

Government of
Northwest Territories



Northwest
Territories
Oil and Gas
Annual Report

2022



Contents

2022 in Brief	4	Pioneer Production Leases	9
Rights Management	4	Oil and Gas Registry	9
Operations	4	Figure 2: Mackenzie Delta/Arctic Islands	
Production	4	Land Disposition Map	10
Northwest Territories Environmental		Figure 3: Liard Basin Land	
Studies Research Fund (NWT ESRF)	4	Disposition Map	11
Petroleum Resources Strategy (PRS)	4	Figure 4: Central Mackenzie Valley	
Resources and Energy Development		Land Disposition Map	12
Information Project (REDI)	4	Figure 5: Cameron Hills Land	
		Disposition Map	13
2022 en bref	5	Revenues from Administration	
Gestion des droits	5	of Interests	14
Fonctionnement	5	Fees	14
Exploitation	5	Table 6: Revenues from Administration	
Fonds pour l'étude de l'environnement des		of Interests (\$)	14
Territoires du Nord-Ouest	5	Benefits Plans	15
Stratégie sur les ressources pétrolières	5	Exploration Activities in the	
Initiative PRÉT	5	Northwest Territories	16
Oil and Gas Resources	6	Production	16
Table 1: Discovered conventional petroleum		Ikhil	16
resource volumes in the Northwest Territories ..	6	Cameron Hills	16
Table 2: Oil resource assessments of Canol		Norman Wells Proven Area	16
and Bluefish shales	6	Table 7: Production Levels 2017-2022	16
Table 3: Natural gas resource estimates		Figure 6: NWT Oil Production Volumes,	
for the Liard Basin	6	2017-2022	17
		Figure 7: NWT Gas Production, 2017-2022	17
Oil and Gas Management	7	Further Information	18
Rights Issuance	7	Mineral and Petroleum Resources Division	18
Figure 1: Rights Management Process	7		
Petroleum Land Disposition in the NWT	8		
Table 4: Land Disposition – Licences	8		
Table 5: Land Disposition – Hectares	8		
Issuance and Terminations	9		
Exploration Licences	9		
Significant Discovery Licences	9		

2022 in Brief

Rights Management

There were no rights issuance processes conducted in 2022 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 GNWT subsurface lands.

Operations

There were no new wells drilled in the NWT between January 1 and December 31, 2022. There was no seismic work conducted in the NWT between January 1 and December 31, 2022.

Production

The total aggregate oil production between January 1 and December 31, 2022 was 2,020,256 barrels. The total aggregate natural gas production in the NWT was 2,198.46 million ft³ between January 1 and December 31, 2022.

Northwest Territories Environmental Studies Research Fund (NWT ESRF)

The ESRF continues to support scientific research in the NWT, funding several projects related to boreal caribou, methane emissions, biodiversity monitoring and groundwater monitoring. For 2022, the abandonment and remediation of petroleum sites was also a research priority. For more information on work supported by the ESRF, visit www.nwt-esrf.org

Petroleum Resources Strategy

The NWT Petroleum Resources Strategy (PRS) outlines actions and investments to promote and grow the territorial oil and gas sector; and to enable exports to international markets while supporting smaller-scale natural gas initiatives designed to meet the needs of residents and communities in the NWT. For more information on the PRS, visit <https://www.iti.gov.nt.ca/en/petroleum-resources-strategy>

Actions and investments in support of these outcomes included continued efforts to advance development of NWT natural gas resources for export specifically from the Mackenzie Delta and Fort Liard regions, initiating research into carbon sequestration potential in the NWT, and assisting the Inuvialuit Regional Corporation as it pursues development of the Inuvialuit Energy Security Project.

Resources and Energy Development Information Project (REDI)

Launched in June 2017, the REDI initiative sees the presentation of information tradeshows and learning activities in communities across the NWT. These events work to provide NWT residents with the information and understanding they need to assess the benefits and risks associated with resource development. Since its inception, REDI has visited Inuvik, Hay River, Yellowknife, Fort Simpson, Fort Smith, and Norman Wells. In respect to pandemic-related travel and gathering restrictions, no REDI events were scheduled in 2021. REDI resumed delivery in 2022 with a show held in Inuvik. There are plans underway for further events in 2023. For more information on work supported by REDI, visit <https://www.gov.nt.ca/redi/>

2022 en bref

Gestion des droits

En 2022, 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 territoriales.

