Mining Works for Alaska

International investment = local benefit

A Lunch and Learn presentation
by Karen Matthias
March 15, 2012

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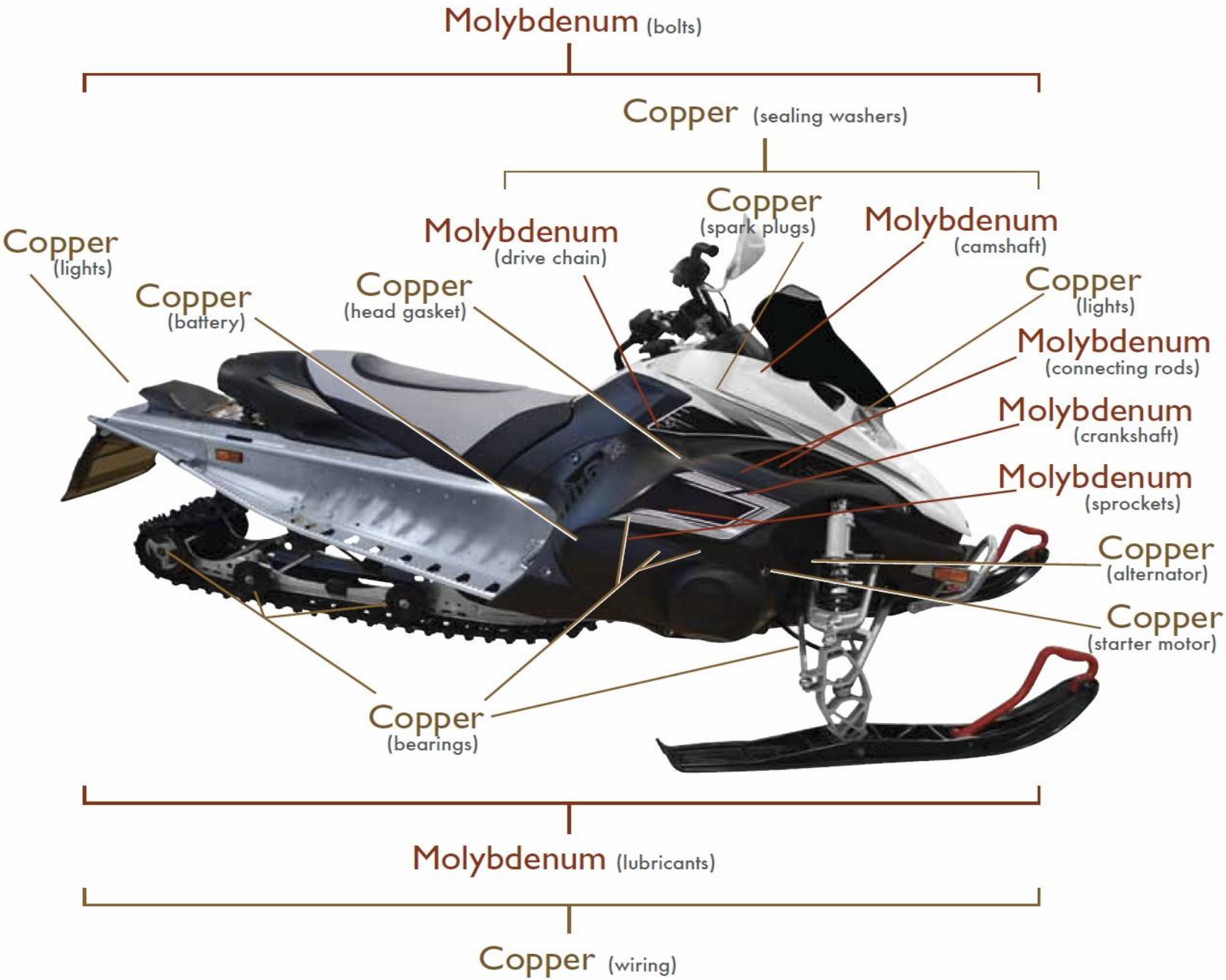
Molybdenum (bolts)
Copper (sealing washers)
Copper (lights)
Copper (battery)
Copper (head gasket)
Molybdenum (drive chain)
Copper (spark plugs)
Molybdenum (camshaft)
Copper (lights)
Molybdenum (connecting rods)
Molybdenum (crankshaft)
Molybdenum (sprockets)
Copper (alternator)
Copper (starter motor)
Copper (bearings)
Molybdenum (lubricants)
Copper (wiring)

Moly for Strength.
Copper for power.

