

PRODUCTION ALLOWABLE REPORT—CRUDE OIL

Email Address: Reservoir@bc-er.ca

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Form must be submitted monthly under the authority of the Energy Resource Activities Act R.S.B.C. 2010, c. 36 Drilling and Production Regulation, s. 59(2), for each oil well or group of oil wells. The form must be received electronically via email at Reservoir@BC-ER.ca by the 21st day of the month. Information collected on this form will be used for public record in accordance with Part 2 of the Energy Resource Activities Act.

Operator	
Well (or Project Name)	
Field	
Producing Zone	

→	insert allowable production for November
-	minus overproduction amount @ end of Oct. *
=	● equals production target for November.

Initial Test Period** (if entitled):

Test Volume: _____ m³

Start Date: _____ End Date: _____

DOA: _____ m³

(1) Month and Days	(2) Oil Production For Month (m ³)	(3) Gross Gas Production for Month (10 ³ m ³)	(4) Approved Gas Credit for Month (10 ³ m ³)	(5) Net Gas Production for Month (10 ³ m ³)	(6) F G.O.R. ***
October					
November (30)					
December (31)					
January (31)					
February (28/29)					
March (31)					
April (30)					
May (31)					
June (30)					
July (31)					
August (31)					
September (30)					
October (31)					

(7) Month and Days	(8) DOA x Days in Month (m ³)	(9) Allowable Production for Month (6) x (8) (m ³)	(10) Production Target from Start of Period Sum (9) (m ³)	(11) Cumulative Production from Start of Period (m ³)	(12) O/P (-) or U/P (+) at Month End (m ³)
November (30)		●	→		
December (31)					
January (31)					
February (28/29)					
March (31)					
April (30)					
May (31)					
June (30)					
July (31)					
August (31)					
September (30)					
October (31)					

Company	Phone	Email
Contact Name	FAX	

* Refer to Section 61, *Drilling and Production Regulation*

** Refer to Sections 1 & 56, *Drilling and Production Regulation*

*** Refer to Section 54, *Drilling and Production Regulation*



PRODUCTION ALLOWABLE REPORT- CRUDE OIL (INSTRUCTIONS)

The form “Production Allowable Report—Crude Oil” (above) is required for each producing oil well or project in British Columbia under section 59 (2) of the [Drilling and Production Regulation](#) (the Regulation) unless otherwise approved. Regulations pertinent to this Report can be found in sections 54 to 62, inclusive. The form must be submitted monthly and received by the 21st day of the month following the reported production.

This form assists both the Regulator and operators in avoiding, detecting, and correcting overproduction; however, it is always the responsibility of the permit holder to ensure production is compliant with the Regulation. Should overproduction occur, this may require the permit holder to shut in the well/pool until the overproduction is completely retired (i.e., equals zero) and/or may be considered a non-compliance, possibly leading to enforcement action. There are three types of overproduction that can occur:

1. Exceeding the Daily Production Limit [Section 55(1) of the Regulation]
 - Daily (or monthly) production may not exceed 125% of the adjusted allowable production
2. Cumulative overproduction (since start of period/November) at the start of a month may not exceed the adjusted monthly allowable production target for that month [Section 61(1) of the Regulation]
 - Eg. cumulative overproduction at the end of Jan/(start of Feb) is -400m³ but the adjusted monthly allowable production for February is only 370m³
 - Should this occur, the permit holder must shut in the oil well on or before the 16th day of the month, and must keep it shut in until the overproduction is completely retired. Additionally, the Regulator must be notified in writing of the date on which the well is shut in, and the number of days calculated for the shut in period based on the daily oil allowable.
3. At the start of a new production year (November 1st), cumulative overproduction at the end of the previous production period (October) exceeds 25% of the adjusted monthly allowable production for October [Section 61(2) of the Regulation]
 - Should this occur, the permit holder must carry the overproduction forward and must shut in the well on or before November 16 and must keep it shut in until the overproduction is completely retired. Additionally, the Regulator must be notified in writing of the date on which the well is shut in, and the number of days calculated for the shut in period based on the daily oil allowable.

The following are some notes to assist in the proper completion of the Production Allowable Report.

These notes accompany two sample forms (page 6 and 7) of a fictitious well from the time of initial oil production into the successive production period.

1. Test Period Allowable

“Test Period” — means 90 producing days (not necessarily consecutive) or the number of days required to produce the test period allowable, commencing with the date of initial oil production, whichever comes first. During an oil well's test period, the oil production allowable for that well is always the sum of 500 m³ plus 90 days multiplied by the DOA (Daily Oil Allowable) measured in cubic meters, and there is **no daily production limit**. During the test period, GOR penalties are not applied so that operators may determine the well's unrestricted flow capability and reservoir characteristics.