Fonctionnement

Entre le 1^{er} janvier et le 31 décembre 2022, aucun nouveau puits n'a été foré aux TNO et aucun travail de prospection sismique n'a été entrepris.

Exploitation

Le bilan total de la production pétrolière entre le 1^{er} janvier et le 31 décembre 2022 a été de 2 020 256 barils. Le bilan total de la production de gaz naturel aux TNO a été de 2 198,46 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 continue 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. Pour 2022, le Fonds a ajouté à ses priorités de recherche la problématique de l'abandon et de la restauration des sites pétroliers. Pour plus d'information sur les travaux soutenus par le Fonds, visitez le www.nwt-esrf.org.

Stratégie sur les ressources pétrolières

La Stratégie sur les ressources pétrolières présente les mesures et les investissements nécessaires pour promouvoir et développer le secteur pétrolier et gazier des TNO, ainsi que pour permettre d'exporter les produits issus de ce secteur vers les marchés

internationaux, tout en soutenant les projets de gaz naturel à plus petite échelle destinés à répondre aux besoins des résidents et des collectivités des TNO. Pour plus d'information sur la Stratégie, visitez le www.iti.gov.nt.ca/fr/strat%C3%A9gie-sur-les-ressources-p%C3%A9troli%C3%A8res.

Les mesures et les investissements qui visent à soutenir les objectifs mentionnés plus haut comprennent notamment la poursuite des efforts pour faire progresser le développement des ressources gazières des TNO destinées à l'exportation, plus particulièrement à partir de la région de Fort Liard et de celle du delta du Mackenzie, la recherche sur le potentiel de séquestration du carbone aux TNO, et le soutien à la Société régionale inuvialuite dans le développement du Projet de sécurité énergétique des Inuvialuits.

Initiative PRÊT

Lancée en juin 2017, l'initiative PRÊT (Préparation sur les ressources et l'énergie pour les Ténos) prévoit la présentation de salons d'information et d'activités d'apprentissage dans les collectivités des TNO. Ces événements visent à fournir aux Ténos les renseignements et les connaissances dont ils ont besoin pour évaluer les avantages et les risques associés à l'exploitation des ressources. Depuis le début de l'initiative PRÊT, ses responsables ont visité Inuvik, Hay River, Yellowknife, Fort Simpson, Fort Smith et Norman Wells. Conformément aux restrictions relatives aux déplacements et aux rassemblements liées à la pandémie, aucun événement de l'initiative PRÊT n'a été programmé en 2021. L'initiative PRÊT a repris ses activités en 2022 lors d'un salon d'information tenu à Inuvik. D'autres événements sont prévus pour 2023. Pour plus d'information sur les travaux appuyés par l'initiative PRÊT, visitez le www.gov.nt.ca/redi/.

Oil and Gas Resources

Table 1: Discovered conventional petroleum resource volumes in the Northwest Territories

National Energy Board, *Assessment of Discovered Conventional Petroleum Resources in the Northwest Territories and Beaufort Sea*, November 2014.

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

Table 2: Oil resource assessments of Canol and Bluefish shales

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

Billion Cubic Metres (billion barrels)	OIL 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)

Table 3: Natural gas resource estimates for the Liard Basin

National Energy Board, *The Unconventional Gas Resource of Mississippian-Devonian Shales in the Liard Basin of British Columbia, the Northwest Territories, and Yukon*, March 2016.

