Indian and Northern Affairs Canada

Affaires indiennes et du Nord Canada

Northern Oil and Gas Annual Report

2010

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Northern Oil and Gas Annual Report 2010

The management of oil and gas resources on Crown lands north of latitude 60°N in the Northwest Territories, Nunavut and the northern offshore is a federal responsibility carried out by the Northern Oil and Gas Branch of Indian and Northern Affairs Canada.

Petroleum resource management on Crown lands is exercised under federal legislation. The *Canada Petroleum Resources Act* and its regulations govern the granting and administration of Crown exploration and production rights and set the royalty regime. The C*anada Oil and Gas Operations Act* governs the regulation of petroleum operations and associated benefits requirements. Land, royalty and benefit matters are managed by the department on behalf of the Minister of Indian Affairs and Northern Development while the National Energy Board takes the lead role in approval of operations.

Information on the northern oil and gas regime may be found on the web at: http://www.ainc-inac.gc.ca/nth/og/.

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Message from the Honourable John Duncan, PC, MP
Minister of Aboriginal Affairs and Northern Development

The petroleum resource potential of the Arctic is increasingly a focus for exploration among our Arctic neighbours and internationally. Canada's share in these resources is an important factor in building a promising economic future for all Canadians.

Our government is working with Northerners, Aboriginal groups and industry to strengthen partnerships in advancing oil and gas exploration to further support development, science and research in the North. We continue to allocate more resources and draw more attention to Northern issues than ever before, and remain committed to helping the North realize its vast potential.

Interest in oil and gas exploration continues to grow. In 2010, renewed uptake of exploration licences in response to the call for nominations and bids for the Central Mackenzie Valley and the Mackenzie Delta/Beaufort Sea was reflective of revitalization in the industry. The National Energy Board also approved the applications for the construction and operation of the Mackenzie Gas Project. This decision marks an important milestone for the project. In its decision report, the Board noted, "the project would contribute to strong, self-reliant communities that continue to take care of the land and the people in the North. This would be a benefit to all Canadians."

Development must also be balanced, and protecting the Northern environment remains a priority. This past year brought increased awareness of the environmental risks posed by offshore drilling, and the Government of Canada continues to support undertakings that will ensure sound environmental decision-making. In 2010, the department launched the Beaufort Regional Environmental Assessment partnership. It will advance environmental and socio-economic research to ensure Canada makes informed regulatory decisions regarding potential oil and gas activities.

In keeping with the Northern Strategy, the Government is modernizing the Northern regulatory system while fostering social and economic development and strengthening environmental stewardship.

In accordance with section 109 of the *Canadian Petroleum Resources Act*, I am pleased to table before Parliament this annual report on the administration of oil and gas lands in the Northwest Territories, Nunavut and the northern offshore for the year ending December 31, 2010. I invite you to consult this report for further details on the exploration and development of Canada's northern oil and gas resources over the past year.

John Duncan
June 2011

Frontier Lands[1] under the administrative responsibility of the Minister of Indian Affairs and Northern Development

[1] "Frontier lands" are defined under section 2 of the *Canada Petroleum Resources Act*, as follows:

"frontier lands" means lands that belong to Her Majesty in right of Canada, or in respect of which Her Majesty in right of Canada has the right to dispose of or exploit the natural resources, and that are situated in

a) the Northwest Territories, Nunavut or Sable Island, or
b) submarine areas, not within a province, in the internal waters of Canada, the territorial sea of Canada or the continental shelf of Canada,

but does not include the adjoining area, as defined in section 2 of the *Yukon Act*.

Table of Contents

List of Tables

List of Figures

NORTHERN OIL AND GAS

Introduction

Exploration for conventional oil and natural gas remains an important component of petroleum sector investment in North America despite the rapid growth of production from unconventional resources such as oil sands and shale gas. In Canada, light oil production still represents one third of total oil production from the western provinces, and all oil produced from the North and East Coast offshore is from conventional fields. While recognizing the potential for growing shale gas production in Canada, gas output from Western Canada continues to decline and the anticipated future growth from unconventional resources awaits more favourable gas prices.

Following the low level of investment in exploration and drilling in Canada in 2009 the industry rebounded somewhat in 2010. In particular, oil-directed drilling showed a sustained increase, although the level of gas-directed drilling remained low. Drilling activity has yet to rebound in the North.

Canada's resource sector continues to interest investors. The opportunity to find large conventional oil fields in the Arctic offshore may be a particular attraction of Canada from an international perspective.

The blowout of BP's Macondo well in the Gulf of Mexico on April 20, 2010, raised scrutiny of offshore deepwater operations around the world and underlined the challenges inherent in preventing and responding to such accidents. In Canada, the National Energy Board is currently undertaking a public review of Arctic safety and environmental offshore drilling requirements. This review will be relevant to future drilling operations on exploration licences issued in the Beaufort Sea and elsewhere in Canada's Arctic offshore.

Industry investment in the North, as demonstrated by uptake of exploration licences and by levels of exploration activity is partly driven by commodity prices. The year 2010 was characterized by a continuing price divergence between oil and natural gas. Oil prices were sustained at relatively high levels and were trending upwards at year-end.

Canadian natural gas prices, on the other hand, dropped by 24% during the year from an average of $4.07/GJ in 2009 to $3.81/GJ in 2010 (see Table 1). Early in 2010, gas prices increased due to winter heating demands but then declined throughout the rest of the year. The main reasons for low gas prices in North America are increased supply due to shale gas production, and strong levels of natural gas in storage.

Table 1: Oil and Gas Prices

	December 2009	December 2010	Average 2010
Oil - C$ per m^3 (Average at Edmonton)	469.53	540.99	508.78
Gas - C$ per GJ (Average at AECO)	4.16	3.62	3.81

Source: Natural Resources Canada

Investment in petroleum exploration in the western Arctic has been affected by delays concerning the proposed Mackenzie gas pipeline and field developments in the Mackenzie Delta. In this regard, the approval by the National Energy Board of the Mackenzie Gas Project late in the year was a positive signal for companies with discovered resources which remain stranded in the Mackenzie Delta and Central Mackenzie Valley.

2010 In Brief

Rights Management

Following a lull in issuance in 2009, 2010 saw renewed uptake of exploration licences in response to both the Central Mackenzie Valley and Beaufort Sea & Mackenzie Delta calls for nominations and bids. Petroleum companies committed work expenditures totalling $110,986,588 for six new exploration licences. Four licences, covering 290,537 ha were acquired by MGM Energy onshore the Mackenzie Delta; Chevron acquired one deepwater licence of 205,949 ha in the Beaufort Sea, and MGM one additional licence in the Colville Hills of the Central Mackenzie Valley.

Operations

Although there were no exploratory wells drilled in the North in 2010, six development wells were drilled in the Cameron Hills field of the southern Northwest Territories for a total of 7,706.5 m.

Only two companies operated geophysical programs in 2010. One onshore survey in the Tulita District of the Central Mackenzie Valley was completed early in the year and two seismic surveys were completed in the Beaufort Sea, out of three authorized, during the open water season in late summer and fall. A total of 6,165 km^2 of 2-D seismic were acquired.

Oil and Gas Production

Three fields produced oil and gas in 2010: the Norman Wells oil field in the Central Mackenzie Valley, the Ikhil gas field on the Mackenzie Delta and the Cameron Hills field southwest of Hay River in the southern Northwest Territories. Total natural gas production in 2010 was 178.5 x 10^6 m^3 (6.3 billion cubic feet), a 7.2% drop from the previous year. Total oil production in 2010 was 872.1 x 10^3 m^3 (5.5 million barrels), a 3.2% decline from 2009.

