

## Changes to Deep Well and Deep Re-Entry Credits

### *Petroleum and Natural Gas Act*

**Please note:** This notice replaces the previous version dated February 2009. The only change to this notice is to the attached schedule in order to add an area of land to the east area for wells spud on, or after, January 1, 2009. The added units of land start with subparagraph (lxiv) of the schedule and end with subparagraph (lxxiii).

This notice outlines changes, **effective February 1, 2009**, to the Deep Well and Deep Re-entry Credit Program. These credits were developed to encourage greater exploratory drilling activity and to maximize the development of known resources on both Crown and freehold production land. There are five changes and they are outlined as follows.

1. A new east/west line is prescribed for wells with spud dates on, or after, January 1, 2009. A new schedule, Schedule 1, is attached to this notice and specifies the units of land that comprise the east area for wells that are spud on, or after, January 1, 2009. Any wells that are not in the east area are considered to be in the west area. The list of locations found in **Bulletin PNG 001**, *Royalty Programs for Deep Gas Wells*, describes units of land in the east area that apply to wells with spud dates before 2009.
2. In provisions relating to deep well credits for wells with spud dates on, or after, January 1, 2009, top of pay is replaced by a completion point in the well. The completion point depends on the type of well, as follows.
  - For vertical wells with open hole completions, the completion point is the bottom of the casing.
  - For vertical wells that do not have open hole completions, the completion point is the bottom of the deepest perforations in the casing.
  - For horizontal wells, the completion point is the point in the well bore at which the angle of the well bore first exceeds 80 degrees from vertical.

3. Changing top of pay to completion point affects the eligibility criteria for deep well credits and exemptions for well events that are in wells with spud dates on, or after, January 1, 2009, as follows.
  - To be eligible for a deep well credit, a well event must have a completion point that has a true vertical depth (TVD) that is:
    - deeper than 2,300 meters if it is in a horizontal well, or
    - deeper than 2,500 meters if it is in a vertical well.
  - To be eligible for a deep re-entry credit, a well event must have a completion point that has a TVD that is deeper than 2,300 meters.
  - To be eligible for a deep discovery well exemption, a well event must have a completion point that has a TVD that is deeper than 4,000 meters.

TVD to completion points will be available from drilling and completion data that is currently provided by industry to the Oil and Gas Commission.

Eligibility criteria for well events in wells with spud dates before 2009 continue to be based on TVD to top of pay. TVD to top of pay for these well events will continue to be obtained from the *Notice of Commencement or Suspension of Operations* (BC11).

All other qualifying conditions for the credits and exemption remain the same, except that wells that qualify for deep well credits and exemptions may not be part of a coalbed methane project.

4. Changing top of pay to completion point also affects the meaning of deep well depth for deep well events in wells with spud dates on, or after, January 1, 2009, as follows.
  - In a vertical well, deep well depth becomes measured depth to the completion point (MDCP). For a well event that is in a vertical well and is **not** an open hole completion, this is the distance along the well bore from the Kelly bushing of the rig used to drill the well to the bottom of the deepest perforation in the well event. For a well event that is in a vertical well and **is** an open hole completion, this is the distance along the well bore to the bottom of the casing.
  - In a horizontal well, deep well depth becomes MDCP plus the horizontal length factor (HLF) multiplied by the positive difference between total measured depth and MDCP.
  - MDCP also replaces measured depth to top of pay in the definition of the HLF, as follows.

- For a gas well event with MDCP between 2,300 and 2,875 metres, the HLF is  $[ 60 - 0.035 \times (\text{MDCP} - 2,300) ] / 100$ .
- For a gas well event with MDCP deeper than 2,875 metres, the HLF is 0.4.

Deep well depth is the measurement used in the deep well credit tables (see [Bulletin PNG 001](#), *Royalty Programs for Deep Gas Wells*) to determine deep well credit amounts. Table depth means the deep well depth of the deepest well event rounded down to the nearest 500 metres.

MDCP will be available from drilling and completion data that is currently provided by the industry to the Oil and Gas Commission.

Deep well credit amounts for well events in wells with spud dates before 2009 continue to be based on measured depth to top of pay. Measured depth to top of pay for these well events will continue to be obtained from the [BC11](#).

5. For well events in wells with spud dates on, or after, January 1, 2009, HLF is determined as follows.
  - For well events with MDCP between 2,300 and 2,875 metres, the HLF is  $[ 60 - 0.035 \times (\text{MDCP} - 2,300) ] / 100$ .
  - For well events with MDCP deeper than 2,875 metres, the HLF = 0.4.

