



NWT OFFICE OF THE REGULATOR OF OIL AND GAS OPERATIONS

Office of the Regulator of Oil and Gas Operations

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Angie Stastook
Specialist Asset Liability & EGS
Prairie Provident Resources Canada Ltd.
1110, 640 – 5th AVENUE SW
CALGARY AB T2P 3G4

June 8, 2023

Dear Angie Stastook:

**Information Request No. 2:
South Pointed Mountain L-68 Well Abandonment (ACW-2021-PPR-L-68-WID1207)**

On June 2, 2023, the Office of the Regulator of Oil and Gas Operations (OROGO) received the response to Information Request No. 1 from Yellowstone Resources, consultants to Prairie Provident Resources Canada Ltd. (PPR), for its request to vary well approval ACW-2021-PPR-L-68-WID1207 for the abandonment of the South Pointed Mountain L-68 (WID1207) well. On June 8, 2023, Yellowstone Resources submitted an updated well abandonment program to OROGO.

OROGO has reviewed the information provided by PPR and requires additional information to complete its review as set out in the attached Information Request No. 2.

Please send your written responses and any associated correspondence to OROGO at oro.gov.nt.ca or through OROGO's secure file transfer site, on or before 4:00 pm on June 26, 2023, at 867-767-9097 or by email at oro.gov.nt.ca.

Sincerely,



Pauline De Jong
Regulator

Encl. Information Request No. 2

c. Jeremy Sadleir, Yellowstone Resources

Information Request No. 2
South Pointed Mountain L-68 Well Abandonment
(ACW-2021-PPR-L-68-WID1207)

2.1 Zonal Abandonment

Preamble:

Steps 12 to 16 of PPR's revised well abandonment program, submitted on June 8, 2023, identify setting a cement retainer at approximately 3,340 mKB and conducting a squeeze of the Upper and Lower Muskwa perforations at the same time as the Exshaw perforations, then capping the retainer with 50m of cement.

The additional information provided on June 2, 2023 in the response to Information Request No. 1 states:

... the Exshaw formation has low porosity and permeability in relation to the Muskwa. By performing a retainer squeeze of ~12T of cement through a cement retainer positioned above the Exshaw perforations, the desired zonal isolation between the Exshaw and Muskwa formations will be achieved as the Muskwa perforations will take the majority of the cement due to being more permeability [sic] and having a higher porosity. The Exshaw formation will still receive cement to squeeze off the zones while also filling all of the void spaces below the cement retainer between the packers with cement.

It is still unclear how PPR will ensure both the Muskwa and the Exshaw perforations will accept cement to ensure isolation between the zones as required by section 6A of the *Well Suspension and Abandonment Guidelines and Interpretation Notes* (Guidelines).

The three completed intervals were fracture stimulated and therefore each interval should be able to accept fluid. The method proposed does not demonstrate how individual feed rates will be determined for each of the intervals, leading to uncertainty about how much cement volume is actually placed into each of these intervals.

Additionally, the submissions to date for the proposed abandonment of this well do not identify the source of the SCVF. PPR indicated that the fluid observed at surface was comprised of drilling mud and water, with traces of hydrocarbon and gas.

Isolating each completed interval independently, as the Guidelines require, would also allow observation of any significant impacts to the SCVF parameters before moving up hole to address the SCVF.

Request:

Submit an updated well abandonment program in compliance with section 6A of the Guidelines that includes:

- Program steps to ensure independent isolation of the Exshaw and Muskwa zones; and
- An updated proposed wellbore diagram reflecting the updated well abandonment program.