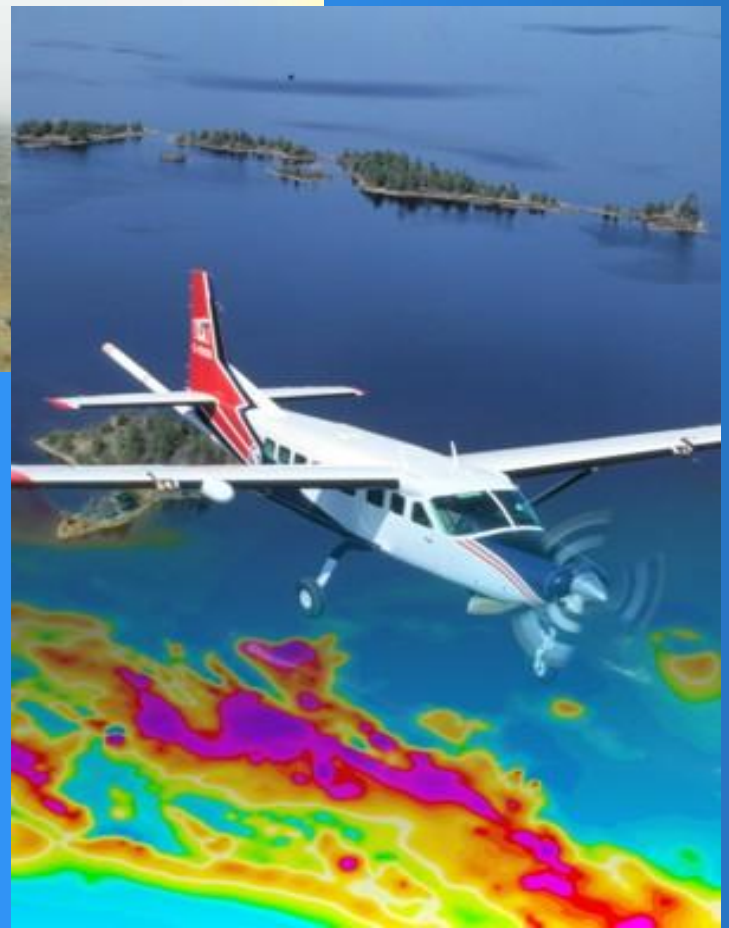
Alaska as a Mineral Exploration Target in a Global Context

Financing for Mine Exploration and Development

Introduction to Mineral Exploration
Life blood of new Mines



Images: Martin Miller

The Mining Cycle

Prospecting

Exploration

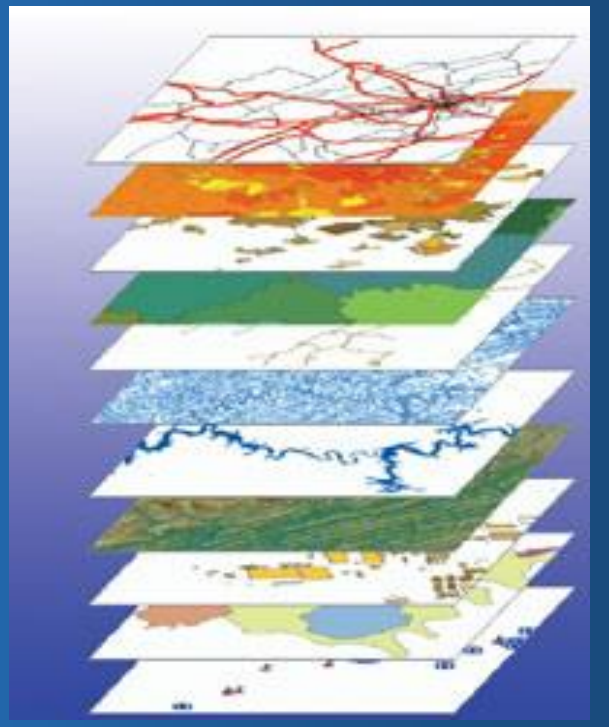
Development

Ore Extraction

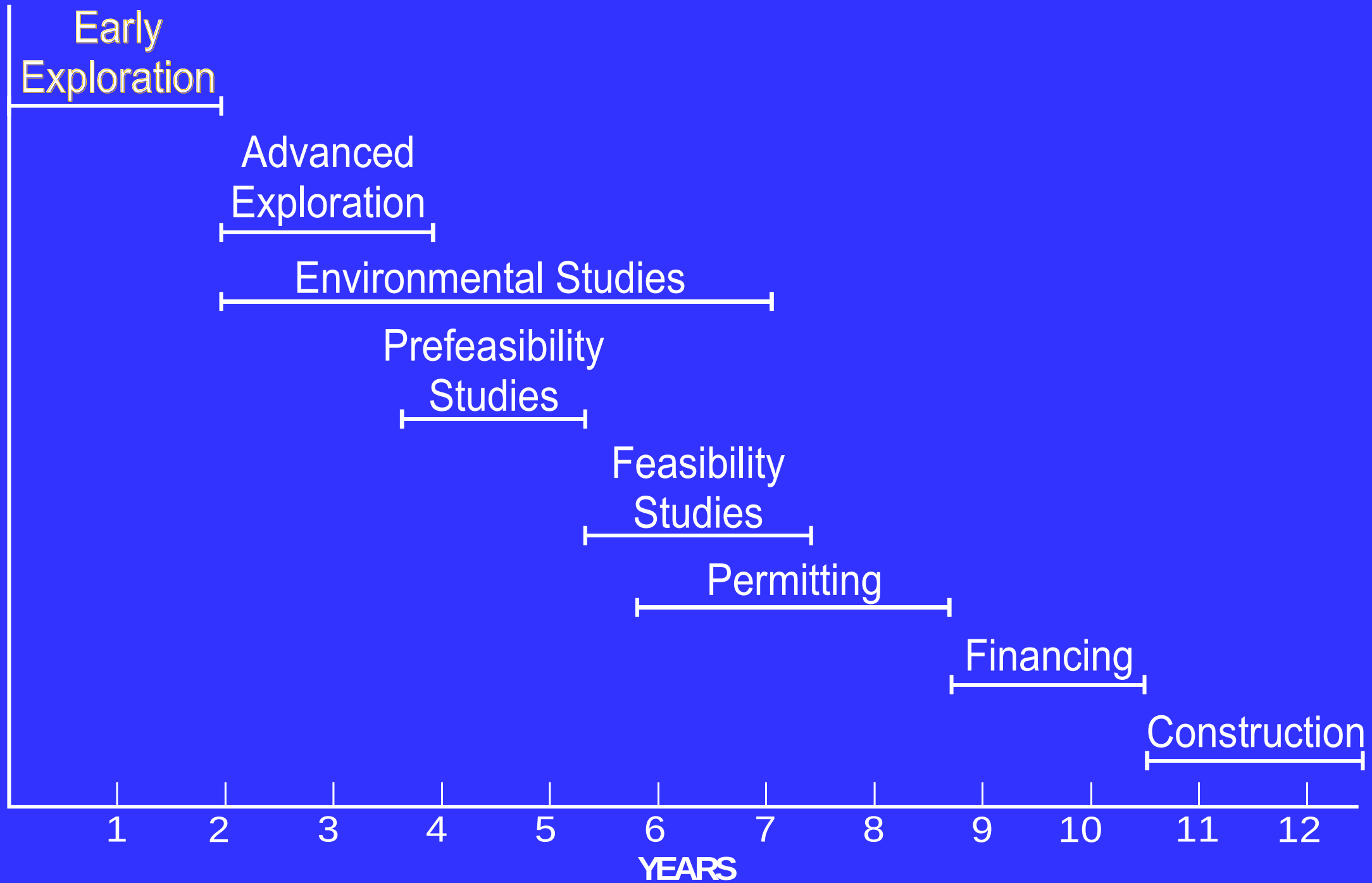
Reclamation

Exploration Steps

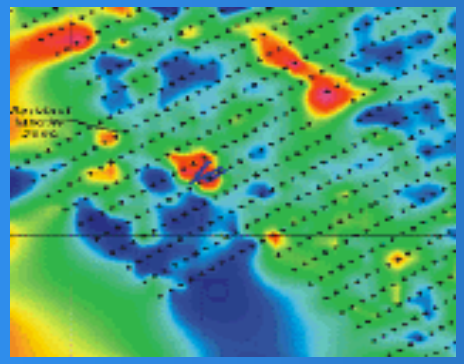
Research, Data Compilation, Synthesis
Mineral right acquisition
Remote Sensing
Prospecting and Field Inspection
Regional Geochemical surveys
Airborne Geophysical Surveys
Detailed Geochemical Surveys
Geological Mapping
Ground-based Geophysical Surveys
Diamond Core Drilling
Deposit Delineation
Feasibility



