



Diavik's Business Commitment

Northern Partners, Northern Success

Diavik's Northern Business Commitment



"Mining companies can no longer be considered on the fringe of community life. They must be an active citizen and partner that shares the values and beliefs that a stronger host community means a stronger and more favourable economic climate."

(From the Diavik Diamond Mines Inc. Northern Business Participation Policy)



Very early in the development of the Diavik Diamonds Project, we recognized the importance that a project like ours would have on Canada's North, in particular the Northwest Territories and West Kitikmeot Region of Nunavut. We therefore committed ourselves to supporting northern economic development through the provision of meaningful training, employment and business opportunities. Diavik further expressed its commitments through a Socio-Economic Monitoring Agreement with the Government of the Northwest Territories and through five Participation Agreements with our neighbouring Aboriginal communities.

On the business side, we have taken a number of steps to make our commitments a reality. We have embedded our commitments in our corporate culture through the development of a Northern Business Participation Policy, which expresses our commitment to support northerners in developing long-lasting and sustainable business capabilities. To assist northern companies in finding opportunities to work on our large project, we engaged a venture development manager whose job it is to work closely with northern businesses and our Aboriginal neighbours. Through the creation of our Northern Vendors and Contractors Capacity Database, by adjusting contracts to fit Northern business capabilities, by facilitating and monitoring joint-venture partnerships, and by capitalizing on the calibre and strength of the northern businesses themselves, we have been able to make significant strides in northern business participation.

Cover photo: Core samples from the Diavik Diamonds Project at Lac de Gras, Northwest Territories, Canada. Featured is a sample of Diavik's diamond-bearing kimberlite which revealed economic diamond deposits.

Photo opposite: The Diavik Diamond Mine under construction during summer 2001 at Lac de Gras, Northwest Territories.

This page: Bearberry (arctostaphylos rubra) growing on the tundra near the Diavik Diamonds Project.

As of September 30, 2001, Diavik Diamond Mines Inc. had awarded to northern companies some \$650 million of the \$850 million value of our contracts. Within the northern dollar figure, Aboriginal joint ventures accounted for over \$450 million, or three quarters of northern spending.

When we imagine what may lay beyond the Diavik Diamond Mine, we see Diavik Diamond Mines Inc. as having played an important part in contributing to a northern business community with more capacity, broader business reach, and greater economic prosperity.

The pages that follow showcase some of the many northern businesses participating in the Diavik Diamonds Project. They, and so many others, have been our welcome and able partners in providing meaningful opportunities for northern business development and contributing to a stronger northern economy.

Stephen Prest
President
Diavik Diamond Mines Inc.

Geotechnical and geosynthetic in the Arctic



When Al and Bertha Harmon moved to Yellowknife in 1988, they arrived with \$10 in their pockets. They came North because Bertha, a registered psychiatric nurse and registered nurse, had accepted a position at Stanton Regional Hospital in Yellowknife, Northwest Territories. Al started working for a local geotechnical consulting firm. After several years, it became apparent to Al there was an opportunity to start his own consulting firm. A&A Technical Services, officially launched in January 1995, is a leading edge northern-based and Aboriginal majority-owned engineering consulting firm. The company, which specializes in geotechnical inspections and testing, and geosynthetic supply and installations, is the only company in Northwest Territories certified as a geosynthetic membrane installer. Rob Cook, a professional engineer who graduated from the University of Alberta, joined A&A Technical as a partner in 1997. He had worked as a seasonal employee for the company, but now works full-time with the growing geotechnical engineering firm.

In the spring of 1997, Al Harmon worked at the Diavik site in the construction and lining of the leachate testing vessels. He quickly recognized that because Diavik was situated on an island and would require stringent environmental protection to protect the water of Lac de Gras, there would be a future opportunity for his company's geotechnical and geosynthetic services. Three years later, A&A Technical was awarded a contract to start laying liner for projects in various areas, including sedimentation pond dams, storm water ponds, and process kimberlite containment dams. A&A Technical Services also do quality control on all aggregate production and

fusion/quality control, dewatering and monitoring of the site's inland lakes. "We are different than most other similar companies because we provide testing and inspection services, and are qualified to do both quality control testing and liner placement and testing," said Harmon. "We offer a wide range of practical and technical experience, gained from working in the North and High Arctic."

Their certified geosynthetic installation teams use the latest hot wedge and extrusion welding technology. A&A has developed a unique preheat fusion system for installing high density polyurethane liner year-round in extreme conditions, even when the tundra temperature dips to minus 50 Celsius. "Working with Diavik has been the key to our entire growth and has given us the opportunity to expand further into the industry. We went from a one-person operation to a business that employs 35 people," said Harmon. "And we continue to expand. This year (2001) we will be allocating \$250,000 for new lab and pipe fusion equipment."

The Harmons, who have been married for eleven years and have three children, named the company A&A for their first two children – Alan and Amelia (the third came after the company was formed). Both Al and Bertha work full-time in the company. Bertha is responsible for human resources and administration, and Al for the management and technical support. Bertha explains their working relationship: "Al is the one who has the ideas and the company's vision. Between us, teamwork is the key to making the vision become a reality."

Photo opposite: Workers installing geotextile, a soil-covering material used to line Diavik's sedimentation pond dams. Some 140,000 square metres, approximately 23 football fields, of geotextile were used at Diavik. Preheating the material allowed installation in temperatures as low as minus 50 Celsius.

placement, compaction testing, thermistor installations, high density polyurethane pipe fusion, high density polyurethane liner

This page: Al and Bertha Harmon of A&A Technical Services.



