

## **BRITISH COLUMBIA**

The following regulations fall under the Oil and Gas Activities Act (OGAA) and can be viewed at [www.bclaws.ca](http://www.bclaws.ca): Drilling and Production Regulation (DPR), Environmental Protection and Management Regulation (EPMR), Geophysical Exploration Regulation, Pipeline Regulation (PR), Pipeline Crossings Regulation (PCR), Fee, Levy and Security Regulation (FLSR), Liquefied Natural Gas Facility Regulation (LNGFR), Emergency Management Regulation (EMR), Consultation and Notification Regulation (CNR), and Dormancy & Shutdown Regulation. Many of these are referenced in this document.

### **I. Administration**

1. Agency regulating oil and gas exploration/production: [Oil and Gas Commission](#) (OGC or Commission).
2. Contact for regulatory updates: Anita Mathur, Legislation Specialist, [anita.mathur@bcogc.ca](mailto:anita.mathur@bcogc.ca) 250-419-4434; alternate Andrew Morgan, Director, Regulatory Affairs, [andrew.morgan@bcogc.ca](mailto:andrew.morgan@bcogc.ca) 250-419-4441
3. Docketing procedure: Statutory Decision Makers at the Commission make decisions in respect of issuing/denying permits, compliance, and other operational details. Permit holders may ask for certain decisions to be reviewed (per OGAA section 70). Permit holders and land owners may appeal a decision (per OGAA section 72)
  - a. Emergency orders: [OGAA section 49](#) enables orders for non-compliance or in the event of risk to public safety, the environment, or resource conservation; made in writing but 49(5) enables oral order if serious consequences appear imminent.
  - b. Notice: Application and amendment procedures require that the applicant undergo a consultation and notification process under [CNR](#). In addition, land owners receive notification of decisions if the activity is on their land: [OGAA Permits sections](#). If [reviews and appeals](#) affect an activity on private land, land owner must be notified of the decision.
4. Agency regulating air emissions: Ministry of Environment; DPR also guides venting restrictions and, effective January 2020, will include a section specific to the regulation of methane emissions
5. Agency regulating water quality: Ministry of Environment; EPMR also guides water quality objectives

### **II. Licence**

1. Licence required:

Permit required for all oil and gas activities: geophysical exploration, exploration for and development of petroleum and natural gas (wells); production, gathering, processing, storage, disposal of petroleum and natural gas (facilities); petroleum refineries; manufacturing plants; storage reservoirs; pipelines; and oil and gas roads.

## 2. Conditions of licence:

Permit holders must adhere to all regulations under OGAA. In addition, an individual permit may contain conditions related to location of activity, restrictions on flaring and venting, conservation/protection of: reservoir, forest, water, environment, wildlife habitat/ecosystems; other safety considerations.

### **III. Bond/Surety**

OGAA s. 30: The Commission may require a permit holder, an applicant for a permit or a transferee of a permit to provide security to the Commission, in the amount the Commission requires, to ensure the performance of an obligation under this Act, a permit or an authorization. Details on this liability management plan: <http://www.bcogc.ca/industry-zone/liability-management-rating-program>.

1. Purpose of surety: Ensure operators have enough financial strength for compliance under OGAA.
2. Plugging and restoration: Security may be required depending on liability management rating
3. Compliance bond required: No. Security ensures restoration compliance.
4. Types of surety accepted: Cash, Letter of Credit.
5. Conditions of bond: Quantum of security deposit required by a company is reviewed each time a change occurs (acquiring assets, disposal of assets, new permit application)
  - a. Amount per well: Determined by liability model. \$0 - >\$200k.
  - b. Amount of blanket bond: N/A

### **IV. Land Leasing Information**

NB Surface and sub-surface tenures are different and are handled separately. This has been completed for subsurface rights only. In addition, permit holders require surface rights granted under the *Land Act* specified sections of which can be administered by the Commission.

1. Leasing method: Crown petroleum and natural gas rights (PNG) are sold once a month through a sealed-bid public tender under s. 71 of the

- [Petroleum and Natural Gas Act](#) (PNG Act). Disposition of tenure provides time limited ownership of specific parcels of PNG rights.
2. Notice method: Notice of disposition dates available on the [Ministry of Natural Gas Development \(MNGD\) website](#) under [Sales Notices](#). Notices of dispositions (sales results) are available via the [MNGD website](#) or in the [BC Gazette](#) on the Crown Publications website.
  3. Minimum bidding \$ (per acre): Based on highest acceptable bid. Bids are sealed. The right to reject bids is reserved.
  4. Qualification of the bidder: Individuals, corporations, or their agent. Questions can be directed to the Petroleum and Natural Gas Titles Branch within the MNGD at [PNGTitles@gov.bc.ca](mailto:PNGTitles@gov.bc.ca)
  5. State statutes: See [PNG Act](#).
  6. Maximum acres: See Petroleum and Natural Gas Drilling License Regulation (under the PNG Act). See also [PNG Act Part 5](#). See also [MNGD website](#)
  7. Royalty rates: [PNG Act Part 10](#). See also [Petroleum and Natural Gas Royalty and Freehold Production Tax Regulation](#) under the PNG Act.
  8. Agency in control of leasing: [Ministry of Natural Gas Development](#) (MNGD). It should be noted that there is no guarantee that successful acquisition of the subsurface lease (PNG tenure) will result in a successful application for a permit. Governing bodies are different and so are the requirements. It is, however, a prerequisite to a well permit application that the applicant own the

