



Freedom To Create. Spirit To Achieve.

# **Alberta Department of Energy Competitiveness Review Changes**

## **Oil & Gas Royalty Operations**

**October 12 & 13, 2010**

**Government  
of Alberta** 

# Agenda

- 1. Introductions**
- 2. Oil Royalty**
  - Changes to Oil Royalty formula
  - Changes to the Transitional Royalty election
- 3. Oil Royalty Rates**
  - New Well Royalty Rate (NWRR)
  - Horizontal Oil New Well Royalty Rate (HONWRR)
- 4. Deep Oil Exploratory Well Program Changes (DOEP)**
- 5. Gas Royalty**
  - Changes to Gas Royalty formulae
- 6. Gas Royalty Rates**
  - Horizontal Gas New Well Royalty Rate (HGNWRR)
  - Shale Gas New Well Royalty Rate (SGNWRR)
  - Coalbed Methane New Well Royalty Rate (CBMNWRR)
- 7. Natural Gas Deep Drilling Program Changes (NGDDP)**

# DISCLAIMER

This document is for informational purposes only, pending the approval of applicable legislation. Contents of the document may be subject to change.

# Oil Royalty

# Oil Royalty Changes

Effective January 1, 2011:

- The Alberta Royalty Framework (ARF) maximum royalty rate for conventional oil is reduced from 50% to 40%
- An additional Price component ( $r_p$ ) and formula for par price  $> \$535.00$
- The Quantity components ( $r_q$ ) do not change
- The Transitional Royalty (ARF-T) components do not change
- **Important note:** Oil Forecasts for January 2011 need to take the formula change into consideration.

# Oil Royalty – Price Component

Effective January 1, 2009

Price (\$/m <sup>3</sup> )	$r_p$
$PP \leq 250.00$	$((PP - 190.00) * 0.0006) * 100$
$250.00 < PP \leq 400.00$	$((PP - 250.00) * 0.0010) + 0.0360 * 100$
$PP > 400.00$	$((PP - 400.00) * 0.0005) + 0.1860 * 100$
Maximum	35%

Effective January 1, 2011

Price (\$/m <sup>3</sup> )	$r_p$
$PP \leq 250.00$	$((PP - 190.00) * 0.0006) * 100$
$250.00 < PP \leq 400.00$	$((PP - 250.00) * 0.0010) + 0.0360 * 100$
$400.00 < PP \leq 535.00$	$((PP - 400.00) * 0.0005) + 0.1860 * 100$
$PP > 535.00$	$((PP - 535.00) * 0.0003) + 0.2535 * 100$
Maximum	35%

## Royalty Formulas – Conventional Oil Effective January 1, 2011

R% = Price Component ( $r_p$ ) + Quantity Component ( $r_q$ )

ARF (2011): R% has a minimum of 0% and a maximum of 40%

Transition: R% has a minimum of 0% and a maximum of 50%

<b>Royalty Parameters</b>				
	<b>Price (\$/m<sup>3</sup>)</b>		<b>% Change (%/\$/m<sup>3</sup>)</b>	
	ARF (2011)	Transition Wells	ARF (2011)	Transition Wells
<b>P<sub>1</sub></b>	190.00	210.00	0.06%	0.035%
<b>P<sub>2</sub></b>	250.00	250.00	0.10%	0.01%
<b>P<sub>3</sub></b>	400.00	350.00	0.05%	0.005%
<b>P<sub>4</sub></b>	535.00	--	0.03%	--
	<b>Q (m<sup>3</sup>/month)</b>		<b>% Change (%/m<sup>3</sup>/month)</b>	
	ARF (2011)	Transition Wells	ARF (2011)	Transition Wells
<b>Q<sub>1</sub></b>	106.4	30.4	0.26%, 0.10%	0.13%
<b>Q<sub>2</sub></b>	197.6	152.0	0.07%	0.08%
<b>Q<sub>3</sub></b>	304.0	273.6	0.03%	0.02%

**Example:** Par Price \$550, Volume 350 m<sup>3</sup>,  
Crown 33.33333333%

## r<sub>p</sub> Calculation

**Effective January 2009**

PP > \$400

$$\begin{aligned} & \frac{(((PP - \$400) * 0.0005) + 0.1860) * 100}{100} \\ &= \frac{(((\$550 - \$400) * 0.0005) + 0.1860) * 100}{100} \\ &= \frac{((\$150 * 0.0005) + 0.1860) * 100}{100} \\ &= \frac{(0.0750 + 0.1860) * 100}{100} \\ &= .2610 * 100 \\ &= 26.10\% \end{aligned}$$

**Effective January 2011**

PP > \$535

$$\begin{aligned} & \frac{(((PP - \$535) * 0.0003) + 0.2535) * 100}{100} \\ &= \frac{(((\$550 - \$535) * 0.0003) + 0.2535) * 100}{100} \\ &= \frac{((\$15 * 0.0003) + 0.2535) * 100}{100} \\ &= \frac{(0.0045 + 0.2535) * 100}{100} \\ &= .2580 * 100 \\ &= 25.80\% \end{aligned}$$

# Example (con't)

## $r_q$ Calculation

Effective January 1, 2009

$Q > 304.0$

$$(((Q - 304.0) * 0.0003) + 0.1657) * 100$$

$$=(((350.0 - 304.0) * 0.0003) + 0.1657) * 100$$

$$=((46.0 * 0.0003) + 0.1657) * 100$$

$$=(0.0138 + 0.1657) * 100$$

$$=0.1795 * 100$$

$$=17.95\%$$

Effective January 1, 2011

$Q > 304.0$

$$(((Q - 304.0) * 0.0003) + 0.1657) * 100$$

$$=(((350.0 - 304.0) * 0.0003) + 0.1657) * 100$$

$$=((46.0 * 0.0003) + 0.1657) * 100$$

$$=(0.0138 + 0.1657) * 100$$

$$=0.1795 * 100$$

$$=17.95\%$$

# Example (con't)

## Royalty Payable

### Effective January 1, 2009

$r_p + r_q = \text{Royalty Rate}$

$$26.10 + 17.95 = 44.05\%$$

Maximum RR is 50%

Volume \* RR \* Crown % = Royalty

$$350 \text{ m}^3 * 44.05\% * 33.33333333\%$$

$$= 51.4 \text{ m}^3$$

### Effective January 1, 2011

$r_p + r_q = \text{Royalty Rate}$

$$25.80 + 17.95 = 43.75\%$$

Maximum RR is 40%

Volume \* RR \* Crown % = Royalty

$$350 \text{ m}^3 * 40.00\% * 33.33333333\%$$

$$= 46.7 \text{ m}^3$$

# Oil Royalty Calculator 2011

[www.energy.alberta.ca](http://www.energy.alberta.ca)

Click on: Our Business, Oil, Calculators

## Part 1 - Royalty Price Component ( $r_p$ )

a. Par Price = \$250

$$((\text{Par Price} - \$190.00) * 0.0006) * 100$$

$r_p =$

\$

%

b. Par Price > \$250 but = \$400

$$(((\text{Par Price} - \$250.00) * 0.0010) + 0.0360) * 100$$

$r_p =$

\$

%

c. Par Price > \$400 but = \$535

$$(((\text{Par Price} - \$400.00) * 0.0005) + 0.1860) * 100$$

$r_p =$

\$

%

d. Par Price > \$535

$$(((\text{Par Price} - \$535.00) * 0.0003) + 0.2535) * 100$$

$r_p =$

\$

%



# Transitional Royalty (ARF-T)

- The Transitional Royalty components and formulae will not change
- The Transitional Royalty continues to have 0% minimum and 50% maximum royalty rates for oil
- The Transitional Royalty business rules remain the same (i.e. election by the last day of the first month of production)
- Transitional Royalty can only be “Elected” until December 31, 2010, and must be elected whether the well is producing or not
- Well events that have “Elected” Transitional Royalty can choose to “Opt-out” on the Petroleum Registry of Alberta (PRA) between **January 1, 2011** and **February 15, 2011**, only
- Well events that have “Elected” and not chosen to “Opt-out” will continue with Transitional Royalty until the well event’s 5 year term expires or January 1, 2014, whichever occurs first.
- Well events that have chosen to “Opt-out” will have royalty calculated using ARF effective with the January 2011 production month.

[\[Infrastructure\]](#) > [\[Alberta Royalty Framework\]](#)

## Edit Alberta Royalty Framework Transitional Rates Election

Licence Number:      
 Location: LSD   SEC   TWP   RGE   MER   W  -

Well ID	Licence #	Well Name	Status	Start Date
AB WI			N/A DRL & C N/A N/A	2010-01-11
AB WI			N/A DRL & C N/A N/A	2008-12-04
AB WI			CR-OIL PUMP N/A N/A	2009-02-08
AB WI			N/A DRL & C N/A N/A	2010-01-05
AB WI			N/A DRL & C N/A N/A	2008-12-08
AB WI			CR-OIL PUMP N/A N/A	2009-12-04
AB WI			N/A DRL & C N/A N/A	2009-11-06
AB WI			N/A DRL & C N/A N/A	2009-10-07
AB WI			N/A DRL & C N/A N/A	2009-12-09
AB WI			N/A DRL & C N/A N/A	2009-12-18
AB WI			CR-OIL FLOW N/A N/A	2009-01-03

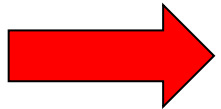
       
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Well ID:       Licence #:   
 Well Name:

Royalty Framework:  Alberta Royalty Framework (Default)      Election Date: 2010-06-08  
 Election:  Apply for Alberta Royalty Framework Transitional Rates (ARF-T)  
                Opt out of Alberta Royalty Framework Transitional Rates (ARF-T)

Transitional Royalty Qualification:      Effective Date:      Termination Date:



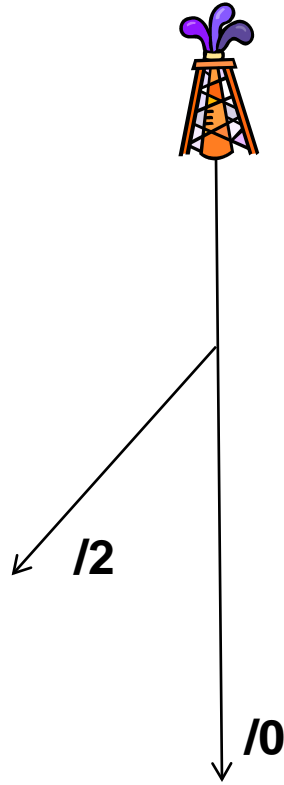
# Oil Royalty Rates

# New Well Royalty Rate (NWRR)

- NWRR became permanent as of the May 2010 production month
- NWRR is no longer a reduction of royalty – it is the royalty rate
- Original eligibility criteria apply
- Additional Eligibility Criteria: Wells brought back on production after April 1, 2011, will qualify if there was no production for 36 months and have not received the NWRR previously
- Maximum 5% royalty rate for all products; however, oil can be less than 5% due to the royalty calculation or the Deep Oil Exploratory Well program
- All eligible well events within the well contribute to a single cap
- Cap is 12 **production** months or 7,949 m<sup>3</sup> of oil equivalent, whichever occurs first
- When a cap is reached part way through a month, regular royalty will be calculated on the remainder of the month; unless the well (event) qualifies for another rate

# Multiple Leg Well Receiving NWRR

Both well events  
approved for NWRR  
only and production is  
contributing to one cap



# Multiple Leg Well Receiving NWRR

• <b>Month #1</b>		<b>NWRR Cap</b>	<b>7,949 m<sup>3</sup></b>	<b>12 months</b>
/0 production	650 m <sup>3</sup>			
/2 production	<u>500 m<sup>3</sup></u>			
Applied to cap	1,150 m <sup>3</sup>		<u>1,150 m<sup>3</sup></u>	<u>1 month</u>
Cap remaining		→	6,799 m <sup>3</sup>	11 months
• <b>Month #2</b>				
/0 Shut in	0 m <sup>3</sup>			
/2 production	<u>450 m<sup>3</sup></u>			
Applied to cap	450 m <sup>3</sup>		<u>450 m<sup>3</sup></u>	<u>1 month</u>
Cap remaining		→	6,349 m <sup>3</sup>	10 months
• <b>Month #3</b>				
/0 Shut in	0 m <sup>3</sup>			
/2 Shut in	<u>0 m<sup>3</sup></u>			
Applied to cap	0 m <sup>3</sup>		<u>0 m<sup>3</sup></u>	<u>0 month</u>
Cap remaining		→	6,349 m <sup>3</sup>	10 months

# Horizontal Oil New Well Royalty Rate (HONWRR)

- Well events spud on or after May 1, 2010, qualify if they are classified as an oil well event
- Must have an ERCB directional drill code of 04 (horizontal) and must be at an 80 degree angle or greater
- One aggregate cap for all eligible well events within the well
- Caps are based on the measured depth of the eligible well events in the well
- Depth is calculated from the Kelly Bushing to the end of the longest eligible horizontal well event plus all eligible additional horizontal laterals in a continuous drilling operation (No reactivations, re-entries, lengthenings or deepenings)
- All products from the eligible horizontal oil leg contribute to the cap

# Horizontal Oil New Well Royalty Rate Caps

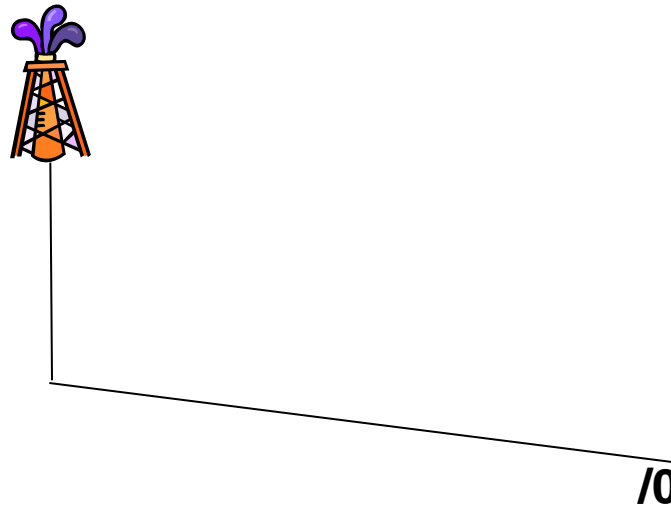
Depth (MD)	Volume Cap of oil equivalent	Production Month Cap
0.0 – 2,499.9 m	7,949.0 m <sup>3</sup>	18 months
2,500.0 – 2,999.9 m	9,539.0 m <sup>3</sup>	24 months
3,000.0 – 3,499.9 m	11,129.0 m <sup>3</sup>	30 months
3,500.0 – 3,999.9 m	12,719.0 m <sup>3</sup>	36 months
4,000.0 – 4,499.9 m	14,309.0 m <sup>3</sup>	42 months
4,500.0 m +	15,899.0 m <sup>3</sup>	48 months

# Deep Oil Exploratory Well Royalty Program

- Deep Oil Exploratory Well Royalty Program remains in place, and will be calculated after the NWRR has been applied
- Any well currently receiving the NWRR and DOEP will have the royalties recalculated back to May 2010 once the legislation has been passed
- No changes to the termination date for the program

# Royalty Rates Running Concurrently

# Example 1: Production Month Cap Out NWRR/HONWRR/ARF



Well event qualifies for both NWRR and HONWRR

MD 2,000 m

NWRR caps – 7,949 m<sup>3</sup> or 12 production months

HONWRR caps – 7,949 m<sup>3</sup> or 18 production months

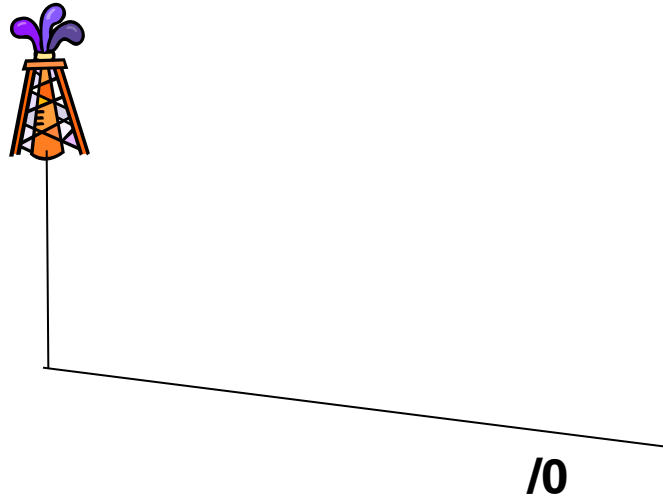
# Example 1: Production Month Cap Out NWRR/HONWRR/ARF

Production Month	ARF-T Qualified?	NWRR					HONWRR					ARF	ARF-T
		Periods Taken	Volume Taken	Vol Cap Remaining	Capped Out?	Applied to Royalty?	Periods Taken	Volume Taken	Vol Cap Remaining	Capped Out?	Applied to Royalty?	Applied to Royalty?	Applied to Royalty?
2010-05	NO	1	100	7849	NO	YES	1	100	7849	NO	NO	NO	NO
2010-06	NO	2	100	7749	NO	YES	2	100	7749	NO	NO	NO	NO
2010-07	NO	3	100	7649	NO	YES	3	100	7649	NO	NO	NO	NO
2010-08	NO	4	100	7549	NO	YES	4	100	7549	NO	NO	NO	NO
2010-09	NO	5	100	7449	NO	YES	5	100	7449	NO	NO	NO	NO
2010-10	NO	6	100	7349	NO	YES	6	100	7349	NO	NO	NO	NO
2010-11	NO	7	100	7249	NO	YES	7	100	7249	NO	NO	NO	NO
2010-12	NO	8	100	7149	NO	YES	8	100	7149	NO	NO	NO	NO
2011-01	NO	9	100	7049	NO	YES	9	100	7049	NO	NO	NO	NO
2011-02	NO	10	100	6949	NO	YES	10	100	6949	NO	NO	NO	NO
2011-03	NO	11	100	6849	NO	YES	11	100	6849	NO	NO	NO	NO
2011-04	NO	12	100	6749	NO	YES	12	100	6749	NO	NO	NO	NO
2011-05	NO				YES	NO	13	100	6649	NO	YES	NO	NO
2011-06	NO				YES	NO	14	100	6549	NO	YES	NO	NO
2011-07	NO				YES	NO	15	100	6449	NO	YES	NO	NO
2011-08	NO				YES	NO	16	100	6349	NO	YES	NO	NO
2011-09	NO				YES	NO	17	100	6249	NO	YES	NO	NO
2011-10	NO				YES	NO	18	100	6149	NO	YES	NO	NO
2011-11	NO				YES	NO				YES	NO	YES	NO
2011-12	NO				YES	NO				YES	NO	YES	NO

# Example 1: Production Month Cap Out NWRR/HONWRR/ARF

- Well event qualifies for NWRR and HONWRR starting on production month 2010-05.
- Well event production periods and Crown volumes count against both NWRR and HONWRR caps for first 12 production months and the royalty rate is 5%.
- NWRR caps out on production months in month 12.
- Well event production periods and Crown volumes continue to count against HONWRR caps for production months 13 to 18 and the royalty rate is 5%.
- HONWRR caps out on production months in the 18<sup>th</sup> month.
- ARF royalty rates apply from production month 19 (2011-11) onward.

