

Application for Measurement Exemption – Submission of Gas Oil Ratio - Guideline

This guideline assists in properly applying for measurement exemption to not report gas production from an oil well, upon submission of a Gas Oil Ratio (GOR) that proves there is not enough gas production to report for the production month. *Guideline PNG034: Determination and Submission of Gas Oil Ratio* provides the procedures and examples for acceptable methods of determining and calculating GOR. The application approval will authorize suppression of volumetric errors (VME0041, VME0010 or VME0042) and Enhanced Production Audit Program’s Compliance Assessment Indicators (CAI 171, 143 and 144), and if necessary, authorize the waiver of volumetric errors and the penalties associated with the volumetric errors that have already been billed. [Directive PNG017: Measurement Requirements for Oil and Gas Operations](#) is the governing directive.

Battery-level GORs are not eligible for submission for the suppression of volumetric errors in Petrinex as it is a monthly calculated volume based on the battery monthly gas production volumes and the battery monthly oil volumes.

For measurement exemptions, please fill out the Application for Measurement Exemption Form – Submission of Gas Oil Ratio on page 2 of this document. Once the form is filled out, ensure that the documents related to application in the check-marked boxes on the form are collected. Log into IRIS and under ‘Applications’, under ‘Petroleum and Natural Gas’, under ‘Production and Measurement’, select “Measurement Exemption”. On the first page “Create Application”, add a brief description of the application. After selecting ‘Next’, on second page, attach the Application for Measurement Exemption Form (these two pages) and all the documents related to the check marked boxes in the form. Select ‘Next’ and review the submission before selecting “Submit”. Once the application on IRIS is submitted, the Ministry of Energy and Resources will be notified. If additional information is required for the review of the application, a Work Item will be generated and sent to the submitter. For more details on how to submit in IRIS, see the document - “Example of Measurement Exemption and Application Process in IRIS” on [Saskatchewan.ca](#).

Application Information	
Facility ID	The facility ID for the facility in which the wells are linked within Petrinex.
Well Completion ID	List of well completion IDs that the GOR is applicable to.
Gas Oil Ratio	Provide the well Gas Oil Ratio (GOR) for each well completion. Please ensure that the GOR includes the Gas in Solution (GIS) in the calculation.
Applicable Production Months	Provide the production months that the GOR is applicable too. Please note that the GOR test and GIS must be applicable to those production months.
Have the Volumetric Errors been triggered and billed?	Check or mark the appropriate box if the volumetric errors have been triggered and billed. If the volumetric errors have been triggered and billed, please provide the invoice number.
Required Information	
Calculation to determine the GOR	Include the calculation for determining the GOR that combines the GOR test and GIS.
Supporting Documentation	Include the methods used for determining the GOR and the components that make up the GOR (GOR test and GIS). Methods for determining the GOR are listed in Section 6.5.3 and Section 12.2.2 of Directive PNG017. Methods for determining the GIS are listed in Section 6.5.3 and Section 12.2.2 of Directive PNG017. The following GOR test information must be submitted: - The meter readings, associated data (e.g. temperature and pressure), instantaneous flow rate and cumulative test volume for each time period (e.g. 20 minutes) that the measurements were taken for each determination of the value of gas and oil. - The date, time, and duration of each of those periods. The maximum period duration must be no longer than 1 hour. - The production parameters (e.g., pressure, pump rate) during each of those periods and in the 48 hours before each of those periods; and - A description of the meter(s) and other equipment used during the test. At a minimum, the meter type, make, and model should be included. - If a separator cannot be used, then the monthly oil disposition volumes and inventories must be provided that were used in the determination of the test oil production volume. - ER will review supplied information to ensure well’s GOR includes some or all of the gas volumes originating from the following sources as applicable and: - Measured well test separator (or dry flow meter) gas. - Measured casing gas. - Flare (including incineration), fuel and vent gas volumes. - Gas in solution (GIS) determined from a GIS factor, see Section 6.5.3. Although rare, it is possible that a well’s GIS gas will be the entire gas volume used in the determination of a well GOR. - Stock tank vapours from produced oil/emulsion tanks and produced water tanks. The following GIS information must be submitted: - Lab analysis showing GIS results, if a PVT test or flash liberation test was done. - Supporting information for the pressure drop if rule of thumb was used. - Manual inputs into the Vasquez-Beggs formula, which includes the oil analysis for the oil API, gas analysis for the gas relative density, temperature, and pressure.
Measurement Schematic for Facility	Provide the measurement schematic for each facility ID that is listed in this document for the production months that the GOR is applicable to. Please refer to Section 1.8 of Directive PNG017 for additional information on how to ensure the measurement schematic is compliant. If more than one facility is included in the (or ‘an’) application, please submit the measurement schematic for each of the facilities.
Other	If additional information will help defend the reason for the measurement exemption, please provide it in the application.
Applicant Information	
Business Associate (BA) Name and ID	The business associate name and BA ID as it is in IRIS. If the submission is from a third party, then enter "Company X (third party) on behalf of Company Y."
BA Contact	The contact person must be able to answer technical questions regarding the application should the Ministry require clarification or additional information.
Telephone Number	The number the BA contact can be reached at should the Ministry require clarification or additional information when reviewing the application.
Email Address	The email address for the BA contact.
Signature & Date	The application must be signed and dated by the contact listed above to be accepted by the Ministry. By signing, the contact is verifying the completeness and accuracy of all information provided. If the application is rejected due to incomplete or inaccurate information, the applicant will be requested to re-submit a complete application and it will enter the review queue based on the new date that it is received.
Method of Submission	
IRIS Submission	All application must be submitted through the Integrated Resource Information System (IRIS) in the generic applications ----> Production and Measurement ----> Measurement Exemption The applications should contain all the necessary information and attachments.

