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Summary

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Regulations and other Acts

Gouvernement du Québec

O.C. 923-2017, 13 September 2017

Professional Code
(chapter C-26)

Professional activities that may be engaged in within the framework of pre-hospital emergency services and care
— Amendment

Regulation to amend the Regulation respecting the professional activities that may be engaged in within the framework of pre-hospital emergency services and care

WHEREAS, under paragraph *h* of section 94 of the Professional Code (chapter C-26), the board of directors of a professional order may, by regulation, determine, among the professional activities that may be engaged in by members of the order, those that may be engaged in by the persons or categories of persons indicated in the regulation, and the terms and conditions on which such persons may engage in such activities;

WHEREAS, in accordance with that paragraph, the board of directors of the Collège des médecins du Québec consulted the Ordre des infirmières et infirmiers du Québec, the Ordre des infirmières et infirmiers auxiliaires du Québec, the Ordre professionnel des inhalothérapeutes du Québec, the Ordre des pharmaciens du Québec, the Ordre professionnel des technologistes médicaux du Québec and the Ordre des technologues en imagerie médicale, en radio-oncologie et en électrophysiologie médicale du Québec before making, on 31 March 2017, the Regulation to amend the Regulation respecting the professional activities that may be engaged in within the framework of pre-hospital emergency services and care;

WHEREAS, under section 95 of the Professional Code and subject to sections 95.0.1 and 95.2 of the Code, every regulation made by the board of directors of a professional order under the Code or an Act constituting a professional order must be transmitted to the Office des professions du Québec for examination; it must be submitted, with the recommendation of the Office, to the Government which may approve it with or without amendment;

WHEREAS, under section 12 of the Regulations Act (chapter R-18.1), a proposed regulation may be made without having been published as provided for in section 8 of that Act, if the authority making it is of the opinion that the urgency of the situation requires it;

WHEREAS, under section 18 of that Act, a regulation may come into force on the date of its publication in the *Gazette officielle du Québec* where the authority that has made it is of the opinion that the urgency of the situation requires it;

WHEREAS, under sections 13 and 18 of that Act, the reason justifying the absence of prior publication and the coming into force of the regulation on the date of its publication in the *Gazette officielle du Québec* must be published with the regulation;

WHEREAS the Government is of the opinion that the following circumstances warrant the absence of prior publication and such coming into force:

— the increasing number of deaths from opioid overdose in Québec, in particular involving fentanyl, and that naloxone is a medication that temporarily reverses the effects of certain opioids; and

— the amendments in the Regulation attached to this Order in Council would allow police officers, firefighters, other first responders and any person to administer naloxone to a person experiencing respiratory depression and significant alteration of consciousness caused by the administration of opioids;

WHEREAS, in accordance with section 95 of the Professional Code, the Office examined the Regulation on 11 September 2017 and submitted it to the Government with its recommendation;

WHEREAS it is expedient to approve the Regulation with amendments;

IT IS ORDERED, therefore, on the recommendation of the Minister of Justice, the Minister of Health and Social Services and the Minister for Rehabilitation, Youth Protection, Public Health and Healthy Living:

THAT the Regulation to amend the Regulation respecting the professional activities that may be engaged in within the framework of pre-hospital emergency services and care, attached to this Order in Council, be approved.

MARC-ANTOINE ADAM,
Associate Secretary General

Regulation to amend the Regulation respecting the professional activities that may be engaged in within the framework of pre-hospital emergency services and care

Professional Code
(chapter C-26, s. 94, par. *h*)

1. The Regulation respecting the professional activities that may be engaged in within the framework of pre-hospital emergency services and care (chapter M-9, r. 2.1) is amended by replacing section 3 by the following:

"**3.** In the absence of a first responder or ambulance technician, any person may

(1) administer adrenalin with an auto-injector device in the case of a severe anaphylactic allergic reaction; and

(2) administer naloxone intranasally or intramuscularly to a person experiencing respiratory depression and significant alteration of consciousness caused by the administration of opioids.".

2. Section 7 is amended by adding the following at the end of the first paragraph:

"(6) administer naloxone intranasally or intramuscularly to a person experiencing respiratory depression and significant alteration of consciousness caused by the administration of opioids.".

3. This Regulation comes into force on the date of its publication in the *Gazette officielle du Québec*.

103141

M.O., 2017

Order of the Minister of Municipal Affairs and Land Occupancy

An Act respecting elections and referendums in municipalities
(chapter E-2.2, s. 580)

Regulation to amend the Regulation respecting the tariff of remuneration payable for municipal elections and referendums

THE MINISTER OF MUNICIPAL AFFAIRS AND LAND OCCUPANCY,

CONSIDERING section 580 of the Act respecting elections and referendums in municipalities (chapter E-2.2), which provides that the Minister of Municipal Affairs, Regions and Land Occupancy shall establish, by regulation, a tariff of the remuneration or expense allowances which the following persons are entitled to receive in respect of duties performed under the Act:

(1) an election officer;

(2) the treasurer within the meaning of Chapter XIII of Title I of the Act;

(3) a person performing duties under Chapter IV of Title II of the Act;

(4) the clerks or secretary-treasurers or the member, secretary or revising officer of a board of revisors performing duties under Chapter V of Title II of the Act;

(5) a referendum officer performing duties under Chapter VI of Title II of the Act;

CONSIDERING the making by the Minister of Municipal Affairs and Regions, by Minister's Order dated 17 July 2008 (2008, *G.O.* 2, 3115), of the Regulation to amend the Regulation respecting the tariff of remuneration payable for municipal elections and referendums;

CONSIDERING that it is expedient to amend the Regulation to increase the amount of remuneration payable in municipal elections and referendums;

CONSIDERING that, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), a draft of the Regulation to amend the Regulation respecting the tariff of remuneration payable for municipal elections and referendums was published in Part 2 of the *Gazette officielle du Québec* of 19 July 2017 with a notice that it could be made by the Government on the expiry of 45 days following that publication;

CONSIDERING that section 18 of that Act provides that a regulation may come into force on the date of its publication in the *Gazette officielle du Québec* where the authority that makes it is of the opinion that the urgency of the situation requires it;

CONSIDERING that, under section 18 of that Act, the reason justifying such coming into force must be published with the regulation;

CONSIDERING that, in the opinion of the Minister, the urgency due to the following circumstances justifies such coming into force:

The next municipal general elections will be held on 5 November 2017 and it is crucial that the tariff of remuneration payable to election officers be known by municipalities as soon as possible, especially when considering that the election period begins on 22 September 2017;

CONSIDERING that it is expedient to make the Regulation without amendment;

ORDERS AS FOLLOWS:

The Regulation to amend the Regulation respecting the tariff of remuneration payable for municipal elections and referendums, attached to this Order, is hereby made and comes into force on the date of its publication in the *Gazette officielle du Québec*.

MARTIN COITEUX,
Minister of Municipal Affairs
and Land Occupancy

Regulation to amend the Regulation respecting the tariff of remuneration payable for municipal elections and referendums

An Act respecting elections and referendums
in municipalities
(chapter E-2.2, s. 580)

1. The Regulation respecting the tariff of remuneration payable for municipal elections and referendums (chapter E-2.2, r. 2) is amended by inserting the following before "**DIVISION I**":

"**DIVISION 0.1**
DEFINITION

0.1. In this Regulation, unless the context indicates otherwise, "minimum wage" means the minimum wage provided for in section 3 of the Regulation respecting labour standards (chapter N-1.1, r. 3).".

2. Section 1 is amended by replacing "$357" by "$536".

3. Section 2 is amended

(1) by replacing "$238" in the first paragraph by "$357";

(2) by replacing "$475" in the second paragraph by "$713".

4. Section 3 is amended

(1) by replacing "$357" in paragraph 1 by "$536";

(2) by replacing "$212" in paragraphs 2 and 3 by "$318";

(3) by replacing "$73" in paragraph 4 by "$110".

5. The heading of subdivision 4 of Division I is replaced by the following:

"*Other election officers*".

6. Section 7 is replaced by the following:

"**7.** The secretary and every member of a board of revisors of the list of electors are entitled to receive remuneration equal to the minimum wage, increased by a factor of 1.4, for each hour during which they carry out their duties.

7.1. Every deputy returning officer and every officer in charge of information and order are entitled to receive remuneration equal to the minimum wage, increased by a factor of 1.25, for each hour during which they carry out their duties.

7.2. The poll clerk and every revising officer to a board of revisors of the list of electors are entitled to receive remuneration equal to the minimum wage, increased by a factor of 1.2, for each hour during which they carry out their duties.

7.3. The chair and every member of an identity verification panel are entitled to receive remuneration equal to the minimum wage for each hour during which they carry out their duties.".

7. Sections 8 to 10 are revoked.

8. Subdivisions 5, 6 and 9 to 13 of Division I, comprising sections 11 to 16 and 20 to 22.4, are revoked.

9. Section 23 is amended by replacing "$357" by "$536".

10. Section 24 is amended

(1) by replacing "$238" in the first paragraph by "$357";

(2) by replacing "$475" in the second paragraph by "$713".

11. Section 25 is amended

(1) by replacing "$357" in paragraph 1 by "$536";

(3) by replacing "$212" in paragraphs 2 and 3 by "$318";

(2) by replacing "$73" in paragraph 4 by "$110".

12. Section 28 is amended

(1) by replacing "of $10" by "equal to the minimum wage, increased by a factor of 1.2,";

(2) by striking out the second paragraph.

13. Section 29 is amended by replacing "to 22" in the first paragraph by "to 7.3".

14. Section 30 is amended

(1) by inserting "plus 1% of the election expenses declared in the return" after "candidate" in paragraph 1;

(2) by inserting "plus 1% of the election expenses declared in the return" after "election" in paragraph 2;

(3) by adding the following paragraph at the end:

"The remuneration of the treasurer must not exceed $10,000.".

15. Section 32 is amended

(1) by striking out "of $13";

(2) by adding the following sentence at the end: "The remuneration is equal to the remuneration provided for in any of sections 7 to 7.3, as the case may be, for each hour of training.".

16. This Regulation comes into force on the date of its publication in the *Gazette officielle du Québec*.

103134

Draft Regulations

Draft Regulation

Building Act
(chapter B-1.1)

Pressure installations

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), that the Regulation respecting pressure installations, appearing below, may be approved by the Government with or without amendment on the expiry of 45 days following this publication.

The main objective of the draft Regulation is to subject pressure installations to the Building Act (chapter B-1.1). It replaces the Regulation respecting pressure vessels (chapter A-20.01, r. 1), made under the Act respecting pressure vessels (chapter A-20.01).

The draft Regulation prescribes for all the territory of Québec the standards and requirements to be met for the manufacturing, installation, repair, alteration, use and maintenance of pressure equipment, with a view to ensuring the quality of the work and public safety. It is intended, among other things, to harmonize the requirements in that field with the regulations of the other provinces and territories of Canada and to make stakeholders more accountable.

The draft Regulation also contains control measures to ensure compliance with the standards and requirements by the various stakeholders of the industry, in particular by requiring that a permit be held to carry on certain activities. The issue of a permit is conditional on the approval and implementation of a quality control program. Lastly, the draft Regulation enables the Régie du bâtiment du Québec to recognize a person or a body for the purposes of carrying out evaluations of conformity or issuing any approval or certificate.

The proposed measures will result in costs estimated at a little over $9,000 for the first year. They will, however, bring about savings of around $400,000 in the second year of the application and savings that could reach $530,000 at the end of the three-year QCP cycle.

Further information may be obtained by contacting Laurent Ruel, director of the Bureau d'expertise et d'homologation en équipements sous pression, Régie du bâtiment du Québec, 545, boulevard Crémazie Est, 7e étage, Montréal (Québec) H2M 2V2; telephone: 514 873-2545; email: laurent.ruel@rbq.gouv.qc.ca

Any person wishing to comment is requested to submit written comments within the 45-day period to Stéphane Labrie, President and Chief Executive Officer, Régie du bâtiment du Québec, 545, boulevard Crémazie Est, 3e étage, Montréal (Québec) H2M 2V2.

DOMINIQUE VIEN,
Minister responsible for Labour

Regulation respecting pressure installations

Building Act
(chapter B-1.1, s. 185, pars. 0.1, 0.3, 2.1, 3, 5.0.1 to 5.5, 6.4, 7, 20, 37 and 38, and s. 192)

CHAPTER I
RELIMINARY PROVISIONS

DIVISION I
DEFINITIONS

1. In this Regulation, unless the context indicates otherwise,

"**accessory**" means a component connected to a pressure installation or forming part thereof, including a fitting, a valve, a cock, a water-level indicator, a gauge, an injector, a regulating or control device as well as a device subject to this Regulation as an accessory under the parameters provided for in figures a, b and c of section 2; (*accessoire*)

"**boiler**" means pressure equipment equipped with a direct power source used to heat a heat-carrying liquid or transform it into steam; (*chaudière*)

"**diameter**" means the inside diameter of a cylindrical vessel. The width or inside diagonal of a non-cylindrical vessel is also considered a diameter; (*diamètre*)

"**direct power**" means the power directly supplied to pressure equipment by means of electric or solar power, or by the combustion of a solid, a liquid, a gas or a mixture of the three; (*énergie directe*)

"**expansion tank**" means a pressure vessel used to provide a pneumatic cushion for the expansion of the water in a closed hot water heating system or cooling system; (*réservoir de dilatation*)

"**hot water tank**" means a pressure vessel not equipped with a direct power source and used to heat water or to store hot water; (*réservoir à eau chaude*)

"**hydropneumatic tank**" means a pressure vessel containing a liquid and compressed air used as damper or propeller; (*réservoir hydropneumatique*)

"**lethal substance**" means a poisonous gas or liquid of such a nature that a very small amount of the gas or of the liquid's vapour mixed or unmixed with air is dangerous to life when inhaled; (*substance létale*)

"**low pressure**" means

(1) gauge pressure of 103 kPa or less for steam and gases;

(2) gauge pressure of 1,100 kPa or less for water at a temperature of 120 °C or less;

(3) vapour pressure of 205 kPa or less in absolute pressure for liquids other than water at the maximum operating temperature; (*basse pression*)

"**owner-user**" means a person or partnership that, for their own account, operates or uses a pressure installation, regardless of who is the owner; (*exploitant-utilisateur*)

"**piping**" means a system of pipes and conduits, including a manifold, used exclusively to carry a fluid from one point to another; (*tuyauterie*)

"**pressure installation**", depending on the context, means one or more of the following pieces of pressure equipment assembled to form an integrated, functional whole: a vessel or boiler intended to contain combustible or non-combustible gas or a liquid under pressure, and any pipes and accessories connected to it; (*installation sous pression*)

"**recognized person**" means a person or body recognized by the Régie du bâtiment du Québec in accordance with Chapter VI to proceed with a compliance evaluation or to give an approval, an authorization or a certificate required under this Regulation; (*personne reconnue*)

"**safety device**" means a device to protect against overpressure designed to release the pressure excess, in particular a safety valve, a relief valve, a safety relief valve or a rupture disc; (*dispositif de sûreté*)

"**thermal fluid**" means a heat-carrying fluid other than water and water-glycol mixtures that is used to transfer heat without vaporisation; (*fluide thermique*)

"**water heater**" means a pressure vessel equipped with a direct energy source in which water destined for exterior use is heated to a temperature of 99 °C or less and to a pressure of 1,100 kPa or less. The heat source and control devices are an integral part of the water heater; (*chauffe-eau)*

"**welder**" means a person qualified to carry out manual, automatic or semi-automatic welding operations; (*soudeur*)

"**welding**" means the permanent assembly of materials by welding, brazing or fusing. (*soudage*)

DIVISION II
SCOPE

2. This Regulation applies to the following pressure equipment and their vicinity:

(1) a boiler, an accessory and piping;

(2) a pressure vessel that complies with the subjection parameters provided for in the following figures:

Figure (a)
Pressure vessels containing liquids that are not more dangerous than water

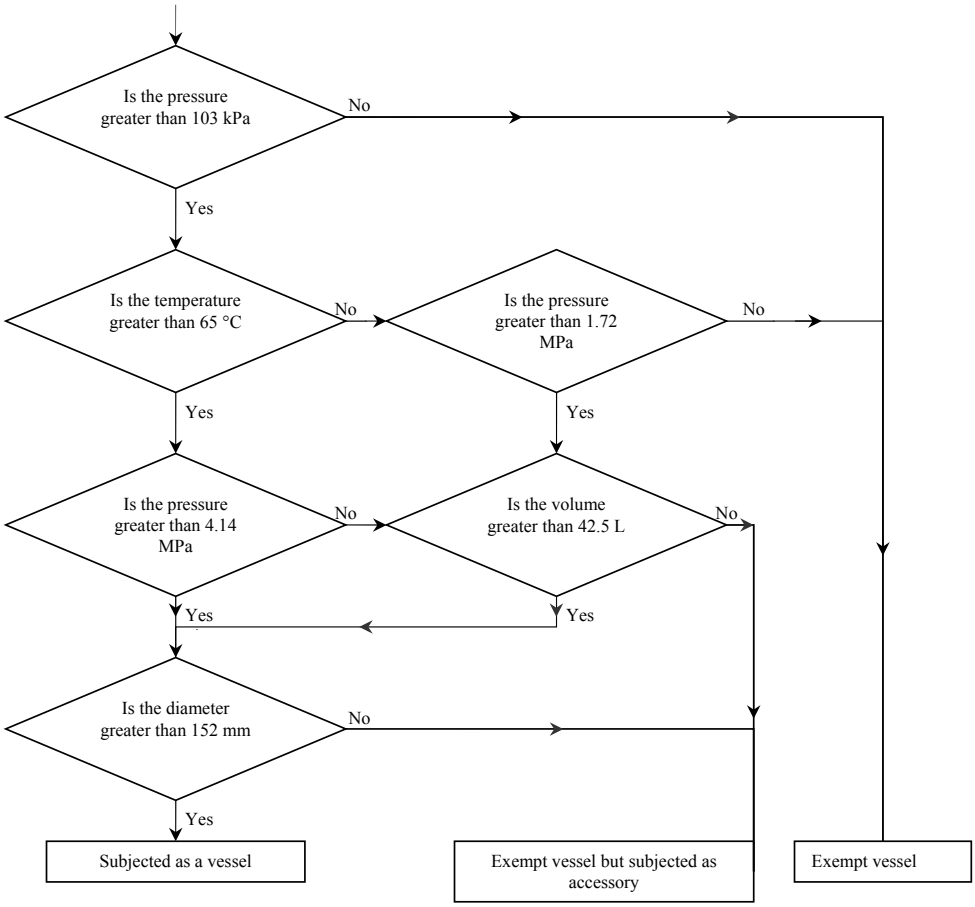


Figure (b)
Pressure vessels containing non-lethal substances not referred to in Figure a

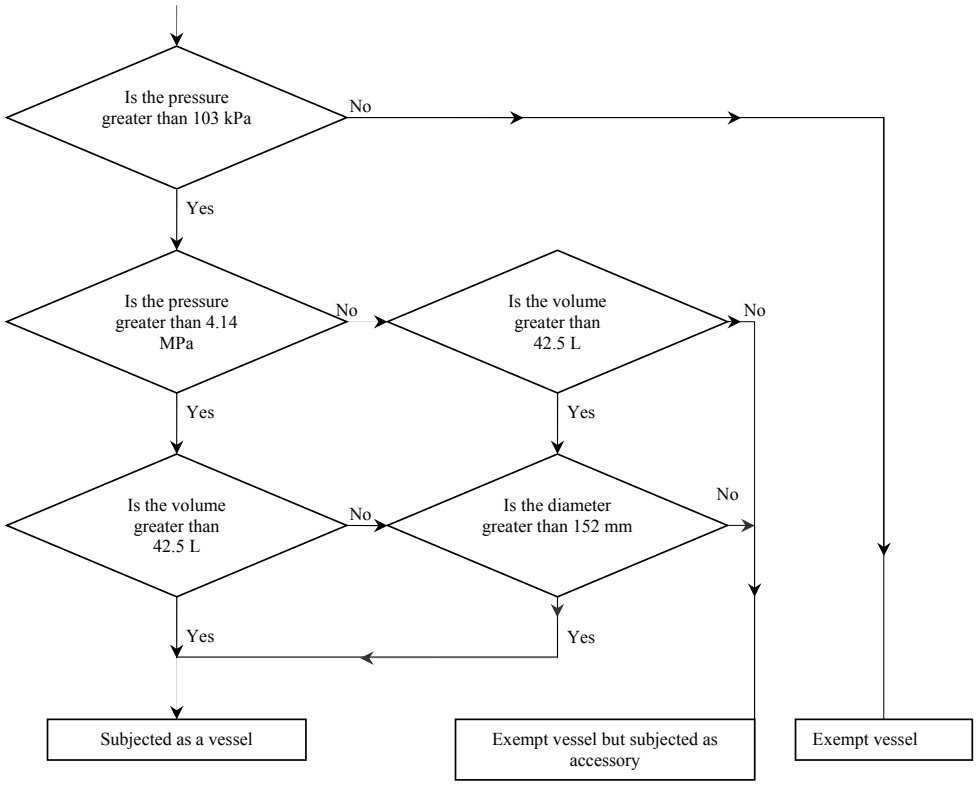
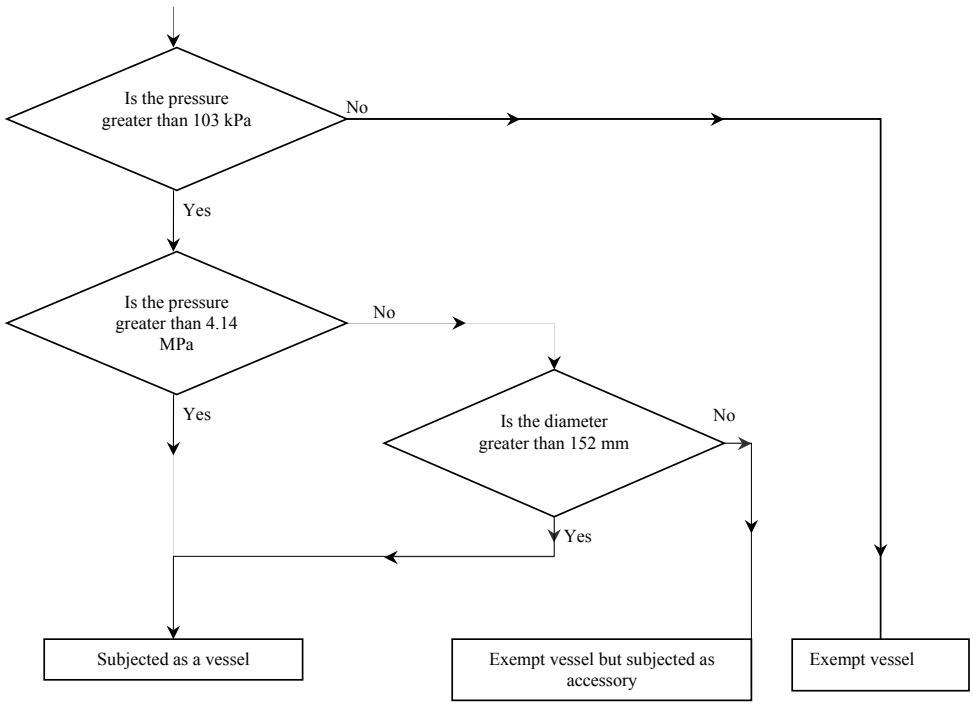


Figure (c)
Pressure vessels containing lethal substances



3. This Regulation does not apply to the following pressure equipment nor to the accessories and piping connected to it:

(1) a boiler:

(a) of the high pressure kind, whose heating surface is 1 m^2 or less or whose power is 10 kW or less;

(b) of the steam, hot water or thermal fluid low-pressure kind, whose wet heating surface is 3 m^2 or less or whose power is 30 kW or less;

(c) whose pressure is 103 kPa or less, open circuit, and that has no valve between the boiler and the vent leading directly to the atmosphere;

(d) of the hot water kind, whose power is 60 kW or less, whose water temperature is 99 °C or less and whose pressure is 1,100 kPa or less;

(e) of the hot water or steam kind, that has the following characteristics:

i. it has no steam drum or steam header;

ii. the tubes and coils are not used to produce steam;

iii. it is provided with manually operated nozzles or sprinklers that conduct the fluid directly into the atmosphere;

iv. the tubes have an outside diameter not exceeding 25 mm and the pipes have a nominal diameter not exceeding 19 mm;

v. its water volume does not exceed 23 litres;

vi. it is provided with a temperature control device that prevents the water temperature from exceeding 180 °C;

vii. it is provided with an overpressure safety relief device adjusted to and sealed at a pressure not exceeding the design pressure indicated on the boiler;

(2) a water heater whose diameter is 610 mm or less and whose power is 120 kW or less;

(3) a hot water tank whose diameter is 610 mm or less;

(4) a hot water tank that is not provided with a power source and that contains water at a temperature of 99 °C or less;

(5) a pressure vessel used as the enclosure for gas pressurized electric equipment and for any tank forming part thereof;

(6) a hydropneumatic tank whose diameter is 610 mm or less, whose volume is 450 litres or less and whose temperature is 65 °C or less;

(7) an expansion tank whose diameter is 610 mm or less and whose pressure is 205 kPa or less;

(8) a mobile pressure vessel not forming part of a pressure installation and used to transport gas or liquid under pressure or used for the propulsion or operation of a vehicle, a vehicle component or equipment thereof;

(9) pressure equipment whose primary design data and primary constraints come from the equipment's operating conditions such as a pump, a compressor, a turbine, an engine or a hydraulic cylinder;

(10) well control pressure equipment used in the petroleum, gas or geothermal prospection and exploitation industry and in the underground storage and intended to contain or control the well's pressure;

(11) pressure equipment used for research and experimentation purposes in a research or teaching establishment;

(12) a pressure vessel not provided with a direct power source and containing an incompressible liquid whose vapour pressure is 205 kPa or less in absolute pressure at the maximum operating temperature;

(13) a refrigeration system whose drive motor has a maximum rated power of 125 kW, that is tested and certified by an approved test laboratory, and that meets all the requirements of CSA B52, Mechanical Refrigeration Code, published by the CSA Group, hereinafter called "Mechanical Refrigeration Code".

4. This Regulation does not apply to piping

(1) of the low pressure kind, except thermal fluid piping connected to a boiler subject to this Regulation;

(2) of a refrigeration system whose capacity is 3 tonnes (11 kW) or less;

(3) for fire protection;

(4) for compressed air, whose nominal diameter does not exceed 19 mm; and

(5) used to convey pressurized gas or liquid for combustion purposes and that is subject to Chapter II, Gas, or Chapter VIII, Petroleum Equipment Installation, of the Construction Code (chapter B-1.1, r. 2).

5. The provisions concerning installation, use and maintenance do not apply to the following pressure equipment nor to the accessories and piping connected to it:

(1) a tank used to store, supply or recover the gas of a vessel referred to in paragraph 4 of section 3, or a tank used for the operation of electricity generating equipment;

(2) a pressure vessel, accessory or piping subject to the requirements of Chapter II, Gas, of the Construction Code (chapter B-1.1, r. 2) or Chapter III, Gas, of the Safety Code (chapter B-1.1, r. 3).

CHAPTER II
TECHNICAL STANDARDS APPLICABLE TO WORK

DIVISION I
GENERAL

6. In this Regulation, a reference to a code or standard refers to the most recent edition published by the body and includes all the later amendments made to it.

Modifications and editions of the codes and standards published after (*insert the date of coming into force of this Regulation*) apply to pressure installations only from the date of the last day of the sixth month following the publication of the French and English versions of those texts. Where those versions are not published at the same time, the period runs from the date of publication of the last version. If the amendments or editions are in one language, the period runs from their publication.

DIVISION II
MANUFACTURING WORK

§1. General

7. Pressure equipment must be manufactured in accordance with CSA B51, Boiler, Pressure Vessel and Pressure Piping Code, published by the CSA Group, hereinafter called "Manufacturing Code".

In the case of refrigeration pressure equipment, it must be manufactured in accordance with the Mechanical Refrigeration Code.

§2. Amendments to the Manufacturing Code

8. Despite the provisions regarding the registration of designs provided for in the Manufacturing Code, the designs and specifications for Class A, B and C piping and accessories, manufactured in accordance with a standard recognized at the national level by the American Society of Mechanical Engineers (ASME), are not required to be registered with the Board.

The designs and specifications must, however, be kept for purposes of verification by the Board.

9. The Manufacturing Code is amended by striking out Schedule J, Requirements regarding the use of finite element analysis (FEA) to support a pressure equipment design submission.

DIVISION III
INSTALLATION WORK

§1. General

10. The installation of pressure equipment must be carried out in accordance with BNQ 3650-900, *Code d'installation des chaudières, des appareils et des tuyauteries sous pression*, published by the Bureau de normalisation du Québec (BNQ), hereinafter called the "Installation Code".

However, in the case of refrigeration pressure equipment, the installation must be carried out in accordance with the Mechanical Refrigeration Code and, in the case of pressure equipment intended for the distribution networks of establishments providing health services, the installation must be carried out in accordance with CSA Standard Z7396.1, Medical gas pipeline systems – Part 1: Pipelines for medical gases, medical vacuum, medical support gases, and anaesthetic gas scavenging systems, published by the CSA Group.

§2. Amendments to the Installation Code

11. In addition to the provisions of the Installation Code regarding the conformity of pressure equipment, all pressure equipment must be supported, attached or anchored to ensure its safe operation.

12. Despite the provisions concerning flow sensitive devices, a pressure differential in a thermal liquid boiler installation is allowed if it performs the same functions as a flow sensitive device.

DIVISION IV
REPAIR AND ALTERATION WORK

13. The repair or alteration of pressure equipment must be carried out in accordance with the technical requirements of ANSI/NB-23, National Board Inspection Code, Part 3 Repairs and Alterations, published by the National Board of Boiler and Pressure Vessel Inspectors (National Board).

A person repairing or altering pressure equipment must also take into account the codes and standards referenced by this Regulation and according to which the equipment was designed, manufactured or installed, as well as the operating conditions to which the equipment is subjected.

CHAPTER III
WORK CONTROL MEASURES

DIVISION I
PERMITS

§1. General

14. Every person who manufactures, installs, repairs or alters pressure equipment must hold a permit issued by the Board.

The classes of permits are the following:

(1) permit to manufacture in a shop or field site;

(2) installation permit;

(3) permit to repair or alter in a shop or field site;

(4) owner-user permit allowing to perform, for its own account, certain installation, repair or modification of its own pressure equipment.

15. An owner-user permit is also required for persons who wish, for their own account, to avail themselves of periodic inspection frequencies that differ from those provided for in the table in section 78.

16. A permit is not required for

(1) the installation of pressure equipment producing low-pressure steam or hot water;

(2) the installation, repair or alteration of piping with no welding involved;

(3) the repair or alteration of pressure equipment accessories or fittings for low pressure steam or hot water production, other than an overpressure safety device.

However, the activities referred to in subparagraph 1 must be declared to the Board in accordance with the requirements of section 32.

§2. Conditions for the issue, renewal or amendment

17. A permit is issued following approval by the Board of a quality control program.

18. To be approved, a quality control program must be adapted to the activities of the person requiring the permit, taking into account, in particular, the nature and complexity of the activities.

The quality control program must also contain measures to ensure

(1) the conformity of the activities, materials used and welding procedures with this Regulation;

(2) the maintenance of the qualification of the personnel performing the activities;

(3) the qualification of the inspection personnel and the personnel's sufficient autonomy to identify any problem related to quality control and to apply the required solutions; and

(4) the possibility to verify, through the implementation of a register, that the activities and inspections have been carried out in accordance with the quality control program and that measures have been taken to remedy any default.

19. Every person applying for the issue, renewal or modification of a permit must provide the Board with the following information and documents, on the form provided for that purpose:

(1) name, home address, telephone number, email address and, if applicable, the business number assigned under the Act respecting the legal publicity of enterprises (chapter P-44.1);

(2) if the application is made on behalf of a partnership or legal person:

(a) the name, address and telephone number of the head office;

(b) if applicable, any other name it is legally authorized to use in Québec and is related to the activities carried on in the field of pressure installations;

(c) the business number assigned under the Act respecting the legal publicity of enterprises (chapter P-44.1) or, in the absence of such registration, a copy of the constituting act, shareholders' agreement or partnership contract;

(d) a declaration to the effect that the person is authorized to submit the application on behalf of the partnership or legal person;

(3) the class of permit and the field of activities for which the application is made;

(4) a copy of the manual describing the quality control program;

(5) the name and telephone number of the person in charge of enforcing the quality control program;

(6) a declaration whereby the person undertakes to comply with the quality control program.

Every permit application must include an attestation to the truthfulness of the information and documents provided under the first paragraph and be signed by the person submitting the application.

20. An application for the issue, renewal or modification of a permit is acceptable only if it contains all the required information and documents and only if it includes the fees payable under section 91 and the charges payable for the verification and approval of the quality control program provided for in section 90.

21. A permit holder must inform the Board without delay of any change to the information and documents required under section 19.

22. In the case of an application for amending or renewing a permit, only the changes to the information and documents already submitted to the Board are to be provided.

23. An application for the renewal of a permit must be submitted to the Board at least 6 months before the permit's date of expiry.

§3. Duration, content and display

24. The period of validity of a permit is 3 years.

25. The permit contains

(1) the name of the person or partnership holding the permit and any other legal name that it is authorized to use in Québec and that is related to the activities carried on in the field of pressure installations;

(2) the address;

(3) the period of validity of the permit;

(4) the permit category and the details of the covered activities; and

(5) the signature of the president and chief executive officer or of a vice-president and the signature of the Board's secretary.

26. The permit holder must display the permit in view of the public at the location of the pressure installations or pressure equipment covered by the permit or, if the permit holder does not possess or operate any, in the permit holder's vehicle.

27. A permit may not be transferred.

§4. Suspension and refusal to issue, modify or renew

28. The Board suspends or refuses to issue, modify or renew a permit referred to in section 14 if the permit holder

(1) has not complied with an order issued under section 123 or 124 of the Building Act (chapter B-1.1); or

(2) has not complied with a remedial notice given by the Board under section 122 of the Building Act (chapter B-1.1) concerning a pressure installation covered by the permit or with a suppletory measure required in such notice.

DIVISION II
AUTHORIZATION AND APPROVAL

§1. Manufacturing work

29. Pressure equipment must be approved by the Board before it is put into service.

30. In order to obtain the Board's approval, the following conditions must be met:

(1) subject to the exemptions concerning accessories and piping provided for in section 8, the design and specifications for the manufacturing of the pressure equipment must be registered with the Board. In addition, the design and specifications for the pressure vessels and boilers must be signed by an engineer;

(2) the pressure equipment must be manufactured in accordance with the quality control program;

(3) subject to the exemptions provided for in the Manufacturing Code, the pressure equipment must have been inspected by the Board at the time of manufacture;

(4) a declaration of conformity must be filed by the manufacturer and sent to the Board.

§2. Installation work

31. Pressure installations must be approved by the Board before they are put into service, except in the following cases:

(1) installation of a mobile boiler or pressure vessel at the same location for a period of 3 weeks or less;

(2) the work pertains solely to accessories or piping and is performed by an installer holding a permit;

(3) installations addressed in the quality control program, approved by the Board, which are allowed to be carried on without approval.

32. To obtain the Board's approval, a pressure installation declaration must be sent to the Board by the installer on the form provided for that purpose. The declaration must include

(1) the address of the worksite;

(2) the name, address and telephone number of the person for whom the work is performed;

(3) the name, address, telephone number, permit number and licence number of the person performing the work;

(4) if applicable, the name of the engineer who designed or supervised the installation;

(5) the dates on which the installation begins and ends;

(6) the use of the building and the use of the installation;

(7) the nature of the work performed;

(8) the characteristics of the boiler or vessel, in particular its registration number, serial number, power, manufacturer's name and, in the case of a refrigeration pressure installation, the serial number, power and compressor manufacturer's name;

(9) the fluid used;

(10) the pressure setting and the relieving capacity of the safety valve; and

(11) an indication that the verifications necessary for ensuring the conformity of the work have been made.

The declaration must be signed and dated by the installer.

33. For installation work not requiring approval under paragraph 3 of section 31, a summarized installation declaration must be sent by the installer to the Board and contain information provided for in subparagraphs 1, 2, 3 and 8 of the first paragraph of section 32. All the information provided for in the first paragraph of section 32 must also be kept by the installer for at least 5 years in a register available for consultation by the Board.

§3. Repair or alteration work

34. Every person must obtain authorization from the Board before repairing or altering pressure equipment, unless the quality control program approved by the Board provides that certain work is performed without authorization.

35. An application for authorization must be sent to the Board on the form provided for that purpose and include

(1) the address of the worksite;

(2) the name, address and telephone number of the person performing the work;

(3) the name, address, telephone number, permit number and licence number of the person performing the work;

(4) the reasons for which the work is necessary and the verifications made before the work;

(5) the nature of the work to be performed;

(6) the characteristics of the boiler or vessel, in particular its registration number, serial number, power and manufacturer's name; and

(7) the list of the activities proposed in the course of the work.

The declaration must be signed and dated by the person who performs the work.

36. The Board may give its authorization subject to conditions, such as the performance of additional activities on the occasion of the repair or alteration of pressure equipment.

37. In addition to the authorization provided for in section 35, where repair or alteration work has a particular, complex or exceptional character, or where it constitutes a safety hazard, authorization from the Board must be obtained prior to the putting into service of the pressure equipment.

38. A person who repairs or alters pressure equipment must, upon completion of the work, so inform the Board using the form provided for that purpose.

CHAPTER IV
PROVISIONS SPECIFIC TO WELDING WORK

DIVISION I
TECHNICAL STANDARDS APPLICABLE TO WORK

39. Welding work performed during the manufacturing, installation, repair or alteration of pressure equipment must be carried out in accordance with the Boiler and Pressure Vessel Code, Section IX - Welding, Brazing and Fusing Qualifications, published by ASME, hereinafter called "Welding Code", and in accordance with the requirements of any other code or design, manufacturing, installation, repair or alteration standard that applies thereto.

DIVISION II
WORK CONTROL MEASURES

§1. Registration of welding procedures

40. A welding procedure must be registered with the Board before welding work is carried out.

41. In order to be registered, the welding procedure must be qualified or pre-qualified in accordance with the Welding Code.

Despite the foregoing, in the case of a pre-qualified welding procedure recognized by ASME, the National Board or the Board, qualification tests for that welding procedure are not required.

42. Where an essential variable of a welding procedure is modified, the welding procedure must be registered again with the Board.

43. Registration with the Board is carried out by the issue of a registration number.

44. An enterprise that has registered a pre-qualified welding procedure with the Board must verify and make sure that it is applicable to the work and must use it within the limits and restrictions prescribed by the body that has qualified the welding procedure.

45. Where the welding is performed outside Québec, the welding procedure must be verified by a body authorized by ASME, by the National Board or by the provincial or territorial authority responsible for the administration of pressure vessels regulations before the pressure vessel may be installed in Québec.

46. An enterprise must keep a register of its welding procedures and keep the documents related to the qualification tests for those procedures.

§2. Qualification of welders

47. Every person who carries out welding work on a pressure installation must have the qualifications prescribed by the Welding Code, in addition to those required by any design, manufacturing, installation, repair or alteration standard that applies thereto.

48. At the time of the first qualification of an enterprise's welders, the tests must be performed under the supervision of the Board or within the context of a training program or the workforce qualification established under the Act respecting workforce vocational training and qualification (chapter F-5) or in accordance with the conditions provided for in the quality control program approved by the Board. Thereafter, the enterprise sees to the maintenance of the qualification of its welders.

49. The enterprise must subject its welders to new qualification tests where the welders have not used a specific process for more than 6 months or where their welding fails to meet the requirements of the Welding Code.

50. The enterprise must keep a register containing the information related to the qualification of its welders and the maintenance of qualification. The enterprise must also keep the documents relevant to the qualification tests taken by its welders.

CHAPTER V
USE AND MAINTENANCE OF A PRESSURE INSTALLATION

DIVISION I
GENERAL

51. Pressure equipment must be used for the purposes for which it was designed and for which it is intended. It must be kept in safe and proper working conditions.

52. A service room or machinery room of a pressure installation must be used and maintained so as not to constitute a safety hazard.

53. Accessibility to pressure equipment must be maintained to allow for maintenance, repair, cleaning, verification and inspection.

54. Where a pressure installation shows dangerous operating conditions, particularly following alteration, modification, intensive use, wear and tear or obsolescence, the required rectification must be made.

55. Any cause of corrosion, excessive deposit on the surfaces, deformation, distortion or cracking must be determined and its scope evaluated before the required rectification is made.

56. In case of accident, explosion, rupture, leak or damage to a pressure installation, the owner-user must immediately stop the operation of the pressure installation and so inform the Board. If stopping the installation is impossible, temporary suppletive measures must be taken.

57. The marking that indicates the characteristics of pressure equipment must be complied with and kept. Where pressure equipment must be replaced, the characteristics of the replacement equipment must be compatible with the pressure installation and be of a quality equal to or greater than the original equipment.

58. A boiler or pressure vessel, including accessories and piping connected to the boiler or pressure vessel, may not be used above the pressure and temperature limits authorized for their manufacturing, installation or condition.

59. Any alteration of a pressure installation resulting in an increased operating pressure or temperature must be reported to the Board and approved by it in accordance with the terms and conditions provided for in subdivision 3 of Division II of Chapter III.

60. Each mobile part of a pressure vessel must have a safety guard or screen.

61. The owner-user must make sure that a leak test at a pressure at least equal to the pressure set for the overpressure safety relief device is carried out when there is a doubt about the integrity of pressure equipment.

62. The maximum quantity of refrigerant that may be stored in the machinery room of a refrigeration pressure installation is 136 kg in addition to the normal load of the system.

63. A person who decides to scrap pressure equipment or to no longer use it as pressure equipment must destroy or obliterate its stamp and so inform the Board. Otherwise, the person remains responsible for the equipment and continues to assume the obligations related to it.

DIVISION II
PARTICULAR RULES FOR CERTAIN DEVICES

64. A safety device must be repaired or replaced in the following cases:

(1) the device is leaking, is cracked, does not operate in a satisfactory manner or has a broken seal;

(2) the outlet, outlet piping or piping linking the device to a pressure installation is blocked or the opening shows a risk of burn or injury;

(3) in the case of a valve, rust deposits have accumulated between the seat and the disk or the seat and the disk are stuck.

65. A safety device must be adjusted within the manufacturer's instructions or replaced in the following cases:

(1) the adjustment pressure exceeds the pressure allowed;

(2) the relieving capacity is less than the capacity required for the installation.

66. A safety device must be replaced when it no longer has an identification or must be evaluated, tested and adjusted so that it may be properly identified.

67. A control device, a gauge, a temperature indicator, a shut-off device in case of low water level, a flow sensitive device, a pressure or temperature limiting device or a water supply device that is defective or inoperative must be replaced, repaired or adjusted according to the manufacturer's instructions.

The piping connecting those devices must be cleaned when an obstruction is observed.

68. The welded, screwed or flanged joints of an accessory, fitting or piping that show a leak must be repaired or replaced.

69. A cock, a manual or automatic locking device or a warning device that is defective or inoperative in a pressure installation must be repaired or replaced.

70. A fitting, cock, valve or piping used to drain or purge a pressure installation that is partially blocked must be cleaned.

DIVISION III
PERIODIC INSPECTION OF A PRESSURE INSTALLATION

§1. General

71. The owner-user of a pressure installation must have it inspected by a recognized person, except in the cases of the following installations:

(1) a refrigeration pressure installation using an A1 or B1 refrigerant;

(2) a drain tank;

(3) an air tank installation whose authorized maximum operating pressure does not exceed 1,725 kPa, whose volume does not exceed 0.651 m^3 and whose diameter does not exceed 0.61 m.

72. An inspection is either external or internal. It includes, in particular, the verification of the condition of the outer or inner surface depending on the type of inspection, of the isolating material or the coating, manholes, hand holes or other inspection openings, the fittings, piping, accessories and piping supports, as well as the functioning of the control and operation devices.

73. Inspection also includes the verification of the condition of the overpressure protection devices, their pressure adjustment, their relieving capacity as well as the verification of the seals and the manual testing of their operation where possible.

74. The owner-user of a pressure installation must prepare the pressure equipment for inspection, give free access to the equipment, provide the materials required for the tests, remove the covers on manholes and hand holes and clean the outside and inside of the equipment.

75. Following the periodic inspection, the owner-user must obtain from the recognized person a certificate attesting to the conformity of the installation.

§2. Special rules for the periodic inspection of certain vessels

76. In addition to the components listed in sections 72 and 73, the external inspection of a pressure vessel subject to a corrosion rate control must include

(1) the verification of the surface of at least one exposed part of the vessel's coating; and

(2) the determination of the thickness of the walls and comparison with the results obtained at the time of previous external inspections.

77. The external inspection of a vessel equipped with a quick-actuating closure, including a pressure cooker, must include, in addition to the components listed in sections 72 and 73, the verification of the condition, operation, wear and tear and imperviousness of the cover, exhausts, indicators, warnings and the fastening and locking components.

§3. Frequency of inspections

78. Subject to the special provisions of sections 79 to 81, the inspection must be carried out according to the frequencies indicated in the following table:

TABLE I:
FREQUENCY OF EXTERNAL AND INTERNAL INSPECTIONS

TYPE OF PRESSURE EQUIPMENT	MAXIMUM PERIOD BETWEEN TWO INSPECTIONS	
	EXTERNAL	**INTERNAL**
Pressure cookers with a quick release, except for sterilizers	1 year	1 year
Yankee dryer	1 year	1 year
Digestor	1 year	1 year
High-pressure steam or hot water boiler High-pressure steam or hot water generator	1 year	2 years
Low-pressure steam boiler Low-pressure steam generator	1 year	3 years
Deaerator	2 years	2 years
Drying roller	2 years	5 years
Refrigeration system using refrigerant other than A1 or B1	2 years	—
Low-pressure hot water boiler	2 years	—
Thermal fluid boiler	2 years	—
Water heater	2 years	—
Expansion tank	4 years	—
Hot water tank	4 years	—
Compressed air tank	4 years	—
Tank containing a non-corrosive fluid	4 years	—
Any other type of equipment	2 years	—

This section does not apply to pressure equipment and boilers whose periodic inspection frequency is determined by an inspection program included in a quality control program approved by the Board in accordance with section 18. The inspection program must contain mechanisms to monitor the condition of the pressure vessels or boilers, in particular as to the control of their corrosion rate.

79. A pressure vessel or a boiler must undergo an internal and external inspection each time it is moved to another location, except in the case of a mobile vessel or boiler.

80. An internal inspection must be carried out where determination is made, following an external inspection, that the condition of the vessel or boiler reveals a safety hazard.

To determine the internal condition of the vessel or boiler, the visual internal inspection may be replaced by any other non-destructive test method such as ultrasound or radiography.

81. Where pressure equipment or a boiler undergoes a change in their conditions of use or has been out of use for more than 1 year, the owner or user must have it inspected and obtain authorization from the Board before putting it back into operation.

DIVISION IV
REGISTER

82. During the existence of the pressure installation, the following information and documents must be entered into a register, available on the premises for consultation by the Board:

(1) the name and contact information of the installation's owner-user;

(2) the manufacturer's operation and maintenance manual;

(3) the history and a description of the maintenance, repairs, replacements and alterations carried out;

(4) the results of any verification or inspection and a copy of the certificate of conformity issued following the periodic inspection;

(5) the name and telephone number of the person responsible for maintenance.

CHAPTER VI
RECOGNIZED PERSONS

83. In order to be recognized by the Board, a person must

(1) depending on the activities the person wishes to engage in:

(a) be certified by ASME, according to ASME Standard QAI-1, Qualifications for Authorized Inspection, published by ASME;

(b) have and maintain a quality control program approved by the National Board in accordance with the requirements of NB-369, Accreditation of Authorized Inspection Agencies (AIA) Performing Inservice or Repair/Alteration Inspection Activities, published by the National Board;

(c) have and maintain a quality control program approved by the Board. The program must be adapted to the activities of the person seeking recognition, taking into account in particular the nature and complexity of the activities;

(2) provide in the quality control program or a letter of undertaking for provisions that regulate communication of information and documents with the Board;

(3) have the means necessary to ensure the confidentiality of the information obtained during inspections or verifications;

(4) if applicable, have staff members in charge of inspections and controls who hold a qualification as pressure vessel inspectors issued by Emploi Québec;

(5) have the means necessary for the adequate performance of the technical and administrative tasks related to the carrying out of evaluations, inspections or verifications;

(6) not be in a situation of conflict of interest such as

(a) have a direct or indirect interest in an enterprise that designs, manufactures, installs, repairs, alters or sells pressure equipment; or

(b) be under pressure, including commercial or financial pressure, likely to influence the person's judgment or the results of the person's verifications; and

(7) underwrite a civil liability insurance policy corresponding to the activities and covering the person's or body's liability for damaged caused to a third person for fault or negligence in the performance of the person's or body's tasks. The insurance policy must include a clause whereby the insurer undertakes to inform the Board of its intention to terminate the contract.

84. A person applying for recognition or renewal of recognition must provide the Board with the following information and documents:

(1) name, home address, telephone number, email address and, if applicable, the business number assigned under the Act respecting the legal publicity of enterprises (chapter P-44.1);

(2) if the application is made on behalf of a partnership or legal person:

(a) the name, address and telephone number of the head office;

(b) if applicable, any other name it is legally authorized to use in Québec and is related to the activities carried on in the field of pressure installations;

(c) the business number assigned under the Act respecting the legal publicity of enterprises (chapter P-44.1) or, in the absence of such registration, a copy of the constituting act, shareholders' agreement or partnership contract;

(d) a declaration to the effect that the person is authorized to make the application on behalf of the partnership or legal person;

(3) the field of activities for which the person applies for recognition and the number of years of experience acquired in that field;

(4) a copy of the manual describing the quality control program;

(5) the name and telephone number of the person in charge of enforcing the quality control program;

(6) a declaration whereby the person undertakes to comply with the quality control program;

(7) a copy of its organization chart, if applicable;

(8) proof of civil liability insurance and an attestation from the insurer that the insurance satisfies the provisions of paragraph 7 of section 83.

Every application for recognition or renewal of recognition must be accompanied by an attestation to the truthfulness of the information and documents provided under the first paragraph and be signed by the person submitting the application.

85. An application for recognition or renewal of recognition is acceptable only if it contains all the required information and documents and only if it is accompanied by the fees payable under section 90.

86. A recognized person must inform the Board without delay of any change in the information and documents required under section 84.

87. The period of validity of recognition is 3 years.

88. Every application for renewal of recognition must be filed with the Board not less than 6 months before the date of the end of the period of validity of the recognition.

89. Pursuant to section 128.4 of the Building Act (chapter B-1.1), the grounds for revoking a person's recognition are the following:

(1) the person no longer meets the recognition conditions in this Chapter in particular the provisions of the person's quality control program;

(2) the person has falsely declared a fact or distorted it or omitted to declare it in the performance of the person's functions;

(3) the person has signed a false or misleading certificate of conformity;

(4) the person is found guilty of an offence under paragraph 2, 3, 4 or 7 of section 194 of the Building Act (chapter B-1.1).

CHAPTER VII
FEES AND CHARGES

90. Charges of $170 for the first hour or fraction of an hour and charges corresponding to half of that rate for each half hour or fraction of a half hour are payable to the Board for the performance of the following activities:

(1) the verification and registration of designs and specifications or any other document related to a pressure installation or pressure equipment or a part thereof;

(2) the verification and approval of a quality control program;

(3) the review or recording of a welding procedure, including brazing and the qualification of a welder or braze-welder;

(4) the inspection of a pressure installation or pressure equipment or a part thereof;

(5) the verification of an application for recognition or renewal of recognition.

Charges of $170 payable to the Board is added to those amounts for each trip required to perform the activities. The rate applies to each person required to make a trip. Those charges include the person's fees during the trip.

The charges payable to the Board are 1.5 those provided for in this section, with a minimum amount equal to the charges payable for 2 hours, where an activity is performed between noon and 1:00 p.m., between 4:30 p.m. and 8:30 a.m., on Saturdays, on Sundays, on a holiday and the day before or after 25 December or 1 January or on any other day standing in lieu thereof.

91. The fees payable are $85 for the issue, amendment or renewal of a permit.

The fees are not reimbursed by the Board following the suspension, cancellation or abandonment of the permit.

CHAPTER VIII
OFFENCE

92. A contravention of any provision of this Regulation constitutes an offence, except for the provisions of Chapter VII.

CHAPTER IX
TRANSITIONAL AND FINAL

93. Persons who have a certificate issued following the approval of a quality control program by the Board pursuant to the Regulation respecting pressure vessels (chapter A-20.01, r. 1) are exempt from the obligation to hold a permit under this Regulation until the date of the expiry of the certificate.

94. Despite the provisions of Division III of Chapter V, the periodic inspection of a pressure installation may be carried out by the Board or by a person to whom that function is delegated under section 8 of the Act respecting pressure vessels (chapter A-20.01) until 1 January 2018.

Where the periodic inspection is carried out by the Board, the charges payable to it are those provided for in section 90 of this Regulation.

95. The Regulation respecting pressure vessels (chapter A-20.01, r. 1) is revoked.

96. This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*. Despite the foregoing,

(1) the rules regarding installation permits provided for in Division I of Chapter III come into force on 1 January 2018. Persons wishing to avail themselves of the new system of permits may apply therefor with the Board;

(2) the provisions of CSA Standard Z7396.1, Medical gas pipeline systems – Part 1: Pipelines for medical gases, medical vacuum, medical support gases, and anaesthetic gas scavenging systems, adopted by reference under the second paragraph of section 10, come into force on 1 January 2018. Until that date, BNQ Standard 5710-500, *Gaz médicaux ininflammables – Réseaux de distribution des établissements fournissant des services de santé – Caractéristiques et méthodes d'essais*, published by BNQ and adopted under the Regulation respecting pressure vessels (chapter A-20.01, r. 1) remains applicable to the installation of pressure equipment intended for the distribution networks of institutions providing health services.

103136

Draft Regulation

Code of Civil Procedure
(chapter C-25.01)

Basic Parental Contribution Determination Table — Amendment

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), that the Regulation to amend the Regulation respecting the Basic Parental Contribution Determination Table, appearing below, may be made by the Minister of Justice on the expiry of 45 days following this publication.

The draft Regulation replaces Schedule I to the Regulation respecting the Basic Parental Contribution Determination Table (chapter C-25.01, r. 12) so as to determine for the year 2018, according to the fiscal parameters of 2017, the basic contribution of parents as well as the amount of the basic deduction provided therein.

Study of the matter has shown no significant impact on the public and on enterprises, including small and medium-sized businesses.

Further information on the draft Regulation may be obtained by contacting Annie Gauthier, Direction des orientations et politiques, Ministère de la Justice, 1200, route de l'Église, 9e étage, Québec (Québec) G1V 4M1; telephone: 418 6465580, extension 20172; fax: 418 646-4894; email: annie.gauthier@justice.gouv.qc.ca

Any person wishing to comment on the matter is requested to submit written comments within the 45-day period to the Minister of Justice, 1200, route de l'Église, 9e étage, Québec (Québec) G1V 4M1.

STÉPHANIE VALLÉE,
Minister of Justice

Regulation to amend the Regulation respecting the Basic Parental Contribution Determination Table

Code of Civil Procedure
(chapter C-25.01, art. 443)

1. The Regulation respecting the Basic Parental Contribution Determination Table (chapter C-25.01, r. 12) is amended by replacing Schedule I by the Schedule attached to this Regulation.

2. This Regulation comes into force on 1 January 2018.

SCHEDULE I
(s. 1)
BASIC PARENTAL CONTRIBUTION DETERMINATION TABLE
(Effective as of 1 January 2018)

Disposable Income of Parents ($)	Basic Annual Contribution ($) Number of Children					
	1 child	2 children	3 children	4 children	5 children	6 children[1]
1 - 1 000	500	500	500	500	500	500
1 001 - 2 000	1 000	1 000	1 000	1 000	1 000	1 000
2 001 - 3 000	1 500	1 500	1 500	1 500	1 500	1 500
3 001 - 4 000	2 000	2 000	2 000	2 000	2 000	2 000
4 001 - 5 000	2 500	2 500	2 500	2 500	2 500	2 500
5 001 - 6 000	2 970	3 000	3 000	3 000	3 000	3 000
6 001 - 7 000	3 040	3 500	3 500	3 500	3 500	3 500
7 001 - 8 000	3 070	4 000	4 000	4 000	4 000	4 000
8 001 - 9 000	3 110	4 500	4 500	4 500	4 500	4 500
9 001 - 10 000	3 160	4 940	5 000	5 000	5 000	5 000
10 001 - 12 000	3 320	5 150	6 000	6 000	6 000	6 000
12 001 - 14 000	3 460	5 380	6 380	7 000	7 000	7 000
14 001 - 16 000	3 650	5 620	6 720	7 810	8 000	8 000
16 001 - 18 000	3 830	5 910	7 100	8 300	9 000	9 000
18 001 - 20 000	4 040	6 220	7 520	8 840	10 000	10 000
20 001 - 22 000	4 320	6 630	8 060	9 470	10 890	11 000
22 001 - 24 000	4 580	7 040	8 570	10 080	11 620	12 000
24 001 - 26 000	4 840	7 450	9 090	10 720	12 370	13 000
26 001 - 28 000	5 070	7 740	9 550	11 310	13 110	14 000
28 001 - 30 000	5 290	8 050	9 920	11 830	13 730	15 000
30 001 - 32 000	5 470	8 300	10 320	12 350	14 350	16 000
32 001 - 34 000	5 650	8 540	10 690	12 790	14 920	17 050
34 001 - 36 000	5 840	8 760	11 010	13 240	15 470	17 700
36 001 - 38 000	5 970	9 010	11 260	13 520	15 800	18 060
38 001 - 40 000	6 160	9 210	11 510	13 830	16 140	18 440
40 001 - 42 000	6 330	9 420	11 800	14 160	16 520	18 880
42 001 - 44 000	6 520	9 690	12 090	14 480	16 890	19 280
44 001 - 46 000	6 710	9 920	12 390	14 860	17 320	19 800
46 001 - 48 000	6 910	10 230	12 760	15 310	17 860	20 410
48 001 - 50 000	7 110	10 470	13 110	15 750	18 380	21 010
50 001 - 52 000	7 320	10 740	13 470	16 210	18 920	21 660
52 001 - 54 000	7 520	11 030	13 830	16 620	19 430	22 240
54 001 - 56 000	7 710	11 290	14 180	17 110	20 000	22 900
56 001 - 58 000	7 910	11 560	14 540	17 500	20 490	23 470
58 001 - 60 000	8 110	11 810	14 870	17 940	21 010	24 070
60 001 - 62 000	8 310	12 080	15 210	18 350	21 500	24 620
62 001 - 64 000	8 480	12 320	15 570	18 800	22 030	25 270
64 001 - 66 000	8 670	12 590	15 920	19 230	22 530	25 840
66 001 - 68 000	8 880	12 820	16 210	19 620	23 020	26 430
68 001 - 70 000	9 020	13 050	16 540	20 050	23 560	27 060

Disposable Income of Parents ($)	Basic Annual Contribution ($) Number of Children					
	1 child	2 children	3 children	4 children	5 children	6 children[1]
70 001 - 72 000	9 180	13 290	16 870	20 430	24 020	27 600
72 001 - 74 000	9 350	13 510	17 190	20 850	24 540	28 200
74 001 - 76 000	9 550	13 730	17 500	21 280	25 060	28 830
76 001 - 78 000	9 670	13 900	17 730	21 580	25 400	29 230
78 001 - 80 000	9 800	14 090	17 990	21 880	25 780	29 670
80 001 - 82 000	9 920	14 250	18 200	22 160	26 110	30 080
82 001 - 84 000	10 030	14 400	18 420	22 430	26 450	30 460
84 001 - 86 000	10 190	14 550	18 630	22 680	26 760	30 820
86 001 - 88 000	10 280	14 670	18 790	22 910	27 030	31 150
88 001 - 90 000	10 350	14 790	18 930	23 080	27 230	31 390
90 001 - 92 000	10 430	14 900	19 120	23 310	27 540	31 740
92 001 - 94 000	10 520	15 010	19 270	23 510	27 730	31 970
94 001 - 96 000	10 620	15 130	19 430	23 720	28 010	32 290
96 001 - 98 000	10 690	15 230	19 540	23 890	28 210	32 560
98 001 - 100 000	10 770	15 320	19 680	24 030	28 400	32 760
100 001 - 102 000	10 850	15 410	19 830	24 220	28 630	33 030
102 001 - 104 000	10 910	15 500	19 960	24 370	28 840	33 260
104 001 - 106 000	10 990	15 600	20 080	24 560	29 040	33 510
106 001 - 108 000	11 050	15 700	20 230	24 730	29 270	33 760
108 001 - 110 000	11 120	15 790	20 380	24 900	29 470	34 000
110 001 - 112 000	11 210	15 880	20 510	25 050	29 690	34 260
112 001 - 114 000	11 280	15 960	20 650	25 240	29 930	34 500
114 001 - 116 000	11 370	16 070	20 790	25 410	30 130	34 750
116 001 - 118 000	11 450	16 160	20 930	25 570	30 350	35 010
118 001 - 120 000	11 520	16 260	21 080	25 780	30 560	35 240
120 001 - 122 000	11 590	16 350	21 200	25 930	30 770	35 490
122 001 - 124 000	11 660	16 460	21 340	26 110	31 000	35 730
124 001 - 126 000	11 730	16 550	21 480	26 260	31 220	36 000
126 001 - 128 000	11 820	16 640	21 630	26 450	31 440	36 260
128 001 - 130 000	11 890	16 740	21 770	26 610	31 640	36 500
130 001 - 132 000	11 970	16 850	21 930	26 790	31 860	36 750
132 001 - 134 000	12 030	16 930	22 040	26 970	32 070	36 980
134 001 - 136 000	12 100	17 010	22 160	27 120	32 260	37 210
136 001 - 138 000	12 180	17 090	22 310	27 260	32 480	37 440
138 001 - 140 000	12 240	17 190	22 430	27 440	32 670	37 680

Disposable Income of Parents ($)	Basic Annual Contribution ($) Number of Children					
	1 child	2 children	3 children	4 children	5 children	6 children[1]
140 001 - 142 000	12 310	17 260	22 550	27 590	32 870	37 910
142 001 - 144 000	12 380	17 370	22 690	27 750	33 080	38 140
144 001 - 146 000	12 450	17 450	22 810	27 890	33 290	38 380
146 001 - 148 000	12 530	17 540	22 960	28 090	33 470	38 610
148 001 - 150 000	12 600	17 630	23 080	28 240	33 700	38 850
150 001 - 152 000	12 670	17 720	23 210	28 390	33 880	39 070
152 001 - 154 000	12 730	17 800	23 330	28 560	34 090	39 290
154 001 - 156 000	12 810	17 900	23 490	28 720	34 310	39 550
156 001 - 158 000	12 880	18 000	23 610	28 870	34 490	39 780
158 001 - 160 000	12 950	18 080	23 720	29 040	34 710	40 020
160 001 - 162 000	13 010	18 150	23 870	29 210	34 920	40 250
162 001 - 164 000	13 090	18 240	24 010	29 380	35 110	40 470
164 001 - 166 000	13 160	18 350	24 140	29 530	35 320	40 730
166 001 - 168 000	13 220	18 440	24 270	29 690	35 540	40 950
168 001 - 170 000	13 290	18 520	24 380	29 860	35 730	41 180
170 001 - 172 000	13 380	18 610	24 530	30 020	35 940	41 430
172 001 - 174 000	13 450	18 710	24 660	30 190	36 130	41 650
174 001 - 176 000	13 520	18 790	24 800	30 350	36 360	41 910
176 001 - 178 000	13 590	18 890	24 910	30 520	36 560	42 140
178 001 - 180 000	13 660	18 990	25 080	30 680	36 760	42 380
180 001 - 182 000	13 740	19 070	25 200	30 840	36 970	42 620
182 001 - 184 000	13 810	19 170	25 330	31 000	37 180	42 840
184 001 - 186 000	13 870	19 260	25 470	31 170	37 370	43 090
186 001 - 188 000	13 950	19 340	25 610	31 340	37 590	43 330
188 001 - 190 000	14 020	19 430	25 730	31 490	37 800	43 570
190 001 - 192 000	14 090	19 530	25 860	31 680	38 000	43 800
192 001 - 194 000	14 160	19 620	25 980	31 830	38 200	44 040
194 001 - 196 000	14 220	19 690	26 130	31 970	38 390	44 250
196 001 - 198 000	14 280	19 780	26 240	32 120	38 560	44 460
198 001 - 200 000	14 350	19 860	26 360	32 270	38 770	44 670
Disposable income greater than $200,000 [2]	14 350 plus 3.5% of excess amount	19 860 plus 4.5% of excess amount	26 360 plus 6.5% of excess amount	32 270 plus 8.0% of excess amount	38 770 plus 10.0% of excess amount	44 670 plus 11.5% of excess amount

(1) If the number of children is greater than 6, the basic parental contribution is determined by multiplying the difference between the amounts prescribed in the Table for 5 and 6 children by the number of additional children and by adding the product thus obtained to the amount prescribed for 6 children (s. 1, 2nd par. of the Regulation respecting the Basic Parental Contribution Determination Table).

