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November 20, 2020

File: MV2020L1-0006

Terence Hughes  
Regulatory and Community Affairs Advisor  
Paramount Resources Ltd.  
421 7 Ave SW Suite 2800,  
Calgary AB T2P 4K9

Sent by email

Dear Terence Hughes,

**Re: Paramount Resources Ltd. – Fort Liard West – Issuance Package – Water Licence MV2020L1-0006 – Industrial Undertaking – Fort Liard, NT**

The Mackenzie Valley Land and Water Board (Board) met on November 13, 2020 and considered the Application from Paramount Resources Ltd. (Paramount) for Water Licence (Licence) MV2020L1-0006 for the Fort Liard West Project in accordance with the *Waters Act*.

Water Licence MV2020L1-0006 (attached) has been granted for a term of 5 years, effective November 20, 2020 and expiring November 19, 2025 and is supported by the Board's Reasons for Decision<sup>1</sup>. These documents are posted to the Board's Public Registry.<sup>2</sup>

Preliminary Screening Exemption Confirmation

Based on the evidence provided, the Board has also confirmed that the Application is exempt from preliminary screening as per Schedule 1, Paragraph 2.1 of the Exemption List Regulations of the MVRMA which states:

A development, or part thereof, for which a permit, licence or authorization is requested that

- a) was part of a development that fulfilled the requirements of the environmental assessment process established by the *Mackenzie Valley Resource Management Act*; and
- b) has not been modified since the development referred to in paragraph (a) fulfilled the requirements of the environmental assessment process established by the *Mackenzie Valley Resource Management Act*.

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<sup>1</sup> See MVLWB Online Registry for MV2020A0009 MV2020L1-0006 – Paramount – Liard West – Reasons for Decision (RFD)

<sup>2</sup> See MVLWB Online Registry for [MV2020L1-0006](http://www.mvlwb.com)

### Security Deposit

A security deposit is required prior to the commencement of Project activities, as per Licence Part C, Condition 1. The security deposit is **payable to the Government of the Northwest Territories (GNWT)** and submitted to the following individual, to whom questions regarding security should also be directed:

Director, Water Resources  
GNWT – Environment and Natural Resources (ENR)  
Box 1320  
Yellowknife, NT X1A 2L4

### Water Use Fees

Water use fees are required to be paid annually on the anniversary date of the Licence, as per Licence Part D, Condition 6. The water use fee for the period of November 20, 2020 through to November 19, 2021 is \$1,091.35. The water use fees were calculated in accordance with the MVLWB *Water Use Fee Policy* and Water Use Fee Calculator based on the rates provided by Paramount in the Application Form. Water use fees must be paid to the **Government of the Northwest Territories**. The Board acknowledges Paramount submitted \$600.00 as part of the Application.<sup>3</sup> Paramount is required to pay the remaining \$491.35 to the **Government of the Northwest Territories**.

### Management Plans – Revision and Resubmission Required

The Board requires that the following Plans be revised to include all changes detailed in the Reasons for Decision and resubmitted. These Plans will be considered to be approved, conditionally upon receipt of this information, and written conformity of confirmation from Board staff.

Condition Number	Title of Plan (Version)	Version and Date Revision Due
Part F, Condition 3	Waste Management Plan (V2) October 2020 <sup>4</sup>	<b>V2.1; minimum of 60 days prior to the commencement of activities</b>
Part H, Condition 3	Spill Contingency Plan (V2) October 2020 <sup>5</sup>	<b>V2.1; minimum of 60 days prior to the commencement of activities</b>
Part B, Condition 19	Engagement Plan (V1) July 2020 <sup>6</sup>	<b>V1.1; 90 days following the effective date of the Licence</b>

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<sup>3</sup> See MVLWB Online Registry for [MV2020L1-0006 – Paramount Resources Ltd. – Receipt – 2020 Water Use Fee](#)

<sup>4</sup> See MVLWB Online Registry for [MV2020L1-0006 - Paramount - Liard West - Renewal Apps - V2 - WMP - Oct-2020](#)

<sup>5</sup> See MVLWB Online Registry for [MV2020L1-0006 - Paramount - Liard West - Renewal Apps - V2 - SCP - Oct-2020](#)

<sup>6</sup> See MVLWB Online Registry for [MV2020L1-0006 - Paramount - Liard West - Permit and Licence Renewal Applications - Engagement Plan - July23-20.pdf](#)

### Management Plans – Submission Required

The Board requires the submission of a Erosion and Sedimentation Management Plan and Closure and Reclamation Plan. The Plans will be distributed for public review and provided to the Board for decision.

Condition Number	Title of Plan (Version)	Version and Date Revision Due
Part F, Condition 4	Erosion and Sedimentation Management Plan (V1)	<b>V1; minimum of 90 days prior to commencement of activities</b>
Part I, Condition 1	Closure and Reclamation Plan (V1)	<b>V1; six months prior to closure of any specific component of the Project</b>
Part I, Condition 3	Closure and Reclamation Plan – Final	<b>Final; three years prior to the expiry date of the licence, or a minimum of two years prior to the end of operations, whichever occurs first</b>

### Inspectors

Inspectors referred to in this Licence can be contacted at the following office:

GNWT-ENR - Dehcho Regional Office  
PO Box 240  
Fort Simpson, NT X0E 0N0  
Phone: 1-867-695-7450

### Licence Lifecycle

Sections 5 and 6 of the Board's *Guide to the Water Licensing Process*<sup>7</sup> (Guide) contains detailed information on enforcement of this Licence, and processes which may occur post-issuance, such as amendments to conditions, and assignment to another company. Please be familiar with this section of the Guide and reach out to Board staff with any questions about Board processes related to this Licence.

Full cooperation of Paramount is anticipated and appreciated. Please contact Andrew Wheeler at (867) 766-7467 with any questions or concerns regarding this letter.

Yours sincerely,



Mavis Cli-Michaud  
Mackenzie Valley Land and Water Board, Chair

Copied to: Dehcho Distribution List  
Jamie Chambers – Regional Superintendent, GNWT-ENR  
Meghan Beveridge – A/Director, Water Resources, GNWT-ENR

Attached: Water Licence MV2020L1-0006  
Reasons for Decision

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<sup>7</sup> See MVLWB Website >> Apply for Permit/Licence >> [Guide to the Water Licensing Process](#) (2020).



**Mackenzie Valley Land and Water Board  
Water Licence**

Pursuant to the *Mackenzie Valley Resource Management Act*, *Waters Act*, and Waters Regulations, the Mackenzie Valley Land and Water Board, hereinafter referred to as the Board, hereby grants to:

Paramount Resources Ltd.  
(Licensee)

of Suite 2800, 421 - 7 Avenue SW Calgary, Alberta T2P 4K9  
(Mailing Address)

hereinafter called the Licensee, the right to alter, divert, or otherwise use water subject to the restrictions and conditions contained in the *Waters Act* and Regulations made thereunder and subject to and in accordance with the conditions specified in this Licence.

Licence Number:	<u>MV2020L1-0006</u>
Licence Type:	<u>B</u>
Water Management Area:	<u>Northwest Territories 03</u>
Location:	<u>60° 20'N, 123° 15'W</u> <u>60° 30'N, 123° 30W</u>
Purpose:	<u>To use water</u>
Description:	<u>Oil and Gas Development</u>
Quantity of Water <b><u>not to be exceeded:</u></b>	<u>299 cubic metres (m<sup>3</sup>) per day</u>
Effective date of Licence:	<u>November 20, 2020</u>
Expiry date of Licence:	<u>November 19, 2025</u>

This Licence issued and recorded at Yellowknife includes and is subject to the annexed conditions.

**Mackenzie Valley Land and Water Board**

A blue ink signature of Mavis Cli-Michaud.

Mavis Cli-Michaud, Chair

A blue ink signature of Amanda Gauthier.

Amanda Gauthier, Witness

# **Type B Water Licence MV2020L1-0006**

## **Paramount Resources Ltd. – Liard West**

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## Part A: Scope and Defined Terms

### Scope:

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|--|---|--|
| 1.   | This Licence entitles the Licensee to use Water for industrial activities at the Fort Liard West.   | <b>SCOPE</b>                                 |
| The scope of this Licence includes the following:  |   |  |
| <ul style="list-style-type: none"><li>a) Operation, maintenance, and remediation of winter roads, all season road, bridges, culverts, pipeline and rights-of-way, quarries, and camps;</li><li>b) Re-entry, completion, suspension, abandonment, remediation and maintenance of sumps, well sites and related natural gas facilities;</li><li>c) Withdrawal of Water for construction of winter roads and ice bridges, and dust control;</li><li>d) Watercourse crossings, including pipelines, bridges and roads;</li><li>e) Watercourse training in respect of culverts; and</li><li>f) Progressive Reclamation and associated Closure and Reclamation activities.</li></ul> |   |  |
| 2.   | The scope of this Licence is as described in Section 3.2 the Report of Environmental Assessment EA99-0061/0086 and Preliminary Screenings for MV2000A0001, MV2000A0059, MV2001P0097, and MV2001L1-0011.   | <b>SCOPE –<br/>SCREENING</b>                 |
| 3.   | This Licence is issued subject to the conditions contained herein with respect to the use of Water and the deposit of Waste in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Any change made to the <i>Waters Act</i> and/or the Waters Regulations that affects licence conditions and defined terms will be deemed to have amended this Licence. | <b>LEGISLATION<br/>SUBJECT TO<br/>CHANGE</b> |
| 4.   | Compliance with this Licence does not relieve the Licensee from responsibility for compliance with the requirements of any applicable federal, territorial, or municipal legislation.   | <b>LEGISLATIVE<br/>COMPLIANCE</b>            |

## Defined Terms:

**Board** – the Mackenzie Valley Land and Water Board established under subsection 99(1) of the *Mackenzie Valley Resource Management Act*.

**Closure Cost Estimate** - an estimate of the cost to close and reclaim the Project.

**Closure Criteria** - standards that measure the success of selected closure activities in meeting closure objectives. Closure criteria may have a temporal component (e.g., a standard may need to be met for a pre-defined number of years). Closure criteria can be site-specific or adopted from territorial/federal or other standards and can be narrative statements or numerical values.

**Closure Objectives** - statements that describe what the selected closure activities are aiming to achieve; they are guided by the closure principles. Closure objectives are typically specific to project components, are measurable and achievable, and allow for the development of closure criteria.

**Closure and Reclamation** – the process and activities that facilitate the return of areas affected by the Project to viable and, wherever practicable, self-sustaining ecosystems that are compatible with a healthy environment and human activities.

**Closure and Reclamation Plan (CRP)** – a document, developed in accordance with this Licence and the MVLWB/AANDC *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories*, that clearly describes the Closure and Reclamation for the Project.

**Construction** – any activities undertaken during any phase of the Project to construct or build any structures, facilities or components of, or associated with, the development of the Project.

**Engagement Plan** – a document, developed in accordance with the MVLWB *Engagement and Consultation Policy* and the *Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits*, that clearly describes how, when, and which engagement activities will occur with an affected party during the life of the Project.

**Environmental Assessment (EA)** – Environmental Assessment EA99-0061/0086 or conducted by the Mackenzie Valley Environmental Impact Review Board for the Project.

**Greywater** – all liquid Waste from showers, baths, sinks, kitchens, and domestic washing facilities, but does not include Toilet Waste.

**Groundwater** – as defined in section 1 of the Waters Regulations: all water in a zone of saturation below the land surface, regardless of its origin.

**Hazardous Waste** - a Waste which, because of its quantity, concentration, or characteristics, may be harmful to human health or the environment when improperly treated, stored, transported, or discharged.

**Inspector** – an Inspector designated by the Minister under subsection 65(1) of the *Waters Act*.

**Licensee** – the holder of this Licence.

**Mackenzie Valley Federal Areas Waters Regulations** – the regulations proclaimed pursuant to section 90.3 of the *Mackenzie Valley Resource Management Act*.

**Minister** – the Minister of the Government of the Northwest Territories (GNWT) – Environment and Natural Resources.

**Ordinary High-Water Mark** – the usual or average level to which a Watercourse rises at its highest point and remains for sufficient time so as to change the characteristics of the land. In flowing Watercourses (rivers, streams), this refers to an active channel/bank-full level, which is often the 1:2-year flood flow return level. In inland lakes, wetlands or marine environments, it refers to those parts of the Watercourse bed and banks that are frequently flooded by Water so as to leave a mark on the land and where the natural vegetation changes from predominantly aquatic vegetation to terrestrial vegetation (excepting Water tolerant species). For reservoirs, this refers to normal high operating levels (full supply level).

**Progressive Reclamation** – Closure and Reclamation activities conducted during the operating phase of the Project.

**Project** – the undertaking described in Part A, Conditions 1 and 2.

**Receiving Environment** – the natural environment that, directly or indirectly, receives any deposit of Waste from the Project.

**RECLAIM** – the Government of the Northwest Territories’ model for estimating Closure and Reclamation costs.

**Reclamation Research** – literature reviews, laboratory or pilot-scale tests, engineering studies, and other methods of resolving uncertainties and answering questions pertaining to environmental risks for the purpose of providing data and information that will reduce uncertainties for closure options, selected closure activities, and/or closure criteria.

**Remediation** – the removal, reduction, or neutralization of substances, Wastes, or hazardous materials from a site in order to prevent or minimize any adverse effects on the environment and public safety, now or in the future.

**Runoff** – the overland flow of Water or Wastewater that occurs when precipitation, meltwater, or other Water is not absorbed by the land.

**Seepage** – any Water or Waste that drains, passes through, or escapes from any structure designed to contain, withhold, divert, or retain Water or Waste.

**Sewage** – all Toilet Wastes and Greywater.

**Sewage Disposal Facilities** – the area(s) and structures designated to contain and treat Sewage.

**Spill Contingency Plan (SCP)** – a document developed for the Project in accordance with INAC’s *Guidelines for Spill Contingency Planning*.

**Toilet Wastes** – all human excreta and associated products, not including Greywater.

**Traditional Knowledge** – the cumulative, collective body of knowledge, experience and values built up by a group of people through generations of living in close contact with nature. It builds upon the historic experiences of a people and adapts to social, economic, environmental, spiritual, and political change.

**Unauthorized Discharge** – a Discharge of any Water or Waste not authorized under this Licence



**Waste** – as defined in section 1 of the *Waters Act*:

- a) a substance that, if added to water, would degrade or alter or form part of a process of degradation or alteration of the quality of the water to an extent that is detrimental to its use by people or by an animal, fish or plant, or
- b) water that contains a substance in such a quantity or concentration, or that has been so treated, processed or changed, by heat or other means, that it would, if added to other water, degrade or alter or form part of a process of degradation or alteration of the quality of that water to the extent described in paragraph (a), and includes
- c) a substance or water that, for the purposes of the *Canada Water Act*, is deemed to be waste,
- d) a substance or class of substances prescribed by regulations made under subparagraph 63(1)(b)(i),
- e) water that contains a substance or class of substances in a quantity or concentration that is equal to or greater than a quantity or concentration prescribed in respect of that substance or class of substances by regulations made under subparagraph 63(1)(b)(ii), and
- f) water that has been subjected to a treatment, process or change prescribed by regulations made under subparagraph 63(1)(b)(iii).

**Waste Management Plan (WMP)** – a document, developed in accordance with the MVLWB *Guidelines for Developing a Waste Management Plan*, that describes the methods of Waste management for the Project from Waste generation to final disposal.

**Wastewater** – any Water that is generated by Project activities or originates on-site, and which contains Waste, and may include, but is not limited to, Runoff, Seepage, Sewage, Minewater, and Effluent.

**Water** – as defined in section 1 of the *Waters Act*: water under the administration and control of the Commissioner, whether in a liquid or frozen state, on or below the surface of land.

**Watercourse** – as defined in section 1 of the *Waters Regulations*: a natural watercourse, body of Water or Water supply, whether usually containing Water or not, and includes Groundwater, springs, swamps, and gulches.