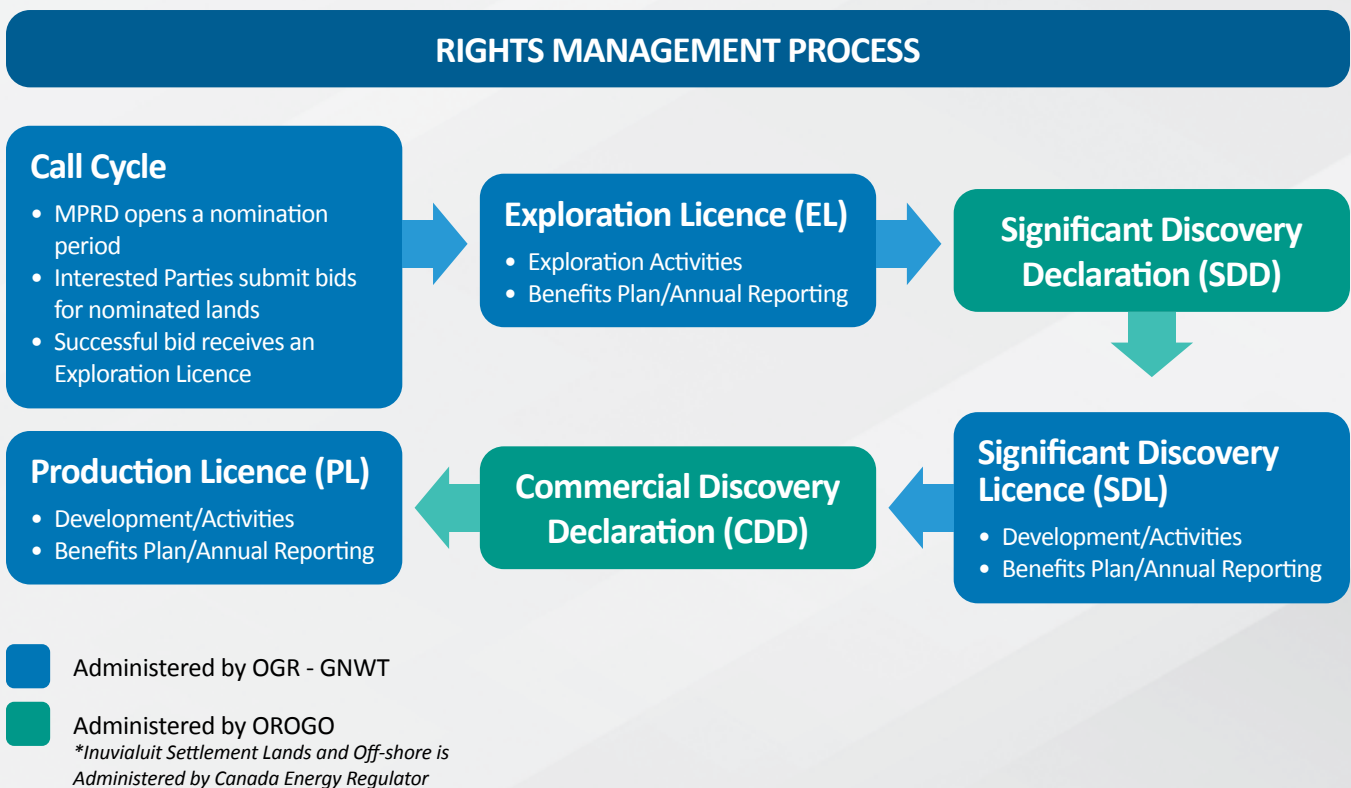
Trillion Cubic Metres (trillion ft)	GAS IN-PLACE		
	Low	Expected	High
Exshaw-Patry	5.2 (184)	9.0 (318)	14.5 (514)
Horn River	2.6 (91)	5.3 (187)	9.0 (317)

Oil and Gas 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. Annual calls for expressions of interest are

planned. 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 the devolution process in 2014.

Table 4: Land Disposition – Licences and Leases					
<i>as of December 31, 2022</i>					
Region (number of interests)	Exploration Licence	Significant Discovery Licence	Production Licence	Pioneer Production Leases	Total
Mackenzie Delta and Arctic Islands	0	39	2	0	41
Central Mackenzie Valley	0	22	0	0	22
Southern Northwest Territories	0	29	18	1	53
TOTAL	0	90	20	1	111

Table 5: Land Disposition – Hectares					
<i>as of December 31, 2022</i>					
Region (hectares)	Exploration Licence	Significant Discovery Licence	Production Licence	Pioneer Production Leases	Total
Mackenzie Delta and Arctic Islands	0	126,750	3,423	0	130,173
Central Mackenzie Valley	0	434,012	0	0	434,012
Southern Northwest Territories	0	62,189	27,028	321	98,892
TOTAL	0	622,951	30,451	321	653,723

Issuance and Terminations

Exploration Licences

There were no new Exploration Licences (EL) issued in 2022.

Significant Discovery Licences

There were no new Significant Discovery Licences (SDL) issued for 2022. However, there were two (2) SDLs that were surrendered in April 2022.

Production Licences

There were no new Production Licences (PL) issued for 2022. However, there were three (3) PLs that were surrendered in April 2022.

Pioneer Production Leases

The single remaining Pioneer Production Lease (PPL) is 838-70 which has undergone a reduction in size from 5,132 ha to 312 ha, to one section in size, while the single remaining well goes from suspension to full abandonment. PPL 838-70 will be surrendered upon full well abandonment.

