

Oil and gas production continues decline in NWT

North holds 146.6 trillion cubic feet of natural gas

11.6 billion barrels of light crude oil

by Guy Quenneville
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NWT

The amount of oil and natural gas produced in the NWT decreased last year.

Total natural gas production for 2010 came in at 176 million cubic metres, down from 190 million cubic metres in 2009.

Calgary-based Paramount Resources currently only has one area of active natural gas production in the NWT.

At the end of 2007, Paramount suspended production at its Liard West well.

In 2007, the Liard West well pumped five million cubic metres of gas, a drop of 66.7 per cent compared to 2006, when 15 million cubic metres was produced.

The peak production year

for the well was 2001, when it pumped out 1.2 billion cubic metres of gas.

Paramount's Cameron Hills property near Kakisa produced 57 million cubic metres of gas in 2010, compared to 65 million cubic metres in 2009 and 77 million in 2008.

The company began producing natural gas at Cameron Hills in early 2002.

As of April 2008, Chevron's Fort Liard natural gas operations ceased production.

The Ikhil well in Inuvik, owned by Inuvik Gas, produced 18 million cubic metres of gas in 2010, which flowed to Inuvik for heating, fuel and power generation. In 2009, the same amount flowed into the Mackenzie Delta town. Ikhil began production in 1999.

Finally, Imperial Oil's well in Norman Wells produced 101 million cubic metres of gas in 2010, down from 107 million cubic metres of gas in 2009.

Ranger Oil Ltd.'s Fort Liard properties were not in operation last year.

Oil production

As for crude oil production, the total amount of oil produced in 2010 between the wells at Norman Wells and Cameron Hills was down from 2009.

In 2010, 872,676 cubic metres of oil was produced, compared to 901,883 cubic metres in 2009 and 941,488 cubic metres in 2008.

Cameron Hills' 2010 oil production was 32,003 cubic metres, compared to 32,783 cubic metres in 2009 and 47,903 cubic metres in 2008.

Paramount began producing oil at Cameron Hills in early 2003.

In Norman Wells, production in 2010 dropped to 840,673 cubic metres, from 869,099 cubic metres in 2009 and 893,585 cubic metres in 2008.

While oil and gas production from currently active



photo courtesy of Paramount Resources

Total natural gas production for 2010 came in at 176 million cubic metres, down from 190 million cubic metres in 2009.

wells is down compared to previous years, one must keep in mind that the Arctic is host to large amounts of untapped oil and gas, according to Indian and Northern Affairs Canada.

INAC reports that 33 per cent of Canada's remaining conventionally recoverable natural gas (146.6 of 443 trillion cubic feet) and 35 per cent of remaining recoverable light crude oil (11.6 of 33 billion barrels) is located in the NWT, Nunavut and Arctic offshore.

In the Mackenzie Delta area, major gas fields at Taglu and Parsons Lake, together with the Niglintak field, are proposed for development by

the proponents of the Mackenzie Gas Project.

Combined resources in these fields is estimated at 5.7 trillion cubic feet.

Onshore in the Mackenzie Delta, companies have made gas discoveries that potentially add significant volumes to the existing inventory of gas resources, bringing the total number of discoveries in the basin to 57.

For example, in 2004, junior exploration company MGM Energy discovered Umiak, estimated to contain 500 billion cubic feet.

As another example, the Nogha C-49/M-17 discovery in the Colville Hills contains an estimated 212 billion cubic

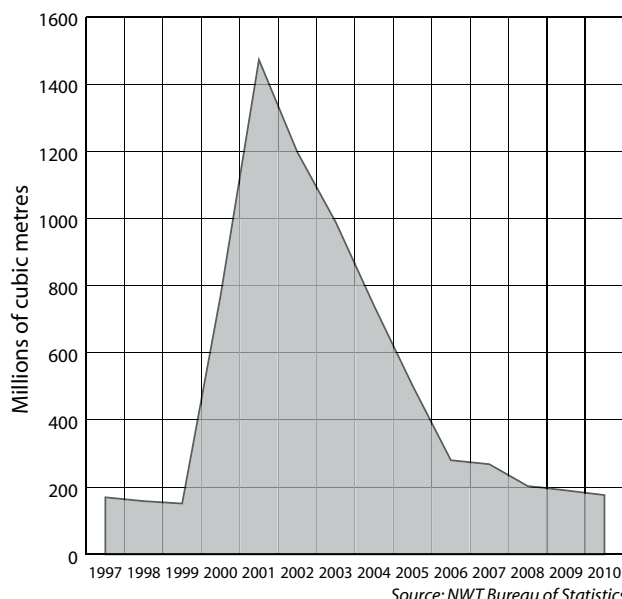
feet of natural gas.