**Water Management Area** – a geographical area of the Northwest Territories established by section 2 and Schedule A of the *Waters Regulations*.

**Waters Regulations** – the regulations proclaimed pursuant to section 63 of the *Waters Act*.

**Water Supply Facilities** – the area(s) and structures designed to collect and supply Water for the Project.

**Water Use** – as defined in section 1 of the *Waters Act*: a direct or indirect use of any kind, including, but not limited to,

- a) a diversion or obstruction of waters,
- b) an alteration of the flow of waters, and
- c) an alteration of the bed or banks of a river, stream, lake or other body of water, whether or not the body of water is seasonal, but does not include a use connected with shipping activities that are governed by the *Canada Shipping Act, 2001*.

**Water Use Fee** – the fee for use of Water as per the *Waters Regulations* pursuant to section 63 of the *Waters Act* and the MVLWB *Water Use Fee Policy*.

## Part B: General Conditions

1.	The Licensee shall ensure a copy of this Licence is maintained on site at all times.	<b>COPY OF LICENCE</b>
2.	The Licensee shall take every reasonable precaution to protect the environment.	<b>PRECAUTION TO PROTECT ENVIRONMENT</b>
3.	In conducting its activities under this Licence, the Licensee shall make every reasonable effort to consider and incorporate any scientific information and Traditional Knowledge that is made available to the Licensee.	<b>INCORPORATE SCIENTIFIC INFORMATION AND TRADITIONAL KNOWLEDGE</b>
4.	In each submission required by this Licence or by any directive from the Board, the Licensee shall identify all recommendations based on Traditional Knowledge received, describe how the recommendations were incorporated into the submission, and provide justification for any recommendation not adopted.	<b>IDENTIFY TRADITIONAL KNOWLEDGE</b>
5.	All references to policies, guidelines, codes of practice, statutes, regulations, or other authorities shall be read as a reference to the most recent versions, unless otherwise noted.	<b>REFERENCES</b>
6.	The Licensee shall ensure all submissions to the Board: <ul style="list-style-type: none"> <li>a) Are in accordance with the MVLWB <i>Document Submission Standards</i>;</li> <li>b) Include a conformity statement or table which identifies where the requirements of this Licence, or other directives from the Board, are addressed; and</li> <li>c) Include any additional information requested by the Board.</li> </ul>	<b>SUBMISSION FORMAT AND CONFORMITY</b>
7.	The Licensee shall ensure management plans are submitted to the Board in a format consistent with the MVLWB <i>Standard Outline for Management Plans</i> , unless otherwise specified.	<b>MANAGEMENT PLAN FORMAT</b>
8.	The Licensee shall comply with all plans, including revisions, approved pursuant to the conditions of this Licence.	<b>COMPLY WITH SUBMISSIONS AND REVISIONS</b>
9.	The Licensee shall conduct an annual review of all plans and make any revisions necessary to reflect changes in operations, contact information, or other details. No later than March 31 each year, the Licensee shall send a notification letter to the Board, listing the documents that have been reviewed and do not require revisions.	<b>ANNUAL REVIEW</b>
10.	The Licensee may propose changes at any time by submitting revised plans to the Board, for approval, a minimum of 90 days prior to the proposed implementation date for the changes. The Licensee shall not implement the changes until approved by the Board.	<b>REVISIONS</b>
11.	The Licensee shall revise any submission and submit it as per the Board's directive.	<b>REVISE AND SUBMIT</b>
12.	If any date for any submission falls on a weekend or holiday, the Licensee may submit the item on the following business day.	<b>SUBMISSION DATE</b>

13.	The Licensee shall comply with the <b>Schedules</b> , which are annexed to and form part of this Licence, and any updates to the Schedules as may be made by the Board.	<b>COMPLY WITH SCHEDULE(S)</b>
14.	The Schedules and any compliance dates specified in this Licence may be updated at the discretion of the Board.	<b>UPDATES TO COMPLIANCE DATE(S)</b>
15.	The Licensee shall comply with all directives issued by the Board in respect of the implementation of the conditions of this Licence.	<b>COMPLY WITH BOARD DIRECTIVES</b>
16.	The Licensee shall install, operate, and maintain meters, devices, or other such methods for measuring the volumes of Water used to the satisfaction of an Inspector.	<b>MEASURE WATER USE</b>
17.	Beginning March 31, 2021 and no later than every March 31 thereafter, the Licensee shall submit an <b>Annual Water Licence Report</b> to the Board and an Inspector. The Report shall be in accordance with the requirements of Schedule 1, Condition 1.	<b>ANNUAL WATER LICENCE REPORT</b>
18.	The Licensee shall comply with the <b>Engagement Plan</b> , once approved.	<b>ENGAGEMENT PLAN</b>
19.	Within 90 days following the effective date of this Licence, the Licensee shall submit to the Board, for approval, a revised Engagement Plan. The Licensee shall not commence Project activities prior to Board approval of the Plan.	<b>ENGAGEMENT PLAN – REVISED</b>
20.	A minimum of ten days prior to the initial commencement of Project activities, the Licensee shall provide written notification to the Board and an Inspector. Notification shall include the commencement date, and the name and contact information for the individual responsible for overseeing the Project. Written notification shall be provided to the Board and an Inspector if any changes occur.	<b>NOTIFICATION – COMMENCEMENT</b>
21.	A minimum of ten days prior to re-commencement of Project activities following a temporary shut-down period, the Licensee shall provide written notification to the Board and an Inspector. Notification shall include the commencement date, and the name and contact information for the individual responsible for overseeing the Project. Written notification shall be provided to the Board and an Inspector if any changes occur.	<b>NOTIFICATION – RE-COMMENCEMENT</b>
22.	The Licensee shall immediately provide written notification to the Board and an Inspector of any non-compliance with the conditions of this Licence.	<b>NOTIFICATION – NON-COMPLIANCE WITH CONDITIONS</b>
23.	The Licensee shall immediately provide written notification to the Board of any non-compliance with a Board directive issued in respect of the implementation of the conditions of this Licence.	<b>NOTIFICATION – NON-COMPLIANCE WITH DIRECTIVES</b>
24.	The Licensee shall ensure that a copy of any written authorization issued to the Licensee by an Inspector is provided to the Board.	<b>COPY – WRITTEN AUTHORIZATION</b>
25.	The Licensee shall submit a current Project schedule to the Board and an Inspector upon request.	<b>SUBMIT CURRENT PROJECT SCHEDULE</b>

## Part C: Security

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| 1. | The Licensee shall post and maintain a security deposit with the Minister in accordance with Schedule 2. The Licensee shall not commence Project activities until the security deposit has been accepted by the Minister.   | <b>POST SECURITY<br/>DEPOSIT</b>            |
| 2. | Upon request of the Board, the Licensee shall submit an updated Closure Cost Estimate using the current version of RECLAIM or another method acceptable to the Board.   | <b>UPDATE CLOSURE<br/>COST ESTIMATE</b>     |
| 3. | <p>The amount of the security deposit required by Part C, Condition 1 may be adjusted by the Board:</p> <p>a) Based on an updated Closure Cost Estimate as per Part C, Condition 2; or<br/>b) Based on such other information as may become available to the Board.</p>   | <b>ADJUSTED SECURITY<br/>AMOUNT</b>         |
| 4. | If the amount of the security deposit is adjusted by the Board as per Part C, Condition 3, the Licensee shall post the adjusted amount with the Minister within the timeframe set by the Board. The Licensee shall not commence any new activities associated with a security adjustment until the additional security deposit has been accepted by the Minister. | <b>POST ADJUSTED<br/>SECURITY AMOUNT</b>    |
| 5. | <p>Unless otherwise approved by the Board, the Licensee may not submit security adjustment requests except with any of the following submissions:</p> <p>a) Closure and Reclamation Plans;<br/>b) Closure and Reclamation Completion Reports; or<br/>c) Performance Assessment Reports.</p>   | <b>SECURITY<br/>ADJUSTMENT<br/>REQUESTS</b> |

## Part D: Water Use

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| 1. | The Licensee shall only obtain Water for the Project from the Liard River. The Licensee may withdraw up to 299 m <sup>3</sup> /day of Water from this source.  | <b>WATER SOURCE AND<br/>MAXIMUM VOLUME</b>                    |
| 2. | In any single ice-covered season, the Licensee shall not withdraw greater than 10% of the available Water volume of any Watercourse, as calculated using the appropriate maximum expected ice thickness.                           | <b>MAXIMUM UNDER-<br/>ICE WATER<br/>WITHDRAWAL<br/>VOLUME</b> |
| 3. | The Licensee shall only withdraw Water using the Water Supply Facilities, unless otherwise authorized temporarily in writing by an Inspector.  | <b>WATER<br/>WITHDRAWAL –<br/>FACILITIES</b>                  |
| 4. | Prior to withdrawing Water from an approved Water source, the Licensee shall post sign(s) to identify the intake for the Water Supply Facilities. All sign(s) shall be located and maintained to the satisfaction of an Inspector. | <b>POST WATER INTAKE<br/>SIGN(S)</b>                          |
| 5. | The Licensee shall construct and maintain the Water intake(s) with a screen designed to prevent impingement or entrapment of fish.   | <b>WATER INTAKE<br/>SCREEN</b>                                |
| 6. | Each year, prior to the November 14 and in advance of any Water use, the Licensee shall pay the Water Use Fee in accordance with the MVLWB <i>Water Use Fee Policy</i> .   | <b>WATER USE FEE</b>  |

## Part E: Construction

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| 1. | The Licensee shall ensure that all structures intended to contain, withhold, divert, or retain Water or Waste are designed, constructed, and maintained to minimize the escape of Waste to the Receiving Environment. | <b>OBJECTIVE –<br/>CONSTRUCTION</b>              |
| 2. | The Licensee shall only use material that is clean and free of contaminants and is from a source that has been authorized in writing by an Inspector.   | <b>CONSTRUCTION<br/>MATERIAL –<br/>SOURCE(S)</b> |
| 3. | The Licensee shall maintain records of Construction materials for all structures and make them available at the request of the Board or an Inspector.   | <b>CONSTRUCTION<br/>RECORDS</b>                  |

## Part F: Waste and Water Management

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| 1. | The Licensee shall manage Waste and Water with the objective of minimizing the impacts of the Project on the quantity and quality of Water in the Receiving Environment through the use of appropriate mitigation measures, monitoring, and follow-up actions. | <b>OBJECTIVE – WASTE<br/>AND WATER<br/>MANAGEMENT</b>                     |
| 2. | The Licensee shall comply with the <b>Waste Management Plan</b> , once approved.   | <b>WASTE<br/>MANAGEMENT<br/>PLAN</b>                                      |
| 3. | A minimum of 60 days prior to commencement of activities, the Licensee shall submit to the Board, for approval, a revised <b>Waste Management Plan</b> . The Licensee shall not commence Project activities prior to Board approval of the Plan.               | <b>WASTE<br/>MANAGEMENT<br/>PLAN – REVISED</b>                            |
| 4. | A minimum of 90 days prior to commencement of activities, the Licensee shall submit to the Board, for approval, a <b>Erosion and Sedimentation Management Plan</b> . The Plan shall be in accordance with the requirements of Schedule 3.                      | <b>EROSION AND<br/>SEDIMENTATION<br/>MANAGEMENT PLAN<br/>- SUBMISSION</b> |
| 5. | The Licensee shall comply with the <b>Erosion and Sedimentation Management Plan</b> , once approved. The Plan shall be in accordance with the requirements of Schedule 3.  | <b>EROSION AND<br/>SEDIMENTATION<br/>MANAGEMENT PLAN</b>                  |
| 6. | The Licensee shall deposit all Waste as described in the approved <b>Waste Management Plan</b> .   | <b>WASTE DISPOSAL</b>   |
| 7. | The Licensee shall not discharge Waste, including Wastewater, to any Watercourse, or to the ground surface within 100 metres of the Ordinary High-Water Mark of any Watercourse.   | <b>DISCHARGE<br/>LOCATION –<br/>ORDINARY HIGH-<br/>WATER MARK</b>         |

## Part G: Aquatic Effects Monitoring

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## Part H: Spill Contingency Planning

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| 1. | The Licensee shall ensure that Unauthorized Discharges associated with the Project do not enter any Waters.  | <b>OBJECTIVE –<br/>PREVENT WASTE<br/>INTO WATER</b>    |
| 2. | The Licensee shall comply with the <b>Spill Contingency Plan</b> , once approved.  | <b>SPILL CONTINGENCY<br/>PLAN</b>                      |
| 3. | A minimum of 60 days prior to the commencement of activities, the Licensee shall submit to the Board, for approval, a revised <b>Spill Contingency Plan</b> . The Licensee shall not commence Project activities prior to Board approval of the Plan.  | <b>SPILL CONTINGENCY<br/>PLAN – REVISED</b>            |
| 4. | <p>If a spill or an Unauthorized Discharge occurs or is foreseeable, the Licensee shall:</p> <ul style="list-style-type: none"> <li>a) Implement the approved Spill Contingency Plan referred to in Part H, Condition 2;</li> <li>b) Report it immediately using the NU-NT Spill Report Form by one of the following methods: <ul style="list-style-type: none"> <li>• Telephone: (867) 920-8130</li> <li>• Fax: (867) 873-6924</li> <li>• E-mail: <a href="mailto:spills@gov.nt.ca">spills@gov.nt.ca</a></li> <li>• Online: Spill Reporting and Tracking Database</li> </ul> </li> <li>c) Notify the Board and an Inspector immediately; and</li> <li>d) Within 30 days of initially reporting the incident, or within a timeframe authorized by an Inspector, submit a detailed report to the Board and an Inspector, including descriptions of causes, response actions, and any changes to procedures to prevent similar occurrences in the future. Written notification shall be provided to the Board and an Inspector if any changes occur</li> </ul> | <b>REPORT SPILLS</b>                                   |
| 5. | The Licensee shall ensure that spill prevention infrastructure and spill response equipment is in place prior to commencement of the Project.  | <b>SPILL PREVENTION<br/>AND RESPONSE<br/>EQUIPMENT</b> |
| 6. | The Licensee shall restore all areas affected by spills and Unauthorized Discharges to the satisfaction of an Inspector.   | <b>CLEAN UP SPILLS</b>                                 |

## Part I: Closure and Reclamation

- |    |   |   |
|----|---|---|
| 1. | Six months prior to the closure of any specific component of the Project, the Licensee shall submit to the Board, for approval, a <b>Closure and Reclamation Plan</b> .   | <b>CLOSURE AND<br/>RECLAMATION PLAN</b>               |
| 2. | Every three years following the previous approval, or as directed by the Board, the Licensee shall submit to the Board, for approval, a revised <b>Closure and Reclamation Plan</b> .   | <b>CLOSURE AND<br/>RECLAMATION PLAN<br/>– REVISED</b> |
| 3. | Three years prior to the expiry date of this Licence, or a minimum of two years prior to the end of operations, whichever occurs first, the Licensee shall submit to the Board, for approval, a final <b>Closure and Reclamation Plan</b> . | <b>CLOSURE AND<br/>RECLAMATION PLAN<br/>– FINAL</b>   |

4.	The Licensee shall endeavor to carry out approved Progressive Reclamation as soon as is reasonably practicable.	<b>PROGRESSIVE RECLAMATION</b>
5.	The Licensee shall not conduct Progressive Reclamation except as approved by the Board.	<b>PROGRESSIVE RECLAMATION – CARRY OUT AS APPROVED</b>
6.	Beginning May 1, 2021 and no later than every May 1 thereafter, the Licensee shall provide written notification to the Board and an Inspector of any approved Progressive Reclamation that will be conducted in the upcoming year. Notification shall include the name and contact information for the individual responsible for overseeing the Progressive Reclamation. Written notification shall be provided to the Board and an Inspector if any changes occur.	<b>PROGRESSIVE RECLAMATION – NOTIFICATION</b>
7.	Within 90 days of completing Closure and Reclamation of the Project, or as otherwise directed by the Board, the Licensee shall submit to the Board for approval, a <b>Post-Closure and Reclamation Monitoring and Maintenance Plan</b> . The Plan shall be in accordance with the requirements of Schedule 4.	<b>POST-CLOSURE AND RECLAMATION MONITORING AND MAINTENANCE PLAN</b>
8.	Within 3 months of completing Closure and Reclamation of any specific component of the Project, the Licensee shall submit to the Board for approval, a <b>Performance Assessment Report</b> . The Report shall be in accordance with the MVLWB/AANDC <i>Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories</i> . The Licensee shall submit subsequent Reports as directed by the Board.	<b>PERFORMANCE ASSESSMENT REPORT – COMPONENT-SPECIFIC</b>