(2) For the part of income exceeding $200,000, the percentage indicated is shown for information purposes only. The court may, if it deems it appropriate, fix for that part of the disposable income an amount different from the amount that would be obtained using that percentage (s. 10 of the Regulation respecting the determination of child support payments (chapter C-25.01, r. 0.4)).

Amount of the basic deduction for the purpose of calculating disposable income (line 301 on the Child Support Determination Form) effective as of 1 January 2018: $11,155

103142

Draft Regulation

Mining Act
(chapter M-13.1)

Petroleum, natural gas and underground reservoirs — Revocation

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), that the Regulation to revoke the Regulation respecting petroleum, natural gas and underground reservoirs, appearing below, may be made by the Government on the expiry of 45 days following this publication.

The draft Regulation revokes the Regulation respecting petroleum, natural gas and underground reservoirs (chapter M-13.1, r. 1) following the coming into force of the Petroleum Resources Act (2016, chapter 35, s. 23), the Regulation respecting petroleum exploration, production and storage licences, and the pipeline construction or use authorization, the Regulation respecting exploration, production and storage activities on land and the Regulation respecting exploration, production and storage activities in a body of water. The Act and the Regulations must come into force at the same time.

Study of the matter shows that the draft Regulation will have an impact on enterprises currently holding rights to search and produce petroleum and gas or operate an underground reservoir to the extent that they will be subject to the regulations pertaining to the Petroleum Resources Act.

Further information on the draft Regulation may be obtained by contacting Marie-Eve Bergeron, Director, Bureau des hydrocarbures, Ministère de l'Énergie et des Ressources naturelles, 5700, 4e Avenue Ouest, bureau A-422, Québec (Québec) G1H 6R1; telephone: 418 627-6385, extension 8131; toll free: 1 800 363-7233, extension 8131; fax: 418 644-1445; email: marie-eve.bergeron@mern.gouv.qc.ca

Any person wishing to comment on the draft Regulation is requested to submit written comments within the 45-day period to Luce Asselin, Associate Deputy Minister for Energy, Ministère de l'Énergie et des Ressources naturelles, 5700, 4e Avenue Ouest, bureau A-407, Québec (Québec) G1H 6R1.

PIERRE ARCAND,
Minister of Energy and
Natural Resources and
Minister responsible for the Plan Nord

Regulation to revoke the Regulation respecting petroleum, natural gas and underground reservoirs

Mining Act
(chapter M-13.1, s. 306)

1. The Regulation respecting petroleum, natural gas and underground reservoirs (chapter M-13.1, r. 1) is revoked.

2. This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

103135

Draft Regulation

Petroleum Resources Act
(2016, chapter 35)

Petroleum exploration, production and storage in a body of water — Making

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), that the Regulation respecting petroleum exploration, production and storage in a body of water, appearing below, may be made by the Government on the expiry of 45 days following this publication.

The draft Regulation sets the conditions for the granting and exercise of the authorizations required for petroleum exploration, production and storage in a body of water, except a marine environment, and sets the fees payable. The draft Regulation also determines the protective and safety measures that must be implemented. In addition, it establishes the content of the permanent well or reservoir closure and site restoration plan, the time at which the work planned in the plan must be carried out, and the duration, form and terms of the related guarantee.

Study of the matter shows that the draft Regulation will have an impact on enterprises currently holding rights to explore for and produce petroleum and gas or operate an underground reservoir that will have to obtain authorizations to carry out certain activities that were not regulated, in particular the carrying out of stratigraphic surveys, fracturing and reconditioning. The enterprises will also have to furnish a guarantee representing the totality of the costs for well or reservoir closure and site restoration. They will have to contend with greater accountability, in particular in respect of the information sent to the Minister of Energy and Natural Resources. The additional requirements may impose, in certain cases, a significant burden.

Further information on the draft Regulation may be obtained by contacting Marie-Eve Bergeron, Director, Bureau des hydrocarbures, Ministère de l'Énergie et des Ressources naturelles, 5700, 4e Avenue Ouest, bureau A-422, Québec (Québec) G1H 6R1; telephone: 418 627-6385, extension 8131; toll free: 1 800 363-7233, extension 8131; fax: 418 644-1445; email: marie-eve.bergeron@mern.gouv.qc.ca

Any person wishing to comment on the draft Regulation is requested to submit written comments within the 45-day period to Luce Asselin, Associate Deputy Minister for Energy and Mines, Ministère de l'Énergie et des Ressources naturelles, 5700, 4e Avenue Ouest, bureau A-407, Québec (Québec) G1H 6R1.

PIERRE ARCAND,
Minister of Energy and
Natural Resources and
Minister responsible for the Plan Nord

Regulation respecting petroleum exploration, production and storage in a body of water

Petroleum Resources Act

(2016, chapter 35, s. 23; ss. 10, 26, 68 to 70, 71, 2nd par., 73, 1st and 2nd pars., 76, 1st and 2nd pars., 78, 1st and 2nd pars, 80, 84, 2nd par., 85, 88, 90, 2nd par., 91, 92, 3rd par., 93, 95, 96, 100, 2nd par., 102, 103, 2nd par., 128, 1st and 3rd pars., 131, 1st par., 191, 207, pars.1 to 3, 5 and 6)

CHAPTER I
GENERAL

1. This Regulation establishes the conditions of exercise of the petroleum exploration, production and storage activities, while ensuring the safety of persons and property, environmental protection, and optimal recovery of the resource.

It applies to activities carried out in a body of water, except in a marine environment.

2. In this Regulation,

"activity site" means a zone grouping one or more drill holes and the land laid out in the immediate vicinity to receive the equipment and infrastructures necessary for the operations carried out in the drill holes or, in the case of a survey, the zone corresponding to the perimeter of the area of the survey; (*site des activités*)

"actual vertical depth" means the vertical distance from a point in the drill hole to a point on the surface; (*profondeur verticale réelle*)

"annular space" means a space in the shape of a ring between the outside of a casing and the wall of the drill hole or between two casing walls inserted one inside the other; (*espace annulaire*)

"blowout preventer" means all the special valves or other similar mechanical devices, installed between the wellhead and the drill floor, and intended to block, control and monitor the drill hole in the event of a blowout; (*bloc obturateur de puits*)

"casing shoe" means a metal annular part installed at the bottom of a casing string; (*sabot de tubage*)

"casing string" means the entire casing of a drill hole composed of a number of tubing sections generally linked by threaded connections; (*colonne de tubage*)

"completion" means all the work carried out in a well or a section of well to allow its start up once the drilling activities are completed, excluding fracturing; (*complétion*)

"concentration of residential, commercial, industrial or service activities" means the grouping of 5 lots or more on which one or more residential, permanent or seasonal, commercial, industrial or service activities are present, and a lot including 5 residential buildings or more; (*concentration d'activités résidentielles, commerciales, industrielles or de services*)

"conductor casing" means the first casing installed at the time of the construction of a drill hole to prevent the collapse of unconsolidated formations near the surface and to provide structural support for the wellhead equipment and for the subsequent casing strings; (*tubage conducteur*)

"deflector" means a sealing and collection device comprising pipes and valves, placed near the wellhead and used to control a shallow blowout and keep the fluids away from the drill hole; (*déflecteur*)

"directional drilling" means a hole drilled at an angle greater than 10° from vertical; (*forage directionnel*)

"drill hole" means a well or a stratigraphic survey; (*trou de forage*)

"drilling fluid" means the sludge circulating in the drill rod and coming up in the annular space during drilling to remove cuttings, to cool and lubricate the bit and to maintain the desired pressure in the drill hole; (*fluide de forage*)

"drilling rig" means the equipment used to drill a well which includes in particular a derrick, a winch, a rotary table, a drilling fluid pump, a blowout prevention system, and power, control and monitoring systems; (*appareil de forage*)

"drill-stem test" means an operation for collecting samples of fluids contained in rock to determine flow characteristics and measure reservoir pressures, without modifying the drill hole equipment; (*essai aux tiges*)

"emanation at the surface casing blowhole" means the flow of fluids from the annular space between the surface casing and an internal casing; (*émanation à l'évent du tubage de surface*)

"flow-back water" means water produced by petroleum exploration and production activities that comes up to the surface of the drill hole; (*eau de reflux*)

"flushing fluid" means fluid designed to clean the drill hole and separate the drilling fluids from the cement flurry; (*fluide de chasse*)

"formation fluid" means a fluid in a natural state or injected present in the pores, fractures, faults, caves or other porosities of the formation; (*fluide de formation*)

"fracturing half-length" means the radial distance separating the well from the outside end of a fracture propagated by fracturing; (*demi-longueur de fracture*)

"fracturing test" means a geomechanical survey carried out before the fracturing that allows to anticipate the length of fractures, the reaction of geological units to fracturing and the geological confinement potential of the fracturing fluids by the sealing rock, and to find out at which pressure the rock starts fracturing; (*essai de fracturation*)

"gas migration" means the gas flow detectable on the surface, outside the farthest casing string; (*migration de gaz*)

"guide tube" means a light tube used to prevent the collapse or washout of soft ground near the surface of a drill hole, but is not used to control the well; (*tube guide*)

"horizontal well" means a well whose drill hole angle, from vertical, exceeds 80° and includes a section extended from the drill hole in the reservoir; (*puits horizontal*)

"injection well" means a well used to inject fluids into an underground formation to improve the recovery of the petroleum; (*puits d'injection*)

"injectivity test" means a procedure to determine the rate and pressure at which fluids may be pumped to obtain the permeability of a zone without fracturing the formation; (*essai d'injectivité*)

“integrity” means, in the case of a drill hole, the condition that ensures containment and prevention of a blowout of fluids in the underground or surface formations; (*intégrité*)

“intermediate casing” means a casing installed before reaching the final depth of the drill hole to isolate unstable hole sections, lost circulation zones, overpressured or underpressured zones or production zones; (*tubage intermédiaire*)

“measured depth” means the length of travel of the drill hole; (*profondeur mesurée*)

“observation well” means a well used to monitor the conditions of one or more geological formations, to determine the decline characteristics of a reservoir or to monitor the other wells of a reservoir, except an observation well for groundwater within the meaning of the Water Withdrawal and Protection Regulation; (*puits d’observation*)

“primary protective barrier” means the first protective barrier of a well constituted of one or more components that, collectively, are designed and installed to contain and isolate fluids inside a well; (*barrière de protection primaire*);

“production casing” means a casing installed to isolate the production zones and provide a duct through which the well is completed and operated; (*tubage de production*)

“production tubing” means a steel tube placed inside casings used as a duct through which fluids are routed from the production zones to the surface or, in the case of an injection well, from the surface to the production zones; (*tube de production*)

“re-entry” means the new drilling in a well already drilled and for which the drilling rig has been released; (*réentrée*);

“seal” means an inflatable device used to close a drill hole or an annular space; (*garniture d’étanchéité*)

“secondary protective barrier” means a second protective barrier designed and installed to ensure a protection and allow control of the well in the event of a mechanical failure of the primary protective barrier; (*barrière de protection secondaire*)

“spacer fluid” means any liquid used to physically separate a liquid or a specific use component from another; (*fluide de séparation*)

“surface casing” means a steel casing in a competent formation after the installation of the conductor casing to prevent the walls from collapsing and protect against underground water contamination; (*tubage de surface*)

“temporary interruption” means the interruption of work for a short period between 2 activities or 2 operations; (*interruption provisoire*)

“usable groundwater” means groundwater whose total concentration in dissolved solids is less than 4,000 mg / l; (*eau souterraine exploitable*)

“well logging” means measurement or recording based on the depth of a characteristic of a geological formation carried out from a drill hole; (*diagraphie*)

"wellhead" means a device installed between the top part of the surface casing and the blowout preventer during the construction phase of the drill hole; it also includes the coil, valve and adaptor system that controls the pressure in a drill hole; (*tête de puits*)

"wellhead value" means the average retail sale price of the substance extracted, excluding all taxes and less the average transportation costs from the well to the places of delivery, measuring costs and, if applicable, purification costs. (*valeur au puits*)

3. For the purposes of this Regulation, the base of the usable groundwater is set at 200 m below the surface, unless a hydrogeological study or an analysis of an adjacent drill hole shows that the deepest base of the aquifer of the usable groundwater is located at a different depth.

4. All documents that must be sent to the Minister under this Regulation must also be sent in an electronic version, in PDF, excluding well logging raw data that must be in ASCII files. The maps produced by a geoscience information system software must be sent in a shapefile or in PDF.

5. The measurement units in the documents required under this Regulation must be expressed according to the International System (SI).

CHAPTER II
SAFETY AND PROTECTIVE MEASURES AND INCIDENT NOTICE

DIVISION I
SAFETY AND PROTECTIVE MEASURES

6. A licence holder ensures that there is a sufficient number of qualified persons and that the persons have received the training needed to successfully complete the activities planned safely and in a manner to protect the environment.

7. A licence holder must ensure that the equipment and components on the activity site are

(1) in good condition and used for the purposes specified, in accordance with the requirements of the manufacturer;

(2) free from any alteration that may endanger the safety of persons and property, and environmental protection; and

(3) entered in a list that is updated and kept on the activity site.

8. A licence holder must ensure that vessels, platforms, navigation equipment and equipment are cleaned before their mobilization on the activity site. The cleaning concerns, in particular, the hull, tools and equipment likely to come into contact with the body of water, and the ballast and water they contain.

9. A licence holder must ensure that adequate procedures and equipment are in place to

(1) verify and control the pressures to which the equipment is submitted during the activities;

(2) detect a liquid flow, or a gas emanation or migration; and

(3) control at all times a drill hole.

10. In the case of a loss of control of a drill hole, a licence holder must close the preventer valves of all other drill holes of the activity site until the drill hole is again under control.

11. A licence holder must install a communication and information exchange system that ensures,

(1) during a change of shift, the transmission of any information pertaining to the conditions and mechanical or operational problems likely to have an impact on the safety of persons and property, and environmental protection;

(2) that every person on the activity site is familiar with the safety instructions and evacuation procedures in an emergency; and

(3) that every person responsible for a measure under the emergency response plan provided for in subparagraph 4 of the second paragraph of section 27 is familiar with the system.

12. A licence holder must ensure that

(1) radio communications with the vessels and platforms near the drilling installation are maintained;

(2) an escape route is established from each work station and is accessible to every person present therein; and

(3) the manuals and any document needed for the safe performance of the work are readily available on each vessel or platform.

13. A licence holder must ensure that any support craft is designed, constructed and maintained to fulfill its support role and to operate safely in reasonably foreseeable conditions.

A support craft may not come closer than 500 m from the installation without the consent of the authorization holder. The authorization holder must take all the measures necessary to notify the persons responsible for the vessels or aircraft present in that zone of the facilities therein and associated risks.

14. A licence holder must ensure that fuel, safety-related chemicals, drilling fluids, cement and other consumables necessary for the carrying out of the ongoing activities are readily available and stored on the activity site in quantities sufficient for any reasonably foreseeable emergency condition.

The licence holder must also ensure that the products used for any work, in particular, explosives, fuel, chemical substances and drilling fluids are stored, handled and transported in a manner that prevents their deterioration and ensures the safety of persons and property, and environmental protection.

15. A licence holder must, for the activities following the cementing of the surface casing, use a biocide treatment on the fluids injected in a drill hole to reduce the action of microorganisms and prevent corrosion by hydrogen sulfide (H_2S).

The Minister may exempt the holder from that requirement if the holder demonstrates that there is no risk of bacterial corrosion.

16. A licence holder must also ensure that the residual materials from the activities are stored, handled, transported, treated and disposed of so as to ensure the safety of persons and property, and environmental protection.

The licence holder also ensures that the activities are carried out so as to reduce to a minimum the production of residual materials.

17. Smoking is prohibited on the activity site, except in locations designated for that purpose by a licence holder.

18. A licence holder must ensure that the activity site and access roads are kept in good condition and that no danger results from the layout of the equipment and installations.

The activity site must also be laid out and maintained so that it is accessible at all times to the emergency teams.

19. A licence holder must secure the drill hole and the activity site during a temporary interruption of activities in order to ensure the safety of persons and property, and environmental protection.

During the temporary interruption, the holder must use a wellhead that must be closed, unless the drill hole is cased over its entire length and has not been perforated.

20. Where a well poses a risk for the safety of persons and property, and environmental protection, a licence holder must carry out corrective activities in compliance with Chapter X.

A well is considered to pose a risk if any of the following situations is detected:

(1) there is an emanation at the surface casing blowhole and that emanation has one of the following characteristics:

(a) its stabilized flow is equal to or greater than 50 m^3 / day;

(b) the emanation is not only composed of gas;

(c) it contains hydrogen sulfide (H_2S) whose concentration is equal to or greater than 6 µg/m^3 for 4 minutes;

(d) it is produced by a failure of a seal or casing;

(2) the stabilized closing pressure at the wellhead is equal to or greater than half the fracturing pressure measured at the elevation of the surface casing shoe or, if that elevation is unknown, at 11 kPa/m multiplied by the actual vertical depth of the surface casing;

(3) there is a gas migration that represents a fire hazard or a risk to the safety of persons and property, and environmental protection.

21. Where a licence holder uses a wellhead, that wellhead must comply with CSA Standard Z625, Well design for petroleum and natural gas industry systems, except a storage wellhead that must comply with CSA Standard Z341, Storage of hydrocarbons in underground formations, published by the Canadian Standards Association.

DIVISON II
INCIDENT NOTICE

22. A licence holder must immediately notify the Minister where any of the following incidents occurs:

(1) damage to the integrity of a drill hole;

(2) a casing corrosion problem;

(3) an unexpected loss of pressure in a drill hole;

(4) the detection of hydrogen sulfide (H_2S);

(5) an accidental blowout or emission;

(6) liquid flow;

(7) the detection of any of the situations provided for in the second paragraph of section 18;

(8) a fire or an explosion;

(9) an accidental spill;

(10) vandalism;

(11) the triggering of the emergency response plan provided for in subparagraph 4 of the second paragraph of section 27;

(12) damage to private property;

(13) any other event likely to have an impact on the safety of persons and property, and environmental protection.

The notice must contain the corrective measures taken by the holder or those planned with their schedule.

In the case of a corrosion problem, the holder must inform the Minister of the type of corrosion, the depth interval and the cause.

In the case of a blowout, the holder must inform the Minister of the depth, volume, duration and density of the drilling fluid necessary to control the drill hole.

In the case of damage to private property, the licence holder must also notify the owner.

23. After having received an incident notice under section 22, the Minister may require that the licence holder send to the Minister an event report stating the facts, evaluating the consequences, listing possible causes and proposing mitigation measures and measures to prevent reoccurrence of the event.

CHAPTER III
PROVISIONS SPECIFIC TO ACTIVITY AUTHORIZATIONS AND APPROVALS

24. A licence holder must ensure that all depth measurements are taken from a single reference point. The holder must always indicate the reference point from which those measurements are taken.

25. A licence holder applying for an authorization or an approval for an activity must, in the application submitted to the Minister, demonstrate that the planned work will be carried out according to generally recognized best practices to ensure the safety of persons and property, environmental protection and the optimal recovery of the resource.

26. A licence holder must keep a copy of authorizations and approvals on the activity site for the work period.

27. The application for authorization or approval of an activity, except the approval of the enhanced petroleum recovery project, must be accompanied by a safety and community involvement program detailing elements likely to have an impact on the safety of persons and property.

The safety and community involvement program must include, in particular,

(1) a plan at a scale of 1:500 showing the activity site, including, in particular,

(a) the dimensions of the site;

(b) access roads;

(c) the actual or proposed location of the collar of the drill hole covered by the authorization or approval application; and

(d) existing or proposed storage equipment, installations, infrastructures and basins;

(2) a description of the mitigation measures that will be implemented to minimize disruptions for the local communities;

(3) an emergency response plan compliant with CSA Standard Z731, Emergency Preparedness and Response, published by the Canadian Standards Association;

(4) a plan for communication with the local communities revised by the monitoring committee;

(5) an estimate of the economic benefits for the region; and

(6) any other information or document requested by the Minister.

For the application for a geophysical surveying authorization, the safety and community involvement program must also include a schedule of the road traffic, indicating the volume of trucking and the period during which it will take place and a map showing routes. However, it does not have to include the elements provided for in subparagraphs 1 and 3 of the second paragraph.

CHAPTER IV
MEASUREMENT

28. A licence holder ensures that the rate of flow and the volume of the following fluids are measured:

(1) the fluid extracted from a well;

(2) the fluid injected into and withdrawn from a well;

(3) the fluid that enters, leaves, is used or is flared, vented or burned in an installation.

The measurements recorded must be expressed at a temperature of 15° C and a pressure of 101.325 kPa.

29. A licence holder ensures that the measurements are taken in accordance with the flow system, flow calculation procedure and flow allocation procedure.

The term "flow system" means the flow meters and auxiliary equipment attached to the flow meters, fluid sampling devices, test equipment, the master meter and meter prover used to measure and record the rate and volumes at which fluids are

(1) produced from a pool or withdrawn from an underground reservoir;

(2) injected into a pool or stored in an underground reservoir;

(3) used as a fuel;

(4) used for artificial lift; or

(5) flared or transferred from an installation.

30. A licence holder must notify the Minister at least 15 days before the calibration of a meter prover or a master meter.

A copy of the calibration certificate is sent to the Minister within 7 days following the calibration.

31. A licence holder who mixes fluids from a well or a group of wells must, 30 days before measuring the production flow of the pool, notify the Minister of the method, the frequency and the duration of the measurements, indicating the manner in which the total production of each of the mixed fluids will be allocated to each of the wells.

32. Where a well goes through a number of pools or formations, a licence holder ensures that the production of each pool or formation is allocated and the injection into each pool and each formation is allocated.

CHAPTER V
GEOPHYSICAL SURVEYING AUTHORIZATION

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

33. A licence holder who wishes to obtain a geophysical surveying authorization must apply to the Minister, in writing, at least 30 days before starting the work.

If the surveying involves line cutting, the application must be submitted to the Minister at least 60 days before starting the work.

34. The application must contain

(1) the name and contact information of the holder and the licence number; and

(2) the work schedule and an estimate of the realization costs.

35. The application must be accompanied by

(1) the demonstration that the separation distances provided for in section 41 are complied with;

(2) a bathymetric map at a sufficient scale showing, in particular,

(a) the perimeter of the licence;

(b) the territories of the municipalities in which surveying is conducted, if applicable;

(c) the St. Lawrence River Seaway included in the territory covered by the licence;

(d) the activity site and the survey lines, and the traverses with their nature, numbering and length; and

(e) the points of energy source and their numbering;

(3) the geophysical surveying technical program provided for in section 36 signed and sealed by a geologist or an engineer;

(4) payment of the fee of $1,030; and

(5) any other information or document requested by the Minister.

If required and based on the area of the surveying, the licence holder may, for the purposes of subparagraph 2 of the first paragraph, submit a number of maps at different scales.

36. The geophysical surveying technical program must include

(1) the name and contact information of the geologist or the engineer responsible for the program;

(2) the name, profession and functions of the persons who prepared or revised the program;

(3) the name and contact information of the enterprises charged with carrying out the data acquisition, processing and interpretation work;

(4) the name of the region in which the surveying will be conducted;

(5) a description of the geological context and the degree of maturity of the exploration in the territory concerned;

(6) the type of the proposed surveying and the energy source used;

(7) the objectives of the surveying including, in particular, the acquisition parameters, the structures, the geological formations targeted and the investigation depth;

(8) the area covered by the surveying or the total number of linear kilometres to be surveyed;

(9) the coordinates of the ends of each survey line or the perimeter of the area of the surveying according to the NAD83 map reference system;

(10) the required flexibility margin on either side of the survey line for positioning the lines indicated on the map;

(11) the method used to determine the location of the lines;

(12) a chronological and detailed description of the work to be carried out;

(13) the time at which the work will be carried out;

(14) a description of the equipment to be used;

(15) the type and name of the vessel or platform, its registration number, the name of its owner and the estimated number of persons on board;

(16) the type of navigation equipment used and its specifications;

(17) the accuracy of the navigation and positioning systems; and

(18) the meteorological and hydrographic conditions anticipated for the work period.

DIVISION II
TIME PERIODS AND NOTICE OF THE START OF THE WORK

37. The authorization holder must, within 12 months after the Minister granted the authorization, start the geophysical surveying work.

The work is deemed to have started as soon as the first step provided in the work schedule is initiated.

The Minister may grant an additional time period for carrying out the surveying if the holder demonstrates the need therefor.

38. The authorization holder must, at least 7 days before the start of the work, notify the Minister of the date anticipated for the start of the work.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

39. The authorization holder must, at least 24 hours before, notify the Minister of the work completion date if the geophysical surveying work is completed or temporarily interrupted, and in the latter case, the holder must also notify the Minister of the work resumption date.

DIVISION III
CONDITIONS OF EXERCISE

40. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by a geologist or an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

A supplementary agreement to the technical program is not required in the following cases:

(1) a change in the position of survey lines, as long as the position remains within the flexibility margin set under paragraph 10 of section 36;

(2) the cancellation of a firing.

In the situations provided for in the third paragraph, the holder immediately notifies the Minister of the change to the technical program.

41. The authorization holder who uses an explosive energy source must not position the shot holes in the right of way of the St. Lawrence River waterway. The holder must also not position them

(1) less than 10 m from a pipe that is not made of concrete;

(2) less than 15 m from a submerged telecommunication infrastructure or any other submerged installation or infrastructure of the same type;

(3) less than 32 m from a pipeline or another installation or infrastructure of the same type, the collar of an existing drill hole or, if the charge exceeds 2 kg, less than a distance corresponding to the following formula:

A + B × 4 = C

where

A is 32 m

B is the explosive charge, in kg

C is the minimum separation distance;

(4) less than 180 m from a high-capacity dam, within the meaning of the Dam Safety Act (chapter S-3.1.01);

(5) less than 200 m from a transmission line having a voltage equal to or greater than 69,000 V; or

(6) less than 200 m from a concrete pipe, if the explosive charge exceeds 12 kg.

The distances must be measured horizontally, in a straight line, from each energy source to the nearest point of the elements referred to in the first paragraph.

If the individual points of the energy source cannot be located precisely, the minimum distances must be measured from the survey line to the nearest point of the elements referred to in the first and second paragraphs.

The Minister may allow the reduction of the distances if the authorization holder demonstrates to the Minister that an effective protective measure reduces risks.

42. In the case of a surveying involving the use of an air gun as an energy source, the authorization holder must ensure

(1) that, during the surveying, the air vessels, air manifolds, air lines and electrical lines and the compressor of the air gun system are regularly inspected for signs of abrasion and wear; where the compressor, a vessel, a manifold, an air line or an electrical line is defective, it must be promptly replaced or repaired if possible;

(2) where there is air pressure in the air gun, the pressure is maintained as low as is practicable but sufficiently high to ensure that the air gun remains seated and that there is no danger of accidental firing; and

(3) that, where a firing is carried out from the deck of a vessel or of a platform, the person charged with the use and maintenance of the gun is present.

43. Where more than 1 air gun is used as a seismic energy source, the authorization holder must establish a procedure for the connection of each air gun to its air line and pressure control valve.

44. Firing may be done from a vessel or a platform if the person in charge of safety has authorized it.

No firing may be done where the air gun is submerged if divers are within a radius of 1,500 m from the gun.

45. Before firing a gas exploder or an air gun, the person responsible must ensure that

(1) a siren is sounded before the firing to alert workers of an impending firing in time to allow evacuation of an area within a radius of 8 m from the firing site;

(2) not more than 1 air gun is fired at one time;

(3) before the firing, an inspection is done to ensure that the area within a radius of 8 m from the firing site is clear of unauthorized workers;

(4) the pipes and hoses connected to the gun that are subject to high pressure are secured or equipped with safety chains to prevent whipping of the pipes or hoses when air pressure is injected into them;

(5) the air pressure in the air gun is less than 3.5 MPa; and

(6) the person in charge of the vessel or platform is advised that the firing is being carried out.

46. No maintenance of the air gun is carried out until

(1) the air pressure in the air gun and the air line connected to the air gun has been completely bled off;

(2) the shuttle of the air gun can be moved freely by use of a wooden safety tool to confirm that.

47. In the case of surveying involving the use of a gas exploder as an energy source, the authorization holder must ensure that

(1) there is no welding or brazing in any area that is in close proximity to any gas cylinders or inflammable liquid tanks;

(2) gas storage areas are properly ventilated;

(3) all valves and fittings used on a gas cylinder are approved by the manufacturer of the cylinder for use on the cylinder;

(4) all equipment used for handling explosives is approved by the manufacturer of the equipment for the handling of explosives;

(5) every gas cylinder and inflammable liquid tank is stored in an area set aside for that purpose and signs warning of the hazard of explosion are posted in conspicuous locations in that area; and

(6) every gas cylinder and inflammable liquid tank is protected from overheating.

48. In the case of surveying involving an electrical energy source, the authorization holder must ensure that

(1) the charging and discharging circuits of the electrical seismic energy source are equipped with circuit breakers;

(2) the electrical cables of the electrical seismic energy source are protected from damage and are adequately insulated and grounded to prevent current leakage and electrical shock; and

(3) the electrical seismic energy source, when tested, is fully immersed in water.

DIVISION IV
DAILY REPORT AND COMPLETION REPORT

49. The authorization holder must draw up a daily report of the work and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day, in particular,

(1) the number of the geophysical surveying authorization;

(2) the type of surveying carried out and the energy source used;

(3) the position and condition of the vessel or platform;

(4) the number of persons on the vessel or platform;

(5) a description, in chronological order, of the work carried out and the time required for carrying out each step of the work;

(6) the number of the lines or traverses in which the data was acquired;

(7) the number of linear kilometres acquired or the area covered, their total and the remaining quantity;

(8) work interruptions and disturbances due, in particular, to meteorological conditions and technical and operational difficulties, and their duration;

(9) the operational problems encountered and the corrective measures taken or planned;

(10) the abnormal meteorological conditions that caused a work delay, in particular, due to

(a) visibility;

(b) temperature variation;

(c) wind speed or direction;

(d) the height, period and direction of the waves and swells;

(e) the size, distance and direction of ice;

(f) icing; and

(g) rolling, pitch and vertical motion of the vessel or platform; and

(11) any other information or document deemed necessary by the Minister.

50. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the work. If the Monday is a holiday, the report is sent on the first working day that follows.

51. The authorization holder must send to the Minister, within the period provided for in section 100 of the Petroleum Resources Act (2016, chapter 35, s. 23), a completion report signed by a geologist or an engineer including, in particular,

(1) the number of the geophysical surveying authorization;

(2) the name and contact information of the holder and the licence number;

(3) the name and contact information of the geologist or engineer responsible for the technical program;

(4) the type and the name of the vessel or platform used, its registration number and the name of its owner;

(5) the type of navigation equipment used and its specifications;

(6) the name of the enterprises that took part in the work and the nature of the work;

(7) the number of employees who took part in the work and their positions;

(8) the name of the region in which the surveying was carried out;

(9) the type of surveying carried out and the energy source used;

(10) the purposes of the surveying including, in particular, the acquisition parameters, structures, geological formations targeted, the type of play and the investigation depth;

(11) the total number of linear kilometres acquired or the area covered by the surveying;

(12) the start and end dates of the work;

(13) the summary of the work carried out in chronological order;

(14) a summary of the abnormal meteorological conditions that caused the operation delay and the corrective measures taken;

(15) a compilation of the daily progress of the work;

(16) a bathymetric map at a sufficient scale showing

(a) the perimeter of the licence;

(b) the activity site, survey lines and traverses with their nature, numbering and length;

(c) the points of energy source and their numbering; and

(d) the St. Lawrence River waterway included in the territory covered by the licence;

(17) a description of the data acquisition parameters indicating, in particular,

(a) the spacing between the points of the energy source, the receiver points and, if applicable, between the survey lines;

(b) the characteristics of the energy source used; and

(c) the setting of the recording filters;

(18) a description of the data processing parameters;

(19) the adjustments made to the data during the interpretation;

(20) the following interpretation maps:

(a) in the case of seismic reflection surveying, the isochrone time structure map of the main target and, if applicable, the secondary target and the interpreted profiles; if the stratigraphy of an adjacent drill hole is known, the holder must carry out the blocking of the seismic profile nearest to the hole and indicate the correlation between the main reflectors and the stratigraphy;

(b) in the case of seismic refraction surveying, the velocity map;

(c) in the case of magnetic surveying, the map for the total magnetic field corrected and offset and the map for the residual magnetic field corrected and offset;

(d) in the case of gravimetric surveying, the maps of Bouguer anomalies and of the residual field;

(21) an analysis of each of the interpretation maps specifying the correlation between the geology and the geophysical data;

(22) if applicable, the technical reports prepared by the enterprises that carried out the data processing or interpretation;

(23) a comparative analysis of the work carried out compared with that planned in the technical program and the results obtained compared with those anticipated;

(24) a description and photographs of the equipment used and its specifications;

(25) photographs of the bottom of the water;

(26) bathymetric maps prepared from the surveyed data; and

(27) the recommendations for the continuation of the work.

If required and based on the area of the work, the holder may, for the purposes of subparagraph 16 of the first paragraph, submit a number of maps at different scales.

CHAPTER VI
STRATIGRAPHIC SURVEY AUTHORIZATION

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

52. A licence holder who wishes to obtain a stratigraphic survey authorization must apply to the Minister, in writing, at least 60 days before starting the work.

53. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the name of the proposed stratigraphic survey; and

(3) the work schedule and an estimate of the realization costs.

54. The application must be accompanied by

(1) a bathymetric map at a scale of 1:20,000 showing, in particular,

(a) the surface projection of the drill hole profile to the location of the bottom of the hole;

(b) the location of the existing drill holes within a radius of 5 km; and

(c) the demonstration that the distances provided for in sections 64 and 66 are met;

(2) the stratigraphic survey technical program provided for in section 55 signed and sealed by an engineer;

(3) payment of the fee of $4,426; and

(4) any other information or document requested by the Minister.

55. The stratigraphic survey technical program must contain

(1) the name and contact information of the engineer responsible for the program;

(2) the name, profession and functions of the persons who prepared or revised the program;

(3) a description and the photographs of the initial condition of the site;

(4) the demonstration that, during the positioning of the stratigraphic survey, the regional and local geology and the presence of adjacent drill holes have been taken into consideration;

(5) the demonstration that the presence of gas in the soil in its natural state has been taken into consideration;

(6) a chronological and detailed description of the work to be carried out;

(7) the name and contact information of the enterprise charged with carrying out the work;

(8) the type and name of the drilling installation, its registration number, the name of its owner and the estimated number of persons on board;

(9) the type of navigation equipment used and its specifications;

(10) the demonstration that the drilling installation is designed and constructed according to the generally recognized best practices;

(11) the design standards and a description of the immobilization system;

(12) the refuelling method;

(13) if applicable, the home port and the location of the land base for storing material and products necessary for the work;

(14) a longitudinal section of the stratigraphic survey indicating the technical elements anticipated before and after the sealing;

(15) a geological projection including

(a) a stratigraphic column indicating the thickness of the unconsolidated deposits, the geological formations, porous and permeable zones, faults and other major structures;

(b) the identification of the potential zones of fluid kicks or lost circulation;

(c) the anticipated base of the usable groundwater, if it is different from the base provided for in section 3;

(d) anticipated primary and secondary petroleum objectives; and

(e) if the seismic profile has been done, the interpreted seismic profile indicating the top of geological formations, the shotpoint nearest the location of the drilling and the location of the anticipated petroleum objectives;

(16) the list of the proposed coring intervals;

(17) the list of pressure and leak tests, drill-stem tests, formation integrity tests and all other tests planned;

(18) the list of the well loggings planned;

(19) the meteorological and hydrographic conditions anticipated during the work;

(20) if applicable, a description of the ice management activities;

(21) the depth of the water at the location of the stratigraphic survey;

(22) the bathymetric map of the area in which the stratigraphic survey is located and, if applicable, a mapping of the bottom of the water;

(23) a description of the nature of the surface deposits and their geotechnical characteristics;

(24) a description of the aquatic wildlife;

(25) for each of the drilling, diving and accommodation installations, a compliance certificate issued by any of the following certification authorities:

(a) the American Bureau of Shipping;

(b) the Bureau Veritas;

(c) DNV GL (Det norske Veritas and Germanischer Lloyd);

(d) Lloyd's Register North America Inc.;

(26) a drilling program including, in particular,

(a) the type of drilling rig and equipment to be used and their specifications;

(b) the drilling fluids and flushing fluids used and their properties, and a demonstration that those fluids comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee;

(c) the measures planned for the management of petroleum, formation fluids, drilling fluids, chemical substances and other discharges;

(d) the diameters of the drill hole according to the measured depth and the actual vertical depth on a longitudinal section, to the bottom of the planned hole;

(e) a graphic projection of the formation pressure and temperature to the expected final depth;

(f) a projection of the planned fracturing gradient;

(g) a graphic projection of the deviation of the drill path to the expected final depth;

(h) the frequency of the measurements of the deviation of the path in dip and azimuth;

(i) the demonstration that the casing strings and tubes comply with CSA Standard Z625, Well design for petroleum and natural gas industry systems, published by the Canadian Standards Association; and

(j) a program for centralizing casings that allows to reach a minimum centralization of 75% compliant with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee, indicating, in particular, the type of centralizers, their dimension, frequency of installation and installation;

(27) a program for cementing annular spaces in each of the casing strings compliant with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the *Drilling and Completion Committee* and including, in particular,

(a) the diameters of the casing strings according to the measured depth and the actual vertical depth;

(b) the planned height of the cement column in the annular space;

(c) the cement preparation and application methods;

(d) the planned minimum and maximum pumping flows and the pumping equipment capacity;

(e) the type of cement used, its density, its additives and their proportions, its setting time, the calculated volume and surplus percentage;

(f) any changes to the cement required due to specific physical and chemical conditions of the environment, including, in particular, the depth of the stratigraphic survey, an abnormal pressure or temperature, a circulation loss area, salt areas, unconsolidated deposits or a corrosive environment;

(g) the methods used to prepare the drill hole for cementing and to improve fluid displacement, in particular, casing movement; and

(h) the method for monitoring cement circulation in the annular space;

(28) the burning activities, the reasons justifying them and an estimate of the volume of gas burned;

(29) if a simulation or modelling has been carried out, a description of the simulation or modelling and the results obtained;

(30) a site sealing and restoration program including, in particular,

(a) the method used to demonstrate the tightness of the stratigraphic survey carried out before the sealing work;

(b) the stratigraphic survey cleaning method used before installing plugs;

(c) the type of device used and its specifications; and

(d) a cementing program compliant with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee including, in particular,

i. for each cement plug, the intervals, the type of cement used, its density, its additives and their proportions, its setting time, the calculated volume and surplus percentage;

ii. any changes to the cement used for the plugs required due to specific physical and chemical conditions of the environment, including, in particular, the depth of the stratigraphic survey, an abnormal temperature or a corrosive environment;

iii. the method for installing each plug; and

iv. the method and frequency of the monitoring of the position of the plugs during sealing, the waiting time before the monitoring and the criteria of the acceptability of the position of the cement plugs;

(e) the method used to demonstrate that following the installation of the plugs and before the cutting of the casings and surface guide tube, there was no gas emanation; and

(f) a chronological and detailed description of the site restoration work planned for maintaining the quality of the body of water and minimizing impact on wildlife, including, in particular,

i. the procedure for dismantling installations and, if applicable, the procedure for dismantling the supply cable;

ii. the rehabilitation of contaminated land;

iii. the purge of pipes; and

iv. the withdrawal of equipment and facilities; and

(31) the list of references consulted during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions.

56. Before ruling on the application for authorization, the Minister may, if the Minister deems it necessary to ensure the long-term integrity of the stratigraphic survey, require that a licence holder tests the cement in a laboratory. The test must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

The holder sends the test results to the Minister.

DIVISION II
TIME PERIODS AND NOTICE OF THE START OF THE WORK

57. The authorization holder must, within 12 months after the Minister granted the authorization, start the stratigraphic survey work.

The work is deemed to have started as soon as the first step provided in the work schedule is initiated.

The Minister may grant an additional time period for carrying out the stratigraphic survey if the holder demonstrates the need therefor.

58. The authorization holder must, at least 7 days before, notify the Minister of the start of the following work:

(1) the mobilization to the site where the drilling rig will be located;

(2) the start of the drilling;

(3) the sealing of the stratigraphic survey.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

59. The authorization holder must, at least 24 hours before, notify the Minister of the rig release and, in the case of a temporary interruption, the holder must also notify the Minister within the same time period of the resumption of the work.

60. The authorization holder must also, at least 24 hours before, notify the Minister of the straightening or towing of an installation.

DIVISION III
CONDITIONS OF EXERCISE

61. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

A supplementary agreement to the technical program is not required in the following cases:

(1) an adjustment of less than 10 m in the final depth of the stratigraphic survey resulting in a slightly different geological projection;

(2) a change in the position of the stratigraphic survey where it remains on the activity site;

(3) the addition or cancellation of a coring section, a drill-stem test, a well logging, a sample collection or a fluid sample.

In the situations provided for in the third paragraph, the holder immediately informs the Minister of the change to the technical program.

62. The authorization holder must design and construct the stratigraphic survey so as to

(1) comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee;

(2) ensure work safety;

(3) prevent incidents in the maximum load conditions normally foreseeable during the life cycle of the stratigraphic survey;

(4) withstand potential conditions, forces and stresses;

(5) ensure a resistance sufficient for fluid kicks;

(6) protect the integrity of the groundwater and the body of water;

(7) ensure that the petroleum layers and aquifer layers are isolated one from the other;

(8) allow the characterization of the geological formations targeted; and

(9) allow activities for controlling the pressure of the bottom of the drill hole in a constant and safe manner.

63. If the water level allows, the authorization holder must, as soon as the work starts and until the site restoration work starts, install a sign at the entrance of the activity site indicating, in particular,

(1) the location of the stratigraphic survey;

(2) the holder's name and the licence number;

(3) the name and number of the stratigraphic survey appearing on the authorization;

(4) a telephone number in case of emergency; and

(5) the pictograms associated with the hazardous products present on the activity site.

64. The authorization holder may not position the collar of a stratigraphic survey

(1) less than 40 m the St. Lawrence River waterway;

(2) less than 100 m from a transmission line having a voltage equal to or greater than 69,000 V, a telecommunication infrastructure, a windmill, pipeline or any other installation or infrastructure of the same type;

(3) less than 180 m from a high-capacity dam within the meaning of the Dam Safety Act;

(4) less than 150 m from any building having fewer than 3 floors or a floor area less than or equal to 10,000 m^2; or

(5) less than 175 m from a concentration of residential, commercial, industrial or service activities.

The distances must be measured horizontally, in a straight line, from the collar to the nearest point of the elements referred to in the first paragraph.

The Minister may allow the reduction of the distances if the authorization holder demonstrates to the Minister that an effective protective measure reduces risks.

65. The authorization holder may not drill a stratigraphic survey less than 100 m from the boundaries of the territory covered by the holder's licence.

66. The authorization holder may not position the activity site less than 60 m from a national park or a protected area entered in the protected area register provided for in section 5 of the Natural Heritage Conservation Act (chapter C-61.01).

67. During the drilling, the authorization holder must make sure that

(1) the stratigraphic survey is drilled so as to never intersect an existing drill hole;

(2) the drilling fluids, drilling fluid system and associated monitoring equipment are designed, installed, used or maintained to provide an effective barrier against formation pressure and to allow for an adequate characterization of the geological formations investigated;

(3) the indicators and alarms associated with the monitoring equipment are installed on the drilling rig to alert onsite personnel; and

(4) adequate procedures, facilities and equipment are in place and utilized to minimize the risk of loss of stratigraphic survey control in the event of lost circulation, fluid kicks or blowout.

68. The authorization holder must ensure that the measurements of the stratigraphic survey path deviation are taken at intervals that allow the position of the drill hole to be determined accurately and that do not exceed 150 m, unless there is a soil stability problem.

69. The authorization holder must protect the usable groundwater and use non-toxic substances in drilling fluids until the surface casing is cemented.

70. Where the authorization holder drills a stratigraphic survey in a region where the geology is unknown or in a region where shallow gas kicks have been documented, the holder must use a deflector.

71. If it is foreseeable that a petroleum zone will be intersected before reaching the depth for the installation of the surface casing, the authorization holder must install a blowout prevention system.

72. While performing the work under the surface casing, the authorization holder must use a wellhead or a blowout prevention system comprising at least 2 different sealing mechanisms for as long as there is a risk of fluid kicks.

73. The wellhead or the blowout prevention system must have been designed to withstand a rated pressure equal to or greater than the maximum formation pressure provided for in the technical program. Where it has not been provided for, it is deemed to be equal to or greater than 11 kPa/m of the actual vertical depth of the stratigraphic survey.

74. The authorization holder must verify daily the blowout prevention system to make sure it works well. If a system component is defective, work must be suspended until the component is repaired.

75. The authorization holder must regularly inspect joints and structural elements of every equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps and maintains, until the end of the sealing work, a register of those inspections.

76. The authorization holder must eliminate or reduce to a minimum the volume of gas released into the atmosphere. The holder must install an ignition pilot at the flare for burning combustible gas.

77. The authorization holder must ensure that the marine riser used

(1) furnishes access to the stratigraphic survey;

(2) isolates the stratigraphic survey from the body of water;

(3) withstands the differential pressure of the drilling fluid relative to the body of water;

(4) withstands the physical forces anticipated in the drilling program;

(5) permits the drilling fluid to be returned to the installation; and

(6) is supported in a manner that effectively compensates for the forces caused by the motion of the drilling installation.

78. During the operations for preparing and applying the cement for cementing casings and for sealing plugs, the authorization holder must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

79. Before proceeding with the cementing of annular spaces, the authorization holder must make sure to completely remove the drilling fluids and the mud cakes from the walls of the stratigraphic survey.

80. During the cementing, the authorization holder must ensure that the fluid returns are observed at the surface.

81. The cement used for cementing casings and for sealing plugs must reach the minimum compressive strength of 3,500 kPa after 36 hours of hardening at the temperature of the shallowest formation to be covered.

It must also be designed and installed to protect the integrity of the layers of gas hydrates.

The authorization holder must restrict the cement shrinkage process and limit to the minimum the risk of formation of a micro-annular space.

82. As of the moment at which the cement has developed a gel strength and until the minimum compressive strength has been reached, the authorization holder must not carry out work that could compromise the integrity of the cement and the holder must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

83. The authorization holder must carry out a cement assessment sonic or ultrasonic logging to show the uniform coverage of the cement behind each casing.

84. After installing and cementing a casing and before drilling out the casing shoe, the authorization holder must submit the casing to a pressure and leak test to the value required to confirm its integrity for the maximum operating pressure provided for in the technical program.

The integrity is confirmed if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes.

85. Before drilling at a measured depth of more than 10 m under the shoe of any casing subsequent to the conductor casing, the authorization holder must test the integrity of the geological formation.

The test must be conducted at a pressure that ensures the safety of the drilling work until the next casing string planned.

The integrity is confirmed if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes.

86. The authorization holder who conducts a drill-stem test must ensure, in particular, that

(1) the equipment used is designed to safely control the stratigraphic survey pressure, properly characterize the geological formation and protect the environment;

(2) the rated pressure of the equipment upstream of and including the testing manifold exceeds the maximum anticipated shut-in pressure; and

(3) the equipment downstream of the testing manifold is sufficiently protected against overpressure.

87. In the case of fluid kicks or during drill-stem tests, the authorization holder must collect samples and analyze the petroleum and groundwater encountered.

In the case of gas, the analyses must, in particular, identify its composition and characterize the carbon isotope ratios. For a vertical or directional drilling, the holder must take a minimum of 15 samples per interval of 1,000 m drilled under the surface casing.

In the case of oil, the analyses must, in particular, identify its composition and characterize its viscosity and density.

In the case of groundwater, the analyses must, in particular, identify its composition in dissolved solids and petroleum and its physical characteristics, including the pH, the conductivity and the cloudiness.

The Minister may exempt the authorization holder from the requirement to collect certain samples where the Minister considers that he or she already has sufficient data to characterize the reservoir or the sealing rocks.

If the holder collects another sample of gas, including gas dissolved in the drilling fluids or gas from the surface casing blowhole, the holder must analyze it to identify its composition and characterize the carbon isotopic ratios.

A holder who collects a sample must use a method preventing contamination of the sample.

88. The authorization holder must collect a sample of the drilling core, at least at each interval of 100 m, to determine, in particular, the porosity, permeability, lithology and content in total organic carbon of the geological formation.

For the stratigraphic survey sections that are not cored, a cutting sample must be collected at each 5-m interval in such manner as to fill

(1) a 10-ml flask of cuttings washed and dried beforehand; samples from the layer of unconsolidated deposits must not be washed; and

(2) a 500-g bag of cuttings dried beforehand.

89. Where samples necessary for analysis have been taken from a core, the authorization holder makes sure that a longitudinal slab that is not less than one half of the cross-sectional area of that core or the remaining core is submitted to the Minister.

The holder who carried out destructive tests on a core removed laterally is exempt from submitting the samples.

90. The samples collected must be packaged in durable containers designed for that purpose and properly labelled by indicating, in particular, the name of the stratigraphic survey and the measured interval or depth of the sampling.

They must be transported and stored in a manner that prevents any loss or deterioration.

91. The authorization holder submits to the Minister the samples whose analysis is completed not later than 90 days after the rig release date.

The Minister may agree to an additional period if the holder wishes to perform additional analyses. In that case, the holder submits to the Minister the samples and analysis results at the end of the agreed period.

The Minister may exempt the holder from the submission of the samples

(1) where the Minister considers that he or she has sufficient samples to adequately document the geological formations intersected by the stratigraphic survey; and

(2) where the Minister already has samples from the same horizons.

92. Before disposing of any cutting samples, drilling cores or collected fluids, the authorization holder must offer them to the Minister.

93. The authorization holder must submit to the Minister, for approval, the corrective actions to be taken where any of the following situations occurs:

(1) a cementing operation provided for in the technical program cannot be carried out;

(2) no cement return has been observed on the surface where such return was expected;

(3) a return of displaced drilling fluids indicates that the cement height required for cementing has not been reached;

(4) there is uncertainty as to reaching the cementing goals.

94. The authorization holder keeps and maintains, for the duration of the work, registers concerning

(1) the persons arriving, leaving or present on the vessel or platform;

(2) the location and movement of support craft;

(3) emergency drills and exercises carried out;

(4) operating tests of surface and subsurface safety valves;

(5) the inspections of the installation and related equipment for corrosion and erosion;

(6) daily maintenance activities; and

(7) in the case of a floating installation, all installation movements, data, observations, measurements and calculations related to the stability and station-keeping capability of the installation.

DIVISION IV
STRATIGRAPHIC SURVEY SEALING AND SITE RESTORATION

95. The authorization holder must seal the stratigraphic survey within 30 days after completion of the drilling.

The Minister may require that the work start before that period for safety reasons or give an additional period for its completion if the holder shows that it is necessary.

96. Before beginning the stratigraphic survey sealing, the authorization holder must conduct a pressure and leak test to ensure the tightness of all the stratigraphic survey components.

The holder may begin the sealing only if the pressure and leak test is successful. Tightness is confirmed if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes. Otherwise, an incident notice must be sent to the Minister within 24 hours.

97. The authorization holder who proceeds with the sealing must ensure to seal the stratigraphic survey over its entire length.

The holder must also ensure the following:

(1) the absence of communication of fluids between the geological formations;

(2) the absence of liquid flow and gas emanation or migration;

(3) the absence of excessive pressure in the stratigraphic survey;

(4) the long-term integrity of the stratigraphic survey, while considering the petroleum development potential of the adjacent sector and the impact of future activities.

98. The authorization holder must not install a cement plug in a section of the hole that does not have a casing, except if the drilling is vertical.

99. The authorization holder must cut the casings and the guide tube at a minimum of 2 m below the surface of the ground. The holder determines the depth according to local conditions such as the type of soil, washout and erosion of the environment.

The authorization holder may use explosives to cut casings and the guide tube if adequate protective measures are implemented.

100. The authorization holder must weld a ventilated steel cover at the top of the casings.

101. At the end of the sealing, the bottom of the water must have been cleared of any material or equipment that is not necessary and that might interfere with subsequent uses of the environment.

102. If applicable, before the demobilization of the installations, the authorization holder must ensure that the structure is free from plants and animals.

103. The authorization holder must restore the activity site as soon as the sealing work ends or the meteorological conditions allow.

The Minister may grant an additional time period for the restoration if the holder shows it is necessary. In that case, the holder must, at least 7 days before, notify the Minister, in writing, of the start of the work for restoring the site.

104. As soon as the sealing work ends, the authorization holder must mark the stratigraphic survey with a device that enables to locate it easily and on which the number of the stratigraphic survey and its geographical coordinates are indicated.

DIVISION V
DAILY REPORT AND COMPLETION REPORT

105. The holder of a stratigraphic survey authorization must draw up a daily report of the work and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the number of the stratigraphic survey authorization;

(2) the name of the drilling installation;

(3) the number of persons on board the drilling installation;

(4) a description, in chronological order, of the work carried out and the time required to complete each step of the work;

(5) the name and contact information of the enterprises that carried out the work;

(6) the measured depth reached during the day;

(7) the composition of the drilling fluid and flushing fluid, and the volumes used;

(8) the operating condition of the blowout prevention system;

(9) a loss of circulation;

(10) the components used to assemble the drill strings;

(11) the specifications of the casing and its setting depth;

(12) the weight applied to the bit and its penetration rate;

(13) the measurements of the deviation of the stratigraphic survey path in dip, azimuth and depth;

(14) traces of petroleum or water detected;

(15) the type of pump used for the cementing and its capacity;

(16) the type of cement used, its density, its additives and their proportions, its setting time and the volume used;

(17) the well loggings carried out;

(18) the observations and data related to the evaluation or characterization of the geological formation;

(19) the fluid samples collected;

(20) the results of the pressure and leak tests;

(21) the volume and composition of the gas used, released, incinerated or burned at the flare and the reasons justifying it;

(22) the composition, concentration and detailed assessment of all the products stored and used on the activity site, in particular, drilling fluids;

(23) the operational problems encountered and the corrective measures taken or planned;

(24) the indication of any temporary work interruption and the procedure followed to secure the stratigraphic survey;

(25) the indication of any event that disrupted the progress of the work;

(26) the abnormal meteorological conditions that caused a work delay, in particular, due to

(a) visibility;

(b) temperature variation;

(c) wind speed or direction;

(d) the height, period and direction of the waves and swells;

(e) the size, distance and direction of ice;

(f) icing; and

(g) rolling, pitch and vertical motion of the vessel or the drilling installation; and

(27) any other information or document deemed necessary by the Minister.

106. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the sealing work. If the Monday is a holiday, the report is sent on the first working day that follows.

107. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, a completion report signed by an engineer including, in particular,

(1) the number of the stratigraphic survey authorization;

(2) the name and contact information of the licence holder;

(3) the type and name of the drilling installation, its registration number and the name of its owner;

(4) the type of navigation equipment used;

(5) the coordinates of the stratigraphic survey collar on a plan provided by a land surveyor according to the NAD83 map reference system;

(6) the measurements of the deviation of the stratigraphic survey path in dip, azimuth and depth, and the final coordinates of the bottom of the hole;

(7) the start and end dates of the work;

(8) a summary of the work carried out in chronological order;

(9) a summary of the abnormal meteorological conditions that caused the work delay and the corrective measures taken;

(10) a report on the cementing operations for each of the casing strings, containing, in particular,

(a) the name and contact information of the enterprise that carried out the cementing work;

(b) the type of cementing unit used and the method for applying the cement;

(c) the type of cement used, its density, its additives and their proportions, its setting time and the volume used;

(d) the cemented interval;

(e) the composition and volume of the flushing fluid and the spacing fluid used;

(f) the circulation pressures;

(g) the propping pressure applied and the duration; and

(h) a description of the cement return, the quantity and the retreat; if no return is observed, a description of the corrective actions taken;

(11) the analysis results and the analysis certificates of the samples and fluid samples collected;

(12) the interpreted well loggings, re-set in actual vertical depth, and the corrections made;

(13) the demonstration that the centralization of the casings complies with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee;

(14) the measured temperature and pressure to the final depth of the stratigraphic survey;

(15) the data, recordings, results of the drill-stem tests, pressure and leak tests, formation integrity tests and their interpretation;

(16) the burning activities, the reasons justifying them and an estimate of the volume of gas burned;

(17) a geological description of the cuttings and drill cores, and a geotechnical description of the drill cores;

(18) a comparative analysis of the work carried out compared with that provided for in the technical program and the results obtained compared with those anticipated;

(19) the list of drill bits used, their type and the number of metres drilled by each;

(20) the type of play encountered and a comparison with a similar oil zone;

(21) a longitudinal section of the stratigraphic survey after the sealing, according to the measured depth and the actual vertical depth, signed and sealed by an engineer, indicating, in particular,

(a) intersected groups, geological formations, lithological contacts and faults;

(b) zones of abnormal pressure;

(c) the diameter of the drill hole and the diameters of each of the casings and the guide tube;

(d) the location of each of the casings and the guide tube;

(e) if applicable, the depth interval of the open-hole stratigraphic survey;

(f) the type of plugs used and the depth intervals of each plug; and

(g) the other equipment installed or dropped in the stratigraphic survey and not recovered;

(22) the daily tour reports;

(23) if laboratory testing has been done on the cement after the granting of the authorization, the properties of the cement determined in the laboratory;

(24) the technical reports prepared by the enterprises that carried out the work;

(25) a technical description of the condition of the stratigraphic survey before the sealing;

(26) in the case of the cement plugs used,

(a) the name and contact information of the enterprise that carried out the cementing work;

(b) the type of cementing unit used and the method for applying the cement;

(c) the type of cement used, its density, its additives and their proportions, its setting time and the volume used;

(d) the verified position of each of the plugs; and

(e) if applicable, the analysis results and the analysis certificates of the samples collected;

(27) the cutting depth of the casings and the guide tube under the surface; and

(28) if applicable, a photograph of the ventilated steel plated welded at the top of the casings before the backfilling;

CHAPTER VII
DRILLING AUTHORIZATION

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

108. A licence holder who wishes to obtain a drilling authorization must apply to the Minister, in writing, at least 60 days before starting the work.

109. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the name of the proposed well, in the case of a new well, or the name of the existing well, in the case of a re-entry; and

(3) the work schedule and an estimate of the realization costs.

110. The application must be accompanied by

(1) a bathymetric map at a scale of 1:20,000 showing, in particular,

(a) the surface projection of the hole profile to the location of the bottom of the hole;

(b) the location of the existing drill holes within a radius of 5 km; and

(c) the demonstration that the distances provided for in sections 120 and 122 are met;

(2) the drilling technical program provided for in section 111 signed and sealed by an engineer;

(3) the permanent well or reservoir closure and site restoration plan or, if applicable, its update, and the guarantee provided for in sections 318 and 320;

(4) payment of the fee of $4,426; and

(5) any other information or document requested by the Minister.

111. The drilling technical program must contain

(1) the name and contact information of the engineer responsible for the program;

(2) the name, profession and functions of the persons who prepared or revised the program;

(3) the demonstration that, during the positioning of the well, the regional and local geology and the presence of adjacent drill holes have been taken into consideration;

(4) the demonstration that the presence of gas in the soil in its natural state has been taken into consideration;

(5) if applicable, the list of the data that could be consulted with respect to the adjacent drill holes;

(6) the proposed classification of the well, determined according to Schedule 1;

(7) a chronological and detailed description of the work to be carried out;

(8) the name and contact information of the enterprise charged with carrying out the work;

(9) the type and name of the drilling installation, its registration number, the name of its owner and the estimated number of persons on board;

(10) the type of navigation equipment used and its specifications;

(11) the demonstration that the drilling installation is designed and constructed according to the generally recognized best practices;

(12) the design standards and a description of the immobilization system;

(13) the refuelling method;

(14) if applicable, the home port and the location of the land base for storing material and products necessary for the work;

(15) a longitudinal section of the well indicating the technical elements

(16) a geological projection of the well including, in particular,

(a) a stratigraphic column indicating the thickness of the unconsolidated deposits, the geological formations, porous and permeable zones, faults and other major structures;

(b) the identification of the potential zones of fluid kicks or lost circulation;

(c) the anticipated base of the usable groundwater, if it is different from the base provided for in section 3;

(d) the anticipated primary and secondary petroleum objectives; and

(e) if the seismic profile has been done, the interpreted seismic profile indicating the top of geological formations, the shotpoint nearest the location of the drilling and the location of the anticipated petroleum objectives;

(17) the list of the planned coring intervals;

(18) the list of pressure and leak tests, drill-stem tests, formation integrity tests and all other tests planned;

(19) the list of the well loggings planned;

(20) the meteorological and hydrographic conditions anticipated during the work;

(21) if applicable, a description of the ice management activities;

(22) the depth of the water at the location of the drilling;

(23) the bathymetric map of the area in which the drilling is located and, if applicable, a mapping of the bottom of the water;

(24) a description of the nature of the surface deposits and their geotechnical characteristics;

(25) a description of the aquatic wildlife;

(26) for each of the drilling, diving and accommodation installations, a compliance certificate issued by any of the following certification authorities:

(a) the American Bureau of Shipping;

(b) the Bureau Veritas;

(c) DNV GL (Det norske Veritas and Germanischer Lloyd);

(d) Lloyd's Register North America Inc.;

(27) a drilling program including, in particular,

(a) the type of drilling rig and equipment to be used and their specifications;

(b) the drilling fluids and flushing fluids used and their properties, and a demonstration that those fluids comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee;

(c) the measures planned for the management of petroleum, formation fluids, drilling fluids, chemical substances and other discharges;

(d) the diameters of the drill hole according to the measured depth and the actual vertical depth on a longitudinal section, to the bottom of the planned hole

(e) a graphic projection of the formation pressure and temperature to the expected final depth;

(f) a projection of the planned fracturing gradient;

(g) a graphic projection of the deviation of the drill path to the expected final depth;

(h) the frequency of the measurements of the deviation of the path in dip and azimuth;

(i) the demonstration that the planned casing strings and tubes comply with CSA Standard Z625, Well design for petroleum and natural gas industry systems, except those installed in a storage well, which must comply with CSA Standard Z341, Storage of hydrocarbons in underground formations, published by the Canadian Standards Association;

(j) a program for centralizing casings that allows to reach a minimum centralization of 75% compliant with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee, indicating, in particular, the type of centralizers, their dimension, frequency of installation and installation; and

(k) in the case of a re-entry, the evaluation of the thickness of the casing string and the calculation of the stresses to which the well may be submitted in accordance with CSA Standard Z625, Well design for petroleum and natural gas industry systems, published by the Canadian Standards Association; for a storage well, the evaluation and calculation must comply with CSA Standard Z341, Storage of hydrocarbons in underground formations, published by the Canadian Standards Association;

(28) a program for the cementing of the annular spaces of each of the casing strings compliant with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee and including, in particular,

(a) the diameters of the casing strings compared with the measured depth and the actual vertical depth;

(b) the planned height of the cement column in the annular space;

(c) the cement preparation and application methods;

(d) the planned minimum and maximum pumping flows and the pumping equipment capacity;

(e) the type of cement used, its density, its additives and their proportions, its setting time, the calculated volume and surplus percentage;

(f) any changes to the cement required due to specific physical and chemical conditions of the environment, including, in particular, the depth of the well, an abnormal pressure or temperature, a circulation loss area, salt areas, unconsolidated deposits or a corrosive environment;

(g) the methods used to prepare the well for cementing and to improve movement of the fluids, in particular, casing movement; and

(h) the method for monitoring cement circulation in the annular space;

(29) the burning activities, the reasons justifying them and an estimate of the volume of gas burned;

(30) if a simulation or modelling has been carried out, a description of the simulation or modelling and the results obtained; and

(31) the list of references consulted during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions.

Where work is planned in a temporarily closed well and the depth of the wellhead under water makes it accessible, the holder must, before it is carried out, inspect the site and the wellhead, maintain the wellhead and carry out a pressure and leak test. In that case, the technical program must also contain the annual inspection worksheet provided for in Schedule 2.

112. Before ruling on a drilling application, Minister may, if the Minister considers it necessary to ensure the long-term integrity of the well, require that the licence holder carry out a cement test in a laboratory. The test must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

The holder sends the results of the test to the Minister.

DIVISION II
TIME PERIODS AND NOTICE OF THE START OF THE WORK

113. The authorization holder must, within 12 months after the granting of the authorization, start the drilling work.

114. The authorization holder must, at least 7 days before, notify the Minister of the date for the start of the following work:

(1) the mobilization of the site in which the drilling rig will be located;

(2) the beginning of the drilling or the re-entry.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

115. The authorization holder must, at least 24 hours before, notify the Minister of the rig release and, in case of a temporary interruption, the holder must also notify the Minister within the same period of the resumption of the work.

116. The authorization holder must also, at least 24 hours before, notify the Minister of the straightening or towing of an installation.

SECTION III
CONDITIONS OF EXERCISE

117. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

A supplementary agreement to the technical program is not required in the following cases:

(1) an adjustment of less than 10 m in the final depth of the well resulting from a slightly different geological projection;

(2) a change in the position of the well where the well remains on the activity site;

(3) the addition or cancellation of a coring section, a drill-stem test, a sample collection or a fluid sample;

(4) the addition or cancellation of a well logging if, in the latter case, it is not required under section 125 or 126.

In the situations provided for in the third paragraph, the holder immediately informs the Minister of the change to the technical program.

118. The authorization holder must design and construct the well so as to

(1) comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee;

(2) ensure work safety;

(3) prevent incidents in the maximum load conditions normally foreseeable during the life cycle of the well;

(4) withstand potential conditions, forces and stresses;

(5) ensure a resistance sufficient for fluid kicks;

(6) protect the integrity of the groundwater and the body of water;

(7) ensure that the petroleum zones and the aquifer layers are isolated from one another;

(8) allow the characterization of the geological formations targeted; and

(9) allow activities for controlling the pressure of the bottom of the drill hole in a constant and safe manner.

119. If the water level allows, the authorization holder must, as soon as the work starts and until the holder begins the work for the restoration of the site, install a sign near the activity site, indicating, in particular,

(1) the location of the well;

(2) the holder's name and the licence number;

(3) the name and number of the well appearing on the authorization;

(4) a telephone number in case of emergency; and

(5) the pictograms associated with the hazardous products present on the site.

120. The authorization holder may not position the collar of a well or, in the case of a re-entry, drill in a well whose collar is situated

(1) less than 40 m from the St. Lawrence River waterway;

(2) less than 100 m from a transmission line having a voltage equal to or greater than 69,000 V, a telecommunication infrastructure, a windmill, a pipeline or any other installation or infrastructure of the same type;

(3) less than 180 m from a high-capacity dam within the meaning of the Dam Safety Act;

(4) less than 150 m from any building having fewer than 3 floors or a floor area less than or equal to 10,000 m^2; or

(5) less than 175 m from a concentration of residential, commercial, industrial or service activities.

The distances must be measured horizontally, in a straight line, from the collar to the nearest point of the elements referred to in the first paragraph.

The Minister may allow the reduction of the distances if the authorization holder demonstrates to the Minister that an effective protective measure reduces risks.

121. The authorization holder may not drill a well less than 100 m from the boundaries of the territory covered by the holder's licence.

122. The authorization holder may not position the activity site less than 60 m from a national park or a protected area entered in the protected area register provided for in section 5 of the Natural Heritage Conservation Act (chapter C-61.01).

123. During the drilling of a well, the authorization holder must make sure that

(1) the well is drilled so as to never intersect an existing drill hole, except if the well covered by the authorization is a relief well;

(2) the drilling fluids, drilling fluid system and associated monitoring equipment are designed, installed, used or maintained to provide an effective barrier against formation pressure and to allow for an adequate characterization of the geological formations investigated;

(3) the indicators and alarms associated with the monitoring equipment are installed on the drilling rig to alert onsite personnel; and

(4) adequate procedures, facilities and equipment are in place and utilized to minimize the risk of loss of well control in the event of lost circulation, fluid kicks or blowout.

124. The authorization holder must ensure that the measurements of the well path deviation are taken at intervals that allow the position of the drill hole to be determined accurately and that do not exceed 150 m, unless there is a soil stability problem.

125. The authorization holder must carry out the well loggings necessary to be able to define the lithology, porosity, type of the fluids present in each of the geological formations intersected by the surface casing to the well collar and in depth, under the surface casing.

The holder must, in particular, carry out

(1) a gamma ray logging from the well collar to the final depth of the drill hole;

(2) a neutron logging from 25 m under the well collar to the base of the surface casing; and

(3) an electrical resistivity logging and a porosity logging from the base of the surface casing to the final depth of the drill hole.

The Minister may exempt the holder from the requirement to carry out certain well loggings in the case of a production well or if the Minister considers that he or she already has sufficient data to characterize the reservoir or the sealing rocks.

126. The authorization holder must also carry out a cement assessment sonic or ultrasonic logging to show the uniform coverage of the cement behind each casing. In the case of a horizontal well, the logging must be carried out at least until an 80° angle has been reached in relation to the vertical.

127. The authorization holder must protect the usable groundwater and use non-toxic substances in the drilling fluids until the surface casing is cemented.

128. Where the authorization holder drills a well in a region where the geology is unknown or in a region where shallow gas kicks have been documented, the holder must use a deflector.

129. If it is foreseeable that a petroleum zone will be intersected before reaching the depth for the installation of the surface casing, the authorization holder must install a blowout prevention system.

130. While performing the work under the surface casing, the authorization holder must use a wellhead or a blowout prevention system comprising at least 2 different sealing mechanisms for as long as there is a risk of fluid kicks.

131. The wellhead or the blowout prevention system must have been designed to withstand a rated pressure equal to or greater than the maximum formation pressure provided for in the technical program. Where the latter cannot be provided for, it is presumed to be equal to or greater than 11 kPa/m of the actual vertical depth of the well.

132. The authorization holder must verify daily the blowout prevention system to make sure it works well. If a system component is defective, work must be suspended until the component is repaired.

133. The authorization holder must regularly inspect joints and structural elements of every equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps and maintains, until the end of the work for the permanent closure of the well, a register of those inspections.

134. The authorization holder must eliminate or reduce to a minimum the volume of gas released into the atmosphere. The holder must install an ignition pilot at the flare for burning combustible gas.

135. If a surface casing is installed, the authorization holder must ensure that it is inserted in a competent formation at a depth allowing for a sufficient anchoring of the well blowout preventer, ensures the control of anticipated pressures in the well and is equipped with an opening valve.

136. The authorization holder must install a conductor casing if

(1) the surface casing is laid at an actual vertical depth exceeding 650 m;

(2) it is foreseeable that a petroleum zone will be intersected before reaching the laying depth of the surface casing; and

(3) an adjacent drill hole encountered groundwater flow on the surface.

The conductor casing must be set in a competent formation.

If a shallow aquifer presents artesian pressure conditions, the conductor casing must be set directly above the aquifer.

137. The authorization holder must ensure that the marine riser used

(1) furnishes access to the well;

(2) isolates the well from the body of water;

(3) withstands the differential pressure of the drilling fluid relative to the body of water;

(4) withstands the physical forces anticipated in the drilling program;

(5) permits the drilling fluid to be returned to the installation; and

(6) is supported in a manner that effectively compensates for the forces caused by the motion of the drilling installation.

138. In the case of the cementing of the surface casing, the authorization holder may not add to the cement charges or additives reducing its compressive strength.

139. In the case of the cementing of a casing, the authorization holder must determine the volume of cement required according to the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

140. Surface casings and, if applicable, intermediate casings subject to wear caused by the movement and rotation of the drill-stems must be inspected, at a maximum interval of 30 days, to determine their integrity, in accordance with the casing integrity inspection procedure provided for in Schedule 3.

141. Before proceeding with the cementing of annular spaces, the authorization holder must make sure to completely remove the drilling fluids and the mud cakes from the walls of the well.

142. During cementing, the authorization holder must ensure that surface fluid returns are observed.

143. The cement used must reach a minimum compressive strength of 3,500 kPa after 36 hours of hardening at the temperature of the shallowest formation to be covered.

It must also be designed and installed to protect the integrity of the layers of gas hydrates.

The authorization holder must restrict the cement shrinkage process and limit to the minimum the risk of formation of a micro-annular space.

144. As of the moment at which the cement has developed a gel strength and until the minimum compressive strength has been reached, the authorization holder must not carry out work that could compromise the integrity of the cement and the holder must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

145. After installing and cementing the casing and before drilling out the casing shoe, the authorization holder must submit the casing to a pressure and leak test to the value required to confirm its integrity for maximum operating pressure provided for in the technical program.

The integrity is confirmed if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes.

146. Before drilling at a measured depth of more than 10 m under the shoe of any casing subsequent to the conductor casing, the authorization holder must test the integrity of the geological formation.

The test must be conducted at a pressure that allows the safety of the drilling work to the next casing string planned.

The integrity is confirmed if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes.

147. The authorization holder may not carry out a drill-stem test except in a well where the full section under test is cased.

The authorization holder who carries out a drill-stem test must ensure, in particular, that

(1) the equipment used is designed to safely control the well pressure, properly characterize the geological formation and protect the environment;

(2) the rated pressure of the equipment upstream of and including the testing manifold exceeds the maximum anticipated shut-in pressure; and

(3) the equipment downstream of the testing manifold is sufficiently protected against overpressure.

148. In the case of fluid kicks or during drill-stem tests, the authorization holder must collect samples and analyze the petroleum and groundwater encountered.

In the case of gas, the analyses must, in particular, identify its composition and characterize the carbon isotope ratios. For a vertical or directional drilling, the holder must take a minimum of 15 samples per interval of 1,000 m drilled under the surface casing. In the case of a horizontal drilling, the holder must take a minimum of 15 samples per interval of 1,000 m drilled between the surface casing and the reaching of an 80° angle in relation to the vertical.

In the case of oil, the analyses must, in particular, identify its composition and characterize its viscosity and density.

In the case of groundwater, the analyses must, in particular, identify its composition in dissolved solids and petroleum and its physical characteristics, including the pH, the conductivity and the cloudiness.

The Minister may exempt the authorization holder from the requirement to collect certain samples where the Minister considers that he or she already has sufficient data to characterize the reservoir or the sealing rocks.

If the holder collects another sample of gas, including gas dissolved in the drilling fluids or gas from the surface casing blowhole, the holder must analyze it to identify its composition and characterize the carbon isotopic ratios.

A holder who collects a sample must use a method preventing contamination of the sample.

149. The authorization holder must collect a sample of the drilling core, at least at each interval of 100 m, to determine, in particular, the porosity, permeability, lithology and content in total organic carbon of the geological formation.

For the well sections that are not cored, a cutting sample must be collected at the following intervals:

(1) every 25 m, from the top of the rock to an actual vertical depth of 50 m above the shallowest anticipated petroleum objective, unless the holder demonstrates that an adjacent drill hole has already been sampled and the spatial variability makes sampling unnecessary;

(2) in the case of vertical and directional wells, every 5 m from an actual vertical depth of 50 m above the shallowest anticipated petroleum objective to the final depth;

(3) in the case of horizontal wells, every 5 m from an actual vertical depth of 50 m above the shallowest anticipated petroleum objective to the reaching of an 80° angle in relation to the vertical, then the interval is 10 m to the final depth.

Cutting samples must be collected in such a manner as to fill

(1) a 10-ml flask of cuttings washed and dried beforehand; samples from the layer of unconsolidated deposits must not be washed; and

(2) a 500-g bag of cuttings dried beforehand.

150. Where samples necessary for analysis have been taken from a core, the authorization holder makes sure that a longitudinal slab that is not less than one half of the cross-sectional area of that core or the remaining core is submitted to the Minister.

The holder who carried out destructive tests on a core removed laterally is exempt from submitting the samples.

151. The samples collected must be packaged in durable containers designed for that purpose and properly labelled by indicating, in particular, the name of the well and the measured interval or depth of the sampling.

They must be transported and stored in a manner that prevents any loss or deterioration.

152. The authorization holder submits to the Minister the samples whose analysis is completed not later than 90 days after the rig release date.

The Minister may agree to an additional period if the holder wishes to perform additional analyses. In that case, the holder submits to the Minister the samples and analysis results at the end of the agreed period.

The Minister may exempt the holder from the submission of the samples

(1) where the Minister considers that he or she has sufficient samples to adequately document the geological formations intersected by the well; and

(2) where the Minister already has samples from the same horizons.

153. Before disposing of any cutting samples, drilling cores or collected fluids, the authorization holder must offer them to the Minister.

154. The authorization holder must submit to the Minister, for approval, the corrective actions to be taken where any of the following situations occurs:

(1) a cementing operation provided for in the technical program cannot be carried out;

(2) no cement return is observed on the surface where such return was planned;

(3) a return of displaced drilling fluid indicates that the cement height required for cementing is not reached;

(4) there is uncertainty as to reaching the cementing goals.

155. The authorization holder keeps and maintains, for the duration of the work, registers concerning

(1) the persons arriving, leaving or present on the vessel or platform;

(2) the location and movement of support craft;

(3) emergency drills and exercises carried out;

(4) operating tests of surface and subsurface safety valves;

(5) the inspections of the installation and related equipment for corrosion and erosion;

(6) daily maintenance activities; and

(7) in the case of a floating installation, all installation movements, data, observations, measurements and calculations related to the stability and station-keeping capability of the installation.

156. An authorization holder must, in the case of an observation well, use a wellhead.

157. An authorization holder must, in the case of an observation well, send to the Minister, not later than 31 December of each year, a report signed and sealed by an engineer containing the data collected and the frequency of the collection and the annual inspection worksheet provided for in Schedule 2.

DIVISION IV
DAILY REPORT AND COMPLETION REPORT

158. The authorization holder must draw up a daily report of the work and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the drilling authorization number;

(2) the name of the drilling installation;

(3) the number of persons on board the drilling installation;

(4) a description, in chronological order, of the work carried out and the time required for carrying out each step of the work;

(5) the name and contact information of the enterprises that carried out the work;

(6) the operating condition of the blowout prevention system;

(7) the measured depth reached during the day;

(8) the composition of the drilling fluid and the flushing fluid and the volumes used;

(9) a loss of circulation;

(10) the components used to assemble the drill strings;

(11) the specifications of the casing and its setting depth;

(12) the weight applied to the bit and its penetration rate;

(13) the measurements of the deviation of the well path in dip, azimuth and depth;

(14) traces of petroleum or water detected;

(15) the type of pump used for the cementing and its capacity;

(16) the type of cement used, its density, its additives and their proportions, its setting time and the volume used;

(17) the well loggings carried out;

(18) the observations and data related to the evaluation or characterization of the geological formation;

(19) the fluid samples collected;

(20) the results of the pressure and leak tests;

(21) the volume and composition of the gas used, released, incinerated or burned at the flare and the reasons justifying it;

(22) the composition, concentration and detailed assessment of all the products stored and used on the site;

(23) the operational problems encountered and the corrective measures taken or planned;

(24) the indication of any temporary drilling work interruption and the procedure followed to secure the well;

(25) the indication of any event that disrupted the progress of the work;

(26) the abnormal meteorological conditions that caused an operation delay, in particular, due to

(a) visibility;

(b) temperature variation;

(c) wind speed or direction;

(d) the height, period and direction of the waves and swells;

(e) the size, distance and direction of ice;

(f) icing; and

(g) rolling, pitch and vertical motion of the vessel or platform; and

(27) any other information or document deemed necessary by the Minister.

159. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the work. If the Monday is a holiday, the report is sent on the first working day that follows.

160. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act starting from the rig release, a completion report signed by an engineer including, in particular,

(1) the drilling authorization number;

(2) the name and contact information of the licence holder;

(3) the type and name of the drilling installation, its registration number and the name of its owner;

(4) the type of navigation equipment used;

(5) the name and contact information of the enterprises that carried out the work;

(6) the coordinates of the well collar on a plan provided by a land surveyor according to the NAD83 map reference system;

(7) the measurements of the deviation of the well path in dip, azimuth and depth, and the final coordinates of the bottom of the hole;

(8) the start and end dates of the work;

(9) a summary of the work carried out in chronological order;

(10) a summary of the abnormal meteorological conditions that caused the delay and the corrective measures taken;

(11) a report on the cementing operations for each of the casing strings, containing, in particular,

(a) the name and contact information of the enterprise that carried out the cementing work;

(b) the type of cementing unit used and the method for applying the cement;

(c) the type of cement used, its density, its additives and their proportions, its setting time and the volume used;

(d) the cemented interval;

(e) the composition and volume of the flushing fluid and the spacing fluid used;

(f) the circulation pressures;

(g) the propping pressure applied and the duration; and

(h) a description of the cement return, the quantity and the retreat; if no return is observed, a description of the corrective actions taken;

(12) the analysis results and the analysis certificates of the samples and fluid samples collected;

(13) the interpreted well loggings, re-set in actual vertical depth, and the corrections made;

(14) the demonstration that the centralization of the casings complies with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee;

(15) the measured temperature and pressure to the final depth of the well;

(16) the data, recordings, results of the drill-stem tests, pressure and leak tests and other tests and their interpretation;

(17) the burning activities, the reasons justifying them and an estimate of the volume of gas burned;

(18) a geological description of the cuttings and drill cores, and a geotechnical description of the drill cores;

(19) a comparative analysis of the work carried out compared with that provided for in the technical program and the results obtained compared with those anticipated;

(20) the elements and practices that the holder intends to adopt and the parameters the holder intends to adjust from a standpoint of continued improvement for the holder's future drilling work, determined in compliance with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee;

(21) the list of the drill bits used, their type and the number of metres drilled by each;

(22) a technical description of the condition of the well after the drilling;

(23) the classification of the well determined according to Schedule 1;

(24) a longitudinal section of the well, according to the measured depth and the actual vertical depth, signed and sealed by an engineer, indicating, in particular,

(a) intersected groups, geological formations, lithological contacts and faults;

(b) zones of abnormal pressure;

(c) the diameter of the drill hole and the diameters of each of the casings and the guide tube;

(d) the location of each of the casings and the guide tube;

(e) if applicable, the depth interval of the open-hole well; and

(f) the other equipment installed or dropped in the well and not recovered;

(25) the daily tour reports;

(26) if laboratory testing has been done on the cement after the granting of the authorization, the properties of the cement determined in the laboratory;

(27) the technical reports prepared by the enterprises that carried out the work; and

(28) the type of play encountered and a comparison with a similar oil zone.

CHAPTER VIII
COMPLETION

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

161. A licence holder who wishes to obtain a completion authorization must apply to the Minister, in writing, at least 45 days before the start of the completion work planned.

162. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the name and number of the well; and

(3) the work schedule and an estimate of the realization costs.

163. The application must be accompanied by

(1) the completion technical program provided for in section 164 signed and sealed by an engineer;

(2) a demonstration that the distances provided for in sections 169 and 170 are met;

(3) payment of the fee of $2,555; and

(4) any other information and document requested by the Minister.

164. The completion technical program must contain

(1) the name and contact information of the engineer responsible for the technical program;

(2) the name, profession and functions of the persons who prepared and revised the program;

(3) the classification of the well determined according to Schedule 1;

(4) a chronological and detailed description of the work to be carried out;

(5) the name and contact information of the enterprises charged with carrying out the work;

(6) a longitudinal section of the well indicating the technical elements;

(7) the type of service device, equipment, components and casings to be used and their specifications;

(8) the type and name of the drilling installation, its registration number, the name of its owner and the estimated number of persons on board;

(9) the type of navigation equipment used and its specifications;

(10) the type and name of the vessel or platform used, its registration number, the name of its owner and the estimated number of persons on board;

(11) the type of navigation equipment used and its specifications;

(12) for every drilling, diving and accommodation installation, a compliance certificate issued by any of the following certification authorities:

(a) the American Bureau of Shipping;

(b) the Bureau Veritas;

(c) DNV GL (Det norske Veritas and Germanischer Lloyd);

(d) Lloyd's Register North America Inc.;

(13) the demonstration that the drilling installations are designed, fabricated and constructed according to the generally recognized best practices;

(14) the design standards and a description of the immobilization system;

(15) if applicable, the home port and the location of the land base for storing material and products necessary for the work;

(16) the demonstration that the equipment, components and casings may withstand the different stresses to which they will be submitted, in particular, bursting, collapse and tension stresses;

(17) the demonstration that the local and regional geology and the presence of adjacent drill holes have been taken into consideration in the preparation of the program;

(18) the measures taken to ensure the integrity of the well;

(19) the type of completion;

(20) the degree of primary, secondary or tertiary petroleum recovery;

(21) the geological formations intersected and the depth of the intervals of each of the completion operations, in actual vertical depth and in measured depth;

(22) the nature, composition and concentration of the fluids used and the total volume expected during the completion work;

(23) the demonstration that the fluid injection pressure will not reach the pressure for fracturing geological formations;

(24) the anticipated volume and flow of flow-back water;

(25) the type of seals installed and the installation depths;

(26) a casing perforation program indicating, in particular, the number and the type of perforations;

(27) the list of the planned well loggings;

(28) the list of expected pressure and leak tests;

(29) the list of expected injectivity tests;

(30) the measures planned for the management of petroleum, formation fluids, drilling fluids, chemical substances and other discharges;

(31) the meteorological and hydrographic conditions anticipated during the work;

(32) if applicable, a description of the ice management activities;

(33) the bathymetric map of the zone;

(34) the nature of the surface deposits and a description of the aquatic wildlife;

(35) the anticipated burning activities, the reasons justifying them and an estimate of the volume of gas burned;

(36) if a simulation or modelling has been carried out, a description of the simulation or modelling and the results obtained; and

(37) the list of references consulted during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions.

Where work is planned in a temporarily closed well and the depth of the wellhead under water makes it accessible, the holder must, before it is carried out, inspect the site and the wellhead, maintain the wellhead and carry out a pressure and leak test. In that case, the technical program must also contain the annual inspection worksheet provided for in Schedule 2.

DIVISION II
TIME PERIODS AND NOTICE OF THE START OF THE WORK

165. The authorization holder must, within 12 months after the granting of the authorization, start the completion work.

The work is deemed to have started as soon as the first step provided in the work schedule is initiated.

166. The authorization holder must notify the Minister, in writing, at least 7 days before the expected date for the start of the work.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

167. The authorization holder must also, at least 24 hours before, notify the Minister of the straightening or towing of an installation.

SECTION III
CONDITIONS OF EXERCISE

168. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

169. The authorization holder may not carry out completion work in a well whose collar is at a distance less than those provided for in section 120.

The distances must be measured horizontally, in a straight line, from the collar to the nearest point of the elements referred to in the first paragraph of section 120.

The Minister may allow the reduction of the distances if the authorization holder demonstrates to the Minister that an effective protective measure reduces risks.

170. The authorization holder may not position the activity site less than 60 m from a national park or a protected area entered in the protected area register provided for in section 5 of the Natural Heritage Conservation Act (chapter C-61.01).

171. Before the start of the completion operations, the authorization holder must carry out pressure and leak tests on the casings, the strings that will be acted upon, the valve, injection and wellhead pipes or the fracturing shaft, and any other component that was not submitted to a pressure and leak test. The tests must be carried out at a pressure that allows confirmation of the integrity of the components where they are submitted to the maximum pressure provided for in the technical program.

The integrity is confirmed and the authorization holder may start the completion operations if the stabilized pressure is at least 90% of the pressure applied over an interval of 10 minutes.

172. The authorization holder must ensure that the pressure applied during the completion work does not exceed the test pressure.

173. The authorization holder must ensure that

(1) each completion interval is isolated from any other permeable or porous interval intersected by the well, except in the case of a commingled production;

(2) any seal is installed as close as possible to the upper level of the completion interval;

(3) no fracturing is induced to the formation during the work; and

(4) the indicators and alarms associated with the monitoring equipment are installed on the service device to alert onsite personnel.

174. The authorization holder must install production tubing if the fluid withdrawn or injected is corrosive for the casings.

The authorization holder must design and install the casing and production tubing so as to comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

175. The cement used must reach the minimum compressive strength of 3,500 kPa after 48 hours of hardening at the temperature of the shallowest formation to be covered.

The authorization holder must restrict the cement shrinkage process and limit to the minimum the risk of formation of a micro-annular space.

176. The authorization holder must ensure that the marine riser used

(1) furnishes access to the well;

(2) isolates the well from the body of water;

(3) withstands the differential pressure of the drilling fluid relative to the body of water;

(4) withstands the physical forces to which it will be submitted;

(5) permits the completion fluid to be returned to the installation; and

(6) is supported in a manner that effectively compensates for the forces caused by the motion of the drilling installation.

177. The authorization holder must use, until the end of the work, a blowout prevention system comprising at least 2 different sealing mechanisms or a wellhead designed to withstand the pressures provided for in the technical program.

178. The authorization holder must verify daily the blowout prevention system to make sure it works well. If a system component is defective, work must be suspended until the component is repaired.

179. The authorization holder must regularly inspect joints and structural elements of every equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps a register of those inspections and maintains it until the end of the work for the permanent closure of the well.

180. The authorization holder keeps and maintains, for the duration of the completion work, registers concerning

(1) the persons arriving, leaving or present on the vessel or platform;

(2) the location and movement of support craft;

(3) emergency drills and exercises carried out;

(4) operating tests of surface and subsurface safety valves;

(5) the inspections of the installation and related equipment for corrosion and erosion;

(6) daily maintenance activities; and

(7) in the case of a floating installation, all installation movements, data, observations, measurements and calculations related to the stability and station-keeping capability of the installation.

181. Before drilling the well casing, the authorization holder must wait until the cement reaches a resistance sufficient to not compromise the integrity of the well.

DIVISION IV
DAILY REPORT AND COMPLETION REPORT

182. The authorization holder must draw up a daily report on the work and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the completion authorization number;

(2) the name of the drilling installation;

(3) the number of persons on board;

(4) a description, in chronological order, of the work carried out and the time required for carrying out each step of the work;

(5) the name and contact information of the enterprises that carry out the completion work;

(6) a summary of the meteorological conditions;

(7) the result of all the pressure and leak tests, including their duration and the initial and final test pressures;

(8) the operating condition of the blowout prevention system;

(9) the well loggings carried out;

(10) the type of seals installed and the installation depths;

(11) the technical details of the perforations, in particular, the number, type and intervals;

(12) the technical details of the completion by chemical stimulation, if applicable, in particular, the intervals, concentrations and volumes of acids and additives injected, the volume of flow-back water and the flows, and the injection pressures;

(13) the volume, composition and concentration of all the products stored and used on the site;

(14) the number, interval, volume of fluid, injection rate and pressure and a summary of the results of each injectivity test;

(15) the volume and composition of the gas used, released, incinerated or burned at the flare and the reasons justifying it;

(16) the operational problems encountered and the corrective measures taken or planned;

(17) the indication of any event that disrupted the progress of the work;

(18) the abnormal meteorological conditions that caused an operation delay, in particular, due to

(a) visibility;

(b) temperature variation;

(c) wind speed or direction;

(d) the height, period and direction of the waves and swells;

(e) the size, distance and direction of ice;

(f) icing; and

(g) rolling, pitch and vertical motion of the vessel or drilling installation;

(19) if applicable, the size, distance and direction of ice;

(20) the indication of any temporary completion work interruption and the procedure followed to secure the well; and

(21) any other information deemed necessary by the Minister.

183. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the completion work. If the Monday is a holiday, the report is sent on the first working day that follows.

184. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, a completion report signed by an engineer including, in particular,

(1) the completion authorization number;

(2) the type and name of the installation, its registration number and the name of its owner;

(3) the type of navigation equipment used;

(4) the start and end dates of the work;

(5) a summary of the work carried out according to their chronological order;

(6) the start and end dates of the completion work;

(7) a summary of the abnormal meteorological conditions that caused the operation delay and the corrective measures taken;

(8) a description of the condition of the well including a longitudinal section indicating the mechanical conditions of the well after the completion;

(9) the classification of the well determined according to Schedule 1;

(10) a description of the type of completion carried out and its degree of recovery, if applicable;

(11) the results of the pressure and leak tests;

(12) the intervals, the type of chemical completion, concentrations and volumes of acids and additives injected, the volume of flow-back water, injection rates and pressures;

(13) the results of the injectivity tests;

(14) the results of the other tests carried out;

(15) the interpreted well loggings and the results of the related analyses and studies;

(16) the analyses of recovered petroleum or water, if applicable;

(17) the number, interval, type and pressure of each series of perforations;

(18) the volume of flow-back water;

(19) the burning activities, the reasons justifying them and an estimate of the volume of gas burned

(20) a comparative analysis of the work carried out compared with that provided for in the technical program and the results obtained compared with those anticipated;

(21) the technical reports prepared by the enterprises that carried out the work; and

(22) if applicable, the other data collected during the completion work and their analysis.

CHAPTER IX
FRACTURING

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

185. A licence holder who wishes to obtain a fracturing authorization must apply to the Minister, in writing, at least 60 days before the planned start of the work.

186. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the name and number of the well; and

(3) the work schedule and an estimate of the realization costs.

187. The application must be accompanied by

(1) the fracturing technical program provided for in section 188 signed and sealed by an engineer;

(2) a demonstration that the distances provided for in sections 194 and 195 are met;

(3) payment of the fee of $2,555; and

(4) any other information and document requested by the Minister.

188. The fracturing technical program must contain

(1) the name and contact information of the engineer responsible for the technical program;

(2) the name, profession and functions of the persons who prepared and revised the program;

(3) the name and contact information of the enterprises charged with carrying out the work;

(4) a chronological and detailed description of the work to be carried out;

(5) the classification of the well determined according to Schedule 1;

(6) a longitudinal section of the well indicating all the technical elements;

(7) an interpreted logging of the quality of the cement bond or any other equivalent analysis of the evaluation of the production tubing or the intermediate casing, from the shallowest zone targeted containing petroleum to the top of the cement, that shows that the hydraulic isolation has been obtained;

(8) the list of well loggings planned;

(9) the list of pressure and leak tests and any other tests planned;

(10) the list of fracturing tests planned, or the reasons why they are not required;

(11) the type and name of the installation, its registration number, the name of its owner and the estimated number of persons on board;

(12) the type of navigation equipment used and its specifications;

(13) for every drilling, diving and accommodation installation, a compliance certificate issued by any of the following certification authorities:

(a) the American Bureau of Shipping;

(b) the Bureau Veritas;

(c) DNV GL (Det norske Veritas and Germanischer Lloyd);

(d) Lloyd's Register North America Inc.;

(14) the demonstration that the installations are designed, fabricated and constructed according to the generally recognized best practices;

(15) the design standards and a description of the immobilization system;

(16) if applicable, the home port and the location of the land base for storing material and products necessary for the work;

(17) the type of service device, equipment, components and casings to be used and their specifications;

(18) an evaluation of well integrity compliant with the Industry Recommended Practice, IRP: # 24, Fracture stimulation, published by the Drilling and Completion Committee indicating, in particular,

(a) the identification of the primary protective barrier and, if applicable, the secondary protective barrier;

(b) the maximum pressure to be used to avoid compromising the integrity of the well; and

(c) that the equipment, components and casings may withstand the conditions, forces and stresses to which they will be submitted;

(19) a description of the fracturing intervals expected, in particular, the location of the perforations, in actual vertical depth and measured depth;

(20) the number of steps planned;

(21) the nature and total volume of the fracturing fluids anticipated at each step;

(22) the pressures and fluid flows anticipated for pumping at each step;

(23) the type of fractures;

(24) the quantity of energy used for pumping at each fracturing step;

(25) a fracturing parameter monitoring program including, in particular,

(a) the surface injection pressure;

(b) the fluid flow;

(c) the concentration of proppant; and

(d) if applicable, the pressure in the annular space between the primary and secondary protective barriers;

(26) a well integrity monitoring program including, in particular,

(a) the changes in the well characteristics likely to indicate a weakness of the casings or any other aspect of the well integrity necessary for the isolation of the usable groundwater;

(b) a well casing corrosion monitoring program; and

(c) the analyses to be carried out concerning the flows of the surface casing blowholes and the migration of the gas;

(27) the following information concerning the fracturing fluids used:

(a) the commercial name of all the additives and their function;

(b) the maximum concentration of each additive and of each additive in the fracturing fluid;

(28) an evaluation of the risks related to the presence of additives in the fracturing fluids and the practices and operational audits provided for the management of the risks and including, in particular,

(a) the physical, chemical and toxicological properties of the additives in the fracturing fluid;

(b) the classification of the additives based on their chemical ingredients and their potential impact on the safety and health of persons;

(c) the identification of the additives for which specific verifications or practices are required to reduce the risks on the health of persons; and

(d) the nature of the specific verifications and practices planned;

(29) an evaluation of the propagation of the fractures including, in particular, an analysis of the communication potential between the stimulated well and the adjacent drilling holes carried out in compliance with the Industry Recommended Practice, IRP: # 24, Fracture stimulation, published by the Drilling and Completion Committee, by using the relevant data to which the holder has access;

(30) an evaluation of the capacity of the geological formations located between the petroleum zone and the base of the usable groundwater aquifer to act as a confining layer and contain the effects of the fracturing, or the reasons why it is not required; if applicable, the evaluation must contain, in particular,

(a) an analysis of the mobility of the fracturing fluid in the zone located between the petroleum zone and the base of the usable groundwater;

(b) an analysis of the location and extent of the geological faults and the zones comprising natural fractures; and

(c) an analysis distance covering double the half length of the fracture planned over the entire depth of the drill hole;

(31) a seismicity analysis based, in particular, on

(a) the normal local and regional seismic activity determined from the historical data available;

(b) the pre-existing geological constraints near the fracturing work contemplated;

(c) the evaluation of the risk of seismicity induced by the fracturing work; and

(d) the evaluation of the probability that an induced earthquake of a magnitude greater than normal occurs;

(32) the measures planned for the management of petroleum, formation fluids, drilling fluids, chemical substances and other discharges;

(33) the meteorological and hydrographic conditions anticipated during the work;

(34) if applicable, a description of the ice management activities;

(35) the bathymetric map of the zone;

(36) the nature of the surface deposits and a description of the aquatic wildlife;

(37) the anticipated burning activities, the reasons justifying them and an estimate of the volume of gas burned;

(38) if a simulation or modelling has been carried out, a description of the simulation or modelling and the results obtained; and

(39) the list of references consulted during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions.

Where the holder observes a probability of an induced seismicity of a magnitude greater than the normal seismic activity, the technical program must also contain a plan for the monitoring, mitigation and response to the induced seismicity including, in particular,

(1) a quality and quantity monitoring plan that covers a radius of 10 km from the fracturing zone, including, in particular,

(a) a map of the temporary or permanent seismic monitoring equipment stations;

(b) the specifications of the seismic monitoring equipment, the data transmission method and their accuracy in measuring the location, depth and magnitude of a seismic activity;

(c) the monitoring procedure, identification of the persons responsible and the speed of the detection and location of an earthquake and the communication of the information; and

(d) a monitoring period comprised between the start of the work and the shortest of the following periods:

i. 60 days after the end of the fracturing work;

ii. the end of the return of the flow-back water to the surface; and

(2) the measures applicable if the recorded magnitude of the induced seismic activity exceeds those provided for in section 206.

Where work is planned in a temporarily closed well and the depth of the wellhead under water makes it accessible, the holder must, before it is carried out, inspect the site and the wellhead, maintain the wellhead and carry out a pressure and leak test. In that case, the technical program must also contain the annual inspection worksheet provided for in Schedule 2.

189. If a licence holder applies for a fracturing authorization 5 years or more after the initial cementing of the well casing, the holder must also provide in the technical program a demonstration that the cementing of the well and casings used are in good order, in particular, to preserve the integrity of the well during the fracturing work.

DIVISION II
TIME PERIODS AND NOTICE OF THE START OF THE WORK

190. The authorization holder must, within 12 months after the granting of the authorization by the Minister, start the fracturing work.

The work is deemed to have started as soon as the first step provided in the work schedule is initiated.

191. The authorization holder must, at least 7 days before, notify the Minister of the start of the fracturing work.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

192. The authorization holder must also, at least 24 hours before, notify the Minister of the straightening or towing of an installation.

DIVISION III
CONDITIONS OF EXERCISE

193. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

194. The authorization holder may not carry out fracturing work in a well whose collar is at a distance less than those provided for in section 120.

The distances must be measured horizontally, in a straight line, from the collar to the nearest point of the elements referred to in the first paragraph of section 193.

The Minister may allow the reduction of the distances if the authorization holder demonstrates to the Minister that an effective protective measure reduces risks.

195. The authorization holder may not position the activity site less than 60 m from a national park or a protected area entered in the protected area register provided for in section 5 of the Natural Heritage Conservation Act (chapter C-61.01).

196. The casings, components and equipment used by the authorization holder must be designed, built, tested, maintained and used so as to ensure the integrity of the well during the fracturing work.

The surface casing and the cement forming it are not protective barriers and must not be exposed to pressures created by the fracturing work.

197. Where the authorization holder holds an exploration licence, the casings, components and equipment the holder uses must be designed so as to serve as primary and secondary protective barriers during the fracturing work.

The Minister may exempt the holder from that requirement if the holder demonstrates to the Minister that the protections in place are sufficient.

198. Before the start of the fracturing operations, the authorization holder must carry out pressure and leak tests on the casings, the strings that will be acted upon, the valve, injection and wellhead pipes and any other component that will be acted upon that was not submitted to a pressure and leak test. The tests must be carried out at a pressure that allows confirmation of the integrity of the components where they are submitted to the maximum pressure provided for in the technical program.

The integrity is confirmed and the holder may start the fracturing operations if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes.

199. Before the start of the fracturing operations, the authorization holder must carry out at least 1 fracturing test.

The Minister may exempt the holder from that requirement if the holder demonstrates to the Minister that a test in the same geological formation has already been carried out in the same conditions.

200. The authorization holder must ensure that the marine riser used

(1) furnishes access to the well;

(2) isolates the well from the body of water;

(3) withstands the differential pressure of the fracturing fluid relative to the body of water;

(4) withstands the physical forces to which it will be submitted;

(5) permits the fracturing fluid to be returned to the installation; and

(6) is supported in a manner that effectively compensates for the forces caused by the motion of the drilling installation.

201. The authorization holder must use, until the temporary or permanent stop of the fracturing work, a blowout prevention system comprising at least 2 different sealing mechanisms or a wellhead designed to withstand the anticipated pressures.

202. The authorization holder must verify daily the blowout prevention system to make sure it works well. If a system component is defective, work must be suspended until the component is repaired.

203. The authorization holder must regularly inspect joints and structural elements of every equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps a register of those inspections and maintains it until the end of the work for the permanent closure of the well.

204. The authorization holder must ensure that the indicators and alarms associated with the monitoring equipment are installed on the service device to alert onsite personnel.

205. The authorization holder must, if applicable, keep the plan for the monitoring, mitigation and response to an induced seismicity at all times on the activity site.

206. If an earthquake of a 2.0 magnitude or more is detected and the epicentre is located within a radius of 10 km from the fracturing zone, the authorization holder must implement a monitoring, mitigation and response plan so as to eliminate or reduce the possibility of other seismic events resulting from the fracturing operations.

If an earthquake of a 4.0 magnitude or more is detected and the epicentre is located within a radius of 10 km from the fracturing zone, the holder must immediately interrupt the fracturing work and secure the well.

The holder immediately sends an incident notice to the Minister.

207. Following an interruption provided for in the second paragraph of section 206, the authorization holder who wishes to resume fracturing work must submit to the Minister, for approval, a supplementary agreement to the holder's technical program to reduce future induced seismicity at a local magnitude of less than 4.0.

The holder resumes the work when the holder implements the corrective measures to the Minister's satisfaction.

208. The authorization holder keeps and maintains, for the duration of the work, registers concerning

(1) the persons arriving, leaving or present on the vessel or platform;

(2) the location and movement of support craft;

(3) emergency drills and exercises carried out;

(4) operating tests of surface and subsurface safety valves;

(5) the inspections of the installation and related equipment for corrosion and erosion;

(6) daily maintenance activities; and

(7) in the case of a floating installation, all installation movements, data, observations, measurements and calculations related to the stability and station-keeping capability of the installation.

DIVISION IV
DAILY REPORT AND COMPLETION REPORT

209. The authorization holder must draw up a daily report of the work and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the fracturing authorization number;

(2) the name of the drilling installation;

(3) the number of persons on board:

(4) the square-drive bushing;

(5) a description, in chronological order, of the work carried out and the time required for carrying out each step;

(6) the name and contact information of the enterprises carrying out the fracturing work;

(7) a summary of the meteorological conditions;

(8) the result of the pressure and leak tests, including the duration and the initial and final test pressures;

(9) the operating condition of the blowout prevention system;

(10) the well loggings carried out;

(11) the type of seals installed and the installation depths;

(12) the volume, composition and concentration of all the products stored and used on the site;

(13) the volume, duration, flow and composition of the flow-back water;

(14) the number, interval, volume of fluid, injection flow and pressure and a summary of the results of the fracturing tests;

(15) the measurements of the extension and orientation of induced fractures;

(16) the volume and composition of the gas used, released, incinerated or burned at the flare and the reasons justifying it;

(17) the operational problems encountered and the corrective measures taken or planned;

(18) the indication of any event that disrupted the progress of the work;

(19) the abnormal meteorological conditions that caused a work delay, in particular, due to

(a) visibility;

(b) temperature variation;

(c) wind speed or direction;

(d) the height, period and direction of the waves and swells;

(e) the size, distance and direction of ice;

(f) icing; and

(g) rolling, pitch and vertical motion of the vessel or drilling installation;

(20) the indication of any temporary interruption of the fracturing work and the procedure followed to secure the well; and

(21) any other information or document deemed necessary by the Minister.

210. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the fracturing work. If the Monday is a holiday, the report is sent on the first working day that follows.

211. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, a completion report signed by an engineer including, in particular,

(1) the fracturing authorization number;

(2) the type and name of the installation, its registration number and the name of its holder;

(3) the type of navigation equipment used;

(4) the start and end dates of the work;

(5) a summary of the work carried out according to the chronological order;

(6) a summary of the abnormal meteorological conditions that caused a work delay and the corrective measures taken;

(7) a description of the condition of the well including a longitudinal section indicating the mechanical conditions of the well after the fracturing;

(8) the classification of the well determined according to Schedule 1;

(9) the result of the pressure and leak tests, including their duration, and the initial and final test pressures;

(10) the results of the fracturing tests including, in particular,

(a) the number and duration of the tests;

(b) the volumes and flows of the injected fluid per test;

(c) the measured pressure on the surface and at the bottom of the well;

(d) the test interval, in metre of measured depth;

(e) the formation temperature;

(f) the indication of the presence of flow-back water or a fracture that closed up by natural leakage;

(g) the indication of any problem encountered and its potential impact on the test results;

(h) the interpretation and analysis of the test results, including, in particular,

i. the measured constraints;

ii. a description and justification of the analysis and interpretation techniques; and

iii. the identification and analysis of any unexpected result; and

(i) the raw test data, in particular,

i. the date of the test;

ii. the test depth, in metre of measured depth;

iii. the test data, including the time elapsed, the wellhead pressure, the pressure at the bottom of the well, the injection flow, the blow-back pressure and the temperature;

(11) the number, interval, type and pressure of each series of perforations;

(12) the start and end dates of each fracturing step;

(13) the maximum and average processing flow of each fracturing step;

(14) the maximum and average processing pressure of each fracturing step;

(15) the duration of the return of the flow-back water to the surface, the total volume recovered, the average flow and the composition;

(16) a comparative analysis of the work carried out compared with that provided for in the technical program and the results obtained compared with those anticipated;

(17) the flow-back volume estimating the volume of injected fluid that returned to the surface and the volume that remained in the formation;

(18) the interpreted well loggings and the results of the related analyses and studies;

(19) the analyses of the petroleum or water recovered, if applicable;

(20) the data collected during the fracturing work, in particular, the fracturing parameter monitoring data;

(21) the burning activities, the reasons justifying them and an estimate of the volume of gas burned;

(22) if applicable, the raw and interpreted seismic monitoring data;

(23) the comparative analysis of the reaction of the geological formations compared to the reaction anticipated;

(24) the technical reports prepared by the enterprises that carried out the work;

(25) the follow-up after an incident referred to in sections 212 and 213; and

(26) if applicable, the other data collected during the fracturing activities.

DIVISION V
NOTICE TO THE MINISTER

212. The authorization holder must immediately notify the Minister where any of the following incidents occurs:

(1) the maximum pressure provided for in the technical program is exceeded;

(2) the volume of fluid rising to the surface exceeds the volume anticipated;

(3) the holder has reasons to suspect a flaw in the casing or the casing cement, or the absence of isolation of a source of usable groundwater.

213. When the authorization holder observes an involuntary entry of any formation fluid inside an adjacent drill hole, the authorization holder must immediately notify the person responsible for the drill hole and the Minister.

CHAPTER X
RECONDITIONING

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

214. A licence holder who wishes to obtain a reconditioning authorization must apply to the Minister, in writing, at least 45 days before the planned start of the work.

215. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the well name, number and type; and

(2) the work schedule and an estimate of the realization costs.

216. The application must be accompanied by

(1) the reconditioning technical program provided for in section 217 signed and sealed by an engineer;

(2) payment of the fee of $4,426; and

(3) any other information and document requested by the Minister.

217. The reconditioning technical program must contain

(1) the name and contact information of the engineer responsible for the technical program;

(2) the name, profession and functions of the persons who prepared and revised the program;

(3) a chronological and detailed description of the work to be carried out;

(4) the classification of the well determined according to Schedule 1;

(5) the name and contact information of the enterprises charged with carrying out the work;

(6) the type and name of the installation, its registration number, the name of its owner and the estimated number of persons on board;

(7) the type of navigation equipment used and its specifications;

(8) for every drilling, diving and accommodation installation, a compliance certificate issued by any of the following certification authorities:

(a) the American Bureau of Shipping;

(b) the Bureau Veritas;

(c) DNV GL (Det norske Veritas and Germanischer Lloyd);

(d) Lloyd's Register North America Inc.;

(9) the design standards and a description of the immobilization system;

(10) if applicable, the home port and the location of the land base for storing material and products necessary for the work;

(11) the demonstration that the regional and local geology and the presence of adjacent drill holes have been taken into consideration;

(12) the reasons justifying the reconditioning;

(13) the purpose of the reconditioning;

(14) a longitudinal section of the well indicating the technical elements;

(15) the list of pressure and leak tests, and the list of other tests planned;

(16) the list of well loggings planned;

(17) the type of service device and equipment to be used and their specifications;

(18) the intervals to be the subject of reconditioning;

(19) a description of the fluids used;

(20) the pressure at the closed wellhead and the shut-in pressure of the well;

(21) the demonstration that the equipment, components and casings may withstand the different stresses to which they will be submitted, in particular, bursting, collapse and tension stresses;

(22) if applicable, a cementing program including, in particular,

(a) the type of cementing;

(b) the cementing intervals;

(c) the method for applying the cement;

(d) the type of cement, its density, its additives and their proportions, its setting time, the flow and pressure used and the volume that remained in the well and the volume that rose to the surface;

(e) if applicable, the maximum pressure for injecting the cement; and

(f) the changes to the cement required, if applicable, due to specific physical and chemical conditions of the environment, or to give the cement specific properties;

(23) a well integrity verification and follow-up program;

(24) any specific condition that could affect the safety of the work on the well;

(25) an evaluation of the impact of the proposed work on the optimal recovery of the resource;

(26) the meteorological and hydrographic conditions anticipated for the work period;

(27) if applicable, a description of the ice management activities;

(28) the bathymetric map of the area;

(29) the nature of the surface deposits and a description of the aquatic wildlife;

(30) the anticipated burning activities, the reasons justifying them and an estimate of the volume of gas burned; and

(31) the list of references consulted during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions.

Where work is planned in a temporarily closed well and the depth of the wellhead under the water makes it accessible, the holder must, before it is carried out, inspect the site and the wellhead, maintain the wellhead and carry out a pressure and leak test. In that case, the technical program must also contain the annual inspection worksheet provided for in Schedule 2.

DIVISION II
TIME PERIODS AND NOTICE OF THE START OF THE WORK

218. The authorization holder must, within 12 months after the granting of the authorization, start the reconditioning.

The work is deemed to have started as soon as the first step provided in the work schedule is initiated.

219. The authorization holder must, at least 7 days before, notify the Minister of the start date of the reconditioning.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

220. The authorization holder must also, at least 24 hours before, notify the Minister of the straightening or towing of an installation.

DIVISION III
CONDITIONS OF EXERCISE

221. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

222. The authorization holder must carry out the reconditioning so as to

(1) ensure the safety of the work;

(2) not compromise the capacity of the well to withstand potential conditions, forces and stresses;

(3) ensure a sufficient resistance to fluid kicks;

(4) protect the integrity of the usable groundwater and the body of water; and

(5) ensure that the petroleum zones and aquifer layers are isolated from one another.

223. The authorization holder must use, until the temporary or permanent stop of the work, a blowout prevention system comprising at least 2 different sealing mechanisms or a wellhead designed to withstand the pressures provided for in the technical program.

224. The authorization holder must verify daily the blowout prevention system to make sure it works well. If a system component is defective, work must be suspended until the component is repaired.

225. The authorization holder must regularly inspect joints and structural elements of every equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps a register of those inspections and maintains it until the end of the work for the permanent closure of the well.

226. The authorization holder must ensure that the indicators and alarms associated with the monitoring equipment are installed on the service device to alert onsite personnel.

227. The authorization holder must ensure that the marine riser used

(1) furnishes access to the well;

(2) isolates the well from the body of water;

(3) withstands the differential pressure of the reconditioning fluid relative to the body of water;

(4) withstands the different forces to which it will be submitted;

(5) permits the completion fluid to be returned to the installation; and

(6) is supported in a manner that effectively compensates for the forces caused by the motion of the drilling installation.

228. The authorization holder keeps and maintains, for the duration of the work, registers concerning

(1) the persons arriving, leaving or present on the vessel or platform;

(2) the location and movement of support craft;

(3) emergency drills and exercises carried out;

(4) operating tests of surface and subsurface safety valves;

(5) the inspections of the installation and related equipment for corrosion and erosion;

(6) daily maintenance activities; and

(7) in the case of a floating installation, all installation movements, data, observations, measurements and calculations related to the stability and station-keeping capability of the installation.

DIVISION IV
DAILY REPORT AND COMPLETION REPORT

229. The authorization holder must draw up a daily report of the work and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the reconditioning authorization number;

(2) the name of the drilling installation;

(3) the number of persons on board;

(4) the square-drive bushing;

(5) a description, in chronological order, of the work carried out and the time required for carrying out each step;

(6) the name and contact information of the enterprises carrying out the reconditioning;

(7) a summary of the meteorological conditions;

(8) the result of the pressure and leak tests, including the duration and the initial and final test pressures;

(9) the result of any other test carried out;

(10) the operating condition of the blowout prevention system;

(11) the well loggings carried out;

(12) the type of seals installed and the installation depths;

(13) the volume, composition and concentration of the reconditioning fluids;

(14) the volume and composition of the gas used, released, incinerated or burned at the flare and the reasons justifying it;

(15) the operational problems encountered and the corrective measures taken or planned;

(16) the indication of any event that disrupted the progress of the work;

(17) the abnormal meteorological conditions that caused a work delay, in particular, due to

(a) visibility;

(b) temperature variation;

(c) wind speed or direction;

(d) the height, period and direction of the waves and swells;

(e) the size, distance and direction of ice;

(f) icing; and

(g) rolling, pitch and vertical motion of the vessel or platform;

(18) the indication of any temporary interruption of the reconditioning and the procedure followed to secure the well; and

(19) any other information or document deemed necessary by the Minister.

230. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the reconditioning. If the Monday is a holiday, the report is sent on the first working day that follows.

231. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, a completion report signed by an engineer including, in particular,

(1) the reconditioning authorization number;

(2) the type and name of the installation, its registration number and the name of its owner;

(3) the type of navigation equipment used;

(4) the start and end dates of the work;

(5) a summary of the work carried out according to the chronological order;

(6) a summary of the abnormal meteorological conditions that caused a work delay and the corrective measures taken;

(7) a description of the condition of the well including a longitudinal section indicating the mechanical conditions of the well after the reconditioning;

(8) the classification of the well determined according to Schedule 1;

(9) the result of the pressure and leak tests, including their duration, and the initial and final test pressures;

(10) the results of any other test carried out,

(11) a comparative analysis of the work carried out compared with that provided for in the technical program and the results obtained compared with those anticipated;

(12) the interpreted well loggings and the results of the related analyses and studies;

(13) the burning activities, the reasons justifying them and an estimate of the volume of gas burned;

(14) the technical reports prepared by the enterprises that carried out the work; and

(15) if applicable, the other data collected during the reconditioning activities.

