



NWT Oil and Gas Annual Report 2019

Rapport sur l'activité pétrolière et gazière aux Territoires du Nord-Ouest 2019

Le présent document contient la traduction
française du résumé et du message du ministre

Northwest Territories Oil and Gas Annual Report 2019

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I am pleased to present this report of oil and gas activity in the Northwest Territories (NWT) for the year ending December 31, 2019.

In 2019 the Department of Industry, Tourism and Investment (ITI) completed a legislative review of both the *Petroleum Resources Act* (PRA) and the *Oil and Gas Operations Act* (OGOA). Through considerable policy review, analysis, and public engagement, important amendments were proposed and drafted, with the final steps of the legislative process receiving final assent in August 2019. The focus was on improving the legislation in place to govern the oil and gas sector in the NWT. The Department's focus is now on regulatory review and amendments which will further improve and modernize the administration and policies associated with petroleum resource development.

Much of our focus in 2019 was towards the future. The Petroleum Resources Strategy, a 15-year strategy released in May 2018, is in its second year of implementation.

We continue to assess the actions in the Strategy's implementation plan and performance measurement framework. In this way, our plan is a living, breathing document – one that will evolve and deliver results. Our priority in the 19th Legislative Assembly is to assess the feasibility of our NWT natural gas resources to replace imported diesel to provide energy security and environmental benefits, as well as the feasibility of exporting our natural gas to Asia-Pacific markets to grow our economy and help others reduce greenhouse gases (GHG).

The Resources and Energy Development Information (REDI) project continued to expand in Norman Wells and Fort Smith. REDI continues to make resource management experts available to residents in their own backyard. Once COVID-19 restrictions are lifted we will continue to open the lines of communication, increasing the knowledge and understanding of how resource development and management works to make the lives of NWT residents better.

Looking to 2020, our work continues. We will identify, understand and pursue the opportunities that lie ahead to grow our petroleum sector responsibly and sustainably for the benefit of all NWT residents.

Caroline Wawzonek
Minister, Industry, Tourism and Investment

October 2020



Je suis heureuse de présenter ce rapport d'activités sur l'exploitation pétrolière et gazière aux Territoires du Nord-Ouest (TNO) pour l'année se terminant le 31 décembre 2019.

En 2019, le ministère de l'Industrie, du Tourisme et de l'Investissement a terminé l'examen de la *Loi sur les hydrocarbures* et de la *Loi sur les opérations pétrolières*. Grâce à l'examen et à l'analyse des politiques ainsi qu'à des échanges approfondis avec le public, d'importantes modifications à ces législations ont été proposées et rédigées, les dernières étapes du processus législatif ayant été achevées en août 2019. Nous avons mis l'accent sur l'amélioration de la législation en place pour régir le secteur pétrolier et gazier des TNO. Le Ministère se concentre maintenant sur la révision et les modifications réglementaires qui permettront d'améliorer et de moderniser davantage l'administration et les politiques liées à l'exploitation des ressources pétrolières.

En 2019, nous avons tourné notre attention vers l'avenir. Publiée en mai 2018, la Stratégie sur les ressources pétrolières des TNO durera 15 ans et en est à sa deuxième année de mise en œuvre.

Nous continuons d'évaluer les actions du plan de mise en œuvre de la Stratégie et du cadre régissant la mesure de son efficacité. Ainsi, nous avons rédigé un plan évolutif, appelé à changer et qui devrait produire des résultats. La priorité de la 19^e Assemblée législative est d'évaluer la faisabilité de l'exploitation des ressources gazières des TNO de façon à remplacer le diesel importé afin d'assurer la sécurité énergétique et d'en tirer des avantages du point de vue de l'environnement. Nous mesurerons aussi la possibilité d'exporter notre gaz naturel vers les marchés de l'Asie-Pacifique pour faire croître notre économie et aider d'autres nations à réduire leurs émissions de gaz à effet de serre.

L'initiative PRÊT (« préparation sur les ressources et l'énergie pour les Ténos ») continue de s'étendre. En 2019, ses responsables ont visité Norman Wells et Fort Smith. Cette initiative continue de mettre des experts en gestion des ressources à la disposition et à proximité des résidents. Nous continuons d'élargir les voies de communication, ce qui permet aux citoyens de mieux connaître et comprendre la façon dont l'exploitation et la gestion des ressources naturelles peuvent améliorer leur qualité de vie.

Nous poursuivrons notre travail en 2020. Nous nous efforcerons de cerner, de comprendre et de saisir les occasions d'affaires qui se présentent pour notre secteur pétrolier, afin de le faire croître, de façon durable et responsable, au profit de tous les Ténos.

M^{me} Caroline Wawzonek
Ministre de l'Industrie, du Tourisme et de l'Investissement

Novembre 2020



NORTHWEST TERRITORIES OIL AND GAS PROGRAM

2019 IN BRIEF

Rights Management

There were no rights issuance processes conducted in 2019 in the onshore regions of the NWT. NWT has a policy of being open to Expressions of Interest from companies interested in gaining the right to explore for petroleum on Government of the Northwest Territories (GNWT) subsurface lands.

Operations

There were no new wells drilled in the NWT between January 1 and December 31, 2019.