Royalties

Royalties received in the calendar year 2010 from oil and gas production on northern frontier lands amounted to $15,762,287. This 16% decline was due largely to lower production.

Beaufort Regional Environmental Assessment

On August 20, 2010, the Government of Canada announced its plan to fund the Beaufort Regional Environmental Assessment (BREA), a multi-stakeholder initiative to sponsor regional environmental and socio-economic research that will gather new information to guide the future management of the Beaufort Sea and the regulation of offshore activities.

Science Highlights

In December 2010, the second Canada – United States Northern Oil and Gas Research Forum was hosted by Canada in Calgary. The Forum brought together 250 participants from multiple disciplines and other interested parties, including representatives from northern Aboriginal groups to discuss research issues relevant to the management of northern oil and gas activities.

Mackenzie Gas Project

On December 16, 2010, The National Energy Board approved the applications for the construction and operation of the Mackenzie Gas Project. The Project comprises a 1,196 km pipeline, three natural gas fields onshore the Mackenzie Delta and a 457 km pipeline to carry natural gas liquids from Inuvik to the northern terminus of an existing oil pipeline at Norman Wells. The Mackenzie Valley Pipeline would run from the Beaufort Sea to Alberta, and is designed to carry up to 34.3 x 10^6 m^3 (1.2 billion cubic feet) of natural gas per day.

History of Exploration in the North

Oil and gas exploration has a long history in the Canadian North, dating back to the Norman Wells oil discovery drilled in 1920. The late 1940s and 1950s saw increased exploration in the southern Northwest Territories followed by exploration throughout the North in the period 1960 to 1985, activity stimulated by the `oil price shock' of 1974 and concerns for domestic supply.

The mid 1980s saw expanded development of the major Norman Wells oil field in the Central Mackenzie Valley and the construction of a pipeline from Norman Wells to northern Alberta. Norman Wells is Canada's most northerly oilfield and remains a prolific producer.

Current interest in the North dates from the mid-1990s. Investment in oil and gas exploration began to flow north in 1995 with the issuance of new exploration licences by the Crown in the Southern Northwest Territories, and subsequently in the central Mackenzie Valley. In 1999 and 2000, and in the years following, companies acquired exploration rights to lands across much of the Mackenzie Delta and adjacent offshore. This stimulated a resurgence of exploration activity over the past decade as companies worked to meet work commitments on these licences. In 2007 and 2008 this interest extended to deeper water areas of the outer continental shelf in the central Beaufort Sea, a trend which was reinforced in 2010 with the issuance of a third deep water licence.

Petroleum sector activities following from the issuance of new exploration licences on Crown lands (and on adjoining private Aboriginal lands where exploration rights are awarded by Aboriginal organizations) have generated diverse benefits for local and regional economies, including training, employment and business opportunities, reflecting the potential of oil and gas as a driver of the northern economy.

Petroleum exploration in Canada's North has also been an important stimulus for northern science and technological advances. Several research programs spanning many decades have led to improved understanding among both companies and regulators of the challenges and sensitivities of the northern operating environment. As knowledge advances, operations can proceed in greater safety and with potential impacts to the environment effectively mitigated.

Oil and Gas Resources

Conventional oil and gas resources in Canada's North form approximately 33% of Canada's remaining conventionally recoverable resources of natural gas and 35% of remaining recoverable light crude oil. As conventional production declines from western Canada, these percentages increase.

Although about 90% of natural gas in Canada is still produced from conventional gas pools in western Canada, new development is increasingly turning to unconventional gas from shale and tight formations. Unconventional gas recovery requires expensive technology and the associated intensive development raises a suite of environmental issues. Large conventional gas pools remain of economic interest, and potential for such pools lies in Canada's North.

Similarly, while Canada's oil production is rising from growing oil sands development, exploring for conventional oil pools is also attractive at today's high prices. The likelihood that large oil pools remain to be discovered in the North both onshore and in the Arctic offshore continues to excite exploration interest.

Regional estimates of Canada's northern resource potential are listed in Table 2. These are mean estimates of potential derived by probabilistic methods using sparse data. Large uncertainties remain about resource potential in most of Canada's northern petroleum basins, especially for conceptual exploration plays which have yet to be proven by the drill. This said, there is increasing evidence from regional geological studies and exploration success in comparable areas elsewhere in the circum-Arctic which build confidence that the potential estimates are based on sound inference.

The most accessible of these potential resources lie between the border with the provinces at 60 degrees North and the Beaufort Sea in a broad corridor running between the Rocky Mountains and the Canadian Shield, including the northern fringe of the Western Canada Sedimentary Basin. The western Arctic includes much of the Northwest Territories and adjacent Arctic offshore, an area estimated to contain more than half of the recoverable petroleum in northern Canada, with the Beaufort-Mackenzie Basin the largest potential contributor.

In the Mackenzie Delta area, major gas fields at Taglu and Parsons Lake, together with the large Niglintgak field are proposed for development by the Mackenzie Gas Project. Combined resources in these fields are estimated by the proponents at 161 x 10^9 m^3 (5.7 trillion cubic feet).

Discovered gas fields in the Colville Hills of the Central Mackenzie Valley could access a future Mackenzie Valley gas system by means of a short lateral pipeline. The Central Mackenzie Valley also holds considerable potential for further oil discoveries. Declining production from the major oil field at Norman Wells opens spare capacity on the existing Enbridge oil pipeline to Alberta. New discoveries in the vicinity would be close to these existing facilities.

Discovered gas volumes in Canada's Arctic Islands (North of latitude 75) are comparable to those in the Beaufort Sea-Mackenzie Delta region. The most promising basin is the Sverdrup Basin where past discoveries include major gas fields at Drake Point and nearby Hecla with combined discovered resources estimated at 257 x 10^9 m^3 (9.1 trillion cubic feet). Significant oil discoveries and largely unexplored oil and gas potential is also present in this vast region of diverse geology.

Several regions of the North remain entirely undrilled. Examples are the Arctic Continental Shelf, deep water areas of the Beaufort Shelf and slope, and most of the Canadian half of Baffin Bay including Lancaster Sound. In these areas, oil and gas potential is largely conceptual although regional studies are confirming high potential for both oil and gas. In 2010 new drilling offshore Greenland signalled a building international interest in the potential of the Baffin Bay region.

Of potential future interest for development are unconventional hydrocarbons in the North. These include shale gas and shale oil potential in the Mackenzie Valley and accumulations of methane hydrates beneath the Mackenzie Delta. In particular, formations with shale gas potential in the northern extensions of the Horn River and Liard Basins in the southern Northwest Territories may add significantly to estimates of gas resources in the future: building activity in British Columbia will help define the potential of comparable shale units north of 60° in due course.