## Part J: Watercourse Crossings

1.	The Licensee shall minimize the disturbance of riparian vegetation within the immediate boundary of any Watercourse crossing to the extent practicable	<b>MINIMIZE DISTURBANCE OF RIPARIAN VEGETATION</b>
2.	Ice and snow crossings should not impede the flow of any Watercourse. These crossings shall be v-notched or removed before spring break-up to facilitate natural flow.	<b>DO NOT IMPEDE WATERCOURSE</b>
3.	Any materials placed below the normal high Water mark used in the construction of Water crossings shall be free of any contaminants, debris, or fine materials	<b>FREE OF CONTAMINANTS</b>
4.	Any materials placed below the normal high Water mark used in the construction of Water crossings shall be removed before spring break-up.	<b>REMOVE BEFORE SPRING BREAK-UP</b>

Signed on behalf of the Mackenzie Valley Land and Water Board



Mavis Cli-Michaud, Chair



Amanda Gauthier, Witness

## Schedule 1: Annual Water Licence Report

1. The **Annual Water Licence Report** referred to in Part B, Condition 17 of this Licence shall include, but not be limited to, the following information about activities conducted during the previous calendar year:
  - a) An As-Built map identifying all current sites and infrastructure at the Fort Liard - West Project sites with a summary of the operation to date including the name and location of all existing wells and the status and identification of all wells;
  - b) A brief summary of Project activities;
  - c) An updated Project schedule;
  - d) The monthly and annual quantities in cubic metres of fresh Water obtained from all sources, as required in Part B, Condition 16 of this Licence;
  - e) A summary of the calibration and status of the meters and devices referred to in Part B, Condition 16 of this Licence;
  - f) A summary of engagement activities conducted in accordance with the approved **Engagement Plan**, referred to in Part B, Condition 18 of this Licence;
  - g) A summary of how Traditional Knowledge was incorporated into decision making;
  - h) A summary of Construction activities conducted in accordance with Part E of this Licence;
  - i) A summary of major maintenance activities conducted in accordance with this Licence;
  - j) A summary of activities conducted in accordance with the approved **Waste Management Plan**, referred to in Part F, Condition 2 of this Licence, including:
    - i. A summary of approved updates or changes to the process or facilities required for the management of Waste; and
    - ii. Monthly and annual quantities, in cubic metres, of Sewage solids and sludge removed from the campsites, identified by disposal location;
  - k) A summary of activities conducted in accordance with the approved **Erosion and Sedimentation Management Plan**, referred to in Part F, Condition 5 of this Licence, including:
    - i. A summary of approved updates or changes to the process or facilities required for the management of erosion and sedimentation;
    - ii. A description of any erosion susceptible areas encountered;
    - iii. A summary of activities undertaken to prevent or mitigate erosion;
    - iv. A report of the performance of mitigations applied to each area;
    - v. A summary and interpretation of monitoring results, including any Action Level exceedances; and
    - vi. A description of actions taken in response to any Action Level exceedances.
  - l) A summary of activities conducted in accordance with the approved **Spill Contingency Plan**, referred to in Part H, Condition 2 of this Licence, including:
    - i. A list and description for all Unauthorized Discharges, including the date, NWT spill number, volume, location, summary of the circumstances and follow-up actions taken, and status (i.e. open or closed), in accordance with the reporting requirements in Part H, Condition 4 of this Licence; and
    - ii. An outline of any spill training carried out.



- m) A summary of activities conducted in accordance with the **Closure and Reclamation Plan**, referred to in Part I, Condition 1 of this Licence, including:
  - i. Details of any Progressive Reclamation undertaken;
  - ii. A discussion on whether planning and implementation remains on schedule, and a summary of any new scheduling setbacks;
  - iii. A summary of Reclamation Research completed;
  - iv. A summary of engagement conducted regarding Closure and Reclamation; and
  - v. A list of any factors that would increase or decrease the Closure Cost Estimate the next time the Estimate is updated.
- n) A list of any non-compliance(s) with the conditions of this Licence or any directive from the Board pursuant to the conditions of this Licence;
- o) A summary of actions taken to address concerns, non-conformances, or deficiencies in any reports filed by an Inspector;
- p) A table detailing all commitments related to Water use and the deposit of Waste made during the Environmental Assessment, with descriptions of how each commitment is being or has been met; and
- q) Any other details requested by the Board by October 31 of the year being reported.

## **Schedule 2: Security**

1. The amount of security referred to in Part C, Condition 1, shall total \$1,000,000.00.

### Schedule 3: Erosion and Sedimentation Management Plan

1. The **Erosion and Sedimentation Management Plan** referred to in Part F, Condition 5 shall include, but not be limited to, the following information:
  - a) Information regarding erosion, sedimentation, and permafrost degradation potential and management, including:
    - i. A summary, with appropriate maps or diagrams of the Project site, identifying areas susceptible to erosion, sedimentation, and/or permafrost degradation;
    - ii. A description of the process and criteria for assessing the risk of erosion, sedimentation, and/or permafrost degradation;
    - iii. A description of the best management practices that will be employed for different levels of assessed risk; and
    - iv. A description of Water management during the Project.
    - v. A description of how climate change has been considered, including any linkages to other plans required under this Licence; and
    - vi. Any other information required to describe how erosion and sediment release into the Receiving Environment, and permafrost degradation will be minimized
  - b) Information regarding monitoring, including:
    - I. Details of the monitoring, including rationale, that will be undertaken with respect to the effectiveness and maintenance of erosion and sediment management practices, including:
      - a. monitoring locations, parameters, frequencies, methods, and types of instrumentation; and
      - b. a map to scale, with monitoring locations.
    - II. Linkages to other monitoring programs required under this Licence; and
    - III. Any other information about monitoring that will be performed to meet the objectives in Part F, Condition 1.
  - c) Information regarding responses to monitoring results, including:
    - i. A description of how the Licensee will link the results of monitoring to those corrective actions necessary to ensure that the objectives listed in Part F, Condition 1 are met. This description shall include:
      - a. Definitions, with rationale, for Action Levels applicable to the performance of erosion and sedimentation control measures; and
      - b. For each Action Level, a description of how exceedances of the Action Level will be assessed and generally, which types of actions will be taken for the Action Levels exceeded.
  - d) Information regarding contingency planning, including:
    - I. A description of reasonably foreseeable scenarios; and
    - II. For each scenario identified in (d)(i) above:
      - a. A description of response action options; and
      - b. A risk-based analysis of response action options, identifying preferred options and alternate options.

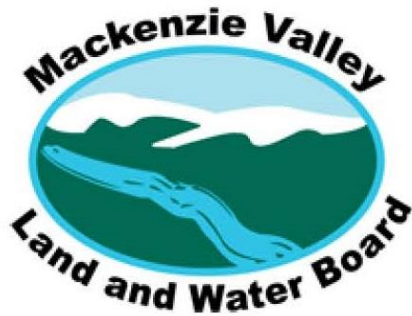
## Schedule 4: Post-Closure and Reclamation Monitoring and Maintenance Plan

1. The **Post-Closure and Reclamation Monitoring and Maintenance Plan** referred to in Part I, Condition 7 of this Licence shall include, but not be limited to the following information:
  - a) Information regarding site conditions:
    - I. A summary of completed Closure and Reclamation activities, including links to Closure and Reclamation Completion Reports;
    - II. A list of the Closure Objectives and Criteria for completed Closure and Reclamation activities;
    - III. A list of all components, Closure Objectives, and Closure Criteria that require monitoring, surveillance, and/or inspections; and
    - IV. A list of all components that require geotechnical inspections by a Professional Engineer.
  - b) Information regarding monitoring:
    - I. A description, including detailed rationale, of the site-specific monitoring activities required to evaluate the Closure Objectives and Criteria for the Project, including links to the approved Closure and Reclamation Plan;
    - II. A description of monitoring protocols, methodologies, parameters, and frequency specific to each type of monitoring identified in (i) above;
    - III. Site map(s) and attached table or detailed legend, illustrating monitoring and sampling locations; and
    - IV. A description of the quality assurance and quality control measures followed for each monitoring type
  - c) Information regarding responses to monitoring results:
    - I. A description of how the Licensee will evaluate the monitoring results against the Closure Objectives and Criteria for the Project;
    - II. A description of how the Licensee will link the results of monitoring to the implementation of contingencies, revisions to the Plan, and/or other necessary response actions.
  - d) Information regarding surveillance and inspections:
    - I. A description, including detailed rationale, of the method and schedule for surveillance and inspections for each component identified in (a)(iii); and
    - II. A description, including detailed rationale, of the schedule for geotechnical inspections for each component identified in (a)(iv).
  - e) Information about responses to surveillance and inspections:
    - I. A description of how the Licensee will evaluate the results of surveillance and inspections against the Closure Objectives and Criteria for the Project; and
    - II. A description of how the Licensee will link the results of surveillance and inspections to the implementation of contingencies, revisions to the Plan, and/or any other necessary response actions.
  - f) Information regarding maintenance:
    - I. A description and schedule of routine maintenance work to be conducted at the site;
    - II. A description of the expected timeline for routine maintenance, including a description of how the Licensee will determine when routine maintenance is no longer required;
    - III. A description of reasonably likely non-routine maintenance work that may be required;
    - IV. A description of how the Licensee will notify the Board and the Inspector of any non-routine maintenance work;
    - V. A description of any potential impacts to the Receiving Environment during routine maintenance work;

- VI. A detailed description of any measures used to prevent or mitigate impacts to the Receiving Environment during routine maintenance work; and
  - VII. A description of any monitoring including, but not limited to, sampling locations, parameters measured and frequencies of sampling to be carried out during maintenance activities to determine impacts to the Receiving Environment.
- g) A description of how the results of the activities carried out under this Plan will be reported.

## Annex A: Concordance Table of Items Requiring Submission

Licence Condition	Report Title/Require Action	Timeline for Submission
<b>B.9</b>	Annual review and revision of plans	March 31 each year
<b>B.17</b> (Schedule 1, Condition 1)	Annual Water Licence Report	March 31 each year
<b>D.6</b>	Payment of Water Use Fee	Each year prior to November 14
<b>B.19</b>	Engagement Plan – submission of revised plan	90 days following the effective date of this Licence
<b>F.3, H.3</b>	Waste Management and Spill Contingency Plan – submission of revised plans	Minimum of 60 days prior to commencement of activities
<b>F.4</b>	Erosion and Sedimentation Management Plan	Minimum of 90 days prior to commencement of activities
<b>H.4</b>	Report spill or Unauthorized Discharge	Immediately
<b>H.4</b>	Detailed report on spill or Unauthorized Discharge	Within 30 days of initial reporting
<b>I.1</b>	Closure and Reclamation Plan	Six months prior to closure of any specific component of the Project
<b>I.2</b>	Revised Closure and Reclamation Plan	Three years following previous approval
<b>I.3</b>	Final Closure and Reclamation Plan	Three years prior to the expiry date of this Licence, or a minimum of two years prior to the end of operations, whichever occurs first
<b>I.6</b>	Notification of approved Progressive Reclamation conducted	May 1, 2021 and every May 1 thereafter
<b>I.7</b>	Post-Closure and Reclamation Monitoring and Maintenance Plan	Within 90 days of completing Closure and Reclamation of the Project
<b>I.8</b>	Performance Assessment Report	Within 3 months of completing Closure and Reclamation of any specific component of the Project



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### Reasons for Decision

Issued pursuant to paragraph 40(2)(c) of the Mackenzie Valley Land Use Regulations (MVLUR) and Section 72.25 of the *Mackenzie Valley Resource Management Act* (MVRMA) and section 36 of the *Waters Act*

Water Licence and Land Use Permit Applications	
Preliminary Screener	MVLWB
File Number	MV2020L1-0006 and MV2020A0009
Company	Paramount Resources Ltd.
Project	Industrial Undertaking and Oil and Gas Development, West of Fort Liard, NT
Date of Decision	November 13, 2020

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These Reasons for Decision set out the Mackenzie Valley Land and Water Board's (the MVLWB/Board) regulatory process and decisions on Applications made by Paramount Resources Ltd. (Paramount) to the Board on August 18, 2020 for Water Licence (Licence) MV2020L1-0006 and Land Use Permit (Permit) MV2020A0009 for the Industrial Undertaking and Oil and Gas Project west of Fort Liard, Northwest Territories (Fort Liard West).

A summary of the Applications is provided in [Section 2](#) below, followed by the regulatory process in [Section 3](#). [Section 4](#) describes the legislative requirements applicable to this regulatory process, leading to the Board's decisions with supporting rationale in [Section 5](#) and [Section 6](#).

## 1.0 List of Abbreviations

Anniversary Date	Effective date of Licence as seen on the Licence cover page
Applicant	Paramount Resources Ltd. (Paramount)
Applications	Paramount Resources Ltd.'s submissions in support of Water Licence MV2020L1-0006 and Land Use Permit MV2020A0009
DFN	Dehcho First Nations
DFO	Department of Fisheries and Oceans
DIAND	Department of Indigenous Affairs and Northern Development
EA/EIR	Environmental Assessment/Environmental Impact Review
GNWT	Government of the Northwest Territories
GNWT-ENR	Government of the Northwest Territories – Environment and Natural Resources
IR	Information Request
Inspector	Government of the Northwest Territories – Environment and Natural Resources – Water Resource Officer
	Government of the Northwest Territories – Lands – Resource Management Officer
Licence	Water Licence MV2020L1-0006
MVLUR	Mackenzie Valley Land Use Regulations
MVLWB or Board	Mackenzie Valley Land and Water Board
MVRMA	<i>Mackenzie Valley Resource Management Act</i>
Minister	Minister of Environment and Natural Resources for the Government of the Northwest Territories
	Minister of Lands for the Government of the Northwest Territories
Party	As per the Board's <i>Rules of Procedures</i>
Permit	Land Use Permit MV2020A0009
Project	Fort Liard West
Review Board	Mackenzie Valley Review Board
SKFN	Sambaa K'e First Nation
SLWB	Sahtu Land and Water Board
Standard Template	Board's <i>Standard Land Use Permit Conditions Template</i>
	Board's <i>Standard Water Licence Conditions and Schedules Template</i>

## **2.0 Summary of Applications**

On July 23, 2020, Paramount submitted renewal applications for Fort Liard West (MV2020A0009 MV2020L1-0006) to replace Permit MV2013A0012 and Licence MV2013L1-0002.<sup>12</sup> The applications were deemed incomplete on July 31, 2020.<sup>3</sup> By August 18, 2020, Paramount submitted revised application material.<sup>4</sup> Board staff deemed the applications complete on August 28, 2020 and distributed the Applications for review.

The Applications are to conduct re-entries, completions, suspensions, abandonments, production, reclamation, and remediation activities associated with natural gas facilities and to use water for the industrial undertakings west of Fort Liard, Northwest Territories. The activities are located within a Non-Federal area. Paramount proposed a start date of November 1, 2020 and a completion date of October 31, 2025, resulting in a term of 5 years.

Paramount indicated the Applications include all facilities and activities previously approved as part of Permit MV2013A0012 and Licence MV2013L1-0002. The facilities include well sites (K-29, O-80, M-25, F-25) containing nine natural gas and disposal wells (K-29, K-29A, 2K-29, 3K-29, O-80, M-25, 2M-25, F-25, and F-25A), a communication site, winter roads, an all season road, ice bridges, pipelines and pipeline rights-of-way<sup>5</sup>, quarries, campsites, and sumps. Paramount indicated no new drilling was being applied for and that all project components have been built. The well and battery sites K-29, O-80, M-25, and F-25A are suspended while F-25 has been abandoned.

