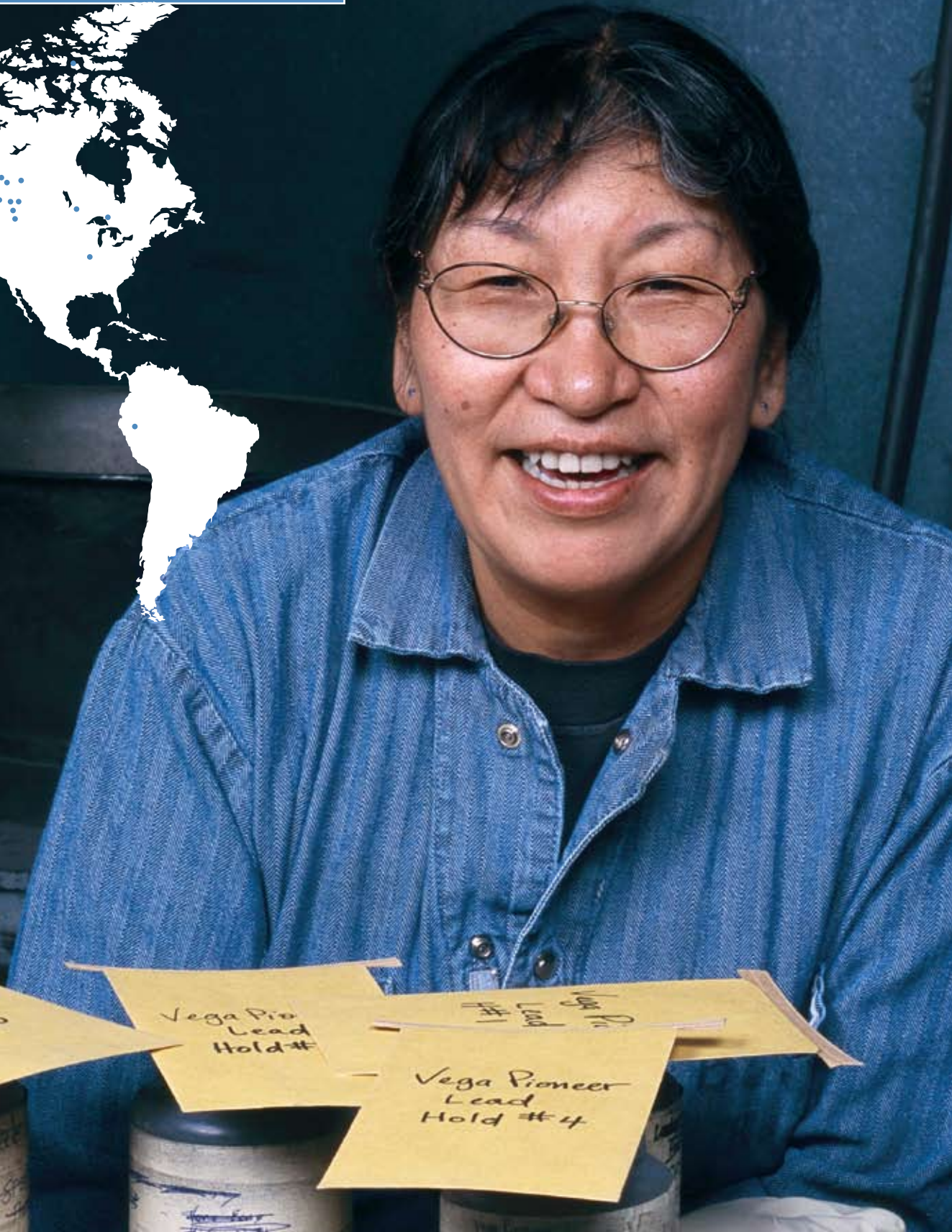


Operation and Site Performance 2006

RED DOG MINE



Vega Pioneer  
Lead  
Hold # 3

Vega Pioneer  
Lead  
#3

Vega Pro  
Lead  
Hold #

Vega Pro  
Lead  
#3

Vega Pioneer  
Lead  
Hold # 4

Vega Pioneer  
Lead  
#4

# Red Dog Mine

## Operational Overview

The Red Dog zinc/lead mine, mill and port facility are located in northwestern Alaska, 130 kilometres north of Kotzebue. Red Dog has a production capacity of over 580,000 tonnes per annum of zinc contained in concentrate. The operation is the largest zinc mine in the world both in terms of zinc reserves and zinc concentrate produced. Operating in a remote location, without road access, the operation is self-reliant, with power generation, an airport, worker housing and ocean shipping facilities.