Table 2: Oil & Gas Resources

OIL RESOURCES						
	Discovered Resources		Undiscovered Resources		Ultimate Potential	
Region	**10^6 m³**	***MMbbls***	**10^6 m³**	***MMbbls***	**10^6 m³**	***MMbbls***
Northwest Territories and Arctic Offshore	187.9	1182.5	799.7	5032.6	987.6	6215.0
Nunavut and Arctic Offshore	51.3	322.9	371.8	2339.4	423.1	2662.3
Arctic Offshore Yukon	62.5	393.8	412.7	2596.8	475.2	2990.6
Total	**301.7**	***1899.1***	**1584.1**	***9968.8***	**1885.9**	***11867.9***

GAS RESOURCES						
	Discovered Resources		Undiscovered Resources		Ultimate Potential	
Region	**10^9 m³**	***Tcf***	**10^9 m³**	***Tcf***	**10^9 m³**	***Tcf***
Northwest Territories and Arctic Offshore	457.6	16.2	1542.2	54.8	1999.8	71.0
Nunavut and Arctic Offshore	449.7	16.0	1191.9	42.3	1641.6	58.3
Arctic Offshore Yukon	4.5	0.2	486.6	17.3	491.1	17.4
Total	**911.8**	***32.4***	**3220.7**	***114.3***	**4132.6**	***146.7***

- MMbbls - million barrels (of oil); Tcf - trillion cubic feet (of natural gas).
- Resources are 'recoverable': standard recovery factors have been applied.
- Numbers may not add precisely due to rounding.
- Adapted from Table 1 and Table 4 in Drummond, K.J. 2009, Northern Canada Distribution of Ultimate Oil and Gas Resources. Available at http://www.drummondconsulting.com/NCAN09Report.pdf. Compiled and integrated from several published sources which may underestimate or overestimate actual field resources. Volumes and distribution should be regarded as approximate and reflect the opinion of the consultant.
- The Arctic Offshore includes marine areas offshore Yukon and the Northwest Territories in the Beaufort Sea, and offshore Nunavut in the High and Eastern Arctic. Resources within Yukon are not included. Assignment of offshore areas by the consultant is based on extrapolation of onshore boundaries between Territories, and does not reflect any position of the Government of Canada.
- Note that discovered gas volumes do not include estimates for recent discoveries (at Ellice I-48, Olivier H-01, Langley K-30, Langley E-07, Kurk M-15 and Ellice J-27 in the Mackenzie Delta, and Summit Creek B-44, Stewart D-57, Lac Maunoir C-34 and Nogha C-49 in the Central Mackenzie Valley).

OIL AND GAS MANAGEMENT

Rights Issuance

The Minister of Indian Affairs and Northern Development provides industry with an annual opportunity to obtain exploration rights in the Northwest Territories, Nunavut and the northern offshore. The exploration rights are issued pursuant to the *Canada Petroleum Resources Act*. Current oil and gas disposition maps are available on the Indian and Northern Affairs Canada website (www.ainc-inac.gc.ca/nth/og).

In accordance with the provisions of comprehensive land claim settlement agreements, the views and support of Aboriginal communities and organizations on the terms and conditions of the issuance and related matters are sought prior to rights issuance. Similarly, the Department engages territorial governments and other expert federal organizations to obtain updated information on environmental sensitivities. After consideration of responses received, the areas opened for exploration may be adjusted from year to year.

The Call for Nominations allows industry to specify lands of interest for inclusion in a subsequent Call for Bids. Although there is no prescribed duration for a Call for Nominations, Calls for Bids must remain open for the statutory minimum of 120 days, and are published in Part I of the *Canada Gazette*.

Exploration rights are issued pursuant to an open, competitive bidding process. A single bid evaluation criterion - currently the expenditure planned on exploration of the land block (`work expenditure bid´) - is used to determine the successful bidder who is issued an Exploration Licence of up to nine years, comprising two periods. The successful bidder is expected to spend the dollar value of the proposed work during the first period of the licence, and is required to drill one well during this first period to continue the licence into the second period.

In submitting a bid for an Exploration Licence, the bidder is required to submit issuance fees of $250 per grid or portion thereof, as well as the bid deposit in the amount of $10,000 for each parcel bid. Within 15 working days of being notified, the successful bidder is required to post 25% of the work expenditure bid (the `work deposit') as security for the performance of work. Following receipt of the work deposit the bid deposit is returned. Failure to post the work deposit as security for the performance of work will result in the disqualification of the bid and forfeiture of the bid deposit. In that event, the Minister may, if he sees fit, award the Exploration Licence to the second highest bidder without making another Call for Bids.

The work deposit is worked off as the licence holder fulfills its work commitments through the approval of allowable expenditures. In recognition of changing industry and administrative practices, the Department amended the Guidance Notes for Claiming Allowable Expenditures to reflect this evolution. In December 2010, the revised Guidance Notes were published on the Indian and Northern Affairs Canada website.

In January 2010, two Calls for Nominations closed with five parcels nominated in the Beaufort Sea & Mackenzie Delta and one parcel nominated in the Central Mackenzie Valley. All nominated parcels were included in subsequent Calls for Bids, which were both launched on March 6, 2010 and closed on July 6, 2010. The Beaufort Sea & Mackenzie Delta Call for Bids resulted in the issuance of five Exploration Licences (EL456 to EL460) for a total of $108,986,599 in work expenditure commitments and covering 496,483 ha. The Central Mackenzie

Valley Call for Bids resulted in the issuance of one Exploration Licence (EL455) of 80,240 ha for a work expenditure commitment of $1,699,989.

The Call for Nominations for the Arctic Islands of Nunavut closed in February 2010. Industry did not respond to this Call for Nominations and consequently no Call for Bids was held in this region.

In December 2010, two Calls for Nominations were launched for the Beaufort Sea & Mackenzie Delta and Central Mackenzie Valley, both closing February 1, 2011. Also, preparations were underway for a Call for Nominations in the Arctic Islands of Nunavut, planned for 2011.

2010 Issuance and Termination of Licences

In October 2010, six new Exploration Licences were issued; all with an effective date January 5, 2011, as a result of the successful Calls for Bids. Five of the new licences were issued following the Beaufort Sea & Mackenzie Delta Call: EL456, EL457, EL458 and EL459 on the Mackenzie Delta to MGM Energy Corp., and EL460 in the Beaufort Sea to Chevron Canada Limited. The remaining new licence, EL455, was issued to MGM Energy Corp. and is located in the Central Mackenzie Valley.

No Significant Discovery Licences or Production Licences were issued in 2010.

Seven interests terminated during 2010 either through expiration at the end of term or by surrender. Five interests expired; two exploration licences, EL413 (Kodiak Energy Inc.) and EL425 (Suncor Energy Inc.), one production licence, PL01 (Suncor Energy Inc), and two former rights[2], 411-68 and 442-R-68, both held by Devon Canada Corporation. EL423 (Husky Oil Operations Limited) and EL427 (MGM Energy Corp.) were surrendered.

[2] Leases issued under the *Canada Oil and Gas Land Regulations,* and pursuant to s. 112(2) of the *Canada Petroleum Resources Act*.

Significant and Commercial Discovery Declarations

No declarations of significant discovery or of commercial discovery were made by the National Energy Board during 2010 under sections 28(2) and 35(2) of the *Canada Petroleum Resources Act*. No new applications for development plan approval were received

Table 3: Land Disposition as of December 31, 2010

Region	Exploration Licence	Significant Discovery Licence	Production Licence	Former Rights [1]	Total
In hectares					
Arctic Islands	0	332,882	0	0	**332,882**
Eastern Arctic Offshore	0	11,184	0	862,500	**873,684**
Hudson Bay [2]	0	0	0	126,376	**126,376**
Beaufort Sea	1,892,144	205,636	0	0	**2,097,780**
Mackenzie Delta	56,624	134,109	3,423	0	**211,578**
Central Mackenzie Valley	985,561	52,725	0	654	**1,038,286**
Southern Northwest Territories	0	65,729	32,842	24,315	**122,886**
Total	**2,934,329**	**802,265**	**36,265**	**1,013,845**	**4,786,704**

Region	Exploration Licence	Significant Discovery Licence	Production Licence	Former Rights [1]	Total
By Interest Type (number of licences)					
Arctic Islands	0	20	0	0	**20**
Eastern Arctic Offshore	0	1	0	30	**31**
Hudson Bay [2]	0	0	0	8	**8**
Beaufort Sea	11	39	0	0	**50**
Mackenzie Delta	1	37	2	0	**40**
Central Mackenzie Valley	12	11	0	6	**29**
Southern Northwest Territories	0	31	21	9	**61**
Total	**24**	**139**	**23**	**53**	**239**

[1] Permits and/or Leases issued under former legislative regimes pursuant to s. 112(2) of the *Canada Petroleum Resources Act*.

