

BRIEFING:

COMINCO,

ALASKA



Official Business

ALASKA STATE LEGISLATURE

SENATE RESOURCES COMMITTEE

State Capitol
Juneau, AK 99801

Chairman: Senator Rick Halford
Vice Chair: Senator Lyda Green
Senator Loren Leman
Senator Bert Sharp
Senator Robin Taylor
Senator John Torgerson
Senator Georgianna Lincoln

AGENDA
1:00 TO 3:00 p.m.
Tuesday, January 21, 1997

BRIEFING: COMINCO ALASKA

Doug Horswell, Vice President, Environmental and Government Affairs, Cominco, Ltd
John Key, General Manager, Red Dog Mine, Cominco Alaska
Charlotte McCay, Senior Administrator, Environmental and Regulatory Affairs, Cominco Alaska
Sarah Scanlon, Vice President, Corporate Affairs, Nana Development Corporation

I Introduction

- Red Dog Mine
- Cominco Alaska, Ltd
- Zinc Market
- Zinc Industry

II Discussion

- Beginning of Red Dog Mine
- Nana - Cominco Partnership
- AIDEA Transportation System Funding
- National Park Service Road Agreement
- Cominco Commitment to Mining in Alaska

III Background Video

IV Benefit to Local and State Economy

- Native Shareholders
- State of Alaska

V Upcoming Cominco Developments

VI Exploration in Alaska

VII State/Private Sector Cooperation

NEXT MEETING

Wednesday, January 22:

Overview - Department of Natural Resources

ADJOURN



Official Business

ALASKA STATE LEGISLATURE

SENATE RESOURCES COMMITTEE

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Senator Robin Taylor
Senator John Torgerson
Senator Georgianna Lincoln

AGENDA

3:30 to 5:00 p.m.

Friday, January 31, 1997

BRIEFING:

NATIONAL PARK SERVICE

Bob Barbee	Field Director, Alaska Field Area, National Park Service
Steve Martin	Superintendent, Denali National Park and Preserve
Jim Brady	Superintendent, Glacier Bay National Park and Preserve
Judy Gottlieb	Assistant Field Director, Alaska Field Area
John Quinley	Public Affairs Officer, Alaska Field Area

- I Introduction and Overview Bob Barbee
 - NPS priorities for the coming years
 - Development plans: Katmai, Wrangell-St. Elias, Kenai Fjord
- II Denali National Park Steve Martin.
 - Public access and development
- III Glacier Bay National Park Jim Brady
 - Cruise ships, commercial fishing and development

BRIEFING:

COMINCO ALASKA

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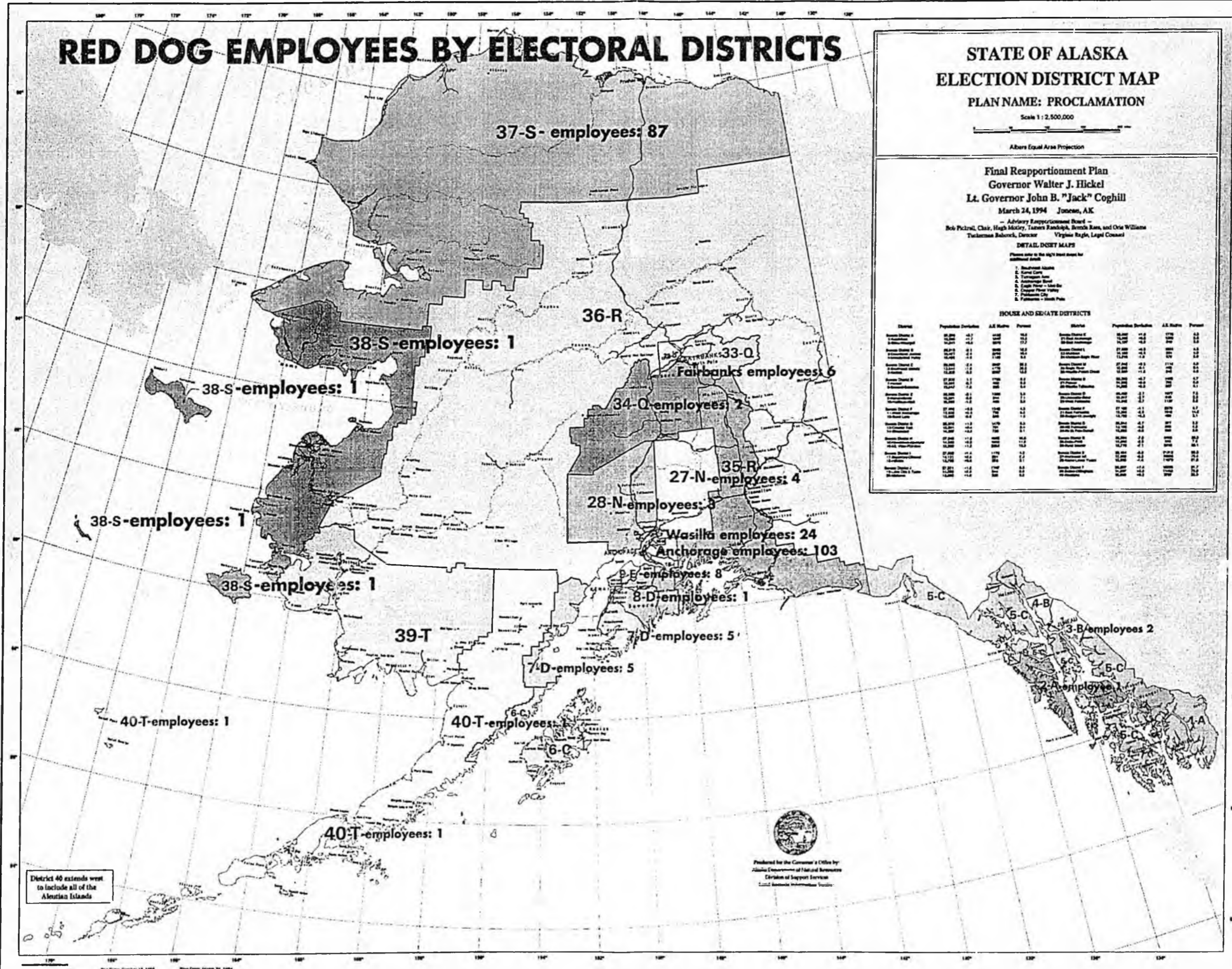
VII State/Private Sector Cooperation

NEXT MEETING

Monday, February 3, 1997:

ADJOURN

RED DOG EMPLOYEES BY ELECTORAL DISTRICTS



STATE OF ALASKA
ELECTION DISTRICT MAP
PLAN NAME: PROCLAMATION
Scale 1 : 2,500,000
Albers Equal Area Projection

Final Reapportionment Plan
Governor Walter J. Hickel
Lt. Governor John B. "Jack" Coghill
March 24, 1994 Juneau, AK
Advisory Reapportionment Board
Bob Pichell, Chair, Hugh McIntire, Tamara Randsdahl, Brenda Ross, and Chris Williams
Tudman Baker, Director Virginia Ruff, Legal Counsel

DETAIL DISTRICT MAPS

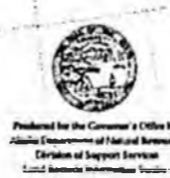
Please refer to the right hand sheet for additional maps

1. Southeast Alaska
2. Kodiak
3. Sitka
4. Wrangell
5. Petersburg
6. Kodiak
7. Kodiak
8. Kodiak
9. Kodiak
10. Kodiak
11. Kodiak
12. Kodiak
13. Kodiak
14. Kodiak
15. Kodiak
16. Kodiak
17. Kodiak
18. Kodiak
19. Kodiak
20. Kodiak

HOUSE AND SENATE DISTRICTS

District	Population	Area	Population	Area	Population	Area
1	100,000	10,000	100,000	10,000	100,000	10,000
2	100,000	10,000	100,000	10,000	100,000	10,000
3	100,000	10,000	100,000	10,000	100,000	10,000
4	100,000	10,000	100,000	10,000	100,000	10,000
5	100,000	10,000	100,000	10,000	100,000	10,000
6	100,000	10,000	100,000	10,000	100,000	10,000
7	100,000	10,000	100,000	10,000	100,000	10,000
8	100,000	10,000	100,000	10,000	100,000	10,000
9	100,000	10,000	100,000	10,000	100,000	10,000
10	100,000	10,000	100,000	10,000	100,000	10,000
11	100,000	10,000	100,000	10,000	100,000	10,000
12	100,000	10,000	100,000	10,000	100,000	10,000
13	100,000	10,000	100,000	10,000	100,000	10,000
14	100,000	10,000	100,000	10,000	100,000	10,000
15	100,000	10,000	100,000	10,000	100,000	10,000
16	100,000	10,000	100,000	10,000	100,000	10,000
17	100,000	10,000	100,000	10,000	100,000	10,000
18	100,000	10,000	100,000	10,000	100,000	10,000
19	100,000	10,000	100,000	10,000	100,000	10,000
20	100,000	10,000	100,000	10,000	100,000	10,000

District 40 extends west to include all of the Aleutian Islands



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Alaska Department of Administration
Division of Support Services
2222 Stevens Highway, Anchorage, Alaska 99501



Cominco Alaska/Red Dog Mine Employees by Election District

2/A	Sitka	1	37/S	Ambler	4
3/B	Juneau	2		Buckland	9
7/D	Homer	3		Kiana	15
	Seldovia	1		Kivalina	5
	Anchor Pt.	1		Kotzebue	15
8/D	Kasiloff	1		Noatak	14
9/E	Soldotna	4		Selawik	4
	Nikiski	1		Shishmaref	1
	Kenai	3		Shungnak	6
10/E	Anchorage	10		Noorvik	14
11/F	Anchorage	7	38/S	Nome	1
12/F	Anchorage	7	40/T	Kokhanok	1
13/G	Anchorage	8			
15/H	Anchorage	8		Total	261
16/H	Anchorage	12			
17/I	Anchorage	4			
18/I	Anchorage	5			
19/J	Anchorage	8			
20/J	Anchorage	14			
21/K	Anchorage	10			
22/K	Anchorage	1			
24/K	Anchorage	1			
25/M	Chugiak	1			
	Eagle River	9			
26/M	Wasilla	24			
27/N	Palmer	3			
	Sutton	1			
28/N	Big Lake	1			
	Talkeetna	1			
	Willow	1			
29/C	Ester	1			
32/P	Fairbanks	6			
34/Q	North Pole	2			
36/R	Nenana	1			



RED DOG MINE

P.O. Box 1230 • Kotzebue, Alaska 99752

Phone (907) 426-9141 • FAX (907) 426-2177





**Cominco Alaska/1996
Dollars Spent by Election District**

<u>Election District</u>	<u>Dollars Spent .</u>
1/A	\$5,199.00
8/D	\$7,382.00
9/E	\$7,097.12
10/E	\$40,416.81
11/F	\$6,249,210.69
12/F	\$10,967.76
13/G	\$16,890.42
14/G	\$185,718.24
15/H	\$1,271,865.99
16/H	\$1,850,752.69
17/I	\$1,008,387.78
19/J	\$26,246.86
20/J	\$4,031,723.09
21/K	\$2,061.91
25/M	\$247,133.35
26/M	\$467,237.14
27/N	\$1,412.32
28/N	\$1,780.00
30/O	\$215,440.68
31/P	\$235,276.00
32/P	\$3,340.00
35/R	\$26,861.90
37/S	<u>\$32,891.68</u>
	\$15,476,276.39





1996 Vendor List
Cominco Alaska

Election District

Vendor

1/A	CRC Cultural Services
8/D	Anglers Lodge & Fish Camp
	Mining & Petroleum Training
9/E	Hotcoat Systems
	Morgan Steel
	Dave Egge Repair
10/E	Steam Supply
	Grinnel Fire Protection
	Stephens Tool Rentals
	Orange Sol Inc.
	Alyeska Pump & Equipment
	Secorp Industries
	Stinebaugh & Co.
	Uresco Construction Material
	Waukesha Alaska Corp.
11/F	Alaska Steel
	Unit Process Company
	Garness Industrial
	Wastinghouse Electric Supply
	Maskell Robbins
	NC Machinery
	Alaska Pacific Powder
	Arctic Wire Rope & Supply
	Air Liquide
	Alaska Winter
	Asplund Supply
	Hilti
	Genuine Parts
	Spenard Builders Supply
	Automated Laundry services
	Furbish Chemical



	Raven Electric
	Grainger
	Alaska Diesel Electric
	Drivetrain Distributors
	Young's Firehouse
	Yukon Fire Protection
	ERA Aviation
	Northern Test Lab
	Coast Crane
	Safety & Supply
	Rubey Engine & Electrical Service
	Big Three Lincoln
	Anchorage Yamaha
	Southern Air Transport
	Alaska X-Ray
	Ametek Inc.
	Johnstone Supply
	Alaska Builders Cache
12/F	Bowman Distributors
13/G	Delta Western Anchorage
	Exercise Equipment Center
	Alaska Eye Care Center
14/G	Alaska Truck Center
	Jackovich Industrial
	Inlet Petroleum
	Preservative Paint Company
	Suburban Propane
	Auto Electric Sales
	DJ Alaska Rentals
	Six Robbless
	Testing Institute of Alaska
	EJ Company
	Air Van North America
	North America Van Lines
	Laynes Art & Frame
15/H	Taiga Sales
	Frigid North
	Surveyors Exchange
	Cal Worthington Ford
	Capital Glass
	Anchorage Reprographics
	Fairweather Inc.
	Stewarts Photo Shop
	Action Locksmiths
	Army Navy Surplus
	Alaska Newspapers

