

Minimum Royalty Program

Petroleum and Natural Gas Act

Latest Revision: *This bulletin has been completely rewritten and replaces the previous version dated July 2014.*

This bulletin explains the minimum royalty program for wells that receive deep gas well credits.

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Overview

The minimum royalty program limits the amount of deep well credit or deep re-entry credits a producer may deduct from the gross royalty payable less producer cost of service (PCOS). The program began with the April 2013 production period and was shown on gas royalty invoices starting in July 2013.

Calculating the Minimum Royalty Amount

A producer with available credits may deduct **the lesser** of the following four deep well or deep re-entry credit amounts from their gross royalty less PCOS:

- i) The portion of the opening deep well credit balance that could reduce the gross royalty less PCOS to zero
- ii) The opening deep well credit balance
- iii) The amount determined in (i), **minus** the minimum royalty amount
- iv) Zero, if the amount determined in (i), **minus** the minimum royalty amount, is equal to or less than 0

On the monthly Crown invoice, the minimum royalty is calculated separately from the calculation of natural gas and by-product royalties. The minimum royalty amount is calculated as follows:

Minimum Royalty Formula	$((\text{Marketable Gas Volume} \times \text{Natural Gas Reference Price}) + (\text{Natural Gas Liquids Sales Value}) + (\text{Sulphur Sales Value})) \times \text{Specified Percentage}$
Specified Percentage	Tier 1 Deep Well = 6% Tier 2 Deep Well = 3%

Between April 1, 2013, and March 31, 2014, deep wells were not classified in tiers and the specified rate was 3%. Effective April 1, 2014, wells that qualify for deep gas well credits are classified as either tier 1 wells or tier 2 wells. The tier is determined based on the bottom hole location, H2S content and spud date. For more information on qualifying deep gas well credits, see [Bulletin PNG 001](#), *Royalty Programs for Deep Gas Wells*.

Examples

Example 1 – Opening Deep Well Credit Balance is **Greater** than Gross Royalty Less PCOS, and Calculated Minimum Royalty is **Less** than Gross Royalty Less PCOS

Opening Tier 2 Deep Well Credit Balance:	\$843,964.06
Gross Royalty Less PCOS:	\$1,898.73
Marketable Gas Volume Produced:	250 10 ³ m ³
Natural Gas Reference Price:	\$100/10 ³ m ³
Natural Gas Liquids Sales Value:	\$8,000.00
Sulphur Sales Value:	\$333.00

Calculate the minimum royalty payable as follows:

$$\begin{aligned}
 & ((\text{Marketable Gas Volume} \times \text{Natural Gas Reference Price}) + \\
 & \text{Natural Gas Liquids Sales Value} + \text{Sulphur Sales Value}) \times \text{Minimum Royalty Rate} \\
 & (250 \times \$100) + \$8,000 + \$333 = \$33,333.00 \\
 & \$33,333 \times 3\% = \mathbf{\$1,000.00}
 \end{aligned}$$

Calculate the four possible credit amounts outlined above. The lesser of the four will determine which amount to deduct from the gross royalty less PCOS:

- i) \$1,898.73
- ii) \$843,964.06
- iii) \$898.73**
- iv) n/a

In this example, **\$898.73** will be deducted from the deep well credit bank.

Deep Well Credit Bank Monthly Transaction				
Opening Deep Well Credit Balance	Gross Royalty less PCOS	3% Minimum Royalty	Closing Deep Well Credit Balance	Amount Invoiced
\$843,964.06	\$1,898.73	\$1,000.00	\$843,065.33	\$1,000.00

Example 2 – Opening Deep Well Credit Balance is **Greater** than Gross Royalty Less PCOS, and Calculated Minimum Royalty is **Greater** than the Gross Royalty Less PCOS

Opening Tier 1 Deep Well Credit Balance:	\$843,964.06
Gross Royalty Less PCOS:	\$1,898.73
Marketable Gas Volume Produced:	750 10 ³ m ³
Natural Gas Reference Price:	\$145/10 ³ m ³
Natural Gas Liquids Sales Value:	\$8,001.50
Sulphur Sales Value:	\$300.00

Calculate the minimum royalty payable as follows:

$$\begin{aligned}
 & (\text{Marketable Gas Volume} \times \text{Natural Gas Reference Price}) + \\
 & \text{Natural Gas Liquids Sales Value} + \text{Sulphur Sales Value} \times \text{Minimum Royalty Rate} \\
 & (750 \times \$145) + \$8,001.5 + \$300 = \$117,051.50 \\
 & \$117,051.50 \times 6\% = \mathbf{\$7,023.09}
 \end{aligned}$$

If the gross royalty less PCOS is lower than the minimum royalty, the gross royalty less PCOS amount is payable and no deep well credits are used.