PPLs were originally issued between 1969 and 1970 under the Canada Oil and Gas Land Regulations with a successive 21-year term. With the surrender of the 7 leases, in 2020, there is one remaining PPL in the oil and gas registry.

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 *Petroleum Resources Act*. 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 at: <http://www.iti.gov.nt.ca/en/services/oil-and-gas-rights-management/oil-and-gas-activity-reporting>.

In addition to the monthly activity report, the Mineral and Petroleum Resources Division has also made available the current licences, details such as: abstracts and title detail reports, for petroleum interests in the Northwest Territories. The Licences information is available at: <https://www.iti.gov.nt.ca/en/oil-and-gas-licences>

The following series of maps show the locations of all current interests on petroleum lands held in the NWT both onshore and offshore as of December 31, 2022.

Figure 2: Mackenzie Delta/Arctic Islands Land Disposition Map

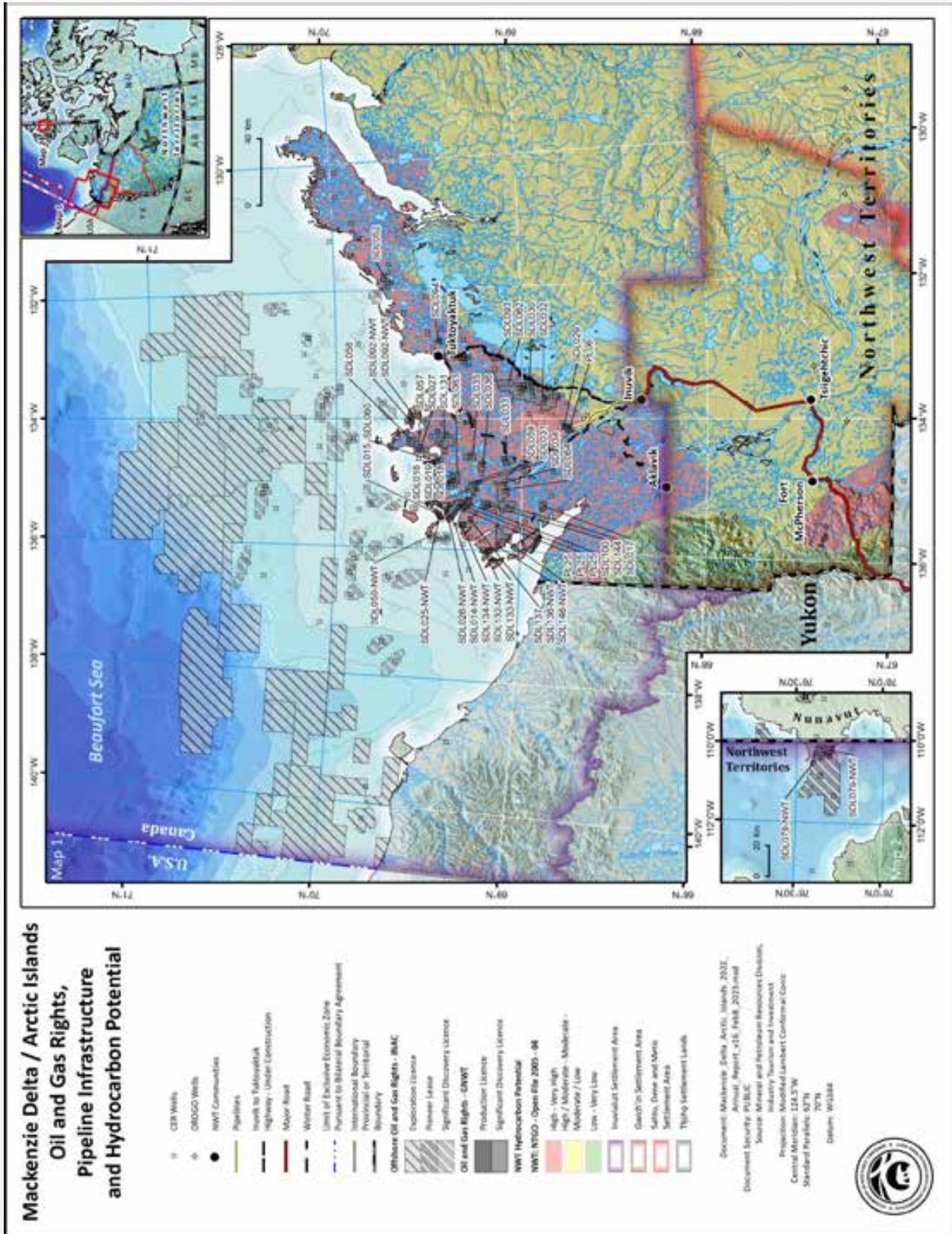


Figure 3: Liard Basin Land Disposition Map

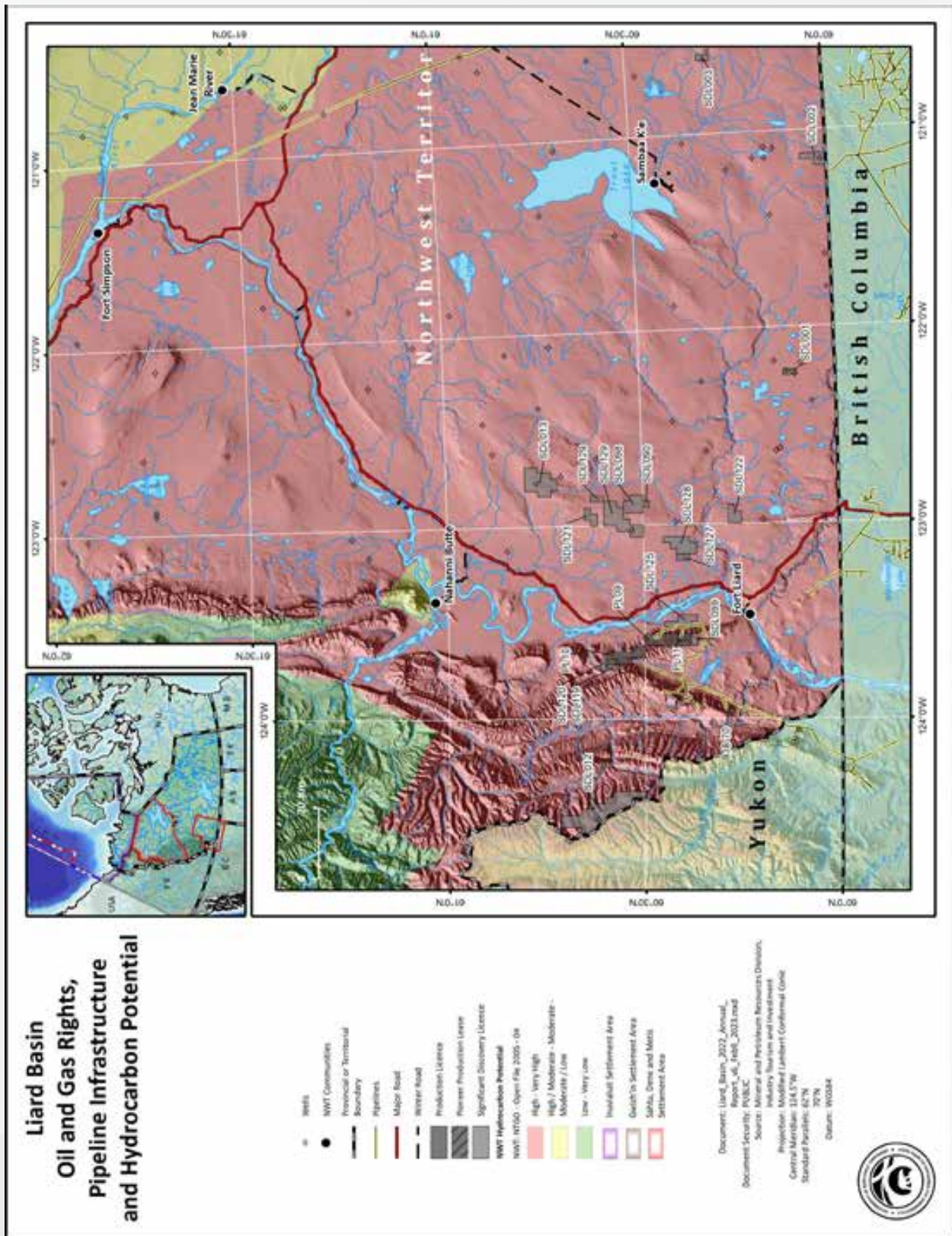
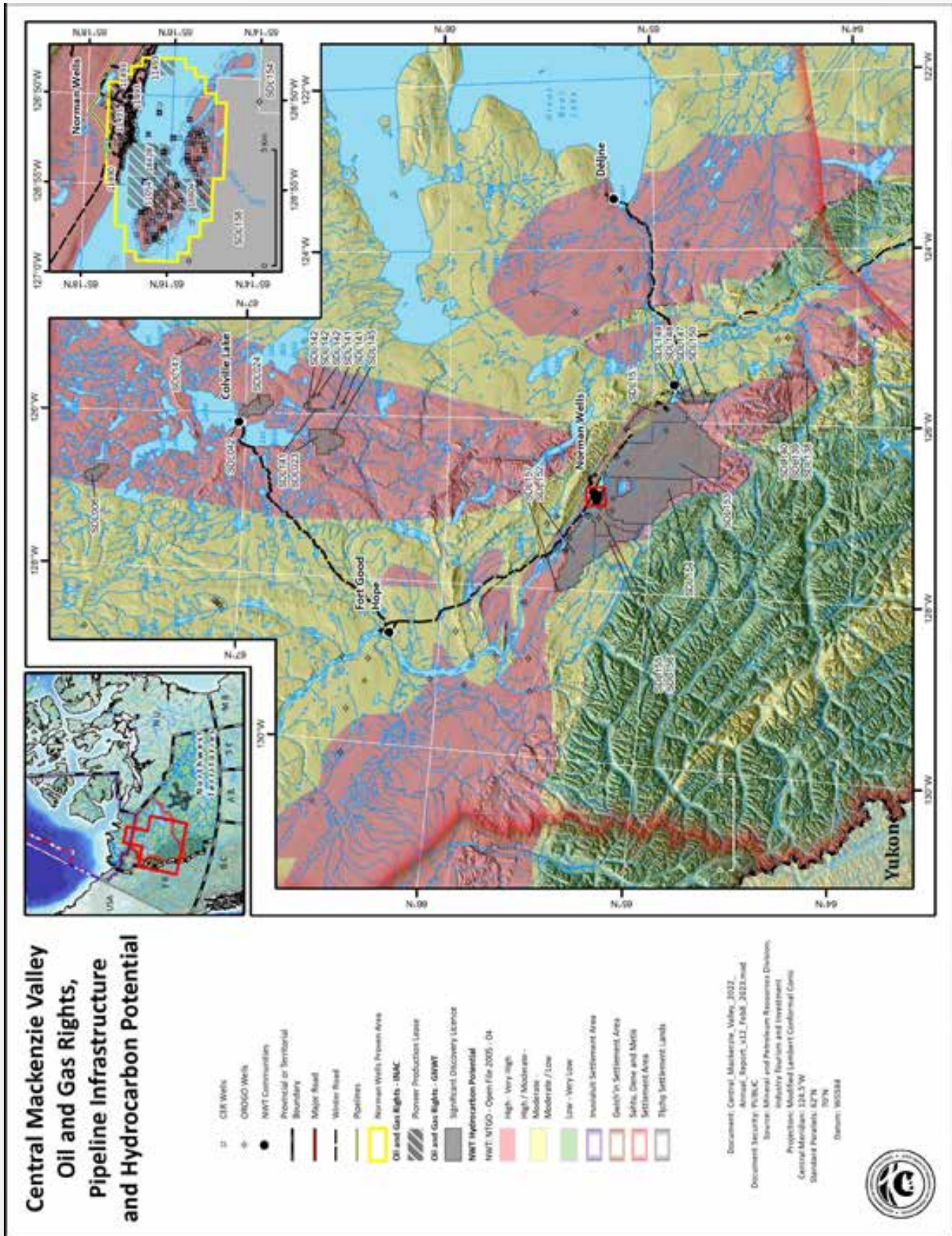