## V. Setbacks

1. What rules/regulations/policies does your jurisdiction have in regard to well setbacks from private residences and/or other habitable structures for use by humans or animals? [D&PR –Part 3: Well Position, Spacing and Target Areas](#) ([s.5 Position of wells](#), [s.6 Spacing and target areas for oil wells](#), [s.7 Spacing and target areas for gas wells](#)). See also [Part 7](#); Safety, Security and Pollution Prevention. See also Pipeline Crossing Regulation for pipeline related requirements.
2. Are there other sources of information on this matter that you could identify? <http://www.bcogc.ca/industry-zone/documentation/wells>: See [Well Permit Application Manual](#) Appendix A. [EPMR speaks to distances from wildlife habitat and riparian lands](#).

## VI. Spacing

1. Spacing requirements: See [PNG Act](#)
  - a. Density: [PNG Act Part 7](#) – Spacing Areas. [D&PR Part 3](#).
  - b. Lineal: N/A
2. Exceptions: See [PNG Act](#)
  - a. Basis: In order to facilitate operations, promote conservation of PNG resources, and protect the environment.
  - b. Approval: Based on Good Engineering Practice (GEP).

## **VII. Pooling**

1. Authority to establish voluntary: May be initiated by application from holder, or invite for submissions by Minister. See [PNG Act - Part 8 – Pooling of Locations](#).
2. Authority to establish compulsory: Minister of MNGD may make pooling agreement. See [PNG - Act Part 8](#).

## **VIII. Unitization**

1. Compulsory unitization of all or part of a pool or common source of supply: can be triggered by working interest owner(s) under PNG Act section 115 but this has not been used for ages; there has not been a unit formed in BC in many years
2. Minimum percentage of voluntary agreement before approval of compulsory unitization:
  - a. Working interest: N/A
  - b. Royalty interest: N/A

## **IX. Drilling Permit**

1. Permits required for:
  - a. Drilling a producing or service well: Yes. [OGAA Part 3, s.21](#). (Well permits govern the drilling, completion, and operation of a well). See also [D&PR](#).
  - b. Seismic drilling: (not a term in common use in BC) Required for geophysical exploration (including seismic lines) [OGAA Part 3, s.21](#). See also Geophysical Exploration Regulation.

- c. Recompletion: Part of well permit or well permit amendment. See <http://www.bcogc.ca/industry-zone/documentation/wells> Re-entries section in Well Drilling Guideline. See also [D&PR](#).
  - d. Plugging and abandoning: D&PR sections 26-28
2. Permit fee: (refer to [FLSR](#))
- a. Drilling: \$12,400 [\$1000 to \$7000 to amend permit)
  - b. Seismic drilling: geophysical exploration permit application: \$3000 (\$1200 to amend permit).
  - c. Recompletion: Depends on well status; either new well permit or well permit amendment fees may apply. See <http://www.bcogc.ca/industry-zone/documentation/wells> Re-entries section in Well Drilling Guideline. See also [D&PR](#).
  - d. Plugging and abandoning: Included in drilling permit. See also [PNG Act s.120](#) (Abandonment).
3. Require filing report of work performed: Yes. D&PR ([Part 4 - Well Operation](#)), [s.8](#) – Notification of well construction and drilling operations. [D&PR Part 6](#) – Well and Other Data ([s.29](#) – [38](#)) outlines required reporting.
4. Sundry notices used: [D&PR – Part 4 - Well Operations](#), [s8](#). See also [s. 24, 26](#). See also [P&NG Act s.60 Notice to drill](#).

#### **X. Vertical Deviation**

1. Regulation requirement: [D&PR s. 33](#) Deviation and directional surveys. See also Well Drilling Guideline at [www.bcogc.ca](http://www.bcogc.ca).
- a. When is a directional survey necessary: Deviation surveys must be made during drilling at intervals not exceeding 150 meters in depth, unless there are wellbore stability problems.
  - b. Filing of survey required: Within 14 days of rig release.
  - c. Format of filing: Electronic submission of directional survey data.

