



# Northern Mining News

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## MINING STATS NWT/NU :

**Three diamond mines in operation and one tungsten mine**

**Value of mineral production (2008)  
\$2,163,067,000**

**Value of mineral exploration (2008)  
\$406,700,000**

## A Unified Vision for Infrastructure

Northern mining and infrastructure have been inseparably linked since fur trade days. Most of our highways, the railway, our ports and all of our hydro owe their development to resource development.

We need a renewed investment in transportation and power generation infrastructure if the next generation of mines is to provide the kind of benefits that we are currently getting from diamonds. Past production of gold and diamonds share one factor; the products are easily transported to market by air.

If we ever are to diversify our range of mined products, we must develop a system of transportation and power generation to support an industry that can produce base metals zinc, lead, iron ore, and nickel.

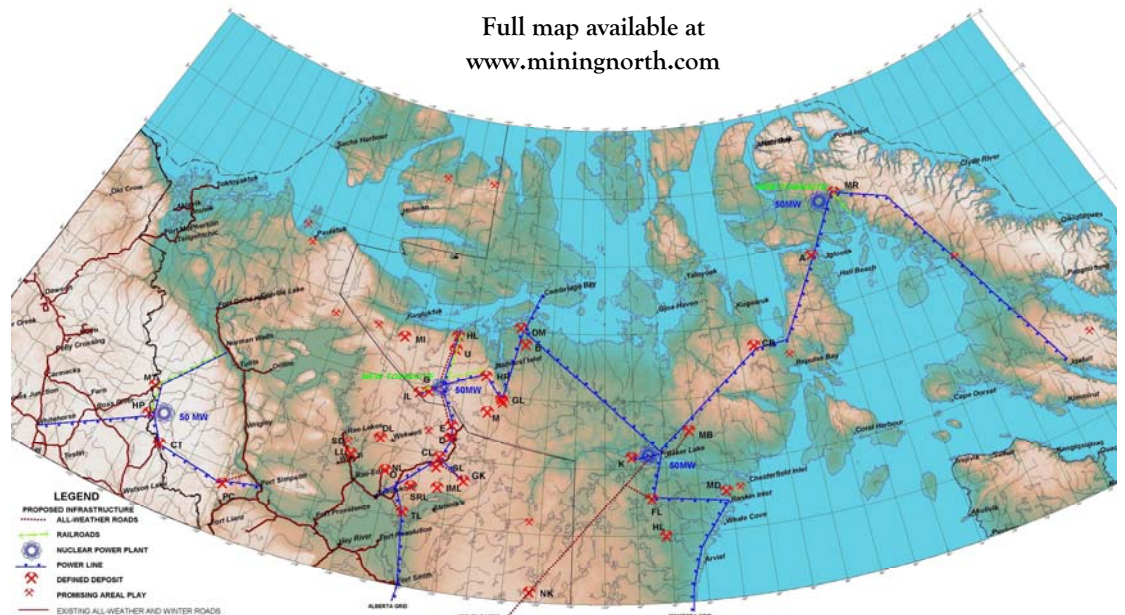
The NWT & Nunavut Chamber of Mines has identified over thirty ore bodies in the NWT & Nunavut that could be in production in the next 25 years. Some will be able to sustain their own infrastructure investment but many will never see production without the support of highways and/or electrical power provided by government. Not only will this type of infrastructure support enhance the value of the mineral deposits to the north and the country as a whole in terms of jobs, business opportunities and revenues to government; the lower costs will extend mine life and thereby lengthen the period that these benefits flow.

The fact that a highway or a power line exists in a region also makes that area more attractive for new exploration efforts and

the increased possibility of new mine development. As for the inevitable mine closure, the railway to Hay River is now a benefit to virtually every community in the western arctic. The hydro power from the Taltson River powers the communities south of Great Slave Lake and the expansion of that system could mean the start of a NWT-wide power grid. The Chamber also sees the connection to the national power grid through Manitoba which has new hydro power under development.

This is not a final plan by any means. The map is designed to encourage discussion and allow northerners to develop a vision for future infrastructure that supports economic development and thereby supports sustainable communities.

Full map available at [www.miningnorth.com](http://www.miningnorth.com)



# Aboriginal Participation in Mining

*The following is an abbreviated version of an article written for UpHere Business Magazine*

*In the mining future of the north, we must not overlook the large native population already resident here. In these people, already acclimatized to northern living, we have one of our greatest resources."*

Colin H. Macdonald,  
Discovery Mine  
manager, 1966



Sonny Arden  
staking claims



Tlich workers at  
Colomac Mine,  
1990

One of the challenges to resource development in the Canadian north during the last 50 years has been a societal one: how best to promote extractive uses of the land that can work to the best interests of the collective community and the environment as a whole. Despite the challenges to bring an aboriginal presence into the mining work force, mining companies in the NWT and Nunavut made positive strides in the 20<sup>th</sup> century.

