

November 1, 2010

7600-4800-59240-13

Amanda White, P. Eng  
Reservoir Engineer  
Hunt Oil Company of Canada, Inc.  
3100, 450 – 1<sup>st</sup> Street S.W.  
CALGARY, AB T2P 5H1

Dear Ms. White:

**RE: PRESSURE MAINTENANCE GAS INJECTION ORDER  
OTHER THAN NORMAL SPACING ORDER  
RIGEL – HALFWAY “H” POOL**

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The Commission has reviewed your application dated August 4, 2010, requesting pressure maintenance gas injection approval for the Rigel - Halfway “H” oil pool.

Pool production has steadily declined since 1997 to current rates that are marginally economic. Associated sour gas production (averaging  $35 \times 10^3 \text{m}^3/\text{d}$  @ 16.4% H<sub>2</sub>S) is currently flared, therefore a Gas Injection Pressure Maintenance Scheme would provide both an economic and environmental benefit.

A Pressure Maintenance Waterflood scheme was approved for the pool [Approval #99-09-003] in June of 1999 but never commenced due to poor injectivity test results. With the approval of this Pressure Maintenance Gas Injection Order, Approval #99-09-003 will be rescinded.

Please find the following orders attached:

- Order 10-13-001 designating pressure maintenance within the Rigel – Halfway “H” pool a Special Project under section 75 of the *Oil and Gas Activities Act*
- Order 10-13-001-OTN approving an Other Than Normal Spacing order under section 65.1 of the *Petroleum and Natural Gas Act* for the subject area.

These approvals incorporate gas injection wells, HUNT ET AL RIGEL 10-18-088-18 (WA# 7471) and HUNT MAXX RIGEL 04-20-088-18W6 (WA #10520), for increased oil recovery.

Please note that, as per section 75 of the *Regulation*, a record of the volume of gas injected must be included on a Monthly Injection or Disposal Statement (BC-S18), which must be submitted to the Oil and Gas Commission no later than the 25th day of the month in which activity occurred. Also, the operation of the acid gas disposal project will be subject to periodic review and the Commission may modify the Order, if deemed appropriate.

Also, 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.

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Should you have any questions, please contact Richard Slocomb at (250) 419-4421 or Travis Mercure at (250) 419-4448.

Sincerely,

A handwritten signature in black ink, appearing to read 'Alex Ferguson', is written over a horizontal line. The signature is stylized and cursive.

Alex Ferguson  
Commissioner  
Oil and Gas Commission

Attachment

IN THE MATTER of the application from Hunt Oil Company of Canada Inc (Hunt Oil) to the Commission dated August 4, 2010, for the development and production of petroleum in the Rigel – Halfway “H” pool.

**ORDER 10-13-001**

- 1 Under Section 75(1)(a) of the *Oil and Gas Activities Act*, I hereby designate the Rigel – Halfway “H” pool within the area described in the attached schedule as a special project for pressure maintenance for recovery of oil by gas 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 173 m<sup>3</sup>.
  - b) Gas may be injected into the Rigel - Halfway “H” pool through the wells 4-20 and 10-18-88-16W6M.
  - c) All associated gas produced 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 project 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 project as a whole
    - ii) the average gas-oil and water-oil rates during each month for each producing well, and for the project as a whole
    - iii) the monthly cumulative gas, oil and water production for each producing well, and for the project 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 project 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 project 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 project as a whole
    - vii) the current volumetrically weighted formation pressure for the project 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 project 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

- f) As per section 75 of the *Act*, a record of the volume of gas injected must be included on a Monthly Injection/Disposal Statement, in the prescribed form (BC-S18), which must be submitted to the Oil and Gas Commission (Victoria) not later than the 25th day of the month following the reported month
- g) The Project shall be deemed to have commenced upon initiation of gas injection into the wells referenced above. The Supervisor, Reservoir Engineering, Resource Conservation, must be notified in writing within 72 hours of commencement of injection operations.

  
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Alex Ferguson  
Commissioner  
Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this      day of November 2010.