

November 24, 2009

9000-8285-59240-15

Heidi Hofbauer Mineral Negotiator Land Department Imperial Oil Resources Limited 237 Fourth Avenue S.W. PO Box 2480 Station 'M' Calgary, Alberta T2P 3M9

Dear Ms. Hofbauer:

RE: EXPERIMENTAL SCHEME APPROVALS, AMENDMENT #1 KOMIE AREA – HORN RIVER FORMATION

Commission staff have reviewed the application dated October 2, 2009 requesting amendments to the four experimental scheme approvals issued September 5, 2008 to explore, develop, evaluate and test the shale gas potential of the Horn River shale sequence, specifically the Muskwa, Otter Park and Evie formations, in the Komie area in northeast British Columbia.

Attached are the following approvals, granted under section 100 of the <u>Petroleum and Natural</u> <u>Gas Act</u>:

Approval

08-15-008 (Imperial Project #1), Amendment #1 08-15-009 (Imperial Project #2), Amendment #1 08-15-010 (Imperial Project #3), Amendment #1 08-15-011 (Imperial Project #4), Amendment #1 Effective Date January 1, 2009

February 10, 2009 March 11, 2009 March 16, 2009

These amendments modify the original approval areas to accommodate identified development opportunities. No objections were received following posting of a notice of the amendment application on the OGC website. In accordance with section 57 of the *Drilling & Production Regulation* all well reports and well data will be held confidential for a period of 3 years after the date of release of the drilling rig for a well forming part of this experimental scheme.

Please note that progress reports, as specified in item 5 of the approvals, must be submitted on an annual basis with the first one due on the first anniversary of the effective dates noted above, based in the rig release date of the first well in each approval area.

Sincerely,

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

Attachments

APPROVAL 08-15-008 (Amendment #1)

THE PROVINCE OF BRITISH COLUMBIA <u>PETROLEUM AND NATURAL GAS ACT</u> OIL AND GAS COMMISSION

IN THE MATTER of the experimental scheme of Imperial Oil Resources Limited (Operator) to test the commercial viability of Horn River shale gas in the Komie area of NE British Columbia.

NOW THEREFORE, the Commission, pursuant to section 100 of the <u>Petroleum and</u> <u>Natural Gas Act</u>, R.S.B.C. 1996, c.361, hereby orders as follows:

- 1. The experimental scheme for the exploration and development of Horn River shale gas in the Komie area, as such proposal is described in the application to the Commission received July 14, 2008 and October 2, 2009 is hereby approved, subject to terms and conditions herein contained.
- 2. The area of the experimental scheme consists of:

094-O-02 Block J – units 14-17, 24-27, 34-39, 44-49, 56-59, 66-69, 76-79 and 86-99.

- 3. The gas wells within the scheme area may be produced without individual well allowable restrictions.
- 4. The requirements of Section 10 of the *Drilling and Production Regulation* are hereby waived, provided that gas wells within the project area are not completed nearer than 250 m to the sides of the approved project area.
- 5. The Operator must submit a progress report to the Commission annually. The progress report is due within 60 days after the end of each period and must contain:
 - a) the daily average rate of gas and water produced during each month for each producing well, and for the scheme as a whole,
 - b) the monthly cumulative gas and water production from each producing well, and for the scheme as a whole,
 - c) details of any workover or fracture treatment program done on any of the wells with results of the workovers or fracture treatment,
 - d) an evaluation of bottom hole pressures and any other data collected,
 - e) representative sample analysis of produced gas and water,
 - f) a discussion of the overall performance of the scheme,
 - g) any other information that is considered necessary, in the opinion of the Commission, to evaluate the progress, performance and efficiency of the scheme.
- 6. The operations of the experimental scheme will be subject to review by the Commission. The Director, Resource Conservation or the Director, Drilling and Production, may issue guidelines regarding the operations of the scheme.

- 7. The Operator of the scheme shall complete operations as set out in the proposed program described in the application from Imperial Oil Resources Limited to the Commission dated October 2, 2009.
- 8. The approval or any condition of it may be modified or rescinded, if deemed appropriate.

Richard Slocomb Supervisor, Reservoir Engineering Resource Conservation

APPROVAL 08-15-009 (Amendment #1)

THE PROVINCE OF BRITISH COLUMBIA <u>PETROLEUM AND NATURAL GAS ACT</u> OIL AND GAS COMMISSION

IN THE MATTER of the experimental scheme of Imperial Oil Resources Limited (Operator) to test the commercial viability of Horn River shale gas in the Komie area of NE British Columbia.

NOW THEREFORE, the Commission, pursuant to section 100 of the <u>Petroleum and</u> <u>Natural Gas Act</u>, R.S.B.C. 1996, c.361, hereby orders as follows:

- 1. The experimental scheme for the exploration and development of Horn River shale gas in the Komie area, as such proposal is described in the application to the Commission received July 14, 2008 and October 2, 2009 is hereby approved, subject to terms and conditions herein contained.
- 2. The area of the experimental scheme consists of:

094-O-02 Block H – units 74-77, 84-87, 94-97 Block I – units 4-7, 14-17 and 24-27.