# Example 2: Volume Cap Out NWRR/HONWRR/ARF



**Well event qualifies for both NWRR and HONWRR**

**MD 2,300 m**

**NWRR caps – 7,949 m<sup>3</sup> or 12 production months**

**HONWRR caps – 7,949 m<sup>3</sup> or 18 production months**

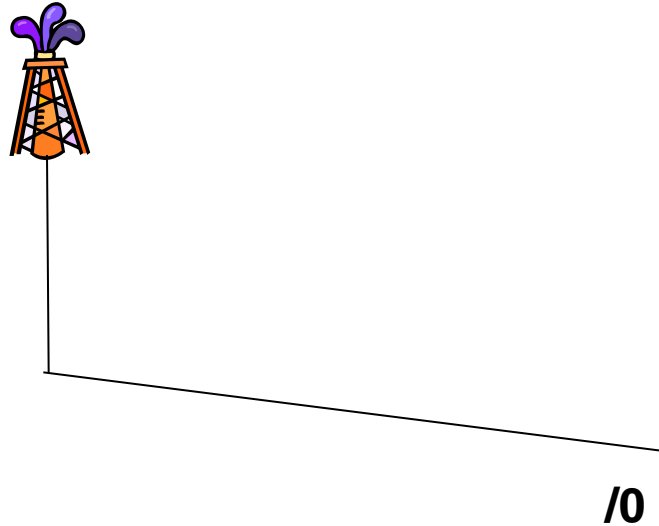
# Example 2: Volume Cap Out NWRR/HONWRR/ARF

Production Month	ARF-T Qualified?	NWRR					HONWRR					ARF	ARF-T
		Periods Taken	Volume Taken	Vol Cap Remaining	Capped Out?	Applied to Royalty?	Periods Taken	Volume Taken	Vol Cap Remaining	Capped Out?	Applied to Royalty?	Applied to Royalty?	Applied to Royalty?
2010-05	NO	1	1000	6949	NO	YES	1	1000	6949	NO	NO	NO	NO
2010-06	NO	2	1000	5949	NO	YES	2	1000	5949	NO	NO	NO	NO
2010-07	NO	3	1000	4949	NO	YES	3	1000	4949	NO	NO	NO	NO
2010-08	NO	4	1000	3949	NO	YES	4	1000	3949	NO	NO	NO	NO
2010-09	NO	5	1000	2949	NO	YES	5	1000	2949	NO	NO	NO	NO
2010-10	NO	6	1000	1949	NO	YES	6	1000	1949	NO	NO	NO	NO
2010-11	NO	7	1000	949	NO	YES	7	1000	949	NO	NO	NO	NO
2010-12	NO	8	949	0	YES	YES	8	949	0	YES	NO	YES	NO
2011-01	NO				YES	NO				YES	NO	YES	NO
2011-02	NO				YES	NO				YES	NO	YES	NO
2011-03	NO				YES	NO				YES	NO	YES	NO
2011-04	NO				YES	NO				YES	NO	YES	NO
2011-05	NO				YES	NO				YES	NO	YES	NO
2011-06	NO				YES	NO				YES	NO	YES	NO
2011-07	NO				YES	NO				YES	NO	YES	NO
2011-08	NO				YES	NO				YES	NO	YES	NO
2011-09	NO				YES	NO				YES	NO	YES	NO
2011-10	NO				YES	NO				YES	NO	YES	NO
2011-11	NO				YES	NO				YES	NO	YES	NO
2011-12	NO				YES	NO				YES	NO	YES	NO

# Example 2: Volume Cap Out NWRR/HONWRR/ARF

- Well event qualifies for NWRR and HONWRR starting on production month 2010-05
- Well event production periods and Crown volumes count against both NWRR and HONWRR caps
- Both NWRR and HONWRR Crown volume caps are reached in production month 8
- ARF royalty rates apply from production month 9 (2011-01) onward

# Example 3: Volume Cap Out NWRR/HONWRR/ARF-T



**Well event qualifies for both NWRR and HONWRR**

**MD 2,700 m**

**NWRR caps – 7,949 m<sup>3</sup> or 12 production months**

**HONWRR caps – 9,539 m<sup>3</sup> or 24 production months**

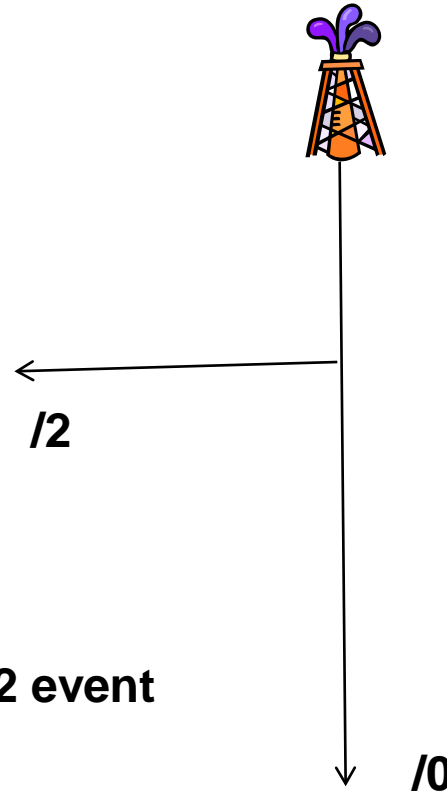
# Example 3: Volume CAP Out NWRR/HONWRR/ARF-T

Production Month	ARF-T Qualified?	NWRR					HONWRR					ARF	ARF-T
		Periods Taken	Volume Taken	Vol Cap Remaining	Capped Out?	Applied to Royalty?	Periods Taken	Volume Taken	Vol Cap Remaining	Capped Out?	Applied to Royalty?	Applied to Royalty?	Applied to Royalty?
2010-05	YES	1	1000	6949	NO	YES	1	1000	8539	NO	NO	NO	NO
2010-06	YES	2	1000	5949	NO	YES	2	1000	7539	NO	NO	NO	NO
2010-07	YES	3	1000	4949	NO	YES	3	1000	6539	NO	NO	NO	NO
2010-08	YES	4	1000	3949	NO	YES	4	1000	5539	NO	NO	NO	NO
2010-09	YES	5	1000	2949	NO	YES	5	1000	4539	NO	NO	NO	NO
2010-10	YES	6	1000	1949	NO	YES	6	1000	3539	NO	NO	NO	NO
2010-11	YES	7	1000	949	NO	YES	7	1000	2539	NO	NO	NO	NO
2010-12	YES	8	949	0	YES	YES	8	1000	1539	NO	YES	NO	NO
2011-01	YES				YES	NO	9	1000	539	NO	YES	NO	NO
2011-02	YES				YES	NO	10	539	0	YES	YES	NO	YES
2011-03	YES				YES	NO				YES	NO	NO	YES
2011-04	YES				YES	NO				YES	NO	NO	YES
2011-05	YES				YES	NO				YES	NO	NO	YES
2011-06	YES				YES	NO				YES	NO	NO	YES
2011-07	YES				YES	NO				YES	NO	NO	YES
2011-08	YES				YES	NO				YES	NO	NO	YES
2011-09	YES				YES	NO				YES	NO	NO	YES
2011-10	YES				YES	NO				YES	NO	NO	YES
2011-11	YES				YES	NO				YES	NO	NO	YES
2011-12	YES				YES	NO				YES	NO	NO	YES

# Example 3: Volume CAP Out NWRR/HONWRR/ARF-T

- Well event qualifies for NWRR and HONWRR starting on production month 2010-05
- Well event production periods and Crown volumes count against both NWRR and HONWRR caps for the first 8 production months
- NWRR caps out on Crown volumes during month 8
- Well event receives HONWRR for the remaining 51 m<sup>3</sup> in month 8
- HONWRR continues and then caps out on Crown volumes in month 10
- ARF-T royalty rates apply to the remaining 461 m<sup>3</sup> in production month 10 (2011-02) and onward

# Example 4: Multiple Leg Well Volume Cap Out NWRR/HONWRR/ARF



Both well events qualify for NWRR and  $/2$  event  
qualifies for HONWRR  
MD 1,500 m  
NWRR caps – 7,949 m<sup>3</sup> or 12 production months  
HONWRR caps – 7,949 m<sup>3</sup> and 18 production months

# Example 4: Multiple Leg Well Volume Cap Out NWRR/HONWRR/ARF

Production Month	ARF-T Qualified?	NWRR for /0 and /2						/2 HONWRR					ARF	ARF-T
		Periods Taken	/0 Volume Taken	/2 Volume Taken	Vol Cap Remaining	Capped Out?	Applied to Royalty?	Periods Taken	Volume Taken	Vol Cap Remaining	Capped Out?	Applied to Royalty?	Applied to Royalty?	Applied to Royalty?
2010-05	NO	1	1000	1000	5949	NO	YES	1	1000	6949	NO	NO	NO	NO
2010-06	NO	2	1000	1000	3949	NO	YES	2	1000	5949	NO	NO	NO	NO
2010-07	NO	3	1000	1000	1949	NO	YES	3	1000	4949	NO	NO	NO	NO
2010-08	NO	4	1000	949	0	YES	YES	4	1000	3949	NO	YES	NO	NO
2010-09	NO					YES	NO	5	1000	2949	NO	YES	NO	NO
2010-10	NO					YES	NO	6	1000	1949	NO	YES	NO	NO
2010-11	NO					YES	NO	7	1000	949	NO	YES	NO	NO
2010-12	NO					YES	NO	8	949	0	YES	YES	YES	NO
2011-01	NO					YES	NO				YES	NO	YES	NO
2011-02	NO					YES	NO				YES	NO	YES	NO

# Example 4: Multiple Leg Well Volume CAP Out NWRR/HONWRR/ARF

- /0 well event qualifies for NWRR starting on production month 2010-05
- /2 well event qualifies for NWRR and HONWRR starting on production month 2010-05
- Production months and Crown volumes count against NWRR for the first 4 months for both well events
- /2 well event production months and Crown volumes also count against the HONWRR caps
- NWRR caps out on production month 4 and the /2 well event will receive HONWRR on the remaining 51 m<sup>3</sup>
- /2 well event continues under HONWRR until the Crown volume cap is reached in production month 8
- ARF royalty rates apply to the remaining 51 m<sup>3</sup> in production month 8