EXPLORATION AND DEVELOPMENT STAGES

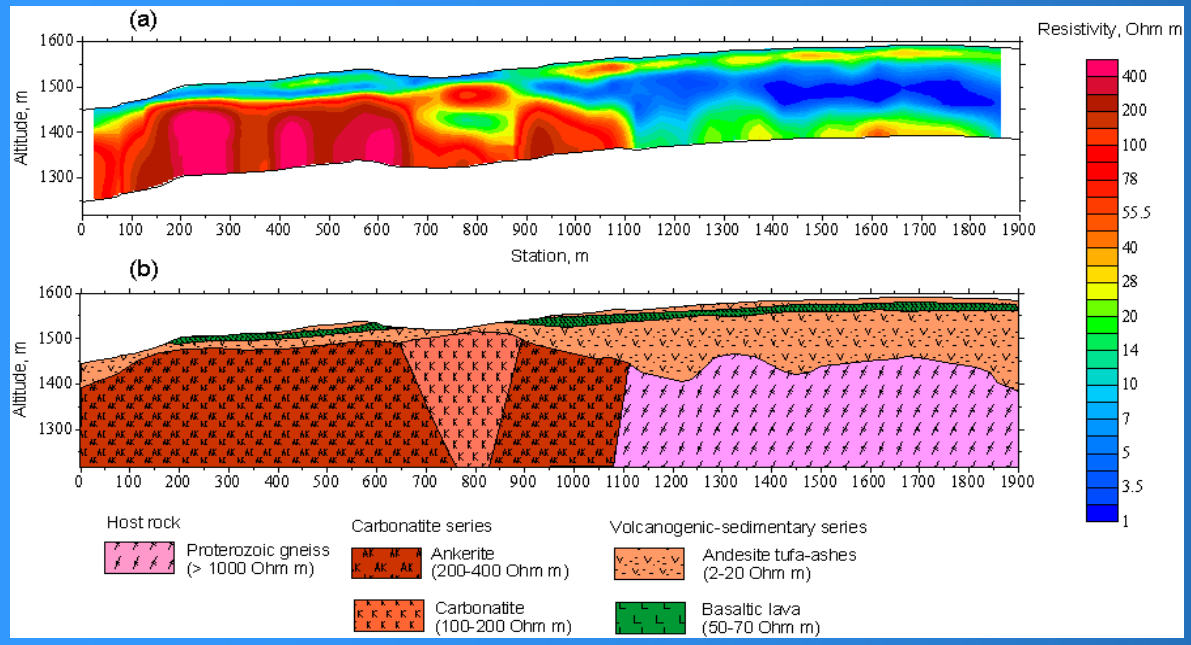


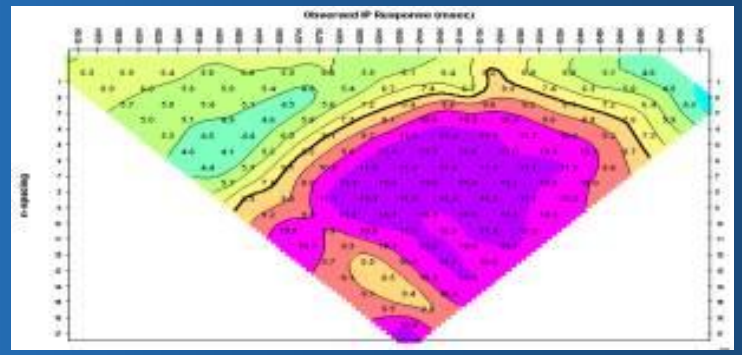
Airborne Geophysics

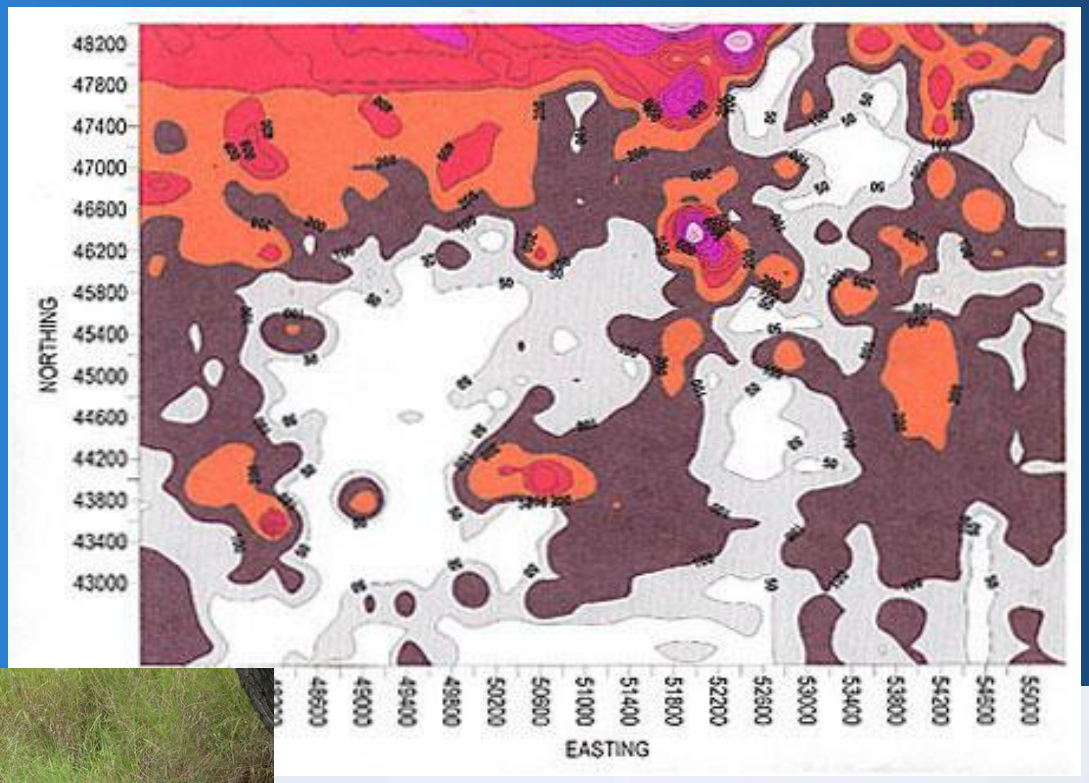


Magnetics
Electromagnetics
Radiometrics
Gravity

Ground-based Geophysics






NORTHING
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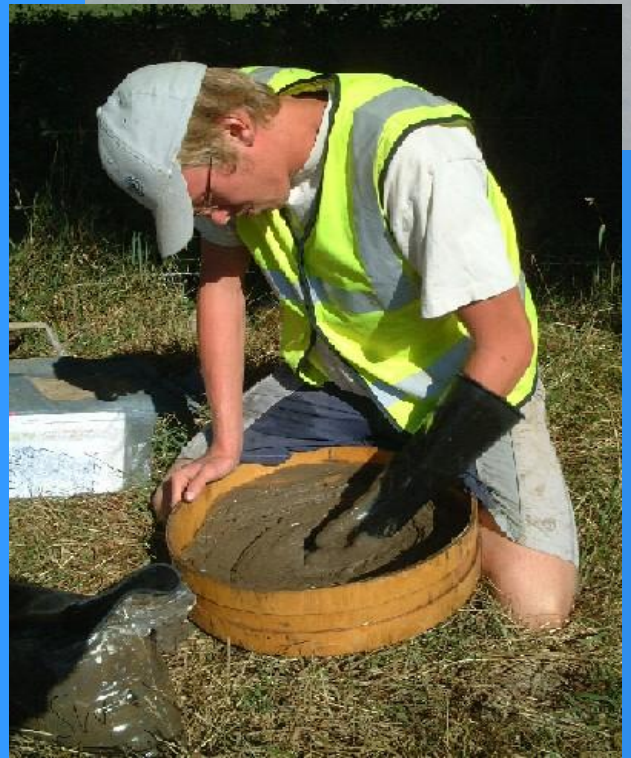
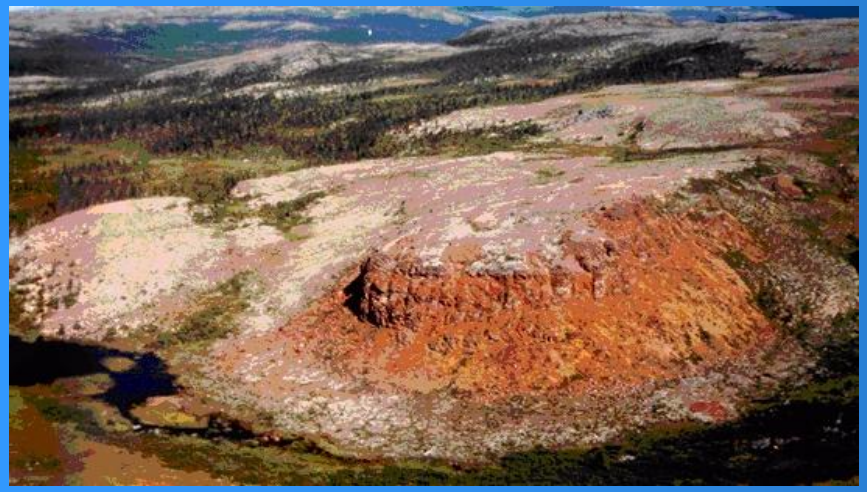
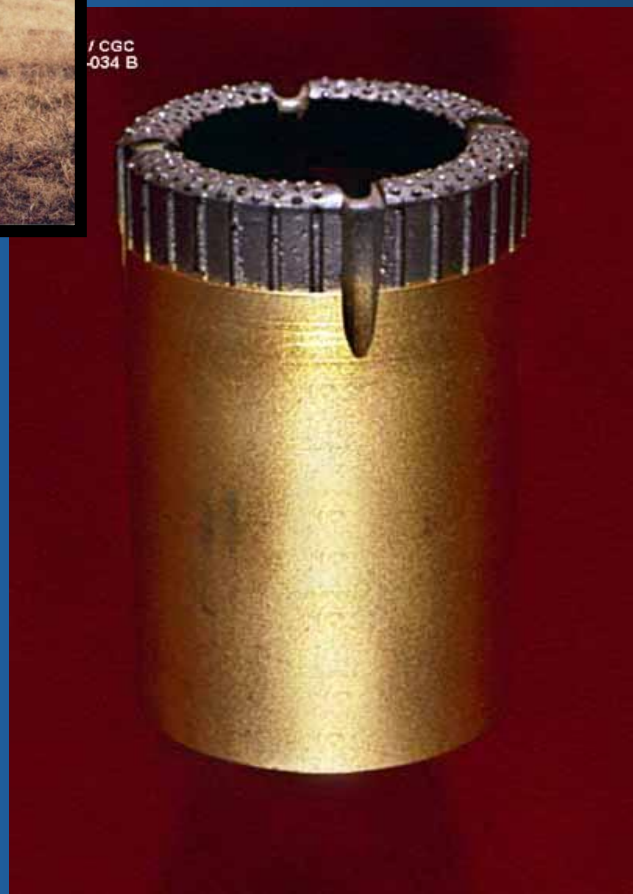