Mine measuring and controlling quality

From its creation in 1995, Aboriginal Engineering's goal has been to employ northern Aboriginals. The company, which performs all aspects of civil engineering, has offices in Rae and Yellowknife in the Northwest Territories. "Aboriginal Engineering Ltd. has historically maintained over 85 per cent Aboriginal employment in its technical training positions," according to professional civil engineer and company project manager Bob Johnson. "We're proud of that. And it's been done at no additional cost to clients...without grant or government funding. It's been done out of our overhead. There is lots of training money available out there but we felt we could do it without that." Five of the company's six owners are Aboriginal.

Majority-owned by Dogrib Treaty 11 Band members, Aboriginal Engineering's work at the Diavik Diamond Mine involves two contracts. These two contracts are among the company's largest. On one contract, Aboriginal Engineering works with engineering company Earth Tech to survey Diavik during mine construction. Under this contract, which also includes quality control on work done by Diavik contractors, Aboriginal Engineering has maintained 100 per cent Aboriginal employment. Through the partnership, Aboriginal Engineering, whose staffing ranges from five to 12 people, provided the contract's survey helpers while Earth Tech brought in lead surveyors. But this changed over the course of the contract – four Aboriginal Engineering survey helpers ultimately gained promotion to lead surveyors. This opened up opportunities for other northern Aboriginals to come on board as survey helpers.

According to Johnson, the end result is a contract whose overall northern Aboriginal content has grown. The company's surveyors are not restricted to work in the field, Johnson adds. According to Johnson, many of the company's workers are keen to do the computer calculations in the office. "Earth Tech and Aboriginal Engineering were successful on this contract in a competitive market,"

Johnson said. "We received the contract based on price and project team. When this contract is done and the mine construction is complete, we will have a pool of surveyors that can tie into the operations phase of the mine. Our employees know every rock and stake, every survey control point, at the site," he said. "There is potential work during operations because every drill hole for blasting the mine's open pits will need to be surveyed," he adds. "An added bonus for the Aboriginal Engineering team has been the training which was incorporated into the contract at no extra cost to Diavik," notes Johnson. "This company believes in Aboriginal employment and in training, just like Diavik," he concluded. "We want to prove training can be acquired on the job, be cost effective, not impact the quality of work, and be done without government funding. It can be done with proper management."

Under the second contract, Aboriginal Engineering works with Golder Associates on quality control for Lac de Gras Constructors, the company building the A154 dike at Diavik. "Again, this contract is a partnership," says Johnson. "Construction of the dike is a technical exercise. There is a need to access highly trained individuals for key roles, that's where Golder Associates comes in, but there is still a lot of opportunity for training and Aboriginal employment." Again, Aboriginal Engineering has maintained 100 per cent Aboriginal content and employs up to twelve technicians on this project. Under this contract, Aboriginal Engineering carries out lab analyses of materials used to build the dike. This means testing materials like grout, used as a water barrier inside the dike, for permeability, strength, and flexibility.

Johnson says the knowledge learned about testing jet grout at Diavik can be transferred to any project worldwide. But he would like them to stay at Diavik, because, as he suggests, who better to monitor the Diavik A154 dike than the technicians who did the quality control during its construction?

Photo opposite: A quality control technician on the A154 dike.

This page: A lead surveyor at work at the Diavik site.



Twin Otters over the tundra

Air Tindi Ltd. Marketing Vice-president Peter Arychuk recalls the early days of diamond exploration as a busy – sometimes quirky – time for flying in the North. "It was the largest staking rush in Canada since the late 1880s and our planes were steadily flying people, supplies, and fuel to the tundra. It was a good time for the flying business. We flew for everyone, as we were the area's main Twin Otter operation. But it was also a very secretive time in mining. You didn't know who you were working for and sometimes they would even change the names of lakes so you wouldn't know where you were headed!"

But Peter and his wife Teri know the tundra well, having been in the flying business since 1984 when they owned and operated Bathurst Air Service. "Even back then we flew Aber Resources' Gren Thomas and his daughter Eira around the North looking for base metals, and then later, for diamonds in the Lac de Gras area. Today we still provide charter services for Diavik out of Yellowknife."

In 1988, they decided to expand and were joined in the business by Peter's brother Alex, an aircraft engineer, and his wife Sheila. They bought Reacom Air and renamed it Air Tindi and began operations on November 1, 1988 with four float/ski planes and eight employees in Yellowknife. The name Tindi, derived from the Dogrib language, means 'the big lake' and refers specifically to Great Slave Lake. In 1991, Air Tindi merged with Latham Island Airways, acquired more planes and by the summer of 1992, the company was the largest floatplane operator in Northern Canada.

Air Tindi today operates a diversified fleet of 18 aircraft (including six Twin Otters) and is still owned and operated by the Arychuk family, all born and raised in the North. Alex is president and general manager, brother Peter is vice-president and manager of public relations and marketing, while Teri is operations manager. Sheila is responsible for the company's financial and administrative affairs. During peak times, the company has over 125 employees and operates from two locations in Yellowknife: a 1,300 square metre hangar at the Yellowknife airport, and the Latham Island floatbase, where flight operations and administration offices are located.

Arychuk notes that the North's flying boom for mining has subsided somewhat, but quickly adds that it was diamond exploration activity that enabled Air Tindi to expand over the years. He also noted that when the resource economy is doing well, it helps fuel other parts of the North's economy, like hunting, fishing, and lodges, which Air Tindi can gain business from. "The diamond industry has opened up golden opportunities for anyone who wants to work. It has been very good for the people of the North. I back the industry 100 per cent as long as there are government controls in place to preserve the environment."

Photo opposite: A Twin Otter arriving at the company's floatbase in Yellowknife, Northwest Territories.

This page: Peter Arychuk, of Air Tindi, at the company's offices, Latham Island, Yellowknife.



