

This Act is current to 30 November 2016.

This Act has "Not in Force" sections. See the [Table of Legislative Changes](#).

## **GEOHERMAL RESOURCES ACT**

[RSBC 1996] CHAPTER 171

### Contents

#### Part 1 — Interpretation

1 Definitions

#### Part 2 — Ownership of Geothermal Resources And General Prohibitions

2 Geothermal resources vested in the government

3 Dispositions approved by Lieutenant Governor in Council

4 Prohibitions

#### Part 3 — Permits and Leases

5 Permits

6 Permit: dimensions of location

7 Work requirements

8 Leases

9 Transfers and assignments

10 Cancellation

11 Default in rent

#### Part 4 — Operation and Conservation

12 Authorizations and licences

13 Limitations on issue

14 Access and inspection

15 Removal of equipment

16 Health and safety

#### Part 5 — Royalty and Unitization

17 Royalty

18 Unitization agreement

19 Unitization order

#### Part 6 — General

20 Inspection and confidentiality

21 Affidavits

22 Offence and penalty

23 Regulations and orders made by minister

24 Regulations made by Lieutenant Governor in Council

#### Part 1 — Interpretation

### Definitions

1 (1) In this Act:

"block" has the same meaning as defined under the Petroleum and Natural Gas Act;

"board" means the board of the commission continued under section 2 of the Oil and Gas Activities Act;

"boundary" means a location's surface boundary and its vertical extension;

"commission" means the Oil and Gas Commission continued under section 2 of the Oil and Gas Activities Act;

"commissioner" means the commissioner as defined in the Oil and Gas Activities Act;

"development plan" means a plan for the drilling of the number of wells that are, in the opinion of the minister, sufficient to enable production of a geothermal resource underlying a lease to begin, including providing piping, equipment, reinjection wells and controls required to produce the geothermal resource, but does not include plans for the commercial utilization of the geothermal resource or for converting it into any other form of energy;

"division" means the Energy Resources Division of the ministry;

"division head" means the assistant deputy minister designated in writing by the minister as having charge of the division;

"facility" means any surface equipment required to produce geothermal resources or to inject water or other fluids produced in connection with a geothermal resource into subsurface strata, but does not include

- (a) a pipeline as defined in the Oil and Gas Activities Act, or
- (b) equipment used in connection with the conversion of the geothermal resource into a commercial commodity;

"field" means

- (a) the surface of land that is underlaid or appears to be underlaid by a geothermal resource, and
- (b) the subsurface region vertically beneath that land surface that is designated by the division head as a field;

"geothermal exploration" means investigation of the subsurface of land for the presence of a geothermal resource by means of

- (a) seismic, gravimetric, magnetic, radiometric, electric, geological or geochemical operations,
- (b) well drilling or test hole drilling, or
- (c) any other method approved by the division head;

"geothermal resource" means the natural heat of the earth and all substances that derive an added value from it, including steam, water and water vapour heated by the natural heat of the earth and all substances dissolved in the steam, water or water vapour obtained from a well, but does not include

- (a) water that has a temperature less than 80oC at the point where it reaches the surface, or
- (b) hydrocarbons;

"geothermal rig licence" means a geothermal rig licence issued under section 12;

"geothermal well" means a well in which casing is run and that the minister considers is producing or capable of producing a geothermal resource from a geothermal resource bearing zone;

"holder of a location" means, in accordance with the context, a permittee or lessee;

"interest" means an undivided interest in a location;

"lease" means a disposition under section 8 of the right to produce, subject to this Act, a geothermal resource from a location;

"lessee" means a person in whose name a lease is recorded in the division records;

"location" means the area described in, and in respect of which rights are given by, a permit or lease;

"officer of the division" means a person employed in the division and authorized by the division head to give an approval under this Act;

"permit" means a permit issued under section 5;

"permittee" means the person in whose name a permit is recorded in the division records;

"produce" means extract or obtain from the earth;

"production plan" means a plan approved under section 4 (1);