Geological Mapping & Prospecting



Diamond Drilling



KNIFE 304

Alaska as an Exploration Target In a Global Context

Geological Potential

Degree of Previous Exploration

Land Availability and Land Tenure

Accessibility

Investment Climate – Political Risk

Taxation

Regulatory

Cost of Exploration and Development

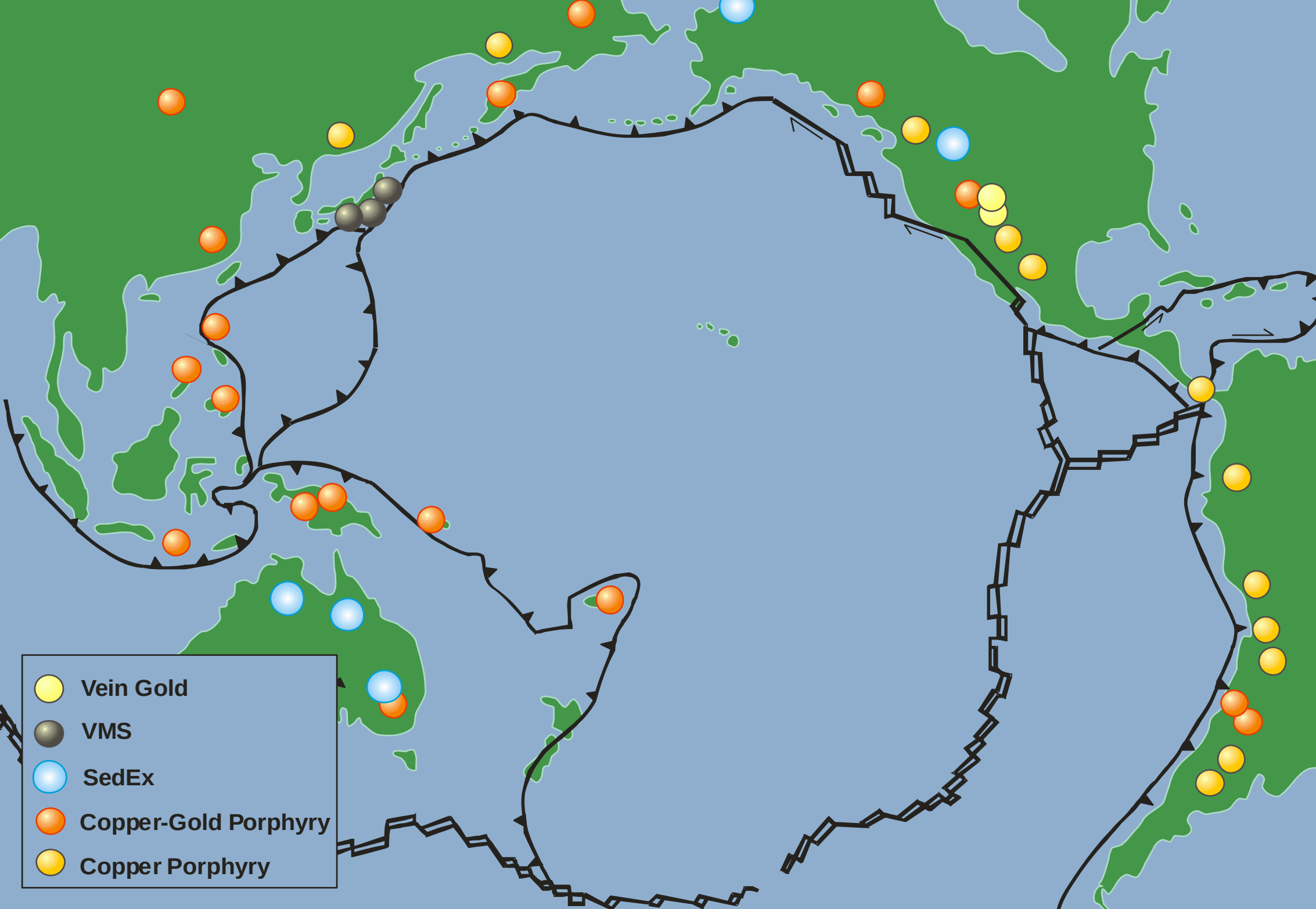
Public Geological Database

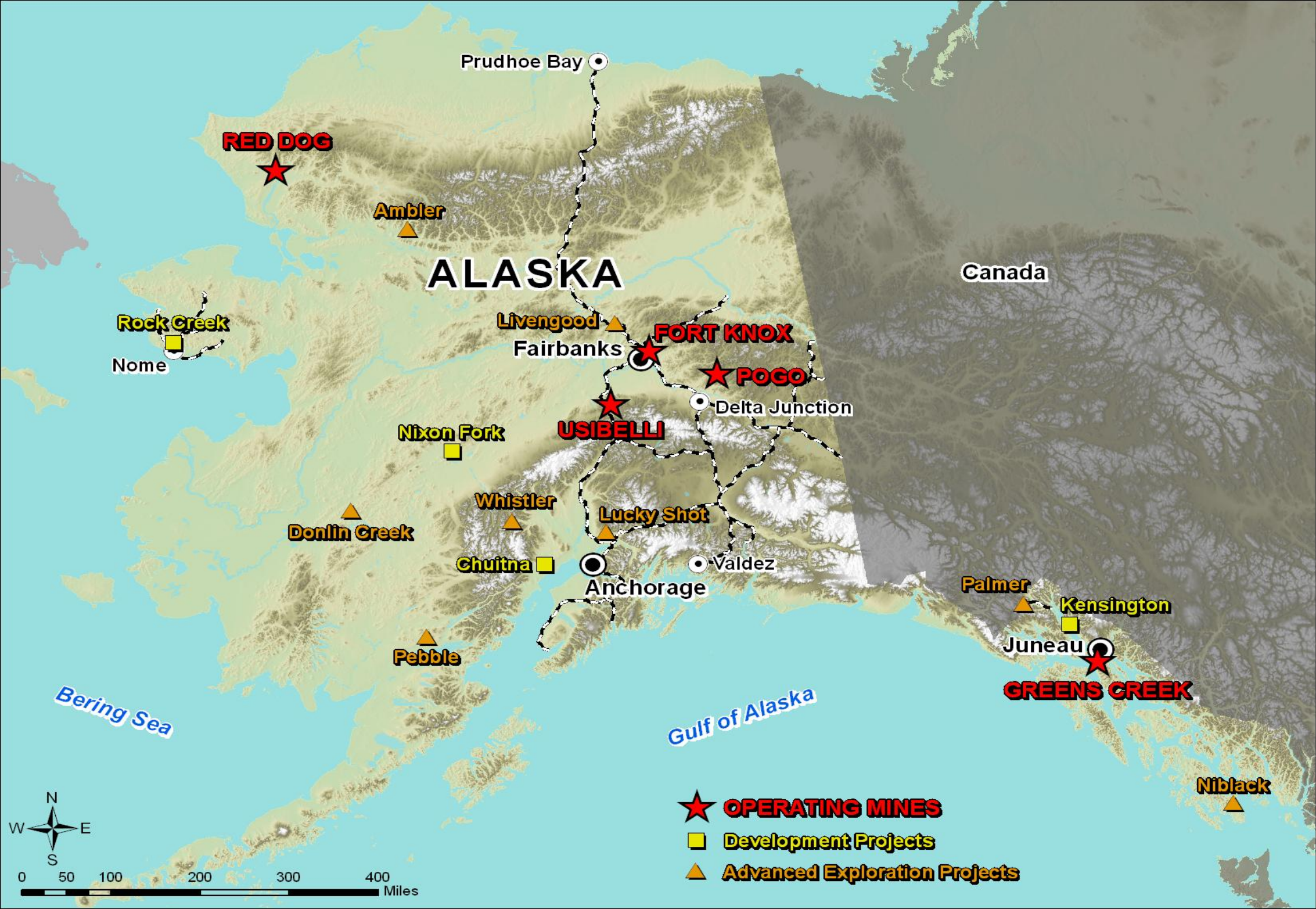
Overall Rating:

Alaska as an Exploration Target In a Global Context

Geological Potential	Very favorable
Degree of Previous Exploration	Very favorable
Land Availability and Land Tenure	
Accessibility	
Investment Climate – Political Risk	
Taxation	
Regulatory	
Cost of Exploration and Development	
Public Geological Database	

Overall Rating:


Vein Gold
VMS
SedEx
Copper-Gold Porphyry
Copper Porphyry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POGO
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USIBELLI
Nixon Fork
Whistler
Donlin Creek
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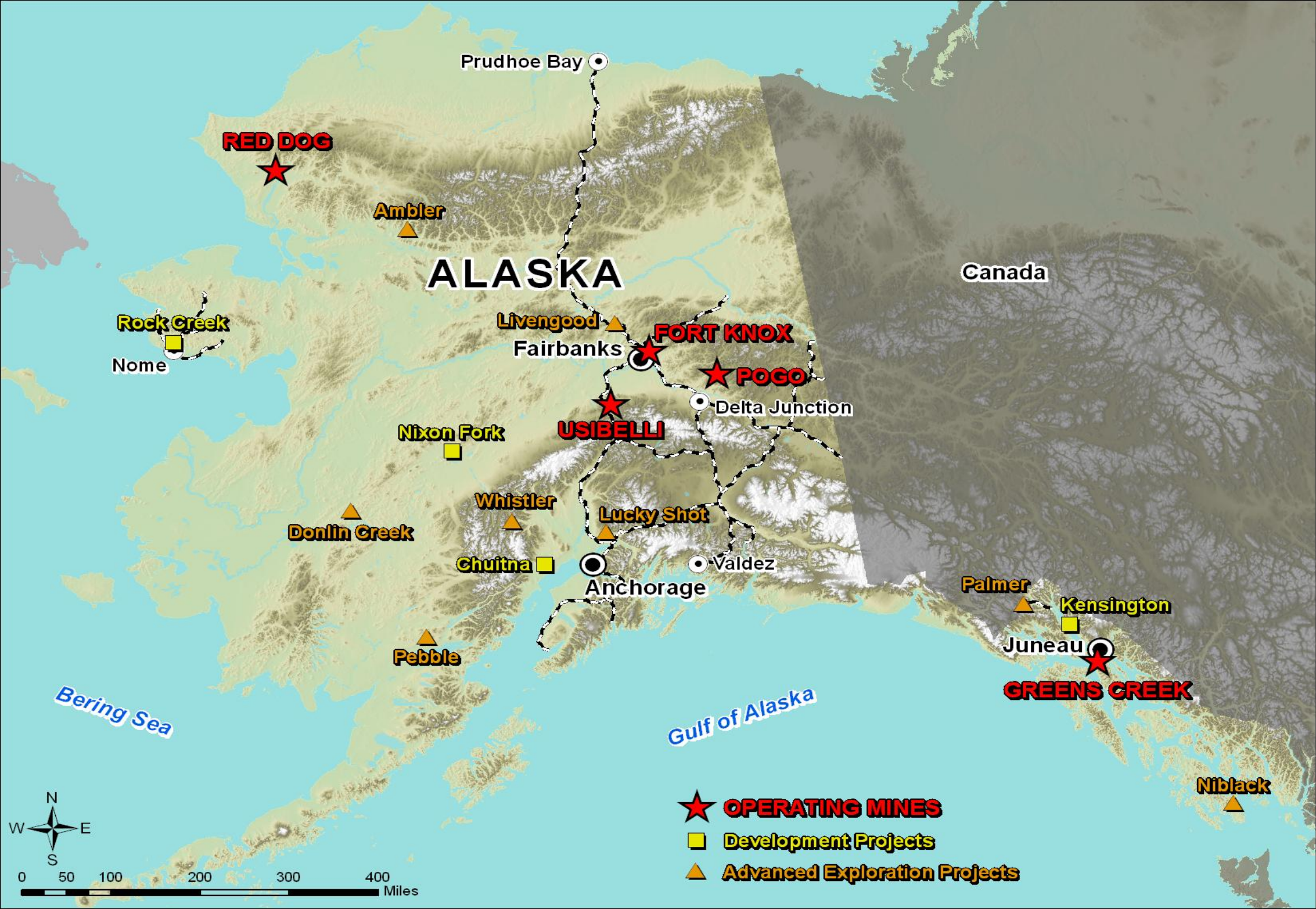
OPERATING MINES
Development Projects
Advanced Exploration Projects