CHAPTER XI
PETROLEUM EXTRACTION TESTS AND USE OF AN UNDERGROUND RESERVOIR

DIVISION I
PETROLEUM EXTRACTION TEST PROGRAM

232. An exploration licence holder who wishes to carry out petroleum extraction tests must submit a petroleum extraction test technical program, for approval, to the Minister at least 30 days before the expected date for the start of the installation of the equipment needed.

233. The test technical program must be signed and sealed by a geologist or an engineer and contain

(1) the name and contact information of the holder and the licence number;

(2) the name and number of the well;

(3) the planned duration of the tests and an estimate of the realization costs;

(4) the name and contact information of the geologist or engineer responsible for the tests;

(5) a chronological and detailed description of the tests to be carried out;

(6) the classification of the well determined according to Schedule 1;

(7) the name and contact information of the enterprise charged with carrying the tests;

(8) the name of the vessel or platform used, its registration number, the name of its owner and the estimated number of persons on board;

(9) the type of navigation equipment used and its specifications;

(10) the depth interval and a description of the geological formations and the zones subject to the tests;

(11) the geological, geophysical, petrophysical and hydrostatic information and the drilling results justifying the tests;

(12) a description of the current condition of the well;

(13) if a seismic profile has been carried out, the interpreted profile indicating the location of the zones subject to the tests;

(14) the methods planned to dispose of the substances extracted; and

(15) any other information or document deemed necessary by the Minister.

DIVISION II
UNDERGROUND RESERVOIR TRIAL TEST PROGRAM

234. An exploration licence holder who wishes to carry out trial tests must submit an underground reservoir trial test technical program for the approval of the Minister at least 30 days before the expected start date of the installation of the necessary equipment.

235. The test technical program must be signed and sealed by a geologist or an engineer and contain

(1) the name and contact information of the holder and the licence number;

(2) the name and number of the well;

(3) the planned duration of the tests and an estimate of the realization costs;

(4) the name and contact information of the geologist or engineer responsible for the tests;

(5) a chronological and detailed description of the tests to be carried out;

(6) the classification of the well determined according to Schedule 1;

(7) the name and contact information of the enterprise charged with carrying out the tests;

(8) the type and name of the vessel or platform used, its registration number, the name of its owner and the estimated number of persons on board;

(9) the type of navigation equipment used and its specifications;

(10) a description of the underground reservoir subject to the tests;

(11) the geological, geophysical, petrophysical and hydrostatic information and the drilling results justifying the tests;

(12) a description of the current condition of the wells;

(13) at least 3 interpreted seismic profiles indicating the location in the subsurface of the underground reservoir subject to the tests and the well seismic cushioning;

(14) the estimated capacity of the underground reservoir on the basis of a modelling;

(15) the shut-in pressure of the underground reservoir recorded at the well subject to the tests;

(16) the nature and properties of the substances stored or disposed of in the underground reservoir during the test period;

(17) the injection method and the volume and pressure of the substances injected in the underground reservoir during the tests;

(18) the methods planned for disposing of the substances withdrawn; and

(19) any other information or document deemed necessary by the Minister.

DIVISION III
TIME PERIODS AND NOTICE OF THE START OF THE WORK

236. An exploration licence holder who carries out petroleum extraction tests or underground reservoir trial tests must, at least 7 days before the expected start date of the installation work of the equipment necessary for that purpose, notify the Minister in writing.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

DIVISION IV
CARRYING OUT OF PETROLEUM EXTRACTION TESTS AND UNDERGROUND RESERVOIR TRIAL TESTS

237. The maximum duration of a test period is 240 consecutive days for the petroleum extraction tests and 365 consecutive days for the underground reservoir trial tests.

The test period begins on the first day on which an exploration licence holder carries out petroleum extraction tests or underground reservoir trial tests and ends on the day on which the holder completely ceases to carry out the tests.

238. An exploration licence holder who carries out tests must comply with the test technical program approved by the Minister.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by a geologist or an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

239. An exploration licence holder who carries out tests must use

(1) a bottom safety valve that closes the well above the seal; and

(2) a wellhead equipped with a valve that may be handled remotely and can close automatically, in the case of tests in a well drilled using a floating drilling installation.

240. An exploration licence holder who carries out tests must ensure that

(1) the equipment used is designed so as to properly evaluate the formation;

(2) the equipment rated pressure upstream of and including the well testing manifold exceeds the maximum anticipated shut-in pressure; and

(3) the equipment downstream of the well testing manifold is sufficiently protected against overpressure.

241. An exploration licence holder who carries out tests must ensure that every person present at the installations has successfully completed awareness training respecting hydrogen sulfide (H_2S).

242. An exploration licence holder who carries out tests keeps and maintains, for the duration of the tests, registers concerning

(1) the persons arriving, leaving or present on the vessel or platform;

(2) the location and movement of support craft;

(3) emergency drills and exercises carried out;

(4) operating tests of surface and subsurface safety valves;

(5) the inspections of the installation and related equipment for corrosion and erosion;

(6) daily maintenance activities; and

(7) in the case of a floating installation, all installation movements, data, observations, measurements and calculations related to the stability and station-keeping capability of the installation.

DIVISION V
DAILY REPORT AND TEST COMPLETION REPORT

243. An exploration licence holder who carries out petroleum extraction test or underground reservoir trial tests must draw up a daily report of the tests and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the name and contact information of the holder and the licence number;

(2) the volumes and flows of petroleum and other fluids extracted, injected, withdrawn and disposed of in the well;

(3) the volume and composition of the gas used, released, incinerated or burned at the flare;

(4) the operational problems encountered and the corrective measures taken or planned;

(5) the indication of any event that disrupted the progress of the work; and

(6) any other information or document deemed necessary by the Minister.

244. An exploration licence holder who carries out tests must send to the Minister, every Monday, the daily reports of the preceding week until the end of the test period. If the Monday is a holiday, the report is sent on the first working day that follows.

245. An exploration licence holder who carries out tests must, within 30 days after the end of the test period, send to the Minister a test completion report signed by a geologist or an engineer including, in particular,

(1) the name and contact information of the holder and the licence number;

(2) a summary of the activities related to the tests;

(3) a technical description of all the tests carried out;

(4) the results obtained during the tests, in particular,

(a) the average daily pressures registered at the wellhead;

(b) the average daily flows measured;

(c) the volumes of fluids extracted, injected, withdrawn and disposed of;

(d) in the case of petroleum extraction tests, the decline curve, the deliverability curve of the well flow and the pressure rise curve;

(e) in the case of underground reservoir trial tests, the deliverability decline curve and the pressure rise curve; and

(f) for a gas well, the absolute open-flow potential;

(5) the realization cost of the tests carried out;

(6) the methods used to dispose of the substances extracted;

(7) the results of the analyses carried out including, in particular, the composition of the fluids extracted, injected, withdrawn and disposed of;

(8) the classification of the well determined according to Schedule 1; and

(9) the technical reports prepared by the enterprises that carried out the work.

CHAPTER XII
SPECIFIC REQUIREMENTS RELATING TO THE PRODUCTION

DIVISION I
PETROLEUM PRODUCTION TESTS

246. A production licence holder must carry out production tests for all the wells that were not subject to extraction tests so as to determine

(1) the nature of the fluids therein;

(2) the petroleum production capacity per day, in m^3, and the volume of water associated with that production; and

(3) the new geological, hydrostatic, petrophysical and geophysical characteristics of the pool.

247. A production licence holder must measure the shut-in pressure of the pool before and after the production test.

248. A production licence holder must carry out, every 3 months, a test in normal production conditions of a maximum duration of 24 hours for each well connected to a bank to determine the petroleum and water production rate.

The holder uses the results of those tests to allocate the monthly production of the bank between the various wells connected to it, if applicable.

On the application of the holder, the Minister may reduce the frequency of the tests. The holder's application must contain

(1) the anticipated frequency of the tests and the method to be used;

(2) a summary of the accuracy of the tests;

(3) the reasons justifying the reduction of the frequency of the tests; and

(4) any other information or document requested by the Minister.

The term "bank" means the storage facilities that receive the production from one or more wells and include the equipment for separating the petroleum from the other fluids and to measure them.

249. During the tests, a production licence holder must measure the pressure interference from one well to the other.

250. A production licence holder must notify the Minister, at least 7 days before, of the date and time planned for the carrying out of the tests.

251. An exploration licence holder who carries out tests must use

(1) a bottom safety valve that closes the well above the seal; and

(2) a wellhead equipped with a valve that may be handled remotely and can close automatically, in the case of tests in a well drilled using a floating drilling installation.

252. A production licence holder who carries out tests must ensure that every person present at the installations has successfully completed awareness training respecting hydrogen sulfide (H_2S).

253. A production licence holder keeps and maintains, for the duration of the tests, registers concerning

(1) the persons arriving, leaving or present on the vessel or platform;

(2) the location and movement of support craft;

(3) emergency drills and exercises carried out;

(4) operating tests of surface and subsurface safety valves;

(5) the inspections of the installation and related equipment for corrosion and erosion;

(6) daily maintenance activities; and

(7) in the case of a floating installation, all installation movements, data, observations, measurements and calculations related to the stability and station-keeping capability of the installation.

254. A production licence holder must send to the Minister the results of the tests carried out and any other information deemed necessary by the Minister, within 30 days after the end of the tests.

DIVISION II
PRODUCING WELL

255. A production licence holder must carry out production loggings before ceasing operations of a producing well.

256. A production licence holder must, for each well in production during the year, measure its shut-in pressure during the first and last months of the year.

DIVISION III
PETROLEUM ENHANCED RECOVERY

257. A production licence holder who wishes to carry out a petroleum enhanced recovery project must submit an enhanced recovery technical program signed and sealed by an engineer for the approval of the Minister at least 30 days before the start of the work necessary for the project.

258. The enhanced recovery technical program must contain

(1) the name and contact information of the holder and the licence number;

(2) the name of the wells concerned by the project;

(3) the classification of the wells determined according to Schedule 1;

(4) a map at a scale sufficient to show the area in which the project must be carried out and the boundaries of the pool;

(5) a diagram showing the wells and the well injection completion methods, if applicable;

(6) a diagram showing the water injection, treatment and measuring installations and the configuration and rated working pressure of the pipes and equipment;

(7) the anticipated method for controlling corrosion in the wells, collecting pipes and surface installations;

(8) a geological and technical analysis including, in particular,

(a) a longitudinal section of the pool indicating the top and base of the reservoir and the distribution of the fluids;

(b) a map at a scale sufficient to show the characteristics of the reservoir, in particular, the structure of the top, the size of the pores and permeability capacity;

(c) production and total recovery forecasts;

(d) the source of the injection fluid and a demonstration of its compatibility with the rocks and fluids of the reservoir;

(e) the estimated injection rate of each of the injection wells and their injection pressure at the wellhead;

(f) the recovery forecasts and simulation models, if applicable; and

(g) the measured or estimated pressure of the reservoir in the area of the project and the pressure of the reservoir as part of the enhanced recovery;

(9) the activities schedule, in particular, the drilling, completion and installation construction activities related to the project; and

(10) any other information or document deemed necessary by the Minister.

259. A production licence holder who carries out a petroleum enhanced recovery project must, at least 7 days before the expected date for the start of the petroleum enhanced recovery, notify the Minister in writing.

The holder also notifies the Minister 15 days before temporarily or permanently ceasing the activities by indicating the reasons justifying the cessation.

260. Before starting the injection in a directional or horizontal drilling, a production licence holder must carry out a diametrical well logging in the injection wells and send the interpreted diametrical well logging to the Minister.

The holder may start petroleum enhanced recovery if no deformity has been identified on the casing and if the well is clean.

CHAPTER XIII
AUTHORIZATION TO PRODUCE BRINE

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

261. No person may produce brine in a body of water.

CHAPTER XIV
WELL CLOSURE

DIVISION I
TEMPORARY OR PERMANENT CLOSURE AUTHORIZATION

§1. *Temporary closure authorization*

§§1. *Conditions for obtaining an authorization*

262. A licence holder must temporarily close the well on the expiry of a period of 12 consecutive months without activity in the well. The Minister may, however, grant an additional period if the holder demonstrates that exceptional circumstances warrant it.

263. On request and after analysis of the annual report provided for in section 157, the Minister may, in the case of an observation well, exempt a licence holder from the requirement to temporarily close the well for the current year where the holder demonstrates the integrity of the well and justifies its use for monitoring the pool or the underground reservoir.

264. A licence holder who must obtain a temporary well closure authorization must apply to the Minister, in writing, at least 30 days before the start of the work.

265. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the name of the well; and

(3) the work schedule and an estimate of the realization costs.

266. The application must be accompanied by

(1) the temporary closure technical program provided for in section 267 signed and sealed by an engineer;

(2) payment of the fee of $2,058; and

(3) any other information or document requested by the Minister.

267. The temporary closure technical program must contain

(1) the name and contact information of the engineer responsible for the program;

(2) the name, profession and functions of the persons who prepared or revised the program;

(3) the type and name of the drilling installation, its registration number, the name of its owner and the estimated number of persons on board;

(4) the classification of the risk potential of the well determined according to Schedule 4;

(5) the condition of the well before the work for the temporary closure;

(6) the classification of the well determined according to Schedule 1 ;

(7) a chronological and detailed description of the work to be carried out;

(8) a description of the activity site restoration work to maintain the quality of the natural landscape, minimize impact on wildlife and harmonize the activity site with the use of the territory, and a plan presenting the wok including, in particular,

(a) the procedure for dismantling installations and, if applicable, the procedure for dismantling the supply cable;

(b) the rehabilitation of contaminated land;

(c) the purge of pipes; and

(d) the withdrawal of equipment and facilities;

(9) a description of the immobilization system;

(10) if applicable, the home port and the location of the land base for storing material and products necessary for the work

(11) a bathymetric map of the area in which the well is located;

(12) the name and contact information of the enterprise charged with carrying out the work;

(13) a longitudinal section indicating, in particular, the anticipated mechanical conditions of the well after the closure and the various geological formations intersected and their respective pressures;

(14) the type of service device and equipment to be used and their specifications, in particular, the configuration of the wellhead and the surface casing blowhole;

(15) the demonstration that, before carrying out the work for the temporary closure, the well did not present any risks within the meaning of the second paragraph of section 20 for the safety of persons and property, and environmental protection;

(16) the type of plugs used and the anticipated depth intervals;

(17) for each cement plug, the type of cement used, its density, its additives and their proportions, its setting time, the calculated volume and surplus percentage;

(18) the method for verifying the position of the plugs;

(19) a program for the regular preventive maintenance of the well and the wellhead;

(20) the list of the planned well loggings;

(21) the meteorological and hydrographic conditions anticipated during the work;

(22) if applicable, a description of the ice management activities; and

(23) the list of references consulted during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions.

The classification provided for in subparagraph 4 of the first paragraph must be performed on the basis of the highest risk obtained according to the criteria. For a well with a number of areas, the classification must be performed on the basis of the highest risk obtained, aside from the areas that are permanently closed. If all the deep areas are permanently closed, the shallowest section of the well subject to completion must be used to determine the classification of the well that will be subject to a temporary closure.

§§2. Notice of the start of the work

268. The holder of a temporary closure authorization must, at least 7 days before, notify the Minister of the start of the work.

The work is deemed to have started as soon as the first step provided in the work schedule is initiated.

269. The authorization holder must also, at least 24 hours before, notify the Minister of the straightening or towing of an installation.

§§3. Conditions of exercise

270. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

271. The authorization holder must, within 3 months after the granting of the authorization, complete the temporary closure work.

272. Before starting the temporary closure work, the authorization holder must carry out a pressure and leak test of the casing at a pressure of 7 MPa.

The holder must also, if production tubing is installed, carry out a pressure and leak test of the tubing and annular spaces at a pressure of 7 MPa.

The tightness is confirmed if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes.

If the wellhead configuration does not allow pressure and leak tests, a visual observation carried out with a one-time measurement of leakage may be carried out.

273. The authorization holder must, if the measurements may be carried out without risk to the integrity of the well, measure the shut-in pressures in all annular spaces and in the production tubing.

274. The authorization holder who temporarily closes a well must ensure

(1) that the facilities and equipment installed in the well are compatible with what is planned in the permanent well or reservoir closure and site restoration plan;

(2) that the facilities and equipment installed in the well are durable and corrosion-resistant;

(3) the absence of communication of fluids between the geological formations;

(4) the absence of leaks in joints and welds of the surface casing blowhole;

(5) that the valve on the surface casing blowhole pipe is open and the blowhole is not blocked;

(6) to install a hemispherical head plug or a blind flange with a needle valve to read the flow at each outlet of the wellhead, except the surface casing blowhole;

(7) to disconnect, if applicable, the wellhead flow pipe; and

(8) to chain and lock the valves or remove the handles.

275. While performing the work, the authorization holder must use a wellhead or a blowout prevention system comprising at least 2 different sealing mechanisms as long as there is a risk of fluid kicks.

Despite the first paragraph, the use of a wellhead is not required if no perforation has been carried out and if the well is not an open-hole well. In that case, the holder may weld a steel plate directly on the production tubing. The plate must however permit the taking of pressure measurements in the well.

276. The blowout prevention system and the wellhead must be designed to withstand the maximum pressures provided for in the technical program.

277. The wellhead must be equipped with a device allowing easy location.

It must be protected against impact, unless the holder can demonstrate that there is no activity in the territory that may cause breakage at the wellhead.

278. The authorization holder must verify daily the blowout prevention system to make sure it works well. If a system component is defective, work must be suspended until the component is repaired.

279. The authorization holder must regularly inspect joints and structural elements of any equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps a register of those inspections and maintains it until the end of the work for the permanent closure of the well.

280. The authorization holder who observes the presence of an emanation at the surface casing blowhole using a bubble point test must also measure the emanation flow over a 24-hour period.

281. The authorization holder must, except for a well whose risk potential has been classified as low under Schedule 4, draw out the polished drill-stem from the well if it is connected to a pumpjack.

282. In the case of a well whose risk potential has been classified as moderate under Schedule 4, the authorization holder must

(1) install, at the bottom of the hole, a blow-out preventer valve and a casing plug or a support plug; and

(2) fill the well with non-saline water or with a corrosion inhibiting fluid; an anti-freeze fluid must also protect at least the first 2 m below the surface.

283. In the case of a well whose risk potential has been classified high under Schedule 4, the authorization holder must close the well in accordance with the generally recognized best practices.

284. At the end of the temporary closure work, the bottom of the water must have been cleared of any material or equipment that is not necessary and that might interfere with subsequent uses of the environment.

285. If applicable, before the demobilization of the installations, the authorization holder must ensure that the installations are free from plants and animals.

286. The authorization holder keeps and maintains, until the end of the work, registers concerning

(1) the persons arriving, leaving or present on the vessel or platform;

(2) the location and movement of support craft;

(3) emergency drills and exercises carried out;

(4) operating tests of surface and subsurface safety valves;

(5) the inspections of the installation and related equipment for corrosion and erosion;

(6) daily maintenance activities; and

(7) in the case of a floating installation, all installation movements, data, observations, measurements and calculations related to the stability and station-keeping capability of the installation.

§§4. *Daily report and completion report*

287. The authorization holder must draw up a daily report of the work and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the number of the temporary closure authorization;

(2) the name of the drilling installation;

(3) the number of persons on board the drilling installation;

(4) a description, in chronological order, of the work carried out and the time required for carrying out each step;

(5) the petroleum or water traces detected;

(6) the type of pump used for the cementing and its capacity;

(7) in the case of any cement plugs, the type of cement used, its density, its additives and their proportions, its setting time and the volume used;

(8) the well loggings carried out;

(9) if applicable, the results of pressure and leak tests;

(10) the operating condition of the blowout prevention system;

(11) the composition, concentration and a detailed assessment of all the products stored and used on the site;

(12) the volume and composition of the gas used, released, incinerated or burned at the flare and the reasons justifying it;

(13) the operational problems encountered and the corrective measures taken or planned;

(14) the indication of any event that disrupted the progress of the work;

(15) the abnormal meteorological conditions that caused a work delay, in particular, due to

(a) visibility;

(b) temperature variation;

(c) wind speed or direction;

(d) the height, period and direction of the waves and swells;

(e) the size, distance and direction of ice;

(f) icing; and

(g) rolling, pitch and vertical motion of the vessel or platform; and

(16) any other information or document deemed necessary by the Minister.

288. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, a completion report signed by an engineer including, in particular,

(1) the number of the temporary closure authorization;

(2) the name and contact information of the licence holder;

(3) the type and name of the drilling installation, its registration number and the name of its owner;

(4) the type of navigation equipment used;

(5) the start and end dates of the work;

(6) a summary of the work carried out according to the chronological order;

(7) a summary of the abnormal meteorological conditions that caused an operation delay and the corrective measures taken;

(8) a comparative analysis of the work carried out compared to the work provided for in the technical program;

(9) an analysis of the efficiency of the temporary closure;

(10) the interpreted well loggings, re-set in actual vertical depth and the corrections made;

(11) a longitudinal section of the well after the temporary closure indicating, in particular,

(a) the mechanical conditions of the well after the closure; and

(b) the other equipment installed or dropped in the well and not recovered;

(12) the classification of the well determined according to Schedule 1 ;

(13) the type of plugs used and the depth intervals of each plug;

(14) in the case of the cement plugs, the type of cement used, its density, its additives and their proportions, its setting time and the volume used;

(15) the verified position of each of the plugs; and

(16) the completed annual inspection worksheet provided for in Schedule 2.

§§5. *Annual inspection*

289. After the temporary closure of the well, the drilling authorization holder must

(1) inspect the well annually and complete the annual inspection worksheet provided for in Schedule 2 if the depth of the wellhead under the water makes it accessible; the holder sends the inspection worksheet to the Minister not later than 31 December of each year;

(2) ensure that the well does not present risks within the meaning of the second paragraph of section 20; and

(3) carry out the program for the regular preventive maintenance of the well and the wellhead.

§2. *Permanent closure authorization*

§§1. *Conditions for obtaining an authorization*

290. A well whose risk potential has been classified as low under Schedule 4 and that has been temporarily closed for 20 years must be closed permanently.

A well whose risk potential has been classified as moderate or high under Schedule 4 and that has been temporarily closed for 10 years must be closed permanently.

The Minister may however grant an additional time period if the drilling authorization holder demonstrates to the Minister that the well is safe and that it is necessary to leave it temporarily closed.

291. A licence holder who wishes to obtain a permanent well closure authorization must apply to the Minister, in writing, at least 30 days before the start of the work.

292. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the name of the well;

(3) the meteorological and hydrographic conditions anticipated during the work;

(4) if applicable, a description of the ice management activities;

(5) if the permanent closure is carried out for a well temporarily closed, the annual inspection worksheet provided for in Schedule 2; and

(6) any other information or document requested by the Minister.

The application must be accompanied by payment of the fee of $2,677.

293. Before ruling on the application for permanent closure, the Minister may, if the Minister deems it necessary, require that the licence holder carry out a cement test in a laboratory. The test must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

The holder sends the results of the test to the Minister.

§§2. *Time periods and notice of the start of the work*

294. The authorization holder must, at least 7 days before, notify the Minister of the start of the work.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

The work is deemed to have started as soon as the first step provided in the work schedule included in the permanent well or reservoir closure and site restoration plan is initiated.

295. The authorization holder must also, at least 24 hours before, notify the Minister of the straightening or towing of an installation.

§§3. Conditions of exercise

296. The authorization holder must comply with the permanent well or reservoir closure and site restoration plan.

297. The authorization holder who closes permanently a well must ensure

(1) the absence of communication of fluids between the geological formations;

(2) the absence of leaks;

(3) the absence of excessive pressure in the entire well;

(4) the long-term integrity of the well, while considering the petroleum development potential of the adjacent sector and the impact of the activities that may be carried out in the future; and

(5) the use of durable and corrosion-resistant facilities and equipment.

298. The authorization holder may close on the surface after closure underground.

299. While performing the work for permanent closure, the authorization holder must use a wellhead or a blowout prevention system comprising at least 2 different sealing mechanisms as long as there is a risk of fluid kicks.

300. The wellhead and the blowout prevention system must be designed to withstand the maximum pressure planned in the permanent well or reservoir closure and site restoration plan.

301. The authorization holder must verify daily the blowout prevention system to make sure it works well. If a system component is defective, work must be suspended until the component is repaired.

302. The authorization holder must place a mechanical packer in the internal casing at 150 m under the bottom of the water and a cement plug must fill those 150 m.

303. The authorization holder must regularly inspect joints and structural elements of any equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps and maintains a register of those inspections until the end of the work.

304. The authorization holder must not install a cement plug in a section of the drill hole that does not have a casing, except if the drilling is vertical and the well risk is classified as low under Schedule 4.

305. During the operations for the preparation and installation of cement plugs, the authorization holder must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

306. The cement used must reach a minimum compressive strength of 3,500 kPa after 36 hours of hardening at the temperature of the shallowest formation to be covered.

The authorization holder must restrict the cement shrinkage process and limit to the minimum the risk of formation of a micro-annular space.

307. As of the moment at which the cement has developed a gel strength and until the minimum compressive strength has been reached, the authorization holder must not carry out work that could compromise the integrity of the cement and the holder must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

308. The authorization holder must verify the position of the top of each of the cement plugs.

309. The authorization holder must cut the casings and guide tube at 2 m below the surface. The holder determines the depth according to the local conditions such as the type of soil, washout and erosion of the environment.

The authorization holder may use explosives to cut the casings and guide tube if adequate protective measures are implemented.

310. The authorization holder must weld a ventilated steel cover at the top of the casings.

311. As soon as the permanent closure work ends, the authorization holder must mark the well with a device allowing easy location of the well on which the well number and geographical coordinates are indicated.

312. At the end of the permanent closure work, the bottom of the water must have been cleared of any material or equipment that is not necessary and that might interfere with subsequent uses of the environment.

313 If applicable, before the demobilization of the installations, the holder must ensure that the installations are free from plants and animals.

314. The authorization holder keeps and maintains, until the end of the work, registers concerning

(1) the persons arriving, leaving or present on the vessel or platform;

(2) the location and movement of support craft;

(3) emergency drills and exercises carried out;

(4) operating tests of surface and subsurface safety valves;

(5) the inspections of the installation and related equipment for corrosion and erosion;

(6) daily maintenance activities; and

(7) in the case of a floating installation, all installation movements, data, observations, measurements and calculations related to the stability and station-keeping capability of the installation.

§§4. *Daily report and completion report*

315. The authorization holder must draw up a daily report of the work and keep it on the activity site.

The daily report must contain all the elements that are applicable to the declared day including, in particular,

(1) the number of the permanent closure authorization;

(2) the name of the drilling installation;

(3) the number of persons on board the drilling installation;

(4) a description, in chronological order, of the work carried out and the time required for carrying out each step;

(5) the petroleum or water traces detected;

(6) the type of pump used for the cementing and its capacity;

(7) the type of cement used, its density, its additives and their proportions, its setting time and the volume used;

(8) the well loggings carried out;

(9) the results of the pressure and leak tests;

(10) the operating condition of the blowout prevention system;

(11) the operational problems encountered and the corrective measures taken or planned;

(12) the composition, concentration and a detailed assessment of all the products stored and used on the site;

(13) the volume and composition of the gas used, released, incinerated or burned at the flare;

(14) the indication of any event that disrupted the progress of the work;

(15) the abnormal meteorological conditions that caused a work delay, in particular, due to

(a) visibility;

(b) temperature variation;

(c) wind speed or direction;

(d) the height, period and direction of the waves and swells;

(e) the size, distance and direction of ice;

(f) icing; and

(g) rolling, pitch and vertical motion of the vessel or platform; and

(16) any other information or document deemed necessary by the Minister.

316. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the work. If the Monday is a holiday, the report is sent on the first working day that follows.

317. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, a completion report signed by an engineer including, in particular,

(1) the number of the permanent closure authorization;

(2) the name and contact information of the licence holder;

(3) the type and name of the drilling installation, its registration number and the name of its owner;

(4) the classification of the well determined according to Schedule 1;

(5) a summary of the work carried out according to the chronological order;

(6) the classification of the well determined according to Schedule 1;

(7) a summary of the abnormal meteorological conditions that caused an operation delay and the corrective measures taken;

(8) the type of device used and its specifications;

(9) the demonstration of the absence of petroleum emanation at the surface casing blowhole before the underground closure work and, if applicable, the demonstration of the absence of petroleum emanation in the casings before the closure on the surface;

(10) the data, recordings and results of the pressure and leak tests and their interpretation;

(11) a demonstration of the quality of the cement bond behind the casing before the work;

(12) the method for cleaning the well used before the installation of the plugs;

(13) in the case of the cement plugs used,

(a) the type of cement used, its density, its additives and their proportions and the volume used;

(b) the method for installing the plugs;

(c) the verified position of each of the plugs; and

(d) if laboratory testing has been done on the cement after the granting of the authorization, the properties of the cement determined in the laboratory;

(14) the nature of the fluid used to fill the space between each plug;

(15) the cutting depth of the casings and guide tube below the surface;

(16) a photograph of the ventilated steel plate welded at the top of the casings before the backfilling;

(17) a longitudinal section of the well after the permanent closure, according to the measured depth and the actual vertical depths signed and sealed by an engineer, indicating, in particular,

(a) groups, geological formations, lithological contacts and faults including, in particular,

i. the usable groundwater;

ii. thermal anomalies;

iii. the coal beds exceeding 300 mm in thickness;

iv. the permeable and porous areas having an effective porosity greater than 1% in a terrigenous bedrock and greater than 3% in a carbonate bedrock;

v. the formations that can potentially produce petroleum and those that produce petroleum;

vi. the layers of abnormal pressure; and

vii. the areas of circulation loss;

(b) the location of each of the casings and of the guide tube;

(c) the depth interval of the open-hole well;

(d) the type of plugs used and the depth intervals of each plug; and

(e) the other equipment installed or dropped in the well and not recovered;

(18) a comparative analysis of the work carried out compared to the work provided for in the permanent well or reservoir closure and site restoration plan;

(19) a plan of the layout of the site after the restoration work; and

(20) the demonstration that all the equipment and facilities have been removed from the work site.

DIVISION II
PERMANENT WELL OR RESERVOIR CLOSURE AND SITE RESTORATION PLAN

§1. *Content of the plan*

318. The permanent well or reservoir closure and site restoration plan must be signed and sealed by an engineer and must contain, in particular,

(1) the name and contact information of the licence holder and the licence number;

(2) the proposed name of the well;

(3) the classification of the well determined according to Schedule 1 ;

(4) the type of drilling installation;

(5) the name of the drilling installation, its registration number, the name of its owner and the estimated number of persons on board;

(6) the name and contact information of the engineer responsible for the permanent well or reservoir closure and site restoration plan;

(7) the name, profession and functions of the persons who prepared or revised the plan;

(8) a description of the immobilization system;

(9) if applicable, the home port and the location of the land base for storing material and products necessary for the work

(10) a bathymetric map of the area in which the well is located;

(11) the method used to demonstrate that, prior to the permanent closure of the well or reservoir, no emanation at the surface vent has been observed over a period of 24 hours and no gas migration;

(12) a chronological and detailed description of the work carried out;

(13) the work schedule;

(14) a broken down estimate of the cost of the work;

(15) a description of the condition of the well including, in particular, the cemented, perforated and open-hole depths;

(16) the cement evaluation method to show the uniform coverage of the cement behind the casing before the work;

(17) the type of service device and equipment to be used and their specifications;

(18) a longitudinal section of the well indicating, in particular,

(a) the technical elements;

(b) the depth intervals that will be protected or isolated; and

(c) the geological formations including, in particular,

i. the usable groundwater;

ii. the thermal anomalies;

iii. the coal beds exceeding 300 mm in thickness;

iv. the formations that can potentially produce petroleum and those that produce petroleum;

v. the layers of abnormal pressure;

vi. the areas of circulation loss; and

vii. the permeable and porous areas having an effective porosity greater than 1% in a terrigenous bedrock and greater than 3% in a carbonate bedrock;

(19) the method for cleaning the well used before the installation of the plugs;

(20) the type of plugs used and the depth intervals of each plug;

(21) a cementing program complying with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee indicating, in particular,

(a) for each cement plug, the type of cement used, its density, its additives and their proportions, its setting time, the calculated volume and surplus percentage;

(b) the method for installing the plugs;

(c) any required changes to the cement used for the plugs due to specific physical and chemical conditions of the environment, including, in particular, the depth of the well, a horizontal well, an abnormal pressure or temperature, a salt area or a corrosive environment; and

(d) the nature of the fluid used to fill the space between each plug;

(22) the method used to demonstrate that following the installation of the plugs and before the cutting of the casings and the guide tube at the surface, there was no gas emanation;

(23) the method used to cut the casings and tube;

(24) a plan showing the extent of the activity site;

(25) the list of equipment and facilities to be removed from the work site;

(26) a chronological and detailed description of the restoration work to maintain the quality of the body of water and minimize impact on wildlife including, in particular,

(a) the procedure for dismantling installations and, if applicable, the procedure for dismantling the supply cable;

(b) the rehabilitation of contaminated land;

(c) the purge of pipes; and

(d) the withdrawal of equipment and facilities; and

(27) a follow-up program for the integrity of the well during the closure and site restoration work.

If certain elements required in the first paragraph are unknown when the holder submits the plan to the Minister in accordance with section 101 of the Act, those elements will have to be provided when the plan is revised.

319. During the revision of the plan, the authorization holder must use the number and name of the well as they appear on the drilling authorization.

§2. *Guarantee*

320. The guarantee provided for in section 103 of the Act must be furnished to the Minister in any of the following forms:

(1) a cheque made to the order of the Minister of Finance;

(2) bonds issued or guaranteed by Québec or another province of Canada, by Canada or by a municipality in Canada, and having a market value at least equal to the amount of the guarantee exigible; registered bonds must be submitted with a power of attorney on behalf of the Minister of Finance and, where applicable, with a resolution authorizing the person who signs the power of attorney;

(3) guaranteed investment certificates or term deposit certificates, in Canadian dollars, issued on behalf of the Minister of Finance by a bank, a savings and credit union or a trust company; deposit certificates must have a term of at least 12 months, be automatically renewable until the declaration of satisfaction of the Minister or the certificate of release under sections 112 and 114 of the Act and not include any restriction in respect of redemption during its term;

(4) an irrevocable and unconditional letter of credit issued on behalf of the Gouvernement du Québec by a bank, a savings and credit union or a trust company;

(5) a security or a guarantee policy issued on behalf of the Gouvernement du Québec by a legal person legally empowered to act in that capacity;

(6) a trust constituted in accordance with the Civil Code and meeting the following requirements:

(a) the purpose of the trust is to ensure the performance of the work provided for in the permanent well or reservoir closure and restoration site plan pursuant to sections 101 to 115 of the Act;

(b) the Minister of Finance and the licence holder referred to in section 101 of the Act are joint beneficiaries of the trust;

(c) the trustee is a bank, a savings and credit union or a trust company;

(d) the trust patrimony is comprised only of sums in cash, or of bonds or certificates of the same type as those listed in subparagraphs 2 and 3.

The financial institutions referred to in subparagraphs 3, 4 and 6 of the first paragraph must be empowered by law to carry on the activities provided for in those subparagraphs.

The guarantees referred to in subparagraphs 1 to 3 of the first paragraph are received on deposit by the Minister of Finance pursuant to the Act respecting deposits with the Bureau général de dépôts pour le Québec (chapter D-5.1).

321. In the case of a guarantee furnished according to subparagraph 3 or 6 of the first paragraph of section 320, the contract constituting the guarantee must provide the following conditions:

(1) the purpose of the guarantee is to ensure the performance of the work provided for in the permanent well or underground reservoir closure and site restoration plan pursuant to sections 101 to 115 of the Act;

(2) no person may make withdrawals or be reimbursed without having obtained the Minister's satisfaction provided for in sections 112 and 114 of the Act or a reduction of the guarantee according to section 108 of the Act; the prohibition also applies to any form of compensation that could be made by the bank, the savings and credit union, the trust company or the trustee;

(3) where the second paragraph of section 111 of the Act applies, the payment of the guarantee is payable at the Minister's request;

(4) the bank, the savings and credit union, the trust company or the trustee provides the Minister with the information it possesses concerning the contract;

(5) in case of dispute, the courts of Québec are the sole competent courts;

(6) in the case of a trust:

(a) the trustee must be domiciled in Québec;

(b) the trustee sees to the management of the trust at the expense of the settlor or of the licence holder referred to in section 101 of the Act;

(c) the trust terminates

i. when the Minister issues the certificate of release under sections 112 and 114 of the Act or when it is replaced by another guarantee complying with the requirements of this Regulation;

ii. when the Minister acts on the condition provided for in subparagraph 3° of the first paragraph of this section.

The licence holder referred to in section 101 of the Act must submit to the Minister a certified copy of the original contract.

322. In the case of a trust, interest yielded by the trust patrimony belongs to the trust. Interest kept as part of the trust patrimony must not be used as payment of the guarantee.

323. The purpose of the irrevocable and unconditional letter of credit provided for in subparagraph 4 of the first paragraph of section 320, of the security and guarantee policy provided for in subparagraph 5 of the first paragraph of that section is to guarantee payment of the cost of the work where the obligations of sections 101 to 115 of the Act are not met. The contract must have a term of at least 12 months and must include clauses providing the following conditions:

(1) in the case of non-renewal, termination, revocation or cancellation, the guarantor must notify the Minister at least 60 days before the date fixed for the expiry, termination, revocation or cancellation of the guarantee;

(2) in the case of non-renewal, termination, revocation or cancellation, the guarantor remains responsible, where the obligations of sections 101 to 115 of the Act are not met, for the payment of the cost of the work involved for the permanent well or underground reservoir closure and site restoration carried out before the date of expiry, termination, non-renewal or revocation up to the amount covered by the letter of credit, the security or guarantee policy. That responsibility must hold until the issue of the certificate of release provided for in sections 112 and 114 of the Act, unless the person in question has deposited an alternative guarantee or the guarantor has deposited the amount covered by the letter of credit, the security or guarantee policy in a trust that complies with this Regulation where the Minister of Finance and the guarantor are joint beneficiaries;

(3) where applicable, the obligation is solidary, with a waiver of the benefits of discussion and division;

(4) the guarantor consents to the Minister's being able at any time after the sending of a notice of 60 days to make changes to the permanent well or underground reservoir closure and site restoration plan and waives pleading against the Minister any ground of defence pertaining to the content of the plan;

(5) where the second paragraph of section 111 of the Act applies, payment of the guarantee is exigible at the Minister's request;

(6) in the case of dispute, the courts of Québec are the sole competent courts.

The licence holder referred to in section 101 of the Act must submit to the Minister a certified copy of the original contract.

324. The guarantee furnished may be replaced at any time by another guarantee that complies with the requirements of this Regulation.

§3. Fees payable

325. The fee payable for the assessment of a permanent well or reservoir closure and site restoration plan is $1,309.

The fee payable for the assessment of a revision of a permanent well or reservoir closure and site restoration plan is $654.

326. The fee payable for the assessment conducted for the purpose of issuing a certificate of release under section 112 of the Act is $587.

The fee payable for the inspections conducted for the purpose of issuing a certificate of release under the first paragraph is $1,992 per inspection.

CHAPTER XV
FEE PAYABLE FOR A NOTICE OF NON-COMPLIANCE, MONETARY ADMINISTRATIVE PENALTIES AND OFFENCE

DIVISION I
FEE PAYABLE FOR A NOTICE OF NON-COMPLIANCE

327. The fee payable by a person to whom an inspector submitted a notice of non-compliance with the provisions of the Act or this Regulation is $500.

DIVISION II
MONETARY ADMINISTRATIVE PENALTIES

328. A monetary administrative penalty of an amount provided for in section 187 of the Act may be imposed on any person who contravenes any of sections 4, 5, 26, 30, 31, the first paragraph of section 37, sections 38, 39, 49, 50, the first paragraph of section 57, sections 58 to 60, 63, 87, 88, the first paragraph of section 89, section 90, the first and second paragraphs of section 91, sections 92, 105, 106, 113 to 116, 119, 148, 149, the first paragraph of section 150, section 151, the first and second paragraphs of section 152, sections 153, 157 to 159, the first paragraph of section 165, sections 166, 167, 182, 183, the first paragraph of section 190, sections 191, 192, 209, 210, the first paragraph of section 218, sections 219, 220, 229, 230, 236, 243 to 245, 250, 254, 259, the first paragraph of section 268, sections 269 and 287, the first and second paragraphs of section 294, sections 295, 315, 316 and 319.

329. A monetary administrative penalty of an amount provided for in section 188 of the Act may be imposed on any person who contravenes any of the second paragraph of section 13, sections 21, 24, 28, the first paragraph of section 29, sections 32 and 40, the first paragraph of section 41, paragraphs 1 and 3 of section 42, sections 43 to 48 and 61, the first paragraph of section 64, sections 65 and 66, paragraphs 1 and 3 of section 67, sections 68 to 83, the first paragraph of section 84, the first and second paragraphs of section 85, paragraph 2 of section 86, sections 93 and 94, the first paragraph of section 95, section 96, the first paragraph of section 97, sections 98 to 100, 103, 104, 117, the first paragraph of section 120, sections 121 and 122, paragraphs 1 and 3 of section 123, section 124, the second paragraph of section 125, sections 126 to 134, subparagraphs 1 and 3 of the first paragraph of section 136, sections 137 to 140, the first paragraph of section 141, section 142, the first paragraph of section 143, sections 144 and 145, the first and second paragraphs of section 146, the first paragraph and subparagraph 2 of the second paragraph of section 147, sections 154 to 156 and 168, the first paragraph of section 169, section 170, the first paragraph of section 171, section 172, paragraphs 3 and 4 of section 173, sections 174 to 180 and 193, the first paragraph of section 194, the first paragraph of section 195, the first paragraph of section 198, the first paragraph of section 199, section 200, sections 201 to 205, 221, 223 to 228, 232, 234, the first paragraph of section 237, section 238, paragraph 2 of section 239, section 240, sections 241, 242, 246, 247, the first and second paragraphs of section 248, sections 249, 251 to 253, 255 to 257, 260 to 262, 270 and 271, the first, second and fourth paragraphs of section 169, paragraphs 4 to 8 of section 274, sections 275 and 286 to 289.

330. A monetary administrative penalty of an amount provided for in section 189 of the Act may be imposed on any person who contravenes any of sections 7, 8, 10 to 12, the first paragraph of section 15, section 17, the first and second paragraphs of section 19, the first paragraph of section 20, sections 22, 23, 206, 207, 212 and 213.

DIVISION III
OFFENCE

331. Every person who contravenes any provision of this Regulation commits an offence and is liable to the fine provided for in paragraph 2 of section 199 of the Act.

CHAPTER XVI
TRANSITIONAL AND FINAL

DIVISION I
TRANSITIONAL

332. A permanent well closure authorization issued under the Mining Act in force on (*insert the date of coming into force of this section*) is deemed to be a permanent closure authorization issued under the Act.

If on (*insert the date of coming into force of this section*) the work for the permanent closure has not started, the authorization holder must provide to the Minister, in accordance with section 275 of the Act, the permanent well or reservoir closure and site restoration plan and the guarantee before starting the work.

If on (*insert the date of coming into force of this section*) the work for the permanent closure is started but not completed, the authorization holder is not required to provide to the Minister the permanent well or reservoir closure and site restoration plan and the guarantee provided for in section 275 of the Act. The holder must complete the work in accordance with the closure program submitted to the Minister under section 59 of the Regulation respecting petroleum, natural gas and underground reservoirs (chapter M-13.1, r. 1). The work must be completed not later than 1 year after (*insert the date of coming into force of this section*).

333. For the purposes of section 275 of the Act, the Minister keeps the performance guarantee submitted to the Minister under section 16 of the Regulation respecting petroleum, natural gas and underground reservoirs until the Minister has received the restoration plan and the guarantee provided for in Chapter IV of the Act.

DIVISION II
FINAL

334. This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

SCHEDULE 1

CLASSIFICATION OF WELLS

The classification of wells must include

1. the fluids in the well;
2. its type;
3. its role;
4. its status;
5. its direction;
6. the abundance of fluids.

Fluids in the well	Oil, gas, condensate, bitumen, CO_2, H_2S, water, brine, water vapour, sulphur, non-combustible gas or gas hydrates
Type of well	Exploration or production, based on the licence held by the drilling authorization holder
Role of the well	Well use
Producing	Well used to extract petroleum or brine from a pool
Injecting	Well used to inject fluids in an underground formation to enhance petroleum recovery
Cyclical	Well used for the production and injection, alternately, on a regular basis
Service - supply	Well used to collect the fluids necessary for the production or injection operations
Service - storage	Well used for the injection and withdrawal of substances determined in the Regulation respecting petroleum exploration, production and storage licences, made by Order in Council XXXX-XXXX dated (*insert the date of the Order in Council*)
Service – disposal	Well used as permanent location to store discharges in the reservoir
Service - relief	Well used to intercept another well that is blowing out
Observation	Well used to monitor the conditions of one or more geological formations, to determine the decline characteristics of a reservoir or to monitor the other wells of a reservoir
No role currently	Well not fulfilling any role
Other	Well having another unidentified role
Status of the well	State of the well at a given point in time
On hold	Well for which a drilling authorization application has been filed, but the drilling authorization has not yet been granted
Planned drilling	Well for which a drilling authorization has been granted, but whose drilling work has not yet been deemed to have started
Activity underway	Well whose authorized work is underway
Production	Well whose fluids are extracted from the drill hole
Injection	Well whose fluids are pumped into the drill hole

Production and injection	Well that produces and in which fluids are injected, alternately, in the drill hole
Temporary interruption (*shut-in*)	Well in which work is interrupted for a short period, between 2 activities or 2 operations
Temporarily closed	Well that has been temporarily closed
Permanently closed	Well that has been permanently closed
Restored	Well that has been permanently closed and whose work site has been restored
Cancelled	Well whose drilling authorization is revoked or expired
Other	Well that has another unidentified status
Direction of the well	Vertical, directional or horizontal
Abundance of fluids	Primary, secondary, indication or trace

SCHEDULE 2

ANNUAL INSPECTION WORKSHEET

Énergie et Ressources naturelles
Québec

Direction du bureau des hydrocarbures
5700, 4e avenue ouest bureau A-422
Québec (Québec) G1H 6R1
Télécopieur : 418-644-1445

ANNUAL INSPECTION WORKSHEET
TEMPORARILY CLOSED WELL
OBSERVATION WELL

* If applicable

Date received by the Department

IDENTIFICATION							
Well number		Licence holder		Expiry of the licence	YYYY/MM	Lot number*	
Well name		Licence number		Date of inspection	YYYY/MM/DD	Cadastre number*	
Location of the well (NAD83 DD MIN SEC)				Time start of inspection		Date of temporary closure *	
Latitude N		Longitude W		Time end of inspection		YYYY/MM/DD	

INTERVENING PARTIES			
Name	Position	Company	Tel. or email

SITE SAFETY – The perimeter of the well is protected.	
A sign at the entrance of the site indicates the location of the well, the name of the holder, the licence number, the name of the well, the well number, the telephone number in case of emergency and pictograms associated to dangerous products.*	
The protection measures implemented around the well are efficient.	

STATE OF THE PREMISES – Safety and environment			
The geographical coordinates are accurate and allow easy location of the well.		The site is free of residual materials.	
The access leading to the well is tidy and safe.*		The site is free of dangerous goods.	
The layout of the equipment around the well is limited.		An indication of migration of gas in the soil is observed.*	
The state of the premises is safe for persons and property, and environmental protection.			

WELLHEAD - If applicable, verify the integrity.			
A wellhead is present.		A surface casing blowhole is present.	
All valves are chained and locked or the handles have been removed.		The surface casing blowhole valve is open.	
The wellhead is free of corrosion or erosion.		The surface casing blowhole is blocked.	
The wellhead is designed to withstand the measured pressure.		Insert the flow measured at the surface casing blowhole (with the unit).	
The flow pipe is disconnected from the wellhead.		Insert the concentration of gas at the blowhole of the casing (with the unit)	
Each outlet is equipped with a plug or a blind flange with a needle valve to read the flow, except on the surface casing blowhole.		The emanation is only composed of gas.	
A leak is observed in the guide tube.		Indicate the composition of the fluid at the blowhole.	
		There is a leak on the blowhole joints and welds.	
The wellhead is intact and safe for persons and property, and environmental protection.			

ANNUAL MONITORING OF THE PRESSURE - If applicable, enter the pressures in kPa in all the annular spaces and in the production tubing.					
Pressure of the production casing:		Pressure of the intermediate casing:		of the surface casing:	
Pressure of the production tubing:		Are the pressures constant with respect to the last measurements?			

REGULAR PREVENTIVE MAINTENANCE – Minimum frequency of 3 or 5 years (refer to the Regulation to determine the frequency associated with each well)			
Insert the date of the last regular preventive maintenance.	YYYY/MM	The joints are leakproof.	
Maintenance has been carried out during the inspection.		The valves are in good condition.	
Insert the date planned for the next maintenance.	YYYY/MM	If repairs are required, indicate the nature of the repairs and the date planned for the work.	

SPECIFIC VERIFICATIONS AT THE WELL (critical elements, validation of compliance for engineering, etc.)

ADDITIONAL INFORMATION

INSTRUMENTATION – Specify the tools used for the inspection (flow meter, gas detector, etc.).			

APPENDICES - If applicable, attach at least a photograph of the protected perimeter of the well and an overall photograph of the wellhead.			
Type of document	Name of document	Description of content	Number of pages

DECLARATION - Confirmation of the validity of the information contained in the report			
Name	Signature	Tel. and email	Date
Inspector:			
Inspector:			
Approver:			

SCHEDULE 3

CASING INTEGRITY INSPECTION PROCEDURE

The holder must select 1 of the following 2 procedures to determine the integrity of the casings:
1. pressure test;
2. inspection logging.

If the holder chooses to carry out a pressure test and an inspection logging, the results of the pressure test prevail.

1. Pressure test

A holder who chooses to carry out a surface or intermediate casing pressure test must proceed as follows:

1.1. Surface casing pressure test

If only 1 surface casing is installed, the minimum pressure to apply to the surface, in kPa, is a factor of 2.5 multiplied by the expected final depth of the drill hole in actual vertical depth.

If an intermediate casing is expected to be installed, the minimum pressure to apply to the surface, in kPa, is a factor of 2.5 multiplied by the expected depth for the installation of the intermediate casing in actual vertical depth.

The pressure to be applied to the surface is calculated by assuming that the density of the fluids in the drill hole is 1,000 kg/m^3. At the time the pressure test is carried out, the holder must adjust the pressure to be applied according to the density of the fluids present in the drill hole.

1.2. Intermediate casing pressure test

If an intermediate casing is installed, the minimum pressure to be applied to the surface is a factor of 0.67 multiplied by the pressure measured at the depth of the installation of the intermediate casing. If that pressure has not been measured, the holder must estimate it from the real or theoretical pressure gradient that is 11 kPa/m of actual vertical depth.

The pressure to be applied to the surface is calculated by assuming that the fluids in the drill hole have a density of 1,000 kg/m^3. At the time the pressure test is carried out, the holder must adjust the pressure to be applied according to the density of the fluids present in the drill hole.

2. Inspection logging

The holder who chooses to carry out a logging or a combination of inspection loggings of the surface casing or the intermediate casing must interpret the data from one joint to the other in order to

• detecter holes, perforations, cracks, metal losses and metal thickness;

• determine the percentage of penetration of the anomalies.

2.1. Surface casing inspection logging

The maximum bursting strength, based on the specified minimum yield strength of the casing and the lowest value obtained from the metal thickness, must be equal to or greater than a factor of 2.5 multiplied by the expected final depth of the drill hole in actual vertical depth. The following equation must be resolved:

$$P_y \geq \frac{(2Y_p t)}{D} \geq 2.5 \times \text{expected final depth of the drill hole in actual vertical depth}$$

where:

P_y = minimum internal yield pressure (kPa)

Y_p = specified minimum yield strength (kPa)

t = reduced thickness of the metal (mm)

D = nominal outside diameter (mm)

2.2. Intermediate casing inspection logging

The maximum bursting strength, based on the specified minimum yield strength of the casing and the lowest value obtained from the metal thickness, must be equal to or greater than a factor of 0.67 multiplied by the formation pressure at the depth of installation of the intermediate casing. The following equation must be resolved:

$$P_y \geq \frac{(2Y_p t)}{D} \geq 0.67 \times \text{expected final depth of the drill hole in actual vertical depth}$$

where:

P_y = minimum internal yield pressure (kPa)

Y_p = specified minimum yield strength (kPa)

t = reduced thickness of the metal (mm)

D = nominal outside diameter (mm)

SCHEDULE 4

CLASSIFICATION OF A WELL'S RISK POTENTIAL

Classification of the wells	Type of well	Geology	Status before the temporary closure
Low risk	Gas well < 28,000 m^3/day Oil well without flow and without H_2S Tube well with a content in H_2S < 5%, non-perforated	Non-problematic geological formations	Non-problematic well Well whose pressures are controlled
Moderate risk	Gas well ≥ 28,000 m^3/day Oil well without flow and with a content in H_2S ≥ 5% Oil well with flow Injection well	Problematic geological formations (example: karsts)	Problems documented and not controlled (example: communication between adjacent wells)
High risk	Gas well with a content in H_2S ≥ 5% Sour gas well	Not applicable	Not applicable

103138

Draft Regulation

Petroleum Resources Act
(2016, chapter M-13.1)

Petroleum exploration, production and storage licences, and pipeline construction or use authorization
— Making

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), that the Regulation respecting petroleum exploration, production and storage licences, and the pipeline construction or use authorization, appearing below, may be made by the Government on the expiry of 45 days following this publication.

The draft Regulation sets the terms and conditions for auctioning and the conditions for awarding an exploration, production and storage licence, and determines the conditions of exercise. It also sets out the conditions for the granting and exercise of a pipeline construction or use authorization. It determines the documents and information to be sent to the Régie de l'énergie for examination as part of a petroleum production or storage project or a pipeline construction or use project. In addition, the draft Regulation sets the amount up to which a licence or a pipeline construction or use authorization holder is required, irrespective of fault, make reparation for any injury arising out of or in the course of the holder's activities, according to the environment in which the project is situated. The draft Regulation contains the terms and conditions of the Mining Act (chapter M-13.1) and the Regulation respecting petroleum, natural gas and underground reservoirs (chapter M-13.1, r. 1) concerning the petroleum and gas royalties that will apply until the adoption of a new petroleum taxation regime. Lastly, the Regulation provides that the fees and rents collected since 1 April 2017 for an exploration licence for petroleum, natural gas and an underground reservoir, a lease to produce petroleum and natural gas and a lease to operate underground reservoirs under the Mining Act will be transferred from the Natural Resources Fund to the Energy Transition Fund established under section 17.12.21 of the Act respecting the Ministère des Ressources naturelles et de la Faune (chapter M-25.2).

Study of the matter shows that the draft Regulation will have an impact on enterprises currently holding rights to explore for and produce petroleum and gas or operate an underground reservoir that will become licence holders and who will have to provide proof that they are solvent up to the amount for which they are liable for the purposes of the system, irrespective of fault. If the enterprises are responsible for an existing pipeline, they will have to prove their solvency for the amount up to which they are liable for the purposes of the no-fault regime relating to that pipeline. They will also have to pay a higher annual fee in addition to contending with greater accountability, in particular in respect of the information sent to the Minister of Energy and Natural Resources. In addition, to foster social acceptability of the projects, licence holders will have to establish monitoring committees and send notices to municipalities, regional county municipalities and the public on the basis of the terms and conditions set in the draft Regulation. The additional requirements may impose, in certain cases, a significant burden. The impact on the public is limited to the notices that it will receive from licence holders, in particular where licences or pipeline construction or use authorizations are awarded.

Further information on the draft Regulation may be obtained by contacting Marie-Eve Bergeron, Director, Bureau des hydrocarbures, Ministère de l'Énergie et des Ressources naturelles, 5700, 4e Avenue Ouest, bureau A-422, Québec (Québec) G1H 6R1; telephone: 418 627-6385, extension 8131; toll free: 1 800 363-7233, extension 8131; fax: 418 644-1445; email: marie-eve.bergeron@mern.gouv.qc.ca

Any person wishing to comment on the draft Regulation is requested to submit written comments within the 45-day period to Luce Asselin, Associate Deputy Minister for Energy, Ministère de l'Énergie et des Ressources naturelles, 5700, 4e Avenue Ouest, bureau A-407, Québec (Québec) G1H 6R1.

PIERRE ARCAND,
Minister of Energy and
Natural Resources and
Minister responsible for the Plan Nord

Regulation respecting petroleum exploration, production and storage licences, and the pipeline construction or use authorization

Petroleum Resources Act
(2016, chapter 35, s. 23: ss. 11, 17, 20, 25, 27 to 29, 31, 36 to 40, 44, 48, 51, 54, 57, 61 to 67 and 117, s. 118, 2nd par., s. 119, 1st par., s. 121, 1st par., s. 122, 2nd and 4th pars., s. 123 and 124, s. 126, 2nd par., ss. 150, 152, 191 and 207, pars. 1°, 5° and 6)

CHAPTER I
GENERAL

1. This Regulation establishes the conditions of exercise of the exploration for petroleum or underground reservoirs, the production or storage of petroleum and the construction or use of a pipeline, while ensuring the safety or persons and property, environmental protection, and optimal recovery of the resource.

2. In this Regulation,

"drill stem test" means an operation for collecting samples of fluids contained in rock to determine flow characteristics and measure reservoir pressures, without modifying the drill hole equipment; (*essai aux tiges*)

"isobaths" means the contour line connecting points of equal depth on a geological surface defined in relation to a reference horizontal surface; (*isobathe*)

"qualified reserves evaluator" means a natural person who is a member of a professional order recognized by law in a territory of Canada, having the required professional qualifications and experience appropriate for the estimation, evaluation and review of geological, hydraulic, petrophysical and economic data relating to reserves, of the information on the resources and related information; (*évaluateur de réserves qualifié*)

"wellhead value" means the average retail sale price of the substance extracted, excluding all taxes and deduction of the transportation average costs from the well to the places of delivery, measuring costs and, if applicable, purification costs. (*valeur au puits*)

3. All documents that must be sent to the Minister under this Regulation, except bids following an auction, must also be sent in an electronic version, in PDF, excluding well logging raw data that must be in ASCII files. The maps produced by a geoscience information system software must be sent in a shapefile or in PDF.

4. The measurement units in the documents required under this Regulation must be expressed according to the International System (SI).

CHAPTER II
SPECIFIC PROVISIONS APPLICABLE TO PETROLEUM EXPLORATION, PRODUCTION AND STORAGE LICENCES

DIVISION I
NOTICE TO OWNERS OR LESSEES, LOCAL MUNICIPALITIES AND REGIONAL COUNTY MUNICIPALITIES

5. The licence awarding notice provided for in sections 29 and 57 of the Petroleum Resources Act (2016, chapter 35, s. 23) must contain

(1) the holder's name and contact information;

(2) the licence number, date of awarding and expiry date;

(3) the date and registration number of the licence in the public register of real and immovable petroleum rights;

(4) the steps taken to establish the monitoring committee provided for in section 28 of the Act;

(5) the local municipalities and the regional county municipalities in which the territory subject to the licence is located; and

(6) the name and contact information of the person to be contacted to obtain additional information.

The holder sends the notice by mail to the owner or the lessee. The holder also sends the notice by registered mail to the local municipalities and regional county municipalities.

6. The notice must be accompanied by a plan to scale sufficient to show the boundaries of the territory subject to the licence, those of the local municipalities and those of the regional county municipalities.

DIVISION II
MONITORING COMMITTEE

7. A member of the monitoring committee is deemed not to be independent

(1) if the member has direct or indirect relations or interests of a financial or commercial nature with the licence holder;

(2) if the member is or was, during the 2 years preceding the date of appointment, employed by the holder or by one of the holder's wholly-owned subsidiaries, or if the member is related to a person holding such employment;

(3) if the member is employed by the Ministère de l'Énergie et des Ressources naturelles or by the Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques; and

(4) if the member is an employee or a commissioner of the Régie de l'énergie, if applicable.

For the purposes of this section, "related person" means persons connected by blood relationship, marriage, civil union, *de facto* union or adoption.