Denesoline Corporation



Partnering for economic development

One-hundred per cent owned by the Lutsel K'e Dene Band, Denesoline Corporation Ltd. goal is economic development. Lutsel K'e is an Aboriginal community located on the shores of Great Slave Lake's East Arm in Canada's Northwest Territories. Denesoline is a business development corporation which administers contracts for firefighting, ice road maintenance, survey stake production, big game hunting and outfitting, and residential construction and other general contracting that creates jobs for the community, according to Cliff Sabirsh, the corporation's general manager. In Chipewyan, Denesoline means 'the real people.'

Incorporated in the early 1990s, Denesoline has joint ventures with industry and investment equity in other corporations. Denesoline has various interests in the North's diamond mining industry. Among its interests is a stake in a unique joint venture, which brings together Aboriginal groups to haul ore from the Misery Pit at the BHP Billiton EKATI™ Diamond Mine. The corporation also plans to be an economic player in the De Beers Snap Lake diamond project.

On the Diavik project, Denesoline supplied labourers to technical firms Dillon Consulting and Golder Associates. On the Dillon contract, Denesoline assisted with the slimy sculpin study. This study involved fish collection to gather data. For Golder, Denesoline workers assisted with core sampling work at Diavik. These partnerships have given Lutsel K'e residents not only economic benefits through jobs, but increased

individuals' technical skills. At summer 2001, the corporation has a memorandum of understanding with Nuna Logistics (the majority Inuit-owned company with a stake in A154 dike builder Lac de Gras Constructors) on ice road and dike work.

Another partnership that will bring economic benefits to Denesoline is a joint venture with Calgary's Western Explosives. In this multi-year joint venture, which will create long-term permanent jobs, Denesoline will play a key role in the mining aspect of the Diavik project. Under the Denesoline/Western Explosives joint venture, Western will provide experience in the manufacture, distribution, transportation and storage of explosives while Denesoline will provide labour and financing. The joint venture includes construction of an explosives plant and an explosives storage building at the Diavik site. Denesoline is demonstrating its commitment to the Diavik project by its role in owning and operating and financing these two explosives plants. "This is an excellent contract for us," Sabirsh said.

Overall, our association with Diavik has "had a positive impact on the social and economic development of the community of Lutsel K'e by creating jobs, and cash flow," concludes Sabirsh.

Photo opposite: In Lutsel K'e, elder Pierre Catholique signs the Diavik-Lutsel K'e Participation Agreement. These unique agreements, signed by Diavik and all of Diavik's neighbouring Aboriginal groups, include provisions for business opportunities, employment, and training.

This page: Through the ice of Lac de Gras, a member of the Lutsel K'e Dene Band uses a hydrophone to track tagged lake trout.



Going beyond building to inside services

Darrell Beaulieu's connection with the Lac de Gras goes back over a couple of hundred years to an ancestor named Francois Beaulieu. "A researcher told me that it was Francois who named Lac de Gras," said Beaulieu. According to Beaulieu, the lake's name – Lac de Gras, French for 'fat lake' – is based on the original Dene word 'ekati' which refers to the white quartz rock found in abundance at Lac de Gras. Dogrib and Dene elders talk about the veins that run through the white rock that make it look like caribou fat. The Diavik Diamond Mine is located on Lac de Gras' East Island. The mine's ore will come from four kimberlite deposits located under the lake waters. The land surrounding the lake is the traditional hunting ground of the Dene, where 350,000 caribou cross each spring and fall.

Beaulieu is chairman of Ek'ati Services Ltd., a diversified company providing Diavik with accommodations facilities, camp management, food and environmental services. Ek'ati Services Ltd. is a joint venture between Deton'Cho Investments North Ltd. and Edmonton-based PTI Group. Deton'Cho Investments North, a subsidiary of Deton'Cho Corporation, the economic development arm of the Yellowknives Dene First Nation, was created to ensure a lasting economic base for the Yellowknives Dene First Nation by partnering for joint ventures and brokering for specific supplies and services. PTI Group Inc. is a major North American company with extensive experience in providing remote site logistics and services.

Beaulieu is CEO of Deton'Cho Corporation and president of the diamond cutting and polishing company, Deton' Cho Diamonds Inc.

Since 1996, Ek'ati Services has been providing camp management services to Diavik, including meal preparation, housekeeping, maintenance, procurement, laundry, administration and other services. Their first project for Diavik was building a temporary 89-person camp and providing catering service. Ek'ati Services would later add modules to the temporary camp, expanding it to 450 units. Ek'ati Services is building the four wings of the Diavik 264-person permanent accommodations complex. As of summer 2001, Ek'ati Services employed approximately 240 people (80 per cent of whom are Aboriginal) at the Diavik site. Ek'ati Services workers provide catering and site services for nearly 1,200 people during construction. The average annual value of the contract over seven years through 2003 is several million dollars.

Ek'ati Services is also involved in apprenticeships and other training programs. "We've got the biggest apprenticeship program in the Northwest Territories, with potential for 30 to 40 apprentices...carpenter, plumber or electrician. And we are just finishing training 11 people at the Travco prefab facility in Nisku, Alberta and they'll come back to work with us at Diavik," said Beaulieu, who is also a Director of the NWT and Nunavut Chamber of Mines and co-chair of the NWT Mine Training Committee, a special committee formed to respond to the growing need for a skilled northern work force in the Northwest Territories mining industry. "Diavik has been a good contract for Ek'ati because it provides employment and a stepping stone for people to progress into other jobs at the mine and perhaps enter managerial positions," said Beaulieu. "It gives me a good feeling to go to Diavik and see people working."

Photo opposite: Diavik's temporary North Construction Camp was erected by Ek'ati Services.

This page: Ek'ati Services staff prepare meals for up to 1,100 workers daily.