Red Dog Mine - Zinc

Teck

NANA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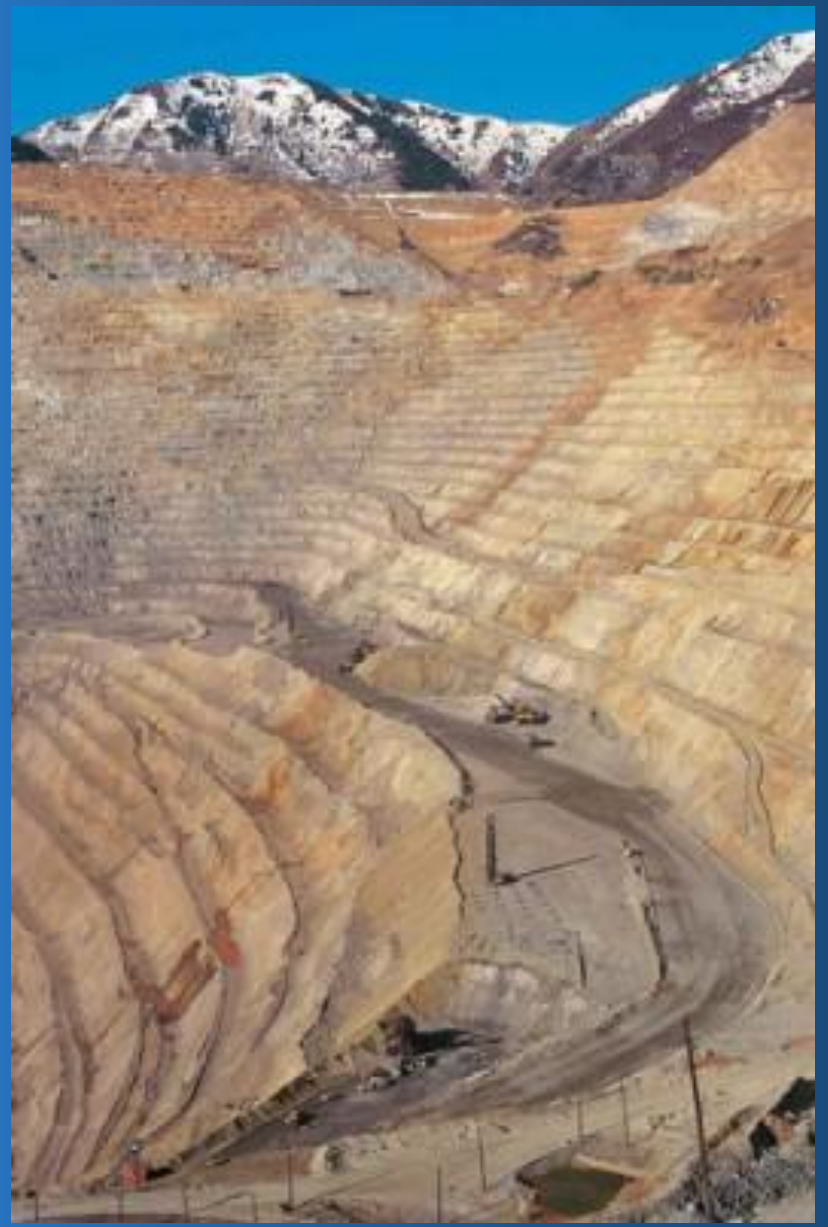
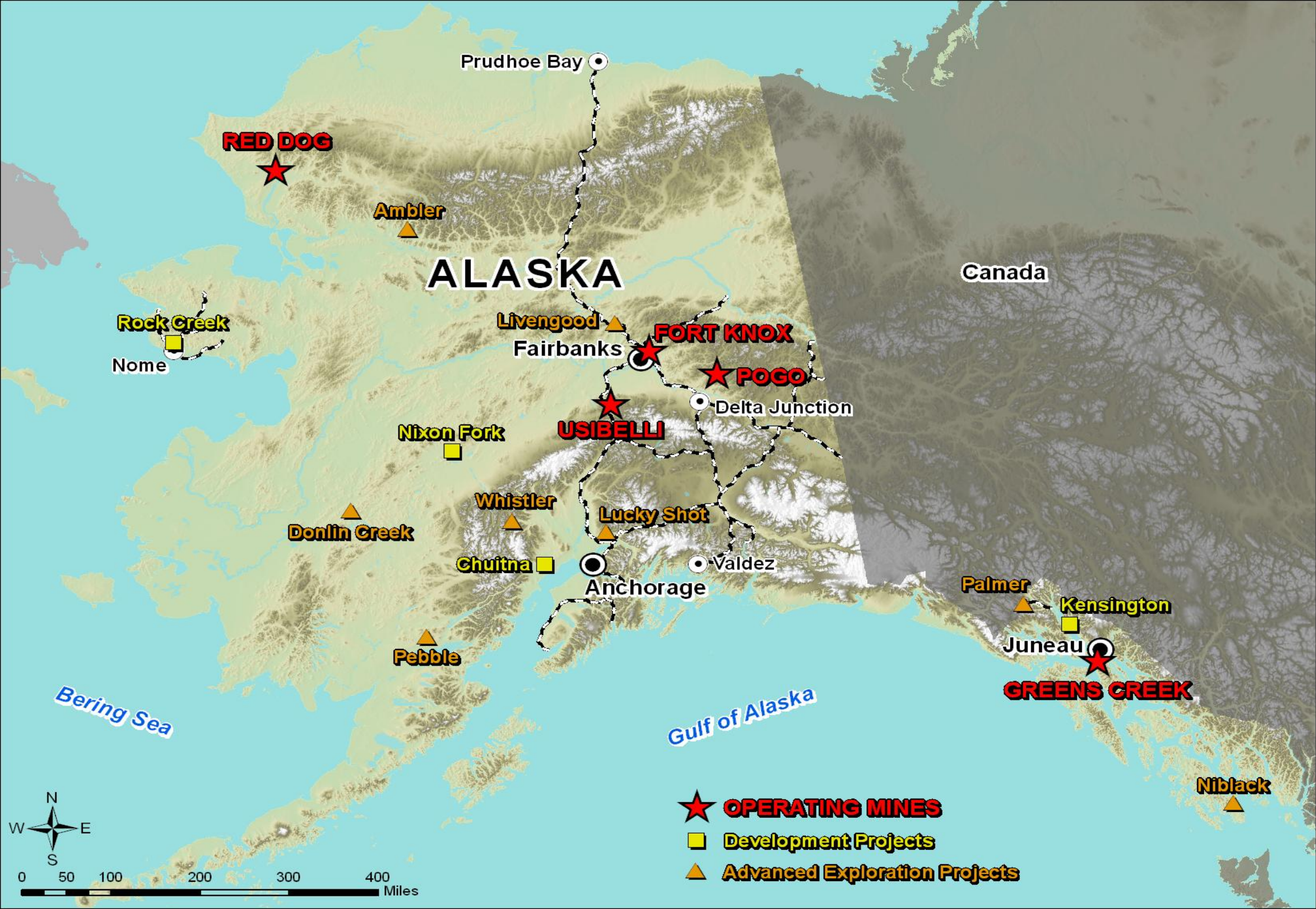
Fort Knox Mine - Gold