# New Client Statements

- Previously, NWRR was shown as a reduction of royalty
- Effective the May 2010 production month, NWRR is to be shown as Gross Royalty
- The Department will retroactively calculate NWRR as a Gross Royalty rate
- Industry shouldn't see any changes to the royalty payable; unless production volumes are amended during our recalculation month
- The Royalty Program report will include well events that qualify for the new royalty rates

# Proposed Current Month Detail



Energy

RAMROY0033  
Confidential

ROYALTY AND MARKETING  
CRUDE OIL CROWN ROYALTY STATEMENT  
CURRENT MONTH DETAIL FOR PRODUCTION PERIOD 2010-07  
ABBT XXXXXXXX

Report Date: 2010/08/25  
Business Period: 2010/08

XXXX DRAFT

All Volumes Are m<sup>3</sup>

FACILITY	WELL EVENT IDENT.	TOTAL PROD	CROWN %	CROWN PROD	DEN	FORMULA	GROSS CROWN ROYALTY	CROWN ROYALTY ADJUSTMENT	REASON CODE(S)	NET CROWN ROYALTY
ABBT XXXXXXXX	AB WI xxx xx xx xxWx xx	400.0	100.0000000	400.0	M	TOTAL	20.0	20.0	DOEP	0.0
						NWRR	10.0			
						HONWRR	10.0			
ABBT XXXXXXXX	AB WI yyy yy yy yyy yyWy yy	200.0	100.0000000	200.0	M	NWRR	10.0	0.0		10.0
<b>SUB-TOTALS</b>		<b>600.0</b>		<b>600.0</b>			<b>30.0</b>	<b>20.0</b>		<b>10.0</b>
<b>FACILITY TOTAL</b>								<b>0.0</b>		<b>10.0</b>

\*\*\* End of Report \*\*\*

RAM DRAFT

**LEGEND**

Density: L - Light, M - Medium, H - Heavy, U - Ultra Heavy  
Formula: NWRR - New Well Royalty Rate, HONWRR - Horizontal Oil Well Royalty Rate  
Reason Code(s): DOEP - Deep Oil Exploratory Well Regulation

- NOTES:**
- (1) ONLY THOSE CROWN ROYALTY FEATURES GIVEN UP AS VOLUMES ARE INCLUDED IN "CROWN ROYALTY ADJUSTMENT"
  - (2) FACILITY TOTALS ARE CARRIED FORWARD TO "CURRENT MONTH SUMMARY" STATEMENT



# Proposed Detail of Adjustments (Prior Period)



Energy

RAMROY0034  
Confidential

ROYALTY AND MARKETING  
CRUDE OIL CROWN ROYALTY STATEMENT  
DETAIL OF ADJUSTMENTS FOR PRODUCTION PERIOD 2010-06  
ABBT XXXXXXX

Report Date: 2011/01/25  
Business Period: 2011/01

XXXX DRAFT

All Volumes Are m³

FACILITY	WELL EVENT IDENT.	TOTAL PROD	CROWN %	CROWN PROD	DEN	FORMULA	GROSS CROWN ROYALTY	CROWN ROYALTY ADJUSTMENT	REASON CODE(S)	NET CROWN ROYALTY
AB BT XXXXXXX	AB WI xxx xx xx xxx xxWx xx									
	PREVIOUS RECORD	100.0	100.000000	100.0	U	NWRR	5.0	0.0		5.0
	ADJUSTED RECORD	100.0	100.000000	100.0	U	TOTAL NWRR ARF	12.5 2.5 10.0	0.0		12.5
	NET ADJUSTMENT	0.0		0.0			7.5	0.0		7.5
AB BT XXXXXXX	AB WI yyy yy yy yyy yyWy yy									
	PREVIOUS RECORD	100.0	100.000000	100.0	U	TOTAL NWRR HONWRR	5.0 2.5 2.5	0.0		5.0
	ADJUSTED RECORD	100.0	100.000000	100.0	U	TOTAL NWRR ARF	12.5 2.5 10.0	0.0		12.5
	NET ADJUSTMENT	0.0		0.0			7.5	0.0		7.5
<b>SUB-TOTALS</b>							<b>15.0</b>	<b>0.0</b>		<b>15.0</b>
<b>TOTAL FACILITY</b>		<b>0.0</b>		<b>0.0</b>				<b>0.0</b>		<b>15.0</b>

\*\*\* End Of Report \*\*\*

**LEGEND**

Density: L - Light, M - Medium, H - Heavy, U - Ultra Heavy

Formula: ARF - Alberta Royalty Framework, NWRR - New Well Royalty Rate, HONWRR - Horizontal Oil Well Royalty Rate

**NOTES:**

- (1) ONLY THOSE CROWN ROYALTY FEATURES GIVEN UP AS VOLUMES ARE INCLUDED IN "CROWN ROYALTY ADJUSTMENT"
- (2) FACILITY TOTALS ARE CARRIED FORWARD TO "CURRENT MONTH SUMMARY" STATEMENT

# Gas Royalty

# Disclaimer

**Throughout this presentation there are a number of examples which may include rounding of calculation in order to simplify presentation of the material.**

# Gas Royalty Rate Changes

Effective January 1, 2011 Production Period:

- The maximum royalty rate for methane and ethane is reduced from 50% to **36%**
- The Price component parameters ( $r_p$ ) have been changed
- No change to the Quantity components ( $r_q$ )
- No change to propane, butanes and pentanes plus royalty rates
- No change to the Transitional royalty rate

## Royalty Formulae – Natural Gas Effective January 1, 2011 Production Period

R% = Price Component ( $r_p$ ) + Quantity Component ( $r_q$ )

ARF (2011): R% has a minimum of 5% and a maximum of 36%

Transition Wells: R% has a minimum of 5% and a maximum of 30%

<b>Royalty Parameters</b>				
	<b>Price (\$/GJ)</b>		<b>% Change (%/\$/GJ)</b>	
	ARF (2011)	Transition Wells	ARF (2011)	Transition Wells
<b>P<sub>1</sub></b>	4.50	2.00	4.5%	3.5%
<b>P<sub>2</sub></b>	5.25	3.25	2.0%	0.5%
<b>P<sub>3</sub></b>	9.00	5.00	1.0%	0.0%
	<b>Q (10<sup>3</sup>m<sup>3</sup>/d)</b>		<b>% Change (%/10<sup>3</sup>m<sup>3</sup>/d)</b>	
	ARF (2011)	Transition Wells	ARF (2011)	Transition Wells
<b>Q<sub>1</sub></b>	4	2	5%	5%
<b>Q<sub>2</sub></b>	6	4	3%	2%
<b>Q<sub>3</sub></b>	11	9	1%	1%

Price Component ( $r_p$ )			
Alberta Royalty Framework (2011)		Transition Wells	
Price (\$/GJ)	$r_p$	Price (\$/GJ)	$r_p$ Transition Wells
$PP \leq 5.25$	$((PP - 4.50) * 0.0450) * 100$	$PP \leq 3.25$	$((PP - 2.00) * 0.0350) * 100$
$5.25 < PP \leq 9.00$	$((PP - 5.25) * 0.0200 + 0.03375) * 100$	$3.25 < PP \leq 5.00$	$((PP - 3.25) * 0.0050 + 0.0437) * 100$
$PP > 9.00$	$((PP - 9.00) * 0.0100 + 0.10875) * 100$	$PP > 5.00$	$((PP - 5.00) * 0.0000 + 0.0525) * 100$
Maximum	30%	Maximum	5.25%

PP is the par price for the month in \$/GJ

Note:  $r_p$  can be negative

Quantity Component ( $r_q$ )			
Alberta Royalty Framework (2011)		Transition Wells	
Quantity ( $10^3\text{m}^3/\text{d}$ )	$r_q$	Quantity ( $10^3\text{m}^3/\text{d}$ )	$r_q$ Transition Wells
$ADP \leq (6 * DF)$	$[(ADP - (4 * DF)) * (0.0500 / DF)] * 100$	$ADP \leq 4$	$[(ADP - 2] * 0.0500) * 100$
$(6 * DF) < ADP \leq (11 * DF)$	$[(ADP - (6 * DF)) * (0.0300 / DF) + 0.1000] * 100$	$4 < ADP \leq 9$	$[(ADP - 4] * 0.0200 + 0.1000) * 100$
$ADP > (11 * DF)$	$[(ADP - (11 * DF)) * (0.0100 / DF) + 0.2500] * 100$	$ADP > 9$	$[(ADP - 9] * 0.0100 + 0.2000) * 100$
Maximum	30%	Maximum	25%

PP is the par price for the month in \$/GJ

Note:  $r_q$  can be negative

DF is a depth factor that applies only to the quantity component and is based on the measured depth (MD) of a well where:

DF = 1 for all transition wells and for MD ≤ 2000 m;  
DF = (MD/2000)<sup>2</sup> for MD > 2000 m; and,  
The depth factor is capped at 4.