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Minerals and metals underpin the renewable energy economy

- 5 tons of copper in a 3MW wind turbine
- Hybrids require almost twice as much copper as regular vehicles
- Rechargeable batteries, solar panels, catalytic converters all need minerals

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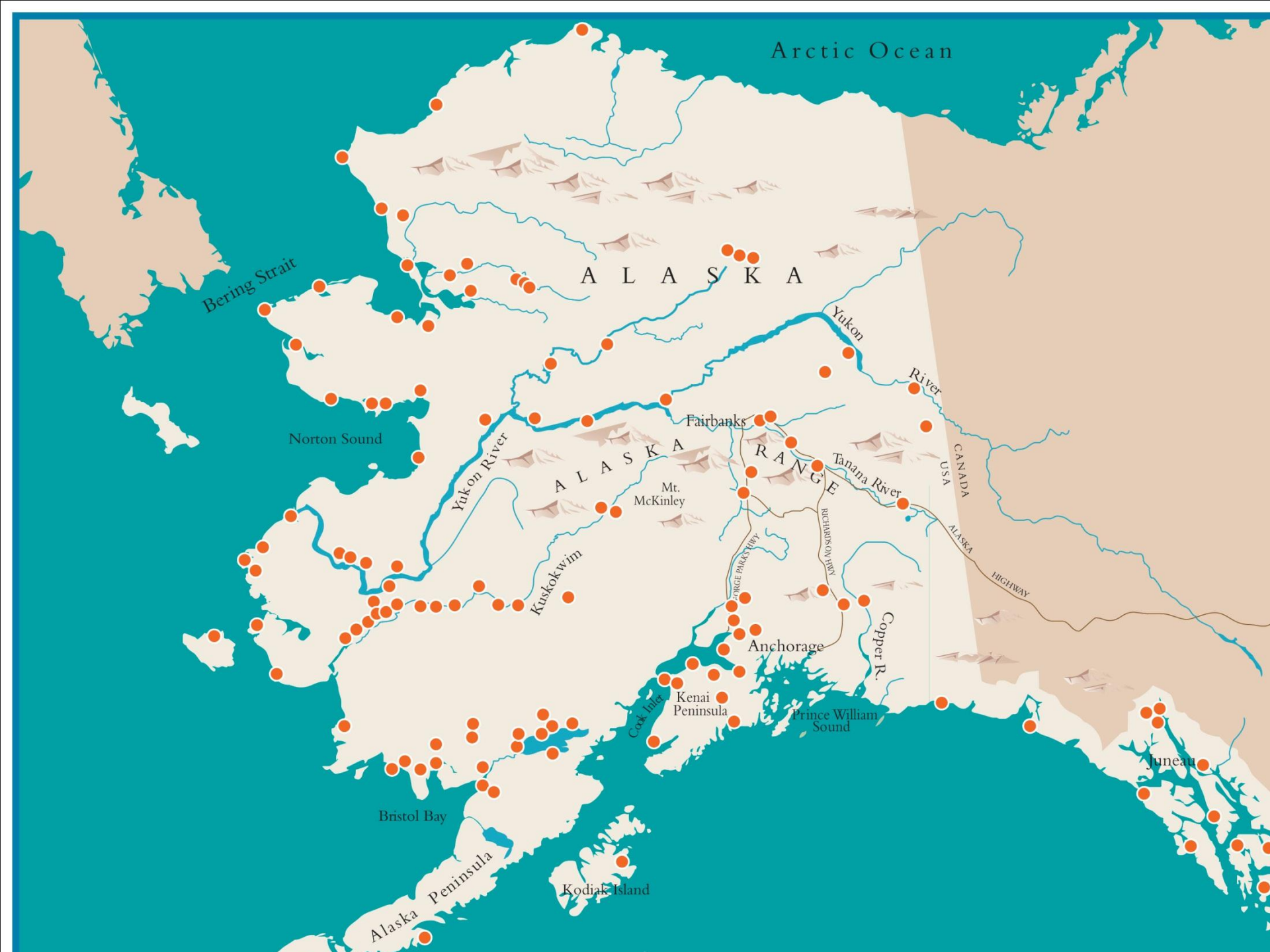
Arctic Ocean
ALASKA
Bering Strait
Norton Sound
Yukon River
Yukon River
Fairbanks
ALASKA RANGE
Mt. McKinley
Tanana River
USA
CANADA
ALASKA HIGHWAY
RICHARDSON HWY
GLENN HIGHWAY
Kuskokwim
Anchorage
Copper R.
Cook Inlet
Kenai Peninsula
Prince William Sound
Juneau
Bristol Bay
Alaska Peninsula
Kodiak Island

