

NORTHWIND INDUSTRIES LIMITED

Inuvik contractor blazes ice road trails in ultra-challenging arctic conditions

Kurt Wainman, president and owner of Northwind Industries Limited, thrives on what looks like an insurmountable challenge — blazing trails for ice roads in the harsh arctic weather conditions.

Based in Inuvik, Canada's largest city north of the Arctic Circle, Northwind Industries specializes in constructing and maintaining ice roads on the Mackenzie River Delta in the Northwest Territories. The vast network of ice roads serves as a vital link for area communities and the growing number of oil and gas exploration sites located on the Mackenzie Delta, the country's largest freshwater delta.

"We consider ourselves the ultimate trailblazers," explains Wainman. "During the ice road season, which usually lasts from mid-November to the end of April, we provide round-the-clock service seven days a week. Weather poses a considerable challenge during the season and temperatures can often dip to 50

below. That can put a huge strain on trucks and machinery, which can break down easily in these conditions. Plus, the entire month of December there is no light. All this makes safety of paramount importance to us and our clients. We need to keep everything moving on the ice roads 24/7, whatever it takes."

In addition to being on the front lines building ice roads, Northwind Industries helps construct lease pads for oil and gas sites on the Delta. The company also provides a variety of services, including oilfield trucking and well-tooled heavy equipment mechanics. In addition, Northwind takes part in a number of projects in the Inuvik area during the summer months, from building gravel roads to demolition work.

Proud Inuvialuit-owned company

Wainman and his company have come a long way since he formed the business in 1997. He started out with one old tow truck after working for another area contractor for 12 years.

"I had a strong background working with another company and was involved in much of the same type of work we are doing today, including building ice roads and running and repairing heavy equipment," he said. "I've had a passion for this type of work ever since I can remember. I loved playing with Tonka toy trucks as a small child and started tinkering with engines for go-carts and snowmobiles by the time I was ten."

Wainman parlayed the money earned on his first project — building a small ice road on the river — into the purchase of another older truck and a plow. "I started out snowplowing ice roads and developed a close relationship with a number of customers," he said. "To keep pace with the growing number of jobs, I got more and more

Kurt Wainman, president and owner of Inuvik-based Northwind Industries Limited, specializes in building ice roads and lease pads for oil and gas exploration sites on the Mackenzie River Delta in the Northwest Territories.





Northwind Industries Limited is based in Inuvik, Northwest Territories. Inuvik is located two degrees above the Arctic Circle on the East Channel of the Mackenzie River Delta and has a population of 3,451 residents. Some of the major landmarks of the community include (clockwise from the top): The Igloo Church that bears the same official name as the famous Notre Dame cathedral in Paris (Our Lady of Victory); an Inuvik road sign alerting motorists about a dog-team crossing; brightly coloured homes, called "smartie box" housing, that sit on pilings due to the permafrost ground conditions in the region.

trucks and equipment. I put everything back into the business and it blossomed from there."

Born and raised in Inuvik, Wainman is a member of the native Inuvialuit group, which traces its roots in the area back thousands of years. Today, Wainman's company is one of the largest Inuvialuit-owned contractors in the region, with a year-round staff of 20 that grows to more than 75 employees during the busy ice road construction season.

"It's a real thrill to be a positive influence in the community and offer opportunities to people in the area," he said. "As an Inuvialuit Beneficiary, I work on projects in the Inuvialuit Settlement Region. All the bid jobs go to local Inuvialuit contractors like me. There are four to five local companies in the region that have the size and capacity to do these types of jobs within the ISR territory. In addition to job cost, other factors such as safety, equipment and experience weigh heavily into who gets the project."

Several members of Wainman's family play key roles in Northwind Industries. Kurt's father, Ray Wainman, is head foreman of the company while Kurt's wife Janelle Firth serves as office manager. In addition, his brothers Corey Wainman and Raymond Wainman Jr. are both longtime equipment operators. Another key member of the team is Dean Lennie, a skilled mechanic who has been with the firm for five years.