[2] Offshore permits in Hudson Bay are under the jurisdiction of Natural Resources Canada. Permits onshore islands in northern Hudson Bay are under the jurisdiction of Indian and Northern Affairs Canada.

Administration of Interests

Exploration Licences

Table 4 lists the status of all Exploration Licences in 2010:

Table 4: Exploration Licences

Licence	Area (ha)	Representative [1]	Effective Date	Well to be Drilled by [5]		Expiry Date	Work Bid Amount (in $)
Beaufort Sea/Mackenzie Delta							
EL317 [2]	175,810	Talisman Energy Inc.	5-Oct-1986	N/A			N/A
EL329 [2]	349,981	BP Canada Energy Resources Company	5-Sep-1987	N/A			N/A
EL427-A [4]	73,608	MGM Energy Corp.	20-Sep-2004	14-Aug-2005	✓	14-Aug-2009	
EL427-B [4]	18,912	MGM Energy Corp.	20-Sep-2004	13-May-2007	✓	13-May-2011	151,758,288 [3]
EL427-C [4]	54,829	MGM Energy Corp.	20-Sep-2004	7-Jun-2009	✓	7-Jun-2013	
EL434	56,624	MGM Energy Corp.	3-May-2006	2-May-2011		2-May-2015	40,169,000
EL435	99,942	Shell Canada Limited	3-May-2006	2-May-2011		2-May-2015	11,552,332
EL446	205,321	Imperial Oil Resources Ventures Limited	1-Oct-2007	30-Sep-2012		30-Sep-2016	585,000,000
EL447	103,711	ConocoPhillips Canada Resources Corp.	1-Sep-2007	31-Aug-2012		31-Aug-2016	12,084,131
EL448	108,185	Chevron Canada Limited	31-Dec-2007	30-Dec-2012		30-Dec-2016	1,010,100
EL449	202,380	Imperial Oil Resources Ventures Limited	1-Dec-2008	30-Nov-2013		30-Nov-2017	1,180,100,000
EL450	41,323	MGM Energy Corp.	3-Jun-2008	2-Jun-2013		2-Jun-2017	1,754,636
EL451	205,359	BP Exploration Company Ltd.	1-Dec-2008	30-Nov-2013		30-Nov-2017	15,100,000
EL452	196,497	ConocoPhillips Canada Resources Corp.	1-Dec-2008	30-Nov-2013		30-Nov-2017	2,543,896
EL453	203,635	BP Exploration Company Ltd.	1-Dec-2008	30-Nov-2013		30-Nov-2017	1,100,000
EL456	73,391	MGM Energy Corp.	5-Jan-2011	4-Jan-2016		4-Jan-2020	1,697,000
EL457	67,284	MGM Energy Corp.	5-Jan-2011	4-Jan-2016		4-Jan-2020	1,530,000
EL458	75,244	MGM Energy Corp.	5-Jan-2011	4-Jan-2016		4-Jan-2020	1,299,600
EL459	74,618	MGM Energy Corp.	5-Jan-2011	4-Jan-2016		4-Jan-2020	1,160,000
EL460	205,946	Chevron Canada Limited	5-Jan-2011	4-Jan-2016		4-Jan-2020	103,300,000

• Work Bids rounded to the nearest $

[1] Representative as of December 31, 2010

[2] Under work prohibition orders as per s. 12(1)(a) of the *Canada Petroleum Resources Act*

[3] Consolidation as per s. 25(3) of the *Canada Petroleum Resources Act* (Note that on consolidated licences, one well may not be sufficient to hold all lands in the licence, depending on the terms and conditions)

[4] Licence expired or surrendered during 2010

[5] Per the original licence, Period 1 may be extended using drilling deposits or through amendment to the licence

✓ Well requirement met as of year end. The drilling of one exploratory or delineation well prior to the end of Period 1 of the term is a condition precedent to obtaining tenure to Period 2.

Table 4: Exploration Licences (continued)

Licence	Area (ha)	Representative [1]	Effective Date	Well to be Drilled by [5]		Expiry Date	Work Bid Amount (in $)
Central Mackenzie Valley - Mainland							
EL413 [4]	80,464	Kodiak Energy Inc.	18-Sep-2001	17-Sep-2005	✓	17-Sep-2010	2,000,000
EL423 [4]	90,632	Husky Oil Operations Limited	8-Jun-2004	7-Jun-2008	✓	7-Jun-2012	24,800,000
EL425 [4]	26,198	Suncor Energy Inc.	8-Jun-2004	7-Jun-2010		7-Jun-2013	22,000,000
EL431	78,516	Suncor Energy Inc.	18-May-2005	17-May-2011		17-May-2014	2,787,792
EL436	84,353	Talisman Energy Inc.	10-May-2006	9-May-2011		9-May-2015	12,150,000
EL437	85,993	Talisman Energy Inc.	10-May-2006	9-May-2011		9-May-2015	32,775,000
EL438	87,183	Talisman Energy Inc.	10-May-2006	9-May-2011		9-May-2015	3,850,000
EL439	82,820	Talisman Energy Inc.	10-May-2006	9-May-2011		9-May-2015	5,125,000
EL440	87,872	MGM Energy Corp.	10-May-2006	9-May-2011		9-May-2015	6,300,000
EL441	88,452	Husky Oil Operations Limited	10-May-2006	9-May-2011		9-May-2015	10,500,000
EL442	63,312	MGM Energy Corp.	10-May-2007	9-May-2012		9-May-2016	8,260,000
EL443	91,116	Husky Oil Operations Limited	10-May-2007	9-May-2012		9-May-2016	4,888,888
EL444	74,604	BG International Limited	10-May-2007	9-May-2012		9-May-2016	1,100,000
EL445	79,240	BG International Limited	10-May-2007	9-May-2012		9-May-2016	1,100,000
EL454	82,100	MGM Energy Corp.	1-Dec-2008	30-Nov-2013		30-Nov-2017	5,487,626
EL455	80,240	MGM Energy Corp.	5-Jan-2011	4-Jan-2016		4-Jan-2020	1,699,990

• Work Bids rounded to the nearest $

[1] Representative as of December 31, 2010

[4] Licence expired or surrendered during 2010

[5] Per the original licence, Period 1 may be extended using drilling deposits or through amendment to the licence

✓ Well requirement met as of year end. The drilling of one exploratory or delineation well prior to the end of Period 1 of the term is a condition precedent to obtaining tenure to Period 2.

Security Deposits Being Administered

Both the work deposit required for Period 1 and the rentals in Period 2 are refundable upon completion and approval of allowable expenditures for work undertaken on the licence.

During Period 1, 25% of the work expenditure bid is held as security to be refunded at $1 for each $4 of allowable expenditure. Should expenditures in Period 1 fail to meet the amount of the work expenditure bid, the residue of the deposit is forfeit. Failure to drill a well on the lands by the end of Period 1 will result in the termination of the exploration licence. Consequently, lands revert to the Crown as Crown reserve lands.

