



# Mining Industry Update

Joint House/Senate Resources Committee  
February 13, 2018





- ✓ Mining's Benefits for Alaska and Alaskans
  - Red Dog case study
- ✓ Expansion potential: what's holding us back?
  - Economics
  - Uncertainty
- ✓ Environmental safeguards
  - Perception vs. reality



# Benefits to Alaska: jobs

- 4,400 direct jobs
- 9,000 total direct and indirect jobs
- \$700 million total payroll
- Average annual wage of \$108,600
- Residents of 55+ communities
- \$580 million in contracts for 600+ AK businesses



# Benefits to Alaska Native Corporations



- 7(i) and 7(j) royalty sharing:
  - \$1.5 billion to NANA (1982-2017), of which \$1 billion shared
  - \$2 million to Calista in 2016
- Jobs for shareholders:
  - Red Dog 55%
  - Upper Kobuk Minerals Projects 59%
- Business partnerships



# Local and State Government Revenue

2017

- \$34 million to local governments (largest taxpayers in Juneau, Fairbanks and Northwest Arctic)
- \$61 million to state government
- \$49 million in other state government-related revenue



# Alaska Permanent Fund

**Corpus:** 25-50% of lease rentals and royalties from mines on state land is deposited into Permanent Fund

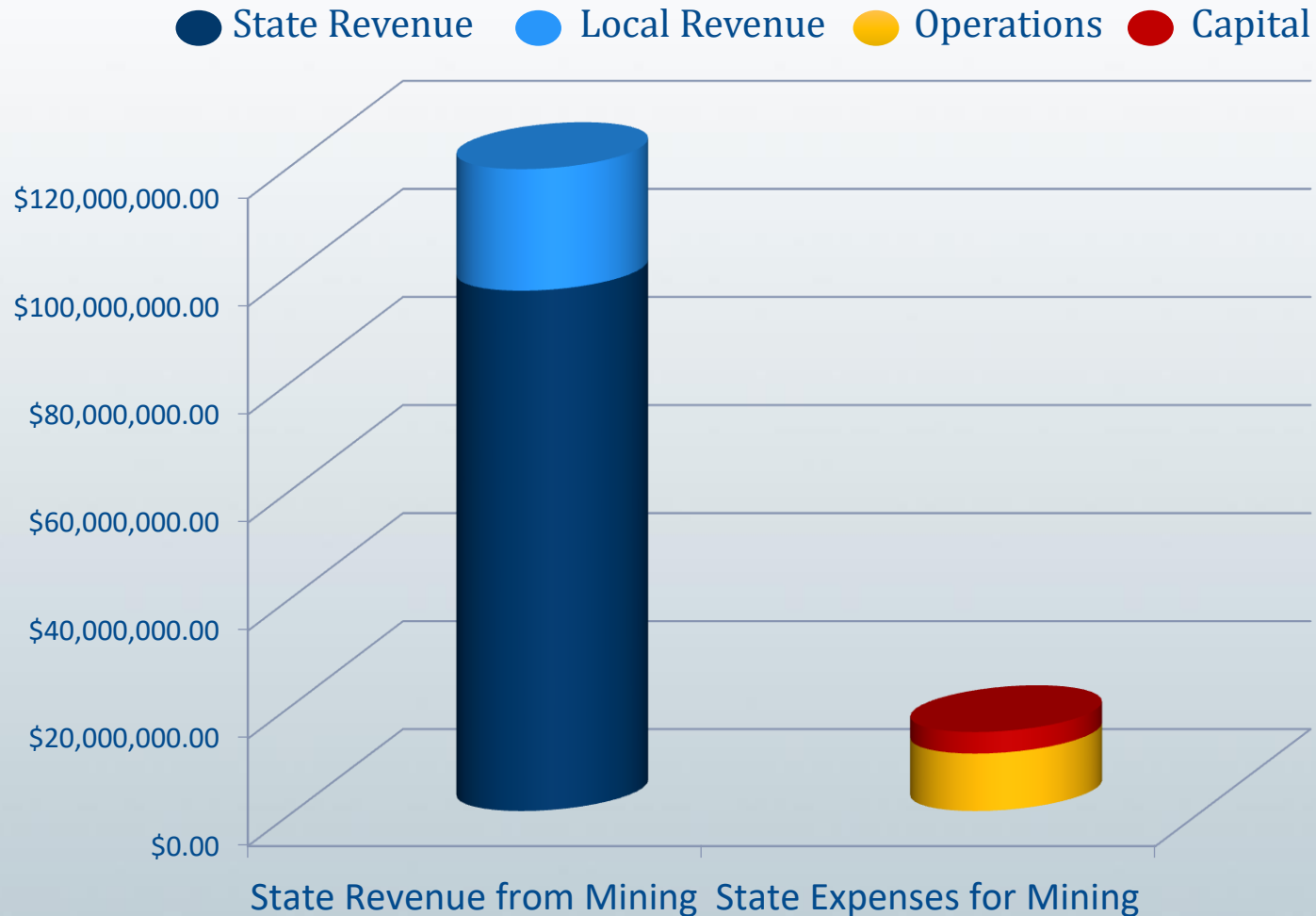
## Investments:

- 479 investments in global metals mining and fabricating
- \$516.6 million value
- Includes \$23.5 million of stock in companies operating mines in AK, >\$7 million of stock in companies with exploration projects in AK

Source: [www.apfc.org](http://www.apfc.org), 02/12/2017



# State Revenue vs. State Costs



*"Fiscal Effects of Commercial Fishing, Mining, & Tourism. What does Alaska receive in revenue? What does it spend?"*

Bob Loeffler and Steve Colt, Institute of Social and Economic Research, UAA, 2016







# Mining Pays its Way

- Companies pay exploration, development and construction costs
- This often includes access and infrastructure, unlike in Lower 48
- Reimbursable Service Agreements
- Financial assurance for reclamation and closure





# AIDEA'S Return on Investment

- Mission: encourage Alaska's economic growth
- \$265 million investment in the Red Dog port and road
- \$465 million in payments from Red Dog (12/2017)
- 6.5% annual interest on loan agreement
- Annual dividend to State General Fund
- Contract goes to 2040

Source: [www.aidea.org](http://www.aidea.org) and AIDEA email 2018-02-08



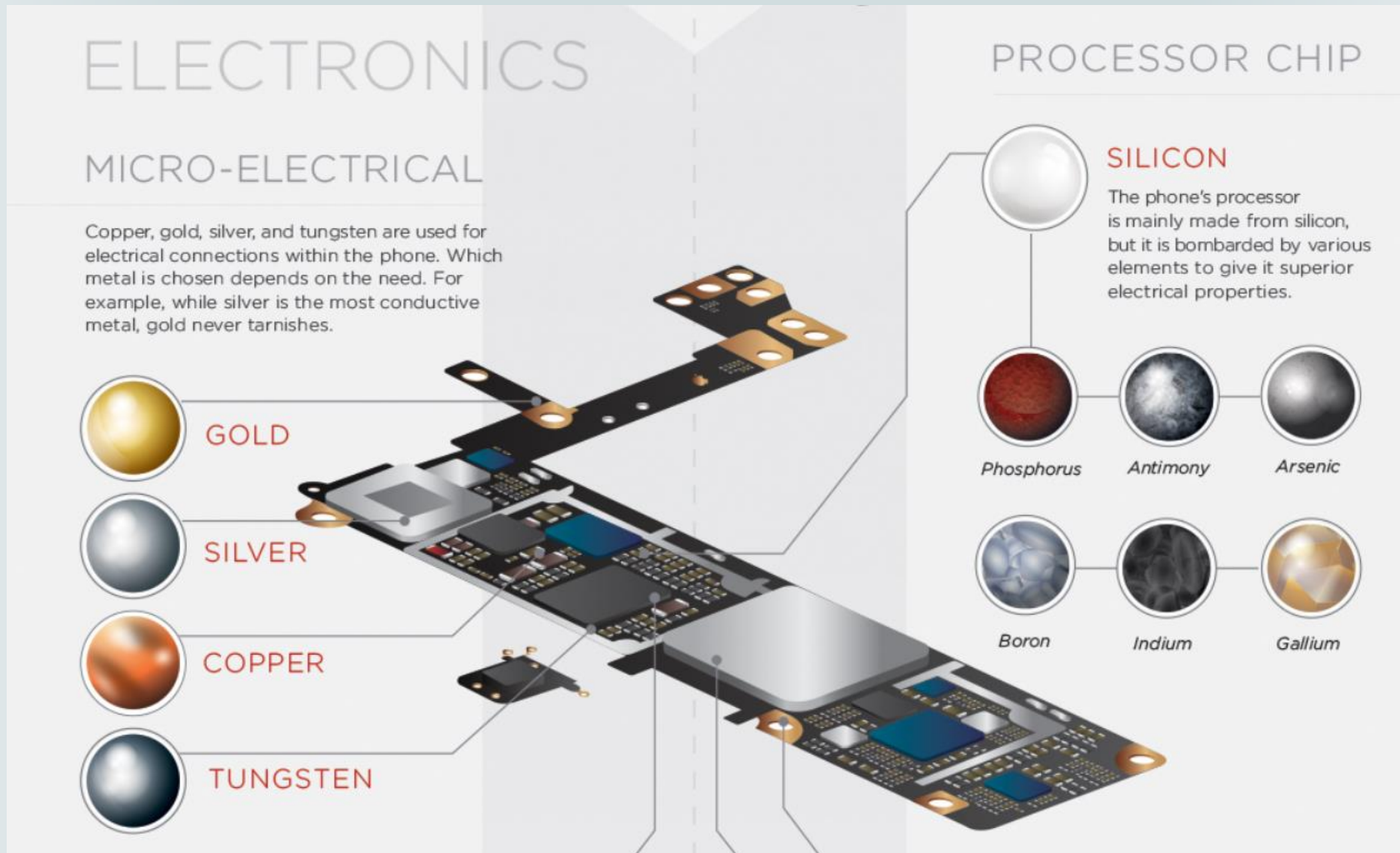
# Why do we mine?



If you have turned on a light, entered a building, driven on a road, made a phone call, used a computer, or visited a doctor, then mining is an important part of your life.



# Alaska metals could be in your phone





335 tons steel

molybdenum

700 lbs rare earths

3 tons aluminum

zinc

4.7 tons copper



# Case Study: Red Dog

Liz Cravalho, NANA



## NANA REGION

- 38,000 sq. miles
- 98,000 sq. kilometers
- 11 communities
- \$1.3 B Corporation
- 85% of shareholders live in Alaska
- 1,400+ Shareholders worked for NANA in 2017
  - 10% Globally
  - 29% in Alaska