16/H

AIC
Electronic Supply Center
Bicycle Shop
Satellite Alaska
Alaska Computer and Typewriter
Lantech
Cardiff Wireless
Wolf's
Peratrovich Nottingham
Bovey Trophy
Snap On Tools
Pameco-Aire
USGS Earth Science Information
PC Possibilities
Visual Communications Group
Alaska Sales & Service
Alaska Industrial Hardware
Potelcom Supply
B & B Tool Supply
Pacific North Equipment
GCR Anchorage Truck Tire Center
Salhberg Safety Supply
Totem Equipment & Supply
Ace Supply
Alaska Mill & Feed
Alaska Mining and Diving
Aeromap US
Cummins Northwest
Far North Supply
Lewis & Lewis
Steel Fabricators
Arctic Controls
Alaska Tool & Equipment
Bob's Services
Stake Shop
General Parts and Service
Automatic Welding & Supply
Kenworth of Alaska
Safety Inc.
Anchorage Suzuki/Arctic Cat
AAA Billiards Sales & Service
Arctic Technology
Audio Video
Engineered Fire Systems
Northern Lights Avionics
Interstate Battery System

17/I

American Sigma-Arctic Contractors
Tom's Plumbing & Heating
Anchorage Cold Storage
Fessler Equipment
Philip Environmental Chemical
Suncoast Pictures
Yukon Equipment
Polar Reproduction Supply
Signs Now
Rayville Enterprises
Alaska Pipe & Supply
Alaska Pump & Supply
DSR Companies
Alaska Yacht World
Trailer Craft
Liberty Alaska
Alaska Fire Inc.
Unitech of Alaska
Pacific Detroit Diesel
Warning Lites of Alaska
Pioneer Door
Eagle Enterprises
Radiator Shop
Alaska Auto Electric Rebuild
Arctic Surveyors Instrument
Quality Fabrication
Superior Plumbing Western States Electric Inc.
Polar Refrigeration
Alaska Industrial Resources
Vallen Safety Supply Company
Alaska Power Sports
Signs and Sounds
Lee's Embroidery
Keystone Industrial
Chill Out Parts and Equipment
Kit's Camera
Dryden Instruments
Borders Books and Music
Pacific Tile
Computer City Corporate Sales
Industrial Lift Truck
Northwood Furniture
Alaska Valve & Fitting
Winter Telecom
Dowland Bach
Ameritone

19/J

Alaska Bearing
Arctic Office Products
Graybar Electric
Construction Machinery
Polar Supply
Alaska Hydraulics
Professional Paint
Van Ooteghem
AAA Rubber Stamp & Engraving
Debenham Electric
Xerox Corporation
Bearing Engineering
Alaska Rubber
Alaska Instrument Company
Control Contractors
Moore Business Forms
Unique Machine & Welding
Fasteners Fire & Equipment
Alaska Electronics Supply
Central Plumbing & Heating
Industrial Valve & Heating
Zee Medical Services
Alaska Pure Water Products
Industrial Boiler & Controls
J & J Services
Quality Litho Printing
Anchorage Telephone Utility
Hayden Electric Motor
General Communication Inc.
Hobart Sales & Service
Honeywell
Arctic Welding Supply
Northern Office Supply
Alaska Diesel Service
Chemex Labs
Eba Engineering
Office Products & Services
Computerland
Gary Kings
Alaska Telecom
Strusser Electric
Curtis & Campbell
Mt. McKinley Fence Co.
Alaska Mechanical
Ronan
R. T. Rude Corporation

Atlas Alaska
Cadillac Plastic
Commercial Testing & Engineering
Alaska Generator & Engine
Refrigerator & Food Equipment
Alaska Pacific Water Group
Molecutech
K Appliance
ENSR Consulting & Engineering
Debenham Electric
Industrial Gasket
General Electric
Ken's Electronic Service
Alaska Scientific
Refrigeration Supplies
Opensystems Inc.
NANA Oilfield Services
Chemex Labs
Hoeffler Consulting Group
Nalco/Exxon Energy Chemical
Recreation Equipment
Red Wing Shoe Store
Engineered Equipment
Shimeks Audio
Haztek
Don Dwiggins Associates
Sears Roebuck
Time Frame
Water Works
Cleanair Alaska
Harolds Appliance
Bay Networks
Key c/o The Alaska Showroom
Microplay
North Slope Telecom
Precision Power Company
Financial System Products
Alaska Auto & Marine Supply
Sound Tech
Kinko Copies
Providence Alaska Medical Center
Motorola Communications
Arctic Rubber & Urethane
Brecht Studio
RWJ Consulting
Geiger Brothers West

21/K

25/M

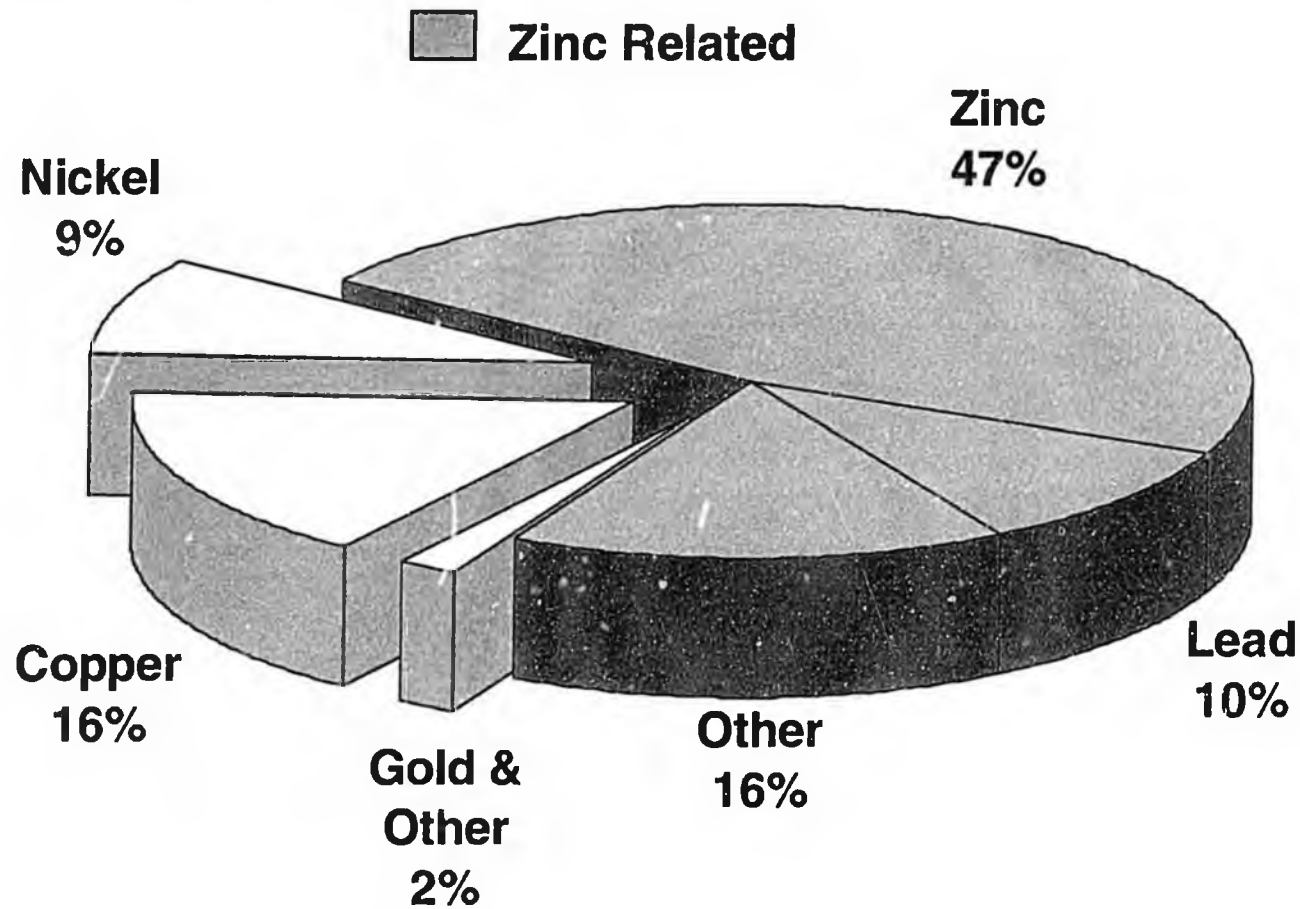
26/M	Suzuki Arctic Cat Motor Sports Gorilla FireWorks Tony Chevrolet Microspecialties Outdoor & More Sporting Goods Little Susitna Hydroseeding Nye Frontier Ford
27/N	Alaska Paint Materials Center Tundra Marketing
28/N	Satellite TV Systems
30/O	Florcraft Everts Air Fuel BCS Consulting Service Northern Land Use Research U of A Fairbanks
31/P	Corporate Express Denali Industrial Supply Alaska Tent & Tarp NDE Consultants Six Robbless Brown & Sons Arctic Fire & Equipment Altrol Inc. Northern Test Lab Capital Office System
32/P	Skidmore Machine Tool Company
35/R	Inchcape Testing Services
37/S	Napa Auto Parts Jerry Norton H & L Sales Hanson Eagle Quality Center Northwest Motor Sports Albert Norton Sleds

Cominco

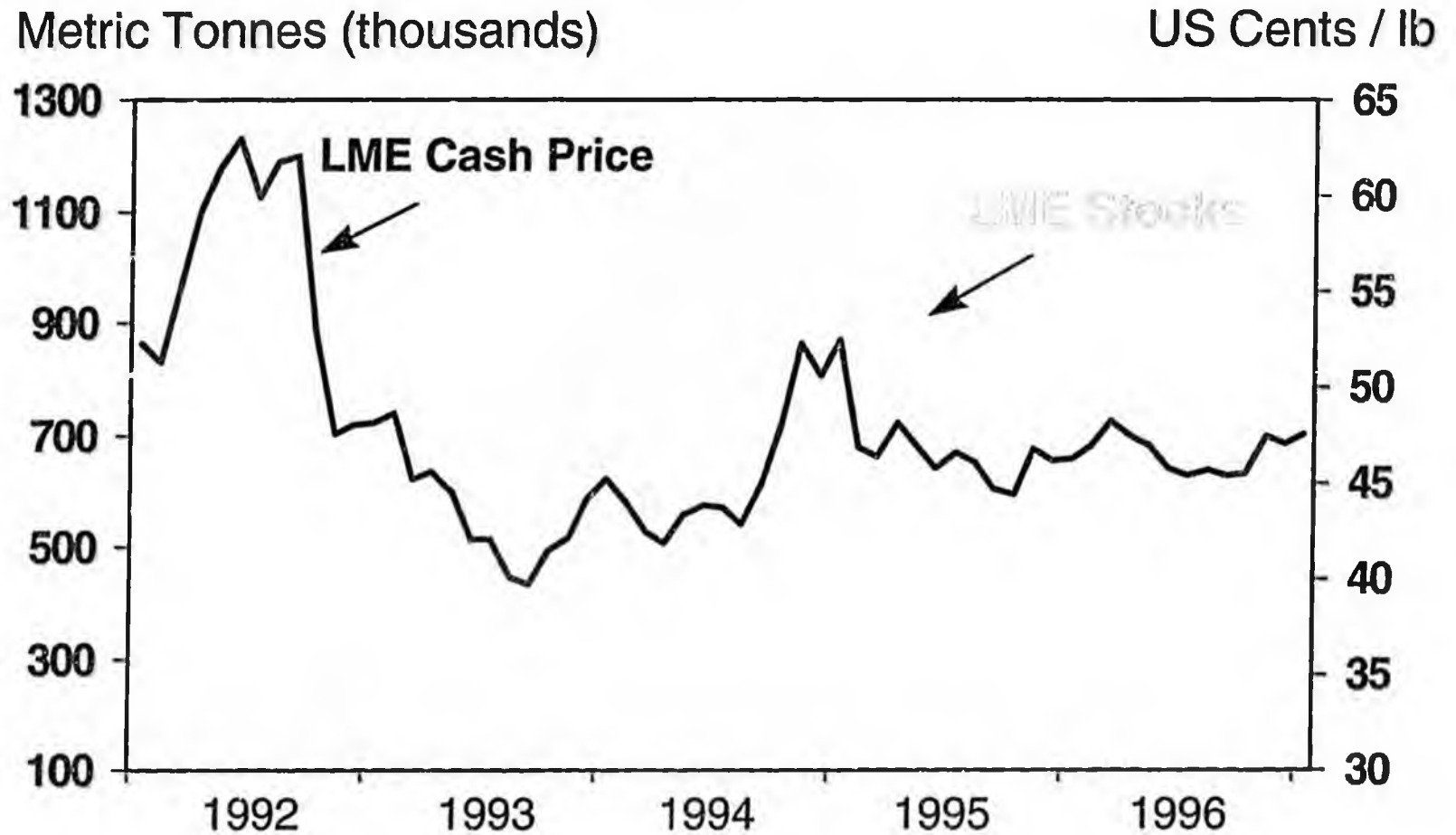
- Established in 1906
- World's largest zinc ore reserves
- World's largest zinc mining company
- Third largest zinc refining company
- Technology leader
- Sales of \$1.6 billion



Product Contribution to Revenue (1996)