Figure 4: Central Mackenzie Valley Land Disposition Map



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 as expenditures as incurred on a dollar-for-dollar basis.

Fees

There were no forfeitures paid for the year ending December 31, 2022. During this same period, a total of \$793 in non-refundable fees on lands under Pioneer Production Leases was paid.

Administrative fees, generally related to information requests made to the NWT Registry and other transactions, totalled \$0.

There were no rental fees on ELs or SDLs paid between January 1 and December 31, 2022.

Table 6: Revenues from Administration of Interests (\$) <i>as of December 31, 2022</i>						
	2017	2018	2019	2020	2021	2022
Non-refundable Rentals (leases)	\$52,202	\$52,202	\$52,202	\$52,202	\$793	\$793
Fees	\$136	\$0	\$0	\$0	\$0	\$0
Forfeitures	\$31,036,250	\$0	\$0	\$0	\$45,251,480	\$0
Period 1 Extension Fees	\$953,716	\$1,387,224	\$1,387,224	\$0	\$0	\$0

Benefits Plans

By definition, 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 have been revised to ensure consistency with the new transparency and confidentiality requirements under the PRA and 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 *Oil and Gas Operations Act* 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. Reference to the need for a Benefits Plan – as well as the need for ministerial approval – is also referenced in Section 20 of the *Petroleum Resources Act*.

Section 18 of the *Oil and Gas Operations Act* outlines all guideline and interpretation notes for a Benefits Plan and states that the Regulator may issue and publish the guidelines and interpretation notes with respect to the application and administration of section 10, 14, or 26 or any regulations made under section 51 or 52.

Additionally, the Minister may issue and publish guidelines and interpretation notes with respect to the application and administration of section 17.

Exploration Activities in the NWT

There was no new exploration drilling in the NWT in 2022, 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, the Norman Wells Proven Area 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 Norman Wells Proven Area 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, 2022.

Cameron Hills

There was no production at the Cameron Hills for the year ending December 31, 2022.

Norman Wells Proven Area

Production at Norman Wells saw full production results in 2022, 321.2 thousand m³ (2,020,256 barrels) of oil and 55.02 million m³ (1,943.03 million ft³) of gas.

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 7.23 million m³ (255.43 million ft³) of natural gas produced during 2022. Gas from this field is used as a back-up system for power generation in Inuvik.

Table 7: Production Levels 2017-2022

as of December 31, 2022

Oil Production Cubic Metres (000s) (barrels) (000s)	Cameron Hills	Norman Wells	Ikhil
2017	N/A	16.62 (104.54)	N/A
2018	N/A	98.42 (619.01)	N/A
2019	N/A	435.29 (2,737.95)	N/A
2020	N/A	309.50 (1,946.72)	N/A
2021	N/A	323.50 (2035.05)	N/A
2022	N/A	321.20 (2,020.2)	N/A
Gas Production Cubic Metres (000,000s) (cubic feet) (000,000s)	Cameron Hills	Norman Wells	Ikhil
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 (2,410)	1.41 (48.14)
2020	0 (0)	46.98 (1,659)	4.24 (149.60)
2021	0 (0)	53.50 (1,889.0)	4.45 (157.1)
2022	0 (0)	55.02 (1,943.02)	7.23 (255.43)

¹Data for Ikhil and Norman Wells courtesy Canadian Energy Regulator

²Data for Cameron Hills from NEB (2013-2014) and Office of the Regulator of Oil and Gas Operations for 2016-2022

