

December 13, 2017

8157-2800-32640-02

Deb Gogol, P.Tech (Eng.)
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 A16-6-81-17 W6M; WA# 32483
TOWER LAKE FIELD – CADOMIN FORMATION**

Commission staff have reviewed the application from Encana Services Company Ltd, on behalf of Encana Corporation, dated November 24th, 2017, requesting an extended injectivity test of 5,000 m³ 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 requested in order to assess the disposal capability of the horizontal well, and to allow wellsite commissioning activities to begin.

Attached please find **Order 17-02-017**, 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 11.69 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 November 24th, 2017 for an extended injectivity test:

ORDER 17-02-017

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 5 – Lsds 3, 4, 5, 6, 11, 12, 13 and 14

DLS Twp 81 Rge 17 W6M Section 6 – Lsds 9, 10, 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 HZ Tower A16-6-81-17; WA# 32483 Cadomin formation, open hole from 1548.0 – 2548.0 mKB MD

b) Not exceed an injection pressure, measured at the wellhead on the subject well, of 17,870 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 m³.

A handwritten signature in black ink, appearing to read 'Ron Stefik'.

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

DATED AT the City of Victoria, in the Province of British Columbia, this 13th day of December, 2017.