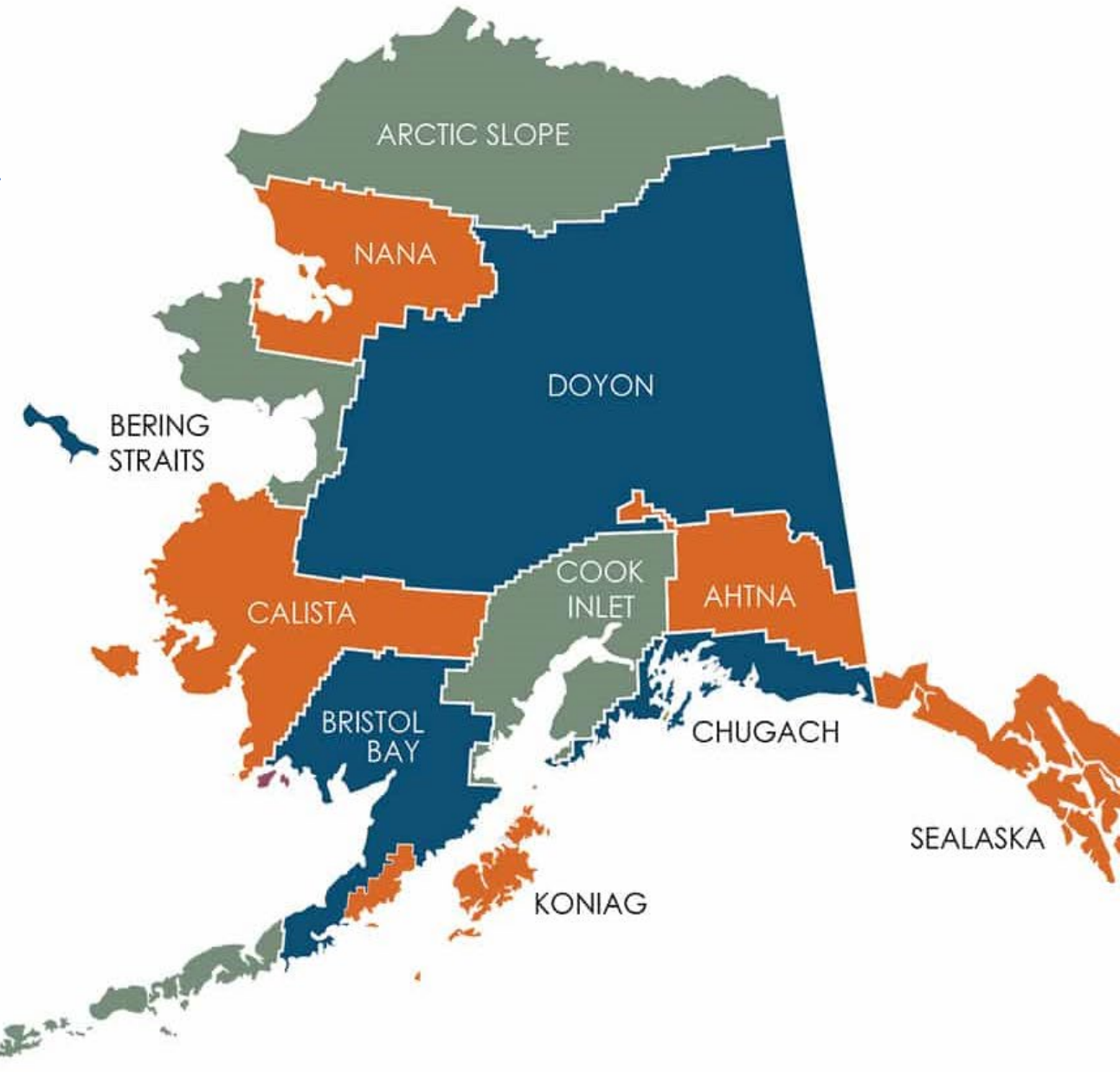
**The Alaska Statehood Act**

Alaska becomes the 49th state on Jan. 3, 1959.

