

November 4, 2010

9045-8295/8550-59240-06

Doreen Rempel, P.Eng.
Community and Regulatory Affairs Manager
Quicksilver Resources Canada Inc.
2000, 125 – 9th Avenue S.E.
CALGARY, AB T2G 0P8

Dear Ms. Rempel:

**RE: GOOD ENGINEERING PRACTICE SPECIAL PROJECTS
OTHER THAN NORMAL SPACING ORDERS
HORN RIVER FIELD – MUSKWA-OTTER PARK & EVIE SHALE FORMATIONS**

The Commission has reviewed your application dated July 19, 2010, requesting approval 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.

As a result of recent legislative changes, authorities previously contained in a single approval document for this activity are now covered in the attached;

- 1) Orders 10-06-043 and 10-06-044 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) Orders 10-06-043–OTN and 10-06-044–OTN 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. The areas referenced in the application as Area 1 and Area 2 have been included within the single approvals '043', as they constitute a contiguous region. 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 09-15-002 QUICKSILVER SHALE GAS PROJECT #1

94-O-15 Block A - units 40, 50, 60, 70
 Block B - units 31, 41, 51 and 61.

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Approvals 10-06-043, 10-06-044

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 Ron Stefik at (250) 419-4430.

Sincerely,



Richard Slocomb, P. Eng.
Supervisor, Reservoir Engineering
Resource Conservation

Attachments

IN THE MATTER of an application from Quicksilver Resources Canada Inc. (Quicksilver) to the Commission dated July 19, 2010 for a Good Engineering Practice project.

ORDER 10-06-043

- 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 18-20, 28-30, 38-40, 48-50, 54-57, 64-67, 74-77, 84-87
NTS 94-O-15 Block A Units 11, 21, 31-33 and 41-43.



Alex Ferguson
Commissioner
Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this 4th day of November 2010.

IN THE MATTER of an application from Quicksilver Resources Canada Inc. (Quicksilver) to the Commission dated July 19, 2010 for a Good Engineering Practice project.

ORDER 10-06-044

- 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-15 Block A Units 16-19, 26-29, 36-40, 46-50, 60, 70
Block B Units 31, 41, 51-53 and 61-63.



Alex Ferguson
Commissioner
Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this 4th day of November 2010.

IN THE MATTER of an application from Quicksilver Resources Canada Inc. (Quicksilver) to the Commission dated July 19, 2010 for Other Than Normal Spacing.

ORDER 10-06-043-OTN

- 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 18-20, 28-30, 38-40, 48-50, 54-57, 64-67, 74-77, 84-87
NTS 94-O-15 Block A Units 11, 21, 31-33 and 41-43.

- 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.



Richard Slocomb
Supervisor, Reservoir Engineering
Oil and Gas Commission

DATED AT the City of Victoria, in the Province of British Columbia, this 4th day of November 2010.

IN THE MATTER of an application from Quicksilver Resources Canada Inc. (Quicksilver) to the Commission dated July 19, 2010 for Other Than Normal Spacing.

ORDER 10-06-044-OTN

- 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-15 Block A Units 16-19, 26-29, 36-40, 46-50, 60, 70
Block B Units 31, 41, 51-53 and 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.



Richard Slocomb
Supervisor, Reservoir Engineering
Oil and Gas Commission

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