KINROSS

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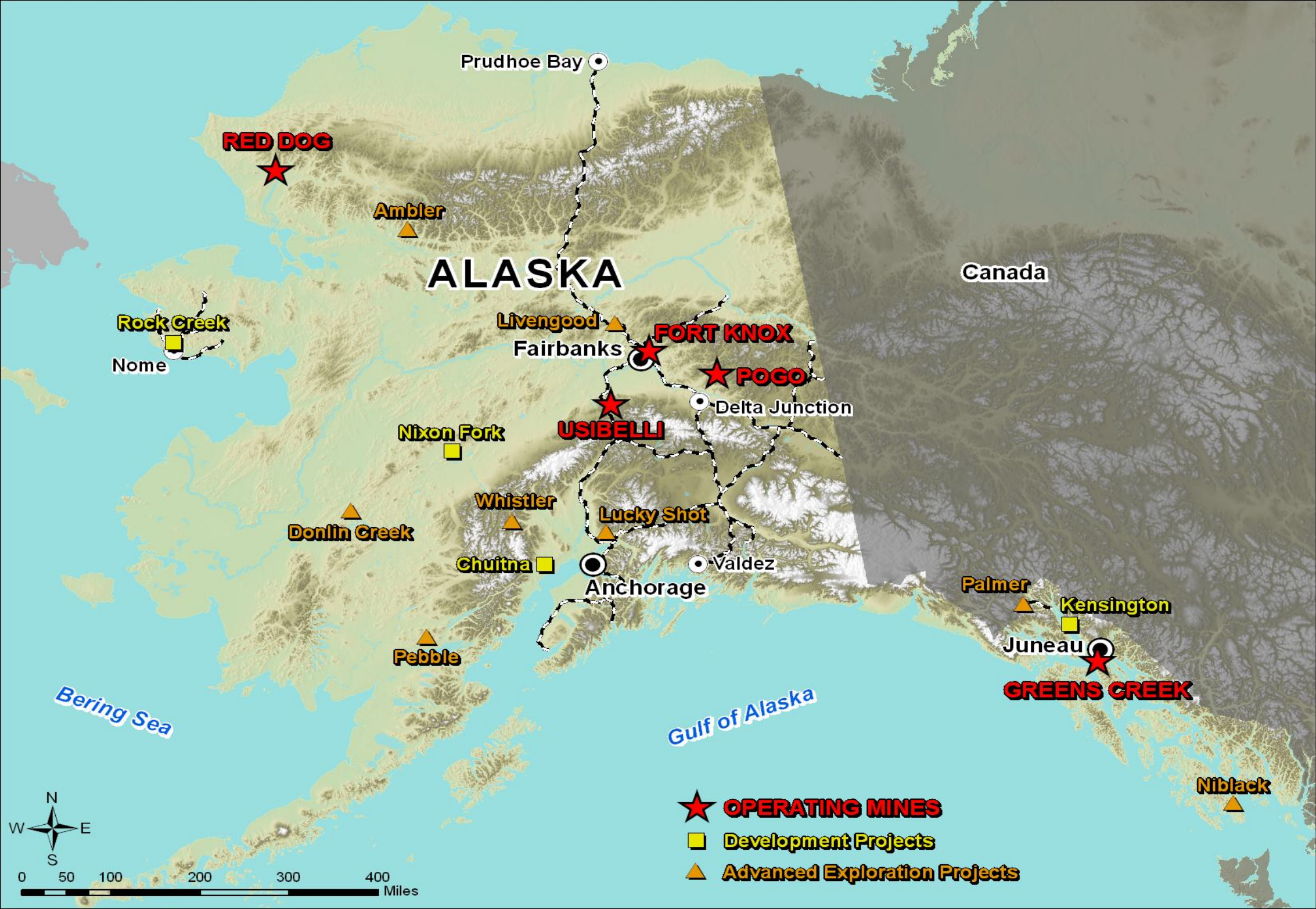
Development Projects
Advanced Exploration Projects

Green’s Creek

Polymetallic VMS Ag Rich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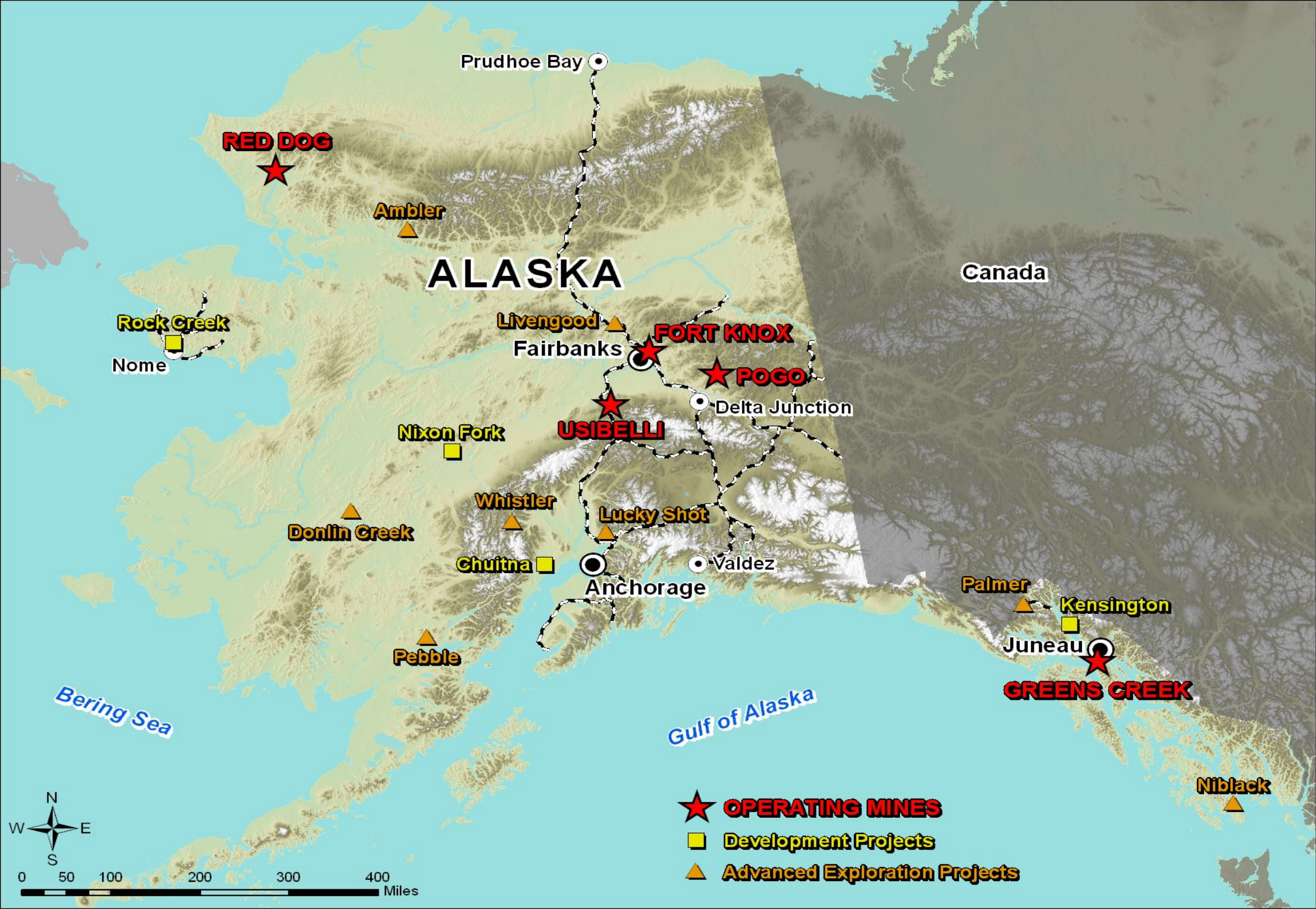
OPERATING MINES
Development Projects
Advanced Exploration Projects