For well events in wells with spud dates before 2009, the HLF has not been changed and continues to be determined as follows.

- For well events with measured depth to top of pay (MDTP) between 2,300 and 2,875 metres, the HLF is  $[ 30 - 0.035 \times (\text{MDTP} - 2,300) ] / 100$ .
- For well events with MDTP deeper than 2,875 metres, the HLF = 0.1.

## Further Information

If you have any questions, please call us at 250 952-0192 in Victoria, or toll-free at 1 800 667-1182, or e-mail your questions to [Oil&GasRoyaltyQuestions@gov.bc.ca](mailto:Oil&GasRoyaltyQuestions@gov.bc.ca)

You can also find information on our website at [www.sbr.gov.bc.ca/business/Natural\\_Resources/Oil\\_and\\_gas\\_royalties/oil\\_and\\_gas\\_royalties.htm](http://www.sbr.gov.bc.ca/business/Natural_Resources/Oil_and_gas_royalties/oil_and_gas_royalties.htm)

The information in this notice is for your convenience and guidance and is not a replacement for the legislation. The *Petroleum and Natural Gas Act* and Regulations are on our website at [www.sbr.gov.bc.ca/business/Natural\\_Resources/Oil\\_and\\_gas\\_royalties/legislation.htm](http://www.sbr.gov.bc.ca/business/Natural_Resources/Oil_and_gas_royalties/legislation.htm)

## Schedule 1

East deep well and deep re-entry credit tables apply to well events that have spud dates on, or after, January 1, 2009, and are located in any of the areas listed below. The areas referred to in (i) to (xxxvi) and (lxiv) to (lxxiii) are described in accordance with the National Topographical Survey. The areas referred to in (xxxvii) to (lxiii), are described in accordance with the Dominion Land Survey System.

- (i) The portion of Group 095-A-01 to Group 095-A-04 (inclusive) that is located within British Columbia
- (ii) The portion of Group 095-B-01 to Group 095-B-04 (inclusive) that is located within British Columbia
- (iii) The portion of Group 095-C-01 that is located within British Columbia
- (iv) Group 094-P-01 to Group 094-P-16 (inclusive)
- (v) Group 094-O-01 to Group 094-O-3 (inclusive)
- (vi) Blocks A to C, Units 1-7 and 11-100 of Block D, and Blocks E to L of Group 094-O-04
- (vii) Group 094-O-05 to Group 094-O-16 (inclusive)
- (viii) Units 11-100 of Block A, Units 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block B, Units 71-77, 81-87, 91-97 of Block E, Units 71-100 of Block F, Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-100 of Block G, Blocks H to K (inclusive), Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block L of Group 094-N-01
- (ix) Units 71-77, 81-87, 91-97 of Block G, Units 71-100 of Block H, Block I, Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block J, of Group 094-N-07
- (x) Blocks A to C (inclusive), Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block D, Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-100 of Block E, Blocks F to L (inclusive) of Group 094-N-08
- (xi) Blocks A-D, Units 1-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block E, Blocks F-K (inclusive), Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block L of Group 094-N-09
- (xii) Block A, Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block B, Units 1-7, 11-17, 21-27 of Block G, Units 1-30 of Block H of Group 094-N-10
- (xiii) Block A, Units 1-73, 81-83, 91-93 of Block B, Units 1-70 of Block C, Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67 of Block D, Units 1-3, 11-13, 21-23, 31-33, 41-43, 51-53, 61-63, 71-73, 81-83, 91-93 of Block G, Block H and I, Units 1-3, 11-13, 21-23, 31-33, 41-43, 51-53, 61-63, 71-73, 81-83, 91-93 of Block J of Group 094-N-16
- (xiv) Group 094-J-01 to Group 094-J-03 (inclusive)

