

# Kitimat LNG Community News



Community News is a quarterly newsletter for our neighbours

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Pacific Trail Pipeline right-of-way

## Pacific Trail Pipeline Update

Bao Vang, Pacific Trail Pipeline Project Manager

Since July, Chevron has been carrying out pre-construction activities on the natural gas Pacific Trail Pipeline (PTP) south of Houston and Smithers. The work we have been doing this summer continues the pre-construction work that began on the western part of the PTP between Terrace and Houston in 2012. The Pacific Trail Pipeline will supply natural gas from northeastern B.C. to the proposed Kitimat LNG facility where it will be cooled into a liquid and shipped to overseas LNG markets.

This year's pre-construction activity is taking place across 36 kilometres of the proposed PTP route and involves environmental field studies, archeological field studies, road upgrades and construction, as well as surveying and centerline clearing work. To support the field work now underway, a construction office in Houston, B.C., was established in July. This work is necessary so that the proposed route for the Pacific Trail Pipeline will be ready to begin full construction when Chevron and our co-venture partner Woodside make the final investment decision to proceed with the Kitimat LNG project.

### **Committed to working with First Nations**

Chevron and the Pacific Trail Pipeline have spent many years building support for the project among many First Nations. Through the First Nations Limited Partnership (FNLP), PTP has a benefits agreement with all 16 First Nations bands whose territories are along the proposed PTP route. Through the FNLP Agreement, there are many First Nations businesses and employees, as well as local communities, who are already working on the Pacific Trail Pipeline and taking advantage of the economic benefits offered by this project.

The work we are doing this year along the 36-kilometre section of the route is in the traditional territory of the Wet'suwet'en, and is being carried out in collaboration with local First Nations. The five elected Wet'suwet'en bands are members of the FNLP. For over 10 years, the PTP has engaged with Wet'suwet'en elected and hereditary leadership. Through these processes we have been issued the required Environmental Assessment Certificate and permits to conduct work in Wet'suwet'en territory.

### **Protecting and preserving**

During our many years of consultation and engagement, we have heard from First Nations the utmost importance on protecting the environment for future generations, and preserving culture and traditional ways. Working collaboratively with all five elected bands and several hereditary chiefs of the Wet'suwet'en Nation, we have listened and responded to concerns by adjusting PTP plans, completing permit amendments, modifying the pipeline route, funding environmental studies, and creating economic opportunities.

Chevron recognizes First Nations Rights and Title, which is why working together and partnering with First Nations is a priority and important for the Kitimat LNG Project and PTP to move forward. To do this we are committed to continuing to work with First Nations to foster relationships based on mutual trust and respect. Building a project that includes First Nations participation in this way is precedent setting among Canadian resource projects and will allow all British Columbians to see the benefits of the Kitimat LNG Project today and for the lifetime of the project.

**Kitimat LNG**



# Taking the time to do things right - protecting wildlife

When a wildlife biologist working for Chevron in the Kaybob Duvernay area of central Alberta discovered a network of great blue heron nests near a natural gas exploration area, the decision to postpone work until the migratory birds had left was a very natural one.

"Absolutely, we did the right thing," said Chevron Project Engineer Susan Robertson. "We determined that we could wait to finish the program once the migratory-bird season is over."

Chevron decided to postpone a geotechnical program that was scheduled to take place in order to protect the nesting colony of birds. The decision was made even though the Alberta Energy Regulator gave the go-ahead to proceed with the work after determining it may not adversely affect the birds that spend their summers in wetlands across Canada.

"We decided to postpone the program to give the birds the space they needed. The birds were nesting and we did not want to interrupt them," said Robertson.

Environmental Specialist Emily Jobson agreed.

"Postponing this project clearly demonstrates Chevron's commitment to environmental stewardship and the environmental principles, one of Chevron's focus areas."

## Working around nature's schedule

The Kaybob Duvernay team had planned to conduct a geotechnical program in the spring - which includes drilling 10 to 20 metre-deep holes, primarily near water and rail crossings to determine the type of rock and dirt underneath in order to design pipeline crossings. But the



work was postponed until September as the large birds generally fly to warmer climates during that time.

Delaying construction work to accommodate wildlife has also been a practice put into place on the Kitimat LNG project. During the Bish Forest Service Road upgrade from Kitimat to the proposed LNG facility that was completed earlier in this year, construction was postponed in an area around an eagle's nest when wildlife biologists discovered eaglets in the nest. Construction did not resume until the birds had matured enough to leave the nest.

