

# LAND HO!

When it comes to oil and gas industrial activity, Placentia Bay's ship has definitely come in

**W**hen the first European fishermen arrived in Placentia Bay on the west coast of the island of Newfoundland during the 1500s, they found a deep body of water that was teeming with fish and ice-free year round. Today, Placentia Bay's 1,750 kilometres of coastline is home to 66 small and medium-sized communities and the fishing industry continues to play an important role in the lives of the Bay's inhabitants.

Don't let the area's traditional fishing economy fool you – this is no sleepy rural backwater. Its ice-free status means that there has always been an industrial side to the Bay's economy. North Atlantic Refining currently operates a 115,000 barrel-a-day refinery (the only refinery in the province) at the head of the Bay in the community of Come-By-Chance. The refinery has one of the largest docks in North America and for the last 30 years has been refining lower cost sour crude oil to produce premium refined petroleum. Not too far away, you'll find the Newfoundland Transshipment Terminal at Whiffen Head. Day in and day out, shuttle tankers come here from the offshore oil fields for storage and reshipment. And approximately 150 kilometres to the south, the Marystown shipyard can produce a variety of different ships from harbour tugs to coast guard vessels while the Cow Head offshore fabrication plant makes rigs and components for the offshore oil industry. Together, they make up the largest shipbuilding and repair facility in Newfoundland and Labrador.

The most unique feature of Placentia Bay, however, is the fact that it's a "Smart Bay". Smart Bay was a project that had been dreamed

of and chatted about for years. Until three years ago. That's when the federal government's Department of Fisheries and Oceans devised the Oceans Action Plan and issued a call for submissions. A group at the St. John's-based Canadian Centre for Marine Communications applied for and received a grant of \$2 million to run a pilot project in Placentia Bay that would use all available technology to provide accurate and timely information about the Bay to everyone and anyone who might need it. A series of buoys strategically placed around the Bay are used to generate data about weather, waves, wind and water. Information from other sources such as spaceborne and airborne sensors is added to the mix and then the information collected is posted on an easy to navigate website ([smartbay.ca](http://smartbay.ca)).

According to Bill Carter, Smart Bay's project manager, Placentia Bay was chosen for the pilot project precisely because it houses so much marine activity alongside industrial development. The project has succeeded admirably.

"The level of interest and usage of the site was completely unexpected," Carter says. "Within three months, everyone



During the 25 years that North Atlantic Refining has been in operation in Placentia Bay, there have been no major environmental issues, which a spokesperson attributes to their strict bay safety practices that include tug escorts, tanker certification and piloting procedures, among others. The spokesperson also says they would expect any new industry coming into Placentia Bay to take protection of the Bay as seriously as they do.

was involved. People would ring up and tell us if a buoy was down."

The initial two-year run of the project will be completed in March, but Carter is optimistic that a project with such obvious and tangible benefits won't be

shut down. "We provide better information, for better safety, which allows everyone to exist side-by-side. It's really positive."

Don Hogan of ACOA recently completed an evaluation of Smart Bay.

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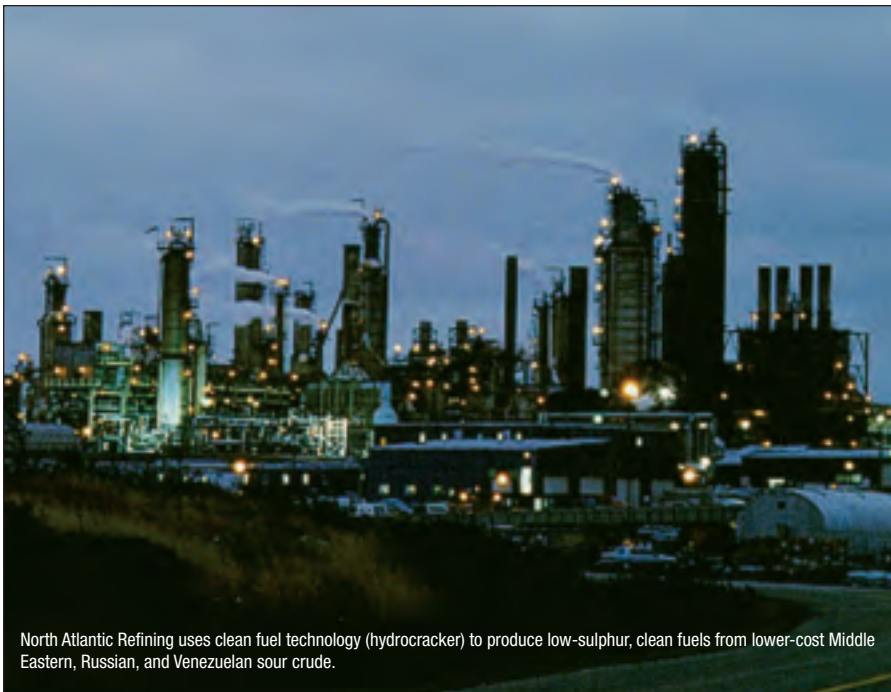
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North Atlantic Refining uses clean fuel technology (hydrocracker) to produce low-sulphur, clean fuels from lower-cost Middle Eastern, Russian, and Venezuelan sour crude.