Total discovered resources in the NWT, Nunavut and Arctic offshore include 1.9 billion barrels of crude oil and 32.4 trillion cubic feet of natural gas.

However, it must be noted that these totals do not reflect some recent discoveries for which estimates of discovered resources are not available.

Shale gas, though present in the NWT, remains largely unexplored. For instance, the shale gas potential of the northern extension of the Horn River Shale Basin extending into the southern Northwest Territories from Northern B.C. has yet to be added to estimates of gas potential.

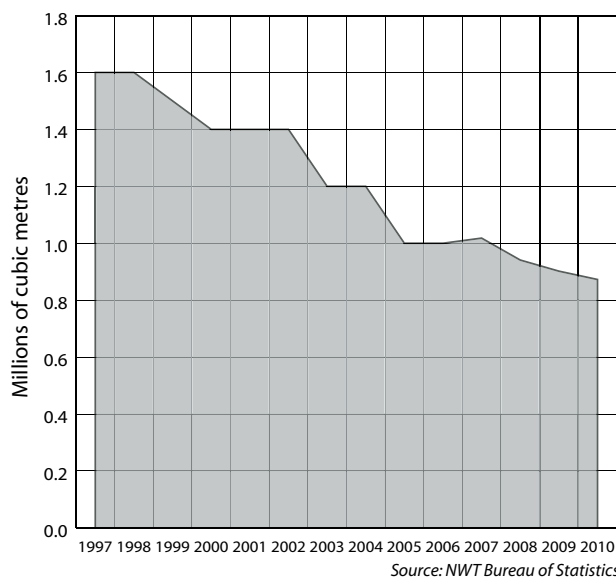
NWT annual natural gas production



Source: NWT Bureau of Statistics

Total natural gas production in 2010 came in at 176 million cubic metres.

NWT annual oil production



Source: NWT Bureau of Statistics

In 2010, the total amount of oil produced amounted to 872,676 cubic metres.

Pipelines carry Northern gas and oil

Cameron Hills line takes 46 million cubic metres south

Paramount down to one gas line

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Six oil and gas pipelines have been constructed in the NWT, only three of which are currently operational.

Built in 1999, the 50 km-long Ikhil pipeline carries natural gas to Inuvik, where it is used to generate electricity and heat homes. Gas flowed through the 15-centimetre pipeline for the first time in May 2000.

The 15-cm Ikhil pipe transports gas pumped from two natural gas wells operated by Calgary-based AltaGas Utility Group Inc., which owns the pipeline with the Inuvialuit Regional Corporation

and ATCO Midstream. ATCO bought a one-third share of the pipeline from Enbridge Pipelines last year.

The gas is piped to Inuvik, where it is sold to Inuvik Gas and the Northwest Territories Power Corporation.

Last year, the Ikhil line transported 17 million cubic metres of gas.

Paramount Resources, also based in Calgary, owns three pipelines in the NWT, only one of which is operational.

The 32.4-centimetre wide Shiha pipeline begins near Fort Liard and goes 24 km south to a processing plant near Maxhamish Lake, B.C. It was deactivated by Paramount in December 2007. In its last

year of operation, Shiha carried 5.2 million cubic metres of gas.

Paramount's Liard West pipeline, which carried gas from north of Fort Liard to the Pointed Mountain pipeline run by Spectra Energy, was deactivated and ceased operations in March 2008.

Paramount's one operating line, the 15-kilometre long Cameron Hills pipeline, carries natural gas and oil to a processing plant near Bistcho Lake, Alta. In 2010, the pipeline carried 46 million cubic metres of gas and 32,000 cubic metres of oil.

The Pointed Mountain pipeline, owned by Canadian Forest Oil Ltd., is currently

deactivated. It starts approximately 30 km west of Fort Liard, where it draws oil from a well owned by Canadian Forest Oil, goes to the Kotaneelee facility in the Yukon, and then to Fort Nelson, B.C.

According to the NWT Bureau of Statistics, the Canadian Forest Oil well has not been in operation since 2000.

Oil along with natural gas liquids – by-products of crude oil – are carried south in the Enbridge pipeline.

Built in 1985, the 870-kilometre line runs from Norman Wells to Zama City, Alta.

In 2010, the Enbridge pipeline carried 1,081,794 cubic metres of oil from Imperial Oil's fields in Norman Wells.

Pipeline gets NEB, federal cabinet OK

Energy board says construction must begin by 2015

Pipeline could double NWT's GDP by 2020

by Guy Quenneville
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Imperial Oil and its partners finally received cabinet approval of the Mackenzie Gas Project in March.

Three months before, the National Energy Board certified that the \$16.2-billion pipeline is in the public interest and has the blessing of the board.