LME Zinc



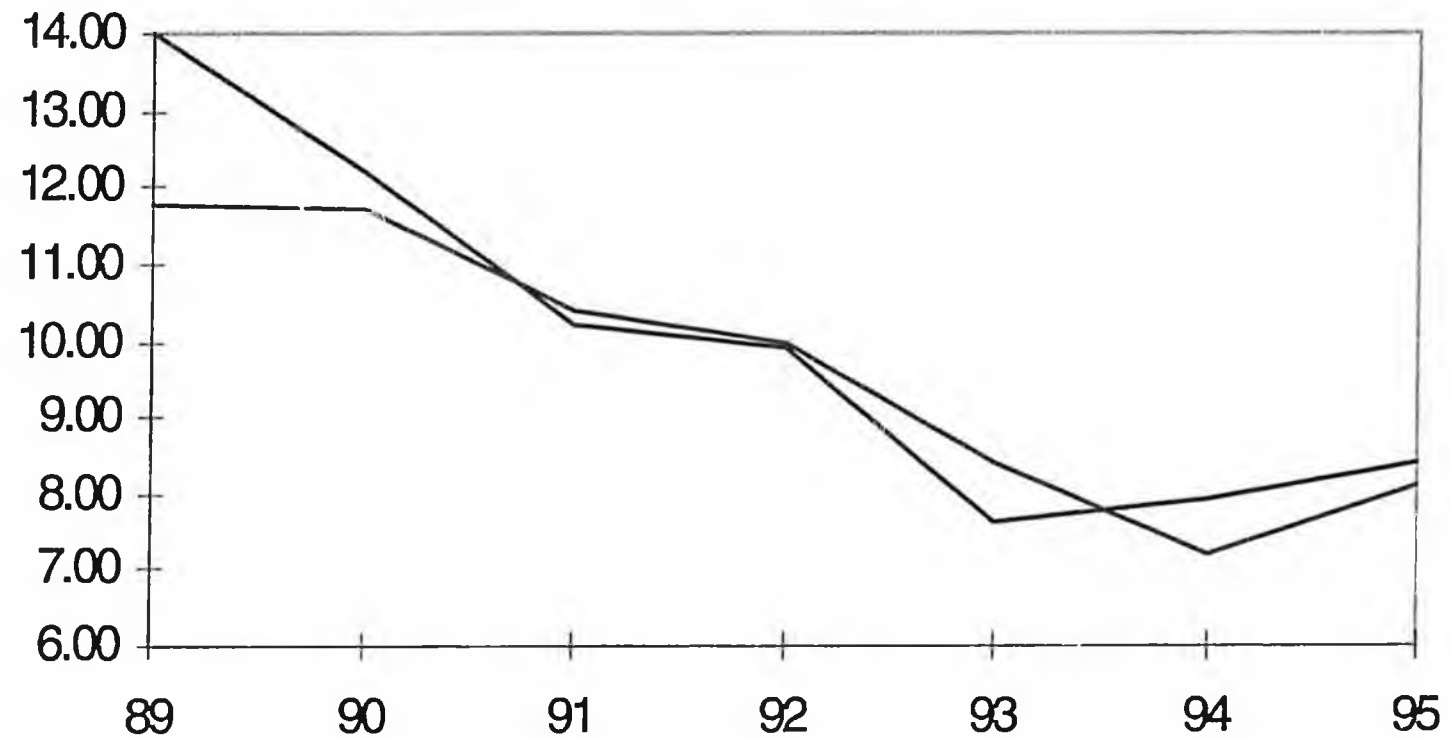
Prices and stocks plotted to January 10, 1997

Source: Metals Week

Zinc Industry Profitability

RESOURCES: IEPIC - WORLD WIDE

Aggregate Profitability (1995 US\$ billion)





Top 10 Western World Zinc Mines

1996 Production

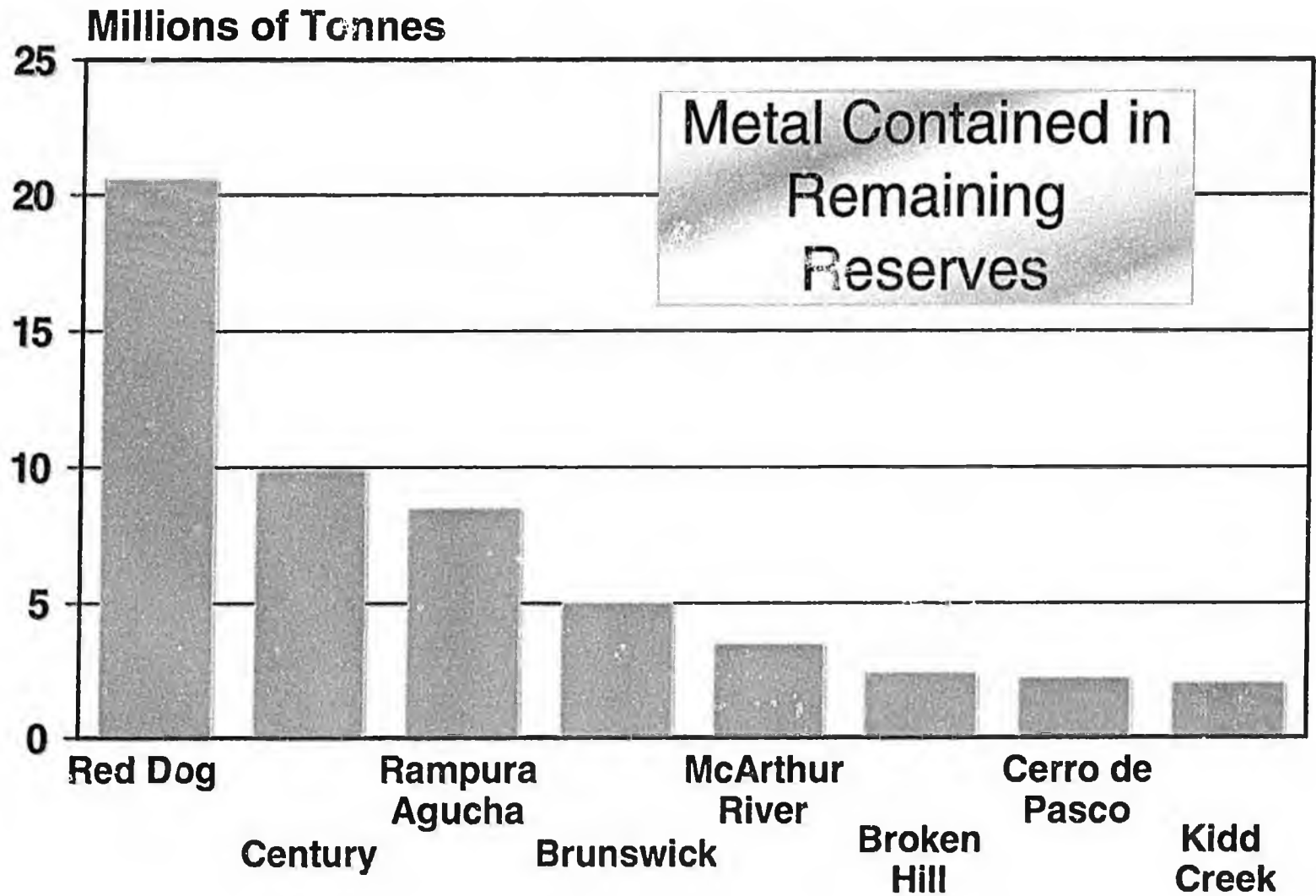
Thousand Tonnes
Contained Zinc

1. Red Dog	Alaska	325
2. Brunswick	Canada	245
3. Mount Isa	Australia	210
4. Cerro De Pasco	Peru	185
5. Broken Hill	Australia	175
6. Tara	Ireland	170
7. Faro	Canada	135
8. Helleyer	Australia	130
9. Polarix	Canada	120
10. Sullivan	Canada	120

Source: Brook Hunt, Cominco



Alaska Leads the World in Zinc Reserves



Red Dog Beginning

RESOURCES - WORLDWIDE

- ◎ NANA Land Agreement
- ◎ AIDA Road/Port Agreement
- ◎ National Park Service Road Agreement
- ◎ Permitting Difficulties

Commitment to Red Dog

RESOURCE WORLDWIDE

- ◎ Cominco initial investment was \$250 million
- ◎ Additional capital to make it work totaled \$35 million
- ◎ Capital invested to make environmental improvements totaled \$46 Million

RED DOG RESERVES

RESOURCEFUL WORLDWIDE

	TONNES	GRADE
MAIN	52,000,000	19.5/5.3/100
AQQALUK	76,000,000	13.7/3.6/66
HILLTOP	9,600,000	17.8/5.5/117
TOTAL	137,600,000	16.2/4.4/82

Returns from Red Dog

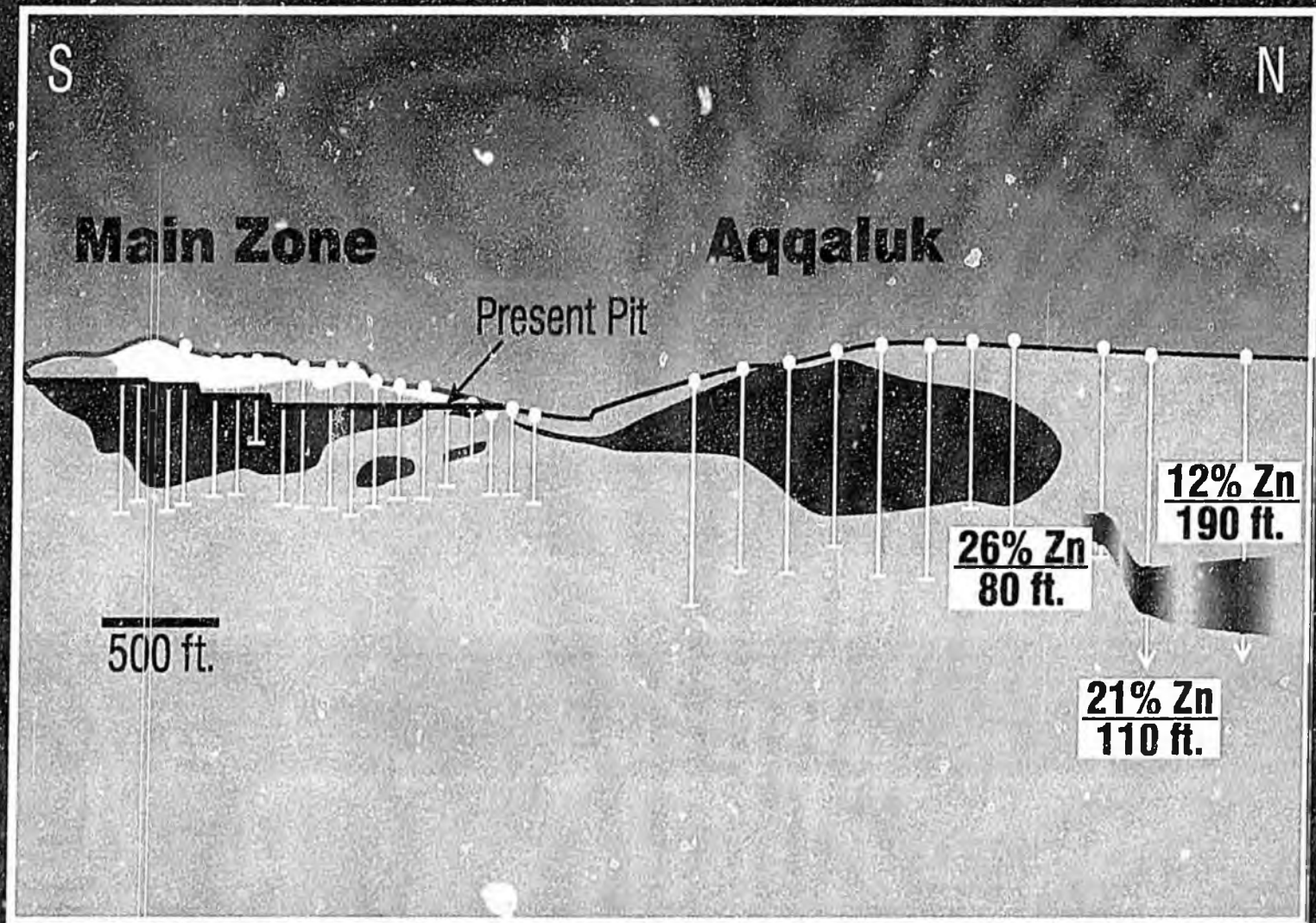
RE-OURCEPII - WORLDWIDE

◎ Operating profit by year:

90	\$ 1,580,000
91	\$ (20,572,000)
92	\$ (39,289,000)
93	\$ (80,602,000)
94	\$ (24,219,000)
95	\$ (7,465,000)
96	\$ 18,709,000
Total	\$(151,858,000)