### **2.1 Distribution List**

This document uses the term “distribution list” for the list of parties with whom materials from this regulatory process were circulated. As this Project is in the Deh Cho Territory, the appropriate core organizational reviewers, governments, First Nations, and Indigenous organizations were included in the list. The list was periodically updated, and (when requested) individuals with specific interests in the Project were also added to the distribution list.

## **3.0 Regulatory Process**

### **3.1 Environmental Assessment: EA99-0061-0086**

An Environmental Assessment (EA) of Fort Laird West was conducted by the Review Board in 1999 when Ranger Oil Limited together with Canadian Forest Oil Limited, applied to the Department of Indian Affairs and Northern Development (DIAND) for a Land Use Permit and to the National Energy Board (NEB) for approval of a Development Plan to construct a natural gas pipeline from well P-66A to tie in to the Westcoast Energy gas pipeline at the gas plant near Pointed Mountain, NT. On June 15, 1999, the Review Board decided to exercise its discretion to conduct an EA of the proposed development.

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<sup>1</sup> See Water Licence MV2020L1-0006 [Application](#)

<sup>2</sup> See Land Use Permit MV2020A0009 [Application](#)

<sup>3</sup> See [Incomplete Letter](#), dated July 31, 2020

<sup>4</sup> See [response letter](#), dated August 13, 2020

<sup>5</sup> As described in the Application, K-29, M-25 and F-25 are tied-in to a 37.2km pipeline that connects the K-29 site to the former Pointed Mountain plant site. The M-25 site is linked to the F-25 plant site via a 1.4 km pipeline and the F-25 plant is linked to the main pipeline via a 3.3 km pipeline.

The scope of the development was broadened in July 1999 when Ranger Oil submitted additional information pertaining to its application. This included two additional pipeline rights-of-way and well site dehydration facilities, drilling of additional wells / water injection wells (2 or 3), the construction and use of three or four camps, and an extension to the all weather road. Two pipelines, a produced water line and a gas line, would be buried in a rights-of-way trench. The Applicant also indicated that each well site would contain an aerial cooler, separator, dehydrator, flare system, generator with fuel tank, water storage tank and transfer pump.

In October 1999, Chevron Canada Resources Limited submitted additional information to the NEB indicating they would dispose of produced water from the P-66A and K-29 wells into the O-80 well.

The Review Board established the scope as the construction of four pipelines for sour natural gas and produced water; the construction, maintenance and reclamation of four well sites and supporting natural gas infrastructure; and, the construction and maintenance of an all-season access road, camp facilities, and supporting infrastructure and associated activities.<sup>6</sup>

Information obtained as part of the EA process was provided to the public from June 15, 1999 to November 26, 1999 through a public registry. On December 7, 1999, the Review Board recommended approval of the development subject to measures outlined in the EA report.<sup>7</sup>

On December 17, 1999, the responsible ministers submitted a letter to the Review Board proposing modifications to the measures in the EA report.<sup>8</sup> On January 10, 2000, the Minister of Indian Affairs and North Development adopted the recommendations of the Review Board that approval of the development be made subject to the measures proposed by the Review Board with certain modifications.<sup>9</sup> This EA, and the resultant measures, and subsequent preliminary screenings continue to apply to these Applications because the principal activities and components of the Project remain unaltered from when the EA and preliminary screenings were conducted.

### **3.2 Details of the Regulatory Process**

On July 23, 2020, Paramount submitted renewal applications for Fort Liard West (MV2020A0009 MV2020L1-0006) to replace Permit MV2013A0012 and Licence MV2013L1-0002. The Applications were deemed incomplete on July 31, 2020 as per subsection 22(1) of the MVLUR. By August 18, 2020, Paramount submitted additional information and the Applications were subsequently deemed complete and distributed for public review. Draft Licence and Permit conditions were included as part of the review.

A public notice of the Applications was published in *News North* during the week of September 7, 2020 to fulfill paragraphs 43(1)(a) of the *Waters Act*.<sup>10</sup>

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<sup>6</sup> See EA99-0061-0086 Minister Decision Letter and Report of EA and Reasons Ranger Oil (p. 12-14), dated January 10, 2000

<sup>7</sup> See EA99-0061-0086 Minister Decision Letter and Report of EA and Reasons Ranger Oil, dated January 10, 2000

<sup>8</sup> See EA99-0061-0086 Minister Decision Letter and Report of EA and Reasons Ranger Oil, dated January 10, 2000

<sup>9</sup> See [Minister decision letter and Report of Environmental Assessment](#), dated January 10, 2000

<sup>10</sup> See [Notice of Application](#), dated September 7, 2020.

By September 18, 2020, comments and recommendations regarding the Applications were received by the Board from the following parties: Shared Value Solutions on behalf of Acho Dene Koe First Nation (ADKFN), Government of the Northwest Territories Department of Environment and Natural Resources (GNWT-ENR), GNWT Department of Lands (GNWT-Lands), and the Northwest Territories Office of the Regulator of Oil and Gas Operations (NWT-OROGO).<sup>11</sup>

On September 22, 2020, Paramount requested an extension to October 2, 2020 to respond to reviewer comments and recommendations. By October 2, 2020, Paramount responded to a majority of reviewer comments and recommendations.

On October 8, 2020, the Board invoked paragraph 22(2)(b) of the MVLUR for the Application for Permit MV2020A0009.<sup>12</sup> The Board determined there were clear linkages between the Permit Application and the Application for the Water Licence, and to develop Permit and Licence conditions that will effectively mitigate impacts of the proposed Project on the lands which will be affected, the Board indicated they will be coordinating the proceedings for the Permit and Licence Application. The Board also direct Paramount to provide additional information by October 22, 2020 to establish security.

Paramount responded to the Board's direction by submitting a letter on October 22, 2020.<sup>13</sup>

On November 13, 2020, the Board met to make decisions regarding the Applications.

#### **4.0 Legislative Requirements**

In conducting its regulatory process for the Applications (as described in Sections 2.0 and 3.0 above), the Board has ensured that all applicable legislative requirements have been satisfied, as required by section 62 of the MVRMA and as outlined in the subsections below. The Board has considered the people and users of the land and water in the Mackenzie Valley, and any Traditional Knowledge and scientific information that was made available to the Board during this regulatory proceeding, as per section 60.1 of the MVRMA. The consideration of information provided to the Board is discussed in detail below in Sections 4.0, 5.0, and 6.0.

##### **4.1 Consultation and Engagement**

In exercising its authority under the MVRMA, the Board must consider the importance of conservation to the well-being and way of life of Indigenous peoples of Canada, as per paragraph subsection 60.1(a) of the MVRMA, specifically those to whom section 35 of the *Constitution Act*, 1982, applies and who use an area of the Mackenzie Valley. Accordingly, the Board works with applicants, affected parties (including Indigenous governments and organizations), and other parties (such as other boards and regulators) to ensure that potential impacts of proposed projects are understood and carefully considered before decisions are made with respect to the issuance of permits and licences.

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<sup>11</sup> See [www.mvlwb.com](http://www.mvlwb.com) Public Registry for Water Licence [MV2020L1-0006](#) and Permit [MV2020A0009](#) – Paramount – Liard West – Review Comments

<sup>12</sup> See MVLWB Letter – [Invoke paragraph 22\(2\)\(b\) of MVLUR](#), dated October 9, 2020.

<sup>13</sup> See [Paramount's Response](#), dated October 22, 2020

The Board's requirements for engagement are set out in the *Engagement and Consultation Policy* (the Policy).<sup>14</sup> The Policy was developed to ensure that the Board's obligations for achieving meaningful consultation (as set out by land claims and applicable legislation) with all affected parties, including Indigenous groups in the Mackenzie Valley, are met and engagement and consultation results clearly articulated.

#### **4.1.1 Applicant's Initial Engagement**

The following is a summary of the engagement activity undertaken by Paramount for the Project. Paramount began engagement by contacting parties through email on April 3, 2020. Paramount contacted parties again on April 21, 2020 through email and telephone calls. Parties included:

- Acho Dene Koe First Nation (ADKFN),
- Dehcho First Nations (DFN),
- Dene Tha First Nation (DTFN),
- DTFN Department of Lands,
- The Hamlet of Fort Liard (the Hamlet),
- Sambaa k'e First Nation (SKFN), and
- SKFN Development Corporation.

Correspondence continued between Paramount and affected parties until June 19, 2020 prior to the submission of the Applications.

#### **4.2 Public Notice**

Notice and copies of the Applications was given to fulfill sections 63 and 64 of the MVRMA. The Board is satisfied that a reasonable amount of time was given to communities, First Nations, and the public to participate in this regulatory process by making submissions to the Board.

#### **4.3 Water Use Fees**

Paramount is required to pay water use fees prior to the start of operations as per subsection 8(1) of the Waters Regulations. Water use fees must be paid annually hereafter for the duration of the Licence on or before its Anniversary Date.

#### **4.4 Existing Licences**

With respect to 26(5)(a) of the *Waters Act*, no other Licensees contacted the Board during the statutory period, and there are no applicants with precedence in the watershed as per subsection 72.26(1) of the MVRMA/59(1) of the *Waters Act*. The Board is satisfied that the granting of this Licence will not adversely affect, in a significant way, any existing Licensee if compliance with the Licence occurs.

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<sup>14</sup> See [www.mvlwb.com](http://www.mvlwb.com) → Resources → Policies and Guidelines: [MVLWB Engagement and Consultation Policy](#) (June 1, 2013).

#### **4.5 Compensation to Existing Water Uses**

Paragraph 26(5)(b) of the *Waters Act* prohibits the issuance of the Licence unless the Board is satisfied that appropriate compensation has been or will be paid by the applicant to persons who would be adversely affected by the use of waters, or deposit of waste proposed by the applicant, at the time when the applicant filed its application with the Board.

The Board received no claims for compensation either during the prescribed period or afterwards. Provided compliance with the Licence conditions takes place, the Board finds that there are no water users or persons listed in paragraph 26(5)(b) of the *Waters Act* who will be adversely affected by the use of waters or the deposit of waste proposed.

#### **4.6 Water Quality Standards**

With regards to subparagraph 26(5)(c)(i) of the *Waters Act*, the Board is satisfied that compliance with the Licence conditions will ensure that waste will be collected and disposed of in a manner which will maintain water quality consistent with applicable standards and the Board's *Water and Effluent Quality Management Policy*. These are discussed further in Section 5.7 of these Reasons for Decision (Part F of the Licence: Conditions Applying to Waste and Water Management).

#### **4.7 Effluent Quality Standards**

There are no effluent quality standards prescribed in the Waters Regulations. The Board has considered its *Water and Effluent Quality Management Policy* to be protective of the receiving waters and environment. The Board is satisfied that compliance with the Licence conditions will protect the receiving waters and environment.

#### **4.8 Financial Responsibility**

The Board must satisfy itself of the financial responsibility of Paramount under 26(5)(c) of the *Waters Act* before it can issue the Licence.

Paramount is a publicly traded Canadian company that has been in business over 40 years and has operated in the Northwest Territories for over 20 years. Paramount has previously posted security for operations at Fort Liard East, Fort Liard West, Fort Liard South and Cameron Hills with the GNWT and OROGO. Most recently for the Project, Paramount previously posted a security of \$125,000.00 under Permit MV2013A00012 and \$0.00 under Licence MV2013L1-0002.

For the reasons set out above, the Board is satisfied that the financial capacity of the Applicant, in this case, is adequate and meets the requirements of paragraph 26(5)(c) of the *Waters Act*.

#### **4.9 Minimization of Adverse Effects**

With regards to subsection 27(2) of the *Waters Act*, it is the opinion of the Board that compliance with the Licence will ensure that any potential adverse effects on other water users, which might arise because of the issuance of the Licence, will be minimized.

#### 4.9.1 Time Limit

The Board is satisfied it has adhered to 48(1) of the *Waters Act*, which requires it to make a decision within a period of nine months after the day on which an application is made or a notice advertised as per subsections 43(1) and 43(2) of the *Waters Act*.

### 4.10 MVRMA Part 5: Environmental Review

#### 4.10.1 Environmental Assessment

The Project was the subject of an Environmental Assessment conducted by the Review Board Review Board: EA99-0061/86. Section 62 and subsection 130(5) of the MVRMA require that measures within the jurisdiction of the Board must be reflected in conditions set out in any land use permit and water license issued by the Board.

The Board carefully reviewed each measure, suggestion, and commitment from the EA and the modifications to the Review Board's measures by the Minister of Indian Affairs and Northern Development. The Board noted that EA measures are sometimes written in broad terms which are not appropriate for direct inclusion in a regulatory instrument. In addition, some measures are not within the Board's jurisdiction. Furthermore, although the reflection of suggestions and commitments in a Licence is not mandatory, the Board reviewed the suggestions and commitments to ensure the closest possible conformity with the EA decision made by the Minister. Overall, the Board is confident that the Licence contains conditions that implement the Review Board measures and the Minister's decisions to ensure that the Project will be adaptively managed, and that project-related effects on the environment will remain within an acceptable range. Annex 1 attached to these Reasons for Decision contains a table detailing how the Board incorporated the measures and suggestions from the EA into Permit and Licence conditions. Based on this analysis, the Board is satisfied that the Permit and Licence have met the requirements of section 62 of the MVRMA.

Portions of the Project underwent preliminary screening as part of the regulatory process for previous authorizations, as follows: MV2001P0097<sup>15</sup>, MV2001L1-0011<sup>16</sup>, MV2000A0001<sup>17</sup> and MV2000A0059<sup>18</sup>. The scope of the preliminary screenings are summarized below:

- MV2001P0097, MV2001L1-0011: ongoing operations, quarrying, staging and maintenance of the natural gas and transportation facilities for K-29, O-80, M-25 and F-25 well sites.
- MV2000A0001: F-25A well re-activation
- MV2000A0059: F25A wellsite production facilities

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<sup>15</sup> See [MV2001P0097 / MV2001L1-0011 Preliminary Screening](#)

<sup>16</sup> See [MV2001P0097 / MV2001L1-0011 Preliminary Screening](#)

<sup>17</sup> See [MV2000A0001 Preliminary Screening](#)

<sup>18</sup> See [MV2000A0059 Preliminary Screening](#)



#### 4.10.2 Preliminary Screening

On November 13, 2020, the Board met and confirmed the activities associated with the Applications were exempt from preliminary screening based on Part 1, Schedule 1, section 2.1 of the Exemption List Regulations to the MVRMA.<sup>19</sup> Consequently, no preliminary screening was conducted.

### 5.0 **Decision – Water Licence MV2020L1-0006**

In making its decision and preparing these Reasons for Decision, the Board has reviewed and considered:

- 1) The Report of Environmental Assessment EA99-0061/86 and Minister's modifications to measures, as approved by the Responsible Minister;
- 2) Preliminary Screening conducted for previous authorizations: MV2000A0059, MV2000A0001, MV2001P0097, MV2001L1-0011;
- 3) The comments and recommendations made during the regulatory processes;
- 4) The evidence and submissions from Paramount received by the Board;
- 5) The written comments and submissions from parties received by the Board; and
- 6) The Staff Report prepared for the Board.

Having due regard to the facts, circumstances, and the merits of the submissions made to it, and to the purpose, scope, and intent of the MVRMA and the *Waters Act*, the Board has determined that Licence MV2020L1-0006 should be issued, subject to the scope, defined terms, conditions, and term contained therein. The Board's determinations and reasons for this decision are set out below.

The scope, defined terms, conditions, and term set forth in the Licence have been developed to address the Board's statutory responsibilities and the concerns that arose during the regulatory process. The Reasons for Decision set out below focus on the major concerns and issues raised by parties, including those that were the subject of substantive argument submitted by one or more parties. They also address evidence which resulted in the inclusion of new or revised conditions that differ from those in the previous Licence MV2013L1-0002.