"test hole" means a hole drilled or being drilled

(a) with a bore hole diameter of 100 mm or less, or

(b) to a depth not exceeding 600 m,

to obtain information about a geothermal resource, but does not include a hole drilled or being drilled for firing an explosive charge in seismic operations;

"unit" has the same meaning as defined under the Petroleum and Natural Gas Act;

"unitized operation" means the development or production of geothermal resources or the implementing of a program for the conservation of geothermal resources or the coordinated management of interests in them in, on or under a location, part of a location or a number of locations combined for that purpose under a unitization agreement under this Act;

"well" means a hole or shaft that is or is being drilled, bored or otherwise sunk into the earth

(a) through which a geothermal resource is or can be produced,

(b) for the purpose of producing a geothermal resource or for the purpose of injecting any substance to assist the production of a geothermal resource, or

(c) that

(i) extends deeper than 600 m,

(ii) has a bore hole diameter of more than 100 mm, and

(iii) is intended to obtain information about a geothermal resource.

(2) Parts 16 and 17 of the Petroleum and Natural Gas Act apply in respect of entry onto and use of land for the purpose of exploring for and producing geothermal resources.

(3) [Repealed 2010-9-7.]

(4) If there is inconsistency between the Utilities Commission Act or Water Sustainability Act and this Act, the Utilities Commission Act or Water Sustainability Act prevails.

Part 2 — Ownership of Geothermal Resources And General Prohibitions

Geothermal resources vested in the government

2 The right, title and interest in all geothermal resources in British Columbia are vested in and reserved to the government and the government may dispose of them only under this Act.

Dispositions approved by Lieutenant Governor in Council

3 Despite Part 3, the minister may dispose of geothermal resources on terms approved by the Lieutenant Governor in Council.

Prohibitions

4 (1) No person may produce a geothermal resource other than for testing purposes unless

(a) the person does so in accordance with a plan for the production of the geothermal resources underlying the location of a lease,

(b) the plan is approved, with respect to matters of energy conservation and operational safety, by the minister, and

(c) the person is the lessee of the location where the well that produces the geothermal resource is located.

(2) No person may drill or operate a well except within the boundaries of a location.

(3) No person may drill a test hole unless a test hole program authorization has been issued for the test hole.

(4) No person may drill or operate a well unless a well authorization has been issued for the well.

(5) No person may, for the purpose of exploring for or producing a geothermal resource, operate a drilling rig or service rig except in accordance with a geothermal rig licence issued for the rig under this Act or a rig licence issued for the rig under the Petroleum and Natural Gas Act.

(6) No person may conduct geothermal exploration other than by way of well drilling or test hole drilling unless the person has notified the commissioner in writing in the form prescribed of the intention to do so.

### Part 3 — Permits and Leases

#### Permits

5 (1) The minister may issue or refuse to issue a permit, whether or not the requirements of this Act have been complied with, and the refusal is final.

(2) A permit must define the boundaries of a location.

(3) A permittee must pay a prescribed rent for the permit.

(4) A permittee has the exclusive right, subject to section 13 (2) and the regulations, to apply for well authorizations for wells to be drilled within the boundaries of the permittee's location.

(5) The minister must not issue a permit

(a) except by public tender, and

(b) unless, at least 2 weeks before the day the permit is issued, a notice stating the terms on which the permit is available for disposition has been published in the Gazette.

(6) If the minister refuses to issue a permit, any fee and rent that accompanied the application must be refunded to the applicant out of the consolidated revenue fund.

(7) A permit expires on the first anniversary of the date of its issue or of its most recent renewal.

(8) Application for renewal of a permit must be made to the commissioner who may renew it, subject to the regulations.

(9) A permit must not be renewed more than 7 times except on the written authorization of the minister and subject to the rents, terms and conditions the minister imposes.

(10) If acting under subsection (9), the minister may authorize a renewal for a period of less than one year.

#### Permit: dimensions of location

6 (1) The maximum size of a location for which a permit may be issued is a block.

(2) The boundaries of a location comprised in a permit must coincide with the boundaries of units unless the location is in an area provided for in subsection (3).