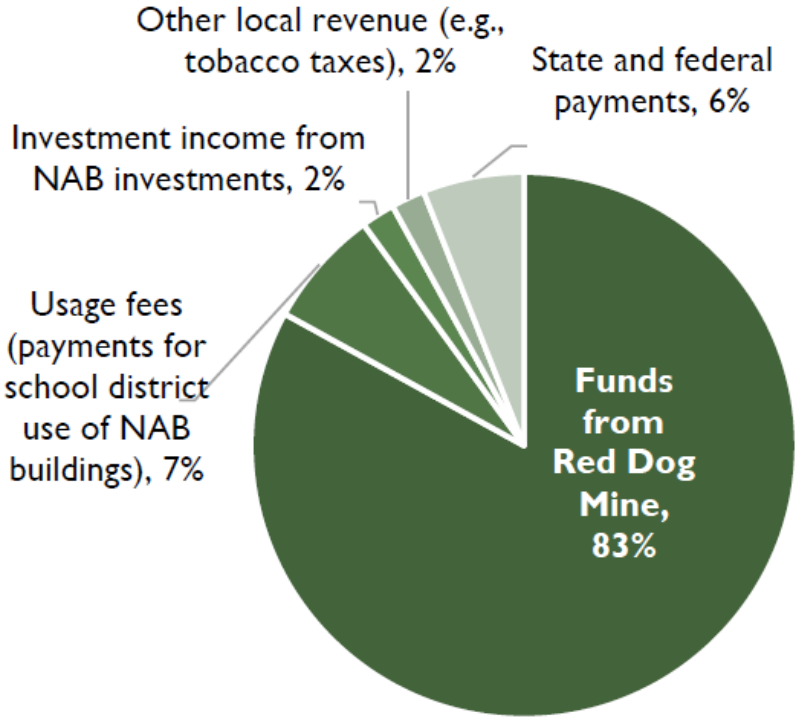
1971

**The Alaska Native Claims Settlement Act**

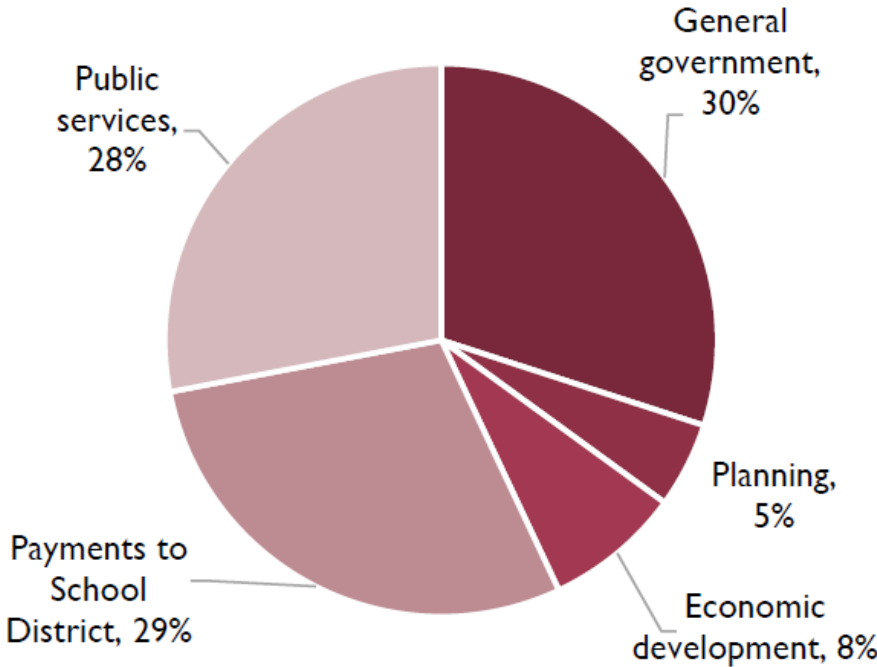
Commercial quantities of resources discovered, settled land claims with 44 million acres, over 200 native corporations.



