

January 20, 2020

0760-4800-59240-09

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

Dear Ms. Jorgensen:

**RE: PRESSURE MAINTENANCE WATERFLOOD ORDER 97-09-003 CANCELLATION
OTHER THAN NORMAL SPACING ORDER CANCELLATION
BEAVERTAIL FIELD – HALFWAY “B” POOL**

The Commission is presently reviewing and amending waterflood approvals to conform to current requirements.

The Beavertail Halfway “B” oil pool commenced production in January 1979. A pressure maintenance waterflood project was approved in May 1997, with injection starting in September 1997. The pool currently has one producer but injection was suspended in October 2010. A review of reservoir performance indicates that the waterflood was successful in stabilizing the GOR, achieving a cumulative oil recovery of approximately 17%.

Due to the suspension of injection since October 2010 and the indication from CNRL, email dated January 17, 2020, that the company has no intention to reactivate the pressure maintenance waterflood project, OGAA Section 75 Order 97-09-003 pressure maintenance waterflood and other than normal spacing approval for the Beavertail field Halfway ‘B’ pool will be cancelled effective this date.

Due to the cancellation of the pressure maintenance waterflood the producing well, CNRL Beavertail b-78-A/94-A-15 (WA 9330) will revert back to an individual unadjusted daily oil allowable (DOA) of 12.6 m³/d subject to a gas-oil ratio adjustment factor. Additional information can be found on the OGC website: <https://bcogc.ca/industry-zone/documentation/Production-Allowables>. Current production rates and GOR indicate underproduction of the allowable limit.

The Commission is concerned regarding the lack of reservoir pressures throughout the pool since 2012, combined with voidage replacement ratio > 1.0. Good reservoir management requires a limit on the ultimate reservoir pressure at the cessation of pool operation, with consideration of demonstrated potential for pool pressure equalization. Prior to abandonment of any well in the Beavertail Halfway ‘B’ pool, the Commission requests a reservoir pressure test from that well to determine the current pressure.

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