

## FACTSHEET

### OIL AND GAS DEVELOPMENT STRATEGY FOR THE HEARTLANDS

#### MODIFIED DEEP ROYALTY PROGRAM

##### **Qualification Criteria:**

A deep well-depth deduction amount may be deducted from a reporting entity's royalty payable if:

- (i) the well in which the deep well events are located has a spud date after November 30, 2003.
- (ii) the well depth deduction amount is based on the deepest productive deep well event in the well.

Where the following terms are defined:

**"Deep Well Depth"** means, for a deep well event,

- (a) for a vertical well, the Measured Depth to Top of Pay,
- (b) for a horizontal well, the sum of
  - (i) the Measured Depth to Top of Pay, and
  - (ii) the product of the applicable Horizontal Length Factor multiplied by the positive difference between the Total Measured Depth and the Measured Depth to Top of Pay.

**"Deep Well Event"** means

- (a) the well event is a gas well event,
- (b) the well event, if in a horizontal well, has a pay the top of which has a True Vertical Depth deeper than 2300 metres,
- (c) the well event, if in a vertical well, has a pay the top of which has a True Vertical Depth deeper than 2500 metres, and
- (d) the well event is not a deep reentry well event.

**"Horizontal Length Factor"** in relation to a gas well event, has the following meaning:

(a) for a gas well event with a measured depth to top of pay between 2300m and 2875m, means the amount determined by the following formula:  $[30 - 0.035 \times (\text{measured depth to top of pay} - 2300)] / 100$ ;

(b) for a gas well event with a measured depth to top of pay deeper than 2875m, means 0.10.

**"Horizontal Well"** means a well that meets the following criteria:

(a) a wellbore in the well is drilled at an angle of at least 80 degrees from vertical, and, for the purposes of this paragraph, the wellbore is deemed to be a line connecting the wellbore's initial point of penetration into a productive zone to the wellbore's end point in that productive zone;

(b) the length of the wellbore referred to in paragraph (a) is at least 100 metres, measured from the wellbore's initial point of penetration into the productive zone referred to in paragraph (a) to the wellbore's end point in that productive zone;

**"Measured Depth to Top of Pay"**, in relation to a well event, means the measured depth along the wellbore from the intersection with the top of the pay of the well event to the Kelly bushing used in drilling the well.

**"Pay"**, in respect of a pool, means the portion of the pool that is determined by the Oil and Gas Commission to be the pay.

**"Total Measured Depth"**, in relation to a well event, means the sum of the lengths of all of the vertically oriented and horizontally oriented wellbores that constitute the well event.

**"True Vertical Depth"** means, for any point on the wellbore of a well, the distance between the wellbore point and the point, directly above the wellbore point, that is the same elevation as the Kelly bushing used in drilling the well.