But there's still a lot of work to do for the pipeline consortium – a group that also includes the Aboriginal Pipeline Group, Exxon Mobil Corp., ConocoPhillips and Royal Dutch Shell PLC – to meet a crucial deadline imposed by the NEB.

When the National Energy Board released its decision on the pipeline in December, it did so with several conditions attached.

The energy board stipulated two key things: that the proponents must decide by the end of 2013 whether they will proceed with construction of the 1,200-km gas line; and, if shovels do indeed hit the ground, it must be before the end of 2015.

Challenging deadline

Pius Rolheiser, spokesperson for Imperial Oil, has told *News/North* on several occasions that meeting the 2013 deadline will prove very challenging.

"Three years sounds like a fair bit of time, and what takes up that time is that, in the first year, we would need to staff the project team because we have reassigned people who were working on this project to other projects because we found we were advancing the engineering ahead of where the regulatory process was," said Randy Ottenbreit, Imperial Oil's former Mackenzie Gas Project development executive.

Other key initiatives during the lead-up to the decision to construct will include revising the cost estimate and finalizing the pipeline's right-of-way.

Rolheiser said the field work is crucial because it will help Imperial Oil acquire the data necessary for the thousands of permits needed to build and operate the project.

But as Rolheiser also told *News/North*, Imperial Oil is waiting on some assurance of federal fiscal support for

the pipeline before it moves forward with the above-mentioned field work.

Bob Reid, president of the Aboriginal Pipeline Group – which stands to acquire a one-third equity stake in the pipeline – put it more urgently.

"It's absolutely contingent on arriving at a fiscal arrangement with the federal government," said Reid.

There are doubts as to whether the federal government will pony up public funds for the project.

Keeping the talks secret has prevented the proponents from establishing public support for the pipeline, said Doug Matthew, a Calgary-based oil and gas analyst.

"The taxpayer has absolutely no idea what Imperial Oil is asking for or what the feds were offering, and in the absence of that information, there was no, that I can say, broad-based support for government funding for this project," said Matthews.

"That seems a shame, because it's an important project for the North. But when was the last time you heard a federal cabinet minister extolling the virtues of the Mackenzie Gas Project?"

Prior to the NEB's greenlight of the project, the regulatory process was held up by the report of the Joint Review Panel, which was released – five years late – in December of 2009.

The JRP was an independent panel appointed in 2004 by the Minister of Environment to write a report on the potential effects of the 1,400 km pipeline through the NWT to the Alberta border. It completed its hearings in November 2007.

Although attaching some conditions – some of which the pipeline proponents have taken issue with – the panel said the pipeline will be good for the NWT economy and gave its conditional support.

"The panel is confident that the project as filed, if built and operated with full implementation of the panel's recommendations, would deliver valuable and lasting overall benefits, and avoid significant adverse environmental impacts," read the preface of the 679-page report.

But the GNWT and Government of Canada's joint response to the JRP report suggested the governments

found little to agree with.

Out of the 115 recommendations, the GNWT and federal government only accepted 10. While the parties accepted the intent of another 77 recommendations, they stated they could not accept those recommendations as written.

The parties rejected the remaining 28 recommendations, which included a request that the National Energy Board establish an office in the NWT.

The governments said the majority of the rejected recommendations fell outside the scope of the JRP's mandate, noting that many of the recommendations would require a significant investment, especially from the federal government.

Shale gas

With the discovery of shale gas deposits in North America, depressed natural gas prices and the promise of U.S. federal loans to proponents of the Alaska Pipeline Project, the focus in ensuing months (or years) will likely be on the economic viability of the Mackenzie pipeline.

In its spring economic forecast for the NWT, the Conference Board of Canada estimated that by 2017, natural gas prices will be high enough to make the Mackenzie Gas Project an attractive investment.

In September 2008, the K'atloodeeche First Nations of Hay River made a motion at its general meeting to join the Dehcho Pipeline Management Limited Partnership (DPMLP). The DPMLP is a body aiming to unite the 11 communities that comprise the Dehcho First Nations to form one limited partner in the APG.

The APG stands to gain one-third of the profits of the pipeline. The revenue will be shared among its members, which include the Inuvialuit Development Corporation, the Gwich'in Tribal Council and the Sahtu Pipeline Trust.

Each member's share will be determined according to the distance of the pipe through each region.

The DPMLP has not yet officially signed on to the APG, but two Dehcho First Nations groups – Acho Dene Koe of Fort Liard and Liidlii Kue First Nation of Fort Simpson – have already climbed on

board the DPMLP.

Bob Reid, president of the APG, said with Fort Liard, Fort Simpson and potentially Hay River all signed on with the partnership, 55 per cent of Dehcho beneficiaries would be represented by the partnership.

