

October 15, 2010

8200-4510-59240-09

Cheryl Leitch, C.E.T.
Senior Engineering Technologist
Progress Energy Ltd.
1200, 205 – 5th Avenue S.W.
CALGARY, AB T2P 2V7

Dear Ms. Leitch:

RE: PRESSURE MAINTENANCE WATERFLOOD ORDER, AMENDMENT #2

OTHER THAN NORMAL SPACING ORDER, AMENDMENT #2

TWO RIVERS - SIPHON "A" POOL

The Commission has reviewed your application dated September 15, 2010, requesting an amendment to the pressure maintenance waterflood order previously granted for the Two Rivers - Siphon "A" oil pool. Pool performance indicates a favorable response since injection commenced in January 2005.

As a result of recent legislative changes, the previous single approval document for this activity has transitioned to the attached Orders 04-09-002 (Amendment #2) and 04-09-002-OTN (Amendment #2) designating pressure maintenance within the Two Rivers – Siphon "A" pool a Special Project under section 75 of the *Oil and Gas Activities Act* and approving an Other Than Normal Spacing order under section 65.1 of the *Petroleum and Natural Gas Act* for the subject area. These amendments incorporate an additional water injection well, PROGRESS ET AL TWO RIVERS 14-05-083-16 (WA# 12253), for improved waterflood sweep efficiency.

Please note that the operation of the pressure maintenance scheme will be subject to periodic review and the Commission may modify the Orders, if deemed appropriate.

Should you have any questions, please contact Richard Slocomb at (250) 419-4421 or Kelly Okuszko at (250) 419-4433.

Sincerely,

Alex Ferguson Commissioner

Oil and Gas Commission

Attachment

IN THE MATTER of a pressure maintenance scheme of Progress Energy Ltd. (Progress) for recovery of oil by waterflooding the Two Rivers Siphon "A" Pool as described in the applications to the Commission dated April 28, 2004, October 5, 2005 and September 15, 2010.

ORDER 04-09-002 (Amendment #2)

- 1 Under Section 75(1)(a) of the *Oil and Gas Activities Act*, , I hereby designate the Two Rivers Siphon "A" pool within the area described in the attached schedule as a special project for pressure maintenance for recovery of oil by water injection.
- 2 Under section 75(2) of the *Oil and Gas Activities Act*, I make the special project designation in this Order subject to the following conditions:
 - a) The project daily oil limit is 210.6 m³.
 - b) Water may be injected into the Two Rivers Siphon "A" pool through the wells 14-5, 16-6 and 10-8-83-16 W6M.
 - c) All associated produced gas must be conserved.
 - d) The injection pressure measured at the sandface must not exceed the formation fracture pressure.
 - e) The permit holder must submit a progress report to the Commission for each twelve month period the scheme is in operation. The progress report must be filed within 60 days after the end of each period and must contain the following:
 - i) the daily average rate during each month of oil production for each producing well, and for the scheme as a whole
 - ii) the average gas-oil and water-oil rates during each month for each producing well, and for the scheme as a whole
 - iii) the monthly cumulative gas, oil and water production for each producing well, and for the scheme as a whole
 - iv) for each type of fluid being injected, the daily average rate of injection per operating day during each month into each injection well, and for the scheme as a whole
 - v) for each type of fluid being injected, the weighted average wellhead injection pressure during each month for each injection well, and for the scheme as a whole
 - vi) for each type of fluid being injected, the monthly cumulative volume of fluid injected to each injection well, and for the scheme as a whole
 - vii) the current volumetrically weighted formation pressure for the scheme as a whole and a copy of the isobaric map from which this pressure was calculated
 - viii) the date and type of any well treatment or workover which must be indicated, in the case of injection wells, on the report of the injected volume, and in the case of producing wells, on the report of the daily average oil production rate
 - ix) calculations of the balance during each month between fluids injected into, and fluids withdrawn from, the part of the pool subject to the scheme and by individual patterns, where applicable

x) an outline of the method actually in use for the quality control and treatment of fluid being injected, or, where there has been no change in the control or treatment from that outlined in a previous report, a statement to that effect

Alex Ferguson

Commissioner

Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this \(\sum_{\text{day}} \) day of October 2010.

SCHEDULE, Order 04-09-002 (Amendment #2)

Twp 83-Rge 16 W6M: NW/4 sec 4, sec 5, NE/4 sec 6, S/2 & NE/4 sec 7 and sec 8.

IN THE MATTER of Other Than Normal Spacing within the Two Rivers Siphon "A" Pool as described in the application form Progress Energy Ltd. (Progress) to the Commission dated September 15, 2010.

ORDER 04-09-002-OTN (Amendment #2)

- 1 Under Section 65.1(2) of the *Petroleum and Natural Gas Act*, I hereby approve Other Than Normal Spacing within the Two Rivers Siphon "A" pool within the area described in attached schedule.
- 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.

Richard Slocomb

Supervisor, Reservoir Engineering

Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this /5 day of October 2010.

SCHEDULE, Order 04-09-002-OTN (Amendment #2)

Twp 83-Rge 16 W6M: NW/4 sec 4, sec 5, NE/4 sec 6, S/2 & NE/4 sec 7 and sec 8.