Mining Works for Alaska

- Six large producing mines
- 4,500 mining jobs
- $100,000 average annual metal mining wage
- $300 million spent on exploration
- $175 million spent on development

Source: The Economic Impacts of Alaska's Mining Industry, McDowell Group, 2012

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Potential new mining jobs

Several advanced exploration projects could generate many jobs in next several years

- Livengood Gold: 500 jobs
- Donlin Gold: up to 3,000 construction jobs, 600-1,000 operations jobs
- Niblack: 200+ jobs
- Pebble: 2,000 construction jobs, 800-1,000 operations jobs

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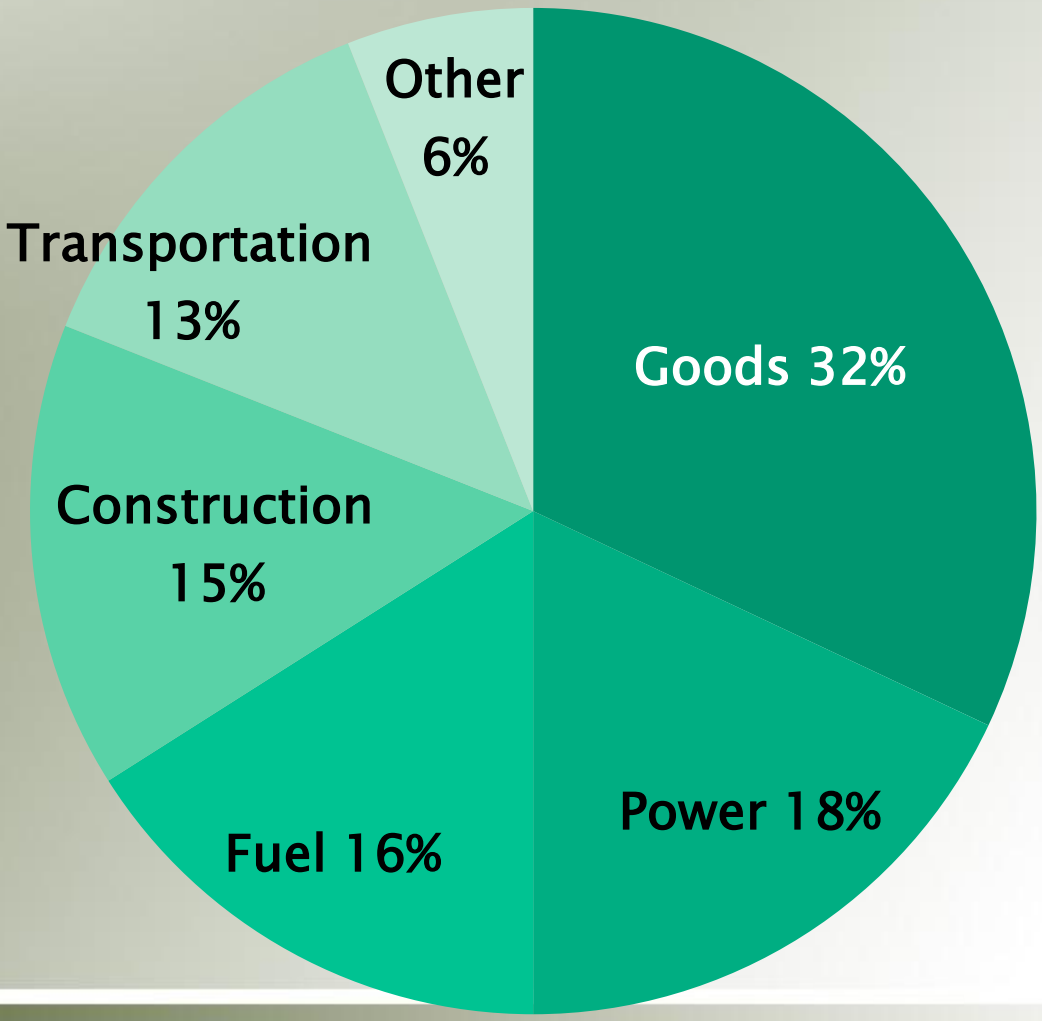
$500 million spent in AK by six producing mines