A socio-economic agreement signed between proponents and the GNWT in 2008 stated that during construction, between 1,300 and 1,400 NWT residents will be hired every year.

Fifteen per cent of capital spending – roughly \$2.4 billion – will go to Northerners in the form of salaries or contracts with suppliers.

Once the pipeline is operational, 74 per cent of the direct employment opportunities will be reserved for Aboriginal beneficiaries and NWT residents.

Business to be conducted with Northern suppliers and contractors during the operational phase is pegged at \$145 million per year.

With the Mackenzie Gas Project in operation, the NWT's gross domestic product would climb to \$9.6 billion, more than twice its current level, by 2020, according to the Conference Board of Canada.

Training

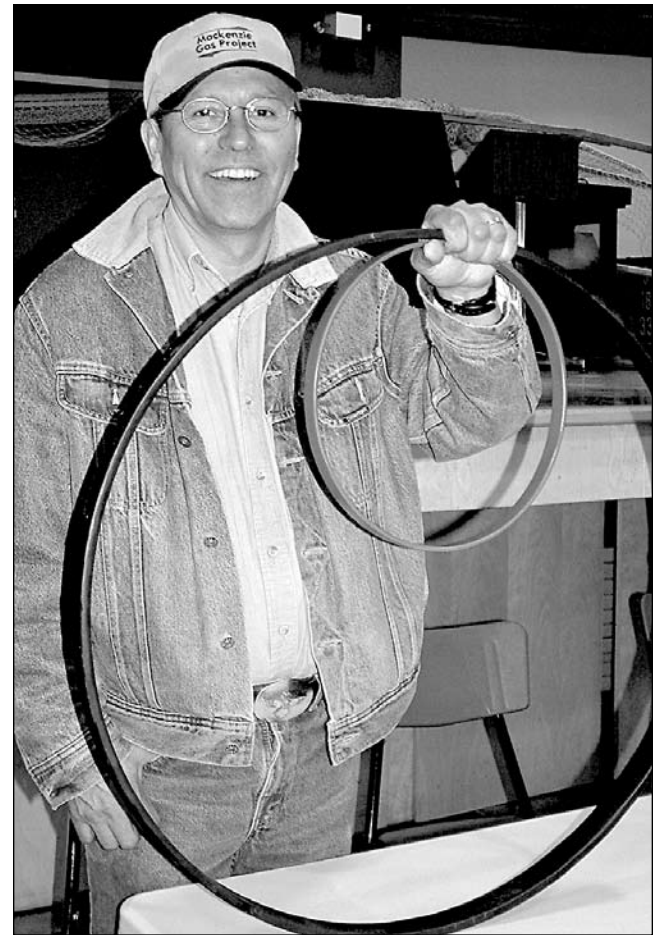
The delays to the pipeline have halted one training program.

The Pipeline Facilities and Training Operations Training Program (POFTP) was created in 2002 by the Pipeline Operations Training Committee. The committee is a mix of industry, government and training providers, including the GNWT.

The four-year program was training NWT residents as millwrights, heavy duty mechanics, electricians and production operators for the three anchor fields. On-the-job trades training and production manager training took place at gas compression facilities in Alberta and at schools like the Northern Alberta Institute of Technology.

As of 2007, nine apprentices taking paid, trades-related training were still in the program, while three people had finished the production manager stream.

"That was discontinued, and there were a number of people that were trained. The



A former Imperial Oil employee uses two metal hoops to illustrate the different sizes of the Enbridge pipeline, which is smaller, and the proposed \$16.9 billion Mackenzie Gas Project, the latter of which was officially approved by the federal government earlier this year.

sad thing is that they had to go south for jobs," said O.D. Hansen, a spokesperson for the Aboriginal Pipeline Group, which also sat on the POFTP committee.

If the proponents decide to move ahead on the pipeline,

"It doesn't give us much time to restart these programs," he added. "We for sure will look at it and we hope to do as much as we can."

When in operation, the pipeline will create around 50 full-time jobs.

fact
FILE

The path to construction

In September 2010, Randy Ottenbreit, Imperial Oil's former Mackenzie Gas Project development executive, laid out this possible three-year timeline leading to a decision to construct the \$16.2 billion pipeline. But it should be noted that Imperial Oil has stated more than once that this work cannot begin without some indication of eventual federal fiscal support for the pipeline. As of press time, the Government of Canada had made no such announcement.

Year 2010-2011

- restaff proponents' project teams
- select prime contractor and staff contractor's team
- advance field investigation programs

Year 2011-2012

- carry out field programs
- conduct preliminary engineering
- finalize right-of-way
- finalize and submit PPAs (project permit applications)

Year 2012-2013

- regulatory processing of PPAs
- conduct additional engineering
- update cost estimate

GOAL: owners decide whether to proceed with construction