Having wildlife biologists and environmental monitors supervise field work to ensure species are not harmed or unnecessarily disturbed during our activities is one way Chevron demonstrates commitment to protecting the environment. Whether it's eagles in B.C., blue herons in Alberta or sea turtles in Australia, when the time is taken to work with nature's schedule, Chevron believes it is possible to build projects that not only benefit communities, but also protect people and the environment.





Wheatstone LNG Project

## LNG 101 – part of the global energy supply for over 70 years!

While a liquefied natural gas (LNG) industry is still very new for British Columbia, LNG facilities have been operating and shipping LNG around the world since the 1950s.

Today, the LNG industry has grown to include more than 19 countries exporting LNG and 110 receiving terminals in over 30 countries. In more than 60 years of shipping LNG to these many destinations, there have been no injuries to the public due to an incident at an LNG terminal.

The Kitimat LNG Project is a 50:50 co-venture between Chevron and Woodside.

Chevron and Woodside are part of the growing global LNG industry that will continue to supply an economical and cleaner source of fuel to the world.

Along with the Kitimat LNG project under development, Chevron is involved in two major LNG facilities in Australia that are under construction and will soon begin shipping LNG. The Wheatstone project, being built in Western Australia, is almost 65 percent complete and is similar in size to the proposed Kitimat LNG facility. Woodside is also a co-venture partner in the Wheatstone project. The larger Gorgon project is nearing completion and is one of the largest natural gas projects ever undertaken and the single-largest resource development in Australia's history.

Woodside is an Australian oil and gas company with a global presence, recognized for its world-class capabilities – as an explorer, developer, producer and supplier. Woodside operates the Pluto LNG project in western Australia as well as the North West Shelf project off Australia's north west coast. With an international

reputation for the safe and reliable delivery of LNG to customers in the Asia-Pacific region and other parts of the world, the North West Shelf Project has delivered more than 4,000 LNG shipments since 1989.

### ***Making long-term investments***

The Wheatstone and Gorgon projects are both making significant contributions to Australia's economy since early works began on the projects more than a decade ago. Combined, the two projects have created over 20,000 jobs and invested billions of dollars on local goods and services that are contributing to the Australian economy. When operating, the Gorgon project is expected to contribute \$40 billion in revenue to the Australian government over its lifetime.

Both projects have been developed with a strong focus on protecting people and the environment. The Gorgon project is not only being built on a "Class A Nature Reserve," Australia's highest level of environmental protection for Crown land, but it has also been recognized as one of the "greenest" LNG facilities in the world for having some of the lowest greenhouse gas emissions of any LNG project.

Chevron's and Woodside's recent experience developing LNG projects is offering many lessons learned and best practices that will benefit the Kitimat LNG project. As part of a growing, global industry with six decades of safety focused development, operations and shipping, British Columbians will be able to have the confidence that the "new" LNG industry is one with proven global expertise and an exceptional record of safety performance.

# Where will the natural gas for Kitimat LNG come from?

The Kitimat LNG facility will liquefy natural gas from British Columbia so it can be delivered to overseas customers in Asia, such as electric utilities, businesses, manufacturers and homes like yours for heating and cooking. But the very first step in that process is developing the natural gas from shale rock formations in northeastern B.C.

As co-venturers in the Kitimat LNG project, Chevron and Woodside are developing natural gas resources in the Liard and Horn River basins located about 100 kilometres northeast of Fort Nelson, B.C. These resources are large enough to provide enough natural gas supply to the proposed Kitimat LNG facility for several decades. Chevron is the operator of the project's upstream natural gas development, which includes identifying the gas resource deep underground, drilling the wells and, finally, building and operating the gas processing and other related facilities.

## ***Supplying clean, reliable energy***

Extracting natural gas from the shale rock in the Liard and Horn River basins requires the application of two proven technologies: horizontal wells and hydraulic fracturing. Hydraulic fracturing is not new and has been in use since the 1950s to extract the natural gas used in hundreds of thousands B.C. homes for heating and cooking. Natural gas from hydraulic fracturing is also used to fuel vehicles, including large trucks and transit buses, providing a cleaner burning source of fuel than conventional gasoline or diesel.

Wells are drilled vertically thousands of metres below the ground and are lined with several layers of steel casing pipe and cement that are located far below aquifers and groundwater. Once at the target depth, the wells are then drilled horizontally along gas-rich shale rock formations.

Horizontal wells allow multiple wells to be drilled from a single surface location, reducing the overall surface disturbance and footprint relative to vertical wells.

