



CONSTANTINE

# Palmer Project

*Cu-Zn-Ag-Au-Barite*

Advanced Stage Mineral Resource Development

The Palmer Base Metals Project  
Alaska, US

**2024-04-15**

# FORWARD LOOKING STATEMENTS

**Forward looking statements:** This presentation contains certain "forward-looking information within the meaning of Canadian securities legislation and "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995 (collectively "forward looking statements") concerning the Company's plans for its properties, operations and other matters. Forward-looking statements include predictions, projections and forecasts and are often, but not always, identified by the use of words such as "seek", "anticipate", "believe", "plan", "estimate", "forecast", "expect", "potential", "project", "target", "schedule", "budget" and "intend" and statements that an event or result "may", "will", "should", "could" or "might" occur or be achieved and other similar expressions and includes the negatives thereof. All statements other than statements of historical fact, including, without limitation, statements regarding potential mineralization, the estimation of mineral resources, the realization of mineral resource estimates, interpretation of prior exploration and potential exploration results, the timing and success of exploration activities generally, the timing and results of future resource estimates, permitting timelines, metal prices and currency exchange rates, availability of capital to the Company and its joint venture partners, government regulation of exploration operations, environmental risks, reclamation, title, statements with respect to the future price of gold and other metals, and future plans and objectives of Constantine are forward-looking statements that involve various risks and uncertainties. There can be no assurance that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Forward-looking statements are based on a number of material factors and assumptions. Important factors that could cause actual results to differ materially from the Company's expectations include actual exploration results, changes in project parameters as plans continue to be refined, results of future resource estimates, future metal prices, availability of capital and financing on acceptable terms to the Company and its joint venture partner, general economic, market or business conditions, uninsured risks, regulatory changes, defects in title, availability of personnel, materials and equipment on a timely basis, accidents or equipment breakdowns, delays in receiving government approvals, unanticipated environmental impacts on operations and costs to remedy same, and other exploration or other risks detailed herein and from time to time in the filings made by the Company with securities regulators. Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ from those described in forward-looking statements, there may be other factors that cause such actions, events or results to differ materially from those anticipated. There can be no assurance that forward-looking statements will prove to be accurate and accordingly, readers are cautioned not to place undue reliance on forward-looking statements. Past performance is no guarantee of future performance, and all investors are urged to consult their investment professionals before making an investment decision.

This presentation contains historical sample results that have not been verified or validated by the Company and not necessarily representative of mineralization on the Company's properties. This presentation contains information with respect to adjacent or similar mineral properties in which the Company has no interest in or right to acquire any interest in any such properties, and that mineral deposits on adjacent or similar properties are not indicative of mineral deposits on the Company's properties.

**Michael J. Vande Guchte P.Geol**, Vice President of Exploration for Constantine Metal Resources Ltd. and a qualified person as defined by Canadian National Instrument 43-101, has reviewed and approved the technical information contained in this presentation. **James N. Gray, P.Geol** of Advantage Geoservices Ltd. is the Qualified Person as defined by NI 43-101 for the resource estimate. The 2019 Preliminary Economic Assessment (PEA) was prepared by JDS Energy & Mining Inc for Constantine Metal Resources and filed on SEDAR ([www.sedar.com](http://www.sedar.com)). The PEA was amended in 2022 (Amended PEA) has an effective date of June 3, 2019 and filed on SEDAR March 7, 2022.



# **PALMER PROJECT OVERVIEW**

# PALMER PROJECT

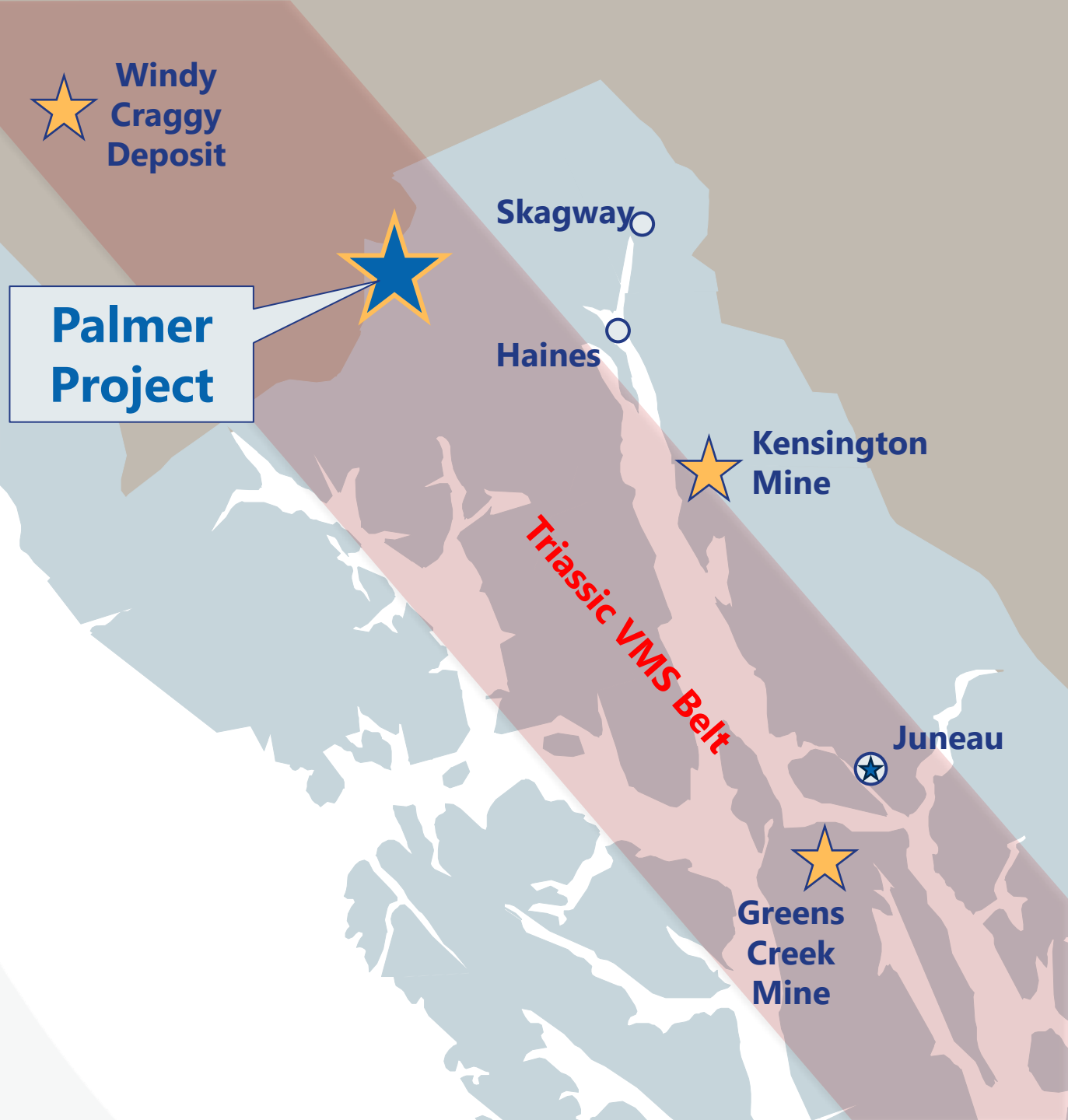
- Volcanogenic Massive Sulfide (VMS) Deposit
  - Copper, Zinc, Gold, Silver, Barite
- Porcupine Mining District with over 125 years of mining history
  - Haines Block specifically selected by AMHT for mineral potential
- Haines State Forest Resource Management Area
  - 1982 MOU by diverse user groups to balance conservation and resource development activities
- Joint Venture Partnership between Dowa Alaska and American Pacific Mining
- Over \$100M invested since 2006