Source: The Economic Impacts of Alaska's Mining Industry, McDowell Group 2012

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Revenue for Local and State Governments

- $14 million to local governments
- $55 million in rents, royalties, fees to State
- $29 million facility use fees to AIDEA
- $1 million to Mental Health Trust

Source: The Economic Impacts of Alaska's Mining Industry, McDowell Group, 2012

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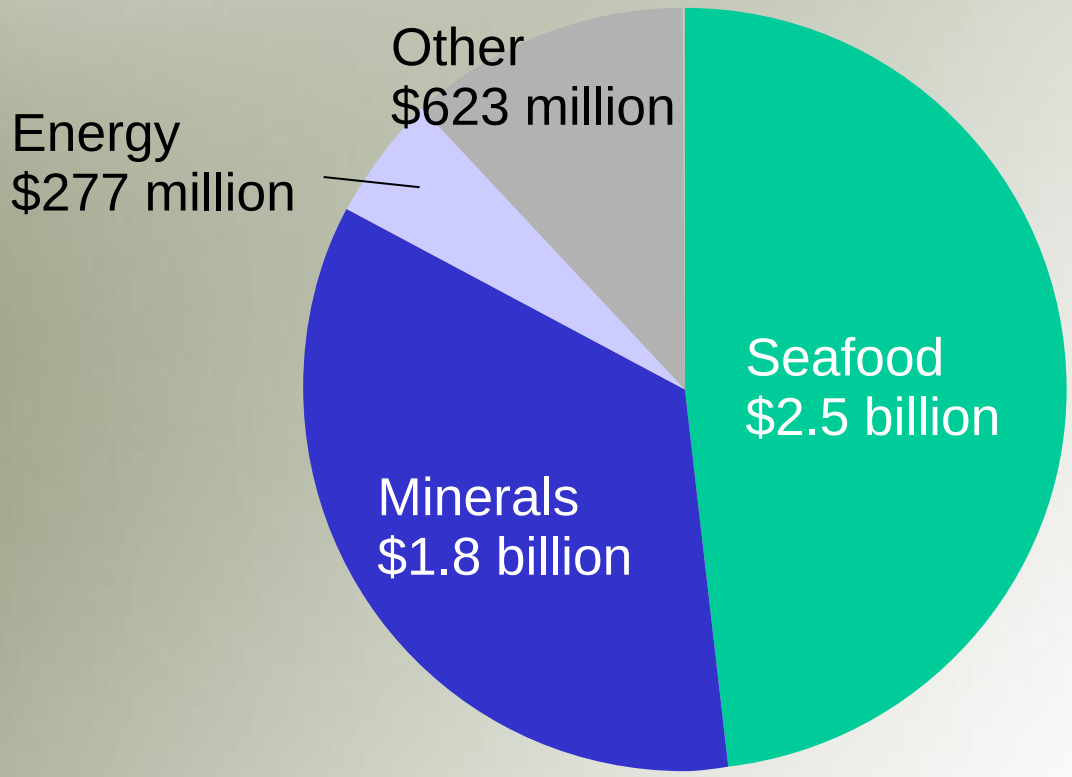
Diversifying Alaska's Exports
$5.2 billion in 2011