Pogo Mine - Gold

SUMITOMO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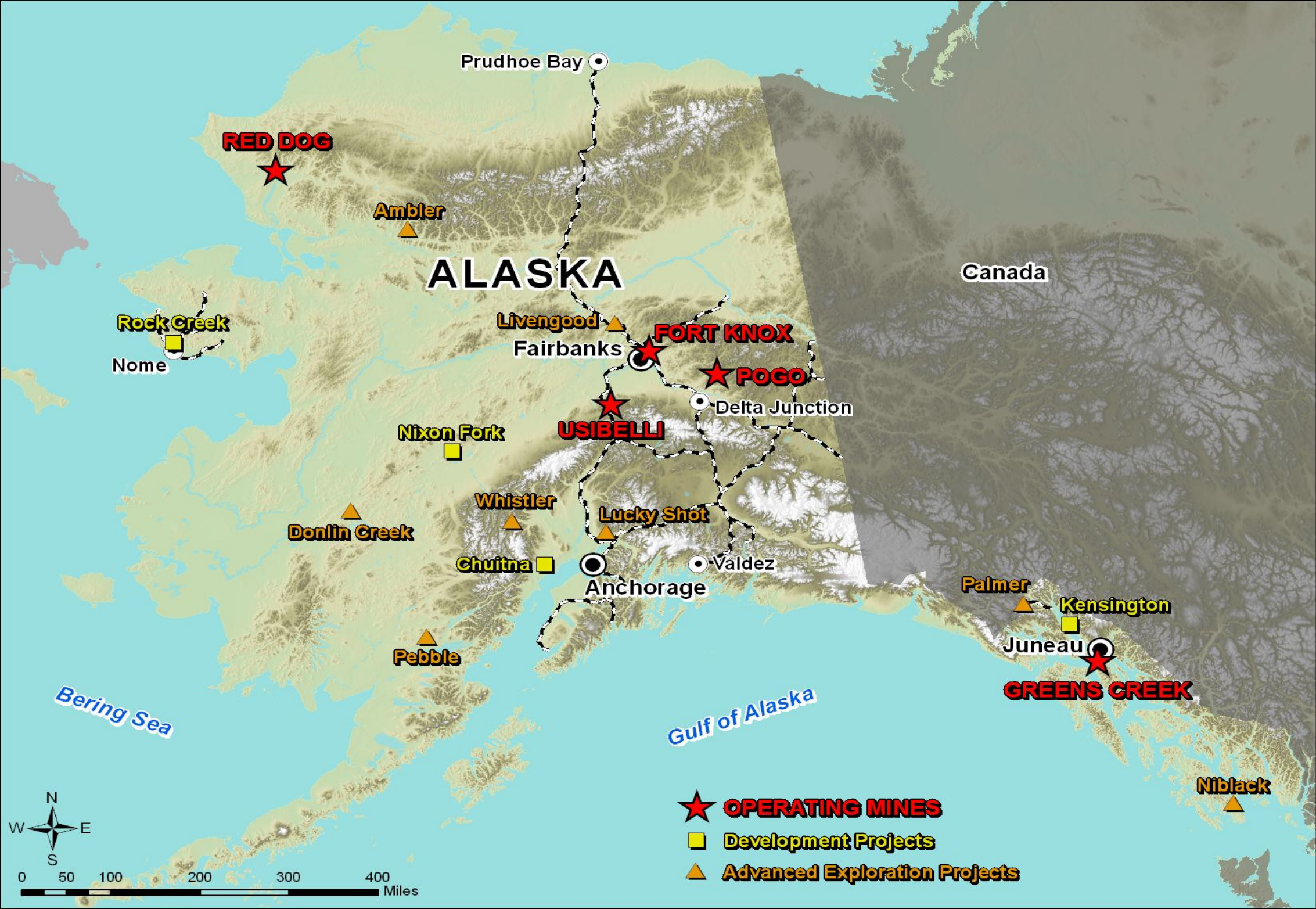
Usibelli Coal Mine - Coal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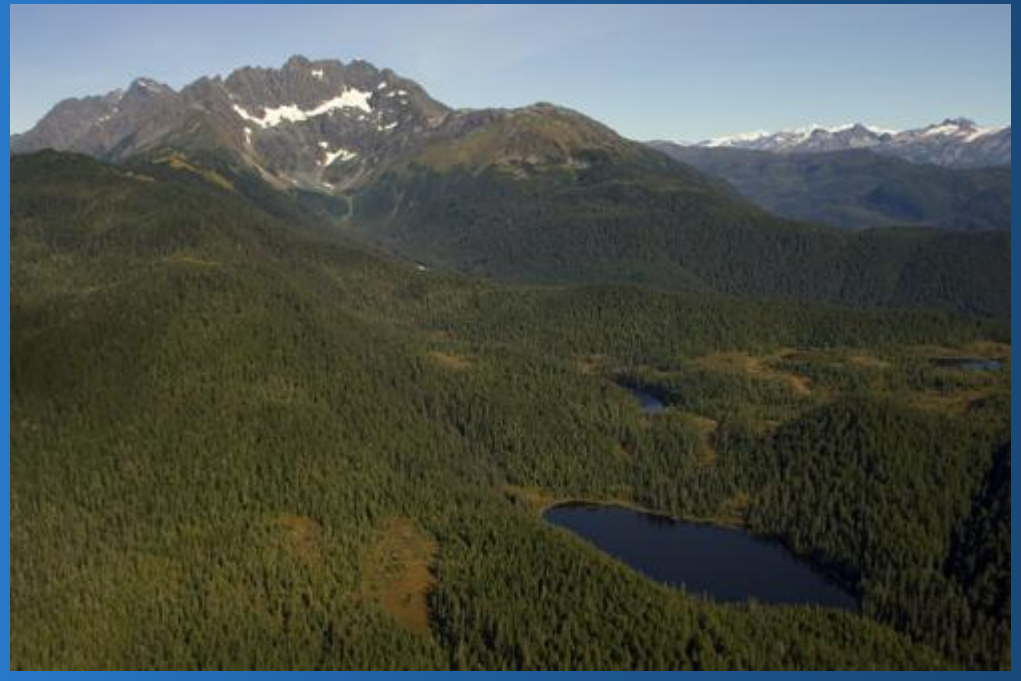
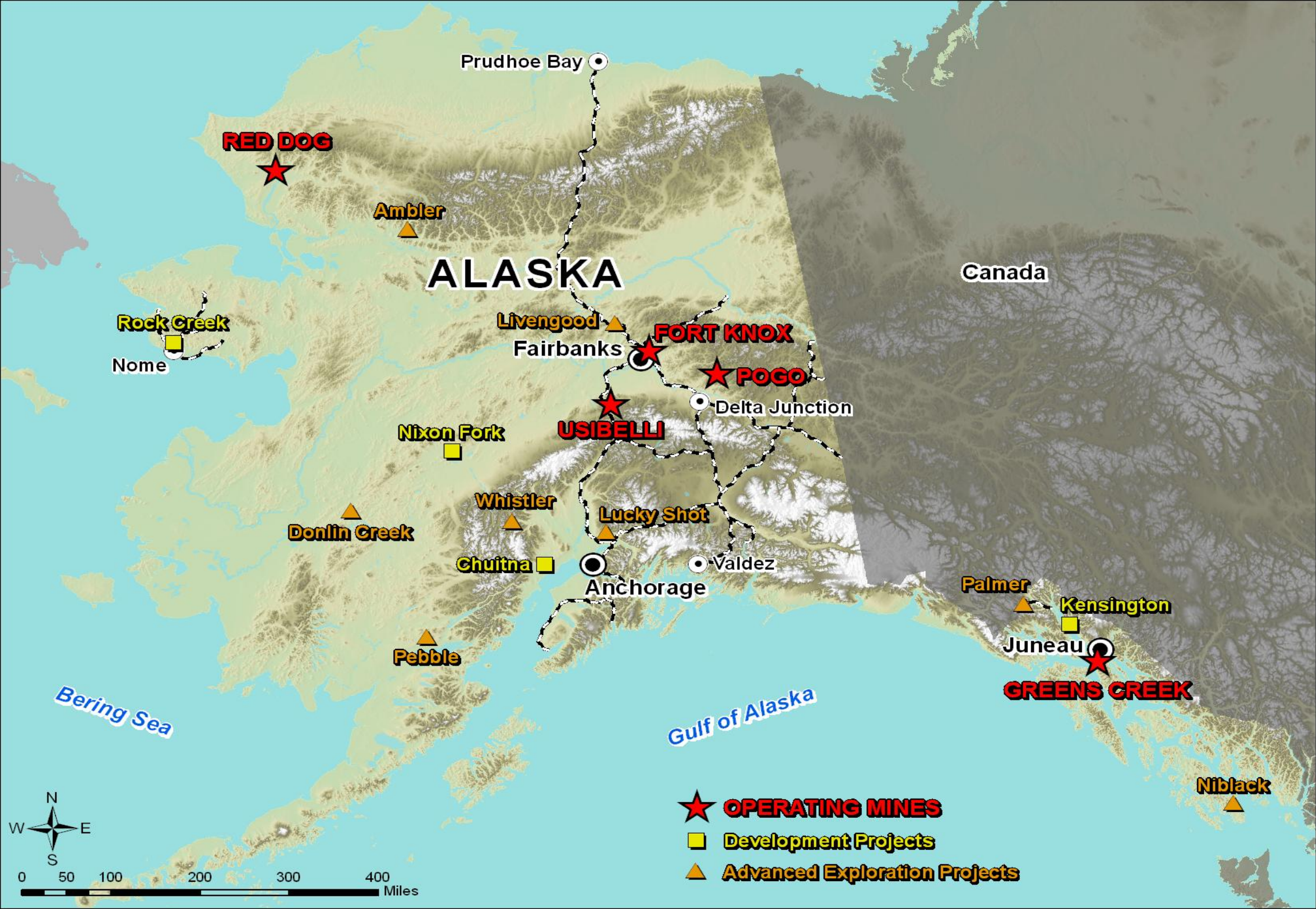
Development Projects
Advanced Exploration Projects

Kensington Mine – Gold
(in construction)