Should an exploration licence enter Period 2 following the drilling of one (1) exploratory or delineation well prior to the end of Period 1, rentals are required in full and payable annually by the anniversary of the effective date of the

licence. The following rates per hectare apply: 1st year @ $3.00; 2nd year @ $5.50; 3rd and 4th years @ $8.00. Rentals are refunded at $1 for every $1 of allowable expenditure. Should expenditures in Period 2 fail to meet the amount of the rentals, the residue of the rentals is forfeit.

Security deposits held for both work deposits and rentals as of December 31, 2010 totalled $522,154,489 for all exploration licences.

Table 5: Revenues from Administration of Interests ($)

	2006*	2007	2008*	2009*	2010
Non refundable rentals (Former Leases) [1]	62,749	62,749	62,749	62,749	61,127
Fees[2]	19,891	26,998	30,762	5,467	16,872
Forfeitures [3]	0	1,290,404	22,174,929	2,054,238	770,372
Total	**82,640**	**1,380,151**	**22,268,440**	**2,122,454**	**848,371**

[1] Former Leases were issued under the *Canada Oil and Gas Land Regulations* and continued in force pursuant to section 114 of the *Canada Petroleum Resources Act*.
[2] Issuance fees and fees for service (s.15 of the *Frontier Lands Registration Regulations*)
[3] Work deposits which were not offset by work expenditures in either Period 1 or 2 of an Exploration Licence
* Revenue adjustments, correction to financial coding

Benefits

Section 5.2 of the *Canada Oil and Gas Operations Act* and Section 21 of the *Canada Petroleum Resources Act* require that a Benefits Plan be approved by the Minister of the Department of Indian Affairs and Northern Development before authorization of any oil and gas work or activity or approval of a development plan relating to a pool or field in the Northwest Territories, Nunavut and Arctic offshore within the area of the Minister's administrative responsibility.[3]

In a Benefits Plan, a company proposing an oil and gas work or activity is required to describe the principles, strategies and procedures that ensure Canadians and Canadian businesses are provided full and fair opportunity to participate in the project. The Department also requires that a company monitor and report on the implementation of the commitments made in a Benefits Plan. A company is encouraged to give first consideration to local Northern Aboriginal and other Northern residents and businesses.

This year, abandonment and reclamation work on several wells in the central Mackenzie Valley and a single seismic program near Tulita provided employment and commercial benefits to local communities. In the southern Mackenzie Valley, ongoing oil and gas maintenance, drilling and production activities in the Cameron Hills field continued to benefit the local and regional economies. Offshore in the Beaufort Sea, seismic acquisition programs created training and employment for the local and regional labour force and opportunities for local and regional businesses to provide goods and services.

[3] Under section 5.2(2) of the *Canada Oil and Gas Operations Act*, the Minister may waive this requirement.

Environmental Considerations

As part of the annual process leading to Calls for Nominations, northern Aboriginal groups are notified of the Minister's intention to open lands and are provided the opportunity to identify areas of environmental sensitivity and those of special interest for cultural reasons. This dialogue explores concerns which may be raised about oil and gas activities initiated by issuance of oil and gas Exploration Licences.

Indian and Northern Affairs Canada also solicits input from expert groups in the territorial governments and other federal departments on the proposed calls, working with departments responsible for planning and managing protected areas such as Marine Protected Areas, Migratory Bird Sanctuaries and the Mackenzie Valley Protected Areas Strategy to ensure that the various land management initiatives are integrated. All input, together with northern land use plans such as the Gwich'in Land Use Plan and the draft Sahtu Land Use Plan are used in developing the Call area, maps, and other documents. In the Inuvialuit Settlement Region community, conservation plans guide the planning of operations.

Environmental considerations and the input of northern Aboriginal groups are important in the design and implementation of the Minister's petroleum rights issuance initiatives. They serve to alert industry to potential concerns which may need to be addressed when companies subsequently apply for land use permits, water licences, and work authorizations to conduct operations such as seismic or drilling on their Exploration Licences. The area opened for nominations, the content of the Call for Nominations package, and the terms and conditions associated with both the Calls for Nominations and Bids reflect consideration of advice received through this engagement process.

2010 saw increased awareness of the environmental dangers posed by offshore drilling following the blow-out of the Macondo well in the Gulf of Mexico and the loss of the Deepwater Horizon rig. The particular challenges of ensuring the safety and environmental requirements of drilling in Canada's Arctic offshore are currently being reviewed by the National Energy Board as part of the Arctic Offshore Drilling Review.

The National Energy Board will examine the best information available on the hazards, risks and safety measures associated with offshore drilling in the Canadian Arctic and use the results to inform its decisions on future applications for offshore drilling in the Arctic under the *Canada Oil and Gas Operations Act*. Such authorizations are independent of the issuance oil and gas rights pursuant to the *Canada Petroleum Resources Act*.

Petroleum and Environmental Management Tool

In 2009, Indian and Northern Affairs Canada introduced the Petroleum and Environmental Management Tool (PEMT) in its consultations leading up to the Call for Nominations.

The PEMT is an on-line, interactive geographic information system and generates maps on environmental and socio-economic sensitivity for a selection of valued ecosystem components based on inputs from expert sources. It also includes maps summarizing geological potential. The PEMT now covers the southern Beaufort Sea extending north-eastwards from 141°W offshore northern Yukon, across the Beaufort Shelf and slope and extending offshore Banks Island to latitude 76°N at the mouth of Parry Channel.

The objectives of the PEMT are to improve rights issuance planning and decision making, to foster information exchange with northern

Aboriginal groups and other stakeholders, and to alert companies considering acquiring Exploration Licences of potential sensitivities which may require special mitigation efforts. Mapped environmental themes currently include polar bears, bowhead whales, beluga whales, migratory birds, ringed seals and Peary caribou. Socio-economic sensitivity is developed from traditional hunting information. These maps will be further refined and developed in consultation with resource management partners.

A link to the PEMT can be found at www.ainc-inac.gc.ca/nth/og/pemt/index-eng.asp in addition to extensive background information on the initiative.

Environmental Studies Research Funds[4]

The Environmental Studies Research Fund (ESRF) finances environmental and social studies related to the exploration, development and production of oil and gas resources on frontier lands. The Fund is established under Section VII of the *Canada Petroleum Resources Act*. The ESRF Management Board funded the northern study program for 2010 through levies on oil and gas interests in the North voted by the Board and subsequently approved by the Minister. The 2010 budget approved for the North by the Minister of Indian Affairs and Northern Development, based upon the recommendation of the Board was $1,201,537.

The Northern Oil and Gas Branch of Indian and Northern Affairs Canada is a member of the ESRF Management Board and chairs the ESRF Northern Advisory Committee which shapes research priorities and projects funded through ESRF.

Three studies were completed in 2010 and are currently in the final stages of publication: *Beaufort Sea Oil Spills State of Knowledge Review and Identification of Key Issues*; *Review of Tuktoyaktuk Harbour as a Base for Offshore Oil and Gas Exploration and Development*; and *Proceedings of a Workshop on Seismic Sound Propagation Characteristics in the Beaufort Sea*, Calgary, Alberta, July 14-15, 2009.