**Figure 4: Borough Revenues, 2020**



**Figure 5: Borough Expenditures, 2020**



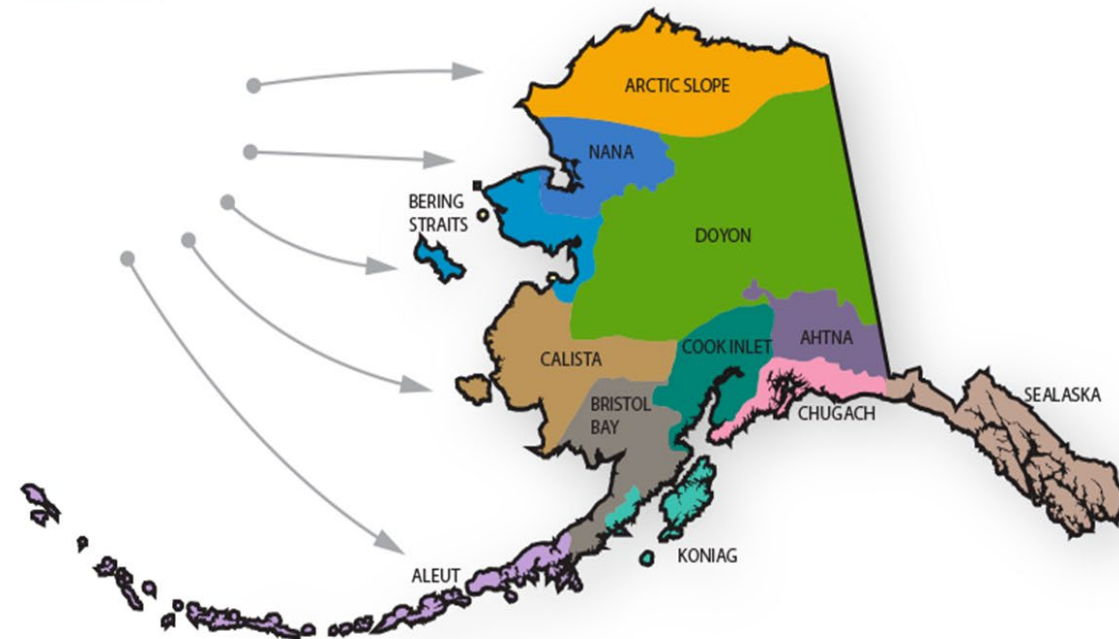
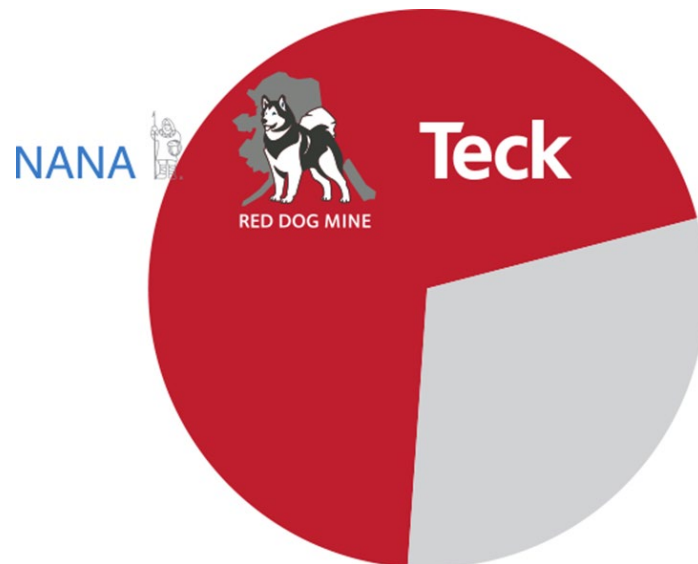
Source: Northwest Arctic Borough, 2021

# Mining Benefits All of Alaska: NANA via Red Dog

- >\$1.92B in total 7(i) contributions through 2023
- 2/3 of the Ak village corps (7j) are dependent on 7i
- In 7 years (FY14-FY20) 69% of 7(i) came from Red Dog. In FY22 76% of 7(i) came from Red Dog.

