

June 4, 2020

1260-4100-32640-60

Lynn Wood, P.Eng.  
Exploitation Engineer  
Canadian Natural Resources Limited  
Suite 2100, 885 – 2nd Street SW  
Calgary, Alberta, T2P 4J8

Dear Ms. Wood,

**RE: OBSERVATION WELL STATUS APPROVAL  
CNRL HZ BIRCH d-29-I/94-A-13 (WA# 8014)  
BIRCH – BALDONNEL C**

BC Oil and Gas Commission (Commission) staff have reviewed the May 29, 2020 application from Canadian Natural Resources Limited (CNRL) seeking observation well designation for CNRL HZ Birch d-29-I/94-A-13 (WA# 8014).

The Drilling and Production Regulation Part 1 defines an observation well as “a well or a portion of a well designated as an observation well under section 2 (7)”.

- 2 (7) An official may designate a well as an observation well if
- (a) the well is being used to monitor reservoir pressures or to obtain other formation information, and
  - (b) the well is not used to produce from, or inject or dispose of fluids into, a formation being monitored.

The subject well was drilled in 1993 and the Baldonnel formation was completed for the purpose of oil production. The well produced from 1993 until 2015 and was converted to water injection in 2017. A reservoir pressure test conducted in February 2017 reported a pressure of 17,711 kPaa; in exceedance of the initial pool pressure of 12,600 kPaa. The last reported injection in the well is dated December 2017 and all water injection in the pool ceased in May 2019. The well is centrally located within the pool.

CNRL is requesting use of this well to monitor reservoir pressure in the Birch Baldonnel ‘C’ pool to understand the pressure dissipation in the pool as it equalizes. CNRL is proposing annual reservoir pressure testing be completed in the pool.

The location of the well in the pool and the pressure testing history of the well support an observation well designation. Approval of observation status is granted for CNRL HZ Birch d-29-I/94-A-13 (WA# 8014), for the Baldonnel ‘C’ pool, with the following requirement;

- conduct a reservoir pressure test annually using downhole recorders.

Please be reminded that all reservoir pressure tests conducted must be submitted to the Commission within sixty days of the date on which the pressure was measured.

Should you have any questions, please contact Kathryn Archibald at (250) 419-4406 or the undersigned at (250) 419-4430.

Sincerely,



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