At its start, our mining industry saw the involvement of individual aboriginal people through the procurement of services. At Great Bear Lake in the early 1930s, there are records of Sahtu men who were out staking and selling claims. Famous author and prospector Fred Watt wrote, "Not only are they blocking in large areas of ground, but they are collecting samples as they go. Their interest in geology, sketchy though it may be, is filled with the greatest of enthusiasm."

During the original Yellowknife gold rush, dozens of greenhorn prospectors arrived who didn't necessarily have the skills to succeed in bush life. Aboriginal people were there to assist. Mines needing fresh meat looked to native hunters to harvest it. Dene men found work cutting logs for boilers and packing supplies through the bush. Johnny Baker was particularly thankful for the native men who helped him build cabins and the wharf at Yellowknife's first gold prospect in 1935. Mineral activity, as strange and foreign it seemed, allowed aboriginal participation in a new economy, just as the fur trade had.

The Byrne family recognized the value of native labour and the Rayrock uranium mine north of Bechoko had a large aboriginal presence; in fact, Tlich families set up a tent community on the

opposite side of Sherman Lake. They were expert wood cutters. In 1958, Yellowknife's vocational wing of Sir John Franklin high school was established, and government hoped to use it to educate aboriginal people in mining trades. They looked for mining companies to assist. Con Mine offered to bring on four Dene students in 1959 and teach them the art of underground mining. The mine also hosted underground tours during a 1959 prospecting school for aboriginal men, who learned the basics of claim staking and geology.

While the intent of these programs was to acclimatize the participants with careers in mining, there was very little follow-through by government until the 1970s. At the time, it was personal initiative that drove aboriginal participation in gold mining: Sahtu born George Blondin worked at Giant Mine for 20 years and was an exceptional worker.

The Pine Point lead/zinc mine was very active in promoting aboriginal employment, although it was always a tenuous relationship as nearby communities were uncomfortable with the massive project. Nonetheless, significant progress was made. Its mine manager in the 1970s, William Gibney, had a special interest in aboriginal communities because he grew up on an Alberta reserve. "We try to show them that if they are good workers, conscientious and attentive, they can become supervisors in the operation" said Gibney, referring to the company's efforts to train native men as shift bosses in the open pit.

Cominco regularly visited communities on both sides of Great Slave Lake to promote employment opportunities to Band Councils. Arrangements were also made to fly community leaders to Yellowknife and Pine Point to

experience at first-hand a mining operation in order to alleviate misunderstandings or fears about working at a mine.

Looking at the arctic, aboriginal involvement in the mining industry dates back to the Rankin Inlet nickel mine on Hudson's Bay in the 1950s where an entire community was built to service the mine. It was short lived but the mine made incredible progress by instituting Inuit labour. The same theme carried over into planning for the Nanisivik lead/zinc mine in the 1970s.

Social licensing, which we consider a more modern phenomenon, got its start in the early 1980s when mining projects such as Cullaton Lake, Polaris, and Lupin signed socio-economic agreements with the GNWT to guarantee northern employment. Several Yellowknives Dene found long term employment at these high arctic mining operations as well. Colomac signed similar deals with Tlich communities when it first started construction in 1989.

It should be remembered that the standards for socio-economic considerations, environmental performance, and community consultation were either vastly different or non-existent in the early years of mining. This reality often leads to the idea that aboriginals were not involved in mining activities. However, the record shows that job opportunities were plenty for those that wanted them and the mines were very proactive in bringing northerners into the mining way of life. Ultimately everything is a learning experience. The lessons of the 20<sup>th</sup> century have guided current industry-aboriginal relations and these too will no doubt evolve in time.

Ryan Silke, NWT & Nunavut Chamber of Mines

# Caribou and the Mining Industry

Concerns about the health of caribou herds across the north have made headlines in the past year and there are many ideas about what is impacting their health, whether it is climate, natural cycles, over hunting, or industrial development.

From a mining perspective, suggestions from the media about the impact mining and mineral exploration have on caribou are questionable and there is no evidence that development has affected caribou migration or the health of the species as a whole. However, everyone agrees that more research is necessary.

Those that have been around the industry long enough should be quite familiar with the Lupin gold mine (pictured) and the famous scenes that show hundreds of caribou grazing on the property, unaffected by vehicular traffic, noise, and even the regular landing of jet aircraft. It is well known that caribou adapt to their surroundings and in the grand

scheme of its migration range, mining operations and their small footprints don't pose much of a burden to caribou. Caribou have the right-of-way on all haul roads at the mines and staff are advised of any sightings by radio as part of protection strategies.

The environmental performance of the NWT's diamond mines are world class and caribou monitoring is a regular part of their operations. Under their Environmental Agreements, the three diamond mines conduct Wildlife Monitoring. Diavik's programs suggest that wildlife are not significantly affected, although it appears that caribou generally avoid the mining area. Its program of monitoring has expanded in recent years as community concerns on the cumulative effects were raised.