Million dollar movers

Glenn MacCara and Greg Works are two friends who met playing peewee hockey in Nova Scotia and later attended the same high school in New Glasgow. These enthusiastic entrepreneurs arrived in Yellowknife several years ago with no money and no jobs. They would go on to own and operate a company with revenues in the millions. Their company, G&G Expediting Ltd., is responsible for the logistics of moving an average of 450,000 kilograms of freight every month for Diavik.

MacCara arrived in the Northwest Territories in 1989 looking for a job in mining but ended up doing exploration work for various companies. He became involved in expediting work for mining camps, and when Works moved to Yellowknife in 1991, he joined the same company as MacCara. For the next few years, they both worked at providing fuel and supplies for camps during the start of the diamond staking rush. They decided to start their own expediting company during a Christmas holiday in 1993 – it was a family decision made during a visit to relatives in Nova Scotia. Before returning to Yellowknife, they had secured start-up money from relatives and formed a partnership, which included MacCara, Works and MacCara's father, to start G&G Expediting.

MacCara laughs recalling their first month in business during that frigid January in 1994. "My dad's old Toyota was going to be our company truck, so he and I drove it from Nova Scotia to Yellowknife during a bitterly cold week in January. As soon as we got here it broke down. Then we had to find a place to live and do business, but all we could afford was a small dilapidated house downtown. For the first while, Greg did the expediting while my dad and I repaired the house."

Diavik has been an integral part of G&G Expediting's history, having been involved in the project since the beginning. Their first ongoing contract was with Kennecott during early diamond exploration at the Diavik site. In the fall of 1995, G&G Expediting built the five-tent camp for Aber Resources' (now Aber Diamond Corp.) initial drill program.

G&G Expediting has grown alongside Diavik. With a staff of ten employees, they manage transportation of supplies, equipment and people from Yellowknife to the Diavik site. Early in 2001, G&G Expediting expanded operations to a two-storey aviation hangar with over 1,300 square metres of office and warehouse space.

"Diavik has been a wonderful contract for us. Before, we were working the company just to survive, but working with Diavik has given us security and enabled us to offer year-round employment to good staff," says Works. "It has let us focus our attention on doing a good job and looking at how we can do it even better."

Photo opposite: G&G Expediting workers load a DC4 aircraft destined for the Diavik site.

This page: G&G owners at the Yellowknife airport.

Making metal work in the North



Imagine building a huge water tank four storeys tall, eight metres in diameter and capable of storing 500,000 litres of water and then arranging to truck it in one piece over 550 kilometres of ice and portages to Diavik. It was a challenge successfully met by King Manufacturing, headquartered at Hay River, Northwest Territories. King Manufacturing, a division of Kingland Ford Sales, began in the mid-1980s as a small fabricating business responding to customer requests to mount various water and sewer tanks to their newly purchased heavy duty vehicles. The company has grown to 30 employees working full-time in its fabrication shop.

The high demand for their service led to the decision by King Manufacturing to begin building their own tanks. They received certification from Transport Canada to build highway tankage – including fuel, vacuum, water, and sewage tanks – for all sorts of rigging of highway trucks. A few years later, they expanded to add fabrication of a full line of environment tanks for the above ground storage of flammable and combustible liquids (the biggest being 100,000 litres for petroleum products). Their core business also includes vertical tanks for oil and water storage.

But the biggest tank fabricated so far in their yard was Diavik's process plant water tank, which took eight weeks to build. It was part of a million dollar contract to build Diavik 30 permanent tanks for storage of bulk oil, water, diesel, heating oil, waste oil, glycol solution and other lubricants. "The steel for the tanks was transported from Edmonton to Hay River in

big sheets, where they were rolled, sheared and welded, and then finished with grey epoxy-based paint specified by Diavik," explains Charlie Scarborough, general manager of King Manufacturing. "The Diavik tanks are built to the codes of the American Waterworks Association and the American Petroleum Institute."

Scarborough said the diamond industry has been good for their company and for the economy of the Northwest Territories. And he knows well what mining means to a community – he grew up in Pine Point, a mining community near Hay River. In the 1960s, Scarborough's father was the manager who opened the Pine Point lead-zinc mine. Scarborough moved to nearby Hay River in 1989 as the town manager and in 2000, he joined King Manufacturing. "Having been in public government for over 15 years, I look at how we can develop a community to grow, to get people to live here in the North, and to have northern job opportunities for our children," said Scarborough. "I'm encouraged by the strong commitment of Diavik to support a meaningful economy led by northern companies, suppliers and workers. It's a challenge to maximize those benefits to northerners."



Photo opposite: Tanks, including a 500,000-litre process water tank and a 100,000-litre raw water tank alongside the Diavik Diamond Mine process plant, were built and tested in the Northwest Territories.

This page: Welding a Diavik tank at King Manufacturing in Hay River.



Lac de Gras Constructors



Raising a ring of rock around Diavik's diamonds

"Building the Diavik Diamond Mine is the most unique construction project in North America right now," according to Val Ricci, Project Manager of Lac de Gras Constructors, a joint venture company between Peter Kiewit Sons' Ltd. (75 per cent) and Nuna Logistics (25 per cent). Peter Kiewit, one of North America's largest mine site developers, also has extensive experience in the construction of dams. Nuna Logistics is a majority Inuit-owned company. Diavik Diamond Mines Inc. awarded Lac de Gras Constructors contracts worth \$262 million for mine earthworks. Under the contracts, Lac de Gras Constructors has built a permanent 1,600-metre airstrip able to handle large jets and a commercial Hercules cargo aircraft, on-site haul roads which are built of rock quarried near the mine's island-based infrastructure, concrete foundations, dam construction for dredged sediment containment ponds, drainage and collection ponds. The company is also responsible for construction of earth barriers for kimberlite containment facilities and processed kimberlite.