8. The term of a committee member is 2 years and may be renewed.

9. The holder must provide to the committee a copy of

(1) the holder's licence and, where applicable, acts relating to its renewal, transfer, surrender, suspension, revocation or expiry;

(2) the proof of solvency provided for in section 166 that the holder has provided to the Minister for the awarding of the licence;

(3) in the case of an exploration licence, the summary of the work planned during the term of the licence provided to the Minister in accordance with paragraph 4 of section 33;

(4) in the case of a production or storage licence, the petroleum production or storage plan;

(5) the acts and documents referred to in subparagraphs 2 to 4 of the first paragraph of section 150 of the Act and any other act or document registered in the public register of real and immovable petroleum rights;

(6) the safety and community involvement programs provided for in the Regulation respecting petroleum exploration, production and storage on land, made by Order in Council xxxx-xxxx dated (*insert the date of the Order in Council*) and in the Regulation respecting petroleum exploration, production and storage in a body of water, made by Order in Council xxxx-xxxx dated (*insert the date of the Order in Council*);

(7) the notices sent under sections 29 and 57 of the Act;

(8) the notices sent under sections 63, 67, 90, 94 and, if applicable, those sent under sections 121 and 125; and

(9) the authorizations, permits and certificates obtained by the holder and issued by an authority other than the Minister.

10. The holder provides the technical support needed by the committee, including the recourse to external expertise where required.

The holder puts at the disposal of the committee a website reserved for the committee's activities and presenting the holder's project to the local community.

11. The committee must meet at least once a year.

Not later than 15 days after each meeting, the committee sends a report of the meeting to the holder. The holder publishes the report on the website within 2 working days following its receipt.

12. Every request for information or documents by the committee to the holder must be made in writing and must concern data needed by the committee to fulfill its mandate.

Within 15 days following the receipt of the request, the holder must provide the information and documents or give reasons for refusal to do so.

13. All expenses related to the operation of the committee are assumed by the holder.

At the request of the committee and on presentation of vouchers, the holder reimburses the travel and accommodation expenses of the committee members.

14. The committee must in particular revise the holder's plan for communication with local communities.

15. The holder must publish an annual report of the committee's activities and expenses on the website and send it to the Minister within 90 days following the end of the holder's fiscal year.

The committee must draw up the portion of the report concerning its activities and send it to the holder at least 2 working days before the deadline for publishing the report.

The holder must produce the other portion of the report concerning the committee's expenses.

16. The holder of a licence who is awarded another licence is not required to establish a new monitoring committee if the territories subject to the licences are adjacent. The holder must, within 30 days following the awarding of the new licence, submit its work program to the existing monitoring committee.

The first paragraph applies up to a maximum of 5 licences.

CHAPTER III
EXPLORATION LICENCE

DIVISION
AUCTION

§1. Process

§§1. List of qualified persons

17. To submit a bid as part of an auction, a person must be registered on the list of qualified persons.

The list is published on the department's website.

18. To establish the list of qualified persons, the Minister publishes a notice of opening of the list on the department's website. The notice may also be published in specialized magazines and newspapers.

The notice contains the eligibility requirements, the place where additional information may be obtained, the place chosen for receiving applications for registration and the date and time before which they must be received.

19. A person is registered on the list where the person

(1) provides the Minister with his or her name and contact information;

(2) meets the eligibility requirements provided for in the notice;

(3) provides an undertaking to prove, if the person is a successful bidder, that he or she is solvent to the amount provided for in section 161; and

(4) pays the fee of $75.

20. A person is ineligible for the list if, in the 5 years preceding the date of his or her application for registration, a licence which the person held or in which the person held a share has been revoked.

A person registered on the list is removed from it if a licence he or she holds or in which the person holds a share is revoked.

21. The list is valid for 5 years.

22. A person not registered on the list may, during an auction process, submit an application for registration to be able to submit a bid. Sections 19 and 20 apply, with the necessary modifications.

The registration is effective for the remaining period of validity of the list.

§§2. Auction documents and submission of a bid

23. The Minister sends a notice of auction of an exploration licence to the persons registered on the list of qualified persons and publishes it on the department's website. The notice may also be published in specialized magazines and newspapers.

The notice is part of the auction documents and contains, in particular,

(1) a brief description of the licence and the territory subject to it;

(2) the designated place and date and time of the beginning of the period for receiving bids;

(3) the bid closing date and time; the period must not be less than 150 days from the beginning of the period for receiving bids;

(4) the place where the auction documents may be obtained and the time at which they will be available;

(5) the place where additional information may be obtained;

(6) the indication that the auction will be won by the person who submitted the highest eligible bid; and

(7) the conditions and rules applicable to an application for registration on the list of qualified persons during the auction process.

24. At the beginning of the period for receiving bids, the auction documents are published on the department's website. They include, in particular,

(1) a copy of the licence to be awarded;

(2) the description of the territory subject to the licence and its geology;

(3) the eligibility and compliance requirements of the bids;

(4) the procedure for opening the bids;

(5) the eligible form of the auction guarantee;

(6) the amount and the eligible form of the proof of solvency provided for in section 166 that will have to be given to the Minister before awarding the licence;

(7) the list of documents exigible from the successful bidder before the awarding of the licence; and

(8) the indication of the required fee.

25. The bidder must provide, with the bid, an auction guarantee of $10,000 and pay a fee of $154.

26. The eligibility and compliance requirements must specify the cases that will entail automatic rejection of a bid including, in particular,

(1) non-compliance of the bid closing date and time, failure to pay the required fee and non-compliance of the place designated for receiving bids; and

(2) the furniture of a guarantee not complying with the required form and requirements.

The compliance requirements must also indicate that the submission, by a person, of several bids for a same auction entails the automatic rejection of all the person's bids. For the purposes of this paragraph, the sending of a same bid by electronic means and on paper is deemed to be the submission of several bids.

27. The Minister may amend the auction documents by means of a supplementary agreement sent to the persons concerned by the auction and published on the department's website.

The supplementary agreement must be sent and published at least 30 days before the bid closing date; if that period is not complied with, the bid closing date must be postponed by as many days as necessary for meeting the minimum period.

§2. Selection and awarding

§§1. Selection of successful bidder

28. The Minister takes cognizance of the eligible bids in the presence of a witness on the bid closing date and time.

The Minister then examines them by verifying their compliance.

29. If the Minister rejects a bid because it is ineligible or non-compliant, the Minister informs the bidder by mentioning the reason for the rejection not later than 15 days after the publication of the name of the successful bidder.

30. The auction is won by the bidder that submitted the highest eligible bid.

In case of a tie, the successful bidder is selected by random draw.

31. The Minister informs the successful bidder that the bidder has been selected and publishes the bidder's name and the amount of the bid on the department's website.

32. A licence may not be awarded to a bidder who made a false or misleading statement.

§§2. Awarding of licence

33. Not later than 45 days after having been informed of the selection, the successful bidder must provide to the Minister

(1) the amount tendered for the licence;

(2) the proof of solvency provided for in section 166;

(3) the process for appointing members of the monitoring committee or, if the bidder is not required to establish a new committee under section 16, identify the monitoring committee that will be consulted for that licence;

(4) a summary of the anticipated exploration work for the term of the licence specifying the objectives, nature and scope, signed and sealed by a geologist or an engineer; and

(5) the payment of the annual fee payable for the first year of the licence.

34. The Minister awards a licence when the successful bidder provides the Minister with the elements referred to in section 33 and approves the process for appointing the members of the monitoring committee.

If the successful bidder fails to provide those elements, the Minister may select a new bidder. Section 30 applies to that new selection.

35. The fee for awarding an exploration licence is $10,000.

The auction guarantee provided by the successful bidder is kept by the Minister and is used to pay the licence awarding fee.

36. Within 30 days after the awarding of a licence, the Minister returns the guarantee to the bidders who have not won the auction.

37. The Minister may keep the auction guarantee where the successful bidder refuses to conclude the licence agreement.

DIVISION II
MINIMUM WORK

38. The amount for the minimum work that an exploration licence holder must perform each year is,

(1) for the first year of the term of the licence, $100 per km^2 or $6,000, whichever is greater;

(2) for the second year of the term of the licence, $200 per km^2 or $12,000, whichever is greater;

(3) for the third year of the term of the licence, $300 per km^2 or $18,000, whichever is greater;

(4) for the fourth year of the term of the licence, $400 per km^2 or $24,000, whichever is greater;

(5) for the fifth year of the term of the licence, $500 per km^2 or $30,000, whichever is greater; and

(6) from the first renewal of the licence made pursuant to section 47, $500 per km^2 or $40,000, whichever is greater.

39. The work connected with the following activities are eligible for the calculation of the amount of minimum work:

(1) geophysical or geochemical surveying;

(2) stratigraphic surveying;

(3) well drilling;

(4) completion of a well;

(5) fracturing of a well;

(6) reconditioning of a well;

(7) test for extracting petroleum or using an underground reservoir;

(8) temporary closing of a well;

(9) permanent closing of a well or a reservoir;

(10) restoration of a site; and

(11) economic evaluation of a pool or a reservoir.

40. The work report referred to in the second paragraph of section 31 of the Act must contain

(1) a detailed description of the work performed during the year and the amounts broken down attributable to the work allowing to distinguish what is eligible and what is not;

(2) the result of the work and its impact on the continuation of the activities;

(3) where applicable, the amount of eligible work exceeding the amount of the required minimum work of the previous years that is carried over to the current year; the holder must identify the year in which the excess was made;

(4) where applicable, the amount of eligible work exceeding the amount of required minimum work performed in the territory of another licence that the holder wishes to apply to the licence for the current year; the holder must identify the licence from which comes the excess;

(5) where applicable, the amount of eligible work exceeding the amount of required minimum work that the holder wishes to apply to one or more other licences for the current year; the holder must identify the licences to which it wishes to apply the excess and detail the allocation between the licences;

(6) where applicable, the amount of eligible work exceeding the amount of minimum work required for the current year that could be carried over to a subsequent year; and

(7) where applicable, the amount of required minimum work that the holder should have performed in the current year and the amount paid in accordance with section 32 of the Act.

The breakdown of the amounts for the work must allow to assign a direct cost to each of the activities provided for in section 39, where applicable.

41. The report provided for in section 40 must be certified by an independent chartered professional accountant auditor.

The holder must provide the Minister, at the Minister's request, with the supporting documents for the eligible work performed during the year.

DIVISION III
ANNUAL FEE

42. The annual fee payable by the exploration licence holder is,

(1) for the first period of the term of the licence, $51.50 per km^2;

(2) from the first renewal of the licence under section 49, $103 per km^2; and

(3) from the renewal of the licence under section 50, $257.50 per km^2.

DIVISION IV
ANNUAL REPORT

43. The annual report provided for in section 37 of the Act must contain

(1) a summary of the work performed, signed and sealed by a geologist or an engineer;

(2) a summary of the exploration expenses incurred in the territory subject to the licence during the year;

(3) a statement in terms of exploration and evaluation assets accrued by the holder since the issuance of the licence in the territory subject to the licence, certified by an independent chartered professional accountant auditor;

(4) a summary of the new knowledge acquired during the year in the territory subject to the licence;

(5) where a notice of a significant or commercial discovery has been registered in the public register of real and immovable petroleum rights, the updating of the estimation of the petroleum reserves and contingent resources present in the territory subject to the licence, established in accordance with the Canadian Oil and Gas Evaluation Handbook by an independent qualified reserves evaluator, if it has been carried out; and

(6) the status of the wells and the amount of guarantees furnished in accordance with section 103 of the Act.

Any supporting or reference document must be sent with the annual report.

44. The annual report must be accompanied by a map showing the perimeter of the area of the geophysical surveying and the geochemical surveying, the survey lines, traverses and sources of energy for the geophysical surveying, the perimeter of the area of the surveying and the sampling points for the geochemical surveying, stratigraphic surveys and drillings carried out in the territory subject to the licence, and the equipment and installations in place.

DIVISION V
DISCOVERY NOTICE

45. The notice of significant discovery provided for in section 38 of the Act must contain

(1) the name and contact information of the holder and the licence number;

(2) the well name and number;

(3) the depth interval and a description of the bearing geological formations and discovery areas;

(4) the location of the discovery;

(5) a longitudinal section of the discovery drilling indicating its position;

(6) a description of the petroleum and its relation with the bearing geological formations;

(7) the data and analyses justifying the area of petroleum accumulation;

(8) the depth of the tests conducted;

(9) an estimation of the petroleum contingent resources and reserves established in accordance with the Canadian Oil and Gas Evaluation Handbook by an independent qualified reserves evaluator and the data and analyses that allowed the establishment of that estimation; and

(10) the results of the extraction tests.

46. The notice of commercial discovery provided for in section 39 of the Act must contain

(1) the name and contact information of the holder and the licence number;

(2) the name and the number of the wells that allowed the discovery and the delineation of the commercial discovery area;

(3) the depth interval and a description of bearing geological formations and discovery areas;

(4) the vertical projection, on the surface, of the top of the pool and isobaths of the top of the pool using sea level as a reference;

(5) a longitudinal section of the wells referred to in paragraph 2 indicating their positions;

(6) a description of the petroleum and its relation with the bearing geological formations;

(7) the data and analyses justifying the area of accumulation of the petroleum;

(8) the depth of the tests conducted; and

(9) the results of the extraction tests.

47. The notice of commercial discovery must also contain the data relating to the reserves and the risked net present value of future net revenue in accordance with Parts 1 to 3 of Form 51-101F1 of Regulation 51-101 respecting Standards of Disclosure for Oil and Gas Activities (chapter V-1.1, r. 23), with the necessary modifications, determined by an independent reserves evaluator.

48. Where an exploration licence holder sends a notice of a significant or commercial discovery, the holder sends by registered mail a copy of the notice to the local municipalities and regional county municipalities situated in the territory subject to the licence.

DIVISION VI
RENEWAL

49. The Minister renews an exploration licence for 1 year, not more than 5 times, provided that the holder

(1) applies for the renewal before the end of the previous term;

(2) pays the annual fee;

(3) has complied with the Act and its regulations during the previous term;

(4) sends a summary of the work planned for the following term specifying its objective, nature and scope, signed and sealed by an engineer; and

(5) has a notice of significant discovery registered in the public register of real and immovable petroleum rights before the end of the previous term or justifies the relevance of continuing the exploration work.

50. After the fifth renewal, the Minister renews the exploration licence for a period of 8 years, provided that the holder

(1) applies for the renewal before the end of the previous term;

(2) pays the annual fee for the first year of renewal;

(3) has a notice of commercial discovery registered in the public register of real and immovable petroleum rights before the end of the previous term;

(4) has complied with the Act and its regulations during the previous term; and

(5) sends a summary of the work planned for the following term specifying its objective, nature and scope, signed and sealed by an engineer.

On the expiry of the 8-year period, the Minister may authorize the extension of the licence for the period necessary for receiving the decision and authorizations provided for in the first paragraph of section 48 of the Act and the issuance of the production licence.

CHAPTER IV
PRODUCTION LICENCE

DIVISION I
AWARDING OF A PRODUCTION LICENCE

§1. Awarding to an exploration licence holder

51. The Minister awards a production licence where the holder of an exploration licence sends to the Minister

(1) the proof of solvency provided for in section 166;

(2) a copy of the authorizations obtained in accordance with section 48 of the Act;

(3) the payment of the annual fee payable for the first year of the licence; and

(4) the payment of the licence awarding fee of $10,000.

52. The holder of an exploration licence sends the elements referred to in section 51 not later than 45 days after receiving the last authorization or favourable decision provided for in section 48 of the Act.

§2. Awarding by auction

53. Where a production licence is awarded by auction, sections 17 to 32 apply, with the necessary modifications.

54. In addition to informing the successful bidder in accordance with section 31, the Minister also informs the bidder having submitted the second highest bid.

The Minister returns the auction guarantee to the other bidders.

55. The successful bidder and the bidder having submitted the second highest bid must submit their production project to the Régie de l'énergie not later than 45 days after having been notified by the Minister in accordance with sections 31 and 54.

The Board takes cognizance of the project of the bidder having submitted the second highest bid only if the successful bidder does not receive a favourable decision for its project.

56. The bidder having submitted the second highest bid may, at all times, withdraw from the process by notifying the Minister and the Régie de l'énergie, in writing. The Minister then returns that bidder's auction guarantee.

57. Not later than 45 days after having received the last authorization or favourable decision provided for in section 48 of the Act, the successful bidder or, as the case may be, the bidder having submitted the second highest bid must

(1) pay the amount tendered for the licence;

(2) provide the proof of solvency provided for in section 166;

(3) provide a copy of the authorizations obtained in accordance with section 48 of the Act;

(4) provide the process for appointing the members of the monitoring committee or, if the bidder is not required to establish a new monitoring committee under the first paragraph of section 16, identify the monitoring committee that will be consulted for that licence; and

(5) pay the annual fee payable for the first year of the licence.

58. The Minister awards a production licence where the Minister receives the elements referred to in section 57 and approves the process for appointing the members of the monitoring committee, where applicable.

59. The production licence awarding fee is $10,000.

The auction guarantee furnished by the person to whom the licence is awarded is kept by the Minister and is used to pay the licence awarding fee.

60. Within 30 days after the awarding of the licence, the Minister returns the auction guarantee to the bidder who has not obtained the licence.

61. The Minister may keep the auction guarantee where the successful bidder or, where applicable, the bidder having submitted the second highest bid refuses to conclude a licence agreement.

DIVISION II
EXAMINATION OF THE PROJECT BY THE RÉGIE DE L'ÉNERGIE

§1. Application

62. A person who wishes to obtain a production licence must send to the Régie de l'énergie the following documents and information so that the Board may rule on the production project:

(1) a general presentation of the production project including, in particular,

(a) the history of the activities already performed;

(b) the date of registration of the notice of commercial discovery in the public register of real and immovable petroleum rights;

(c) the partners, their respective interests and their technical and financial capabilities to carry out the project;

(d) a map showing the vertical projection, on the surface, of the pool and the equipment and installations required to carry out the production project;

(d) the schedule of the anticipated work;

(e) a topographic map at a scale sufficient to show

i. the perimeter of the territory that will be subject to the licence;

ii. the municipalities in the territory that will be subject to the licence;

iii. the roads included in the territory that will be subject to the licence;

iv. the public and private lands; and

v. the land and bodies of water;

(f) the schedule of the anticipated work;

(g) a general description of the progress of the installations over time;

(h) the list of the technical documents and data used in the preparation of the production project;

(i) if the project is submitted after an auction process, the summary of how any financial liabilities attributable to the anticipated activities will be resolved by specifying the means that will be taken to obtain the necessary funds and the time at which the funds will be raised;

(j) the list of permits, licences and authorizations required to carry out the work; and

(k) if applicable, a description of the amendments made to the project following conditions imposed by other departments or bodies;

(2) a report containing, in particular,

(a) an overview of the regional geology;

(b) the structural geology and the geology of the reservoir;

(c) a petrological analysis of the reservoir and the country rocks;

(d) a geophysical analysis on the geophysical data available, in particular, seismic surveys and well loggings, and whose objective is to characterize the geometry of the pool and the country rocks and their physical properties;

(e) a geological modeling of the pool;

(f) a reservoir petrophysical analysis allowing in particular to establish a volumetric model that takes into account the porosity, permeability and water saturation as well as the methodology selected and the raw data used for the analysis;

(g) the results of the drill stem tests;

(h) the properties of the fluids in the reservoir;

(i) the pressures, volumes and temperatures in the reservoir; and

(j) a demonstration that the spacing of the wells allows an adequate delineation of the pool;

(3) an evaluation of the reserves and contingent resources prepared in accordance with the Canadian Oil and Gas Evaluation Handbook by an independent qualified reserves evaluator;

(4) a petroleum production plan including

(a) the detailed chronology of the activities planned during the development of the pool;

(b) the situation of the wells in order to encompass the production of the pool in its entirety;

(c) the list of factors that may affect the production project, in particular, the physical constraints and geotechnical aspects;

(d) a description of the production and transportation installations;

(e) the presentation of the technical management approach concerning contractors, suppliers and subcontracting;

(f) the pool dry-off method including, if applicable, an assisted recovery plan;

(g) the pool management and petroleum marketing strategy;

(h) a production simulation model; and

(i) the strategy for the closing of wells, dismantling of equipment and installations and restoration of the work sites;

(5) an emergency preparedness plan compliant with CSA-Z731 Standard, Emergency Preparedness and Response, published by the Canadian Standards Association;

(6) an operation and maintenance plan establishing the pool management objectives and the usual operational considerations, in particular, the tests, analyses, performance control and monitoring of the pool;

(7) an economic evaluation of the project including, in particular,

(a) the expenses incurred prior to the preparation of the production project for installations that will be used in the production phase;

(b) the preparation costs of the production project;

(c) an estimate of the costs in principal of the development project, in particular, the costs for drilling, completing and fracturing wells, the cost of the installations for extraction, purification, fracturing, liquefaction, compression, measurement and transportation to the place of delivery, the closing, dismantling and site restoration costs, and indirect costs;

(d) an estimate of the operation and maintenance costs, in particular, administrative and technical support and the costs for operation, extraction, purification, fracturing, liquefaction, compression, measurement and transportation to the place of delivery and indirect costs;

(e) a presentation of production scenarios and revenue projections;

(f) an evaluation of the recovery in the pool;

(g) the contingency factors affecting the potential recovery of discovered, non-recoverable petroleum;

(h) a scenario for the royalties to be paid;

(i) an economic sensitivity analysis; and

(j) the risked net present value of future net revenue in accordance with Parts 1 to 3 of Form 51-101F1 of Regulation 51-101 respecting Standards of Disclosure for Oil and Gas Activities (chapter V-1.1, r. 23), with the necessary modifications, determined by an independent qualified reserves evaluator;

(8) a local and regional benefit plan presenting, in particular, the projections of the expenses made in the environment, the tax implications and the related employment as well as the negative financial impact;

(9) a summary of the public consultations carried out prior to the submission of the project; and

(10) a description of the mitigation measures anticipated to harmonize the use of the territory and minimize disruptions for the local communities and on the environment.

The document required under subparagraph 2 of the first paragraph must be signed and sealed by a geologist or an engineer and the documents required under subparagraphs 4 to 6 must be signed and sealed by an engineer.

63. As soon as the application has been submitted to the Board, the person who wishes to obtain a production licence sends a notice to the Minister containing

(1) the person's contact information and, if the person holds an exploration licence, the licence number; and

(2) the date of filing the application with the Board and the file number.

64. During the examination of the project, the Board must take into account, in particular,

(1) the profitability of the project;

(2) job creation;

(3) the estimate of the revenues for the State;

(4) the negative economic impact of the project; and

(5) the project completion probability.

65. Where the Board renders its decision, it must in particular rule on the viability and overall economic relevance of the project.

§2. Amendments to the production project

66. A licence holder who wishes to amend its production project must first submit the amendment to the Board.

It must contain, in particular,

(1) the presentation of the amendments to the project;

(2) an update of the documents already submitted;

(3) the difference in the costs of the project and the proportion of those costs in relation to the costs of the most recent version of the project that received a favourable decision from the Board; and

(4) the justification of any change to the nature of the most recent version of the project that received a favourable decision from the Board because of a technical change, or the reasons for which the amendment does not result in such change.

67. As soon as the holder has submitted an amendment to the Board, the holder notifies the Minister.

The notice must be accompanied by the presentation of the amendments to the production project and must include the Board's file number.

DIVISION III
ANNUAL FEE AND ROYALTIES

68. The production licence holder pays an annual fee of $361 per km^2.

69. The royalties that the production licence holder must pay monthly are set according to the quantity of petroleum extracted declared in the monthly report provided for in section 72.

The royalties are,

(1) on petroleum extracted from the territory covered by the licence,

(a) where the average daily production per production well is 7 m^3 or less, 5% of the wellhead value;

(b) where the average daily production per production well is greater than 7 m^3 and less than 30 m^3,

i. 5% of the wellhead value on the first 7 m^3; and

ii. 10% of the wellhead value on the excess;

(c) where the average daily production per production well is greater than 30 m^3,

i. 8.75% of the wellhead value on the first 30 cubic metres; and

ii. 12.5% of the wellhead value on the excess; and

(2) on the gas extracted from the territory covered by the licence,

(a) where the average daily production per production well is greater than 84,000 m^3, 10% of the wellhead value;

(b) where the average daily production per production well is greater than 84,000 m^3,

i. 10% of the wellhead value on the first 84,000 m^3; and

ii. 12.5% of the wellhead value on the excess.

70. The royalties must be paid in cash, or by cheque or postal money order payable to the order of the Minister of Finance.

71. The royalties that are not paid within the prescribed period bear interest as of the date of the failure to pay, at the rate determined under section 28 of the Tax Administration Act (chapter A-6.002).

DIVISION IV
REPORTS

§1. Monthly report

72. The production monthly report provided for in section 62 of the Act must contain, in particular,

(1) the name and contact information of the holder and the licence number;

(2) a summary of the activities in the wells and installations and of the production operations;

(3) the nature and volume of petroleum produced daily by each well and the monthly and annual accumulation of that volume;

(4) the amount of the royalties payable on the petroleum produced, by type of petroleum, including, in particular,

(a) the monthly volume of each type of petroleum produced by all the wells in the territory subject to the licence;

(b) the monthly production revenues for each type of petroleum;

(c) the measurement, transportation and purification costs;

(d) the monthly average well head value for each type of petroleum; and

(e) the total monthly amount of royalties to be paid for the petroleum produced during the year concerned.

The report must be sent within the first 20 days of the following month.

§2. Annual report

73. The annual report provided for in section 64 of the Act must include, in particular,

(1) the name and contact information of the holder and the licence number;

(2) a summary of

(a) the activities in the wells and installations;

(b) production operations; and

(c) the activities of the monitoring committee;

(3) a description of the equipment and installations used on the surface and in the wells;

(4) a technical analysis concerning the production characteristics and the annual monitoring data of those characteristics that includes, in particular,

(a) the results of verifications and checks carried out on the equipment and wells;

(b) the flow, type of substance and volume of the fluids and petroleum produced from or injected into the wells;

(c) the results of production tests, pressure surveys and analyses of fluids and petroleum;

(d) a description of petroleum refining processes on the production site;

(e) a copy of production loggings recorded before ceasing operation of a producing well, where applicable; and

(f) the results of other tests, measurements and well loggings carried out;

(5) a description of the meters for measuring and their specifications and a map locating them;

(6) the date of the last calibration of the meters;

(7) the results of the shut-in pressure measurement for each well;

(8) the nature and volume of petroleum produced daily per well and the monthly and yearly accumulation of that volume;

(9) the annual volume of each type of petroleum produced by all the wells in the territory subject to the licence;

(10) the annual production revenues for each type of petroleum, including the sale price, the volume sold and the person involved in the transaction;

(11) the total monthly amount of the royalties for the petroleum produced during the year concerned;

(12) the result of the annual re-evaluation of the petroleum reserves and contingent resources prepared in accordance with the Canadian Oil and Gas Evaluation Handbook by an independent qualified reserves evaluator; and

(13) the annual review of the economic evaluation of the project submitted to the Régie de l'énergie.

Any supporting reference document must be sent with the annual report.

74. The annual report must be accompanied by a map showing the perimeter of the area of the geophysical surveying or the geochemical surveying, the survey lines, traverses and sources of energy for the geophysical surveying, the perimeter of the area of the surveying and the sampling points for the geochemical surveying, stratigraphic surveys and drillings carried out in the territory subject to the licence, and the equipment and installations in place.

DIVISION V
RENEWAL

75. The Minister renews a production licence for a 10-year period, not more than 5 times, provided that the holder

(1) pays the fee for the first year of the renewal;

(2) has complied with the Act and its regulations during the previous term;

(3) demonstrates that the holder has produced petroleum for at least 24 months during the 5 years preceding the renewal application; and

(4) demonstrates that the pool development approach allows for an optimal and safe recovery of the petroleum.

After those periods, the Minister may authorize the extension of the licence term for the period the Minister determines, where the holder has applied for it in accordance with the first paragraph and demonstrates the economic viability of the pool for the extension period.

The renewal application must be sent at least 120 days before the end of the previous term failing which the holder is liable to the monetary administrative penalty provided for in paragraph 1 of section 187 of the Act.

76. If the holder has not applied for renewal on the date of expiry of the licence, the holder must send to the Minister the annual report the holder was required to send to the Minister under section 73.

CHAPTER V
STORAGE LICENCE

DIVISION I
PROTECTIVE PERIMETER

77. For delimiting the territory subject to a storage licence provided for in section 11 of the Act, the protective perimeter corresponds to 10% of the maximum width of the area of the vertical projection, on the ground, of the reservoir measured at its largest point.

DIVISION II
AWARDING OF A STORAGE LICENCE

§1. Awarding to the exploration or production licence holder

78. The Minister awards a storage licence to the holder of an exploration or production licence where the holder sends to the Minister

(1) the proof of solvency provided for in section 166;

(2) a copy of the authorizations obtained in accordance with section 48 of the Act;

(3) the payment of the annual fee payable for the first year of the licence; and

(4) the payment of the licence awarding fee of $10,000.

79. The holder of an exploration or production licence sends the elements referred to in section 78 not later than 45 days after having received the last authorization or favourable decision provided for in section 48 of the Act.

§2. Awarding by auction

80. Where a storage licence is awarded by auction, sections 17 to 32 apply, with the necessary modifications.

81. In addition to informing the successful bidder in accordance with section 31, the Minister also informs the bidder having submitted the second highest bid.

The Minister returns the auction guarantee to the other bidders.

82. The successful bidder and the bidder having submitted the second highest bid must submit their storage project to the Régie de l'énergie not later than 45 days after having been notified by the Minister in accordance with sections 31 and 81.

The Board takes cognizance of the project of the bidder having submitted the second highest bid only if the successful bidder does not receive a favourable decision on its project.

83. The bidder having submitted the second highest bid may, at all times, withdraw from the process by notifying the Minister and the Régie de l'énergie, in writing. The Minister then returns its auction guarantee.

84. Not later than 45 days after receiving the last authorization or favourable decision provided for in section 48 of the Act, the successful bidder or, where applicable, the bidder having submitted the second highest bid, must

(1) pay the amount tendered for the licence;

(2) provide the proof of solvency provided for in section 166;

(3) provide a copy of the authorizations obtained in accordance with section 48 of the Act;

(4) provide the process for appointing the members of the monitoring committee or, if the bidder is not required to establish a new monitoring committee under the first paragraph of section 16, identify the monitoring committee that will be consulted for that licence; and

(5) pay the annual fee payable for the first year of the licence.

85. The Minister awards a storage licence where the Minister receives the elements referred to in section 84 and approves the process for appointing the members of the monitoring committee, where applicable.

86. The storage licence awarding fee is $10,000.

The auction guarantee furnished by the licensee is kept by the Minister and is used to pay the licence awarding fee.

87. Within 30 days after awarding a licence, the Minister returns the guarantee to the person who did not obtain the licence.

88. The Minister may keep the auction guarantee where the successful bidder or, where applicable, the bidder having submitted the second highest bid refuses to conclude the licence agreement.

DIVISION III
EXAMINATION OF THE PROJECT BY THE RÉGIE DE L'ÉNERGIE

§1. *Application*

89. A person who wishes to obtain a storage licence must submit to the Régie de l'énergie the following documents and information so that the Board may rule on the storage project:

(1) a general presentation of the storage project including, in particular,

(a) the history of the activities already performed, which includes, in particular, in the case of an underground reservoir resulting from the drying-up of a pool, a history of the development carried out and the production;

(b) the partners, their respective interests and their technical and financial capabilities to carry out the project;

(c) a map showing the vertical projection, on the surface, of the reservoir and the equipment and installations required to carry out the storage project;

(d) a topographic map at a scale sufficient to show

i. the perimeter of the territory that will be subject to the licence;

ii. the municipalities in the territory that will be subject to the licence;

iii. the roads included in the territory that will be subject to the licence;

iv. the public and private lands; and

v. the land and bodies of water;

(e) the schedule of the anticipated work;

(f) a general description of the progress of the installations over time;

(g) the list of the technical documents and data used in the preparation of the storage project;

(h) if the project is submitted after an auction process, a summary of how any financial liabilities attributable to the anticipated activities will be resolved by specifying the means that will be taken to obtain the necessary funds and the time at which the funds will be raised;

(i) the list of permits, licences and authorizations required to carry out the work; and

(j) if applicable, a description of the amendments made to the project following conditions imposed by other departments or bodies

(2) a report containing, in particular,

(a) an overview of the regional geology;

(b) the structural geology and the geology of the reservoir;

(c) a petrological analysis of the reservoir and the country rocks;

(d) a geophysical analysis on the geophysical data available, in particular, seismic surveys and well loggings, and whose objective is to characterize the geometry of the reservoir and the country rocks and their physical properties;

(e) a geological modeling of the reservoir;

(f) a reservoir petrophysical analysis allowing, in particular, to establish a volumetric model that takes into account the porosity, permeability and water saturation as well as the methodology selected and the raw data used for the analysis;

(g) the results of the drill stem tests;

(h) the properties of the fluids in the reservoir;

(i) the pressures, volumes and temperatures in the reservoir;

(j) a reservoir integrity study;

(k) an estimate of the commercial volumetric capacity of the reservoir including the methodology justifying that calculation;

(*l*) a fluid behaviour modeling;

(m) the approach allowing to maintain pressure and production capacities; and

(n) the daily maximum injection and withdrawal rates;

(3) in the case of an underground reservoir resulting from the drying-up of a pool, a history of the production of indigenous petroleum along with an evaluation of the resource in place prior to the storage project, prepared in accordance with the Canadian Oil and Gas Evaluation Handbook by an independent qualified reserves evaluator;

(4) a petroleum storage plan including, in particular

(a) the storage management strategy;

(b) the detailed chronology of the activities planned during the development of the storage reservoir and the installations and equipment required;

(c) a description of the injection and withdrawal, and transportation installations;

(d) the list of factors that may affect the storage project, in particular, the physical constraints and geotechnical aspects;

(e) the presentation of the technical management approach concerning contractors, suppliers and subcontracting;

(f) a description of the targeted market along with a storage simulation model showing the monthly volumes injected and withdrawn based on the targeted market and the anticipated income over the life of the project; and

(g) the strategy for closing wells, dismantling equipment and installations and restoration of work sites;

(5) an emergency preparedness plan compliant with CSA-Z731 Standard, Emergency Preparedness and Response, published by the Canadian Standards Association;

(6) an operation and maintenance plan including the reservoir management objectives and the usual operational considerations, in particular, the tests, analyses, performance control and monitoring of the reservoir;

(7) an economic evaluation of the project including, in particular,

(a) the expenses incurred prior to the preparation of the storage project and that will be used as part of the storage project;

(b) the preparation costs of the storage project;

(c) an estimate of the costs in principal of the development project, in particular, the costs for drilling, completing and fracturing wells, the cost of the installations for injection and withdrawal, purification, fractionation, liquefaction, compression, measurement and transportation to the place of delivery, the closing, dismantling and site restoration costs, and indirect costs;

(d) an estimate of the operation and maintenance costs, in particular, administrative and technical support and the costs for injection and withdrawal, purification, fractionation, liquefaction, compression, measurement and transportation to the place of delivery and indirect costs;

(e) a presentation of injection, storage and withdrawal scenarios and revenue projections;

(f) a scenario of the duties to be paid on substances withdrawn; and

(g) an economic sensitivity analysis;

(8) a local and regional benefit plan presenting in particular the projections of the expenses made in the environment and related employment as well as the negative financial impact;

(9) a summary of the public consultations carried out prior to the submission of the project; and

(10) a description of the mitigation measures anticipated to harmonize the use of the territory and minimize disruptions for the local communities and on the environment.

The document required under subparagraph 2 of the first paragraph must be signed and sealed by a geologist or an engineer and the documents required under subparagraphs 4 to 6 must be signed and sealed by an engineer.

90. As soon as the application has been submitted to the Board, the person who wishes to obtain a storage licence must send a notice to the Minister containing

(1) the person's contact information and if the person holds an exploration or production licence, the licence number; and

(2) the date on which the application was filed with the Board and the file number.

91. When examining the project, the Board must in particular take into account

(1) the project's profitability;

(2) job creation;

(3) the estimate of the revenues for the State;

(4) the negative economic impact of the project; and

(5) the project completion probability.

92. Where the Board renders its decision, it must in particular rule on the viability and overall economic relevance of the project.

§2. Amendments to the storage project

93. A licence holder who wishes to amend the storage project must first submit the amendment to the Board.

It must contain, in particular,

(1) the presentation of the modifications to the project;

(2) an update of the documents already submitted;

(3) the difference in the costs of the project and the proportion of those costs in relation to the costs of the most recent version of the project that received a favourable decision from the Board; and

(4) the justification of any change to the nature of the most recent version of the project that received a favourable decision from the Board because of a technical change, or the reasons for which the amendment does not result in such change.

94. As soon as the holder has submitted an amendment to the Board, the holder notifies the Minister.

The notice must be accompanied by the presentation of the modifications to the storage project and must include the Board's file number.

DIVISION IV
SPECIAL OBLIGATIONS OF A STORAGE LICENCE HOLDER

95. A storage licence gives the holder the right to use an underground reservoir to store in it and withdraw natural gas.

96. A licence holder may not withdraw from the underground reservoir a quantity of substance greater than the quantity injected.

97. A storage licence holder must immediately notify the Minister of any change to the characteristics of the underground reservoir.

DIVISION V
ANNUAL FEES AND DUTIES ON THE SUBSTANCES WITHDRAWN

98. A storage licence holder pays an annual fee of $361 per km^2.

99. The duties on the substances withdrawn that a storage licence holder must pay monthly are fixed according to the quantity of withdrawn substances declared in the monthly report provided for in section 102.

The duties are

(1) $258 per million cubic metres on the first 50 million cubic metres withdrawn in the year;

(2) $515 per million cubic metres on the volumes between 50 and 100 million cubic metres withdrawn in the year;

(3) $772 per million cubic metres on the volumes between 100 and 250 million cubic metres withdrawn in the year;

(4) $1,074 per million cubic metres for the remainder.

However, for each year, the total of the duties on the substances withdrawn may not be less than $10,074. The last monthly payment must be adjusted upward if the total of the sums paid is lower.

100. Payment of the duties on the substances withdrawn must be in cash, or by cheque or postal money order payable to the order of the Minister of Finance.

101. The duties on the substances withdrawn that are not paid within the prescribed period bear interest as of the date of failure at the rate determined under section 28 of the Tax Administration Act (chapter A-6.002).

DIVISION VI
REPORTS

§1. Monthly report

102. The injection and withdrawal monthly report provided for in section 65 of the Act must contain, in particular,

(1) the name and contact information of the holder and the licence number;

(2) a summary of the activities in the wells and the installations and of the injection and withdrawal operations;

(3) the nature and volume of substances injected and withdrawn daily per well and the monthly and annual accumulation of that volume;

(4) the amount of the duties payable on the substances withdrawn that includes, in particular,

(a) the monthly volume of substances withdrawn from all the wells in the territory subject to the licence;

(b) an estimate of the volume of substances that should be withdrawn in the current year;

(c) the monthly amount of the duties paid on the substances withdrawn during the month concerned; and

(d) the total amount of the duties paid on the substances withdrawn for the current year.

The report must be sent within the first 20 days of the following month.

103. The report must be accompanied, in particular, by the daily injection and withdrawal reports and the records of the official transactions with third persons concerning those activities.

§2. Annual report

104. The annual report provided for in section 67 of the Act must contain, in particular,

(1) the name and contact information of the holder and the licence number;

(2) a summary of

(a) the activities in the wells and installations in the territory subject to the licence;

(b) the injection and withdrawal operations; and

(c) the activities of the monitoring committee;

(3) a technical analysis on the characteristics of the reservoir and the annual monitoring data of those characteristics;

(4) a description of the meters used for measuring and their specifications and a map locating them;

(5) the date of the last calibration of the meters;

(6) the nature and volume of the substances injected and withdrawn daily per well and the monthly and yearly accumulation;

(7) the amount of the duties payable on the substances withdrawn including, in particular,

(a) the annual volume of the substances withdrawn for all the wells in the territory subject to the licence;

(b) the monthly amounts of the duties paid on the substances withdrawn for the year concerned; and

(c) the adjustment of the duties payable on the substances withdrawn on the basis of the real annual volume withdrawn by all the wells in the territory subject to the licence; and

(8) a projection of the substance injection and withdrawal activities for the coming year.

Any supporting or reference document must be sent with the annual report.

105. The annual report must be accompanied by a map showing the perimeter of the area of the geophysical surveying or the geochemical surveying, the survey lines, traverses and sources of energy for the geophysical surveying, the perimeter of the area of the surveying and the sampling points for the geochemical surveying, stratigraphic surveys and drillings carried out in the territory subject to the licence, and the equipment and installations in place.

DIVISION VII
RENEWAL

106. The Minister renews a storage licence for a period of 10 years, not more than 5 times, provided that the holder

(1) pays the fee for the first year of the renewal;

(2) has complied with the Act and its regulations during the previous term;

(3) demonstrates that the holder has injected, stored or withdrawn petroleum for at least 24 months during the last 5 years of the previous term; and

(4) demonstrates that the reservoir use approach allows the injection, storage and withdrawal of the petroleum in an optimal and safe manner.

After those periods, the Minister may authorize the extension of the licence term for the period the Minister determines, where the holder applies for it in accordance with the first paragraph and demonstrates the economic viability of the operation of the underground reservoir for the extension period.

The renewal application must be sent at least 120 days before the end of the previous term failing which the holder is liable to the monetary administrative penalty provided for in paragraph 1 of section 187 of the Act.

107. If the holder has not applied for renewal on the date of expiry of the licence, the holder must send to the Minister the annual report the holder was required to send to the Minister under section 104.

CHAPTER VI
SURRENDER, REVOCATION AND TRANSFER OF A PETROLEUM EXPLORATION, PRODUCTION OR STORAGE LICENCE

DIVISION I
SURRENDER

108. A licence holder who wishes to surrender all or part of its right must apply to the Minister and must have obtained the declaration of satisfaction provided for in section 114 of the Act with respect to all the wells or reservoirs for which the holder is responsible situated in the territory to be surrendered.

The application must be accompanied by the payment of the fee of $250.

109. In the case of an application for the partial surrender of an exploration right, the holder must send to the Minister a summary of the exploration work planned in the residual territory specifying the objectives, nature and scope, signed and sealed by an engineer.

110. In the case of an application for partial surrender of a production or storage right, the area of the territory to be surrendered must not be less than 2 km^2.

DIVISION II
REVOCATION

111. A holder whose licence has been revoked by the Minister must, within 6 months of the date on which the revocation is enforceable, have permanently closed the wells for which the holder is responsible in the territory subject to the licence, in accordance with the permanent well or reservoir closure and site restoration plans.

Sections 304 to 322 of the Regulation respecting petroleum exploration, production and storage on land and sections 293 to 316 of the Regulation respecting petroleum exploration, production and storage in a body of water apply to the closure and restoration work, with the necessary modifications.

DIVISION III
TRANSFER

§1. General

112. A licence holder who wishes to transfer all or part of the licence must not have failed to fulfill the holder's obligations under the Act and its regulations.

113. A person may not obtain, by transfer, a licence or a share of the licence's right, if a licence the person holds has been revoked in the last 5 years.

§2. Transfer of licence

114. A transferee must apply for the transfer to the Minister, in writing.

The application must be accompanied by the proof of solvency provided for in section 166 and a summary of the anticipated exploration work, signed and sealed by a geologist or an engineer, if the licence transferred is an exploration licence.

115. For each well on the land subject to the licence and that is not permanently closed, the transferee must also apply for the drilling authorization provided for in the Regulation respecting petroleum exploration, production and storage on land and the Regulation respecting petroleum exploration, production and storage in a body of water.

116. A transferee who wishes to modify the process for the appointment of the members of the monitoring committee must first submit a new process to the Minister for approval.

117. Once the licence transferred, the transferee must notify the owners or lessees, the local municipalities and the regional county municipalities of the transfer according to the terms and conditions provided for in section 5, with the necessary modifications.

§3. Transfer of a share of the exploration, production and storage right

118. A transferee must apply for the transfer to the Minister, in writing.

The application must be accompanied by

(1) the most recent annual financial statement audited by an independent auditor, if the transferee is a legal person;

(2) an update of the proof of solvency provided for in section 166, if the transferee acquires the majority of shares in the exploration, production and storage right; and

(3) the designation of a representative with the Minister.

CHAPTER VIII
PIPELINE CONSTRUCTION OR USE AUTHORIZATION

DIVISION I
SPECIFIC PROVISION FOR THE PIPELINE CONSTRUCTION OR USE AUTHORIZATION

119. This Chapter applies to the pipeline construction and use on land and in a body of water, except the marine environment.

DIVISION II
EXAMINATION OF THE PROJECT BY THE RÉGIE DE L'ÉNERGIE

§1. Application

120. A person who wishes to obtain a pipeline construction or use authorization must submit the following documents and information to the Régie de l'énergie, for its ruling on the pipeline construction or use project:

(1) a detailed description of the project and the context justifying it;

(2) for a construction project, a pipeline construction technical program, signed and sealed by an engineer, concerning, in particular, the equipment, tools, assembly materials and the measurement, control and safety systems;

(3) a topographic map at a scale of 1:10,000 showing the actual or anticipated installations and the real or proposed route of the pipeline, and all its elements;

(4) the criteria used to determine the proposed route;

(5) a description of the location and area of the temporary work areas;

(6) the work schedule for the construction, use, maintenance and temporary or permanent shutdown of the pipeline, including, in particular, a detailed description of each activity planned;

(7) a demonstration, signed and sealed by an engineer, that the design of the pipeline, including, in particular, the construction, use, maintenance and temporary or permanent shutdown work, complies with the standards provided for in section 133 and that it ensures the safety of persons and property, and environmental protection;

(8) a broken down estimate of the construction, use, maintenance and temporary or permanent shutdown work, and the income anticipated for the use of the pipeline;

(9) the list of the permits, licences and authorizations required to carry out the project;

(10) the list of the exploration, production and storage licences in force in the territory covered by the pipeline project and, where applicable, the business relationship between their holders;

(11) the partners, their respective interests and their technical and financial capacities to carry out the project;

(12) a summary of the public consultations carried out prior to the submission of the project; and

(13) a description of the mitigation measures anticipated to harmonize the use of the territory and minimize disruptions for the local communities and on the environment.

If required and based on the environments crossed by the pipeline route, the person who wishes to obtain an authorization may, for the purposes of subparagraph 3 of the first paragraph, submit a number of types of maps including a topographic map and a bathymetric map.

121. As soon as the application has been submitted to the Board, the person who wishes to obtain an authorization sends a notice to the Minister containing

(1) the person's name and contact information; and

(2) the date of filing the application with the Board and the file number.

122. During the examination of the project, the Board must take into account, in particular,

(1) the project completion probability;

(2) the project profitability and negative financial impact;

(3) the pipeline design, including, in particular, the construction, use, maintenance and temporary or permanent shutdown work; and

(4) the needs for the petroleum gathering and transportation in the territory covered by the project.

123. Where the Board renders its decision, it must, in particular, rule on the viability and overall economic relevance of the project, and its compliance with the generally recognized best practices.

§2. Amendments to a project

124. The authorization holder who wishes to amend a project must first submit the amendment to the Board.

It must contain, in particular,

(1) the presentation of the amendments to the project;

(2) an update of the documents already submitted;

(3) the difference in the costs of the project and the proportion of those costs in relation to the costs of the most recent version of the project that received a favourable decision from the Board; and

(4) the justification of any change to the nature of the most recent version of the project that received a favourable decision from the Board because of a technical change, or the reasons for which the amendment does not result in such change.

125. As soon as the holder has submitted an amendment to the Board, the holder notifies the Minister.

The notice must be accompanied by the presentation of the amendments to the project and must include the Board's file number.

DIVISION III
AWARDING OF AND AMENDMENT TO AN AUTHORIZATION

126. Not later than 120 days after having obtained the last authorization necessary or the favourable decision from the Board, a person who wishes to obtain a pipeline construction or use authorization must apply to the Minister in writing.

127. The application must contain

(1) the name and contact information of the applicant;

(2) the proof of solvency provided for in section 166;

(3) the following documents, signed and sealed by an engineer:

(a) an integrity management program complying with CSA Standard Z662, Oil and Gas Pipeline Systems, including its appendices, published by the Canadian Standards Association;

(b) a safety and loss management program complying with Appendix A of CSA Standard Z662, Oil and Gas Pipeline Systems, published by the Canadian Standards Association;

(c) a security management program complying with CSA Standard Z246.1, Security management for petroleum and natural gas, industry systems, including its appendices, published by the Canadian Standards Association;

(d) an emergency management program complying with CSA Standard Z662, Oil and Gas Pipeline Systems, CSA Standard Z731, Emergency Preparedness and Response, and CSA Standard Z246.2, Emergency preparedness and response for petroleum and natural gas industry systems, including their appendices, published by the Canadian Standards Association;

(e) a damage prevention program for the protection of underground infrastructures complying with CSA Standard Z247, Damage prevention for the protection of underground infrastructures, including its appendices, published by the Canadian Standards Association;

(f) a plan for the restoration of temporary work areas for the pipeline;

(g) a program related to pipeline inspections before and after the start-up concerning, in particular, the pressure tests, non-destructive inspections, destructive tests and visual examinations;

(h) a monitoring and control program ensuring, in particular, the safety of persons, property and pipeline, and environmental protection;

(i) a construction, use and maintenance manual including, in particular, the methods for promoting the safety of persons and property, environmental protection and the pipeline performance; and

(j) a detailed plan for crossing watercourses complying with the standards provided for in section 133 and including, in particular, the techniques planned for each watercourse;

(4) a safety and community involvement program detailing the elements likely to have an impact on the safety or persons and property including, particular, a description of the mitigation measures to be implemented to take into account the harmonization of the use of the territory and minimize disruptions for the local communities and on the environment;

(5) the list of references consulted, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions; and

(6) any other information or document required by the Minister.

It must be accompanied by the documents submitted to the Board for the examination of the project under section 120 and payment of the fee of $10,000 to which is added $1,000 per kilometre of pipeline anticipated.

128. As soon as the authorization holder receives a favourable decision from the Board on the supplementary agreement to the project submitted under section 124, the holder must provide to the Minister an update of the documents already submitted with the authorization application. It must be accompanied by the payment of $1,000 per kilometre of additional pipeline anticipated.

DIVISION IV
NOTICE TO OWNERS OR LESSEES, LOCAL MUNICIPALITIES AND REGIONAL COUNTY MUNICIPALITIES

129. The notice for the awarding of a pipeline construction or use authorization provided for in section 124 of the Act, must contain

(1) the name and contact information of the holder;

(2) the number, date of awarding and expiry date of the authorization;

(3) the date and registration number of the authorization in the public register of real and immovable petroleum rights;

(4) the local municipalities and regional county municipalities crossed by the pipeline; and

(5) the name and contact information of the person to be contacted to obtain additional information.

The holder sends the notice by mail to the owner or the lessee. The holder also sends the notice by registered mail to the local municipalities and regional county municipalities.

130. The notices must be accompanied by topographic or bathymetric maps at a scale sufficient to show the route of the pipeline, that of the territory of the local municipalities and that of the regional county municipalities crossed by the pipeline.

DIVISION V
CONDITIONS OF EXERCISE

§1. Time periods and notice of the start of the work

131. The authorization holder must start the pipeline construction work not later than 12 months after obtaining the last authorization necessary or the favourable decision from the Board.

The Minister may grant an additional period for starting the construction work if the holder shows that it is necessary.

132. The authorization holder must, at least 7 days before, notify the Minister of the start of the following work:

(1) the layout of the temporary work areas;

(2) the placing of a pipe or any pipe network in the ground, and the elements contained in a pipe;

(3) the start-up of the pipeline;

(4) the start of the use of the pipeline;

(5) the carrying out of an inspection of the pipeline;

(6) the temporary or permanent shutdown of the pipeline.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

§2. Design, construction, use, maintenance and shutdown

133. The authorization holder who designs, constructs, uses, maintains or temporarily or permanently ceases to use a pipeline must ensure to comply with CSA Standard Z662, Oil and Gas Pipeline Systems, CSA Standard Z246.1, Security management for petroleum and natural gas, industry systems, CSA Standard Z246.2, Emergency preparedness and response for petroleum and natural gas industry systems, CSA Standard Z731 , Emergency Preparedness and Response, and CSA Standard Z247, Damage prevention for the protection of underground infrastructures, including their appendices, published by the Canadian Standards Association.

However, in the case of a pipeline used to gather or transport petroleum for underground storage, the holder must ensure to do so in accordance with CSA Standard Z341, Storage of hydrocarbons in underground formations, including its appendices, published by the Canadian Standards Association.

134. During the pipeline construction work, the authorization holder must ensure that the persons present in the temporary work areas are informed of the practices and procedures to follow to ensure their safety.

135. The authorization holder must keep a copy of the construction, use and maintenance manual on the temporary work areas. It must be accessible at all times.

136. Pressure tests must be supervised by an engineer who is not employed by the enterprise that carried out the construction work.

137. The authorization holder must inspect the conduct of the construction work to ensure the safety of persons and property, and environmental protection.

The holder keeps and maintains, until the end of the construction work, a register of those inspections. The holder enters in the register, in particular, any incident involving the construction of the pipeline and the corrective measures taken or planned and their schedule.

138. The authorization holder ensures that the pumping or compression stations are

(1) designed so that their access is safe for the personnel;

(2) designed to allow access only to authorized persons; and

(3) provided with installations used to confine, handle and dispose of waste materials resulting from their use.

139. The authorization holder must inspect annually the pipeline to ensure the safety of persons and property, and environmental protection.

The holder keeps and maintains, until the end of the period of validity of the authorization, a register of those inspections. The holder enters in the register, in particular, cases of non-compliance and the corrective measures taken or planned and their schedule.

140. The authorization holder must, within 24 hours, notify the Minister of any incident related to the pipeline. The holder submits to the Minister, within 7 days of the incident, a detailed report including, in particular, the corrective measures taken or planned and their schedule.

141. The authorization holder must immediately notify the Minister of any spill or leak from the pipeline and immediately take the measures indicated in the emergency management program submitted to the Minister under subparagraph *d* of subparagraph 3 of the first paragraph of section 127.

142. After having received an incident notice under section 140 or 141, the Minister may request a detailed event report on, in particular, the causes of the incident. The authorization holder must entrust the preparation of the report to an expert who is not employed by the authorization holder.

143. The authorization holder must regularly inspect joints and structural elements of any equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps and maintains a register of those inspections until the permanent shutdown of pipeline.

144. After a temporary shutdown, the authorization holder must send an annual report, signed and sealed by an engineer who is not employed by the authorization holder, that shows that the shutdown, the corrosion control program and the other maintenance activities comply with CSA Standard Z662, Oil and Gas Pipeline Systems, including its appendices, published by the Canadian Standards Association.

§3. Restoration

§§1. End of construction work

145. The authorization holder must ensure that, 90 days after the end of the pipeline construction work, the temporary work areas are restored to a state allowing for the harmonization of the site with the use of the territory.

On request, the Minister may grant an additional period for the restoration if the holder shows that it is necessary. The holder must, at least 30 days before the end of the 90-day period, notify the Minister, in writing, of the reasons preventing the restoration within the prescribed period.

146. The authorization holder send to the Minister, within 60 days after the end of the restoration of the temporary work areas, a report describing the activities carried out on the site, signed and sealed by an engineer who is not employed by the holder of the enterprise that carries out the restoration work. The report must be accompanied by photographs of the entire site before its layout for the construction work, during the placing of the pipe or any pipe network in the ground and after its restoration.

§§2. Permanent shutdown

147. The authorization holder must permanently shutdown the pipeline before the end of the period of validity of the authorization provided for in sections 154 and 155.

148. The authorization holder must ensure that, 12 months after the permanent shutdown of a pipeline, the site on which the pipeline is located is restored allowing its harmonization with the use of the territory.

On request, the Minister may grant an additional period for the restoration if the holder shows it is necessary. The holder must, at least 30 days before the end of the 12-month period, notify the Minister, in writing, of the reasons preventing the restoration within the prescribed period.

149. The authorization holder must send to the Minister within 60 days before the end of the restoration work, a report showing that the restoration complies with CSA Standard Z662, Oil and Gas Pipeline Systems, including its appendices, published by the Canadian Standards Association, signed and sealed by an engineer who is not employed by the enterprise who carries out the shutdown.

DIVISION IV
DAILY REPORT, COMPLETION REPORT AND ANNUAL REPORT

150. The authorization holder must prepare a daily report of the construction work signed by an engineer and keep it in the temporary work areas.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the name and contact information of the holder and the authorization number;

(2) the number of welds carried out;

(3) the number of portions of lines installed and the elements contained therein;

(4) the result of the inspections carried out;

(5) the operational problems encountered and the corrective measures taken or planned;

(6) the indication of any event that disrupted the planned progress of the work; and

(7) any other information or document deemed necessary by the Minister.

151. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the construction work. If the Monday is a holiday, the report is sent on the first working day that follows.

152. The authorization holder must, within 90 days following the end of the construction work, send to the Minister a completion report signed by an engineer including, in particular,

(1) the name and contact information of the holder and the authorization number;

(2) a summary of the work carried out according to the chronological order;

(3) a technical description of the condition of the pipeline after the construction work;

(4) a demonstration that the construction work has been carried out in accordance with the standards provided for in section 133 and the generally recognized best practices;

(5) the results of the pipeline inspection program, in particular, those of the pressure and leak tests, non-destructive inspections, destructive tests and visual examinations;

(6) photographs, after the construction work, of all the land subject to the work; and

(7) a topographic map at a scale of 1:10,000 showing all the elements of the pipeline.

If required and based on the environments crossed by the pipeline, the holder may, for the purposes of subparagraph 8 of the first paragraph, submit a number of types of maps including a topographic map and a bathymetric map.

153. The authorization holder must send, within 90 days of the anniversary of the granting of the authorization, an annual report including, in particular,

(1) the name and contact information of the holder and the authorization number;

(2) a summary of the operations;

(3) the results of the pipeline inspection program, in particular, those of the pressure and leak tests, non-destructive inspections, destructive tests and visual examinations;

(4) the average and maximum daily flow per type of substance and the daily, monthly and annual volume of any petroleum collected or transported;

(5) a description and the specifications of the various meters intended for the measurement for petroleum gathering or transportation; and

(6) a financial summary of the project.

Any justification or reference document must be sent with the annual report.

DIVISION V
PERIOD OF VALIDITY AND RENEWAL

154. The period of validity of a pipeline construction or use authorization is 20 years.

155. The Minister renews a pipeline construction or use authorization for 5-year periods provided that the holder

(1) pays the fee of $2,000 for the renewal period to which $500 per kilometre of pipeline constructed is added;

(2) complied with the Act and its regulations during the previous validity period; and

(3) shows that the holder has gathered or transported petroleum during the last 60 months of the previous validity period.

The renewal application must be sent at least 120 days before the end of the previous validity period failing which the holder is liable to the monetary administrative penalty provided for in paragraph 1 of section 187 of the Act.

DIVISION VIII
REVOCATION AND TRANSFER OF A PIPELINE CONSTRUCTION AND USE AUTHORIZATION

§1. Revocation

156. The holder whose authorization is revoked by the Minister must, within 12 months from the date on which the revocation becomes executory, have carried out the permanent shutdown of the pipeline and the restoration of the site in which it is located.

The holder then sends a report showing the shutdown complies with CSA Standard Z662, Oil and Gas Pipeline Systems, including its appendices, published by the Canadian Standards Association, signed and sealed by an engineer who is not employed by the enterprise carrying out the shutdown.

§2. Transfer

157. The holder who wishes to transfer the pipeline construction or use authorization must not be in default of complying with the obligations incumbent on the holder under of the Act and its regulations.

158. A person may not obtain by transfer a pipeline construction or use authorization, if the person held an authorization that has been revoked in the last 5 years.

159. The transferee must apply to the Minister, in writing, for the transfer.

The application must be accompanied by the documents and information provided for in section 127 and the proof of solvency provided for in section 166.

160. Once the authorization has been transferred, the transferee must notify the owners or the lessees, the municipalities and the regional county municipalities of the transfer according to the conditions set out in section 129, with the necessary modifications.

CHAPTER VIII
NO-FAULT LIABILITY REGIME

DIVISION I
AMOUNT OF THE SOLVENCY REQUIRED FOR THE PURPOSES OF THE NO-FAULT LIABILITY REGIME

§1. Petroleum exploration, production or storage licence

161. The amount up to which the holder of a petroleum exploration, production or storage licence is liable for the purposes of the no-fault liability regime is

(1) 10 million dollars where the territory subject to the licence is situated on land;

(2) 25 million dollars where the territory subject to the licence is situated in a body of water, except a marine environment;

(3) 1 billion dollars where the territory subject to the licence is situated in a lake having an area greater than 1,000 km^2; and

(4) 1 billion dollars where the territory subject to the licence is situated in a marine environment.

Where the territory subject to the licence is situated in more than one environment, the amount up to which the petroleum exploration, production or storage licence holder is liable for the purposes of the no-fault liability regime is determined by the Minister and corresponds to the sum of the amounts payable according to the environments calculated in proportion to the ratio of each with respect to the total territory subject to the licence.