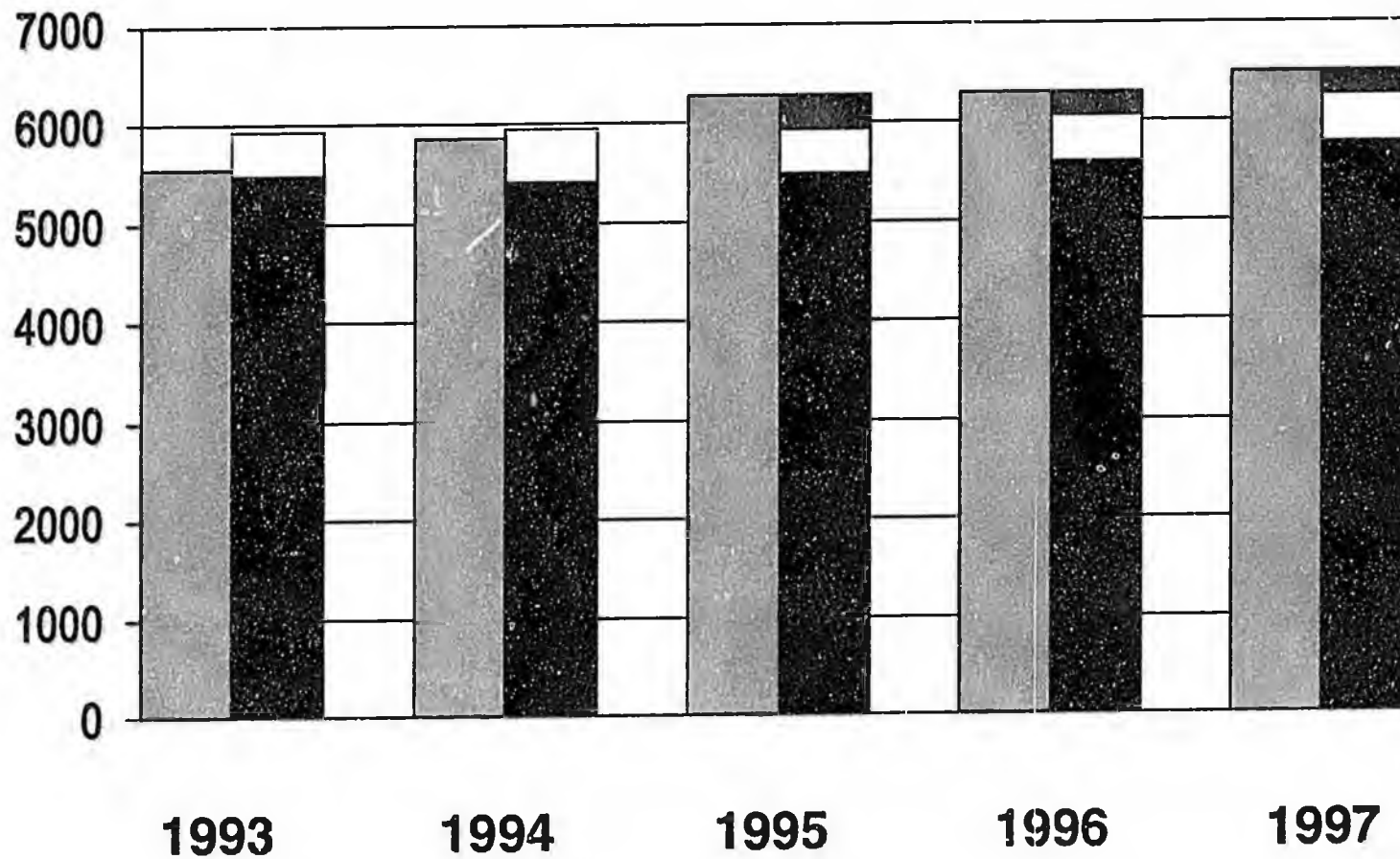
Red Dog - Aqqaluk Drill Section

RESOURCEFUL - WORLDWIDE

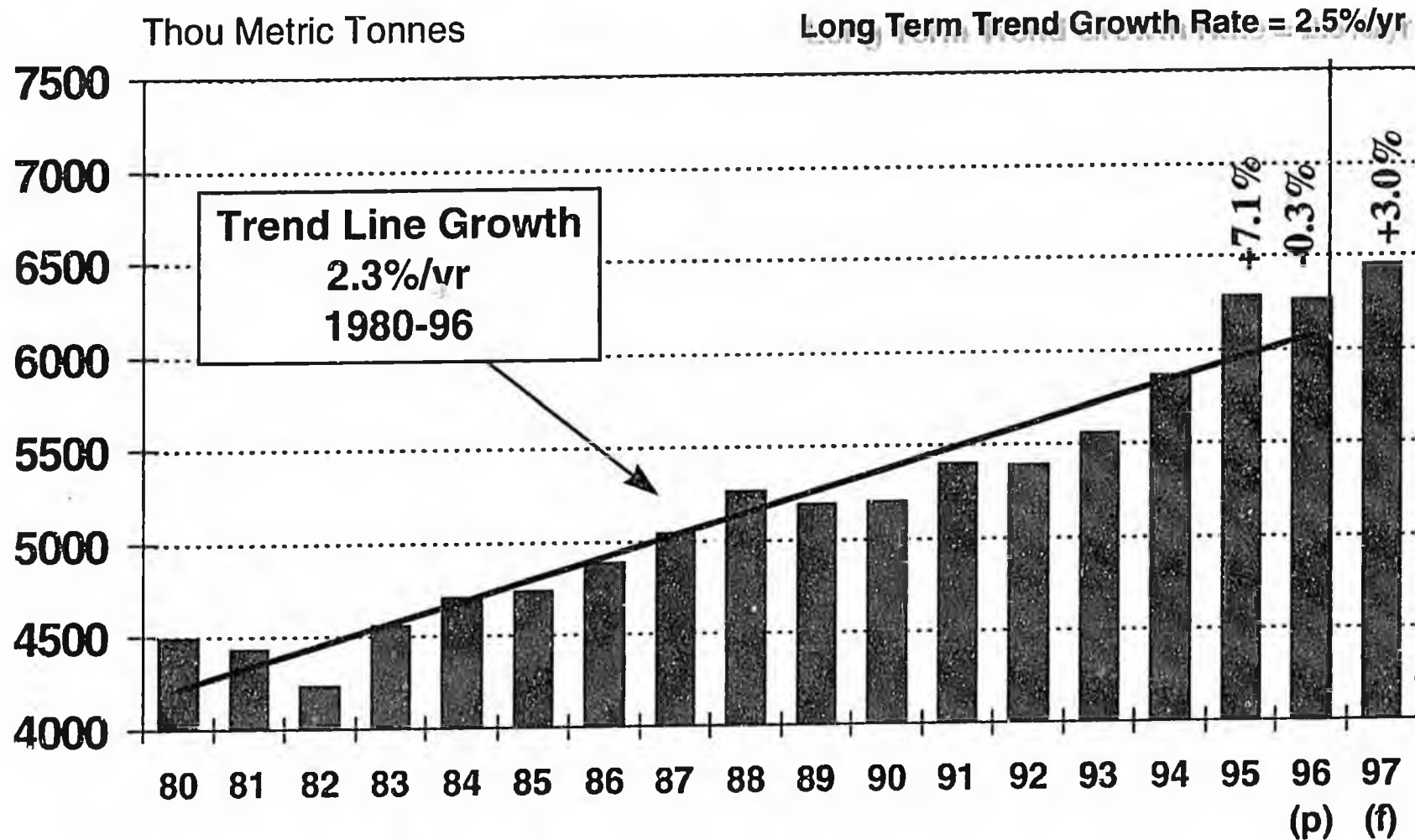


Western World Experiencing Zinc Deficit

WW Consumption WW Supply EW Trade Stock Drawdown



Western World Refined Zinc Consumption



Source: ILZSG, Cominco

Cominco - A Zinc Company

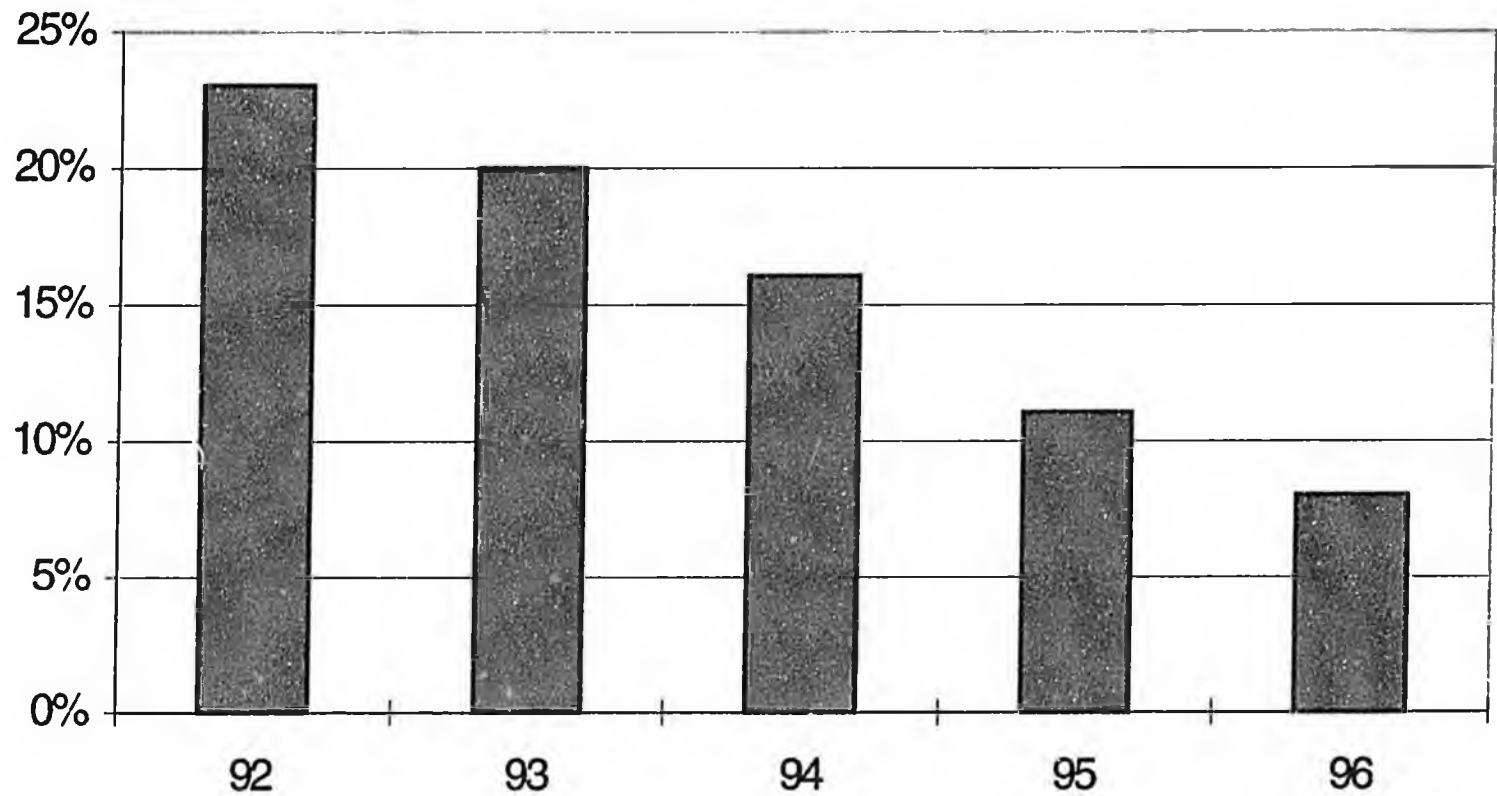
RESOURCEFUL - WORLDWIDE

- ⊙ 75% of Revenue Zinc Related
- ⊙ Technological Leader in Zinc
- ⊙ Refinery and Smelting Capacity
Dedicated to Red Dog
- ⊙ Industry Leader in Marketing Zinc
Concentrates and Metal
- ⊙ Cominco's future is Zinc

U.S. Share of Global Exploration Expenditures

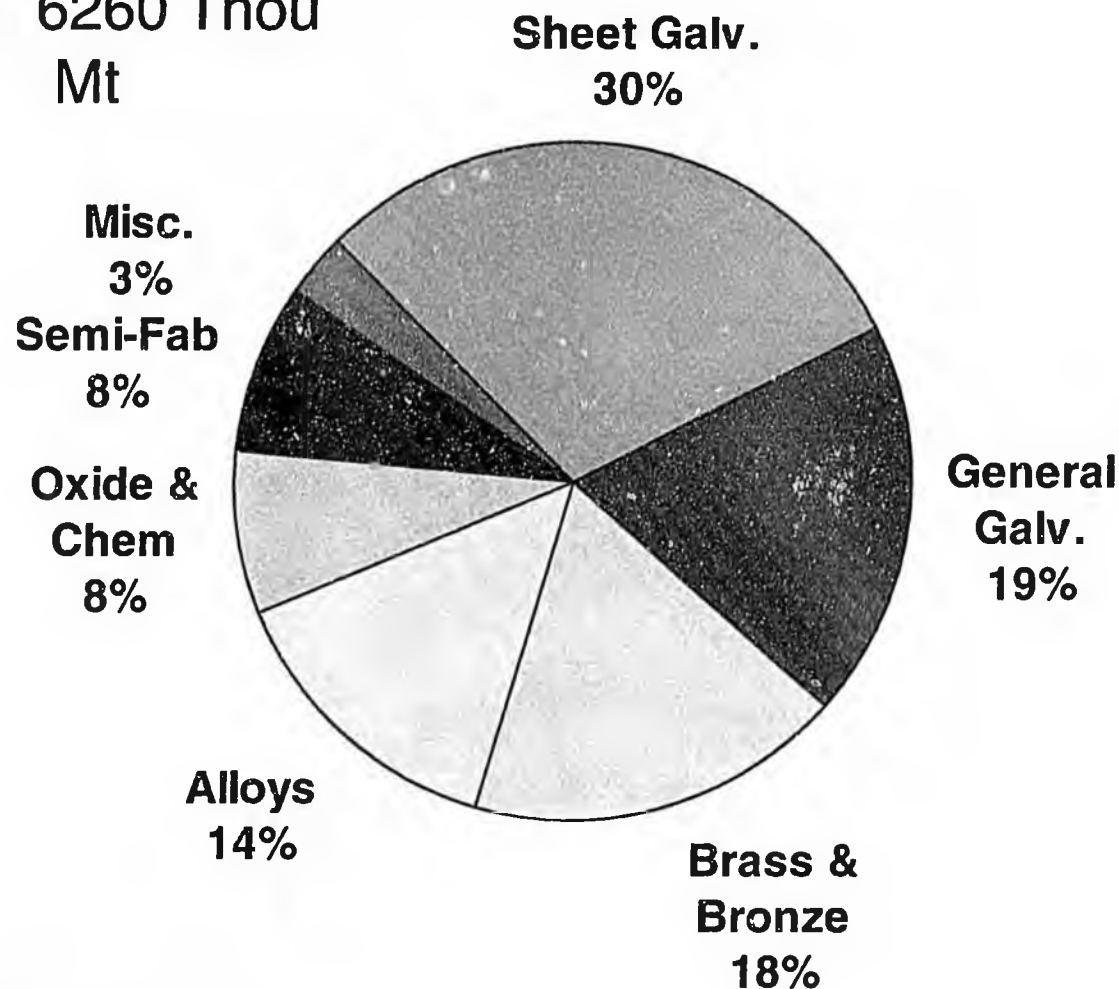
RESOURCEFUL - WORLDWIDE

United States



Western World Refined Zinc Consumption by End-Use (1996)