Figure 6: NWT Oil Production Volumes, 2017-2022

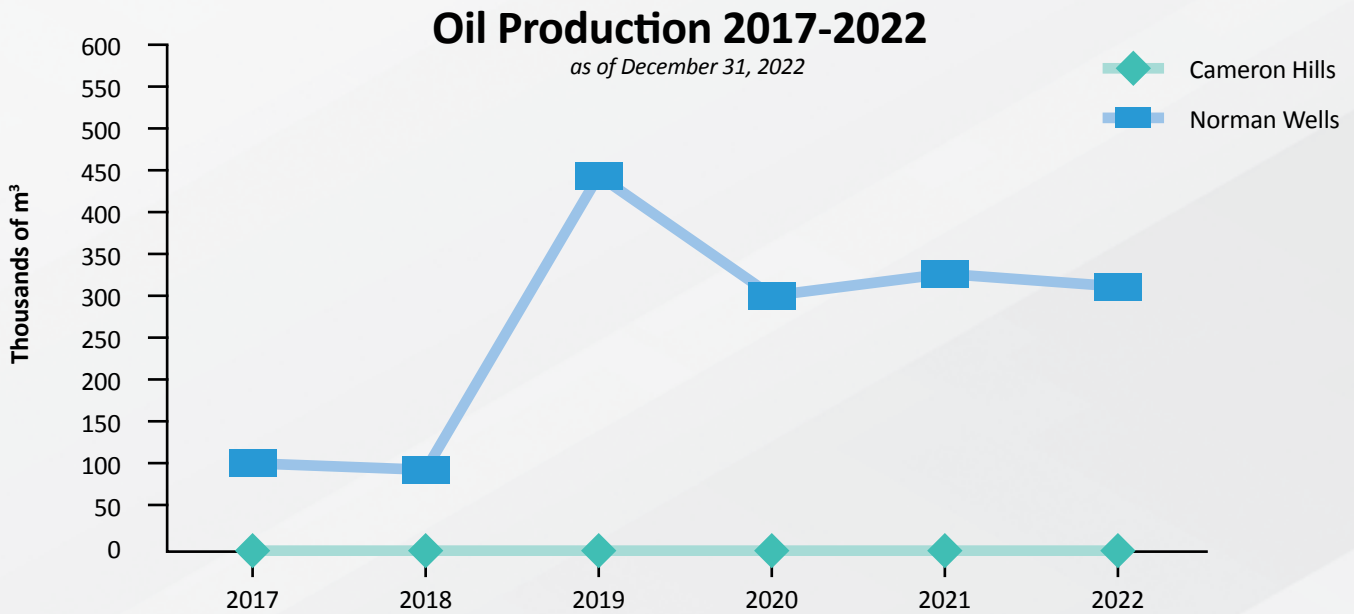
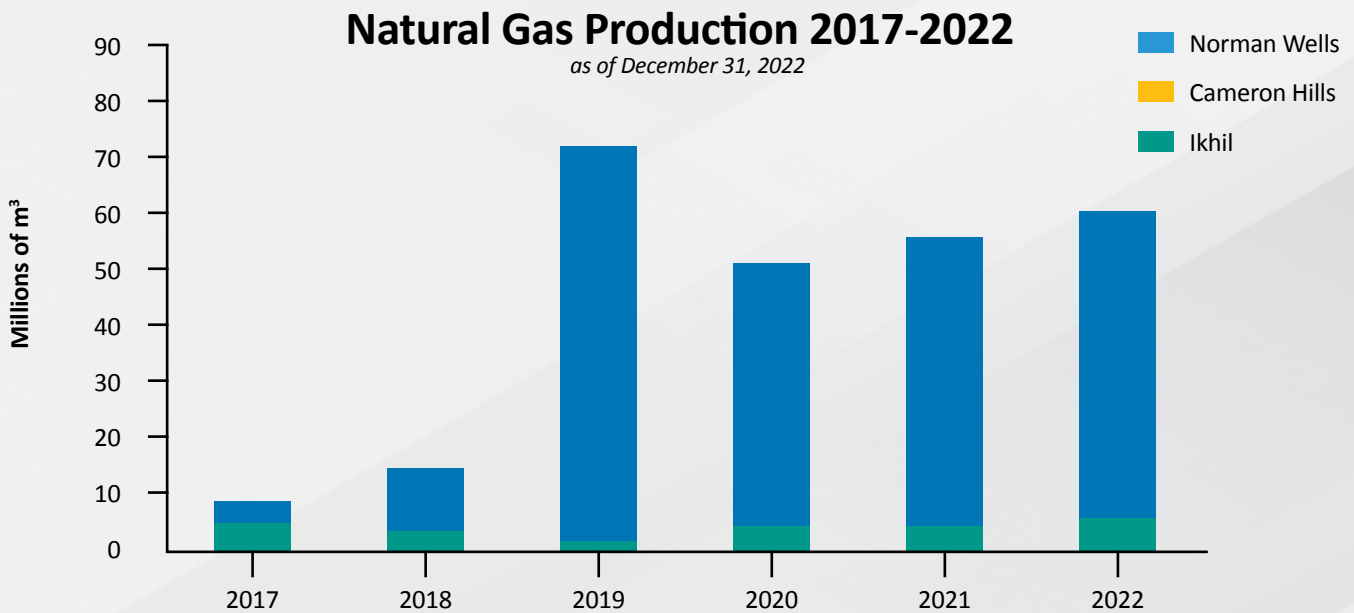


Figure 7: NWT Gas Production, 2017-2022



Further Information

Mineral and Petroleum Resources Division

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
INUVIK, NT X0E 0T0

Email: oilandgasrights@gov.nt.ca

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

Manager, Oil and Gas Rights:

(867) 678-8024 Ext. 63671

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

Registrar, Oil and Gas Rights:

(867) 678-8024 Ext. 63675

Information on Mineral and Petroleum Resources Division maps and Geographic Information System (GIS) data:

Mineral and Petroleum Geomatics Officer:

(867) 678-8024 Ext. 63674





Northwest Territories
Oil and Gas Annual Report
2022