**Palmer  
VMS  
Project**

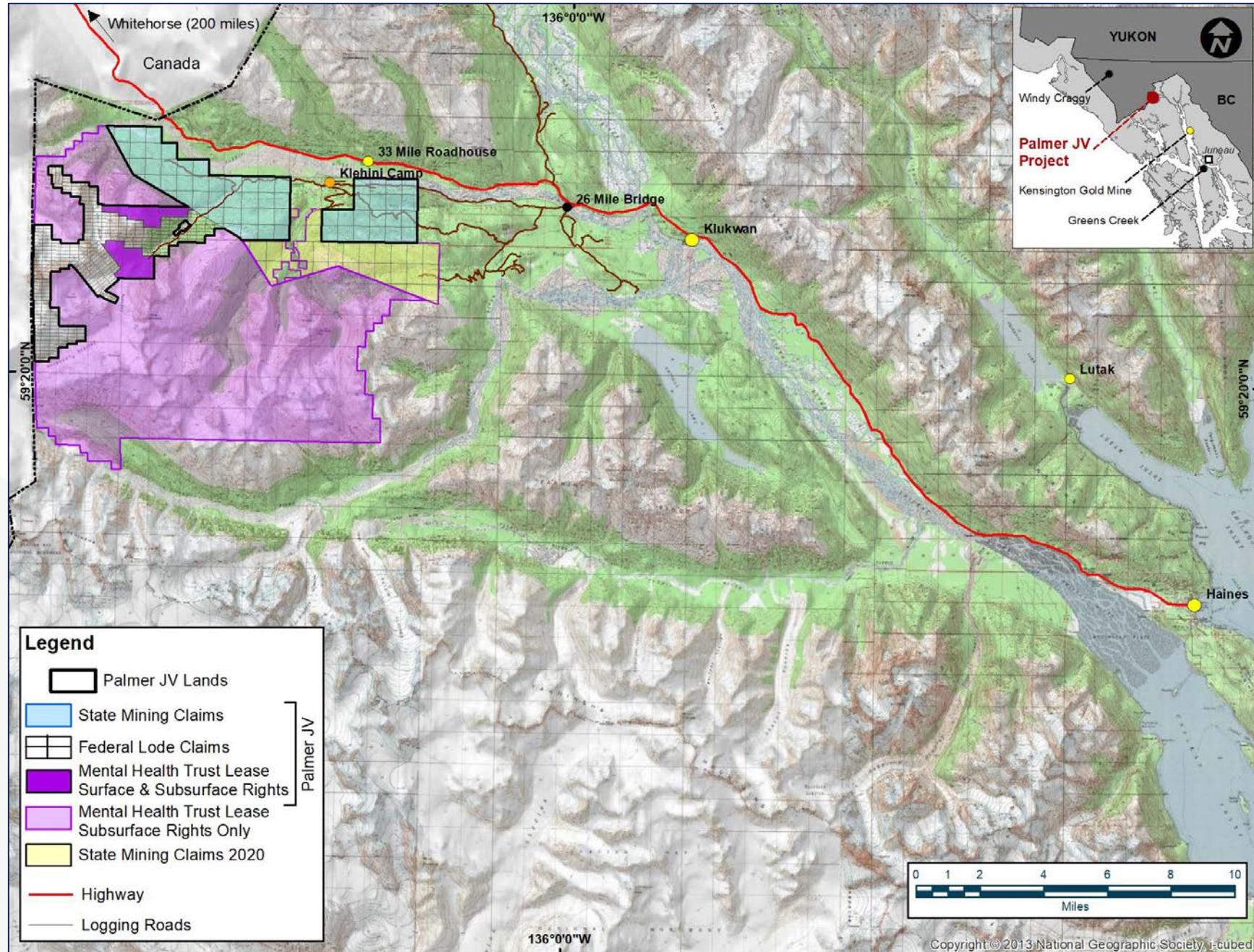
# METALLOGENIC BELT

- Over 1000 miles long extending throughout Southeast Alaska
- Haines, Skagway and Juneau have long history of mining activities
- Several active projects and past producers with two operating mines
  - Greens Creek Mine
  - Kensington Mine



# PALMER PROPERTY

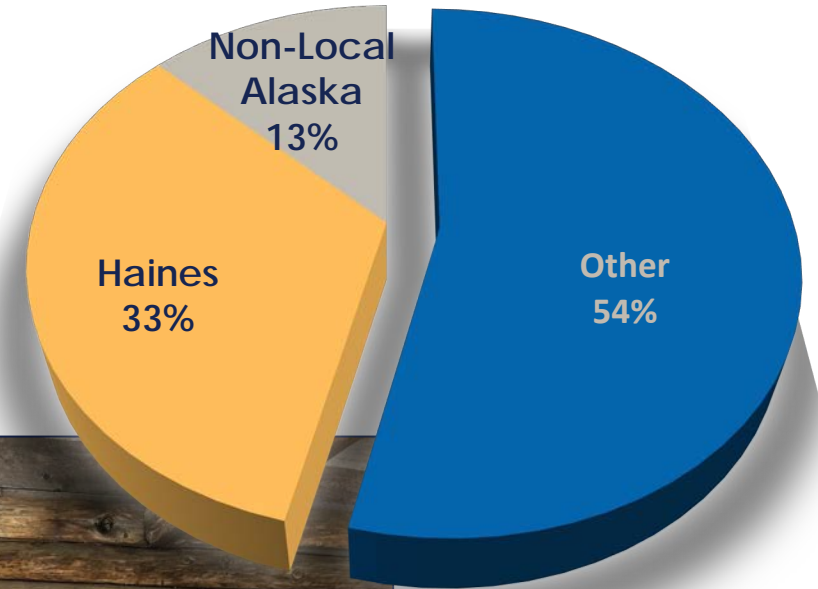
- ~60,000 total acres
- 340 federal (BLM) unpatented lode mining claims; 6,567 acres
- 63 state (ADNR) mining claims; 9,185 acres
- Lease from the Mental Health Trust (MHT); 42,237 acres



# BUILDING A COMMUNITY FOCUS

- Local-minded Philosophy
- Year-round, fulltime local employment
  - Supports families and businesses
- Funding causes that support life in Haines
  - Scholarships
  - Jena's Playground
  - Haines Dolphins
  - Chamber of Commerce
  - American Legion
  - SE Alaska State Fair
  - Salvation Army
  - Alaska Avalanche Center
  - Chilkat Snowburners
  - Haines Search and Rescue
  - Chilkat Valley Preschool