"History is being made on the tundra landscape at Diavik. For example, it is the first time in North America that a dike has been designed as a cut-off using crushed rock placed straight in the water. The dike's three-kilometre silt curtain, located 200 metres off-shore, is the longest one ever constructed, and the quality control regulations and specifications are among the strictest we have ever encountered," explains Ricci. Ricci has worked extensively on large construction projects for Peter Kiewit. "It is a challenging project to reach the diamonds."

Nuna Logistics was formed in 1993 and is 51 per cent Inuit-owned. Nunasi Corporation, a Nunavut economic development company, has a 26 per cent stake in Nuna

Logistics while the Kitikmeot Corporation, representing the Inuit of Nunavut's Kitikmeot Region, holds 25 per cent and the company's management group owns 49 per cent.

Photo opposite: The south section of the Diavik Diamond Mine A154 dike extending into Lac de Gras. This 3.9 kilometre dike, one of three to be built at the Diavik Diamond Mine, will circle two underwater diamond deposits.

This page: Scrubbing hydrofraise 'teeth'. This machine is used in construction of the dike's cut-off wall.

With operations in Yellowknife and Cambridge Bay, as well as offices in Edmonton and Vancouver, the firm provides logistics, construction, contract mining and site services to the mining industry in northern Canada, utilizing the knowledge and expertise of its management team and northern partners familiar with Arctic operations. "Nuna Logistics started out as a group of friends looking at northern business opportunities with special emphasis on the concept of a port and road coming from the North to service the northern mines, such as Diavik. The company, while still heavily involved in the port and road, has also focused on servicing the northern mining industry from its exploration stage through to contract mining," says Mervyn Hempenstall, the company's Vancouver-based president and chief operating officer. For the past five years, Nuna Logistics has built and maintained the 600-kilometre ice road, which stretches northeast from the end of the Ingraham Trail near Yellowknife, to the Lupin gold mine in Nunavut. About 80 per cent of the road crosses frozen lakes and ponds. This ice artery is open for about eight weeks every winter and services isolated northern mining operations, like Diavik. Traffic has increased from 800 truckloads in the mid-90s to over 8,000 truckloads on the 2001 winter road.

Nuna's involvement with Diavik goes back to its early exploration days. "We cleared the land and built the exploration camps, the first small airstrip to land Twin Otters, the winter ice strip to land larger planes, built the drill pads, and assisted with the original sampling of the lake bottom," recalls Hempenstall, who has worked on major construction projects around the world. Hempenstall echoes Ricci's enthusiasm about the Diavik project. "This is the most exciting project to be involved with in North America. The rest of the world talks about economic gloom and global recession, but here in the North we have a very economically sustainable diamond industry. It is so positive for economic growth that I want to keep it a secret!" Hempenstall adds. "It is an exciting time and I feel very fortunate to be involved."



Linking up for joint venture

When Tercon Contractors from Kamloops, B.C. contacted North Slave Metis Alliance President Clem Paul in Yellowknife, Northwest Territories, and Rowe's Construction part-owner Jack Rowe in Hay River, Northwest Territories about getting together to discuss partnership opportunities in the diamond mining sector, the Southern company met two positive northern responses. In 1998, the trio formed Metcon Construction, a joint venture company specializing in site development, quarry, highway and civil construction, as well as heavy mechanic installations for the mining, oil and gas industries. In November 2000, they were awarded a multi-million dollar contract from Diavik Diamond Mines to supply, install and test the piping system of all yard and overland pipelines on site.

"This first contract was very important to the Metis community because it lets us be a part of the Diavik construction project. We provided workers to do the welding on the piping and to coordinate the goods and materials. But more importantly, the contract gave Diavik an opportunity to see that our people work well," said Paul. The North Slave Metis Alliance is an organization whose mandate includes providing social, educational, economic and cultural opportunities to its membership.

Rowe's Construction, started in 1975, is a general construction company focused on heavy equipment rental. The company is owned by the Rowe brothers: Fleet Manager Mike Rowe based in Fort Simpson, Northwest Territories, General Manager Owen Rowe who is also in Fort Simpson, and Jack Rowe who is in charge of overall management out of Hay River. A fourth owner is Don Schaub, who oversees

general contracting from the company's Hay River office. "We are a small organization with 80 employees which was looking at ways to get involved in the diamond industry. Metcon Construction gave us that opportunity. We didn't have the financial resources to underwrite a contract this size ourselves, so partnering with a larger capacity company and an Aboriginal corporation has worked well for us and them," said Rowe. "We hope to build on the relationship with the North Slave Metis Alliance and work with them on future joint ventures."

During the two-year contract, Metcon will install over 30 kilometres of high density polyurethane piping at the Diavik site. The pipe will carry raw water, domestic water and water from drainage dikes and sewage lines. Paul is pleased to see Diavik meet its commitment to hire Northern companies and is impressed with their honesty and openness. "We have a good working relationship with Diavik and enjoy working with them. Our goal is to secure some life-of-mine contracts so we can strategize and make long-term plans. For the last couple of hundred years, our community has been fragmented, but thanks to companies like Diavik who recognize the Metis community, we are developing now into a credible organization that will someday be recognized internationally."



Photo opposite: Welders at work on service pipelines during Diavik Diamond Mine construction.

This page: Metcon workers at the Diavik site.



Diamond mining meant potential

"What Diavik has done for Nahanni Construction Ltd. is to take a small company and help it become a well-rounded, broad-sized business that is now becoming diversified and international in scope," explains Barry Henkel, a civil engineering technologist who, together with partners Bob Morgan and Dwight Peart, own and operate Yellowknife-based Nahanni Construction. "Just recently we had a call from Alaska inquiring about the foldaway metal structures we had developed for the Diavik contract. We would never have had that opportunity if there had been no diamond industry here." Nahanni Construction has installed several foldaway structures at Diavik. These versatile buildings can be collapsed for easy transport.