# Example

$r_p$  calculation

Effective January 1, 2009

$$PP_{C1} = \$6.35$$

$$r_p = ((PP-4.5)*0.0450)*100 \\ = 8.325\%$$

$$PP_{C2} = \$9.50$$

$$r_p = ((PP-7)*0.0300 + 0.1125)*100 \\ = 18.750\%$$

Effective January 1, 2011

$$PP_{C1} = \$6.35$$

$$r_p = ((PP-5.25)*0.0200 + 0.03375)*100 \\ = 5.575\%$$

$$PP_{C2} = \$9.50$$

$$r_p = ((PP-9)*0.0100 + 0.10875)*100 \\ = 11.375\%$$

# Continuation

$r_q$  calculation (C1 and C2)

Effective January 1, 2009 and effective January 1, 2011

MD = 2050 m

DF =  $(2050/2000)^2 = 1.050625$

AGF =  $1.03 - (.20 + .05) = 0.78$

ADP =  $(300.0/724)*24 = 9.9 \text{ } 10^3\text{m}^3/\text{day}$

Adj ADP =  $\text{ADP} * \text{AGF} = 7.72 \text{ } 10^3\text{m}^3/\text{day}$

$(6*DF) < \text{ADP} \leq (11*DF)$

$r_q = ([\text{ADP} - (6*DF)]*(0.0300/DF) + 0.1000)*100$   
 $= 14.043\%$

# Continuation

$$RR = r_p + r_q$$

Effective January 1, 2009

$$\begin{aligned} RR_{C1} &= 8.325\% + 14.043\% \\ &= 22.368\% \end{aligned}$$

$$\begin{aligned} RR_{C2} &= 18.750\% + 14.043\% \\ &= 32.793\% \end{aligned}$$

Effective January 1, 2011

$$\begin{aligned} RR_{C1} &= 5.575\% + 14.043\% \\ &= 19.618\% \end{aligned}$$

$$\begin{aligned} RR_{C2} &= 11.375\% + 14.043\% \\ &= 25.418\% \end{aligned}$$

# Condensate Royalty Rate Changes

Calculation of Condensate royalty rate is based on the Conventional Oil royalty rate table

- The maximum royalty rate for condensate is reduced from 50% to 40%.
- An additional price parameter and formula for par price  $>$  or  $=$  \$535.00 as shown on Oil Royalty Rate – Price Component ( $r_p$ ) Table

# Emerging Resources and Technologies New Well Royalty Rates

Shale Gas New Well Royalty Rate (SGNWRR)

Coalbed Methane New Well Royalty Rate (CBMNWRR)

Horizontal Gas New Well Royalty Rate (HGNWRR)

# New Well Royalty Rates

New Well Royalty Rates	Applies to	Maximum 5% Royalty Rate for	
		Time Limit	Volume Limit
<b>New Well Royalty Rate - extended</b>	Well that is classified as an “oil”, “gas”, or “crude bitumen” well when it commences or recommences production on or after April 2009.	12 producing months	Oil equivalent of 7,949 m <sup>3</sup> (14,158 e <sup>3</sup> m <sup>3</sup> of gas)
<b>Shale Gas Royalty Rate</b> ERCB Fluid code 25 – Shale Gas only	Well events that <b>start producing</b> gas exclusively from shale zones on or after May 2010	36 producing months commencing with the first month of production	No volume limitation
<b>Coalbed Methane Royalty Rate</b> ERCB Fluid code 23 – Coalbed Methane – coals only	Well events that <b>start producing</b> gas exclusively from coal zones on or after May 2010	36 producing months commencing with the first month of production	Oil equivalent of 11,924 m <sup>3</sup> (21,238 e <sup>3</sup> m <sup>3</sup> of gas)
<b>Horizontal Gas Royalty Rate</b> ERCB Fluid codes: 02, 22, 24, or 26  Directional Drill Reason Code 4	Horizontal gas wells <b>drilled (spud)</b> on or after May 2010	18 producing months commencing with the first month of production from the well event	Oil equivalent of 7,949 m <sup>3</sup> (14,158 e <sup>3</sup> m <sup>3</sup> of gas)

# NWRR Volume/Production Month Cap Out Examples

# Example 1: NWRR Volume Cap Out/SGNWRR Production Month cap out, HGNWRR Volume cap out/ARF

Production Month	ARF-T Qualified?	NWRR					SGNWRR			HGNWRR				ARF	ARF-T
		Periods Taken	Volume Taken	Vol Cap Remaining	Capped Out?	Applied to Royalty?	Periods Taken	Capped Out?	Applied to Royalty?	Volume Taken	Vol Cap Remaining	Capped Out?	Applied to Royalty?	Applied to Royalty?	Applied to Royalty?
2010-05	NO	1	1000	6949	NO	YES	1	NO	NO	1000	6949	NO	NO	NO	NO
2010-06	NO	2	1000	5949	NO	YES	2	NO	NO	1000	5949	NO	NO	NO	NO
2010-07	NO	3	1000	4949	NO	YES	3	NO	NO	1000	4949	NO	NO	NO	NO
2010-08	NO	4	1000	3949	NO	YES	4	NO	NO	1000	3949	NO	NO	NO	NO
2010-09	NO	5	1000	2949	NO	YES	5	NO	NO	1000	2949	NO	NO	NO	NO
2010-10	NO	6	1000	1949	NO	YES	6	NO	NO	1000	1949	NO	NO	NO	NO
2010-11	NO	7	1000	949	NO	YES	7	NO	NO	1000	949	NO	NO	NO	NO
2010-12	NO	8	949	0	YES	YES	8	NO	YES	949	0	YES	NO	NO	NO
2011-01	NO				YES	NO	9	NO	YES			YES	NO	NO	NO
2011-02	NO				YES	NO	10	NO	YES			YES	NO	NO	NO
2011-03	NO				YES	NO	11	NO	YES			YES	NO	NO	NO
							Periods 12 - 25		YES						
2012-06	NO				YES	NO	26	NO	YES			YES	NO	NO	NO
2012-07	NO				YES	NO	27	NO	YES			YES	NO	NO	NO
2012-08	NO				YES	NO	28	NO	YES			YES	NO	NO	NO
2012-09	NO				YES	NO	29	NO	YES			YES	NO	NO	NO
2012-10	NO				YES	NO	30	NO	YES			YES	NO	NO	NO
2012-11	NO				YES	NO	31	NO	YES			YES	NO	NO	NO
2012-12	NO				YES	NO	32	NO	YES			YES	NO	NO	NO
2013-01	NO				YES	NO	33	NO	YES			YES	NO	NO	NO
2013-02	NO				YES	NO	34	NO	YES			YES	NO	NO	NO
2013-03	NO				YES	NO	35	NO	YES			YES	NO	NO	NO
2013-04	NO				YES	NO	36	NO	YES			YES	NO	NO	NO
2013-05	NO				YES	NO		YES	NO			YES	NO	YES	NO
2013-06	NO				YES	NO		YES	NO			YES	NO	YES	NO

## Example 1: NWRR Volume Cap Out, SGNWRR Production Month Cap Out, HGNWRR Volume Cap Out followed by ARF

- Well event qualifies for NWRR, SGNWRR and HGNWRR starting on production month 2010-05.
- Well event applies 5% rate for NWRR for first 8 production months, when it caps out on volume.
- Well event does not apply 5% rate for HGNWRR for any production months - NWRR has the same production month and volume caps.
- HGNWRR also caps out on crown production during month 8.
- Well event draws down production month caps for SGNWRR for first 7 production months but the well event does not get the 5% under SGNWRR.
- Well event applies 5% rate for SGNWRR (partially) in production month 8, then applies 5% rate SGNWRR fully from production months 9 through 36.
- SGNWRR caps out on production months during month 36.
- Because well event does not qualify for ARF-T, ARF royalty rates apply from production month 37 (2013-05) onward.

## Example 2: NWRR Volume Cap Out/CBMNWRR Production Month cap out, HGNWRR Volume cap out/ARF

Prod Month	ARF	NWRR					CBMNWRR					HGNWRR			
		Periods Taken	Volume Taken	Vol Cap Remaining	Capped Out?	Applied to Royalty?	Periods Taken	Volume Taken	Vol Cap Remaining	Capped Out?	Applied to Royalty?	Volume Taken	Vol Cap Remaining	Capped Out?	Applied to Royalty?
2010-05	NO	1	1000	6949	NO	YES	1	1000	10924	NO	NO	1000	6949	NO	NO
2010-06	NO	2	1000	5949	NO	YES	2	1000	9924	NO	NO	1000	5949	NO	NO
2010-07	NO	3	1000	4949	NO	YES	3	1000	8924	NO	NO	1000	4949	NO	NO
2010-08	NO	4	1000	3949	NO	YES	4	1000	7924	NO	NO	1000	3949	NO	NO
2010-09	NO	5	1000	2949	NO	YES	5	1000	6924	NO	NO	1000	2949	NO	NO
2010-10	NO	6	1000	1949	NO	YES	6	1000	5924	NO	NO	1000	1949	NO	NO
2010-11	NO	7	1000	949	NO	YES	7	1000	4924	NO	NO	1000	949	NO	NO
2010-12	NO	8	949	0	YES	YES	8	1000	3924	NO	YES	949	0	YES	NO
2011-01	NO				YES	NO	9	1000	2924	NO	YES			YES	NO
2011-02	NO				YES	NO	10	100	2824	NO	YES			YES	NO
2011-03	NO				YES	NO	11	100	2724	NO	YES			YES	NO
							Periods 12 - 25			NO	YES				
2012-06	NO				YES	NO	26	100	2624	NO	YES			YES	NO
2012-07	NO				YES	NO	27	100	2524	NO	YES			YES	NO
2012-08	NO				YES	NO	28	100	2424	NO	YES			YES	NO
2012-09	NO				YES	NO	29	100	2324	NO	YES			YES	NO
2012-10	NO				YES	NO	30	100	2224	NO	YES			YES	NO
2012-11	NO				YES	NO	31	100	2124	NO	YES			YES	NO
2012-12	NO				YES	NO	32	100	2024	NO	YES			YES	NO
2013-01	NO				YES	NO	33	100	1924	NO	YES			YES	NO
2013-02	NO				YES	NO	34	100	1824	NO	YES			YES	NO
2013-03	NO				YES	NO	35	100	1724	NO	YES			YES	NO
2013-04	NO				YES	NO	36	100	1624	NO	YES			YES	NO
2013-05	YES				YES	NO				YES	NO			YES	NO
2013-06	YES				YES	NO				YES	NO			YES	NO

## Example 2: NWRR Volume Cap Out, CBMNWRR Production Month Cap Out, HGNWRR Volume Cap Out followed by ARF

- Well event qualifies for NWRR, CBMNWRR and HGNWRR starting on production month 2010-05.
- Well event applies 5% rate for NWRR for first 8 production months, when it caps out on volume.
- Well event does not apply 5% rate for HGNWRR for any production months - NWRR has the same production month and volume caps.
- HGNWRR also caps out on crown production during month 8.
- Well event draws down production month caps for HGNWRR for first 7 production months but the well event does not get the 5% under HGNWRR.
- Well event applies 5% rate for CBMNWRR (partially) in production month 8, then applies 5% rate CBMNWRR fully from production months 9 through 36.
- CBMNWRR caps out on production months during month 36.
- ARF royalty rates apply from production month 37 (2013-05) onward.