**"Vertical Well"** means any well that is not a horizontal well.

# Deep Vertical Wells

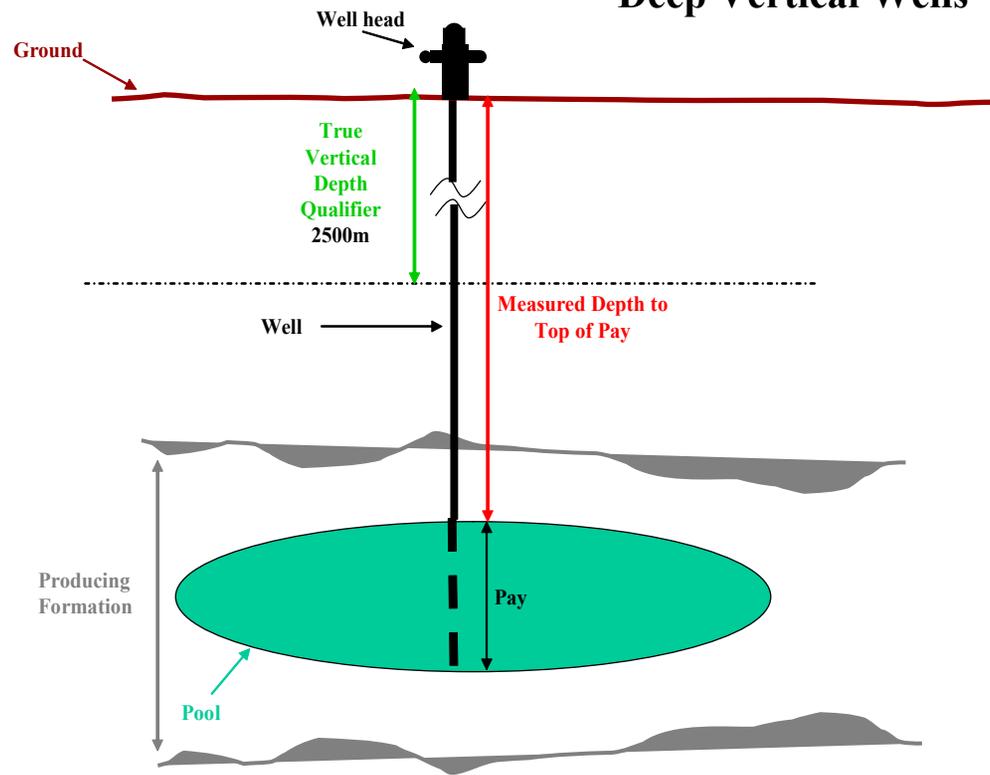


Table Depth = "Measured Depth to Top of Pay"