- (xv) Blocks A to C (inclusive), Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block D, Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block E, Blocks F to K (inclusive), Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block L of Group 094-J-04
- (xvi) Blocks A to C (inclusive), Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block D, Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block E, Blocks F to K (inclusive), Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block L of Group 094-J-05
- (xvii) Group 094-J-06 to 094-J-11 (inclusive)
- (xviii) Blocks A to C (inclusive), Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block D, Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block E, Blocks F to K (inclusive), Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block L of Group 094-J-12
- (xix) Blocks A to C (inclusive), Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block D, Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block E, Blocks F to K (inclusive), Units 1-7, 11-17, 21-27, 31-37, 41-47, 51-57, 61-67, 71-77, 81-87, 91-97 of Block L of Group 094-J-13
- (xx) Group 094-J-14 to Group 094-J-16 (inclusive)
- (xxi) Group 094-I-01 to Group 094-I-16 (inclusive)
- (xxii) Group 094-H-01 to Group 094-H-16 (inclusive)
- (xxiii) Block A, Units 1-3, 11-13, 21-23, 31-37, 41-47, 51-57, 61-67, 71-100 of Block B, Units 71, 81, 91 of Block C, Unit 91 of Block E, Units 1, 11-15, 21-25, 31-35, 41-45, 51-59, 61-69, 71-79, 81-89, 91-100 of Block F, Blocks G to K (inclusive), Units 1, 11, 21, 31-33, 41-43, 51-55, 61-65, 71-75, 81-85, 91-97 of Block L of Group 094-G-01
- (xxiv) Units 31, 41, 51-53, 61-63, 71-73, 81-83, 91-95 of Block A, Units 51, 61, 71-73, 81-83, 91-95 of Block G, Units 1-5, 11-17, 21-27, 31-39, 41-49, 51-100 of Block H, Block I, Units 1-5, 11-15, 21-25, 31-37, 41-47, 51-59, 61-69, 71-79, 81-89, 91-100 of Block J, Unit 91 of Block K of Group 094-G-07
- (xxv) Block A to Block C (inclusive), Units 1-7, 11-19, 21-29, 31-100 of Block D, Blocks E to L of Group 094-G-08
- (xxvi) Group 094-G-09
- (xxvii) Block A and B, Units 1, 11-13, 21-23, 31-33, 41-43, 51-55, 61-65, 71-77, 81-87, 91-100 of Block C, Unit 91 of Block D, Units 1, 11-13, 21-23, 31-37, 41-47, 51-100 of Block E, Blocks F to L (inclusive) of Group 094-G-10
- (xxviii) Units 51, 61, 71-75, 81-85, 91-99 of Block H, Units 1-9, 11-100 of Block I, Units 11-13, 21-23, 31-37, 41-47, 51-100 of Block J, Units 51, 61, 71-73, 81-83, 91-97 of Block K of Group 094-G-11

- (xxix) Units 71-73, 81-83, 91-97 of Block A, Units 71, 81, 91-95 of Block F, Units 31-35, 41-45, 51-59, 61-69, 71-100 of Block G, Units 1-7, 11-19, 21-29, 31-100 of Block H, Blocks I and J, Units 1-5, 11-19, 21-29, 31-100 of Block K, Units 31-33, 41-43, 51-57, 61-67, 71-77, 81-87, 91-97 of Block L of Group 094-G-13
- (xxx) Blocks A and B, Units 1-7, 11-100 of Block C, Units 11, 21, 31-33, 41-43, 51-59, 61-69, 71-100 of Block D, Blocks E to L (inclusive) of Group 094-G-14
- (xxxi) Group 094-G-15 and Group 094-G-16
- (xxxii) Unit 91 of Block H, Units 1, 11-13, 21-23, 31-37, 41-47, 51-57, 61-67, 71-79, 81-89, 91-100 of Block I, Units 91-93 of Block J of Group 094-B-16
- (xxxiii) The portion of Group 094-A-09 to Group 094-A-11 that is located outside the Peace River Block
- (xxxiv) The portion of Block I, Units 1, 11-15, 21-25, 31-35, 41-45, 51-57, 61-67, 71-100 of Block J, Units 71, 81, 91 of Block K of Group 094-A-12 that is located outside the Peace River Block
- (xxxv) Blocks A and B, Units 1, 11-13, 21-23, 31-35, 41-45, 51-55, 61-65, 71-77, 81-87, 91-99 of Block C, Units 11-13, 21-23, 31-35, 41-45, 51-57, 61-67, 71-79, 81-89, 91-100 of Block E, Units 1-9, 11-100 of Block F, Blocks G to L (inclusive) of Group 094-A-13
- (xxxvi) Group 094-A-14 to Group 094-A-16 (inclusive)
- (xxxvii) The portion of the Peace River Block within Sections 1-3, 10-15, 22-29, 2-36 of Township 88 Range 23 W6M
- (xxxviii) The portion of the Peace River Block with Township 88 east of Range 23 W6M within British Columbia
- (xxxix) Sections 1-3, 10-15, 22-27, 34-36 of Township 87 Range 23 W6M
  - (xl) Township 87 east of Range 23 W6M within British Columbia
  - (xli) Sections 1-5, 8-16, 21-28, 33-36 of Township 86 Range 23 W6M
  - (xlii) Township 86 east of Range 23 W6M within British Columbia
  - (xliii) Sections 1, 2, 12, 13, 24 of Township 85 Range 24 W6M
  - (xliv) Township 85 east of Range 24 W6M within British Columbia
  - (xlv) Sections 1-5, 8-16, 22-27, 35, 36 of Township 84 Range 24 W6M
  - (xlvi) Township 84 east of Range 24 W6M within British Columbia
  - (xlvii) Sections 1, 12, 13, 24 of Township 83 Range 25 W6M
  - (xlviii) Township 83 east of Range 25 W6M within British Columbia
  - (xlix) Sections 1, 2, 10-15, 22-27, 34-36 of Township 82 Range 25 W6M
    - (l) Township 82 east of Range 25 W6M within British Columbia
    - (li) Sections 12, 13, 24-26, 35, 36 of Township 81 Range 25 W6M
    - (lii) Township 81 east of Range 25 W6M within British Columbia
    - (liii) Sections 1-3, 9-16, 20-29, 31-36 of Township 80 Range 24 W6M
    - (liv) Township 80 east of Range 24 W6M within British Columbia
    - (lv) Sections 12, 13, 23-26, 34-36 of Township 79 Range 24 W6M