Total: 6260 Thou
Mt

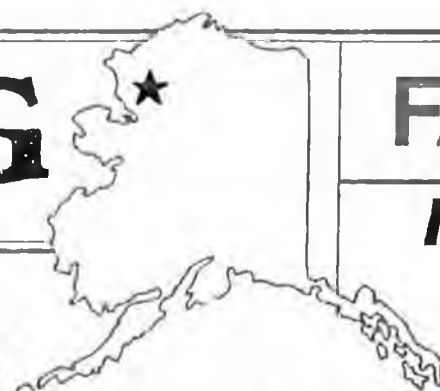


Source: ILZSG, Cominco

RED DOG

FACTS

History



The Red Dog zinc/lead ore deposit is situated in the DeLong Mountains of the Brooks Range, 90 miles north of Kotzebue, and roughly 55 miles from the Chukchi Sea. It is situated within the Northwest Arctic Borough.

The first report of mineralization in the Red Dog area was in 1953. At that time, geologists noted mineral staining in the area. In 1968, mention of potential mineralization in the Red Dog area was made again to the U.S. Geological survey (USGS).

The Red Dog Deposit was later documented by Mr. Irving Tailleir of the U.S. Geological Survey in 1970. The late Bob Baker of Kotzebue, Alaska, a bush pilot and prospector, noticed a rusty alteration zone in Red Dog Creek while flying over the area. He brought it to the attention of Mr. Tailleir, who was mapping the geology of the DeLong Mountain quadrangle, which includes Red Dog. Mr. Tailleir visited the site and immediately noticed abundant barite, black chert, siliceous sinter and iron oxide staining. His few rock samples graded over 2% lead and 1% zinc. One stream sediment sample graded over 10% lead.

Mr. Tailleir's findings and the apparent similarities of this occurrence to other large zinc/lead deposits around the world were documented in a USGS open file report published in 1970. The name "Red Dog Creek" was coined by Mr. Tailleir after Bob Baker's prospecting company, the Red Dog Mining Company, which was named after his pet dog, who frequently flew with him.

With the passage of the Alaska Native Claims Settlement Act, certain lands in Alaska were withdrawn from staking and selection. This included the land at Red Dog. In 1975, the U.S. Bureau of Mines was directed to conduct a mineral assessment in Northwest Alaska. As a result of this detailed assessment, Red Dog was 'discovered' again. In the fall of 1975 the U.S. Bureau of Mines issued a press release announcing the significance of the deposit at Red Dog.

Mining companies who were working in Alaska at the time of the announcement proceeded to stake hundreds of thousands of mining claims in the DeLong Mountains.

The NANA Regional Corporation became interested in selecting the land at Red Dog in 1976. Since the area was withdrawn from selection, NANA approached Congress about obtaining the rights to this area. With the passage of the 1980 Alaska National Interest Lands Conservation Act, the lands around and including Red Dog were available for selection by NANA.

Subsequently, NANA selected the lands, and finally after approval by shareholders, NANA proceeded to discuss mine development possibilities. Then, in 1982, NANA signed an agreement with Cominco regarding the development of the deposit.

Cominco Alaska, is a wholly-owned subsidiary of Cominco Ltd., whose principle activities are in exploration, mining and refining. Cominco Ltd., incorporated in 1906, one of the world's largest producers of zinc and lead, which accounts for about 10 percent of production in the western world, also produces copper concentrate, silver and gold.

With the agreement signed, there were a number of projects to be completed before construction of the mine could begin. These included: developing design concepts; feasibility studies; completing environmental reports and permitting, and finally the start of detailed engineering.

In addition, there were two other major hurdles to overcome; obtaining congressional approval for the road through Cape Krusenstern National Monument, and financing from the State of Alaska for the transportation system.

RED DOG

FACTS

History Cont'd

In May 1985, the Alaska State Legislature authorized the Alaska Industrial Development and Export Authority (AIDEA) to construct the DeLong Mountain Regional Transportation System (DMRTS). The primary objective of the DMRTS was to facilitate the development of the Red Dog Mine. Later that year, Congress passed legislation authorizing a transportation easement through the monument.

Initial development in the project began in 1986 with the installation of a shallow water dock and small staging area at the port site. With these facilities in place, major construction on the road and the mine site started in July 1987. By November 1989, construction was complete, the Red Dog Mine was a reality, commencing operations and producing concentrate in December 1989.

The Red Dog zinc/lead orebody contains one of North America's most significant mineral deposits. The U.S. Bureau of Mines (1989) expected the deposit to contain 29 percent of all proven U.S. zinc reserves. It is the largest zinc mine in the western world.

COMINCO/NANA AGREEMENT

In 1982, Cominco Ltd. and NANA reached an agreement that led to the development of the mine. Under the agreement, Cominco leases the property from NANA, operates the mine, and markets the concentrate.

The purpose of the agreement is threefold: to develop one of the richest zinc deposits in the world; provide employment, and protect the subsistence lifestyle of the people in the region.

Upon signing the agreement, NANA received \$1.5 million. Every year thereafter, until the mine went into production, NANA received an additional \$1.0 million, plus a general cost escalator. Once production began, NANA received 4.5% of the net smelter return. After Cominco recovers its capital

investment, NANA will begin sharing in the net proceeds. This begins at 25% and increases by 5% every 5 years until NANA and Cominco share equally in the profits.

An important provision in the agreement deals with employment. First preference on all Red Dog jobs goes to qualified natives in the NANA region.

Despite the remote location, as well as high development and shipping costs, Red Dog is expected to operate as an efficient ore producer for a half century, due to the grade of the deposit and the size of the orebody.

During the first five years of operations, Cominco Alaska was able to resolve operating and metallurgical challenges, and by the end of 1995 is expected to be producing at above design production levels.

The Aqqaluk Deposit, a new orebody discovered during the 1995 exploration program, 1/4 mile from the main Red Dog ore deposit, significantly increased the ore reserves at Red Dog.

Red Dog is truly a great example of all levels of government, local native corporations, and industry, working together to provide a good future for mining in Alaska.



RED DOG

FACTS

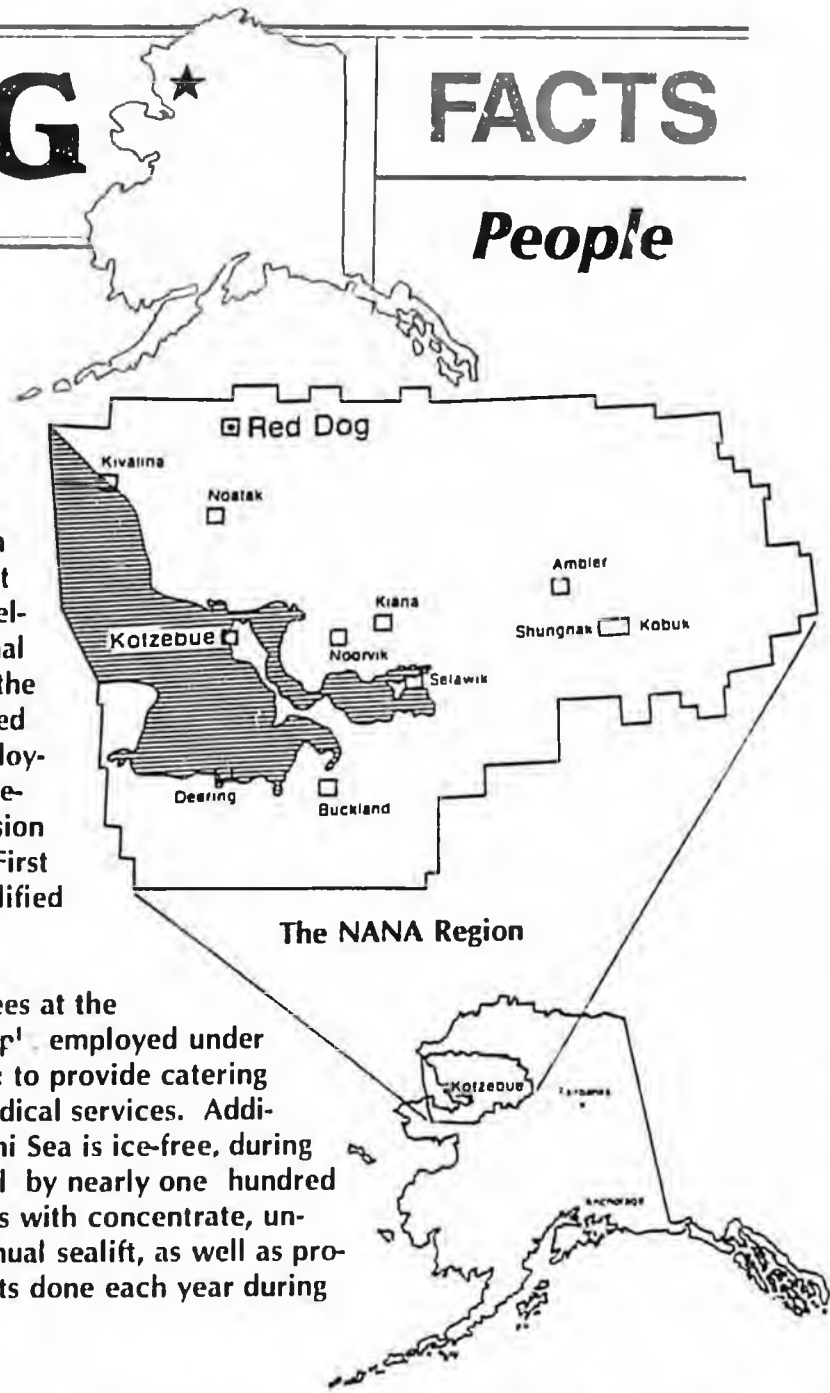
People

In the 1970's, most NANA shareholders did not favor development of the Red Dog Mine, or mining at all for that matter, for fear of the possible adverse impacts on the land and subsistence uses. In 1979, when NANA again polled its shareholders, it was found that most of the people felt that the mine could be developed in a way which could protect traditional activities. Of equal importance to NANA, is the understanding that for the next 50 years, Red Dog's mine, mill and port will provide employment, training and income for people of the region. Consequently, another important provision in the agreement deals with employment. First preference on all Red Dog jobs goes to qualified natives in the NANA region.

Cominco Alaska employs 325 regular employees at the Red Dog Mine Site, with an additional 75 people employed under contracts for hauling concentrates to the port; to provide catering and housekeeping services; and for on-site medical services. Additionally, due to the short time that the Chukchi Sea is ice-free, during the summer months, the workforce may swell by nearly one hundred people. These people are needed to load ships with concentrate, unload and store supplies arriving during the annual sealift, as well as provide additional labor for a series of betterments done each year during the short construction season.

Cominco has established a drug and alcohol-free policy at Red Dog, endorsed by NANA, which applies to all employees, contractors and visitors. The workforce, half of which are Inupiat people from the NANA region, is made up of mining professionals from a wide variety of occupations, which include engineers, geologists, laboratory assistants, mill operators, equipment operators, technicians, clerical support, and many more. Since Cominco provides on-the-job training in most areas of operations and maintenance, many of the Inupiat employees having learned their trades at Red Dog during the mine's first five years of operation.

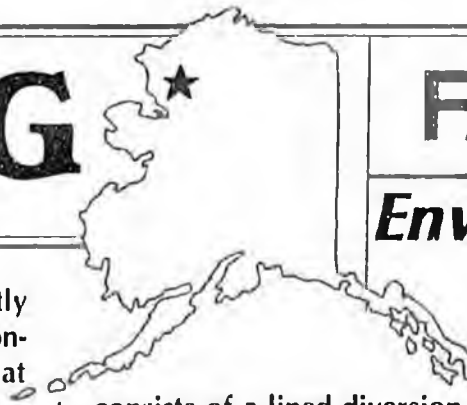
Transportation to and from Anchorage, Kotzebue and the ten villages of the NANA region is provided on a weekly basis, and most Cominco employees work either a four weeks on/two weeks off site, or the two weeks on/one week off site schedule. Most, except for those assigned to the port site, live at "The Doghouse", a large accommodations complex, equipped with sleeping and dining facilities, as well as gymnasium, saunas, weight rooms, running track, library, and several lounges dedicated to activities ranging from darts, to music, to television.



RED DOG

FACTS

Environment



NANA and Cominco are singularly, and jointly very much concerned with protecting the environment and the subsistence lifestyle of the Inupiat people.

