

November 15, 2019

6800-4800-59240-09

Brittany Jorgensen, P.Eng.
Exploitation Engineer
Canadian Natural Resources Limited
Suite 2500, 855 – 2nd Street S.W.
Calgary, AB T2P 4J8

Dear Mrs. Jorgensen:

**RE: PRESSURE MAINTENANCE WATERFLOOD SPECIAL PROJECT - CANCELLATION
OTHER THAN NORMAL SPACING ORDER - CANCELLATION
RESERVOIR PRESSURE TEST REQUIREMENT
PEEJAY – HALFWAY UNIT #1**

In a review of pressure maintenance waterflood projects, the Commission noted that production from the subject pool ceased in November 2017. However, water injection continued until April 2019.

A pressure maintenance waterflood project was approved for the Peejay field Halfway Unit#1 in April 1964 (Order # 64-09-001). This project has consisted of 22 producers and 15 injector wells. Cumulative oil production to November 2017 was 2,227.1 e³m³ resulting in a successful recovery factor of approximately 38 per cent. Commission records indicate 18 wells are surface or zonally abandoned and 18 wells are suspended, with the single injection well d-8-E/94-A-16 (WA # 1624) remaining as active status.

Due to the suspension of production and injection, OGAA Section 75 Order 64-09-001, pressure maintenance waterflood and other than normal spacing approval for the Peejay field Halfway Unit #1, **will be cancelled on November 29, 2019**, unless this office is contacted prior to that date with valid reason why this should not occur.

Reservoir Pressure Testing

The last reservoir pressure test the Commission has on record for this project was performed in 1996. With continued injection after production terminated, and a cumulative voidage replacement ratio > 1.00, the current pool pressure is unknown but potentially significantly elevated at a pool or local well area, a potential safety and environmental concern.

CNRL is hereby required to **conduct a reservoir pressure test by December 31, 2019**, as per section 73 (2) of the Drilling and Production Regulation, on the well CNRL Peejay d-8-E/94-A-16 (WA # 1624), the last active injection well. In addition, CNRL must take a pressure test from the following wells: CNRL et al Peejay b-59-E/94-A16, WA 2578; CNRL et al Peejay d-69-E/94-A-16, WA 902; and CNRL Peejay d-18-E/94-A-16, WA 612 to calculate the average reservoir pressure at abandonment **no later than December 31, 2019**.

Should you have any questions, please contact Petra Kriescher-Trudgeon at (250) 419-4415 or the undersigned at (250) 419-4430.

Sincerely,



Ron Stefik, EngL
Supervisor, Reservoir Engineering
Oil and Gas Commission