## RED DOG CONTRIBUTIONS



**Annual average jobs (including on-site, year-round contractors)**

610 jobs

**Average Red Dog regular annual wage**

\$112,000

**Red Dog (Teck) employee wages (excluding benefits) to NANA shareholders**

\$31 million

**Red Dog (Teck) cumulative wages paid to NANA shareholders (1999-2013)**

\$303 million

**Red Dog state and federal taxes (annual)**

\$100 million

**Red Dog (Teck) cumulative wages paid to NWAB residents shareholders (1999-2013)**

\$132 million

## BENEFITING OUR REGION, STATE AND NATION

**73%**

Total U.S zinc  
production

**\$55.7 million**

Red Dog profits after  
expenses and 7(i) sharing

**\$1.1 Billion**

in benefits to  
Alaska

**\$820 Million**

In total 7(i)  
payments

**\$155.6 Million**

In total PILT to NWAB  
since mining began

**\$4-\$8 Million**

Annual Teck  
contribution to VIF

# Expansion potential: What's holding us back?

Mike Satre,  
Hecla Greens Creek Mine





# Life Stages of Greens Creek

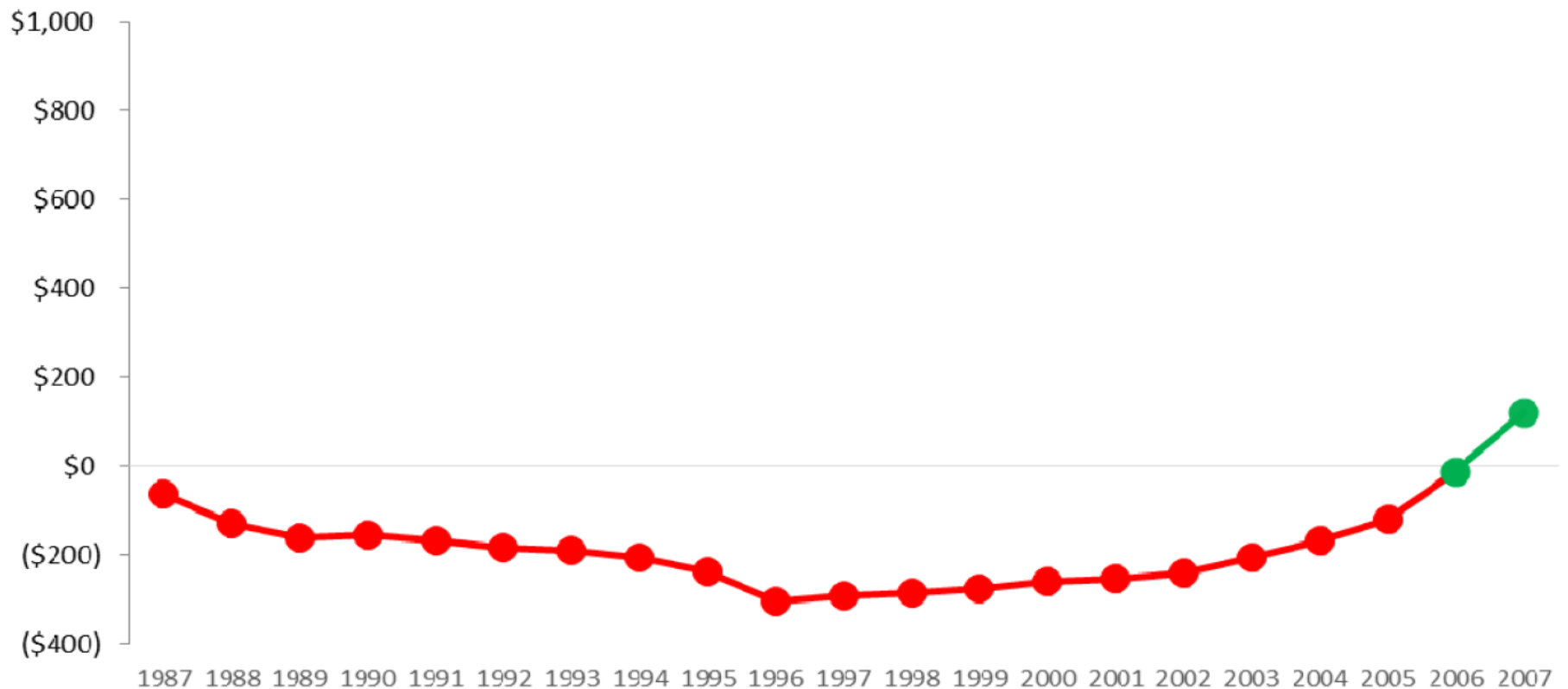
- Exploration 1973-1980
- Permitting 1980-1987
- Construction 1987-1989
- Operation 1989-Present
- Value Creation 2006-Present