## Local Hire (2023/24)



# PALMER PROJECT HISTORY



- 1969: Copper and zinc mineralization discovered by local prospector Merrill Palmer
- 1969 - 2006: Various exploration companies completed regional geological, geochemical, and geophysical surveys and exploration drilling
- **2006: Constantine Metals Resources acquires Palmer project**
- 2010: First resource estimate for Palmer Deposit South Wall & RW Zones
- 2013: Palmer Project Option Agreement with Dow
- 2015: Updated resource estimate for the Palmer Deposit
- 2017: Dow JV Partnership
- 2018: Updated resource estimate for Palmer Deposit and Initial resource estimate for AG Zone
- 2021-2022: Geotechnical studies and road/campsite construction supporting exploration
- 2022: American Pacific Mining Corp acquires Constantine Metal Resources
- 2023: Exploration drilling and camp construction



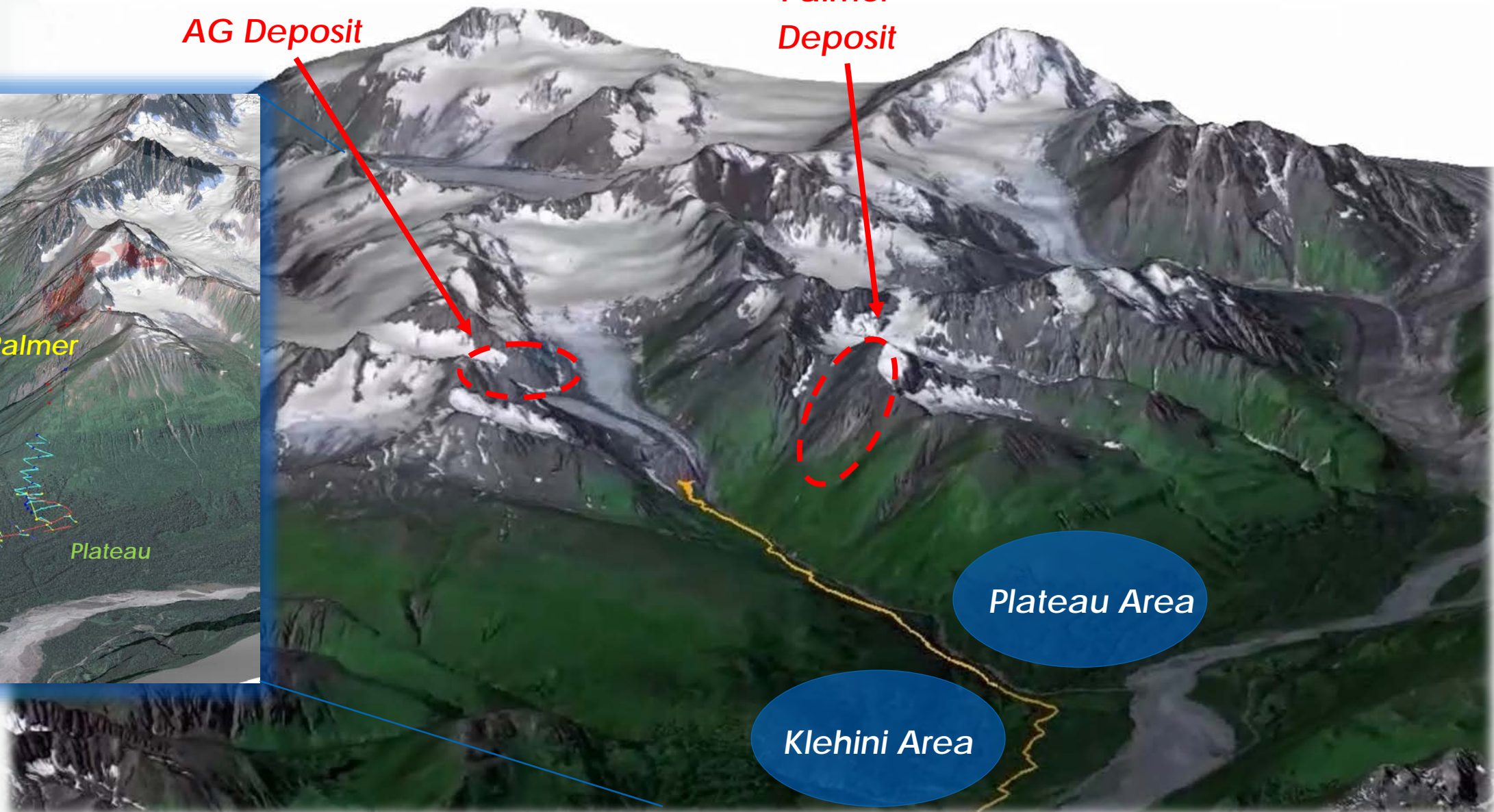
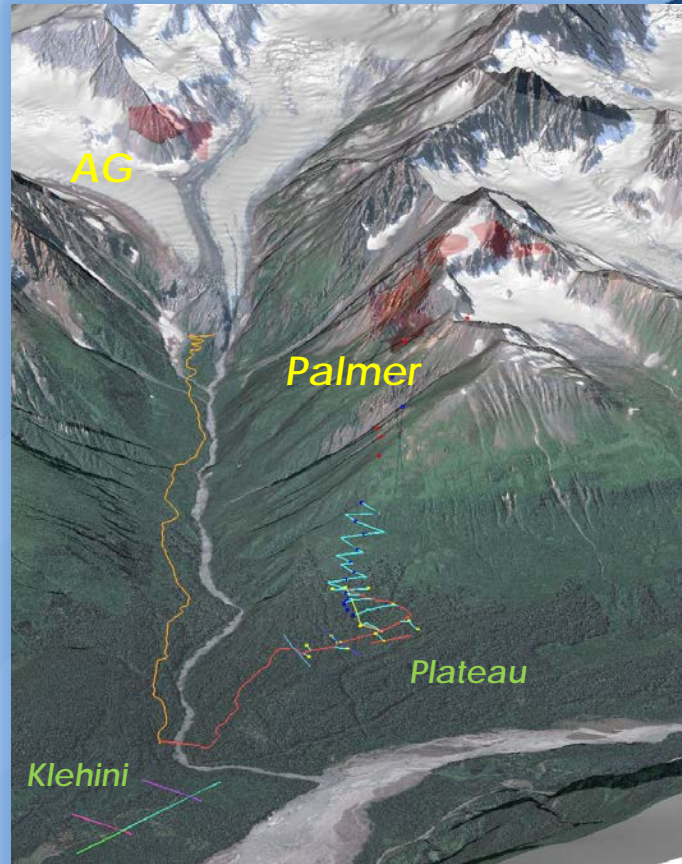