# NWRR Final Proration Example

Well Event ID		100 00 00 000 00W5 02												
Qty Remaining		409.23 e <sup>3</sup> m <sup>3</sup>												
NWRR Proration Factor (7.37817%)														
Client	Product	Client Qty	Client Heat GJ	Crown Interest %	EAGEV Factor	Crown Interest Qty (EAGEV) e <sup>3</sup> m <sup>3</sup>	ARF Royalty Rate %	New Well Royalty Rate %	Price \$	Proration Factor	Prorated NWRR Qty e <sup>3</sup> m <sup>3</sup>	Client Qty	Client Heat GJ	Gross Royalty \$
0001	GAS	986.80	41,153	100	1.00000	986.80	24.96068	5.00000	3.22	7.37817%	72.81	72.81	3,036	488.85
0001	C2-MX	7.76	144	100	0.28132	2.18	25.95000	5.00000	3.54	7.37817%	0.16	0.57	11	1.88
0001	C3-MX	21.98	0	100	0.65554	14.41	30.00000	5.00000	222.21	7.37817%	1.06	1.62	0	18.02
0001	C4-MX	40.96	0	100	0.72793	29.82	30.00000	5.00000	381.47	7.37817%	2.20	3.02	0	57.65
0001	C5-MX	93.92	0	100	0.78783	73.99	40.00000	5.00000	536.56	7.37817%	5.46	6.93	0	185.90
0123	GAS	986.80	41,154	100	1.00000	986.80	24.96068	5.00000	3.22	7.37817%	72.81	72.81	3,036	488.86
0123	C2-MX	7.76	144	100	0.28132	2.18	25.95000	5.00000	3.54	7.37817%	0.16	0.57	11	1.88
0123	C3-MX	21.98	0	100	0.65554	14.41	30.00000	5.00000	222.21	7.37817%	1.06	1.62	0	18.02
0123	C4-MX	40.96	0	100	0.72793	29.82	30.00000	5.00000	381.47	7.37817%	2.20	3.02	0	57.65
0123	C5-MX	93.92	0	100	0.78783	73.99	40.00000	5.00000	536.56	7.37817%	5.46	6.93	0	185.90
0123	COND	13.20	0	100	0.78783	10.40	50.00000	5.00000	553.81	7.37817%	0.77	0.97	0	26.97
0321	GAS	2,960.40	123,463	100	1.00000	2,960.40	24.96068	5.00000	3.22	7.37817%	218.42	218.42	9,109	1,466.60
0321	C2-MX	23.27	433	100	0.28132	6.55	25.95000	5.00000	3.54	7.37817%	0.48	1.72	32	5.65
0321	C3-MX	65.85	0	100	0.65554	43.17	30.00000	5.00000	222.21	7.37817%	3.19	4.86	0	53.98
0321	C4-MX	122.99	0	100	0.72793	89.53	30.00000	5.00000	381.47	7.37817%	6.61	9.07	0	173.08
0321	C5-MX	281.84	0	100	0.78783	222.05	40.00000	5.00000	536.56	7.37817%	16.38	20.79	0	557.89
						<b>5,546.50</b>				<b>7.37817%</b>	<b>409.23</b>	<b>425.75</b>	<b>15,235</b>	<b>3,788.78</b>
NWRR Proration Factor = Qty Remaining/Crown Interest Qty = 409.23/5546.50 = 7.37817%														

# New Well Royalty Rate Details

NEW WELL ROYALTY RATE DETAILS

Issue Date: 2011-06-30  
 Royalty Client: 0001  
 Name: A1 PETROLEUMS LTD

Invoice #: 00000048289

Royalty Payer Code: 0001  
 Name: A1 PETROLEUMS LTD  
 Address: PO BOX 9999, STN 2  
 CALGARY AB T2T 3N2  
 CA

NEW WELL ROYALTY RATE INFORMATION

Licence	0000001
well operator ID	0xxxx
well operator Name	NO NAME RESOURCES LIMITED
well file	
Application Number	01xxxx
Type	New well Royalty Rate
Expiration Date	2012-03-01
Status	Complete
Total well Eligible Quantity / Periods	14,158.0 / 12
Quantity / Periods Taken Under Previous Rate	0.0 / 0
Total well Contributed Quantity / Periods	14,158.0 / 2
Total Oil Quantity / Periods Taken	0.0 / 0
Remaining well Eligible quantity / Periods	0.0 / 8

Production Period	well Production	Gas (t/d)	Oil (m3)	Cond (m3)	Royalty Product	Crown Interest %	Conversion Factor	Client Quantity	NwRR Qty (EAGEv)	Gross Royalty (\$)	Client Quantity	NwRR Qty (EAGEv)	Gross Royalty (\$)
well Event: 100 00 00 000 00 w5 02													
2011-01	6330.3			1.8	GAS	100.0000000	1.00000	5827.2	5827.2	56,259.32	1165.4	1165.4	11,251.63
					C2-HX	100.0000000	0.28132	21.5	6.1	99.71	4.3	1.2	19.85
					C3-HX	100.0000000	0.65554	148.0	95.7	2,101.19	29.2	19.1	419.05
					C4-HX	100.0000000	0.72793	256.1	259.2	6,730.49	71.2	51.8	1,345.34
					C5-HX	100.0000000	0.78783	437.5	344.7	10,714.93	87.5	68.9	2,142.99
					COND	100.0000000	0.78783	1.8	1.4	43.64	0.0	0.0	0.00
Sub-Total									6534.3	75,951.48		1306.5	15,179.76
2011-02	8825.5				GAS	100.0000000	1.00000	6237.6	6237.6	51,992.49	1247.5	1247.5	10,398.34
					C2-HX	100.0000000	0.28132	43.0	12.1	168.64	8.6	2.4	33.57
					C3-HX	100.0000000	0.65554	185.0	121.3	1,906.15	27.0	24.2	381.06
					C4-HX	100.0000000	0.72793	430.6	313.3	8,014.95	86.2	62.7	1,603.73
					C5-HX	100.0000000	0.78783	672.8	530.0	16,919.11	134.6	106.0	3,383.82
Sub-Total									7214.5	79,001.34		1442.9	15,800.53
2011-03	2342.5												
Sub-Total									0.0	0.00		0.0	0.00
0011MON	3414.4				GAS	100.0000000	1.00000	364.0	364.0	2,443.31	72.9	72.9	489.78
					C2-HX	100.0000000	0.28132	2.9	0.8	9.41	0.8	0.2	1.89
					C3-HX	100.0000000	0.65554	8.1	5.3	90.02	1.6	1.1	18.09
					C4-HX	100.0000000	0.72793	15.1	11.0	288.38	3.0	2.2	37.70
					C5-HX	100.0000000	0.78783	34.7	27.3	929.09	6.9	5.3	186.25
					COND	100.0000000	0.78783	11.2	0.8	36.97	0.0	0.0	0.00
Sub-Total									409.2	3,786.78		81.9	753.74
TOTAL									14158.0	158,741.60		2831.3	31,734.03

\*\*\*\*\* End of Report \*\*\*\*\*

Reference Number: 177849

Page 1

# Natural Gas Deep Drilling Program (NGDDP)

# Changes to Natural Gas Deep Drilling Program

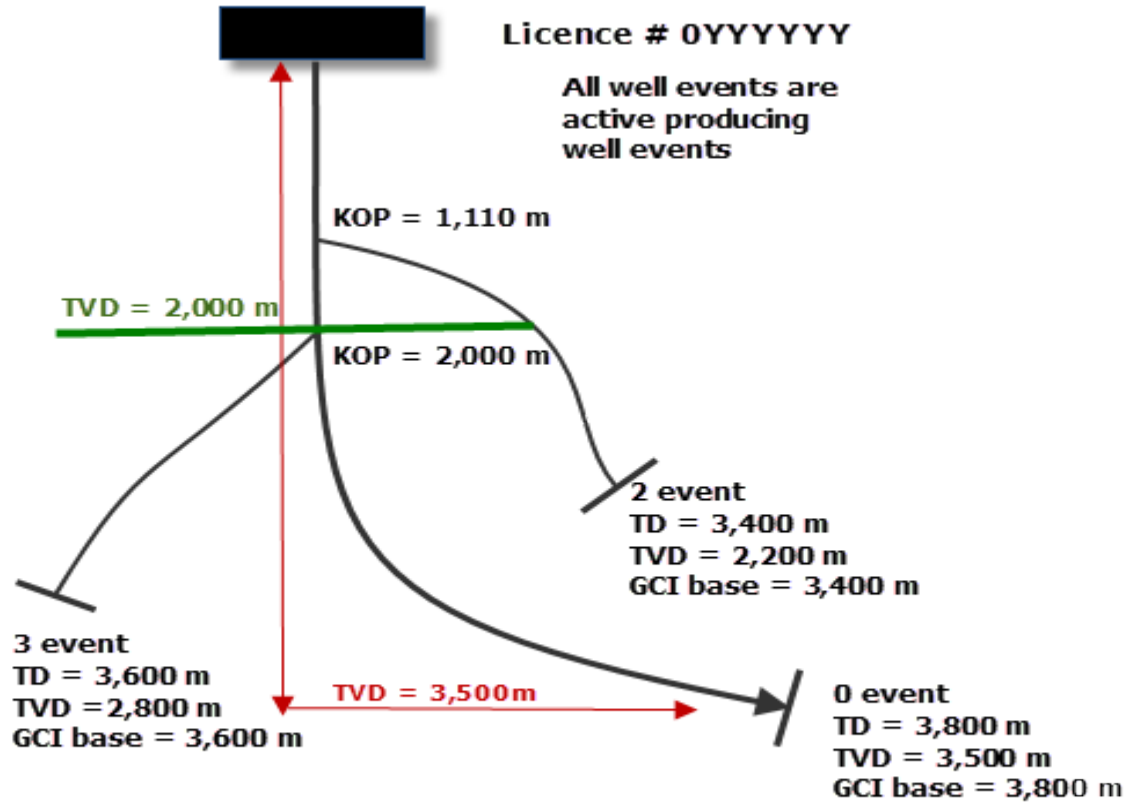
- Applies to wells with spud date or deepened on or after **May 1, 2010**
- True vertical depth (TVD) of the producing interval is greater than **2,000 metres**
- Additional benefits for laterals as per table below:

Benefits for Additional Laterals	
Qualifying true vertical depth (TVD of the well event)	Benefit per drilled metre (GCI Base/Total Depth – kick off point of the well event)
<b>2,000 &lt; TVD &lt; 3,500</b>	<b>\$625</b>
<b>&gt;=3,500</b>	<b>\$2,500</b>

- If well event qualifies for NWRR, SGNWRR, CBMNWRR, or HGNWRR, NWRRs are applied first
- The 60 month calendar time for NGDDP runs concurrently with all the NWRRs
- The existing Supplemental Benefits of \$875,000 are **NOT** available for wells spud on or after May 28, 2010
- Changes to technical evaluation that no longer disqualifies a well under the new NGDDP
  - Off target
  - Within ERCB designated pool boundaries as of June 1, 1985 (G-Orders)
  - Drilling Spacing Unit

# Example 1 : Developmental Well

Well Drilling Occurrence ID: ABWI100YYYYYYYW400 (deepest and longest)



# Calculation: Example 1

## Licence #0YYYYYY

Measured Depth	2000<Depth<=3500	3500<Depth<=4000	4000<Depth<=5000	Depth>5000
Benefit/m drilled in the depth range (\$/m):	625.00	2,500.00	2,500.00	3,000.00
Metres in depth range:	1,500.0	300.0	0.0	0.00
Benefit amount for depth (\$):	937,500.00	750,000.00	0.00	0.00
Developmental Benefit (\$):	1,687,500.00			
<b>Additional Benefit (\$):</b>	<b>2,431,250.00</b>			
Developmental Benefit Total (\$):	4,118,750.00			

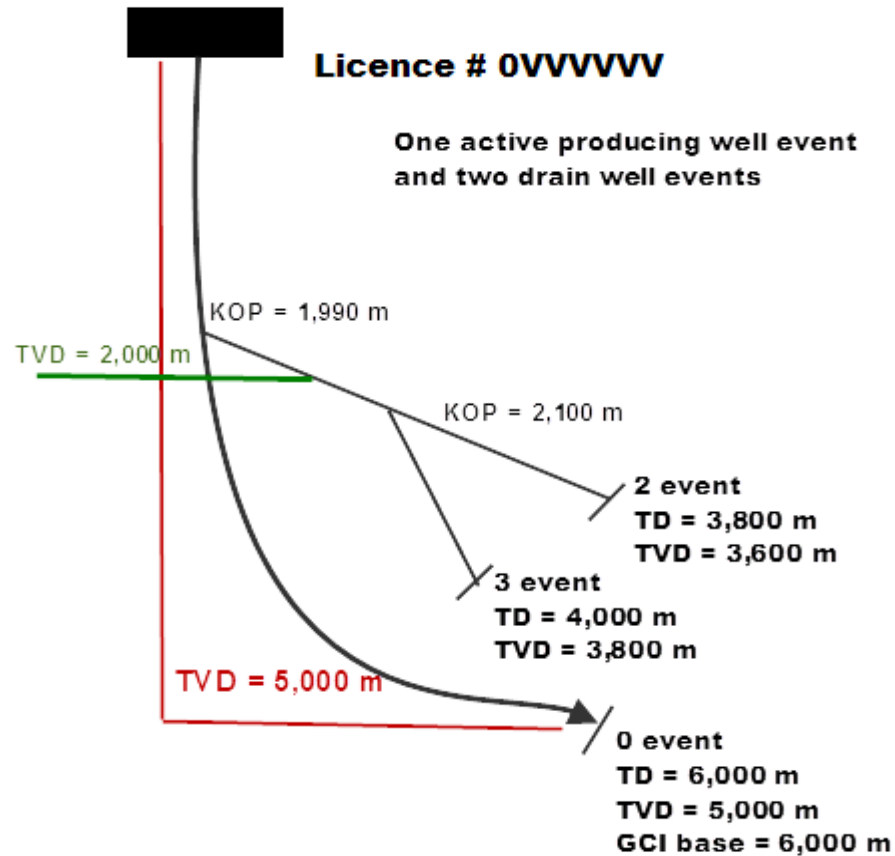
# Calculation: Additional Benefits for Licence # 0YYYYYY

Well Event ID	True Vertical Depth	GCI Base/ Total Depth	Kick off Depth	Leg Depth	Benefit per metre (\$/m)	Additional Benefit (\$)
ABWI100YYYYYYW402	2,200.0	3,400.0	1,110.0	2,290.0	625.00	1,431,250.00
ABWI100YYYYYYW403	2,800.0	3,600.0	2,000.0	1,600.0	625.00	1,000,000.00
					<b>Additional Benefit Total:</b>	<b>2,431,250.00</b>

Additional Benefit = (GCI Base/Total Depth – Kick off Depth) \* Benefit per metre

# Example 2 : Exploratory Well

Well Drilling Occurrence ID: ABWI100VVVVVVW400 (deepest and longest)



## Calculation: Example 2

### Licence # 0VVVVVV

Measured Depth	2000<Depth<=3500	3500<Depth<=4000	4000<Depth<=5000	Depth>5000
Benefit/m drilled in the depth range (\$/m):	625.00	2,500.00	3,125.00	3,750.00
Metres in depth range:	1,500.0	500.0	1,000.0	1,000.0
Benefit amount for depth (\$):	937,500.00	1,250,000.00	3,125,000.00	3,750,000.00
Exploratory Benefit (\$):	9,062,500.00			
<b>Additional Benefit (\$):</b>	<b>9,275,000.00</b>			
Exploratory Benefit Total(\$):	18,337,500.00			

The maximum benefit for an exploratory well is \$10 million; therefore, the benefit for this well is \$10 million.

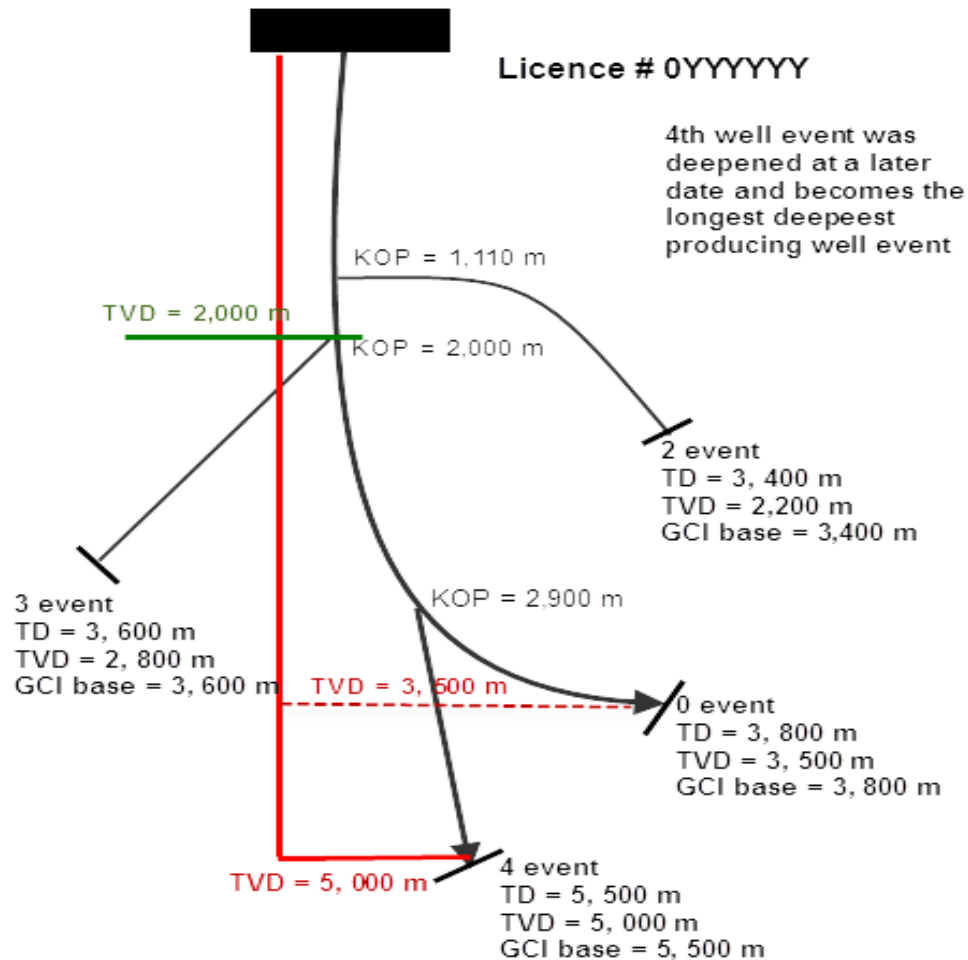
# Calculation: Additional Benefits for Licence # 0VVVVVV

Well Event ID	True Vertical Depth	GCI Base/ Total Depth	Kick off Depth	Leg Depth	Benefit per metre (\$/m)	Additional Benefit (\$)
ABWI100VVVVVVW402	3,600.0	3,800.0	1,990.0	1,810.0	2,500.00	4,525,000.00
ABWI100VVVVVVW403	3,800.0	4,000.0	2,100.0	1,900.0	2,500.00	4,750,000.00
					<b>Additional Benefit Total:</b>	<b>9,275,000.00</b>

Additional Benefit = (GCI Base/Total Depth – Kick off Depth) \* Benefit per metre

# Example 3: Developmental Well with Deepening

Well Drilling Occurrence ID: ABWI100YYYYYYW404 (deepest and longest)



## Calculation: Example 3

### Licence # 0YYYYYYY

Measured Depth	2000<Depth<=3500	3500<Depth<=4000	4000<Depth<=5000	Depth>5000
Benefit/m drilled in the depth range (\$/m):	625.00	2,500.00	2,500.00	3,000.00
Metres in depth range:	1,500.0	500.0	1,000.0	500.0
Benefit amount for depth (\$):	937,500.00	1,250,000.00	2,500,000.00	1,500,000.00
Developmental Benefit (\$):	6,187,500.00			
<b>Additional Benefit (\$):</b>	<b>4,681,250.00</b>			
Developmental Benefit Total (\$):	10,868,750.00			

The maximum benefit for a developmental well is \$8 million; therefore, the benefit for this well is \$8 million. The previous actual adjustment balance received by the royalty client will be deducted from \$8 million. A new five year term will be established based on the new Finished Drill Date.