# Deep Directional Wells- defined as vertical wells

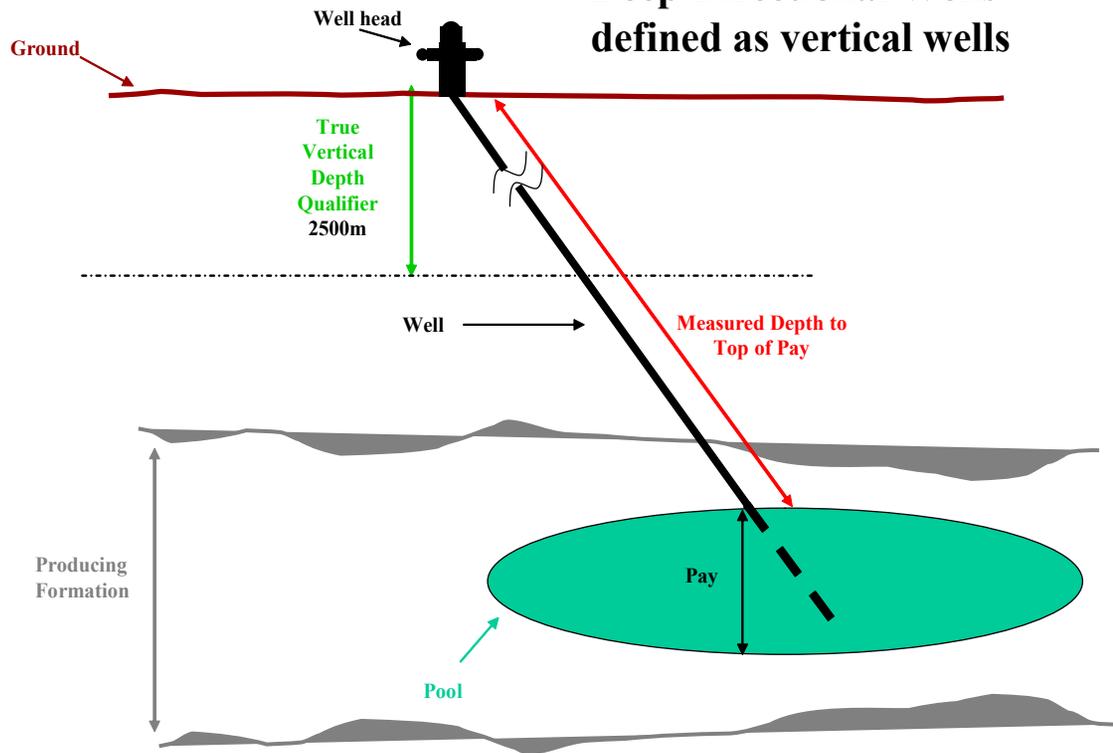
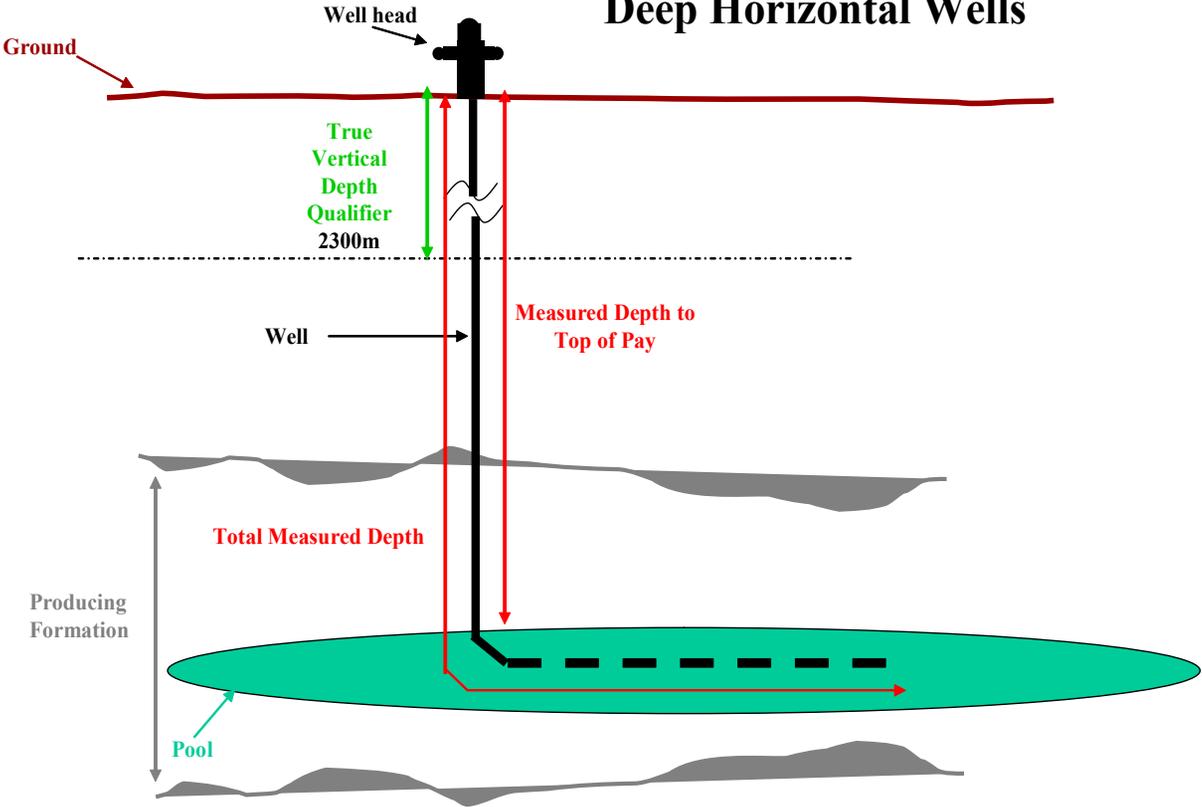