# **EXPLORATION AND EVALUATION**

# PALMER PROJECT DEPOSITS

*AG Deposit*

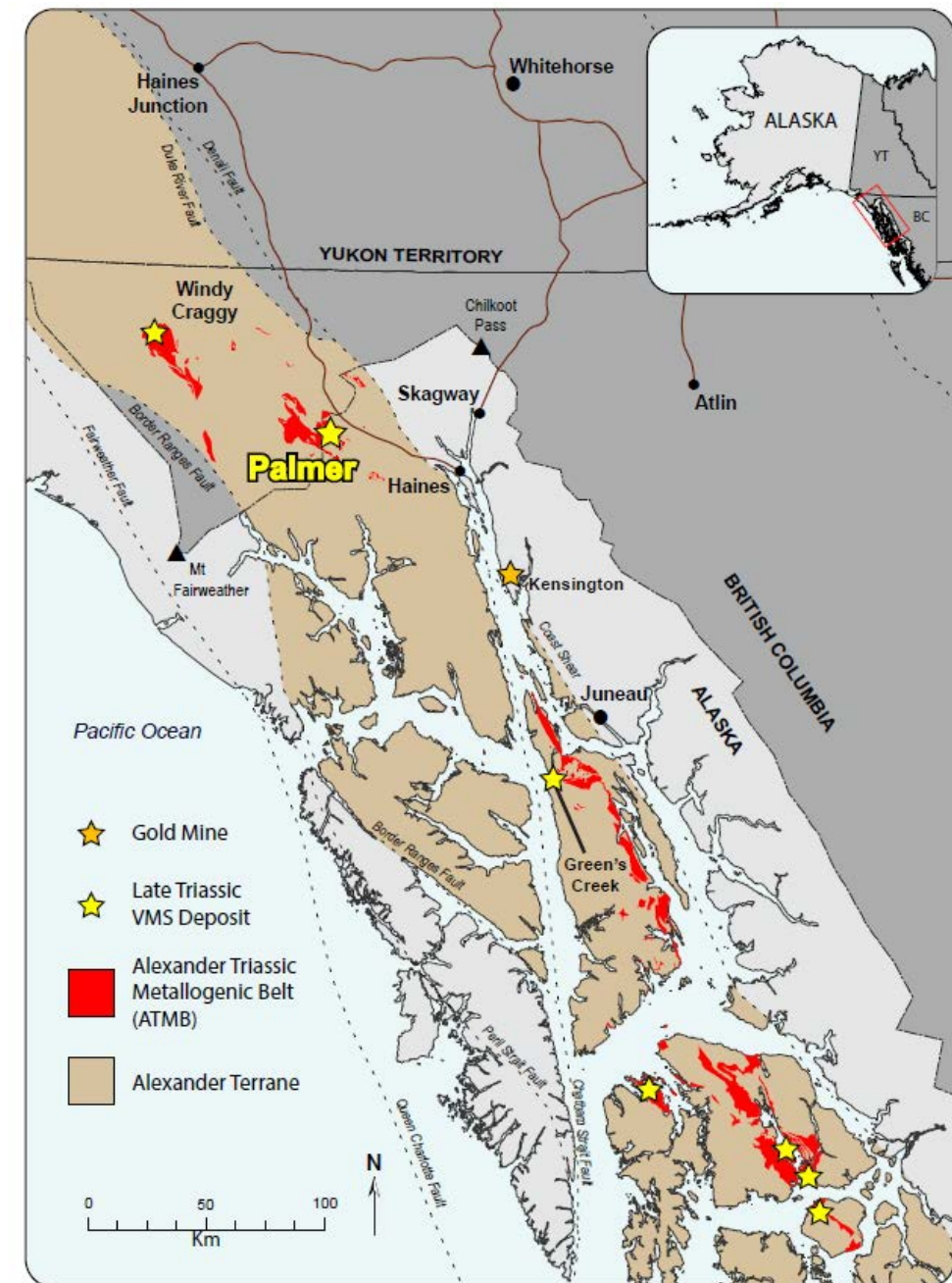
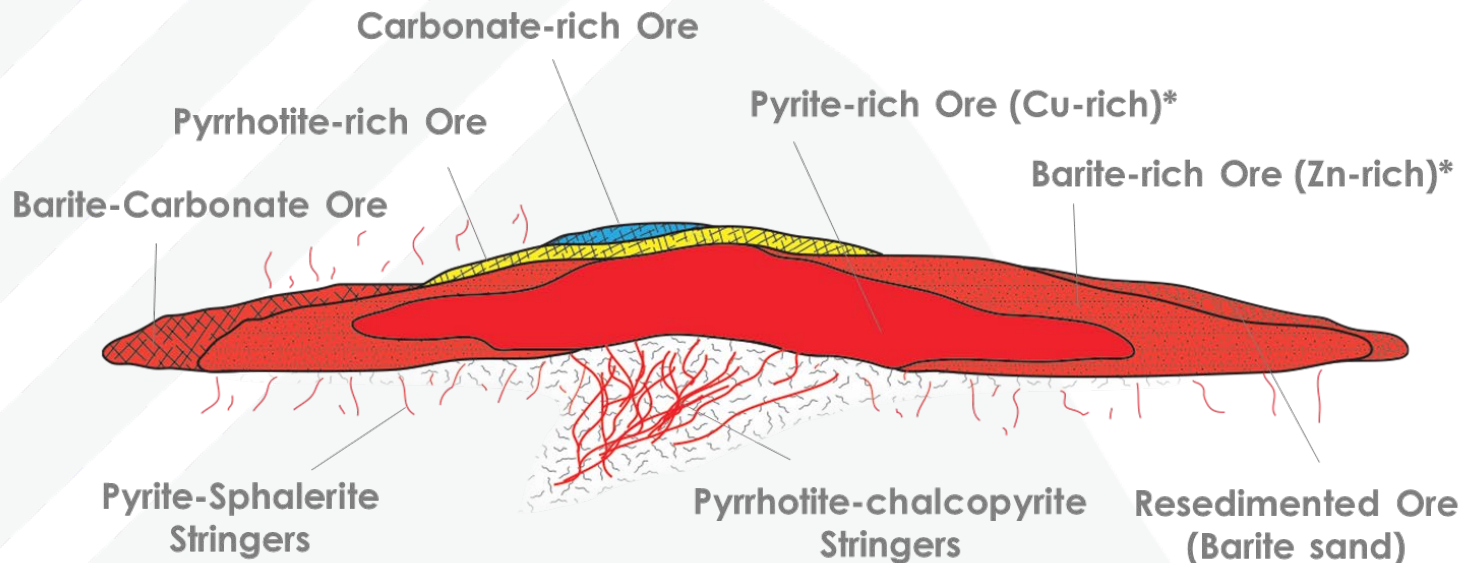
*Palmer Deposit*