"We have assembled a really excellent team that blends experienced people with young people who are hard-working and want to learn," said Wainman. "We have an awesome group of young and talented operators who have what we like to call the 'hydraulic touch.' Plus, my father adds a great deal of experience to the operation. He was involved in the oil and gas industry in Tuktoyaktuk during the first boom. He's a very good teacher and has helped improve the skills of our people. I've been fortunate because he and my mother Gloria Allen have always been behind me every step of the way. My brothers and wife have also been instrumental in our success. In addition, our mechanic Dean Lennie has almost unlimited skills when it comes to repairing equipment. So it's a team effort throughout the organization. I couldn't do it without them."

Lifeline of ice highways

Located on the east channel of the Mackenzie River Delta, Inuvik is the final stop on the famous 740-kilometre-long Dempster Highway. The city is the epicentre of an oil and gas exploration boom, and may soon be the starting point of a multibillion-dollar natural gas pipeline.

Ice roads form the principal transportation lifeline on the Mackenzie Delta for much of the year. The government of the Northwest

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Delta depends on ice highways

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Territories maintains several winter roads in the region. Oil and gas companies depend on ice roads to move machinery and materials to their lease sites.

"The ice roads are just as smooth or smoother than an asphalt road and most have speed limits of up to 70 km an hour," explained Wainman. "You can ice blade them and it takes all the roughness out of them. The government and oil and gas companies put a lot of money into the roads because they are the chief means of travel here. We take pride in the quality of the roads we construct. Through the years, we've done hundreds of kilometres of roads for oil and gas companies as well as the government."

After the Mackenzie River freezes in late fall, workers use specialized equipment to check the depth of the ice and outline a path for a specific ice road route.

"The first step is profiling the ice," said Wainman. "We go out on the river on snowmobiles and use an auger to check if there's enough ice. After that, we drag a profiler behind the snowmobile so we can shape the dimensions of the road. Once we know the depth of the ice, we use formulas to figure the weight of trucks and equipment the ice can support. As soon as

we have enough ice early in the season, we open the roads with nine plow trucks that usually make a 150-metre-wide path, moving behind the profiler toward our final destination."

To increase ice thickness early in the season, Northwind uses unique auger trucks to drill holes through the river ice, flooding sections of the route with water that freezes and builds up the layers of ice. The ice thickness ranges from less than one-half metre early in the season to nearly two metres during the peak of winter.

"We keep flooding the road behind us to thicken the ice so we can use heavy equipment, such as motor graders and dozers," said Wainman. "The graders ice blade the roads to make them smoother and the dozers push the piled snow into banks alongside the road. We then use graders, dozers, wheel loaders and the plow trucks to maintain the roads during the season when there is snowfall or drifting snow."

Clearing path to drill site

Crews from Northwind Industries recently completed one of its largest projects, an ice road for the Mackenzie Delta Partnership of BP Canada, Chevron, Texaco and Burlington Resources Canada, Ltd. The ice road led to the partnership's new natural-gas well-drilling site on Ellice Island, 117 kilometres northwest of Inuvik at the mouth of Mackenzie River near the Beaufort Sea.

"The 115-kilometre ice road to the lease site was by far one of the longest ice roads we have ever built," noted Wainman. "We were the prime contractor on the project. We also constructed a 3/4-kilometre-by-3/4 kilometre pad over the ice and snow for the rig to sit on; a sump system to contain waste from the drilling process; a large air strip; and another 50-kilometre-long road to a fuel cache."

Northwind Industries was also involved in constructing Mackenzie Delta Partnership's staging area at Swimming Point in 2000. Facilities included camp accommodations for more than 100 employees, an air strip, a shop complex and a fuel-storage facility.

"Ever since it opened, we have also had an operator and a wheel loader stationed at Swimming Point to do utility jobs," said Wainman. "We unload planes and trucks that

Seasonal ice roads are a vital transportation link on the Mackenzie River, helping move freight to communities and oil and gas exploration sites on the Delta. The roads are surprisingly smooth and most have a posted speed limit of 70 km an hour.