Calculate the four possible credit amounts outlined above. The lesser of the four will determine which amount to deduct from the gross royalty less PCOS:

- i) \$1,898.73
- ii) \$843,964.06
- iii) n/a
- iv) \$0

In this example, \$0 will be deducted from the deep well credit bank.

Deep Well Credit Bank Monthly Transaction				
Opening Deep Well Credit Balance	Gross Royalty less PCOS	6% Minimum Royalty	Closing Deep Well Credit Balance	Amount Invoiced
\$843,964.06	\$1,898.73	\$7,023.09	\$843,964.06	\$1,898.73

Example 3 – Opening Deep Well Credit Balance is **Less** than Gross Royalty less PCOS, and Calculated Minimum Royalty is **Greater** than the Gross Royalty Less PCOS

Opening Tier 1 Deep Well Credit Balance:	\$1,500.00
Gross Royalty Less PCOS:	\$1,898.73
Marketable Gas Volume Produced:	750 10 ³ m ³
Natural Gas Reference Price:	\$134/10 ³ m ³
Natural Gas Liquids Sales Value:	\$14,250.00
Sulphur Sales Value:	\$2,301.16

Calculate the minimum royalty payable as follows:

$$\begin{aligned}
 & (\text{Marketable Gas Volume} \times \text{Natural Gas Reference Price}) + \\
 & \text{Natural Gas Liquids Sales Value} + \text{Sulphur Sales Value} \times \text{Minimum Royalty Rate} \\
 & (750 \times \$134) + \$14,250 + \$2,301.16 = \$117,051.16 \\
 & \$117,051.16 \times 6\% = \mathbf{\$7,023.07}
 \end{aligned}$$

Calculate the four possible credit amounts outlined above. The lesser of the four will determine which amount to deduct from the gross royalty less PCOS:

- i) n/a
- ii) \$1,500
- iii) n/a
- iv) n/a

In this example, **\$1,500** will be deducted from the deep well credit bank.

Deep Well Credit Bank Monthly Transaction				
Opening Deep Well Credit Balance	Gross Royalty less PCOS	6% Minimum Royalty	Closing Deep Well Credit Balance	Amount Invoiced
\$1,500.00	\$1,898.73	\$7,023.07	\$0.00	\$398.73

Example 4 – Opening Deep Well Credit Balance is **Less** than Gross Royalty less PCOS, and Calculated Minimum Royalty is **Less** than the Gross Royalty Less PCOS

Opening Tier 1 Deep Well Credit Balance:	\$1,500.00
Gross Royalty Less PCOS:	\$1,898.73
Marketable Gas Volume Produced:	134 10 ³ m ³
Natural Gas Reference Price:	\$113/10 ³ m ³
Natural Gas Liquids Sales Value:	\$1,212.00
Sulphur Sales Value:	\$312.67

Calculate the minimum royalty payable as follows:

$$\begin{aligned}
 & (\text{Marketable Gas Volume} \times \text{Natural Gas Reference Price}) + \\
 & \text{Natural Gas Liquids Sales Value} + \text{Sulphur Sales Value} \times \text{Minimum Royalty Rate} \\
 & (134 \times \$113) + \$1,212 + \$312.67 = \$16,666.67 \\
 & \$16,666.67 \times 6\% = \mathbf{\$1,000.00}
 \end{aligned}$$

Calculate the four possible credit amounts outlined above. The lesser of the four will determine which amount to deduct from the gross royalty less PCOS:

- i) n/a
- ii) **\$1,500**
- iii) n/a
- iv) n/a

In this example, **\$1,500** will be deducted from the deep well credit bank.

Deep Well Credit Bank Monthly Transaction				
Opening Deep Well Credit Balance	Gross Royalty less PCOS	6% Minimum Royalty	Closing Deep Well Credit Balance	Amount Invoiced
\$1,500.00	\$1,898.73	\$1,000.00	\$0	\$398.73

 **Need more info?**

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