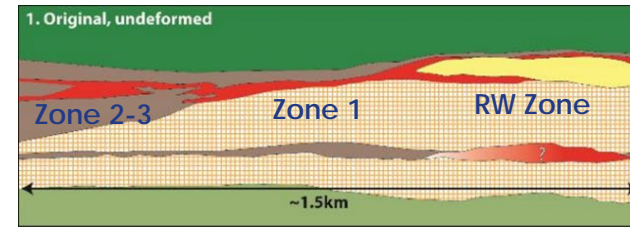
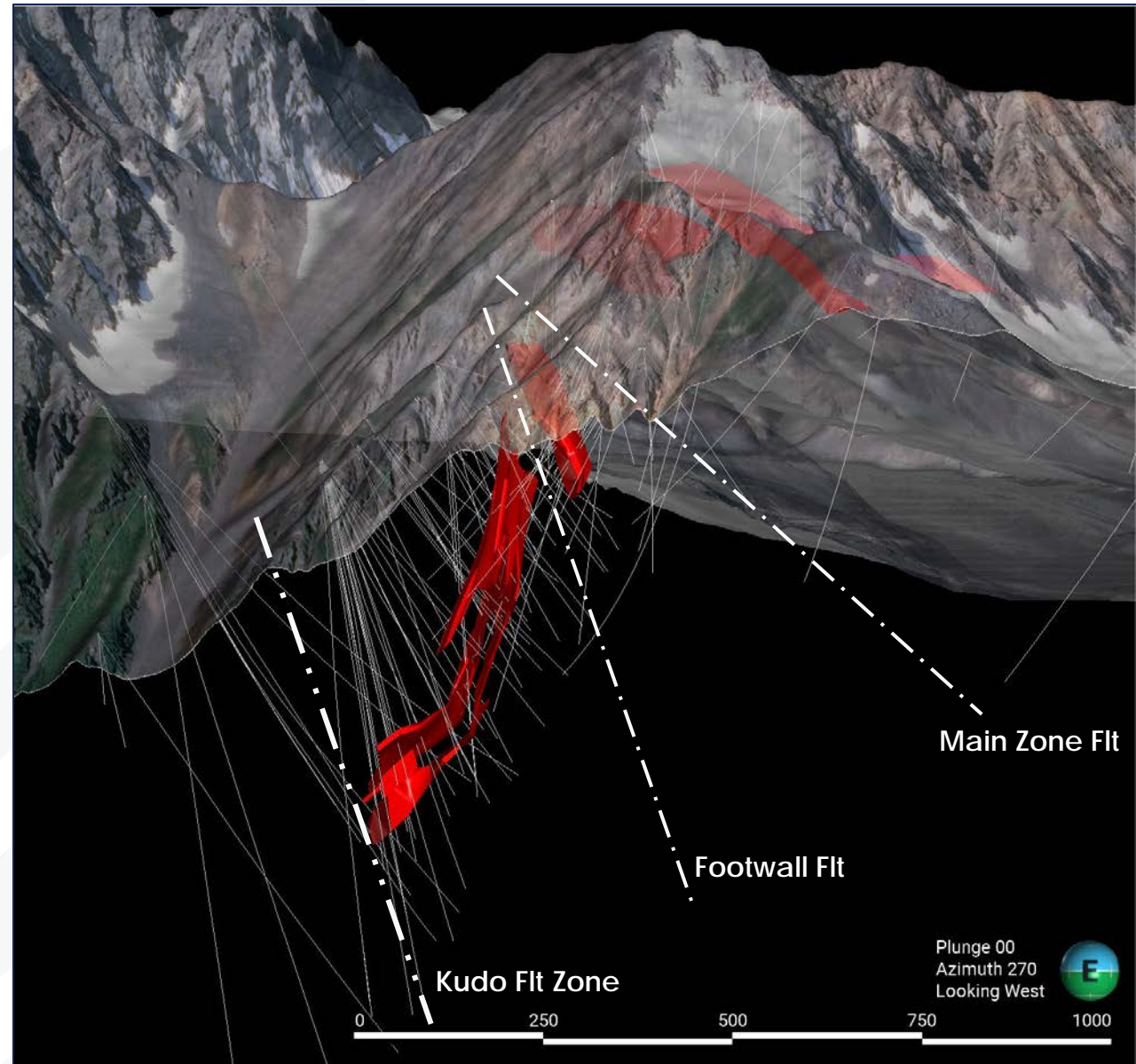
# A LITTLE GEOLOGY

## The Alexander Triassic metallogenic belt (ATMB)

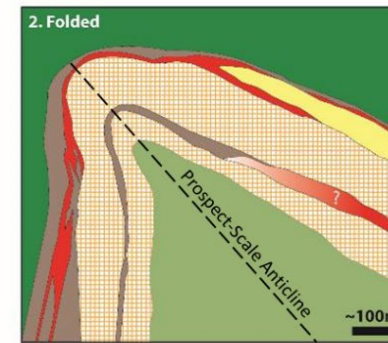
- An important Cordilleran VMS belt & global volcanogenic massive sulfide (VMS) district
- Late Triassic rifted arc rocks



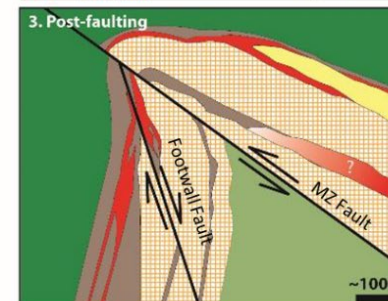
# PALMER PROJECT DEPOSITS



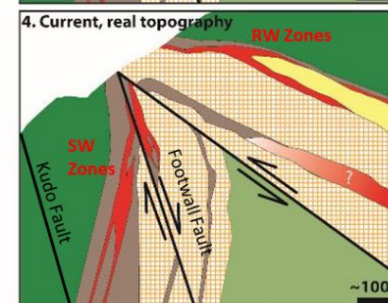
Original  
Deposition  
(~214 Ma)



