



March 9, 2012

9450-7400-32640-02

Tyler Trilsbeck, P. Eng.  
Production Engineer  
Encana Corporation  
150 – 9<sup>th</sup> Avenue SW  
P.O. Box 2850  
Calgary, AB T2P 2S5

Dear Mr. Trilsbeck:

**RE: SALT WATER DISPOSAL SPECIAL PROJECT  
ENCANA KIWIGANA d-93-L/94-O-02; WA# 26753  
OTHER AREAS - DEBOLT FORMATION**

Commission staff has reviewed the application dated December 21, 2011, to dispose of produced water and completion/workover fluids resulting from fracture treatments of Horn River Basin shale gas formations into the Debolt formation of the subject well.

A step rate injectivity test was conducted on September 9, 2011 to determine the formation fracture pressure. The resulting fracture gradient is considerably higher than typical. A more conservative gradient value, in part due to the relatively shallow depth has been used to determine the maximum allowable wellhead pressure. The required production test found the zone to be water bearing with no commercial hydrocarbons potential. We concur that the subject well appears to be a good candidate for salt water disposal in the Debolt formation. Notice of your application was posted on the OGC website with no objections received.

Attached please find Order 12-02-006, designating the Other Areas – Debolt formation a Special Project under section 75 of the *Oil and Gas Activities Act*, for the operation and use of a storage reservoir for the disposal of salt water.

Please note that, as per section 75 of the Drilling and Production Regulation, a record of the volume of salt water disposed of through this well must be included on a Monthly Injection or Disposal Statement (BC-S18), which must be submitted to the Oil and Gas Commission no later than the 25th day of the month in which activity occurred. Also, the operation of the salt water disposal project will be subject to periodic review and the Commission may modify the Order, if deemed appropriate.

Should you have any questions, please contact Ron Stefik at (250) 419-4430 or Curtis Kitchen at (250) 419-4443.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Jenkins", is written over a white background.

Paul Jenkins  
Commissioner & CEO  
BC Oil and Gas Commission

Attachment

IN THE MATTER of the application from Encana Corporation to the Commission dated December 21, 2011 for the operation and use of a storage reservoir.

**ORDER 12-02-006**

- 1 Under Section 75(1)(d) of the *Oil and Gas Activities Act*, the Commission designates the operation and use of a storage reservoir for the disposal of salt water or recovered fluids from a well completion or workover in the Other Areas – Debolt formation as a special project in the following area:

NTS 94-O-02 Block D – Unit 93

- 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) Salt water shall be injected only into the Debolt formation (424.5-640 mKB) through the well Encana Kiwigana d-93-L/94-O-02 (WA # 26753).
  - b) The wellhead injection pressure must be continually measured and recorded, and must not exceed 8100 kPa.
  - c) The Project shall be deemed to have commenced upon initiation of salt water injection into the well. The Supervisor, Reservoir Engineering, Resource Development, must be notified in writing within 72 hours of commencement of injection operations.



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Paul Jenkins  
Commissioner & CEO  
Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this 9<sup>th</sup> day of March 2012.