

August 8, 2017

8157-2800-32640-02

Deb Gogol, C.E.T  
Sr. Engineering Technologist  
Encana Corporation  
500 Centre Street SE, PO Box 2850  
Calgary, Alberta T2P 2S5

Dear Ms. Gogol,

**RE: EXTENDED INJECTIVITY TEST  
ECA HZ TOWER A5-11-81-18 W6M; WA# 32377  
TOWER LAKE FIELD – CADOMIN FORMATION**

Commission staff have reviewed the application from Encana Services Company Ltd, on behalf of Encana Corporation, dated July 28<sup>th</sup>, 2017, requesting an extended injectivity test of 5,000 m<sup>3</sup> into the Cadomin formation of the subject well.

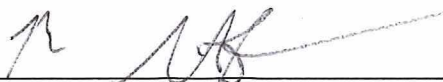
The subject well was horizontally completed in the Cadomin formation for disposal purpose. An extended injectivity test is required to obtain data regarding the reservoir capability of the subject well, in order to plan for future disposal requirements in the area. An application for disposal operation is presently being reviewed by the Commission.

Attached please find **Order 17-02-011**, designating an area near the Tower Lake field, Cadomin formation, as a Special Project under section 75 of the Oil and Gas Activities Act, for the temporary operation and use of a storage reservoir for the injection of produced water. This authorization does not warrant that a future disposal approval will be issued. Note that the maximum wellhead injection pressure (MWHIP) designated in condition 2b) was calculated using a fluid hydrostatic gradient of 11.7 kPa/m, the density of the fluid to be disposed as indicated in Encana's application. If Encana plans to use fresh water for this test, a fluid gradient appropriate to the disposal fluid should be used, which may alter the MWHIP.

Additional general information regarding disposal wells is available on the Commission's website at <http://www.bcogc.ca/industry-zone/documentation/Subsurface-Disposal>.

Should you have any questions, please contact Michelle Harding at (250) 419-4493 or Ron Stefik at (250) 419-4430.

Sincerely,



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

Attachment

IN THE MATTER of the application from Encana Services Company Ltd. on behalf of Encana Corporation, to the Oil and Gas Commission (Commission), dated July 28<sup>th</sup>, 2017 for an extended injectivity test:

**ORDER 17-02-011**

- 1 Under Section 75(1)(d) of the *Oil and Gas Activities Act*, the Commission designates the temporary operation and use of a storage reservoir for the injection of fresh water or produced water, including flowback from fracturing operations, near the Tower Lake field – Cadomin formation as a special project in the following area:

DLS Twp 81 Rge 18 W6M Section 11 – Lsds 1, 2, 3, 4, 5, 6, 7 and 8

- 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. The Permit Holder shall:
- a) Inject water into the well ECA HZ Tower A5-11-81-18; WA# 32377 Cadomin formation, open hole from 1563.0 – 2534.0 mKB MD
  - b) Not exceed an injection pressure, measured at the wellhead on the subject well, of 18,000 kPag or the pressure required to fracture the formation, whichever is lesser.
  - c) If the fluid injected is not fresh water, inject only through tubing with a packer set as near as is practical above the injection interval.
  - d) The total volume of injected water must not exceed 5,000 m<sup>3</sup>.



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

DATED AT the City of Victoria, in the Province of British Columbia, this 3<sup>rd</sup> day of August, 2017.