The following research projects were underway in 2010: *Seabed stability conditions in the shelf/slope transition zone, Canadian Beaufort Sea*; *An assessment of impacts and recovery of seismic lines* (final year of a three year study); *Bosworth Creek water quality data review study*; *Detection of oil under ice with helicopter-borne Ground Penetrating Radar* (first year of a two year study); *Tracking oil spills/ice hazards with ice-ocean forecast model* (first year of two year study).

Beaufort Regional Environmental Assessment

The Beaufort Regional Environmental Assessment (BREA) will finance scientific and socio-economic research at a regional scale to inform regulatory processes and project-specific environmental assessments for oil and gas activities in the Beaufort Basin. The key goal for BREA is to produce relevant scientific and socio-economic information that simplifies project-level environmental assessment and regulatory decision-making for oil and gas activities, while strengthening the relationship between environmental assessment and integrated management and planning in the region.

BREA will foster research on recurring issues with project specific regulatory applications. These issues include cumulative effects assessment and monitoring, information management, regional waste management, oil spill preparedness and response, socio-economic indicators, and climate change. A total of $21.8 million will be funded through BREA, from 2011 to 2015.

Other Research Activities

In addition to ESRF, the Northern Oil and Gas Branch participates in shaping federally-funded science research for frontier oil and gas activities

[4] For further information see the ESRF web site at www.esrfunds.org.

by representing the Department on the Frontier Oil and Gas Portfolio Committee of the Program on Energy Research and Development. The Branch also leverages partnerships among the private sector, academia, Aboriginal communities and other federal government departments to initiate scientific research needed to support management and regulatory decision-making. For example, the Branch is involved in a Joint Industry Project with the goal of compiling existing data on ice characteristics to improve knowledge of engineering needs and requirements in Beaufort Sea oil and gas operations.

EXPLORATION ACTIVITIES IN THE NORTH

Northern Operations

Summary

Metres drilled in the Northwest Territories totalled 7,706.5 m in 2010. All drilling was related to development of the Cameron Hills field in the southern Northwest Territories. No new exploratory wells were drilled in the North during the year.

There were four geophysical field operations in 2010; three in the Beaufort Sea and one in the Central Mackenzie Valley. A total of 6,165 km of 2D seismic (two-dimensional program) were acquired. Four additional geophysical programs were approved for data purchase and reprocessing: these did not involve field operations.

Total exploration expenditures in the North in 2010 are provisionally estimated at $33 million. (This do not include the case of development-drilling).

Southern Northwest Territories

Six development wells were drilled in the Cameron Hills Field for a total of 7,706.5 m. Five of these wells reached total depth and completed: one well was abandoned at shallow depth. In addition to the new wells, five wells in Cameron Hills field were re-entered for well work. There was no new exploration in this region in 2010.

Mackenzie Delta

No exploration or development drilling and no seismic surveys was conducted onshore the Mackenzie Delta in 2010.

Beaufort Sea

The geophysical company GX Technology Canada Ltd. completed two seismic programs in the Beaufort Sea. Both were acquired as non-exclusive programs for sale to petroleum companies. The 2-D survey offshore the Tuktoyaktuk Peninsula included gravity and magnetic measurements and acquired 502 km of data. Operations ran from August 6 to September 27. This survey used an ocean botton cable deployed by the vessel M/V *Polar Prince.* A much more extensive 2-D marine seismic program was conducted over the same period using the M/V *Boss Atlantic.* This program spanned the central Beaufort Sea and acquired 5577.3 km of seismic, including gravity and magnetic data. Operations using this vessel ran from August 12 to October 6. A third program in the western Beaufort Sea was commenced but only 45.5 km of data were acquired. A fourth program using ocean bottom cable in Liverpool Bay was authorized but not commenced.

In addition to these field operations, there was one authorization to purchase and interpret existing seismic data previously acquired in the

region, and two authorizations to purchase and reprocess data.

Central Mackenzie Valley

Although no new wells were drilled, Husky Oil re-entered four of its previously drilled exploratory wells in the Tulita District of Sahtu to conduct full abandonments. Work was also undertaken on three wells in the Norman Wells field but there was no new development drilling.

One non-exclusive 2-D seismic program (the Brackett Lake survey) was operated by Explor Geophysical Ltd. in the Tulita District of Sahtu. Sixty kilometres of data were acquired between February 11 and March 6.

In addition to these field operations, there were two authorizations to purchase and interpret existing seismic data previously acquired in the region, and one authorization to purchase and reprocess data.

Arctic Islands of Nunavut

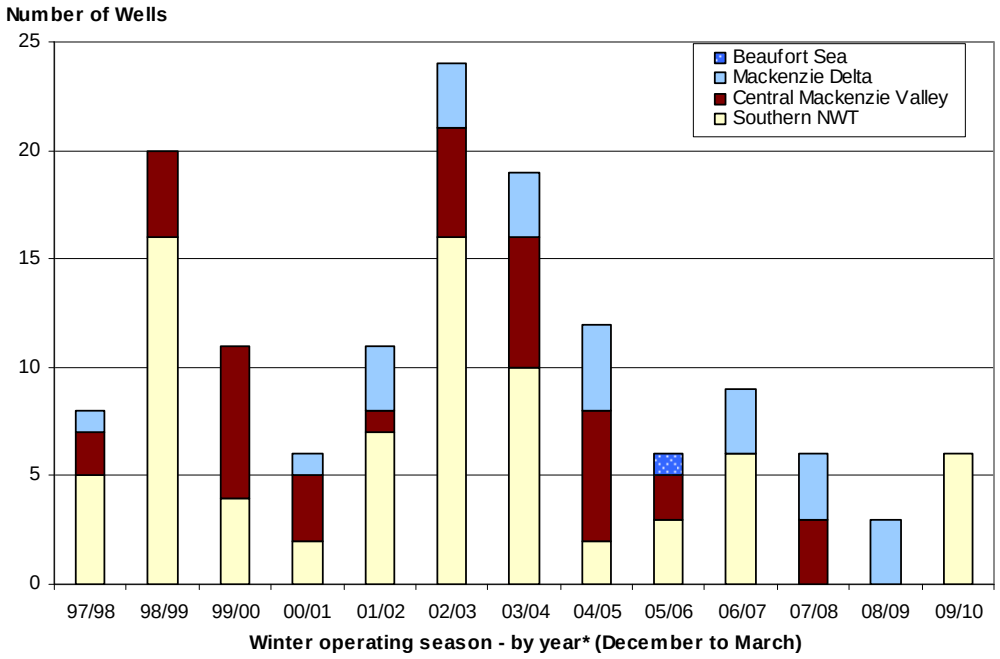
There was no industry exploration or development activity in this region in 2010.

Eastern Arctic Offshore

There was no industry exploration or development activity in Canadian waters in this region in 2010. The eastern half of Baffin Bay, however, saw three wells drilled by Cairn Energy on licences acquired from the Greenland government. Cairn announced promising results but no discovery.

