



May 10, 2013

1400-7400-59240-09

Joe Leonard, P.Eng.  
Manager, Engineering  
Progress Energy Canada Ltd.  
1200, 205 5<sup>th</sup> Ave. SW  
CALGARY, AB T2P 2V7

Dear Mr. Leonard:

**RE: PRESSURE MAINTENANCE WATERFLOOD ORDER, AMENDMENT #1  
OTHER THAN NORMAL SPACING ORDER, AMENDMENT #1  
BLUEBERRY FIELD – DEBOLT “E” POOL**

The Oil and Gas Commission has reviewed historical Section 75 project approvals and found multiple Orders for the Blueberry field that include the area now mapped as the Debolt 'E' pool. This pool was granted a Pressure Maintenance Order (93-09-001) in November, 1993 and a Good Engineering Practice Order (92-06-004 4E) in April, 2000. To avoid redundancy and confusion, the original waterflood order is being amended and the GEP is being rescinded to establish a single Order for this field and pool.

The PMWF order was originally granted in 1993 for the Debolt B pool. In April 2000, the B pool was divided into the B and E pools; the E pool was granted a GEP approval and the B pool was granted a Concurrent Production approval. An injection well was part of the E pool.

At this point, the GEP for the E pool and the PMWF approval are being combined into one approval Order. Attached are:


- 1) Order 93-09-001 Amendment #1 designating Pressure Maintenance Water Injection, within the Blueberry field – Debolt “E” pool, as a Special Project under section 75 of the *Oil and Gas Activities Act*, and
- 2) Order 93-09-001-OTN Amendment #1 approving Other Than Normal Spacing under section 65.1 of the *Petroleum and Natural Gas Act* for the subject formation and area.

The Good Engineering Practice approval, Order #92-06-004 Amendment #4E, issued April 13, 2000, is hereby rescinded, with oil allowable conditions incorporated within the attached Order 93-09-001 Amendment #1. GOR adjusted oil allowable, based on recent production is significantly higher than the project oil rate.

Please note that the annual progress report requirement has been removed from the Order, but new pressure testing expectations are specified. Also, as per section 75 of the *Drilling and Production Regulation*, a record of the volume of water injected and maximum wellhead pressure of the injection well must be included on a Monthly Injection or Disposal Statement (BC-S18), which must be submitted to the Commission no later than the 25<sup>th</sup> day of the month following the month in which activity occurred.

Should you have any questions, please contact Ron Stefik at (250) 419-4430 or Michelle Gaucher at (250) 419-4482.

Sincerely,



Richard Slocomb, P.Eng.  
Deputy Commissioner, Engineering  
Oil and Gas Commission

Attachments

IN THE MATTER of an Order for the production of petroleum using pressure maintenance (waterflood).

**ORDER 93-09-001 AMENDMENT #1**

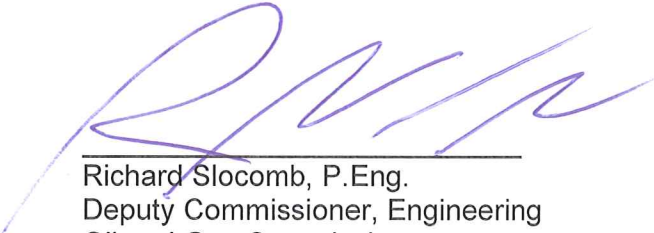
1 Under Section 75(1)(a) of the *Oil and Gas Activities Act*, the Blueberry field – Debolt ‘E’ formation is designated as a special project for pressure maintenance for recovery of oil by water injection within the following area;

NTS 94-A-12: Block L - units 61, 71, 72, 81, 82, 92, 93

NTS 94-A-13: Block D - units 2 – 4.

2 Under section 75(2) of the *Oil and Gas Activities Act*, I specify the following:

- a) The project unadjusted daily oil allowable (UDO) is 88 m<sup>3</sup>/d.
- b) All associated produced gas must be conserved.
- c) Water may be injected into the Blueberry - Debolt “E” pool through the well Progress et al Blueberry d-93-L/94-A-12 (WA 1242).
- d) The maximum wellhead injection pressure must not exceed 21,500 kPa.
- e) The maximum average formation pressure should not exceed 22,903 kPa, 120% of the initial pool pressure.
- f) Conduct bi-annual reservoir pressure tests on the Debolt ‘E’ formation on the injection 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. The next pressure test is due before the 4<sup>th</sup> quarter of 2013.



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Richard Slocomb, P.Eng.  
Deputy Commissioner, Engineering  
Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this 10<sup>th</sup> day of May 2013.

IN THE MATTER of Other Than Normal Spacing within the Blueberry – Debolt “E” pool.

**ORDER 93-09-001 OTN AMENDMENT #1**

1 Under Section 65.1(2) of the *Petroleum and Natural Gas Act*, Other Than Normal Spacing within the Blueberry – Debolt “E” pool is hereby approved within the following area;

NTS 94-A-12: Block L - units 61, 71, 72, 81-83, 92, 93

NTS 94-A-13: Block D - units 2 - 4.

2 Under section 65.1(3) of the *Petroleum and Natural Gas Act*, I specify the following:

- a) the target area for an oil well completed within the project area is not nearer than 100 m to the sides of the Other Than Normal Spacing area,
- b) an oil well completed outside the specified target area may be subject to an off-target production penalty,
- c) oil wells drilled within the specified project area are not subject to spacing requirements.



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

DATED AT the City of Victoria, in the Province of British Columbia, this 10<sup>th</sup> day of May 2013