The format of the Licence has been reorganized from Licence MV2013L1-0002, with minimal content changes. Many of the conditions the Board has included in the Licence are from the MVLWB *Standard Water Licence Conditions Template* (Standard Licence Conditions)<sup>20</sup>, which includes general rationale for each standard condition. The Standard Licence Conditions have been established by the Land and Water Boards (LWBs) based on information from LWB policies and guidelines, other applicable guidelines and best practices, meetings with Inspectors, input from LWB staff, and feedback from a public review. Each standard condition has been evaluated against the following five characteristics of an ideal condition as laid out in the MVLWB *Standard Process for New Conditions*<sup>21</sup>:

- Clearly part of LWBs' authority;
- Has a clear purpose and rationale;
- Is practical and enforceable;

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<sup>19</sup> See MVLWB Decision – MV2020A0009 MV2020L1-0006 – Paramount – Liard West - Preliminary Screening Exemption Confirmation, November 13, 2020

<sup>20</sup> [MVLWB \(2020\) Standard Water Licence Conditions Template](#)

<sup>21</sup> [MVLWB \(2013\) Standard Process for New Conditions](#)

- Matches the scale of the project; and
- Does not conflict with existing legislation (i.e. is not less stringent).

As such, standard conditions are not discussed in detail in these Reasons for Decision except as they specifically relate to concerns or recommendations raised during this regulatory process. The Board's reasons for developing and including project-specific conditions are detailed in the relevant sections below. Where applicable, non-standard conditions developed for MV2013L1-0002 were carried over to MV2020L1-0006.

## **5.1 Term of Licence**

Paramount proposed a start date of November 1, 2020 and a completion date of October 31, 2025, resulting in a term of five years. Paramount indicated that well and battery sites K-29, O-80, M-25, and F-25A have been suspended while F-25 has been abandoned; the sites contain oil and gas infrastructure but are not producing. Compliance requirements for oil and gas wells which have been suspended or abandoned are described by the OROGO *Well Suspension and Abandonment Guidelines and Interpretation Notes*<sup>22</sup>.

Subsection 26(2) of the *Waters Act* allows for a Licence term of not more than 25 years or the duration of the undertaking. After reviewing the submissions made during this regulatory process and taking into consideration the closely linked Permit and OROGO's compliance requirements, the Board has determined an appropriate term for this undertaking is five years.

As the Licence and Permit are closely linked, the Board decided to continue the practice of setting the Licence term to coincide with that of the Permit, and therefore set the term of the Licence for five years from the date of issuance which takes into account the five-year term of the Permit, plus the possibility of a two-year extension of the Permit's term.

## **5.2 Part A: Scope and Defined Terms**

Part A of the Licence contains the scope and defined terms used throughout.

### Scope

The scope of the Licence ensures the Licensee is entitled to conduct activities which have been applied for and screened by the Board. In setting out the scope of the Licence, the Board endeavoured to provide enough detail to identify and describe the authorized activities, without be unduly restrictive or prescriptive, and to allow for project flexibility throughout the life of the Licence.

The scope of the Licence was written to be inclusive of Paramount's Application description and the scope of the previous Licence MV2013L1-0002. The description of the scope was also updated in accordance with the most recent Standard Water Licence Conditions and Schedules Template. A draft Licence was distributed as part of the public review allowing for input on the proposed scope. No comments or recommendations pertaining to the scope were submitted by reviewers as part of the public review.

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<sup>22</sup> [OROGO Well Suspension and Abandonment Guidelines and Interpretation Notes](#)

Paramount included production as part of the activities applied for. The scope excludes production as it was not part of the previous Licence and requires a Type A Application as per the Waters Regulations Schedule D, Item 3(b), which Paramount has not applied for. The requirement for a Type A application was also communicated as part of the decision letter for the previous Licence.<sup>23</sup>

In consideration of the scope, related natural gas facilities include those associated with well sites, the pipeline and rights-of-way, valve sites, repeater site, and dehydration facility. Ice bridges were not explicitly written into the scope as they are encompassed by bridges.

Part A, conditions 1(b) through 1(e) are consistent with previous Licences issued by the Board. These conditions ensure that the scope of the authorization includes all water uses and deposits of waste associated with the Project, reflect and comply with all applicable legislation for the life of the authorization, and consider and incorporate scientific and Traditional Knowledge where available in the Licensee's effort to protect the environment.

As part of the public review, ADKFN indicated they view the Paramount Liard West and East developments as one project and recommended they be merged into a single project. Paramount responded by indicating they are of the opinion Liard West and East are separate projects based on their likely outcomes; Paramount indicated Liard West may produce in the future while they plan to close and reclaim Liard East. The Closure and Reclamation guidance, as described by the MVLWB/AANDC *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories (2013)*, allows for the Closure and Reclamation of project components while other components remain active, and, therefore, the different outcomes of the projects should not be a limiting factor for not merging Fort Liard West and East.

#### Defined Terms

The Board defined items in the Licence to ensure a common understanding of conditions, to avoid future differences in interpretation, and to use wording similar to that found in previously issued licences. For the most part, the defined terms are consistent with the Standard Licence Conditions.

### **5.3 Part B: General Conditions and Schedule 1**

Part B and Schedule 1 of the Licence contains general administrative conditions regarding compliance and conformity with the *MVRMA* and *Waters Act*, and is consistent with standard conditions found in previous Licences issued by the Board.

Part B, condition 5, clarifies that all references to policies, guidelines, codes of practice, statutes, regulations or other authorities shall be read as a reference to the most recent versions, unless otherwise denoted. This standard practice allows for flexibility in Licence conditions when documents are updated during the life of the Licence.

This section addresses conformity and compliance with submissions to the Board. Annual review and submission of major updates or changes to management plans are required by Part B, condition 10, for Board approval. Such revisions must be approved by the Board prior to the implementation of activities not identified in existing, approved plans. This condition ensures that all applicable plans

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<sup>23</sup> See the Board's [decision letter](#) for MV2013L1-0002, dated November 14, 2013

are regularly reviewed and updated so they reflect changes in technology and/or changes and phases of the project throughout the life of the authorization.

Part B, condition 13 introduces the Schedules which are annexed to and form part of the Licence.

Part B, condition 16, was altered in accordance with the Application material which indicated all waste would be removed from the Northwest Territories. No comments were received as part of the public review.

#### Part B, condition 17 and Schedule 1, condition 1: Annual Water Licence Report

The requirements for the Annual Water Licence Report are outlined in Part B, condition 17, and Schedule 1, condition 1. The purpose of the Annual Water Licence Report is to provide the Board and all stakeholders the opportunity to be annually updated on project components and activities, and to provide a platform for stakeholders to submit comments, observations, feedback, and questions as necessary. The requirements are intended to provide clarity and summarize information already captured through existing submissions; they are not meant to be onerous. The Board organized these requirements to coincide with the layout of the Licence and to be consistent with recently issued licences.

#### Part B, condition 18: Engagement

The Board assesses engagement adequacy of applications through the Boards' *Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permits*, and the Boards' *Engagement and Consultation Policy*. The Board notes that Paramount's pre-engagement for the Applications was determined to be in accordance with the Guidelines and Policy. Paramount included an Engagement Plan and Log (dated July 2020) in the Applications.

As part of the public review, ADKFN commented on socio-economic concerns and Community Investment Plans. ADKFN indicated that they and Paramount are parties to a Community Investment Plan ("CIP") for the Fort Liard West Project and that Paramount has not fulfilled their obligations under the CIP, including work preference, community investment, engagement and compensation provisions. ADKFN requested the Applications not be approved until Paramount fulfills their obligations.

It is not within the Board's jurisdiction to require agreements related to funding to be in place, as dictated by recent Board decisions.<sup>24</sup> The Board's Engagement Guidelines do not require Proponents to report extensively on engagement efforts related to socio-economic issues. According to the Board's Engagement Guidelines:

*The Board may require additional or fewer Engagement activities to be conducted at the request of a proponent or affected party, or at their own discretion. For example, a potential case may be that the Board may require fewer engagement activities from a proponent if the affected party was deemed to be unreasonable in its response. In another case, the Board may*

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<sup>24</sup> See [MV2019X0007 – Giant Mine Remediation Project – Reasons for Decision](#)

*require additional engagement activities with an affected party if it required more information about unresolved issues in order to properly mitigate effects in a permit's conditions.*<sup>25</sup>

As part of the public review, ADKFN requested more information pertaining to the expected work and a minimum notice of 90 days prior to the commencement of any new activities. ADKFN also requested a schedule for all work expected to occur during the term of the authorizations. Paramount clarified that activity is related to economic conditions and, given current conditions, limited activity other than monitoring and maintenance will occur, and, consequently, were not able to provide a schedule; though, Paramount did commit to notifying ADKFN if re-activation or abandonment activities were to occur. The Board notes that production requires an application for a Type A Water Licence, which Paramount has not applied for. Paramount would be required to engage with ADKFN prior to submitting a Type A Water Licence application.

**Interim Approve:** The Engagement Plan has been approved as an interim submission and should be revised and re-submitted within 90 days of the issuance date of the Licence to reflect updates as agreed to during the public review and the recommendations of the Board:

- Update the Engagement Plan to include notifying affected parties 60 days prior to the commencement of site activities.

The revised Plan will be considered to be approved upon written confirmation of conformity from Board staff.

In acknowledgement of the comments, recommendations, and concerns brought forward by reviewers throughout the regulatory process, the Board included Part B, item 10 in the Licence which requires an updated Engagement Plan to be submitted to the Board, for Board approval, within 90 days following issuance of the Licence.

#### **5.4 Part C: Conditions Applying to Security Requirements and Schedule 2**

The Board is authorized to require the Licensee to provide security to the Minister by subsection 35(1) of the *Waters Act*. Subsection 35(2) of the *Waters Act* specifies how the security may be applied.

As part of the review, Paramount requested background on why the RECLAIM model is used to estimate security for the oil and gas industry. The MVLWB *Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories (2013)*<sup>26</sup> and MVLWB/GNWT/INAC *Guidelines for Closure and Reclamation Cost Estimates for Mines (2017)*<sup>27</sup> provide information on the security requirements and applicability of the RECLAIM model.

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<sup>25</sup> See [www.mvlwb.com](http://www.mvlwb.com) → Resources → Policies and Guidelines: [MVLWB Engagement Guidelines for Applicants and Holders of Water Licences and Land Use Permit](#) (June 5, 2018).

<sup>26</sup> See [MVLWB Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories \(2013\)](#)

<sup>27</sup> See [MVLWB/GNWT/INAC Guidelines for Closure and Reclamation Cost Estimates for Mines \(2017\)](#)

ADKFN stated Paramount's estimate did not include funding for engagement processes. Paramount noted they included funds under indirect project costs which in Paramount's view would be sufficient for engagement. ADKFN also indicated they felt there was an insufficient amount of time and cost allotted for Post-Closure Monitoring and Maintenance. The Board notes that the funds allotted to Post-Closure Monitoring and Maintenance in Paramount's estimate are similar to that of the GNWT's estimate.

Part C of the Licence, by reference to Schedule 2, sets the level of security to be maintained by the Licensee and requirements related to posting and updating security. As in other licences, the Board may request a security update from the proponent at any time, and may adjust the security amount at any time, based on available information. Specifically, Part C, conditions 3 and 4 stipulate that the Board can revise the security deposit and that the Licensee will post the revised deposit within 90 days following the Board's decision. This condition pertains to both increases and reductions in security. The conditions in this section are similar to those found in other Licences issued by the Board.

The Board has determined that the total security deposit amount shall be \$2,000,000.00; \$1,000,000.00 is required under the Licence and \$1,000,000.00 is required under the Permit. A detailed explanation of how the Board determined the security deposits for these two instruments is provided in Appendix A: Reclamation Security for the Project. They are discussed together since the Licence and Permit are intimately linked.

Specifically, Paramount is required to ensure security is posted prior to the commencement of site activities.

#### **5.5 Part D: Conditions Applying to Water Use**

Part D of the Licence contains conditions related to water use for the Project. These are consistent with standard conditions found in previous Licences issued by the Board.

Paramount indicated in their Application that water was to be obtained from the Liard River near station 10ED001 with geographic coordinates 60° 14'29"N 123° 28'31"W. Water is required for the construction of ice roads, ice bridges, camps, and dust control.

Part D, condition 1 describes the maximum quantity of water that can be withdrawn from Liard River as 299 m<sup>3</sup>/day.

As part of the review process, reviewers requested clarification on how the water would be removed from the source. Paramount clarified that removal of water would be done in adherence to standards from the Department of Fisheries and Oceans. Part D, condition 5 specifies the water intake requirements to mitigate the entrapment of fish.

#### **5.6 Part E: Conditions Applying to Construction**

Part E of the Licence contains conditions applying to construction activities for the Project and is consistent with standard conditions found in previous Licences issued by the Board. Paramount indicated the Project components have already been constructed.

Standard conditions pertaining to Engineered Structures contained in Part E: Construction were not included in the Licence as the facilities have been constructed and do not retain water unless they are in operation. Operation in the form of production is not part of the scope of the authorizations.

In their Applications Paramount indicated all Waste will be removed from the Project and that prior to removal it would be stored. In order to address environmental concerns associated with Waste storage, the Board has included conditions that require Paramount to utilize appropriate structures to contain, withhold, divert or retain water or Waste and maintain construction records. Accordingly, the Board adjusted Part E, condition 1 to include Waste, as per the Standard Template.

Paramount also indicated ice bridges will be constructed for water crossings. To address environmental concerns associated the construction of ice bridges, the Board has included a condition that the Licensee may only use material that is free of contaminants (Part E, condition 2).

Part E, condition 6 of the previous Licence was removed as it is encompassed by a standard condition in the Permit (condition 70) pertaining to restoring pre-construction profiles.

### **5.7 Part F: Conditions Applying to Waste and Water Management and Schedule 3**

Sump definitions were not included in the Licence. Paramount indicated in their Application that all waste would be removed from the Northwest Territories.

Part F and Schedule 3 of the Licence contains conditions applying to waste and water management activities for the Project and is consistent with standard conditions included in previous Licences issued by the Board. Site-specific conditions were developed where necessary.

Part F, condition 1 sets out the objectives for the management of water and waste for the Project. This condition is consistent with the principles of objective-based regulation: it essentially defines the objectives of any required management actions, plans or reports. This condition is standard for Licences issued by the Board and reminds the Licensee of the need to manage water and Waste with the goal of minimizing impacts on the receiving environment.

Discharge criteria from the previous Licence were removed (condition D.10) as Paramount indicated in their Application that all Waste would be removed from the Northwest Territories.

### **Management Plans and Monitoring Programs**

#### **Part F, Condition 2: Waste Management Plan**

The Boards' authority to regulate the management of Waste is described in subsection 26(1) of the MVLUR and sections 11 and 27 of the *Waters Act*. As such, the Board developed, and approved, *Guidelines for Developing a Waste Management Plan*.<sup>28</sup> These guidelines can be applied to a wide range of projects and are intended to ensure that all Waste management activities specific to each project are carried out in a way that is consistent with best practices and applicable guidelines to

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<sup>28</sup> See [www.mvlwb.com](http://www.mvlwb.com) → Resources → Policies and Guidelines: [MVLWB Guidelines for Developing a Waste Management Plan](#) (March 31, 2011).

minimize waste released from the Project. Waste Management Plan is a defined term in the Licence, ensuring that the required Plan adheres to the Board's Guidelines.

Submittal and compliance with a Waste Management Plan is standard for Licences issued by the Board. Paramount included a Waste Management Plan in the Application, dated August 2020.

The regulatory review process resulted in comments and recommendations regarding the specificity of the Waste Management Plan to the applied for activities; namely, that the Waste Management Plan indicated that all Waste would be removed from the Northwest Territories. As a result, methods for Waste management depicted in the version submitted with the Application no longer applied: Waste discharge, deposition of Waste in sumps and the disposal well. The version submitted with the Application also contained other Waste management methods not included in the scope of previous authorizations, such as bioremediation and thermal treatment. The review also resulted in recommendations for more detail with respect to Waste storage locations; specifically, that the Waste Management Plan be updated with detailed site maps which display local geographic features, site structures and operations of the Project identifying the locations in which waste would be stored. Paramount partially addressed these recommendations in their responses to reviewer comments.