§2. Pipeline construction or use authorization

162. The amount up to which a pipeline construction or use authorization holder is liable for the purposes of the no-fault liability regime, in the case of a pipeline used for gathering and transporting oil is

(1) where it is located on land,

(a) 10 million dollars for a pipeline whose design capacity is less than 5,000 barrels per day;

(b) 25 million dollars for a pipeline whose design capacity is between 5,000 and 14,999 barrels per day;

(c) 50 million dollars for a pipeline whose design capacity is between 15,000 and 29,999 barrels per day;

(d) 200 million for a pipeline whose design capacity is between 30,000 and 49,999 barrels per day;

(e) 300 million for a pipeline whose design capacity is between 50,000 and 250,000 barrels per day; and

(f) 1 billion dollars for a pipeline whose design capacity is greater than 250,000 barrels per day; and

(2) where it is located in a body of water, except a marine environment,

(a) 25 million dollars for a pipeline whose design capacity is less than 5,000 barrels per day;

(b) 40 million de dollars for a pipeline whose design capacity is between 5,000 and 14,999 barrels per day;

(c) 75 million dollars for a pipeline whose design capacity is between 15,000 and 29,999 barrels per day;

(d) 200 million for a pipeline whose design capacity is between 30,000 and 49,999 barrels per day;

(e) 300 million for a pipeline whose design capacity is between 50,000 and 250,000 barrels per day; and

(f) 1 billion dollars for a pipeline whose design capacity is greater than 250,000 barrels per day or where it is located in a lake whose area is greater than 1,000 km^2.

163. The amount up to which a pipeline construction or use authorization holder is liable for the purposes of the no-fault liability regime, in the case of a pipeline used to gather or transport natural gas on land or in a body of water, except a marine environment, is determined according to the coefficient equivalent to multiplication of the squared outside diameter of the pipeline, measured in millimetres, by the maximum operating pressure, measured in MPa.

That amount is

(1) 10 million dollars if the coefficient is less than 150,000;

(2) 25 million dollars if the coefficient is between 150,000 and 499,999;

(3) 50 million dollars if the coefficient is between 500,000 and 1,000,000; and

(4) 200 million dollars if the coefficient is greater than 1 000 000.

However, where a pipeline used for gathering or transporting natural gas is located in a lake whose area is greater than 1,000 km^2, the amount is 1 billion dollars.

164. Where the pipeline is located in more than one environment, the amount up to which the pipeline construction or use authorization holder is liable for the purposes of the no-fault liability regime is determined by the Minister and corresponds to the sum of the amounts payable according to the environments under section 162 and 163, calculated in proportion of the ratio of each with the total length of the pipeline.

165. The authorization holder who modifies the pipeline project so as to cause a revision of the amount payable under sections 162 to 164 must first notify the Minister to that the Minister may determine the new amount up to which the holder is liable for the purposes of the no-fault liability regime.

The holder then provides to the Minister an update of the proof of solvency.

DIVISION II
PROOF OF SOLVENCY

166. For the purpose of demonstrating solvency to the amount provided for in sections 161 to 164, a person who wishes to obtain a licence or a pipeline construction or use authorization or the holder of a licence or of such an authorization must provide the Minister with a statement indicating the person's net assets or financing agreements entered into and demonstrating that the person is able to pay the sum concerned.

The statement must be accompanied and supported by any of the following documents or a combination of them:

(1) the most recent annual financial statement audited by an independent auditor and the last quarterly financial statements and, if the person has received a credit rating from a recognized rating organization and the rating is up to date, a document certifying that the rating is up to date;

(2) bonds issued or guaranteed by Québec or another province of Canada, by Canada or by a municipality in Canada, and having a market value at least equal to the amount provided for in sections 161 to 164. Registered bonds must be submitted with a power of attorney on behalf of the Minister of Finance and, where applicable, with a resolution authorizing the person who signs the power of attorney;

(3) guaranteed investment certificates or term deposit certificates, in Canadian dollars, issued on behalf of the Minister of Finance by a bank, a savings and credit union or a trust company. Such certificates must have a term of at least 12 months, be automatically renewable for the term of the licence or authorization and not include any restriction in respect of redemption during its term;

(4) a promissory note payable on demand to the Minister of Finance, non-negotiable and unconditional, signed and indicating expressly the amount for which it is issued. If the promissory note is issued by a person other than the person wishing to obtain a licence or authorization, the licence or authorization holder, a bank, a savings and credit union or a trust company, it must be accompanied by the financial statements provided for in subparagraph 1 of this paragraph submitted for that person so that the Minister may ascertain the person's solvency to the amount of the promissory note;

(5) an insurance policy issued by an insurer that has received a credit rating equal to or greater than A- from an internationally recognized rating organization covering all the risks provided for in section 128 of the Act, indicating that the insurer waives the subrogation right to the Minister and the policy may be cancelled only following a notice given to the Minister at least 30 days before the cancellation date. The insurance policy must indicate the Minister as additional insured, whose liability is covered for the actions or omissions of the licence or authorization holder;

(6) an escrow agreement to which the Minister is party specifying the amount that must be furnished to the depositary and kept in an account in trust, managed according to the conditions provided for in the agreement and stipulating that the amount is payable within 5 days on request of the Minister to the legal depositary;

(7) a trust constituted in accordance with the Civil Code and meeting the following requirements:

(a) the purpose of the trust is to ensure the reparation for injury provided for in section 128 of the Act;

(b) the Minister of Finance and the licence or authorization holder are joint beneficiaries of the trust;

(c) the trustee is a bank, a savings and credit union or a trust company;

(d) the trust patrimony is comprised only of sums in cash, or of bonds or certificates of the same type as those listed in subparagraphs 2 and 3 of this paragraph;

(8) an irrevocable, non-transferable, unassignable and unconditional letter of credit issued on behalf of the Gouvernement du Québec by a bank, a savings and credit union or a trust company;

(9) a security or a guaranty contract issued on behalf of the Gouvernement du Québec by a legal person legally empowered to act in that capacity.

The financial institutions referred to in subparagraphs 3, 4, 7 and 8 of the second paragraph must be empowered by law to carry on the activities provided for in those subparagraphs.

The guarantees referred to in subparagraphs 2 and 3 of the second paragraph are received on deposit by the Minister of Finance pursuant to the Act respecting deposits with the Bureau général de dépôts pour le Québec (chapter D-5.1).

167. The declaration setting forth the net assets or financing agreements that the holder has entered into provided for in the first paragraph of section 166 must contain, in particular,

(1) the holder's assets and total liability;

(2) a description of the holder's organizational structure and, where applicable, of any affiliated or parent company, including an organization chart showing the relationships between them; and

(3) a summary of how any financial liabilities attributable to the anticipated activities in the territory subject to the licence will be resolved by specifying the means that will be taken to obtain the necessary funds and the time at which the funds will be raised.

168. In the case of a proof of solvency provided under subparagraphs 3 and 7 of the second paragraph of section 166, the contract constituting the proof of solvency must include the following requirements:

(1) the purpose of the contract is to ensure the reparation of injury provided for in section 128 of the Act;

(2) no person may make withdrawals or be reimbursed before the expiry of the licence or the authorization. The prohibition also applies to any form of compensation that may be made by the bank, the savings and credit union, the trust company or the trustee;

(3) where the holder fails to repair the injury caused, the payment is payable at the Minister's request;

(4) the bank, the savings and credit union, the trust company or the trustee provides the Minister with the information it possesses concerning the contract;

(5) in case of dispute, the courts of Québec are the sole competent courts;

(6) in the case of a trust:

(a) the trustee must be domiciled in Québec;

(b) the trustee sees to the management of the trust at the expense of the settlor or of the licence or authorization holder;

(c) the trust terminates when the Minister acts on the condition provided for in subparagraph 3 or when the licence expires.

The licence or authorization holder must submit to the Minister a certified copy of the original contract.

169. The purpose of the irrevocable and unconditional letter of credit provided for in subparagraph 8 of the second paragraph of section 166 is to ensure the reparation of injury provided for in section 128 of the Act. The contract must have a term of at least 12 months and must include clauses providing that

(1) in the case of non-renewal, termination, revocation or cancellation, the guarantor must notify the Minister at least 90 days before the date fixed for the expiry, termination, revocation or cancellation of the guarantee letter;

(2) in the case of non-renewal, termination, revocation or cancellation, the guarantor remains responsible, in case of injury, until the expiry of the licence unless the person concerned has deposited proof of alternative solvency, repair of injury prior to the date of expiry, termination, non-renewal or revocation up to the amount covered by the letter of credit;

(3) the amount is payable within 5 days at the request of the Minister; and

(4) in case of dispute, the courts of Québec are the sole competent courts.

A certified copy of the original must be submitted to the Minister.

170. The purpose of the security and guarantee contract provided for in subparagraph 9 of the second paragraph of section 166 is to ensure the reparation of injury provided for in section 128 of the Act. The contract must have a term of at least 12 months and it must include clauses providing that

(1) in the case of non-renewal, termination, revocation or cancellation, the guarantor must notify the Minister at least 60 days before the date fixed for the expiry, termination, revocation or cancellation of the guarantee;

(2) in the case of non-renewal, termination, revocation or cancellation, the guarantor remains responsible, in case of injury, until the expiry of the licence unless the person concerned has deposited proof of alternative solvency, repair of injury prior to the date of expiry, termination, non-renewal or revocation up to the amount covered by the security or guaranty contract;

(3) if the guarantor is not a bank, savings and credit union or trust company, the security or the guarantee contract must be accompanied by the security guarantor's financial statements provided for in subparagraph 1 of the second paragraph of section 166 so that the Minister may ascertain the solvency of that person to that amount;

(4) where the licence or authorization holder fails to repair the injury caused, the payment of the amount necessary for reparation is payable at the Minister's request; and

(5) in case of dispute, the courts of Québec are the sole competent courts.

The licence or authorization holder must submit to the Minister a certified copy of the original contract.

171. Proof of solvency provided may at all times be replaced by another proof of solvency compliant with the requirements of this Regulation. The licence or authorization holder immediately notifies the Minister and sends to the Minister the new proof of solvency.

172. On the anniversary date of the licence or the authorization, the holder provides to the Minister an update of the proof of solvency.

CHAPTER IV
PUBLICATION OF RIGHTS

173. In addition to the rights, acts and documents provided for in section 150 of the Act, the following acts and documents must be registered in the public register of real and immovable petroleum rights:

(1) the renewal, suspension, revocation or expiry of a pipeline construction or use authorization;

(2) the reports required under sections 62, 64, 65, 67 and 71 of the Act.

The following documents mays also be registered in the register:

(1) inspection reports produced by the Minister;

(2) non-compliance notices produced by the Minister;

(3) agreements on the impacts and benefits.

The documents are registered in the public register on presentation of a copy.

174. The fees payable for the public register are

(1) $155 for the entry of a right, act or other document provided for or determined pursuant to section 150 of the Act;

(2) $58.86 per hour, for a minimum of 30 minutes, for the search of a registered right, act or document;

(3) $108, as management costs, for obtaining a copy of a right, act or other document that is available and may be downloaded free of charge from the register;

(4) $0.27 per page for obtaining a copy;

(5) $26.75 for issuing a certificate of entry of a registered right, act or document; and

(6) $21.60 for sending by mail a copy or a certificate of entry.

Consultation of the register online is free.

CHAPTER X
FEE PAYABLE FOR A NOTICE OF NON-COMPLIANCE, MONETARY ADMINISTRATIVE PENALTIES AND OFFENCE

DIVISION I
FEE PAYABLE FOR A NOTICE OF NON-COMPLIANCE

175. The fee payable by person to whom an inspector submitted a notice of non-compliance with the provisions of the Act or this Regulation is $500.

DIVISION II
MONETARY ADMINISTRATIVE PENALTIES

176. A monetary administrative penalty of the amount provided for in section 187 of the Act may be imposed on any person who contravenes any of sections 3 to 6, 9, 10,

the second paragraph of section 11, the second paragraph of section 12, the second paragraph of section 13, the first paragraph of section 15, the first paragraphs of section 16, the second paragraph of section 41, sections 63, 67, 76, 90, 94, 97, 107, 109, 116, 117, 121, 125, 129, 130, the first paragraph of section 131, sections 132, 135, 144, 146, 149 to 151, the first paragraph of section 152 and sections 153 and160.

177. A monetary administrative penalty of the amount provided for in section 188 of the Act may be imposed on any person who contravenes any of sections 95, 96, 128, 133, 136, 137, paragraphs 2 and 3 of section 138, sections 139, 142, 143, 145, 165, 171 and 172.

178. A monetary administrative penalty of the amount provided for in section 189 of the Act may be imposed on any person who contravenes any provisions of sections 111, 140, 141, 147, 148 and 156.

DIVISION III
OFFENCE

179. Every person who contravenes any provisions of this Regulation commits an offence and is liable to the fine provided for in paragraph 2 of section 199 of the Act.

CHAPTER XI
TRANSITIONAL AND FINAL

DIVISION I
TRANSITIONAL PROVISIONS MADE UNDER SECTION 287 OF THE ACT

180. A site of a significant find and a discovery of a deposit within the meaning of the Mining Act (chapter M-13.1) recognized by the Minister before (*insert the date of coming into force of this section*) are deemed to be respectively a significant discovery and a commercial discovery within the meaning of the Act.

The holder of an exploration licence who has declared such discoveries before (*insert the date of coming into force of this section*) must have them registered in the public register of real and immovable petroleum rights before the next application for renewal of the licence.

181. A holder of an exploration, production or storage licence referred to in any of sections 269 to 271 of the Act must, within 12 months after (*insert the date of coming into force of this section*), provide to the Minister the proof of solvency provided for in section 166.

The liability insurance policy in the amount of $1,000,000, a copy of which certified by the police has been submitted to the Minister under section 17 of the Regulation respecting petroleum, natural gas and underground reservoirs (chapter M-13.1, r.1), must remain valid until the holder provides the proof of solvency to the Minister.

182. The second paragraph of section 11 of the Act does not apply to a territory subject to a storage licence provided for in section 271 of the Act.

183. Every person who, on (*insert the date of coming into force of this section*), uses a pipeline must provide the Minister with the documents and information provided for in the first paragraph of section 127 and pay the fee of $10,000 to which is added $1,000 per kilometre of pipeline built, not later than 180 days following (*insert the date of coming into force of this section*).

The Minister then grants the person a pipeline construction or use authorization.

184. Every person who, on (*insert the date of coming into force of this section*), is responsible for a pipeline that is not used must so notify the Minister within 180 days following (*insert the date of coming into force of this section*).

The notice must contain the name and contact information of the person responsible and be accompanied by a map at a scale of 1:10,000 showing the installations and the route of the pipeline and all its elements.

185. Fees and rents collected since 1 April 2017 for an exploration licence for petroleum, natural gas and an underground reservoir, a lease to produce petroleum and natural gas and a lease to operate underground reservoirs under the Mining Act will be transferred to the Energy Transition Fund established under section 17.12.21 of the Act respecting the Ministère des Ressources naturelles et de la Faune (chapter M-25.2).

DIVISION II
FINAL

186. This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

103137

Draft Regulation

Petroleum Resources Act
(2016, chapter 35)

Petroleum exploration, production and storage on land
— Making

Notice is hereby given, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), that the Regulation respecting petroleum exploration, production and storage on land, appearing below, may be made by the Government on the expiry of 45 days following this publication.

The draft Regulation sets the conditions for the granting and exercise of the authorizations required for petroleum exploration, production and storage on land, and sets the fees payable. The draft Regulation also determines the protective and safety measures that must be implemented. In addition, it establishes the content of the permanent well or reservoir closure and site restoration plan, the time at which the work planned in the plan must be carried out, and the duration, form and terms of the related guarantee. Lastly, it provides for conditions for the granting and exercise specific to the authorization to produce brine.

Study of the matter shows that the draft Regulation will have an impact on enterprises currently holding rights to explore for and produce petroleum and gas or operate an underground reservoir that will have to obtain authorizations to carry out certain activities that were not regulated, in particular the carrying out of stratigraphic surveys, fracturing and reconditioning. The enterprises will also have to furnish a guarantee representing the totality of the costs for well or reservoir closure and site restoration. They will have to contend with greater accountability, in particular in respect of the information sent to the Minister of Energy and Natural Resources. The additional requirements may impose, in certain cases, a significant burden.

Further information on the draft Regulation may be obtained by contacting Marie-Eve Bergeron, Director, Bureau des hydrocarbures, Ministère de l'Énergie et des Ressources naturelles, 5700, 4e Avenue Ouest, bureau A-422, Québec (Québec) G1H 6R1; telephone: 418 627 -6385, extension 8131; toll free: 1 800 363 -7233, extension 8131; fax: 418 644 -1445; email: marie-eve.bergeron@mern.gouv.qc.ca

Any person wishing to comment on the draft Regulation is requested to submit written comments within the 45-day period to Luce Asselin, Associate Deputy Minister for Energy and Mines, Ministère de l'Énergie et des Ressources naturelles, 5700, 4e Avenue Ouest, bureau A-407, Québec (Québec) G1H 6R1.

PIERRE ARCAND,
Minister of Energy and
Natural Resources and
Minister responsible for the Plan Nord

Regulation respecting petroleum exploration, production and storage on land

Petroleum Resources Act

(2016, chapter 35, s. 23; ss. 10, 26, 68 to 70, 71, 2nd par., 73, 1st and 2nd pars., 76, 1st and 2nd pars., 78, 1st and 2nd pars, 80, 84, 2nd par., 85, 88, 90, 2nd par., 91, 92, 3rd par., 93, 95, 96, 100, 2nd par., 102, 103, 2nd par., 117, 118, 2nd par., 119, 1st par., 121, 1st par., 122, 2nd and 4th pars., 123, 124, 126, 2nd par., 128, 1st and 3rd pars., 131, 1st par., 191, 207, pars.1 to 3 and 5)

CHAPTER I
GENERAL

1. This Regulation establishes the conditions of exercise of the petroleum exploration, production and storage activities, while ensuring the safety of persons and property, environmental protection, and optimal recovery of the resource.

It applies to activities carried out on land.

2. In this Regulation,

"activity site" means a zone grouping one or more drill holes and the land laid out in the immediate vicinity to receive the equipment and infrastructures necessary for the operations carried out in the drill holes or, in the case of a survey, the zone corresponding to the perimeter of the area of the survey; (*site des activités*)

"actual vertical depth" means the vertical distance from a point in the drill hole to a point on the surface; (*profondeur verticale réelle*)

"annular space" means a space in the shape of a ring between the outside of a casing and the wall of the drill hole or between two casing walls inserted one inside the other; (*espace annulaire*)

"blowout preventer" means all the special valves or other similar mechanical devices, installed between the wellhead and the drill floor, and intended to block, control and monitor the drill hole in the event of a blowout; (*bloc obturateur de puits*)

"casing shoe" means a metal annular part installed at the bottom of a casing string; (*sabot de tubage*)

"casing string" means the entire casing of a drill hole composed of a number of tubing sections generally linked by threaded connections; (*colonne de tubage*)

"completion" means all the work carried out in a well or a section of well to allow its start up once the drilling activities are completed, excluding fracturing; (*complétion*)

"concentration of residential, commercial, industrial or service activities" means the grouping of 5 lots or more on which one or more residential, permanent or seasonal, commercial, industrial or service activities are present, and a lot including 5 residential buildings or more; (*concentration d'activités résidentielles, commerciales, industrielles or de services*)

"conductor casing" means the first casing installed at the time of the construction of a drill hole to prevent the collapse of unconsolidated formations near the surface and to provide structural support for the wellhead equipment and for the subsequent casing strings; (*tubage conducteur*)

"deflector" means a sealing and collection device comprising pipes and valves, placed near the wellhead and used to control a shallow blowout and keep the fluids away from the drill hole; (*déflecteur*)

"directional drilling" means a hole drilled at an angle greater than 10° from vertical; (*forage directionnel*)

"drill hole" means a well or a stratigraphic survey; (*trou de forage*)

"drilling fluid" means the sludge circulating in the drill rod and comes up in the annular space during drilling to remove cuttings, cool and lubricate the bit and maintain the desired pressure in the drill hole; (*fluide de forage*)

"drilling rig" means the equipment used to drill a well which includes in particular a derrick, a winch, a rotary table, a drilling fluid pump, a blowout prevention system, and power, control and monitoring systems; (*appareil de forage*)

"drill-stem test" means an operation for collecting samples of fluids contained in rock to determine flow characteristics and measure reservoir pressures, without modifying the drill hole equipment; (*essai aux tiges*)

"emanation at the surface casing blowhole" means the flow of fluids from the annular space between the surface casing and the internal casing; (*émanation à l'évent du tubage de surface*)

"flow-back water" means water produced by petroleum exploration and production activities that comes up to the surface of the drill hole; (*eau de reflux*)

"flushing fluid" means fluid designed to clean the drill hole and separate the drilling fluids from the cement flurry; (*fluide de chasse*)

"formation fluid" means a fluid in a natural state or injected present in the pores, fractures, faults, caves or other porosities of the formation; (*fluide de formation*)

"fracturing half-length" means the radial distance separating the well from the outside end of a fracture propagated by fracturing; (*demi-longueur de fracture*)

"fracturing test" means a geomechanical survey carried out before the fracturing that allows to anticipate the length of fractures, the reaction of geological units to fracturing and the geological confinement potential of the fracturing fluids by the sealing rock, and to find out at which pressure the rock starts fracturing; (*essai de fracturation*)

"gas migration" means the gas flow detectable on the surface, outside the farthest casing string; (*migration de gaz*)

"guide tube" means a light tube used to prevent the collapse or washout of soft ground near the surface of a drill hole, but is not used to control the well; (*tube guide*)

"horizontal well" means a well whose drill hole angle, from vertical, exceeds 80° and includes a section extended from the drill hole in the reservoir; (*puits horizontal*)

"injection well" means a well used to inject fluids into an underground formation to improve the recovery of the petroleum; (*puits d'injection*)

"injectivity test" means a procedure to determine the rate and pressure at which fluids may be pumped to obtain the permeability of a zone without fracturing the formation; (*essai d'injectivité*)

"integrity" means, in the case of a drill hole, the condition that ensures containment and prevention of a blowout of fluids in the underground or surface formations; (*intégrité*)

"intermediate casing" means a casing installed before reaching the final depth of the drill hole to isolate unstable hole sections, lost circulation zones, overpressured or underpressured zones or production zones; (*tubage intermédiaire*)

"measured depth" means the length of travel of the drill hole; (*profondeur mesurée*)

"miss-fire" means any portion or remainder of a hole containing explosives that have not completely detonated following blasting operations; (*raté*)

"observation well" means a well used to monitor the conditions of one or more geological formations, to determine the decline characteristics of a reservoir or to monitor the other wells of a reservoir, except an observation well for groundwater within the meaning of the Water Withdrawal and Protection Regulation; (*puits d'observation*)

"primary protective barrier" means the first protective barrier of a well constituted of one or more components that, collectively, are designed and installed to contain and isolate fluids inside a well; (*barrière de protection primaire*);

"production casing" means a casing installed to isolate the production zones and provide a duct through which the well is completed and operated; (*tubage de production*)

"production tubing" means a steel tube placed inside casings used as a duct through which fluids are routed from the production zones to the surface or, in the case of an injection well, from the surface to the production zones; (*tube de production*)

"re-entry" means the new drilling in a well already drilled and for which the drilling rig has been released; (*réentrée*);

"seal" means an inflatable device used to close a drill hole or an annular space; (*garniture d'étanchéité*)

"secondary protective barrier" means a second protective barrier designed and installed to ensure a protection and allow control of the well in the event of a mechanical failure of the primary protective barrier; (*barrière de protection secondaire*)

"spacer fluid" means any liquid used to physically separate a liquid or a specific use component from another; (*fluide de séparation*)

"surface casing" means a steel casing in a competent formation after the installation of the conductor casing to prevent the walls from collapsing and protect against underground water contamination; (*tubage de surface*)

"surface improvement work for sporting or recreational purposes" means a bicycle or cross-country ski trail, a snowmobile trail, a downhill skiing centre, a golf course, a baseball or soccer field, or any other facility of that type intended for sporting or recreational purposes; (*ouvrage d'amélioration de la surface à des fins sportives ou récréatives*)

"temporary interruption" means the interruption of work for a short period between 2 activities or 2 operations; (*interruption provisoire*)

"usable groundwater" means groundwater whose total concentration in dissolved solids is less than 4,000 mg / l; (*eau souterraine exploitable*)

"well logging" means measurement or recording based on the depth of a characteristic of a geological formation carried out from a drill hole; (*diagraphie*)

"wellhead" means a device installed between the top part of the surface casing and the blowout preventer during the construction phase of the drill hole; it also includes the coil, valve and adaptor system that controls the pressure in a drill hole; (*tête de puits*)

"wellhead value" means the average retail sale price of the substance extracted, excluding all taxes and less the average transportation costs from the well to the places of delivery, measuring costs and, if applicable, purification costs. (*valeur au puits*)

3. For the purposes of this Regulation, the base of the usable groundwater is set at 200 m below the surface, unless a hydrogeological study or an analysis of an adjacent drill hole shows that the deepest base of the aquifer of the usable groundwater is located at a different depth.

4. All documents that must be sent to the Minister under this Regulation must also be sent in an electronic version, in PDF, excluding well logging raw data that must be in ASCII files. The maps produced by a geoscience information system software must be sent in a shapefile or in PDF.

5. The measurement units in the documents required under this Regulation must be expressed according to the International System (SI).

CHAPTER II
SAFETY AND PROTECTIVE MEASURES AND INCIDENT NOTICE

DIVISION I
SAFETY AND PROTECTIVE MEASURES

6. A licence holder ensures that there is a sufficient number of qualified persons and that the persons have received the training needed to successfully complete the activities planned safely and in a manner to protect the environment.

7. A licence holder must ensure that the equipment and components on the activity site are

(1) in good condition and used for the purposes specified, in accordance with the requirements of the manufacturer;

(2) free from any alteration that may endanger the safety of persons and property, and environmental protection; and

(3) entered in a list that is updated and kept on the activity site.

8. A licence holder must ensure that the equipment, vehicles and machinery are cleaned before their mobilization on the activity site.

9. A licence holder must ensure that adequate procedures and equipment are in place to

(1) verify and control the pressures to which the equipment is submitted during the activities;

(2) detect a liquid flow, or a gas emanation or migration; and

(3) control at all times a drill hole.

10. In the case of a loss of control of a drill hole, a licence holder must close the valves of all other drill holes of the activity site until the drill hole is again under control.

11. A licence holder must install a communication and information exchange system that ensures,

(1) during a change of shift, the transmission of any information pertaining to the conditions and mechanical or operational problems likely to have an impact on the safety of persons and property, and environmental protection;

(2) that every person on the activity site is familiar with the safety instructions and evacuation procedures in an emergency; and

(3) that every person responsible for a measure under the emergency response plan provided for in subparagraph 4 of the second paragraph of section 25 is familiar with the system.

12. A licence holder must ensure that the fuel, chemical substances related to safety, drilling fluids, cement and other consumables necessary for carrying out the activities under way are easily accessible and stored on the activity site in a quantity sufficient to meet the needs of any emergency situation normally foreseeable.

The licence holder must also ensure that the products used for all work, including explosives, fuel, chemical substances and drilling fluids are stored, handled and transported so as to prevent their deterioration and to ensure the safety of persons and property, and environmental protection.

13. A licence holder must also ensure that the residual materials from the activities are stored, handled, transported, treated and disposed of so as to ensure the safety of persons and property, and environmental protection.

The licence holder also ensures that the activities are carried out so as to reduce to a minimum the production of residual materials.

14. A licence holder must, for the activities following the cementing of the surface casing, use a biocide treatment on the fluids injected in a drill hole to reduce the action of microorganisms and prevent corrosion by hydrogen sulfide (H_2S).

The Minister may exempt the holder from that requirement if the holder demonstrates that there is no risk of bacterial corrosion.

15. Smoking is prohibited on the activity site, except in locations designated for that purpose by a licence holder.

16. A licence holder must ensure that the activity site and access roads are kept in good condition and that no danger results from the layout of the equipment and installations.

The activity site must also be laid out and maintained so that it is accessible at all times to the emergency teams.

17. A licence holder must secure the drill hole and the activity site during a temporary interruption of activities in order to ensure the safety of persons and property, and environmental protection.

During the temporary interruption, the holder must use a wellhead that must be closed, unless the drill hole is cased over its entire length and has not been perforated.

18. Where a well poses a risk for the safety of persons and property, and environmental protection, a licence holder must carry out corrective activities in compliance with Chapter X.

A well is considered to pose a risk if any of the following situations is detected:

(1) there is an emanation at the surface casing blowhole and that emanation has one of the following characteristics:

(a) its stabilized flow is equal to or greater than 50 m^3 / day;

(b) the emanation is not only composed of gas;

(c) it contains hydrogen sulfide (H_2S) whose concentration is equal to or greater than 6 $\mu g/m^3$ for 4 minutes;

(d) it is produced by a failure of a seal or casing;

(2) the stabilized closing pressure at the wellhead is equal to or greater than half the fracturing pressure measured at the elevation of the surface casing shoe or, if that elevation is unknown, at 11 kPa/m multiplied by the actual vertical depth of the surface casing.

(3) there is a gas migration that represents a fire hazard or a risk to the safety of persons and property, and environmental protection.

19. Where a licence holder uses a wellhead, that wellhead must comply with CSA Standard Z625, Well design for petroleum and natural gas industry systems, except a storage wellhead that must comply with CSA Standard Z341, Storage of hydrocarbons in underground formations, published by the Canadian Standards Association.

DIVISION II
INCIDENT NOTICE

20. A licence holder must immediately notify the Minister where any of the following incidents occurs:

(1) damage to the integrity of a drill hole;

(2) a casing corrosion problem;

(3) an unexpected loss of pressure in a drill hole;

(4) the detection of hydrogen sulfide (H_2S);

(5) an accidental blowout or emission;

(6) liquid flow;

(7) the detection of any of the situations provided for in the second paragraph of section 18;

(8) a fire or an explosion;

(9) an accidental spill;

(10) vandalism;

(11) the triggering of the emergency response plan provided for in subparagraph 4 of the second paragraph of section 25;

(12) damage to private property;

(13) ground movement;

(14) any other event likely to have an impact on the safety of persons and property, or environmental protection.

The notice must contain the corrective measures taken by the holder or those planned with their schedule.

In the case of a corrosion problem, the holder must inform the Minister of the type of corrosion, the depth interval and the cause.

In the case of a blowout, the holder must inform the Minister of the depth, volume, duration and density of the drilling fluid necessary to control the drill hole.

In the case of damage to private property, the licence holder must also notify the owner.

21. After having received an incident notice under section 20, the Minister may require that the licence holder send to the Minister an event report stating the facts, evaluating the consequences, listing possible causes and proposing mitigation measures and measures to prevent reoccurrence of the event.

CHAPTER III

PROVISIONS SPECIFIC TO ACTIVITY AUTHORIZATIONS AND APPROVALS

22. A licence holder must ensure that all depth measurements are taken from a single reference point. The holder must always indicate the reference point from which those measurements are taken.

23. A licence holder applying for an authorization or an approval for an activity must, in the application submitted to the Minister, demonstrate that the planned work will be carried out according to generally recognized best practices to ensure the safety of persons and property, environmental protection and the optimal recovery of the resource.

24. A licence holder must keep a copy of authorizations and approvals on the activity site for the work period.

25. The application for authorization or approval of an activity, except the authorization for geochemical surveying and the approval of the enhanced petroleum recovery project, must be accompanied by a safety and community involvement program detailing elements likely to have an impact on the safety of persons and property.

The safety and community involvement program must include, in particular,

(1) a plan at a scale of 1:500 showing the layout of the activity site, including, in particular,

(a) the dimensions of the site;

(b) access roads;

(c) the actual or proposed location of the collar of the drill hole covered by the authorization or approval application; and

(d) existing or proposed storage equipment, installations, infrastructures and basins;

(2) a description of the mitigation measures anticipated to harmonize the use of the territory and minimize disruptions for the local communities;

(3) an emergency response plan compliant with CSA Standard Z731, Emergency Preparedness and Response, published by the Canadian Standards Association;

(4) a plan for communication with the local communities revised by the monitoring committee;

(5) an estimate of the economic benefits for the region; and

(6) any other information or document requested by the Minister.

For the application for a geophysical surveying authorization, the safety and community involvement program must also include a schedule of the road traffic, indicating the volume of trucking and the period during which it will take place and a map showing routes. However, it does not have to include the elements provided for in subparagraphs 1 and 3 of the second paragraph.

CHAPTER IV
MEASUREMENT

26. A licence holder ensures that the rate of flow and the volume of the following fluids are measured:

(1) the fluid extracted from a well;

(2) the fluid injected into and withdrawn from a well;

(3) the fluid that enters, leaves, is used or is flared, vented, burned or disposed of in an installation.

The measurements recorded must be expressed at a temperature of 15° C and a pressure of 101.325 kPa.

27. A licence holder ensures that the measurements are taken in accordance with the flow system, flow calculation procedure and flow allocation procedure.

The term “flow system” means the flow meters and auxiliary equipment attached to the flow meters, fluid sampling devices, production test equipment, the master meter and meter prover used to measure and record the rate and volumes at which fluids are

(1) produced from a pool or withdrawn from an underground reservoir;

(2) injected into a pool or stored in an underground reservoir;

(3) used as a fuel;

(4) used for artificial lift; or

(5) flared or transferred from an installation.

28. A licence holder must notify the Minister at least 15 days before the calibration of a meter prover or a master meter.

A copy of the calibration certificate is sent to the Minister within 7 days following the calibration.

29. A licence holder who mixes fluids from a well or a group of wells must, 30 days before measuring the production flow of the pool, notify the Minister of the method, the frequency and the duration of the measurements, indicating the manner in which the total production of each of the mixed fluids will be allocated to each of the wells.

30. Where a well goes through a number of pools or formations, a licence holder ensures that the production of each pool or formation is allocated and the injection into each pool and each formation is allocated.

CHAPTER V
GEOPHYSICAL OR GEOCHEMICAL SURVEYING AUTHORIZATION

DIVISION I
AUTHORISATION FOR GEOPHYSICAL SURVEYING

§1. Conditions for obtaining an authorization

31. A licence holder who wishes to obtain a geophysical surveying authorization must apply to the Minister, in writing, at least 30 days before starting the work.

If the surveying involves line cutting, the application must be submitted to the Minister at least 60 days before starting the work.

32. The application must contain

(1) the name and contact information of the holder and the licence number; and

(2) the work schedule and an estimate of the realization costs.

33. The application must be accompanied by

(1) the demonstration that the separation distances provided for in section 40 are complied with;

(2) a topographic map at a sufficient scale showing, in particular,

(a) the perimeter of the licence;

(b) the territories of the municipalities in which surveying is conducted;

(c) the roads comprised in the perimeter of the licence;

(d) the activity site and the survey lines, and the traverses with their nature, numbering and length;

(e) the points of energy source and their numbering;

(f) public and private land;

(g) if applicable, the existing line cutting up to 400 m from the activity site;

(h) if applicable, the campsite or the helicopter platform; and

(i) in the case of an aerial survey, the flight plan;

(3) the geophysical surveying technical program provided for in section 33 signed and sealed by a geologist or an engineer;

(4) payment of the fee of $1,030; and

(5) any other information or document requested by the Minister.

If required and based on the area of the surveying, the licence holder may, for the purposes of subparagraph 2 of the first paragraph, submit a number of maps at different scales.

34. The geophysical surveying technical program must include

(1) the name and contact information of the geologist or the engineer responsible for the program;

(2) the name, profession and functions of the persons who prepared or revised the program;

(3) the name and contact information of the enterprises charged with carrying out the data acquisition, processing and interpretation work;

(4) the name of the region in which the surveying will be conducted;

(5) a description of the geological context and the degree of maturity of the exploration in the territory concerned;

(6) the type of the proposed surveying and the energy source used;

(7) the objectives of the surveying including, in particular, the acquisition parameters, the structures, the geological formations targeted and the investigation depth;

(8) the area covered by the surveying or the total number of linear kilometres to be surveyed;

(9) the coordinates of the ends of each survey line or the activity site according to the NAD83 map reference system;

(10) the required flexibility margin on either side of the survey line for positioning the lines indicated on the map;

(11) the method used to determine the location of the lines;

(12) a chronological and detailed description of the work to be carried out;

(13) the time at which the work will be carried out;

(14) a description of the equipment to be used;

(15) in the case of a surveying involving an explosive energy source,

(a) a description of the training or certificates of the workers who will load explosives in the shot holes and fire them; and

(b) the type of explosive substance and the charge, in kilograms, to be detonated; and

(16) in the case of a surveying involving the drilling of a shot hole, the depth and method of sealing the hole.

§2. Time periods and notice of the start of the work

35. The authorization holder must, within 12 months after the Minister granted the authorization, start the geophysical surveying work.

The work is deemed to have started as soon as the first step provided in the work schedule is initiated.

The Minister may grant an additional time period for carrying out the surveying if the holder demonstrates the need therefor.

36. The authorization holder must, at least 7 days before the start of the work, notify the Minister of the date anticipated for the start of the work.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

37. The authorization holder must, at least 24 hours before, notify the Minister of the work completion date if the geophysical surveying work is completed or temporarily interrupted, and in the latter case, the holder must also notify the Minister of the work resumption date.

§3. Conditions of exercise

38. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by a geologist or an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

A supplementary agreement to the technical program is not required in the following cases:

(1) a change in the position of survey lines, as long as the position remains within the flexibility margin set under paragraph 10 of section 34;

(2) the cancellation of the drilling or loading of a shot hole.

In the situations provided for in the third paragraph, the holder immediately notifies the Minister of the change to the technical program.

39. The authorization holder must, during the work, install a sign on each mobile equipment, excluding aircrafts, indicating

(1) the holder's name and the licence number;

(2) the number of the geophysical surveying authorization; and

(3) the type of surveying carried out.

40. The authorization holder who uses an explosive energy source must not position the shot holes in the right of way of a public highway within the meaning of the Highway Safety Code (chapter C-24.2), a multi-purpose road within the meaning of the Sustainable Forest Development Act (chapter A-18.1), a mining road within the meaning of the Mining Act (chapter M-13.1) and a road within the meaning of section 138 of the Petroleum Resources Act (2016, chapter 35, s. 23). The holder must also not position them

(1) less than 10 m from a survey marker or a pipe that is not made of concrete;

(2) less than 15 m from a buried telecommunication infrastructure or any other buried installation or infrastructure of the same type or a wastewater treatment system and a holding tank;

(3) less than 30 m from a railway;

(4) less than 32 m from a pipeline or another installation or infrastructure of the same type, the collar of an existing drill hole or, if the charge exceeds 2 kg, less than a distance corresponding to the following formula:

A + B × 4 = C where

A is 32 m

B is the explosive charge, in kg

C is the minimum separation distance;

(5) less than 100 m from a cemetery;

(6) less than 180 m from a building with a concrete foundation or a concrete pipe if the explosive charge does not exceed 12 kg;

(7) less than 180 m from a high-capacity dam, within the meaning of the Dam Safety Act (chapter S-3.1.01);

(8) less than 200 m from a site for withdrawing water for the purposes of human consumption or food processing or from a transmission line having a voltage equal to or greater than 69,000 V; or

(9) less than 200 m from a building with a concrete foundation or a concrete pipe, if the explosive charge exceeds 12 kg.

The authorization holder who uses a non-explosive energy source at the surface must not position the energy source

(1) less than 2 m from a buried telecommunication infrastructure or any other buried installation or infrastructure of the same type;

(2) less than 10 m from a survey marker or a pipe that is not made of concrete;

(3) less than 15 m from a pipeline or other installation or infrastructure of the same type, the collar of an existing drill hole, a wastewater treatment system and a holding tank or a railway;

(4) less than 50 m from a cemetery, a building with a concrete foundation, a concrete pipe or a high-capacity dam within the meaning of the Dam Safety Act; or

(5) less than 200 m from a transmission line having a voltage equal to or greater than 69,000 V.

The distances must be measured horizontally, in a straight line, from each energy source to the nearest point of the elements referred to in the first and second paragraphs.

If the individual points of the energy source cannot be located precisely, the minimum distances must be measured from the survey line to the nearest point of the elements referred to in the first and second paragraphs.

The Minister may allow the reduction of the distances if the authorization holder demonstrates to the Minister that an effective protective measure reduces risks.

41. An authorization holder must not drill a shot hole at a depth greater than 12 m.

The holder must not use an explosive charge greater than 20 kg in a shot hole.

42. Where a surveying requires drilling, the authorization holder must protect usable groundwater and use non-toxic substances when drilling and sealing shot holes.

43. Where a surveying involves an explosive energy source, the authorization holder keeps and maintains, until the end of the blasting operations, a register of all the numbers of the holes drilled and of those loaded with explosives.

44. The authorization holder must ensure that a hole loaded with explosives is monitored until

(1) the collar is packed with drill cuttings, bentonite or an equivalent material;

(2) a survey post marking the location and indicating the surveying authorization number is installed;

(3) the wire connected to the explosive charge is solidly attached on the surface and the excess wire is rolled around the survey post; and

(4) the remaining drill cuttings are levelled uniformly around the shot hole.

45. The authorization holder must comply with the following firing procedure:

(1) before proceeding with the firing, the person responsible for the blasting must ensure that the persons present have taken shelter;

(2) the following sound signals must be emitted with a siren of at least 120 decibels:

(a) immediately before blasting, 12 short horn signals at one-second intervals;

(b) 30 seconds must elapse between the last warning signal and the time of firing;

(c) after blasting, once the blasting area is safe, one continuous 15-second horn signal must announce that work may be resumed in the area;

(3) the person responsible for the blasting must make sure that workers take shelter outside the blasting area before the first signal and that they remain there until the 15-second signal is sounded;

(4) a code of sound signals reserved for blasting operations must be written in coloured letters 150 mm high, against a contrasting background, on a board 1.2 m high by 2.4 m wide, placed at all points of access to the blasting site.

46. Any explosive charge that misfired must not be extracted, but must be blasted again during the same work shift.

During the repriming or refiring, the authorization holder must make sure that

(1) the untamping of the collar is done by the person who loaded and fired the shot hole, unless the person is unable to do so;

(2) during all untamping, repriming and firing operations, only the person responsible for the operations is present in the blasting area; and

(3) the material used for untamping and the shot hole and inserted in it is made of non-ferrous materials.

If dynamite has been used as explosive charge, it is prohibited to untamp a shot hole unless a tamping plug is placed between the explosive charge and tamping at the time the shot hole is loaded. The tamping plug must consist of paper or any other solid non-ferrous material, have a thickness of 100 mm, brightly-coloured and contrasting with the colour of the packaging of the explosive and the tamping used. During untamping of a shot hole, the tamping plug and the explosives must not have been subjected to stress or shock. When the tamping plug is reached, untamping must be stopped; a primer must then be placed on the contact of the tamping plug and the hole must be restemmed.

If the repriming or refiring operation is impossible, the explosives that are not dynamite must be extracted in accordance with a procedure drawn up by an engineer, taking into account the types of explosives and the manufacturer’s instructions and the physical environmental conditions. The procedure must be kept at all times on the activity site.

47. Where, during drilling or the blasting of a shot hole, groundwater flows to the surface or where the presence of gas is detected, the authorization holder must

(1) interrupt the work in progress;

(2) make sure that no explosive charge is placed in adjacent shot holes; and

(3) seal the shot hole so that the fluid is confined in its initial zone.

The holder must obtained the Minister's authorization to continue drilling work. The holder must move or reduce the depth of the drilling of adjacent shot holes to prevent new groundwater flows to the surface or another detection of gas.

48. In the case of surveying involving an explosive energy source, the authorization holder must, immediately after the firing,

(1) cut the excess of the wire connected to the charge detonated at ground level or in the shot hole;

(2) seal the shot hole by tamping, up to the surface, at least 1 m of drill cuttings or equivalent material; and

(3) level the remaining drill cuttings around the shot hole.

If the ground around the shot hole collapsed, the holder must put the site back to its initial level. The backfill material must be of the same type as the soil.

49. The authorization holder must collect all residual materials, facilities and equipment, and restore the activity site as soon as the work ends or as soon as the meteorological conditions allow.

§4. Daily report and completion report

50. The authorization holder must draw up a daily report of the work and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day, in particular,

(1) the number of the geophysical surveying authorization;

(2) the type of surveying carried out and the energy source used;

(3) a description, in chronological order, of the work carried out and the time required to carry out each step of the work;

(4) the number of the lines or traverses in which the data was acquired;

(5) the number of linear kilometres acquired or the area covered, their total and the remaining quantity;

(6) work interruptions and disturbances due, in particular, to meteorological conditions and technical and operational difficulties, and their duration;

(7) the operational problems encountered and the corrective measures taken or planned; and

(8) any other information or document deemed necessary by the Minister.

51. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the work. If the Monday is a holiday, the report is sent on the first working day that follows.

52. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, a completion report signed by a geologist or an engineer including, in particular,

(1) the number of the geophysical surveying authorization;

(2) the name and contact information of the holder and the licence number;

(3) the name and contact information of the geologist or engineer responsible for the technical program;

(4) the name of the enterprises that took part in the work and the nature of the work;

(5) the number of employees who took part in the work and their positions;

(6) the name of the region in which the surveying was carried out;

(7) the type of surveying carried out and the energy source used;

(8) the purposes of the surveying including, in particular, the acquisition parameters, structures, geological formations targeted, the type of play and the investigation depth;

(9) the total number of linear kilometres acquired or the area covered by the surveying;

(10) the start and end dates of the work;

(11) the summary of the work carried out in chronological order;

(12) a compilation of the daily progress of the work;

(13) a topographic map at a sufficient scale showing

(a) the perimeter of the licence;

(b) the activity site, survey lines and traverses with their nature, numbering and length;

(c) the points of energy source and their numbering; and

(d) the roads included in the perimeter of the licence;

(14) a description of the data acquisition parameters indicating, in particular,

(a) the spacing between the points of the energy source, the receiver points and, if applicable, between the survey lines;

(b) the characteristics of the energy source used; and

(c) the setting of the recording filters;

(15) a description of the data processing parameters;

(16) the adjustments made to the data during the interpretation;

(17) the following interpretation maps:

(a) in the case of seismic reflection surveying, the isochrone time structure map of the main target and, if applicable, the secondary target and the interpreted profiles; if the stratigraphy of an adjacent drill hole is known, the holder must carry out the blocking of the seismic profile nearest to the hole and indicate the correlation between the main reflectors and the stratigraphy;

(b) in the case of seismic refraction surveying, the velocity map;

(c) in the case of magnetic surveying, the map for the total magnetic field corrected and offset and the map for the residual magnetic field corrected and offset;

(d) in the case of gravimetric surveying, the maps of Bouguer anomalies and of the residual field;

(e) in the case of spectrometric surveying, a map of the natural petroleum spill areas on the surface and, if applicable, a map of the anomalies in potassium, uranium and thorium;

(f) in the case of electrical resistivity surveying, a map or a profile of the apparent resistivity including, if applicable, faults, the depth of zones and their thickness;

(18) an analysis of each of the interpretation maps specifying the correlation between the geology and the geophysical data;

(19) if applicable, the technical reports drawn up by the enterprises that carried out the data processing or interpretation;

(20) a comparative analysis of the work carried out compared with that planned in the technical program and the results obtained compared with those anticipated;

(21) a description and photographs of the equipment used and their specifications;

(22) in the case of a surveying involving an explosive energy source, the coordinates of all misfirings according to the NAD83 map reference system and a description of the corrective measures taken;

(23) in the case of a surveying involving the drilling of a shot hole, the coordinates of the holes in which there is an groundwater spill on the surface or a detection of gas according to the NAD83 map reference system and a description of the corrective measures taken; and

(24) the recommendations for the continuation of the work.

If required and based on the area of the surveying, the holder may, for the purposes of subparagraph 13 of the first paragraph, submit a number of maps at different scales.

§5. *Notice to the Minister*

53. The authorization holder must, within 24 hours, notify the Minister where a firing has misfired.

The notice must indicate the corrective measures taken by the holder or those planned with their schedule.

54. After having received a notice under section 53, the Minister may require from the authorization holder that the holder submits an event report stating the facts, evaluating the consequences, listing possible causes and proposing mitigation measures and measures to prevent reoccurrence of the event.

SECTION II
GEOCHEMICAL SURVEYING AUTHORIZATION

§1. *Conditions for obtaining an authorization*

55. A licence holder who wishes to obtain a geochemical surveying authorization must apply to the Minister, in writing, at least 30 days before the start of the work.

56. The application must contain

(1) the name and contact information of the holder and the licence number; and

(2) the work schedule and an estimate of the realization costs.

57. The application must be accompanied by

(1) a topographic map at a sufficient scale showing, in particular,

(a) the perimeter of the licence;

(b) the activity site;

(c) the sampling points; and

(d) public and private land;

(2) the geochemical surveying technical program provided for in section 58 signed and sealed by a geologist or an engineer;

(3) payment of the fee of $1,030; and

(4) any other information or document requested by the Minister.

If required and based on the area of the work, the licence holder may, for the purposes of subparagraph 1 of the first paragraph, submit a number of maps at different scales.

58. The geochemical surveying technical program must contain

(1) the name and contact information of the geologist or the engineer responsible for the program;

(2) the name, profession and functions of the persons who prepared or revised the program;

(3) the name and contact information of the enterprises charged with carrying out the data acquisition, processing and interpretation work;

(4) the name of the region in which the surveying will be carried out;

(5) a description of the geological context and the degree of maturity of the exploration in the territory concerned;

(6) the type of surveying proposed;

(7) the purposes of the surveying including, in particular, the acquisition parameters and the type of analyses planned;

(8) a chronological and detailed description of the work to be carried out;

(9) the area covered by the surveying;

(10) the number of samples and the expected percentage of loss;

(11) the spacing interval between the sampling points;

(12) the depth of the sample collection; and

(13) the sampling, collection, transportation and analysis protocol.

§2. *Time periods and notice of the start of the work*

59. The authorization holder must, within 12 months after the Minister granted the authorization, start the geochemical surveying work.

The work is deemed to have started as soon as the first step provided in the work schedule is initiated.

The Minister may grant an additional time period for carrying out the geochemical surveying if the holder demonstrates the need therefor.

60. The authorization holder must, at least 7 days before the start of the work, notify the Minister of the date anticipated for the start of the work.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

61. The authorization holder must, at least 24 hours before, notify the Minister of the work completion date if the geochemical surveying work is completed or temporarily interrupted, and in the latter case, the holder must also notify the Minister of the work resumption date.

§3. Conditions of exercise

62. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by a geologist or an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

A supplementary agreement to the technical program is not required in the following cases:

(1) an adjustment in the position of the sampling points;

(2) a variation in the quantity of sampling points.

In the situations provided for in the third paragraph, the holder immediately notifies the Minister of the change to the technical program.

63. The authorization holder must, during the work, install a sign on each mobile equipment indicating, in particular,

(1) the holder's name and the licence number;

(2) the number of the geochemical surveying authorization; and

(3) the type of surveying carried out.

64. The authorization holder who plans on leaving samples on the surveying site must make sure to protect the integrity of the data, facilities and equipment.

65. The authorization holder must restore the activity site as soon as the work ends or as soon as the meteorological conditions allow.

§4. Daily report and completion report

66. The authorization holder must draw up a daily report of the work and keep it on the activity site

The daily report must contain all the elements applicable to the declared day, in particular,

(1) the number of the geochemical surveying authorization;

(2) the type of surveying carried out;

(3) a description, in chronological order, of the work carried out and the time required to carry out each step of the work;

(4) the numbers of the sampling points and data acquisition modules, their depths and theirs GPS coordinates;

(5) if applicable, the discovery of a natural seepage;

(6) work interruptions and disturbances due in particular to meteorological conditions and technical and operational difficulties, and their duration;

(7) the operational problems encountered and the corrective measures taken or planned; and

(8) any other information or document deemed necessary by the Minister.

67. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the work. If the Monday is a holiday, the report is sent on the first working day that follows.

68. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, a completion report signed by a geologist or an engineer including, in particular,

(1) the number of the geochemical surveying authorization;

(2) the name and contact information of the licence holder and the licence number;

(3) the name and contact information of the geologist or engineer responsible for the technical program;

(4) the name of the enterprises that took part in the work and the nature of the work;

(5) the number of employees who took part in the work and their positions;

(6) the name of the region in which the surveying was carried out;

(7) the type of surveying carried out;

(8) the purposes of the surveying including, in particular, the acquisition parameters and the type of analyses;

(9) the number of samples collected and the percentage of actual loss;

(10) the depth of the sample collection;

(11) the area covered by the surveying;

(12) the start and end dates of the work;

(13) the summary of the work carried out in chronological order;

(14) a compilation of the daily progress of the work;

(15) a topographic map at a sufficient scale showing, in particular,

(a) the perimeter of the licence;

(b) the activity site;

(c) the numbered sampling points; and

(d) private and public land;

(16) the list of the numbered sampling points and their GPS coordinates;

(17) a description of the data processing parameters;

(18) an interpretation map for gas sampling showing the spatial variation of the distribution of the gas concentrations showing anomalies;

(19) an analysis of the interpretation map specifying the correlations between the geology and the geochemical data;

(20) if applicable, the technical reports drawn up by the enterprises that carried out the data processing or interpretation;

(21) a comparative analysis of the work carried out compared with that planned in the technical program and the results obtained compared with those anticipated;

(22) if applicable, the interpretation of the results obtained in connection with the other geological and geophysical data available;

(23) if applicable, the type of petroleum anticipated in the targets identified by the surveying;

(24) if applicable, the discovery of a natural seepage;

(25) a description and photographs of the equipment used and their specifications; and

(26) the recommendations for the continuation of the work.

If required and based on the area of the work, the holder may, for the purposes of subparagraph 15 of the first paragraph, submit a number of maps at different scales.

CHAPTER VI
STRATIGRAPHIC SURVEY AUTHORIZATION

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

69. A licence holder who wishes to obtain a stratigraphic survey authorization must apply to the Minister, in writing, at least 60 days before starting the work.

70. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the name of the proposed stratigraphic survey; and

(3) the work schedule and an estimate of the realization costs.

71. The application must be accompanied by

(1) a topographic map at a scale of 1:20,000 showing, in particular,

(a) the surface projection of the drill hole profile to the location of the bottom of the hole;

(b) the location of the existing drill holes within a radius of 5 km; and

(c) the demonstration that the distances provided for in sections 81 and 83 are met;

(2) the stratigraphic survey technical program provided for in section 72 signed and sealed by an engineer;

(3) payment of the fee of $4,426; and

(4) any other information or document requested by the Minister.

72. The stratigraphic survey technical program must contain

(1) the name and contact information of the engineer responsible for the program;

(2) the name, profession and functions of the persons who prepared or revised the program;

(3) a description and the photographs of the initial condition of the site;

(4) the demonstration that, during the positioning of the stratigraphic survey, the regional and local geology, and the presence of adjacent drill holes have been taken into consideration;

(5) the demonstration that the presence of gas in the soil in its natural state has been taken into consideration;

(6) a chronological and detailed description of the work to be carried out;

(7) the name and contact information of the enterprise charged with carrying out the work;

(8) a longitudinal section of the stratigraphic survey indicating the technical elements anticipated before and after the sealing;

(9) a geological projection including

(a) a stratigraphic column indicating the thickness of the unconsolidated deposits, the geological formations, porous and permeable zones, faults and other major structures;

(b) the identification of the potential zones of fluid kicks or lost circulation;

(c) the anticipated base of the usable groundwater, if it is different from the base provided for in section 3;

(d) anticipated primary and secondary petroleum objectives; and

(e) if the seismic profile has been done, the interpreted seismic profile indicating the top of geological formations, the shotpoint nearest the location of the drilling and the location of the anticipated petroleum objectives;

(10) the list of the proposed coring intervals;

(11) the list of pressure and leak tests, drill-stem tests, formation integrity tests and all other tests planned;

(12) the list of the well loggings planned;

(13) a drilling program including, in particular,

(a) the type of drilling rig and equipment to be used and their specifications;

(b) the drilling fluids and flushing fluids used and their properties, and a demonstration that those fluids comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee;

(c) the measures planned for the management of petroleum, formation fluids, drilling fluids, chemical substances and other discharges;

(d) the diameters of the drill hole according to the measured depth and the actual vertical depth on a longitudinal section, to the bottom of the planned hole;

(e) a graphic projection of the formation pressure and temperature to the expected final depth;

(f) a projection of the planned fracturing gradient;

(g) a graphic projection of the deviation of the drill path to the expected final depth;

(h) the frequency of the measurements of the deviation of the path in dip and azimuth;

(i) the demonstration that the casing strings comply with CSA Standard Z625, Well design for petroleum and natural gas industry systems, published by the Canadian Standards Association; and

(j) a program for centralizing casings that allows to reach a minimum centralization of 75% compliant with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee, indicating, in particular, the type of centralizers, their dimension, frequency of installation and installation;

(14) a program for cementing annular spaces in each of the casing strings compliant with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the *Drilling and Completion Committee* and including, in particular,

(a) the diameters of the casing strings according to the measured depth and the actual vertical depth;

(b) the planned height of the cement column in the annular space;

(c) the cement preparation and application methods;

(d) the planned minimum and maximum pumping flows and the pumping equipment capacity;

(e) the type of cement used, its density, its additives and their proportions, its setting time, calculated volume and surplus percentage;

(f) any changes to the cement required due to specific physical and chemical conditions of the environment, including, in particular, the depth of the stratigraphic survey, an abnormal pressure or temperature, a circulation loss area, salt areas, unconsolidated deposits or a corrosive environment;

(g) the methods used to prepare the drill hole for cementing and to improve fluid displacement, in particular, casing movement; and

(h) the method for monitoring cement circulation in the annular space;

(15) if a simulation or modelling has been carried out, a description of the simulation or modelling and the results obtained;

(16) a site sealing and restoration program including, in particular,

(a) the method used to demonstrate the tightness of the stratigraphic survey carried out before the sealing work;

(b) the stratigraphic survey cleaning method used before installing plugs;

(c) the type of device used and its specifications; and

(d) a cementing program compliant with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee including, in particular,

i. for each cement plug, the intervals, the type of cement used, its density, its additives and their proportions, its setting time, calculated volume and surplus percentage;

ii. any changes to the cement used for the plugs required due to specific physical and chemical conditions of the environment, including, in particular, the depth of the stratigraphic survey, an abnormal temperature or a corrosive environment;

iii. the method for installing each plug; and

iv. the method and frequency of the monitoring of the position of the plugs during sealing, the waiting time before the monitoring and the criteria of the acceptability of the position of the cement plugs;

(17) the method used to demonstrate that following the installation of the plugs and before the cutting of the casings and surface guide tube, there was no gas emanation;

(18) a description of the activity site restoration work planned for maintaining the quality of the natural landscapes, minimizing impact on wildlife, and harmonizing the activity site with the use of the territory, and a plan presenting the work including, in particular,

(a) the procedure for dismantling installations and, if applicable, the procedure for dismantling the supply cable;

(b) the rehabilitation of contaminated land;

(c) the purge of pipes; and

(d) the withdrawal of equipment and facilities; and

(19) the list of references consulted during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions.

73. The holder may drill a stratigraphic survey in a zone potentially exposed to land movement particularly identified in accordance with government mapping available. If such mapping is not available, the holder cannot drill at less than a horizontal distance measured in relation to the top and base of a embankment that corresponds to twice the height of the embankment.

Despite the foregoing, a licence holder may drill a stratigraphic survey in an area potentially exposed to landslides if the holder provides the Minister, with the application, geotechnical expertise that

(1) assesses the stability of the activity site and confirms that the drill hole will not be threatened by a landslide;

(2) confirms that the expected activity does not act as a triggering factor by destabilizing the activity site and adjacent land; and

(3) confirms that the subsequent activities on the activity site do not constitute an aggravating factor by unduly reducing the safety coefficients

Where applicable, the geotechnical expertise must include recommendations on the precautions to take and the protective measures necessary to maintain at all times the stability of the activity site and the security of the area being examined.

74. Before ruling on the application for authorization, the Minister may, if the Minister deems it necessary to ensure the long-term integrity of the stratigraphic survey, require that the licence holder tests the cement in a laboratory. The test must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

The holder sends the test results to the Minister.

DIVISION II
TIME PERIODS AND NOTICE OF THE START OF THE WORK

75. The authorization holder must, within 12 months after the Minister granted the authorization, start the stratigraphic survey work.

The work is deemed to have started as soon as the first step provided in the work schedule is initiated.

The Minister may grant an additional time period for carrying out the stratigraphic survey if the holder demonstrates the need therefor.