In **Example #1** (page 6), the well has been assigned a DOA of 10.0 m³. The test period allowable for this well would be:

$$(90 \text{ days}) (10.0 \text{ m}^3/\text{day}) + 500 \text{ m}^3 = 1400 \text{ m}^3$$

The initial production date for the well is December 15th. The period from December 15th to March 14th (90 producing days) is the test period for this well. The test period could have

* Refer to Section 61, *Drilling and Production Regulation*

** Refer to Sections 1 & 56, *Drilling and Production Regulation*

*** Refer to Section 54, *Drilling and Production Regulation*

been less than 90 days had the well been able to produce its test period allowable sooner, or longer than 90 calendar days, had the well produced on non-consecutive dates. The test period dates should be indicated on the form. A convenient place for this entry is the blank area beneath the words "Producing zone" in the upper left portion of the form.

2. Continuous Production

In **Example #1**, after March 14th, production from the well is limited to the Allowable Production for the month which is entered in Column 9. To determine the value for Column 9, the GOR Factor in Column 6 must be determined first. The formula for the Gas-Oil Ratio Adjustment Factor (F_{GOR}) is in section 54(4) of the Regulation. The formula is as follows:

$$F_{GOR} = 177.3 / [GOR + (0.0257) (S)]$$

where S = average separator pressure (kPa), Note: $F_{GOR} \leq 1$ (i.e. maximum value is 1.00, use 1.00 if the calculated value is > 1.00,

To determine the GOR Factor, use the production values for the previous month. In Example #1, use the production values from February (from Columns 2 & 3) to determine the Allowable Production for the remainder of March. If gas injection volumes are reported under Column 4, "Approved Gas Credit for Month", use "Net Gas Production for Month" from Column 5 in place of Gross Gas Production in the GOR calculation. (Note: Conservation of gas does not normally entitle a well to Gas Credits; Gas Credits usually only apply to gas volumes reinjected into a reservoir.) The calculation is as follows:

$$GOR = \text{Gross Gas Prod. for Month} / \text{Oil Prod. for Month} \quad GOR = 179,000 \text{ m}^3 / 483.4 \text{ m}^3 = 370.29$$

Using a separator pressure of S = 400 kPa (section 76.13)

$$F_{GOR} = 177.3 / [370.29 + (0.0257) (400)] = 0.47$$

*This number is placed in Column 6 in the row which contains February production.
(Note: F_{GOR} is always rounded to 2 decimal places)*

The Test Period ended March 14th. This leaves 17 days in March for which we must calculate the Allowable Production (Column 9). In this case, Column 8 for March would be:

$$(17 \text{ days}) (10.0 \text{ m}^3/\text{day}) = 170.0 \text{ m}^3$$

The Allowable Production (Column 9) for the remainder of March would be:

$$(\text{Column 6}) (\text{Column 8}) = (.47) (170.0) = 79.9 \text{ m}^3$$

The Production Target from the Start of the Period (Column 10) is:

$$\text{Test Period Allowable} + \text{Allowable Production for the Remainder of March} = 1400 + 79.9 = 1479.9$$

This value is placed in Column 10.

The Cumulative Production (Column 11) is the sum of Column 2. In **Example #1**, the production for March is 321.7 m³. The sum of the production from December to the end of March is 1470.3 m³, which is entered in Column 11.

The difference between Columns 10 & 11 is entered in Column 12. In this case, the Cumulative Production (Column 11) is less than the Production Target (Column 10) so the well is an underproduction situation (9.6 m³).

NOTE: Underproduction may be made up at any time within a **production period** (November 1 to October 31 of the following year) at a rate not exceeding the **daily production limit** (a volume equal to 125% of the daily allowable). A large amount of underproduction is not the bonanza that it may at first appear to be. **When the next production period commences, all underproduction is lost.**

If the result in Column 12 is negative, the well is in an overproduction situation and the overproduction must be retired in accordance with section 61 of the regulation.

The remainder of the form is completed in the same manner. The Gas-Oil Ratio Adjustment Factor used to determine the Allowable Production for April is calculated using the production values for March as follows:

$$F_{GOR} = 177.3 / [(124,600/321.7) + (0.0257) (400)] = 0.45 \quad \text{This value is entered in Column 6 in the row which contains March production.}$$

The Allowable Production for April is:

$$(0.45) (300.0) = 135.0 \text{ m}^3 \text{ [i.e., Column 6 x Column 8]}$$

The 135.0 m³ allowable production for April is added to the 1479.9 m³ in Column 10 to give a Production Target from the Start of the Period of 1614.9 m³. Production of 136.5 m³ in April is added to the 1470.3 m³ in Column 11 to give a Cumulative Production of 1606.8 m³.

