



NWT OFFICE OF THE REGULATOR OF OIL AND GAS OPERATIONS

Office of the Regulator of Oil and Gas Operations

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John Hawkins, P. Eng.  
Director Asset Management  
Paramount Resources Ltd.  
Suite 2800, 421 – 7<sup>TH</sup> AVE SW  
CALGARY AB T2P 4K9

May 3, 2022

Dear John Hawkins:

**Information Request No. 1: Paramount Resources Ltd. Application to Abandon the Arrowhead River B-41 Well (ACW-2022-PAR-B-41-WID1733)**

On April 29, 2022, the Office of the Regulator of Oil and Gas Operations (OROGO) received a complete application to Alter the Condition of a Well (ACW) from Paramount Resources Ltd. (Paramount) for the abandonment of the Arrowhead River B-41 well (WID1733) in the Fort Liard area of the Northwest Territories.

OROGO has reviewed the information provided by Paramount and requires additional information in order to complete its review of Paramount's ACW application, as set out in the attached Information Request No. 1.

Please send your written responses and any associated correspondence to OROGO at [oro.go@gov.nt.ca](mailto:oro.go@gov.nt.ca) or through OROGO's secure file transfer site, on or before 4:00 pm on May 18, 2022. If you are unable to respond within this timeframe or have any questions, please contact OROGO at (867) 767-9097 or by email at [oro.go@gov.nt.ca](mailto:oro.go@gov.nt.ca).

Sincerely,



Pauline de Jong  
Regulator

Encl. Information Request No. 1

**Information Request No. 1**  
**Arrowhead River B-41 Well Abandonment**  
**ACW-2022-PAR-B-41-WID1733**

## **1.1 Area of Application**

### **Preamble:**

On page 3 of its April 29, 2022, application, Paramount includes a map of the Area of Application. The map resolution is poor.

### **Request:**

Please submit an updated application with a map in higher resolution.

## **1.2 Gas Migration Testing**

### **Preamble:**

On page 6 of its April 29, 2022, application, Paramount indicates that it could not conduct formal gas migration testing in 2021, but that there were no visible signs of gas migration at the well site. Paramount proposes to monitor the well and immediately surrounding area for surface casing vent flows and gas migration prior to and during the abandonment operations in winter 2023.

Section 4A of the *Well Suspension and Abandonment Guidelines and Interpretation Notes* (guidelines) requires operators to conduct gas migration testing:

- Prior to beginning the abandonment program; and
- In frost free months only, avoiding periods immediately after a rainfall.

Paramount's application does not provide a rationale for not completing gas migration testing in the summer of 2022, in accordance with the guidelines. Gas migration testing in winter 2023 is unlikely to provide useful information as the ground surrounding the well will be frozen.

**Request:**

Please submit an updated application that:

- Includes gas migration testing during frost free months prior to the abandonment in winter 2023, in accordance with the guidelines; or
- Provides a rationale for not completing gas migration testing in accordance with the guidelines for the Regulator's consideration.

**1.3 Pressure Testing and Cement Evaluation****Preamble:**

The abandonment program in Appendix 2 of Paramount's April 29, 2022, application does not include pressure testing plugs and retainers or cement evaluation.

Section 6A of the guidelines requires operators to:

- Pressure test cement plugs, bridge plugs and cement retainers for 10 minutes at 7,000 kPa; and
- Evaluate the existing cement behind the casing string(s) of a well before beginning abandonment operations, including:
  - Determining the cement top;
  - Evaluating the cement bond in the casing annulus; and
  - Assessing any repairs or remedial cementing required to meet the requirements of the *Oil and Gas Drilling and Production Regulations* for abandoned wells.

**Request:**

Please submit an updated abandonment program that includes pressure testing and cement evaluation as required by the guidelines.