The mine is operated by Teck Cominco Alaska Incorporated (TCAK—an indirect wholly-owned subsidiary of Teck Cominco Limited) under an agreement with the NANA Regional Corporation (NANA—an entity wholly owned by the Inupiat people of northwest Alaska). The workforce totals 460 employees and contractors, of which 56% are NANA shareholders.

## Environmental Highlights

In April 2004, Red Dog achieved certification under ISO 14001. During the summer of 2006 the operation had a successful third-party maintenance audit in conformance with the ISO 14001:2004 standard.

In 2004, five citizens from the Village of Kivalina filed suit under the U.S. Clean Water Act alleging numerous violations of water discharge permits. The majority of the allegations were for total dissolved solids in the mine's discharge, however, these discharges were authorized under an order granted by the U.S. Environmental Protection Agency (EPA). Regardless, a citizen's suit is still pending. An attempt to mediate this dispute is underway. A new National Pollution Discharge Elimination Permit, issued by the EPA in March 2007, is under appeal.

Significant environmental achievements in 2006 include:

- Construction of a new and larger sand-filter facility that replaced an older filtration facility. Sand filtration is the final stage of water treatment prior to discharge to the environment;
- Geotechnical drilling and design of a back-dam for the tailings impoundment. State of Alaska authorization to construct was also granted. Construction of this structure, scheduled for 2007, will ensure protection of an important aquatic habitat.
- A Draft Closure Plan for the mine reached the final stages of development. Two workshops were conducted with regional stakeholders, local and state agencies and interested NGOs. Over 100 individuals



Aerial view of the Red Dog mine and complex

attended and provided valuable feedback on the plan, which will be finalized in 2007;

- Operational and capital improvements continued for the reduction of metal-bearing fugitive dust. Bag-houses were installed on the mine's crusher dump pockets. Engineering and permitting were also completed for the installation of a bag-house on the coarse ore stockpile building;
- A draft Ecological and Human Health Risk Assessment is being finalized. Public comments are being addressed and the report is being revised accordingly. An ecological risk evaluation for the mine and mill sites was also started. Both risk studies will identify the potential risk from the release of fugitive dust and will be used to develop further mitigation measures;
- A triennial spill drill was conducted that allowed the operation to fully exercise its Incident Command System as well as deploy its spill response equipment. The State of Alaska Department of Environmental Conservation and the U.S. Coast Guard were involved and were satisfied with the exercise;
- Initial drilling to evaluate the extractability of natural gas was unsuccessful due to difficult ground conditions. A modified program is being planned for 2007. Natural gas would be used to replace diesel fuel currently used for power generation and thereby significantly reduce particulate matter, NO<sub>x</sub> and SO<sub>2</sub> air emissions.



### Safety and Health

Red Dog has an Occupational Health and Safety Committee that is comprised of a cross-section of employees from the workplace. During the year, over 40 hours of training was provided to each committee member in order for them to promote safety and health standards, manage hazards, conduct workplace inspections and understand that injuries are preventable.

The greatest disappointment of the year was a fatal injury to a geologist working in the pit.

### Community Sustainability

Under the TCAK/NANA Agreement, an independent committee consisting of local native hunters provides direction to the Operation on environmental matters. This committee meets quarterly to review all subsistence issues with the mine staff. The Committee provides input on operational activities as they relate to caribou, fish, seal, whale and other important subsistence resources.

An Employment and Training Committee is also provided for under the Agreement. This Committee is mandated to develop initiatives that will help maximize the number of NANA shareholders working at the operation. Under their oversight, Red Dog has an ambitious on-the-job training program and extensive student development efforts. Over 12,000 hours of on-the-job training was provided in 2006 to shareholders. On the education side, 41 students were enrolled in the scholarship program in 2006.