Miners working on the Barren Lands are ideally located for the information they collect on caribou

movement. Mineral exploration projects in Nunavut have also sponsored caribou monitoring programs. Baffinland Iron Mines Limited has been helping the Nunavut Government collar animals on Baffin Island, as have Starfield Resources Ltd. and AREVA Resources in the Kivalliq Region.

Northern people need economic opportunities and the caribou need respect. The industry seeks continuous improvement of caribou management associated with its projects, and understands that caribou are critical to the health of the northern ecosystem and people.



Ray Petorak photo

Caribou grazing at the Lupin Gold Mine

## NWT Summer Exploration Updates

Exploration in the NWT is the lowest it's been in many years, with 2009 expenditures estimated to be a mere \$28 million, down from \$133 million in 2008. Nonetheless, exploration is proceeding on several existing properties and on one grassroots project.

*North Arrow Minerals Inc.* staked claims to cover a pegmatite dyke early this year at Alymer Lake and obtained a land use permit to conduct a small diamond drill program. Seven holes totaling 682m have been completed to date, each having intersected lithium bearing pegmatite. Future drill

programs will confirm the geologic attitude of the pegmatite at depth.

*Tyhee Development Corporation Ltd.* has continued to explore its Clan Lake property north of Yellowknife and identified seven new zones in 2009. Meanwhile, it relogged and sampled historical drill ore at Clan Lake. At the Ormsby and Nicholas Lake deposits, infill diamond drilling continues.

*Avalon Rare Metals Inc.* continued diamond drilling at its Thor Lake project during the winter and summer of 2009; 26 holes (5477m) were completed in the winter program. The

summer program began in July and drilling is now underway at the southern part of the Lake Zone to intersect the Basal zone at regular 50m grids. Metallurgical testing of the samples will also continue.

*Merc International Minerals Inc.* acquired the Damoti Lake gold deposit last year and initiated a 6000m drill program in July, intended to expand the historic resource of the Horseshoe zone by infilling priority target areas.

There will be more updates on the results of summer exploration in the NWT and Nunavut in the next issue.



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## KNOW YOUR METAL - Zinc

**What is it?** Zinc is a very common mineral and is the second most common trace metal in the human body. Zinc and lead are the most common base metals.

**Where did it come from?** Zinc occurs in different minerals and geological settings. The Pine Point ore deposit was part of an ancient ocean reef, buried under sediments, which faulted and fractured, allowing mineralized solutions to enter cavities in the rock layers. Zinc in these solutions combined with sulphur to form sphalerite, its principal mineral.

**Where is it mined?** Zinc is mined around the world at a rate of 10 million tonnes per year. China, Europe, and Australia produced the most zinc; Canada only produced 7% in 2008 and most is exported to the U.S.

**What is it used for?** Zinc is primarily used as a galvanized coating on steel and iron to protect them from corrosion. Every year, over three million tons of galvanized steel is produced and used to construct buildings and vehicles. Zinc plays an important role as a micro-nutrient in the development and health of plants and animals. The human body normally contains 2-3 grams of zinc, and is important for the function of enzymes, stabilization of DNA, and transfer of nerve signals.

**What is the mineral potential in the NWT and Nunavut?** Historically, the NWT and Nunavut have been important producers of zinc. *Selwyn Resources'* Howard's Pass deposit is the NWT's most promising find, while Izok Lake in Nunavut, owned by *MinMetals Inc.*, is another.

## 2009 Nunavut Mining Week

A celebration of Nunavut's mining and mineral exploration industry took place September 19 to 26, 2009 across the territory.

In Iqaluit, the regional office of Indian and Northern Affairs Canada (INAC) Mineral Resource's Division, in partnership with the Government of Nunavut's Economic Development and Transportation Department, set up a booth at the local North Mart promoting mining and geology. The exhibit was extremely popular and was an opportunity for the government to showcase its new Nunavut Rocks and Minerals Kit.

Newmont Mining Corporation hosted high school and college talks in Cambridge Bay about mineral exploration and careers in geology. They also sponsored a shoreline cleanup and BBQ in partnership with NTI Lands Department.



Courtesy Karen Costello, INAC

*The INAC rock and mineral exhibit at Iqaluit's North Mart received a lot of public interest during Nunavut Mining Week*



Courtesy Alex Bruchan, Newmont

*Newmont Mining Corporation and NTI Lands sponsored a shoreline cleanup and BBQ in Cambridge Bay during Mining Week*

## Upcoming Mineral Industry Events

Mark your calendars now for these important industry events and functions:

- **Strategic Northern Infrastructure Symposium ... October 14-15, 2009 ... Yellowknife, NWT**
- **37th Annual NWT Geoscience Forum ... November 17-19, 2009 ... Yellowknife, NWT**
- **37th Annual Yukon Geoscience Forum ... November 22-25, 2009 ... Whitehorse, YK**
- **Mineral Exploration Roundup BC ... January 18-21, 2010 ... Vancouver, BC**