- 3. The gas wells within the scheme area may be produced without individual well allowable restrictions.
- 4. The requirements of Section 10 of the *Drilling and Production Regulation* are hereby waived, provided that gas wells within the project area are not completed nearer than 250 m to the sides of the approved project area.
- 5. The Operator must submit a progress report to the Commission annually. The progress report is due within 60 days after the end of each period and must contain:
 - a) the daily average rate of gas and water produced during each month for each producing well, and for the scheme as a whole,
 - b) the monthly cumulative gas and water production from each producing well, and for the scheme as a whole,
 - c) details of any workover or fracture treatment program done on any of the wells with results of the workovers or fracture treatment,
 - d) an evaluation of bottom hole pressures and any other data collected,
 - e) representative sample analysis of produced gas and water,
 - f) a discussion of the overall performance of the scheme,
 - g) any other information that is considered necessary, in the opinion of the Commission, to evaluate the progress, performance and efficiency of the scheme.
- 6. The operations of the experimental scheme will be subject to review by the Commission. The Director, Resource Conservation or the Director, Drilling and Production, may issue guidelines regarding the operations of the scheme.

- 7. The Operator of the scheme shall complete operations as set out in the proposed program described in the application from Imperial Oil Resources Limited to the Commission dated October 2, 2009.
- 8. The approval or any condition of it may be modified or rescinded, if deemed appropriate.

Richard Slocomb Supervisor, Reservoir Engineering Resource Conservation

APPROVAL 08-15-010 (Amendment #1)

THE PROVINCE OF BRITISH COLUMBIA <u>PETROLEUM AND NATURAL GAS ACT</u> OIL AND GAS COMMISSION

IN THE MATTER of the experimental scheme of Imperial Oil Resources Limited (Operator) to test the commercial viability of Horn River shale gas in the Komie area of NE British Columbia.

NOW THEREFORE, the Commission, pursuant to section 100 of the <u>Petroleum and</u> <u>Natural Gas Act</u>, R.S.B.C. 1996, c.361, hereby orders as follows:

- 1. The experimental scheme for the exploration and development of Horn River shale gas in the Komie area, as such proposal is described in the application to the Commission received July 14, 2008 and October 2, 2009 is hereby approved, subject to terms and conditions herein contained.
- 2. The area of the experimental scheme consists of:

094-O-01 Block E – units 71, 81, 91 Block F – units 76-80, 86-90, 96-100 Block K – units 6-10, 16-20, 26-30 Block L – units 1, 11 and 21.

- 3. The gas wells within the scheme area may be produced without individual well allowable restrictions.
- 4. The requirements of Section 10 of the *Drilling and Production Regulation* are hereby waived, provided that gas wells within the project area are not completed nearer than 250 m to the sides of the approved project area.
- 5. The Operator must submit a progress report to the Commission annually. The progress report is due within 60 days after the end of each period and must contain:
 - a) the daily average rate of gas and water produced during each month for each producing well, and for the scheme as a whole,
 - b) the monthly cumulative gas and water production from each producing well, and for the scheme as a whole,
 - c) details of any workover or fracture treatment program done on any of the wells with results of the workovers or fracture treatment,
 - d) an evaluation of bottom hole pressures and any other data collected,
 - e) representative sample analysis of produced gas and water,
 - f) a discussion of the overall performance of the scheme,
 - g) any other information that is considered necessary, in the opinion of the Commission, to evaluate the progress, performance and efficiency of the scheme.
- 6. The operations of the experimental scheme will be subject to review by the Commission. The Director, Resource Conservation or the Director, Drilling and Production, may issue guidelines regarding the operations of the scheme.

- 7. The Operator of the scheme shall complete operations as set out in the proposed program described in the application from Imperial Oil Resources Limited to the Commission dated October 2, 2009.
- 8. The approval or any condition of it may be modified or rescinded, if deemed appropriate.

Richard Slocomb Supervisor, Reservoir Engineering Resource Conservation

APPROVAL 08-15-011 (Amendment #1)

THE PROVINCE OF BRITISH COLUMBIA <u>PETROLEUM AND NATURAL GAS ACT</u> OIL AND GAS COMMISSION

IN THE MATTER of the experimental scheme of Imperial Oil Resources Limited (Operator) to test the commercial viability of Horn River shale gas in the Komie area of NE British Columbia.

NOW THEREFORE, the Commission, pursuant to section 100 of the <u>Petroleum and</u> <u>Natural Gas Act</u>, R.S.B.C. 1996, c.361, hereby orders as follows:

- 1. The experimental scheme for the exploration and development of Horn River shale gas in the Komie area, as such proposal is described in the application to the Commission received July 14, 2008 and October 2, 2009 is hereby approved, subject to terms and conditions herein contained.
- The area of the experimental scheme consists of: 094-O-01 Block J – units 16-20, 26-30, 36-40, 46-50 Block K – units 11, 21, 31 and 41.
- 3. The gas wells within the scheme area may be produced without individual well allowable restrictions.
- 4. The requirements of Section 10 of the *Drilling and Production Regulation* are hereby waived, provided that gas wells within the project area are not completed nearer than 250 m to the sides of the approved project area.
- 5. The Operator must submit a progress report to the Commission annually. The progress report is due within 60 days after the end of each period and must contain:
 - a) the daily average rate of gas and water produced during each month for each producing well, and for the scheme as a whole,
 - b) the monthly cumulative gas and water production from each producing well, and for the scheme as a whole,
 - c) details of any workover or fracture treatment program done on any of the wells with results of the workovers or fracture treatment,
 - d) an evaluation of bottom hole pressures and any other data collected,
 - e) representative sample analysis of produced gas and water,
 - f) a discussion of the overall performance of the scheme,
 - g) any other information that is considered necessary, in the opinion of the Commission, to evaluate the progress, performance and efficiency of the scheme.
- 6. The operations of the experimental scheme will be subject to review by the Commission. The Director, Resource Conservation or the Director, Drilling and Production, may issue guidelines regarding the operations of the scheme.

- 7. The Operator of the scheme shall complete operations as set out in the proposed program described in the application from Imperial Oil Resources Limited to the Commission dated October 2, 2009.
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