



November 18, 2014

8100-2800-32640-02

Travis Loewen  
Operations Manager  
Albright Flush Systems Ltd.  
P.O. Box 6148  
Fort St. John, BC V1J 4H6

Dear Mr. Loewen,

**RE: PRODUCED WATER DISPOSAL APPROVAL AMENDMENT #1  
ABT W STODDART A10-09-087-21; WA# 14095  
WEST STODDART FIELD - CADOMIN FORMATION**

A review of the Order 14-02-013, issued by the Commission on November 10<sup>th</sup>, revealed an error in the calculation of the maximum wellhead pressure allowed. As a result, an amended Order has been issued and follows this letter.

Attached please find **Order 14-02-013 Amendment #1** designating an area in the West Stoddart field – Cadomin formation as a Special Project under section 75 of the *Oil and Gas Activities Act*, for the use of a storage reservoir for the disposal of produced water. This Order contains a number of detailed operational conditions. 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 the undersigned at (250) 419-4430 or Michelle Gaucher at (250) 419-4482.

Sincerely,

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

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

Attachment

cc:Robyn.Swanson@ihs.com

## ORDER 14-02-013 Amendment #1

- 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 produced water, into the Cadomin formation – West Stoddart field as a special project in the following area:

DLS        Twp 87 Rge 21 W6M Section 9 - Lsd 9, 10, 15, 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, including well flowback completion fluids, only into the well ABT W Stoddart A10-9-87-21; WA# 14095 – Cadomin formation (1259 to 1273 mKB).
- b) Not exceed an injection pressure, measured at the wellhead on the subject well, of 16,400 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) Continually measure and record the wellhead casing and tubing pressures electronically.
- e) Cease injection and notify the Commission immediately if hydraulic isolation is lost in the wellbore or formation.
- f) Submit the annual packer isolation test report to the Commission within 30 days of the completion of the test.
- g) Include the disposal operating hours and the maximum injection pressure value on the monthly BC-S18 disposal statement.
- h) Conduct a reservoir pressure test on the formation in the subject well every 3 years, with a shut-in period of sufficient length to provide data for calculation of the reservoir pressure, and submit a report of the test within 60 days of the end of the test.
- i) Cease injection upon reaching a maximum formation pressure of 12,700 kPaa.
- j) i) Perform a casing inspection log on the subject well and submit results to the Commission within 30 days of the completion of logging, at an interval of not more than every 7 years, commencing from the date of initial injection.  
  
ii) Perform a hydraulic isolation temperature log on the subject well and submit results to the Commission within 30 days of the completion of logging, at an interval of not more than every 5 years, commencing from the date of initial injection.
- k) Not conduct a hydraulic fracture stimulation on any formation in the subject well without prior Commission approval.

  
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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 18<sup>th</sup> day of November, 2014.

## Advisory Guidance for Order 14-02-013

- I. A production packer must be set above the injection interval and the space between the tubing and casing filled with corrosion inhibiting fluids, as per section 16(2) of the Drilling and Production Regulation.
- II. Annual packer isolation tests are required, as per section 16(3) of the Drilling and Production Regulation.
- III. Injected fluids must be metered, as per section 74 of the Drilling and Production Regulation.
- IV. A monthly disposal statement must be submitted to the Commission not later than the 25<sup>th</sup> day of the month following the reported month, as per section 75 of the Drilling and Production Regulation.