The Subsistence Advisory Committee, formed when the Cominco/NANA Agreement was signed, is designed not only to consider the effects of development and operations activities on the environment and on subsistence needs, but also to ensure that all mining activity at the mine site is consistent with these needs.

The Committee had an integral role in the selection for the routing of the road from the mine site to the port. The current 52 mile route was chosen to avoid important caribou migration paths, fish spawning areas and waterfowl nesting sites.

Cominco strongly exhibits its commitment to pollution prevention in air, water and waste.

Prior to mine development, Red Dog Creek was a naturally toxic waterbody. High concentrations of minerals such as zinc, iron and cadmium prevented use of the Middle Fork by fish and aquatic invertebrates. Fish use of the Main Stem was limited, due to the high metals concentrations. Fish would die when they migrated through the Main Stem to the North Fork during low flow periods. Although the state designated these streams, as they did most water bodies in the state, suitable for the highest use, the process is underway to reclassify these creeks to their appropriate uses, as based on pre-mining conditions.

Cominco Alaska is pro-active in pollution prevention by controlling and managing all stormwater run-off. The diversion ditch system is a prime example of the commitment to minimizing the effects of Red Dog Mine on the surrounding subsistence areas. Therefore, with development of the mine, a diversion ditch system was installed as a pollution prevention measure to manage stormwater and mine drainage. The diversion system

consists of a lined diversion channel that carries upstream Middle Fork Red Dog Creek, as well as unaffected tributaries, and a drainage ditch which collects mine drainage and seepage. The diversion channel protects the creek from mine drainage water.

Downstream effects of the diversion system have been documented in the Alaska Department of Fish and Game's annual fisheries studies, in which it has been noted that metal levels in streams below the orebody have decreased. Fish habitat has expanded in Main Stem and North Fork Red Dog Creek to include usage by more species and age groups of fish. Overall, downstream fisheries and water quality are better now than they were prior to mining.

All surface run-off either flows to, or is pumped to the tailings impoundment, where it is reclaimed to a state-of-the-art water treatment plant and discharged to Middle Fork Red Dog Creek.

Discharge water has less metals, in order of magnitude, than the creek, so it dilutes the creek water, resulting in cleaner water downstream. Discharge water is sampled twice a week to monitor the water quality, whereas downstream water in Red Dog Creek, Ikalukrok Creek and Wulik River are sampled weekly to monitor water quality.

The Ikalukrok Creek and Wulik River are important over-wintering habitats for Dolly Varden. Since commencement of Red Dog operations, the Dolly Varden population has, not only, remained healthy, but has increased. This is due in part, to the better water quality in Red Dog Creek, as a result of the mine drainage diversion system and dilution of toxic creek water with clean treated water.



RED DOG

FACTS

Environment Cont'd

It is intended that Red Dog and Ikalukrok Creeks will be reclassified for usage, because of their natural toxicity. Reclassification will permit maximum allowable volumes of treated water to be discharged from the tailings impoundment. The pond will be kept at a safe level, and the natural metal concentrations in the creeks will be diluted at the same time, resulting in healthy fisheries downstream.

Cominco Alaska also exhibits its commitment to pollution prevention by installing secondary containment on all petroleum containers greater than 300 gallons. The fuel storage tanks at the mine and port sites were lined and bermed.

The high priority of air quality preservation resulted in enclosure of the coarse ore stockpile, the addition of a closed truck loading facility at the mine's concentrate storage building, and total enclosure of the shiploader at the port site. From the jaw crusher to the shiploader, the process is totally enclosed to protect air quality. Road watering, along with application of calcium chloride, has solved summer dust problems, not only in the pit, but on the port road as well.

Waste minimization is an important part of our pollution prevention program. Hazardous products such as solvents have been replaced with non-hazardous, or less hazardous equivalents, which reduce the amount of hazardous waste to be disposed. Scrap iron, batteries, hydraulic oil, antifreeze, paper, newspapers and magazines are all recycled, rather than disposed. Even soil which is contaminated with petroleum is recycled through bioremediation, rather than being sent off site for disposal.

Protection of archaeological sites south of the port is of high concern. With the installation of the port site dock, the natural sediment movement was interrupted, resulting in sediment accretion to the north and erosion to the south. To maintain the natural shoreline and to protect archaeologi-

cal sites, Cominco Alaska manually transfers the accreted sediment to the area of erosion each year, and an annual beach survey tracks shoreline movement at the beach.

Wildlife concerns were present prior to start-up of the mine, but annual caribou studies have not found any adverse affects. In fact, the herd population peaked during the first six years of operation. A clean camp has prevented wildlife attraction, and there has been no observable affect on the wildlife. Cominco Alaska also conducts an annual Spring Clean-up Day, in an effort to maintain a clean camp.

PROTECTION OF THE ENVIRONMENT

"To comply with all existing local, state and federal laws and regulations. To provide additional environmental protection measures, where warranted, that are technically feasible and economically viable. To encourage, support and conduct necessary research to establish high standards of performance and to improve methods for environmental control. To keep employees, agency personnel, and the general public fully informed concerning the environmental aspects of Company operations. In all emergency situations, protect in order of priority: personnel, environment, property and production."



RED DOG

FACTS

Mining

Red Dog ore is mined by open pit techniques. Mining rates of 7,000 TPD are small relative to most other open pit operations, due to the high grade of the deposit, the low stripping ratio and short haul distances.

The original reserves were 85 million tons at 17.1% zinc; 5.0% lead and 2.4 oz./ton silver, and a stripping ratio of less than 1:1 over mine life. During mine construction, 2.5 million tons of overburden and waste was stripped from the orebody. Competent non-mineralized waste was used to build roads and waste dumps.

With an operating schedule of 365 days/year, in 1991-1992, the estimated tons per day were 5,260; the 1995 estimated tons were 7,000 per day. The ore mining rate is 2.6 million tons per year. The strip ratio starts off at 1.2 to 1, falling to 1.0 to 1 by year five and ultimately to 0.8 to 1.

Bench heights are set at 25 feet. Pit slopes vary, depending on the material present in the wall. The slope, through competent waste and the sulphide package, is set at 45 degrees. The Kivalina shales are an ice-rich shale whose carbonate matrix has been leached-out and which exhibits little or no strength as it thaws.

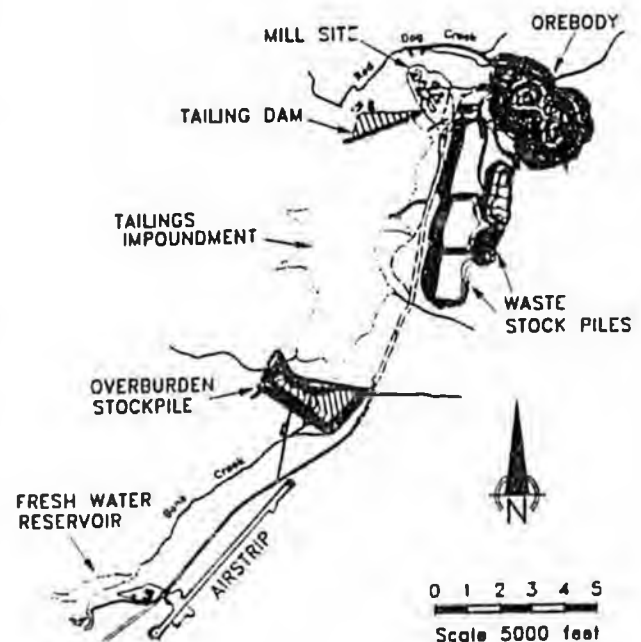
Haul roads are 60 feet wide, providing a 50 foot driving surface. Maximum grades are usually 8%. Blasthole diameters are 6 to 9 inches. Since the density of the ore varies with its grade, hole spacing is adjusted accordingly. Rotary, and in-the-hole drilling systems are being utilized. ANFO is used in the dryer parts of the pit and packaged slurry in wet ones.

A relatively small fleet of mobile equipment is required for mining operations. Two 13 cubic yard loaders are being utilized, with a third unit for backup and stockpile operations. Five 85-ton haulage trucks, three bulldozers, two utility loaders, two graders and a water/sand truck round-out the equipment fleet. Ore is hauled to a

blended stockpile a distance of approximately 0.3 miles.

For the first 6 years of operation, the open pit was confined to the west flank of Red Dog Creek. Stripping of material on the east side of the creek commenced in 1995.

Waste disposal requires special attention because of the location of the project and the varying natures of the environmentally sensitive materials handled. One important criterion in the design of the waste dumps was that all water draining through the dumps be directed to the tailings pond to be treated.



Mine Site

RED DOG

FACTS

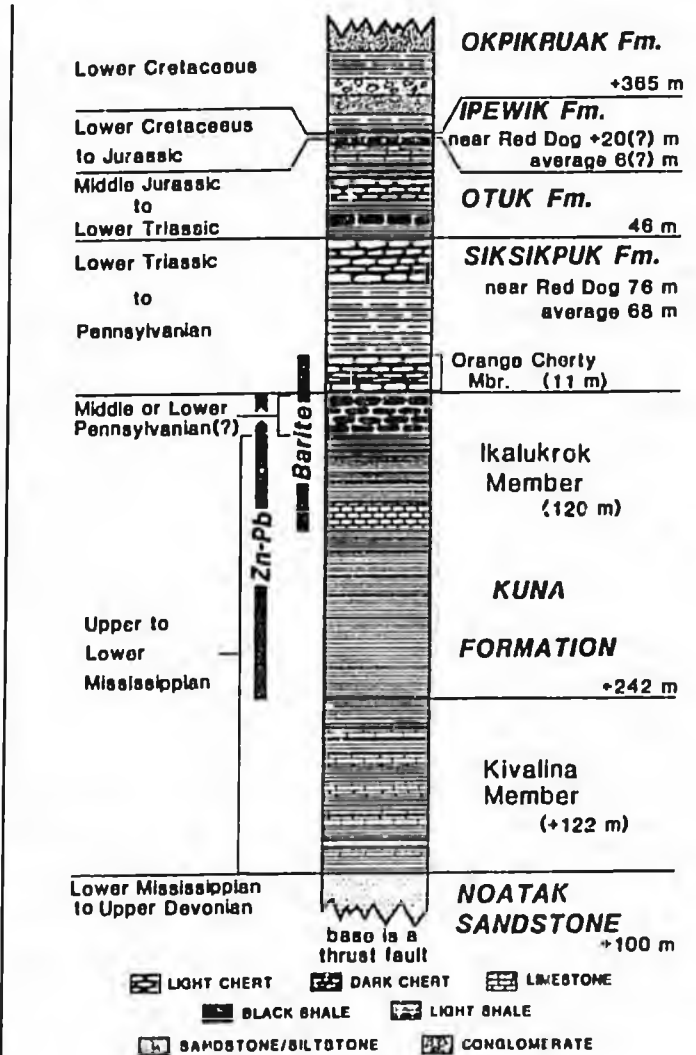
Geology

Red Dog is a Mississippian to Permian (300 m.y.), black shale hosted, zinc-lead-silver deposit located in the DeLong Mountains, western Brooks Range, Alaska. The property currently contains 152 million tons (138 M tonnes), averaging 16.2% zinc, 4.4% lead and 2.4 oz/ton (82 g) silver.

The Brooks Range is comprised of eight stacked thrust plates that represent portions of a basin thrust northward by a Jurassic to Cretaceous aged (~85 m.y.) compressional event. The Brooks Range allochthon, the second lowest thrust plate, is comprised of Devonian to Cretaceous clastic sediments and contains Red Dog and all other similar regional occurrences.

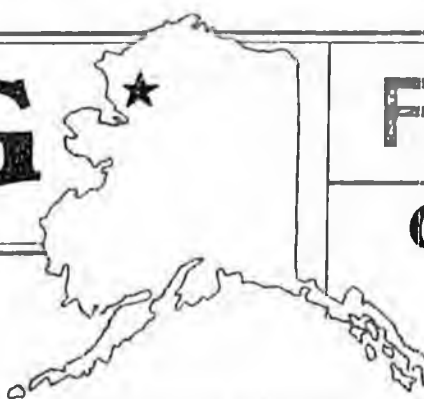
The oldest rocks in the Brooks Range allochthon are the Devonian to Mississippian Endicott group. The group contains a deltaic sandstone (Noatak sandstone) that hosts regionally distributed base metals and is thought to be the aquifer for the mineralizing fluids. Conformably overlying the Endicott is the Mississippian or Pennsylvanian Kuna Formation, which at Red Dog, is subdivided into two members. The older Kivalina Member comprises the lower half and is the deposit's footwall. The Kivalina is a calcareous shale and limestone, and is thought to represent a distal turbidite. The upper Ikalukrok Member is a carbonaceous shale and the host to the deposit and all other regional occurrences. This unit represents a local sag in the basin which produced a low energy reducing environment. The Pennsylvanian to Permian Siksikpuk Formation conformably overlies the Kuna Formation and is the deposit's hanging wall. It is comprised of light colored shales and cherts that were deposited in an oxidizing environment. Interbedded and unmineralized barite occurs at the base of the Siksikpuk Formation.

The following figure, from Moore et al (1986), shows a stratigraphic section for the Red Dog sequence, Brooks Range allochthon.



