

March 28, 2014

2800-4800-32640-02

Lesley Jorgensen Storm Resources Ltd 200, 640 – 5th Avenue S.W. Calgary, AB T2P 3G4

Dear Ms. Jorgensen:

RE:

PRODUCED WATER DISPOSAL SPECIAL PROJECT APPLICATION SRL W BUICK d-38-L/094-A-14; WA# 21696 **WEST BUICK FIELD - HALFWAY FORMATION**

Oil and Gas Commission staff have reviewed the application; dated February 10, 2014 requesting approval to dispose of produced water into the Halfway formation of the subject well.

The subject well was initially drilled in September 2006 to evaluate the Slave Point & Debolt formations. These completions were unsuccessful for hydrocarbon production. The well was suspended until February 2011 when the Montney formation was perforated and fracture stimulated, testing limited gas inflow, then suspended until November 2013. The Montney formation has been abandoned, the Halfway formation perfed and injection tested for water disposal potential. The Halfway formation initial reservoir pressure was found to be 11,755 kPa at MPP, consistent with the Halfway initial reservoir pressure in this area. The Halfway formation has been successfully utilized for disposal in other wells and appears suitable at this location.

Attached please find Order 14-02-004, designating an area in the Buick Creek West field -Halfway formation as a Special Project under section 75 of the Oil and Gas Activities Act. for the operation and use of a storage reservoir for the disposal of produced water and well stimulation This Order includes a number of detailed operational conditions including: continuous wellhead measurements, a maximum wellhead injection pressure, ultimate reservoir pressure limit, as well as wellbore integrity monitoring and reporting requirements.

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 Petra Kriescher-Trudgeon at (250) 419-4415 or Ron Stefik at (250) 419-4430.

Sincerely,

Richard Slocomb, P.Eng.

Deputy Commissioner, Engineering

Oil and Gas Commission

Attachment

ORDER 14-02-004

- 1. Under Section 75(1)(d) of the *Oil and Gas Activities Act*, the Oil and Gas Commission (Commission) designates the operation and use of a storage reservoir for the disposal of produced water, including flowback from fracturing operations, into the Halfway formation Buick Creek West field as a special project in the following area:
 - NTS Map 094 A 14; Block L, Unit 38
- 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 SRL W Buick d-38-L/094-A-14; WA# 21696 Halfway formation.
 - b) Not exceed an injection pressure, measured at the wellhead on the subject well, of 6,400 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.
 - e) Cease injection and notify the Commission immediately if hydraulic isolation is lost in the wellbore or formation.
 - 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 values on the monthly disposal statement.
 - h) Cease injection upon reaching a maximum formation pressure of 14,170 kPaa.
 - i) Conduct an annual reservoir pressure test on the formations in the subject well, 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.
 - 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 10 years, commencing from the date of initial disposal.
 - ii) Perform a hydraulic isolation 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 disposal.

k) Not conduct a hydraulic fracture stimulation on any formation in the subject well without prior Commission approval.

Richard Slocomb, P. Eng,

Deputy Commissioner, Engineering

Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this 28 day of March 2014.

Advisory Guidance for Order 14-02-004

- I. A production packer must be set above the injection interval and the space between the tubing and casing (including the space between the 3 packers) 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 25th day of the month following the reported month, as per section 75 of the Drilling and Production Regulation.