76. The authorization holder must, at least 7 days before, notify the Minister of the start of the following work:

(1) the preparation of the site where the drilling rig will be located;

(2) the start of the drilling;

(3) the sealing of the stratigraphic survey.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

77. The authorization holder must, at least 24 hours before, notify the Minister of the rig release and, in the case of a temporary interruption, the holder must also notify the Minister within the same time period of the resumption of the work.

DIVISION III
CONDITIONS OF EXERCISE

78. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

A supplementary agreement to the technical program is not required in the following cases:

(1) an adjustment of less than 10 m in the final depth of the stratigraphic survey resulting from a slightly different geological projection;

(2) a change in the position of the stratigraphic survey where it remains on the activity site;

(3) the addition or cancellation of a coring section, a drill-stem test, a well logging, a sample collection or a fluid sample.

In the situations provided for in the third paragraph, the holder immediately notifies the Minister of the change to the technical program.

79. The authorization holder must design and build the stratigraphic survey so as to

(1) comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee;

(2) ensure work safety;

(3) prevent incidents in the maximum load conditions normally foreseeable during the life cycle of the stratigraphic survey;

(4) withstand potential conditions, forces and stresses;

(5) ensure a resistance sufficient for fluid kicks;

(6) protect the integrity of the groundwater;

(7) allow the characterization of the geological formations targeted; and

(8) allow activities for controlling the pressure of the bottom of the drill hole in a constant and safe manner.

80. The authorization holder must, as soon as the work starts and until the site restoration work starts, install a sign at the entrance of the activity site indicating, in particular,

(1) the location of the stratigraphic survey;

(2) the holder's name and the licence number;

(3) the name and number of the stratigraphic survey appearing on the authorization;

(4) a telephone number in case of emergency; and

(5) the pictograms associated with the hazardous products present on the activity site.

81. The authorization holder may not position the collar of a stratigraphic survey

(1) less than 40 m from a public highway within the meaning of the Highway Safety Code or a railway;

(2) less than 100 m from a transmission line having a voltage equal to or greater than 69,000 V, a telecommunication infrastructure, a windmill, pipeline or any other installation or infrastructure of the same type;

(3) less than 100 m from a cemetery or surface improvement work for sporting or recreational purposes;

(4) less than 150 m from any building having fewer than 3 floors or a floor area less than or equal to 10,000 m^2;

(5) less than 175 m from a concentration of residential, commercial, industrial or service activities;

(6) less than 180 m from a high-capacity dam within the meaning of the Dam Safety Act;

(7) less than 275 m from a health and social services institution, a teaching institution, a building in which childcare services are offered, a classified heritage site entered in the cultural heritage register referred to in section 5 of the Cultural Heritage Act (chapter P-9.002), any building having 3 floors or more or a floor area greater than 10,000 m^2; or

(8) less than 1 000 m from an airport or an aerodrome.

The distances must be measured horizontally, in a straight line, from the collar to the nearest point of the elements referred to in the first paragraph.

The Minister may allow the reduction of the distances if the authorization holder demonstrates to the Minister that an effective protective measure reduces risks.

The distances provided for in the first paragraph do not apply with respect to buildings belonging to the authorization holder or used for the work.

82. The authorization holder may not drill a stratigraphic survey less than 100 m from the boundaries of the territory covered by the holder's licence.

83. The authorization holder may not position the activity site less than 60 m from a national park or a protected area entered in the protected area register provided for in section 5 of the Natural Heritage Conservation Act (chapter C-61.01).

84. During the drilling, the authorization holder must make sure that

(1) the stratigraphic survey is drilled so as to never intersect an existing drill hole;

(2) the drilling fluids, drilling fluid system and associated monitoring equipment are designed, installed, used or maintained to provide an effective barrier against formation pressure and to allow for an adequate characterization of the geological formations investigated;

(3) the indicators and alarms associated with the monitoring equipment are installed on the drilling rig to alert onsite personnel; and

(4) adequate procedures, facilities and equipment are in place and utilized to minimize the risk of loss of stratigraphic survey control in the event of lost circulation, fluid kicks or blowout.

85. The authorization holder must ensure that the measurements of the stratigraphic survey path deviation are taken at intervals that allow the position of the drill hole to be determined accurately and that do not exceed 150 m, unless there is a soil stability problem.

86. The authorization holder must protect the usable groundwater and use non-toxic substances in drilling fluids until the surface casing is cemented.

87. Where the authorization holder drills a stratigraphic survey in a region where the geology is unknown or in a region where shallow gas kicks have been documented, the holder must use a deflector.

88. If it is foreseeable that a petroleum zone will be intersected before reaching the depth for the installation of the surface casing, the authorization holder must install a blowout prevention system.

89. While performing the work under the surface casing, the authorization holder must use a wellhead or a blowout prevention system comprising at least 2 different sealing mechanisms for as long as there is a risk of fluid kicks.

90. The wellhead or the blowout prevention system must have been designed to withstand a rated pressure equal to or greater than the maximum formation pressure provided for in the technical program. Where it has not been provided for, it is deemed to be equal to or greater than 11 kPa/m of the actual vertical depth of the stratigraphic survey.

91. The authorization holder must verify daily the blowout prevention system to make sure it works well. If a system component is defective, work must be suspended until the component is repaired.

92. The authorization holder must regularly inspect joints and structural elements of every equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps and maintains, until the end of the sealing work, a register of those inspections.

93. The authorization holder must eliminate or reduce to a minimum the volume of gas released into the atmosphere. The holder must install an ignition pilot at the flare for burning combustible gas.

94. During the operations for preparing and applying the cement for cementing casings and for sealing plugs, the authorization holder must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

95. Before proceeding with the cementing of annular spaces, the authorization holder must make sure to completely remove the drilling fluids and the mud cakes from the walls of the stratigraphic survey.

96. During the cementing, the authorization holder must ensure that the fluid returns are observed at the surface.

97. The cement used for cementing casings and for sealing plugs must reach the minimum compressive strength of 3,500 kPa after 36 hours of hardening at the temperature of the shallowest formation to be covered.

The authorization holder must restrict the cement shrinkage process and limit to the minimum the risk of formation of a micro-annular space.

98. As of the moment at which the cement has developed a gel strength and until the minimum compressive strength has been reached, the authorization holder must not carry out work that could compromise the integrity of the cement and the holder must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

99. The authorization holder must carry out a cement assessment sonic or ultrasonic logging to show the uniform coverage of the cement behind each casing.

100. After installing and cementing a casing and before drilling out the casing shoe, the authorization holder must submit the casing to a pressure and leak test to the value required to confirm its integrity for the maximum operating pressure provided for in the technical program.

The integrity is confirmed if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes.

101. Before drilling at a measured depth of more than 10 m under the shoe of any casing subsequent to the conductor casing, the authorization holder must test the integrity of the geological formation.

The test must be conducted at a pressure that ensures the safety of the drilling work until the next casing string planned.

The integrity is confirmed if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes.

102. The authorization holder who conducts a drill-stem test must ensure, in particular, that

(1) the equipment used is designed to safely control the stratigraphic survey pressure, properly characterize the geological formation and protect the environment;

(2) the rated pressure of the equipment upstream of and including the testing manifold exceeds the maximum anticipated shut-in pressure; and

(3) the equipment downstream of the testing manifold is sufficiently protected against overpressure.

103. In the case of fluid kicks or during drill-stem tests, the authorization holder must collect samples and analyze the petroleum and groundwater encountered.

In the case of gas, the analyses must, in particular, identify its composition and characterize the carbon isotope ratios. For a vertical or directional drilling, the holder must take a minimum of 15 samples per interval of 1,000 m drilled under the surface casing.

In the case of oil, the analyses must, in particular, identify its composition and characterize its viscosity and density.

In the case of groundwater, the analyses must, in particular, identify its composition in dissolved solids and petroleum and its physical characteristics, including the pH, the conductivity and the cloudiness.

The Minister may exempt the authorization holder from the requirement to collect certain samples where the Minister considers that he or she already has sufficient data to characterize the reservoir or the sealing rocks.

If the holder collects another sample of gas, including gas dissolved in the drilling fluids or gas from the surface casing blowhole, the holder must analyze it to identify its composition and characterize the carbon isotopic ratios.

A holder who collects a sample must use a method preventing contamination of the sample.

104. The authorization holder must collect a sample of the drilling core, at least at each interval of 100 m, to determine, in particular, the porosity, permeability, lithology and content in total organic carbon of the geological formation.

For the stratigraphic survey sections that are not cored, a cutting sample must be collected at each 5-m interval in such manner as to fill

(1) a 10-ml flask of cuttings washed and dried beforehand; samples from the layer of unconsolidated deposits must not be washed; and

(2) a 500-g bag of cuttings dried beforehand.

105. Where samples necessary for analysis have been taken from a core, the authorization holder makes sure that a longitudinal slab that is not less than one half of the cross-sectional area of that core or the remaining core is submitted to the Minister.

The holder who carried out destructive tests on a core removed laterally is exempt from submitting the samples.

106. The samples collected must be stored in durable containers designed for that purpose and properly labelled by indicating, in particular, the name of the stratigraphic survey and the measured interval or depth of the sampling.

They must be transported and stored in a manner that prevents any loss or deterioration.

107. The authorization holder submits to the Minister the samples whose analysis is completed not later than 90 days after the rig release date.

The Minister may agree to an additional period if the holder wishes to perform additional analyses. In that case, the holder submits to the Minister the samples and analysis results at the end of the agreed period.

The Minister may exempt the holder from the submission of the samples

(1) where the Minister considers that he or she has sufficient samples to adequately document the geological formations intersected by the stratigraphic survey; and

(2) where the Minister already has samples from the same horizons.

108. Before disposing of any cutting samples, drilling cores or collected fluids, the authorization holder must offer them to the Minister.

109. The authorization holder must submit to the Minister, for approval, the corrective actions to be taken where any of the following situations occurs:

(1) a cementing operation provided for in the technical program cannot be carried out;

(2) no cement return has been observed on the surface where such return was expected;

(3) a drilling fluid return indicates that the cement height required for cementing has not been reached;

(4) there is uncertainty as to reaching the cementing goals.

DIVISION IV
STRATIGRAPHIC SURVEY SEALING AND SITE RESTORATION

110. The authorization holder must seal the stratigraphic survey within 30 days after completion of the drilling.

The Minister may require that the work start before that period for safety reasons or give an additional period for its completion if the holder shows that it is necessary.

111. Before beginning the stratigraphic survey sealing, the authorization holder must conduct a pressure and leak test to ensure the tightness of all the stratigraphic survey components.

The holder may begin the sealing only if the pressure and leak test is successful. Tightness is confirmed if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes. Otherwise, an incident notice must be sent to the Minister within 24 hours.

112. The authorization holder who proceeds with the sealing must ensure to seal the stratigraphic survey over its entire length.

The holder must also ensure the following:

(1) the absence of communication of fluids between the geological formations;

(2) the absence of liquid flow and gas emanation or migration;

(3) the absence of excessive pressure in the stratigraphic survey;

(4) the long-term integrity of the stratigraphic survey, while considering the petroleum development potential of the adjacent sector and the impact of future activities.

113. The authorization holder must not install a cement plug in a section of the hole that does not have a casing, except if the drilling is vertical.

114. The authorization holder must cut the casings and the guide tube at 1 m below the surface.

Where it is justified by agricultural activities, the holder may, with the Minister's authorization, cut the casings and the guide tube at 1.6 m below the surface.

115. The authorization holder must weld a ventilated steel cover at the top of the casings.

116. The authorization holder must restore the activity site as soon as the sealing work ends or the meteorological conditions allow.

The Minister may grant an additional time period for the restoration if the holder shows it is necessary. In that case, the holder must, at least 7 days before, notify the Minister, in writing, of the start of the work for restoring the site.

117. As soon as the sealing work ends, the authorization holder must mark the stratigraphic survey with a steel plate at least 150 mm wide and 300 mm high indicating, in relief, the number of the stratigraphic survey and its geographical coordinates.

The plate must be fixed 1.5 m above the surface of the ground using a metal rod welded to the outside casing of the stratigraphic survey.

Where it is justified by agricultural activities, the holder may, with the Minister's authorization, position the plate as close as possible to the stratigraphic survey and indicate the azimuth and the distance at which the stratigraphic survey is located.

DIVISION V
DAILY REPORT AND COMPLETION REPORT

118. The holder of a stratigraphic survey authorization must draw up a daily report of the work and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the number of the stratigraphic survey authorization;

(2) a description, in chronological order, of the work carried out and the time required for completing each step of the work;

(3) the name and contact information of the enterprises that carried out the work;

(4) the measured depth reached during the day;

(5) the composition of the drilling fluid and flushing fluid, and the volumes used;

(6) the operating condition of the blowout prevention system;

(7) a loss of circulation;

(8) the components used to assemble the strings;

(9) the specifications of the casing and its setting depth;

(10) the weight applied to the bit and its penetration rate;

(11) the measurements of the deviation of the stratigraphic survey path in dip, azimuth and depth;

(12) traces of petroleum or water detected;

(13) the type of pump used for the cementing and its capacity;

(14) the type of cement used, its density, its additives and their proportions, its setting time and the volume used;

(15) the well loggings carried out;

(16) the observations and data related to the evaluation or characterization of the geological formation;

(17) the fluid samples collected;

(18) the results of the pressure and leak tests;

(19) the volume and composition of the gas used, released, incinerated or burnt at the flare;

(20) the composition, concentration and detailed assessment of all the products stored and used on the activity site, in particular, drilling fluids;

(21) the operational problems encountered and the corrective measures taken or planned;

(22) the indication of any temporary work interruption and the procedure followed to secure the stratigraphic survey;

(23) the indication of any event that disrupted the planned progress of the work; and

(24) any other information or document deemed necessary by the Minister.

119. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the sealing work. If the Monday is a holiday, the report is sent on the first working day that follows.

120. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, a completion report signed by an engineer including, in particular,

(1) the number of the stratigraphic survey authorization;

(2) the name and contact information of the licence holder;

(3) the coordinates of the stratigraphic survey collar on a plan provided by a land surveyor according to the NAD83 map reference system;

(4) the measurements of the deviation of the stratigraphic survey path in dip, azimuth and depth, and the final coordinates of the bottom of the hole;

(5) a summary of the work carried out in chronological order;

(6) a report on the cementing operations for each of the casing strings, containing, in particular,

(a) the name and contact information of the enterprise that carried out the cementing work;

(b) the type of cementing unit used and the method for applying the cement; if no return is observed, a description of the corrective actions taken;

(c) the type of cement used, its density, its additives and their proportions, the setting time and the volume used;

(d) the cemented interval;

(e) the composition and volume of the flushing fluid and the spacing fluid used;

(f) the circulation pressures;

(g) the propping pressure applied and the duration; and

(h) a description of the cement return, the quantity and the retreat;

(7) the analysis results and the analysis certificates of the samples and fluid samples collected;

(8) the interpreted well loggings, re-set in actual vertical depth, and the corrections made;

(9) the demonstration that the centralization of the casings complies with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee;

(10) the measured temperature and pressure to the final depth of the stratigraphic survey;

(11) the data, recordings, results of the drill-stem tests, pressure and leak tests, formation integrity tests and their interpretation;

(12) a geological description of the cuttings and drill cores, and a geotechnical description of the drill cores;

(13) a comparative analysis of the work carried out compared with that provided for in the technical program and the results obtained compared with those anticipated;

(14) the list of drill bits used, their type and the number of metres drilled by each;

(15) the type of play encountered and a comparison with a similar oil zone;

(16) a longitudinal section of the stratigraphic survey after the sealing, according to the measured depth and the actual vertical depth, signed and sealed by an engineer, indicating, in particular,

(a) intersected groups, geological formations, lithological contacts and faults;

(b) zones of abnormal pressure;

(c) the diameter of the drill hole and the diameters of each of the casings and the guide tube;

(d) the location of each of the casings and the guide tube;

(e) if applicable, the depth interval of the open stratigraphic survey;

(f) the type of plugs used and the depth intervals of each plug; and

(g) the other equipment installed or dropped in the stratigraphic survey and not recovered;

(17) the daily tour reports;

(18) if laboratory testing has been done on the cement after the granting of the authorization, the properties of the cement determined in the laboratory;

(19) the technical reports prepared by the enterprises that carried out the work;

(20) a technical description of the condition of the stratigraphic survey before the sealing;

(21) in the case of the cement plugs used,

(a) the name and contact information of the enterprise that carried out the cementing work;

(b) the type of cementing unit used and the method for applying the cement;

(c) the type of cement used, its density, its additives and their proportions, its setting time and the volume used;

(d) the verified position of each of the plugs; and

(e) if applicable, the analysis results and the analysis certificates of the samples collected;

(22) the cutting depth of the casings and the guide tube under the surface;

(23) a photograph of the ventilated steel plated welded at the top of the casings before the backfilling;

(24) a plan showing the layout of the activity site after the restoration work; and

(25) photographs of the entire restored activity site.

CHAPTER VII
DRILLING AUTHORIZATION

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

121. A licence holder who wishes to obtain a drilling authorization must apply to the Minister, in writing, at least 60 days before starting the work.

122. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the name of the proposed well, in the case of a new well, or the name of the existing well, in the case of a re-entry; and

(3) the work schedule and an estimate of the realization costs.

123. The application must be accompanied by

(1) a topographic map at a scale of 1:20,000 showing, in particular,

(a) the surface projection of the hole profile to the location of the bottom of the hole;

(b) the location of the existing drill holes within a radius of 5 km; and

(c) the demonstration that the distances provided for in sections 133 to 135 are met;

(2) the drilling technical program provided for in section 124 signed and sealed by an engineer;

(3) the permanent well or reservoir closure and site restoration plan or, if applicable, its update, and the guarantee provided for in sections 322 and 324;

(4) payment of the fee of $4,426; and

(5) any other information or document requested by the Minister.

124. The drilling technical program must contain

(1) the name and contact information of the engineer responsible for the program;

(2) the name, profession and functions of the persons who prepared or revised the program;

(3) the demonstration that, during the positioning of the well, the regional and local geology, and the presence of adjacent drill holes have been taken into consideration;

(4) the demonstration that the presence of gas in the soil in its natural state has been taken into consideration;

(5) if applicable, the list of the data that could be consulted with respect to the adjacent drill holes;

(6) the proposed classification of the well, determined according to Schedule 1;

(7) a chronological and detailed description of the work to be carried out;

(8) the name and contact information of the enterprise charged with carrying out the work;

(9) a longitudinal section of the well indicating the technical elements;

(10) a geological projection including, in particular,

(a) a stratigraphic column indicating the thickness of the unconsolidated deposits, the geological formations, porous and permeable zones, faults and other major structures;

(b) the identification of the potential zones of fluid kicks or lost circulation;

(c) the anticipated base of the usable groundwater, if it is different from the base provided for in section 3;

(d) the anticipated primary and secondary petroleum objectives; and

(e) if the seismic profile has been done, the interpreted seismic profile indicating the top of geological formations, the shotpoint nearest the location of the drilling and the location of the anticipated petroleum objectives;

(11) the list of the planned coring intervals;

(12) the list of pressure and leak tests, drill-stem tests, formation integrity tests and all other tests planned;

(13) the list of the well loggings planned;

(14) a drilling program including, in particular,

(a) the type of drilling rig and equipment to be used and their specifications;

(b) the drilling fluids and flushing fluids used and their properties, and a demonstration that those fluids comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee;

(c) the measures planned for the management of petroleum, formation fluids, drilling fluids, chemical substances and other discharges;

(d) the diameters of the drill hole according to the measured depth and the actual vertical depth on a longitudinal section, to the bottom of the planned hole;

(e) a graphic projection of the formation pressure and temperature to the expected final depth;

(f) a projection of the planned fracturing gradient;

(g) a graphic projection of the deviation of the drill path to the expected final depth;

(h) the frequency of the measurements of the deviation of the path in dip and azimuth;

(i) the demonstration that the planned casing strings and tubes comply with CSA Standard Z625, Well design for petroleum and natural gas industry systems, except those installed in a storage well, which must comply with CSA Standard Z341, Storage of hydrocarbons in underground formations, published by the Canadian Standards Association;

(j) a program for centralizing casings that allows to reach a minimum centralization of 75% compliant with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee, indicating, in particular, the type of centralizers, their dimension, frequency of installation and installation; and

(k) in the case of a re-entry, the evaluation of the thickness of the casing string and the calculation of the stresses to which the well may be submitted in accordance with CSA Standard Z625, Well design for petroleum and natural gas industry systems, published by the Canadian Standards Association; for a storage well, the evaluation and calculation must comply with CSA Standard Z341, Storage of hydrocarbons in underground formations, published by the Canadian Standards Association;

(15) a program for the cementing of the annular spaces of each of the casing strings compliant with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee and including, in particular,

(a) the diameters of the casing strings compared with the measured depth and the actual vertical depth;

(b) the planned height of the cement column in the annular space;

(c) the cement preparation and application methods;

(d) the planned minimum and maximum pumping flows and the pumping equipment capacity;

(e) the type of cement used, its density, its additives and their proportions, its setting time, the calculated volume and surplus percentage;

(f) any changes to the cement required due to specific physical and chemical conditions of the environment, including, in particular, the depth of the well, an abnormal pressure or temperature, a circulation loss area, salt areas, unconsolidated deposits or a corrosive environment;

(g) the methods used to prepare the well for cementing and to improve movement of the fluids, in particular, casing movement; and

(h) the method for monitoring cement circulation in the annular space;

(16) if a simulation or modelling has been carried out, a description of the simulation or modelling and the results obtained; and

(17) the list of references consulted during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions.

Where work is planned in a temporarily closed well, the holder must, before it is carried out, inspect the site and the wellhead, maintain the wellhead and carry out a pressure and leak test. In that case, the technical program must also contain the annual inspection worksheet provided for in Schedule 2.

125. The holder may drill a well in a zone potentially exposed to land movement particularly identified in accordance with government mapping available. If such mapping is not available, the holder cannot drill at less than a horizontal distance measured in relation to the top and base of an embankment that corresponds to twice the height of the embankment

Despite the foregoing, a licence holder may drill a well in an area potentially exposed to landslides if the holder provides the Minister, with the application, the geotechnical expertise provided for in section 73, with the necessary modifications.

126. Before ruling on a drilling application, Minister may, if the Minister considers it necessary to ensure the long-term integrity of the well, require that the licence holder carry out a cement test in a laboratory. The test must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

The holder sends the results of the test to the Minister.

DIVISION II
TIME PERIODS AND NOTICE OF THE START OF THE WORK

127. The authorization holder must, within 12 months after the granting of the authorization, start the drilling work.

128. The authorization holder must, at least 7 days before, notify the Minister of the date for the start of the following work:

(1) the preparation of the site in which the drilling rig will be located;

(2) the beginning of the drilling or the re-entry.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

129. The authorization holder must, at least 24 hours before, notify the Minister of the rig release and, in case of a temporary interruption, the holder must also notify the Minister within the same period of the resumption of the work.

SECTION III
CONDITIONS OF EXERCISE

130. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

A supplementary agreement to the technical program is not required in the following cases:

(1) an adjustment of less than 10 m in the final depth of the well resulting from a slightly different geological projection;

(2) a change in the position of the well where the well remains on the activity site;

(3) the addition or cancellation of a coring section, a drill-stem test, a sample collection or a fluid sample;

(4) the addition or cancellation of a well logging if, in the latter case, it is not required under section 138 or 139.

In the situations provided for in the third paragraph, the holder immediately notifies the Minister of the change to the technical program.

131. The authorization holder must design and construct the well so as to

(1) comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee;

(2) ensure work safety;

(3) prevent incidents in the maximum load conditions normally foreseeable during the life cycle of well;

(4) withstand potential conditions, forces and stresses;

(5) ensure a resistance sufficient for fluid kicks;

(6) protect the integrity of the groundwater;

(7) ensure that the petroleum zones and the aquifer layers are isolated from one another;

(8) allow the characterization of the geological formations targeted; and

(9) allow activities for controlling the pressure of the bottom of the drill hole in a constant and safe manner.

132. The authorization holder must, as soon as the work starts and until the holder begins the work for the permanent closure of the well and the restoration of the site, install a sign at the entrance to the site, indicating, in particular,

(1) the location of the well;

(2) the holder's name and the licence number;

(3) the name and number of the well appearing on the authorization;

(4) a telephone number in case of emergency; and

(5) the pictograms associated with the hazardous products present on the site.

133. The authorization holder may not position the collar of a well or, in the case of a re-entry, drill in a well whose collar is situated

(1) less than 40 m from a public highway within the meaning of the Highway Safety Code or a railway;

(2) less than 100 m from a transmission line having a voltage equal to or greater than 69,000 V, a telecommunication infrastructure, a windmill, a pipeline or any other installation or infrastructure of the same type;

(3) less than 100 m from a cemetery or surface improvement work for sporting or recreational purposes;

(4) less than 150 m from any building having fewer than 3 floors or a floor area less than or equal to 10,000 m^2;

(5) less than 175 m from a concentration of residential, commercial, industrial or service activities;

(6) less than 180 m from a high-capacity dam within the meaning of the Dam Safety Act;

(7) less than 275 m from a health and social services institution, a teaching institution, a building in which childcare services are offered, a classified heritage site entered in the cultural heritage register referred to in section 5 of the Cultural Heritage Act, any building having 3 floors or more or a floor area greater than 10,000 m^2; or

(8) less than 1 000 m from an airport or an aerodrome.

The distances must be measured horizontally, in a straight line, from the collar to the nearest point of the elements referred to in the first paragraph.

The Minister may allow the reduction of the distances if the authorization holder demonstrates to the Minister that an effective protective measure reduces risks.

The distances provided for in the first paragraph do not apply with respect to buildings belonging to the authorization holder or used for the work.

134. The authorization holder may not drill a well less than 100 m from the boundaries of the territory covered by the holder's licence.

135. The authorization holder may not position the activity site less than 60 m from a national park or a protected area entered in the register of protected areas provided for in section 5 of the Natural Heritage Conservation Act.

136. During the drilling of a well, the authorization holder must make sure that

(1) the well is drilled so as to never intersect an existing drill hole, except if the well covered by the authorization is a relief well;

(2) the drilling fluids, drilling fluid system and associated monitoring equipment are designed, installed, used or maintained to provide an effective barrier against formation pressure and to allow for an adequate characterization of the geological formations investigated;

(3) the indicators and alarms associated with the monitoring equipment are installed on the drilling rig to alert onsite personnel; and

(4) adequate procedures, facilities and equipment are in place and utilized to minimize the risk of loss of well control in the event of lost circulation, fluid kicks or blowout.

137. The authorization holder must ensure that the measurements of the well path deviation are taken at intervals that allow the position of the drill hole to be determined accurately and that do not exceed 150 m, unless there is a soil stability problem.

138. The authorization holder must carry out the well loggings necessary to be able to define the lithology, porosity, type of the fluids present in each of the geological formations intersected by the surface casing to the well collar and in depth, under the surface casing.

The holder must, in particular, carry out

(1) a gamma ray logging from the well collar to the final depth of the drill hole;

(2) a neutron logging from 25 m under the well collar to the base of the surface casing; and

(3) an electrical resistivity logging and a porosity logging from the base of the surface casing to the final depth of the drill hole.

The Minister may exempt the holder from the requirement to carry out certain well loggings in the case of a production well or if the Minister considers that he or she already has sufficient data to characterize the reservoir or the sealing rocks.

139. The authorization holder must also carry out a cement assessment sonic or ultrasonic logging to show the uniform coverage of the cement behind each casing. In the case of a horizontal well, the logging must be carried out at least until an 80° angle has been reached in relation to the vertical.

140. The authorization holder must protect the usable groundwater and use non-toxic substances in the drilling fluids until the surface casing is cemented.

141. Where the authorization holder drills a well in a region where the geology is unknown or in a region where shallow gas kicks have been documented, the holder must use a deflector.

142. If it is foreseeable that a petroleum zone will be intersected before reaching the depth for the installation of the surface casing, the authorization holder must install a blowout prevention system.

143. While performing the work under the surface casing, the authorization holder must use a wellhead or a blowout prevention system comprising at least 2 different sealing mechanisms for as long as there is a risk of fluid kicks.

144. The wellhead or the blowout prevention system must have been designed to withstand a rated pressure equal to or greater than the maximum formation pressure provided for in the technical program. Where it has not been provided for, it is deemed to be equal to or greater than 11 kPa/m of the actual vertical depth of the well.

145. The authorization holder must verify daily the blowout prevention system to make sure it works well. If a system component is defective, work must be suspended until the component is repaired.

146. The authorization holder must regularly inspect joints and structural elements of every equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps and maintains, until the end of the work for the permanent closure of the well, a register of those inspections.

147. The authorization holder must eliminate or reduce to a minimum the volume of gas released into the atmosphere. The holder must install an ignition pilot at the flare for burning combustible gas.

148. If a surface casing is installed, the authorization holder must ensure that it is inserted in a competent formation at a depth allowing for a sufficient anchoring of the well blowout preventer, ensures the control of anticipated pressures in the well and is equipped with an opening valve.

149. The authorization holder must install a conductor casing if

(1) the surface casing is laid at an actual vertical depth exceeding 650 m;

(2) it is foreseeable that a petroleum zone will be intersected before reaching the laying depth of the surface casing;

(3) an adjacent drill hole or a shot hole encountered groundwater flow on the surface; and

(4) the well is located less than 100 m from a body of water.

The conductor casing must be fixed in a competent formation.

If a shallow aquifer presents artesian pressure conditions, the conductor casing must be fixed directly above the aquifer.

150. In the case of the cementing of the surface casing, the authorization holder may not add to the cement charges or additives reducing its compressive strength.

151. In the case of the cementing of a casing, the authorization holder must determine the volume of cement required according to the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

152. Surface casings and, if applicable, intermediate casings subject to wear caused by the movement and rotation of the drill-stems must be inspected, at a maximum interval of 30 days, to determine their integrity, in accordance with the casing integrity inspection procedure provided for in Schedule 3.

153. Before proceeding with the cementing of annular spaces, the authorization holder must make sure to completely remove the drilling fluids and the mud cakes from the walls of the well.

154. During cementing, the authorization holder must ensure that surface fluid returns are observed.

155. The cement used must reach a minimum compressive strength of 3,500 kPa after 36 hours of hardening at the temperature of the shallowest formation to be covered.

The authorization holder must restrict the cement shrinkage process and limit to the minimum the risk of formation of a micro-annular space.

156. As of the moment at which the cement has developed a gel strength and until the minimum compressive strength has been reached, the authorization holder must not carry out work that could compromise the integrity of the cement and the holder must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

157. After installing and cementing the casing and before drilling out the casing shoe, the authorization holder must submit the casing to a pressure and leak test to the value required to confirm its integrity for maximum operating pressure provided for in the technical program.

The integrity is confirmed if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes.

158. Before drilling at a measured depth of more than 10 m under the shoe of any casing subsequent to the conductor casing, the authorization holder must test the integrity of the geological formation.

The test must be conducted at a pressure that allows the safety of the drilling work to the next casing string planned.

The integrity is confirmed if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes.

159. The authorization holder who conducts a drill-stem test must ensure, in particular, that

(1) the equipment used is designed to safely control the well pressure, properly characterize the geological formation and protect the environment;

(2) the rated pressure of the equipment upstream of and including the testing manifold exceeds the maximum anticipated shut-in pressure; and

(3) the equipment downstream of the testing manifold is sufficiently protected against overpressure.

160. In the case of fluid kicks or during drill-stem tests, the authorization holder must collect samples and analyze the petroleum and groundwater encountered.

In the case of gas, the analyses must, in particular, identify its composition and characterize the carbon isotope ratios. For a vertical or directional drilling, the holder must take a minimum of 15 samples per interval of 1,000 m drilled under the surface casing. In the case of a horizontal drilling, the holder must take a minimum of 15 samples per interval of 1,000 m drilled between the surface casing and the reaching of an 80° angle in relation to the vertical.

In the case of oil, the analyses must, in particular, identify its composition and characterize its viscosity and density.

In the case of groundwater, the analyses must, in particular, identify its composition in dissolved solids and petroleum and its physical characteristics, including the pH, the conductivity and the cloudiness.

The Minister may exempt the authorization holder from the requirement to collect certain samples where the Minister considers that he or she already has sufficient data to characterize the reservoir or the sealing rocks.

If the holder collects another sample of gas, including gas dissolved in the drilling fluids or gas from the surface casing blowhole, the holder must analyze it to identify its composition and characterize the carbon isotopic ratios.

A holder who collects a sample must use a method preventing contamination of the sample.

161. The authorization holder must collect a sample of the drilling core, at least at each interval of 100 m, to determine, in particular, the porosity, permeability, lithology and content in total organic carbon of the geological formation.

For the well sections that are not cored, a cutting sample must be collected at the following intervals:

(1) every 25 m, from the top of the rock to an actual vertical depth of 50 m above the shallowest anticipated petroleum objective, unless the holder demonstrates that an adjacent drill hole has already been sampled and the spatial variability makes sampling unnecessary;

(2) in the case of vertical and directional wells, every 5 m from an actual vertical depth of 50 m above the shallowest anticipated petroleum objective to the final depth;

(3) in the case of horizontal wells, every 5 m from an actual vertical depth of 50 m above the shallowest anticipated petroleum objective to the reaching of an 80° angle in relation to to the vertical, then the interval is 10 m to the final depth.

Cutting samples must be collected in such a manner as to fill

(1) a 10-ml flask of cuttings washed and dried beforehand; samples from the layer of unconsolidated deposits must not be washed; and

(2) a 500-g bag of cuttings dried beforehand.

162. Where samples necessary for analysis have been taken from a core, the authorization holder makes sure that a longitudinal slab that is not less than one half of the cross-sectional area of that core or the remaining core is submitted to the Minister.

The holder who carried out destructive tests on a core removed laterally is exempt from submitting the samples.

163. The samples collected must be stored in durable containers designed for that purpose and properly labelled by indicating, in particular, the name of the well and the measured interval or depth of the sampling.

They must be transported and stored in a manner that prevents any loss or deterioration.

164. The authorization holder submits to the Minister the samples whose analysis is completed not later than 90 days after the rig release date.

The Minister may agree to an additional period if the holder wishes to perform additional analyses. In that case, the holder submits to the Minister the samples and analysis results at the end of the agreed period.

The Minister may exempt the holder from the submission of the samples

(1) where the Minister considers that he or she has sufficient samples to adequately document the geological formations intersected by the well; and

(2) where the Minister already has samples from the same horizons.

165. Before disposing of any cutting samples, drilling cores or collected fluids, the authorization holder must offer them to the Minister.

166. The authorization holder must submit to the Minister, for approval, the corrective actions to be taken where any of the following situations occurs:

(1) a cementing operation provided for in the technical program cannot be carried out;

(2) no cement return is observed on the surface where such return was planned;

(3) a return of displaced drilling fluid indicates that the cement height required for cementing is not reached;

(4) there is uncertainty as to reaching the cementing goals.

167. An authorization holder must, in the case of an observation well, use a wellhead.

168. An authorization holder must, in the case of an observation well, send to the Minister, not later than 31 December of each year, a report signed and sealed by an engineer containing the data collected and the frequency of the collection and the annual inspection worksheet provided for in Schedule 2.

DIVISION IV
DAILY REPORT AND COMPLETION REPORT

169. The authorization holder must draw up a daily report of the work and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the drilling authorization number;

(2) a description, in chronological order, of the work carried out and the time required to carry out each step of the work;

(3) the name and contact information of the enterprises that carried out the work;

(4) the measured depth reached during the day;

(5) the composition of the drilling fluid and the flushing fluid and the volumes used;

(6) the working condition of the blowout prevention system;

(7) a loss of circulation;

(8) the components used to assemble the drill strings;

(9) the specifications of the casing and its setting depth;

(10) the weight applied to the bit and its penetration rate;

(11) the measurements of the deviation of the well path in dip, azimuth and depth;

(12) traces of petroleum or water detected;

(13) the type of pump used for the cementing and its capacity;

(14) the type of cement used, its density, its additives and their proportions, the setting time and the volume used;

(15) the well loggings carried out;

(16) the observations and data related to the evaluation or characterization of the geological formation;

(17) the fluid samples collected;

(18) the results of the pressure and leak tests;

(19) the volume and composition of the gas used, released, incinerated or burnt at the flare;

(20) the composition, concentration and detailed assessment of all the products stored and used on the site;

(21) the operational problems encountered and the corrective measures taken or planned;

(22) the indication of any temporary work interruption and the procedure followed to secure the stratigraphic survey;

(23) the indication of any event that disrupted the planned progress of the work; and

(24) any other information or document deemed necessary by the Minister.

170. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the drilling or re-entry work. If the Monday is a holiday, the report is sent on the first working day that follows.

171. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act starting from the rig release, a completion report signed by an engineer including, in particular,

(1) the drilling authorization number;

(2) the name and contact information of the licence holder;

(3) the name and contact information of the enterprises that carried out the work;

(4) the coordinates of the well collar on a plan provided by a land surveyor according to the NAD83 map reference system;

(5) the measurements of the deviation of the well path in dip, azimuth and depth, and the final coordinates of the bottom of the hole;

(6) the start and end dates of the work;

(7) a summary of the work carried out in chronological order;

(8) a report on the cementing operations for each of the casing strings, containing, in particular,

(a) the name and contact information of the enterprise that carried out the cementing work;

(b) the type of cementing unit used and the method for applying the cement;

(c) the type of cement used, its density, its additives and their proportions, the setting time and the volume used;

(d) the cemented interval;

(e) the composition and volume of the flushing fluid and the spacing fluid used;

(f) the circulation pressures;

(g) the propping pressure applied and the duration; and

(h) a description of the cement return, the quantity and the retreat; if no return is observed, a description of the corrective actions taken;

(9) the analysis results and the analysis certificates of the samples and fluid samples collected;

(10) the interpreted well loggings, re-set in actual vertical depth, and the corrections made;

(11) the demonstration that the centralization of the casings complies with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee;

(12) the measured temperature and pressure to the final depth of the well;

(13) the data, recordings, results of the drill-stem tests, pressure and leak tests and other tests and their interpretation;

(14) a geological description of the cuttings and drill cores, and a geotechnical description of the drill cores;

(15) a comparative analysis of the work carried out compared with that provided for in the technical program and the results obtained compared with those anticipated;

(16) the elements and practices that the holder intends to adopt and the parameters the holder intends to adjust from a standpoint of continued improvement for the holder's future drilling work, determined in compliance with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee;

(17) the list of the drill bits used, their type and the number of metres drilled by each;

(18) a technical description of the condition of the well after the drilling;

(19) the well classification determined according to Schedule 1;

(20) a longitudinal section of the well, according to the measured depth and the actual vertical depth, signed and sealed by an engineer, indicating, in particular,

(a) intersected groups, geological formations, lithological contacts and faults;

(b) zones of abnormal pressure;

(c) the diameter of the drill hole and the diameters of each of the casings and the guide tube;

(d) the location of each of the casings and the guide tube;

(e) if applicable, the depth interval of the open-hole well; and

(f) the other equipment installed or dropped in the well and not recovered;

(21) the daily tour reports;

(22) if laboratory testing has been done on the cement after the granting of the authorization, the properties of the cement determined in the laboratory;

(23) the technical reports prepared by the enterprises that carried out the work;

(24) the type of play encountered and a comparison with a similar oil zone; and

(24) photographs of the entire site after the drilling work.

CHAPTER VIII
COMPLETION

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

172. A licence holder who wishes to obtain a completion authorization must apply to the Minister, in writing, at least 45 days before the start of the completion work planned.

173. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the name and number of the well; and

(3) the work schedule and an estimate of the realization costs.

174. The application must be accompanied by

(1) the completion technical program provided for in section 175 signed and sealed by an engineer;

(2) a demonstration that the distances provided for in sections 179 and 180 are met;

(3) payment of the fee of $2,555; and

(4) any other information and document requested by the Minister.

175. The completion technical program must contain

(1) the name and contact information of the engineer responsible for the technical program;

(2) the name, profession and functions of the persons who prepared and revised the program;

(3) the well classification determined according to Schedule 1;

(4) a chronological and detailed description of the work to be carried out;

(5) the name and contact information of the enterprises charged with carrying out the work;

(6) a longitudinal section of the well indicating the technical elements;

(7) the type of service device, equipment, components and casings to be used and their specifications;

(8) the demonstration that the equipment, components and casings may withstand the different stresses to which they will be submitted, in particular, bursting, collapse and tension stresses;

(9) the demonstration that the local and regional geology and the presence of adjacent drill holes have been taken into consideration in the preparation of the program;

(10) the measures taken to ensure the integrity of the well;

(11) the type of completion;

(12) the degree of primary, secondary or tertiary petroleum recovery;

(13) the geological formations intersected and the depth of the intervals of each of the completion operations, in actual vertical depth and in measured depth;

(14) the nature, composition and concentration of the fluids used and the total volume expected during the completion work;

(15) the demonstration that the fluid injection pressure will not reach the pressure for fracturing geological formations;

(16) the anticipated volume and flow of flow-back water;

(17) the type of seals installed and the installation depths;

(18) a casing perforation program indicating, in particular, the number and the type of perforations;

(19) the list of the planned well loggings;

(20) the list of expected pressure and leak tests;

(21) the list of expected injectivity tests;

(22) the measures planned for the management of petroleum, formation fluids, drilling fluids, chemical substances and other discharges;

(23) if a simulation or modelling has been carried out, a description of the simulation or modelling and the results obtained; and

(24) the list of references consulted during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions.

Where work is planned in a temporarily closed well, the holder must, before it is carried out, inspect the site and the wellhead, maintain the wellhead and carry out a pressure and leak test. In that case, the technical program must also contain the annual inspection worksheet provided for in Schedule 2.

DIVISION II
TIME PERIODS AND NOTICE OF THE START OF THE WORK

176. The authorization holder must, within 12 months after the granting of the authorization, start the completion work.

The work is deemed to have started as soon as the first step provided in the work schedule is initiated.

177. The authorization holder must notify the Minister, in writing, at least 7 days before the expected date for the start of the work

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

SECTION III
CONDITIONS OF EXERCISE

178. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

179. The authorization holder may not carry out completion work in a well whose collar is at a distance less than those provided for in section 133.

The distances must be measured horizontally, in a straight line, from the collar to the nearest point of the elements referred to in the first paragraph of section 133.

The Minister may allow the reduction of the distances if the authorization holder demonstrates to the Minister that an effective protective measure reduces risks.

The distances provided for in the first paragraph do not apply with respect to buildings belonging to the authorization holder or used for the work.

180. The authorization holder may not position the activity site less than 60 m from a national park or a protected area entered in the protected area register provided for in section 5 of the Natural Heritage Conservation Act

181. Before the start of the completion operations, the authorization holder must carry out pressure and leak tests on the casings, the strings that will be acted upon, the valve, injection and wellhead pipes and any other component that was not submitted to a pressure and leak test. The tests must be carried out at a pressure that allows confirmation of the integrity of the components where they are submitted to the maximum pressure provided for in the technical program.

The integrity is confirmed and the authorization holder may start the completion operations if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes.

182. The authorization holder must ensure that the pressure applied during the completion work does not exceed the test pressure.

183. The authorization holder must ensure that

(1) each completion interval is isolated from any other permeable or porous interval intersected by the well, except in the case of a commingled production;

(2) any seal is installed as close as possible to the upper level of the completion interval;

(3) no fracturing is induced to the formation during the work; and

(4) the indicators and alarms associated with the monitoring equipment are installed on the service device to alert onsite personnel.

184. The authorization holder must install production tubing if the fluid withdrawn or injected is corrosive for the casings.

The authorization holder must design and install the casing and production tubing so as to comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

185. The cement used for cementing the production tubing must reach the minimum compressive strength of 3,500 kPa after 36 hours of hardening at the temperature of the shallowest formation to be covered.

The authorization holder must restrict the cement shrinkage process and limit to the minimum the risk of formation of a micro-annular space.

186. The authorization holder must use, until the end of the work, a blowout prevention system comprising at least 2 different sealing mechanisms or a wellhead designed to withstand the pressures provided for in the technical program.

187. The authorization holder must verify daily the blowout prevention system to make sure it works well. If a system component is defective, work must be suspended until the component is repaired.

188. The authorization holder must regularly inspect joints and structural elements of every equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps and maintains a register of those inspections until the end of the work for the permanent closure of the well.

189. Before drilling the well casing, the authorization holder must wait until the cement reaches a resistance sufficient to not compromise the integrity of the well.

DIVISION IV
DAILY REPORT AND COMPLETION REPORT

190. The authorization holder must draw up a daily report on the work and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the completion authorization number;

(2) a description, in chronological order, of the work carried out and the time required to carry out each step of the work;

(3) the name and contact information of the enterprises that carry out the completion work;

(4) a summary of the meteorological conditions;

(5) the result of all the pressure and leak tests, including their duration and the initial and final test pressures;

(6) the working condition of the blowout prevention system;

(7) the well loggings carried out;

(8) the type of seals installed and the installation depths;

(9) the technical details of the perforations, in particular, the number, type and intervals;

(10) the technical details of the completion by chemical stimulation, if applicable, in particular, the intervals, concentrations and volumes of acids and additives injected, the volume of flow-back water and the flows, and the injection pressures;

(11) the volume, composition and concentration of all the products stored and used on the site;

(12) the number, interval, volume of fluid, injection rate and pressure and a summary of the results of each injectivity test;

(13) the volume and composition of the gas used, released, incinerated or burnt at the flare;

(14) the operational problems encountered and the corrective measures taken or planned;

(15) the indication of any event that disrupted the planned progress of the work;

(16) the indication of any temporary work interruption and the procedure followed to secure the well; and

(17) any other information deemed necessary by the Minister.

191. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the completion work. If the Monday is a holiday, the report is sent on the first working day that follows.

192. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, a completion report signed by an engineer including, in particular,

(1) the completion authorization number;

(2) the start and end dates of the work;

(3) a summary of the work carried out according to their chronological order;

(4) the start and end dates of the completion work;

(5) a description of the condition of the well including a longitudinal section indicating the mechanical conditions of the well after the completion;

(6) the classification of the well determined according to Schedule 1;

(7) a description of the type of completion carried out and its degree of recovery, if applicable;

(8) the results of the pressure and leak tests;

(9) the intervals, the type of chemical completion, concentrations and volumes of acids and additives injected, the volume of flow-back water, injection rates and pressures;

(10) the results of the injectivity tests;

(11) the results of the other tests carried out;

(12) the interpreted well loggings and the results of the related analyses and studies;

(13) the analyses of recovered petroleum or water, if applicable;

(14) the number, interval, type and pressure of each series of perforations;

(15) the volume of flow-back water;

(16) a comparative analysis of the work carried out compared with that provided for in the technical program and the results obtained compared with those anticipated;

(17) the technical reports prepared by the enterprises that carried out the work; and

(18) if applicable, the other data collected during the completion work.

CHAPTER IX
FRACTURING

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

193. A licence holder who wishes to obtain a fracturing authorization must apply to the Minister, in writing, at least 60 days before the planned start of the work.

194. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the name and number of the well; and

(3) the work schedule and an estimate of the realization costs.

195. The application must be accompanied by

(1) the fracturing technical program provided for in section 196 signed and sealed by an engineer;

(2) a demonstration that the distances provided for in sections 201 and 202 are met;

(3) payment of the fee of $2,555; and

(4) any other information and document requested by the Minister.

196. The fracturing technical program must contain

(1) the name and contact information of the engineer responsible for the technical program;

(2) the name, profession and functions of the persons who prepared and revised the program;

(3) the name and contact information of the enterprises charged with carrying out the work;

(4) a chronological and detailed description of the work to be carried out;

(5) the classification of the well determined according to Schedule 1;

(6) a longitudinal section of the well indicating the technical elements;

(7) an interpreted logging of the quality of the cement bond or any other equivalent analysis of the evaluation of the production tubing or the intermediate casing, from the shallowest zone targeted containing petroleum to the top of the cement, that shows that the hydraulic isolation has been obtained;

(8) the list of well loggings planned;

(9) the list of pressure and leak tests and any other tests planned;

(10) the list of fracturing tests planned, or the reasons why they are not required;

(11) the type of service device, equipment, components and casings to be used and their specifications;

(12) an evaluation of well integrity compliant with the Industry Recommended Practice, IRP: # 24, Fracture stimulation, published by the Drilling and Completion Committee indicating, in particular,

(a) the identification of the primary protective barrier and, if applicable, the secondary protective barrier;

(b) the maximum pressure to be used to avoid compromising the integrity of the well; and

(c) that the equipment, components and casings may withstand the conditions, forces and stresses to which they will be submitted;

(13) a description of the fracturing intervals expected, in particular, the location of the perforations, in actual vertical depth and measured depth;

(14) the number of steps planned;

(15) the nature and total volume of the fracturing fluids anticipated at each step;

(16) the pressures and fluid flows anticipated for pumping at each step;

(17) the type of fractures;

(18) the quantity of energy used for pumping at each fracturing step;

(19) a fracturing parameter monitoring program including, in particular,

(a) the surface injection pressure;

(b) the fluid flow;

(c) the concentration of proppant; and

(d) if applicable, the pressure in the annular space between the primary and secondary protective barriers;

(20) a well integrity monitoring program including, in particular,

(a) the changes in the well characteristics likely to indicate a weakness of the casings or any other aspect of the well integrity necessary for the isolation of the usable groundwater;

(b) a well casing corrosion monitoring program; and

(c) the analyses to be carried out concerning the flows of the surface casing blowholes and the migration of the gas;

(21) the following information concerning the fracturing fluids used:

(a) the commercial name of all the additives and their function;

(b) the maximum concentration of each additive and of each additive in the fracturing fluid;

(22) an evaluation of the risks related to the presence of additives in the fracturing fluids and the practices and operational audits provided for the management of the risks and including, in particular,

(a) the physical, chemical and toxicological properties of the additives in the fracturing fluid;

(b) the classification of the additives based on their chemical ingredients and their potential impact on the safety and health of persons;

(c) the identification of the additives for which specific verifications or practices are required to reduce the risks on the safety and health of persons; and

(d) the nature of the specific verifications and practices planned;

(23) an evaluation of the propagation of the fractures including, in particular, an analysis of the communication potential between the stimulated well and the adjacent drilling holes carried out in compliance with the Industry Recommended Practice, IRP: # 24, Fracture stimulation, published by the Drilling and Completion Committee, by using the relevant data to which the holder has access;

(24) an evaluation of the capacity of the geological formations located between the petroleum zone and the base of the usable groundwater aquifer to act as a confining layer and contain the effects of the fracturing, or the reasons why it is not required; if applicable, the evaluation must contain, in particular,

(a) an analysis of the mobility of the fracturing fluid in the zone located between the petroleum zone and the base of the usable groundwater;

(b) an analysis of the location and extent of the geological faults and the zones comprising natural fractures; and

(c) an analysis distance covering double the half length of the fracture planned on the entire depth of the drill hole;

(25) a seismicity analysis based, in particular, on

(a) the normal local and regional seismic activity determined from the historical data available;

(b) the pre-existing geological constraints near the fracturing work contemplated;

(c) the evaluation of the risk of seismicity induced by the fracturing work; and

(d) the evaluation of the probability that an induced earthquake of a magnitude greater than normal occurs;

(26) the measures planned for the management of petroleum, formation fluids, drilling fluids, chemical substances and other discharges;

(27) if a simulation or modelling has been carried out, a description of the simulation or modelling and the results obtained; and

(28) the list of references consulted during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions.

Where the holder observes a probability of an induced seismicity of a magnitude greater than the normal seismic activity, the technical program must also contain a plan for the monitoring, mitigation and response to the induced seismicity including, in particular,

(1) a quality and quantity monitoring plan that covers a radius of 10 km from the fracturing zone, including, in particular,

(a) a map of the temporary or permanent seismic monitoring equipment stations;

(b) the specifications of the seismic monitoring equipment, the data transmission method and their accuracy in measuring the location, depth and magnitude of a seismic activity;

(c) the monitoring procedure, identification of the persons responsible and the speed of the detection and location of an earthquake and the communication of the information;and

(d) a monitoring period comprised between the start of the work and the shortest of the following periods:

i. 60 days after the end of the fracturing work;

ii. the end of the return of the flow-back water to the surface; and

(2) the measures applicable if the recorded magnitude of the induced seismic activity exceeds those provided for in section 212.

Where work is planned in a temporarily closed well, the holder must, before it is carried out, inspect the site and the wellhead, maintain the wellhead and carry out a pressure and leak test. In that case, the technical program must also contain the annual inspection worksheet provided for in Schedule 2.

197. If a licence holder applies for a fracturing authorization 5 years or more after the initial cementing of the well casing, the holder must also provide in the technical program a demonstration that the cementing of the well and casings used are in good condition, in particular, to preserve the integrity of the well during the fracturing work.

DIVISION II
TIME PERIODS AND NOTICE OF THE START OF THE WORK

198. The authorization holder must, within 12 months after the granting of the authorization, start the fracturing work.

The work is deemed to have started as soon as the first step provided in the work schedule is initiated.

199. The authorization holder must, at least 7 days before, notify the Minister of the start of the fracturing work.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

DIVISION III
CONDITIONS OF EXERCISE

200. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

201. The authorization holder may not carry out fracturing work in a well whose collar is at a distance less than those provided for in section 133.

The distances must be measured horizontally, in a straight line, from the collar to the nearest point of the elements referred to in the first paragraph of section 133.

The Minister may allow the reduction of the distances if the authorization holder demonstrates to the Minister that an effective protective measure reduces risks.

The distances provided for in the first paragraph do not apply to buildings belonging to the authorization holder or used for the work.

202. The authorization holder may not position the activity site less than 60 m from a national park or a protected area entered in the protected area register provided for in section 5 of the Natural Heritage Conservation Act.

203. The casings, components and equipment used by the authorization holder must be designed, built, tested, maintained or used so as to ensure the integrity of the well during the fracturing work.

The surface casing and the cement forming it are not protective barriers and must not be exposed to pressures created by the fracturing work.

204. Where the authorization holder holds an exploration licence, the casings, components and equipment the holder uses must be designed so as to serve as primary and secondary protective barriers during the fracturing work.

The Minister may exempt the holder from that requirement if the holder demonstrates to the Minister that the protections in place are sufficient.

205. Before the start of the fracturing operations, the authorization holder must carry out pressure and leak tests on the casings, the strings that will be acted upon, the valve, injection and wellhead pipes and any other component that will be acted upon that was not submitted to a pressure and leak test. The tests must be carried out at a pressure that allows confirmation of the integrity of the components where they are submitted to the maximum pressure provided for in the technical program.

The integrity is confirmed and the holder may start the fracturing operations if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes.

206. Before the start of the fracturing operations, the authorization holder must carry out at least 1 fracturing test.

The Minister may exempt the holder from that requirement if the holder demonstrates to the Minister that a test in the same geological formation has already been carried out in the same conditions.

207. The authorization holder must use, until the temporary or permanent stop of the fracturing work, a blowout prevention system comprising at least 2 different sealing mechanisms or a wellhead designed to withstand the anticipated pressures.

208. The authorization holder must verify daily the blowout prevention system to make sure it works well. If a system component is defective, work must be suspended until the component is repaired.

209. The authorization holder must regularly inspect joints and structural elements of every equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps a register of those inspections and maintains it until the end of the work for the permanent closure of the well.

210. The authorization holder must ensure that the indicators and alarms associated with the monitoring equipment are installed on the service device to alert onsite personnel.

211. The authorization holder must, if applicable, keep the plan for the monitoring, mitigation and response to an induced seismicity at all times on the activity site.

212. If an earthquake of a 2.0 magnitude or more is detected and the epicentre is located within a radius of 10 km from the fracturing zone, the authorization holder must implement a monitoring, mitigation and response plan so as to eliminate or reduce the possibility of other seismic events resulting from the fracturing operations.

If an earthquake of a 4.0 magnitude or more is detected and the epicentre is located within a radius of 10 km from the fracturing zone, the holder must immediately interrupt the fracturing work and secure the well.

The holder immediately sends an incident notice to the Minister.

213. Following an interruption provided for in the second paragraph of section 212, the authorization holder who wishes to resume fracturing work must submit to the Minister, for approval, a supplementary agreement to the holder's technical program to reduce future induced seismicity at a local magnitude of less than 4.0.

The holder resumes the work when the holder implements the corrective measures to the Minister's satisfaction.

DIVISION IV
DAILY REPORT AND COMPLETION REPORT

214. The authorization holder must draw up a daily report of the work and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the fracturing authorization number;

(2) the square-drive bushing;

(3) a description, in chronological order, of the work carried out and the time required for carrying out each step;

(4) the name and contact information of the enterprises carrying out the fracturing work;

(5) a summary of the meteorological conditions;

(6) the result of the pressure and leak tests, including the duration and the initial and final test pressures;

(7) the working condition of the blowout prevention system;

(8) the well loggings carried out;

(9) the type of seals installed and the installation depths;

(10) the volume, composition and concentration of all the products stored and used on the site;

(11) the volume, duration, flow and composition of the flow-back water;

(12) the number, interval, volume of fluid, injection flow and pressure and a summary of the results of the fracturing tests;

(13) the measurements of the extension and orientation of induced fractures;

(14) the volume and composition of the gas used, released, incinerated or burnt at the flare;

(15) the operational problems encountered and the corrective measures taken or planned;

(16) the indication of any event that disrupted the planned progress of the work;

(17) the indication of any temporary interruption of the fracturing work and the procedure followed to secure the well; and

(18) any other information or document deemed necessary by the Minister.

215. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the fracturing work. If the Monday is a holiday, the report is sent on the first working day that follows.

216. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, a completion report signed by an engineer including, in particular,

(1) the fracturing authorization number;

(2) the start and end dates of the work;

(3) a summary of the work carried out according to the chronological order;

(4) a description of the condition of the well including a longitudinal section indicating the mechanical conditions of the well after the fracturing;

(5) the classification of the well determined according to Schedule 1;

(6) the result of the pressure and leak tests, including their duration, and the initial and final test pressures;

(7) the results of the fracturing tests including, in particular,

(a) the number and duration of the tests;

(b) the volumes and flows of the injected fluid per test;

(c) the measured pressure on the surface and at the bottom of the well;

(d) the test interval, in metre of measured depth;

(e) the formation temperature;

(f) the indication of the presence of flow-back water or a fracture that closed up by natural leakage;

(g) the indication of any problem encountered and its potential impact on the test results;

(h) the interpretation and analysis of the test results, including, in particular,

i. the measured constraints;

ii. a description and justification of the analysis and interpretation techniques; and

iii. the identification and analysis of any unexpected result; and

(i) the raw test data, in particular,

i. the date of the test;

ii. the test depth, in metre of measured depth; and

iii. the test data, including the time elapsed, the wellhead pressure, the pressure at the bottom of the well, the injection flow, the blow-back pressure and the temperature;

(8) the number, interval, type and pressure of each series of perforations;

(9) the start and end dates of each fracturing step;

(10) the maximum and average processing flow of each fracturing step;

(11) the maximum and average processing pressure of each fracturing step;

(12) the duration of the return of the flow-back water to the surface, the total volume recovered, the average flow and the composition;

(13) a comparative analysis of the work carried out compared with that provided for in the technical program and the results obtained compared with those anticipated;

(14) the flow-back volume estimating the volume of injected fluid and the volume that remained in the formation;

(15) the interpreted well loggings and the results of the related analyses and studies;

(16) the analyses of the petroleum or water recovered, if applicable;

(17) the data collected during the fracturing work, in particular, the fracturing parameter monitoring data;

(18) if applicable, the raw and interpreted seismic monitoring data;

(19) the comparative analysis of the reaction of the geological formations compared to the reaction anticipated;

(20) the technical reports prepared by the enterprises that carried out the work;

(21) the follow-up after an incident referred to in sections 217 and 218; and

(21) if applicable, the other data collected during the fracturing activities.

DIVISION V
NOTICE TO THE MINISTER

217. The authorization holder must immediately notify the Minister where any of the following incidents occurs:

(1) the maximum pressure provided for in the technical program is exceeded;

(2) the volume of fluid rising to the surface exceeds the volume anticipated;

(3) the holder has reasons to suspect a flaw in the casing or the casing cement, or the absence of isolation of a source of usable groundwater.

218. When the authorization holder observes an involuntary entry of any formation fluid inside an adjacent drill hole, the authorization holder must immediately notify the person responsible for the drill hole and the Minister.

CHAPTER X
RECONDITIONING

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

219. A licence holder who wishes to obtain a reconditioning authorization must apply to the Minister, in writing, at least 45 days before the planned start of the work.

220. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the well name, number and type; and

(3) the work schedule and an estimate of the realization costs.

221. The application must be accompanied by

(1) the reconditioning technical program provided for in section 222 signed and sealed by an engineer;

(2) payment of the fee of $4,426; and

(3) any other information and document requested by the Minister.