Red Dog management routinely meets with various governments and stakeholders. Once a year, all 11 of the local villages are visited and an operational update is provided at a public meeting. Meetings with the two closest villages, Noatak and Kivalina, are held on a more frequent basis. A total of 33 meetings were conducted in 2006. In addition, Red Dog has engaged several statewide and national NGO groups to discuss such issues as fugitive dust and closure planning.



Emergency erosion control effort in the Village of Kivalina.

A storm in October 2006 collapsed a major section of the wall and jeopardized a fuel storage facility.

### Kivalina Emergency Control

For the second consecutive year, Red Dog personnel participated in an emergency erosion control effort in the Village of Kivalina. During the summer, a seawall had been constructed to protect the shoreline in order to prevent erosion and property damage from ocean storms. A storm in October 2006 collapsed a major section of the wall and jeopardized a fuel storage facility. Red Dog provided materials, equipment and manpower to help repair the erosion control barrier.

#### Benefits provided to Red Dog full-time and temporary employees

	FT	TMP
Health Insurance	no	no
Extended Health/Medical (US)	yes	yes
Dental	yes	no
Health Spending Account	yes	no
Group Travel	yes	yes
Life	yes	yes
Dependent Life	yes	no
Employee Optional Life	yes	no
Spousal Optional Life	yes	no
AD&D	yes	yes
Employee Optional AD&D	yes	no
Spousal Optional AD&D	yes	no
Short-Term Disability	yes	no
Long-Term Disability	yes	no
Maternity Leave	yes	no
Parental Leave	yes	no
Retirement Plan (pension, RRSP, 401K)	yes	no

FT = Full-time      TMP = Temporary

Performance Trends—Red Dog Mine			
	2006	2005	2004
<b>Health &amp; Safety Statistics</b>			
Fatalities	1	0	0
Lost-time injuries	11	18	16
LTI frequency	1.68	3.31	2.96
Severity	953.6	119.0	109.0
<b>Permit Compliance</b>			
Number of excursions	15	13	20
<b>Reportable Spills</b>			
Number*	130	128	144
<b>Metals Released in Effluent (tonnes)</b>			
Cadmium	0.003	0.004	0.002
Lead	0.003	0.003	0.003
Zinc	0.393	0.330	0.225
<b>Average Concentrations in Effluent (mg/L)</b>			
Cadmium (permit limit 0.002 mg/L)	0.0005	0.0007	0.0006
Lead (permit limit 0.081 mg/L)	0.0006	0.0005	0.0008
Zinc (permit limit 0.120 mg/L)	0.0722	0.0581	0.0571
<b>Energy Use (Direct and Indirect)</b>			
Electricity (TJ)	0	0	0
Fuel (TJ)	2,652	2,680	2,499
Energy intensity in product (GJ/t)	3.9	4.0	3.7
<b>GHG Emissions (Direct)</b>			
CO <sub>2</sub> equivalents (kt)	183	192	179
Carbon intensity (as CO <sub>2</sub> e) in product (t/t)	0.27	0.29	0.27
<b>Production—Metal Contained in Concentrate (000 tonnes)</b>			
Zinc	557	568	554
Lead	123	102	117
<b>Recycling</b>			
Total solid materials (tonnes)	806	491	983
Total liquid materials (m <sup>3</sup> )	191	0	0
Total items counted (count)	0	0	1176
<b>Managed Wastes</b>			
Total waste rock (000 tonnes)	4,326	3591	3470
Total non-hazardous wastes to landfill (000 tonnes)	7.4	n/a	n/a
Total tailings wet and dry volume (000 m <sup>3</sup> )	12,769	10093	10111
<b>Water Conservation</b>			
Total groundwater withdrawal (m <sup>3</sup> /yr)	0	n/a	n/a
Total surface water withdrawal (m <sup>3</sup> /yr)	2,716,800	n/a	n/a
Water sources affected by withdrawal (name)	None	n/a	n/a
Total volume of water recycled/reused (m <sup>3</sup> /yr)	12,136,635	n/a	n/a
Total percentage water recycled/reused %	447%	n/a	n/a

n/a = Not available \* The higher number of spills reported in the U.S. is due to very conservative spill reporting requirements, which can include spills of drinking water and as little as 1 drop of diesel fuel to a water body.

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