Source: US Department of Commerce: www.trade.gov/mas/ian

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Value for Fairbanks – Fort Knox

- 502 workers – ALL live in FNSB
- $90,280 average salary
- Total payroll $45.3 million
- $4.7 million: FNSB's #1 property taxpayer
- $145,900 donations to AK non-profits
- GVEA's largest commercial customer = significant rate savings for all customers

Source: Socioeconomic Impacts of Fort Knox Mine, McDowell Group 2011

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Value for Southeast Alaska

- 2/3 Greens Creek Alaska employees live in Juneau
- Greens Creek and Kensington are #1 taxpayers to City and Borough of Juneau
- Mining provided infrastructure: hydroelectric power generation

Source: The Economic Impacts of Alaska's Mining Industry, McDowell Group, 2012

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Partnering with Alaska Native Corporations

- Red Dog paid $170 million to NANA, $82 million distributed to other ANCSA corps.
- Majority of onsite jobs at Donlin filled by Calista shareholders
- 56% of Red Dog year-round jobs filled by NANA shareholders
- Business development opportunities

Source: The Economic Impacts of Alaska's Mining Industry, McDowell Group, 2012

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Red Dog is more than just a mine developing essential minerals; it is a mechanism for hope and catalyst for the northwest Alaska and statewide economy.

www.nana.com/regional/resources/red-dog-mine/

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High risk, high return...or no return

- More than $2.8 billion spent on exploration since 1981
- 2011: 60 projects, of which 30 spent more than $1million
- 6 large hard rock mines in operation