COEUR
ALASKA
KENSINGTON GOLD MINE
producing & protecting

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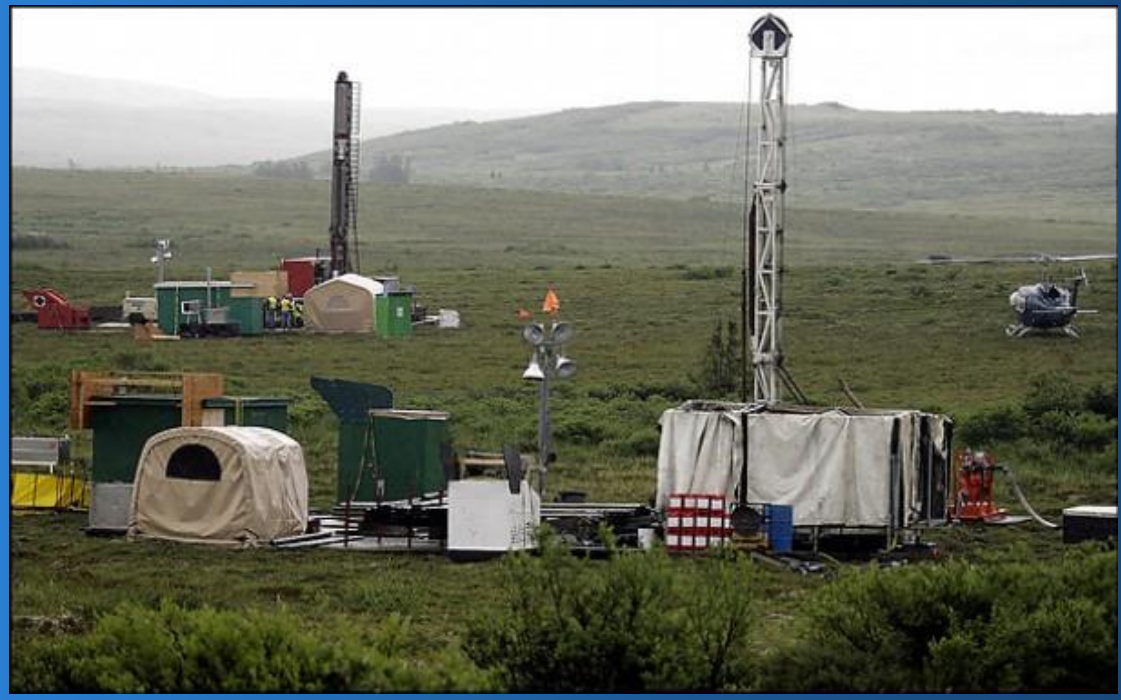
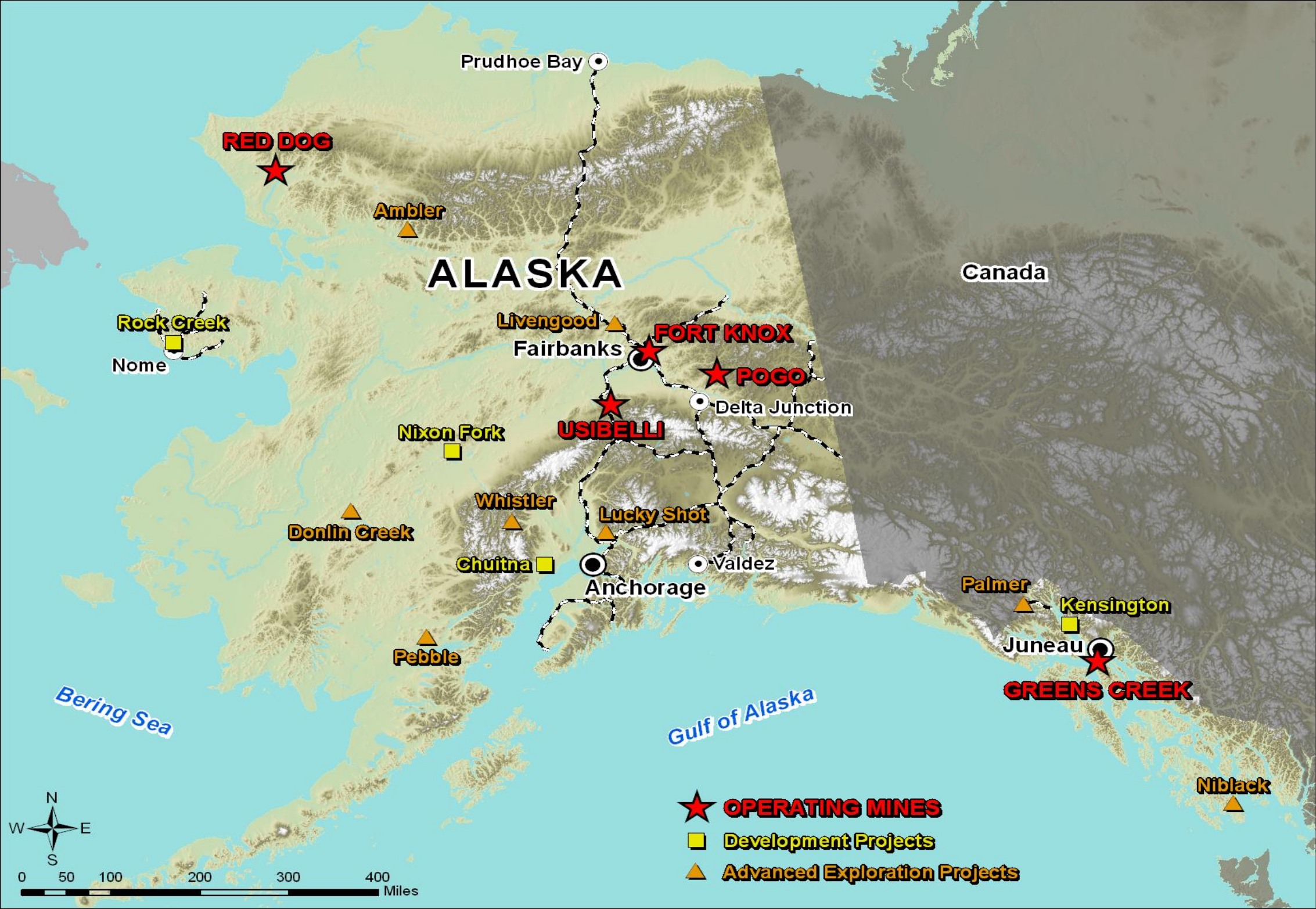


Pebble Project – Copper, Gold

Advanced Exploration Project

THE pebble PARTNERSHIP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Advanced Exploration Projects

Donlin Creek – Gold

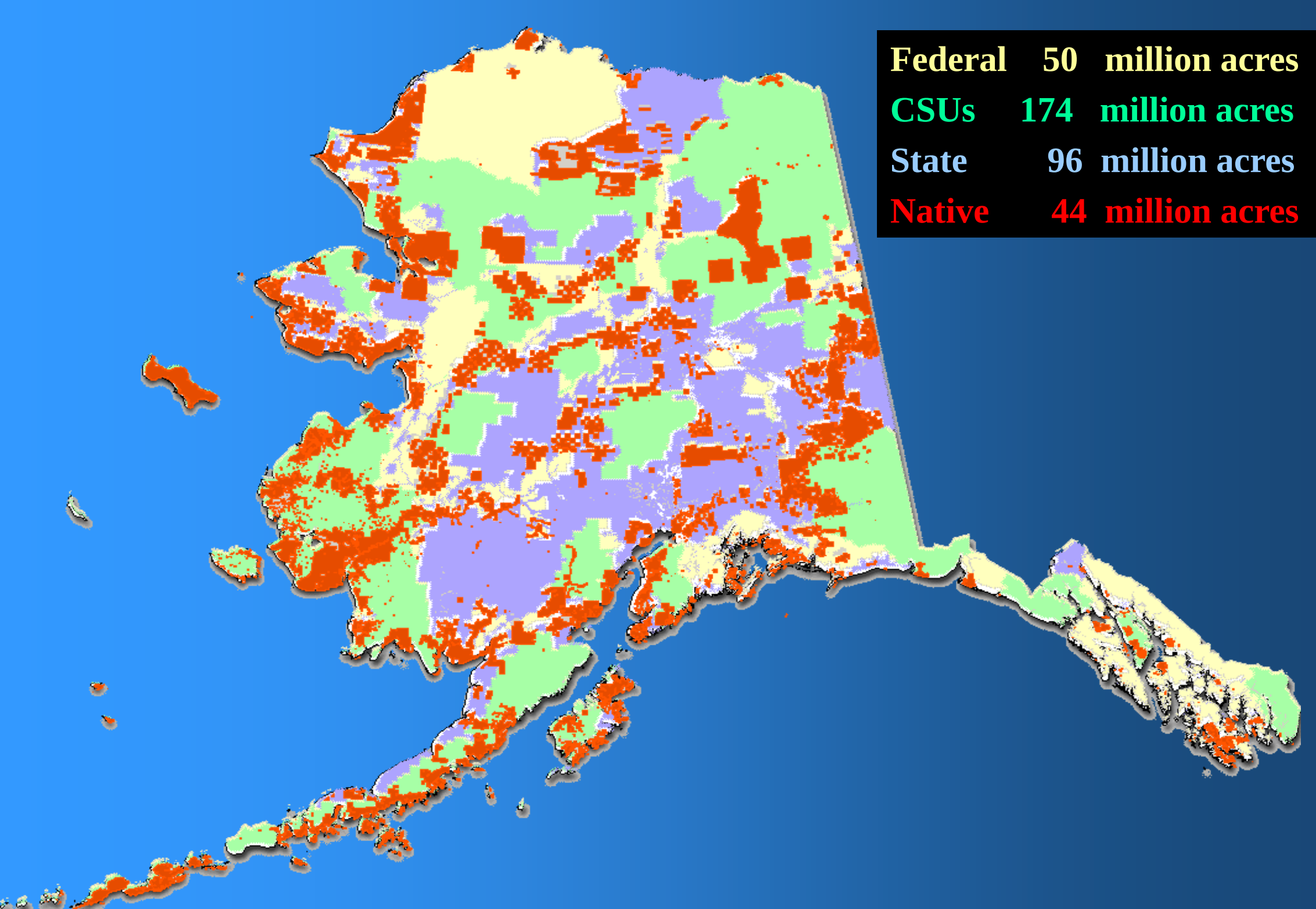
Advanced Exploration Project

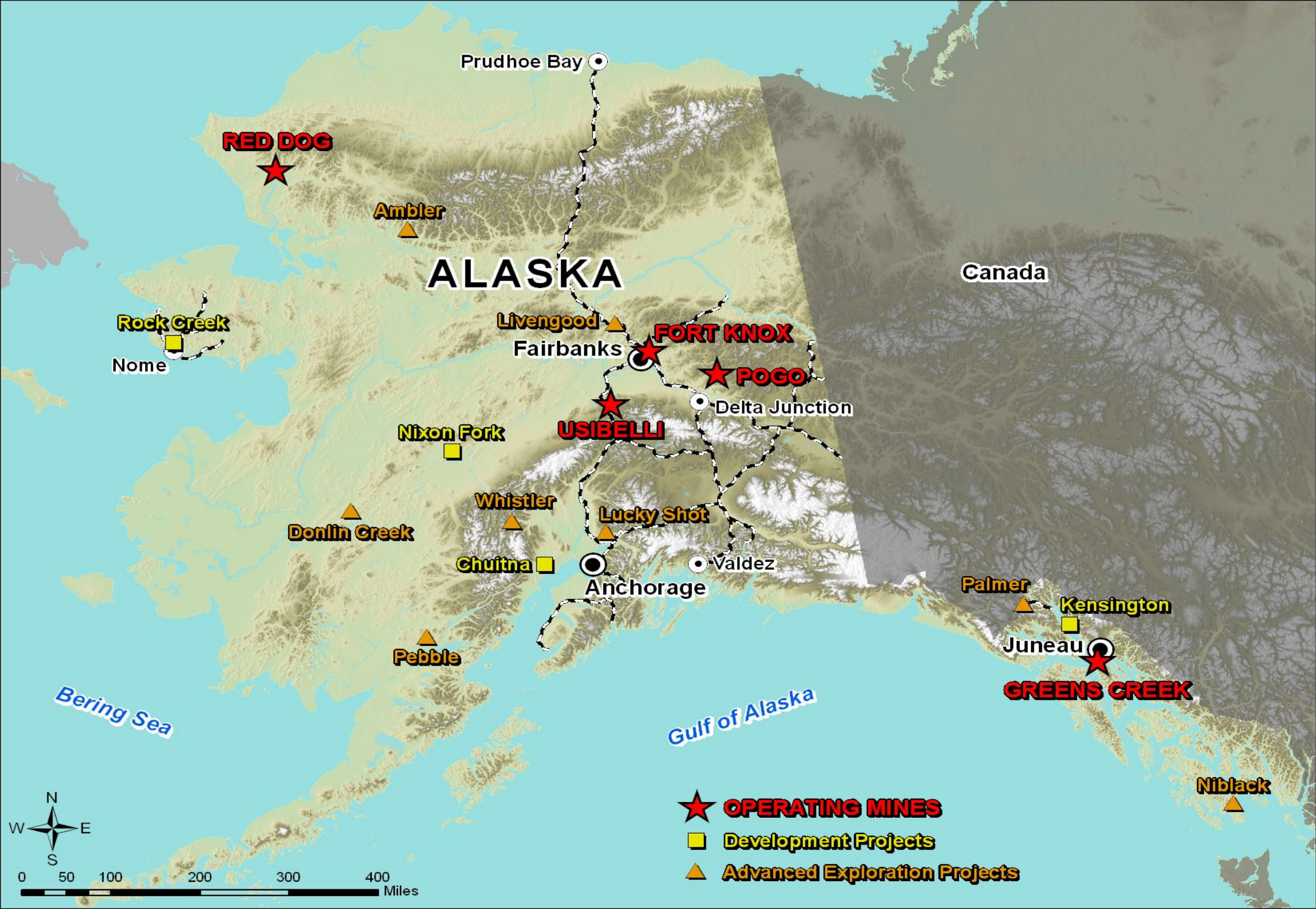
DONLIN CREEK LLC
A BARRICK/NOVAGOLD COMPANY