The GNWT recommended Paramount ensure Waste management processes limit the attraction of wildlife through the following mitigation measures: using appropriate food and garbage handling and storage procedures; storing all food, Waste, recyclables and debris that may attract wildlife within sealed animal proof containers until final disposal; ensuring sealed animal proof containers are cleaned once emptied to minimize the attraction of wildlife; and removing all Waste to an approved disposal facility.

**Interim Approve:** The Waste Management Plan cannot be approved at this time and should be revised and re-submitted 60 days prior to commencement of activities to reflect the scope of the proposed activities, to meet the applicable guidelines, and to address the recommendations as part of the public review, as follows:

- Remove bioremediation and thermal treatment techniques as they do not apply to the current authorizations (MVLWB comment ID-1);
- Update site figures with sufficient detail of the sites as per MVLWB comment ID-9;
- Update storage information as provided in Paramount's response (MVLWB comment ID-18);
- Ensure waste management processes limit the attraction of wildlife through the following mitigation measures: appropriate food and garbage handling and storage procedures; storing all food, waste, recyclables and debris that may attract wildlife within sealed animal proof containers until final disposal; ensuring sealed animal proof containers are cleaned once emptied to minimize the attraction of wildlife; and removal of all waste to an approved disposal facility (GNWT comment ID-9);

The revised Plan will be considered to be approved upon written confirmation of conformity from Board staff.

#### Part F, Condition 5 and Schedule 3: Erosion and Sedimentation Management Plan

Part F, condition 5 lists the requirements for the Erosion and Sedimentation Management Plan. This Plan is required by the Licence to ensure potential erosion and sedimentation is managed in accordance with the *Waters Act*, and the objectives listed in Part F, condition 1 of the Licence.



The control of erosion and sediment was raised by ADKFN as part of the public review. ADKFN noted that Paramount did not include an Erosion and Sedimentation Management Plan in their Application and expressed concern that an Erosion and Sedimentation Management Plan is necessary to protect fish and fish habitat as ADKFN use waterways in the area for traditional practices. Paramount responded by indicating that Inspections conducted by the GNWT have not identified any concerns with respect to erosion.

Throughout the regulatory process Paramount indicated the use of access roads and water crossings are required for transportation throughout the Project area and that heavy equipment will be utilized near watercourses; notably, for the construction of ice bridges, earthworks for maintenance and reclamation activities, and for the use of quarries. Erosion and Sedimentation Management Plans are part of the Standard Template for Industrial Undertakings which pose a risk of erosion and sedimentation. The requirement for an Erosion and Sedimentation Management Plan has been included in Part F, condition 5. Specifically, Paramount is required to submit an Erosion and Sedimentation Management Plan 90 days prior to commencement of activities, for Board approval. This means that the Plan would be sent out for review for a period of time, allowing reviewers the opportunity to submit any comments or concerns to the Board.

Schedule 3 outlines the requirements of the Erosion and Sedimentation Management Plan.

#### **5.8 Part G: Conditions Applying to Aquatic Effects Monitoring Program**

The Board did not require conditions in this section to satisfy its mandate. The MVLWB/GNWT *Guidelines for Aquatic Effects Monitoring Programs* outlines monitoring requirements for developments and when Aquatic Effects Monitoring Programs (AEMP) are necessary. AEMPs are generally required for undertakings that require a Type A water licence as defined in the Waters Regulations and of projects which directly deposit waste to the receiving environment; though, an AEMP may be required for any project or undertaking where a change or effect to the aquatic environment is reasonably expected. In all cases, the requirement for an AEMP for any specific project is at the discretion of the Boards and will be based on the evidence presented in individual water licence proceedings.

The Application material indicated there would be no direct deposition of waste, and that the risk posed to aquatic environments would primarily result from earthworks, the construction of ice bridges, and the spring melt of ice bridges. These activities, and applicable monitoring and mitigation measures, are required as part of the Erosion and Sedimentation Management Plan as per Part F, condition 5 of the Licence.

As part of the public review, ADKFN expressed concern indicating their treaty rights are impacted through negative effects to the aquatic environment; however, ADKFN did not provide supporting evidence through the regulatory process.

In making its determination, regarding Part G conditions, the Board considered the previous authorizations, the Environmental Assessment and Preliminary Screening, the Application material in comparison to the MVLWB/GNWT *Guidelines for Aquatic Effects Monitoring Programs*, conditions pertaining to the control of erosion and sedimentation, and evidence brought forth as part of the review process.

## 5.9 Part H: Conditions Applying to Contingency Planning

Part H of the Licence contain conditions related to spill contingency planning and reporting, reclamation of spills and unauthorized discharges, and emergency response for the Project. The purpose of this part is to ensure that Paramount is fully prepared to respond to spills and unauthorized discharges. The planning and reporting requirements in this part ensure that Paramount has identified the lines of authority and responsibility, has an action plan(s) for responses to spills and unauthorized discharges, and has established reliable reporting and communication procedures. This will ensure that any spills or unauthorized discharges are effectively controlled and cleaned, with the goal of preventing or limiting damage to the Receiving Environment. The conditions in Part H are consistent with standard conditions found in previous Licences issued by the Board.

### Part H, condition 2: Spill Contingency Plan

Spill Contingency Plan is a defined term in the Licence, referencing the Indian and Northern Affairs Canada's *Guidelines for Spill Contingency Planning*.<sup>29</sup> Paramount included a Spill Contingency Plan in the Applications, dated August 2020.

Throughout the regulatory review process, comments and recommendations were received from reviewers regarding the applicability of the Spill Contingency Plan to the applied for activities, including: site maps which display local geographic features, site structures and operations of the project as per the Boards' *Guideline for Geographic Information Systems Submission Standard*<sup>30</sup>; clarification regarding the total volume of fuel stored on site; describing and depicting where fuel and methanol would be stored; the location of spill response resources; adverse effects of spill events with consideration of the environmental setting and receptors; action plans which address wastewater, methanol, including circumstances on how various material is handled and transported; clarification regarding how the public would be notified in the event of an emergency; and ensuring action plans address spill events on / near water, snow and ice.

Paramount responded by submitting an updated Spill Contingency Plan which addressed some of the recommendations; particularly, Paramount clarified the amount of fuel stored on site (63,000 litres). However, certain recommendations were not addressed.

**Interim Approve:** The Spill Contingency Plan cannot be approved at this time and should be revised and re-submitted 60 days prior to the commencement of activities to reflect the guidelines, updates as agreed to during the public review, to reflect the scope of the proposed activities and to include the following:

- Update site figures for K-29, M-25, and F-25 to address the recommendation under MVLWB comment ID-9;
- Depict hydrocarbon fuel and methanol storage locations on site maps (MVLWB comment ID-11);
- Identify the location of spill response resources (MVLWB comment ID-12);
- Include response and control measures for wastewater and methanol (MVLWB comment ID-14);
- Identify how the public will be notified in the event of an emergency (MVLWB comment ID-15); and
- Include response measures for spills on/near water, snow and ice (MVLWB comment ID-16).

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<sup>29</sup> [INAC Guidelines for Spill Contingency Planning \(2007\)](#)

<sup>30</sup> [MVLWB Guideline for Geographic Information Systems \(GIS\) Submission \(2016\)](#)

The revised Plan will be considered to be approved upon written confirmation of conformity from Board staff.

#### **5.10 Part I: Conditions Applying to Closure and Reclamation and Schedule 4**

Part I and Schedule 4 of the Licence contain conditions applying to Closure and Reclamation of the Project.

During the regulatory review process, ADKFN recommended that Paramount submit a Closure and Reclamation Plan and requested they be able to review the plan to ensure measures are taken to ensure the long-term protection of the environment and complete recovery of the site. Part I, condition 1, requires the Closure and Reclamation Plan be submitted for Board approval, which is consistent with other licences issued by the Board. This means that the Plan would be sent out for review for a period of time, allowing reviewers the opportunity to submit any comments or concerns to the Board.

The Licence conditions applying to the security deposit (Part C and Schedule 1) are closely related to Part I; the security deposit is directly related to the activities to be described in the closure plan, and updates to the closure plan often results in updates to the security deposit.

Part I, condition 3 requires Paramount to submit a Final Closure and Reclamation Plan three years prior to the expiry date of the licence, or a minimum of two years prior to the end of operations, whichever occurs first, for Board approval. The condition is a standard requirement of Licences issued by the Board and will ensure the Project is reclaimed in accordance with established guidelines and expectations of reviewers and the Board.

Part I, condition 7 requires Paramount to submit a Post-Closure and Reclamation Monitoring and Maintenance Plan within 90 days of completing Closure and Reclamation of the Project, or as otherwise directed by the Board, in accordance with Schedule 4, for Board approval. This is a standard requirement of Licences issued by the Board and will ensure the Project is reclaimed in accordance with established guidelines and expectations of reviewers and the Board. Requirements related to structures meeting the definition of a Dam were removed from the Schedule as they are not applicable to the Project.

Part I, condition 8 requires Paramount to submit a Performance Assessment Report within 90 days of completing Closure and Reclamation of any specific component of the Project, for Board approval. This is a standard requirement of Licences issued by the Board and will ensure the Project is reclaimed in accordance with established guidelines and expectations of reviewers and the Board.

#### **5.11 Part J: Conditions Applying to Watercourse Crossings**

The previous Licence contained six non-standard conditions pertaining to watercourse crossings. Four of the non-standard conditions were carried over to the current Licence. Two of the non-standard conditions are included as part of standard conditions:

- Condition E.2 of the previous Licence is addressed by the standard licence condition Part E, condition 2 of the current Licence; and
- Condition E.6 of the previous Licence is addressed by the standard permit condition Pre-Construction Profiles, condition 70 of the current Permit .

As part of the review, ADKFN indicated the draft water licence conditions did not contain recommended conditions ADKFN provided to Paramount regarding the construction of ice and snow bridges in watercourses that are frozen to bottom and conducting winter fish habitat assessments on rivers where snow and ice fill bridges are constructed. Paramount responded by indicating no new access or crossings are considered, that the road is built, and creating new crossings would lead to new disturbance. The Board notes that ADKFN did not provide supporting evidence for the inclusion of the requested conditions and that altering the location of stream crossings would likely have implications on the road which cannot be completely foreseen at this point; though, it seems apparent the road alignment would require alteration to connect to any proposed new watercourse crossing locations.

Based on the application material, the Project is accessed by an all-season road and existing bridges, with an ice bridge over the Liard River connecting the Hamlet of Fort Liard to the all-season road. Consequently, the Board concluded ADKFN's recommendations apply to Liard East.

#### **5.12 Annex A: Table of Submissions**

Annex A of the Licence contains a table that summarizes the information Paramount is required to submit as required by the Licence conditions.

### **6.0 Decision – Land Use Permit MV2020A0009**

In making its decision and preparing these Reasons for Decision, the Board has reviewed and considered:

- 1) The Report of Environmental Assessment EA99-0061/86 and Minister's modifications to measures, as approved by the Responsible Minister;
- 2) Preliminary Screenings conducted for previous authorizations: MV2000A0059, MV2000A0001, MV2001P0097;
- 3) The comments and recommendations made during the regulatory processes;
- 4) The evidence and submissions from Paramount received by the Board;
- 5) The written comments and submissions from parties received by the Board; and
- 6) The Staff Report prepared for the Board.

Having due regard to the facts, circumstances, and the merits of the submissions made to it, and to the purpose, scope, and intent of the MVRMA, the Board has determined that Permit MV2020A0009 should be issued, subject to the scope, defined terms, conditions, and term contained therein. The Board's determinations and reasons for this decision are set out below.

The scope, defined terms, conditions, and term set forth in the Permit have been developed to address the Board's statutory responsibilities and the concerns that arose during the regulatory processes. The Reasons for Decision set out below focus on the major concerns and issues raised by parties, including those that were the subject of substantive argument submitted by one or more parties.

Most conditions in the Permit are from the *Standard Permit Conditions Template* (Standard Permit Conditions), which includes general rationale for each standard condition. The Standard Permit Conditions have been established by the LWBs based on information from LWB policies and guidelines, other applicable guidelines and best practices, meetings with Inspectors, input from LWB staff, and feedback from a public review. Each standard condition has been evaluated against the following five characteristics of an ideal condition:

- Clearly part of LWBs' authority;
- Has a clear purpose and rationale;
- Is practical and enforceable;
- Matches the scale of the project; and
- Does not conflict with existing legislation (i.e. is not less stringent).

As such, standard conditions are not discussed in detail in these Reasons for Decision except as they specifically relate to concerns or recommendations raised during this regulatory process. The Board's reasons for developing and including project-specific conditions are detailed in the relevant sections below.

### **6.1 Term of Permit**

Paramount has applied for a term of 5 years for the Permit. Paramount indicated that well and battery sites K-29, O-80, M-25, and F-25A have been suspended while F-25 has been abandoned; the sites contain oil and gas infrastructure but are not producing. Compliance requirements for oil and gas wells which have been suspended or abandoned are described by the *OROGO Well Suspension and Abandonment Guidelines and Interpretation Notes*<sup>31</sup>.

Based on the timelines for suspended and abandoned wells described in the *OROGO Well Suspension and Abandonment Guidelines and Interpretation Notes*, the requested term of five years is appropriate to accommodate activities associated suspension and abandonment.

Subsections 26(5) of the MVLUR allows for a Permit term of not more than five years. After reviewing the submissions made during this regulatory process and taking into consideration the closely linked Licence and OROGO's compliance requirements, the Board has determined an appropriate term for this undertaking is five years.

### **6.2 Part A: Scope of Permit**

The scope of the Permit ensures the Permittee is entitled to conduct activities which have been applied for and screened by the Board. In setting out the scope of the Licence, the Board endeavoured to provide enough detail to identify and describe the authorized activities, without be unduly restrictive or prescriptive, and to allow for project flexibility throughout the life of the Permit.

As part of the public review it became apparent that clearing of vegetation was required to maintain roads and rights-of-way. Clearing was added to the scope of the Permit to accommodate the activities identified in the Application.

The use of equipment, vehicles and machines and the construction, use and maintenance of winter roads is intended to include the activities related to road maintenance Paramount identified in the Application, including earthworks and grading.

Paramount suggested removal of closure from the scope. The Board has included closure as it is included in the Standard Template, and the Permit and Licence are closely linked.

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<sup>31</sup> [\*OROGO Well Suspension and Abandonment Guidelines and Interpretation Notes\*](#)

### **6.3 Part B: Defined Terms**

The Board defined items in the Permit to ensure a common understanding of conditions, to avoid future differences in interpretation, and to use wording similar to that found in previously issued Permits. The defined terms used wording from the Board's Standard Template.

The Engineered Structure definition was not included in the Permit as the existing facilities do not retain water unless they are in operation. Operation, in the form of production, is not included in the scope.

### **6.4 Part C: Conditions Applying to All Activities**

The subheadings below correspond to the headings in the conditions section of the Permit, as outlined in section 26(1) of the MVLUR. Most conditions in the Permit are from the Board's Standard Template, and are not discussed in detail in these Reasons for Decision unless notable due to recommendations or concerns raised during the public review. Where applicable, the Board's reasons for including non-standard conditions are discussed.

As part of the review process, Paramount provided recommendations to draft conditions. Paramount's recommendations are discussed under the specific part of the Permit below.

#### 26(1)(a) Location and Area

The conditions included in this section are all consistent with the Board's Standard Template, except as noted below.

The standard conditions Quarry Setback and Parallel Watercourse Setback were altered to include the wording "except as described in the Application" to accommodate the scope of work. No comments were received on these conditions during the review period.