Table Depth = "Measured Depth to Top of Pay"

# Deep Horizontal Wells



**Horizontal Length = "Total Measured Depth" less "Measured Depth to Top of Pay"**

**Table Depth = "Measured Depth to Top of Pay" plus "X% of Horizontal Length"**  
 where "X %" varies from 10% to 30%

**Royalty Calculation:**

The deep well depth deduction amount is determined by the following formula:

$$(CV + AD) \times PS$$

Where, for each well for which the calculation is to be made, “CV” means the Cumulative Value shown opposite the table depth in the portion of the following table that applies to the well,

“AD” means the amount determined by multiplying the Incremental Value amount shown opposite the table depth in the following table by the positive difference between the well depth and the table depth, “PS” means the reporting entity’s proportionate interest in the well, and “table depth” means the greatest depth of the deepest well event rounded down to the nearest 500 metres.

**Table 1: Deep Royalty Holiday Credits**

**West Special Sour**

Depth (m)	Cumulative	Incremental
	Value \$000	Value \$/Metre
2500	0	4,200
3000	2,100	600
3500	2,400	700
4000	2,750	800
4500	3,150	900
5000	3,600	1,000
5500	4,100	

**East Special Sour**

Depth (m)	Cumulative	Incremental
	Value \$000	Value \$/Metre
2500	0	1,500
3000	750	650
3500	1,075	750
4000	1,450	850
4500	1,875	1,000
5000	2,375	1,100
5500	2,925	

**West Sweet**

Depth (m)	Cumulative	Incremental
	Value \$000	Value \$/Metre
2500	0	3,800
3000	1,900	550
3500	2,175	600
4000	2,475	700
4500	2,825	800
5000	3,225	900
5500	3,675	

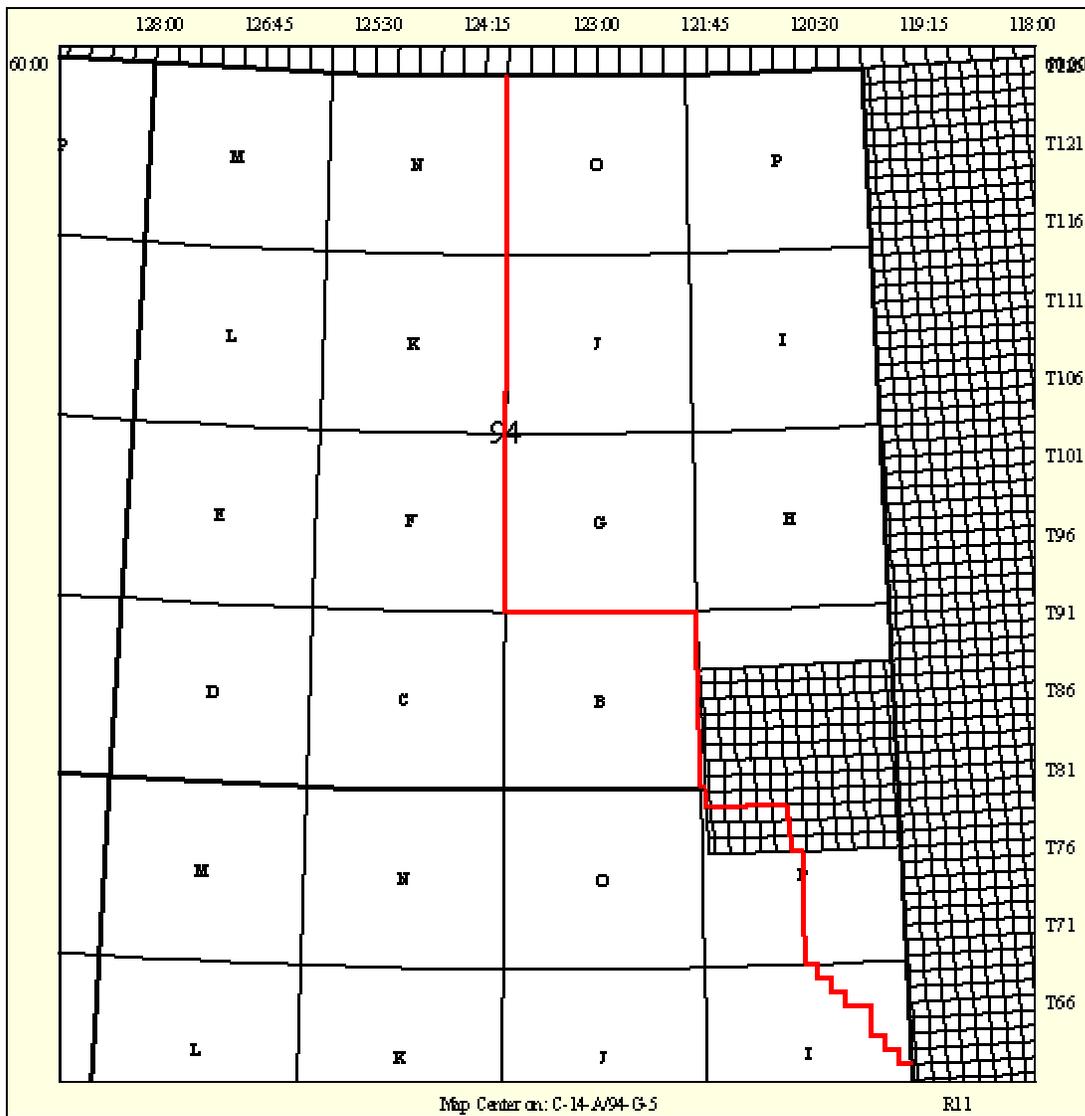
**East Sweet**

Depth (m)	Cumulative	Incremental
	Value \$000	Value \$/Metre
2500	0	1,400
3000	700	600
3500	1,000	700
4000	1,350	800
4500	1,750	900
5000	2,200	1000
5500	2,700	

