

September 12, 2011

9045-8295/8550-59240-06

V. Michelle Taylor  
Engineering Technologist  
Quicksilver Resources Canada Inc.  
2000, 125 – 9<sup>th</sup> Avenue S.E.  
CALGARY, AB T2G 0P8

Dear Ms. Taylor:

**RE: GOOD ENGINEERING PRACTICE SPECIAL PROJECT, AMENDMENT #1  
OTHER THAN NORMAL SPACING ORDER, AMENDMENT #1  
HORN RIVER FIELD – MUSKWA-OTTER PARK & EVIE SHALE FORMATIONS**

The Commission has reviewed your application dated July 22, 2011, requesting amendment of Good Engineering Practice for areas within the Horn River Basin - Horn River formation.

The Horn River Basin is an area of intense new activity for shale gas development. Numerous wells from multiple pads have been drilled within the area of application. Gas recovery from this resource will continue to benefit from the ability to produce horizontal wells in optimal locations, drilling from central sites.

The following Orders are attached:

- 1) Order 10-06-043 (Amendment #1) designating Good Engineering Practice within portions of the regional Horn River field Muskwa-Otter Park and Evie shale gas formations as Special Projects under section 75 of the *Oil and Gas Activities Act*, and
- 2) Order 10-06-043–OTN (Amendment #1) approving Other Than Normal Spacing under section 65.1 of the *Petroleum and Natural Gas Act* for the subject formations and areas.

As a Good Engineering Practice special project the applicant intends to locate, complete and operate wells in a manner to optimize resource recovery while minimizing surface impacts. Please note that GEP Approval #10-06-044 will be canceled as it has been incorporated into the 10-06-043 (Amendment #1) approvals referenced above. No objections were received following notice of application on the OGC website.

For regulatory purposes, the Commission designates the Middle Devonian aged Muskwa-Otter Park as a single formation, and the Evie shale as a separate zone. Therefore, wells completed within the Muskwa-Otter Park formation are not considered commingled, removing any requirement for application, notification or approval. Completing a wellbore for un-segregated production from both the Muskwa-Otter Park and the Evie will require submission of the form Notification of Commingled Production.

Please note that the following Experimental Scheme approval is hereby terminated, the area now included within a subject GEP approval;

**Approval 09-15-003 QUICKSILVER SHALE GAS PROJECT #2**

94-O-15      Block A - units 51-53, 61-63  
                  Block B - units 60 and 70.

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Approvals 10-06-043 (Amendment #1)

Any well already rig released within the Experimental Schemes will retain the remaining portion of the 3-year confidentiality period, however new wells will not obtain Experimental status. A final Progress Report, required as a condition of the Experimental Scheme approval, must be submitted to the Commission within 60 days of this date, regardless of the previous reporting cycle.

Should you have any questions, please contact Kelly Okuszko at (250) 419-4433 or Travis Mercure at (250) 419-4448.

Sincerely,



Paul Jeakins  
Chief Operating Officer  
Oil and Gas Commission

Attachments

IN THE MATTER of an application from Quicksilver Resources Canada Inc. (Quicksilver) to the Commission dated July 22, 2011 for a Good Engineering Practice project.

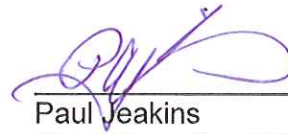
**ORDER 10-06-043 (AMENDMENT #1)**

- 1 Under Section 75(1)(a) of the *Oil and Gas Activities Act*, the Horn River field – Muskwa-Otter Park and Evie formations is designated as a special project for the enhanced recovery of natural gas utilizing Good Engineering Practice within the following area;

NTS 94-O-16 Block D Units 12-20, 22-30, 32-40, 42-50, 52-60, 62-70, 72-80, 82-90

NTS 94-O-15 Block A Units 11-19, 21-29, 31-73, 81-83

NTS 94-O-15 Block B Units 31-33, 41-43, 51-53, 61-63.



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Paul Jeakins  
Chief Operating Officer  
Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this <sup>th</sup> 8 day of September 2011.

IN THE MATTER of an application from Quicksilver Resources Canada Inc. (Quicksilver) to the Commission dated July 22, 2011 for Other Than Normal Spacing.

**ORDER 10-06-043-OTN (AMENDMENT #1)**

- 1 Under Section 65.1(2) of the *Petroleum and Natural Gas Act*, Other Than Normal Spacing is approved within the regional Horn River field Muskwa-Otter Park and Evie formations within the following area;

NTS 94-O-16 Block D Units 12-20, 22-30, 32-40, 42-50, 52-60, 62-70, 72-80, 82-90

NTS 94-O-15 Block A Units 11-19, 21-29, 31-73, 81-83

NTS 94-O-15 Block B Units 31-33, 41-43, 51-53, 61-63.

- 2 Under section 65.1(3) of the *Petroleum and Natural Gas Act*, I specify the following:
- a) the target area for a gas well completed within the project area is not nearer than 100 m to the sides of the Other Than Normal Spacing area,
  - b) a gas well completed outside the specified target area may be subject to an off-target production penalty,
  - c) gas wells drilled within the specified project area are not subject to spacing requirements.



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Kelly Okuszko  
Supervisor, Reservoir Engineering  
Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this 13<sup>th</sup> day of September 2011.