



April 27, 2020

Janpeter Lennie-Misgeld
Senior Advisor, Legislation and Policy
Office of the Regulator of Oil and Gas Operations
4th Floor, 5201-50 Avenue
Yellowknife, NT
X1A 3S9

**RE: Information Request No.1:
Application to Alter the Condition of a Well for the Abandonment of the
S.W. Arrowhead M-35 well (ACW-2019-015-CNRL-M-35-WID1989)**

Dear Sir:

Canadian Natural Resources Limited (Canadian Natural) is responding to the Information Request letter dated March 27, 2020 from the Office of the Regulator of Oil and Gas Operations (OROGO) with the following information:

1.1 Detailed Operations Program

Request: Please submit an updated abandonment program that provides sufficient detail to determine how CNRL proposes to:

- 1) Safely conduct pressure testing of pumping surface lines as stated in Step 17;
- 2) Kill the well as stated in Step 20;
- 3) Ensure that the internal surface of the casing is free of debris and/or scaling if a scraper run is NOT completed before installing the bridge plug as stated in Step 21;
- 4) Ensure compliance with Section 6A of the Guidelines which requires that the entire well bore must be filled with non-saline water; and
- 5) Prepare, introduce and circulate the cement when placing the required 15 metres of circulated cement as stated in Step 26.

Response: CNRL has updated the abandonment program with more concise; or additional verbiage to enhance or clarify the procedures / intentions of the program steps in question above.

Canadian Natural Resources Limited

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Canadian Natural

1.2 Well bore Schematic

Request: Please submit an updated well bore schematic that includes the proposed 15 vertical metres of cement circulated into place above the permanent bridge plug (572.5 mKB) on the vertical schematic drawing.

Response: CNRL has corrected and the aforementioned wellbore schematic.

If you have any questions, please contact the undersigned at Ryan.N.Munro@cnrl.com; or at (403) 386-6538.

Yours truly,
CANADIAN NATURAL RESOURCES LIMITED

Ryan Munro, P.Eng.
Manager, Abandonment Engineering

Canadian Natural Resources Limited

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