Folding

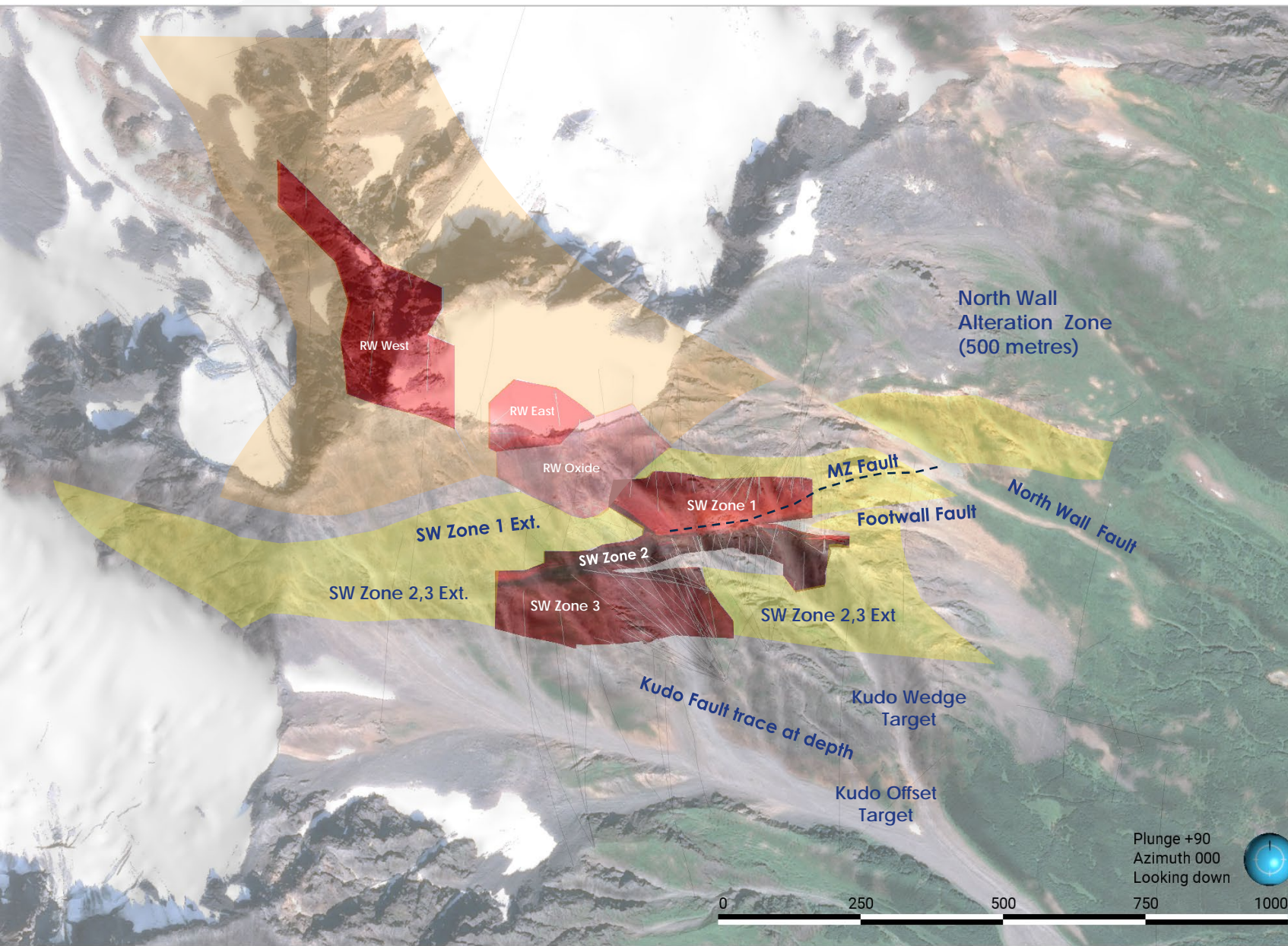


Faulting

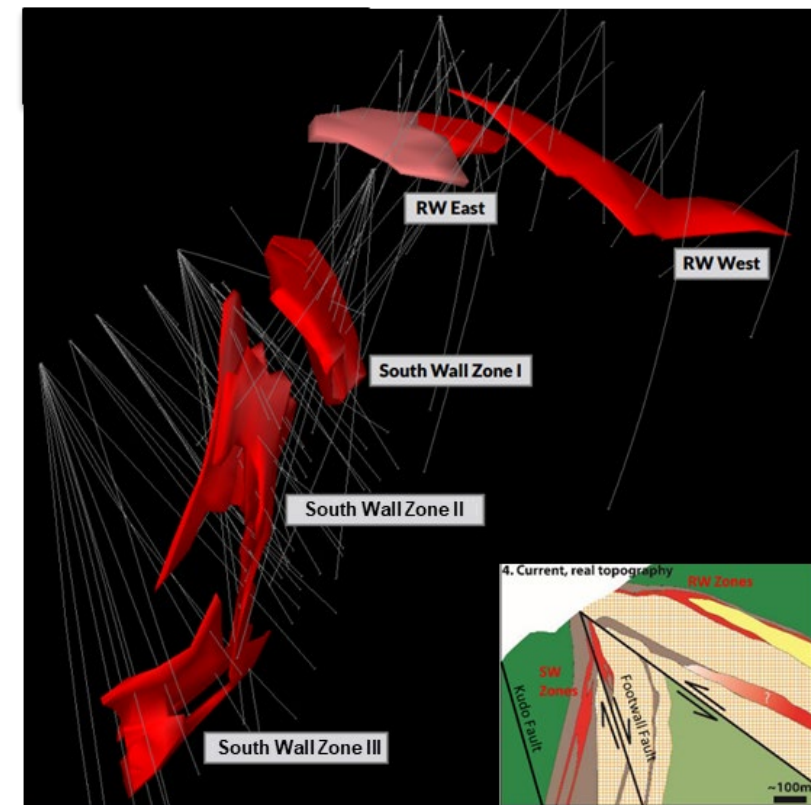


Current Deposit  
(10 Mt)

# PALMER DEPOSIT (PLAN VIEW)



- Mineralized Zones
- RW Zone - Prospective Target horizon
- South Wall Zone - Prospective Target horizon



# EXPLORATION MILESTONES

## DRILLING

- 280 drill holes (91,192 m) completed on the Palmer Property
- 2023 identified a copper-rich core in South Wall Zone 1

## GEOLOGY & GEOPHYSICS

- Property scale geologic mapping
- Aerial surveys (2014, 2018)
- Ground geophysical and Borehole EM Surveys
- Geotech seismic surveys (2014, 2021, and 2023)

## MINERAL RESOURCE

- Mineral Resource Estimate on Palmer and AG Deposits (2018)



# ONGOING ENVIRONMENTAL PROGRAMS

- Environmental baseline data provides assessment of natural conditions and identifies sensitivities or mitigations prior to activities

## Representative of Location and Elevation



**Water Quality Testing**



**Meteorological Studies**



**Air Data Collection**

## Understanding Existing Conditions



**Wetland Mapping**



**Wildlife & Aquatic Surveys**

# PERMITTING

- Federal and state authorizations support current activities
- Permits and authorizations are specific to proposed activities and guide compliance requirements
  - Land use
  - Water Use
  - Drilling
  - Geotechnical
  - Construction
  - Reclamation





# 2023 ACCOMPLISHMENTS

- New Management Team to guide project exploration and evaluation
- One of the largest drill programs on the Palmer Project to date
- Continued to build on environmental baseline data
  - Water quality
  - Wildlife
  - Meteorological
  - Wetland data
- Permitted and constructed a new camp
- Surface Geotechnical
- Metallurgical Testwork



# Two High-Grade Deposits

## Copper-Zinc-Silver-Gold and Barite

Deposit	Cut-off	Resource Category	Tonnes	Zn	Cu	Pb	Ag	Au	Barite	ZnEq	CuEq
			(kt)	(%)	(%)	(%)	(g/t)	(g/t)	(BaSO <sub>4</sub> %)	(%)	(%)
Palmer Deposit (South Wall & RW)	\$75/t NSR	Indicated	4,677	5.23	1.49	-	30.8	0.30	23.9	10.21	3.92
	\$75/t NSR	Inferred	5,338	5.20	0.96	-	29.2	0.28	22.0	8.74	3.35
AG Zone Deposit	5.0% ZnEq	Inferred	4,256	4.64	0.12	0.96	119.5	0.53	34.8	9.04	3.46
<b>Total</b>		<b>Indicated</b>	<b>4,677</b>	<b>5.23</b>	<b>1.49</b>	<b>-</b>	<b>30.8</b>	<b>0.30</b>	<b>23.9</b>	<b>10.21</b>	<b>3.92</b>
		<b>Inferred</b>	<b>9,594</b>	<b>4.95</b>	<b>0.59</b>	<b>0.43</b>	<b>69.3</b>	<b>0.39</b>	<b>27.7</b>	<b>8.87</b>	<b>3.40</b>

**Metal equivalents exclude value of barite**

See news release dated December 18, 2018. Net Smelter Return ("NSR") equals (US\$16.01 x Zn% + US\$48.67 x Cu% + US\$23.45 x Au g/t + US\$0.32 x Ag g/t). NSR formula is based on estimated metallurgical recoveries, assumed metal prices, and assumed offsite costs that include transportation of concentrate, smelter treatment charges, and refining charges. ZnEq equals = (\$66 x Cu% + \$25.3 x Zn% + \$22 x Pb% + \$0.51 x Ag g/t + \$40.19 x Au g/t) / 25.3. Assumed metal prices are US\$1.15/lb for zinc (Zn), US\$3.00/lb for copper (Cu), US\$1250/oz for gold (Au), US\$16/oz for silver (Ag). Estimated metal recoveries for Palmer Deposit are 93.1% for zinc, 89.6% for copper, 90.9% for silver (70.8% to the Cu concentrate and 20.1% to the Zn concentrate) and 69.6% for gold (49.5% to the Cu concentrate and 20.1% to the Zn concentrate) as determined by 2018 metallurgical locked cycle flotation tests. No recovery data is available for AG Zone deposit. Barite (BaSO<sub>4</sub>) not included in the Cut-off determination or reported ZnEq and CuEq.