# Mines are made...not found

*\$ in millions*

## Cumulative Net Cash Flow\*

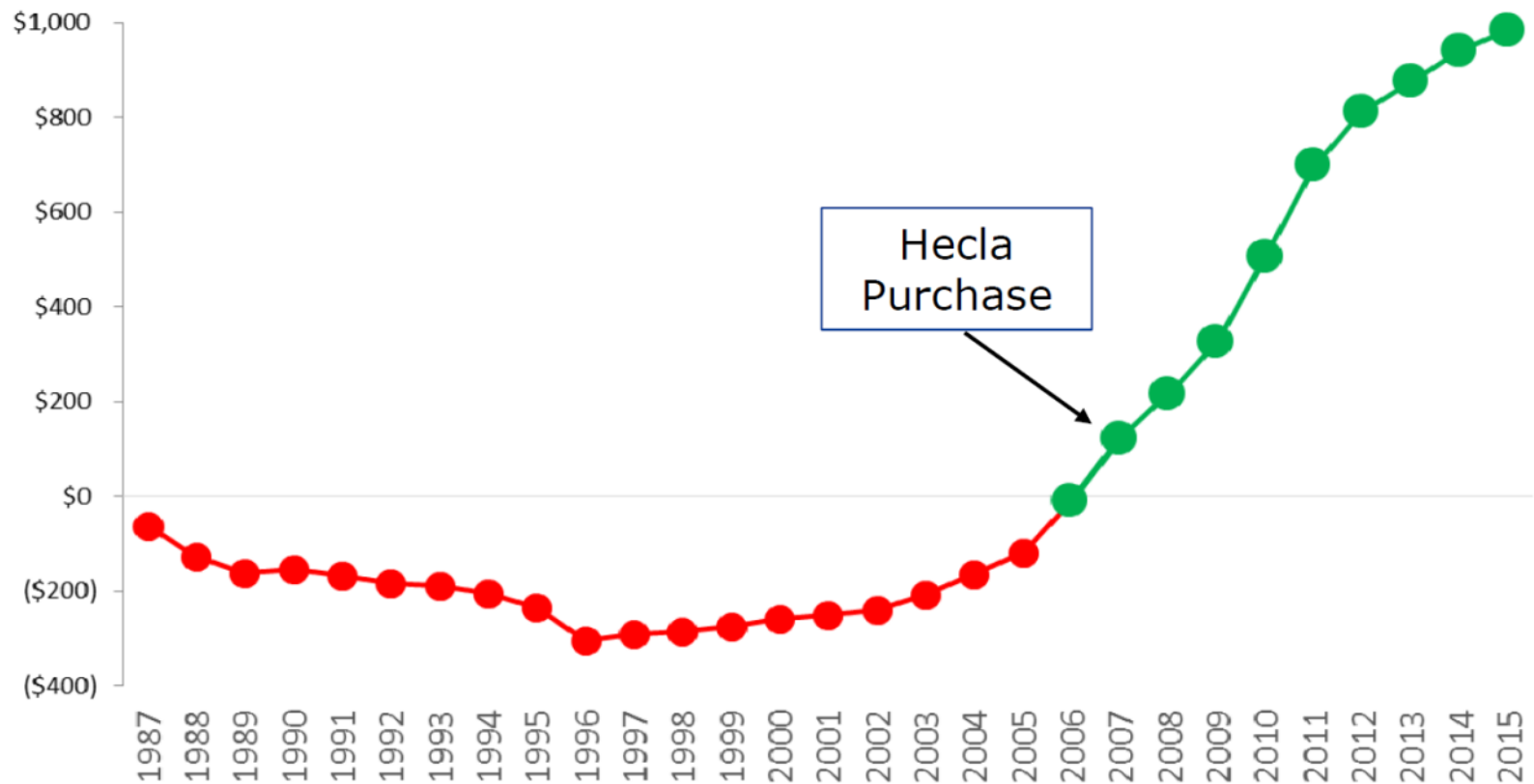


# Mines are made...not found

## Patience Pays!

*\$ in millions*

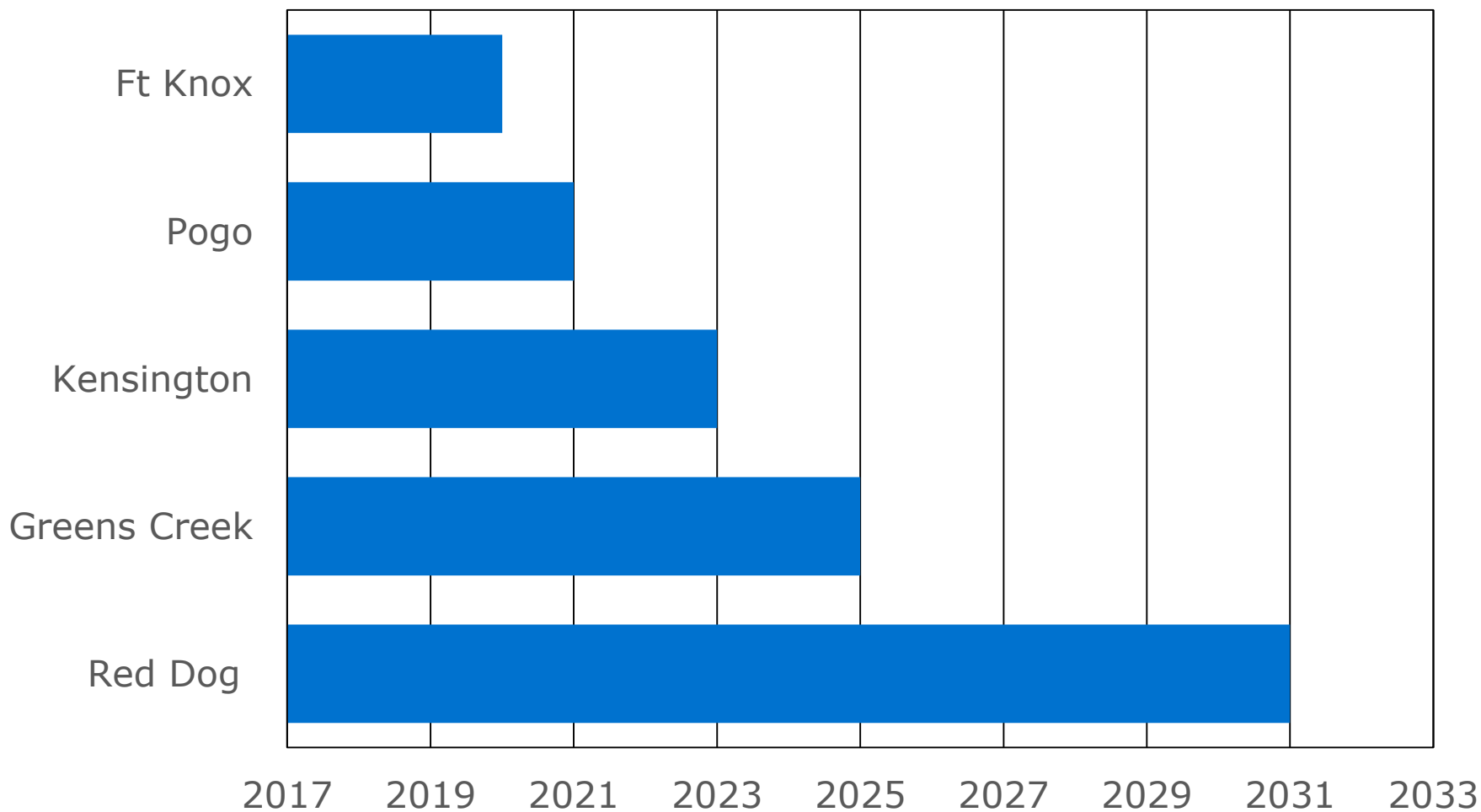
### Cumulative Net Cash Flow



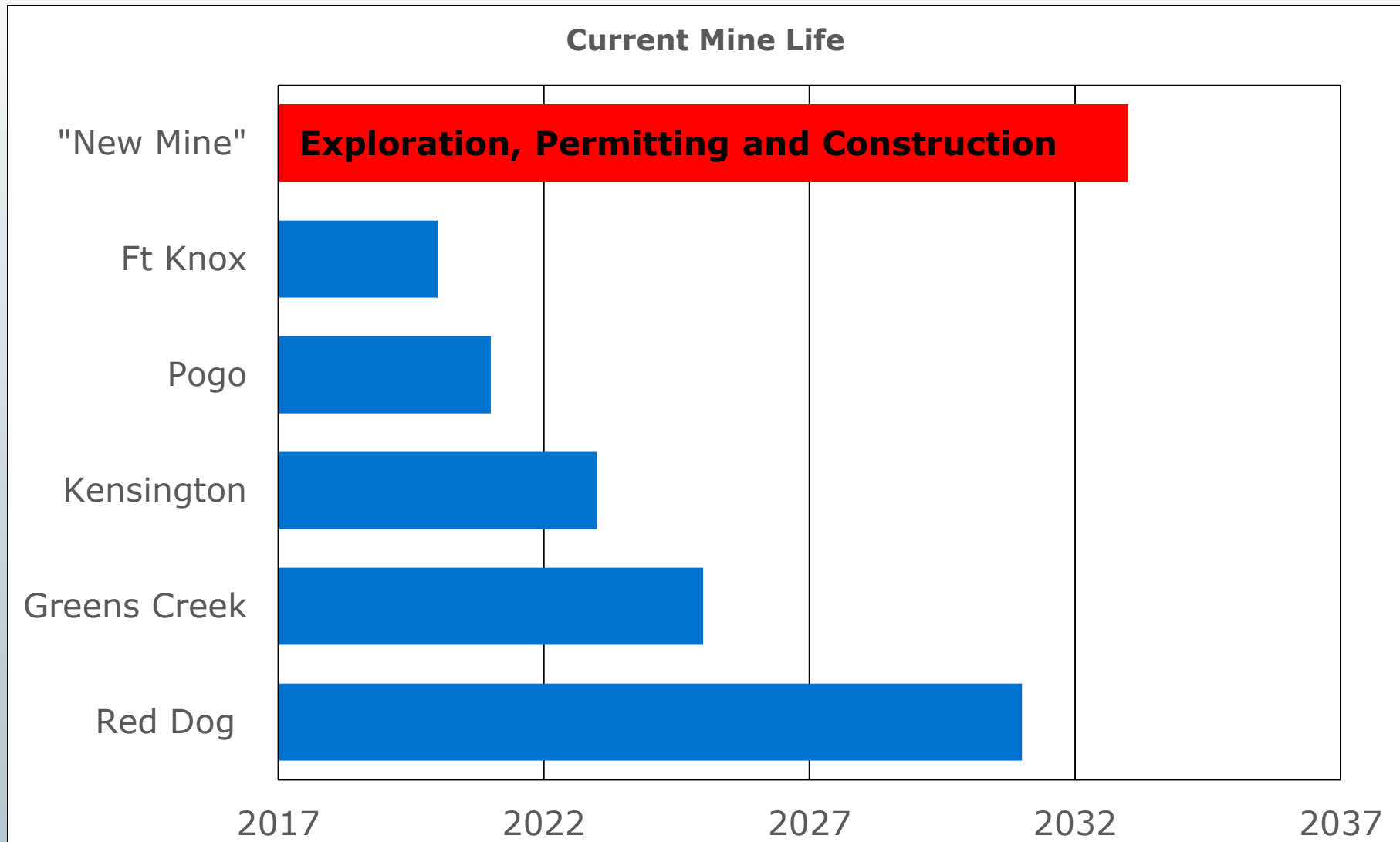


# Life expectancy of AK mines

**Current Mine Life**



# Do we have a production gap?



# What does a new mine need?

	Grade	Size	Access	Power
Red Dog	✓	✓		
Ft. Knox			✓	✓
Pogo	✓	✓	✓	✓
Kensington			✓	
Greens Creek	✓		✓	✓





















# But much more is needed...

- Community support
- Mineral tenure partnerships
- Stable fiscal climate
- Stable regulatory regime





# How are we doing today?

	Current Status	Outlook
Existing Mines		
Exploration		
Infrastructure		
Community Support		
State Land		
Federal Land		
ANCSA Land		
State Permitting		
Federal Permitting		
Fiscal Climate		