Operators Corey Wainman and Ron Wainman use a Komatsu GD670A motor grader and a WA250PT-3 wheel loader equipped with a huge snow blower to help clear and maintain a section of a new 115-kilometre ice road. Northwind Industries constructed the road which leads to the Mackenzie Delta Partnership's new natural-gas well-drilling site on Ellice Island.

come into the yard as well as clear snow with it. We also handle fuel for Arctic Oil & Gas Services on the site. During the winter months, the crew and I stay at lease camps, like Swimming Point, near where we may be working."

Wainman has also partnered with Swanburg Trucking and Formula Transport of Grande Prairie, Alberta, to form Beaufort Logistics. That company focusses on moving heavy drilling rigs to lease pads on the Delta for oil and gas companies.

"It was a natural move for me because we have a large fleet of trucks. We combine them with the other two companies' resources to service the oil and gas industry," he explained. "We've moved some heavy rigs over the ice, including loads that weigh up to 85,000 pounds."

In addition to its private work, Northwind Industries is active in helping maintain and build ice roads for the government of the Northwest Territories. Last year, they constructed a 65-kilometre section of a seasonal winter road that connects Inuvik to Tuktoyaktuk, located north on the Beaufort Sea. The company has also helped build a number of access roads for early-warning radar sites in the region.

Once the ice roads deteriorate and break up during the spring thaw, Northwind Industries turns its attention to jobs in the Inuvik area.

"During summer, we shift gears and are usually in town hauling gravel or building roads," said Wainman. "We built a new gravel road in the industrial section of Inuvik last year and had a demolition project at the hospital in town."

Extreme conditions challenge equipment

The extreme conditions and round-the-clock customer service Northwind Industries provides during the ice road season require productive and reliable equipment. With the help of Coneco Equipment's Whitehorse branch/sales manager Merv Dawn, the company has found Komatsu equipment to be up to the imposing challenge.

Wainman and his crews count on a large fleet of Komatsu equipment, including two GD670 motor graders, two WA250 wheel loaders, two WA380 wheel loaders, a WA500 wheel loader, a PC300LC-6 excavator, a D41P dozer and a WB140 backhoe loader.

"I first turned to Coneco and Komatsu back in 2000 when I purchased a WA380 wheel loader for work in the camps," recalled Wainman. "I was very impressed with the wheel loader and started adding more Komatsu machines from Coneco. Now, virtually all my fleet is composed of Komatsu equipment. We like the power and reliability the machines give



Ray Wainman, head foreman for Northwind Industries

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Harsh conditions challenge man and machine

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us, and the service and parts support from Coneco has been very good. Parts are a phone call away and shipped by plane to the (Inuvik) airport."

Outfitted with a variety of attachments such as snow blowers, blades, buckets, forks, hydraulic thumb and winches, the Komatsu equipment gives Northwind the capabilities to handle virtually all the tasks involved in building and maintaining the ice roads and lease pad sites. Plus, the machines provide the versatility to handle different types of construction jobs in Inuvik during the summer months.

"The Komatsu wheel loaders are real workhorses for us," said Wainman. "The two WA250s are primarily utility machines, servicing the camp sites, while the two WA380s remove snow and maintain ice roads. We also equip



The Mackenzie Delta Partnership's staging area at Swimming Point was constructed in 2000 and includes accommodations for more than 100 employees as well as an air strip, shop complex and fuel storage facility.

Operator Donald Ross plows a portion of the new Mackenzie Delta Partnership's ice road to its site at Ellice Island with a Komatsu GD670A motor grader. Northwind Industries uses a large fleet of Komatsu equipment, acquired through Coneco Equipment and Whitehorse branch/sales manager Merv Dawn, to help build and maintain ice roads and lease sites round-the-clock from November through April.



them with forks for heavy lifting at the rig sites. We use the WA500 mostly to load gravel trucks."