# Calculation: Additional Benefits for Licence # 0YYYYYY

Well Event ID	True Vertical Depth	GCI Base/ Total Depth	Kick off Depth	Leg Depth	Benefit per metre (\$/m)	Additional Benefit (\$)
ABWI100YYYYYYW400	3,500.0	3,800.0	2,900.0	900.0	2,500.00	2,250,000.00
ABWI100YYYYYYW402	2,200.0	3,400.0	1,110.0	2,290.0	625.00	1,431,250.00
ABWI100YYYYYYW403	2,800.0	3,600.0	2,000.0	1,600.0	625.00	1,000,000.00
					<b>Additional Benefit Total:</b>	<b>4,681,250.00</b>

Additional Benefit = (GCI Base/Total Depth – Kick off Depth) \* Benefit per metre

# NWRR Final Proration and Start of NGDDP Example

Well Event ID		100 00 00 000 00W5 02																	
Qty Remaining		409.23 e <sup>3</sup> m <sup>3</sup>																	
										NWRR Proration Factor (7.37817%)					NGDDP (92.62183%)				
Client	Product	Client Qty	Client Heat GJ	Crown Interest %	EAGEV Factor	Crown Interest Qty (EAGEV) e <sup>3</sup> m <sup>3</sup>	ARF Royalty Rate %	New Well Royalty Rate %	Price \$	Proration Factor	Prorated NWRR Qty e <sup>3</sup> m <sup>3</sup>	Client Qty	Client Heat GJ	Gross Royalty \$	Remaining Client Qty	Remaining Client Heat GJ	Gross Royalty \$	Exemption \$	
0001	GAS	986.80	41,153	100	1.00000	986.80	24.96068	5.00000	3.22	7.37817%	72.81	72.81	3,036	488.85	913.99	38,117	\$30,635.65	24,498.87	
0001	C2-MX	7.76	144	100	0.28132	2.18	25.95000	5.00000	3.54	7.37817%	0.16	0.57	11	1.88	7.19	134	\$122.67	99.03	
0001	C3-MX	21.98	0	100	0.65554	14.41	30.00000	5.00000	222.21	7.37817%	1.06	1.62	0	18.02	20.36	0	\$1,357.43	1,131.19	
0001	C4-MX	40.96	0	100	0.72793	29.82	30.00000	5.00000	381.47	7.37817%	2.20	3.02	0	57.65	37.94	0	\$4,342.08	3,618.40	
0001	C5-MX	93.92	0	100	0.78783	73.99	40.00000	5.00000	536.56	7.37817%	5.46	6.93	0	185.90	86.99	0	\$18,669.35	16,335.68	
0123	GAS	986.80	41,154	100	1.00000	986.80	24.96068	5.00000	3.22	7.37817%	72.81	72.81	3,036	488.86	913.99	38,118	\$30,636.40	24,499.47	
0123	C2-MX	7.76	144	100	0.28132	2.18	25.95000	5.00000	3.54	7.37817%	0.16	0.57	11	1.88	7.19	134	\$122.67	99.03	
0123	C3-MX	21.98	0	100	0.65554	14.41	30.00000	5.00000	222.21	7.37817%	1.06	1.62	0	18.02	20.36	0	\$1,357.43	1,131.19	
0123	C4-MX	40.96	0	100	0.72793	29.82	30.00000	5.00000	381.47	7.37817%	2.20	3.02	0	57.65	37.94	0	\$4,342.08	3,618.40	
0123	C5-MX	93.92	0	100	0.78783	73.99	40.00000	5.00000	536.56	7.37817%	5.46	6.93	0	185.90	86.99	0	\$18,669.35	16,335.68	
0123	COND	13.20	0	100	0.78783	10.40	50.00000	5.00000	553.81	7.37817%	0.77	0.97	0	26.97	12.23	0	\$3,385.46	3,046.91	
0321	GAS	2,960.40	123,463	100	1.00000	2,960.40	24.96068	5.00000	3.22	7.37817%	218.42	218.42	9,109	1,466.60	2,741.98	114,354	\$91,909.94	73,499.00	
0321	C2-MX	23.27	433	100	0.28132	6.55	25.95000	5.00000	3.54	7.37817%	0.48	1.72	32	5.65	21.56	401	\$368.02	297.11	
0321	C3-MX	65.85	0	100	0.65554	43.17	30.00000	5.00000	222.21	7.37817%	3.19	4.86	0	53.98	61.00	0	\$4,066.13	3,388.44	
0321	C4-MX	122.99	0	100	0.72793	89.53	30.00000	5.00000	381.47	7.37817%	6.61	9.07	0	173.08	113.92	0	\$13,036.83	10,864.03	
0321	C5-MX	281.84	0	100	0.78783	222.05	40.00000	5.00000	536.56	7.37817%	16.38	20.79	0	557.89	261.05	0	\$56,027.48	49,024.05	
						<b>5,546.50</b>					<b>7.37817%</b>	<b>409.23</b>	<b>425.75</b>	<b>15,235</b>	<b>3,788.78</b>	<b>5,344.66</b>	<b>191,256</b>	<b>\$279,048.97</b>	<b>231,486.48</b>

# Royalty Adjustment Statement (previously Royalty Exemption Statement)

ROYALTY ADJUSTMENT STATEMENT

Issue Date: 2011-06-30  
 Royalty Client: 0001  
 Name: A1 PETROLEUMS LTD

Invoice #: 00000048289

Royalty Payer Code: 0001  
 Name: A1 PETROLEUMS LTD  
 Address: PO BOX 9999, 5TH Z  
 CALGARY AB T2T 5N2  
 CA

ROYALTY ADJUSTMENT INFORMATION	
License	0XXXXXX
Qualifying well Event ID	100 00 00 000 00 W5 00
well operator ID	0XXX
well operator Name	NO NAME RESOURCES LIMITED
well tie	
Royalty Adjustment Application Number	N29292
Royalty Adjustment Type	Natural Gas Deep Drilling Program
Royalty Adjustment Expiration Date	2012-12-01
Royalty Adjustment Status	Active
Total well Eligible Adjustment	\$625,000.00
Adjustment Taken Under Previous Program	\$0.00
Total well Eligible Adjustment Taken	\$228,439.57
Condensate Taken	\$3,046.91
Remaining well Eligible adjustment	\$396,560.43

Production Period	TOTAL WELL EVENT 100 00 00 000 00 W5 02				ROYALTY CLIENT SHARE			
	Gross Royalty (\$)	Eligible Adjustment Taken (\$)	Condensate Royalty (\$)	Eligible Condensate Adjustment Taken (\$)	Gross Royalty (\$)	Eligible Adjustment Taken (\$)	Condensate Royalty (\$)	Eligible Condensate Adjustment Taken (\$)
Pre-2002				0.00				0.00
2011-04	275,663.51	228,439.57	3,385.46	3,046.91	35,127.18	45,683.17	0.00	0.00
Sub-Total	275,663.51	228,439.57	3,385.46	3,046.91	35,127.18	45,683.17	0.00	0.00
TOTAL	275,663.51	228,439.57	3,385.46	3,046.91	35,127.18	45,683.17	0.00	0.00

\*\*\*\*\* End Of Report \*\*\*\*\*

# Rate Table

Order	Royalty Rate	Rationale
1	New Well Royalty Rate	5% base gross royalty rate for a well event 7,949 m <sup>3</sup> or 12 production months
2	Horizontal Oil New Well Royalty Rate	15,899 m <sup>3</sup> or 48 production months 14,309 m <sup>3</sup> or 42 production months
3	Shale Gas New Well Royalty Rate	36 production months, no volume cap
4	Horizontal Oil New Well Royalty Rate	12,719 m <sup>3</sup> or 36 production months
5	Coalbed Methane New Well Royalty Rate	11,924 m <sup>3</sup> or 36 production months
6	Horizontal Oil New Well Royalty Rate,	11,129 m <sup>3</sup> or 30 production months or 9,539 m <sup>3</sup> or 24 production months
7	Horizontal Oil New Well Royalty Rate	7,949 m <sup>3</sup> or 18 production months
8	Horizontal Gas New Well Royalty Rate	7,949 m <sup>3</sup> or 18 production months
9	Alberta Royalty Framework (Transition)	If elected and qualified for ARF-T
10	Alberta Royalty Framework	Standard gross royalty rate

**•Notes:**

- The Deep Oil Exploratory Well program is an oil royalty reduction, not a gross royalty rate. As such, it cannot be applied until after applicable oil royalty rates have been calculated.
- The Natural Gas Deep Drilling Program reduction has a 60 month calendar draw down period.

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