Nahanni Construction was started as a general construction company in the mid 1970s by Morgan and Peart. It is also a major northern builder of bridges. Among their big construction projects was a joint venture to construct the bridge over the Yellowknife River.

When diamonds were discovered in the Northwest Territories, Nahanni Construction recognized the potential for the construction industry and quickly targeted the mining sector as a core area for their involvement. Nahanni Construction was the first general contractor to build at the Diavik site. The company supplied people and equipment for concrete work at the Diavik Diamonds project and installed raw water intake line for the water pump house. As a subcontractor, they installed concrete block walls, steel mandos and overhead doors in the maintenance complex, powerhouse, boilerhouse and sewage treatment plant. On the airstrip and road infrastructures, Nahanni Construction has installed almost 2,700 metres of steel culvert. Nahanni Construction staff

worked with German company, Bauer, and Lac De Gras Constructors on the A154 dike construction.

In recognition of the importance of Diavik to their company, Nahanni has designated Henkel as the company partner to work exclusively with Diavik. "They are a major client of ours, with almost 30 per cent of our total work last year being for Diavik. So far we have benefited with approximately \$5.5 million in Diavik contracts and that has helped us provide jobs for over 80 people, most of them northerners."

An important part of Nahanni Construction's relationship with Diavik is in the training programs delivered cooperatively to northern Aboriginal communities. Under Diavik's community-based training programs, Nahanni provides an experienced construction instructor to build the students' technical skills. The goal is to train people to meet the qualifications necessary to enter apprenticeship programs and eventually, if the participant chooses, to be employed at Diavik. Like Diavik, Henkel is committed to working with northerners to maximize economic development. Born and raised in Calgary, he moved to Yellowknife in 1985. "There are so many exciting opportunities to work and live here in the North. It is the best place in Canada to be!"

Photo opposite: A flagman gives a haul truck the all clear on the Diavik A154 dike.

This page: Barry Henkel, of Nahanni Construction, at the company's Yellowknife office.

*Fuel tanks for
Diavik, fueling the
northern economy*



It seems somehow fitting that one of Diavik Diamond Mines Inc.'s first contracts went to Northern Transportation Company Limited (NTCL), a company whose roots go back to the North's early mining days. One of the Northwest Territories' oldest companies, NTCL's involvement in mining activity on Great Bear Lake dates back over 50 years. When Diavik Diamond Mines Inc. needed steel fuel tanks for the Diavik Diamonds Project, the company looked to NTCL's steel fabrication division. In late 1999, Diavik Diamond Mines Inc. announced that NTCL had been awarded a \$1.9 million contract to fabricate 23 temporary fuel tanks for the Diavik site.

NTCL's story goes back to 1931 when two Edmonton men, Carl Murdoff and C. Becker, started Northern Waterways Ltd. With one wooden tug and two wooden barges, they offered service between Waterways, Alberta, and Aklavik, Northwest Territories. "They sold it in April 1934 to the White Eagle Mines who changed the company's name to its current moniker. Two years later, Eldorado Gold Mines bought NTCL and owned it until 1944, when the Canadian Government, through the War Measures Act, expropriated Eldorado Gold Mines Limited and renamed it Eldorado Mining and Refining Company Limited. They needed its uranium mining operations for the Manhattan Project. As a subsidiary of Eldorado, NTCL also came under Crown ownership," explains Lynnette Storoz, NTCL's marketing manager. In 1985, NTCL was returned to private ownership and purchased by the Inuvialuit Development Corporation, representing the Inuvialuit of the Western Arctic, and Nunasi Corporation, representing the Inuit of Nunavut. In 1987, NTCL became part of their NorTerra Group of Companies.

NTCL's head office and principal marine facilities, including an inland shipyard and fabrication shop, are located in Hay River,

Northwest Territories. A total of 350 employees work for NTCL offices and terminals across northern Canada, Alaska, and Quebec. Although best known as Canada's only pan-Arctic marine company providing transportation services and links throughout northern Canada and the Arctic, NTCL also offers a full range of industrial and mechanical services, including steel fabrication, sandblasting, machining, and electronic and electrical services.

It was at their fabrication shop, among the largest in the Northwest Territories, that NTCL built the 23 standard API 650 temporary tanks for Diavik. API 650 refers to an American Petroleum Institute standard which covers materials, design, fabrication, erection, and testing requirements for welded steel storage tanks. Each tank is about nine metres wide and about ten metres high, with storage capacity of 480,000 litres. "The biggest logistical challenge was hydro-testing the tanks for leaks," said John Marshall, who has worked for NTCL for 21 years and is their manager of marketing and technical sales. "It was the middle of winter with outside temperatures about minus 35 Celsius. To test, we used a low pressure, high volume eight-inch cargo pump to pump 1,200 gallons a minute of cold water into the tank from the Hay River. We covered each tank with a big military parachute, used four diesel heaters to send heat up the parachute to keep the tank water from freezing and then let it sit for 24 hours." The tanks were trucked, over an ice road built across Great Slave Lake, to Yellowknife Bay. From there, they were trucked along the Ingraham Trail and up the winter road to Diavik.

The Diavik contract enabled NTCL to provide year-round employment to their shipyard employees who normally were laid off from four to six weeks in winter. "I think it is important to acknowledge that Diavik has come through on their commitment to use northern firms," said Marshall. "They said they would support the northern economy and they are. I commend them."

Photo opposite: One of Diavik's 480,000-litre temporary fuel tanks is trucked across Great Slave Lake, via ice road.

This page: An NTCL barge and tug moving goods on the Mackenzie River.