#### **XI. Casing and Tubing**

1. Minimum amount required: [D&PR s.16](#), [17](#), [18](#), and [19](#).
- a. Surface casing: Surface casing must be set at depth sufficient to provide competent anchor for blowout prevention equipment and to ensure control of anticipated well pressures. Annulus must be filled with cement to surface. See [D&PR s.16](#), [17](#), [18](#), and [19](#) for more.

- b. Production casing: All reasonable measures must be taken to cement all intermediate and production casing to the surface or a min of 200 m above the shoe of the previous casing string. See [D&PR s.16](#), [17](#), [18](#), and [19](#) for more.
- 2. Minimum amount of cement required: See [D&PR s.16](#), [17](#), [18](#), and [19](#).
  - a. Surface casing: See [D&PR s.16](#), [17](#), [18](#), and [19](#) for more information on cement requirements and integrity.
  - b. Production casing: See [D&PR s.16](#), [17](#), [18](#), and [19](#) for more information on cement requirements and integrity.
  - c. Setting time: [D&PR s.16](#), [17](#), [18](#), and [19](#) are results based, specifying required result (sufficient compressive strength) but not setting time
- 3. Tubing requirements: [D&PR s.16](#) Tools, casing, equipment and materials
  - a. Oil wells: [D&PR s.16](#). Required if gas contains greater than 5 mole percent of hydrogen sulphide (H<sub>2</sub>S).
  - b. Gas wells: [D&PR s.16](#). Required if gas contains greater than 5 mole percent of hydrogen sulphide (H<sub>2</sub>S).

## **XII. Hydraulic Fracturing**

- 1. Permitting: part of well permit; [D&PR s.21](#) Fracturing Operations. specific permission required for fracturing operation shallower than 600 m below ground level.
  - a. Before drilling: Yes. [D&PR Part 4 – Well Operations s.8](#) Notification of well construction and drilling operations.
  - b. Before fracking: Notice of Operation required.
  - c. How long before: D&PR section 8 notifications within 24 hours before operation.
- 2. Reporting requirements: Yes. [D&PR s.37](#) Fracturing fluids records; D&PR s. 14 mandates retaining of records and OGAA s.38 enables any record to be submitted to the Commission
  - a. Where reported: Commission
  - b. When reported: Within 30 days after the completion of the well.
- 3. Source water requirements: Yes. Short term water use permits can be issued by Commission under the *Water Sustainability Act*. Sources of water are on record.

4. Mechanical integrity: [D&PR](#)
  - a. Cementing log required: [D&PR s.18\(7\)](#) If there is any reason to doubt the effectiveness of casing cementation, a well permit holder must ensure that a survey is made to evaluate the cement integrity and that remedial measures are taken if necessary.
  - b. Pressure testing: [D&PR s.10\(1\)\(a\)](#) pressure-control equipment associated with well operations is pressure-tested on installation and as often as necessary during well operations to ensure the continued safe operation of the equipment.
  - c. Pressure monitoring: [D&PR s.10\(3\)](#) A well permit holder must maintain, for 60 days from the date of rig release, a record of the results of tests required under subsection (1) (a). Standard practices include ongoing monitoring.
  - d. Blowout preventer required: [D&PR s.9](#) Well control equipment (equipment is installed to control kicks, prevent blow outs and safely carry out all well operations).
5. Disposal of flowback fluids: [D&PR s.51](#) and [52](#) outline requirements.
  - a. Retaining pits: See also [Information letter 09-07](#) Storage of Fluid Returns from Hydraulic Fracturing Operations.
  - b. Tanks: See also [Information letter 09-07](#) Storage of Fluid Returns from Hydraulic Fracturing Operations.
  - c. Approved discharge to surface water: No.
  - d. Underground injection: As per [Oil and Gas Waste Regulation s.7\(1\)](#) Requirements for discharges from specific operations. Operators are authorized to discharge produced water or recovered fluids in accordance with [OGAA s.70](#). Application to the Commission must be made for deep well disposal.
6. Chemical disclosure requirement: [S. 37 D&PR](#)
  - a. Mandatory: Yes.
  - b. Where disclosed: Oil and Gas Commission. ([FracFocus.ca](#) also houses provincial fracturing information for public viewing).
  - c. When disclosed (pre-fracturing, post-fracturing, both): Post.
  - d. Time limit to disclose: Disclosure of records to the Commission is required within 30 days after the completion of the well.

- e. Information required to be disclosed: All (fluid description and purpose, ingredient concentration, chem abstract service number, total volume of water injected, trade name of supplier of ea ingredient).
- f. Trade secret protection: Yes. Hazardous Materials Information Review Commission (HMIRC).
- g. Required disclosure to health/emergency personnel: Yes.

