



December 14, 2018

8157-2800-32640-02

Deb Gogol, P.Tech (Eng.)  
Sr. Engineering Technologist  
Dawson North Development  
Encana Services Company Ltd.  
500 Centre Street SE, PO Box 2850  
Calgary, Alberta T2P 2S5

Dear Ms. Gogol,

**RE: EXTENDED INJECTIVITY TEST  
ECA TOWER 13-08-81-17 W6M; WA# 27431  
TOWER LAKE FIELD – CADOMIN FORMATION**

Commission staff have reviewed the application from Encana Services Company Ltd, on behalf of Encana Corporation, dated November 28<sup>th</sup>, 2018, requesting an extended injectivity test of 3,500 m<sup>3</sup> into the Cadomin formation of the subject well.

The subject vertical well was drilled in July of 2011 for the purpose of production from the Montney formation. The well was cased and cemented but not perforated or stimulated, then was suspended in September 2012. September 2018 the well was prepared for microseismic monitoring for Montney completions on the nearby 13-8 well pad. The Cadomin formation was completed for disposal purposes in November, 2018. An extended injectivity test is requested in order to assess the disposal capability of the vertical well, and to allow wellsite commissioning activities to begin.

Attached please find **Order 18-02-011**, designating an area in 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 Gaucher at (250) 419-4482 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 November 28<sup>th</sup>, 2018 for an extended injectivity test:

**ORDER 18-02-011**

- 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, in the Tower Lake field – Cadomin formation as a special project in the following area:

DLS Twp 81 Rge 17 W6M Section 8 – Lsds 13, 14, 15 and 16

- 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 Tower 13-08-81-17; WA# 27431 Cadomin formation from 1,257.0 – 1,277.0 mKB.
  - b) Not exceed an injection pressure, measured at the wellhead on the subject well, of 16,000 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 3,500 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 14<sup>th</sup> day of December, 2018.