# Environmental Safeguards

## Deantha Crockett, AMA





# Alaska's World Class Regulatory System

- Rigorous permitting system
  - air, land, water, fish and wildlife
- Strict operational oversight
- Closure/Reclamation
- Financial Assurance



# No Single Permit to Mine: there are many permits & authorizations

Mine permitting is a mixture of State, Federal and local permitting requirements.  
Each project is unique.

## STATE

- Plan of Operations (DNR)
- Reclamation and Bonding (DNR)
- Waste Management Permits and Bonding (ADEC)
- CWA Section 402 APDES Water Discharge Permit
- Certification of ACOE Permits (ADEC)
- Sewage Treatment System Approval (ADEC)
- Air Quality Permits (ADEC)
- Fish Habitat and Fishway Permits (ADF&G)
- Water Rights (DNR)
- Right of Way/Access (DNR/DOT)
- Tidelands Leases (DNR)
- Dam Safety Certification (DNR)
- Cultural Resource Protection (DNR)
- Monitoring Plan (Surface/Groundwater/Wildlife) (DNR/DEC/DFG)

## FEDERAL

- US EPA Air Quality Permit review
- US EPA Safe Drinking Water Act (UIC Permit)
- US ACOE S. 404 Dredge and Fill Permit
- US ACOE S. 10 Rivers and Harbors Act
- US ACOE S. 106 Historical & Cultural Resources Protection
- NMFS Threatened & Endangered Species Act Consultation
- NMFS Marine Mammal Protection Act
- NMFS Essential Fish Habitat
- NMFS Fish and Wildlife Coordination Act
- USFWS Threatened & Endangered Species Act Consultation
- USFWS Bald Eagle Protection Act Clearance
- USFWS Migratory Bird Protection
- USFWS Fish & Wildlife Coordination Act

These are only some of the permits required!



Council of  
Alaska Producers





# Alaska's Permit System is Unique

- Stringent application of a national water quality system
- Robust monitoring system
- 3<sup>rd</sup> party compliance audits of both:
  - company methodology and results
  - regulatory agency oversight



True North (Fairbanks)



Poker Flats (Healy)

## Reclamation and Closure

- Alaska law (AS 27.19) requires that a mine site must be returned to a stable condition compatible with the post-mining land use
- Plan & financial assurance must be approved by DNR Commissioner *before* operations begin
- Financial assurance applies to all companies
- Reviewed every 5 years or earlier if necessary





# Doing it Right: Fort Knox Mine







# Potential

*Are the right policies in place to encourage development and production of critical and strategic minerals in Alaska?*





# Let's Attract Investment to Alaska

- Bring more mines into production, especially those on state land
- Keep Alaska competitive with other mining jurisdictions
- Keep the permitting process rigorous *and* efficient
- Preserve a stable and predictable tax structure at the state and local level



# Thank you!

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