Example: Company A has a 75% interest in a 3346m deep Special Sour well found in the East area.

$$\text{Royalty Credit} = (750,000 + 346 \times 650) \times 0.75 = \$731,175$$

Figure 1: Map of East and West Deep Royalty Areas



Ministry of Energy and Mines

 <p>Copy 2 of Form 10 E03 (Rev. 02) Ministry of Energy and Mines 1000-100</p>	<p>On Rec'd - 04/01/03 On Rec'd - 04/01/03 File - 04/01/03 Scale - 1:25000</p>
---	--



For the purposes of determining which portion of the table applies to a well:

- (a) the portions of the table applicable to “East” apply to a well that is located in any of the following areas, which areas are, in the case of areas referred to in subparagraphs (i) to (xvi), described in accordance with the petroleum and natural gas grid established under the Petroleum and Natural Gas Grid Regulation, B.C. Reg. 321/93, and, in the case of the areas referred to in subparagraphs (xvi) to (xxi), described in accordance with the Dominion Land Survey System:
  - (i) that portion of Group 095-A-01 to Group 095-A-04 (inclusive) that is located within British Columbia.
  - (ii) that portion of Group 095-B-01 to Group 095-B-04 (inclusive) that is located within British Columbia.
  - (iii) Group 094-O-01 to Group 094-O-16 (inclusive).
  - (iv) Group 094-P-01 to Group 094-P-16 (inclusive).
  - (v) Group 094-I-01 to Group 094-I-16 (inclusive).
  - (vi) Group 094-J-01 to Group 094-J-16 (inclusive).
  - (vii) Group 094-G-01 to Group 094-G-16 (inclusive).
  - (viii) Group 094-H-01 to Group 094-H-16 (inclusive).
  - (ix) that portion of Group 094-A-01 to Group 094-A-16 (inclusive) that is located outside the Peace River Block.
  - (x) that portion of Group 093-P-09 that is located outside the Peace River Block.
  - (xi) that portion of Group 093-P-10 that is located outside the Peace River Block.
  - (xii) Groups 093-P-01, 093-P-02, 093-P-07 and 093-P-08.
  - (xiii) Group 093-I-16.
  - (xiv) Blocks A and G to K of Group 093-I-15.
  - (xv) Blocks A, B and F to K of Group 093-I-09.
  - (xvi) Block I of Group 093-I-08.
  - (xvii) the portion of the Peace River Block within Township 076 east of Range 20 W6M that is within British Columbia.

(xviii) the portion of the Peace River Block within Township 077 east of Range 20 W6M that is within British Columbia.

(xix) the portion of the Peace River Block within Township 078 east of Range 20 W6M that is within British Columbia.

(xx) the portion of the Peace River Block within Township 079 east of Range 20 W6M that is within British Columbia.

(xxi) the portion of the Peace River Block within Township 080 to Township 088 and Range 13 to Range 26 W6M that is within British Columbia.

(b) the portions of the table applicable to “West” apply to a well in British Columbia to which paragraph (a) does not apply.

(c) the portions of the table applicable to “Special Sour” apply to a well:

(i) from which the maximum potential H<sub>2</sub>S release rate is 0.01 m<sup>3</sup>/s or greater and less than 0.1 m<sup>3</sup>/s if that well is located within 500 metres of the corporate boundaries of an urban centre.

(ii) from which the maximum potential H<sub>2</sub>S release rate is 0.1 m<sup>3</sup>/s or greater and less than 0.3 m<sup>3</sup>/s if that well is located within 1.5 kilometres of the corporate boundaries of an urban centre.

(iii) from which the maximum potential H<sub>2</sub>S release rate is 0.3 m<sup>3</sup>/s or greater and less than 2.0 m<sup>3</sup>/s if that well is located within 5 kilometres of the corporate boundaries of an urban centre, or

(iv) from which the maximum potential H<sub>2</sub>S release rate is 2.0 m<sup>3</sup>/s or greater.

(d) the portions of the table applicable to “Sweet” apply to any well in British Columbia to which paragraph (c) does not apply.