All the rocks associated with the mineralizing event are considered to be part of the exhalite rock package. This package is comprised of three components, silica, barite and sulfides that form three exhalite rock types; silica rock, barite rock and sulfide rock. These rocks are gradational, all can contain ore. At Red Dog, the exhalite rocks are facies of the Ikalukrok Member. Silicification was a dominant component of the mineralizing event and the host shale has been silicified and

RED DOG



FACTS

Geology Cont'd

locally resembles a chert. The major sulfides in decreasing order of abundance are sphalerite, pyrite, marcasite and galena. Most of the deposit's silver occurs within the crystal structure of the galena. The dominant ore mineral, sphalerite, is very fine grained to amorphous and is commonly intergrown with silica. Ore textures are massive, fragmental, chaotic, veined and rarely show classic sulfide sedimentary layering. The upper portion of the orebody has been physically and chemically weathered. Oxidation has altered the sulfides to sulfates. The zinc and iron sulfates are very soluble and are readily depleted from the weathered cap, while the lead sulfate is residual and is, therefore, enriched.

Three deposits occur at Red Dog: the Main Deposit (the area of our current mining), the Aqqaluk Deposit (a northward extension of the Main Deposit) and the Hilltop Deposit. The Hilltop Deposit is an isolated thrust plate, located 2,400 feet (730 meters) south of the Main Deposit, now separated by faulting and/or erosion. In the Main Deposit and Aqqaluk Deposit areas, the ancestral deposit has been structurally repeated by a series of low angle Cretaceous aged thrust faults and now occurs in three plates. The lower plate occurs throughout this area, but is best developed in the north. It contains the entire Aqqaluk Deposit. The median plate starts at the south end of the area and laps over the lower plate before being truncated by erosion as it rises in the north. The Main Deposit includes all the ore in this plate plus a portion of the southern lower plate. The upper plate is restricted to the south end of the area and is not ore bearing. The reserves, by deposit are:

Sulfide veins are common. They cut the silicified host shale at the base and periphery of the deposits and also occur in the exhalite package. Bitumen blebs occur locally in the exhalite package, are quite mature (ranging from pyro-bitumen to semi-anthracite) and are believed to represent remobilized organic carbon from the carbonaceous host. Elongated cylindrical structures occur and represent a well developed vent biota. They bear similarities to worms observed around modern day sea floor hydrothermal vents.

A genetic model has been developed for Red Dog that combines a sedimentary exhalite (sedex) and replacement origin. Rifting during the early Mississippian developed a restricted sub-basin into which reduced black shale of the Kuna Formation was deposited. Block faulting associated with rifting tapped the regionally extensive Noatak sandstone and provided a pathway for fluid flow to the sea floor. Syngenetic barite rock and subordinate amounts of low grade sulfide rock and silica rock were deposited as sediments. The barite rock formed a cap which restricted and localized fluid flow. Replacement by silica and sulfides continued under this cap. Upward migration of the vein system, through the exhalite, further upgraded the deposit. Thrusting, related to a Cretaceous aged compressional event, fragmented and structurally repeated the orebody.

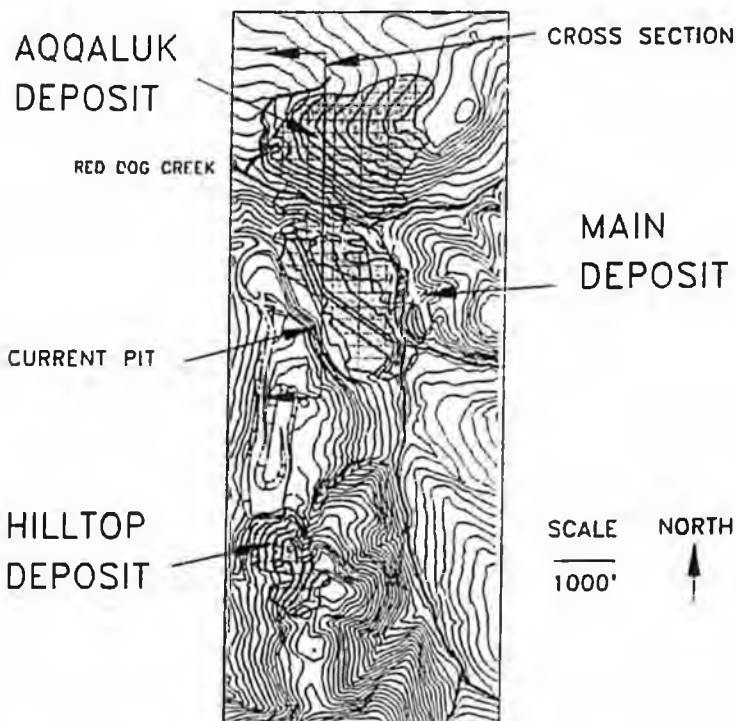
DEPOSIT	TONS (Tonnes) x 1000	% Zn	% Pb	Ag Oz/T (g)
MAIN (Indicated)	57,526 (52,176)	19.5	5.3	2.9 (100)
AQQALUK (Inferred)	83,832 (76,036)	13.7	3.6	1.9 (66)
HILLTOP (Probable Resource)	10,611 (9,624)	17.8	5.5	3.4 (117)
TOTAL	151,969 (137,836)	16.2	4.4	2.4 (82)



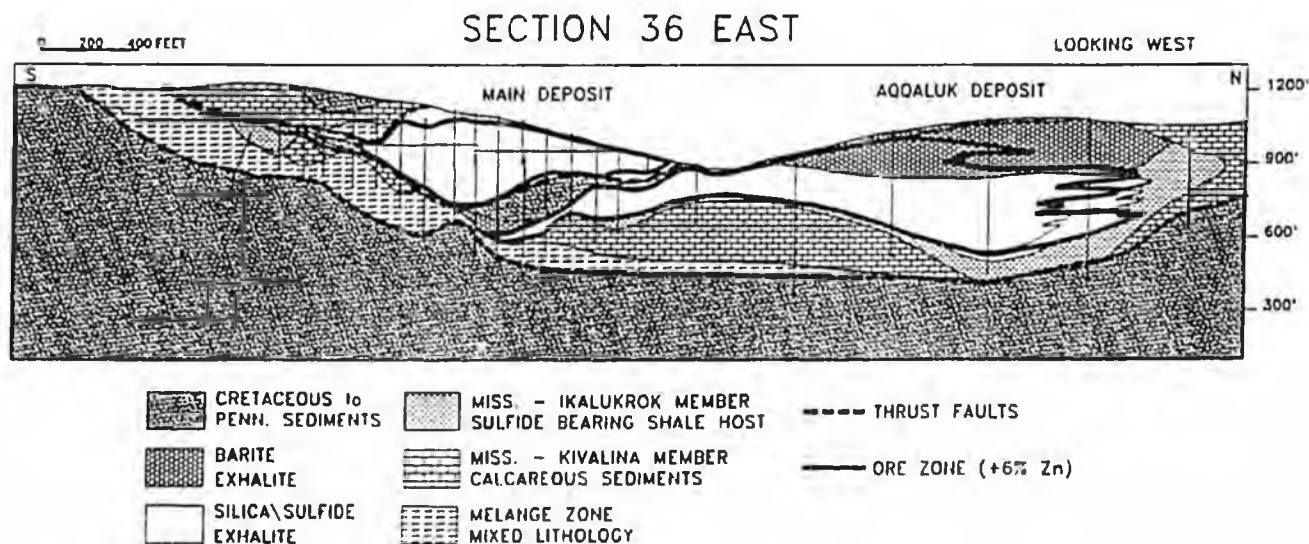
RED DOG

FACTS

Geology Cont'd



Three deposits exist at Red Dog, as shown by the adjacent map. These deposits, or ore zones, are pieces of one ancestral deposit. The Hilltop Deposit, which is the smallest, is a thin, moderate grade ore zone which caps a ridge south of the Main Deposit. Hilltop contains copper, averaging 0.2% and moderate grades, suggesting it contains a mineralizing center (four centers are postulated for Red Dog.) The Main Deposit and the Aqqaluk Deposit are a continuous zone of near equal size. The Main Deposit is the highest grade deposit at Red Dog and has a moderate thickness. Two mineralizing centers may occur within the Main Deposit. The Aqqaluk zone is slightly larger, due to a thick ore section. It is the lowest grade deposit at Red Dog, but has a higher grade area which probably defines a mineralizing center. As shown in the Cross Section, the Main Deposit and the Aqqaluk Deposit occur in two overlapping ore hosting plates. Red Dog Creek is used as the boundary between the two deposits. The Main Deposit's ore is from the median plate and the south end of the lower plate. The Aqqaluk Deposit is entirely within the lower plate.



RED DOG

FACTS

Production

The Red Dog process flow sheet is relatively simple, yet many techniques which are new to zinc/lead processing have been incorporated. Among these innovations are: modular construction, tower mills, column cells and pressure filters. The unique design of the flow sheet is the result of Cominco's 70 years of operating experience at the Sullivan Mine and successful arctic mining operations at Pine Point, Black Angel and Polaris.

Process facilities include the modular crushing plant located at the exit from the open pit, the coarse ore stockpile, and the eight prefabricated modules forming the mill complex. Adjacent to the concentrator is the power plant module and the mine site concentrate storage building. There is storage capacity at the mine site to hold up to two weeks of concentrate, in the event of haulage interruptions due to bad weather, or caribou migration. The mill modules were constructed in the Philippines and designed by the Ralph M. Parsons Company, Pasadena, California.

Crushing And Milling

The Red Dog orebody is a fine-grained, stratiform zinc-lead-silver deposit which requires a reasonably fine grind to achieve acceptable metal recoveries at marketable grades. After being crushed to minus 6 inches at the primary crusher, ore is conveyed to the milling complex. A grinding sequence consisting of SAG mill/ball mill/tower mill was chosen due to low capital and operating costs, and the high level of reliability. This circuit design eliminates fine crushing and achieves high energy efficiency through the use of tower mills, which can result in a reduction in power needs of up to 40%. Cominco has been successfully operating tower mills for over eight years. The final zinc concentrate is ground to 80%, passing 60 microns and the final lead concentrate is ground to 80%, passing 20 microns.

1995 Annual Production

Mined Ore:	2.5 million Tons/Year
Zinc Concentrate:	645,000 Tons/Year @ 55.6% Zn; 3% Pb; 3.7 Oz/T Ag
Lead Concentrate:	101,000 Tons/Year @ 55% Pb; 12.2% Zn; 12.1 Oz/T Ag

Flotation

Cominco has implemented column cell flotation technology at Red Dog in order to maximize metal recoveries and produce quality zinc/lead concentrates. It has been found that due to the fine-grained nature of the ore, conventional large diameter flotation tanks alone will not produce acceptable metal recoveries at marketable concentrate grades. The use of column cells have resulted in improved concentrate grades and zinc/lead separation at reduced operating costs.

Concentrator

Crushing:	Primary Jaw Crusher, to minus 6"
Grinding:	SAG Mill/Ball Mill/Tower Mill
Flotation:	Column Cells/Maxwell Cells
Dewatering:	Pressure Filters
Production Schedule:	365 days/year to produce 2000 TPD of concentrates



RED DOG

FACTS

Production Cont'd

Water Management

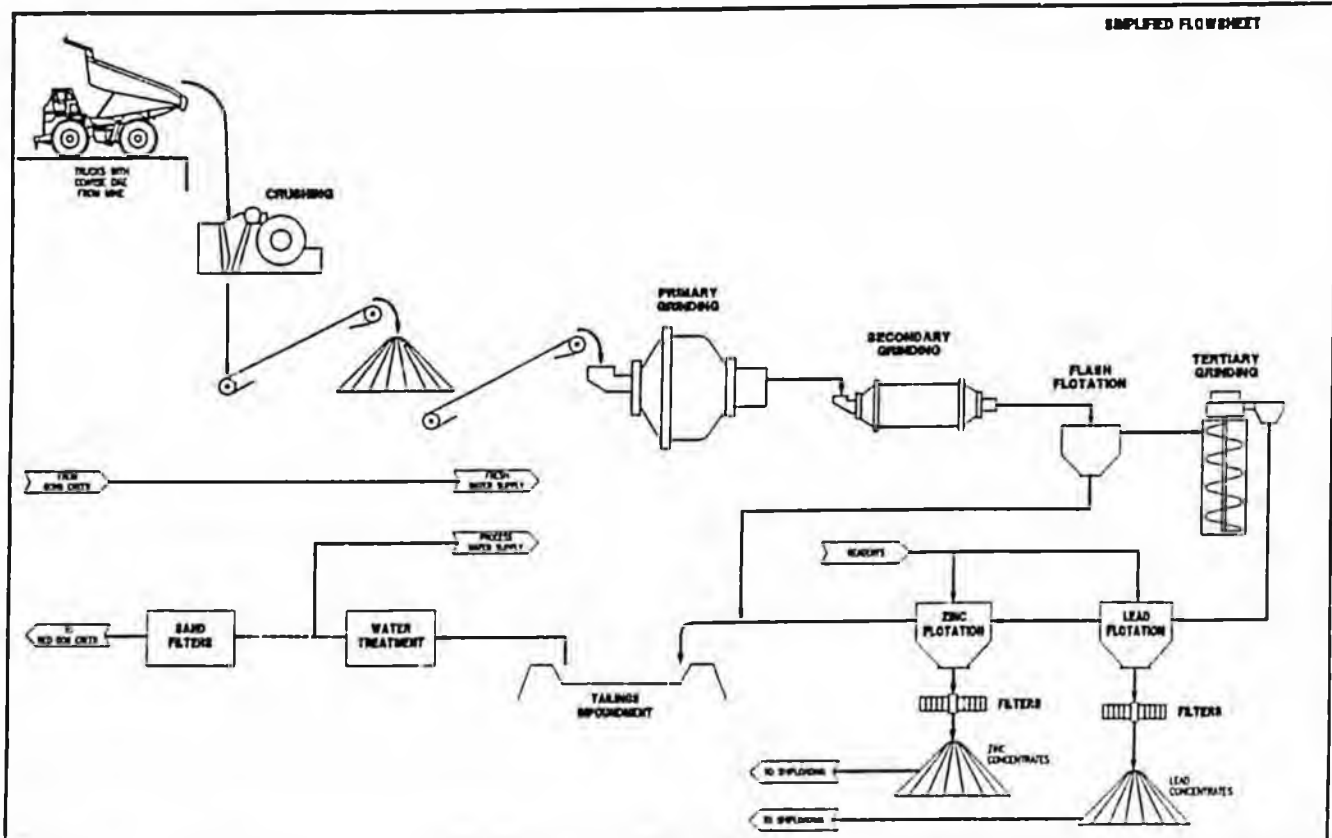
Management of the water regime at Red Dog is a key part of the process flow sheet for the following reasons:

1. Water flow ceases for five to six months each winter and there are no lakes available for long-term water storage.
2. Red Dog Creek already contains extremely high naturally occurring levels of soluble heavy metals which will create environmental and process problems, if uncontrolled.
3. Red Dog must adhere to EPA "zero discharge" requirements for flotation plant tailings.

