

November 22, 2022

4700-8400-32640-02

Stephen Penner  
Exploitation Engineering Technologist  
Canadian Natural Resources Limited  
2100, 855 – 2<sup>nd</sup> Street SW  
Calgary AB, T2P 4J8

Dear Mr. Penner,

**RE: PRODUCED WATER DISPOSAL SPECIAL PROJECT APPROVAL; AMENDMENT #1  
LOGGING AND RESERVOIR PRESSURE TEST DEFERRAL  
CNRL HELMET d-79-A/94-P-07; WA# 2881  
HELMET FIELD – SLAVE POINT 'B' POOL**

Commission staff have reviewed Canadian Natural Resources Limited (CNRL)'s request for deferral on logging and reservoir pressure testing for the subject well until March 31<sup>st</sup>, 2023, received via email on November 2<sup>nd</sup>, 2022. CNRL has indicated that the well is winter access only and it will not be possible to access the well before the end of 2022.

The subject well produced gas from the Slave Point 'B' pool from April 1976 to December 1992. Disposal started into the subject well in February 2005. Since 1978 the reservoir pressure in the subject well has been maintained at approximately the same pressure, indicating an extensive aquifer accepting fluids. Additionally, the subject well has injected on vacuum since 2016. During a workover in June 2015, a casing inspection log was performed, which showed 14 casing joints with class 4 damage and one with class 5 damage. As such, casing inspection logs are required once every 5 years. The last casing inspection log was obtained in August of 2015.

The Commission hereby grants a deferral of the logging requirements until March of 2023, subject to the following conditions:

- a) Perform a casing inspection log and hydraulic isolation log on the subject well prior to March 31<sup>st</sup>, 2023 and submit the results within 30 days of the completion of the logs.
- b) Conduct a reservoir pressure test on the disposal formation of the subject well, with a shut-in period of sufficient length to provide data for calculation of the reservoir pressure, prior to March 31<sup>st</sup>, 2023, and submit a report of the test within 60 days of the end of the test.
- c) Total disposal volume following the date of this letter shall not exceed 2,500m<sup>3</sup> until the results of a new casing inspection log, hydraulic isolation log, and reservoir pressure test are submitted to the Commission.
- d) Injection pressure, measured at the wellhead on the subject well, may not exceed of 150 kPag, until a new casing inspection log, hydraulic isolation log, and reservoir pressure test are submitted to the Commission.
- e) All other conditions of Order 03-02-004 Amendment #1 still apply.

Should you have any questions, please contact Logan Gray at (250) 419-4465 or the undersigned at (250) 419-4430.

Sincerely,



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Ron Stefik, P.L.Eng.  
Supervisor, Reservoir Engineering  
Oil and Gas Commission