Private Property Setback condition (condition 2) - Paramount indicated they were not aware of cabins within 100 meters, and that they would not want to preclude ADKFN members or other traditional land users from building cabins. As no further evidence was gained as part of the review, the condition was not altered.

Width Right-of-Way condition (condition 7) - Paramount indicated access is built and the condition is therefore not necessary. The condition has been included as it is part of the Standard Template.

#### 26(1)(b) Time

The conditions included in this section are all consistent with the Board's Standard Template.

#### 26(1)(c) Type and Size of Equipment

The conditions included in this section are all consistent with the Board's Standard Template. Due to a lack of clarity in the Application material, reviewers requested Paramount specify the amount of equipment expected to be utilized as part of the authorizations. Paramount indicated that equipment requirements are dependent on circumstances of the work and that they anticipate one piece of abandonment and suspension equipment would be required.

#### 26(1)(d) Methods and Techniques

The conditions included in this section are all consistent with the Board's Standard Template.

#### 26(1)(e) Type, Location, Operation of All Facilities

The conditions included in this section are all consistent with the Board's Standard Template.

#### 26(1)(f) Control or Prevention of Ponding of Water, Flooding, Erosion, Slides, and Subsidence of Land

The conditions included in this section are all consistent with the Board's Standard Template, except as noted below

As part of the review, Paramount indicated that the 'Equipment: Watercourse Buffer' condition (condition 35) would not allow Paramount to repair and maintain the existing road as indicated in the Application. The condition was altered to include the wording "except as described in the Application" to enable road maintenance.

#### 26(1)(g) Use, Storage, Handling, and Ultimate Disposal of Any Chemical or Toxic Material

The conditions included in this section are all consistent with the Board's Standard Template.

Sump definitions were not included as Paramount indicated in their Application that all waste would be removed from the Northwest Territories.

The Project has historically used sumps for the disposal of drilling waste and wastewater. Paramount indicated in their Application that all waste would be removed from the Northwest Territories. The standard conditions associated with Sumps were not included: Sump Setback, Reclaim Oil and Gas Sumps, Reclaim non-Oil and Gas Sumps, Notification of Oil and Gas Sump Backfilling, Sewage Disposal – Sump Setback.

#### 26(1)(h) Wildlife and Fish Habitat

As part of the public review, the GNWT submitted comments and recommendations pertaining to mitigating effects to wildlife, including nesting birds. This included a recommendation to provide a Wildlife Management and Monitoring Plan (WMMP) which addresses disturbance, monitoring, and reporting of species known to inhabit the area which are NWT-listed or pre-listed species. The GNWT's recommendations extended to the reduction and elimination of impacts to wildlife as well.

The Board notes that provisions in the MVLUR apply to protection of wildlife habitat, not wildlife. Impacts to wildlife are under the jurisdiction of the GNWT through the Wildlife Act. For this reason, the Board decided not to require a WMMP as part of the Permit. The Board included condition 40 in the Permit, which requires Paramount to prevent damage to wildlife and fish Habitat. This is a condition from the Board's Standard Template, and is intended to ensure Paramount conducts their land-use operation in such a way as to minimize disturbance to habitat.

#### 26(1)(i) Storage, Handling, and Disposal of Refuse or Sewage:

A Waste Management Plan is a standard requirement for land use permits issued by the Board. The Waste Management Plan is intended to ensure that all waste management activities are carried out in a way that is consistent with best practices and applicable guidelines to minimize waste released

from the Project. The Waste Management Plan is also required under Part F of the Licence and the Board's reasons for including the Waste Management Plan, and requiring revisions and re-submittals, are described above in Section 5.7. The Board mirrored these conditions to the extent possible with the Licence requirements to ensure one submission will satisfy conditions of both the Licence and Permit.

The conditions included in this section are all consistent with the Board's Standard Template.

26(1)(j) Protection of Historical, Archaeological, and Burial Sites;

The conditions included in this section are all consistent with the Board's Standard Template.

26(1)(k) Objects and Places of Recreational, Scenic, and Ecological Value

The Board did not require conditions in this section to satisfy its mandate and did not receive any comments during the review of the draft Permit.

26(1)(l) Security Deposit

The Board is authorized to require the Permittee to provide security to the Minister by subsection 32(1) of the MVLUR. Subsection 32(2) of the MVRMA specifies how the security may be applied.

The Board has included a requirement for security in the Permit. The Board's reasons associated with this section are described above in Section 5.4, in conjunction with reasons for security required by the Licence. The security deposits required by these two instruments are discussed together since they are intimately linked. The conditions included in this section are all consistent with the Board's Standard Template.

26(1)(m) Fuel Storage

A Spill Contingency Plan is a standard requirement for land use permits issued by the Board. This Plan is intended to ensure that an action plan(s) for responses to spills and unauthorized discharges, and has established to effectively control and clean up spills and unauthorized discharges, with the goal of preventing or limiting damage to the receiving environment. The Spill Contingency Plan is also required under Part H of the Licence and the Board's reasons for including the Spill Contingency Plan, and requiring revisions and re-submittals, are described above in Section 5.9. The Board mirrored these conditions to the extent possible with the Licence requirements to ensure one submission will satisfy conditions of both the Licence and Permit.

In response to review comments, Paramount submitted a revised Spill Contingency Plan that indicated 63,000 litres of fuel would be stored on site. The Maximum Fuel on Site condition has been updated to reflect the amount of fuel specified in the revised Spill Contingency Plan.

26(1)(n) Methods and Techniques for Debris and Brush Disposal

The conditions included in this section are all consistent with the Board's Standard Template.

26(1)(o) Restoration of the Lands

The conditions included in this section are all consistent with the Board's Standard Template.



#### 26(1)(p) Display of Permits and Permit Numbers

The conditions included in this section are all consistent with the Board's Standard Template.

#### 26(1)(q) Biological and Physical Protection of the Land

The conditions included in this section are all consistent with the Board's Standard Template.

An Engagement Plan is a standard requirement for land use permits issued by the Board. This Plan is intended to ensure adequate and effective engagement with potentially affected parties has occurred prior to the submission of the Applications (in the form of the Engagement Log) and is planned for throughout the life of the Project. This Plan is also required under Part B of the Licence and the Board's reasons for including this Plan, and requiring revisions and re-submittals, are described above in Section 5.3. The Board mirrored these conditions to the extent possible with the Licence requirements to ensure one submission will satisfy conditions of both the Licence and Permit.

As part of their review, the GNWT-ENR recommended that vegetation clearing, and new ground disturbance be conducted outside of bird breeding and nesting season for birds in the project area. Paramount acknowledged the GNWT's comment but did not commit to the recommendation. To address the GNWT's recommendation, a non-standard condition titled Bird Breeding / Nesting Seasons has been added. The condition states the Permittee shall only conduct vegetation clearing and any new ground disturbance between September 22 and March 31 of any year unless otherwise authorized by an Inspector.

### **7.0 Conclusion**

Subject to the scopes, defined terms, conditions, and terms set out in the Licence and Permit, and for the reasons expressed herein, the MVLWB is of the opinion that the land-use activities, water use, and waste disposal associated with the Project can be completed by Paramount while providing for the conservation, development, and utilization of waters in a manner that will provide the optimum benefit for all Canadians and in particular for the residents of the Mackenzie Valley.

Water Licence MV2020L1-0006 and Land Use Permit MV2020A0009 contain provisions that the Board deems necessary to ensure and monitor compliance with the MVRMA, *Waters Act*, and the Regulations made thereunder, and to provide appropriate safeguards in respect of Paramount use of the land and water affected by the Licence.

SIGNATURE

Mackenzie Valley Land and Water Board



Mavis Cli-Michaud, Chair

November 13, 2020

Date

## Appendices and Annexes

Water Licence and Land Use Permit Applications	
<b>Preliminary Screener</b>	MVLWB
<b>File Number</b>	MV2020L1-0006 and MV2020A0009
<b>Company</b>	Paramount Resources Ltd.
<b>Project</b>	Industrial Undertaking and Oil and Gas, West of Fort Liard, NT
<b>Date of Decision</b>	November 13, 2020

### **Appendix 1: Reclamation Security for the Project**

#### **1.0 Introduction**

The security established under the previous Licence and Permit is summarized in Table 1.0 below.

**Table 1.0: Current Security**

Authorization	Condition	Amount
Permit MV2013A0012	Condition 59	\$125,000.00
Licence MV2013L1-0002	Part B condition 2	\$0.00
<b>Total</b>		<b>\$125,000.00</b>

On August 30, 2018, the Board approved an Extension to Term of Permit MV2013A0012 and Amendment to Term of Licence MV2013L1-0002 to November 13, 2020.<sup>32</sup> As part of the approvals, the Board directed Paramount to submit a revised security estimate by October 30, 2018. This stemmed from a recommendation during the review period from GNWT-ENR that the Board initiate a review of the security held under the authorizations to ensure the amount appropriately represents the liability associated with the Project.

On October 30, 2018, Paramount submitted a security estimate utilizing Directive 011<sup>33</sup> from the Alberta Energy Regulator without supporting rationale.<sup>34</sup> The security proposed by Paramount totaled \$345,000.00.

On January 17, 2019, the Board determined they could not proceed with the regulatory process based on Paramount's October 30, 2019 submission. The Board directed Paramount to submit a security estimate using the current version of RECLAIM by February 28, 2019 and encouraged Paramount to work with the GNWT in establishing their submission.<sup>35</sup> Paramount submitted a revised security estimate using the RECLAIM model on March 1, 2019.<sup>36</sup> Paramount's estimate totalled \$698,904.00; \$695,311.00 attributed to land and \$3,593.00 attributed to water.

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<sup>32</sup> See [decision letter](#), dated August 30, 2018

<sup>33</sup> See [Directive 011](#), dated August 1, 2015

<sup>34</sup> See [submission](#), dated October 30, 2018

<sup>35</sup> See [Board direction](#), dated January 17, 2019

<sup>36</sup> See Paramount's [security estimate](#), dated March 1, 2019

## 1.1 Evidence from the Security Re-assessment in 2019

Paramount's March 1, 2019 security estimate was distributed for public review on March 5, 2019. As part of the public review, the GNWT submitted an updated security estimate.<sup>37</sup> The GNWT's and Paramount's submissions resulted in different estimations of liability costs, as summarized in Table 1.1 below.

**Table 1.1: Summary of Paramount's and the GNWT's Security Estimates**

<b>RECLAIM 7.0 Oil and Gas</b>	<b>Paramount 2019</b>		<b>GNWT 2019</b>	
<b>CAPITAL COSTS</b>	<b>Land Liability</b>	<b>Water Liability</b>	<b>Land Liability</b>	<b>Water Liability</b>
Wells and Facilities	\$0	\$0	\$637,000	\$368,500
Buildings and Equipment	\$2,040	\$2,040	\$180,190	\$100,425
Chemicals and contaminated soil management	\$392,700	\$0	\$0	\$257,150
Surface and groundwater management	\$0	\$0	\$0	\$0
Interim care and maintenance	\$0	\$0	\$0	\$3,890
<b>SUBTOTAL: Capital Costs</b>	<b>\$394,740</b>	<b>\$2,040</b>	<b>\$817,190</b>	<b>\$729,965</b>
<b>PERCENT OF SUBTOTAL</b>	99%	1%	53%	47%
<b>INDIRECT COSTS</b>	<b>Land Liability</b>	<b>Water Liability</b>	<b>Land Liability</b>	<b>Water Liability</b>
Mobilization/ demobilization	\$124,383	\$643	\$58,149	\$51,943
Post-closure monitoring and maintenance	\$65,661	\$339	\$38,135	\$34,065
Engineering (3%)	\$11,842	\$61	\$24,516	\$21,899
Project management (3%)	\$11,842	\$61	\$24,516	\$21,899
Health and safety plans/ monitoring & QA/QC (1%)	\$3,947	\$20	\$8,172	\$7,300
Bonding/insurance (1%)	\$3,947	\$20	\$8,172	\$7,300
Contingency (20%)	\$78,948	\$408	\$163,438	\$145,993
Market price factor adjustment (0%)	\$0	\$0	\$0	\$0
<b>SUBTOTAL: Indirect Costs</b>	<b>\$300,571</b>	<b>\$1,553</b>	<b>\$325,098</b>	<b>\$290,398</b>
<b>TOTAL COSTS</b>	<b>\$695,311</b>	<b>\$3,593</b>	<b>\$1,142,288</b>	<b>\$1,020,363</b>
<b>GRAND TOTAL COSTS</b>	<b>\$698,904</b>		<b>\$2,162,651</b>	

### 1.1.1. Government of the Northwest Territories

As part of their review, the GNWT indicated that Paramount's security estimate lacked supporting information. In establishing their estimate, the GNWT indicated they used information from

<sup>37</sup> See Review Comment Summary Table 2019, GNWT-ENR comment 9

Paramount's applications; though, they were required to make assumptions due to the Applications not having sufficient information. The GNWT's security estimate totaled \$2,162,651; \$1,142,288 and \$1,020,363 for land and water, respectively. The GNWT noted they did not include the reclamation cost of access roads or for the removal of pipelines. Their rationale for exclusion was due to uncertainty whether the pipeline is part of the MVLWB authorizations or reclamation requirements or under another jurisdiction, such as the National Energy Board (NEB, now the Canada Energy Regulator) or OROGO.

#### *1.1.2. Office of the Oil and Gas Regulator*

As part of their review, OROGO clarified the purpose of the Proof of Financial Responsibility (PFR) in which they hold.<sup>38</sup> OROGO indicated the PFR may be used to pay claims made under section 63 of the *Oil and Gas Operations Act* (OGOA) for the actual loss or damages from or for cost associated with clean-up of debris, spills or authorized discharge, emission or escape of oil and gas, with terms defined as follows:

- "Actual loss or damage" as including loss of income, including future income and the loss of hunting, fishing and gathering opportunities by Aboriginal peoples;
- "Debris" as an installation or structure that has been abandoned without authorization or any material that has broken away or been jettisoned or displaced in the course of an approved work or activity; and
- "Spills" as a discharge, emission or escape of petroleum.

#### *1.1.3. Paramount Resources Ltd.*

As part of their responses to review comments, Paramount stated they established their estimate using information on the MVLWB public registry, information contained in current and former applications, the commitments Paramount made (or inherited) under Environmental Assessment processes, and information from inspections conducted by the GNWT and Crown Indigenous Relations and Northern Affairs Canada (CIRNAC).

Paramount indicated they disagreed with the GNWT's estimate and expressed concern that the GNWT's estimate could result in Paramount posting security for aspects of the Project that, from their understanding, are the jurisdiction of OROGO, namely abandonment of wells and decommissioning of production facilities.

Paramount indicated they were of the opinion the GNWT's estimate contained errors regarding the scale and scope of project, as follows:

*"For Liard West, there are no camps at D-05 or L-18 and the camp at K-29 is part of the production equipment. GNWT ENR assumes monthly monitoring will be required, this is not done at present for the fields and is not a standard reclamation practice. No justification is provided in their estimate as to why monthly monitoring would be needed."*

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<sup>38</sup> See Review Comment Summary Table 2019, OROGO comment 1

#### 1.1.4. Analysis

Based on the evidence collected as part of the re-assessment of security in 2019, the different estimations of liability costs are attributed to the following:

- 1) Whether reclamation, specifically of wells and site buildings, is the responsibility of the GNWT or OROGO. Paramount excluded portions of the Project from their cost estimate which resulted in different costs under line items 'Wells and Facilities' and 'Buildings and Equipment'.
- 2) Detail regarding the scale and scope of development which resulted in the GNWT and Paramount inputting different values into the RECLAIM model.

The review also identified other factors which would significantly influence security:

- 1) Whether reclamation of the access roads should be included.
- 2) Whether reclamation of pipelines and pipeline rights-of-way should be included.
- 3) That Fort Liard West contains nine wells (K-29, K-29A, 2K-29, 3K-29, O-80, M-25, 2M-25, F-25, and F-25A) at five sites (K-29, O-80, M-25, F-25 and F-25A), amounting to four additional wells not included in the GNWT's estimate.