Source: The Economic Impacts of Alaska's Mining Industry, McDowell Group, 2012

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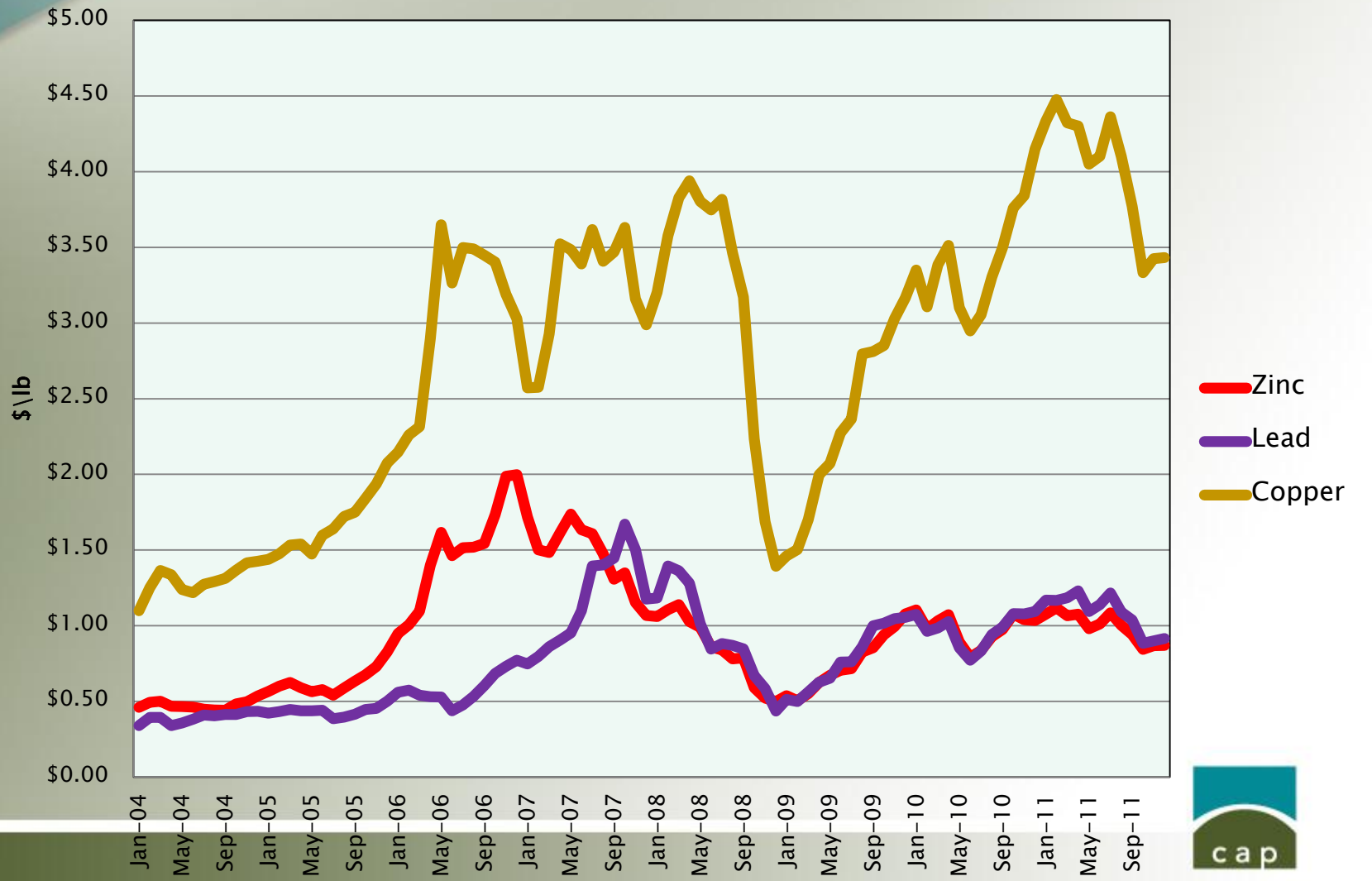
Volatility of Commodity Prices



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Mine	Discovered	First Production	Development Period
Greens Creek	1975	1989	14 years
Red Dog	1968	1989	21 years
Pogo	1994	2006	12 years
*Fort Knox	1984	1996	12 years
*Kensington	1983?	2010	27 years