[*Note: The Frontier Information Office of the National Energy Board is the primary source of operational data cited above.]*

Figure 1: Wells Drilled



*Excludes Norman Wells development drilling

*Includes Cameron Hills development drilling

Table 6: Drilling Statistics 2010

WELL NAME	Lat (NAD 27)	Long (NAD 27)	Class [1]	Total Depth (m)	Metres drilled in 2010	Begun	Rig Released	Well Status[2]	Licence [3]
Southern Territories									
New Wells									
Paramount et al CAMERON M-74	60.066	-117.499	DEV	1477.2	1477.2	17/Jan/10	14/Feb/10	S	PL19
Paramount et al CAMERON H-06	60.088	-117.506	DEV	1463.4	1463.4	16/Jan/10	03/Feb/10	S	PL19
Paramount et al CAMERON F-77	60.108	-117.485	DEV	1417.0	1417.0	06/Feb/10	15/Feb/10	S	PL14
Paramount et al CAMERON B-09	60.136	-117.514	DEV	387.6	387.6	16/Feb/10	19/Feb/10	A	PL19
Paramount et al CAMERON N-06	60.097	-117.520	DEV	1445.4	1445.4	19/Feb/10	05/Mar/10	S	PL19
Re-Entries of previously drilled wells									
Paramount et al CAMERON L-29	60.145	-117.593	DE L	-	-	04/Mar/10	05/Mar/10	S	PL18
Paramount et al CAMERON C-50	60.151	-117.645	EX	-	-	01/Feb/10	08/Feb/10	S	PL15
Paramount et al CAMERON M-49	60.148	-117.655	DEL	-	-	06/Feb/10	09/Feb/10	S	PL15
Paramount et al CAMERON F-73	60.040	-117.491	DEV	-	-	27/Jan/10	28/Jan/10	S	PL4
Paramount et al CAMERON 2F-73	60.040	-117.491	DEL	-	-	23/Jan/10	26/Jan/10	S	PL4
Mackenzie Valley									
Re-Entries of previously drilled wells									
Husky et al SAH CHO L-71	64.345	-125.743	EX	-	-	16/Sep/10	17/Sep/10	A	EL397
Husky et al STEWART D-57	64.268	-125.435	EX	-	-	16/Sep/10	16/Sep/10	A	SA
Husky et al SUMMIT CREEK B-44	64.384	-125.890	EX	-	-	30/Aug/10	13/Sep/10	A	EL397
Husky et al SUMMIT CREEK K-44	64.396	-125.892	EX	-	-	15/Sep/10	15/Sep/10	A	EL397
Imperial et al CANOL B-30X	65.288	-126.867	DEV	-	-	21/May/10	25/May/10	S	PA
Imperial et al NORMAN WELLS B-35X	65.286	-126.856	DEV	-	-	11/May/10	14/May/10	S	PA
Esso et al NORMAN WELLS S-06X	65.272	-126.961	DEV	-	-	09/Mar/10	15/Mar/10	S	PA
Mackenzie Delta/Beaufort Sea/High Arctic/East Coast Offshore									
NO WELL RELATED ACTIVITY									

[1] Class EX=exploratory, DEL=delineation, DEV=development

[2] Status S=suspended, A=abandoned, PR=production

[3] Licence EL=Exploration Licence, SDL=Significant Discovery Licence, PL=Production Licence, SA=Sahtu Lands, PA=Norman Wells Proven Area

Table 7: Seismic Acquisition

	2002	2003	2004	2005	2006	2007	2008	2009	2010
2D Seismic (in km)	2,506	586	189	564	3,917	6,028	12,684	1,488	6,165
3D Seismic (in sq. km)	4,060	194	804	635	1,100	0	1,638	1,577	0

DEVELOPMENT AND PRODUCTION

Three fields produced oil or gas in the Northwest Territories in 2010; the Norman Wells oil field in the Central Mackenzie Valley, the Ikhil gas field on the Mackenzie Delta and the Cameron Hills field southwest of Hay River in the southern Northwest Territories.

Imperial Oil's Norman Wells field in the Central Mackenzie Valley is the northern anchor for the Enbridge Norman Wells oil pipeline which terminates in Zama, Alberta. This major oil field was discovered in 1920 and continues to produce oil from a Devonian age reef largely underlying the Mackenzie River. The field was fully developed in the early 1980s and has produced continuously since 1985, although there were earlier periods of limited production. By the end of 2010, the field had produced a cumulative total of 41.6 x 10^6 m^3 (262 million barrels). This year saw a 3.3% decline in oil production from the 2009 level, reflecting a continuing downwards trend.

Gas from the Ikhil field on the Mackenzie Delta is produced from two wells and delivered through a 50 km pipeline to Inuvik, where it is used for power generation and heating. The field is operated by Altagas Ltd. and, as of December 2010, had produced a cumulative total of 178.1 x 10^6 m^3 (6.3 billion cubic feet) of natural gas over 12 years of production.

The only field producing from the southern Northwest Territories in 2010 was Cameron Hills, operated by Paramount Resources Ltd. Production from the four fields in the Fort Liard area continues to be suspended. The Cameron Hills field produces both oil and gas, which are delivered by pipeline south to the Bistcho area of northern Alberta. After a producing life of nine years, by year end the field had produced cumulative totals of 811 x 10^6 m^3 (28.6 billion cubic feet) of natural gas and 360 x 10^3 m^3 (2.3 million barrels) of oil.

There are no producing fields in Nunavut or in offshore Arctic waters.

Total aggregate oil production in 2010 was 872.1 x 10^3 m^3 (5.5 million barrels), a 3.2% decline from 2009 (see Figure 2). Total natural gas production in the Northwest Territories in 2010 was 178.5 x 10^6 m^3 (6.3 billion cubic feet), a 7.2% drop from the previous year (see Figure 3). Over half of the gas produced was associated with oil production at Norman Wells and was used for field operations.

Table 8: Oil and Gas Production

	2006	2007	2008	2009	2010	2009-2010 % Change
Oil Production (thousands of cubic metres)						
Norman Wells (Imperial Oil)	1012.4	964.3	893.6	869.0	840.7	-3.26%
Cameron Hills (Paramount)	70.3	53.3	47.8	32.2	31.4	-2.48%
Total	**1082.7**	**1017.6**	**941.4**	**901.2**	**872.1**	-3.23%
Gas Production (millions of cubic metres)						
Norman Wells (Imperial Oil)	109.3	103.7	103.8	107.5	101.4	-5.67%
Ikhil (AltaGas)	16.2	17.9	18.9	18.0	17.7	-1.67%
Cameron Hills (Paramount)	93.5	99.0	80.3	66.9	59.4	-11.21%
Fort Liard ("F-36" - Paramount)	29.9	52.6	0	0	0	
Fort Liard ("K-29" - Paramount)	59.1	49.1	0	0	0	
Southeast Fort Liard ("N-01" - Paramount)	11.9	0	0	0	0	
Total	**319.9**	**322.3**	**203.0**	**192.4**	**178.5**	-7.22%