222. The reconditioning technical program must contain

(1) the name and contact information of the engineer responsible for the technical program;

(2) the name, profession and functions of the persons who prepared and revised the program;

(3) a chronological and detailed description of the work to be carried out;

(4) the classification of the well determined according to Schedule 1;

(5) the name and contact information of the enterprises charged with carrying out the work;

(6) the demonstration that the regional and local geology and the presence of adjacent drill holes have been taken into consideration;

(7) the reasons justifying the reconditioning;

(8) the purpose of the reconditioning;

(9) a longitudinal section of the well indicating the technical elements;

(10) the list of pressure and leak tests, and the list of other tests planned;

(11) the list of well loggings planned;

(12) the type of service device and equipment to be used and their specifications;

(13) the intervals to be the subject of reconditioning;

(14) a description of the fluids used;

(15) the pressure at the closed wellhead and the shut-in pressure of the well;

(16) the demonstration that the equipment, components and casings may withstand the different stresses to which they will be submitted, in particular, bursting, collapse and tension stresses;

(17) if applicable, a cementing program including, in particular,

(a) the type of cementing;

(b) the cementing intervals;

(c) the method for applying the cement;

(d) the type of cement, its density, its additives and their proportions, the setting time, the flow and pressure used and the volume that remained in the well and the volume that rose to the surface;

(e) if applicable, the maximum pressure for injecting the cement; and

(f) the changes to the cement required, if applicable, due to specific physical and chemical conditions of the environment, or to give the cement specific properties;

(18) a well integrity verification and follow-up program;

(19) any specific condition that could affect the safety of the work on the well;

(20) an evaluation of the impact of the proposed work on the optimal recovery of the resource; and

(21) the list of references consulted during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions.

Where work is planned in a temporarily closed well, the holder must, before it is carried out, inspect the site and the wellhead, maintain the wellhead and carry out a pressure and leak test. In that case, the technical program must also contain the annual inspection worksheet provided for in Schedule 2.

DIVISION II
TIME PERIODS AND NOTICE OF THE START OF THE WORK

223. The authorization holder must, within 12 months after the granting of the authorization, start the reconditioning.

The work is deemed to have started as soon as the first step provided in the work schedule is initiated.

224. The authorization holder must, at least 7 days before, notify the Minister of the start date of the reconditioning.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

DIVISION III
CONDITIONS OF EXERCISE

225. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

226. The authorization holder must carry out the reconditioning so as to

(1) ensure the safety of the work;

(2) not compromise the capacity of the well to withstand potential conditions, forces and stresses;

(3) ensure a sufficient resistance to fluid kicks;

(4) protect the integrity of the usable groundwater; and

(5) ensure that the petroleum zones and the aquifer layers are isolated from one another.

227. The authorization holder must use, until the temporary or permanent stop of the work, a blowout prevention system comprising at least 2 different sealing mechanisms or a wellhead designed to withstand the pressures provided for in the technical program.

228. The authorization holder must verify daily the blowout prevention system to make sure it works well. If a system component is defective, work must be suspended until the component is repaired.

229. The authorization holder must regularly inspect joints and structural elements of every equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps and maintains a register of those inspections until the end of the work for the permanent closure of the well.

230. The authorization holder must ensure that the indicators and alarms associated with the monitoring equipment are installed on the service device to alert onsite personnel.

DIVISION IV
DAILY REPORT AND COMPLETION REPORT

231. The authorization holder must draw up a daily report of the work and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the reconditioning authorization number;

(2) the square-drive bushing;

(3) a description, in chronological order, of the work carried out and the time required for carrying out each step;

(4) the name and contact information of the enterprises carrying out the reconditioning;

(5) a summary of the meteorological conditions;

(6) the result of the pressure and leak tests, including the duration and the initial and final test pressures;

(7) the result of any other test carried out;

(8) the working condition of the blowout prevention system;

(9) the well loggings carried out;

(10) the type of seals installed and the installation depths;

(11) the volume, composition and concentration of the reconditioning fluids;

(12) the volume and composition of the gas used, released, incinerated or burnt at the flare;

(13) the operational problems encountered and the corrective measures taken or planned;

(14) the indication of any event that disrupted the progress of the work;

(15) the indication of any temporary interruption of the reconditioning work and the procedure followed to secure the well; and

(16) any other information or document deemed necessary by the Minister.

232. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the reconditioning work. If the Monday is a holiday, the report is sent on the first working day that follows.

233. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, a completion report signed by an engineer including, in particular,

(1) the reconditioning authorization number;

(2) the start and end dates of the work

(3) a summary of the work carried out according to the chronological order;

(4) a description of the condition of the well including a longitudinal section indicating the mechanical conditions of the well after the reconditioning;

(5) the classification of the well determined according to Schedule 1;

(6) the result of the pressure and leak tests, including their duration, and the initial and final test pressures;

(7) the result of any other test carried out;

(8) a comparative analysis of the work carried out compared with that provided for in the technical program and the results obtained compared with those anticipated;

(9) the interpreted well loggings and the results of the related analyses and studies;

(10) the technical reports prepared by the enterprises that carried out the work; and

(11) if applicable, the other data collected during the reconditioning activities.

CHAPTER XI
PETROLEUM EXTRACTION TESTS AND USE OF AN UNDERGROUND RESERVOIR

DIVISION I
PETROLEUM EXTRACTION TEST PROGRAM

234. An exploration licence holder who wishes to carry out petroleum extraction tests must submit a petroleum extraction test technical program, for approval, to the Minister at least 30 days before the expected date for the start of the installation of the equipment needed.

235. The test technical program must be signed and sealed by a geologist or an engineer and contain

(1) the name and contact information of the holder and the licence number;

(2) the name and number of the well;

(3) the planned duration of the tests and an estimate of the realization costs;

(4) the name and contact information of the geologist or engineer responsible for the tests;

(5) a chronological and detailed description of the tests to be carried out;

(6) the classification of the well determined according to Schedule 1;

(7) the name and contact information of the enterprise charged with carrying the tests;

(8) the depth interval and a description of the geological formations and the zones subject to the tests;

(9) the geological, geophysical, petrophysical and hydrostatic information and the drilling results justifying the tests;

(10) a description of the current condition of the well;

(11) if a seismic profile has been carried out, the interpreted profile indicating the location of the zones subject to the tests;

(12) the methods planned to dispose of the substances extracted; and

(13) any other information or document deemed necessary by the Minister.

DIVISION II
UNDERGROUND RESERVOIR TRIAL TEST PROGRAM

236. An exploration licence holder who wishes to carry out trial tests must submit an underground reservoir trial test technical program for approval to the Minister at least 30 days before the expected start date of the installation of the necessary equipment.

237. The test technical program must be signed and sealed by a geologist or an engineer and contain

(1) the name and contact information of the holder and the licence number;

(2) the name and number of the well;

(3) the planned duration of the tests and an estimate of the realization costs;

(4) the name and contact information of the geologist or engineer responsible for the tests;

(5) a chronological and detailed description of the tests to be carried out;

(6) the classification of the well determined according to Schedule 1;

(7) the name and contact information of the enterprise charged with carrying out the tests;

(8) a description of the underground reservoir subject to the tests;

(9) the geological, geophysical, petrophysical and hydrostatic information and the drilling results justifying the tests;

(10) a description of the current condition of the wells;

(11) at least 3 interpreted seismic profiles indicating the location in the subsurface of the underground reservoir subject to the tests and the well seismic cushioning;

(12) the estimated capacity of the underground reservoir on the basis of a modelling;

(13) the shut-in pressure of the underground reservoir recorded at the well subject to the tests;

(14) the nature and properties of the substances stored or disposed of in the underground reservoir during the test period;

(15) the injection method and the volume and pressure of the substances injected in the underground reservoir during the tests;

(16) the methods planned for disposing of the substances withdrawn; and

(17) any other information or document deemed necessary by the Minister.

DIVISION III
TIME PERIODS AND NOTICE OF THE START OF THE WORK

238. An exploration licence holder who carries out petroleum extraction tests or underground reservoir trial tests must, at least 7 days before the expected start date of the installation work of the equipment necessary for that purpose, notify the Minister in writing.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

DIVISION IV
CARRYING OUT OF PETROLEUM EXTRACTION TESTS AND UNDERGROUND RESERVOIR TRIAL TESTS

239. The maximum duration of a test period is 240 consecutive days for the petroleum extraction tests and 365 consecutive days for the underground reservoir trial tests.

The test period begins on the first day on which an exploration licence holder carries out petroleum extraction tests or underground reservoir trial tests and ends on the day on which the holder completely ceases to carry out the tests.

240. An exploration licence holder who carries out tests must comply with the test technical program approved by the Minister.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by a geologist or an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

241. An exploration licence holder who carries out tests must ensure that

(1) the equipment used is designed so as to properly evaluate the formation;

(2) the equipment rated pressure upstream of and including the well testing manifold exceeds the maximum anticipated shut-in pressure; and

(3) the equipment downstream of the well testing manifold is sufficiently protected against overpressure.

DIVISION V
DAILY REPORT AND TEST END REPORT

242. An exploration licence holder who carries out petroleum extraction test or underground reservoir trial tests must draw up a daily report of the tests and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the name and contact information of the holder and the licence number;

(2) the volumes and flows of petroleum and other fluids extracted, injected, withdrawn and disposed of in the well;

(3) the volume and composition of the gas used, released, incinerated or burnt at the flare;

(4) the operational problems encountered and the corrective measures taken or planned;

(5) the indication of any event that disrupted the progress of the work; and

(6) any other information or document deemed necessary by the Minister.

243. An exploration licence holder who carries out tests must send to the Minister, every Monday, the daily reports of the preceding week until the end of the test period. If the Monday is a holiday, the report is sent on the first working day that follows.

244. An exploration licence holder who carries out tests must, within 30 days after the end of the test period, send to the Minister a test completion report signed by a geologist or an engineer including, in particular,

(1) the name and contact information of the holder and the licence number;

(2) a summary of the activities related to the tests;

(3) a technical description of all the tests carried out;

(4) the results obtained during the tests, in particular,

(a) the average daily pressures registered at the wellhead;

(b) the average daily flows measured;

(c) the volumes of fluids extracted, injected, withdrawn and disposed of;

(d) in the case of petroleum extraction tests, the decline curve, the deliverability curve of the well flow and the pressure rise curve;

(e) in the case of underground reservoir use tests, the deliverability decline curve and the pressure rise curve; and

(f) for a gas well, the absolute open-flow potential;

(5) the realization cost of the tests carried out;

(6) the methods used to dispose of the substances extracted;

(7) the results of the analyses carried out including, in particular, the composition of the fluids extracted, injected, withdrawn and disposed of;

(8) the classification of the well determined according to Schedule 1; and

(9) the technical reports prepared by the enterprises that carried out the work.

CHAPTER XII
SPECIFIC REQUIREMENTS RELATING TO THE PRODUCTION

DIVISION I
PETROLEUM PRODUCTION TESTS

245. A production licence holder must carry out production tests for all the wells that have not been subject to extraction tests so as to determine

(1) the nature of the fluids therein;

(2) the petroleum production capacity per day, in m^3, and the volume of water associated with that production; and

(3) the new geological, hydrostatic, petrophysical and geophysical characteristics of the pool.

246. A production licence holder must measure the shut-in pressure of the pool before and after the production test.

247. A production licence holder must carry out, every 3 months, a test in normal production conditions of a maximum duration of 24 hours for each well connected to a bank to determine the petroleum and water production rate.

The holder uses the results of those tests to allocate the monthly production of the bank between the various wells connected to it, if applicable.

On the application of the holder, the Minister may reduce the frequency of the tests. The holder's application must contain

(1) the anticipated frequency of the tests and the method to be used;

(2) a summary of the accuracy of the tests;

(3) the reasons justifying the reduction of the frequency of the tests; and

(4) any other information or document requested by the Minister.

The term "bank" means the storage facilities that receive the production from one or more wells and include the equipment for separating the petroleum from the other fluids and to measure them.

248. During the tests, a production licence holder must measure the pressure interference from one well to the other.

249. A production licence holder must notify the Minister, at least 7 days before, of the date and time planned for the carrying out of the tests.

250. A production licence holder must send to the Minister the results of the tests carried out and any other information deemed necessary by the Minister, within 30 days after the end of the tests.

DIVISION II
PRODUCING WELL

251. A production licence holder must carry out production loggings before ceasing operations of a producing well.

252. A production licence holder must, for each well in production during the year, measure its shut-in pressure during the first and last months of the year.

DIVISION III
PETROLEUM ENHANCED RECOVERY

253. A production licence holder who wishes to carry out a petroleum enhanced recovery project must submit an enhanced recovery technical program signed and sealed by an engineer for the approval of the Minister at least 30 days before the start of the work necessary for the project.

254. The enhanced recovery technical program must contain

(1) the name and contact information of the holder and the licence number;

(2) the name of the wells concerned by the project;

(3) the classification of the wells determined according to Schedule 1;

(4) a map at a scale sufficient to show the area in which the project must be carried out and the boundaries of the pool;

(5) a diagram showing the wells and the well injection completion methods, if applicable;

(6) a diagram showing the water injection, treatment and measuring installations and the configuration and rated working pressure of the pipes and equipment;

(7) the anticipated method for controlling corrosion in the wells, collecting pipes and surface installations;

(8) a geological and technical analysis including, in particular,

(a) a longitudinal section of the pool indicating the top and base of the reservoir and the distribution of the fluids;

(b) a map at a scale sufficient to show the characteristics of the reservoir, in particular, the structure of the top, the size of the pores and permeability capacity;

(c) production and total recovery forecasts;

(d) the source of the injection fluid and a demonstration of its compatibility with the rocks and fluids of the reservoir;

(e) the estimated injection rate of each of the injection wells and their injection pressure at the wellhead;

(f) the recovery forecasts and simulation models, if applicable; and

(g) the measured or estimated pressure of the reservoir in the area of the project and the pressure of the reservoir as part of the enhanced recovery;

(9) the activities schedule, in particular, the drilling, completion and installation construction activities related to the project; and

(10) any other information or deemed necessary by the Minister.

255. A production licence holder who carries out a petroleum enhanced recovery project must, at least 15 days before the expected date for the start of the petroleum enhanced recovery, notify the Minister in writing.

The holder also notifies the Minister 7 days before temporarily or permanently ceasing the activities by indicating the reasons justifying the cessation.

256. Before starting the injection in a directional or horizontal drilling, a production licence holder must carry out a diametrical well logging and send the interpreted diametrical well logging to the Minister.

The holder may start petroleum enhanced recovery if no deformity has been identified on the casing and if the well is clean.

CHAPTER XIII
AUTHORIZATION TO PRODUCE BRINE

DIVISION I
CONDITIONS FOR OBTAINING AN AUTHORIZATION

257. A licence holder who wishes to obtain an authorization to produce brine must apply to the Minister, in writing, at least 60 days before the expected date for the start of the production.

258. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the name and number of the well; and

(3) the work schedule and an estimate of the realization costs.

259. The application must be accompanied by

(1) the brine production program provided for in section 260 signed and sealed by an engineer;

(2) payment of the fee of $2,500;

(3) payment of the annual fee for the first year; and

(4) any other information or document requested by the Minister.

260. The brine production program must contain

(1) the name and contact information of the engineer responsible for the program;

(2) the name, profession and functions of the persons who prepared or revised the program;

(3) the name and contact information of the enterprise charged with carrying out the work;

(4) a longitudinal section of the well indicating the technical elements;

(5) a general presentation of the production project including, in particular,

(a) a description of the manner in which the well will have to be adapted and the related installations planned;

(b) the list of licences, certificates and other authorizations to be obtained, if applicable;

(c) a description of the manner in which the brine will be treated, delivered and transported, if applicable; and

(d) a general description of the progress of the installations over time;

(6) an economic evaluation of the project including, in particular,

(a) the market targeted, including the anticipated uses;

(b) an estimate of the production and its market value; and

(c) an estimate of the royalties to be paid;

(7) the characterization of the brine including, in particular,

(a) a brine analysis certificate prepared from a characterization sampling performed by a hydrogeologist pertaining, in particular, to its pH, conductivity, turbidity, salinity, content in sodium, calcium, magnesium, potassium, hydrogen sulfide (H_2S), radon, methane, lead, mercury and arsenic, its content in chloride ion, bromide ion, sulfate ion and carbonate ion, and its content in petroleum; and

(b) the temperature of the brine at the well outlet;

(8) a brine production, storage and transportation program including, in particular,

(a) the process by which the brine will be extracted;

(b) the brine treatment method, in particular, its filtering and degassing, and the addition of additives;

(c) if applicable, the brine storage method including, in particular,

i. the type of tanks and lines to be used and their technical parameters; and

ii. the resistance to corrosion of the equipment; and

(d) the means of transportation and delivery of the brine; and

(9) the list of references consulted during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions.

Where work is planned in a temporarily closed well, the holder must, before it is carried out, inspect the site and the wellhead, maintain the wellhead and carry out a pressure and leak test. In that case, the technical program must also contain the annual inspection worksheet for temporarily closed wells provided for in Schedule 2.

DIVISION II
TIME PERIODS AND WORK NOTICE

261. The authorization holder must, within 24 months after the granting of the authorization by the Minister, start the production of brine.

262. The authorization holder must notify the Minister, in writing, at least 14 days before the expected start date for the construction of the infrastructures necessary for the production and at least 30 days before the start date of the production.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 14 or 30 days of the first notice of delay, as the case may be, or of the holder's intent not to proceed.

DIVISION III
CONDITIONS OF EXERCISE

263. The authorization holder must comply with the brine production program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the brine production program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

264. The authorization holder must, as soon as the work starts, add on the sign installed in accordance with section 132, an indication that it is a well containing brine.

265. The authorization holder must regularly inspect joints, structural elements and every equipment used for the extraction, treatment, storage and transportation of the brine to ensure the safe operation of the equipment.

The holder keeps a register of those inspections and maintains it until the end of the work for the permanent closure of the well.

266. The annual fee payable by an authorization holder is $722.

267. The Minister renews an authorization for a 5-year period, provided that the holder

(1) pays the fee for the first year of renewal;

(2) complied with the provisions of the Act and its regulations during the previous term;

(3) demonstrates that he or she produced brine for at least 24 months during the previous term; and

(4) demonstrates that the use approach allows optimal recovery of the brine.

The renewal application must be sent at least 60 days before the end of the previous term, failing which the holder is liable to the monetary administrative penalty provided for in paragraph 1 of section 187 of the Act.

268. An authorization to produce brine is transferable only in the case of the transfer of the licence of the authorization holder.

269. A person who wishes to obtain an authorization to produce brine already granted must apply to the Minister, in writing, at the same time as the application for the transfer of the licence.

The application must be accompanied by a supplementary agreement to the brine production program, if applicable.

DIVISION IV
MONTHLY REPORTS AND ROYALTIES

270. The authorization holder must draw up a monthly report of the work and keep it on the activity site.

The monthly report must contain, in particular,

(1) the number of the authorization to produce brine;

(2) the volume of brine extracted during the month, in m^3;

(3) the number of production days;

(4) the monthly and cumulative costs for production, transportation and purification and the average retail selling price;

(5) the wellhead value of the brine extracted;

(6) the calculation of the royalty in accordance with section 272;

(7) the operational problems encountered and the corrective measures taken or planned;

(8) the indication of any event that disrupted the progress of the work; and

(9) any other information or document deemed necessary by the Minister .

271. The authorization holder must send to the Minister, within the 25 first days of the following month, the monthly report, until the end of the period of validity of the authorization.

The monthly report is accompanied by the payment of the royalties on the brine extracted during the month concerned.

272. The authorization holder pays the following monthly royalties for the brine extracted from the well:

(1) where the average daily production of the well is 300 m^3 or less, 5% of the well head value of the brine extracted;

(2) where the average daily production of the well is greater 300 m^3 but less than 1,000 m^3,

(a) 5% of the well head value of the brine extracted for the first 300 m^3; and

(b) 10% of the well head value of the brine extracted on the excess; and

(3) where the average daily production of the well is greater than 1,000 m^3,

(a) 8.75% of the well head value of the brine extracted for the first 1,000 m^3; and

(b) 12.5% of the well head value on the excess.

273. The royalties must be paid in cash, or by cheque or postal money order payable to the order of the Minister of Finance of Québec.

274. The royalties that are not paid within the prescribed period bear interest as of the date of the failure to pay, at the rate determined under section 28 of the Tax Administration Act (chapter A-6.002).

CHAPTER XIV
WELL CLOSURE

DIVISION I
TEMPORARY OR PERMANENT CLOSURE AUTHORIZATION

§1. *Temporary closure authorization*

§§1. *Conditions for obtaining an authorization*

275. A licence holder must temporarily close the well on the expiry of a period of 12 consecutive months without activity in the well. The Minister may, however, grant an additional period if the holder demonstrated that exceptional circumstances warrant it.

276. On request and after analysis of the annual report provided for in section 168, the Minister may, in the case of an observation well, exempt a licence holder from the requirement to temporarily close the well for the current year where the holder demonstrates the integrity of the well and justifies its use for monitoring the pool or the underground reservoir.

277. A licence holder who must obtain a temporary well closure authorization must apply to the Minister, in writing, at least 30 days before the start of the work.

278. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the name of the well; and

(3) the work schedule and an estimate of the realization costs.

279. The application must be accompanied by

(1) the temporary closure technical program provided for in section 280 signed and sealed by an engineer;

(2) payment of the fee of $2,058; and

(3) any other information or document requested by the Minister.

280. The temporary closure technical program must contain

(1) the name and contact information of the engineer responsible for the program;

(2) the name, profession and functions of the persons who prepared or revised the program;

(3) the classification of the risk potential of the well determined according to Schedule 4;

(4) the condition of the well before the work for the temporary closure;

(5) the classification of the well determined according to Schedule 1 ;

(6) a chronological and detailed description of the work to be carried out;

(7) a description of the activity site restoration work to maintain the quality of the natural landscape, minimize impact on wildlife and harmonize the activity site with the use of the territory, and a plan presenting the wok including, in particular,

(a) the procedure for dismantling installations and, if applicable, the procedure for dismantling the supply cable;

(b) the rehabilitation of contaminated land;

(c) the purge of pipes; and

(d) the withdrawal of equipment and facilities;

(8) the name and contact information of the enterprise charged with carrying out the work;

(9) a longitudinal section indicating, in particular, the anticipated mechanical conditions of the well after the closure and the various geological formations intersected and their respective pressures;

(10) the type of service device and equipment to be used and their specifications, in particular, the configuration of the wellhead and the surface casing blowhole;

(11) the demonstration that, before carrying out the work for the temporary closure, the well did not present any risks within the meaning of the second paragraph of section 18 for the safety of persons and property, and environmental protection;

(12) the type of plugs used and the anticipated depth intervals;

(13) for each cement plug, the type of cement used, its density, its additives and their proportions, the setting time, calculated volume and surplus percentage;

(14) the method for verifying the position of the plugs;

(15) a program for the regular preventive maintenance of the well and the wellhead;

(16) the list of the planned well loggings; and

(17) the list of references consulted during the preparation of the technical program, in particular, the standards from recognized organizations and guidelines from other Canadian jurisdictions.

The classification provided for in subparagraph 3 of the first paragraph must be performed on the basis of the highest risk obtained according to the criteria. For a well with a number of areas, the classification must be performed on the basis of the highest risk obtained, aside from the areas that are permanently closed. If all the deep areas are permanently closed, the shallowest section of the well subject to completion must be used to determine the classification of the well that will be subject to a temporary closure.

§§2. Notice of the start of the work

281. The holder of a temporary closure authorization must, at least 7 days before, notify the Minister of the start of the work.

The work is deemed to have started as soon as the first step provided in the work schedule is initiated.

§§3. Conditions of exercise

282. The authorization holder must comply with the technical program.

The holder may modify the program by sending to the Minister a supplementary agreement signed and sealed by an engineer stating the nature of the modification and the reasons justifying it. The supplementary agreement must be sent to the Minister before carrying out the work covered by the agreement. If it is urgent to modify the technical program for safety or work quality purposes, the holder must immediately send the agreement to the Minister and justify the urgency.

283. The authorization holder must, within 3 months after the granting of the authorization, complete the temporary closure work.

284. Before starting the temporary closure work, the authorization holder must carry out a pressure and leak test of the casing at a pressure of 7 MPa.

The holder must also, if production tubing is installed, carry out a pressure and leak test of the tubing and annular spaces at a pressure of 7 MPa.

The tightness is confirmed if the stabilized pressure is at least 90% of the pressure applied over a minimum interval of 10 minutes.

If the wellhead configuration does not allow pressure and leak tests, a visual observation carried out with a one-time measurement of leakage may be carried out.

285. The authorization holder must, if the measurements may be carried out without risk to the integrity of the well, measure the shut-in pressures in all annular spaces and in the production tubing.

286. The authorization holder who temporarily closes a well must ensure

(1) that the facilities and equipment installed in the well are compatible with what is planned in the permanent well or reservoir closure and site restoration plan;

(2) that the facilities and equipment installed in the well are durable and corrosion-resistant;

(3) the absence of communication of fluids between the geological formations;

(4) the absence of leaks in joints and welds of the surface casing blowhole;

(5) that the valve on the surface casing blowhole pipe is open and the blowhole is not blocked;

(6) to install a hemispherical head plug or a blind flange with a needle valve to read the flow at each outlet of the wellhead, except the surface casing blowhole;

(7) to disconnect, if applicable, the wellhead flow pipe; and

(8) to chain and lock the valves or remove the handles.

287. While performing the work, the authorization holder must use a wellhead or a blowout prevention system comprising at least 2 different sealing mechanisms as long as there is a risk of fluid kicks.

Despite the first paragraph, the use of a wellhead is not required if no perforation has been carried out and if the well is not an open-hole well. In that case, the holder may weld a steel plate directly on the production tubing. The plate must however permit the taking of pressure measurements in the well.

288. The blowout prevention system and the wellhead must be designed to withstand the maximum pressures provided for in the technical program.

289. The authorization holder must verify daily the blowout prevention system to make sure it works well. If a system component is defective, work must be suspended until the component is repaired.

290. The authorization holder must regularly inspect joints and structural elements of any equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps and maintains a register of those inspections and maintains it until the end of the work for the permanent closure of the well.

291. The authorization holder who observes the presence of an emanation at the surface casing blowhole using a bubble point test must also measure the emanation flow over a 24-hour period.

292. The authorization holder must, except for a well whose risk potential has been classified as low under Schedule 4, draw out the polished drill-stem from the well if it is connected to a pumpjack.

293. In the case of a well whose risk potential has been classified as moderate under Schedule 4, the authorization holder must

(1) install, at the bottom of the hole, a blow-out preventer valve and a casing plug or a support plug; and

(2) fill the well with non-saline water or with a corrosion inhibiting fluid; an anti-freeze fluid must also protect at least the first 2 m below the surface.

294. In the case of a well whose risk potential has been classified high under Schedule 4, the authorization holder must close the well in accordance with the generally recognized best practices.

295. At the end of the work, the authorization holder must protect the wellhead with a protective fence solidly anchored in the ground, having a perimeter of at least 12 m and a height of at least 2.5 m.

The installation must include a gate with a lock permitting access to the wellhead for monitoring and inspection purposes.

The land must have been leveled around the well.

§§4. Daily report and completion report

296. The authorization holder must draw up a daily report of the work and keep it on the activity site.

The daily report must contain all the elements applicable to the declared day including, in particular,

(1) the number of the temporary closure authorization;

(2) a description, in chronological order, of the work carried out and the time required for carrying out each step;

(3) the petroleum or water traces detected;

(4) the type of pump used for the cementing and its capacity;

(5) in the case of any cement plugs, the type of cement used, its density, its additives and their proportions, the setting time and the volume used;

(6) the well loggings carried out;

(7) if applicable, the results of pressure and leak tests;

(8) the working condition of the blowout prevention system;

(9) the composition, concentration and a detailed assessment of all the products stored and used on the site;

(10) the volume and composition of the gas used, released, incinerated or burnt at the flare;

(11) the operational problems encountered and the corrective measures taken or planned;

(12) the indication of any event that disrupted the planned progress of the work; and

(13) any other information or document deemed necessary by the Minister .

297. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, a completion report signed by an engineer including, in particular,

(1) the number of the temporary closure authorization;

(2) the name and contact information of the licence holder;

(3) the start and end dates of the work;

(4) a summary of the work carried out according to the chronological order;

(5) a comparative analysis of the work carried out compared to the work provided for in the technical program;

(6) an analysis of the efficiency of the temporary closure;

(7) the interpreted well loggings, re-set in actual vertical depth and the corrections made;

(8) a longitudinal section of the well after the temporary closure indicating, in particular,

(a) the mechanical conditions of the well after the closure; and

(b) the other equipment installed or dropped in the well and not recovered;

(9) the classification of the well determined according to Schedule 1 ;

(10) the type of plugs used and the depth intervals of each plug;

(11) in the case of the cement plugs, the type of cement used, its density, its additives and their proportions, the setting time and the volume used;

(12) the verified position of each of the plugs; and

(13) the completed annual inspection worksheet provided for in Schedule 2.

§§5. *Annual inspection*

298. After the temporary closure of the well, the drilling authorization holder must

(1) inspect the well annually and complete the annual inspection worksheet provided for in Schedule 2; the holder sends the grid to the Minister not later than 31 December of each year;

(2) ensure that the well does not present risks within the meaning of the second paragraph of section 18; and

(3) carry out the program for the regular preventive maintenance of the well and the wellhead.

§2. *Permanent closure authorization*

§§1. *Conditions for obtaining an authorization*

299. A well whose risk potential has been classified as low under Schedule 4 and that has been temporarily closed for 20 years must be closed permanently.

A well whose risk potential has been classified as moderate or high under Schedule 4 and that has been temporarily closed for 10 years must be closed permanently.

The Minister may however grant an additional time period if the drilling authorization holder demonstrates to the Minister that the well is safe and that it is necessary to leave it temporarily closed.

300. A licence holder who wishes to obtain a permanent well closure authorization must apply to the Minister, in writing, at least 30 days before the start of the work.

301. The application must contain

(1) the name and contact information of the holder and the licence number;

(2) the name of the well;

(3) if the permanent closure is carried out for a well temporarily closed, the annual inspection worksheet provided for in Schedule 2; and

(4) any other information or document requested by the Minister.

The application must be accompanied by payment of the fee of $2,677.

302. Before ruling on the application for permanent closure, the Minister may, if the Minister deems it necessary, require that the licence holder carry out a cement test in a laboratory. The test must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

The holder sends the results of the test to the Minister.

§§2. Time periods and notice of the start of the work

303. The authorization holder must, at least 7 days before, notify the Minister of the start of the work.

Where the holder cannot comply with the date, the holder must as soon as possible notify the Minister, in writing, indicating the reasons justifying the delay. The holder must also notify the Minister, in writing, of the new expected date for the start of the work if the date is expected within 7 days of the first notice of delay or of the holder's intent not to proceed.

The work is deemed to have started as soon as the first step provided in the work schedule included in the permanent well or reservoir closure and site restoration plan is initiated.

§§3. Conditions of exercise

304. The authorization holder must comply with the permanent well or reservoir closure and site restoration plan.

305. The authorization holder who closes permanently a well must ensure

(1) the absence of communication of fluids between the geological formations;

(2) the absence of leaks;

(3) the absence of excessive pressure in the entire well;

(4) the long-term integrity of the well, while considering the petroleum development potential of the adjacent sector and the impact of the activities that may be carried out in the future; and

(5) the use of durable and corrosion-resistant facilities and equipment.

306. The authorization holder may close on the surface after closure underground.

307. While performing the work for permanent closure, the authorization holder must use a wellhead or a blowout prevention system comprising at least 2 different sealing mechanisms as long as there is a risk of fluid kicks.

308. The wellhead and the blowout prevention system must be designed to withstand the maximum pressure planned in the permanent well or reservoir closure and site restoration plan.

309. The authorization holder must verify daily the blowout prevention system to make sure it works well. If a system component is defective, work must be suspended until the component is repaired

310. The authorization holder must regularly inspect joints and structural elements of any equipment used to control the pressure to ensure the safe operation of the equipment.

The holder keeps and maintains a register of those inspections until the end of the work.

311. The authorization holder must not install a cement plug in a section of the drill hole that does not have a casing, except if the drilling is vertical and the well risk is classified as low under Schedule 4.

312. During the operations for the preparation and installation of cement plugs, the authorization holder must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

313. The cement used must reach a minimum compressive strength of 3,500 kPa after 36 hours of hardening at the temperature of the shallowest formation to be covered.

The authorization holder must restrict the cement shrinkage process and limit to the minimum the risk of formation of a micro-annular space.

314. As of the moment at which the cement has developed a gel strength and until the minimum compressive strength has been reached, the authorization holder must not carry out work that could compromise the integrity of the cement and the holder must comply with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee.

315. The authorization holder must verify the position of the top of each of the cement plugs.

316. The authorization holder must cut the casings and guide tube at 1 m below the surface.

Where it is justified by agricultural activities, the holder may, with the Minister's authorization, cut the casings and the guide tube at 1.6 m below the surface.

317. The authorization holder must weld a ventilated steel cover at the top of the casings.

318. As soon as the permanent closure work ends, the authorization holder must mark the well with a steel plate at least 150 mm wide and 300 mm high indicating, in relief, the name of the well and its geographical coordinates.

The plate must be fixed 1.5 m above the surface of the ground using a metal rod welded to the outside casing of the well. Where it is justified by agricultural activities, the holder may, with the Minister's authorization, position the plate as close as possible to the well and indicate the azimuth and the distance at which the well is located.

§§4. *Daily report and completion report*

319. The authorization holder must draw up a daily report of the work and keep it on the activity site.

The daily report must contain all the elements that are applicable to the declared day including, in particular,

(1) the number of the permanent closure authorization;

(2) a description, in chronological order, of the work carried out and the time required to carry out each step;

(3) the petroleum or water traces detected;

(4) the type of pump used for the cementing and its capacity;

(5) the type of cement used, its density, its additives and their proportions, the setting time and the volume used;

(6) the well loggings carried out;

(7) the results of the pressure and leak tests;

(8) the working condition of the blowout prevention system;

(9) the operational problems encountered and the corrective measures taken or planned;

(10) the composition, concentration and a detailed assessment of all the products stored and used on the site;

(11) the volume and composition of the gas used, released, incinerated or burnt at the flare;

(12) the indication of any event that disrupted the planned progress of the work; and

(13) any other information or document deemed necessary by the Minister .

320. The authorization holder must send to the Minister, every Monday, the daily reports of the preceding week until the end of the work. If the Monday is a holiday, the report is sent on the first working day that follows.

321. The authorization holder must send to the Minister, within the period provided for in section 100 of the Act, a completion report signed by an engineer including, in particular,

(1) the number of the permanent closure authorization;

(2) the name and contact information of the licence holder;

(3) the start and end dates of the work;

(4) a summary of the work carried out according to the chronological order;

(5) the classification of the well determined according to Schedule 1;

(6) the type of device used and its specifications;

(7) the demonstration of the absence of petroleum emanation at the surface casing blowhole before the underground closure work and, if applicable, the demonstration of the absence of petroleum emanation in the casings before the closure on the surface;

(8) the data, recordings and results of the pressure and leak tests and their interpretation;

(9) a demonstration of the quality of the cement bond behind the casing before the work;

(10) the method for cleaning the well used before the installation of the plugs;

(11) in the case of the cement plugs used,

(a) the type of cement used, its density, its additives and their proportions, its setting time and the volume used;

(b) the method for installing the plugs;

(c) the verified position of each of the plugs; and

(d) if laboratory testing has been done on the cement after the granting of the authorization, the properties of the cement determined in the laboratory;

(12) the nature of the fluid used to fill the space between each plug;

(13) the cutting depth of the casings and guide tube below the surface;

(14) a photograph of the ventilated steel plate welded at the top of the casings before the backfilling;

(15) a longitudinal section of the well after the permanent closure, according to the measured depth and the actual vertical depths signed and sealed by an engineer, indicating, in particular,

(a) groups, geological formations, lithological contacts and faults including, in particular,

i. the usable groundwater;

ii. thermal anomalies;

iii. the coal beds exceeding 300 mm in thickness;

iv. the permeable and porous areas having an effective porosity greater than 1% in a terrigenous bedrock and greater than 3% in a carbonate bedrock;

v. the formations that can potentially produce petroleum and those that produce petroleum;

vi. the layers of abnormal pressure; and

vii. the areas of circulation loss;

(c) the location of each of the casings and of the guide tube;

(d) the depth interval of an open-hole well;

(e) the type of plugs used and the depth intervals of each plug; and

(f) the other equipment installed or dropped in the well and not recovered;

(16) a comparative analysis of the work carried out compared to the work provided for in the permanent well or reservoir closure and site restoration plan;

(17) a plan of the layout of the site after the restoration work; and

(18) photographs of the entire site restored.

DIVISION II
PERMANENT WELL OR RESERVOIR CLOSURE AND SITE RESTORATION PLAN

§1. *Content of the plan*

322. The permanent well or reservoir closure and site restoration plan must be signed and sealed by an engineer and must contain, in particular,

(1) the name and contact information of the licence holder and the licence number;

(2) the proposed name of the well;

(3) the classification of the well determined according to Schedule 1 ;

(4) the name and contact information of the engineer responsible for the permanent well or reservoir closure and site restoration plan;

(5) the name, profession and functions of the persons who prepared or revised the plan;

(6) a description and photographs of the condition of the site before the drilling;

(7) the method used to demonstrate that, prior to the permanent closure of the well or reservoir, no emanation at the surface vent has been observed over a period of 24 hours and no gas migration;

(8) a chronological and detailed description of the work carried out;

(9) the work schedule;

(10) a broken down estimate of the cost of the work;

(11) a description of the condition of the well including, in particular, the cemented, perforated and open-hole depths;

(12) the cement evaluation method to show the uniform coverage of the cement behind the casing before the work;

(13) the type of service device and equipment to be used and their specifications;

(14) a longitudinal section of the well indicating, in particular,

(a) the technical elements;

(b) the depth intervals that will be protected or isolated; and

(c) the geological formations including, in particular,

i. the usable groundwater;

ii. the thermal anomalies;

iii. the coal beds exceeding 300 mm in thickness;

iv. the formations that can potentially produce petroleum and those that produce petroleum;

v. the layers of abnormal pressure;

vi. the areas of circulation loss; and

vii. the permeable and porous areas having an effective porosity greater than 1% in a terrigenous bedrock and greater than 3% in a carbonate bedrock;

(15) the method for cleaning the well used before the installation of the plugs;

(16) the type of plugs used and the depth intervals of each plug;

(17) a cementing program complying with the Industry Recommended Practice, IRP: # 25, Primary Cementing, published by the Drilling and Completion Committee indicating, in particular,

(a) for each cement plug, the type of cement used, its density, its additives and their proportions, the setting time, calculated volume and surplus percentage;

(b) the method for installing the plugs;

(c) any required changes to the cement used for the plugs due to specific physical and chemical conditions of the environment, including, in particular, the depth of the well, a horizontal well, an abnormal pressure or temperature, a salt area or a corrosive environment; and

(d) the nature of the fluid used to fill the space between each plug;

(18) the method used to demonstrate that following the installation of the plugs and before the cutting of the casings and the guide tube at the surface, there was no gas emanation;

(19) a plan showing the extent of the activity site;

(20) a chronological and detailed description of the restoration work to maintain the natural landscapes, minimize impact on wildlife, and harmonize the site with the use of the territory including, in particular,

(a) the removal of the rat and mouse holes;

(b) the levelling of the ground around the well;

(c) the draining of the retention ponds;

(d) the filling or levelling of the ponds;

(e) the rehabilitation of contaminated land;

(f) the purge of pipes;

(g) the withdrawal of the equipment and facilities; and

(h) revegetation;

(21) a plan modelling the work described in subparagraph 20;

(22) the surface drainage after the work; and

(23) a follow-up program for the integrity of the well during the closure and site restoration work.

If certain elements required in the first paragraph are unknown when the holder submits the plan to the Minister in accordance with section 101 of the Act, those elements will have to be provided when the plan is revised.

323. During the revision of the plan, the authorization holder must use the number and name of the well as they appear on the drilling authorization.

§2. Guarantee

324. The guarantee provided for in section 103 of the Act must be furnished to the Minister in any of the following forms:

(1) a cheque made to the order of the Minister of Finance;

(2) bonds issued or guaranteed by Québec or another province of Canada, by Canada or by a municipality in Canada, and having a market value at least equal to the amount of the guarantee exigible; registered bonds must be submitted with a power of attorney on behalf of the Minister of Finance and, where applicable, with a resolution authorizing the person who signs the power of attorney;

(3) guaranteed investment certificates or term deposit certificates, in Canadian dollars, issued on behalf of the Minister of Finance by a bank, a savings and credit union or a trust company; deposit certificates must have a term of at least 12 months, be automatically renewable until the declaration of satisfaction of the Minister or the certificate of release under sections 112 and 114 of the Act and not include any restriction in respect of redemption during its term;

(4) an irrevocable and unconditional letter of credit issued on behalf of the Gouvernement du Québec by a bank, a savings and credit union or a trust company;

(5) a security or a guarantee policy issued on behalf of the Gouvernement du Québec by a legal person legally empowered to act in that capacity;

(6) a trust constituted in accordance with the Civil Code and meeting the following requirements:

(a) the purpose of the trust is to ensure the performance of the work provided for in the permanent well or reservoir closure and restoration site plan pursuant to sections 101 to 115 of the Act;

(b) the Minister of Finance and the licence holder referred to in section 101 of the Act are joint beneficiaries of the trust;

(c) the trustee is a bank, a savings and credit union or a trust company;

(d) the trust patrimony is comprised only of sums in cash, or of bonds or certificates of the same type as those listed in subparagraphs 2 and 3.

The financial institutions referred to in subparagraphs 3, 4 and 6 of the first paragraph must be empowered by law to carry on the activities provided for in those subparagraphs.

The guarantees referred to in subparagraphs 1 to 3 of the first paragraph are received on deposit by the Minister of Finance pursuant to the Act respecting deposits with the Bureau général de dépôts pour le Québec (chapter D-5.1).

325. In the case of a guarantee furnished according to subparagraph 3 or 6 of the first paragraph of section 324, the contract constituting the guarantee must provide the following conditions:

(1) the purpose of the guarantee is to ensure the performance of the work provided for in the permanent well or underground reservoir closure and site restoration plan pursuant to sections 101 to 115 of the Act;

(2) no person may make withdrawals or be reimbursed without having obtained the Minister's satisfaction provided for in sections 112 and 114 of the Act or a reduction of the guarantee according to section 108 of the Act; the prohibition also applies to any form of compensation that could be made by the bank, the savings and credit union, the trust company or the trustee;

(3) where the second paragraph of section 111 of the Act applies, the payment of the guarantee is payable at the Minister's request;

(4) the bank, the savings and credit union, the trust company or the trustee provides the Minister with the information it possesses concerning the contract;

(5) in case of dispute, the courts of Québec are the sole competent courts;

(6) in the case of a trust:

(a) the trustee must be domiciled in Québec;

(b) the trustee sees to the management of the trust at the expense of the settlor or of the licence holder referred to in section 101 of the Act;

(c) the trust terminates

i. when the Minister issues the certificate of release under sections 112 and 114 of the Act or when it is replaced by another guarantee complying with the requirements of this Regulation;

ii. when the Minister acts on the condition provided for in subparagraph 3 of the first paragraph of this section.

The licence holder referred to in section 101 of the Act must submit to the Minister a certified copy of the original contract.

326. In the case of a trust, interest yielded by the trust patrimony belongs to the trust. Interest kept as part of the trust patrimony must not be used as payment of the guarantee.

327. The purpose of the irrevocable and unconditional letter of credit provided for in subparagraph 4 of the first paragraph of section 324, of the security or guarantee policy provided for in subparagraph 5 of the first paragraph of that section is to guarantee payment of the cost of the work where the obligations of sections 101 to 115 of the Act are not met. The contract must have a term of at least 12 months and must include clauses providing the following conditions:

(1) in the case of non-renewal, termination, revocation or cancellation, the guarantor must notify the Minister at least 60 days before the date fixed for the expiry, termination, revocation or cancellation of the guarantee;

(2) in the case of non-renewal, termination, revocation or cancellation, the guarantor remains responsible, where the obligations of sections 101 to 115 of the Act are not met, for the payment of the cost of the work involved for the permanent well or underground reservoir closure and site restoration carried out before the date of expiry, termination, non-renewal or revocation up to the amount covered by the letter of credit, the security or guarantee policy. That responsibility must hold until the issue of the certificate of release provided for in sections 112 and 114 of the Act, unless the person in question has deposited an alternative guarantee or the guarantor has deposited the amount covered by the letter of credit, the security or guarantee policy in a trust that complies with this Regulation where the Minister of Finance and the guarantor are joint beneficiaries;

(3) where applicable, the obligation is solidary, with a waiver of the benefits of discussion and division;

(4) the guarantor consents to the Minister's being able at any time after the sending of a notice of 60 days to make changes to the permanent well or underground reservoir closure and site restoration plan and waives pleading against the Minister any ground of defence pertaining to the content of the plan;

(5) where the second paragraph of section 111 of the Act applies, payment of the guarantee is exigible at the Minister's request;

(6) in the case of dispute, the courts of Québec are the sole competent courts.

The licence holder referred to in section 101 of the Act must submit to the Minister a certified copy of the original contract.

328. The guarantee furnished may be replaced at any time by another guarantee that complies with the requirements of this Regulation.

§3. *Fees payable*

329. The fee payable for the assessment of a permanent well or reservoir closure and site restoration plan is $1,309.

The fee payable for the assessment of a revision of a permanent well or reservoir closure and site restoration plan is $654.

330. The fee payable for the assessment conducted for the purpose of issuing a certificate of release under section 112 of the Act is $587.

The fee payable for the inspections conducted for the purpose of issuing a certificate of release under the first paragraph is $996 per inspection.

CHAPTER XV
FEE PAYABLE FOR A NOTICE OF NON-COMPLIANCE, MONETARY ADMINISTRATIVE PENALTIES AND OFFENCE

DIVISION I
FEE PAYABLE FOR A NOTICE OF NON-COMPLIANCE

331. The fee payable by a person to whom an inspector submitted a notice of non-compliance with the provisions of the Act or this Regulation is $500.

DIVISION II
MONETARY ADMINISTRATIVE PENALTIES

332. A monetary administrative penalty of an amount provided for in section 187 of the Act may be imposed on any person who contravenes any of sections 4, 5, 24, 28, 29, the first paragraph of section 35, sections 36, 37, 39, 43, 49 to 51, the first paragraph of section 59, sections 60, 61, 63 to 67, the first paragraph of section 75, sections 76, 77, 80, 103, 104, the first paragraph of section 105, section 106, the first and second paragraphs of section 107, sections 108, 117 to 119, 127 to 129, 132, 160, 161, the first paragraph of section 162, section 163, the first and second paragraphs of section 164, sections 165, 168 to 170, the first paragraph of section 176, sections 177, 190, 191, the first paragraph of section 198, sections 199, 214, 215, the first paragraph of section 223, sections 224, 231, 232, 238, 242 to 244, 249, 250, 255, 261, 262, 264, 270, the first paragraph of section 281, section 296, the first and second paragraphs of section 303, sections 319, 320 and 323.

333. A monetary administrative penalty of an amount provided for in section 188 of the Act may be imposed on any person who contravenes any of sections 19, 22, 26, the first paragraph of section 27, sections 30, 38, the first and second paragraphs of section 40, sections 41, 42, 47, 48, 62, 78, the first paragraph of section 81, sections 82 and 83, paragraphs 1 and 3 of section 84, sections 85 to 99, the first paragraph of section 100, the first and second paragraphs of section 101, paragraph 2 of section 102, section 109, the first paragraph of section 110, section 111, the first paragraph of section 112, sections 113 to 116 and 130, the first paragraph of section 133, sections 134 and 135, paragraphs 1 and 3 of section 136, section 137, the second paragraph of section 138, sections 139 to 147, subparagraphs 1, 3 and 4 of the first paragraph of section 149, sections 150 to 156, the first paragraph of section 157, the first and second paragraphs of section 158, paragraph 2 of section 159, sections 166, 167, 171, 178, the first paragraph of section 179, the first paragraph of section 181, section 182, paragraphs 3 and 4 of section 183, sections 184 to 188, 200, the first paragraph of section 201, section 202, the first paragraph of section 205, the first paragraph of section 206, sections 207 to 211, 225, 227 to 230, 234, 236, the first paragraph of section 239, section 240, paragraph 2 of section 241, sections 245 and 246, the first and second paragraphs of section 247, sections 248, 251 to 253, 256, 263, 265, 275, 282, 283, the first, second and fourth paragraphs of section 284, paragraphs 4 to 8 of section 286, sections 287 to 295 and 298.

334. A monetary administrative penalty of an amount provided for in section 189 of the Act may be imposed on any person who contravenes any of sections 7, 8, 10, 11, the first paragraph of section 14, section 15, the first and second paragraphs of section 17, the first paragraph of section 18, sections 20, 21, 44 to 46, 53, 54, 212, 213, 217 and 218.

DIVISION III
OFFENCE

335. Every person who contravenes any provision of this Regulation commits an offence and is liable to the fine provided for in paragraph 2 of section 199 of the Act.

CHAPTER XVI
TRANSITIONAL AND FINAL

DIVISION I
TRANSITIONAL PROVISIONS MADE UNDER SECTION 287 OF THE ACT

336. The authorization to produce brine referred to in the first paragraph of section 272 of the Act is deemed to be issued for each of the wells for which the holder has started to produce brine on (*insert the date of coming into force of this section*).

337. A permanent well closure authorization issued under the Mining Act in force on (*insert the date of coming into force of this section*) is deemed to be a permanent closure authorization issued under the Act.

If on (*insert the date of coming into force of this section*) the work for the permanent closure has not started, the authorization holder must provide to the Minister, in accordance with section 275 of the Act, the permanent well or reservoir closure and site restoration plan and the guarantee before starting the work.

If on (*insert the date of coming into force of this section*) the work for the temporary closure is started but not completed, the authorization holder is not required to provide to the Minister the permanent well or reservoir closure and site restoration plan and the guarantee provided for in section 275 of the Act. The holder must complete the work in accordance with the closure program submitted to the Minister under section 59 of the Regulation respecting petroleum, natural gas and underground reservoirs (chapter M-13.1, r. 1). The work must be completed not later than 1 year after (*insert the date of coming into force of this section*).

338. For the purposes of section 275 of the Act, the Minister keeps the performance guarantee submitted to the Minister under section 16 of the Regulation respecting petroleum, natural gas and underground reservoirs until the Minister has received the restoration plan and the guarantee provided for in Chapter IV of the Act.

DIVISION II
FINAL

339. This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

SCHEDULE 1
CLASSIFICATION OF WELLS

The classification of wells must include
1. the fluids in the well;
2. its type;
3. its role;
4. its status;
5. its direction;
6. the abundance of fluids.

Fluids in the well	Oil, gas, condensate, bitumen, CO_2, H_2S, water, brine, water vapour, sulphur, non-combustible gas or gas hydrates
Type of well	Exploration or production, based on the licence held by the drilling authorization holder
Role of the well	Well use
Producing	Well used to extract petroleum or brine from a pool
Injecting	Well used to inject fluids in an underground formation to enhance petroleum recovery
Cyclical	Well used for the production and injection, alternately, on a regular basis
Service - supply	Well used to collect the fluids necessary for the production or injection operations
Service - storage	Well used for the injection and withdrawal of substances determined in the Regulation respecting petroleum exploration, production and storage licences, made by Order in Council XXXX-XXXX dated (*insert the date of the Order in Council*)
Service – disposal	Well used as permanent location to store discharges in the reservoir
Service - relief	Well used to intercept another well that is blowing out
Observation	Well used to monitor the conditions of one or more geological formations, to determine the decline characteristics of a reservoir or to monitor the other wells of a reservoir
No role currently	Well not fulfilling any role
Other	Well having another unidentified role
Status of the well	State of the well at a given point in time
On hold	Well for which a drilling authorization application has been filed, but the drilling authorization has not yet been granted
Planned drilling	Well for which a drilling authorization has been granted, but whose drilling work has not yet been deemed to have started
Activity underway	Well whose authorized work is underway
Production	Well whose fluids are extracted from the drill hole
Injection	Well whose fluids are pumped into the drill hole

Production and injection	Well that produces and in which fluids are injected, alternately, in the drill hole
Temporary interruption (*shut-in*)	Well in which work is interrupted for a short period, between 2 activities or 2 operations
Temporarily closed	Well that has been temporarily closed
Permanently closed	Well that has been permanently closed
Restored	Well that has been permanently closed and whose work site has been restored
Cancelled	Well whose drilling authorization is revoked or expired
Other	Well that has another unidentified status
Direction of the well	Vertical, directional or horizontal
Abundance of fluids	Primary, secondary, indication or trace

SCHEDULE 2

ANNUAL INSPECTION WORKSHEET

Énergie et Ressources naturelles
Québec

Direction du bureau des hydrocarbures
5700, 4e avenue ouest bureau A-422
Québec (Québec) G1H 6R1
Télécopieur : 418-644-1445

ANNUAL INSPECTION WORKSHEET
TEMPORARILY CLOSED WELL
OBSERVATION WELL

Date received by the Department

IDENTIFICATION							
Well number		Licence holder		Expiry of the licence	YYYY/MM	Lot number	
Well name		Licence number		Date of inspection	YYYY/MM/DD	Cadastre number	
Location of the well (NAD83 DD MIN SEC)				Time start of inspection		Date of temporary closure, if applicable	
Latitude N		Longitude W		Time end of inspection		YYYY/MM/DD	

INTERVENING PARTIES			
Name	Position	Company	Tel. or email

SITE SAFETY – The perimeter of the well is protected.	
A sign at the entrance of the site indicates the location of the well, the name of the holder, the licence number, the name of the well, the well number, the telephone number in case of emergency and pictograms associated with dangerous products.	
The wellhead is surrounded by a protective fence having a perimeter of at least 12 metres and a height of at least 2.5 metres.	
The fence is solidly anchored in the ground.	
The installation includes a gate with a lock permitting access to the wellhead.	
The protection measures implemented around the well are efficient.	

STATE OF THE PREMISES – Safety and environment			
The geographical coordinates are accurate and allow easy location of the well.		The site is free of residual materials.	
The access leading to the well is tidy and safe.		The site is free of dangerous goods.	
The premises are free of brush that may cause a fire.		An indication of migration of gas in the soil is observed.	
The layout of the equipment around the well is limited.		A test of gas migration in the soil has been carried out.	
The land around the well is leveled.		The test results confirm gas migration in the soil.	
The state of the premises is safe for persons and property, and environmental protection.			

WELLHEAD – The integrity			
A wellhead is present.		A surface casing blowhole is present.	
All valves are chained and locked or the handles have been removed.		The surface casing blowhole valve is open.	
The wellhead is free of corrosion or erosion.		The surface casing blowhole is blocked.	
The wellhead is designed to withstand the measured pressure.		Insert the flow measured at the surface casing blowhole (with the unit).	
The flow pipe is disconnected from the wellhead.		Insert the concentration of gas at the blowhole of the casing (with the unit)	
Each outlet is equipped with a plug or a blind flange with a needle valve to read the flow, except on the surface casing blowhole.		The emanation is only composed of gas.	
A leak is observed in the guide tube.		Indicate the composition of the fluid at the blowhole.	
		There is a leak on the blowhole joints and welds.	
The wellhead is intact and safe for persons and property, and environmental protection.			

ANNUAL MONITORING OF THE PRESSURE - If applicable, enter the pressures in kPa in all the annular spaces and in the production tubing.					
Pressure of the production casing:		Pressure of the intermediate casing:		of the surface casing:	
Pressure of the production tubing:		Are the pressures constant with respect to the last measurements?			

REGULAR PREVENTIVE MAINTENANCE – Minimum frequency of 3 or 5 years (refer to the Regulation to determine the frequency associated with each well)			
Insert the date of the last regular preventive maintenance.	YYYY/MM	The joints are leakproof.	
Maintenance has been carried out during the inspection.		The valves are in good condition.	
Insert the date planned for the next maintenance.	YYYY/MM	If repairs are required, indicate the nature of the repairs and the date planned for the work.	

SPECIFIC VERIFICATIONS AT THE WELL (critical elements, validation of compliance for engineering, etc.)

ADDITIONAL INFORMATION

INSTRUMENTATION – Specify the tools used for the inspection (flow meter, gas detector, etc.).			

APPENDICES - Attach at least a photograph of the protected perimeter of the well and an overall photograph of the wellhead.			
Type of document	Name of document	Description of content	Number of pages

DECLARATION - Confirmation of the validity of the information contained in the report			
Name	Signature	Tel. and email	Date
Inspector:			
Inspector:			
Approver:			

SCHEDULE 3
CASING INTEGRITY INSPECTION PROCEDURE

The holder must select 1 of the following 2 procedures to determine the integrity of the casings:
1. pressure test;
2. inspection logging.

If the holder chooses to carry out a pressure test and an inspection logging, the results of the pressure test prevail.

1. Pressure test

A holder who chooses to carry out a surface or intermediate casing pressure test must proceed as follows:

1.1. Surface casing pressure test

If only 1 surface casing is installed, the minimum pressure to apply to the surface, in kPa, is a factor of 2.5 multiplied by the expected final depth of the drill hole in actual vertical depth.

If an intermediate casing is expected to be installed, the minimum pressure to apply to the surface, in kPa, is a factor of 2.5 multiplied by the expected depth for the installation of the intermediate casing in actual vertical depth.

The pressure to be applied to the surface is calculated by assuming that the density of the fluids in the drill hole is 1,000 kg/m^3. At the time the pressure test is carried out, the holder must adjust the pressure to be applied according to the density of the fluids present in the drill hole.

1.2. Intermediate casing pressure test

If an intermediate casing is installed, the minimum pressure to be applied to the surface is a factor of 0.67 multiplied by the pressure measured at the depth of the installation of the intermediate casing. If that pressure has not been measured, the holder must estimate it from the real or theoretical pressure gradient that is 11 kPa/m of actual vertical depth.

The pressure to be applied to the surface is calculated by assuming that the fluids in the drill hole have a density of 1,000 kg/m^3. At the time the pressure test is carried out, the holder must adjust the pressure to be applied according to the density of the fluids present in the drill hole.

2. Inspection logging

The holder who chooses to carry out a logging or a combination of inspection loggings of the surface casing or the intermediate casing must interpret the data from one joint to the other in order to
• detecter holes, perforations, cracks, metal losses and metal thickness;
• determine the percentage of penetration of the anomalies.

2.1. Surface casing inspection logging

The maximum bursting strength, based on the specified minimum yield strength of the casing and the lowest value obtained from the metal thickness, must be equal to or greater than a factor of 2.5 multiplied by the expected final depth of the drill hole in actual vertical depth. The following equation must be resolved:

$$P_y \geq \frac{(2Y_p t)}{D} \geq 2.5 \times \text{expected final depth of the drill hole in actual vertical depth}$$

where:

P_y = minimum internal yield pressure (kPa)

Y_p = specified minimum yield strength (kPa)

t = reduced thickness of the metal (mm)

D = nominal outside diameter (mm)

2.2. Intermediate casing inspection logging

The maximum bursting strength, based on the specified minimum yield strength of the casing and the lowest value obtained from the metal thickness, must be equal to or greater than a factor of 0.67 multiplied by the formation pressure at the depth of installation of the intermediate casing. The following equation must be resolved:

$$P_y \geq \frac{(2Y_p t)}{D} \geq 0.67 \times \text{expected final depth of the drill hole in actual vertical depth}$$

where:

P_y = minimum internal yield pressure (kPa)

Y_p = specified minimum yield strength (kPa)

t = reduced thickness of the metal (mm)

D = nominal outside diameter (mm)

SCHEDULE 4

CLASSIFICATION OF A WELL'S RISK POTENTIAL

Classification of the wells	Type of well	Location	Geology	Status before the temporary closure
Low risk	Gas well < 28,000 m^3/day Oil well without flow and without H_2S Tube well with a content in H_2S < 5%, non-perforated	At 150 m or more from a building	Non-problematic geological formations	Non-problematic well Well whose pressures are controlled
Moderate risk	Gas well ≥ 28,000 m^3/day Oil well without flow and with a content in H_2S ≥ 5% Oil well with flow Injection well	At less than 150 m from a building	Problematic geological formations (example: karsts)	Problems documented and not controlled (example: communication between adjacent wells)
High risk	Gas well with a content in H_2S ≥ 5□% Sour gas well	Not applicable	Not applicable	Not applicable

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Abbreviations: **A**: Abrogated, **N**: New, **M**: Modified