(3) In any area where the boundaries of units and blocks do not coincide with surveyed boundaries of sections, townships or another district lot system, the boundaries of a location comprised in a permit may, despite anything in this Act, be established to coincide with the surveyed boundaries of a section, a township or other district lot system.

#### Work requirements

7 (1) Each year in accordance with the regulations, a permittee must

(a) carry out in respect of the permittee's location geothermal exploration of a prescribed value, or

(b) make payments instead of the work.

(2) A permittee must record all work, including road construction giving access to the location, with the commissioner in the permit year in which it is done.

#### Leases

8 (1) If a geothermal well has been drilled on a location and the permittee submits a development plan for the location that the minister considers satisfactory, the minister may, in accordance with the regulations and on terms and conditions the minister considers desirable, issue a lease in respect of the whole or any part of the location.

(2) The minister must not issue a lease except to a person who holds a permit that includes the location of the lease.

(3) If the lease is issued the permit expires with respect to the location of the lease.

(4) A lessee must pay a prescribed rent for the lease.

(5) A lease expires on the 20th anniversary of the commencement of its term, and if renewed, expires

(a) on the fifth anniversary of its renewal, or

(b) if a production plan for its location has been approved, on the 20th anniversary of its renewal.

(6) Section 6 applies to the issue of a lease.

(7) If the minister is satisfied that a lessee is not in default of any of the lessee's obligations under this Act or under the lease, the minister must, on application by the lessee made within 90 days before the expiry of the lease, issue to the lessee a renewal of the lease.

(8) If part of the location of the lease is the subject of

(a) a production plan,

(b) an agreement respecting royalty under section 17, or

(c) a unitization agreement under section 18,

the minister may confine the renewal of the lease to that part of the lease location.

Transfers and assignments

9 (1) The commissioner must maintain a register in which must be recorded transfers and other instruments affecting the title to permits and leases.

(2) A transfer or other instrument must not be registered unless it complies with the regulations.

(3) On registration, a transfer or other instrument affecting the title to a permit or lease is registered and effective from the time that the commissioner receives the application to register it.

(4) Failure to register a transfer or other instrument affecting the title to a permit or lease does not invalidate it as between the parties to it, but subsection (3) governs its effectiveness for any other person.

(5) Holders of a permit or lease may transfer their permit or lease directly to themselves jointly with another person.

(6) If the permit or lease is held by more than one person, they may transfer it directly to one or more of their number either alone or jointly with another person.

(7) Trustees or personal representatives may transfer a permit or lease to themselves individually if the making of the transfer is otherwise within their power.

Cancellation

10 (1) If a permittee or lessee fails to comply with

(a) a provision of this Act or the regulations,

(b) a notice or an order under this Act, or

(c) a term, covenant or condition of that person's permit or lease,  
the minister may give the person notice to comply.

(2) If the holder fails to comply within 60 days after the date the notice is received by the person, the minister may, in writing, declare the permit or lease to be cancelled, and at the end of the day specified in the minister's declaration, the permit or lease terminates.

Default in rent

11 Despite anything in this Act, if a lessee fails to pay the rent payable under that person's lease, the lease expires on the 60th day after the date the rent was payable unless before the 60 days have elapsed the lessee pays

(a) the rent, and

(b) for each 30 day period or part of it that the lessee is in default a sum equal to 2% of the yearly rent.

Part 4 — Operation and Conservation

Authorizations and licences

12 (1) Subject to the regulations, the division head or a person authorized by the division head in writing to do so may issue, subject to conditions, restrictions and stipulations considered necessary or desirable, or may refuse to issue, a test hole program authorization, well authorization or geothermal rig licence.

(2) A geothermal rig licence expires one year from its date of issue.

(3) In subsections (4) and (6), "operator" means a person to whom a test hole program authorization or well authorization is issued.