There was no seismic work conducted in the NWT between January 1 and December 31, 2019.

Production

The total aggregate oil production between January 1 and December 31, 2019 was from the Norman Wells field which totaled 2,737,952 barrels or 435,299 m³. The total aggregate natural gas production in the NWT was 2.546 billion ft³ or 72 million m³ between January 1 and December 31, 2019.

Northwest Territories Environmental Studies Research Fund (ESRF)

ESRF continued its work to support scientific research in the territory, funding several projects related to boreal caribou and groundwater monitoring. For more information on work supported by the ESRF, visit www.nwt-esrf.org.

Petroleum Resources Strategy (PRS)

During 2019, ITI began collecting industry spending and employment data involved in oil and gas production, exploration and development, captured by various departments that will contribute to the promotion and growth of the territorial oil and gas sector.

The PRS looks at the potential of expanding the territorial oil and gas sector which has the potential to work towards self sufficiency through exports to international markets, while supporting smaller-scale natural gas initiatives designed to meet the needs of residents and communities in the NWT.

Based on the direct input of NWT residents, businesses, governments, industry and many other stakeholder groups, the PRS offers a balanced approach to developing oil and gas resources to ensure that NWT residents can both support the sector and benefit from it in the long term.



Resources and Energy Development Information Project

The core foundational activity of the “Resources and Energy Development Information” initiative or (REDI), are community focused, trade show style, resource information events that, to date, have taken place in every region across our territory. The REDI initiative makes resource management experts available to residents of the NWT in their own backyard. REDI continues to open the lines of communication with every event, increasing the knowledge and understanding of how resource exploration/development and its management are working to enhance the lives of NWT residents. Unfortunately, in light of the recent COVID-19 pandemic, the planning for all future REDI sessions has been suspended until further direction from the Chief Public Health Officer.

During 2019, REDI visited the communities of Norman Wells and Fort Smith.



PROGRAMME PÉTROLIER ET GAZIER DES TERRITOIRES DU NORD-OUEST

2019 EN BREF

Gestion des droits

En 2019, il n'y a eu aucun processus d'attribution de droits dans les régions continentales des TNO. Suivant sa politique, le GTNO est ouvert aux déclarations d'intérêt d'entreprises qui souhaitent obtenir les droits d'exploration pétrolière du sous-sol des terres du gouvernement des Territoires du Nord-Ouest.

Opérations

Entre le 1^{er} janvier et le 31 décembre 2019, aucun nouveau puits n'a été foré aux TNO.

On n'a entrepris aucune session de travaux sismiques non plus au cours de la même période.

Production

Le bilan total de la production pétrolière à Norman Wells, notre unique champ pétrolifère en activité, entre le 1^{er} janvier et le 31 décembre 2019 a été de 2 737 952 barils. Le bilan total de la production gazière aux TNO a été de 50,6 millions de pieds cubes pour la même période.

Fonds pour l'étude de l'environnement des Territoires du Nord-Ouest


Le Fonds pour l'étude de l'environnement a continué de soutenir la recherche scientifique aux TNO. Il a permis de financer plusieurs projets de surveillance du caribou boréal, des émissions de méthane, de la biodiversité et des eaux souterraines. En outre, le Fonds a ajouté à ses priorités de recherche la problématique de l'abandon et de la restauration des sites pétroliers. Pour en savoir plus sur les travaux soutenus par le Fonds, visitez son site Web www.nwt-esrf.org.

Stratégie sur les ressources pétrolières

En 2019, le MITI a commencé à recueillir auprès de divers ministères des données qui contribueront à la promotion et à la croissance du secteur pétrolier et gazier des TNO.

La Stratégie sur les ressources pétrolières permet d'examiner l'expansion potentielle du secteur pétrolier et gazier en visant l'autosuffisance grâce aux exportations sur le marché international, tout en soutenant des projets de gaz naturel à plus petite échelle qui visent à répondre aux besoins des résidents et des collectivités des TNO.

Élaborée à partir des commentaires fournis par les résidents, les entreprises, les



gouvernements, l'industrie et beaucoup d'autres parties prenantes des TNO, la Stratégie propose une approche équilibrée pour développer les ressources pétrolières et gazières afin de s'assurer que les Ténos peuvent à la fois soutenir le secteur et profiter de ses retombées à long terme.

L'initiative PRÊT

Lancée en juin 2017, l'initiative PRÊT (« préparation sur les ressources et l'énergie pour les Ténos ») répond à l'engagement du gouvernement de veiller à ce que les Ténos puissent participer pleinement à l'évaluation des avantages et des risques associés à l'exploitation des ressources, dont ceux liés à la fracturation hydraulique. Depuis le début de l'initiative PRÊT, ses responsables ont visité Inuvik, Hay River, Yellowknife, Fort Simpson, Fort Smith et Norman Wells.

En 2019, ils ont rencontré les citoyens de Norman Wells et de Fort Smith.

OIL AND GAS RESOURCES

Several scientific studies over the last decade have confirmed conventional and unconventional oil and gas resource estimates in different parts of NWT.

