

March 27, 2017

8100-6200/4900-59070-20

Kelly Okuszko, P.Eng. Exploitation Engineer Canadian Natural Resources Ltd. 2500, 855 – 2<sup>nd</sup> Street SW Calgary, AB T2P 4j8

Dear Mrs. Okuszko:

RE: COMMINGLED PRODUCTION SPECIAL PROJECT

CNRL W STODDART 16-04-086-20; WA #5449

The Oil and Gas Commission (Commission) has reviewed your application dated December 19, 2016 requesting approval to commingle oil production from the Belloy with the Doig 'B' pool in the subject well.

The subject well was drilled by Scurry-Rainbow Oil Limited (SRO) in Oct 1980, reaching a total depth of 1922 mKB. DSTs were run for the Belloy and Doig formations and the Belloy formation was cored. The Doig formation was perforated and acidized from 1567.5 to 1569.5 mKB and placed on production in December 1980. Several casing holes were detected, cement squeezed and pressure tested in August 1991 and July 2008 reestablishing the integrity of the wellbore.

Well CNRL W Stoddart 16-04-086-20, WA #5449, produces about 1 m3/d at a GOR of 2417 m3/m3 with no water production. The Commission recognizes that this volume is at the lower limit of operational feasibility; adding the Belloy production increases the throughput and will allow for sustainable operations. The Belloy formation in the 16-04, within the Stoddart West, Belloy 'C' pool, will be partially depleted but at a similar pressure as the Doig formation. Cross-flow, if present, will be minimal. The Commission is satisfied that the commingling of both zones in this wellbore will be of benefit and hence approves this application. The initial allocation factors are listed in the attached order. However, due to the absence of a Belloy production test, the Commission requests that CNRL provide a revised allocation factor for all products after three months of production, with values derived by difference from base Doig production.

Please find Order 17-20-001 attached, designating an area in the Stoddart West field within the subject formations is a Special Project under section 75 of the *Oil and Gas Activities Act* for Commingled Production. Special equipment requirements for the sour Doig production are included in the Order. For the purpose of production reporting, a well completion event Unique Well Identifier (UWI) must be established for the Belloy formation at 1886.5 to 1892 mKB. Please submit a form BC-11 for the zone which notes this commingled production Approval Order 17-20-001. A commingle Notification form, which can be found on the OGC website (<a href="http://www.bcogc.ca/industry-zone/documentation/Commingling">http://www.bcogc.ca/industry-zone/documentation/Commingling</a>), must be submitted as indicated on the form as well.

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

Sincerely,

Ron Stefik, Eng.L

Supervisor, Reservoir Engineering

Oil and Gas Commission

Attachment

IN THE MATTER of an application from Canadian Natural Resources Ltd. to the Oil and Gas Commission dated December 19, 2016 for Commingled Production approval.

## ORDER 17-20-001

Under Section 75(1)(a) of the Oil and Gas Activities Act, the Commission designates the commingling of production from the Stoddart West field – Doig 'B' and Belloy 'C' pools as a special project for the optimum recovery of oil by commingling production within the following area;

DTS

Twp 86 Rge 20

NW/4 of section 4

- 2 Under section 75(2) of the *Oil and Gas Activities Act*, the special project designation in this Order is subject to the following conditions:
  - a) Production from the Doig 'B', interval 1567.5 to 1569.5, may be commingled with the Belloy 'C', interval 1886.5 to 1892.0, production through well CNRL W Stoddart 16-04-086-20 (WA # 5449).
  - b) H2S resistant production equipment must be used to operate the above well.
  - c) A packer must be placed above the Doig interval to isolate the production from the up-hole formations only if the well does not utilize artificial lift equipment.
  - d) Gas, oil and water production from the commingled well must be allocated on the Ministry of Finance BC-S1, BC-S2 and BC-08 forms on the basis of Doig 'B' 15% and Belloy 'C' 85%. The allocation factors for all products must be resubmitted after three months of production, for amendment of this order.

Ron<sup>1</sup>Stefik, Eng

Supervisor, Reservoir Engineering

Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this 27 day of March, 2017.