Alaska as an Exploration Target In a Global Context

Geological Potential	Very favorable
Degree of Previous Exploration	Very favorable
Land Availability and Land Tenure	Favorable
Accessibility	Unfavorable
Investment Climate – Political Risk	
Taxation	
Regulatory	
Cost of Exploration and Development	
Public Geological Database	

Overall Rating:


Federal 50 million acres
CSUs 174 million acres
State 96 million acres
Native 44 million acres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Alaska as an Exploration Target In a Global Context

Geological Potential	Very favorable
Degree of Previous Exploration	Very favorable
Land Availability and Land Tenure	Favorable
Accessibility	Unfavorable
Investment Climate – Political Risk	Questionable, Schizo
Taxation	
Regulatory	
Cost of Exploration and Development	
Public Geological Database	

Overall Rating:

Article 8 - Natural Resources
§ 1. Statement of Policy

It is the policy of the State to encourage the settlement of its land and the development of its resources by making them available for maximum use consistent with the public interest.

Mining News: Suit worries natural resources industry

Trustees for Alaska sues state, claiming DNR and the Legislature created a scheme to skirt public comment of water use permits

Trustees for Alaska File Suit: Exploration permits could be suspended as a result of lawsuit filed today

Alaska as an Exploration Target In a Global Context

Geological Potential	Very favorable
Degree of Previous Exploration	Very favorable
Land Availability and Land Tenure	Favorable
Accessibility	Unfavorable
Investment Climate – Political Risk	Questionable
Taxation	Favorable, Risky
Regulatory	
Cost of Exploration and Development	
Public Geological Database	

Overall Rating:

Alaska as an Exploration Target In a Global Context

Geological Potential	Very favorable
Degree of Previous Exploration	Very favorable
Land Availability and Land Tenure	Favorable
Accessibility	Unfavorable
Investment Climate – Political Risk	Questionable
Taxation	Favorable, Risky
Regulatory	Stringent, Cumbersome
Cost of Exploration and Development	
Public Geological Database	

Overall Rating:

Alaska as an Exploration Target In a Global Context

Geological Potential	Very favorable
Degree of Previous Exploration	Very favorable
Land Availability and Land Tenure	Favorable
Accessibility	Unfavorable
Investment Climate – Political Risk	Questionable
Taxation	Favorable, Risky
Regulatory	Stringent, Cumbersome
Cost of Exploration and Development	High
Public Geological Database	

Overall Rating:

Alaska as an Exploration Target In a Global Context

Geological Potential	Very favorable
Degree of Previous Exploration	Very favorable
Land Availability and Land Tenure	Favorable
Accessibility	Unfavorable
Investment Climate – Political Risk	Questionable
Taxation	Favorable, Risky
Regulatory	Stringent, Cumbersome
Cost of Exploration and Development	High
Public Geological Database	Unfavorable

Overall Rating:

Alaska as an Exploration Target In a Global Context

Geological Potential	Very favorable
Degree of Previous Exploration	Very favorable
Land Availability and Land Tenure	Favorable
Accessibility	Unfavorable
Investment Climate – Political Risk	Questionable
Taxation	Favorable, Risky
Regulatory	Stringent, Cumbersome
Cost of Exploration and Development	High
Public Geological Database	Unfavorable
Overall Rating:	Attractive

Mineral Exploration and Development Financing

Big Companies

Anglo American Britain – South Africa
Anglo Gold Ashanti – South Africa
Kinross – Canada
Rio Tinto – Britain
Teck – Canada
Barrick - Canada
Hecla – USA
BHP - Australia
Couer – USA
Newont – USA
Sumitomo - Japan
Usibelli – USA (Alaska)

Financing for exploration in Alaska
is derived from production
at mines around the world

Mineral Exploration and Development Financing

Small Companies – the Explorers, small scale developers

NovaGold – Canada
International Tower Hill – Canada (USA)
Full Metal Minerals – Canada
Northern Dynasty Mines - Canada
Quaterra – Canada (USA)
Millrock – Canada (USA)
Kiska – Canada
U-Core – Canada
International Freegold – Canada
Fire River – Canada

Extensive, constantly changing list

Financing for exploration in Alaska is derived from selling shares of company stock to investors

Mineral Exploration and Mine Financing Centers

Growth through discovery of high value metallic mineral deposits in Alaska and Arizona

MILLROCK RESOURCES INC

TSXV – MRO
www.millrockresources.com

Project Generator – Joint Venture Business Model

Why Should Alaska Look for Mines?

The End is Near

Mines will not replace oil

Mines can be a major contributor – see AMA pamphlet

Exploration is the life blood for new mines

Mineral Exploration Expenditures 2009: 160 million
2008: 240 million

There could be a lot more mines if exploration stimulated

Cyclic business
Market dependent
Perception dependent - open for business?

Marketing
Send a message

Alaska Minerals Commission Recommendations

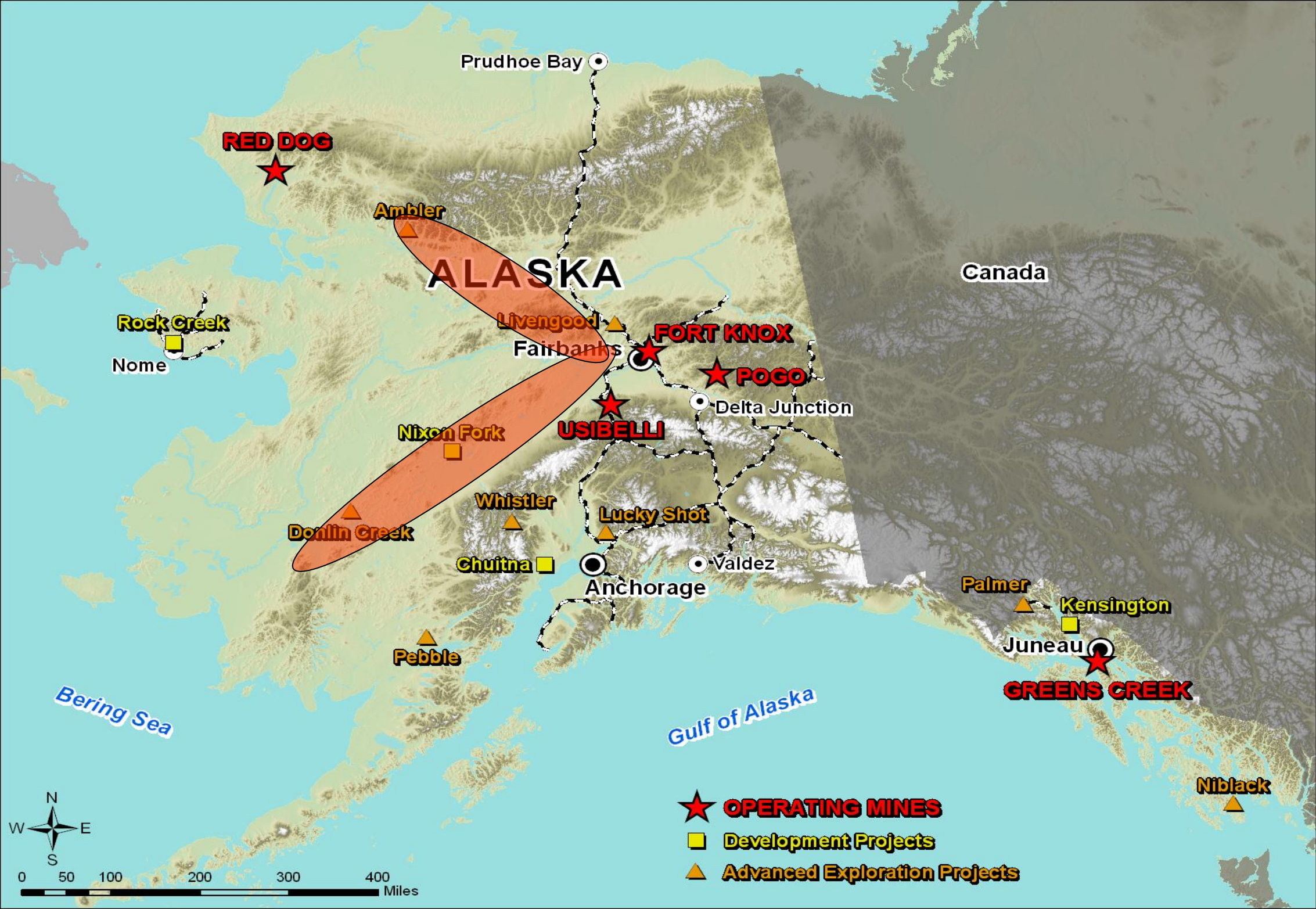
Bring energy infrastructure to western and southwestern Alaska

Build a road to western Alaska

Expand low-cost base load energy on the existing electrical grid

Reject harmful and unnecessary regulatory and legal agendas

Reaffirm mining as a cornerstone industry for Alaska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Development Projects
Advanced Exploration Projects

The biggest deterrent to mine exploration and development financing is obstructionist anti-development groups, and the fear that Alaska government will change the rules.