Note: Liard Production suspended

Figure 2: Oil Production

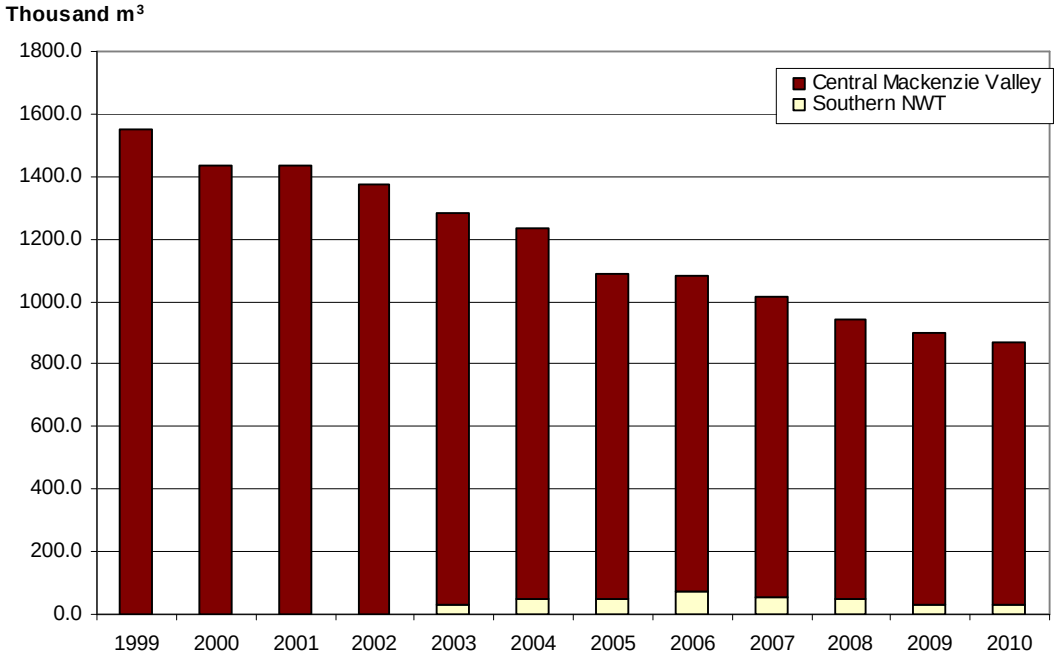
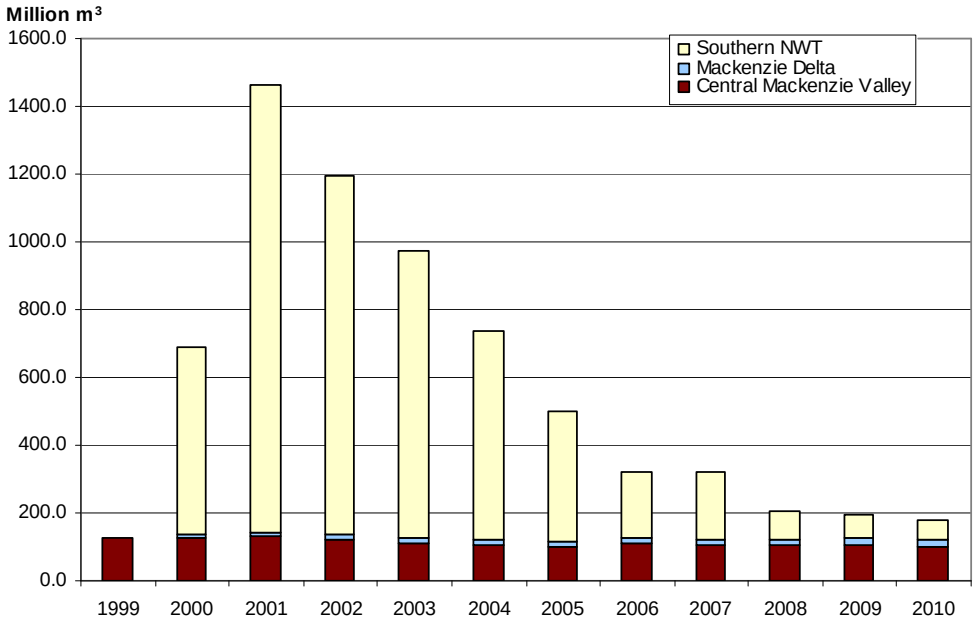


Figure 3: Gas Production



ROYALTIES

Royalties received in the 2010 calendar year from oil and gas production on northern frontier lands amounted to $15,762,287 (See Table 9). This 16.5% drop from 2009 was largely due to decreased production.

Table 9: Royalties ($)

	2006	2007	2008	2009 [2]	2010
Royalty [1]	30,477,442	25,078,071	30,381,061	18,876,656	15,762,287

Note: Royalty from the Ikhil field is not included. Ikhil lies on Inuvialuit Lands and is administered on behalf of the Inuvialuit pursuant to s. 7 (94) of the Inuvialuit Final Agreement.

[1] Royalty total includes Norman Wells royalty on two thirds of production but not the net profit from the Crown share in the field.

[2] 2009 revenue includes a deposit of $4 million from an interest holder against an estimated audit assessment. The audit was completed in December 2010 and the final amount owing will be finalized in 2011.

Audits and Assessments

The Northern Oil and Gas Branch manages a risk-based audit and assessment program, where royalty submissions are regularly monitored and periodically audited. One new audit was undertaken in 2010 and two audits carried over from previous years were completed during the year. One assessment was subsequently issued pursuant to section 61 of the *Canada Petroleum Resources Act.*

Royalty Administration

A new web-based Royalty Management System (RMS) was launched in April 2010. This secure, online electronic reporting application is used by interest holders to submit required production and sales figures, and assists the efficient administration of petroleum royalties.

FURTHER INFORMATION

Northern Oil and Gas Branch

Please check our website first at www.ainc-inac.gc.ca/nth/og/.

To obtain further information, please contact appropriate individuals below by phone or in writing.

Mailing address:

Northern Oil and Gas Branch
Indian and Northern Affairs Canada
OTTAWA ON K1A 0H4

Courier only:

Northern Oil and Gas Branch
Indian and Northern Affairs Canada
10 Wellington Street
GATINEAU QC K1A 0H4
Telephone: 819-997-0877
Fax: 819-953-5828

Information on the resource management regime, Calls for Nominations and Bids, and other related information: Manager, Land Tenure – Telephone: 819-934-9392

Information on registration procedures and regulations, exploration, significant discovery and Production Licences, transfers, and notices: Registrar – Telephone: 819-997-0048

Information on Northern Oil and Gas Maps, and Geographic Information System (GIS) Data: Geomatics Officer – Telephone: 819-934-9394

Information on northern exploration history and geological / geophysical activities: Senior Petroleum Geologist – Telephone: 819-953-8722

Information on royalty policy and royalty submissions: Manager, Fiscal Policy and Royalty Administration – Telephone: 819-953-8790

Information on Benefits Plan requirements for Nunavut and northern offshore is available from the Northern Oil and Gas Branch – Telephone 819-953-2087

Information on Benefits Plan requirements associated with new exploration programs on land in the Northwest Territories is available from the department's Northwest Territories Regional Office at:

Petroleum Development Division
Northwest Territories Regional Office
Indian and Northern Affairs Canada
4914-50th Street, PO Box 1500
YELLOWKNIFE NT X1A 2R3
Telephone: 867-669-2469 / Fax: 867-669-2705

Other Sources of Information

National Energy Board

- The Operations Business Unit regulates the exploration, development and production of hydrocarbon resources in non-Accord frontier lands under the *Canada Petroleum Resources Act*, the *Canada Oil and Gas Operations Act*, and the *National Energy Board Act*.
- The Frontier Information Office provides access to maps, technical information, geological and geophysical reports, well history reports and records.

National Energy Board (NEB)
444 Seventh Avenue SW
CALGARY AB T2P 0X8
Telephone: 403-292-4800
Website: http://www.neb.gc.ca/

Geological Survey of Canada

The Geological Survey of Canada Calgary provides public viewing and sampling facilities for cores and samples, and information on wells drilled north of 60 at its offices at:

Geological Survey of Canada Calgary
3303-33rd Street NW
CALGARY AB T2L 2A7
Telephone: 403-292-7000
Website: http://gsc.nrcan.gc.ca/org/calgary/

Information on geoscience in the Baffin Bay – Davis Strait region is available from:

Geological Survey of Canada Atlantic
Bedford Institute of Oceanography
PO Box 1006
DARTMOUTH NS B2Y 4A2
Website: http://gsc.nrcan.gc.ca/org/atlantic/