Argentina. Several projects, in various states of completion, are expected to provide employment for hundreds of people and billions of dollars of investment in the area.

Several years ago, when maverick entrepreneur and airline mogul Sir Richard Branson threatened to build his own refinery because of the exorbitant cost of jet fuel, Newfoundland and Labrador Premier Danny Williams invited him to the province to do just that. While nothing came of the original proposal, it did get Brian Dalton, the president of Altius Resources, thinking about the possibility of building an oil refinery in the province. An initial \$5 million feasibility study suggested that the idea was a good one and the Newfoundland and Labrador Refining Corporation (NLRC) was born.

“Economically and fundamentally, a new refinery makes a lot of business and investment sense,” says NLRC vice president Chad Wells, pointing to the fact that there hasn’t been a new refinery built in North America in over 20 years. Then there’s the devastation wreaked on oil processing by Hurricane Katrina, which showed the vulnerability of North

“Smart Bay is a tool for integrated management of the ocean for fishing, aquaculture, search and rescue, pollution monitoring and everything else. Unequivocally, everyone... sings the

praises of the project.”

As a result, the future of Placentia Bay looks so bright they ought to hand out sunglasses when people get off the ferry from the mainland at the terminal in

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America's oil derivative supply.

NLRC's plan is to start with 300,000 barrels of oil a day, with the possibility of expanding to 600,000. Main products will be gasoline, kerosene/jet fuel and ultra-low sulphur diesel. It's a huge undertaking that will employ an expected 3,000 people during peak construction and require 750 workers when the plant is operational.

The company is still waiting for the federal go-ahead on the environmental report and is in the process of lining up investors. It'll cost a cool \$5 billion to get the plant operational, but if all goes well they hope to break ground some time this year with production expected to start in late 2011.

"Even if demand for oil softens, this facility will still be strong," asserts Wells. "Technology has evolved and this will be one of the most advanced refineries on the planet with lots of environmentally friendly attributes."

Another huge project coming to the Bay is the Liquefied Natural Gas (LNG) plant in Grassy Point (just seven kilometres from NTL and North Atlantic Refining). It's being developed by Newfoundland LNG Ltd., an independent energy service company jointly owned by North Atlantic Pipeline Partners and LNG Partners.

Liquefied Natural Gas, or LNG, is natural gas in a liquid state. When cooled to  $-162^{\circ}\text{C}$ , natural gas becomes a clear, colourless, odourless liquid. The cooling process also reduces the gas to 1/600th of its original volume, which facilitates its transport over long distances in specially designed tankers. A terminal valued at \$1.5 billion will provide facilities for LNG cargo transfer, temporary vessel-based storage and a lay-up site for in-transit LNG carriers. Construction is expected to take three years and provide 300 jobs in the area, followed by 125 permanent jobs when the facility goes on-line.

The plan is to transport the LNG in large carriers from North Africa, the Middle East and the West Indies to the Grassy Point facility where it will be transferred into shuttle vessels or re-gas vessels that will take the gas to markets. Basically, big ships will come into the specially designed jetties and smaller ones, able to dock at regular ports, will come out. The company hopes to break ground in June or July of this year and expects that the facility should be fully operational by 2010.

Mark Turner, president and CEO of



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Newfoundland LNG, reiterates what everyone has to say about this choice of location. "Placentia Bay has lots of geographical and physiological assets. It's on the traffic lanes for North America and Europe, it's deep, ice-free, it has Smart Bay and the presence of other industries creates an exciting synergy."