The Production Target (1614.9) minus the Cumulative Production (1606.8) equals 8.1 m³ of underproduction at the end of April (Column 12).

The values on the rest of the form are derived using the same method as described above.

Note: If oil and gas production for a calendar month is zero, the allowable production for the month still accumulates. For a month with zero production, the F_{GOR} from the last representative (i.e., “on trend”) month should be used for calculations.

3. New Production Period - **Example #2** (page 6)

Two values are carried forward from the previous production period:

- the Gas-Oil Ratio Adjustment Factor
- any overproduction at the end of October.

The F_{GOR} from the bottom of Column 6 of the previous report is entered at the top of Column 6 on the new report.

Overproduction is carried forward from the previous report and entered in the top right portion of the new report in the following manner:

- When overproduction at the end of the previous production period is less than or equal to 25% of the monthly oil allowable for October (Column 9), it is carried forward to the new report.
- When overproduction at the end of a production period is greater than 25% of the monthly oil allowable for October (Column 9), it is carried forward and the operator must shut in the well on or before November 16 and keep it shut in until the overproduction is completely retired.
- Overproduction is carried forward and entered as a negative number in the blank space after the phrase “minus overproduction amount @ end of Oct.” In **Example #2**, overproduction in the amount of 5.7 m³ is carried over.

The “Calculated value from November” (Column 9) is found in the usual manner by multiplying the F_{GOR} in Column 6 by the value in Column 8 on the form:

$$(0.56) (300.0) = 168.0 \text{ m}^3 \quad \text{This value is entered in the top right blank on the report.}$$

The overproduction that was carried forward is subtracted from the Allowable Production for November to give us the Production Target from the Start of the Period (Column 10).

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The reporting process is continued in the manner previously described.

In **Example #2**, the amount of overproduction at the end of April exceeds the Allowable Production for the month of May (-144.0 m³ vs 136.4 m³). At this point, the well must be shut in to retire the overproduction, as stated in section 61(1) of the Regulation:

“If overproduction at the beginning of any month exceeds the monthly oil allowable, adjusted for any penalties, for that month, the operator must shut in the oil well on or before the 16th day of the month, and must keep it shut in until the overproduction is completely retired.”

Thus, when the overproduction value in Column 12 exceeds the value in Column 9 for the following month, a shut-in period is required. During the time the well is shut in the F_{GOR} calculated for the last producing month is used in Column 6.

The shut-in period is calculated based on the following formula:

$$\text{Shut-in Period} = \text{Overproduction} / [(DOA) (F_{GOR})]$$

The F_{GOR} used is the value from the last calculated month. This Shut-in Period is rounded up to the nearest whole number of days.

The form should be submitted to: Reservoir@bc-er.ca

Should you have any questions concerning the Production Allowable Report (Form 32), please contact Reservoir@bc-er.ca.

PRODUCTION ALLOWABLE REPORT—CRUDE OIL

Email Address: Reservoir@bc-er.ca **EXAMPLE #1**

Phone: (250) 419-4400
Fax: (250) 419-4402

Form must be submitted monthly under the authority of the Energy Resource Activities Act R.S.B.C. 2010, c. 36 Drilling and Production Regulation, s. 59(2), for each oil well or group of oil wells. The form must be received electronically via email at Reservoir@BC-ER.ca by the 21st day of the month. Information collected on this form will be used for public record in accordance with Part 2 of the Energy Resource Activities Act.

Operator	Fictitious Oil Company Ltd.
Well (or Project Name)	FOC Boundary 02-23-84-14
Field	Boundary Lake
Producing Zone	Boundary Lake A

Initial Test Period** (if entitled): Test

Volume: m³

Start Date: December

End Date: March

(90 Day Test Period)

DOA: 10.0 m³

→	insert allowable production for November
-	minus overproduction amount @ end of Oct. *
=	equals production target for November.