# PALMER POLYMETALLIC MINERAL RESOURCES

- **Copper\*** (chalcopyrite): pipes, wiring, hybrid vehicles, wind turbines
- **Zinc\*** (sphalerite): galvanizing steel and iron, alloys, boat anodes, fertilizer
- **Gold:** monetary currency, jewelry, electronics, dentistry, aerospace
- **Silver:** photography, jewelry and tableware, electronics, alloys, antibacterial clothing
- **Barite\***: drilling mud, heavy cement, mud flaps, radiation blocking, medical x-ray liquid



\* USGS or USDOE critical mineral or material designation

# PALMER'S MINERALS NEEDED TODAY



Every American Born Will Need...  
**3.07 MILLION POUNDS** of minerals,  
metals, and fuels in their lifetime

**60,662 lbs.**  
CEMENT

**11,154 lbs.**  
CLAYS

**235,074 lbs.**  
COAL

**993 lbs.**  
COPPER

**1.18 Troy oz.**  
GOLD

**20,246 lbs.**  
IRON ORE

**840 lbs.**  
LEAD

**1.5 lb.**  
LITHIUM

**12,148 lbs.**  
PHOSPHATE ROCK

**29,796 lbs.**  
SALT

**3.2 lbs.**  
SILVER

**1.34M lbs.**  
STONE, SAND  
& GRAVEL

**458 lbs.**  
ZINC

**1.36M lbs.**  
OTHER MINERALS,  
METALS & FUELS



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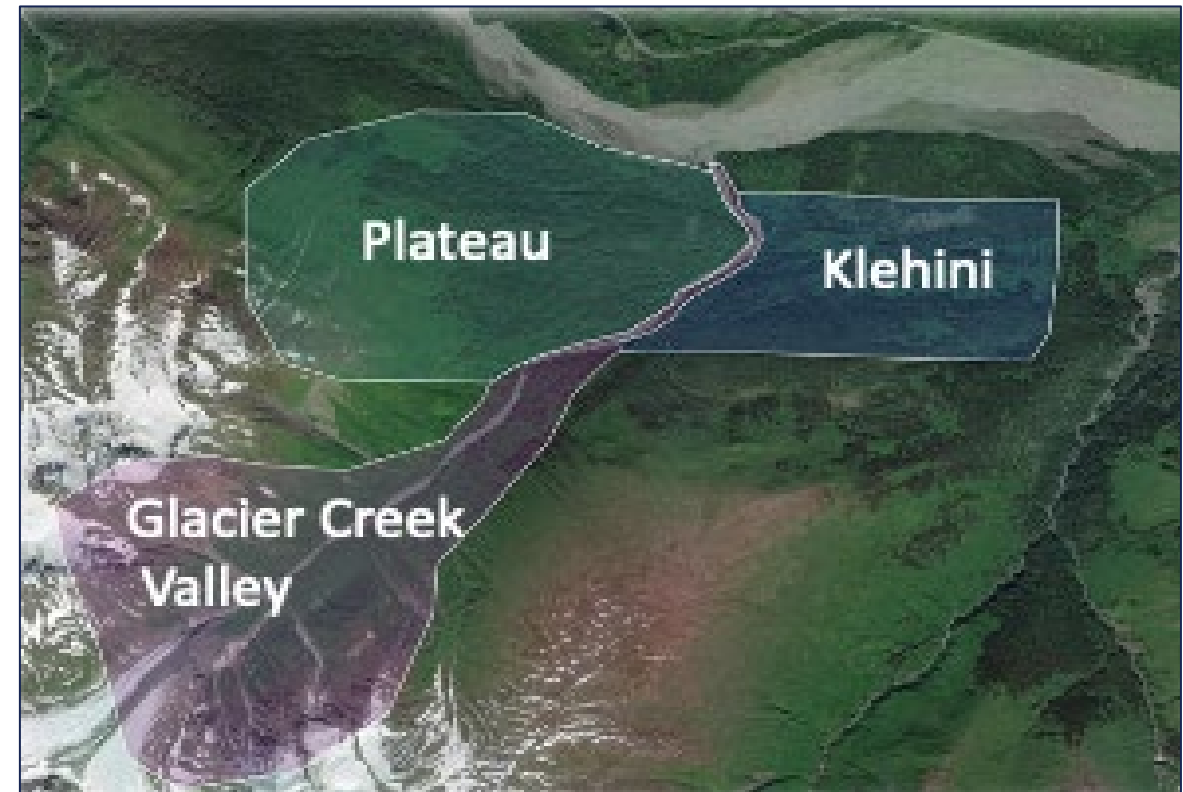
Learn more: [MineralsEducationCoalition.org](https://MineralsEducationCoalition.org)



# **FIVE-YEAR PLAN OF OPERATIONS**

# ENVIRONMENTAL STUDIES AND MONITORING

Extension of baseline studies onto state land to focus data collection on the property