(4) An operator must deposit with the minister

(a) cash,

(b) government of Canada and government of British Columbia direct or guaranteed securities having a maturity of not longer than 3 years, or

(c) chartered banks', trust companies' or credit unions' certificates of deposit if supported by an appropriate letter giving direction concerning payment of the funds to the Minister of Finance, in an amount prescribed by the regulations as security for the proper completion of the well or test hole in compliance with the Act and regulations.

(5) If the application for a well authorization or a test hole program authorization is not approved, the deposit must be returned to the applicant in accordance with any directive under section 22 (3) of the Financial Administration Act.

(6) The deposit or part of it may be refunded to the operator on completion of the drilling of the test hole or well in accordance with the Act and regulations to the satisfaction of an officer of the division.

Limitations on issue

13 (1) No well authorization may be issued except to

(a) a permittee or lessee, or

(b) a person who has made an agreement with a permittee or lessee for the drilling or operation of the well.

(2) A person referred to in subsection (1) (b) may apply for a well authorization.

Access and inspection

14 (1) At any reasonable time, persons authorized in writing by the division head have the right, with respect to a geothermal resource,

(a) to enter on and inspect any well or place at which geothermal resources are handled, processed or treated, and any place used or occupied for those purposes,

(b) to inspect all equipment, plant and records relating to the resource, and

(c) to take samples or particulars or carry out tests or examinations.

(2) If records required by the regulations to be kept are kept at a place other than a place referred to in subsection (1) (a), persons employed in the division and authorized in writing by the division head have the right, during normal business hours and after giving reasonable notice to the persons affected, to inspect the records, and for that purpose to enter the place where the records are kept.

(3) Persons authorized by the division head to exercise any of the powers in subsection (1) or (2) must produce on demand their authorization signed by the division head and their identification card signed by the minister.

Removal of equipment

15 A person who has failed to comply with

(a) this Act or the regulations,

(b) a notice given or order made under this Act, or

(c) a term, covenant or condition of that person's permit or lease,  
must not

(d) remove equipment, or

(e) allow equipment to be removed

from a location or former location without permission in writing from the commissioner.

Health and safety

16 (1) A person holding a permit or lease must keep all machinery, equipment, test holes, wells and other facilities on the location in a safe condition.

(2) The duty imposed by subsection (1) continues after the expiry or other termination of the lease or permit, until an officer of the division issues a certificate of restoration certifying that

(a) all equipment, machinery, test holes, wells and other facilities on the location of the lease or permit have been removed, plugged or are otherwise in safe condition in accordance with prescribed standards, and

(b) the land surface of the location has been restored to a satisfactory condition in accordance with the regulations.

(3) The minister may refuse to accept a surrender of a permit or lease until an officer of the division has issued a certificate of restoration.

(4) If, after inspection of a location or well, an officer of the division considers that a method or practice being employed in connection with the location or well constitutes or may constitute a hazard to the health or safety of any person, or of the public, the officer may give notice of it in writing to

(a) the permittee or lessee of the location,

- (b) the holder of a well authorization or test hole program authorization for the well, or
  - (c) the agent or representative of a person referred to in paragraph (a) or (b),  
setting out the remedial measures the officer requires be taken.
- (5) If the officer of the division considers that delay in implementation of the remedial measures would constitute a danger to any person or to the public, the officer may, in the same notice or subsequently, order in writing that
- (a) the method or practice be discontinued, or
  - (b) all operations in the location or in connection with the well cease until the matter is remedied to the officer's satisfaction.
- (6) No person, knowing that an order has been made under subsection (5), may continue a method, practice or operation contrary to the order.

#### Part 5 — Royalty and Unitization

##### Royalty

17 (1) A lessee who produces a geothermal resource for purposes other than testing must pay to the government

- (a) a royalty established by agreement under this section,
  - (b) an amount agreed under this section to be paid instead of royalty, or
  - (c) if no royalty or amount has been agreed under this section, the prescribed royalty.
- (2) The minister may enter into an agreement approved by the Lieutenant Governor in Council
- (a) establishing the rate of royalty and the method of calculating it, or
  - (b) by which the government receives, instead of royalty, a share of the income revenue or profit generated from the production of a geothermal resource.
- (3) A lessee who fails to pay
- (a) a royalty, or
  - (b) an amount agreed to be paid instead of royalty
- when it is due must pay interest on the unpaid amount at the prescribed rate calculated from the time the unpaid amount becomes due until payment is made.