(1) Month and Days	(2) Oil Production For Month (m ³)	(3) Gross Gas Production for Month (10 ³ m ³)	(4) Approved Gas Credit for Month (10 ³ m ³)	(5) Net Gas Production for Month (10 ³ m ³)	(6) F G.O.R. ***
October					
November (30)					
December (31)	170.2	39.9			
January (31)	495.0	227.3			
February (28/29)	483.4	179.0			0.47
March (31)	321.7	124.6			0.45
April (30)	136.5	41.0			0.57
May (31)	143.8	43.8			0.56
June (30)	172.4	49.6			0.60
July (31)	222.6	67.9			0.56
August (31)	198.3	62.9			0.54
September (30)	179.5	54.1			0.57
October (31)	140.2	42.8			0.56

(7) Month and Days	(8) DOA x Days in Month (m ³)	(9) Allowable Production for Month (6) x (8) (m ³)	(10) Production Target from Start of Period Sum (9) (m ³)	(11) Cumulative Production from Start of Period (m ³)	(12) O/P (-) or U/P (+) at Month End (m ³)
November (30)					
December (31)	Test Period Allowable				
January (31)	(90 days)(10.0m³/day) + 500m³ = 1400m³				
February (28/29)			1400.0		
March (31)	(17 days)(10.0) 170.0	(0.47)(170) 79.9	1479.9	1470.3	9.6
April (30)	300.0	135.0	1614.9	1606.8	8.1
May (31)	310.0	176.7	1791.6	1750.6	41.0
June (30)	300.0	168.0	1959.6	1923.0	36.6
July (31)	310.0	186.0	2145.6	2145.6	0.0
August (31)	310.0	173.6	2319.2	2343.4	-24.7
September (30)	300.0	162.0	2481.2	2523.4	-42.2
October (31)	310.0	176.7	2657.9	2663.6	-5.7

Company	Fictitious Oil Company Ltd.	Phone	(403) 263-1234	Email	G.Gusher@fictitious.com
Contact Name	Gus Gusher	FAX	(403) 263-2345		

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** Refer to Sections 1 & 56, Drilling and Production Regulation

*** Refer to Section 54, Drilling and Production Regulation

PRODUCTION ALLOWABLE REPORT—CRUDE OIL

Email Address: Reservoir@bc-er.ca **EXAMPLE #2**

Phone: (250) 419-4400
Fax: (250) 419-4402

Form must be submitted monthly under the authority of the Energy Resource Activities Act R.S.B.C. 2010, c. 36 Drilling and Production Regulation, s. 59(2), for each oil well or group of oil wells. The form must be received electronically via email at Reservoir@BC-ER.ca by the 21st day of the month. Information collected on this form will be used for public record in accordance with Part 2 of the Energy Resource Activities Act.

Operator	Fictitious Oil Company Ltd.
Well (or Project Name)	FOC Boundary 02-23-84-14
Field	Boundary Lake
Producing Zone	Boundary Lake A

Initial Test Period** (if entitled):

Test Volume: _____ m³

Start Date: _____ End Date: _____

DOA: 10.0 m³

➔ 168.0 m ³	<i>insert allowable production for November</i>
- 5.7 m ³	<i>minus overproduction amount @ end of Oct. *</i>
= 162.3 m ³	<i>equals production target for November.</i>

(1) Month and Days	(2) Oil Production For Month (m ³)	(3) Gross Gas Production for Month (10 ³ m ³)	(4) Approved Gas Credit for Month (10 ³ m ³)	(5) Net Gas Production for Month (10 ³ m ³)	(6) F G.O.R. ***
October					0.56
November (30)	158.6	52.7			0.52
December (31)	188.4	68.1			0.48
January (31)	181.7	66.9			0.47
February (28/29)	161.9	60.0			0.47
March (31)	170.2	67.3			0.44
April (30)	164.8	64.8			0.44
May (31)					
June (30)					
July (31)					
August (31)					
September (30)					
October (31)					

(7) Month and Days	(8) DOA x Days in Month (m ³)	(9) Allowable Production for Month (6) x (8) (m ³)	(10) Production Target from Start of Period Sum (9) (m ³)	(11) Cumulative Production from Start of Period (m ³)	(12) O/P (-) or U/P (+) at Month End (m ³)
November (30)	300.0	● 168.0	➔ 162.3	158.6	3.7
December (31)	310.0	161.2	323.5	347.0	-23.5
January (31)	310.0	148.8	472.3	528.7	-56.4
February (28/29)	280.0	131.6	603.9	690.6	-86.7
March (31)	310.0	145.7	749.6	860.8	-111.2
April (30)	300.0	132.0	881.6	1025.6	-144.0
May (31)	310.0	136.4	1018.0		
June (30)					
July (31)					
August (31)					
September (30)					
October (31)					

Company	Fictitious Oil Company Ltd.	Phone	(403) 263-1234	Email	G.Gusher@fictitious.com
Contact Name	Gus Gusher	FAX	(403) 263-2345		

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** Refer to Sections 1 & 56, *Drilling and Production Regulation*

*** Refer to Section 54, *Drilling and Production Regulation*