Hydraulic fracturing describes the process of using a mixture of water, additives and sand that are pumped under pressure to create small openings or "fractures" in shale formations, allowing the natural gas trapped in the rock to be released. The gas released by hydraulic fracturing moves up the well where it is processed at the surface to remove water and any impurities. The gas is then transported by pipelines, and in the case of Kitimat LNG, it is chilled into a liquid form for delivery via large ocean-going carriers to LNG customers overseas.

Canada's oil and gas industry is among the most stringently regulated in the world. In British Columbia, strict regulations by the independent oil and gas regulator, the BC Oil and Gas Commission, have contributed to a strong safety and environmental record.

When it comes to the amount of water used in hydraulic fracturing, the natural gas industry is continuing to find innovative ways to reduce water use, including accessing non-potable water sources and through recycling. The hydraulic fracturing process typically takes less than two weeks per well to complete; little to no additional water is used after the well is put into production. Compared to other industrial water users in British Columbia, the entire oil and gas industry accounts for just 1.5% of all water use licenses issued in the province.

To learn more about hydraulic fracturing in B.C., visit [www.fracfocus.ca](http://www.fracfocus.ca).



Kitimat LNG upstream operations in northeastern B.C.



**"Chevron has had a longtime relationship with the Red Cross here in B.C.,"**

## Chevron donates to wildfire relief

Summer in British Columbia was barely underway when wildfires across the province began threatening homes and causing air quality concerns for many communities. By the end of August, more than 1,600 wildfires had put firefighters and communities to the test.

Tragically, 30 homes were lost and hundreds of people were evacuated due to fast-moving wildfires. When people are facing such a stressful and devastating event, the Canadian Red Cross is there for them to provide support, such as emergency supplies including cots, water, hygiene kits and other basic necessities, as well as helping them to reunite with family members who may have been evacuated from their homes after getting just a few minutes notice that they had to leave.

That's where Chevron saw a practical way to help out those communities here in B.C., by providing \$5,000 in gasoline gift certificates to the Red Cross to give to people who were evacuated or lost their homes as well as \$15,000 from Kitimat LNG as a donation to the Red Cross.

"We hope that this will allow people displaced by a wildfire who are dealing with a very stressful time in their lives to have one less item to worry about. Chevron has been operating in B.C. for more than 80 years and a strong focus of those operations is to support communities," said Deidre Reid, Kitimat LNG's Social Investment Manager.

"Chevron has been a long-standing supporter of the Red Cross here in B.C.," said Reid. "We are happy now to be able to offer even more support for the Red Cross and the valuable work they do here in B.C. through the Kitimat LNG project."

"Losing your home and belongings to a flood or fire can be devastating," said Canadian Red Cross B.C. Director Kimberley Nemrava. "Chevron's generous support allows the Red Cross to help vulnerable people after disasters with basic needs like shelter, food, and clothing." The Canadian Red Cross continues to work with impacted individuals and families to assist with their recoveries.

To read more about Kitimat LNG's Social Investment programs visit [www.chevron.ca/kitimat-lng/community-benefits](http://www.chevron.ca/kitimat-lng/community-benefits)



Photo courtesy of Canadian Red Cross.

# K.U.T.E. RECYCLING DEPOT



## Community Contact

The Kitimat LNG project welcomes your feedback. If you have any comments, questions or suggestions for future articles, please contact us at [KitimatLNGFeedback@chevron.com](mailto:KitimatLNGFeedback@chevron.com).

Call us toll-free at 1-844-800-0900

[www.chevron.ca/KitimatLNG](http://www.chevron.ca/KitimatLNG)

**Kitimat LNG**



## Kitimat LNG supports "KUTE"

Kitimat LNG's plant team got together in July for a day of teambuilding on Lake Else, between Kitimat and Terrace.

The "Build a Lake-worthy Watercraft" event was made possible by Kitimat Understanding the Environment (KUTE) which provided the cardboard for a number of boats - not all proving to be lake-worthy.

The winning design was piloted by Kitimat LNG's Bobby Laird, below, whose team's canoe design proved more than up to the task. Kitimat LNG provided a \$500 donation to KUTE for providing the cardboard.

To left, Community Relations Advisor Sandra Bovingdon presented the donation to KUTE's Vice-President Michelle Martins along with KUTE Director David Brown, his daughter Maya and Kitimat LNG Health, Environment and Safety Technician Stacey Vandenadel.



## KITIMAT OFFICE

Looking for information about the Kitimat LNG project? Our Kitimat community office is at 369 City Centre in Kitimat.

Office hours are generally Monday to Friday from 9:00 a.m. to 3:00 p.m. Or you can call ahead and make an appointment: 250-632-3680.