On January 17, 2019, prior to Paramount submitting revised security estimates, the Board encouraged Paramount to work with the GNWT. As part of the public review in 2019, the GNWT stated Paramount had not engaged with them as part of their submission. The lack of engagement appears to be a significant factor in the discrepancies between the estimates.

## 1.2 Evidence from the Regulatory Process for the Applications

When the Applications were distributed for review it was communicated to reviewers and the Applicant that evidence gained as part of the security re-assessment in 2019 would be used to assist in establishing security for the applied for authorizations.

#### 1.2.1. Government of the Northwest Territories

As part of the review for the Applications, GNWT clarified their authority in relation to OROGO's jurisdiction with respect to the liability associated with the Project:<sup>39</sup>

- i. PFR is not related to reclamation-related security that the Ministers of ENR and Lands require for water licences and land use permits, respectively;
- ii. The GNWT cannot access OROGO funds in the case of solvency, and PFR does not apply to reclamation outside of the wells and pipelines (e.g. sumps and battery sites);
- iii. PFR can only be paid to persons suffering "actual loss or damage" from a spill or debris or to the GNWT if it reasonably incurs "costs or expenses taking any action or measure in relation to the spill... or remedial action in relation to debris", as defined in OGOA.
- iv. PFR is based on a future hypothetical scenario that may never materialize (e.g. a spill), which is unlike reclamation costs that are based on the estimated actual costs of restoring lands to their original state. The GNWT indicated that because of the information they provided, they and OROGO do not consider their requirements to overlap.

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<sup>39</sup> See Review Comment Summary Table 2020, the GNWT-ENR comments 1, 2, and 3

The GNWT referenced a previous ruling by the Sahtu Land and Water Board (SLWB) on its authorities in relation to the NEB's jurisdiction regarding oil and gas development. A notable portion of the SLWB's ruling is provided below:

*The Board [SLWB] is of the view that its authorities do not conflict with those granted to the National Energy Board (NEB) under its legislation and that these regulatory regimes are complementary.<sup>40</sup>*

#### 1.2.2. Paramount Resources Ltd.

Paramount responded by reiterating their view that the GNWT and OROGO's security requirements overlap, and provided additional detail with respect to perceived errors with the GNWT's estimate:

*"Paramount continues to believe there are inaccuracies in the estimate provided by ENR. Examples can be seen of the estimates currently on the review system. This includes but are not limited to battery equipment at every site and facility equipment at every site for Liard West. Liard West is a gas development and thus no oil battery is or has ever been located at the facility. Further, a number of items related to the gas development were removed during the de-activation. The remaining equipment is subject to a 10 (1)b approval which would be covered by section 63 of OGOA as debris includes any structure that was put in place in the course of any work or activity required to be authorized under that paragraph... Other errors include estimates on volumes, buildings and equipment, depth of wells and monitoring estimates.... GNWT estimate includes costs for contamination, which would occur because of a spill which is within the jurisdiction that OROGO would provide funds for."*

#### 1.2.3. Analysis

##### Perceived Overlapping of Security Requirements

The GNWT's and OROGO's submissions as part of the public review of the Applications and during the re-assessment of security in 2019 clarified their authorities with respect to security. Further, the GNWT explicitly indicated OROGO's PFR *"is for a different purpose than the reclamation-related security that the Ministers of ENR and Lands hold under water licences and land use permits, respectively."*

The GNWT's and OROGO's responses are also consistent with previous correspondence from OROGO where they clarified that costs associated with well abandonment, and any other costs associated with site remediation and reclamation are not covered by the PFR.<sup>41</sup>

##### Perceived Inaccuracies in the Government of the Northwest Territories Security Estimate

After reviewing the comments, recommendations and responses as part of the review, the Board invoked paragraph 22(2)(b) of the MVLUR on October 9, 2020, and directed Paramount to submit a revised security estimate along with supporting documentation containing detail on the

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<sup>40</sup> See Sahtu Land and Water Board [Ruling on Jurisdiction](#), May 15, 2014

<sup>41</sup> See [correspondence](#) from OROGO dated October 14, 2018

Project's infrastructure.<sup>42</sup> The purpose of the direction was to align the closely linked permit and licence applications and to clarify the perceived inaccuracies which Paramount expressed as part of their reviews. The Board directed Paramount, as follows:

*"In establishing their revised estimate, Paramount must:*

- *Engage with the GNWT;*
- *Use version 7.0 of the RECLAIM model for oil and gas;*
- *Include all applicable oil and gas facilities and associated infrastructure;*
- *Provide a supporting document which clearly identifies the following:*
  - *All oil and gas facilities and associated infrastructure in Fort Liard West,*
  - *The oil and gas facilities and associated infrastructure that have been included in the security estimate, and*
  - *The oil and gas facilities and associated infrastructure that have been excluded from the security estimate, with supporting rationale justifying the exclusion."*

Paramount submitted a letter on October 22, 2020. As part of their response, Paramount indicated the following:

- They did not have sufficient time to prepare a revised estimate;
- They were of the opinion they had engaged with the GNWT through the regulatory and review processes;
- Their estimate included the reclamation of all well sites (5), access roads, camps and sumps; and
- They are uncomfortable taking responsibility for using the RECLAIM model.

Paramount also stated the following:

- Their estimate includes contamination that would have or will occur under OROGO's approval and if required to submit a new security estimate they would most likely exclude those costs;
- Wellbores and wellheads were not included in their estimate; and
- All installations and structures subject to approval with OROGO were not included in their estimate.

Paramount's response did not include a revised security estimate or detail on the infrastructure associated with the Project, and, consequently, it did not clarify Paramount's perceived inaccuracies of the GNWT's estimate. The Board understands Paramount's view of perceived inaccuracies in the GNWT's estimate; however, Paramount themselves have not provided a clear detailed description of the infrastructure associated with the Project to reconcile their perceived inaccuracies. Further, the Board is satisfied that throughout the regulatory review process for the re-assessment of security in 2019, and the regulatory review process as part of the Applications, Paramount has had sufficient time to engage with the GNWT to reconcile their perceived discrepancies and provide a security estimate with clear supporting rationale.

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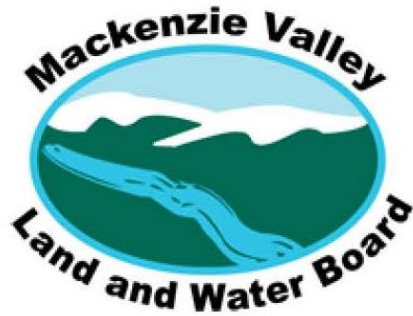
<sup>42</sup> See [Board direction](#), dated October 9, 2020

## **2.0     Decision – Security MV2020L1-0006 MV2020A0009**

Based on the analysis described above, the Board concluded that the GNWT's security estimate likely best reflects the liabilities that are associated with the Project. The Board established security amounts of \$1,000,000.00 for land and \$1,000,000.00 for water. The financial security conditions in the Permit and Licence require security to be deposited prior to commencing site activities.

Refer to Section 5.4 of these Reasons for the Board's determination of security for MV2020L1-0006 and MV2020A0009 based on the detailed reasons described here.





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## Annex 1: Incorporation of Measures and Suggestions from Environmental Assessment for the Project

**Table 1: Measures 1-14 from the Environmental Assessment EA 99-0061-0086**

#	Topic	Measure and Minister's Modifications to the Review Board's Measures (January 10, 2000)	Where item was addressed in the Licence/Permit
1	Public Consultation	The Review Board recommends that the developer provide information and training sessions on the gas industry to the affected communities on a period basis, but no less frequently than once a year to assist in this understanding. The Review Board comments and supports the developer's commitment to undertake ongoing consultations with the community of Fort Liard and recommends that this commitment be extended to include all affected communities.	See Minister's Modifications below
		The Review Board also recommends that the developer be required to document the issues and concerns raised during these consultations and file a summary of these meetings, including any responses and mitigation resulting from these community concerns with the National Energy Board, DIAND and the Review Board. <i>Minister's Modifications to the Review Board's Measures</i> <i>In letters dated December 15, 1999, to the National Energy Board (NEB), Chevron Resources Canada Ltd. and Ranger Oil Ltd. committed to on-going consultation with affected communities.</i>	Permit 26(1)(q) Licence Part B
2	Traditional Knowledge	The Review Board recommends that the developer, preferably in cooperation with the Liard Valley Producers Group, work with elders from affected communities to develop a complete listing of TK data sources indicating the nature and location of TK in the region.	See Minister's Modifications below
		<i>Minister's Modifications to the Review Board's Measures</i> <i>As outlined in letters dated December 15, 1999, to the NEB, Chevron Canada Resources Ltd. and Ranger Oil Ltd. committed to work with affected communities to develop a list of traditional data sources appropriate to the project area in conjunction with the on-going consultation. The Cumulative Effects Assessment and Management Framework initiative may also consider the development of a meta-database of traditional knowledge data sources.</i>	Licence Part B conditions 3 and 4

#	Topic	Measure and Minister's Modifications to the Review Board's Measures (January 10, 2000)	Where item was addressed in the Licence/Permit
3	Visual Aesthetics	The Review Board recommends that the developer make every effort to minimize visual impacts and enhance visual resources in the area affected by the development. The Review board further recommends that the developer and government undertake research to evaluate the amount of regrowth that can occur on a pipeline right-of-way and investigate best methods and species for revegetation. (See also 6.3.1).	See Minister's Modifications below
		<i>Minister's Modifications to the Review Board's Measures</i> <i>Ranger Oil Ltd. and Chevron Canada Resources Ltd. will make all reasonable efforts to minimize visual impacts caused by the proposed development. Ranger Oil Ltd. and Chevron Canada Resources Ltd. will develop and implement a re-vegetation monitoring plan as part of the abandonment and restoration plan. Re-vegetation will be progressive throughout the life of the project. The Department of Resources, Wildlife and Economic Development (RWED) and EC will review Ranger Oil Ltd. and Chevron Canada Resources Ltd.'s re-vegetation plan prior to the developer proceeding. RWED and EC have both committed to review the developers progress and on-going success of that plan.</i>	Licence Part I Closure and Reclamation Plan  Progressive reclamation included in Licence Part I, conditions 4, 5 and 6
5	Extent of Physical Footprint	<p>The Review Board recommends that the developer make every effort to reduce the physical footprint of the development on all development right-of-ways. The Review Board also recommends that at the end of construction, the pipeline right-of-ways be returned to pre-development forest cover type, and that any reforestation plans be developed in consultation with the GNWT.</p> <p>The Review Board supports the recommendations made by the GNWT and DIAND with respect to monitoring road access and ensuring good environmental and industry practices are followed. The Review Board recommends that these suggestions be implemented by the developer. The developer should report annually on the implementation and results of these measures to DIAND, the GNWT and the Review Board. The developer should also work with government to study and report on appropriate reforestation/re-vegetation methods, species and success rates.</p> <p>The Review Board recommends that the pipeline facilities be designed to accommodate the complete thaw of permafrost where it is encountered. The developer should work with NRCAN and other appropriate government departments and agencies to develop and implement a long term monitoring and reporting program to monitor the effects of this development on ground thermal regimes. The information collected should be made available to the public to be used in the assessment and design of any future developments in this area. This monitoring and reporting should also be coordinated with other monitoring recommendations in 6.2.3, 6.3.3 and 6.3.4.</p>	See Minister's Modifications below

#	Topic	Measure and Minister's Modifications to the Review Board's Measures (January 10, 2000)	Where item was addressed in the Licence/Permit
		<p><i>Minister's Modifications to the Review Board's Measures</i></p> <p><i>Ranger Oil Ltd. and Chevron Canada Resources Ltd. should make every effort to reduce the physical footprint of the development on all development right-of-ways. At the end of construction, the pipeline right-of-ways will be returned to pre-development vegetation cover where possible. Ranger Oil Ltd. and Chevron Canada Resources Ltd. will develop a re-vegetation plan as part of the abandonment and restoration plan. This plan will be developed in consultation with the GNWT and EC. RWED and EC have both committed to review Ranger Oil Ltd. and Chevron Canada Resources Ltd.'s progress and ongoing success of the plan. The Ranger Oil Ltd. and Chevron Canada Resources Ltd. will present the results to DIAND in accordance with a land use permit and/or licence of occupation.</i></p> <p><i>With respect to monitoring increased access that may result from this development, Ranger Oil Ltd. and Chevron Canada Resources Ltd. will be required to monitor the non-project vehicular access on the all-season road and pipeline corridors with respect to potential impacts on relevant wildlife populations. Ranger Oil Ltd. and Chevron Canada Resources Ltd. will design a monitoring program in consultation with the GNWT to determine whether additional measures are required to mitigate impacts on wildlife.</i></p> <p><i>Ranger Oil Ltd. and Chevron Canada Resources Ltd. indicated that, while the pipeline placement has been designed to avoid areas of expected permafrost, any problem areas detected during construction or initial operations would trigger additional monitoring and mitigation. The NEB may consider the expertise available from Natural Resources Canada (NRCan) when necessary. We understand that any follow-up requirements of the NEB will be publicly available.</i></p>	<p>Licence Part I Closure and Reclamation Plan</p> <p>n/a*</p> <p>n/a*</p>
6	Water Quality	<p>The Review Board recognizes the public concern with the potential for contaminant emissions, including sedimentation, to water. The Review Board recommends that best industry practices be followed to ensure that such emissions are minimized. Government should monitor such emissions from the development.</p> <p>The Review Board recommends that the development be required to implement the recommendations of Environment Canada and DFO.</p> <p>The Review Board recommends that the developer confirm the salinity characteristics of the produced water to be injected into O-80. These characteristics should be compared with those of the receiving formation to ensure the injection water remains in the formation and does not migrate to surface. The developer should work with NRCan and the NEB, and report its findings to government and the Review Board.</p>	See Minister's Modifications below
		<i>Minister's Modifications to the Review Board's Measures</i>	Protection/monitoring water

#	Topic	Measure and Minister's Modifications to the Review Board's Measures (January 10, 2000)	Where item was addressed in the Licence/Permit
		<p><i>Best industry practices to protect water quality from contaminant and sediment emissions will be followed by Ranger Oil Ltd. and Chevron Canada Resources Ltd. Ranger Oil Ltd. and Chevron Canada Resources Ltd. will be required to monitor such emissions from the development and report these to the appropriate responsible ministers. We also anticipate that the NEB will likely provide for independent inspection to ensure the construction plans are followed.</i></p> <p><i>With respect to stream crossings, Ranger Oil Ltd. and Chevron Canada Resources Ltd. must implement best practices for winter stream crossing construction. These should include replacing excavated bed materials with clean materials of a similar size fraction, and stabilization of the full wetted channel width, such as with riprap. Bank stabilization and runoff diversion away from distributed areas are other necessary mitigation measures.</i></p> <p><i>Regarding salinity characteristics of the produced water to be injected into O-80, it is our understanding that the NEB will require measures and monitoring in its regulatory instruments with Ranger Oil Ltd. and Chevron Canada Resources Ltd. The NEB may consider the expertise available from NRCan where necessary.</i></p>	<p>quality – Part H, Part F, Condition 4</p> <p>Not applicable to the authorizations applied for as construction is complete</p> <p>n/a*</p>
9	Abandonment and Restoration	<p>The Review Board recommends that the developer be required to implement a program of ongoing reclamation of disturbed sites associated with its development to minimize the potential effects to wildlife and wildlife habitat, and to reduce the footprint of the development during operations. (see also 6.3.1).</p> <p><i>Minister's Modifications to the Review Board's Measures</i></p> <p><i>Abandonment and restoration will be carried out considering on-going reclamation of disturbed sites where feasible.</i></p>	<p>See Minister's Modifications below</p> <p>Permit 26(1)(o)</p>

\*Measures 4, 7, 8, 10, 11, 12, 13, and 14, and portions of measures 5 and 6, relate to topics which are not within the jurisdiction of the MVLWB, including wildlife and the development of environmental or socio-economic agreements, or were not directed at the MVLWB.