But even that is not the sum of Placentia Bay's industrial activity. There is also the Long Harbour Commercial Nickel Processing Plant being proposed by Voisey's Bay Nickel Company (VBNC), a subsidiary of VALE Inco. The plant will support a world-class mining operation in Voisey's Bay, Labrador and is part of a long-standing commitment to build a processing plant in Newfoundland and Labrador.

Construction of the processing plant is scheduled to begin in 2008 with production beginning in the fall of 2011. What's

## What's going on?

Placentia Bay is one of the world's largest and deepest navigable bays and is one of Canada's largest ports based on tonnage, largely crude oil and petroleum products. In addition to being the home of a 500-year old fishery, it is also the site of increasing industrial activity.

### Current industrial developments include:

- North Atlantic Refining, a 115,000 barrel-a-day oil refinery
- Newfoundland Transshipment Limited with 3 million barrels of storage capacity
- Marystown Shipyard and Cow Head offshore fabrication plant, the largest shipbuilding and repair facility in Newfoundland and Labrador
- Smart Bay.ca, an information portal that provides data about weather, waves, wind and water conditions

### Future developments include:

- Newfoundland and Labrador Refining Corporation (NLRC) hopes to break ground later this year on a \$5 billion, 600,000 barrel-a-day oil refinery
- Newfoundland LNG Ltd. hopes to have a \$1.5 billion LNG terminal operational by 2011.
- Voisey's Bay Nickel Company (VBNC), a subsidiary of VALE Inco, is scheduled to start construction on a commercial-scale nickel processing plant some time in 2008.

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not yet known is the type of processing that will take place at the plant. There are two possibilities. The first is hydromet, short for hydrometallurgical processing. It's a new process currently being tested at a Demonstration Plant in Argentina. More energy efficient, producing fewer air pollutants and with a higher level of metal recovery, it's the preferred process. However, if it's determined to be technologically or economically unfeasible, conventional matte technology will be used instead. Either method would produce 50,000 tonnes of nickel, 3,710 tonnes of copper and 2,450 tonnes of cobalt a year and employ a workforce of 450 people for the plant's projected 15 years of operation, a time line in synch with the life expectancy of the Voisey's Bay mine.

All these projects can't help but affect life on Placentia Bay. In 2007, there were 1,570 non-fishing vessels plying its waters, of which about half were oil tankers. That number could reach 3,300 by 2012. It's a huge increase for what is already a fairly busy waterway. As well, Placentia Bay has a population of around 25,000, not nearly enough to fill the projected demand for workers. The call will

go out province-wide and then nationwide as companies vie for employees; employees who will somehow have to integrate into the existing communities.

While it will be a challenge to accommodate the disparate needs of the people of the Bay, the fishing industry and big business, the Placentia Bay Integrated Management Planning Committee was formed in 2005 with the hope of reconciling these apparent conflicts. As committee chair Calvin Manning explains, their job is to make sure that everyone has a voice in the development of the Bay. That's why representatives from the fishing industry, tourism and mining, for example, meet to express their needs and concerns and listen to the needs and concerns of the others, in an attempt to resolve any potential conflicts before they get out of hand.

"There's going to be conflict," Manning admits, matter-of-factly. "But the majority of people in the Bay are pro-development because of the opportunities for young people. So we need to co-habitate. It would be easy to say 'shut the door' but trying to work things out is the only attitude that's going to work."

"There will be an impact on the envi-

ronment and fisheries, but we have faith in the regulatory process. It's no good laying a golden egg if the goose dies."

Placentia Bay is a deepwater, ice-free port on the main North Atlantic shipping route with easy access to U.S. and European markets. It has an existing industrial support infrastructure, Smart Bay and an established vessel traffic management system. If all goes as planned it will be the home of several state-of-the-art mid-stream and down-stream facilities of the resource industry. It doesn't require much imagination to envision a time when workers will be commuting to the island from Alberta because the booming economy of Placentia Bay needs more people than it can possibly find within the province.

Even with such rosy visions in place, Manning tries to keep a level head. "In Newfoundland and Labrador, we're always within an inch of great prosperity. But my patron saint is Doubting Thomas and I'll believe it when I see it." Nonetheless he concludes: "We'll see what happens and respond as it goes, but I think Placentia Bay is going to be the hottest warehouse of energy in North America." NR



*Production operations at the White Rose field*

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