Table 1: Discovered conventional resource volumes in the Northwest Territories

TYPE	NWT Onshore ¹	Arctic Islands ¹	TOTAL
Natural Gas			
billion m ³	213.8	75.2	289.0
(trillion ft ³)	(7.6)	(2.6)	(10.2)
Natural Gas Liquids			
million m ³	8.3	0.0	8.3
(million barrels)	(52.1)	(0.0)	(52.2)
Oil			
million m ³	84.1	4.9	89.0
(million barrels)	(529.4)	(31.0)	(560.4)

National Energy Board, *Assessment of Discovered Conventional Petroleum Resources in the Northwest Territories and Beaufort Sea*, November 2014. ¹See Fig. 1-4 for maps illustrating these areas.

Table 2: Unconventional resource assessments of Canol and Bluefish shale

billion m ³ (billion barrels)	In-Place		
	Low	Expected	High
Bluefish	4.392 (27.634)	7.366 (46.346)	11.254 (70.808)
Canol	13.129 (82.605)	23.018 (144.825)	35.095 (220.811)

National Energy Board, *An Assessment of the Unconventional Petroleum Resources of the Bluefish Shale and the Canol Shale in the Northwest Territories*, June 2015

Table 3: Natural gas resource estimates for the Liard Basin

trillion m ³ (trillion ft ³)	In-Place		
	Low	Expected	High
Exshaw-Paltry	5.2 (184)	9.0 (318)	14.5 (514)
Horn River	2.6 (91)	5.3 (187)	9.0 (317)

National Energy Board, *The Unconventional Gas Resources of Mississippian-Devonian Shales in the Liard Basin of British Columbia, the Northwest Territories, and Yukon*, March 2015

OIL AND GAS RIGHTS MANAGEMENT

RIGHTS ISSUANCE

Companies with an interest in petroleum exploration in the NWT can nominate the lands which they would like to see included in a call-for-bids process at any time. Having an open-call rights-issuance process means the NWT is operating in much the same way as Alberta, Saskatchewan, Yukon, and the offshore petroleum boards of Newfoundland and Nova Scotia.

Petroleum land disposition in the NWT

The following series of charts show the current petroleum land dispositions in the NWT, all of which were transferred over from the Government of Canada as a result of Devolution in 2014.

Table 4: Land Disposition as of December 31, 2019

Region (number of interests)	Exploration Licence	Significant Discovery Licence	Production Licence	Petroleum Land Leases ¹	Total
Mackenzie Delta and Arctic Islands	0	39 ²	2	0	41 ²
Central Mackenzie Valley	1 ³	21	0	0	22
Southern Northwest Territories	0	31	21	8	60
TOTAL	1	91 ²	23	8	123 ²

Region (hectares)	Exploration Licence	Significant Discovery Licence	Production Licence	Petroleum Land Leases ¹	Total
Arctic Islands	0	10,719	0	0	10,719
Mackenzie Delta	0	119,454	3,423	0	119,454
Central Mackenzie Valley	173,403	284,394	0	0	457,797
Southern Northwest Territories	0	65,729	32,842	21,107	119,678
TOTAL	173,403	476,873	36,265	21,107	707,648

¹These leases and licences were issued under former legislative regimes pursuant to Sections 99 and 101 of the *Petroleum Resources Act*.

²Changes needed to be made to these totals due a title being missed in previous summary statistics.

³EL494 is the land title. EL494A and EL494B are the unconsolidated portions of the licence. A single consolidated licence will be issued as an SDL in the future.

Issuance and Terminations

Exploration Licences

There were no Exploration Licences (EL) issued in 2019, nor were there any ELs surrendered.

However in 2019, International Frontier Resources (IFR) reached the end of Period 1 and as per the requirements of the PRA, drilling of a well prior to the end of Period 1 is required in order to obtain tenure for Period 2. IFR had no wells drilled prior to the end of Period 1 which called for their Exploration Licence (EL495) to expire in 2019 by "Termination by Expiry".

Significant Discovery Licences (SDL)

There were no Significant Discovery Licences (SDL) issued in 2019.

Oil and Gas Registry

The Mineral and Petroleum Resources Division maintains a public registry of all petroleum interests and instruments registered under Part 8 of the PRA. The registry stands as the official record of rights holders, and any transfers or changes of ownership are duly recorded.

A monthly activity report is available online at: <http://www.iti.gov.nt.ca/en/services/oil-and-gas-rights-management/oil-and-gas-activity-reporting>.

The following series of maps show the locations of all interests on petroleum lands held in the NWT both onshore and offshore as of December 31, 2019.