- (lvi) Township 79 east of Range 24 W6M within British Columbia
- (lvii) Section 36 of Township 78 Range 24 W6M
- (lviii) Sections 1-4, 9-17, 19-36 of Township 78 Range 23 W6M
- (lix) Township 78 east of Range 23 W6M within British Columbia
- (lx) Sections 1, 12-14, 23-27, 34-36 of Township 77 Range 23 W6M
- (lxi) Township 77 east of Range 23 W6M within British Columbia
- (lxii) The portion of the Peace River Block within Section 36 of Township 76 Range 23 W6M
- (lxiii) The portion of the Peace River Block within Township 76 east of Range 23 W6M within British Columbia
- (lxiv) Group 093-P-01
- (lxv) Units 1-5, 11-15, 21-25, 31-37, 41-47, 51-100 of Block A, Units 51, 61, 71-73, 81-83, 91-97 of Block B, Units 71, 81, 91-93 of Block E, Units 11, 21, 31-33, 41-43, 51-57, 61-67, 71-100 of Block F, Units 1-7, 11-100 of Block G, Blocks H to K (inclusive), Units 1-3, 11-15, 21-25, 31-37, 41-47, 51-100 of Block L of Group 093-P-02
- (lxvi) Units 51, 61, 71-73, 81-83, 91-95 of Block I of Group 093-P-03
- (lxvii) Units 1-5, 11-19, 21-29, 31-100 of Block A, Units 31, 41, 51-53, 61-63, 71-75, 81-85, 91-97 of Block B, Units 71, 81, 91 of Block F, Units 1-7, 11-17, 21-27, 31-39, 41-49, 51-59, 61-69, 71-100 of Block G, Blocks H to J (inclusive), Units 1, 11-13, 21-23, 31-35, 41-45, 51-55, 61-65, 71-75, 81-85, 91-97 of Block K of Group 093-P-06
- (lxviii) Group 093-P-07 and Group 093-P-08
- (lix) The portion of Group 093-P-09 and Group 093-P-10 that is located outside of the Peace River Block
- (lxx) The portion of Blocks A, B, Units 1-7, 11-19, 21-29, 31-39, 41-49, 51-59, 61-69, 71-100 of Block C, Units 71, 81, 91-93 of Block D, Units 1-3, 11-13, 21-23, 31-33, 41-43, 51-55 of Block E, Blocks F to H (inclusive) of Group 093-P-11 that is located outside of the Peace River Block
- (lxxi) Units 51, 61, 71-73, 81-83, 91-97 of Block H, Units 1-7, 11-17, 21-27, 31-100 of Block I, Units 31, 41, 51-53, 61-63, 71-77, 81-87, 91-100 of Block J, Unit 91 of Block K of Group 093-I-09
- (lxxii) Units 51, 61, 71, 81, 91 of Block H, Units 1, 11-13, 21-23, 31-33, 41-43, 51-53, 61-63, 71-73, 81-83, 91-95 of Block I of Group 093-I-15
- (lxxiii) Blocks A, B, Units 1, 11-17, 21-27, 31-100 of Block C, Units 31, 41, 51-55, 61-65, 71-77, 81-87, 91-97 of Block D, Units 1-7, 11-19, 21-29, 31-39, 41-49, 51-100 of Block E, and Blocks F to L (inclusive) of Group 093-I-16