##### Unitization agreement

18 (1) On behalf of the government, the minister may enter into a unitization agreement for the unitized operation of a field or a part of it.

(2) Section 9 does not apply to an agreement entered into under this section.

##### Unitization order

19 (1) On receipt of an application for a unitization order from a lessee or group of lessees who hold locations that comprise at least 2/3 of the area proposed to be operated under the unitization agreement and who have agreed in writing to a proposed unitized operation, the minister may invite interested persons to make, within a time the minister specifies, submissions respecting the advisability of or necessity for a unitization agreement.

(2) After reviewing the submissions or on expiry of the time specified under subsection (1), the minister may reject the application or make a unitization order requiring that the plan of unitized operations proposed by the applicant be applicable to the whole of the proposed unitized area, or to any area in the same field that the minister determines, and the order is binding on all owners of interests in the area ordered by the minister to be subject to the plan of unitized operations.

#### Part 6 — General

##### Inspection and confidentiality

20 (1) The register maintained under section 9 (1) must be open to public inspection during normal office hours.

- (2) If the ministry receives
- (a) a geothermal exploration report, or
  - (b) records or data respecting a well,
- the report, records or data must not be disclosed to any person except as authorized by the regulations.

## Affidavits

21 An affidavit required under the regulations may be made before

- (a) a person authorized under the Evidence Act, or
- (b) the commissioner.

## Offence and penalty

22 (1) A person commits an offence who contravenes section 4, 15 or 16 (6) or any regulation creating an offence.

(2) A person who commits an offence is liable on conviction to a fine of not less than \$500 or not more than \$5 000.

(3) Section 5 of the Offence Act does not apply to

- (a) this Act, or
- (b) the regulations.

## Regulations and orders made by minister

23 (1) The minister may make regulations of general application, or may make an order related to a specific location or well, governing the drilling of wells and test holes and the production and conservation of geothermal resources including regulations and orders for the following purposes and respecting the following matters:

- (a) prohibiting the drilling of a well at any place within a prescribed distance of any boundary, roadway, road allowance, right of way, building of any specified type or any specified work;
- (b) requiring permittees and lessees to submit an application and obtain the approval of an officer of the division before
  - (i) deepening a well beyond the formation from which production is being taken or has been taken,
  - (ii) recompletion of a well by perforating any casing with a view to producing a geothermal resource from any formation other than that from which production is being taken or has been taken,
  - (iii) suspending drilling,
  - (iv) ceasing normal producing operations,
  - (v) resuming drilling after a previous completion, suspension or abandonment of a well,
  - (vi) resuming production after production stops,
  - (vii) reworking a well to alter its producing characteristics, or
  - (viii) abandoning a well,and authorizing an officer of the division to direct the conditions under which approval is granted in any such case, and the methods to be employed in a drilling or abandonment operation;
- (c) prescribing the conditions under which drilling may be carried out in water covered areas, and any special measures to be taken;
- (d) prescribing the measures to be adopted to confine geothermal resources water encountered during drilling to its original stratum, and to protect the contents of the stratum from infiltration, inundation and migration;
- (e) prescribing the minimum standard of tools, casing, equipment and materials that may be used for drilling, development and production of geothermal resources;
- (f) to regulate the drilling of multizone wells, prohibit completion of a well as a multizone well without the permission of an officer of the division, prohibit the use of a well for the production from or injection to more than one zone without the approval of an officer of the division and authorize the officer of the division to grant permission or approval subject to conditions the officer of the division considers necessary;
- (g) prescribing measures for the protection of petroleum and natural gas deposits, coal seams, mineral deposits and any workings in them;
- (h) requiring the provision of adequate well casing and proper anchorage and cementation;
- (i) requiring and prescribing samples, tests, analyses, surveys, logs, records, other information respecting a geothermal resource or operation, the method of taking samples and submission of records and information to the division;
- (j) prescribing the measures to be taken before drilling begins and during drilling and production to conserve geothermal resources and water;
- (k) prescribing or limiting the methods of operation to be used during drilling and in the subsequent management of a well and the conduct of an operation for any purpose, including
  - (i) the prevention and extinguishing of fires, and