Blasting from a small company to a mid-size business

As the only drilling and blasting contractor at Diavik from site development to present, Yellowknife-based NWT Rock Services Ltd. has been there to see Diavik rise from the rocks. "There was only an exploration camp there when we arrived in January 2000," says Cliff Friesen, vice-president and general manager of NWT Rock. "We blasted all the rock to set up the first roads and we've been working there ever since."

At the Diavik site, NWT Rock Services is working on several large projects with Nuna Logistics and Lac de Gras Constructors in development of the Diavik site and production of rock for dike construction. As well, NWT Rock Services completed camp pilings and ad-freeze pilings. Ad-freeze pilings use permafrost as a foundation, as opposed to conventional pilings, which contact bedrock.

The company started back in 1990 when the McCaw brothers – Irwin, Terry and the late Joe – identified a year-round need for a blasting and drilling company in Yellowknife which would service the area's water and sewer, quarry, land development and rock building industry. During the next few years, NWT Rock took on a number of projects in Yellowknife and other northern communities like Rankin Inlet and Kugluktuk. But it was the arrival of the diamond industry that provided a turning point for the company, allowing it the resources to go from a small to medium-sized company. At peak periods, at least 75 NWT Rock employees work at the Diavik site.

"Because of the Diavik contract, we were able to significantly increase the size of our company and add staff to provide support services for our field work. It gave us stability and provided steady opportunities to better utilize our Aboriginal and northern staff," explains Friesen. "Hopefully when construction is completed, other drilling and blasting opportunities will be available to help maintain this work force." They recently doubled the size of their office space to 300 square metres.

One of the long-term benefits for NWT Rock has been the credibility that comes with being connected to a world-class construction project like Diavik. "Diavik Diamond Mine is the first diamond mine of its kind in the world. It has given our company exposure to a wide range of construction activity and that is going to open new doors for us in the future," says Friesen. Leaning forward on his office desk he added: "They have also made us a better contractor by introducing us to their very stringent safety policy. That has been good both for Diavik and for us."

Friesen, who has been actively involved in Yellowknife since 1992, applauds the positive economic and business development that diamond mining has brought to the Northwest Territories. Says Friesen, "It has led the Canadian North into the world's limelight and provided a springboard of opportunities for northern-based companies."

Photo opposite: Blaster's helper Richard Marlowe, with NWT Rock Services, in the Diavik quarry.

This page: Cliff Friesen, of NWT Rock Services, at the company's Yellowknife office.



Hauling heavy loads over the Arctic's ice artery

Thriving for over three decades as a family-owned and operated business, RTL Robinson Enterprises Ltd. has grown into the North's largest trucking company. RTL is also an industry leader in providing high calibre service and establishing safety initiatives. They were the first trucking company in the NWT to introduce a permanent safety program and hire a full-time safety coordinator. The company handles major freight and fuel resupply contracts and has extensive experience in ice road construction and operation.

With 120 permanent employees and up to 450 seasonal workers, RTL is headquartered in Yellowknife, with branch offices in Edmonton, Alberta and Enterprise, Northwest Territories. The company owns more than 700 pieces of equipment, including over 180 trucks, 400 trailers, heavy equipment, tug boats, barges and several fixed wing aircraft and helicopters. Company founder Richard (Dick) Robinson moved his company – then known as Robinson's Trucking – and his family from Edmonton to Yellowknife in 1968. With the help of his wife Esther, they ran the company for many years while training their children for eventual management. Eldest son Marvin would become the company's president in 1989. Younger sons, Rickie and Donnie manage the Edmonton and Yellowknife operations respectively. Dick and Esther Robinson's son-in-law Dale Christensen, manages the recently acquired concrete business. A third generation of Robinsons is already in the wings ready to someday continue the family business tradition.

RTL is a northern company that has expanded south, launching a southern trucking company, Robfam Transport, in Edmonton, that provides an important supply link to

amalgamated their two companies to become RTL Robinson Enterprises. "We are particularly good at doing projects that other companies don't want to tackle. For example, we build winter roads into places no one else will and haul complicated equipment that others won't," said Marvin Robinson. "We understand the environment, and have the equipment and expertise to do the job." In 1999, RTL was awarded the contract to transport all the materials, supplies and equipment for Diavik's initial site development. A massive effort, RTL Robinson hauled everything up the winter ice road through a narrow window of opportunity. RTL continued to haul supplies to Diavik over the 2000 winter road. In 2001, in addition to resupplying the Diavik camp, RTL used the winter road to transport specialized construction equipment, including Bauer cranes from Germany, used for dike construction. RTL also provided year-round marshalling and loading of shipments that were delivered to the Diavik site by a Northern-based commercial Hercules aircraft. The 2002 winter haul contract will involve transporting the permanent camp and concrete for construction activities. "The most unusual loads we have ever hauled were the large fuel storage tanks for Diavik two years ago. These tanks were 48 feet high, 29 feet wide and weighed 55,000 pounds. "We moved the tanks across Great Slave Lake on an ice road which we specially built for them. We then moved the tanks over the winter road to Diavik," said Robinson. "Diavik is a complicated and interesting project...with the building of dikes in the lake and the related construction activities," he said. "The whole Northwest Territories will be watching with great interest."

Photo opposite: RTL haul trucks moving Diavik's temporary fuel tanks up the 425-kilometre ice road to the Diavik site.

northern markets from points across North America. Ten years ago, RTL

This page: In winter 2001, Diavik trucked 4,089 loads of construction materials, mining equipment and fuel to the Diavik site.