Application for Measurement Exemption Form- GOR Submission

Application is made under Directive PNG017: Measurement Requirements for Oil and Gas Operations for the approval of not reporting gas production at an oil well and the suppression of Volumetric Errors (VME0041, VME0042, and VME0010) and the Enhanced Production Audit Program's Compliance Assessment Indicators (CAI 171, 143, and 144).

Energy Regulation Division
1945 Hamilton St.
Regina, SK S4P

Gas Oil Ratio				
Facility ID	Well Completion ID	Gas Oil Ratio (m³ of Gas per m³ of Oil) to five digits	Applicable Production Months	Has the Volumetric Errors been triggered and billed?
				No Yes, Invoice #
				No Yes, Invoice #
				No Yes, Invoice #
				No Yes, Invoice #
				No Yes, Invoice #
				No Yes, Invoice #
				No Yes, Invoice #
				No Yes, Invoice #
				No Yes, Invoice #
				No Yes, Invoice #
				No Yes, Invoice #
				No Yes, Invoice #
				No Yes, Invoice #
				No Yes, Invoice #
				No Yes, Invoice #
				No Yes, Invoice #

Attachments: Required information, where applicable, MUST be submitted in IRIS with application.

Measurement Schematic for Facility

Calculation to Determine the GOR

Supporting Documentation

The following GOR test information must be submitted:

The meter readings, associated data (e.g. temperature and pressure), instantaneous flow rate and cumulative test volume for each time period (e.g. 20 minutes) that the measurements were taken for each determination of the value of gas and oil.

The date, time, and duration of each of those periods. The maximum period duration must be no longer than 1 hour.

The production parameters (e.g., pressure, pump rate) during each of those periods and in the 48 hours before each of those periods.

A description of the meter(s) and other equipment used during the test. At a minimum, the meter type, make, and model should be included.

If a separator cannot be used, then the monthly oil disposition volumes and inventories must be provided that were used in the determination of the test oil production volume.

The following GIS information must be submitted:

If a PVT test or flash liberation test that was used to determine the GIS then the lab analysis.

If the rule of thumb is used then the supporting information for the pressure drop.

If Vasquez Beggs methodology is used then the inputs into the methodology includes the oil analysis for the oil API, gas analysis for the gas relative density, temperature and pressure.

Additional Information, where applicable, that must be submitted to support the application:

If there is no common ownership of all wells in the battery, written notification has been given to all working interest participants, with no resulting objections.

If there is no common Crown or Freehold royalty and only Freehold royalties is or are involved in all wells in the battery, written notification has been given to all Freehold royalty owners, with no resulting objection received. If there is a mix of Freehold and Crown royalties involved, the licensee must apply to the Regulator for approval if any Freehold royalty owner objects.

Business Associate Name: _____

Business Associate Contact: _____

Telephone Number: _____ Extension: _____ Email: _____

By signing below, I hereby certify that the application form and the attached supporting documentation is complete and accurate. If the application is found to be incomplete or inaccurate, I acknowledge that the Ministry will discard the application after notifying me of the deficiencies and that I will be required to submit a new application.

Signature _____

Date _____