- (ii) the prevention of wells flowing out of control;
- (l) regulating the location and equipping of production facilities;
- (m) regulating the conditioning or reconditioning of wells by mechanical, chemical or explosive means;
- (n) requiring the inspection of wells both during and after drilling;
- (o) requiring the capping or closing in of wells for the purpose of preventing waste;
- (p) requiring the cleaning out of a well;
- (q) regulating the unitization of a field for drilling and production;
- (r) regulating and prohibiting the release of well records and well data;
- (s) the naming of wells and production facilities;
- (t) measures to contain and eliminate spillage;
- (u) regulating production from a geothermal well;
- (v) the general conservation of geothermal resources, their waste or improvident disposition, and any matter incidental to geothermal resource wells' development, drilling, operation and production;
- (w) the methods and units to be used for the measurement of geothermal resources, and the standard conditions to which the measurements are to be converted.

(2) A regulation or order made under subsection (1) may provide that the division head may, by order, in relation to a particular location or well and subject to conditions the division head specifies, exempt a person from the application of all or part of the regulation or order.

Regulations made by Lieutenant Governor in Council

24 (1) For the purposes of this Act, or respecting geothermal resources the Lieutenant Governor in Council may make regulations referred to in section 41 of the Interpretation Act.

(2) Without limiting subsection (1), the Lieutenant Governor in Council may make regulations for the following purposes and respecting the following matters:

- (a) establishing the conditions under which persons are eligible to apply for the issue and renewal of permits, leases, test hole program authorizations, well authorizations, geothermal rig licences, registrations, recordings and other rights, privileges and services under this Act, and the procedures to be followed and the fees to be paid by them;
- (b) the revocation and suspension by officers of the ministry in circumstances specified in the regulations of permits, leases, test hole program authorizations, well authorizations and geothermal rig licences and the powers to be exercisable by those officers for those purposes;
- (c) the application, with or without modification, of regulations made under the Oil and Gas Activities Act respecting geophysical exploration, to exploration for geothermal resources;
- (d) requiring persons holding leases to submit plans for any work that they propose and prohibiting the carrying out of that work without approval;
- (e) establishing the conditions under which permits, geothermal rig licences, leases, test hole program authorizations and well authorizations may be transferred;
- (f) royalties and the amount or rate of a royalty that must be paid in cases where there is no agreement under section 17;
- (g) prescribing the rent payable in respect of leases;
- (h) prescribing the amount or method of calculation of security deposits required under the Act;
- (i) establishing the amount and kind of work to be performed by permittees and lessees on their locations and the time within which the work is required to be done, providing for grouping, unitization, payments instead of work and related matters, and authorizing, in circumstances specified in the regulation, the extension of time within which work required to be done on a location may be done if the permittee or lessee has been prevented from doing work by extraordinary physical conditions that are beyond the person's control and could not be foreseen by the person;
- (j) requiring lessees to provide surveys of their locations at their expense and setting standards for the surveys;
- (k) establishing procedures for recording transfers and other instruments affecting the title to permits and leases;
- (l) the granting, in respect of a test hole or well drilled or in operation before this Act came into force, of exemptions from provisions of this Act other than section 2;
- (m) to meet any difficulties that may arise by reason of the repeal of the Geothermal Resource Act and the substitution of this Act;

(n) requiring persons drilling for or producing geothermal resources to keep records, and prescribing the information to be recorded in those records;

(o) requiring persons drilling for or producing geothermal resources to

(i) supply samples and cores,

(ii) disclose geological information respecting the resources obtained by them in the course of the drilling and production.

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