The two Komatsu GD670 motor graders are usually on the front lines building ice roads or helping plow snow off the roads, while the D41P dozer, outfitted with a winch, handles a wide variety of tasks.

"With their deep plows and wing blades, the graders open the roads and keep them clean with ice blading," he said. "The D41P is an amazing little machine. It has a lot of horsepower for its size. I can go places in that machine where other dozers can't go. I've moved some big buildings with it over the ice and used the winch to move skids up hills."

The PC300LC-6 excavator is the newest addition to Northwind's fleet. It's equipped with a hydraulic thumb.

"The excavator is very versatile," Wainman pointed out. "Last summer we used it for truck loading, material stockpiling, demolition jobs and sump work. We also used the machine on the hospital demolition job in Inuvik."

To help meet the rugged arctic conditions, the machines are modified with auxiliary heaters and special arctic hoses.

"Every piece of equipment has big heaters because we want our operators to be warm and comfortable when we send them out," reported Wainman. "We change many of the hoses to arctic hoses, which flex and hold up better in the cold temperatures. We also have had Coneco increase the engine temperature of some of our machines for operation in the cold weather, including our motor graders."

Safety and community first

The harsh arctic conditions test man as well as machine. That makes safety of vital importance to Wainman and Northwind Industries.

"Safety is the top priority of our company and is something we constantly emphasize because of the conditions in which we work," said Wainman. "Each of our employees is equipped with personal protective equipment, rated at 50 to 60 degrees below zero. We also use special red, white and silver DOT tape on the equipment so it can be seen in the dark. Plus, we insist operators wear seat belts at all times — no exceptions."



Northwind Industries helped build a pad for this new rig and gas well site operated by the Mackenzie Delta Partnership. The pad is located 117 kilometres northwest of Inuvik on Ellice Island.



A Northwind Industries operator uses a Komatsu D41P dozer to level snow and ice while crews help construct a flare-unit site for testing near the gas well location at Ellice Island.



Northwind Industries uses unique equipment, like this water truck, to help build up layers of ice, frozen by the cold temperatures of the Far North.

To promote safety, Northwind Industries launched an awards program that culminates with an employee party each May. “We are proud of our safety record and we reward our employees for their efforts to make this a safe company,” he said. “We give safety awards to all employees who have no lost-time accidents.”

Wainman is also active in many community organizations in the Inuvik area, including the sponsorship of youth and adult hockey teams.

“I like putting money back into the community and much of it is focussed on children because they are the future,” he said. “We donate money for youth hockey teams and also have a Northwind-sponsored adult hockey team, which has won the Inuvik C Cup two years in a row as part of the Inuvialuit Tournament.”

As for the future, Wainman is enthusiastic about the prospects of the proposed Mackenzie Gas Project. It involves constructing a network of pipelines to deliver natural gas from sites in the Delta to an existing pipeline system in northwestern Alberta. The project also includes a processing facility in the Inuvik area.

“The pipeline would greatly increase economic growth of Inuvik and surrounding communities. I have faith it’s going to happen,” he predicted. “As for our company, we may be interested in some of the work that’s involved in constructing the pipeline south of Inuvik. Yet, we feel our long-term future will continue to be on the oil and gas exploration side that we are focussed on today.”

No matter what happens, Wainman and Northwind Industries are poised for more growth in the coming years.

“My goal is to be one of the largest employers in the area — with local talent and money staying in the community,” concluded Wainman. “I was born here, and I’m fulfilling my dreams here. I’m really proud of the company we have created and the positive influence it has had on Inuvik. One of the biggest rewards is passing on the skills and talents I’ve learned to other people and seeing them succeed. I want others to have the same opportunities I had, whether that means working with Northwind Industries or going off on their own someday just like I did.” ■

Kurt Wainman is flanked by Coneco Equipment Whitehorse branch/sales manager Merv Dawn (left) and marketing services manager Harvey Erickson.