*Historic district, first modern deposit discovery

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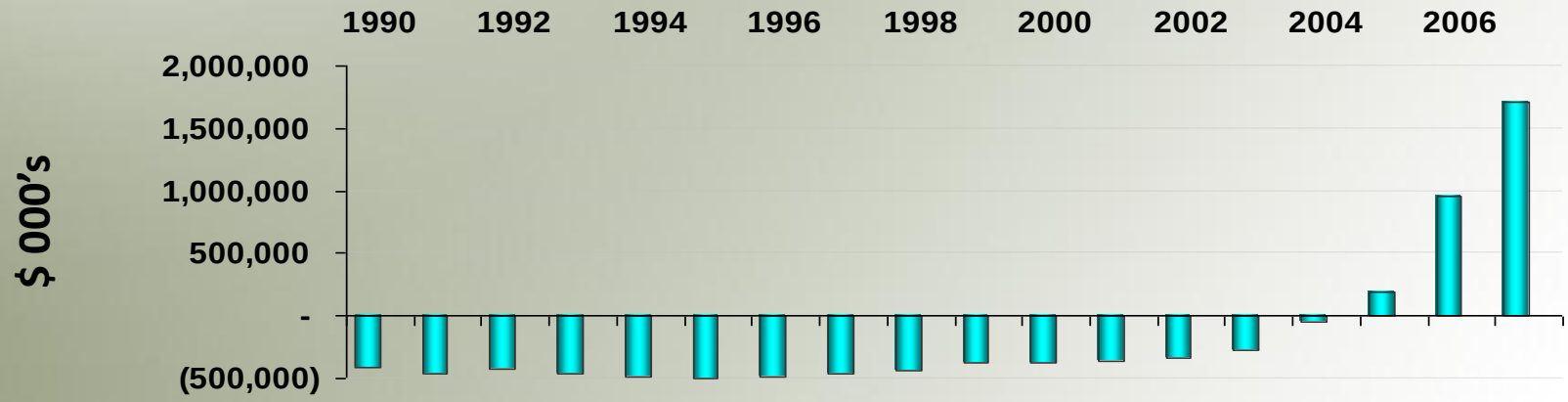
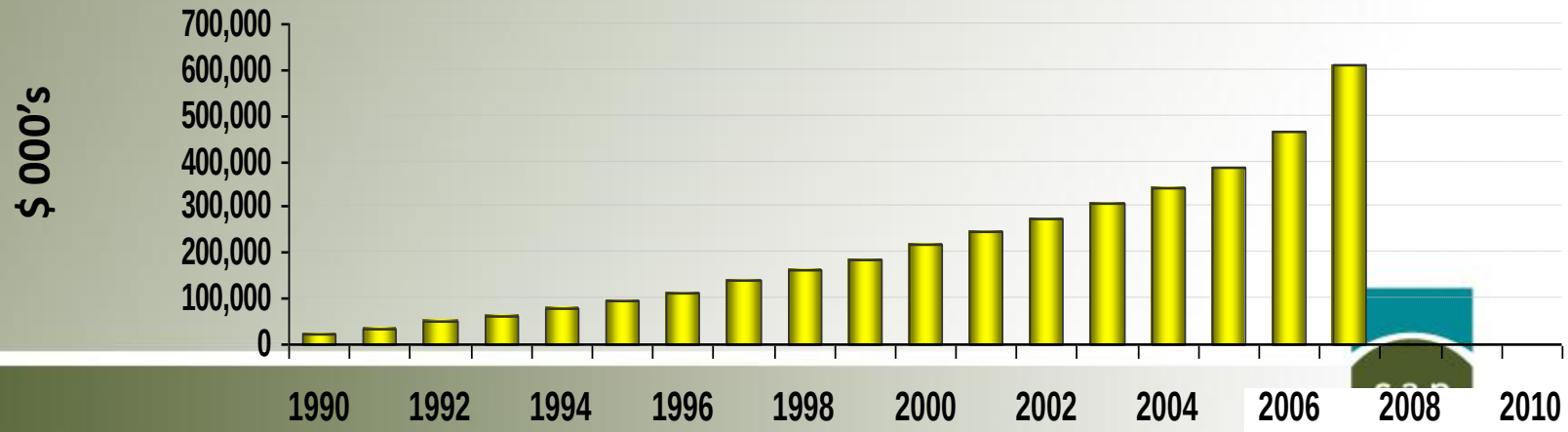
Sharing the Benefits

Teck Cash Flow (Cumulative)



Payments to NANA, Shareholders & Region (Cumulative)



Canada is a major mining country

- Leading producer of uranium, nickel, aluminum, zinc, molybdenum, diamonds
- Minerals make up 19% of Canada's exports
- 58% of Canada's metal exports came to U.S.
- U.S. mining supply sector: 5,526 companies

Source: Mining Association of Canada Facts and Figures 2010

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Financing – Canada's lead position

- 59% (1434) of world's public mining companies listed on Toronto Stock Exchange and Venture Exchange
- Toronto Stock Exchange handles most global public mining financings
- TSX-listed companies had almost 9,000 mineral projects in process in 2010

Source: Mining Association of Canada Facts and Figures 2010

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Social and environmental responsibility

- Health and safety of workers and neighbors
- Environmental sustainability

- Avoiding negative impact with traditional land use

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No single permit to mine; many permits and authorizations