A water treatment plant has been designed to remove heavy metals from the tailings pond effluent and ensure that water used in the flotation circuit does not contain excessive levels of heavy metals.

The ore processing and support systems are fully computerized. It is possible to continuously evaluate the main process variables, including ore and water flow rates, solids/water ratios, particle sizes, and assays.

Waste heat generated by the power plant is recovered and satisfies all heating requirements. Waste heat not used for buildings will be used in the mill process water.



RED DOG

FACTS

Transportation of Concentrates

Red Dog concentrates are hauled from the mine site to the port site facilities on the Chukchi Sea.

The \$180 million DeLong Mountain Regional Transportation System, financed by AIDEA, includes the 52-mile road from the mine site to the port site and all associated port facilities, such as the concentrate storage facilities, conveyors and fuel storage tanks. In return for these services, Cominco guaranteed to:

- Pay a yearly toll of approximately \$12 million for the life of the mine;
- Provide AIDEA a 6.5% return on its investment;
- Other users will share operating and maintenance costs, and
- Other users will pay similar fees to the state.

Since 23 miles of road traverses the Cape Krusenstern National Monument, a 100-year easement was granted to the NANA Regional Corporation by the U. S. congress in September 1985.

Road construction required the granting of 33 permits from 7 different state and federal agencies. Construction of the port site required an additional 20 permits and/or approvals from 9 state and federal agencies.

The road was constructed over permafrost, using a minimum of 5 feet of crushed rock placed on geotextile mat to ensure stability. A caribou monitoring plan has been developed to deal with annual caribou migrations which cross the road system.

Concentrate is moved from the concentrator to the port site under contract by Arrow Transportation International, Inc. of Seattle, in specially designed 75-ton trucks. During the 100-day shipping

season, Foss Maritime of Seattle, Washington, uses barges to carry the concentrate from the shallow water port to ships waiting several miles offshore. The shallow sea floor gradient has made it necessary to utilize self-unloading barges to load ocean-going vessels. Fednav Limited of Montreal, PQ, acts as shipping agent for the concentrates. An estimated 15 ships, ranging in size from 35,000 to 80,000 tons will call at the port each year.

Concentrates destined for Cominco's smelter in Trail, B.C. are transferred from ships to the Burlington Northern Railway at Vancouver, B.C., where they are transported by railway to the Waneta Reload Facility, located 8 km south of Trail. The short journey from Waneta to Trail is made by highway trucks, operated by Trimac Transportation Services Ltd. of Calgary.





Red Dog Mine Background

Just 55 miles from the Chukchi Sea, tucked in the DeLong Mountains, lies the world's largest zinc mine: the Red Dog Mine. The mine is a unique operation on property owned by the NANA Regional Corporation, an Alaska Native corporation, and leased to Cominco Alaska, which operates the mine.

Production at Red Dog began in 1989, bringing economic development and skilled jobs to a part of Alaska that has traditionally had high unemployment and a scarcity of year-round, ongoing employment. The lease agreement between NANA and Cominco provides for training and hiring of NANA shareholders, who now comprise half the mine's 400-person workforce.

Often described as a mining "success story" involving state and private sector cooperation, development of the Red Dog Mine began with reports of mineralization in the early 1950s. The deposit at Red Dog was later brought to the attention of the U.S. Geological Survey by Kotzebue-area bush pilot Bob Baker. Baker frequently flew over the region, accompanied by his pet, a red dog, who inspired the area's name. Subsequent mapping and sampling of the area by the USGS showed significant quantities of zinc and lead.

Under the Alaska National Interest Lands Conservation Act, NANA chose the Red Dog area during the land selection process. At the direction of NANA shareholders, corporate leaders signed an agreement in 1982 with Cominco Ltd., an international exploration, mining and refining company, to lease the land, construct the facilities, and operate the mine at Red Dog Creek. NANA owns approximately 72 square miles of land surrounding the mine site, all of which has geology that indicates lead, zinc and silver mineralization.

The Red Dog deposit is a shale-hosted, lead-zinc-silver deposit containing 170 million tons of 17.1 percent zinc, 5.0 percent lead and 2.4oz/ton silver. The discovery of the Aqqaluk orebody adjacent to the mine site have increased the deposit estimate to 170 million tons of zinc, lead and silver.

Production at the mine has proven beneficial to the residents of the Northwest Arctic Borough, who are actively involved in the regulation and oversight of resource production activities.



RED DOG MINE

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Workers at the mine site work directly for Cominco and are involved in exploration, mine operation and environmental compliance. The company also contracts with NANA/Marriott, a NANA joint venture, to provide on-site housekeeping and food services for mine employees.

To ensure that ongoing job opportunities are provided to shareholders, Cominco and NANA established a formal Employment Committee, consisting of village leaders and Cominco officials. In addition, village leaders are involved in a mine Operations Committee and a Subsistence Committee that is part of decisions that impact habitat and wildlife.

Cominco, which has a strong international environmental policy, readily agreed to strict protection of fish, wildlife and habitat at the Red Dog development. The Subsistence Committee reviews many of the environmental monitoring reports prepared by Cominco to assess any potential impacts.

As part of the Cominco/NANA operating agreement, Cominco agreed to employ and train NANA shareholders to work at the mine. Currently, approximately 50% of the mine's 350 workers are NANA shareholders.

In addition, a subsistence committee of residents from nearby villages is actively involved in decisions that impact habitat. Two other committees, which advise on employment and operations activities, are also comprised of village leaders and Cominco officials.

During the caribou migration season, the Subsistence Committee has authority to halt traffic on the 52-mile road from the mine to the port. This same authority is extended to the local people of Kivalina and Kiana, if they feel the impact of commercial traffic is proving detrimental to subsistence hunting.

The financial agreement between Cominco and NANA provided the Native corporation with \$1.5 million upon signing in 1982. An additional \$1 million was paid to NANA every year until production began in 1989. Once production started, NANA began receiving royalty payments at 4.5 percent of the net revenue. After Cominco has recovered its capital investment, NANA will share in net proceeds starting at 25 percent and increasing by 5 percent annually until both Cominco and NANA have an equal share in mine profits.

The transportation network for the mine was financed by the State of Alaska through the Alaska Industrial Development and Export Authority (AIDEA). A 52-mile road and sea port were constructed with a \$160 million loan that Cominco is repaying, with interest, from user and export fees.

In order to construct the road, which traverses the Cape Krusenstern National Monument, NANA requested a 100-year easement, granted by Congress in 1985. The road is built over permafrost using a minimum of 5 feet of crushed rock on a geotextile mat to ensure stability.

Zinc concentrate is trucked from the mine to the port and stored until the shipping season, which lasts for about 100 days each year. Due to shallow waters, barges carry the concentrate from the port facility to ships waiting several miles offshore. The ships then carry much of the concentrate to Vancouver, B.C., where it is carried via railroad, then truck, to Cominco's smelter at Trail, B.C. Some of the concentrate is shipped to overseas markets.

The Red Dog Mine was originally projected to operate for at least 50 years, Cominco, NANA and the state of Alaska recently announced 40 percent expansion activities that will reduce unit costs to a level that will ensure the operation can survive through the lows in the metal-price cycle. With the Aqqaluk orebody added to the original mine zone, the operation is secure for the next 50 years. AIDEA has agreed to issue tax-exempt revenues bonds -- this time to finance an \$85 million port expansion.

Cominco Alaska will invest \$108 million into the expansion efforts, which include a new ore storage facility, employee camp, and upgraded conveyor system. Construction is currently underway and will be completed in November, 1998.

"This is a real life example of a true partnership between government and the business community," said Governor Tony Knowles, announcing AIDEA's participation in the expansion project.

Alaska's Red Dog Mine now produces 5 percent of the world's supply of zinc. Output in 1996 was approximately 620,000 tons. By the year 2000, Red Dog will be producing more than 1 million tons of lead and zinc concentrate per year.



Fast Facts

- Red Dog Mine is on land owned by NANA Regional Corporation
- The land is leased by Cominco, which built and operates the mine
- Cominco/NANA lease agreement began in 1982
- Total capital construction costs to date exceed \$500 million
- Ore production began in 1989
- 400 year-round employees/50% are NANA shareholders
- Red Dog Mine is the world's largest zinc mine with reserves of 170 million tons
- Red Dog Mine produces 5% of world's supply of zinc
- NANA shareholders sit on Subsistence, Employment and Operations Committees
- Wages paid to NANA shareholders total approximately \$13 million per year
- Cominco conducts training programs to encourage shareholder advancement
- Cominco has recruitment programs designed to increase shareholder hire
- Cominco was founded in 1906



RED DOG MINE
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Cominco Alaska Environmental Policy

Cominco Alaska recognizes that maintaining a healthy environment goes hand-in-hand with a strong economy. We understand that in order to prosper over the long-term we must incorporate environmental considerations into all aspects of our business dealings. This policy is adopted to guide all Cominco Alaska employees in the daily performance of their jobs.

1. Cominco Alaska will explore, develop and process resources and market products in an environmentally sound manner.
2. Cominco Alaska will provide information to counsel customers, transporters & others in the safe and proper handling of our products.
3. Appropriate environmental care will be exercised in the planning, development, operating and closure phases of Cominco Alaska operations in all jurisdictions. Environmental protection measures appropriate to site specific conditions will be applied in the absence of regulation.
4. Cominco Alaska will promote the development of open and constructive partnerships with the public to address environmental concerns and advance necessary protection measures.
5. Cominco Alaska will promote the advancement of scientific knowledge to be applied to the identification and effective resolution of real environmental problems.
6. Cominco Alaska will encourage pollution prevention, waste minimization and recycling efforts throughout its operations.
7. Observance of environmental legislation will be a priority in all company activities
8. Cominco Alaska will conduct audits of operations to ensure adherence to this policy.





Cominco Ltd.

Cominco Ltd. is an international, integrated natural resource company whose principal activities are exploration, mining, smelting and refining.

The company is the world's largest zinc concentrate producer and third largest zinc metal producer. Other concentrates include copper, molybdenum, gold and germanium. Its other metal products include lead, copper, gold, silver, ferronickel, cadmium, bismuth and indium.

Cominco has been in the mining business since 1906 and is Canada's oldest continually operating mining company. Cominco was the first mining company to establish an air service to aid in exploration efforts in Canada's unexplored north, the Yukon and northwestern Alaska.

The company's operations include three metallurgical complexes and five mines. In the United States: the Red Dog Mine in Alaska (zinc/lead) and the Glenbrook ferronickel smelter in Oregon, the only nickel smelter in the U.S. In Canada: the Sullivan mine in British Columbia (zinc/lead/silver); Polaris mine in the Northwest Territories (zinc/lead); and Highland Valley Copper Mine in British Columbia (copper/molybdenum). Its zinc refinery and lead smelting complex is in Trail, British Columbia, with an annual zinc capacity that will reach 290,000 tons in 1997. And in Chile, the Quebrada Blanca mine producing copper and the Cajamarquilla zinc refinery in Peru.

The company also supports and conducts research and development work that investigates new ideas and opportunities to provide technical assistance to existing operations in processing and environmental care.

Cominco's mission is to explore, develop and market resources in an environmentally sound fashion; to apply environmental protection measures appropriate to site specific conditions in the absence of regulation; to encourage pollution prevention, waste minimization and recycling efforts in company operations worldwide; to observe environmental laws in all company activities; and exercise environmental care in the planning, developing, operating and closure phases of all company operations.

Human health and the environment are fundamental concerns and top priorities that dictate decision-making at Cominco.



RED DOG MINE

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Cominco Partnership with AIDEA

In 1985, the Alaska Legislature authorized the Alaska Industrial Development and Export Authority (AIDEA) to provide \$150 million in funding for the DeLong Mountain Regional Transportation System.

The purpose of the transportation network was to facilitate development of the Red Dog Mine. The entire system consists of the 52-mile road from the mine site to the port, and all associated port facilities, such as the concentrate storage facilities, conveyors and fuel storage tanks.

The financing arrangement require that Cominco guaranteed it would:

- Pay a yearly toll of approximately \$12 million for the life of the mine
- Provide AIDEA with a 6.5 percent return on its investment
- Require other users to share operating & maintenance costs
- Require other users to pay similar fees to the state

Cominco continues to honor its agreement with the state and is entering into another venture with AIDEA that will involve \$85 million in state funds and more than \$100 million in Cominco financing. The latest project will expand the port facilities and increase production by 40%, helping the Red Dog project become more economic.



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