# ENVIRONMENTAL STUDIES AND MONITORING

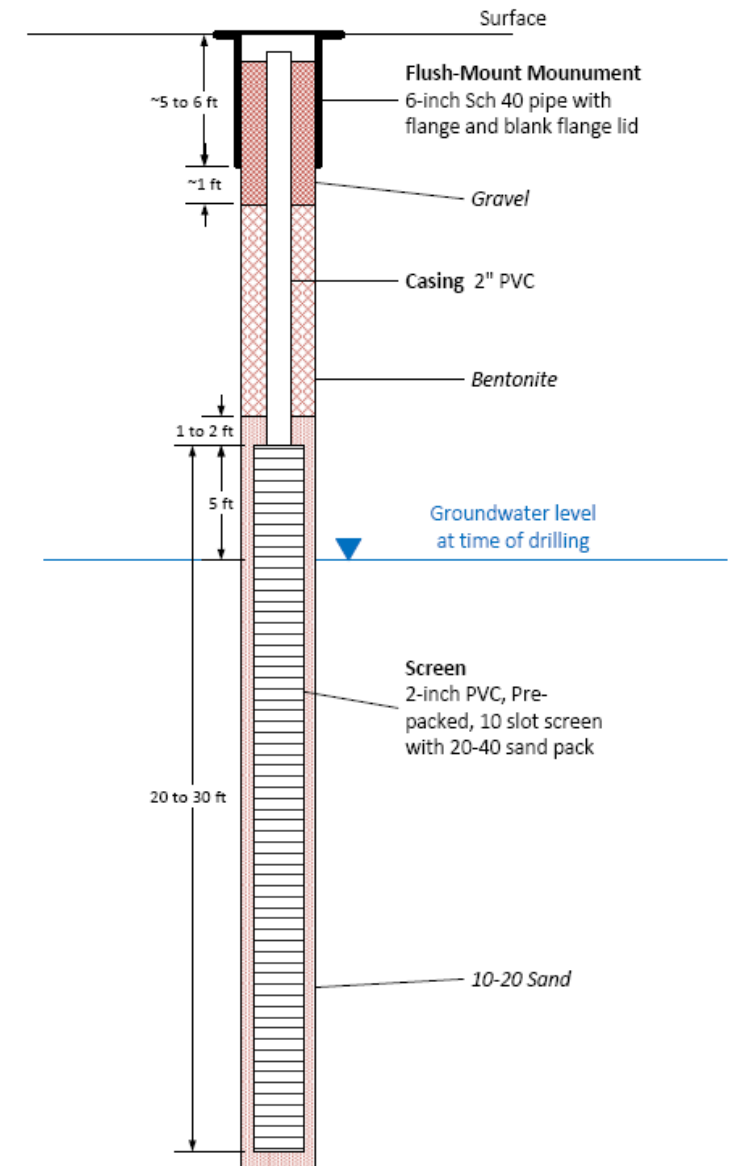
Existing environmental programs proposed for enhancement and extension onto state land to further understand:

- Climate
  - Weather station
- Water Quality, Conditions and Movement
  - Groundwater monitoring wells
  - Surface water flow and quality monitoring
  - Wetlands delineation
- Fish and Wildlife
  - Fish surveys
  - Wildlife observations and surveys



# MONITORING WELLS

- Up to 20 monitoring wells may be installed
  - Monitor changes in groundwater levels over time
  - Ability to sample groundwater quality





# GEOTECHNICAL UNDERSTANDING

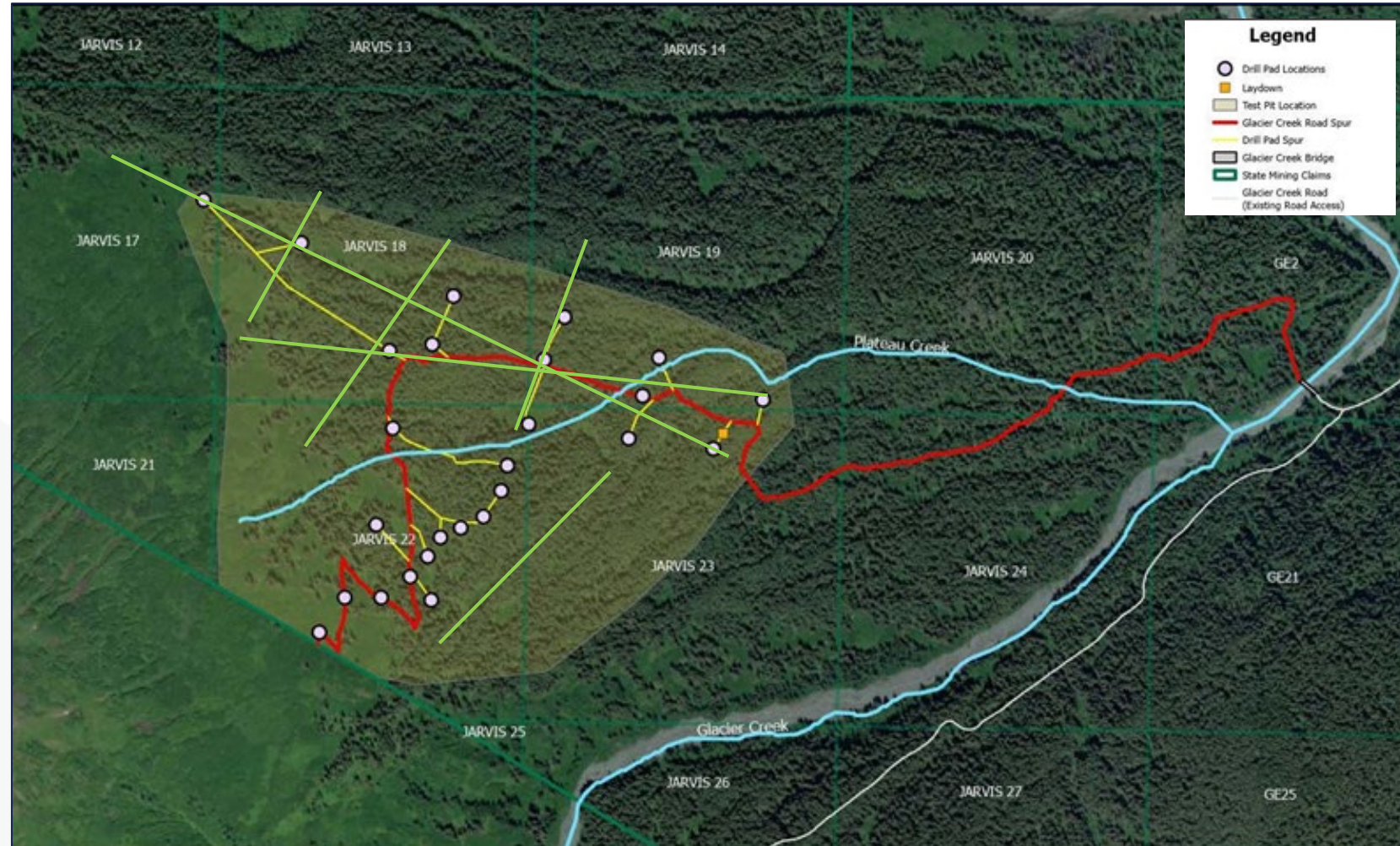
Specific data needed to understand sub-surface conditions

- Test Pits:
  - 40 excavator-bucket-size overburden holes to assess near surface ground conditions
    - pits filled and reclaimed immediately
- Seismic Surveys:
  - 5.5 miles of line clearing
  - Specialized equipment sends sound waves to produce images of shallow rock structure
- Geotechnical Drilling:
  - 33 drill pads developed and reclaimed



# ADDITIONAL FIELD ACTIVITIES

- 6.55 miles of access roads utilizing existing forestry roads where possible
- 5.5 miles of shallow refraction seismic surveys
- 1-acre laydown area for storing and staging of equipment





# **PALMER LOOK AHEAD**

# PALMER PROJECT PROPOSED TIMELINE

2024	2025	2026	2027	2028
Exploration Drilling/Resource Definition				
Engineering Programs				Evaluation
Environmental Studies & Analysis				Environmental Review
Environmental Monitoring				
Engagement & Communication				
Community Perspective				

# THANK YOU

- Palmer Project is still in exploration and evaluation stage
- The Plan of Operations proposes a continuation of current activities
- Public Comment is open until April 24, 2024



<http://notice.alaska.gov/214969>

