



November 28, 2017

5860-4900-59240-09

Enrico DeLauretis, P.Eng.
Manager, Reservoir Engineering
Venturion Oil Limited
1600, 500 – 4th Ave S.W.
CALGARY, AB T2P 3V6

Dear Mr. DeLauretis:

**RE: PRESSURE MAINTENANCE WATERFLOOD SPECIAL PROJECT
OTHER THAN NORMAL SPACING ORDER
MICA FIELD – DOIG “B” POOL**

The Commission has reviewed the application dated October 23rd, 2017, requesting pressure maintenance waterflood approval for the Mica field – Doig ‘B’ pool. Examination of pool mapping, reservoir pressure and production data indicates that the pool is suitable for waterflood. The pool is currently at about 75 percent of initial pressure; water injection will result in maintaining or increasing the pressure of the pool ensuring maximum resource recovery.

The following Orders are attached;

- 1) Order 17-09-001 Amendment #3 designating Pressure Maintenance Waterflood within the Mica field – Mica ‘A’ pool, as a Special Project under section 75 of the *Oil and Gas Activities Act*, and
- 2) Order 17-09-001 Amendment #3 - OTN approving Other Than Normal Spacing under section 65.1 of the *Petroleum and Natural Gas Act* for the subject area and formation.

This approval includes recognition of the well Venturion Mica 14-36-081-14 (WA 28390) as water injector. This injection location will provide sweep efficiency and pressure support to increase recovery and preserve reservoir energy.

Please note that, as per section 75 of the *Drilling and Production Regulation*, a record of the volume of water injected must be included on a Monthly Injection or Disposal Statement (BC-S18), which must be submitted to the Commission no later than the 25th day of the month in which activity occurred. Upon injection, a form BC-11 Notice of Commencement or Suspension of Operations must be submitted to amend the status to water injector.

Good Engineering Practice approval Order 15-06-001 for the Mica - Doig ‘B’ pool is terminated effective the date of initial water injection.

Should you have any questions, please contact Petra Kriescher-Trudgeon at (250) 419-4415 or the undersigned at (250) 419-4430.

Sincerely,

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

Attachments

IN THE MATTER of an application from Venturion Oil Limited to the Commission dated October 23rd, 2017 for the production of oil using pressure maintenance (water injection).

ORDER 17-09-001

1. Under Section 65.1(2) of the *Petroleum and Natural Gas Act*, Other Than Normal Spacing is approved within the Mica field – Doig “B” pool within the following area;

DLS Twp 81 Rge 13 W6M SW/4 Section 31

 Twp 81 Rge 14 W6M Section 36

 Twp 82 Rge 14 W6M SW/4 Section 1

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

- a) The project unadjusted daily oil allowable (UDOAA) is 168.6 m³/d.
- b) All associated produced gas must be conserved.
- c) Water may be injected into the injection well Venturion Mica 14-36-081-14 W6M (WA 28390), interval 1694.0 – 1698.0 mKB;
 - i) Inject only through tubing with a packer set as near as is practical above the injection interval.
 - ii) Not exceed an injection pressure, measured at the wellhead of 15,150 kPa or the pressure required to fracture the formation, whichever is lesser.
- d) Not exceed an average pool pressure of 15,930 kPaa measured at 1052.0 meters subsea.
- e) Cease injection for the well listed in (c) and notify the Commission immediately if hydraulic isolation is lost in the wellbore or formation
- f) Submit the annual packer isolation test report for the well listed in (c) to the Commission within 30 days of the completion of the test.
- g) Include the injection hours and the maximum injection pressure value for the well listed in (c) on the monthly BC-S18 form.
- h) Injection must cease upon termination of production from the pool.
- i) The permit holder must submit a Progress Report to the Commission for each 12 month period the project is in operation. The Progress Report must be filed by March 31st the following year and must contain the information specified in Pressure Maintenance Progress Report Requirements.

Advisory Guidance for Order 17-09-001

- I. A production packer must be set above the injection interval and the space between the tubing and casing filled with corrosion and frost inhibiting fluids, as per section 16(2) of the Drilling and Production Regulation.
- II. Annual packer isolation tests are required to be submitted, as per section 16(3) of the Drilling and Production Regulation.
- III. Injected fluids must be metered and the injection pressure measured at the wellhead, as per section 74 of the Drilling and Production Regulation.
- IV. A monthly injection 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.
- V. Seismic events must be reported and disposal operations suspended as per section 21.1 of the Drilling and Production Regulation.



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

DATED AT the City of Victoria, in the Province of British Columbia, this 28th day of November 2017.

IN THE MATTER of an application from Venturion Oil Limited to the Oil and Gas Commission dated October 23rd, 2017 for Other Than Normal Spacing.

ORDER 17-09-001

- 1 Under Section 65.1(2) of the *Petroleum and Natural Gas Act*, Other Than Normal Spacing is approved within the Mica field – Doig “B” pool within the following area;

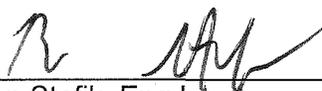
DLS Twp 81 Rge 13 W6M SW/4 Section 31

 Twp 81 Rge 14 W6M Section 36

 Twp 82 Rge 14 W6M SW/4 Section 1

- 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 target area specified in paragraph (a) may be subject to an off-target production penalty,
- c) oil wells drilled within the specified project area are not subject to spacing requirements.



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

DATED AT the City of Victoria, in the Province of British Columbia, this 25th day of November 2017.