Figure 1: Mackenzie Delta/Arctic Islands Petroleum Land Disposition Map

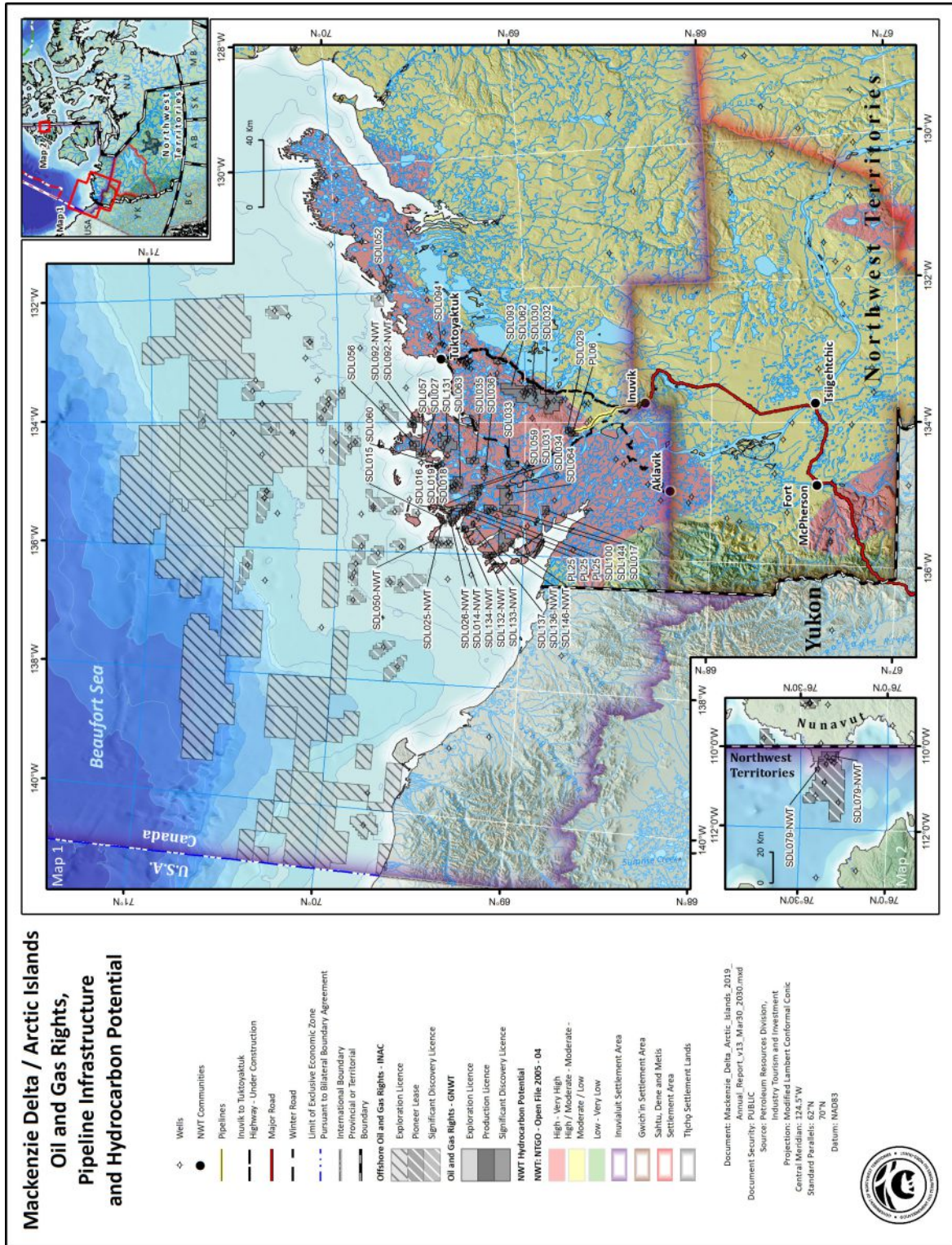


Figure 2: Liard Basin Land Disposition Map

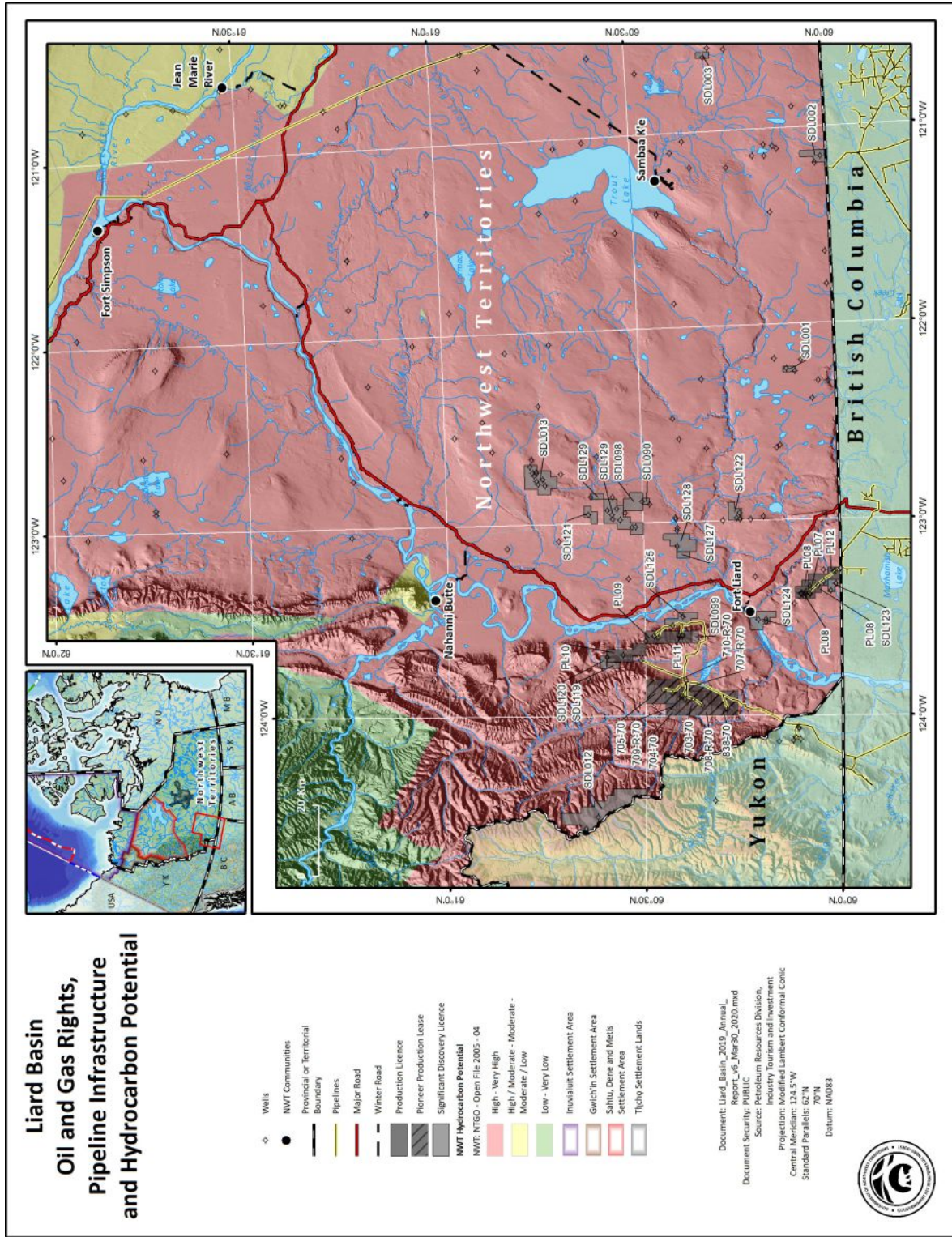


Figure 3: Central Mackenzie Valley Land Disposition Map

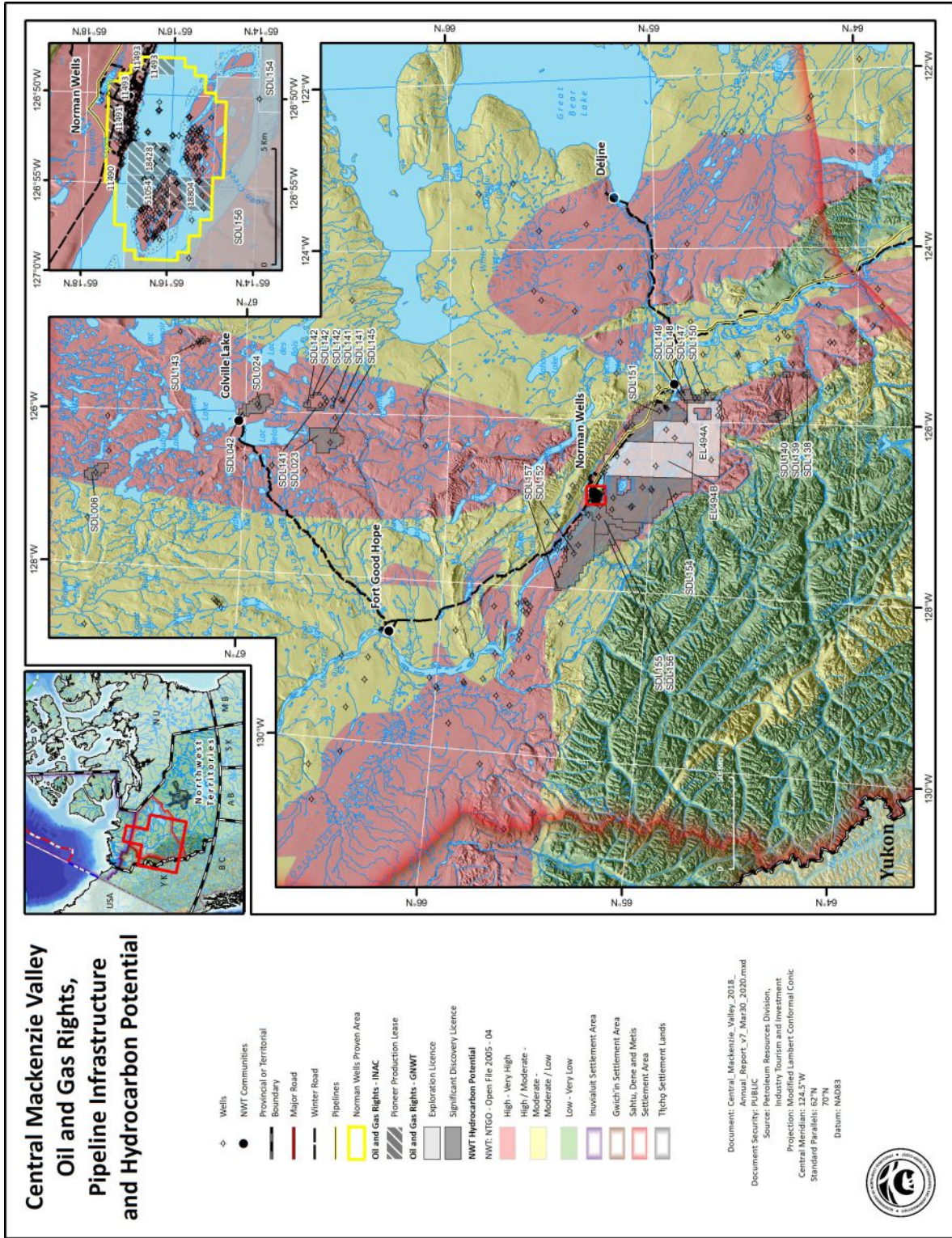


Figure 4: Cameron Hills Land Disposition Map

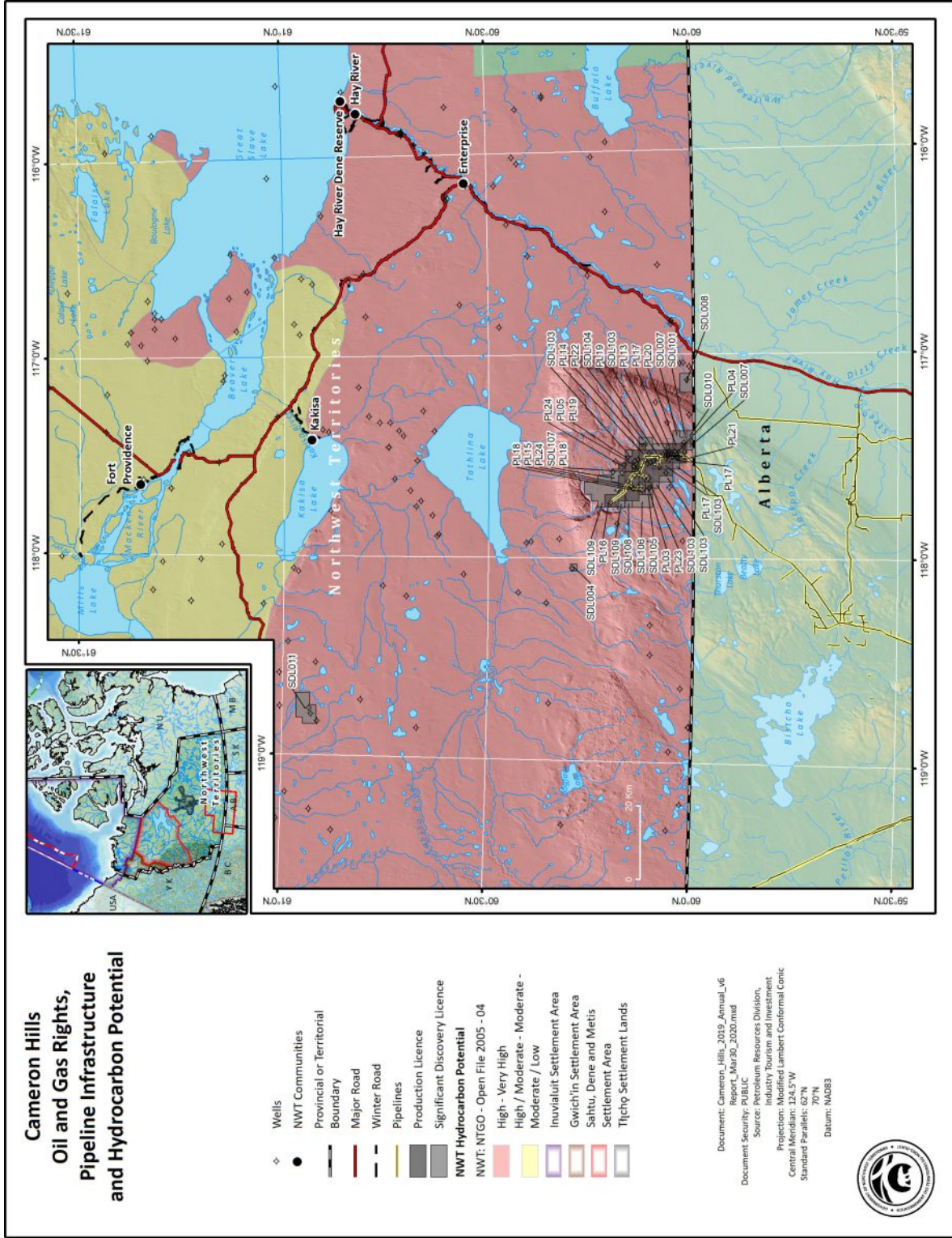


Table 5: Exploration Licences in the NWT

Licence	Hectares	Representative ¹		Issue Date	End of Period 1 ²	Expiry Date	Work Proposal Bid ³ (\$)
EL494	173,403	Husky Oil Operations Limited	√	29/08/2013	29/08/2016	28/08/2020	376,000,000
TOTAL:	173,403		√				376,000,000

¹Current representative as of December 31, 2019

²This date is as per the terms and conditions of the original licence.

³All amounts rounded to the nearest dollar.

√ indicates that a well has been drilled on the lands under licence.

Revenues from Administration of Interests

Following the completion of a rights issuance process, successful bidders for Exploration Licences are required to post 25 percent of the Work Proposal Bid before the interest can be issued. Referred to as the Work Deposit, this amount is refundable as expenditures are incurred through the first (Period 1) term of the licence. Approved expenditures are refunded to the interest holders at the prorated amount of 25 percent of the total amount of expenditures. Any balance remaining at the end of Period 1 of an Exploration Licence is forfeited.