### **XIII. Underground Injection**

1. Agencies that control the underground injection of fluid by well class: OGC

### **XIV. Completion**

1. Completion report required: Yes
  - a. Time limit: Within 30 days. [D&PR s. 36](#) Completion and Workover Reports.
  - b. Where submitted: Commission
2. Well logs required to be filed: Yes – gamma ray, neutron, resistivity and porosity logs. See [D&PR s. 34](#) Tests, analyses, surveys and logs for exceptions.
  - a. Time limit: Within 30 days after the date on which a log was run.
  - b. Where submitted: Commission.
  - c. Confidential time period: Variable- depends whether well is exploratory wildcat, exploratory outpost, development, etc. See Oil and Gas Activities Act General Regulation (under OGAA), [Part 2 – Release of Information](#). See also [s. 17 Well reports and well data](#).
  - d. Available for public use: anything that is well reports or well data is released as per Oil and Gas Activities Act General Regulation, [s. 17](#) Publication and availability of records and reports.
  - e. Log catalog available: See Oil and Gas Activities Act General Regulation, [Part 2 – Release of Information](#).
3. Multiple completion regulation: [D&PR s. 23](#) Multi-zone or commingled wells. [OGAA s. 75](#) Special projects.
  - a. Approval obtained: Must be permitted through well permit or authorized under [s. 75 of OGAA](#).



4. Commingling in well bore: May be permitted by way of [OGAA s 75](#). See also [D&PR Div. 4 s.23](#)
  - a. Approval obtained: Commission

## **XV. Oil Production**

1. Definition of an oil well: no specific definition of "oil well"; "oil" is defined in the *Petroleum and Natural Gas Royalty and Freehold Production Tax Regulation*; "well" is defined in the PNG Act.
2. Potential tests required: Yes. [D&PR Division 2 – Oil](#), and [Division 5 – Pressure Measurement](#). See also [Part 8: Production Operations – Div 1. Measurements](#).
  - a. Time interval: See [D&PR s. 58 Production test of oil wells](#)
  - b. Witness required: N/A. Records of production quantity tests must be kept.
3. Maximum gas-oil ratio:
  - a. Provision for limiting gas-oil ratio: See [D&PR s. 54](#) for adjustment factors which may relate to gas-oil ratio; no limit cited in regulations.
  - b. Exception to limiting gas-oil ratio: Section 54 does not apply to unconventional oil
4. Bottom-hole pressure test reports required: Yes. [D&PR Part 8 Div 5 – Pressure Measurement](#).
  - a. Periodical bottom-hole pressure surveys: [D&PR s.73\(2\)](#) static bottom hole pressure of producing pools and observations wells measured once every calendar year.
5. Commingling oil in common facilities: n/a
6. Measurement involving meters: D&PR section 53 and related guidelines specify measurement requirements
7. Production reports: Yes. [D&PR s.38](#) Production data.
  - a. By lease: n/a
  - b. By well: Yes. [D&PR s.59](#) Calculation of oil production.
  - c. Time limit: Yes. [D&PR s.59](#) Calculation of oil production.

## **XVI. Gas Production**

1. Definition of a gas well: As per the PNG Act: means a well in which casing is run and that, in the opinion of the Commission, is producing or is capable of producing from a natural gas bearing zone; well is defined in PNG Act.
2. Pressure base: See [D&PR s.64 Metering and measurement of gas](#). 101.325 KPa and 15 degrees C
3. Initial potential tests: [D&PR Division 3 – Gas. S.63](#) Gas well tests.
  - a. Time interval: D&PR Tests, analyses, surveys and logs [s.34\(5\)](#) If initial production tests from a well allow good sampling, the well permit holder must submit to the Commission, within 30 days of analysis completion, a report of all analyses made of any gas recovered from each formation.
  - b. Witness required: N/A. Submission to Commission required.
4. Bottom-hole pressure test reports required: Yes. [D&PR Div 5 – Pressure Measurement](#).
  - a. Periodical bottom-hole pressure surveys: [D&PR s.73\(2\)](#) static bottom hole pressure of producing pools and observations wells measured once every calendar year.
5. Commingling of gas in common facilities: A well permit holder must establish and maintain hydraulic isolation between all porous zones in a well, except for zones in which commingled production is permitted or authorized as described in [section 23 of D&PR - Multi-zone or commingled wells](#).
6. Measurement involving meters: Yes. A measurement of a volume of gas required by the Act or this regulation must be computed as the number of cubic metres it would occupy at standard conditions of 101.325 kPa and 15°C.
7. Production reports: D&PR Tests, analyses, surveys and logs [s.34\(5\)](#) If initial production tests from a well allow good sampling, the well permit holder must submit to the commission, within 30 days of analysis completion, a report of all analyses made of any gas recovered from each formation.
  - a. By lease: n/a
  - b. By well: Yes.
  - c. Time limits: 30 days.