Sizing up an opportunity and securing business

"I'm retired, but I'm working twice as hard as I ever did before and I love it!" says Ron Near, president and CEO of SecureCheck, a Yellowknife-based security service providing pre-employment screening and investigation, security training and management, due diligence and specialized transportation services. When he retired from the Royal Canadian Mounted Police in 1996, after serving 17 of his 25 years in the North, Near became warden at the Yellowknife Correctional Centre. It was at the time when the diamond mining and manufacturing industry was on the cusp of bringing significant economic development to the Northwest Territories. Near and his wife Peggy identified an industry need for specialized security services, and in 1997, launched SecureCheck to meet the need.

"Peggy ran the business for the first couple of months out of a small office with a partner, whom we bought out the following year, while I continued to work as a warden. But the increased diamond activity brought a surge of business to us, and in early 1998, Peggy told me it was time to quit my job as warden and work at SecureCheck full-time," recalls Near. "We had found our niche." The company has continued to grow and by summer 2001, employed 60 people, peaking at 100 during winter. One of the company's strongest growth areas has been a company program designed to train security personnel in industrial settings. SecureCheck was the first in Canada to provide security training in rough diamonds, bringing in diamond experts from Antwerp, Belgium, to train government, industry, and law enforcement professionals.

"The diamond industry developed very quickly," said Near. "When we first started the business four years ago, no one was sure how to provide security in the diamond sector. We had a strong mindset in policing and security, but diamond industry security is different. It has been a huge learning curve. We've been lucky to have met the major diamond players in the early days and have moved with them as a group."

At the Diavik mine site, SecureCheck provides construction security, as well as contract work for special programs, bulk sample protection and random searches of individuals travelling by plane to and from the site. SecureCheck also has the annual private policing contract for the winter ice road, which stretches from east of Yellowknife, past Diavik and the EKATI™ Diamond Mine to the Lupin gold mine in Nunavut. "Winter road policing demands specialized expertise to keep things moving and for that we hire retired police officers from all over Canada, the only time SecureCheck brings in people to the North. It's a fast moving, high-energy 24-hour-a-day project, and one of my favourites," Near said. SecureCheck has expanded in size and diversity alongside the development of the diamond mining industry in the Northwest Territories.

Photo opposite: Checking in at the Diavik site's reception desk.

This page: Ron Near, of SecureCheck, at the company's Yellowknife office.



The source for service

In the late 1990's, the Dogrib Rae Band looked at what was happening to the traditional land around them. They saw opportunities for business and economic development, and decided to do something about it. "To broaden opportunities for our people, we had to explore strategies that would take us outside the community to work, but yet let people continue to live in Rae," said Barry Conacher, in charge of business development for the Dogrib Rae Band. "We wanted training and sustained employment for our members, particularly our young people." The band focused on the mining sector and began exploring areas of activity with longevity beyond construction of the mine.

"Mine sites are like small towns and require a range of services to keep them going. Everything from handling fuel, maintaining facilities, operating power generators, clearing snow, to water delivery, garbage disposal, and maintaining roads and airstrips," Conacher said. "We identified the provision of site services as a key area of long-term activity, one that would provide employment, training and economic opportunities for the Dogrib people. But to make it happen, we knew we needed a partner who was experienced in delivering these services and that led us to ATCO Frontec."

The result of that partnership is Tli Cho Logistics, a company launched in 1998 as a joint venture between the Dogrib Rae Band and ATCO Frontec. The partnership combines local Dogrib knowledge with ATCO Frontec's expertise in site services, facilities management, and fuel provision and handling. The company, guided by an active board of directors comprised of four Dogrib members and four members from

ATCO Frontec, was structured to give the Dogrib maximum control over personnel and capacity building, and to ensure the conditions of employment reflected Dogrib values and aspirations.

Within a year of formation, Tli Cho Logistics was awarded a contract for site services at Diavik. In 1999 and 2000, Tli Cho Logistics received the contracts to provide the mines fuel and fuel handling services. Conacher credits Diavik as a catalyst for Tli Cho Logistics growth and ability to maximize opportunities stemming from diamond mining. Diavik has provided Tli Cho Logistics with an opportunity to develop a solid base of proven experience that enabled them to broaden their scope of activities to other mine sites and geographical regions, and to become a major supplier of fuel to the mining industry. But Tli Cho Logistics success is really a people's story.

"The Dogrib people have been here for a long time and will be here after Diavik is gone. We have to develop our human resources to create sustainability. With Diavik, the Dogrib people have gained valuable work experience in diverse disciplines, trade certification, long-term employment and opportunities to hone skills that can be used anywhere," Conacher comments. Tli Cho Logistics was created to advance the vision for a self-sufficient Dogrib Nation. Diavik has been an important element in making the vision become a reality.

Photo opposite: Tli Cho Logistics unloading a vehicle from a Hercules aircraft at the Diavik site.

This page: Tli Cho Logistics workers at the Diavik site.

Following page: Diavik's temporary North Construction Camp in winter.

Diavik Facts

- Project manager – Diavik Diamond Mines Inc.
- Mine location – 300 kilometres northeast of Yellowknife, Northwest Territories, Canada
- Project capital cost – \$1.3 billion
- Construction start-up – January 2001
- Projected mine start-up – First half 2003
- Estimated mineable reserves – 25.6 million tonnes (diluted)
- Average estimated reserve grade – 4.0 carats/tonne (diluted)
- Mine life – 20 years
- Average diamond value – US\$63 per carat (2000 valuation)
- Ore production – 1.5 million tonnes annually
- Annual diamond production – peaks at over six million carats
- Total employment – 400 +/- 50
- Direct annual wages – approximately \$30 million
- Northern Workforce – 250-300 at start-up



The Diavik Diamond Mine is a joint venture between Diavik Diamond Mines Inc. (60 per cent), a subsidiary of Rio Tinto plc (RTP-NYSE) and Aber Diamond Mines Ltd. (40 per cent) a subsidiary of Aber Diamond Corporation (ABZ-TSE; ABER-NASDAQ)



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