If an interest holder meets all terms and conditions set out in the Exploration Licence and is able to maintain the licence for an additional four years, they are required to pay rental fees. Rental fees are refundable against expenditures incurred on a dollar-for-dollar basis.

Financial deposits held for Period 1 work as of December 31, 2019 amounted to \$44,207,174⁴.

ITI also received \$1,387,224 for EL494 in the form of a Period 1 Extension Fee. Husky Oil Limited, interest holder on EL494, paid the fee equivalent of its fourth year of rental in Period 2 but retained its outstanding Work Bid Deposit having met its Period 1 drilling requirement.

Table 6: Revenues from Administration of Interests (\$)

	2014	2015	2016	2017	2018	2019
Non-refundable rentals (leases)	52,202	52,202	52,202	52,202	52,202	52,202
Fees	106	1,432	118	136	0	0
Forfeitures	0	0	12,084,465	31,036,250	0	300,000
Period 1 Extension Fee	0	0	520,209	953,716	1,387,224	1,387,224

Fees and Forfeiture

There was one forfeiture paid for totalling \$300,000 during the year ending December 31, 2019. During this same period, a total of \$52,202 in non-refundable fees on lands under Petroleum Land Leases was paid.

There were no rental fees on ELs or SDLs paid between January 1 and December 31, 2019.

⁴ \$300,000 was surrendered through forfeiture of SDL495.



Benefits Plans

As defined in Section 17 of OGOA, a Benefits Plan refers to an employment plan for Canadians that also provides Canadian companies with opportunities to supply goods and services to the oil and gas industry. In the NWT, a Benefits Plan means training and employment opportunities for residents and new opportunities for northern businesses by ensuring that as much of the economic spin-off as possible from work in the NWT stays within the territory.

The Benefits Plan Guidelines were revised during 2019 to ensure consistency with the new transparency and confidentiality requirements under the PRA and the OGOA. To ensure the Guidelines protect confidential information, it has been clarified that no commercially confidential or sensitive information will be included in the Benefits Plans or Benefits Plan Reports submitted to the GNWT.

Section 17 of the OGOA outlines all requirements of a Benefits Plan – and states that no approval for a proposed work plan can begin until the Minister of ITI has approved the Benefits Plan. The need for a Benefits Plan – as well as the need for ministerial approval – is also referenced in Section 20 of the PRA.

In 2019, three licence holders in the Liard Area submitted Benefits Plans for work on their licences and were approved by the Minister.

EXPLORATION ACTIVITIES IN THE NORTHWEST TERRITORIES

There was no new exploration drilling in the NWT in 2019, nor was there any development drilling for the same period. Additionally, there were no seismic programs conducted in the NWT during this period.

PRODUCTION

The Cameron Hills field and the Ikhil gas field, while both located in onshore regions of the NWT, are subject to regulation under two distinct bodies – Cameron Hills under the Office of the Regulator of Oil and Gas Operations and Ikhil under the Canada Energy Regulator (formerly the National Energy Board).

Production information in this report spans the period from January 1-December 31, 2019.

Ikhil

Production levels at Ikhil J-35 continue to be low year over year as efforts to conserve reservoir pressure remain in place, with approximately 1.41 million m³ (49.839 million ft³) of natural gas produced during 2019. Gas from this field is used as a back-up system for power generation in Inuvik.

Cameron Hills


There was no production at the Cameron Hills for the year ending December 31, 2019. Strategic Oil and Gas Limited is currently subject to creditor protection proceedings in Alberta, which affects their assets and liabilities at the Cameron Hills oil and gas field in the South Slave region of NWT. As of October 2019, the court-appointed monitor is continuing to seek a potential purchaser for the assets and liabilities, with oversight by the governments of Alberta and NWT.

Table 7: Production Levels 2014-2019

<i>Oil cubic metres (000s) (barrels) (000s)</i>	Cameron Hills	Norman Wells	Ikhil
2014	8.2 (52)	630.73 (3,967.18)	N/A
2015	1.8 (11.35)	576.29 (3,623.75)	N/A
2016	N/A	521.99 (3,283.23)	N/A
2017	N/A	16.62 (104.54)	N/A
2018	N/A	98.42 (619.01)	N/A
2019	N/A	435.30 (2,737.95)	N/A
<i>Gas Production cubic metres (000,000s) (cubic feet) (000,000s)</i>	Cameron Hills	Norman Wells	Ikhil
2014	24.40 (861.7)	83.85 (2,961.04)	3.64 (128.58)
2015	3.69 (130.40)	83.83 (2,961.04)	2.79 (98.37)
2016	0.01 (0.27)	78.55 (2,773.89)	3.78 (133.42)
2017	0.001 (0.035)	4.11 (144.97)	4.79 (169.08)
2018	0 (0)	11.13 (393.04)	3.42 (120.78)
2019	0 (0)	70.67 (2,495)	1.41 (48.14)

¹Data for Ikhil and Norman Wells courtesy Canadian Energy Regulator (formerly the National Energy Board)