State

- Plan of Operations (DNR)
- Reclamation and Bonding (DNR)
- Waste Management Permits and Bonding (DEC)
- Certification of NPDES and ACOE Permits (DEC)
- Sewage Treatment Systems Approval (DEC)
- Air quality permits (DEC)
- Fish Habitat and Fishway Permits (DFG)
- Water Rights (DNR)
- Tidelands Leases (DNR)
- Dam Safety Certification (DNR)
- Cultural Resource Protection (DNR)
- Monitoring Plans: Surface, Groundwater, Wildlife (DNR/DEC)
- Coastal Zone Consistency Determination (DNR)

Federal

- US EPA Section 402 NPDES Water Discharge Permit
- US EPA Air Quality 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 and Cultural Resources Protection
- NMFS Threatened and Endangered Species Act Consultation
- NMFS Marine Mammal Protection Act
- NMFS Essential Fish Habitat
- NMFS Fish & Wildlife Coordination Act
- US FWS Bald Eagle Protection Act Clearance
- US FWS Migratory Bird Protection
- US FWS Fish & Wildlife Coordination Act

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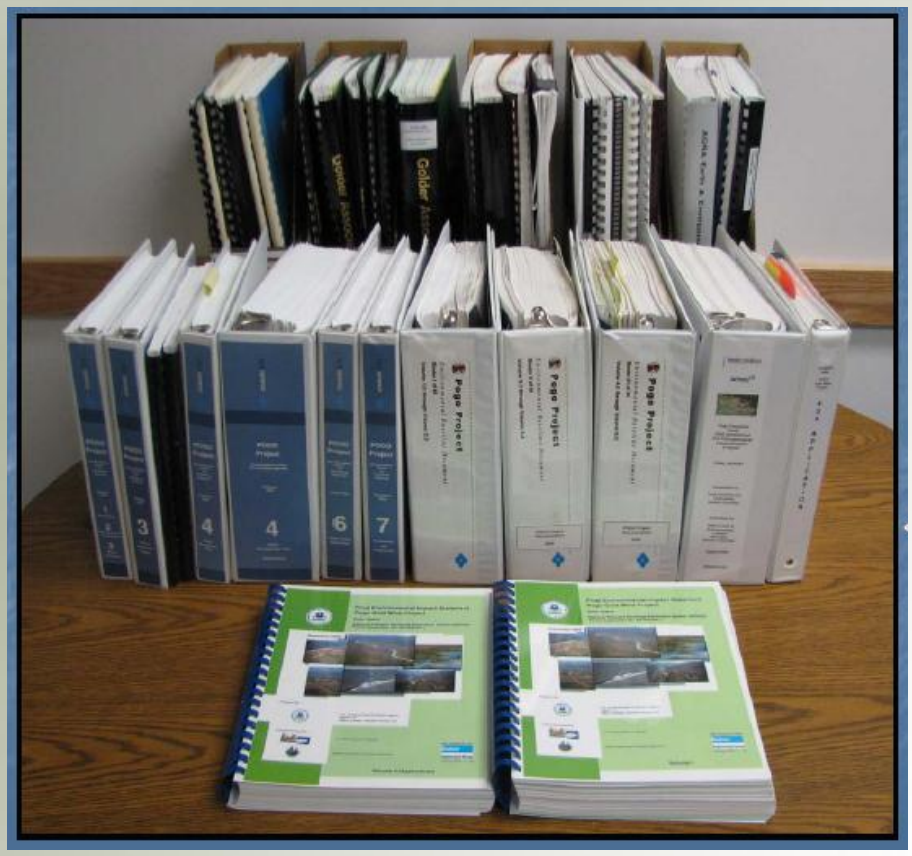
Alaska has the World's Most Stringent Regulatory System



Pogo Mine's Permitting Documents and Environmental Impact Statement

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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
- Reclamation plan requires DNR approval
- Financial assurance

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Here's the real Pebble picture

Reclamation begins immediately


1997 - DEVELOPMENT OF HIGH VALUE WETLANDS


1998 One Season's Growth
After Recontouring and Seeding

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CAP Speakers Bureau

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- Overview of the mining industry in Alaska today and Alaska's mining heritage

www.alaskaproducers.org/speakers-bureau

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