

August 27, 2018

8157-2800-32640-02

Trevor Befus
Environment and Regulatory Planner
Catapult Environmental Inc.
Suite 1620, 700 – 9th Ave S.W.
Calgary, AB T2P 3V4

Dear Mr. Befus,

**RE: EXTENDED INJECTIVITY TEST
CATAPULT TOWER 9-28-81-17; WA# 20897
TOWER LAKE FIELD – CADOMIN FORMATION**

Commission staff have reviewed the application from Catapult Environmental Inc., dated August 10th, 2018, requesting an extended injectivity test of 5,000 m³ into the Cadomin formation of the subject well.

The subject well was approved for disposal into the Bluesky formation on December 11th, 2017. However, injectivity into the Bluesky zone has reached uneconomic rates. Catapult has requested an extended injectivity test into the Cadomin formation to determine the injection potential of the zone.

Attached please find **Order 18-02-008**, 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. The injection volume has been limited to 3,000 m³ as the maximum volume the Commission deems suitable for an injectivity test of this nature. The MWHIP has been set to 14,460 kPag, corresponding to a fracture gradient of 26 kPa/m, as a conservative value prior to review and verification of DFIT results. This authorization does not warrant that a future disposal approval will be issued.

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 Catapult Environmental Inc. to the Oil and Gas Commission (Commission), dated August 10th, 2018 for an extended injectivity test:

ORDER 18-02-008

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 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 28 - 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 produced water only into the well Catapult Tower 9-28-81-17; WA# 20897 – Cadomin formation (perforations 1156.0 – 1235.0 mKB MD)
- b) Not exceed an injection pressure, measured at the wellhead on the subject well, of 14,460 kPag or the pressure required to fracture the formation, whichever is lesser.
- c) 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 3,000 m³.

A handwritten signature in black ink, appearing to read 'Ron Stefik', written over a horizontal line.

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

DATED AT the City of Victoria, in the Province of British Columbia, this 27th day of August, 2018.