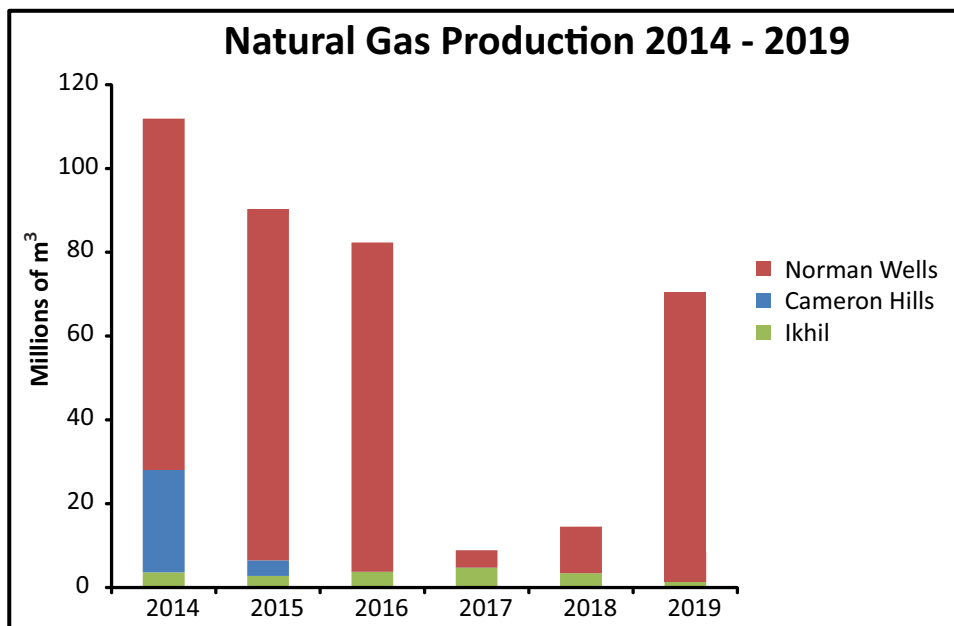
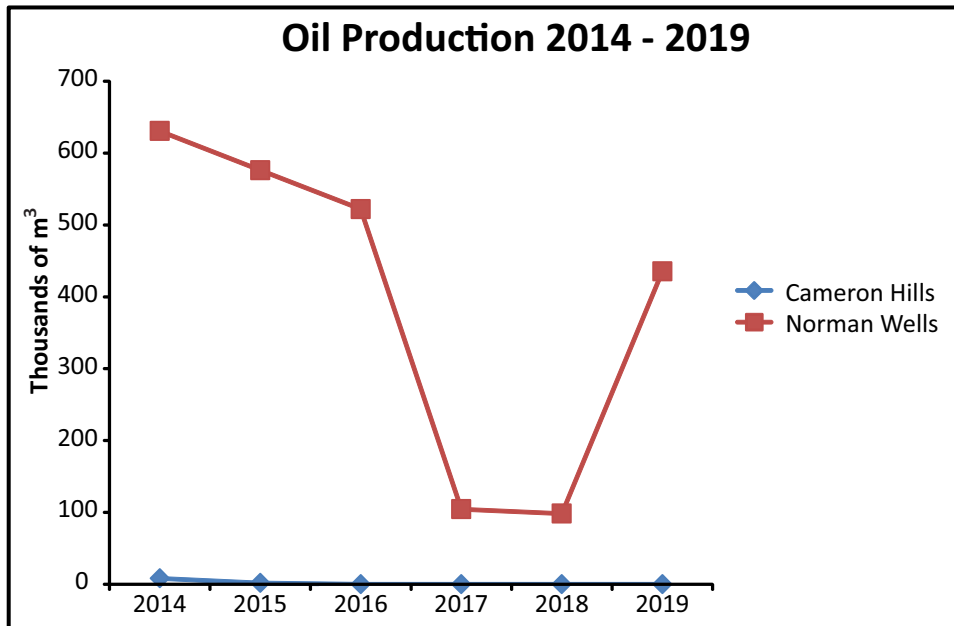
²Data for Cameron Hills from NEB (2014) and Office of the Regulator of Oil and Gas operations for 2015-2019



Norman Wells Proven Area

The Norman Wells Proven Area saw full production results in 2019 with 2,737,952 barrels (435,299.6 m³) of oil and 70.67 million m³ (2.495 billion ft³) of gas produced.

Figure 7: NWT Production Volumes, 2013-2018





FURTHER INFORMATION

Please visit our website at www.nwtpetroleum.com

To obtain further information, please contact the appropriate individual below by telephone or in writing:

Mailing address:

Mineral and Petroleum Resources Division
Department of Industry, Tourism and Investment
P.O. Box 3019
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Email: oilandgasrights@gov.nt.ca

Information on the resource management regime, rights issuance process and other related information:

Manager, Oil and Gas Rights: (867) 777-7477

Information on registration procedures and regulations, exploration, significant discovery and production licences, transfers and notices:

Registrar, Oil and Gas Rights: (867) 777-7476

Information on petroleum resources maps and Geographic Information System (GIS) data:

Mineral and Petroleum Geomatics Officer: (867) 777-7483



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Northwest Territories Territoires du Nord-Ouest

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