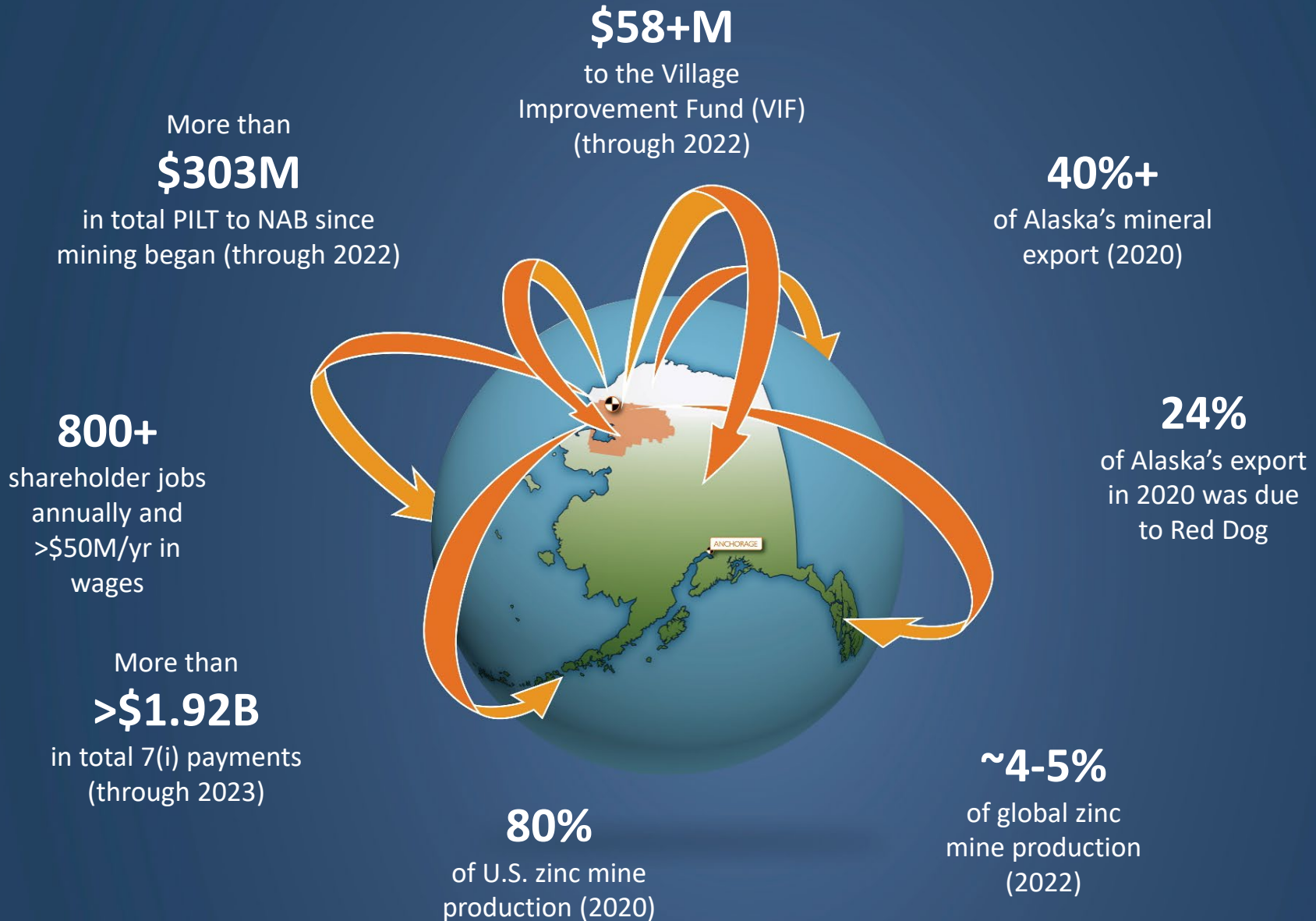


Teck





# Benefits of Red Dog Mine



**“mining is not everything, but without mining  
everything is nothing”**

Max Plank; Nobel prize winner in physics and known as the originator of quantum theory